

**Anhang  
Annexe  
Appendix**

**Version 5.2**

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# I **Übersicht der Optionen** **Disposition des options** **Arrangement of options**

Die in diesem Anhang enthaltenen Schemata beinhalten neben der Standardausrüstung auch sämtliche Optionen und müssen mit der effektiven Maschinenausrüstung nicht übereinstimmen. Soweit es sich um optionale Maschinenausrüstungen handelt sind diese in den Schemata mit Rahmen und entsprechender Ident.-Nr. gekennzeichnet. Die folgende Tabelle zeigt eine Übersicht der möglichen Optionen.

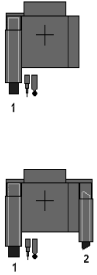
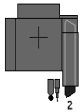
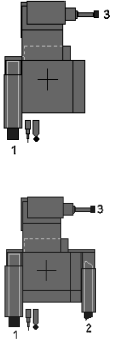
Les schémas de cette annexe contiennent en plus de l'équipement standard également de nombreuses options et peuvent ne pas concorder avec l'équipement effectif de la machine. Lorsqu'il s'agit d'équipements optionnels de la machine, ceux-ci sont contenus dans des schémas avec cadre et sont indiqués par le n° d'identification correspondant. Le tableau suivant présente un aperçu des options possibles.

The diagrams in this appendix show not only the standard equipment but also all optional extras. Consequently, they may differ from the actual machine as supplied. Where optional machine equipment is concerned, this is shown in the diagrams with a frame and is identified by the corresponding identity no. The following tables show an overview of possible optional extras.

|          | Bezeichnung der Option                                | Désignation de l'option  | Designation of option                                   |
|----------|---|--|---|
| 4011.01  | SCHLEIFSCHEIBENAUSRÜSTUNG RECHTS                      | ÉQUIPEMENT DE MEULE À DROITE   | GRINDING WHEEL EQUIPMENT R-H SIDE                       |
| 4019.01  | SEPARATER KÜHLMITTELKREISLAUF                         | CIRCUIT DE REFOIDISSEMENT SEPARÉ   | SEPARATE COOLANT CIRCUIT                                |
| 10620.13 | HALBAUTOMATISCHE AUSWUCHTEINRICHTUNG                  | DISPOSITIF D'ÉQUILIBRAGE SEMI-AUTOMATIQUE                                  | SEMI-AUTOMATIC BALANCING DEVICE                         |
| 4030.03  | PNEUMATISCHER PINOLENRÜCKZUG FÜR DEN REITSTOCK        | RECVL PNEUMATIQUE DU FOURREAU DE LA CONTRE-POUPÉE                          | PNEUMATIC SLEEVE RETRACTION FOR TAILSTOCK               |
| 4030.05  | PNEUMATISCHE ENTLASTUNG DES REITSTOCKES               | ASSISTANCE PNEUMATIQUE POUR LE DÉPLACEMENT FACILE DE LA CONTRE-POUPÉE      | AIR-CUSHIONING FOR EASE OF TAILSTOCK REPOSITIONING      |
| 4036.01  | SCHWENKWINKELANZEIGE ZU WERKSTÜCKSPINDELSTOCK         | ALIMENTATION D'AFFICHAGE D'ANGLE D'ORIENTATION                             | SWIVEL ANGLE INDICATOR FOR WORKHEAD                     |
| 4031.02  | KÜHLSCHMIERMITTELZUFÜHRUNG DURCH DIE WERKSTÜCKSPINDEL | AMENÉE DU LUBRIFIANT DE REFOIDISSEMENT À TRAVERS LA BROCHE                 | COOLANT LUBRICANT SUPPLY THROUGH THE WORKSPINDLE        |
| 4039.02  | WARTUNGSEINHEIT FÜR PNEUMATISCHE ENTLASTUNGEN         | UNITÉ D'ENTRETIEN POUR ASSISTANCES PNEUMATIQUES                            | SERVICE UNIT FOR AIR-CUSHIONING FUNCTIONS               |
| 4060.01  | AKTIVE LÄNGSPOSITIONIERUNG KEL-POS, MOVOMATIC         | DISPOSITIF DE POSITIONNEMENT LONGITUDINAL ACTIF KEL-POS, MOVOMATIC         | ACTIVE FLAGGING DEVICE KEL-POS, MOVOMATIC               |
| 4060.02  | AKTIVE LÄNGSPOSITIONIERUNG KEL-POS, MOVOMATIC         | DISPOSITIF DE POSITIONNEMENT LONGITUDINAL ACTIF KEL-POS, MOVOMATIC         | ACTIVE FLAGGING DEVICE KEL-POS, MOVOMATIC               |
| 4062.01  | PASSIVE LÄNGSPOSITIONIERUNG MOVOMATIC TMP 91          | DISPOSITIF DE POSITIONNEMENT LONGITUDINAL PASSIF MOVOMATIC TMP 91          | PASSIVE FLAGGING DEVICE, MOVOMATIC TMP 91               |
| 4063.01  | MESSSTEUERUNG MOVOMATIC CR 100                        | SYSTÈME D'AUTO-CALIBRAGE CR 100, MOVOMATIC                                 | IN-PROCESS GAUGING SYSTEM CR 100, MOVOMATIC             |
| 4063.03  | MESSSTEUERUNG MOVOMATIC CR 257                        | SYSTÈME D'AUTO-CALIBRAGE CR 257, MOVOMATIC                                 | IN-PROCESS GAUGING SYSTEM CR 257, MOVOMATIC             |
| 4064.01  | KOMBINIERTES MESSSTEUERUNG MOVOMATIC                  | SYSTÈME D'AUTO-CALIBRAGE COMBINÉ, MOVOMATIC                                | COMBINED IN-PROCESS GAUGING SYSTEM, MOVOMATIC           |
| 11420.05 | ANSCHNITT-SENSOR ELASO                                | APPAREIL POUR CONTRÔLE DE COUPE ELASO                                      | GAP CONTROL SENSOR UNIT, ELASO                          |
| 4070.01  | PAPIERBANDFILTER 375 LITER                            | FILTRE À RUBAN DE PAPIER, 375 LITRES                                       | PAPERBAND-FILTRATION UNIT, 375 LITERS                   |
| 4070.02  | PAPIERBANDFILTER 240 LITER                            | FILTRE À RUBAN DE PAPIER, 240 LITRES                                       | PAPERBAND-FILTRATION UNIT, 240 LITERS                   |
| 4071.01  | MAGNET-/PAPIERBANDFILTER 375 LITER                    | FILTRE COMBINÉ ET MAGNÉTIQUE À RUBAN DE PAPIER, 375 LITRES                 | MAGNETIC SWARF / PAPERBAND-FILTRATION UNIT, 375 LITERS  |
| 4071.02  | MAGNET-/PAPIERBANDFILTER 240 LITER                    | FILTRE COMBINÉ ET MAGNÉTIQUE À RUBAN DE PAPIER, 240 LITRES                 | MAGNETIC SWARF / PAPERBAND-FILTRATION UNIT, 240 LITERS  |
| 4073.03  | VORBEREITUNG ZENTRALE KÜHLSCHMIERMITTELANLAGE         | JEU DE PIÈCE DE CONNEX., GROUPE CENTRALE POUR LUBRIFIANT DE REFOIDISSEMENT | KIT OF CONNECT. PARTS, CENTRAL COOLANT-LUBRICANT SYSTEM |
| 4074.01  | SCHLEIFNEBEL-ABSAUGANLAGE                             | SYSTÈME D'ASPIRATION DU BROUILLARD DE RECTIFICATION                        | DUST-EXTRACTION UNIT                                    |
| 4083.01  | SONDER- ANSCHLUSSPANNUNGEN                            | TENSIONS D'ALIMENTATION ÉLECTRIQUES  | SPECIAL CONNECTION VOLTAGES                             |
| 4083.02  | ANSCHLUSSPANNUNG 3 X 400 V, 50 HZ                     | TENSION D'ALIMENTATION ÉLECTRIQUE 3 X 400 V, 50 HZ                         | CONNECTION VOLTAGE 3 X 400 V, 50 HZ                     |
| 4083.03  | ANSCHLUSSPANNUNG 3 X 460 V, 60 HZ                     | TENSION D'ALIMENTATION ÉLECTRIQUE 3 X 460 V, 60 HZ                         | CONNECTION VOLTAGE 3 X 460 V, 60 HZ                     |
| 10060.44 | MASCHINE UR 175/600 MIT CNC-STEUERUNG GE FANUC 211    | MACHINE UR 175/600 AVEC COMMANDE NUMÉRIQUE GE FANUC 211                    | MACHINE UR 175/600 WITH CNC CONTROL UNIT GE FANUC 211   |
| 10060.45 | MASCHINE UR 175/1000 MIT CNC-STEUERUNG GE FANUC 211   | MACHINE UR 175/1000 AVEC COMMANDE NUMÉRIQUE GE FANUC 211                   | MACHINE UR 175/1000 WITH CNC CONTROL UNIT GE FANUC 211  |
| 11310.00 | ABRICHTGERÄT AUF DEM OBERTISCH                        | DISPOSITIF DE DRESSAGE MONTÉ SUR LA TABLE SUPÉRIEURE                       | DRESSING DEVICE MOUNTED ON UPPER TABLE                  |

## **2 Schleifköpfe Têtes de meules Workheads**

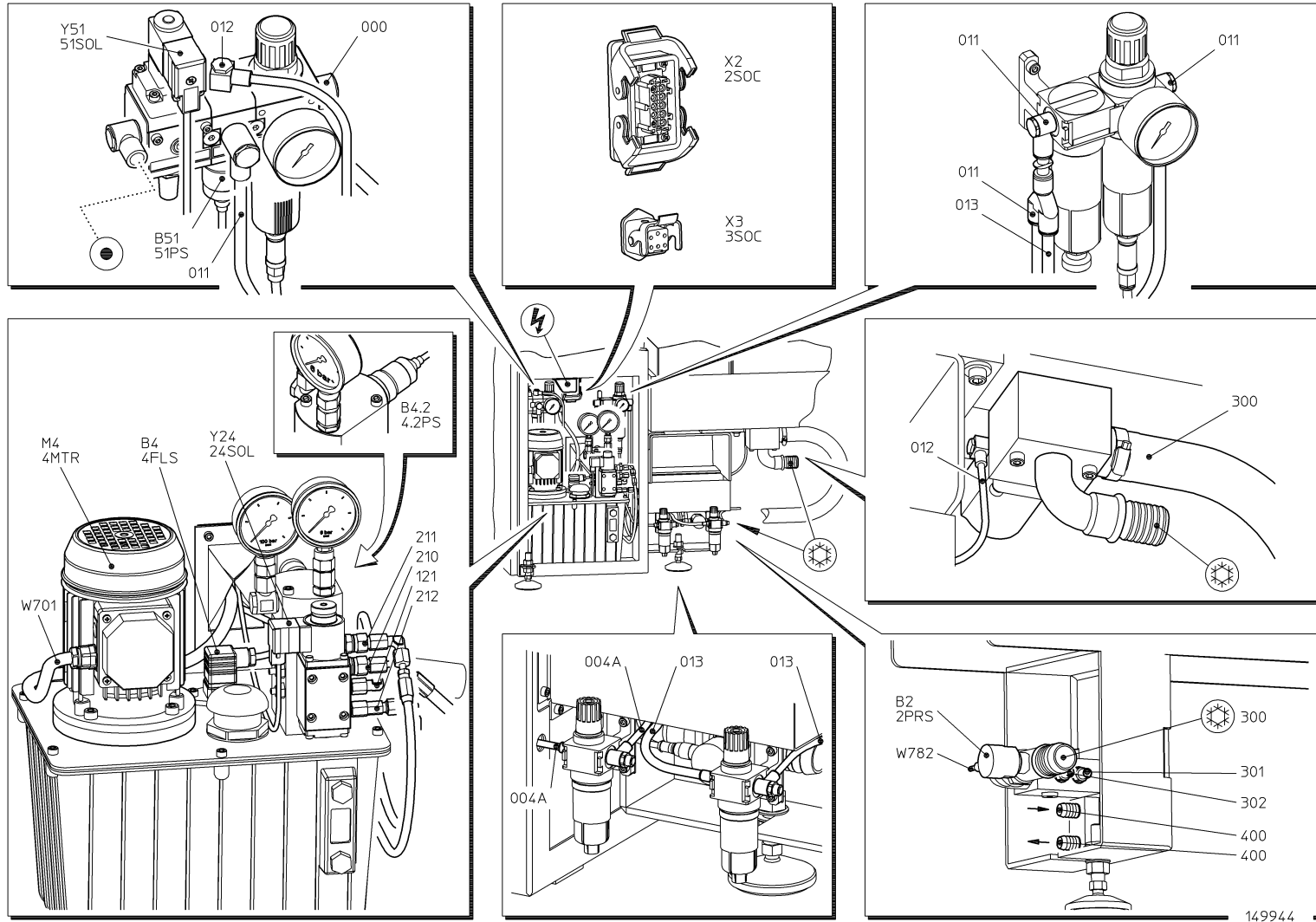
**Universal-Schleifköpfe Poupée porte-meule Universelles Universal wheelheads**

| Bezeichn. / Désign. / Design.<br>Schwenkbereich / Plage de pivotement / Swivelling range | Abbildung / Illustration<br>Illustration   | Max. Abmessungen Werkzeuge<br>Dimensions max. d'outils<br>Max. dimensions of the tools                       |  |                           |
|--|--|--|--|---------------------------|
|  |  | 1  | 2                                      | 3                         |
| <b>R</b><br>+10° / -210°   |   | T1<br>ø450x80<br>ø18"x3"   | T2<br>(Option)<br>ø300x40<br>ø12"x1.5" | -                         |
| <b>RS</b><br>+10° / -210°  |   | -  | T2<br>ø450x80<br>ø18"x3"               | -                         |
| <b>UR</b><br>+10° / -210°  |  | T1<br>ø400x63<br>ø16"x2.5"<br><br>T1<br>(Option)<br>ø400x80<br>ø16"x3"<br>oder/ou/or<br>ø450x63<br>ø18"x2.5" | T2<br>(Option)<br>ø300x40<br>ø12"x1.5" | T3<br>HJN ø80<br>ø3 5/32" |

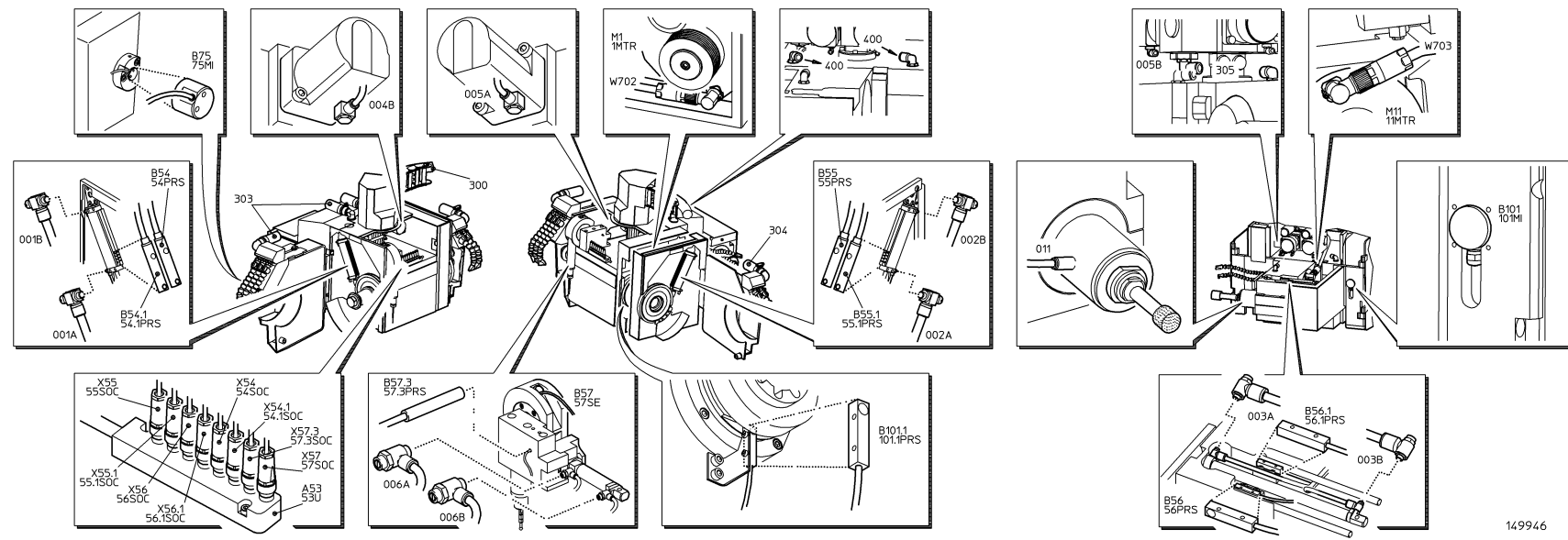
### **3 Übersicht Disposition Arrangement**



**3.1 Energieversorgung Alimentation en énergie Power supply**

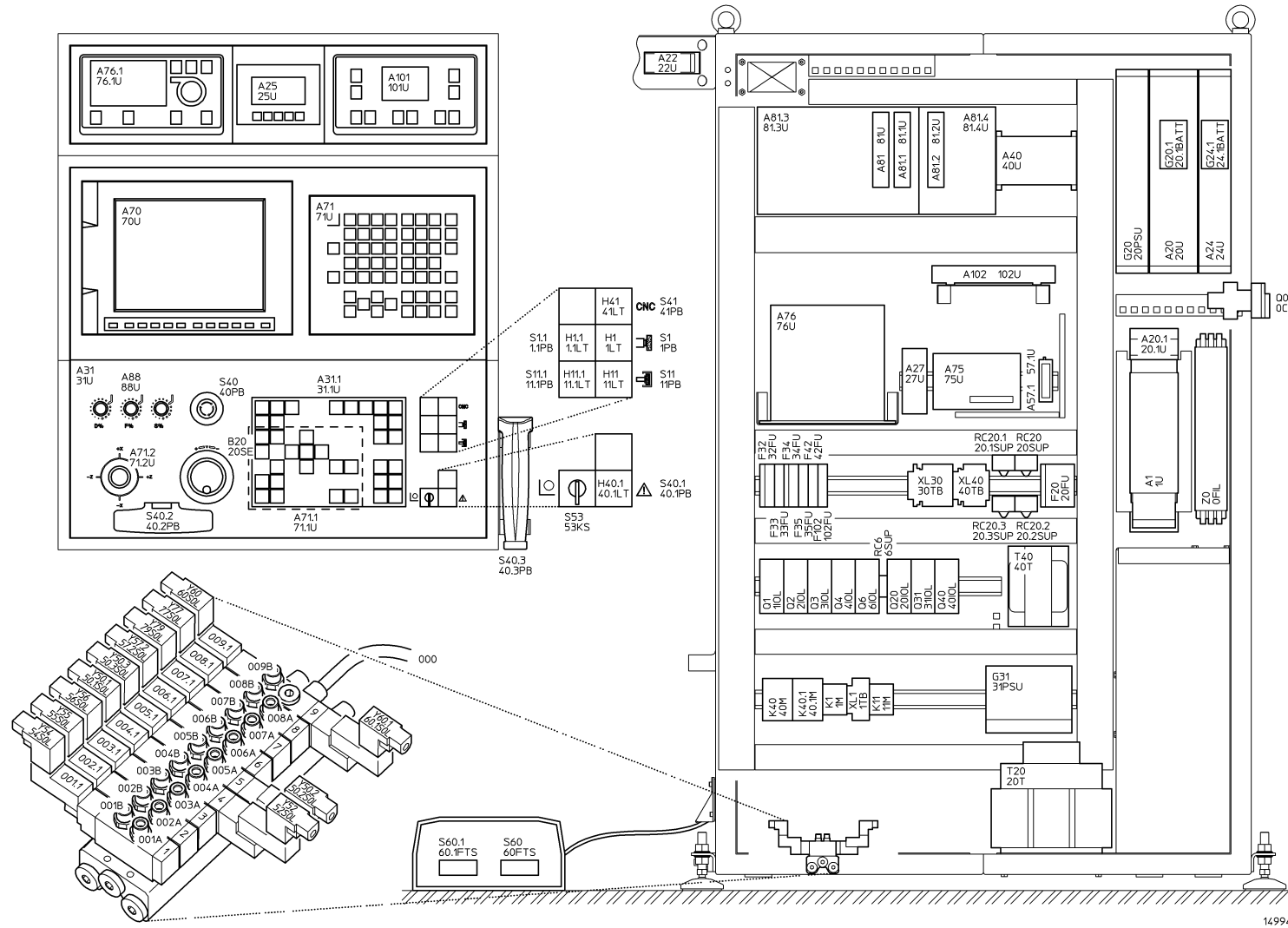


**3.2 Schleifkopf Tête de meule Wheelhead**



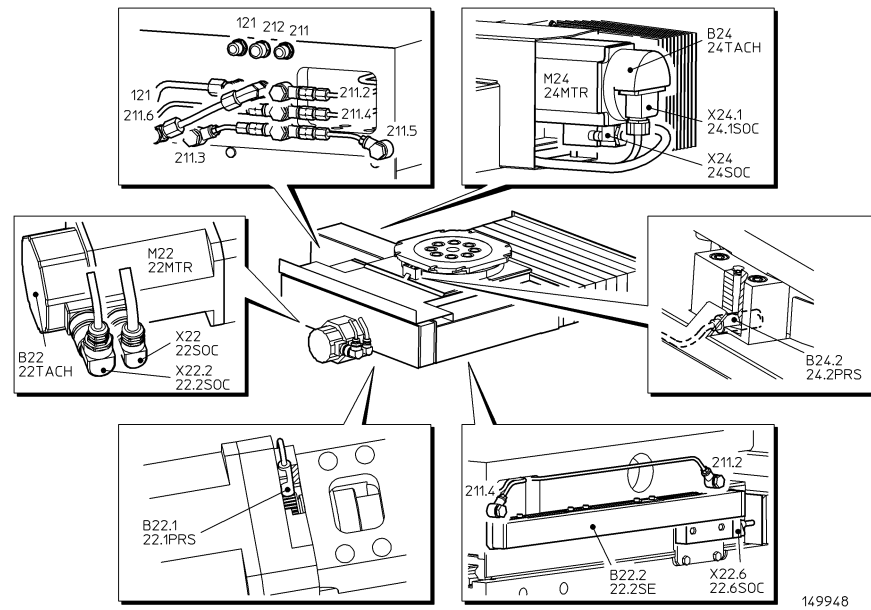
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**3.3 Elektroschrank Armoire électrique Electrics cubicle**

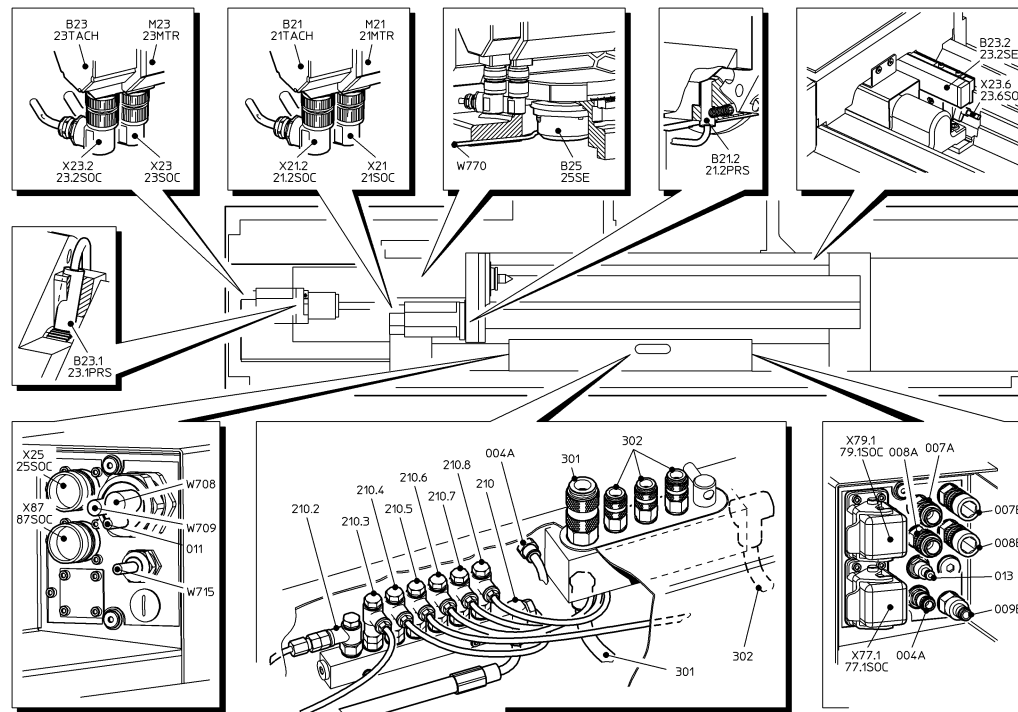


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**3.4 Schleifschlitten Chariot porte-meule Grinding slide**



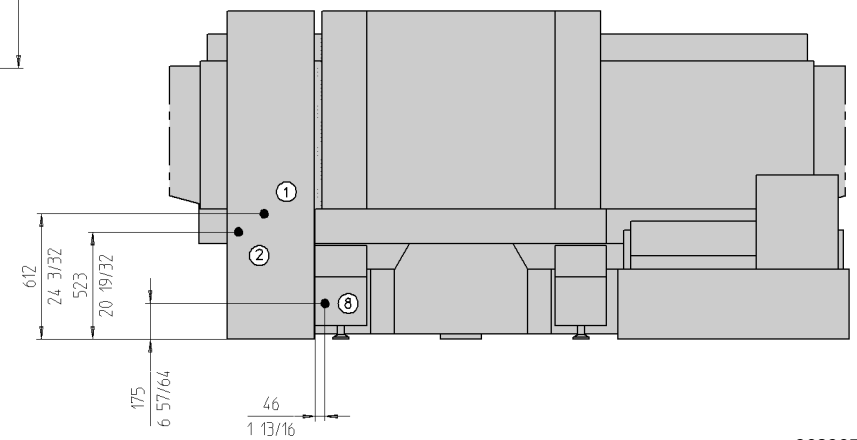
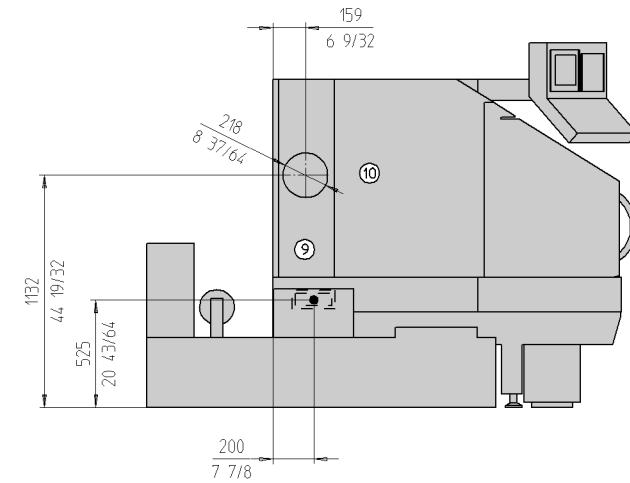
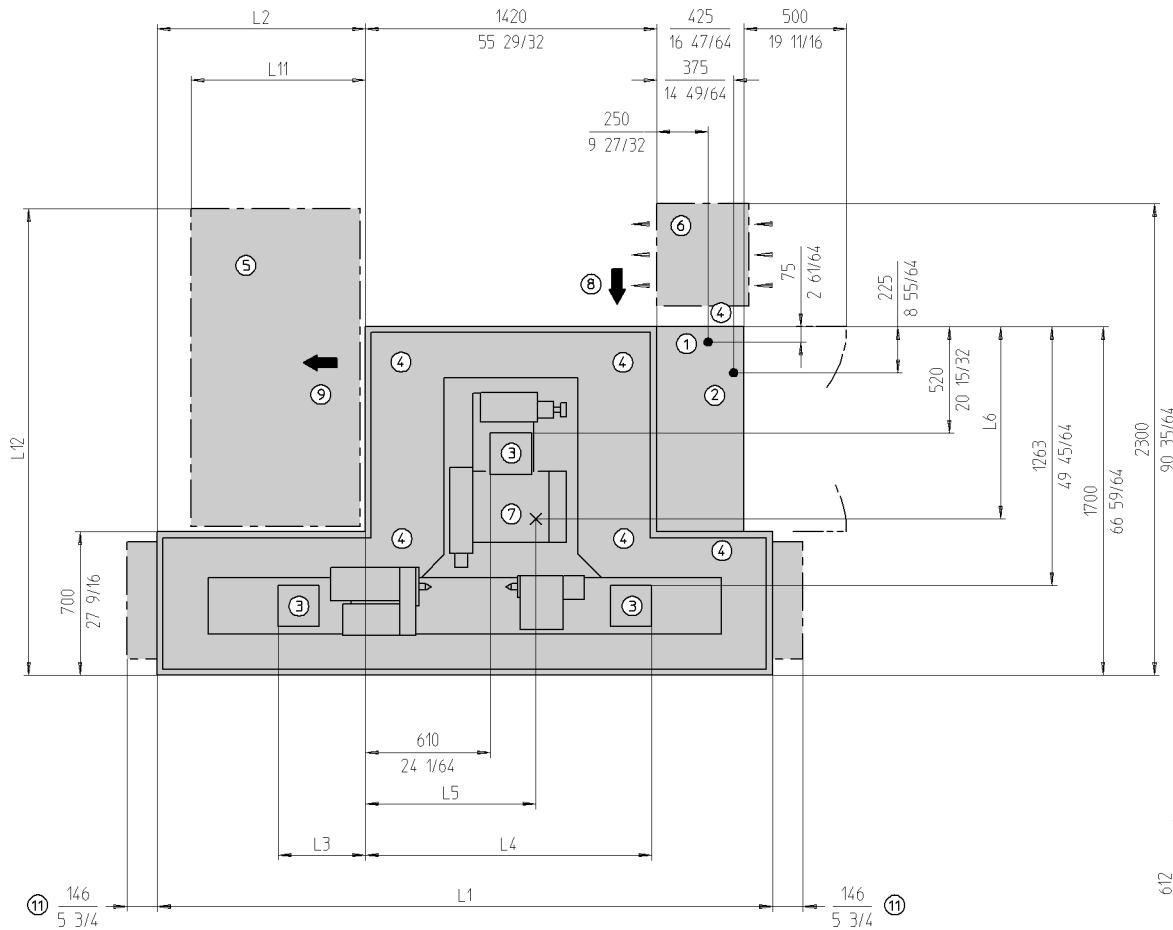
**3.5 Untertisch Table inférieure Lower table**



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## **4    Aufstellungsplan Plan d'implantation Space assignment plan**

**Aufstellungsplan Plan d'implantation Space assignment plan**



293287-1/2

| Legende<br>Légende<br>Legend |  |
|------------------------------|--|
| ①                            | Elektroanschluss<br>Alimentation électrique<br>Electric connection<br>U=3 × 400V, f=50Hz<br>U=3 × 460V, f=60Hz<br>I=25A  |
| ②                            | Pneumatikanschluss<br>Alimentation pneumatique<br>Pneumatic connection<br>p= min. 6bar<br>ca 4m <sup>3</sup> /h<br>Ø10/8mm / G1/4"   |
| ③                            | Schwingungsdämpfende Unterlagen<br>Semelles anti-vibrations<br>Vibration damping bases   |
| ④                            | Maschinenfüsse<br>Pieds de la machine<br>Machine feet  |
| ⑤                            | Kühlschmiermittelanlagen<br>Groupe pour lubrifiant de refroidissement<br>Coolant-lubricant system<br>l= max 6,3A   |
| ⑥                            | Kühlanlage<br>Groupe frigorifique<br>Cooling system  |
| ⑦                            | Maschinenschwerpunkt<br>Centre de gravité de la machine<br>Machine center of mass  |
| ⑧                            | Kühlschmiermittelananschluss<br>Raccordement pour le lubrifiant de refroidissement<br>Coolant-lubricant connection<br>p= max. 3bar / 80l/min<br>1bar / 160l/min<br>Ø36mm / G1" |
| ⑨                            | Kühlschmiermittelausfluss<br>Écoulement du lubrifiant de refroidissement<br>Coolant-lubricant outlet   |
| ⑩                            | Anschluss Schleinebel-Absauganlage<br>Raccordement d'un système d'aspiration du brouillard de liquide d'arrosage<br>Connection of a dust extraction and filtration unit        |
| ⑪                            | Vollverschaltung<br>Capotage complet<br>Fully enclosed cabinet   |

| Kühlschmiermittelanlagen<br>Groupe pour lubrifiant de refroidissement<br>Coolant-lubricant system |                   |                    |
|---|-------------------|--------------------|
|   | L 11              | L 12               |
| Streuli SPB3  | 880<br>34 41/64"  | 2250<br>88 37/64"  |
| Streuli SAM G4-SPB3   | 880<br>34 41/64"  | 2250<br>88 37/64"  |
| Streuli SPB4  | 1180<br>46 29/64" | 2320<br>91 11/32"  |
| Streuli SAM G5-SPB4   | 1180<br>46 29/64" | 2320<br>91 11/32"  |
| Darenth 1030  | 950<br>37 13/32"  | 2370<br>93 5/16"   |
| Darenth 1040  | 950<br>37 13/32"  | 2750<br>108 17/64" |

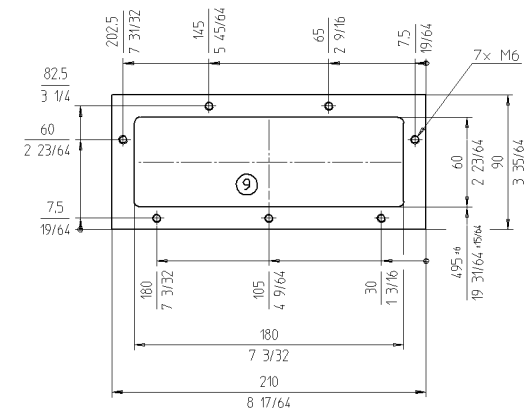
| Spitzenweite<br>Dist. entre pointes<br>Dist. between centers |                   |                   |
|--|-------------------|-------------------|
|  | L 1               | L 2               |
| 600  | 2400<br>94 31/64" | 615<br>24 7/32"   |
| 1000   | 3000<br>118 7/64" | 1015<br>39 61/64" |

| Spitzenweite<br>Dist. entre pointes<br>Dist. between centers |                  |                   |
|--|------------------|-------------------|
|  | L 3              | L 4               |
| 600  | 225<br>8 55/64"  | 1395<br>54 59/64" |
| 1000   | 425<br>16 47/64" | 1395<br>54 59/64" |

| Spitzenweite<br>Dist. entre pointes<br>Dist. between centers |                  |                  |
|--|------------------|------------------|
|  | L 5              | L 6              |
| 600 R / UR   | 856<br>33 45/64" | 880<br>34 41/64" |
| 1000 R / UR  | 794<br>31 17/64" | 938<br>36 59/64" |

ichlwerte (Schlitten-, Tischstellung / Optionen)  
dice (Position du chariot, position de la table / options)  
ecommended settings (carriage and table positioning / options)

| Umgebungsbedingungen<br>Conditions d'environnement<br>Environmental conditions |                                  |                                  |
|--|----------------------------------|----------------------------------|
|  | 600                              | 1000                             |
| Gewicht / Bodenbelastung<br>poids / charge sur sol<br>weight / floor load      | 3000kg /<br>8000N/m <sup>2</sup> | 3500kg /<br>8000N/m <sup>2</sup> |
| max. Raumtemperatur<br>max. température ambiante<br>max. room temperature      | 40°C / 104°F                     |                                  |
| max. Luftfeuchtigkeit<br>max. humidité de l'air<br>max. capacity of air        | 75%                              |                                  |



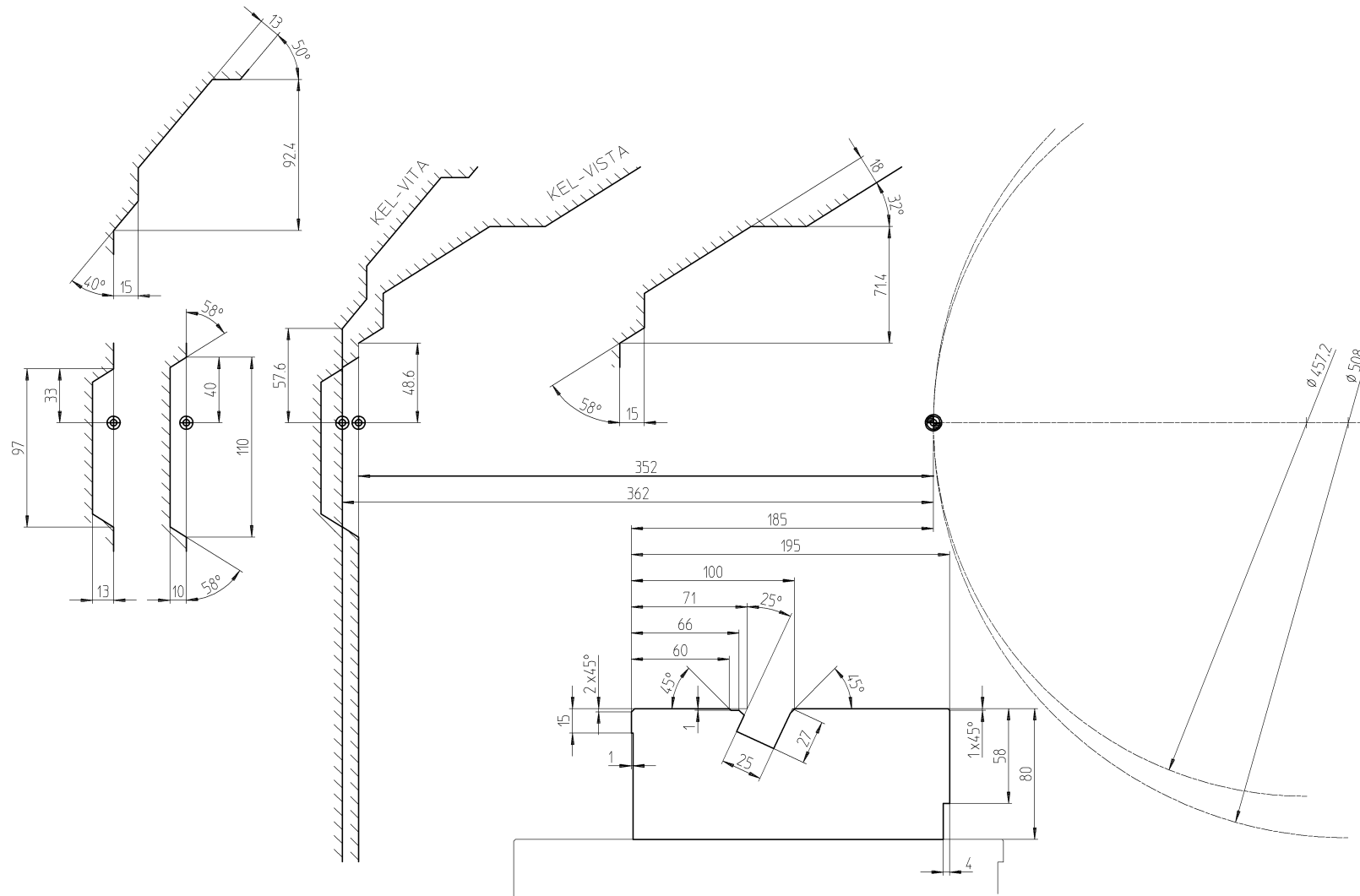


## **5 Anschlussmasse**

### **Dimensions de raccordement**

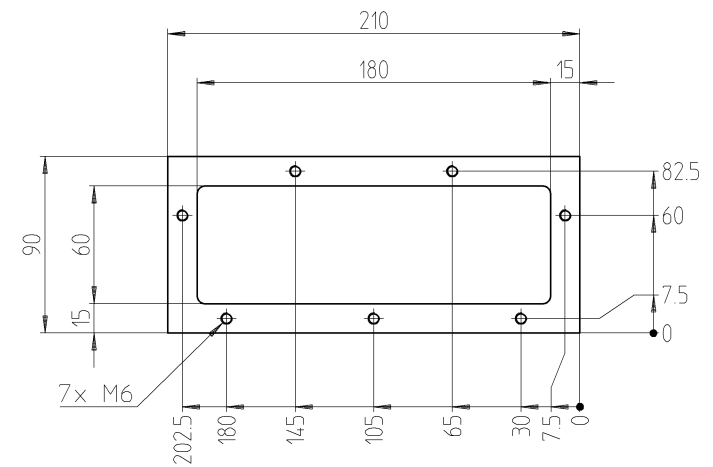
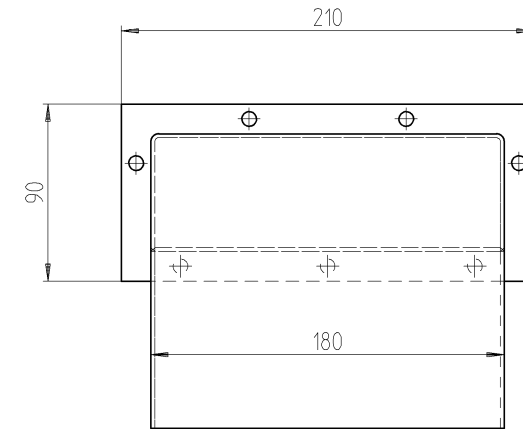
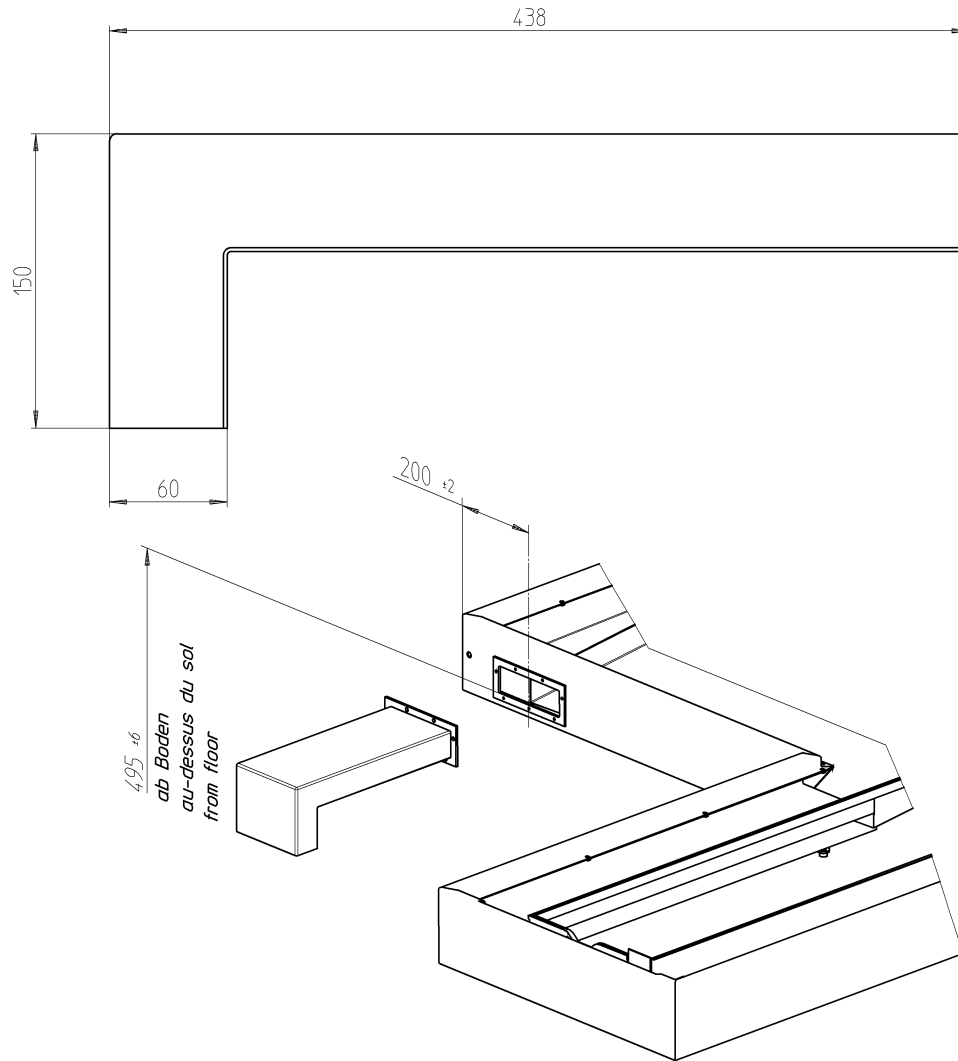
### **Connection sizes**

**Obertischprofil Profile du table supérieure Upper table profile**










**Kühlschmiermittelabfluss    Ecoulement du lubrifiant de refroidissement    Coolant-lubricant outled**




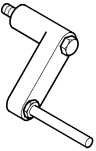









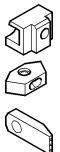


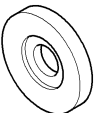



## **6 Normalzubehör**

### **Accessoires standard**

### **Normal accessories**



| Abbildung<br>Illustration<br>Parts  | Teilebezeichnung<br>Désignation des pièces<br>Parts reference  | Ident.-Nr.<br>No. d'ident.<br>ID-no. | Verwendung  | Utilisation   | Purpose  |
|---|--|--------------------------------------|---|---|--|
|    | Gabelschlüsselsatz SW<br>Jeu de clés à fourche, ouvertures<br>Set of open end wrenches, sizes<br>8, 10, 11, 12, 13, 14, 17, 22, 24, 27, 32 | 109709                               | diverse   | divers  | Miscellaneous  |
|   | Gabelschlüssel SW40<br>Clé à fourche, ouverture 40<br>Open end wrench, size 40   | 134897                               | Handspannrohr:<br>Festziehen von Magnetspannfutter oder Flanschroh-<br>ling   | Tube de serrage manuel:<br>Serrage du mandrin magnétique ou de la pièce<br>brute à bride  | Manual collet tube:<br>Tightening magnetic chuck or blank flange   |
|    | Sechskant-Stiftschlüsselsatz SW<br>Jeu de clés mâles, ouvertures<br>Set of Allen keys, sizes<br>3, 4, 5, 6, 7, 8, 8 spec., 10, 12, 14      | 109708                               | diverse   | divers  | Miscellaneous  |
|    | Sechskant-Schraubendreher SW8<br>Clé mâle coudée pour vis à six pans<br>creux SW 8<br>Hexagon screwdriver<br>size 8                        | 107607                               | Tischaufbauten:<br>Befestigung, Festziehen div. Klemmschrauben<br>Hand-Spannrohr:<br>Verstellung des Plananschlages | Ensembles montés sur la table:<br>Fixation, serrage div. vis de serrage<br>Tube de serrage manuel:<br>Ajustage de la butée axiale | Table assemblies:<br>Fastening, tightening various clamping screws<br>Manual collet tube:<br>Adjusting the back stop |
|   | Auswuchtdorn D63<br>Tasseau ø 63<br>Balancing arbor dia. 63  | 105447                               | Statisches Auswuchtgerät:<br>Aufspannen und Auswuchten der Schleifscheibe   | Dispositif d'équilibrage dynamique:<br>Serrage et équilibrage de la meule   | Static balancing stand:<br>Setting and balancing the grinding wheel  |
| Auswuchtdorn D50<br>Tasseau ø 50<br>Balancing arbor dia. 50                         | 105389   |                                      |   |   |  |
|  | Steckschlüssel SW46<br>Clé à pipe, ouverture 46<br>Box wrench, size 46   | 134879                               | Schleifscheibe auf Schleifscheibenflansch:<br>Festziehen der Befestigungsmutter                                     | Meule sur bride porte-meule:<br>Serrage des écrous de fixations   | Grinding wheel on grinding wheel flange:<br>Tightening fastening screw   |
|  | Montagedorn D63<br>Mandrin de montage ø 63<br>Assembly arbor dia. 63   | 134880                               | Schleifscheibe An- oder Abbau:<br>Konuserweiterung an der Schleifspindel  | Montage ou démontage de la meule:<br>Elargissement du cône de la broche porte-meule   | Mounting/Dismantling grinding wheel:<br>Taper adapter  |
|   | Montagedorn D50<br>Mandrin de montage ø 50<br>Assembly arbor dia. 50   | 145714                               |   |   |  |
|  | Abdeckhaube R/UR<br>Couvercle R/UR<br>Cover R/UR   | 145167                               | Schleifen zwischen den Spitzen:<br>Schleifspindelabdeckung bei abmontiertem Berüh-<br>rungsschutz                   | Rectification entre les pointes:<br>Protection de la broche porte-meule en cas du<br>démontage de la chape de protection.         | Grinding between centers:<br>Grinding spindle cover when the contact guard is<br>removed.                            |
|   | Abdeckhaube RS<br>Couvercle RS<br>Cover RS   | 144683                               |   |   |  |

| Abbildung<br>Illustration<br>Parts  | Teilebezeichnung<br>Désignation des pièces<br>Parts reference   | Ident.-Nr.<br>No. d'ident.<br>ID-no. | Verwendung  | Utilisation  | Purpose  |
|---|---|--------------------------------------|---|--|--|
|    | Abzugsschlüssel<br>Clé d'extraction<br>Extraction wrench  | 130134                               | Schleifscheibe:<br>Abziehen vom Schleifscheibenflansch  | Meule:<br>Extraction de la broche porte-meule  | Grinding wheel:<br>Removing grinding wheel flange  |
|    | Reduktionshülse MK5 / MK4<br>Manchon de réduction CM5 / CM4<br>Reduction sleeve MT5 / MT4                     | 156686                               | Werkstückspindelstock:<br>Reduktion der Konusaufnahme   | Poupée porte-pièce:<br>Réduction du cône   | Workhead:<br>Reduction of taper support  |
|    | Montagering<br>Anneau de montage<br>Assembly ring   | 133022                               | Werkstückspindelstock:<br>- Riemenwechsel Werkstückspindel Antrieb<br>- Ausrichtlehre für die Schwenkposition | Poupée porte-pièce standard:<br>- Changer la courroie, commande de la broche<br>- Jauge pour la position de pivotement | Workhead standard:<br>- Belt change, workspindle drive<br>- Aligning gauge for swivel position |
|    | Mitnehmer<br>Taquet<br>Driver   | 134330                               | Werkstückspindelstock:<br>Werkstück-Mitnehmer   | Poupée porte-pièce:<br>Toc d'entraînement  | Workhead:<br>Workpiece driving dogs  |
|    | Konuswischer MK4<br>Essuie-cône CM4<br>Taper wiper MT4  | 107104                               | Reitstock:<br>Reinigung der Konusaufnahme   | Contre-poupée:<br>Nettoyage du support du cône   | Tailstock:<br>Cleaning taper support   |
|   | Konuswischer MK5<br>Essuie-cône CM5<br>Taper wiper MT5  | 110676                               | Werkstückspindelstock:<br>Reinigung der Konusaufnahme   | Poupée porte-pièce:<br>Nettoyage du support du cône  | Workhead:<br>Cleaning taper support  |
|  | Zentrierspitze MK4, Vollspitze<br>Pointe de centrage CM4, Pointe complète<br>Locating center MT4, Full center | 106985                               | Reitstock<br>Werkstückspindelstock  | Contre-poupée<br>Poupée porte-pièce  | Tailstock<br>Workhead  |
|  | Zentrierspitze MK4, Halbspitze<br>Pointe de centrage CM4, Demi-pointe<br>Locating center MT4 Half center      | 107107                               | Reitstock   | Contre-poupée  | Tailstock  |
|  | Ausstosstange SW8<br>Tige d'éjection 8<br>Ejector rod size 8  | 139264                               | Reitstock:<br>- Zentrierspitze austossen<br>- Spitzendruck einstellen   | Contre-poupée:<br>- Ejecter la pointe de centrage<br>- réglage de la pression de la pointe                             | Tailstock:<br>- Ejecting the center sleeve<br>- Setting the center pressure                    |
|  | Schwingungsdämpfende Unterlagen<br>Semelles anti-vibrations<br>Damping bases                                  | 132921                               | Nivellieren der Maschine  | Mise à niveau de la machine  | Leveling the machine   |

| Abbildung<br>Illustration<br>Parts  | Teilebezeichnung<br>Désignation des pièces<br>Parts reference  | Ident.-Nr.<br>No. d'ident.<br>ID-no. | Verwendung   | Utilisation  | Purpose   |
|---|--|--------------------------------------|--|--|---|
|    | Schlüssel-Verlängerung<br>Prolongation de la clé<br>Wrench extension   | 145729                               | Schwingungsdämpfende Unterlagen:<br>Nivellieren der Maschine   | Semelles anti-vibrations:<br>Mise à niveau de la machine   | Damping bases:<br>Leveling the machine  |
|    | Diamanthalter mit Diamantfliese MKD<br>Porte-diamant avec carreau diamanté MKD<br>Diamond holder with diamond fliese MKD | 145562                               | Abrichten  | Dressage   | Dressing  |
|    | Kühlung Abrichten<br>Refroidissement dressage<br>Dressing cooling system   | 160857                               | Kühlung der Abrichtdiamanten;<br>Montage an der Aufnahmeplatte   | Refroidissement des diamants de dressage;<br>montage sur la plaque de réception  | Cooling system for the dressing diamond;<br>installation on the adapter plate   |
|    | Schleifscheibenflansch<br>Flasques porte-meule<br>Grinding wheel flanges   | *                                    | Aufspannen der Schleifscheiben   | Fixation des meules  | Mounting grinding wheel   |
|    | Schleifscheibe<br>Meule de rectification<br>Grinding wheel   | *                                    |  |  |   |
|   | Hand-Spannrohr<br>Tube de serrage manuel<br>Manual collet tube   | 156695                               | Spannzangenbetätigung<br>Befestigung Permanent-Magnetspannfutter<br>Befestigung Flanschrohling<br>Plananschlag für alle Hand-Spannmittel<br>Kühlschmiermittelzuleitung für alle Hand-Spannmittel | Utilisation des pinces. Fixation pour :<br>- mandrin magnétique à aimant permanent<br>- pièce brute à bride<br>Butée axiale pour tous les moyens de serrage manuels<br>Amenée du lubrifiant de refroidissement pour tous les moyens de serrage manuels | Actuating the spring collet<br>Attaching the permanent magnet chuck<br>Attaching the blank flange<br>Back stop for all manual work-holding fixtures<br>Coolant-lubricant supply line for all manual work-holding fixtures |
|  | Gabelschlüssel SW34<br>Clé à fourche, ouverture 34<br>Open end wrench, size 34   | 150751                               | Schnellspaneinrichtung:<br>Ein- und Ausbau der Zugstange   | Pince de serrage rapide:<br>Montage et démontage de la barre de traction   | Quick-action collet chucking attachment:<br>Fitting and removing the manual draw bar  |
|  | Schild Korrekturdiagramm<br>Panneau Diagramme de correction<br>Plate with correction diagrams                            | 145765                               | Obertischschwenkung  | Valeurs pour le pivotement de la table supérieure  | Upper table swivel  |

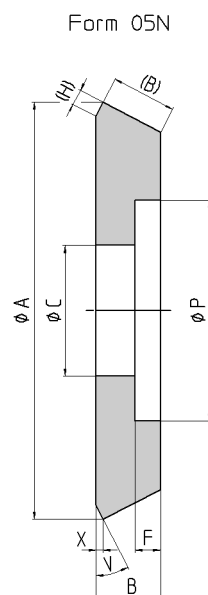
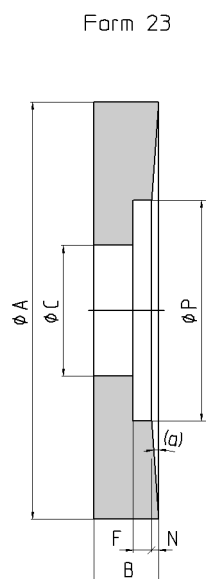


Entsprechend der Zusatzausrüstung wird folgendes Zubehör mitgeliefert:  
 Les accessoires suivants sont livrés avec l'équipement complémentaire:  
 The following accessories are supplied according to the auxiliary equipment:

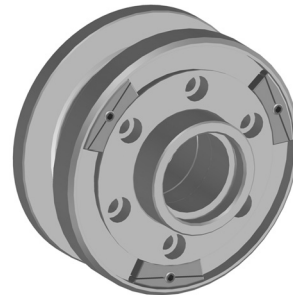
| Abbildung<br>Illustration<br>Parts   | Teilebezeichnung<br>Désignation des pièces<br>Parts reference  | Ident.-Nr.<br>No. d'ident.<br>ID-no. | Verwendung   | Utilisation  | Purpose   |
|--|--|--------------------------------------|--|--|---|
|  | Schild Wertetabelle zu Sinuslineal<br>Tableau des valeurs pour la règle sinus<br>Sign value table for sine bar | 108975                               | Werkstückspindelstock<br>Korrekturwerte für Winkel-Feinverstellung | Poupée porte-pièce<br>Valeurs de correction pour l'ajustage fin de l'angle | Workhead<br>Adjustment values for the fine angle adjustment |
|  | Druck-Prüfgerät<br>Contrôleur de pression<br>Pressure testing apparatus  | 144934                               | Innenschleifspindel HJN:<br>Einstellung Sperrluft                  | Broche de rectification intérieure HJN:<br>Ajustage air de serrage         | I.D. grinding spindle HJN:<br>Adjustment airlock            |

- \* der Maschinenausrüstung entsprechend
- \* selon l'équipement de la machine
- \* depending on the machine equipment

## 6.1 Schleifscheiben Meules de rectification Grinding wheels



| Schleifscheibe<br>Meule de rectification<br>Grinding wheel            | Form | Bezeichnung<br>Désignation<br>Designation | P                                      | F            | N           | a     | V     | X           | H              | IDNR   |
|---|------|---|--|--------------|-------------|-------|-------|-------------|----------------|--------|
| A x B x C   |      |   | mm / in                                |              |             |       |       | mm / in     |                |        |
| $\phi 300 \times 40 \times 127$<br>$\phi 12" \times 1.5" \times 5"$   | 23   | 38A60-KVS                                 | $\phi 185$<br>$\phi 7 \frac{9}{32}"$   | 10<br>25/64" | 5<br>13/64" | 4,97° | -     | -           | -              | 109809 |
| $\phi 400 \times 63 \times 127$<br>$\phi 16" \times 2.5" \times 5"$   | 23   | 19A60-KVS                                 | $\phi 215$<br>$\phi 8 \frac{15}{32}"$  | 18<br>45/64" | 7<br>9/32"  | 4,33° | -     | -           | -              | 109805 |
| $\phi 400 \times 80 \times 127$<br>$\phi 16" \times 3" \times 5"$     | 23   | 23A60-JVBE                                |  | 25<br>63/64" |             |       |       |             |                | 163607 |
| $\phi 450 \times 63 \times 203.5$<br>$\phi 18" \times 2.5" \times 8"$ | 23   | 38A60-JVS                                 | $\phi 290$<br>$\phi 11 \frac{27}{64}"$ | 17<br>43/64" | 8<br>5/16"  | 5,44° | -     | -           | -              | 152739 |
| $\phi 450 \times 80 \times 203.2$<br>$\phi 18" \times 3" \times 8"$   | 23   |   |  | 142519       |             |       |       |             |                |        |
| $\phi 450 \times 80 \times 203.2$<br>$\phi 18" \times 3" \times 8"$   | 05N  | 38A60-JVS                                 | $\phi 290$<br>$\phi 11 \frac{27}{64}"$ | 25<br>63/64" | -           | -     | 27.5° | 9<br>23/64" | 19.6<br>49/64" | 145520 |

**6.2 Schleifscheibenflansche Flasques porte-meule Grinding wheel flanges**


6900062

| Aufnahmedurchmesser (f7)<br>Diamètre du logement (f7)<br>Diameter of work-holder (f7) | Max. Schleifscheiben-Aussendurchmesser<br>Diamètre maximale de la meule extérieure<br>Max. diameter of O.D.-grinding wheel | Spannbreite<br>Largeur de serrage<br>Clamping range | Max. Schleifscheibenbreite<br>Largeur maximale de la meule<br>Max. width of grinding wheel | Aufnahmekonus-Durchmesser<br>Diamètre du cône<br>Holding cone diameter | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|---|--|---|--|--|--------------------------------------|
| 127 mm<br>5"  | 400 mm<br>16"  | 22 ... 63 mm<br>55/64"... 2 31/64"                  | 63 mm<br>2 1/2"  | 63 mm<br>2 1/2"  | 10600.03                             |
| 203.2 mm<br>8"  | 450 mm<br>18"  | 25 ... 80 mm<br>1" ... 3 10/64"                     | 80 mm<br>3"  | 63 mm<br>2 1/2"  | 10600.05                             |
| 127 mm<br>5"  | 300 mm<br>12"  | 18 ... 48 mm<br>2/3" ... 1 1/2"                     | 48 mm<br>1 1/2"  | 50 mm<br>2"  | 10600.06                             |

## **7 Verschleissteile Pièces d'usure Wearing parts**

| Position<br>Rep.<br>Item | Bezeichnung       | Désignation                | Designation of part   | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-------------------|----------------------------|-----------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 042394                   | STERNGRIF         | POIGNÉE                    | STAR HANDLE           |                                      | M8 / 40 X 30                          | 042394                               |
| 042396                   | STERNGRIF         | POIGNÉE                    | STAR HANDLE           |                                      |                                       | 042396                               |
| 100562                   | DRUCKFEDER        | RESSORT DE PRESSION        | PRESSURE SPRING       |                                      | 0.4 X 4.8 X 10                        | 100562                               |
| 100619                   | DRUCKFEDER        | RESSORT DE PRESSION        | PRESSURE SPRING       |                                      | 4.0 X 29 X 237                        | 100619                               |
| 100788                   | DICHTRING         | BAGUE D'ÉTANCHÉITÉ         | GASKET                |                                      | 8.2/12 X 1                            | 100788                               |
| 100789                   | DICHTRING         | BAGUE D'ÉTANCHÉITÉ         | GASKET                |                                      | 10.2/14 X 1                           | 100789                               |
| 100791                   | DICHTRING         | BAGUE D'ÉTANCHÉITÉ         | GASKET                |                                      | 14.3/18 X 1.5                         | 100791                               |
| 100816                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 70 X 2.5                              | 100816                               |
| 100876                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 5 X 1.5                               | 100876                               |
| 100877                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 5 X 2.5                               | 100877                               |
| 100879                   | O-RING            | JOINT TORIQUE              | TORIDAL SEALING RING  |                                      | 6 X 2                                 | 100879                               |
| 100886                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 12 X 2.0                              | 100886                               |
| 100888                   | O-RING            | JOINT TORIQUE              | TORIDAL SEALING RING  |                                      | 14 X 2                                | 100888                               |
| 100902                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 22 X 2.0                              | 100902                               |
| 100909                   | O-RING            | JOINT TORIQUE              | TORIDAL SEALING RING  |                                      | 26 X 2.0                              | 100909                               |
| 100915                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 32 X 2.0                              | 100915                               |
| 100921                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 45 X 2.0                              | 100921                               |
| 100924                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 54 X 3.0                              | 100924                               |
| 100929                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 65 X 3.0                              | 100929                               |
| 100931                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 70 X 2.0                              | 100931                               |
| 103169                   | A-RING            | BAGUE EXTÉRIEURE           | OUTER-RING            |                                      | 55 X 68 X 20 11-P5                    | 103169                               |
| 103858                   | BUNDMUTTER        | ECROU A EMBASE             | FLANGED NUT           |                                      |                                       | 103858                               |
| 104511                   | BACKEN            | MORS                       | JAWS                  |                                      |                                       | 104511                               |
| 104514                   | GEWINDESPINDEL    | BROCHE FILETÉE             | ADJUSTING BOLT        |                                      |                                       | 104514                               |
| 104515                   | GEWINDESPINDEL    | BROCHE FILETÉE             | ADJUSTING BOLT        |                                      |                                       | 104515                               |
| 104583                   | BACKEN            | MORS                       | JAWS                  |                                      |                                       | 104583                               |
| 105045                   | O-RING            | JOINT TORIQUE              | TOROIDAL SEALING RING |                                      | 21 X 2.0                              | 105045                               |
| 105108                   | V-RING            | JOINT TRAPÉZOÏDALE         | V-RING SEAL           |                                      | V- 145                                | 105108                               |
| 105203                   | NADELKÄFIG        | CAGE È AIGUILLES           | NEEDLE CAGE           |                                      | AXK 1024                              | 105203                               |
| 105205                   | NADELKÄFIG        | CAGE È AIGUILLES           | NEEDLE CAGE           |                                      | AXK 1730                              | 105205                               |
| 105210                   | AXIAL-LAGERSCHALE | DISQUE DE PALIER AXIAL     | WASHER                |                                      | AS 1024                               | 105210                               |
| 105212                   | AXIAL-LAGERSCHALE | DISQUE DE PALIER AXIAL     | WASHER                |                                      | AS 1730                               | 105212                               |
| 105320                   | O-RING            | JOINT TORIQUE              | TORIDAL SEALING RING  |                                      | 30 X 2.5                              | 105320                               |
| 106486                   | NADELKRANZ        | CAGE DE PALIER À AIGUILLES | NEEDLE RING           |                                      | K 55 X 60 X 20                        | 106486                               |
| 107603                   | DRUCKFEDER        | RESSORT DE PRESSION        | PRESSURE SPRING       |                                      | 1.25 X 19                             | 107603                               |
| 107608                   | DRUCKFEDER        | RESSORT DE PRESSION        | PRESSURE SPRING       |                                      | 1.6 X 19.8 X 44                       | 107608                               |
| 107609                   | ZENTRIERSPITZE    | POINTE DE CENTRAGE         | CENTER SLEEVE         |                                      | MK1 L80                               | 107609                               |

| Position<br>Rep.<br>Item | Bezeichnung                                | Désignation  | Designation of part                           | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|--|--|---|--------------------------------------|---------------------------------------|--------------------------------------|
| 107610                   | ZENTRIERSPITZE                             | POINTE DE CENTRAGE   | CENTER SLEEVE                                 |                                      | MK1 L80                               | 107610                               |
| 109264                   | O-RING                                     | JOINT TORIQUE  | TORIDAL SEALING RING                          |                                      | 35 X 2.0                              | 109264                               |
| 109266                   | BOLZEN                                     | BOULON   | BOLT  |                                      |                                       | 109266                               |
| 109268                   | BOLZEN                                     | BOULON   | BOLT  |                                      |                                       | 109268                               |
| 109270                   | DRUCKFEDER                                 | RESSORT DE PRESSION  | PRESSURE SPRING                               |                                      | 0.8 X 10 X 20                         | 109270                               |
| 110647                   | O-RING                                     | JOINT TORIQUE  | TOROIDAL SEALING RING                         |                                      | 36 X 3.0                              | 110647                               |
| 110724                   | O-RING                                     | JOINT TORIQUE  | TOROIDAL SEALING RING                         |                                      | 9 X 2.0                               | 110724                               |
| 110846                   | DRUCKFEDER                                 | RESSORT DE PRESSION  | PRESSURE SPRING                               |                                      | 0.45 X 6.6 X 23                       | 110846                               |
| 111614                   | BACKEN                                     | MORS   | JAWS  |                                      |                                       | 111614                               |
| 111615                   | BACKEN                                     | MORS   | JAWS  |                                      |                                       | 111615                               |
| 111794                   | O-RING                                     | JOINT TORIQUE  | TOROIDAL SEALING RING                         |                                      | 1.5 X 10                              | 111794                               |
| 112521                   | RILLENKUGELLAGER                           | ROULEMENT À BILLES   | BALL BEARING                                  |                                      | 25/52 X 15 6205-2RS                   | 112521                               |
| 113116                   | EINSCHRAUBDROSSEL                          | SOUPAPE D'ÉTRANGLEMENT                                     | SCREW TYPE THROTT                             |                                      | VD4-99                                | 113116                               |
| 114188                   | BUNDMUTTER                                 | ECROU A EMBASE   | FLANGED NUT                                   |                                      |                                       | 114188                               |
| 114755                   | O-RING                                     | JOINT TORIQUE  | TORIDAL SEALING RING                          |                                      | 22 X 2.5                              | 114755                               |
| 115161                   | FLÜSSIGKEITSANZEIGE                        | VERRE REGARD DU NIVEAU D'HUILE                             | OIL-LEVEL INDICATOR                           |                                      | FSA76.1.11/12                         | 115161                               |
| 115484                   | MESSTASTER                                 | PALPEUR  | MEASURING PIN                                 |                                      | C25                                   | 115484                               |
| 117770                   | KOLBENDICHTUNG                             | BAGUE D'ÉTANCHÉITÉ   | PISTON PACKING                                |                                      | KDS 20-015                            | 117770                               |
| 117771                   | O-RING                                     | JOINT TORIQUE  | TORIDAL SEALING RING                          |                                      | 16 X 2.0                              | 117771                               |
| 118131                   | DICHTRING                                  | BAGUE D'ÉTANCHÉITÉ   | GASKET  |                                      | SD 40 X 52 X 5                        | 118131                               |
| 118202                   | MANOMETER                                  | MANOMÈTRE  | MANOMETER                                     |                                      | NG63 0-100BAR                         | 118202                               |
| 118510                   | V-RING                                     | JOINT TRAPÉZOÏDAL  | V- SEALING RING                               |                                      | VL-0300                               | 118510                               |
| 119964                   | NUTSTEIN                                   | COULISSEAU   | SLIDING BLOCK                                 |                                      |                                       | 119964                               |
| 121738                   | INITIATOR                                  | PREPARATEUR  | INITIATOR                                     |                                      | IFRM 06P1788/PL                       | 121738                               |
| 121862                   | O-RING                                     | JOINT TORIQUE  | TOROIDAL SEALING RING                         |                                      | 50 X 2.0                              | 121862                               |
| 122059                   | DICHTRING                                  | BAGUE D'ÉTANCHÉITÉ   | GASKET  |                                      | RA 080-1/8"                           | 122059                               |
| 122522                   | NUTDICHTUNG                                | JOINT  | SEAL  |                                      |                                       | 122522                               |
| 122889                   | O-RING                                     | JOINT TORIQUE  | TOROIDAL SEALING RING                         |                                      | 34 X 3.0                              | 122889                               |
| 124036                   | RILLENKUGELLAGER                           | ROULEMENT À BILLES   | BALL BEARING                                  |                                      | 8/22 X 7 608-2RSR                     | 124036                               |
| 124431                   | STANGENDICHTUNG                            | BAGUE D'ÉTANCHÉITÉ   | BAR PACKING                                   |                                      | SDS 20X2                              | 124431                               |
| 124917                   | O-RING                                     | JOINT TORIQUE  | TOROIDAL SEALING RING                         |                                      | 120.32 X 2.62                         | 124917                               |
| 130129                   | FILTERELEMENT                              | FILTRE IMMÉRGÉ   | FILTER ELEMENT                                |                                      | 0030 D 010 BN                         | 130129                               |
| 130430                   | SCHWIMMERSCHALTER                          | INTERRUPTEUR À FLOTTEUR                                    | FLOATING SWITCH                               |                                      | AFMS-L165-SB                          | 130430                               |
| 130475                   | EINFÜLL- UND BELÜFTUNGSFILTER              | FILTRE DE REMPLISSAGE ET D'AÉRATION                        | FILLING AND VENTILATION FILTER                |                                      | SES1-S                                | 130475                               |
| 130542                   | ZWISCHENPLATTE                             | SEMELLE DE REHAUSSE  | RAISING BLOCK                                 |                                      | 50MM                                  | 130542                               |
| 131051                   | REITSTOCKPINOLE<br>(OHNE MIKROVERSTELLUNG) | FOURREAU DE CONTRE-POUPÉE<br>(SANS AJUSTAGE MICROMÉTRIQUE) | TAILSTOCK SLEEVE<br>(WITHOUT MICRO CORRECTOR) |                                      | MK4 L = 317                           | 131051                               |

| Position<br>Rep.<br>Item | Bezeichnung                | Désignation                             | Designation of part              | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|----------------------------|---|----------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 131059                   | BÜCHSE                     | COUSSINET                               | BEARING BUSH                     |                                      |                                       | 131059                               |
| 131061                   | KUGELKÄFIG                 | CAGE À BILLETS                          | BALL BEARING CAGE                |                                      | 50 / 58 X 45                          | 131061                               |
| 131661                   | DICHTPROFIL                | PROFILÉ D'ÉTANCHÉITÉ                    | SEALING PROFILE                  |                                      | 445 852                               | 131661                               |
| 131665                   | LAMELLENRING               | JOINT                                   | SEAL RING                        |                                      | FK6 ISD 125/6/2                       | 131665                               |
| 131666                   | LAMELLENRING               | JOINT                                   | SEAL RING                        |                                      | FK6 ISD 160/7/2                       | 131666                               |
| 131678                   | MANOMETER                  | MANOMÈTRE                               | MANOMETER                        |                                      | NG63 0-6BAR                           | 131678                               |
| 132016                   | AXIAL-SCHRÄGKUGELLAGERPAAR | ROULEMENT À BILLES À DISPOSITION OLIQUE | AXIAL ANGULAR BALL BEARING       |                                      | BSD 3062 C/DBB                        | 132016                               |
| 132024                   | SPINDEL                    | BROCHE                                  | SPINDLE                          |                                      |                                       | 132024                               |
| 132029                   | FLANSCHBÜCHSE              | DOUILLE À BRIDE                         | FLANGED BUSH                     |                                      | 8 X 12 X 10                           | 132029                               |
| 132030                   | FLANSCHBÜCHSE              | DOUILLE À BRIDE                         | FLANGED BUSH                     |                                      | 12 X 18 X 12                          | 132030                               |
| 132303                   | FÜHRUNGSRÖLLE              | ROULEAU DE GUIDAGE                      | GUIDE PULLEY                     |                                      |                                       | 132303                               |
| 132378                   | O-RING                     | JOINT TORIQUE                           | TORIDAL SEALING RING             |                                      | 50 X 1.5                              | 132378                               |
| 132388                   | O-RING                     | JOINT TORIQUE                           | TOROIDAL SEALING RING            |                                      | 48 X 2.0                              | 132388                               |
| 132428                   | ZAHNRING HIRTH             | DEMI-ACCOUPEMENT AVEC DENTURE DU HIRTH  | COUPLING HALF WITH HIRTH-TOOTHED |                                      | 300-250-144-1.67-15                   | 132428                               |
| 132511                   | KLEMMSCHRAUBE              | VIS DE SERRAGE                          | CLAMPING SCREW                   |                                      |                                       | 132511                               |
| 133112                   | SPANNROLLE                 | POULIE DE TENSION                       | TENSION PULLEY                   |                                      |                                       | 133112                               |
| 133122                   | RILLENKUGELLAGER           | ROULEMENT À BILLES                      | BALL BEARING                     |                                      | 35/62 X 14 6007.C3                    | 133122                               |
| 133212                   | EINSCHRAUBDROSSEL          | SOUPAPE D'ÉTRANGLEMENT                  | SCREW TYPE THROTT                |                                      | VD1-107                               | 133212                               |
| 133711                   | O-RING                     | JOINT TORIQUE                           | TOROIDAL SEALING RING            |                                      | 185 X 2.0                             | 133711                               |
| 133712                   | O-RING                     | JOINT TORIQUE                           | TOROIDAL SEALING RING            |                                      | 120 X 2.0                             | 133712                               |
| 133714                   | O-RING                     | JOINT TORIQUE                           | TOROIDAL SEALING RING            |                                      | 180 X 2.0                             | 133714                               |
| 133738                   | O-RING                     | JOINT TORIQUE                           | TORIDAL SEALING RING             |                                      | 145 X 2.5                             | 133738                               |
| 133739                   | O-RING                     | JOINT TORIQUE                           | TORIDAL SEALING RING             |                                      | 140 X 2.0                             | 133739                               |
| 133852                   | RUNDZYLINDER               | CYLINDRE ROND                           | ROUND CYLINDER                   |                                      | D16-HUB198 ISO 6432                   | 133852                               |
| 133859                   | LINEARKUGELLAGER           | ROULEMENT A BILLES LINEAIRE             | LINEAR BALL BEARING              |                                      | KH1026PP RR                           | 133859                               |
| 133954                   | RUNDZYLINDER               | CYLINDRE ROND                           | ROUND CYLINDER                   |                                      | D25-HUB50 ISO 6432                    | 133954                               |
| 133958                   | DROSSELRÜCKSCHLAGVENTIL    | SOUPAPE D'ÉTRANGLEMENT                  | ONE-WAY RESTRICTOR THREAD        |                                      | R1-8"                                 | 133958                               |
| 134325                   | POSITIONIERSTEIN           | TENON                                   | TENON                            |                                      | DIN 55027-5 X 15.9                    | 134325                               |
| 134889                   | O-RING                     | JOINT TORIQUE                           | TORIDAL SEALING RING             |                                      | 3.5 X 1.5                             | 134889                               |
| 138336                   | KOLBENSTANGENDICHTUNG      | GARNITURE DE LA TIGE DE PISTON          | PISTON ROD GLAND                 |                                      | SDS 12-015                            | 138336                               |
| 138337                   | SCHMUTZABSTREIFER          | RACLEUR D'IMPURETES                     | DIRT SCRAPER                     |                                      | P7                                    | 138337                               |
| 138339                   | O-RING                     | JOINT TORIQUE                           | TORIDAL SEALING RING             |                                      | 11 X 3.0                              | 138339                               |
| 138343                   | K-RING                     | ANNEAU K                                | K-RING                           |                                      | KA12                                  | 138343                               |
| 139174                   | EINSCHRAUBDROSSEL          | SOUPAPE D'ÉTRANGLEMENT                  | SCREW TYPE THROTT                |                                      | VD1-109                               | 139174                               |
| 139188                   | INNENZAHNRADPUMPE          | POMPE A ENGRENAGES INTERIEURS           | INTERNAL GEARED WHEEL PUMP       |                                      | 14-4000 IPZ1-HR-2                     | 139188                               |
| 139189                   | WELLENKUPPLUNG             | ACCOUPEMENT D'ARBRES                    | SHAFT COUPLING                   |                                      | 19/24                                 | 139189                               |
| 139191                   | DRUCKBEGRENZUNGSVENTIL     | LIMITATEUR DE PRESSION                  | PRESSURE RELIEF VALVE            |                                      | G1/8" 0-2.5B 6239JF                   | 139191                               |

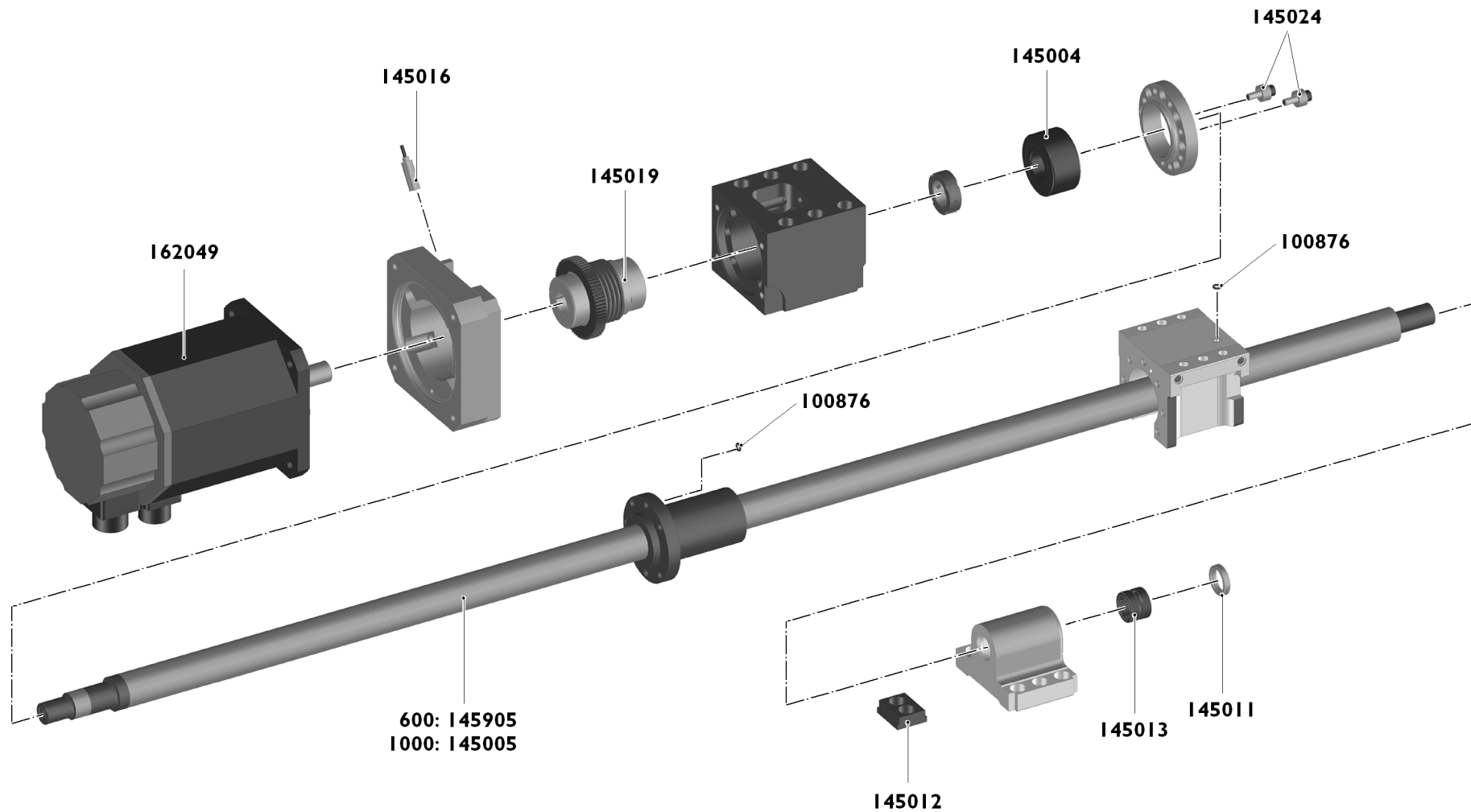
| Position<br>Rep.<br>Item | Bezeichnung                | Désignation                    | Designation of part       | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|----------------------------|--------------------------------|---------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 139197                   | DREHSTROMMOTOR             | MOTEUR TRIPHASÉ                | THREE-PHASE AC MOTOR      |                                      | 0.12KW H-63-A4                        | 139197                               |
| 139211                   | DICHTUNG                   | JOINT                          | SEAL                      |                                      | D140GK                                | 139211                               |
| 139813                   | HOCHLEISTUNGSSPINDEL       | BROCHE A HAUT RENDEMENT        | HEAVY DUTY SPINDLE        |                                      | HJN 828                               | 139813                               |
| 139814                   | HOCHLEISTUNGSSPINDEL       | BROCHE A HAUT RENDEMENT        | HEAVY DUTY SPINDLE        |                                      | HJN 842                               | 139814                               |
| 139815                   | HOCHLEISTUNGSSPINDEL       | BROCHE A HAUT RENDEMENT        | HEAVY DUTY SPINDLE        |                                      | HJN 860                               | 139815                               |
| 142503                   | SICHERHEITSVERRIEGELUNG    | VERROUILLAGE DE SÛRETÉ         | SECURITY SWITCH (LOCKING) |                                      | AZM_170-02ZRK-24VDC                   | 142503                               |
| 142816                   | FLACHZYLINDER              | CYLINDRE PLAT                  | FLAT CYLINDER             |                                      | DZF-25-125-P-A                        | 142816                               |
| 143409                   | V-RING                     | JOINT TRAPÉZOÏDAL-V            | V-SEALING RING            |                                      | V50A                                  | 143409                               |
| 144680                   | MITNEHMER                  | TOC D'ENTRAÎNEMENT             | DRIVER                    |                                      |                                       | 144680                               |
| 144985                   | VERLÄNGERUNG               | PROLONGATION                   | EXTENSION                 |                                      | 50MM                                  | 144985                               |
| 145002                   | SPINDELLAGER               | PALIER DE BROCHE               | SPINDLE BEARING           |                                      | B7014C-2RSD-T-P4S-DTL                 | 145002                               |
| 145003                   | SPINDELLAGER               | PALIER DE BROCHE               | SPINDLE BEARING           |                                      | B71914C-2RSD-T-P4S-DTL                | 145003                               |
| 145004                   | SPINDELLAGER               | PALIER DE BROCHE               | SPINDLE BEARING           |                                      | DBSB025057-2RS-T-T59                  | 145004                               |
| 145005                   | KUGELGEWINDESPINDEL        | BROCHE FILETÉE À BILLES        | BALL SCREW                |                                      |                                       | 145005                               |
| 145006                   | KUGELGEWINDESPINDEL        | BROCHE FILETÉE À BILLES        | BALL SCREW                |                                      |                                       | 145006                               |
| 145011                   | DICHTRING                  | BAGUE D'ÉTANCHÉITÉ             | GASKET                    |                                      |                                       | 145011                               |
| 145012                   | FESTANSCHLAG               | ARRÊT                          | FIXED STOP                |                                      |                                       | 145012                               |
| 145013                   | NADELLAGER                 | ROULEMENT À AIGUILLES          | NEEDLE BEARING            |                                      | NK 20-20                              | 145013                               |
| 145016                   | INITIATOR                  | PRÉPARATEUR                    | INITIATOR                 |                                      | BES 3D11-PAF7LO-ZA8A0-PU08            | 145016                               |
| 145019                   | METALLBALGKUPPLUNG SPEZIAL | EMBRAYAGE                      | CLUTCH                    |                                      | AKD30-19G6-20F6                       | 145019                               |
| 145024                   | FESTANSCHLAG               | ARRÊT                          | FIXED STOP                |                                      |                                       | 145024                               |
| 145026                   | LINEARFÜHRUNG              | LLINÉAIREMENT MODULE           | LINEAR MODULE             |                                      | 2XMRC250898-W2-G1-V3-SO               | 145026                               |
| 145031                   | GUMMISCHUTZ 1000           | PROTECTION EN CAOUTCHOUC 1000  | RUBBER PROTECTION 1000    |                                      |                                       | 145031                               |
| 145032                   | NONIUS                     | VERNIER                        | VERNIER                   |                                      |                                       | 145032                               |
| 145046                   | BOLZEN                     | BOULON                         | BOLT                      |                                      |                                       | 145046                               |
| 145087                   | SCHLEIFSPINDEL             | BROCHE PORTE-MEULE             | GRINDING SPINDLE          |                                      |                                       | 145087                               |
| 145088                   | O-RING                     | JOINT TORIQUE                  | TOROIDAL SEALING RING     |                                      | 105 X 2.5                             | 145088                               |
| 145091                   | ENERGIEFÜHRUNGSKETTE       | CHAÎNES PORTE-CÂBLES           | CABLE CARRIERS            |                                      | 0455.040.038.065-910                  | 145091                               |
| 145116                   | FALTENBALG                 | SOUFFLET                       | BELLOW                    |                                      |                                       | 145116                               |
| 145128                   | RILLENKUGELLAGER           | ROULEMENT À BILLES             | BALL BEARING              |                                      | 61821-2Z P6                           | 145128                               |
| 145138                   | MOTORSCHLEIBE              | POULIE                         | PULLEY                    |                                      |                                       | 145138                               |
| 145149                   | POLYFLEX-KEILRIEMEN        | COURROIE TRAPÉZOÏDALE POLYFLEX | POLYFLEX V-BELT           |                                      | 3/5M-690JB                            | 145149                               |
| 145159                   | STANGENDICHTUNG            | JOINTS RADIAUX                 | RODS SEALS                |                                      | 60/72 X 8.5                           | 145159                               |
| 145163                   | DREHVERSCHRAUBUNG          | RACCORDS ROTATIFS              | ROTARY CONNECTIONS        |                                      | DVWE06LRA3C                           | 145163                               |
| 145178                   | INITIATOR                  | PRÉPARATEUR                    | INITIATOR                 |                                      | T11 / T21                             | 145178                               |
| 145207                   | NONIUS                     | VERNIER                        | VERNIER                   |                                      |                                       | 145207                               |
| 145211                   | K-RING                     | ANNEAU K                       | K-RING                    |                                      | KA75                                  | 145211                               |



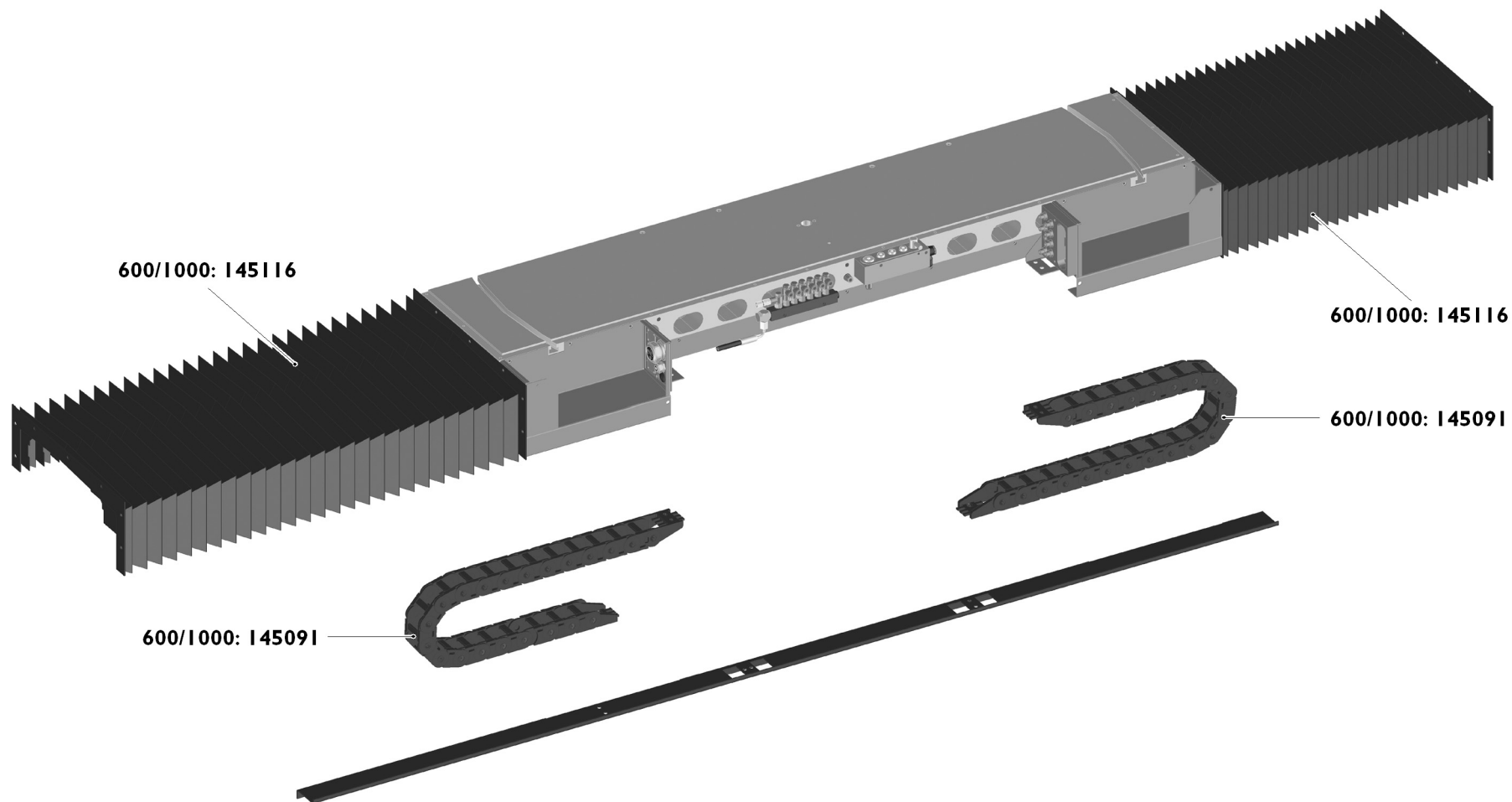
| Position<br>Rep.<br>Item | Bezeichnung                            | Désignation                            | Designation of part                     | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|--|--|---|--------------------------------------|---------------------------------------|--------------------------------------|
| I45212                   | K-RING                                 | ANNEAU K                               | K-RING                                  |                                      | K150                                  | I45212                               |
| I45222                   | MAGNETVENTIL                           | SOUPAPE MAGNÉTIQUE N                   | SOLENOID                                |                                      | 4/2 NG6 DHI-0631/2-X24DC              | I45222                               |
| I45223                   | DRUCKBEGRENZUNGSVENTIL                 | LIMITATEUR DE PRESSION                 | PRESSURE RELIEF VALVE                   |                                      | G1/8" 80-100B 5980CG                  | I45223                               |
| I45224                   | DRUCKSCHALTER                          | INTERRUPTEUR MANOMETRIQUE              | PRESSURE SWITCH                         |                                      | 0166 405 03 1 019                     | I45224                               |
| I45279                   | INITIATOR                              | PREPARATEUR                            | INITIATOR                               |                                      | T31                                   | I45279                               |
| I45559                   | SICHERHEITSSCHEIBE                     | VITRES DE PROTECTION                   | SECURITY WINDOW                         |                                      |                                       | I45559                               |
| I45652                   | MESSUHR                                | COMPARATEUR                            | DIAL GAUGE                              |                                      |                                       | I45652                               |
| I45679                   | ENERGIEFÜHRUNGSKETTE                   | CHAÎNES PORTE-CÂBLES                   | CABLE CARRIERS                          |                                      |                                       | I45679                               |
| I45721                   | GUMMISCHUTZ 600                        | PROTECTION EN CAOUTCHOUC 600           | RUBBER PROTECTION 600                   |                                      |                                       | I45721                               |
| I45787                   | SPRITZSCHUTZBLECH VORNE                | CARTER DE PROTECTION, DEVANT           | SPLASH GUARD, FRONT                     |                                      |                                       | I45787                               |
| I45796                   | KEILRIEMENSCHLEIBE                     | POULIE DE LA COURROIE TRAPÉZOÏDALE     | V-BELT PULLEY                           |                                      | D150                                  | I45796                               |
| I45809                   | O-RING                                 | JOINT TORIQUE                          | TORIDAL SEALING RING                    |                                      | 28 X 1.5                              | I45809                               |
| I45819                   | SPINDELLAGER                           | PALIER DE BROCHE                       | SPINDLE BEARING                         |                                      | HSS7006C.T.P4S.DUL                    | I45819                               |
| I45905                   | KUGELGEWINDESPINDEL                    | BROCHE FILETÉE À BILLES                | BALL SCREW                              |                                      |                                       | I45905                               |
| I45935                   | NADELLAGER                             | ROULEMENT À AIGUILLES                  | NEEDLE BEARING                          |                                      | RNA4904-2RS                           | I45935                               |
| I45978                   | REITSTOCKPINOLE (MIT MIKROVERSTELLUNG) | FOURREAU (AVEC AJUSTAGE MICROMÉTRIQUE) | TAILSTOCK SLEEVE (WITH MICRO CORRECTOR) |                                      | MK4 L = 317                           | I45978                               |
| I45991                   | DRUCKFEDER                             | RESSORT DE PRESSION                    | PRESSURE SPRING                         |                                      | 2.5-21.5-40 Nr. 617                   | I45991                               |
| I45993                   | ABSTREIFER                             | RACLOIR                                | SCRAPER                                 |                                      | PU7 50 x 60 x 7                       | I45993                               |
| I47346                   | POLYFLEX-KEILRIEMEN                    | COURROIE TRAPÉZOÏDALE POLYFLEX         | POLYFLEX V-BELT                         |                                      | 3/3M-580JB                            | I47346                               |
| I47347                   | POLYFLEX-KEILRIEMEN                    | COURROIE TRAPÉZOÏDALE POLYFLEX         | POLYFLEX V-BELT                         |                                      | 3/3M-615JB                            | I47347                               |
| I49017                   | SPANNROLLE                             | GALET TENDEUR                          | TENSION ROLLER                          |                                      |                                       | I49017                               |
| I49028                   | LITHIUM BATTERIE                       | BATTERIE LITHIUM                       | LITHIUM BATTERY                         |                                      | CR203273V                             | I49028                               |
| I49338                   | FILTERPATRONE                          | CARTOUCHE FILTRANTE                    | FILTER CARTRIDGE                        |                                      | I829207061                            | I49338                               |
| I49339                   | FILTERPATRONE                          | CARTOUCHE FILTRANTE                    | FILTER CARTRIDGE                        |                                      | I829207063                            | I49339                               |
| I49624                   | KEILRIEMENSCHLEIBE                     | POULIE DE LA COURROIE TRAPEZOÏDALE     | V-BELT PULLEY                           |                                      | D100                                  | I49624                               |
| I49856                   | DICHTRING                              | BAGUE D'ÉTANCHÉITÉ                     | SEALING WASHER                          |                                      |                                       | I49856                               |
| I49870                   | WASSERVENTIL                           | VANNE À EAU                            | WATER VALVE                             |                                      | 1"                                    | I49870                               |
| I49906                   | ZAHNRIEMEN                             | COURROIE DENTÉE                        | TOOTHED BELT                            |                                      | GT 5MR-700-20                         | I49906                               |
| I50160                   | DICHTPROFIL                            | JOINT                                  | SHAFT SEAL                              |                                      | I011-I5                               | I50160                               |
| I50161                   | MASCHINENLAMPE                         | LAMPE DE LA MACHINE                    | MACHINE LAMP                            |                                      | I12257013 1X14W/24VDC/IP67            | I50161                               |
| I50529                   | MITNEHMERRING                          | ANNEAU D'ENTRAÎNEMENT                  | DRIVER RING                             |                                      |                                       | I50529                               |
| I50655                   | DICHTRING                              | BAGUE D'ÉTANCHÉITÉ                     | GASKET                                  |                                      |                                       | I50655                               |
| I50656                   | SIMMERRING                             | ANNEAU JOINT                           | LUBRICANT RETAINING RING                |                                      | 88-110 X 13                           | I50656                               |
| I50657                   | KREUZROLLENLAGER                       | ROULEMENT À ROULEAUX EN CROIX          | CROSS ROLLER BEARING                    |                                      | RB10016-UU-CCO                        | I50657                               |
| I50679                   | MESSTASTER                             | PALPEUR                                | MEASURING PIN                           |                                      | C25                                   | I50679                               |
| I50816                   | POLYFLEX-KEILRIEMEN                    | COURROIE TRAPÉZOÏDALE POLYFLEX         | POLYFLEX V-BELT                         |                                      | 3/5M-775JB                            | I50816                               |
| I51770                   | SCHNELLKUPPLUNG MIT ABSPERRUNG         | ACCOUPLLEMENT RAPIDE AVEC BLOCAGE      | RAPID COUPLING WITH BLOCKING            |                                      | 9201 21 10 1/8 A                      | I51770                               |

| Position<br>Rep.<br>Item | Bezeichnung                         | Désignation                             | Designation of part                | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-------------------------------------|---|------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 152679                   | KABELSCHLEPP                        | TUBE DE CABLE                           | CABLE CONDUIT                      |                                      | 0455.040.078.065-591,5                | 152679                               |
| 153198                   | KEILRIEMENSCHLEIBE                  | POULIE DE LA COURROIE TRAPÉZOÏDALE      | V-BELT PULLEY                      |                                      | D164.3                                | 153198                               |
| 153199                   | NÄHERUNGSSCHALTER                   | COMMUTEUR CAPACITIF                     | PROXIMITY SWITCH                   |                                      | BES 616-300-S166-PU-0.5M              | 153199                               |
| 153478                   | ZAHNRIEMENSCHLEIBE                  | POULIE POUR COURROIE DENTÉE             | TOOTHED BELT PULLEY                |                                      | Z = 42                                | 153478                               |
| 153479                   | ZAHNRIEMENSCHLEIBE                  | POULIE POUR COURROIE DENTÉE             | TOOTHED BELT PULLEY                |                                      | Z = 105                               | 153479                               |
| 153487                   | ZAHNSCHLEIBE                        | ROUE PLATE                              | CROWN GEAR                         |                                      |                                       | 153487                               |
| 153488                   | MITNEHMERNOCKEN                     | TOC D'ENTRAÎNEMENT                      | DRIVER                             |                                      |                                       | 153488                               |
| 153492                   | EXZENTER                            | EXCENTRIQUE                             | ECCENTRIC                          |                                      |                                       | 153492                               |
| 153496                   | KABEL MIT KUPPLUNG UND PRINTSTECKER | CABLE AVEC ACCOUPLEMENT ET PLAQUE       | CABLE WITH COUPLING AND PRINT PLUG |                                      |                                       | 153496                               |
| 153497                   | BLOCKVERTEILER                      | DISTRIBUTEUR                            | DISTRIBUTOR                        |                                      | FSM4-2SKP3/S89                        | 153497                               |
| 154193                   | MESSTASTER                          | PALPEUR                                 | MEASURING PIN                      |                                      | A90                                   | 154193                               |
| 155221                   | ABDECKTUCH                          | COUVERTURE                              | COVER                              |                                      |                                       | 155221                               |
| 156557                   | ZAHNRING HIRTH                      | DEMI-ACCOUPLEMENT AVEC DENTURE DU HIRTH | COUPLING HALF WITH HIRTH-TOOTHED   |                                      | 300-250-360-1.51-15                   | 156557                               |
| 156562                   | DICHTUNG                            | JOINT                                   | SEAL                               |                                      | D12A NR                               | 156562                               |
| 159189                   | RÜCKSCHLAGVENTIL                    | CLAPET ANTI-RETOUR                      | CHECK VALVE                        |                                      | RHV06LREDOMDCF0, SBAR                 | 159189                               |
| 159811                   | EINBAU-DREHSTROMMOTOR               | MOTEUR TRIPHASÉ ENCASTRABLE             | BUILT-IN THREE-PHASE A.C. MOTOR    |                                      | 100-MK-4 6KW                          | 159811                               |
| 159812                   | EINBAU-DREHSTROMMOTOR               | MOTEUR TRIPHASÉ ENCASTRABLE             | BUILT-IN THREE-PHASE A.C. MOTOR    |                                      | 71-MK-2 3KW                           | 159812                               |
| 159814                   | FALTENBALG                          | SOUFFLET                                | BELLOW                             |                                      |                                       | 159814                               |
| 159815                   | FALTENBALG                          | SOUFFLET                                | BELLOW                             |                                      |                                       | 159815                               |
| 159816                   | FALTENBALG                          | SOUFFLET                                | BELLOW                             |                                      |                                       | 159816                               |
| 159828                   | SPRITZSCHUTZBLECH HINTEN            | CARTER DE PROTECTION, DERRIÈRE          | SPLASH GUARD, BEHIND               |                                      |                                       | 159828                               |
| 159925                   | TASTARM                             | BRAS-PALPEUR                            | MEASURING PINCER                   |                                      |                                       | 159925                               |
| 159926                   | TASTARM VERLÄNGERUNG                | BRAS PALPEUR PROLONGATION               | MEASURING PINCER EXTENSION         |                                      |                                       | 159926                               |
| 159927                   | SOLLBRUCHSTÜCK                      | ELEMENT DE RUPTURE                      | BREAK STEM                         |                                      |                                       | 159927                               |
| 160331                   | KEILRIEMENSCHLEIBE                  | POULIE DE LA COURROIE TRAPÉZOÏDALE      | V-BELT PULLEY                      |                                      | D75                                   | 160331                               |
| 162049                   | SERVOMOTOR                          | SERVOMOTEUR                             | SERVOMOTOR                         |                                      | AC4/3000i A06B-0221-B100              | 162049                               |
| 162050                   | SERVOMOTOR                          | SERVOMOTEUR                             | SERVOMOTOR                         |                                      | A8/3000i A06B-0227-B200/0100          | 162050                               |
| 162053                   | SERVOMOTOR                          | SERVOMOTEUR                             | SERVOMOTOR                         |                                      | A2/5000i A06B-0205-B100/0100          | 162053                               |
| 162379                   | MASSSTAB Z-ACHSE 600                | ECHELLE AXE Z 600                       | SCALE Z-AXIS 600                   |                                      | LC493F ML820                          | 162379                               |
| 162380                   | MASSSTAB Z-ACHSE 1000               | ECHELLE AXE Z 1000                      | SCALE Z-AXIS 1000                  |                                      | LC493F ML1240                         | 162380                               |
| 162382                   | MASSSTAB X-ACHSE                    | ECHELLE AXE X                           | SCALE X-AXIS                       |                                      | LC493F ML370                          | 162382                               |

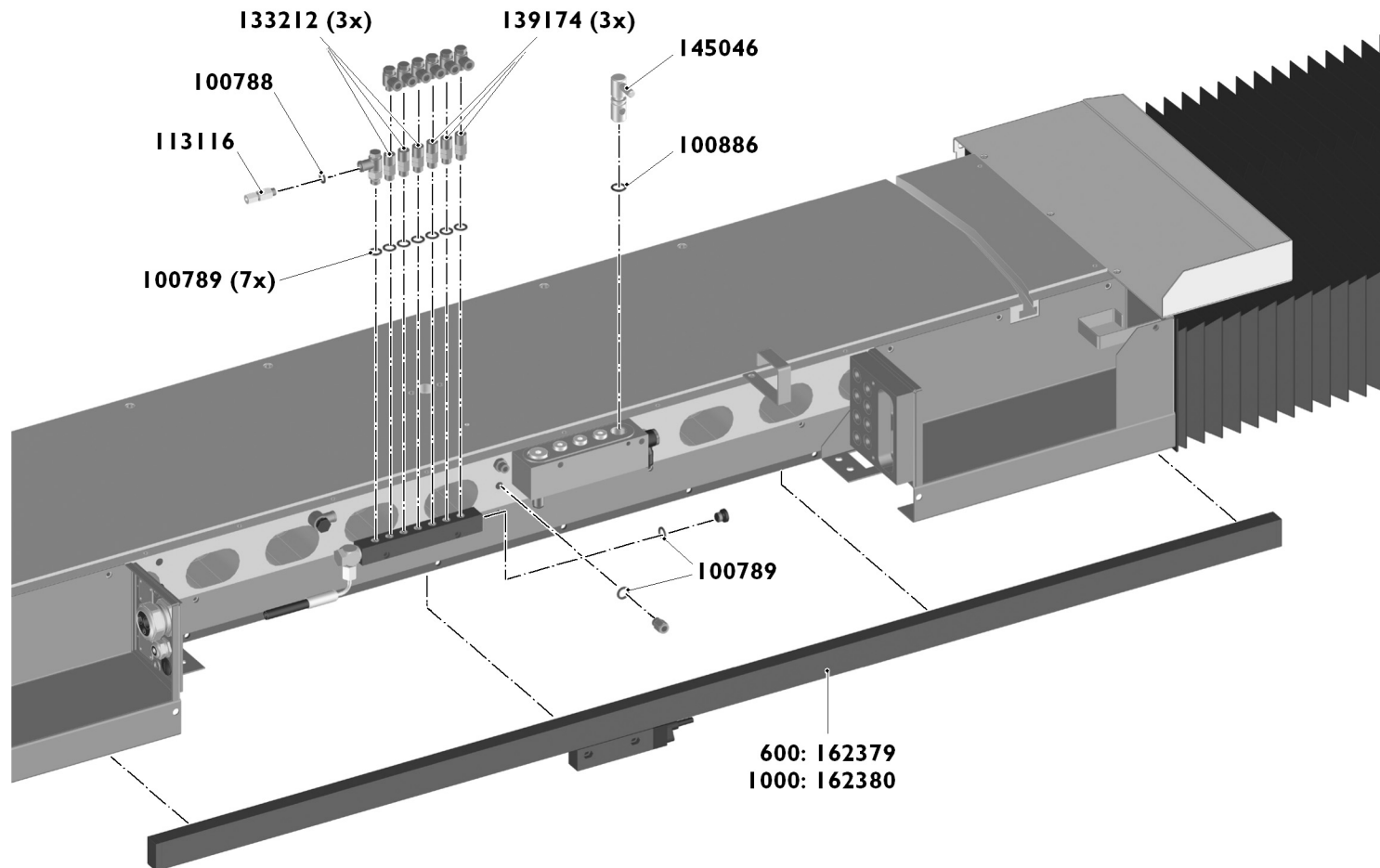
**7.1 Längsschlitten Chariot longitudinal Longitudinal slide**  
**Längsschlitten Z-Achse Chariot longitudinal axe Z Longitudinal slide Z-axis**



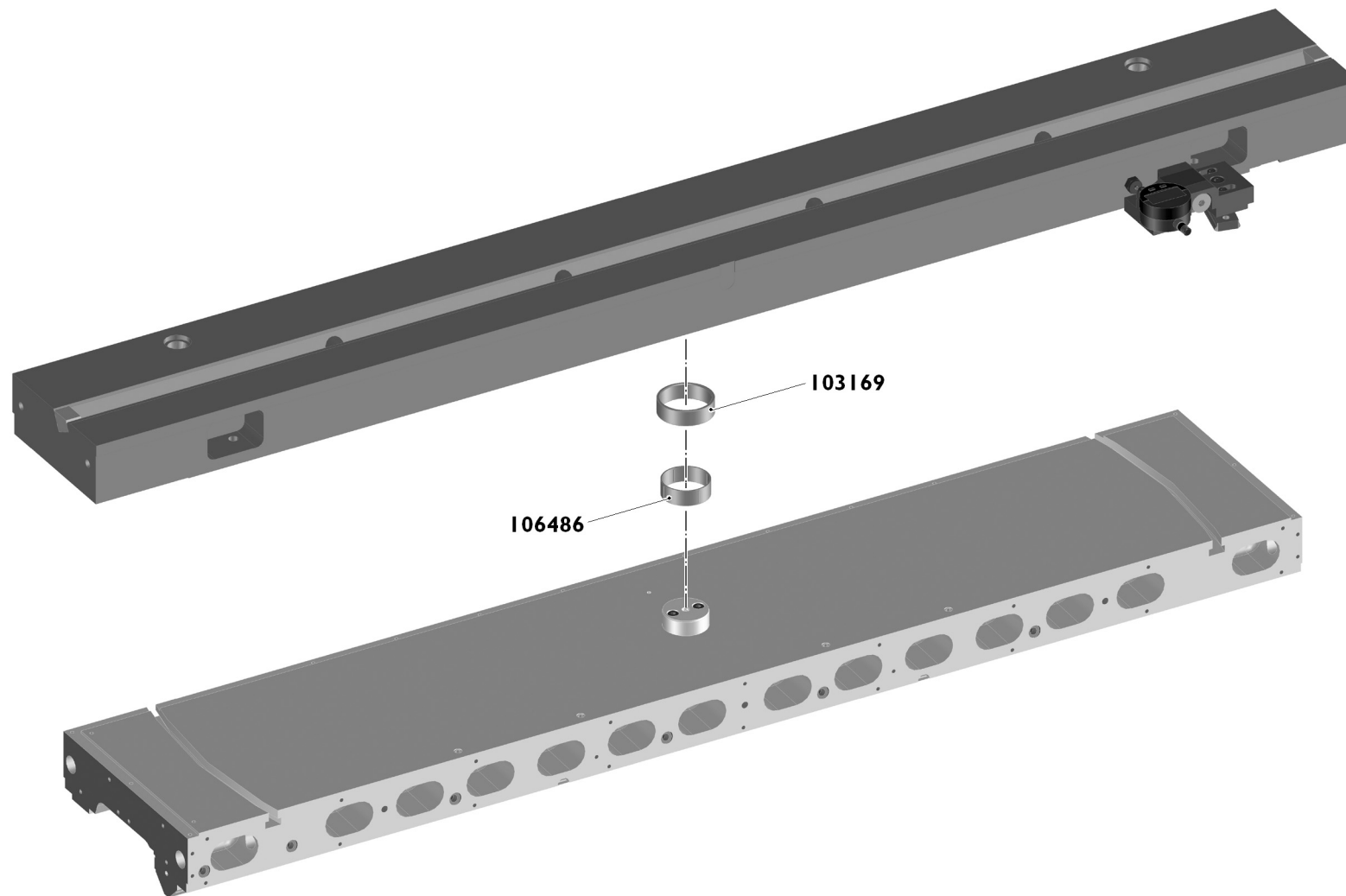
Längsschlitten Untertisch Chariot longitudinal table inférieure Longitudinal slide lower table



Längsschlitten Untertisch Chariot longitudinal table inférieure Longitudinal slide lower table

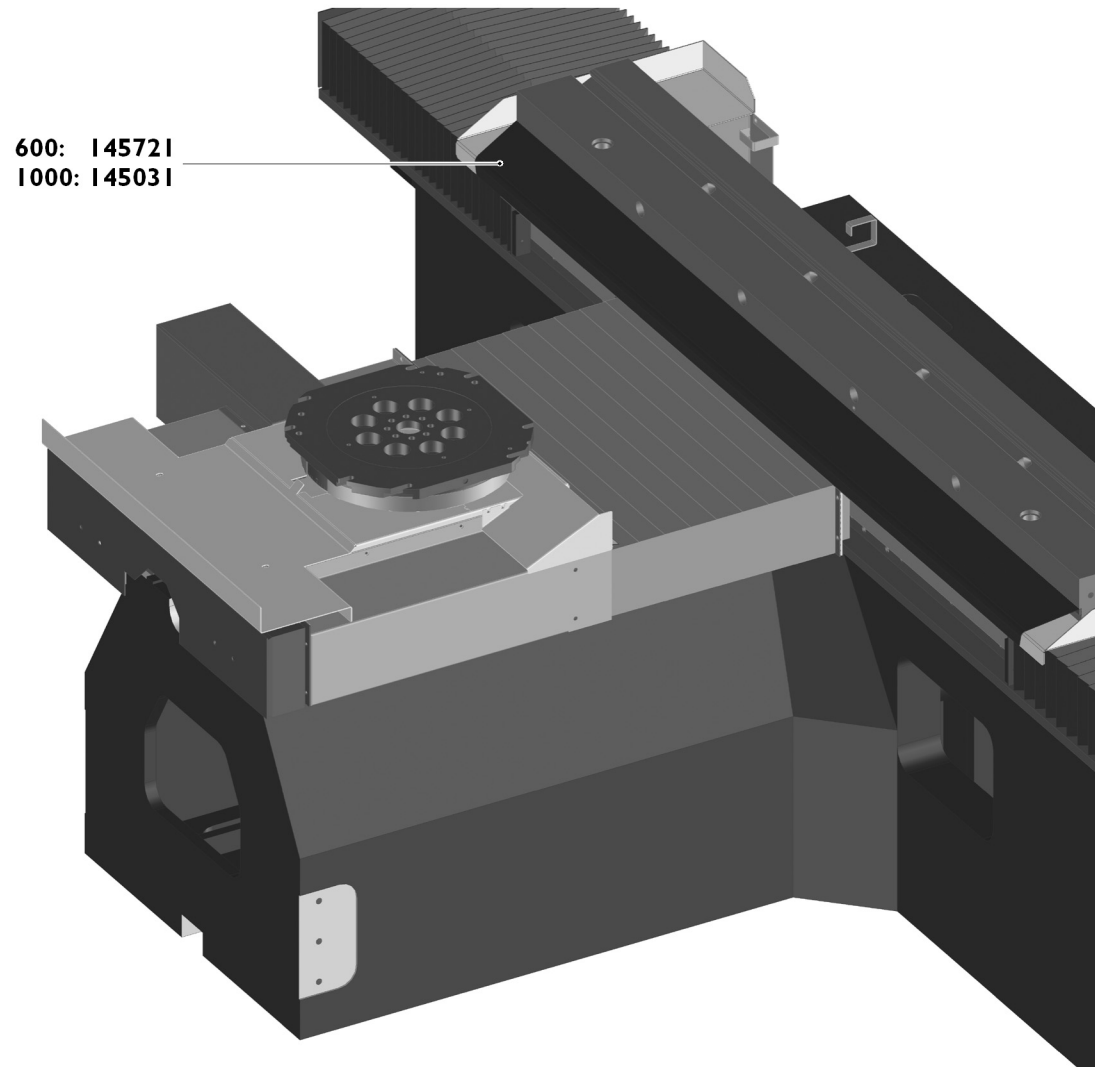


Längsschlitten Obertisch Chariot longitudinal table supérieure Longitudinal slide upper table

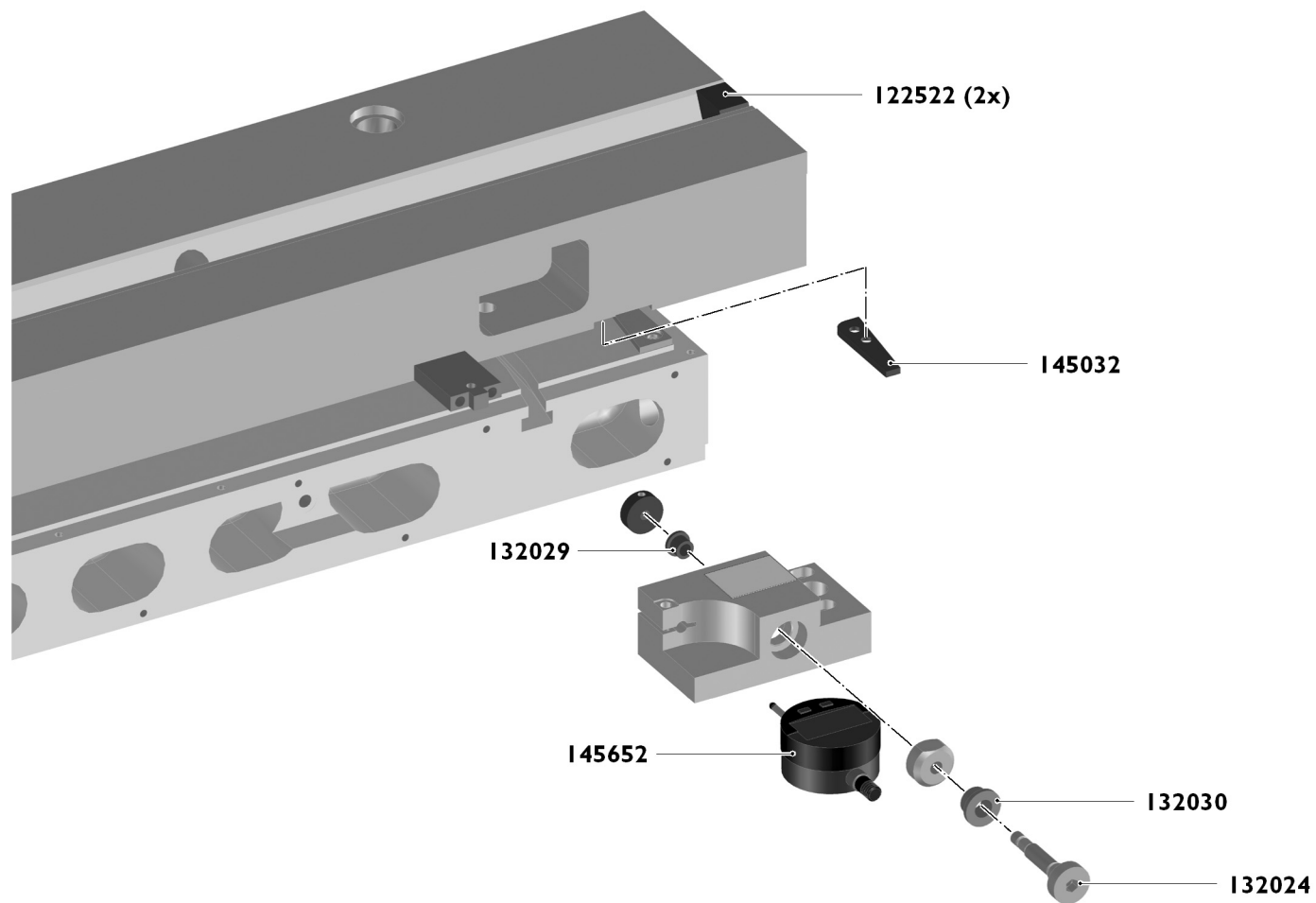


293389-4/6

Längsschlitten Obertisch Chariot longitudinal table supérieure Longitudinal slide upper table

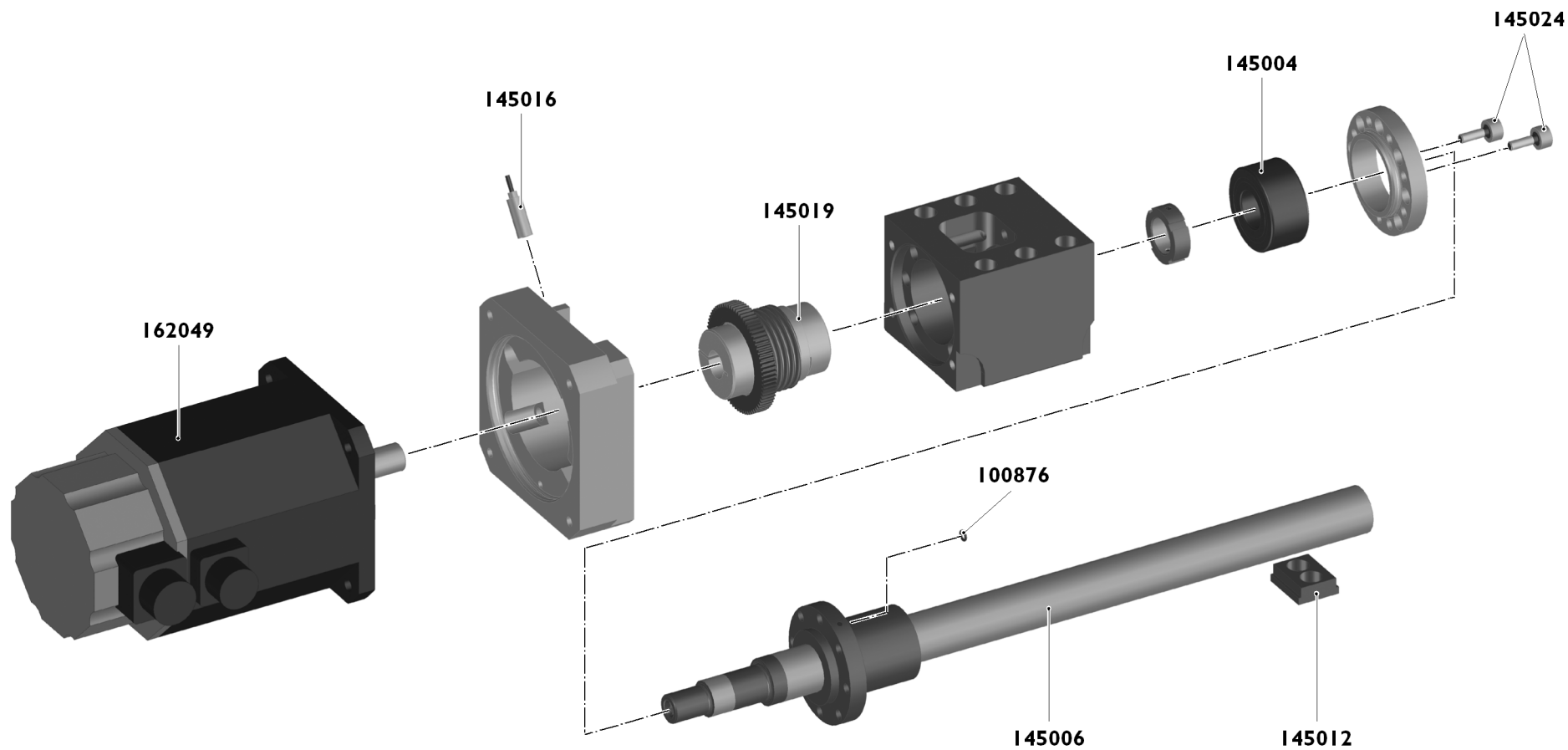


Längsschlitten Obertisch Chariot longitudinal table supérieure Longitudinal slide upper table

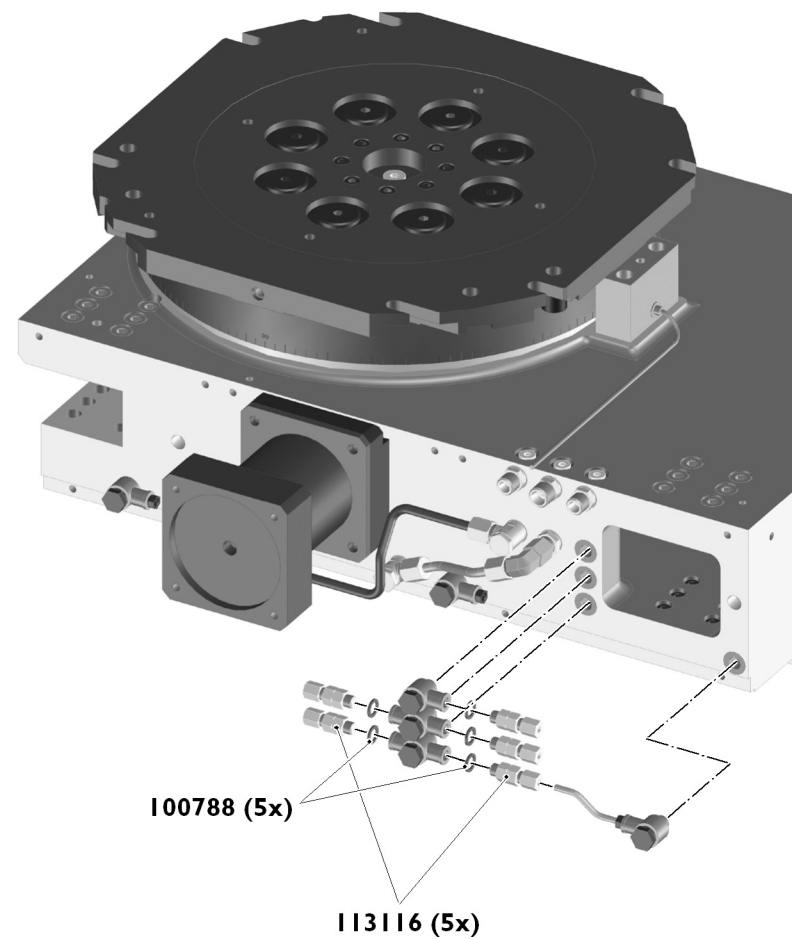
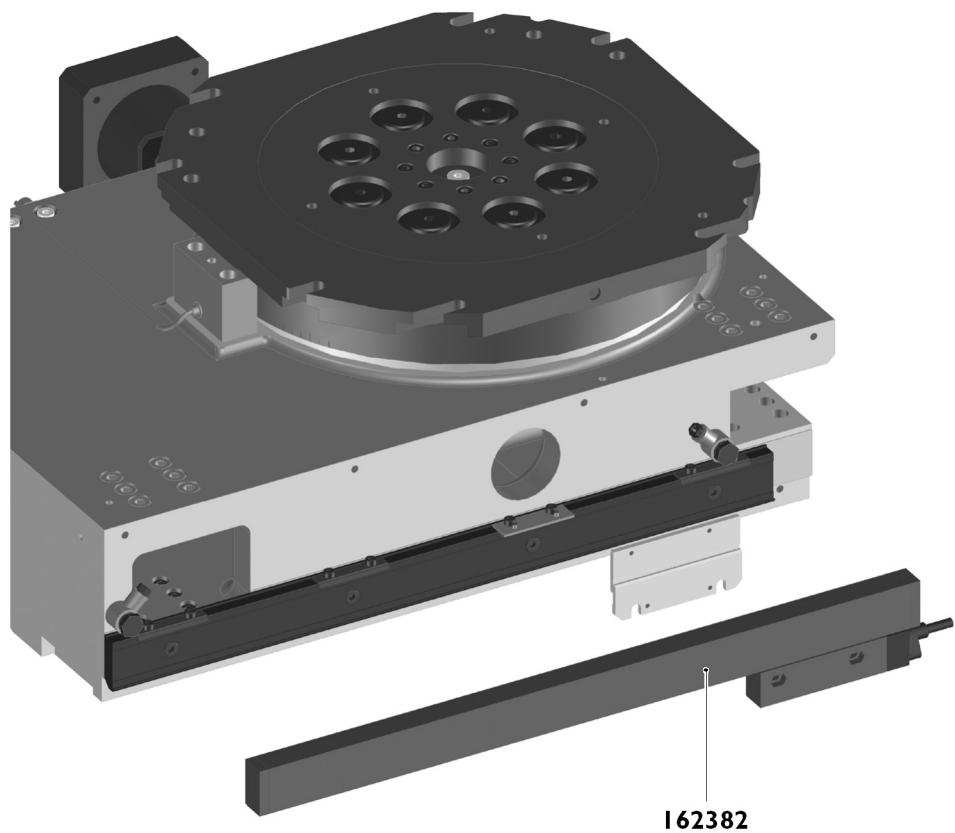




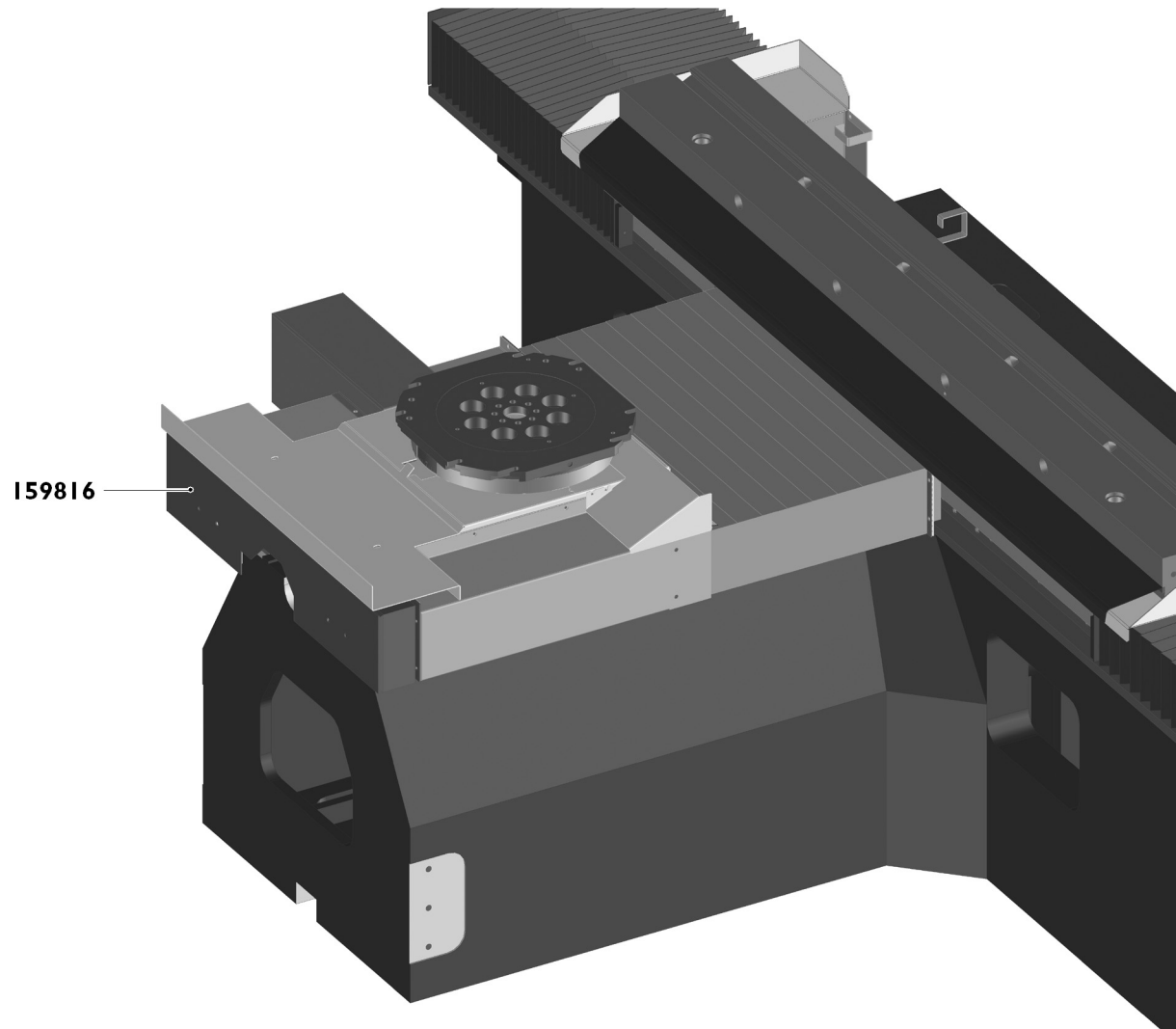
**7.2 Schleifschlitten Chariot porte-meule Grinding slide**  
**Schleifschlitten X-Achse Chariot porte-meule axe-X Grinding slide X-axis**



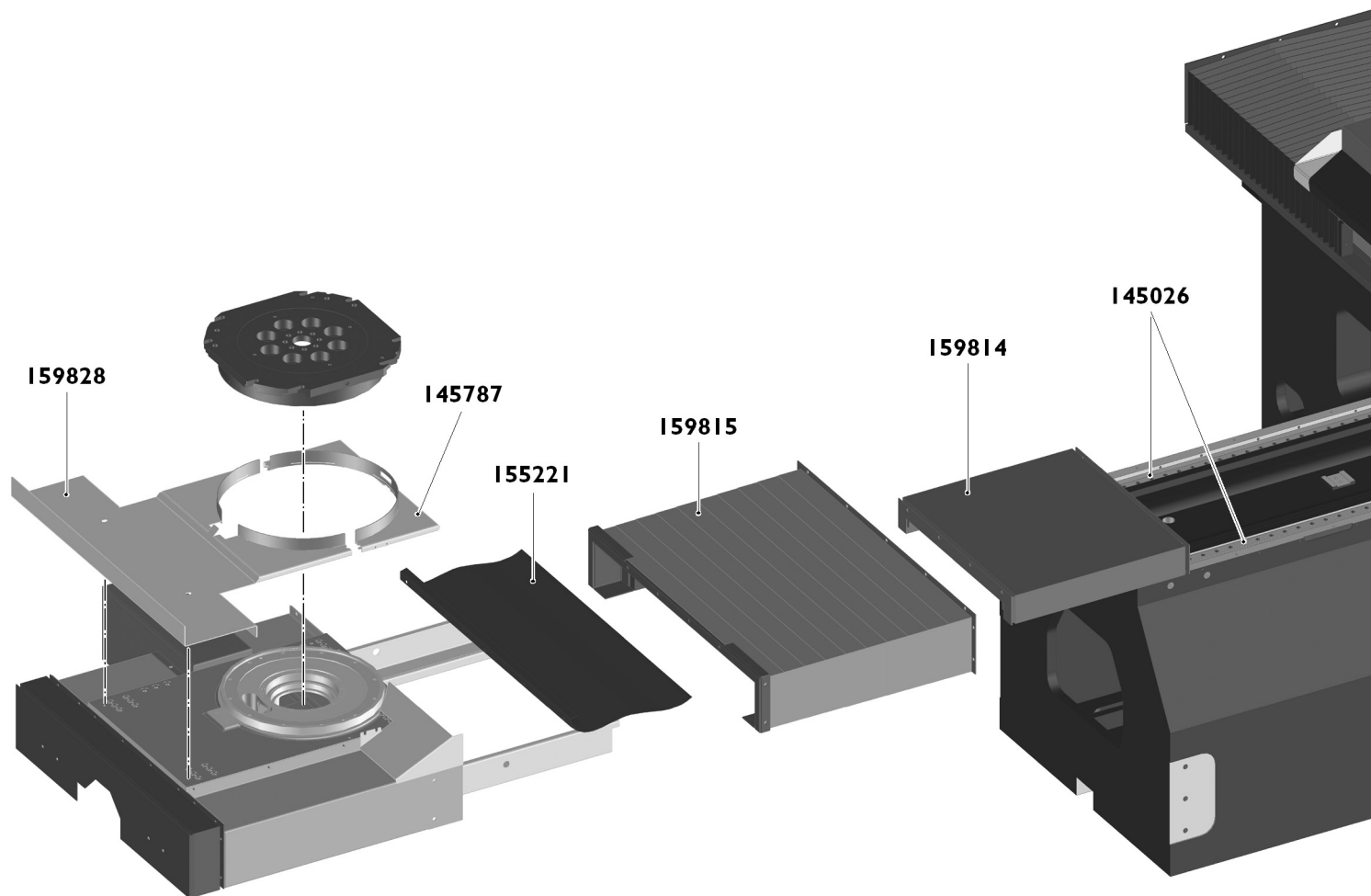
Schleifschlitten X-Achse Chariot porte-meule axe-X Grinding slide X-axis



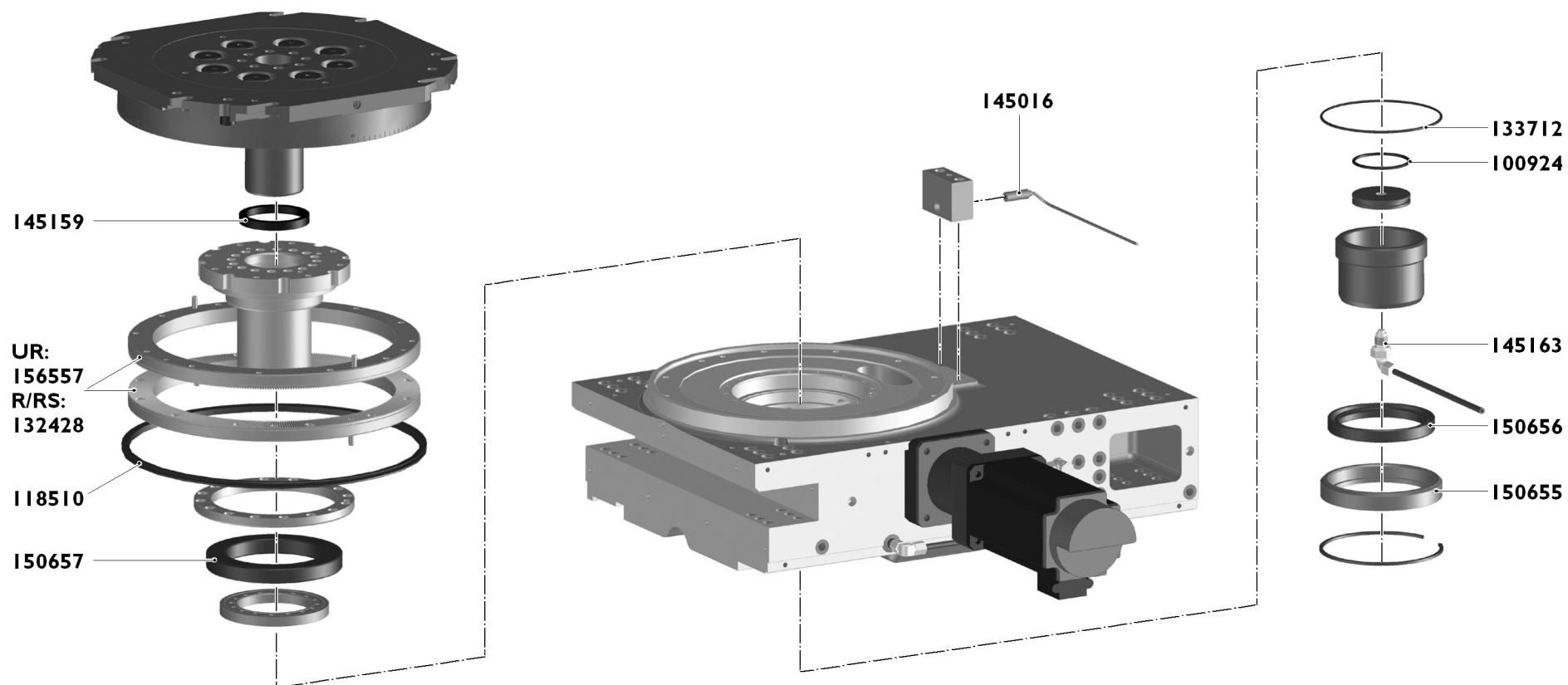
Schleifschlitten X-Achse Chariot porte-meule axe-X Grinding slide X-axis



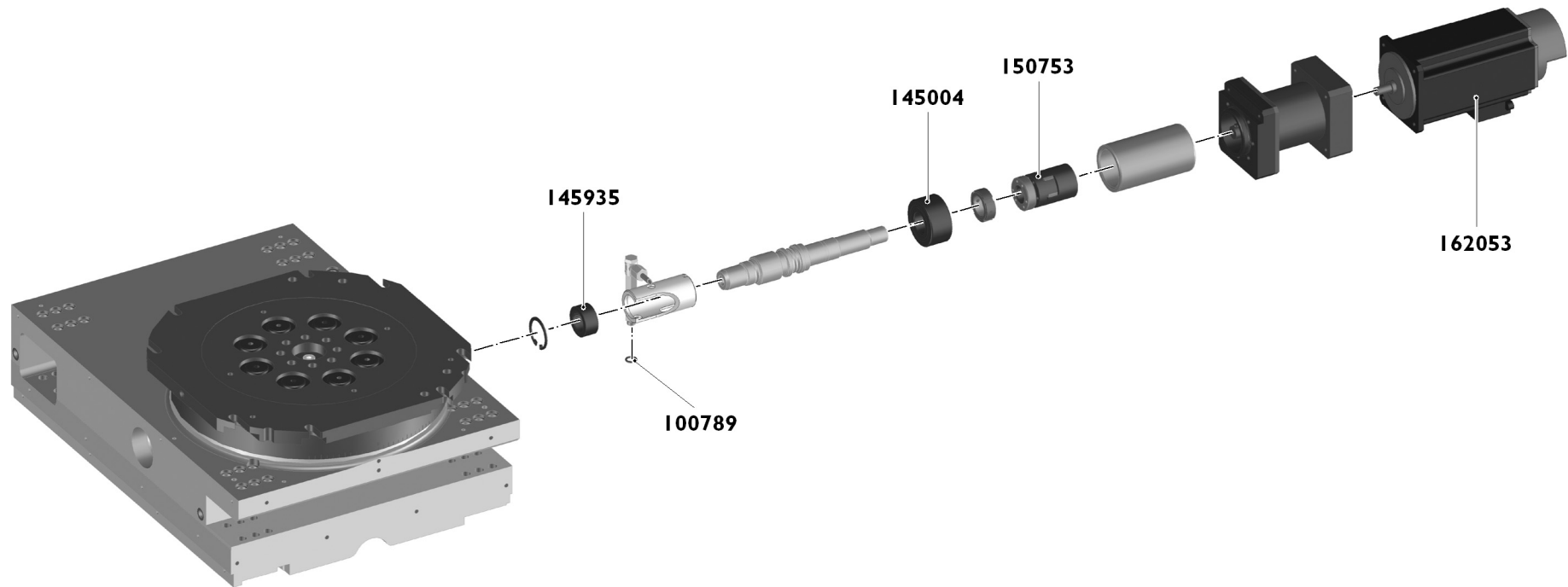
Schleifschlitten X-Achse Chariot porte-meule axe-X Grinding slide X-axis



**7.3 Zwischenteil Plateau intermédiaire Intermediate section**  
**Zwischenteil R/RS/UR Plateau intermédiaire R/RS/UR Intermediate section R/RS/UR**

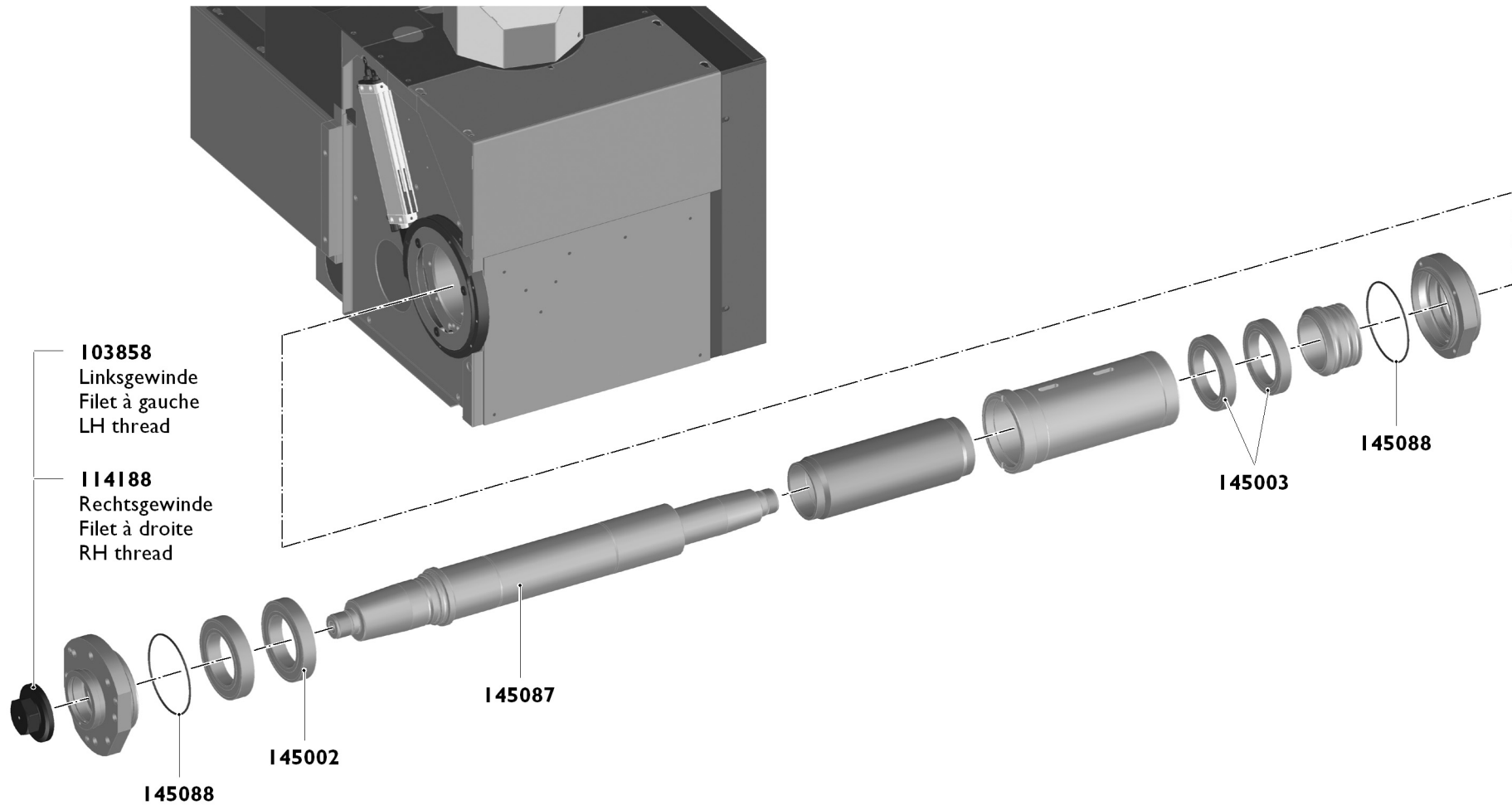


**Zwischenteil Automatische Indexierung UR    Plateau intermédiaire Indexation automatique UR    Intermediate section Automatic indexing UR**

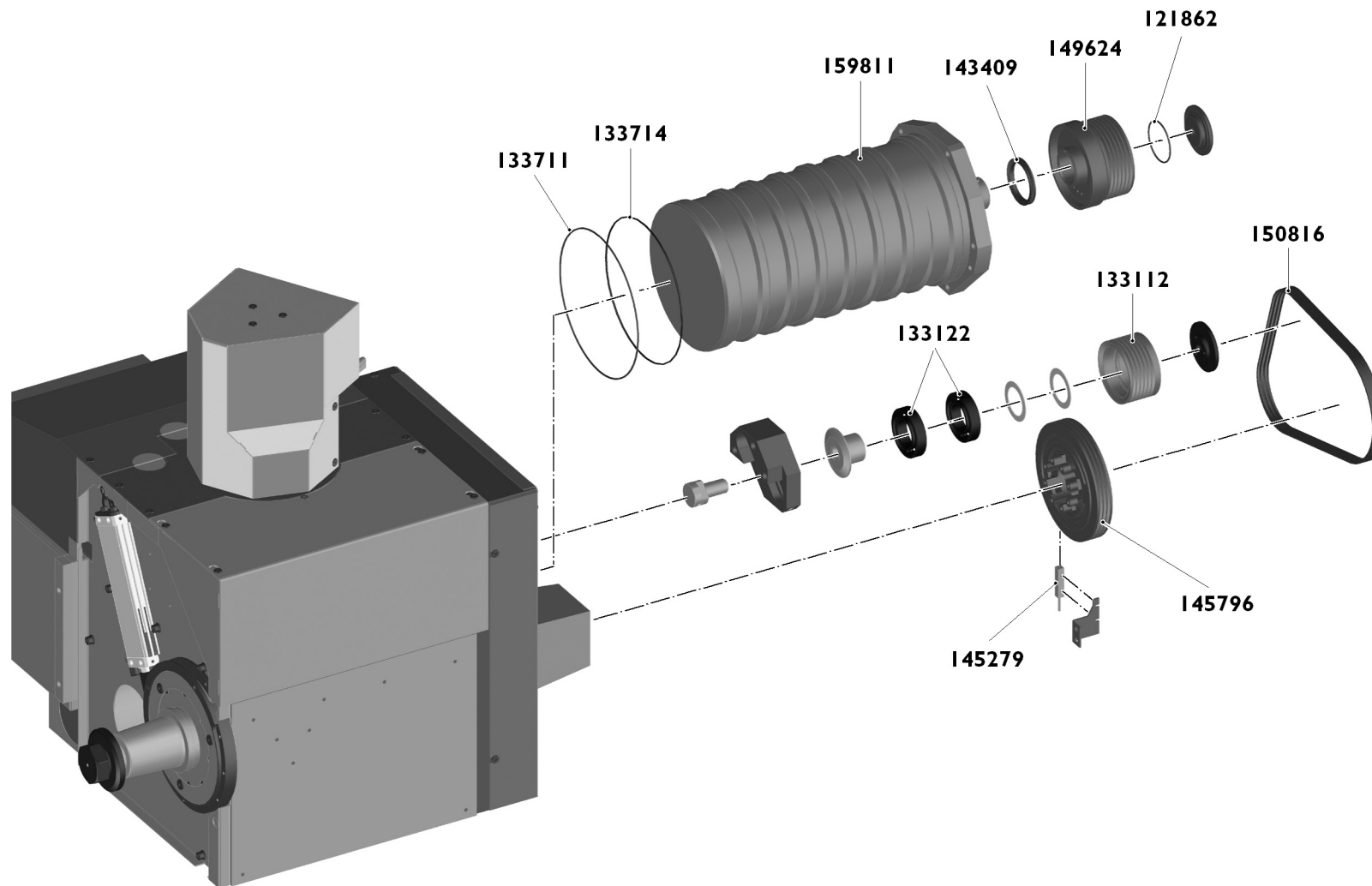


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**7.4 Schleifkopf Poupée porte-meule Wheelhead**  
**Schleifkopf Aussenschleifen Poupée porte-meule rectification extérieure Wheelhead O.D. grinding**

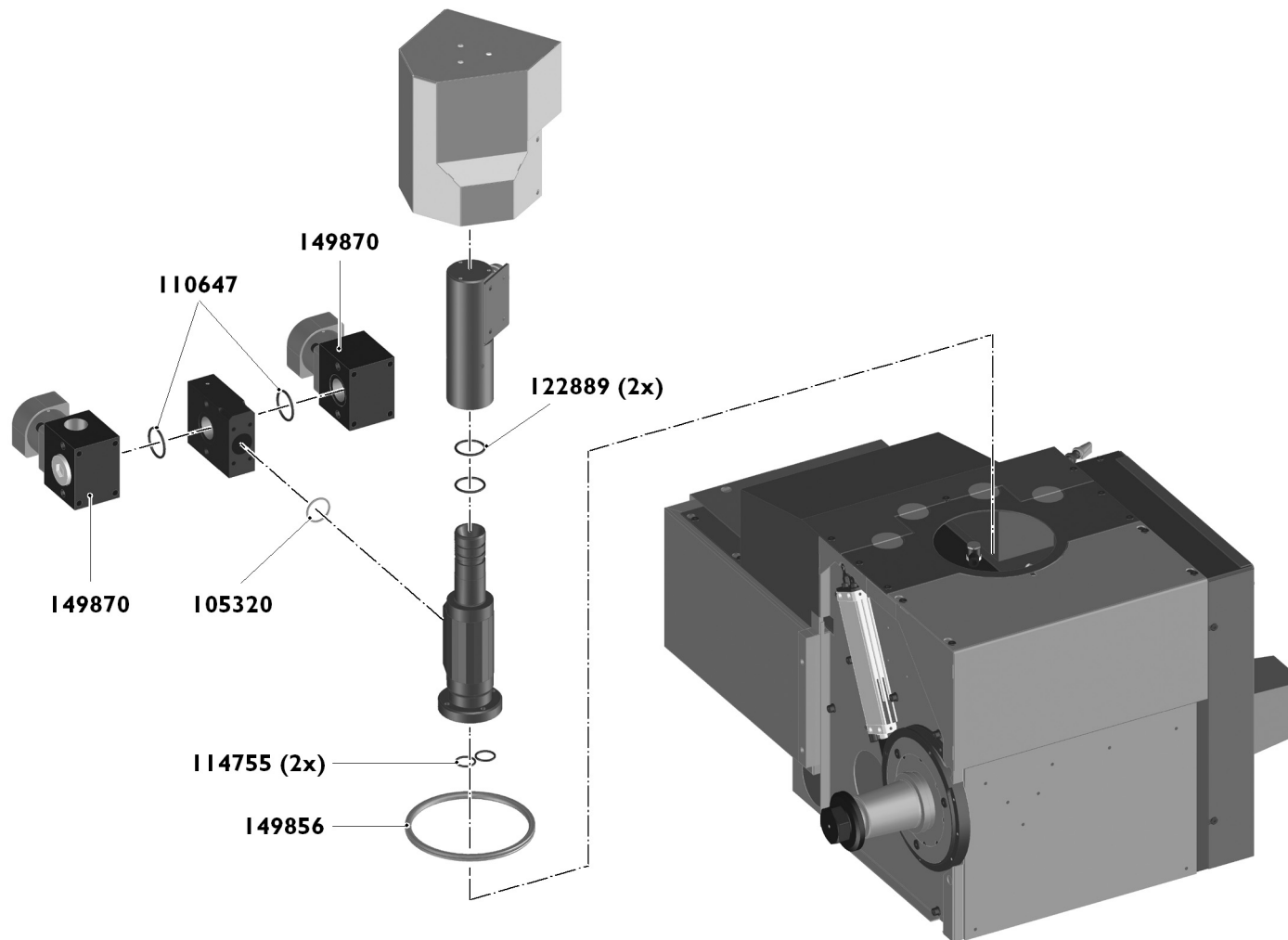


Schleifkopf Aussenschleifen Poupée porte-meule rectification extérieure Wheelhead O.D. grinding

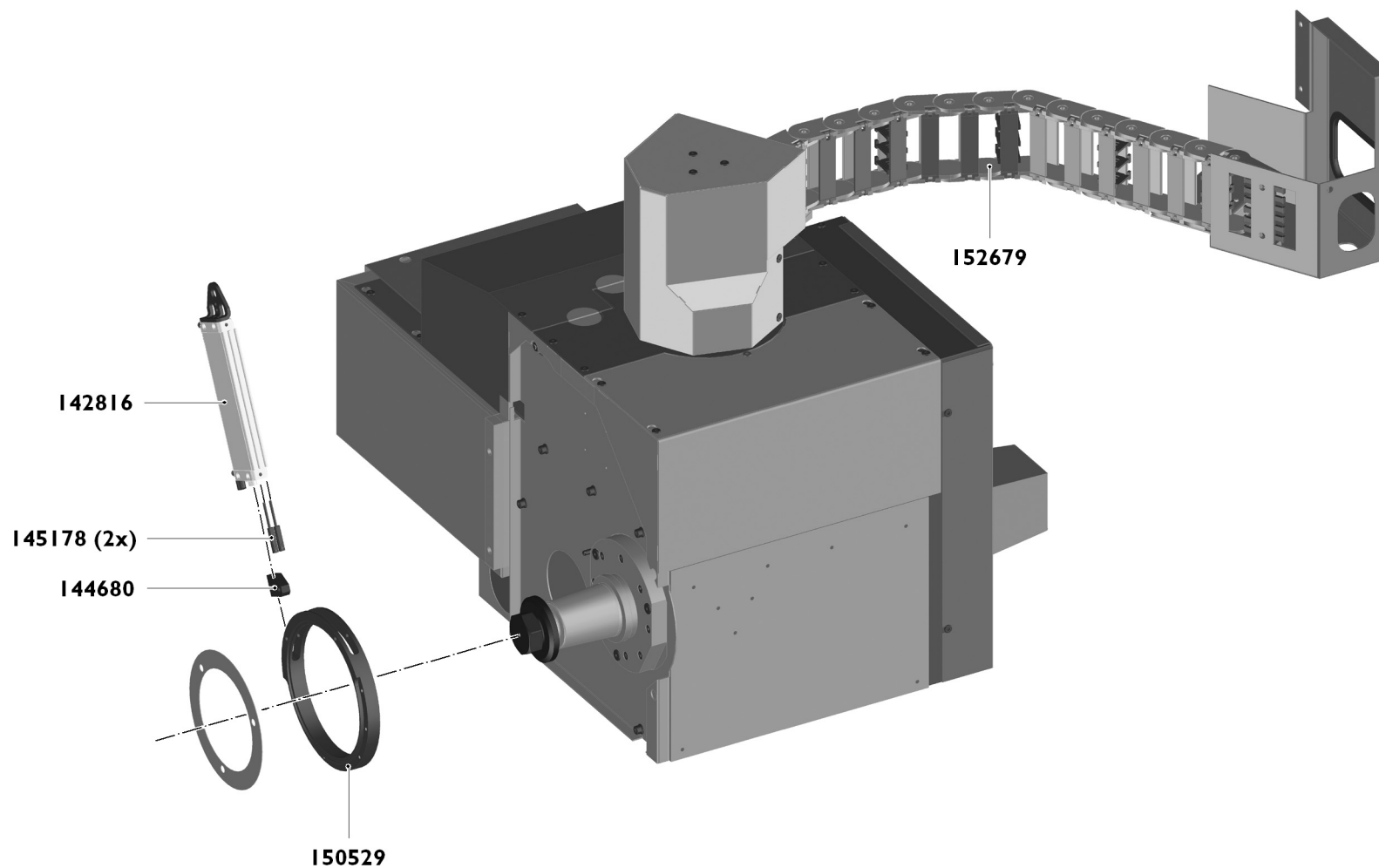




**Schleifkopf Aussenschleifen Poupée porte-meule rectification extérieure Wheelhead O.D. grinding**

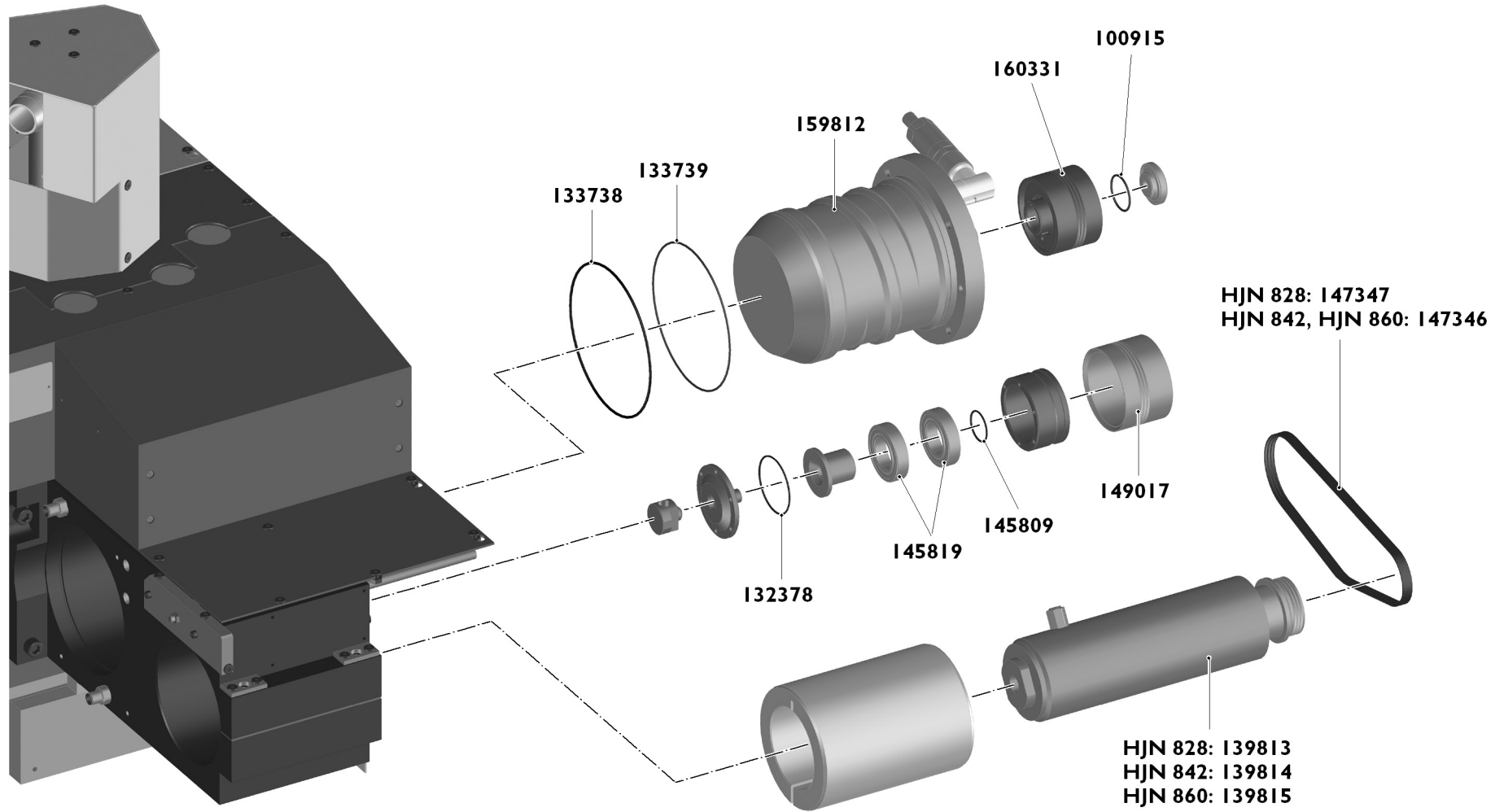


Schleifkopf Aussenschleifen Poupée porte-meule rectification extérieure Wheelhead O.D. grinding

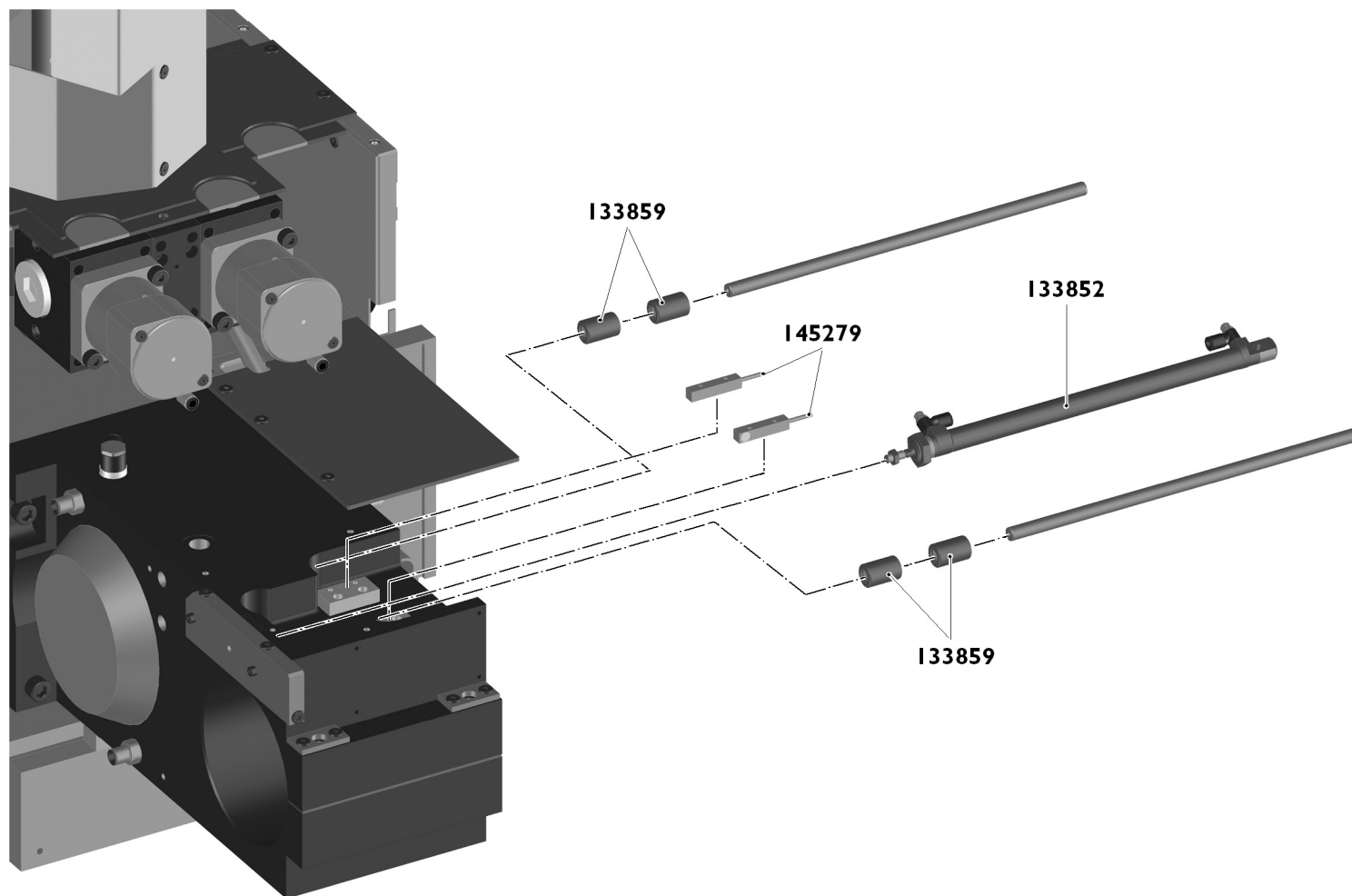


293392-4/4

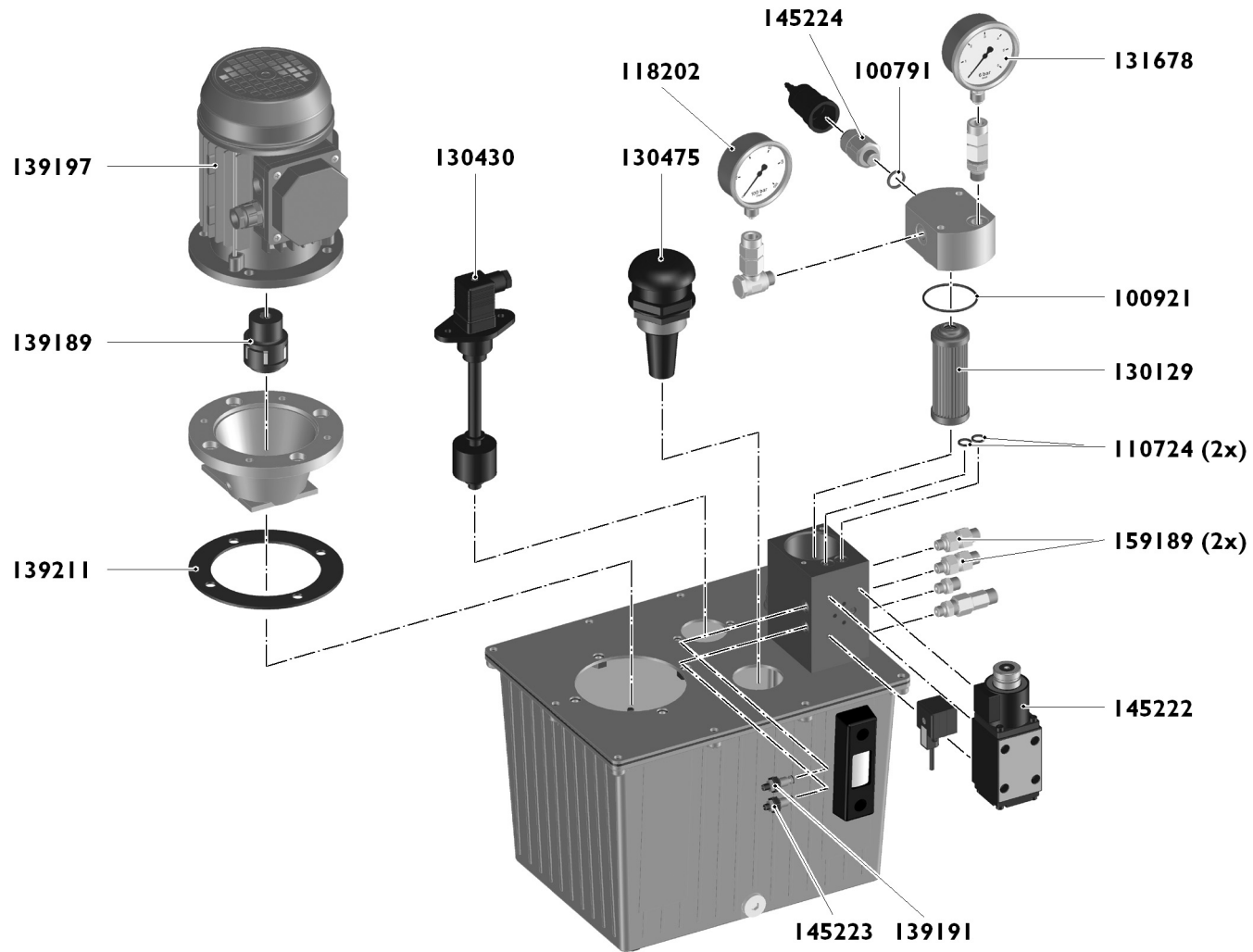
Schleifkopf Innenschleifen    Poupée porte-meule rectification intérieure    Wheelhead I.D. grinding



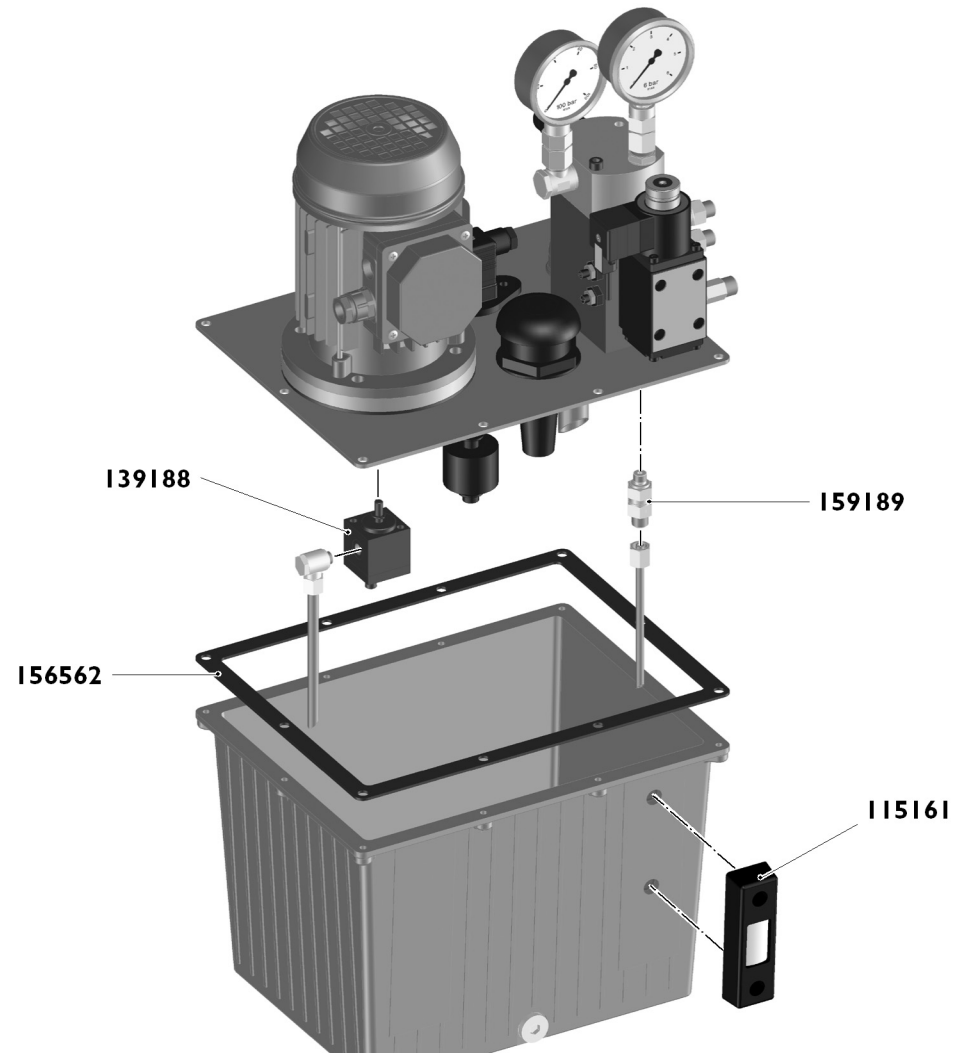
Schleifkopf Innenschleifen    Poupée porte-meule rectification intérieure    Wheelhead I.D. grinding



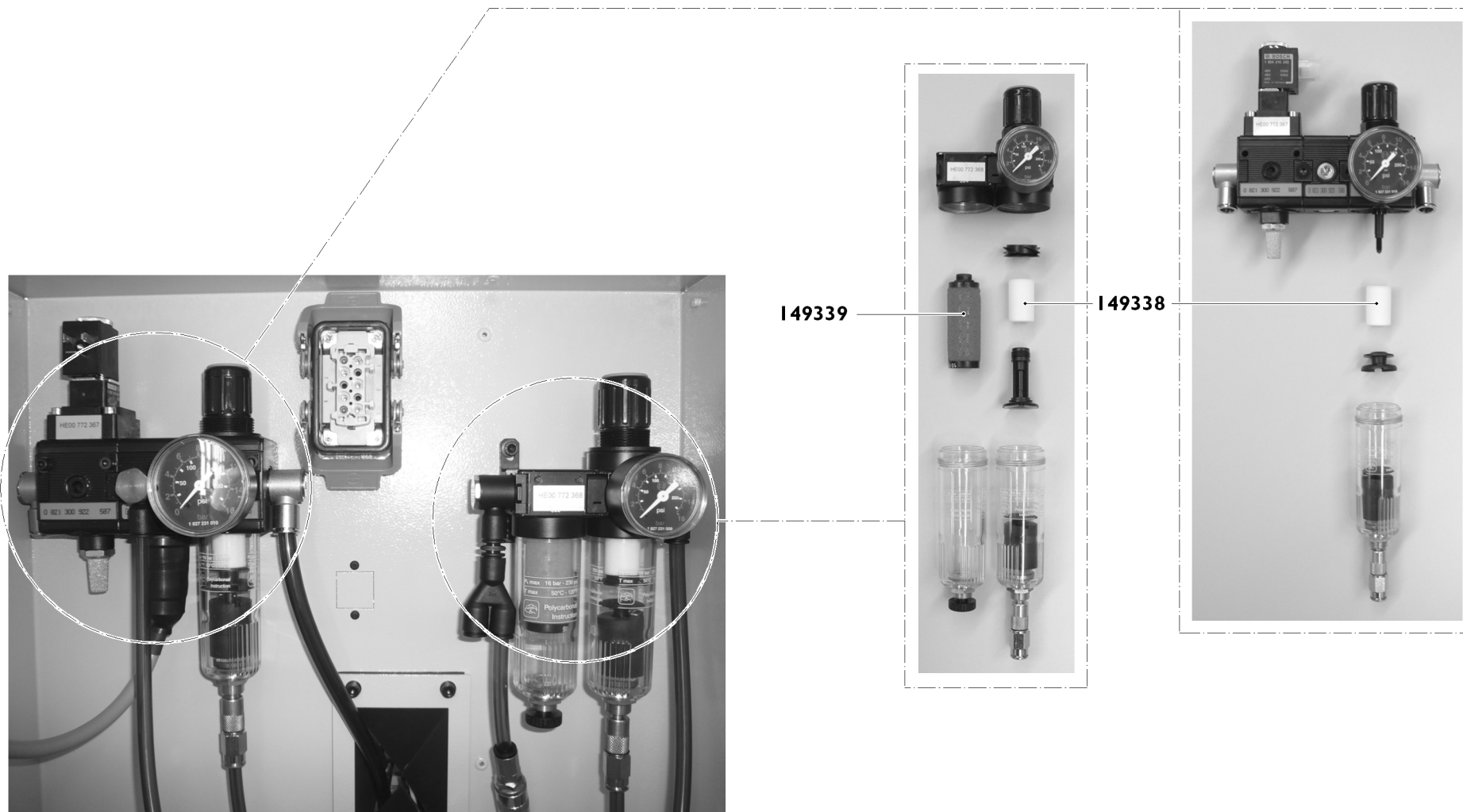
**7.5 Hydraulik Hydraulique Hydraulics**



Hydraulik Hydraulique Hydraulics

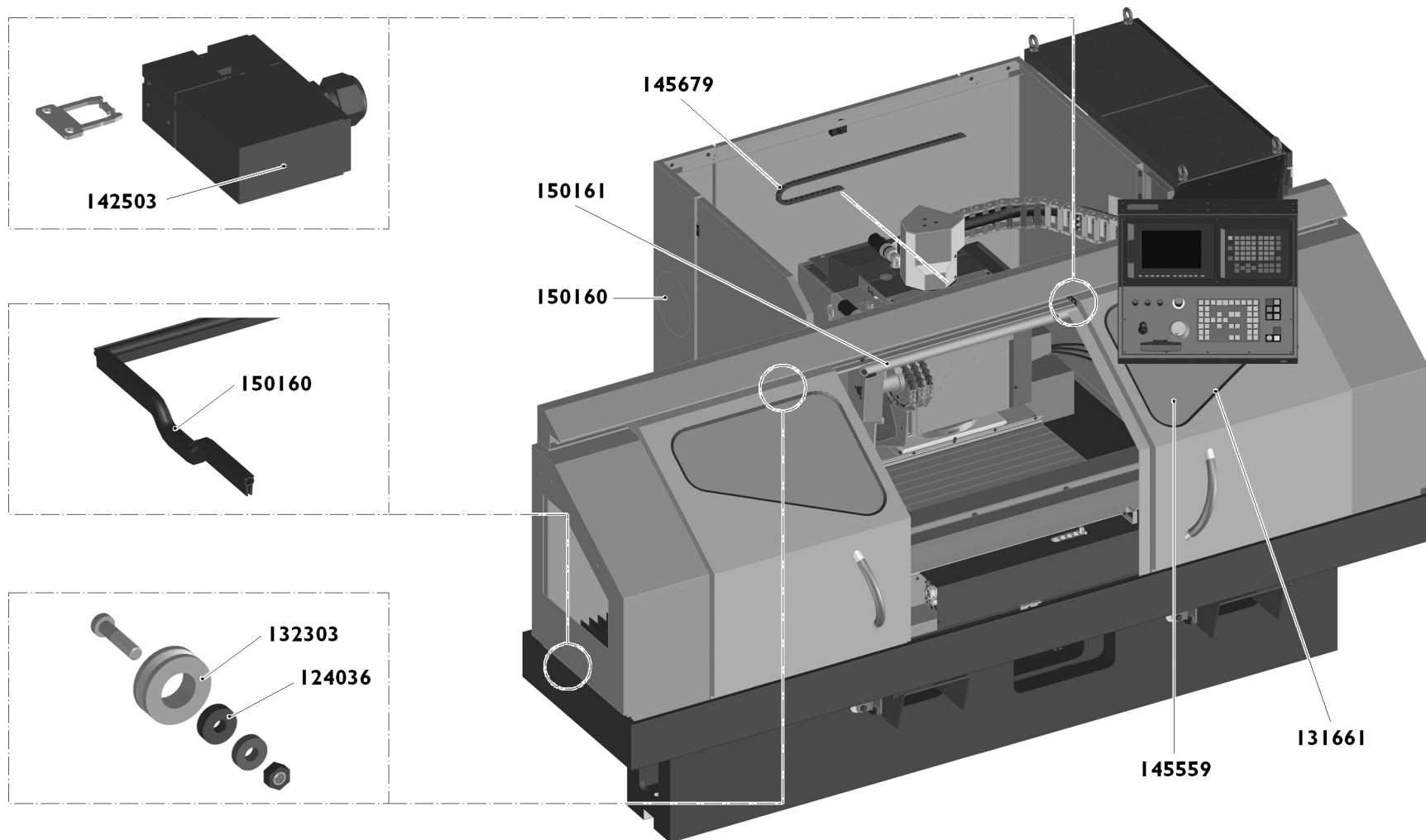


**7.6 Pneumatik    Système pneumatique    Pneumatic system**



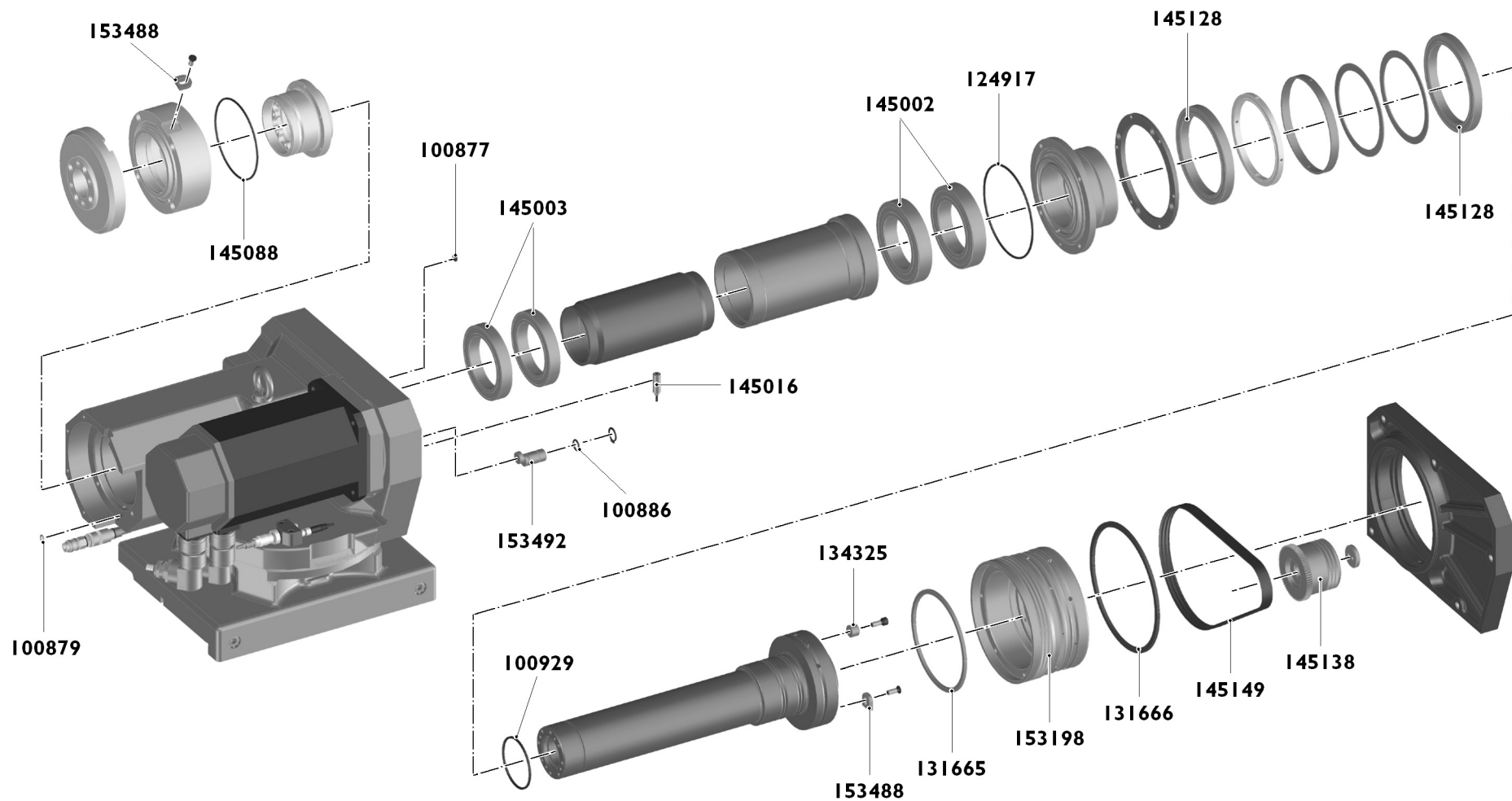
293395-1/1

**7.7 Verschalung Capotage Cabinet**



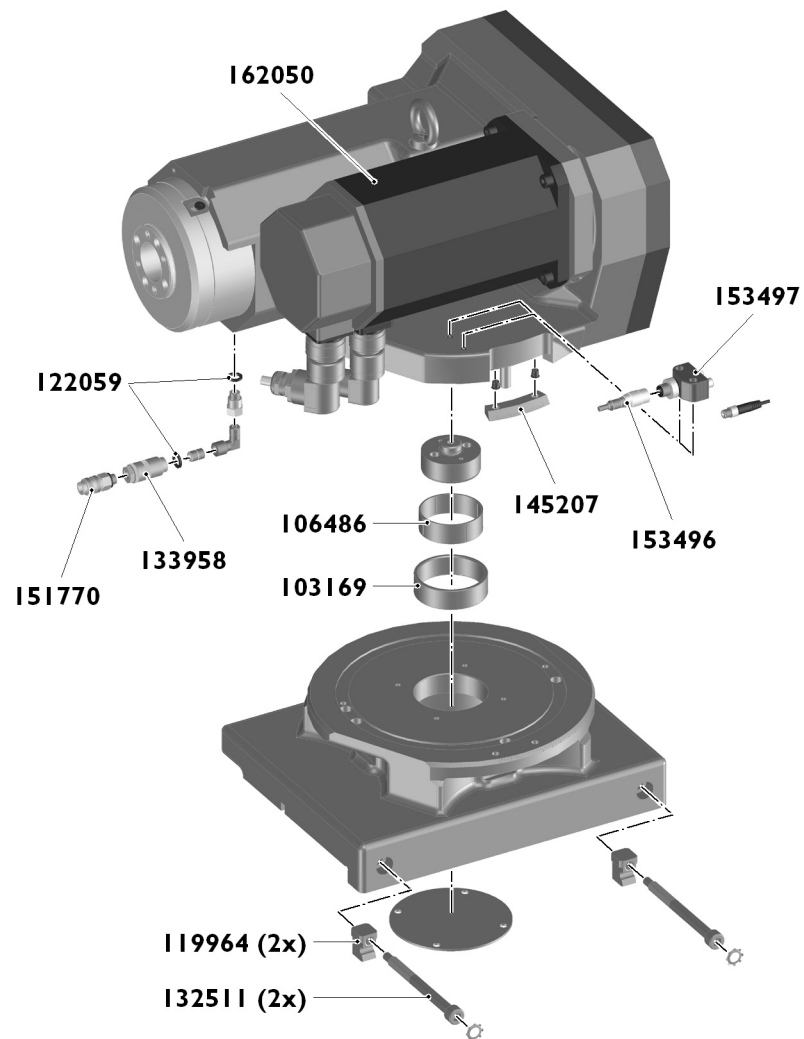


**7.8 Werkstückspindelstock   Poupée porte-pièce   Workhead**  
**Werkstückspindelstock Standard   Poupée porte-pièce standard   Standard workhead**

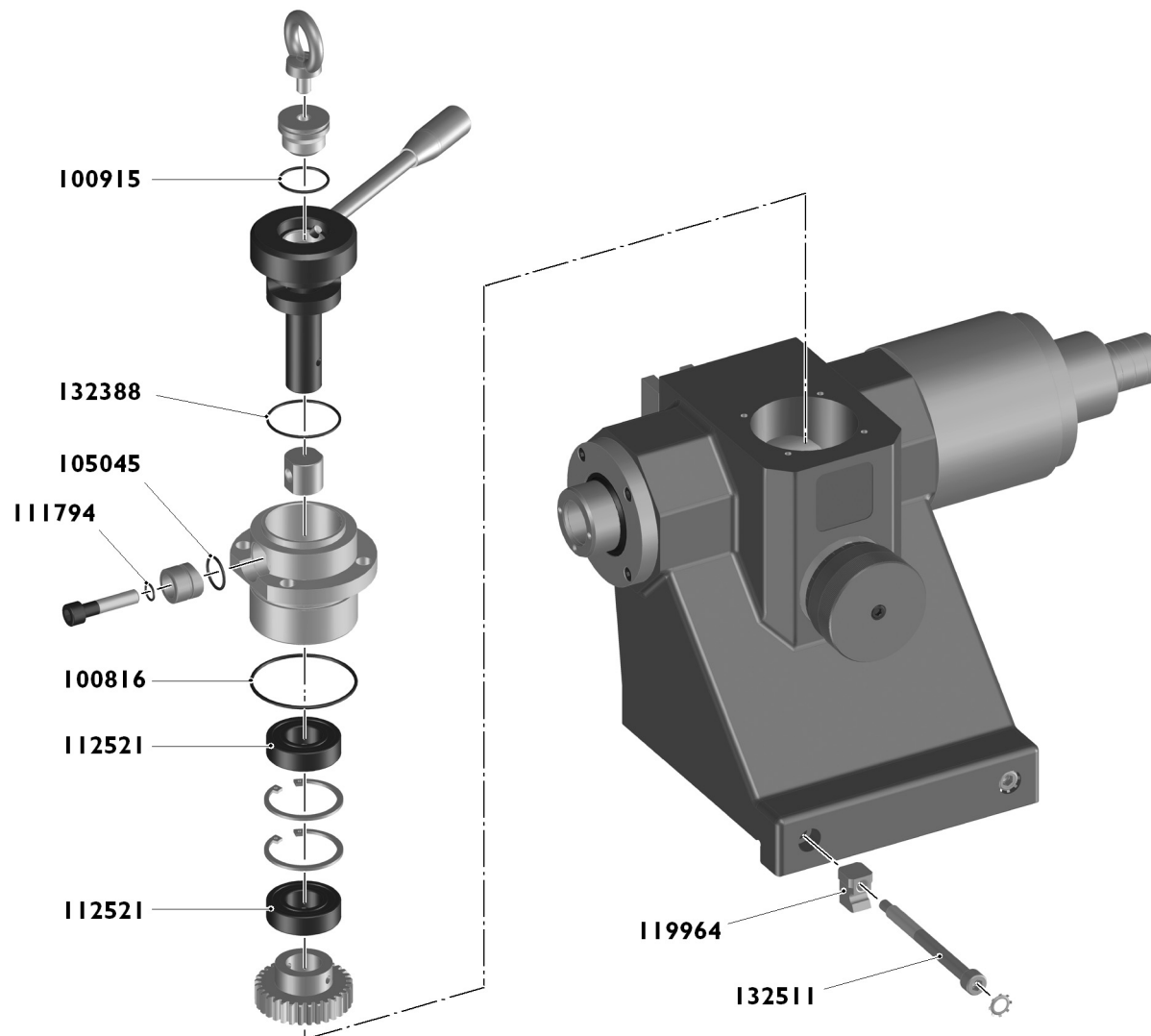




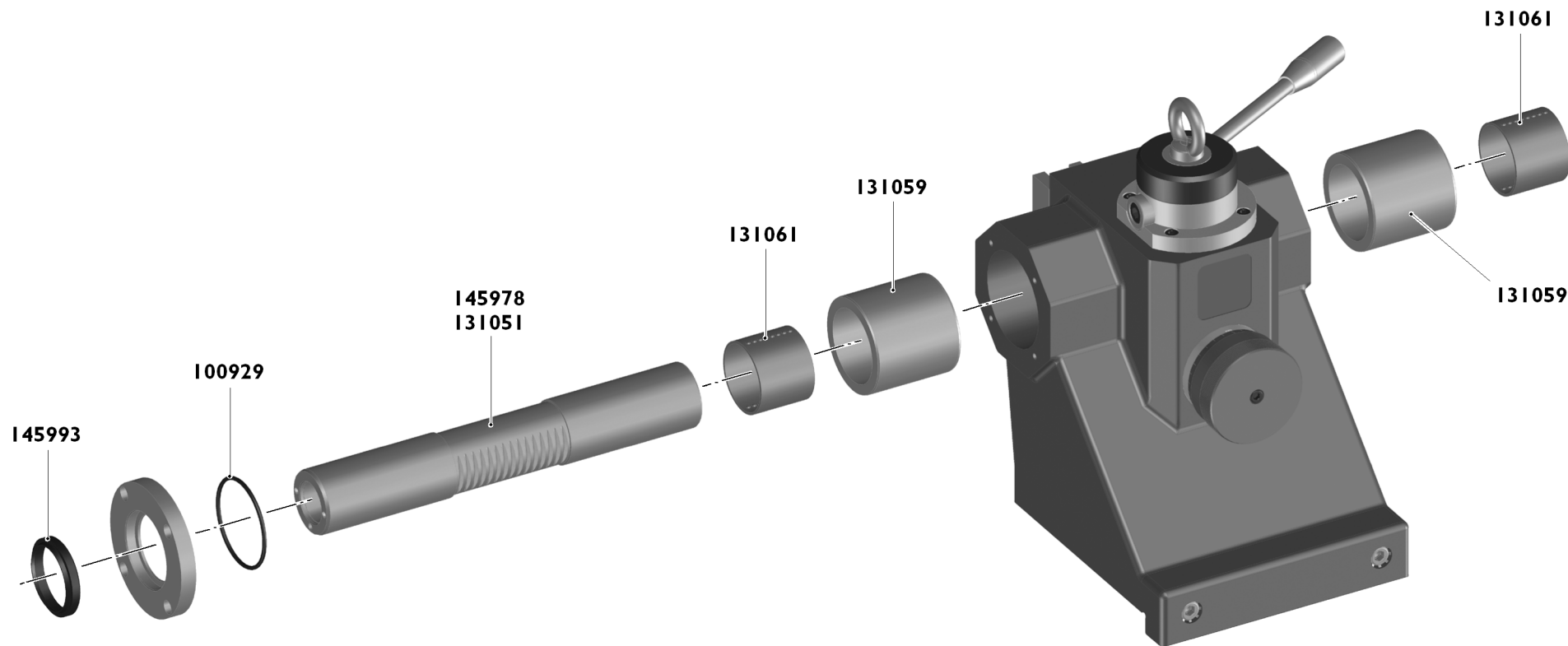
**Werkstückspindelstock Poupée porte-pièce Workhead**



**7.9 Reitstock Contre-poupée Tailstock**  
**Reitstock Standard Contre-poupée standard Tailstock standard version**

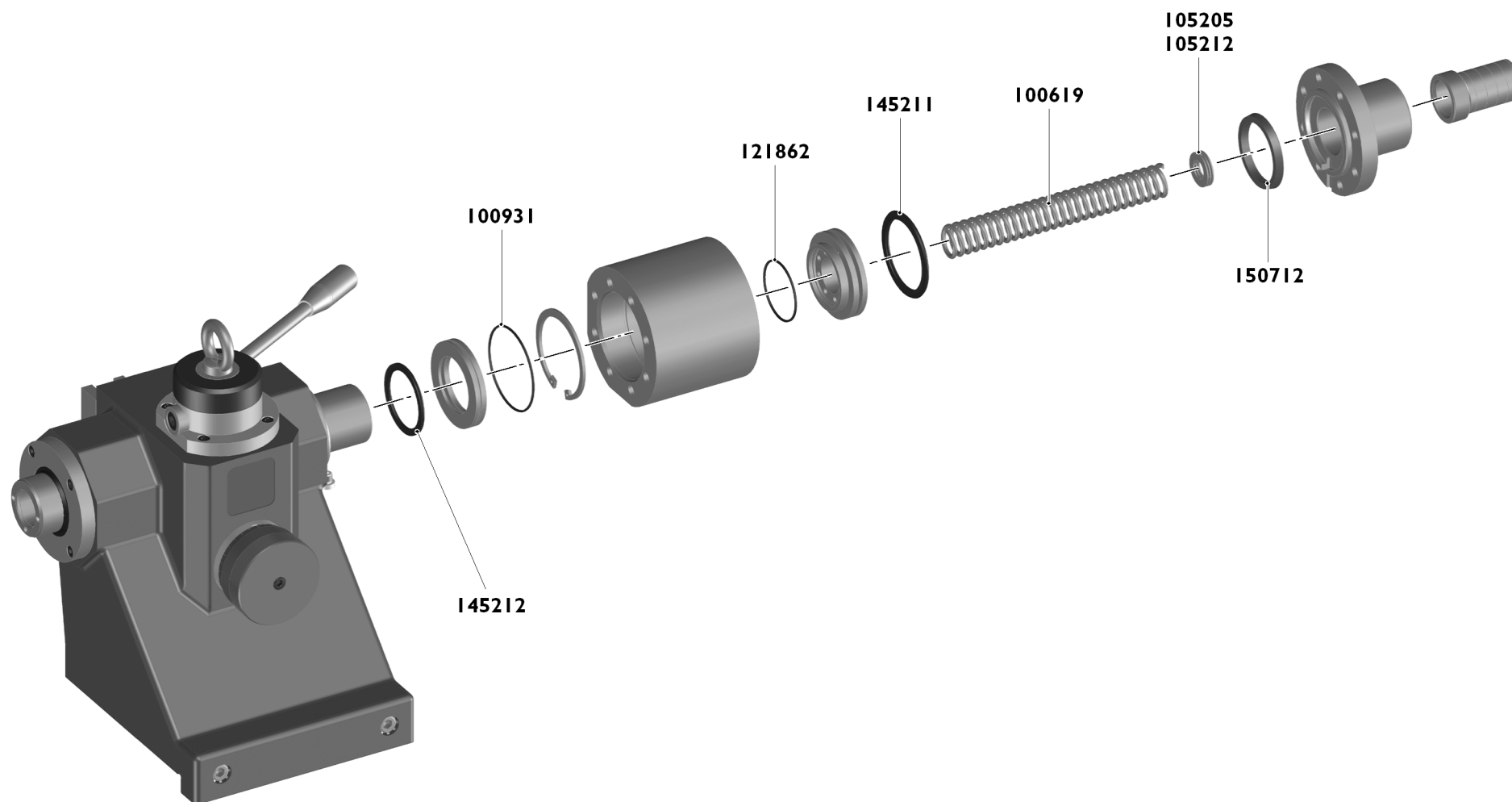


**Reitstock Standard    Contre-poupée standard    Tailstock standard version**



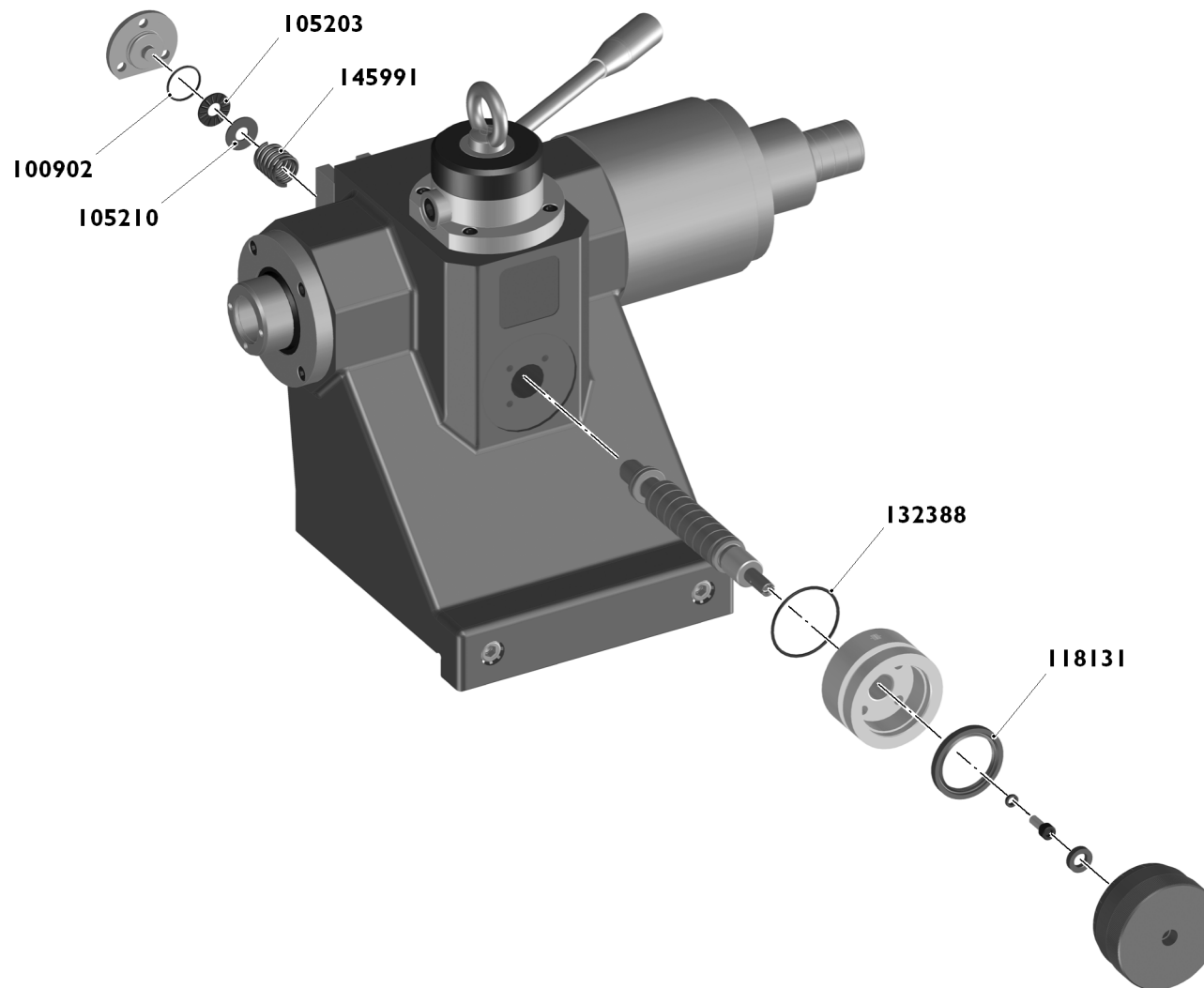
293346-2/4

**Reitstock Standard    Contre-poupée standard    Tailstock standard version**



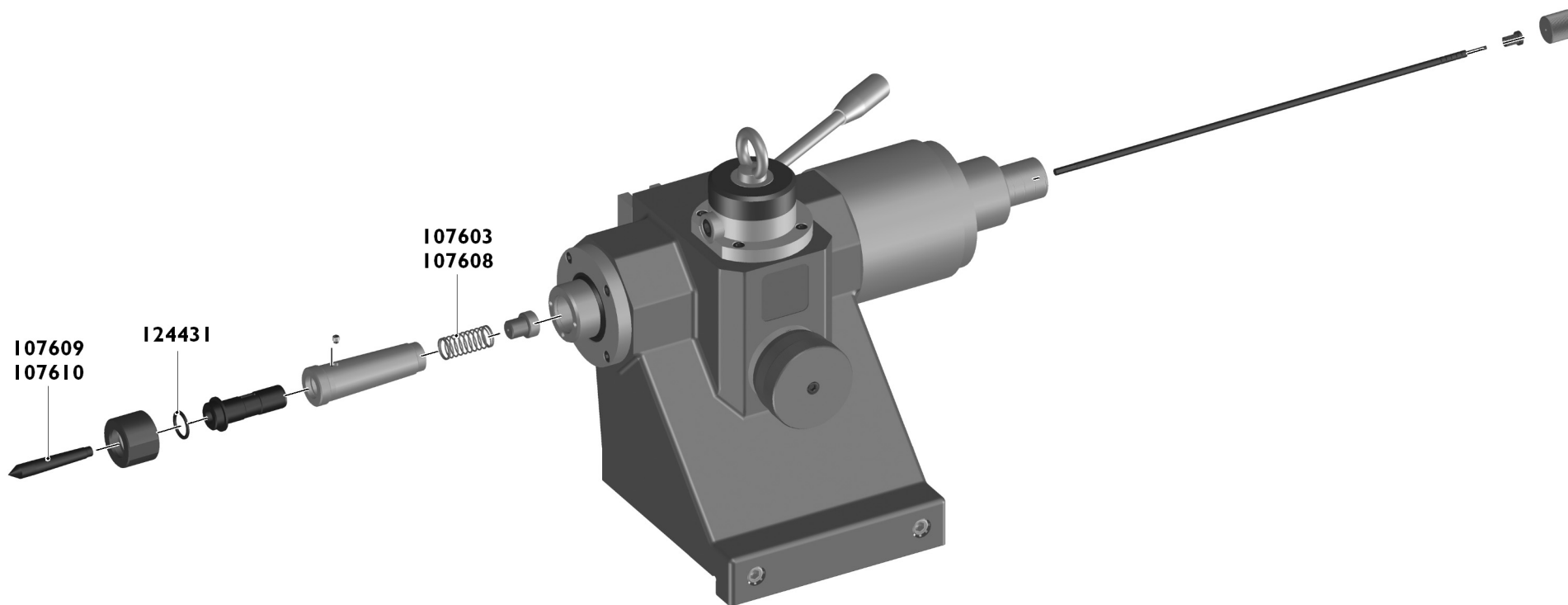
293346-3/4

**Reitstock mit Mikroverstellung    Contre-poupée avec ajustage micrométrique    Tailstock with micro corrector**



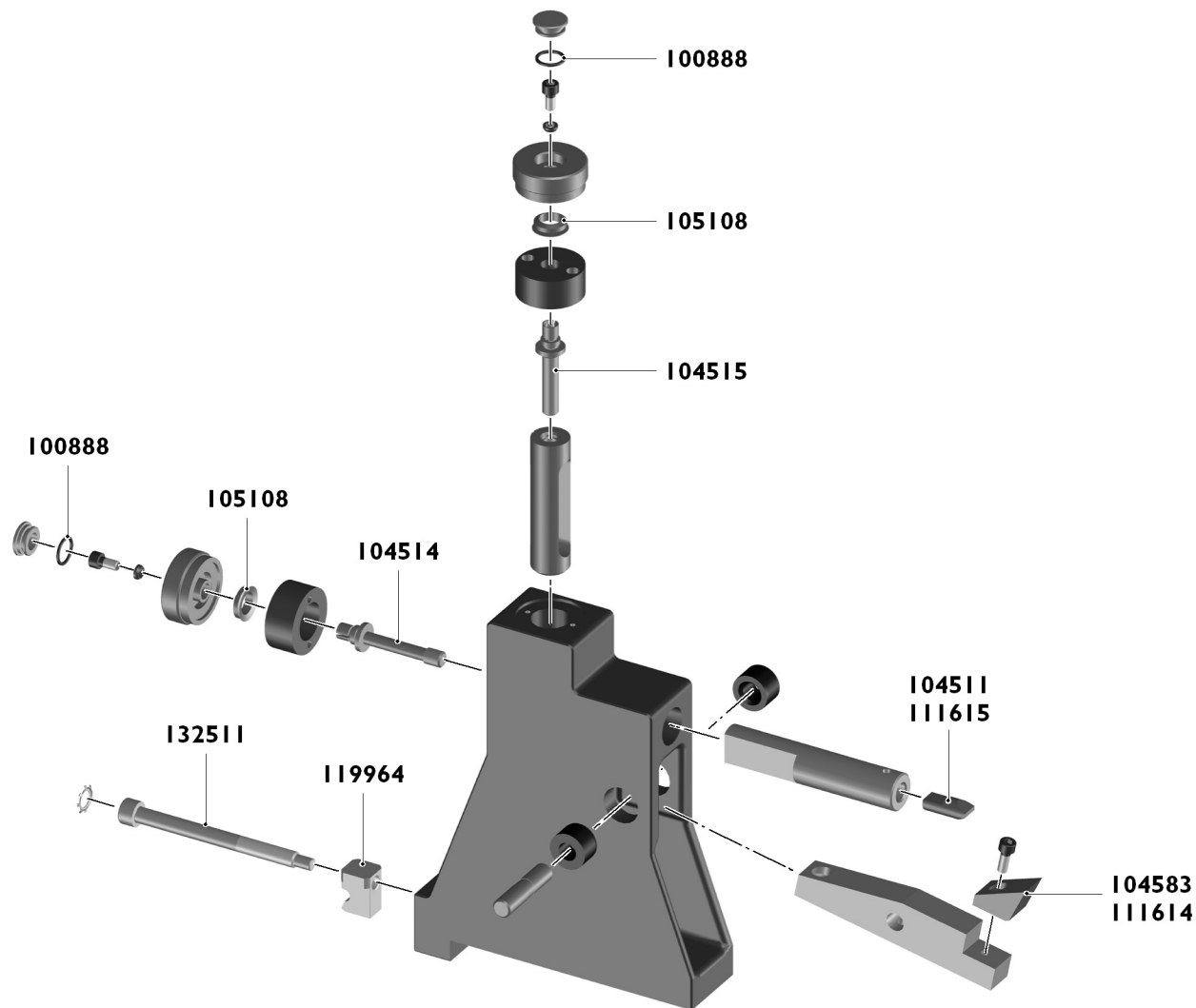
293346-4/4

Federnde Reitstockspitze    Pointe à ressorts    Spring center

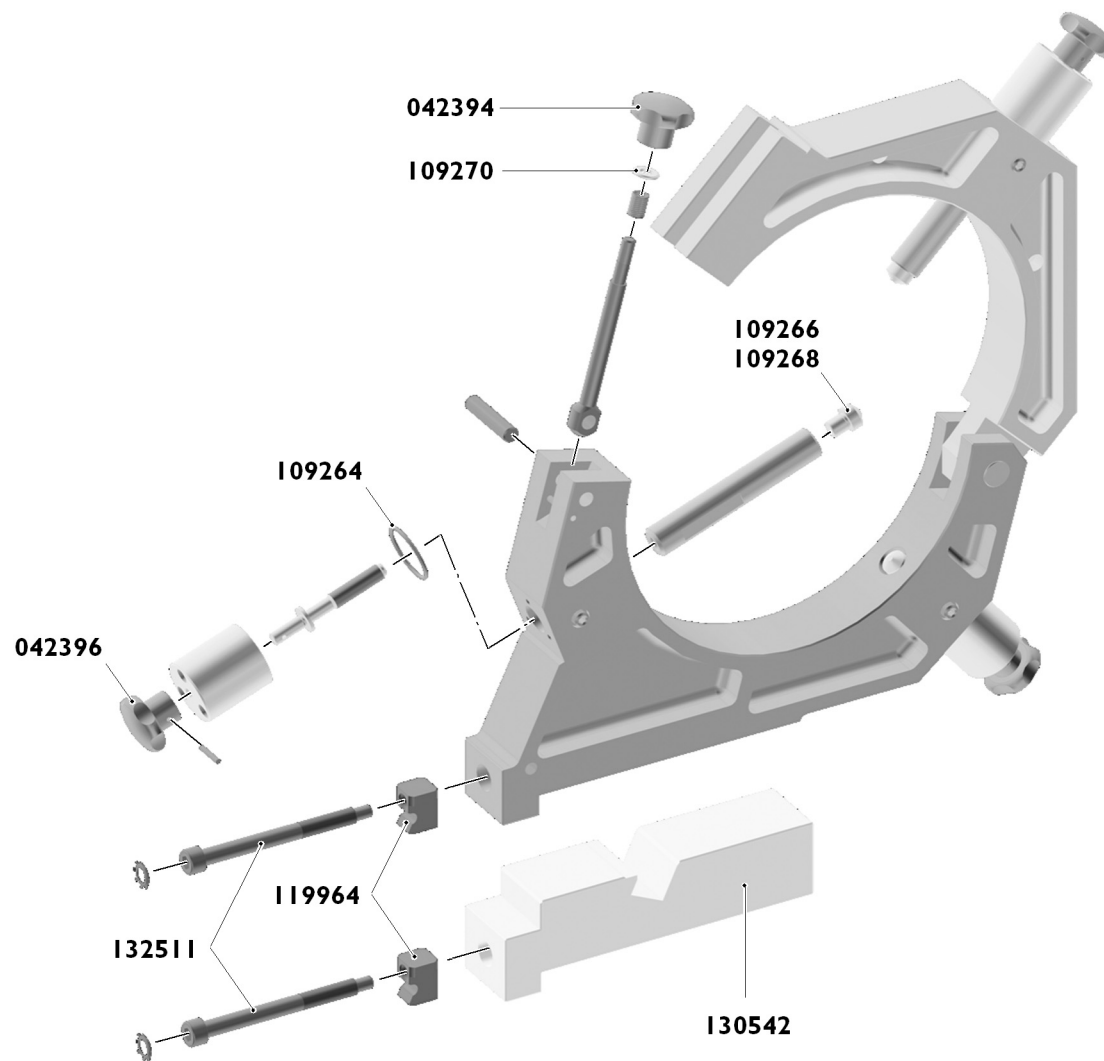




**7.10 Lünetten Lunettes Steady rests**  
**Zweibackenlünette Lunette à deux mors 2-jaw steady rest**

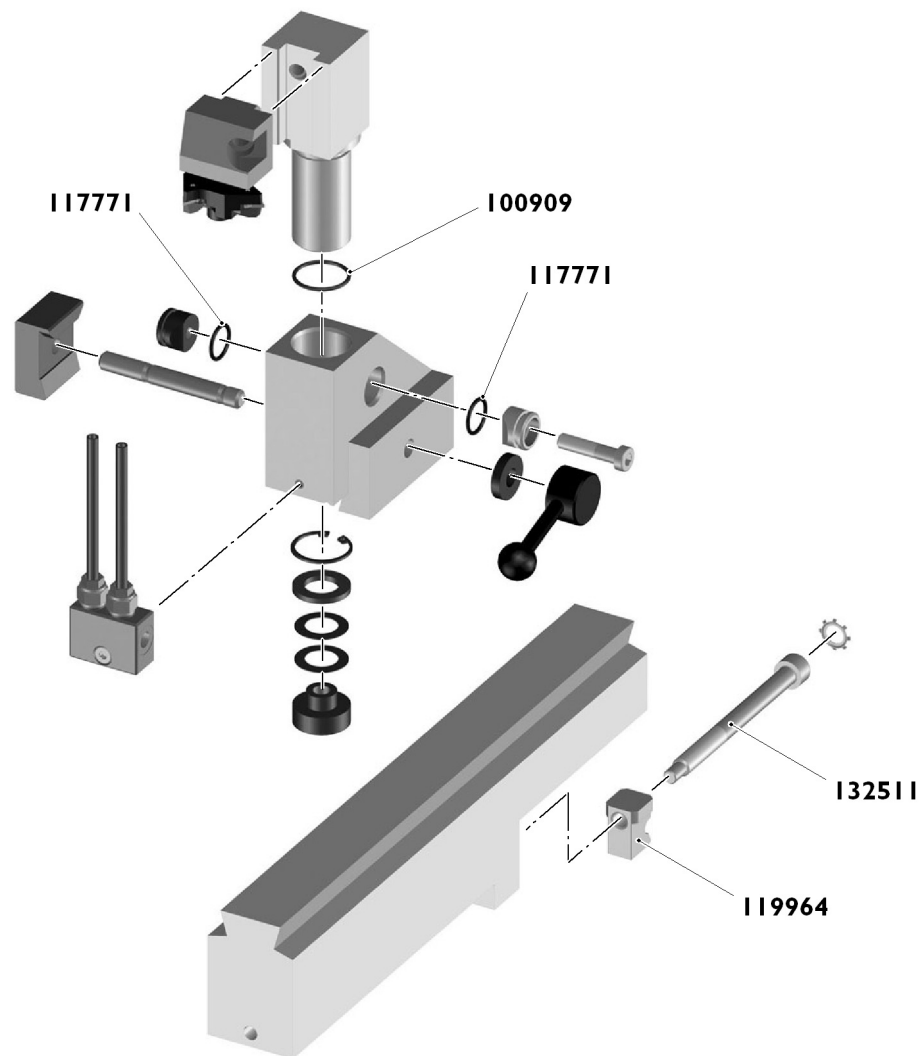


**Dreibackenlunette Lunette à trois mors 3-jaw steady rest**

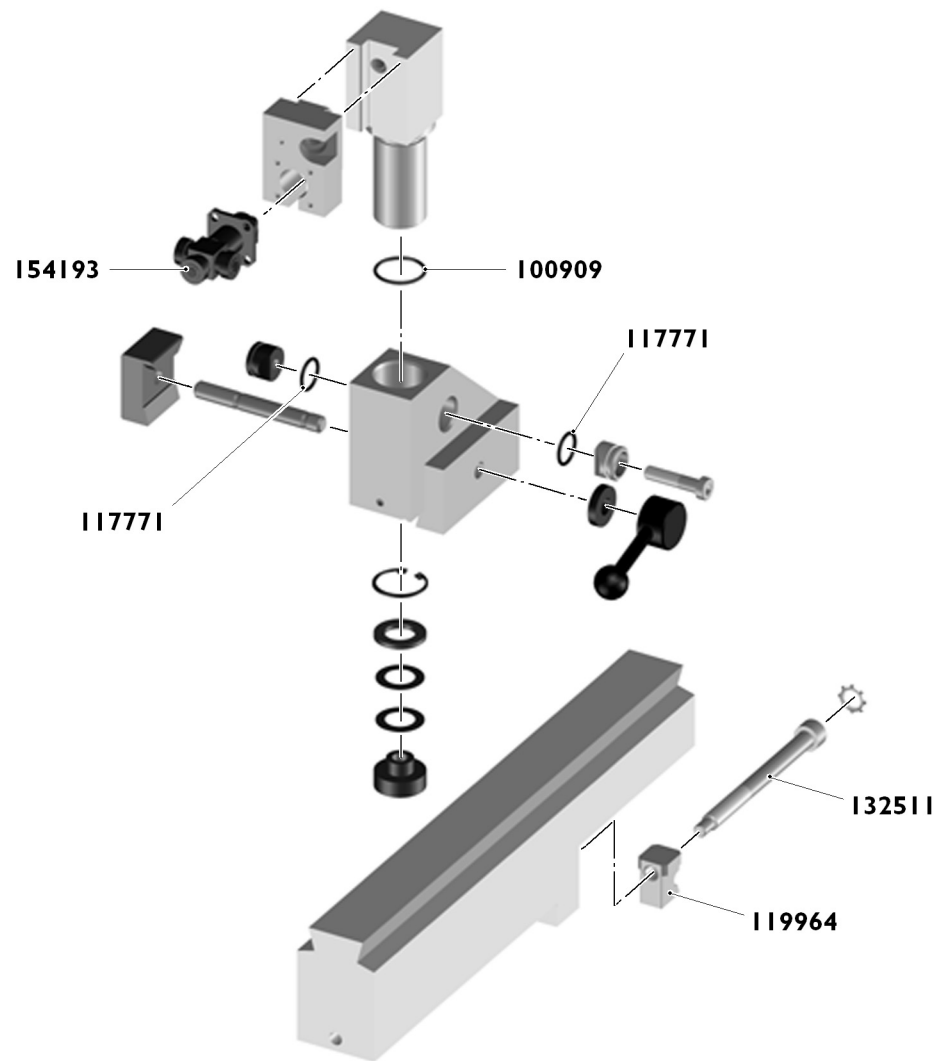


**7.11 Abrichtgerät Dispositif à dresser Dressing device**

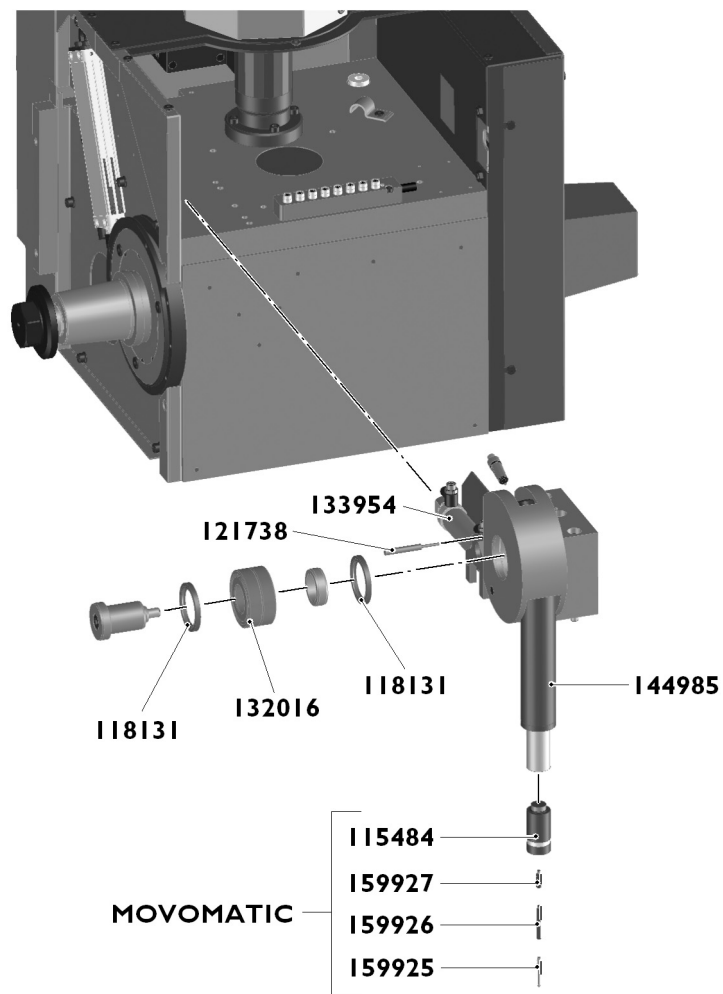
**Abrichtgerät auf Obertisch Dispositif à dresser monté sur la table supérieure Dressing device on the upper table**



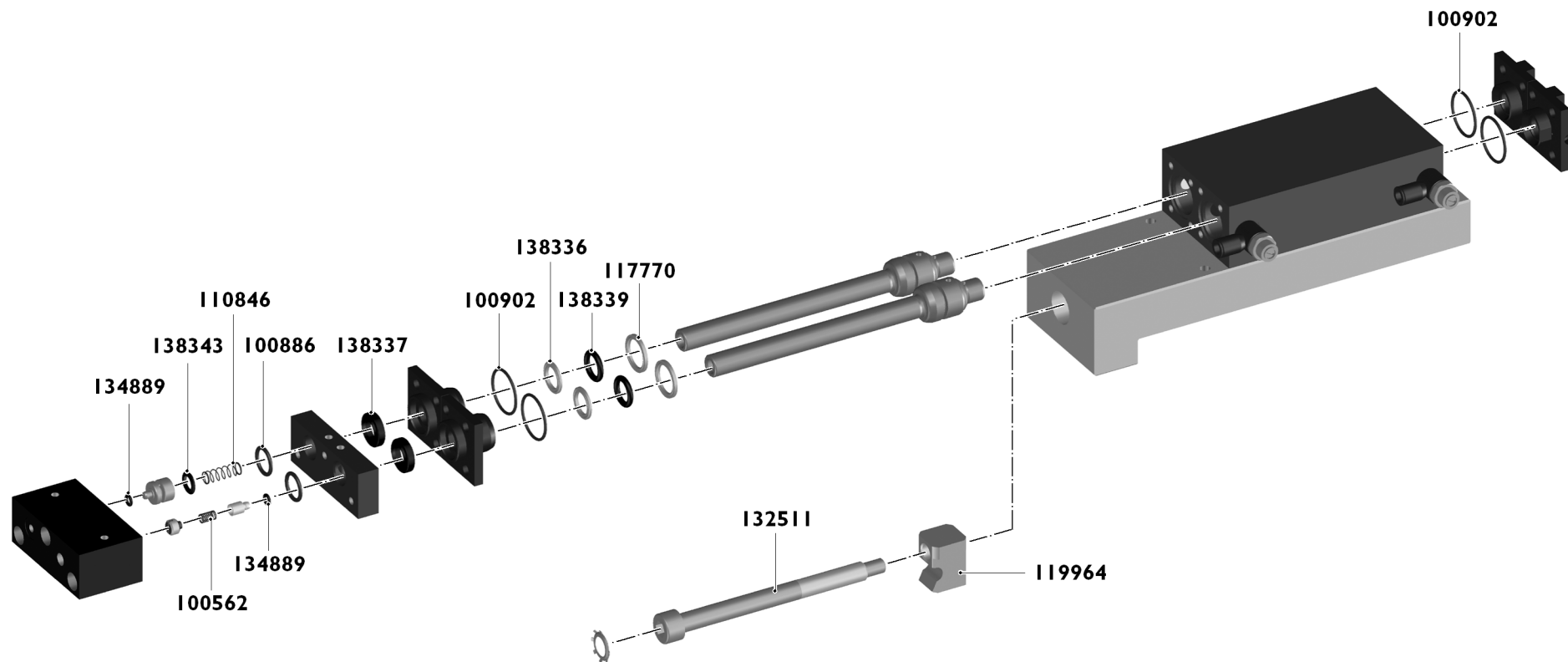
**7.12 Werkzeugvermessungssystem KEL-SET    Système de mesure de meules KEL-SET    Tool measuring system KEL-SET**



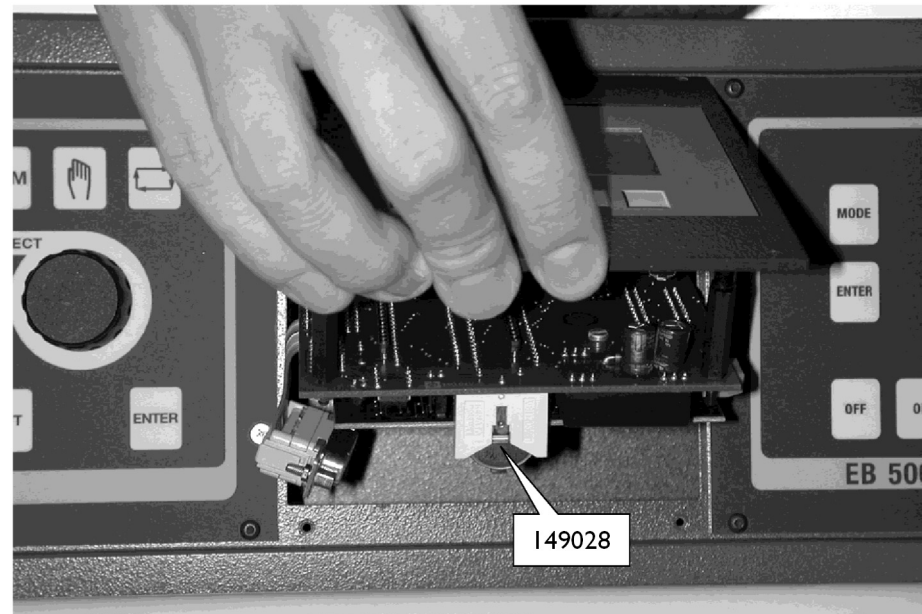
**7.13 Aktive Längspositionierung KEL-POS    Système de positionnement actif KEL-POS    Active flagging device KEL-POS**



**7.14 Messteuerung pneum. Pinolenrückzug Autocalibrage rétraction pneum. du fourreau In-process gauge system pneum. retraction**



**7.15 Schwenkwinkelanzeige Werkstückspindelstock Alimentation d'affichage d'angle d'orientation Swivel angle indicator workhead**



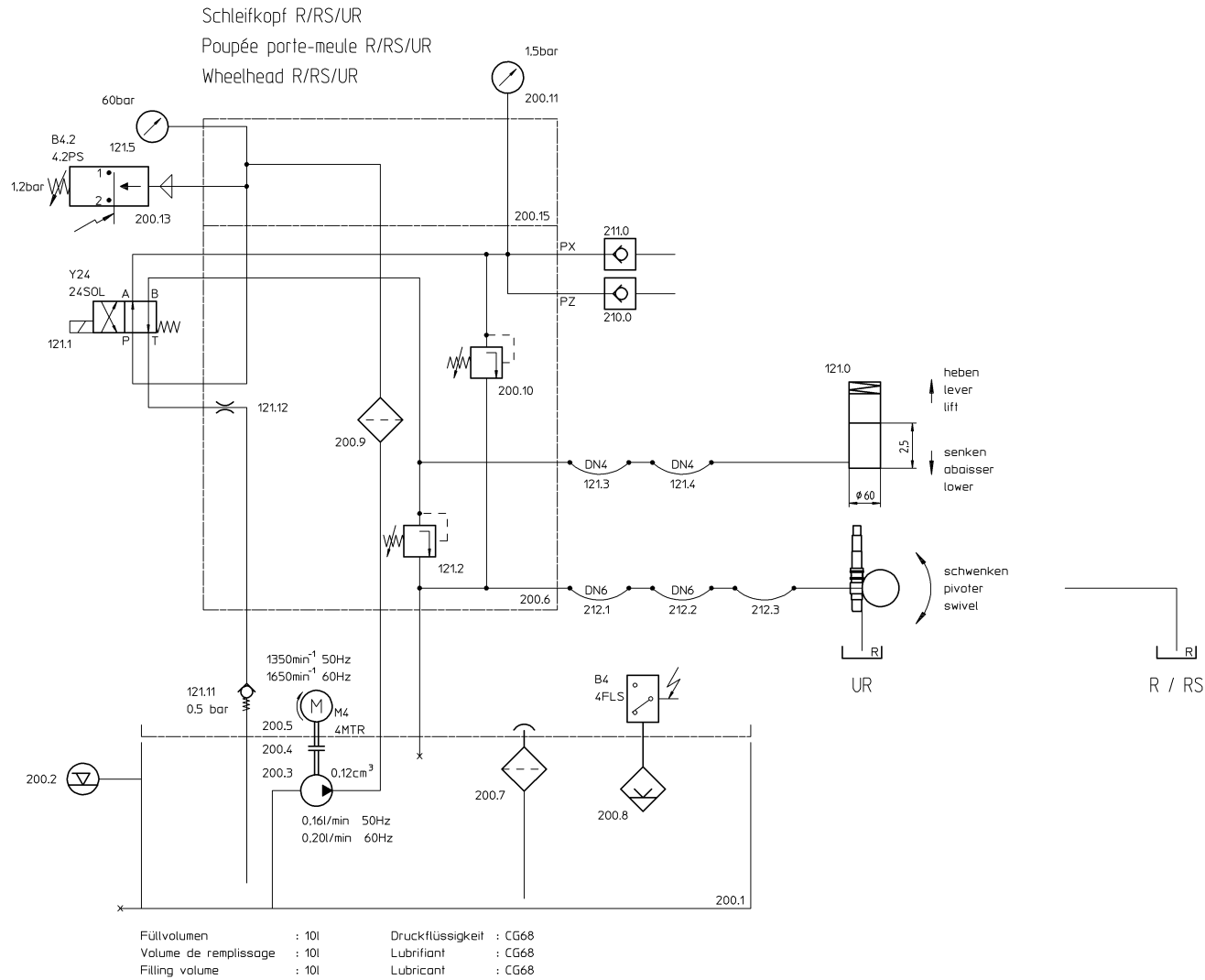
149028

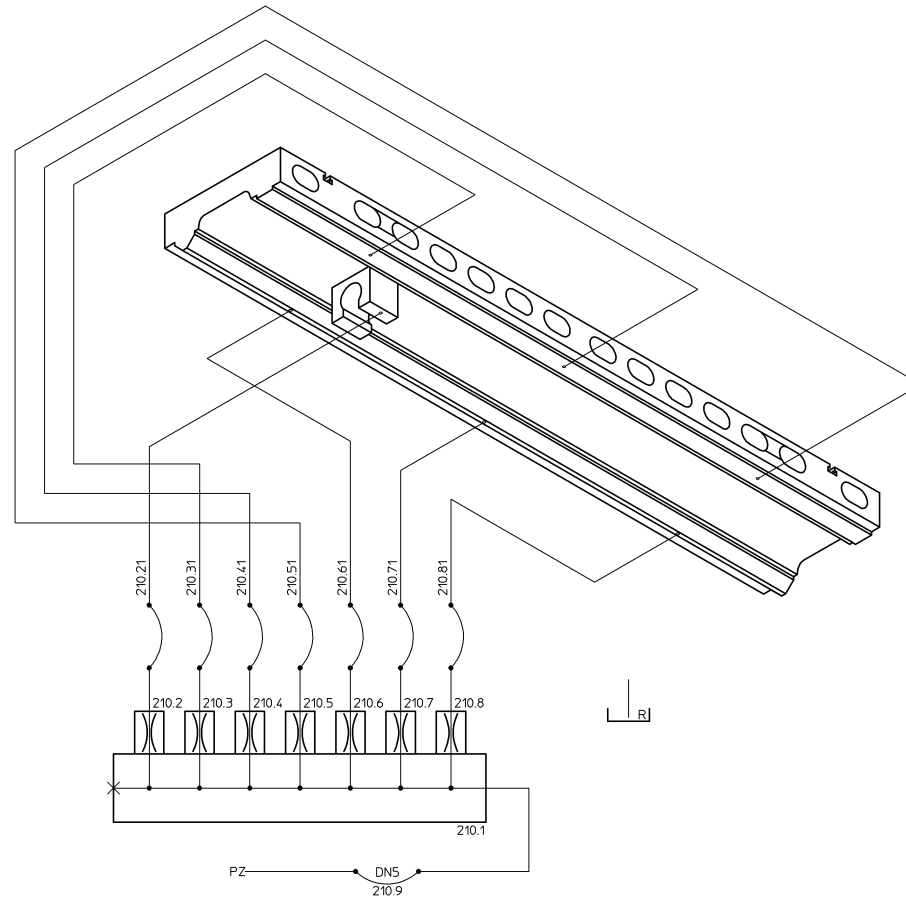
## **8 Schmierschema Schéma de lubrification Lubrication diagram**



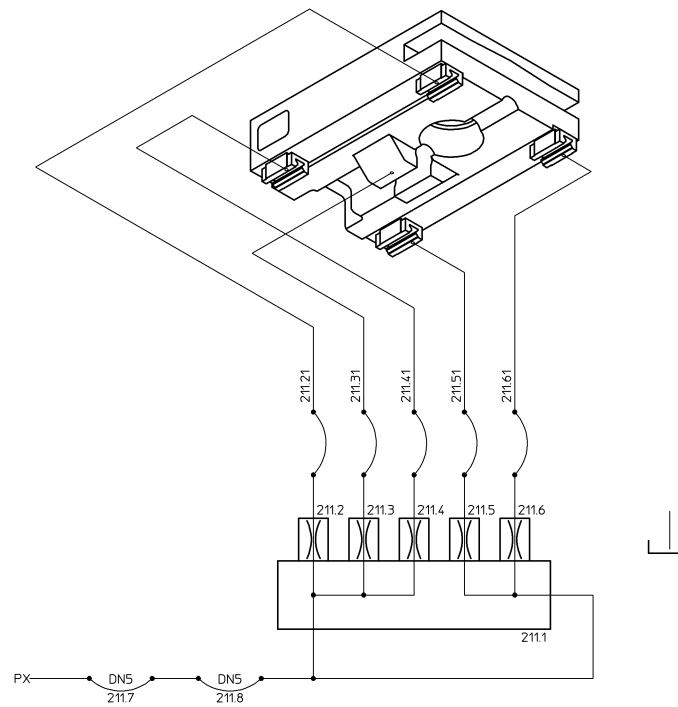
| Position<br>Rep.<br>Item | Bezeichnung                      | Désignation                         | Designation of part             | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|----------------------------------|-------------------------------------|---------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 121.1                    | 4/2 MAGNETVENTIL NG6             | 4/2 SOUPAPE MAGNÉTIQUE NG6          | 4/2 SOLENOID NG6                |                                      | DHI 0631/2-X24DC                      | 145222                               |
| 121.3                    | SCHLAUCHLEITUNG DN5 L = 1,35M    | FLEXIBLE DN5 L = 1,35M              | HOSE DN5 L = 1,35M              | TECALTO                              | 2040N-003V00-DN5-1350                 | 151772                               |
| 121.4                    | SCHLAUCHLEITUNG DN5 L = 0,85M    | FLEXIBLE DN5 L = 0,85M              | HOSE DN5 L = 0,85M              | TECALTO                              | 2040N-003V00-DN5-850                  | 151773                               |
| 121.4                    | SCHLAUCHLEITUNG DN4 L = 0,85M    | FLEXIBLE DN4 L = 0,85M              | HOSE DN4 L = 0,85M              | TECALTO                              | PTA-025-DN4-850                       | 145855                               |
| 121.5                    | MANOMETER 0-100 BAR              | MANOMÈTRE 0-100 BAR                 | MANOMETER 0-100 BAR             | ATOS                                 | NG63                                  | 118202                               |
| 121.11                   | RÜCKSCHLAGVENTIL                 | CLAPET ANTI-RETOUR                  | CHECK VALVE                     | ERMETO                               | RHV 6-PUR-ED 0,5 bar                  | 139204                               |
| 121.12                   | DROSSELVENTIL                    | CLAPET ANTI-RETOUR À ÉTRANGLEMENT   | FLOW CONTROL VALVE              | EUMA                                 | -                                     | 130054                               |
|                          |                                  |                                     |                                 |                                      |                                       |                                      |
| 200.1                    | ÖLBEHÄLTER                       | RÉSERVOIR À HUILE                   | OIL TANK                        | HBE                                  | AB12 NR                               | 156560                               |
| 200.2                    | FLÜSSIGKEITSANZEIGE              | VERRE REGARD DU NIVEAU D'HUILE      | OIL-LEVEL INDICATOR             | FLUTEC                               | FSA 76.1.1/12                         | 115161                               |
| 200.3                    | INNENZAHNRADPUMPE                | POMPE À ENGRENAGE                   | INTERNAL GEAR PUMP              | JUNG                                 | IPZ1-HR-2                             | 139188                               |
| 200.4                    | WELLENKUPPLUNG                   | ACCOUPLMENT DE L'ARBRE              | SHAFT COUPLING                  | HBE                                  | SOFTEX 19/24                          | 139189                               |
| 200.5                    | DREHSTROMMOTOR                   | MOTEUR TRIPHASÉ                     | THREE-PHASE MOTOR               | ETR                                  | H 63 A4                               | 139197                               |
|                          | N: 0,12 0,15                     | N: 0,12 0,15                        | N: 0,12 0,15                    |                                      |                                       |                                      |
|                          | N: 1350 1650                     | N: 1350 1650                        | N: 1350 1650                    |                                      |                                       |                                      |
|                          | U: 380-420 440-480               | U: 380-420 440-480                  | U: 380-420 440-480              |                                      |                                       |                                      |
|                          | 220-240 255-280                  | 220-240 255-280                     | 220-240 255-280                 |                                      |                                       |                                      |
|                          | F: 50 60                         | F: 50 60                            | F: 50 60                        |                                      |                                       |                                      |
|                          | BAUFORM B5                       | TYPE B5                             | MODEL B5                        |                                      |                                       |                                      |
|                          |                                  |                                     |                                 |                                      |                                       |                                      |
| 200.6                    | STEUERBLOCK                      | BLOC DE COMMANDE                    | CONTROL BLOCK                   | KELLENBERGER                         | -                                     | 145420                               |
| 200.7                    | EINFÜLL-UND BELÜFTUNGSFILTER     | FILTRE DE REMPLISSAGE ET D'AÉRATION | FILLING- AND VENTILATION FILTER | STAUFF                               | SES1-5                                | 130475                               |
| 200.8                    | SCHWIMMERSCHALTER                | INTERRUPTEUR À FLOTTEUR             | FLOAT SWITCH                    | KÜBLER                               | AFMS-L165-SB                          | 130430                               |
| 200.9                    | FILTERELEMENT                    | FILTRE IMMERGÉ                      | FILTERELEMENT                   | HYDAC                                | 0030 D 010 BN/HC                      | 130129                               |
| 200.10                   | DRUCKBEGRENZUNGSVENTIL 0-2,5 BAR | LIMITATEUR DE PRESSION 0-2,5 BAR    | PRESSURE RELIEF VALVE 0-2,5 BAR | JUNG                                 | 16-06239-00                           | 139191                               |
| 200.11                   | MANOMETER 0-6 BAR                | MANOMÈTRE 0-6 BAR                   | MANOMETER 0-6 BAR               | UCC                                  | NG63                                  | 131678                               |
| 200.13                   | DRUCKSCHALTER                    | PRESSOSTAT                          | PRESSURE SWITCH                 | SUCO                                 | 0166 40503 I 019                      | 145224                               |
| 200.15                   | STEUERBLOCK-DECKEL               | COUVERCLE DU BLOC DE COMMANDE       | CONTROL BLOCK CAP               | KELLENBERGER                         | -                                     | 145421                               |
|                          |                                  |                                     |                                 |                                      |                                       |                                      |
| 210.0                    | RÜCKSCHLAGVENTIL                 | CLAPET ANTI-RETOUR                  | CHECK VALVE                     | ERMETO                               | RHV 6-PLR-ED 0,5 BAR                  | 139204                               |
| 210.1                    | VERTEILLEISTE                    | BARRE DE DISTRIBUTION               | BAFFLE                          | VOGEL                                | 327761                                | 133213                               |
| 210.2                    | EINSCHRAUBDROSSEL 00             | SOUPAPE D'ÉTRANGLEMENT À VIS 00     | SCREW TYPE THROTTLE 00          | VOGEL                                | VD4-99                                | 113116                               |
| 210.21                   | SCHLAUCHLEITUNG L = 0,25M        | FLEXIBLE L = 0,25M                  | HOSE L = 0,25M                  | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 210.3                    | EINSCHRAUBDROSSEL 7              | SOUPAPE D'ÉTRANGLEMENT À VIS 7      | SCREW TYPE THROTTLE 7           | VOGEL                                | VD1-107                               | 133212                               |
| 210.31                   | SCHLAUCHLEITUNG L = 0,65M        | FLEXIBLE L = 0,65M                  | HOSE L = 0,65M                  | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 210.4                    | EINSCHRAUBDROSSEL 7              | SOUPAPE D'ÉTRANGLEMENT À VIS 7      | SCREW TYPE THROTTLE 7           | VOGEL                                | VD1-107                               | 133212                               |
| 210.41                   | SCHLAUCHLEITUNG L = 0,23M        | FLEXIBLE L = 0,23M                  | HOSE L = 0,23M                  | TECALTO                              | TTF 4X0,75                            | 105360                               |

| Position<br>Rep.<br>Item | Bezeichnung                   | Désignation                     | Designation of part    | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-------------------------------|---------------------------------|------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 210.5                    | EINSCHRAUBDROSSEL 7           | SOUPAPE D'ÉTRANGLEMENT À VIS 7  | SCREW TYPE THROTTLE 7  | VOGEL                                | VD1-107                               | 133212                               |
| 210.51                   | SCHLAUCHLEITUNG L = 0,80M     | FLEXIBLE L = 0,80M              | HOSE L = 0,80M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 210.6                    | EINSCHRAUBDROSSEL 9           | SOUPAPE D'ÉTRANGLEMENT À VIS 9  | SCREW TYPE THROTTLE 9  | VOGEL                                | VD1-109                               | 139174                               |
| 210.61                   | SCHLAUCHLEITUNG L = 1,02M     | FLEXIBLE L = 1,02M              | HOSE L = 1,02M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 210.7                    | EINSCHRAUBDROSSEL 9           | SOUPAPE D'ÉTRANGLEMENT À VIS 9  | SCREW TYPE THROTTLE 9  | VOGEL                                | VD1-109                               | 139174                               |
| 210.71                   | SCHLAUCHLEITUNG L = 0,55M     | FLEXIBLE L = 0,55M              | HOSE L = 0,55M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 210.8                    | EINSCHRAUBDROSSEL 9           | SOUPAPE D'ÉTRANGLEMENT À VIS 9  | SCREW TYPE THROTTLE 9  | VOGEL                                | VD1-109                               | 139174                               |
| 210.81                   | SCHLAUCHLEITUNG L = 0,92M     | FLEXIBLE L = 0,92M              | HOSE L = 0,92M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 210.9                    | SCHLAUCHLEITUNG DN5 L = 5M    | FLEXIBLE DN5 L = 5M             | HOSE DN5 L = 5M        | TECALTO                              | 2040N-003V00-DN5-5000                 | 145873                               |
| 211.0                    | RÜCKSCHLAGVENTIL              | CLAPET ANTI-RETOUR              | CHECK VALVE            | ERMETO                               | RHV 6-PLR-ED 0,5 BAR                  | 139204                               |
| 211.1                    | SCHLEIFSCHLITTEN              | CHARIOT PORTE-MEULE             | GRINDING SLIDE         | KELLENBERGER                         | -                                     | 159170                               |
| 211.2                    | EINSCHRAUBDROSSEL 00          | SOUPAPE D'ÉTRANGLEMENT À VIS 00 | SCREW TYPE THROTTLE 00 | VOGEL                                | VD4-99                                | 113116                               |
| 211.21                   | SCHLAUCHLEITUNG L = 0,77M     | FLEXIBLE L = 0,77M              | HOSE L = 0,77M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 211.3                    | EINSCHRAUBDROSSEL 00          | SOUPAPE D'ÉTRANGLEMENT À VIS 00 | SCREW TYPE THROTTLE 00 | VOGEL                                | VD4-99                                | 113116                               |
| 211.31                   | SCHLAUCHLEITUNG L = 0,06M     | FLEXIBLE L = 0,06M              | HOSE L = 0,06M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 211.4                    | EINSCHRAUBDROSSEL 00          | SOUPAPE D'ÉTRANGLEMENT À VIS 00 | SCREW TYPE THROTTLE 00 | VOGEL                                | VD4-99                                | 113116                               |
| 211.41                   | SCHLAUCHLEITUNG L = 0,50M     | FLEXIBLE L = 0,50M              | HOSE L = 0,50M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 211.5                    | EINSCHRAUBDROSSEL 00          | SOUPAPE D'ÉTRANGLEMENT À VIS 00 | SCREW TYPE THROTTLE 00 | VOGEL                                | VD4-99                                | 113116                               |
| 211.51                   | SCHLAUCHLEITUNG L = 0,07M     | FLEXIBLE L = 0,07M              | HOSE L = 0,07M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 211.6                    | EINSCHRAUBDROSSEL 00          | SOUPAPE D'ÉTRANGLEMENT À VIS 00 | SCREW TYPE THROTTLE 00 | VOGEL                                | VD4-99                                | 113116                               |
| 211.61                   | SCHLAUCHLEITUNG L = 0,29M     | FLEXIBLE L = 0,29M              | HOSE L = 0,29M         | TECALTO                              | TTF 4X0,75                            | 105360                               |
| 211.7                    | SCHLAUCHLEITUNG DN5 L = 1,35M | FLEXIBLE DN5 L = 1,35M          | HOSE DN5 L = 1,35M     | TECALTO                              | 2040N-003V00-DN5-1350                 | 151772                               |
| 211.8                    | SCHLAUCHLEITUNG DN5 L = 0,85M | FLEXIBLE DN5 L = 0,85M          | HOSE DN5 L = 0,85M     | TECALTO                              | 2040N-003V00-DN5-850                  | 151773                               |
| 212.1                    | SCHLAUCHLEITUNG DN6 L = 1,35M | FLEXIBLE DN6 L = 1,35M          | HOSE DN6 L = 1,35M     | TECALTO                              | 2040N-004V00-DN6-1350                 | 149723                               |
| 212.2                    | SCHLAUCHLEITUNG DN6 L = 0,85M | FLEXIBLE DN6 L = 0,85M          | HOSE DN6 L = 0,85M     | TECALTO                              | 2040N-004V00-DN6-850                  | 149724                               |
| 212.3                    | SCHLAUCHLEITUNG L = 0,10M     | FLEXIBLE L = 0,10M              | HOSE L = 0,10M         | TECALTO                              | TTF 6X1                               | 105361                               |





293248-2/3



**9**      **Pneumatikschema**  
**Schéma pneumatique**  
**Pneumatic diagram**

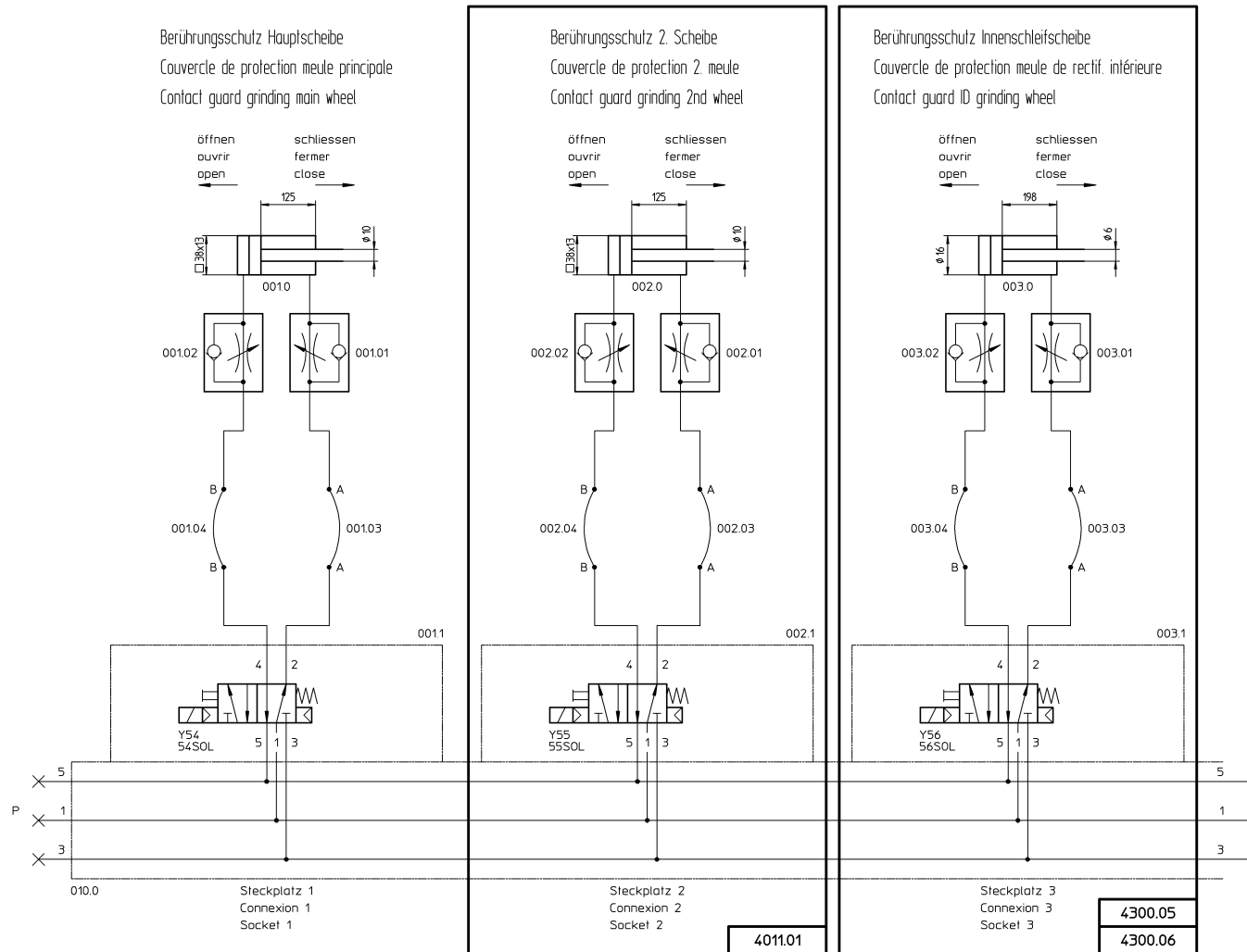
| Position<br>Rep.<br>Item | Bezeichnung                      | Désignation                      | Designation of part           | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|----------------------------------|----------------------------------|-------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 000.01                   | ABSPERRVENTIL NL2                | SOUPAPE D'ARRÊT NL2              | SHUT-OFF VALVE NL2            | BOSCH                                | 0 821 300 922                         | -                                    |
| 000.02                   | SCHALLDÄMPFER G1/4"              | SILENCIEUX G1/4"                 | SOUND ABSORBER G1/4"          | BOSCH                                | 1 827 000 001                         | 119500                               |
| 000.03                   | SCHLAUCHLEITUNG Ø 8/6 L = 0,6M   | FLEXIBLE Ø 8/6 L = 0,6M          | HOSE Ø 8/6 L = 0,6M           | TRIGRESS                             | PUR-1198A/8X6                         | 150709                               |
| 000.2                    | VERTEILER 4FACH NL2              | DISTRIBUTEUR 4-VOIES NL2         | 4-DISTRIBUTOR NL2             | BOSCH                                | 0 821 300 920                         | -                                    |
| 000.3                    | MEMBRANDRUCKSCHALTER             | MANOCONTACTEUR À MEMBRANE        | DIAPHRAGM PRESSURE SWITCH     | SUCO                                 | 0166 40503 1 019                      | 145224                               |
| 000.4                    | FILTER-DRUCKREGLER NL2           | MANOSTAT FILTRE NL2              | FILTER PRESSURE REGULATOR NL2 | BOSCH                                | 0 821 300 319                         | -                                    |
| 000.6                    | SCHALLDÄMPFER G1/4"              | SILENCIEUX G1/4"                 | SOUND ABSORBER G1/4"          | BOSCH                                | 1 827 000 001                         | 119500                               |
| 000.7                    | SCHALLDÄMPFER G1/4"              | SILENCIEUX G1/4"                 | SOUND ABSORBER G1/4"          | BOSCH                                | 1 827 000 001                         | 119500                               |
| 000.8                    | SCHLAUCHLEITUNG Ø 10/8 L = 1,5M  | FLEXIBLE Ø 10/8 L = 1,5 M        | HOSE Ø 10/8 L = 1,5 M         | TRIGRESS                             | PUR-1198A/10X8                        | 150710                               |
| 001.0                    | FLACHZYLINDER                    | CYLINDRE PLAT                    | FLAT CYLINDER                 | FESTO                                | DZF-25-125-P-A                        | 142816                               |
| 001.01                   | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 19                            | 145614                               |
| 001.02                   | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 19                            | 145614                               |
| 001.03                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M         | HOSE Ø 6/4 L = 4,2 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 001.04                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M         | HOSE Ø 6/4 L = 4,2 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 001.1                    | 5/2-WEGEVENTIL                   | DISTRIBUTEUR 5/2 VOIES           | 5/2-DIRECTIONAL CONTROL VALVE | BOSCH                                | 0 820 038 126                         | 145403                               |
| 002.0                    | FLACHZYLINDER                    | CYLINDRE PLAT                    | FLAT CYLINDER                 | FESTO                                | DZF-25-125-P-A                        | 142816                               |
| 002.01                   | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 19                            | 145614                               |
| 002.02                   | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 19                            | 145614                               |
| 002.03                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M         | HOSE Ø 6/4 L = 4,2 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 002.04                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M         | HOSE Ø 6/4 L = 4,2 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 002.1                    | 5/2-WEGEVENTIL                   | DISTRIBUTEUR 5/2 VOIES           | 5/2-DIRECTIONAL CONTROL VALVE | BOSCH                                | 0 820 038 126                         | 145403                               |
| 003.0                    | RUNDZYLINDER DOPPELTWIRKEND      | CYLINDRE ROND À DOUBLE EFFET     | ROUND CYLINDER, DOUBLE-ACTING | BOSCH                                | D16-HUB198 ISO 6432                   | 133852                               |
| 003.01                   | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 19                            | 145614                               |
| 003.02                   | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 19                            | 145614                               |
| 003.03                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M         | HOSE Ø 6/4 L = 4,2 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 003.04                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M         | HOSE Ø 6/4 L = 4,2 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 003.1                    | 5/2-WEGEVENTIL                   | DISTRIBUTEUR 5/2 VOIES           | 5/2-DIRECTIONAL CONTROL VALVE | BOSCH                                | 0 820 038 126                         | 145403                               |
| 004.02                   | OBERTISCH/ REITSTOCK             | TABLE SUPÉRIEURE / CONTRE-POUPÉE | UPPER TABLE / TAILSTOCK       | KELLENBERGER                         | -                                     | -                                    |
| 004.021                  | DROSSELRÜCKSCHLAGVERSCHRÄUBUNG   | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD     | LEGRIS                               | 7010 06 10                            | 145615                               |
| 004.023                  | MICRO-NEBELÖLER NLI              | SYSTÈME D'HUILAGE DE L'AIR NLI   | OIL ATOMIZER NLI              | BOSCH                                | 0 821 301 702                         | 138808                               |
| 004.025                  | SCHLAUCHLEITUNG Ø 6/4 L = 0,28 M | FLEXIBLE Ø 6/4 L = 0,28 M        | HOSE Ø 6/4 L = 0,28 M         | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.027                  | SCHLAUCHLEITUNG Ø 6/4 L = 1,7 M  | FLEXIBLE Ø 6/4 L = 1,7 M         | HOSE Ø 6/4 L = 1,7 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.029                  | SCHLAUCHLEITUNG Ø 6/4 L = 9,0 M  | FLEXIBLE Ø 6/4 L = 9,0 M         | HOSE Ø 6/4 L = 9,0 M          | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |

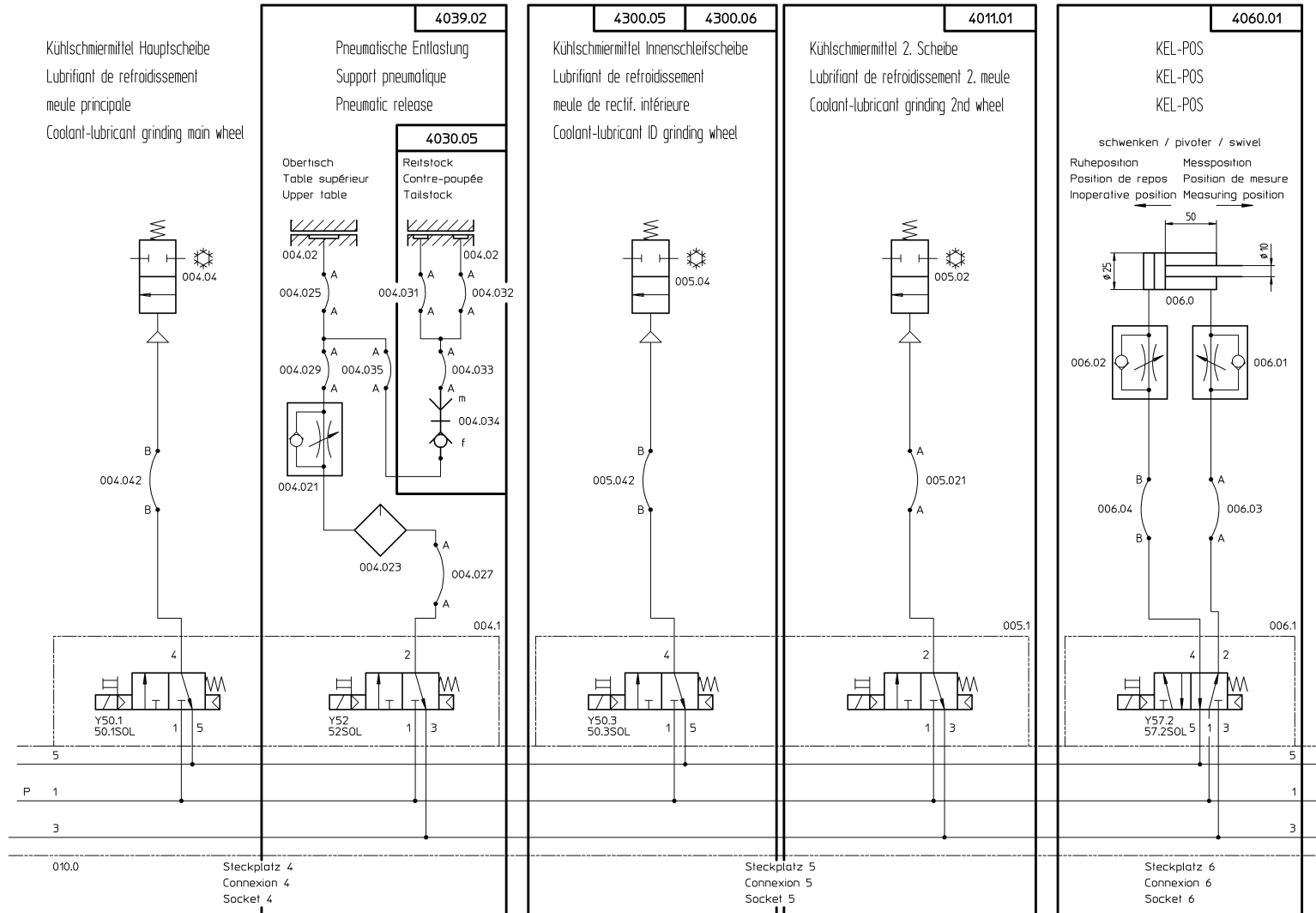
| Position<br>Rep.<br>Item | Bezeichnung                      | Désignation                    | Designation of part              | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 004.031                  | SCHLAUCHLEITUNG Ø 6/4 L = 0,2 M  | FLEXIBLE Ø 6/4 L = 0,2 M       | HOSE Ø 6/4 L = 0,2 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.032                  | SCHLAUCHLEITUNG Ø 6/4 L = 0,2 M  | FLEXIBLE Ø 6/4 L = 0,2 M       | HOSE Ø 6/4 L = 0,2 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.033                  | SCHLAUCHLEITUNG Ø 6/4 L = 0,8 M  | FLEXIBLE Ø 6/4 L = 0,8 M       | HOSE Ø 6/4 L = 0,8 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.034                  | KUPPLUNGSNIPPEL G1/8"            | NIPPLE D'ACCOUPEMENT G1/8"     | COUPLING NIPPLE G1/8"            | LEGRIS                               | 9086 20 10                            | 145600                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"         | ACCOUPEMENT DE FERMETURE G1/8" | COUPLING G1/8"                   | LEGRIS                               | 9201 20 10                            | 148129                               |
| 004.035                  | SCHLAUCHLEITUNG Ø 6/4 L = 0,62 M | FLEXIBLE Ø 6/4 L = 0,62 M      | HOSE Ø 6/4 L = 0,62 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.04                   | WASSERVENTIL                     | VANNE À EAU                    | WATER VALVE                      | VEKTOR                               | VPST 964531                           | 133143                               |
| 004.042                  | SCHLAUCHLEITUNG Ø 6/4 L = 3,5 M  | FLEXIBLE Ø 6/4 L = 3,5 M       | HOSE Ø 6/4 L = 3,5 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 004.1                    | 2X 3/2-WEGEVENTIL                | 2X DISTRIBUTEUR 3/2 VOIES      | 2X 3/2-DIRECTIONAL CONTROL VALVE | BOSCH                                | 0 820 037 102                         | 145404                               |
|                          |                                  |                                |                                  |                                      |                                       |                                      |
| 005.02                   | WASSERVENTIL                     | VANNE À EAU                    | WATER VALVE                      | VEKTOR                               | VPST 964531                           | 133143                               |
| 005.021                  | SCHLAUCHLEITUNG Ø 6/4 L = 3,5 M  | FLEXIBLE Ø 6/4 L = 3,5 M       | HOSE Ø 6/4 L = 3,5 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 005.04                   | WASSERVENTIL                     | VANNE À EAU                    | WATER VALVE                      | VEKTOR                               | VPST 964531                           | 133143                               |
| 005.042                  | SCHLAUCHLEITUNG Ø 6/4 L = 3,5 M  | FLEXIBLE Ø 6/4 L = 3,5 M       | HOSE Ø 6/4 L = 3,5 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 005.1                    | 2X 3/2-WEGEVENTILE               | 2X DISTRIBUTEUR 3/2 VOIES      | 2X 3/2-DIRECTIONAL CONTROL VALVE | BOSCH                                | 0 820 037 102                         | 145404                               |
|                          |                                  |                                |                                  |                                      |                                       |                                      |
| 006.0                    | RUNDZYLINDER DOPPELTWIRKEND      | CYLINDRE ROND À DOUBLE EFFET   | ROUND CYLINDER, DOUBLE-ACTING    | BOSCH                                | D25-HUB50 ISO 6432                    | 133954                               |
| 006.01                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG   | SOUPAPE D'ÉTRANGLEMENT         | ONE-WAY RESTRICTOR THREAD        | LEGRIS                               | 7010 06 10                            | 145615                               |
| 006.02                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG   | SOUPAPE D'ÉTRANGLEMENT         | ONE-WAY RESTRICTOR THREAD        | LEGRIS                               | 7010 06 10                            | 145615                               |
| 006.03                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M       | HOSE Ø 6/4 L = 4,2 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 006.04                   | SCHLAUCHLEITUNG Ø 6/4 L = 4,2 M  | FLEXIBLE Ø 6/4 L = 4,2 M       | HOSE Ø 6/4 L = 4,2 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 006.1                    | 5/2-WEGEVENTIL                   | DISTRIBUTEUR 5/2 VOIES         | 5/2-DIRECTIONAL CONTROL VALVE    | BOSCH                                | 0 820 038 126                         | 145403                               |
|                          |                                  |                                |                                  |                                      |                                       |                                      |
| 007.0                    | RÜCKZUGSVORRICHTUNG              | DISPOSITIF DE RECU             | RETRACTION DEVICE                | KELLENBERGER                         | -                                     | -                                    |
| 007.01                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG   | SOUPAPE D'ÉTRANGLEMENT         | ONE-WAY RESTRICTOR THREAD        | LEGRIS                               | 7010 06 10                            | 145615                               |
| 007.02                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG   | SOUPAPE D'ÉTRANGLEMENT         | ONE-WAY RESTRICTOR THREAD        | LEGRIS                               | 7010 06 10                            | 145615                               |
| 007.03                   | KUPPLUNGSNIPPEL G1/8"            | NIPPLE D'ACCOUPEMENT G1/8"     | COUPLING NIPPLE G1/8"            | LEGRIS                               | 9086 21 10                            | 145604                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"         | ACCOUPEMENT DE FERMETURE G1/8" | COUPLING G1/8"                   | LEGRIS                               | 9201 21 10                            | 151770                               |
| 007.04                   | KUPPLUNGSNIPPEL G1/8"            | NIPPLE D'ACCOUPEMENT G1/8"     | COUPLING NIPPLE G1/8"            | TRIGRESS                             | 21 SF IW 10 MXN 6                     | 145618                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"         | ACCOUPEMENT DE FERMETURE G1/8" | COUPLING G1/8"                   | TRIGRESS                             | 21 KA AW 10 MPN 6                     | 145617                               |
|                          |                                  |                                |                                  |                                      |                                       |                                      |
| 007.05                   | SCHLAUCHLEITUNG Ø 6/4 L = 1,0 M  | FLEXIBLE Ø 6/4 L = 1,0 M       | HOSE Ø 6/4 L = 1,0 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 007.06                   | SCHLAUCHLEITUNG Ø 6/4 L = 1,0 M  | FLEXIBLE Ø 6/4 L = 1,0 M       | HOSE Ø 6/4 L = 1,0 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 007.07                   | SCHLAUCHLEITUNG Ø 6/4 L = 5,0 M  | FLEXIBLE Ø 6/4 L = 5,0 M       | HOSE Ø 6/4 L = 5,0 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 007.08                   | SCHLAUCHLEITUNG Ø 6/4 L = 5,0 M  | FLEXIBLE Ø 6/4 L = 5,0 M       | HOSE Ø 6/4 L = 5,0 M             | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 007.1                    | 5/2-WEGEVENTIL                   | DISTRIBUTEUR 5/2 VOIES         | 5/2-DIRECTIONAL CONTROL VALVE    | BOSCH                                | 0 820 038 126                         | 145403                               |
|                          |                                  |                                |                                  |                                      |                                       |                                      |

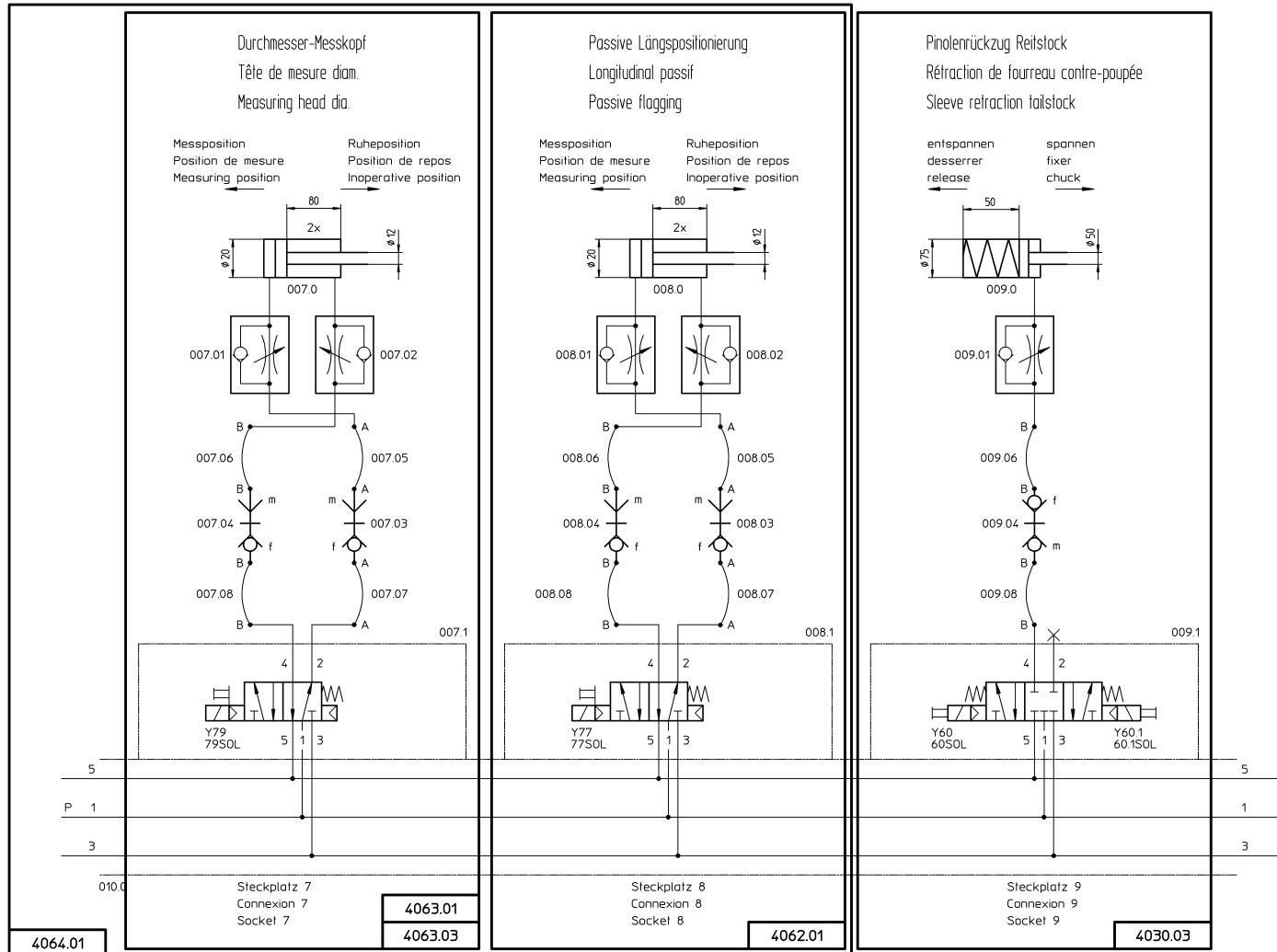


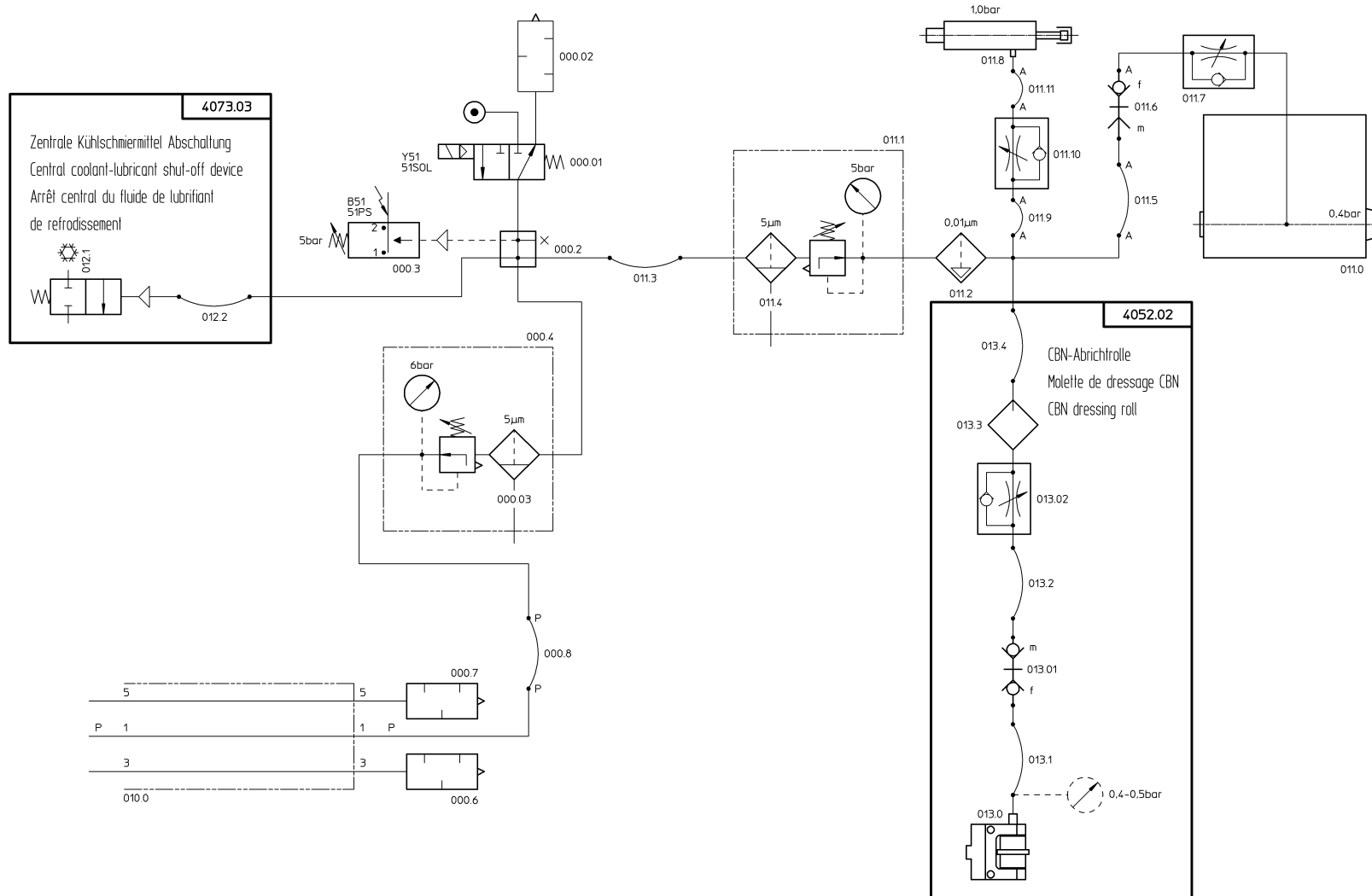
| Position<br>Rep.<br>Item | Bezeichnung                    | Désignation                        | Designation of part             | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|--------------------------------|------------------------------------|---------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 008.0                    | RÜCKZUGSVORRICHTUNG            | DISPOSITIF DE RECOL                | RETRACTION DEVICE               | KELLENBERGER                         | -                                     | -                                    |
| 008.01                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG | SOUPAPE D'ÉTRANGLEMENT             | ONE-WAY RESTRICTOR THREAD       | LEGRIS                               | 7010 06 10                            | 145615                               |
| 008.02                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG | SOUPAPE D'ÉTRANGLEMENT             | ONE-WAY RESTRICTOR THREAD       | LEGRIS                               | 7010 06 10                            | 145615                               |
| 008.03                   | KUPPLUNGSNIPPEL G1/8"          | NIPPLE D'ACCOUPEMENT G1/8"         | COUPLING NIPPLE G1/8"           | LEGRIS                               | 9086 21 10                            | 145604                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"       | ACCOUPEMENT DE FERMETURE G1/8"     | COUPLING G1/8"                  | LEGRIS                               | 9201 21 10                            | 151770                               |
| 008.04                   | KUPPLUNGSNIPPEL G1/8"          | NIPPLE D'ACCOUPEMENT G1/8"         | COUPLING NIPPLE G1/8"           | TRIGRESS                             | 21 SF IW 10 MXN 6                     | 145618                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"       | ACCOUPEMENT DE FERMETURE G1/8"     | COUPLING G1/8"                  | TRIGRESS                             | 21 KA AW 10 MPN 6                     | 145617                               |
| 008.05                   | SCHLAUCHEITUNG Ø 6/4 L = 1,0 M | FLEXIBLE Ø 6/4 L = 1,0 M           | HOSE Ø 6/4 L = 1,0 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 008.06                   | SCHLAUCHEITUNG Ø 6/4 L = 1,0 M | FLEXIBLE Ø 6/4 L = 1,0 M           | HOSE Ø 6/4 L = 1,0 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 008.07                   | SCHLAUCHEITUNG Ø 6/4 L = 5,0 M | FLEXIBLE Ø 6/4 L = 5,0 M           | HOSE Ø 6/4 L = 5,0 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 008.08                   | SCHLAUCHEITUNG Ø 6/4 L = 5,0 M | FLEXIBLE Ø 6/4 L = 5,0 M           | HOSE Ø 6/4 L = 5,0 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 008.1                    | 5/2-WEGEVENTIL                 | DISTRIBUTEUR 5/2 VOIES             | 5/2-DIRECTIONAL CONTROL VALVE   | BOSCH                                | 0 820 038 126                         | 145403                               |
|                          |                                |                                    |                                 |                                      |                                       |                                      |
| 009.0                    | REITSTOCKZYLINDER              | CYLINDRE DE CONTRE-POUPÉE          | TAILSTOCK CYLINDER              | KELLENBERGER                         | -                                     | 145213                               |
| 009.01                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG | SOUPAPE D'ÉTRANGLEMENT             | ONE-WAY RESTRICTOR THREAD       | LEGRIS                               | 7010 06 10                            | 1456154                              |
| 009.04                   | KUPPLUNGSNIPPEL G1/8"          | NIPPLE D'ACCOUPEMENT G1/8"         | COUPLING NIPPLE G1/8"           | LEGRIS                               | 9287 21 10                            | 149931                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"       | ACCOUPEMENT DE FERMETURE G1/8"     | COUPLING G1/8"                  | LEGRIS                               | 9214 21 10                            | 149932                               |
| 009.06                   | SCHLAUCHEITUNG Ø 6/4 L = 1,0 M | FLEXIBLE Ø 6/4 L = 1,0 M           | HOSE Ø 6/4 L = 1,0 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 009.08                   | SCHLAUCHEITUNG Ø 6/4 L = 5,0 M | FLEXIBLE Ø 6/4 L = 5,0 M           | HOSE Ø 6/4 L = 5,0 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 009.1                    | 5/3-WEGEVENTIL                 | DISTRIBUTEUR 5/2 VOIES             | 5/2-DIRECTIONAL CONTROL VALVE   | BOSCH                                | 0 820 039 116                         | 145405                               |
|                          |                                |                                    |                                 |                                      |                                       |                                      |
| 010.0                    | SAMMELPLATTE                   | PLAQUE DE RASSEMBLEMENT            | COLLECTION PLATE                | BOSCH                                | 1 825 503 900                         | 145406                               |
|                          | BLINDPLATTE                    | PLAQUE FEINTE                      | BLIND PLATE                     | BOSCH                                | 1 825 503 932                         | 145407                               |
|                          |                                |                                    |                                 |                                      |                                       |                                      |
| 011.0                    | WERKSTÜCKSPINDELSTOCK          | TÊTE PORTE-PIÈCE                   | WORKHEAD                        | -                                    | -                                     | -                                    |
| 011.1                    | FILTER-DRUCKREGLER NLI         | MANOSTAT FILTRE NLI                | FILTER PRESSURE REGULATOR NLI   | BOSCH                                | 0 821 300 758                         | -                                    |
| 011.2                    | FEINFILTER NLI                 | FILTRE FIN NLI                     | FINE FILTER NLI                 | BOSCH                                | 0 821 303 718                         | -                                    |
| 011.3                    | SCHLAUCHEITUNG Ø 8/6 L = 0,7 M | FLEXIBLE Ø 8/6 L = 0,7 M           | HOSE Ø 8/6 L = 0,7 M            | TRIGRESS                             | PUR-1198A/8X6                         | 150709                               |
| 011.4                    | SCHLAUCHEITUNG Ø 6/4 L = 0,5 M | FLEXIBLE Ø 6/4 L = 0,5 M           | HOSE Ø 6/4 L = 0,5 M            | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 011.5                    | SCHLAUCHEITUNG Ø 6/4 L = 6 M   | FLEXIBLE Ø 6/4 L = 6 M             | HOSE Ø 6/4 L = 6 M              | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 011.6                    | KUPPLUNGSNIPPEL G1/8"          | NIPPLE D'ACCOUPEMENT G1/8"         | COUPLING NIPPLE G1/8"           | LEGRIS                               | 9086 21 10                            | 145604                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"       | ACCOUPEMENT DE FERMETURE G1/8"     | COUPLING G1/8"                  | LEGRIS                               | 9214 21 10                            | 149932                               |
| 011.7                    | DROSSELRÜCKSCHLAGVENTIL        | SOUPAPE D'ÉTRANGLEMENT             | ONE-WAY RESTRICTOR THREAD       | LEGRIS                               | 7011 06 10                            | 145616                               |
| 011.8                    | INNENSCHLEIFSPINDEL            | BROCHE DE RECTIFICATION INTÉRIEURE | INTERNAL GRINDING SPINDLE       | -                                    | -                                     | -                                    |
| 011.9                    | SCHLAUCHEITUNG Ø 8/6 L = 0,2 M | FLEXIBLE Ø 8/6 L = 0,2 M           | HOSE Ø 8/6 L = 0,2 M            | TRIGRESS                             | PUR-1198A/8X6                         | 150709                               |
| 011.10                   | DROSSELRÜCKSCHLAGVENTIL R1/8"  | SOUPAPE D'ÉTRANGLEMENT R1/8"       | ONE-WAY RESTRICTOR THREAD R1/8" | TRIGRESS                             | DRV55                                 | 133958                               |
| 011.11                   | SCHLAUCHEITUNG Ø 8/6 L = 5 M   | FLEXIBLE Ø 8/6 L = 5 M             | HOSE Ø 8/6 L = 5 M              | TRIGRESS                             | PUR-1198A/8X6                         | 150709                               |

| Position<br>Rep.<br>Item | Bezeichnung                     | Désignation                      | Designation of part       | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|---------------------------------|----------------------------------|---------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 012.1                    | WASSERVENTIL                    | VANNE À EAU                      | WATER VALVE               | VEKTOR                               | VPST 964531                           | 133143                               |
| 012.2                    | SCHLAUCHLEITUNG Ø 6/4 L = 1,0 M | FLEXIBLE Ø 6/4 L = 1,0 M         | HOSE Ø 6/4 L = 1,0 M      | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 013.0                    | CBN-ABRICHTROLLE                | MOLETTE DE DRESSAGE CBN          | CBN DRESSING ROLL         | MEISTER                              | -                                     | 142488                               |
| 013.1                    | SCHLAUCHLEITUNG Ø 6/4 L = 3 M   | FLEXIBLE Ø 6/4 L = 3 M           | HOSE Ø 6/4 L = 3 M        | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 013.01                   | KUPPLUNGSNIPPEL G1/8"           | NIPPLE D'ACCOUPLLEMENT G1/8"     | COUPLING NIPPLE G1/8"     | LEGRIS                               | 9287 20 10                            | 133596                               |
|                          | VERSCHLUSSKUPPLUNG G1/8"        | ACCOUPLLEMENT DE FERMETURE G1/8" | COUPLING G1/8"            | LEGRIS                               | 9214 20 10                            | 133597                               |
| 013.2                    | SCHLAUCHLEITUNG Ø 6/4 L = 5 M   | FLEXIBLE Ø 6/4 L = 5 M           | HOSE Ø 6/4 L = 5 M        | TRIGRESS                             | PUR-1198A/6X4                         | 150708                               |
| 013.02                   | DROSSELRÜCKSCHLAGVERSCHRAUBUNG  | SOUPAPE D'ÉTRANGLEMENT           | ONE-WAY RESTRICTOR THREAD | LEGRIS                               | 7010 06 10                            | 145615                               |
| 013.3                    | MICRO-NEBELÖLER NLI             | SYSTÈME D'HUILAGE DE L'AIR NLI   | OIL ATOMIZER NLI          | BOSCH                                | 0 821 301 702                         | 138808                               |
| 013.4                    | SCHLAUCHLEITUNG Ø 8/6 L = 1 M   | FLEXIBLE Ø 8/6 L = 1 M           | HOSE Ø 8/6 L = 1 M        | TRIGRESS                             | PUR-1198A/8X6                         | 150709                               |







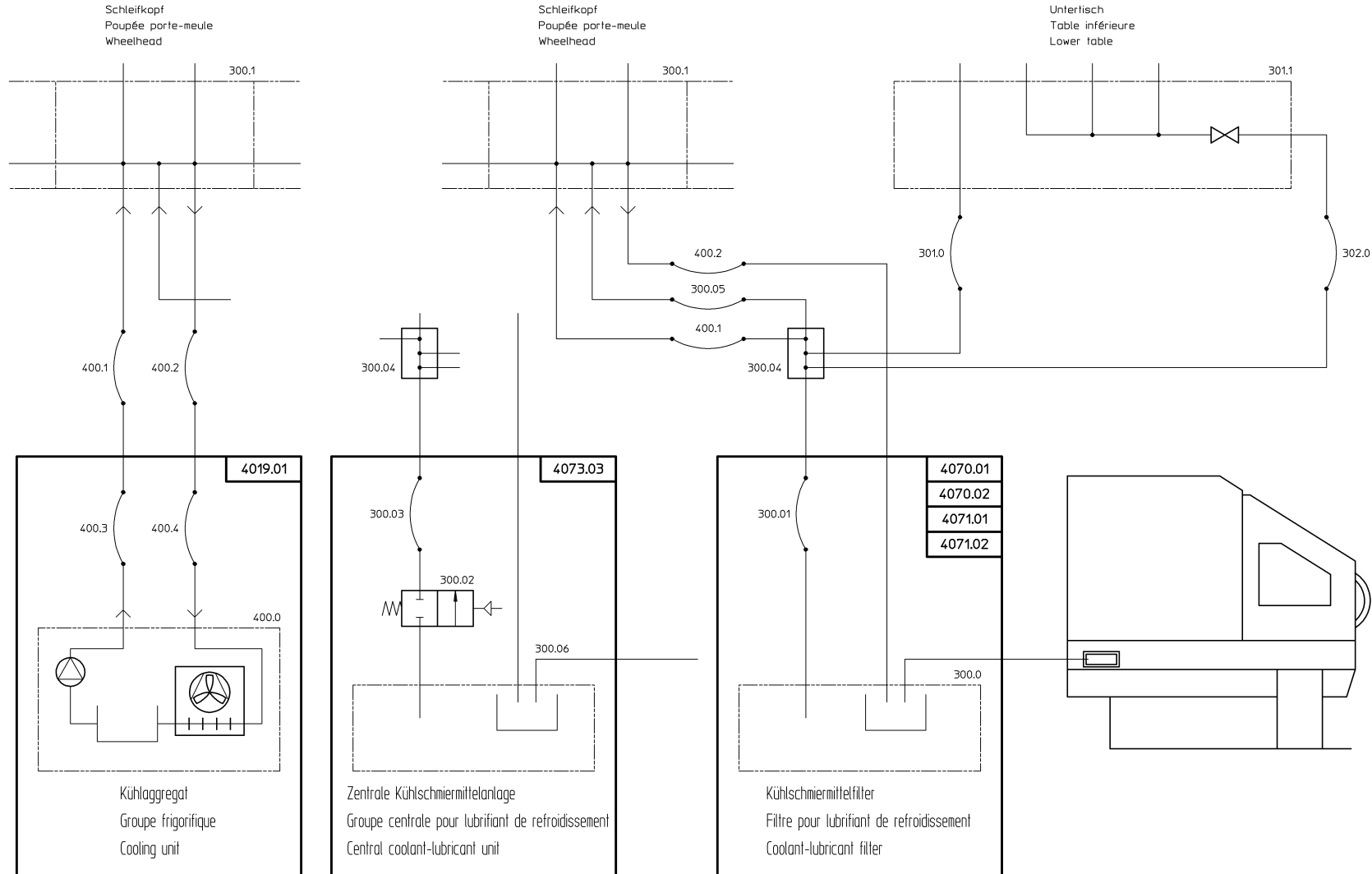


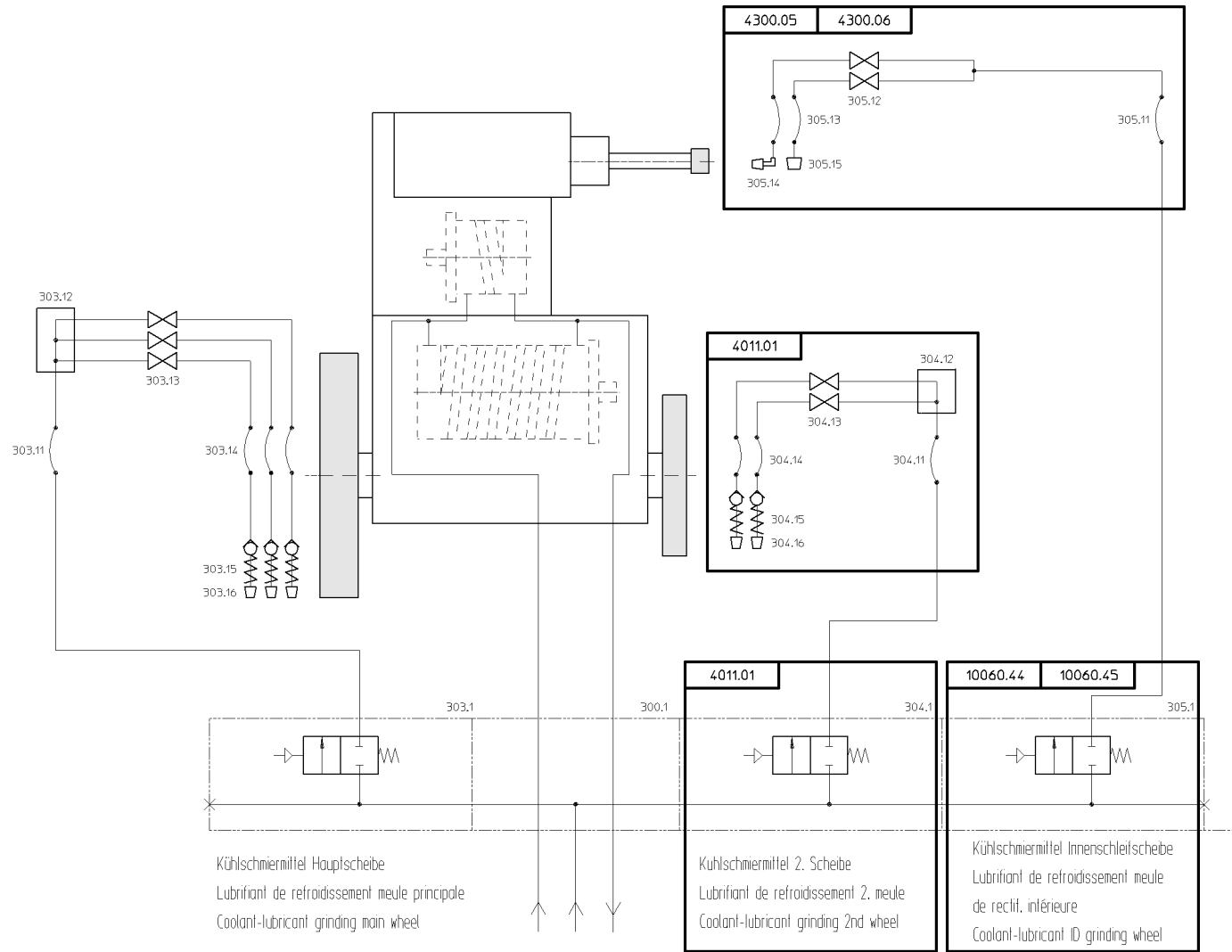
**10 Kühlschmiermittelschema  
Schéma du lubrifiant de refroidissement  
Coolant lubricant diagram**

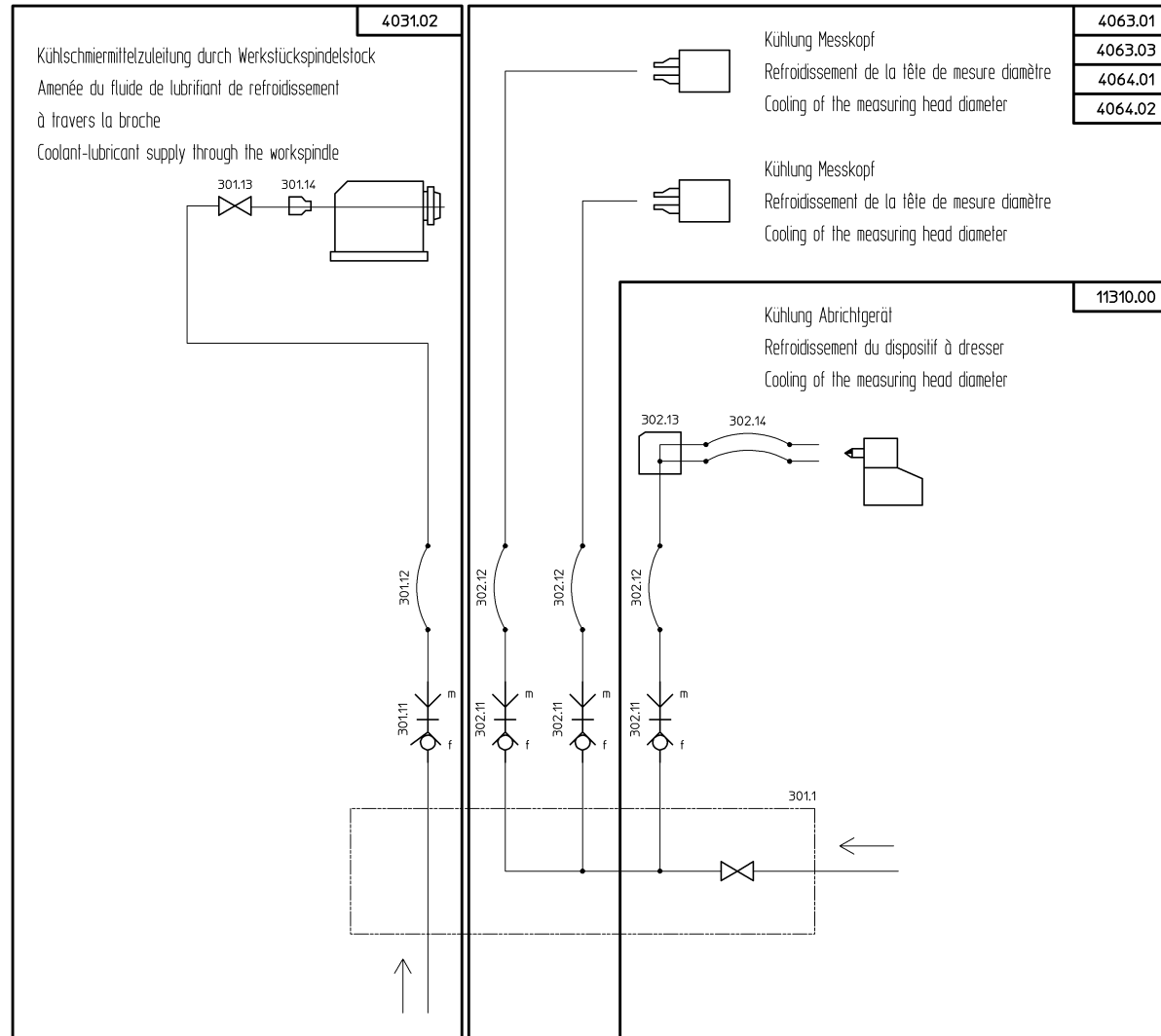
| Position<br>Rep.<br>Item | Bezeichnung                       | Désignation                                  | Designation of part                      | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-----------------------------------|--|--|--------------------------------------|---------------------------------------|--------------------------------------|
| 300.0                    | PAPIERBANDFILTER 375 L            | FILTRE À RUBAN DE PAPIER 375 L               | PAPERBAND-FILTRATION UNIT 375 L          | STREULI                              | SPB 4                                 | 145707                               |
|                          | PAPIERBANDFILTER 240 L            | FILTRE À RUBAN DE PAPIER 240 L               | PAPERBAND-FILTRATION UNIT 240 L          | STREULI                              | SPB 3                                 | 145708                               |
|                          | MAGNET-PAPIERBANDFILTER 375 L     | FILTRE MAGNÉT. À RUBAN DE PAPIER 375 L       | MAGNETIC PAPERBAND-FILTRATION UNIT 375 L | STREULI                              | SAM G5-SPB4                           | 145709                               |
|                          | MAGNET-PAPIERBANDFILTER 240 L     | FILTRE MAGNÉT. À RUBAN DE PAPIER 240 L       | MAGNET PAPERBAND FILTRATION UNIT 240 L   | STREULI                              | SAM G4-SPB3                           | 145710                               |
| 300.01                   | SCHLAUCHLEITUNG Ø 35/44 L = 2,5 M | FLEXIBLE Ø 35/44 L = 2,5 M                   | HOSE Ø 35/44 L = 2,5 M                   | ANGST+PFISTER                        | 33.6113.0000                          | 133766                               |
| 300.02                   | WASSERVENTIL                      | VANNE À EAU                                  | WATER VALVE                              | VEKTOR                               | VPST 964531                           | 133143                               |
| 300.03                   | SCHLAUCHLEITUNG Ø 35/44 L = 1,0 M | FLEXIBLE Ø 35/44 L = 1,0 M                   | HOSE Ø 35/44 L = 1,0 M                   | ANGST+PFISTER                        | 33.6113.0000                          | 133766                               |
| 300.04                   | KÜHLSCHMIERMITTELVERTEILER KOMPL. | DISTRIBUTEUR DU LUBRIFIANT DE REFOIDISSEMENT | COOLANT LUBRICANT MANIFOLD COMPLETE      | KELLENBERGER                         | -                                     | 150768                               |
| 300.05                   | SCHLAUCHLEITUNG Ø 35/44 L = 2,5 M | FLEXIBLE Ø 35/44 L = 2,5 M                   | HOSE Ø 35/44 L = 2,5 M                   | ANGST+PFISTER                        | 33.6113.0000                          | 133766                               |
| 300.06                   | ABFLUSSROHR                       | TUYAU D'ÉCOULEMENT                           | DRAIN-PIPE                               | KELLENBERGER                         | -                                     | 132983                               |
|                          |                                   |  |  |                                      |                                       |                                      |
| 300.1                    | ANSCHLUSSBLOCK                    | BLOQUE DE CONNECTION                         | CONNECTION BLOCK                         | KELLENBERGER                         | -                                     | 145098                               |
| 300.11                   | SCHLAUCHLEITUNG Ø 10/7 L = 0,24 M | FLEXIBLE Ø 10/7 L = 0,24 M                   | HOSE Ø 10/7 L = 0,24 M                   | LEGRIS                               | 1025U10 00/10X7                       | 145764                               |
|                          |                                   |  |  |                                      |                                       |                                      |
| 301.0                    | SCHLAUCHLEITUNG Ø 10/7 L = 5,0 M  | FLEXIBLE Ø 10/7 L = 5,0 M                    | HOSE Ø 10/7 L = 5,0 M                    | LEGRIS                               | 1025U10 00/10X7                       | 145764                               |
| 301.1                    | VERTEILERBLOCK                    | BLOQUE DE DISTRIBUTION                       | DISTRIBUTION BLOCK                       | KELLENBERGER                         | -                                     | 145400                               |
| 301.11                   | VERSCHLUSSKUPPLUNG R1/4"          | ACCOUPEMENT DE FERMETURE R1/4"               | COUPLING R1/4"                           | LEGRIS                               | 9201 25 13                            | 151771                               |
|                          | KETTE                             | CHAÎNE                                       | CHAIN                                    | TRIGRESS                             | S215015N07                            | 145642                               |
|                          | SCHUTZKAPPE                       | CHAPE DE PROTECTION                          | PROTECTING CAP                           | TRIGRESS                             | SK 23                                 | 145644                               |
|                          | KUPPLUNGSNIPPEL G1/4"             | NIPPLE D'ACCOUPEMENT G1/4"                   | COUPLING NIPPLE G1/4"                    | LEGRIS                               | 9086 25 13                            | 145619                               |
| 301.12                   | SCHLAUCHLEITUNG Ø 10/7 L = 1,4 M  | FLEXIBLE Ø 10/7 L = 1,4 M                    | HOSE Ø 10/7 L = 1,4 M                    | LEGRIS                               | 1025U10 00/10X7                       | 145764                               |
| 301.13                   | KUGELHAHN G1/4"                   | ROBINET À TOURNANT SPHÉRIQUE G1/4"           | BALL VALVE G1/4"                         | TRIGRESS                             | -                                     | 060885                               |
| 301.14                   | DREHDURCHFÜHRUNG                  | PASSAGE TOURNANT                             | ROTARY TRANSMISSION                      | KELLENBERGER                         | -                                     | 145040                               |
|                          |                                   |  |  |                                      |                                       |                                      |
| 302.0                    | SCHLAUCHLEITUNG Ø 10/7 L = 5,0 M  | FLEXIBLE Ø 10/7 L = 5,0 M                    | HOSE Ø 10/7 L = 5,0 M                    | LEGRIS                               | 1025U10 00/10X7                       | 145764                               |
| 302.11                   | VERSCHLUSSKUPPLUNG G1/8"          | ACCOUPEMENT DE FERMETURE R1/8"               | COUPLING R1/8"                           | LEGRIS                               | 9201 21 10                            | 151770                               |
|                          | KETTE                             | CHAÎNE                                       | CHAIN                                    | TRIGRESS                             | S215015N07                            | 145642                               |
|                          | SCHUTZKAPPE                       | CHAPE DE PROTECTION                          | PROTECTING CAP                           | TRIGRESS                             | SK 16                                 | 145643                               |
|                          | KUPPLUNGSNIPPEL G1/8"             | NIPPLE D'ACCOUPEMENT G1/8"                   | COUPLING NIPPLE G1/8"                    | LEGRIS                               | 9086 21 10                            | 145604                               |
| 302.12                   | SCHLAUCHLEITUNG Ø 8/5,5 L = 0,7 M | FLEXIBLE Ø 8/5,5 L = 0,7 M                   | HOSE Ø 8/5,5 L = 0,7 M                   | LEGRIS                               | 1025U08 00/8X5,5                      | 121638                               |
| 302.13                   | VERTEILER                         | DISTRIBUTEUR                                 | DISTRIBUTOR                              | KELLENBERGER                         | -                                     | 132382                               |
| 302.14                   | SCHLAUCHLEITUNG Ø 4/6 L = 0,1 M   | FLEXIBLE Ø 4/6 L = 0,1 M                     | HOSE Ø 4/6 L = 0,1 M                     | JOHANNSEN                            | 4/6 DEKABON – 1300                    | 132383                               |
|                          |                                   |  |  |                                      |                                       |                                      |
| 303.1                    | WASSERVENTIL                      | VANNE À EAU                                  | WATER VALVE                              | VEKTOR                               | VPST 964531                           | 133143                               |
| 303.11                   | SCHLAUCHLEITUNG Ø 35/44 L = 1,1 M | FLEXIBLE Ø 35/44 L = 1,1 M                   | HOSE Ø 35/44 L = 1,1 M                   | ANGST+PFISTER                        | 33.6113.0000                          | 133766                               |
| 303.12                   | VERTEILERSTÜCK                    | DISTRIBUTEUR                                 | DISTRIBUTOR                              | KELLENBERGER                         | -                                     | 137287                               |
| 303.13                   | KUGELHAHN                         | ROBINET À TOURNANT SPHÉRIQUE                 | BALL VALVE                               | LOC-LINE                             | 32094                                 | 133371                               |



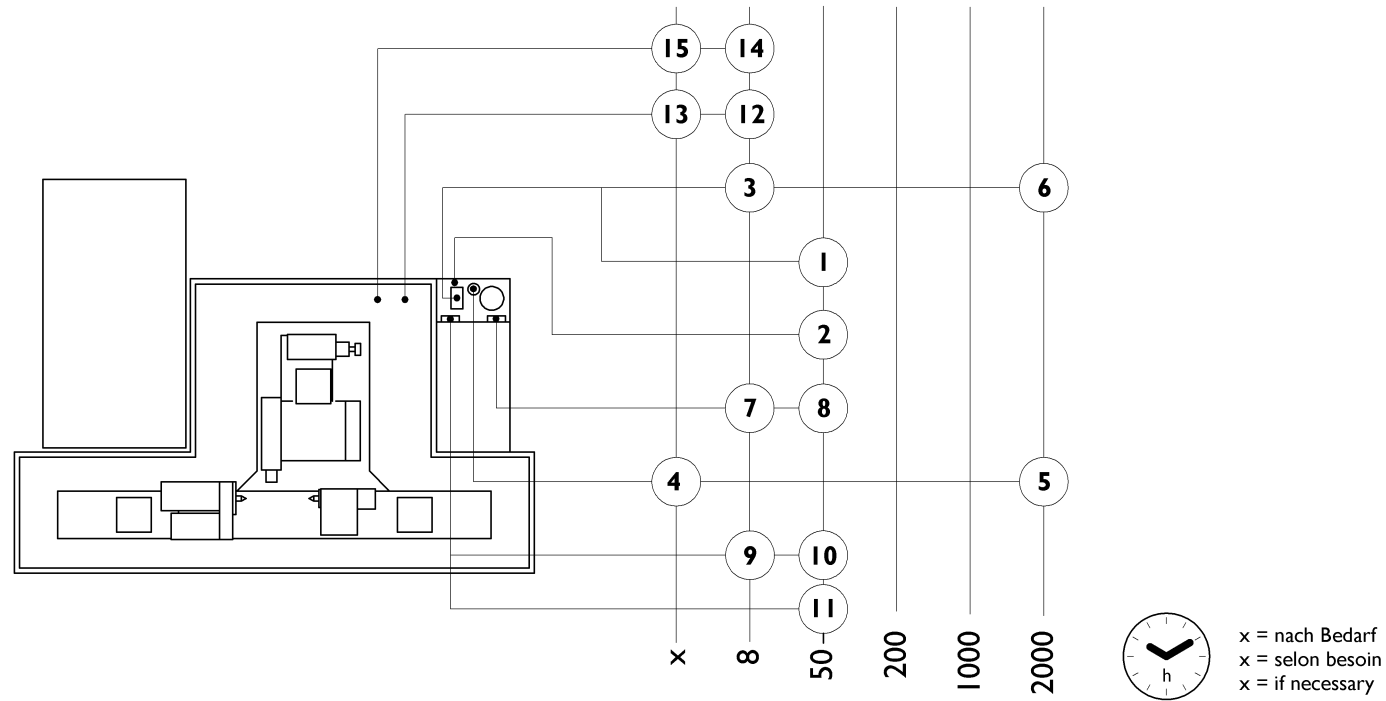
| Position<br>Rep.<br>Item | Bezeichnung                       | Désignation                     | Designation of part    | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-----------------------------------|---------------------------------|------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| 303.14                   | GELENKSTÜCK 6 STK.                | ARTICULATION 6 PIÈCES           | ARTICULATION 6 PIECES  | LOC-LINE                             | 51800                                 | 122996                               |
| 303.15                   | RÜCKSCHLAGVENTIL                  | CLAPET DE NON RETOUR            | CHECK VALVE            | LOC-LINE                             | 32091                                 | 133624                               |
| 303.16                   | FLACHDÜSE                         | BUSE PLAT                       | FLAT NOZZLE            | LOC-LINE                             | 59867                                 | 122997                               |
| 304.1                    | WASSERVENTIL                      | VANNE À EAU                     | WATER VALVE            | VEKTOR                               | VPST 964531                           | 133143                               |
| 304.11                   | SCHLAUCHLEITUNG Ø 35/44 L = 1,1 M | FLEXIBLE Ø 35/44 L = 1,1 M      | HOSE Ø 35/44 L = 1,1 M | ANGST+PFISTER                        | 33.6113.0000                          | 133766                               |
| 304.12                   | VERTEILERSTÜCK                    | DISTRIBUTEUR                    | DISTRIBUTOR            | KELLENBERGER                         | -                                     | 137019                               |
| 304.13                   | KUGELHAHN                         | ROBINET À TOURNANT SPHÉRIQUE    | BALL VALVE             | LOC-LINE                             | 32094                                 | 133371                               |
| 304.14                   | GELENKSTÜCK 3 STK.                | ARTICULATION 3 PIÈCES           | ARTICULATION 3 PIECES  | LOC-LINE                             | 51800                                 | 122996                               |
| 304.15                   | RÜCKSCHLAGVENTIL                  | CLAPET DE NON RETOUR            | CHECK VALVE            | LOC-LINE                             | 32091                                 | 133624                               |
| 304.16                   | FLACHDÜSE                         | BUSE PLAT                       | FLAT NOZZLE            | LOC-LINE                             | 59867                                 | 122997                               |
| 305.1                    | WASSERVENTIL                      | VANNE À EAU                     | WATER VALVE            | VEKTOR                               | VPST 964531                           | 133143                               |
| 305.11                   | SCHLAUCHLEITUNG 16/24 L = 0,21 M  | FLEXIBLE 16/24 L = 0,21 M       | HOSE 16/24 L = 0,21 M  | ANGST+PFISTER                        | 34.6181.0000                          | 133764                               |
| 305.12                   | KUGELHAHN                         | ROBINET À TOURNANT SPHÉRIQUE    | BALL VALVE             | LOC-LINE                             | 21192                                 | 126826                               |
| 305.13                   | GELENKSTÜCK 30 STK.               | ARTICULATION 30 PIÈCES          | ARTICULATION 30 PIECES | LOC-LINE                             | 41401                                 | 114814                               |
| 305.14                   | WINKELDÜSE                        | BUSE D'ANGLE                    | ANGLE NOZZLE           | LOC-LINE                             | 41471                                 | 133854                               |
| 305.15                   | MEHRLOCHWINKELDÜSE                | BUSE D'ANGLE À PLUSIEURS TROUS  | ANGLE NOZZLE MULTIHOLE | LOC-LINE                             | 41473                                 | 133853                               |
| 400.0                    | KÜHLAGGREGAT                      | GROUPE FRIGORIFIQUE             | COOLING UNIT           | BURN ENGINEERING                     | WP 2800-K5                            | 150650                               |
| 400.1                    | SCHLAUCHLEITUNG Ø 12/8 L = 3,3 M  | TUYAU FLEXIBLE Ø 12/8 L = 3,3 M | HOSE Ø 12/8 L = 3,3 M  | LEGRIS                               | 1025U12.00 8/12                       | 144993                               |
| 400.2                    | SCHLAUCHLEITUNG Ø 12/8 L = 3,3 M  | TUYAU FLEXIBLE Ø 12/8 L = 3,3 M | HOSE Ø 12/8 L = 3,3 M  | LEGRIS                               | 1025U12.00 8/12                       | 144993                               |
| 400.3                    | SCHLAUCHLEITUNG Ø 24/16 L = 2 M   | TUYAU FLEXIBLE Ø 24/16 L = 2 M  | HOSE Ø 24/16 L = 2 M   | ANGST & PFISTER                      | 34.61.81.0000                         | 133764                               |
| 400.4                    | SCHLAUCHLEITUNG Ø 24/16 L = 2 M   | TUYAU FLEXIBLE Ø 24/16 L = 2 M  | HOSE Ø 24/16 L = 2 M   | ANGST & PFISTER                      | 34.61.81.0000                         | 133764                               |


































## **II    Schmieranleitung Instructions de graissage Lubrication instructions**



| Maschinenteile<br>Organes de machine<br>Machine parts                | Hydraulik<br>Hydraulique<br>Hydraulics  | Schmieraggregat<br>Unité de lubrification<br>Lubrication unit                            |  |   |   |  | Pneumatik / Pneumatique / Pneumatics   |  |  |  |  |   | Optionen / Options / Options  |   |   |
|--|---|--|--|---|---|--|--|--|--|--|--|---|---|---|---|
|  |   |  |  |   |   |  | Normalluft<br>Air normal<br>Normal air   |  | Feinluft<br>Air épuré<br>Fine air  |  | Pneum.Entlastung<br>Allègement pneumatic<br>Air-cushion                                    |   | CBN-Abriehrolle<br>Rouleau à dresser CBN<br>Dressing roll CBN                       |   |   |
| Position<br>Pièce<br>Item  | 1   | 2  | 3  | 4   | 5   | 6  | 7  | 8  | 9  | 10   | 11   | 12  | 13  | 14  | 15  |
| Symbol<br>Symbole<br>Symbol  | <br>60 bar |         | <br>1.5 bar |  |           |           | <br>6 bar |         | <br>5.0 bar |         |         |        |  |        |  |
| Prüfen<br>Contrôler<br>Check   | <br>50h    | <br>50h | <br>8h      |   |   |  | <br>8h    | <br>50h | <br>8h      | <br>50h | <br>50h | <br>8h |   | <br>8h |   |
| Auffüllen nach Bedarf<br>Remplir selon besoin<br>Refill if necessary |   |  |  | •   |   |  |  |  |  |  |  |   | •   |   | •   |
| Reinigen und ersetzen<br>Nettoyer ou remplacer<br>Clean or replace   |   |  |  |   |   | <br>2000h |  | Nach Bedarf<br>Selon besoin<br>If necessary  |  | Nach Bedarf<br>Selon besoin<br>If necessary  | Nach Bedarf<br>Selon besoin<br>If necessary  |   |   |   |   |
| Austauschen<br>Echanger<br>Exchange                                  |   |  |  |   | <br>2000h |  |  |  |  |  |  |   |   |   |   |
| Behälterkapazität I<br>Capacité de récipient I<br>Capacity of tank I |   |  | 10   |   |   |  |  | 0,016  |  | 0,016  | 0,016  | 0,035   |   |   |   |
| Schmierstoffe<br>Lubrifiants<br>Lubricants                           | ISO 3498  | VG 68  |  |   |   |  |  |  |  |  |  | CB 32   |   |   |   |
|  | DIN 8659  | CG 68  |  |   |   |  |  |  |  |  |  | CL 32   |   |   |   |
| Viskosität<br>Viscosité<br>Viscosity                                 |   |  | 68   |   |   |  |  |  |  |  |  | 32  | 30  | 32  | 30  |
| Bezeichnung<br>Désignation<br>Designation                            |   |  | Tonna 68<br>(NG)   |   |   |  |  |  |  |  |  | Plus 16-110   | Mobil DTE <sup>24</sup>   | Energol HLP-D 32  | Nuro H 32   |
| Hersteller<br>Producteur<br>Manufacturer                             |   |  | Shell  |   |   |  |  |  |  |  |  | Aseol   | Mobil   | BP  | Esso  |

## **I2    Wartungsliste**

### **Liste d'entretien**

### **Maintenance list**



### WICHTIG / IMPORTANT / IMPORTANT

Die Angaben zu **Wartung** und **Wartungsintervallen** gelten für den Einsatz von **wassergemischten Kühlschmierstoffen auf Mineralölbasis**. Bei Einsatz von anderen Kühlschmierstoffen sind entsprechend angepasste **Vorsichtsmassnahmen, Wartungsvorschriften und Zusatzausrüstungen** anzuwenden.

Les indications concernant l'entretien et les intervalles d'entretien sont valables pour l'utilisation de lubrifiants de refroidissement à base d'huile minérale mélangés à de l'eau. En cas d'utilisation d'autres lubrifiants de refroidissement, il faut utiliser des mesures de précaution, des prescriptions d'entretien et des équipements supplémentaires adaptés en conséquence.

The specifications regarding maintenance and maintenance intervals apply for the application of mineral-based, water-mixed coolant-lubricants. Please use appropriate safety measures, maintenance regulations and additional equipment for the application of other coolant-lubricants.

### WICHTIG / IMPORTANT / IMPORTANT

Die **Wartungsarbeiten** sind entsprechend der detaillierten **Anleitung** auszuführen.

Les travaux d'entretien doivent être exécutés conformément au **manuel détaillé**.

Carry out maintenance in accordance with the detailed manual instructions.

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                          | Tätigkeit / Action / Action |                          |   |                              |                                |                                |   |   |                              | Thema<br>Objet<br>Topic  | Ort<br>Localisation<br>Location  | Bemerkungen<br>Remarques<br>Notes | Schema<br>Schéma<br>Diagram | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|--------------------------|-----------------------------|--------------------------|---|------------------------------|--------------------------------|--------------------------------|---|---|------------------------------|--|--|-----------------------------------|-----------------------------|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other | Wert<br>Valeur<br>Value     | Einheit<br>Unité<br>Unit | Reinigen<br>Nettoyer<br>Clean   | Prüfen<br>Contrôler<br>Check | Einstellen<br>Régler<br>Adjust | Nachfüllen<br>Remplir<br>Refil | Ersetzen<br>Remplacer<br>Replace  | Einölen<br>Lubrifier<br>To oil  | Diverse<br>Divers<br>Various |  |  |                                   |                             |                               |
| 1.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  |                              |                                |                                |   |   |                              | Abdeckung<br>Couvercle de protection<br>Cover  | Untertisch<br>Table inférieure<br>Lower table  |                                   |                             | 9.1.1                         |
| 2.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  | <input type="checkbox"/>     |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |   |                              | Faltenbalg<br>Soufflet<br>Protective bellow  | Untertisch<br>Table inférieure<br>Lower table  |                                   | <a href="#">293389-2/6</a>  | 9.1.1                         |
| 3.                        | X                                 |           |             |                          |                             |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>     |                                |                                |   | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                              | Obertisch / Untertisch<br>Table supérieure / inférieure<br>Upper table / Lower table | Arbeitsraum<br>Salle de travail<br>Working area  |                                   |                             | 9.1.1<br>9.1.2                |
| 4.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  |                              |                                |                                |   | <input type="checkbox"/>  |                              | Verdeckte Auflageflächen<br>Surfaces d'appui recouvertes<br>Hidden bearing surfaces  | Obertisch / Untertisch<br>Table supérieure / Table inférieure<br>Upper table / Lower table |                                   |                             | 9.1.1<br>9.1.2                |

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                          | Tätigkeit / Action / Action |                          |   |   |                                |                                |   |                                |                                | Thema<br>Objet<br>Topic   | Ort<br>Localisation<br>Location   | Bemerkungen<br>Remarques<br>Notes   | Schema<br>Schéma<br>Diagram                              | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|--------------------------|-----------------------------|--------------------------|---|---|--------------------------------|--------------------------------|---|--------------------------------|--------------------------------|---|---|---|--|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other | Wert<br>Valeur<br>Value     | Einheit<br>Unité<br>Unit | Reinigen<br>Nettoyer<br>Clean   | Prüfen<br>Contrôler<br>Check  | Einstellen<br>Régler<br>Adjust | Nachfüllen<br>Remplir<br>Refil | Ersetzen<br>Remplacer<br>Replace  | Einölen<br>Lubrifier<br>To oil | Diverse<br>Divers<br>Various   |   |   |   |  |                               |
| 5.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  | <input type="checkbox"/>  |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                | Gummischutz<br>Protection en caoutchouc<br>Rubberized protection  | Obertisch<br>Table supérieure<br>Upper table  |   |  | 9.1.2                         |
| 6.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  | <input type="checkbox"/>  |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                | Faltenbalg<br>Soufflet<br>Bellow  | Schleifschlitten X<br>Chariot porte-meule X<br>Grinding slide X   |   | <a href="#">293390-3/4</a><br><a href="#">293390-4/4</a> | 9.1.3                         |
| 7.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  | <input type="checkbox"/>  |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                | Kunststofftuch<br>Toile en plastique<br>Plastic cloth   | Schleifschlitten X<br>Chariot porte-meule X<br>Grinding slide X   |   | <a href="#">293390-4/4</a>                               | 9.1.3                         |
| 8.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/>  |   |                                |                                |   |                                |                                | Vordere Abdeckung<br>Carter de protection devant<br>Front cover   | Schleifschlitten X<br>Chariot porte-meule X<br>Grinding slide X   |   | <a href="#">293390-4/4</a>                               | 9.1.3<br>9.2.1                |
| 9.                        |                                   | X         |             |                          |                             |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>  |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                | Skala und Bereich unter<br>Vorderer Abdeckung<br>Cadran et zone située sous le<br>carter de protection devant<br>Graduated scale and area<br>underneath the front cover | Manuelle Indexierung,<br>Schleifschlitten<br>Indexation manuelle, chariot<br>porte-meule<br>Manual indexing, grinding slide |   |  | 9.1.3<br>9.2.1                |
| 10.                       |                                   | X         |             |                          |                             |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>  |                                |                                |   |                                |                                | Lagerstelle und<br>Antriebsmechanik<br>Emplacement du palier et<br>mécanique d'entraînement<br>Bearing point and drive<br>mechanics                                     | Berührungsschutz, Schleifkopf<br>Protection anti-contact, poupée<br>porte-meule<br>Protection against contact,<br>wheelhead |   |  | 9.3.1                         |
| 11.                       |                                   |           | X           |                          |                             |                          |   | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                |   |                                |                                | Riemenspannung<br>Tension de la courroie<br>Belt tension  | Schleifkopf<br>Poupée porte-meule<br>Wheelhead  |   |  | 9.3.1                         |
| 12.                       |                                   |           | X           |                          |                             |                          |   | <input type="checkbox"/>  |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                | Keilriemen<br>Courroie<br>V-Belt  | Schleifkopf<br>Poupée porte-meule<br>Wheelhead  |   | <a href="#">293392-2/4</a>                               | 9.3.1                         |
| 13.                       |                                   |           |             | X <sup>*)</sup>          |                             |                          |   |   |                                |                                |   |                                | <input type="checkbox"/><br>*) | Innenschleifspindel<br>Broche de rectification<br>intérieure<br>Internal grinding spindle   | Schleifkopf<br>Poupée porte-meule<br>Wheelhead  | *) entsprechend Lieferan-<br>tendokumentation<br>*) conformément à la<br>documentation du<br>fournisseur<br>*) in accordance with the<br>delivery documentation |  | 9.3.2.1                       |

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                          | Wert<br>Valeur<br>Value | Einheit<br>Unité<br>Unit | Tätigkeit / Action / Action   |                              |                                |                                |                                  |                                |                              | Thema<br>Objet<br>Topic  | Ort<br>Localisation<br>Location   | Bemerkungen<br>Remarques<br>Notes   | Schema<br>Schéma<br>Diagram   | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|--------------------------|-------------------------|--------------------------|-------------------------------|------------------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------|------------------------------|--|---|---|---|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other |                         |                          | Reinigen<br>Nettoyer<br>Clean | Prüfen<br>Contrôler<br>Check | Einstellen<br>Régler<br>Adjust | Nachfüllen<br>Remplir<br>Refil | Ersetzen<br>Remplacer<br>Replace | Einölen<br>Lubrifier<br>To oil | Diverse<br>Divers<br>Various |  |   |   |   |                               |
| 14.                       | X                                 |           |             |                          | *)                      | bar                      |                               | <input type="checkbox"/>     | <input type="checkbox"/>       |                                |                                  |                                |                              | Sperrluft<br><br>Air de barrage<br><br>Airlock                         | HJN-Innenschleifspindel<br><br>Broche de rectification<br>intérieure HJN<br><br>HJN internal grinding spindle   | *) bei Bedarf Druck messen<br>(gem. Betriebsanleitung<br>9.4.2)<br><br>*) mesurer la pression en<br>cas de besoin (conformé-<br>ment au § 9.4.2 du mode<br>d'emploi)<br><br>*) if necessary, measure the<br>pressure (in acc. with<br>instruction manual 9.4.2) | <a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a>                                   | 9.3.2.1<br>9.4.2              |
| 15.                       | X                                 |           |             |                          | 1.5                     | bar                      |                               | <input type="checkbox"/>     | <input type="checkbox"/>       |                                |                                  |                                |                              | Versorgungsdruck<br><br>Pression d'alimentation<br><br>Supply pressure | Druckbegrenzungsventil zu<br>Schmierinstallation<br><br>Soupape de limitation de pression<br>de l'installation de graissage<br><br>Pressure relief valve to the<br>lubricating installation                 |   | <a href="#">293248-1/3</a><br><br><a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a> | 9.4.1                         |
| 16.                       |                                   | X         |             |                          | 60                      | bar                      |                               | <input type="checkbox"/>     | <input type="checkbox"/>       |                                |                                  |                                |                              | Versorgungsdruck<br><br>Pression d'alimentation<br><br>Supply pressure | Druckbegrenzungsventil zu<br>Schleifkopfabhebung<br><br>Soupape de limitation de pression<br>du système de soulèvement de la<br>poupée porte-meule<br><br>Pressure relief valve to the<br>wheelhead lifting |   | <a href="#">293248-1/3</a><br><br><a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a> | 9.4.1                         |
| 17.                       |                                   | X         |             |                          |                         |                          |                               | <input type="checkbox"/>     | <input type="checkbox"/>       |                                |                                  |                                |                              | Ölstand<br><br>Niveau d'huile<br><br>Oil level                         | Hydraulik-/Schmieraggregat<br><br>Groupe hydraulique / de graissage<br><br>Hydraulic assembly /<br>Lubrication unit   |   | <a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a>                                   | 9.4.1                         |
| 18.                       |                                   |           | X           |                          | 10                      | L                        |                               |                              |                                | <input type="checkbox"/>       |                                  |                                |                              | Ölwechsel<br><br>Changement d'huile<br><br>Oil change                  | Hydraulik-/Schmieraggregat<br><br>Groupe hydraulique / de graissage<br><br>Hydraulic assembly/Lubrication<br>unit   |   | <a href="#">293248-1/3</a><br><br><a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a> | 9.4.1                         |
| 19.                       |                                   |           | X           |                          |                         |                          | <input type="checkbox"/>      |                              |                                |                                |                                  |                                |                              | Filter<br><br>Filtre<br><br>Filter                                     | Steuerblock zu Hydraulik-<br>/Schmieraggregat<br><br>Bloc de commande du groupe<br>hydraulique / de graissage<br><br>Control block to the hydraulic<br>assembly/lubrication unit                            |   | <a href="#">293248-1/3</a><br><br><a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a> | 9.4.1                         |

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                          | Wert<br>Valeur<br>Value | Einheit<br>Unité<br>Unit | Tätigkeit / Action / Action   |                              |                                |   |                                  |                                |                              | Thema<br>Objet<br>Topic                                      | Ort<br>Localisation<br>Location  | Bemerkungen<br>Remarques<br>Notes  | Schema<br>Schéma<br>Diagram   | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|--------------------------|-------------------------|--------------------------|-------------------------------|------------------------------|--------------------------------|---|----------------------------------|--------------------------------|------------------------------|--|--|--|---|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other |                         |                          | Reinigen<br>Nettoyer<br>Clean | Prüfen<br>Contrôler<br>Check | Einstellen<br>Régler<br>Adjust | Nachfüllen<br>Remplir<br>Refil              | Ersetzen<br>Remplacer<br>Replace | Einölen<br>Lubrifier<br>To oil | Diverse<br>Divers<br>Various |  |  |  |   |                               |
| 20.                       | X                                 |           |             |                          | 6.0                     | bar                      |                               | <input type="checkbox"/>     | <input type="checkbox"/>       | Nach Bedarf<br>Selon besoin<br>If necessary |                                  |                                |                              | Druckregler<br>Régulateur de pression<br>Pressure controller | Pneumatik, Normalluft<br>Système pneumatique, air normal<br>Pneumatic, normal air  |  | <a href="#">293249-1/4</a><br><br>Schmieranleitung<br>Instructions de<br>graissage<br>Lubrication<br>instructions                               | 9.4.2                         |
| 21.                       | X                                 |           |             |                          | 5.0                     | bar                      |                               | <input type="checkbox"/>     | <input type="checkbox"/>       | Nach Bedarf<br>Selon besoin<br>If necessary |                                  |                                |                              | Druckregler<br>Régulateur de pression<br>Pressure controller | Pneumatik, Feinluft<br>Système pneumatique, air épuré<br>Pneumatic, fine air   |  | <a href="#">293249-4/4</a><br><br>Schmieranleitung<br>Instructions de<br>graissage<br>Lubrication<br>instructions                               | 9.4.2                         |
| 22.                       | X                                 |           |             |                          |                         |                          |                               | <input type="checkbox"/>     | <input type="checkbox"/>       | Nach Bedarf<br>Selon besoin<br>If necessary |                                  |                                |                              | Ölstand<br>Niveau d'huile<br>Oil level                       | Druckluftöler zu pneumatische<br>Entlastung und Abrichtrolle<br>Lubrificateur pneumatique, pour<br>l'allègement pneumatique et la<br>molette de dressage<br>Compressed air lubricator to the<br>pneumatic relief and dressing roll |  | <a href="#">293249-2/4</a><br><a href="#">293249-4/4</a><br><br>Schmieranleitung<br>Instructions de<br>graissage<br>Lubrication<br>instructions | 9.4.2                         |
| 23.                       |                                   | X         |             |                          | 6-8                     | *)                       |                               | <input type="checkbox"/>     | <input type="checkbox"/>       | Nach Bedarf<br>Selon besoin<br>If necessary |                                  |                                |                              | Durchfluss<br>Débit d'écoulement<br>Flow                     | Druckluftöler zu pneumatische<br>Entlastung<br>Lubrificateur pneumatique, pour<br>l'allègement pneumatique<br>Compressed air lubricator to the<br>pneumatic relief   | *) Tropfen pro 1 min<br>*) Nombre de gouttes<br>toutes les minutes<br>*) Drops per 1 min   | <a href="#">Schmieranleitung<br/>Instructions de<br/>graissage<br/>Lubrication<br/>instructions</a>   | 9.4.2                         |
| 24.                       |                                   | X         |             |                          | 1                       | *)                       |                               | <input type="checkbox"/>     | <input type="checkbox"/>       | Nach Bedarf<br>Selon besoin<br>If necessary |                                  |                                |                              | Durchfluss<br>Débit d'écoulement<br>Flow                     | Druckluftöler zu CBN-<br>Abrichtrolle<br>Lubrificateur pneumatique, pour la<br>molette de dressage CBN<br>Compressed air lubricator to the<br>CBN dressing roll  | *) Tropfen pro 4 min<br>*) Nombre de gouttes<br>toutes les 4 minutes<br>*) Drops per 4 min | <a href="#">293249-4/4</a>  | 9.4.2                         |
| 25.                       |                                   | X         |             |                          |                         |                          |                               | <input type="checkbox"/>     | <input type="checkbox"/>       | Nach Bedarf<br>Selon besoin<br>If necessary |                                  |                                |                              | Filter<br>Filtre<br>Filter                                   | Normal- und Feinluft, Pneumatik<br>Air normal/épuré, système pneum.<br>Normal and fine air, pneumatic  |  | <a href="#">293249-4/4</a><br><br>Schmieranleitung<br>Instructions de<br>graissage<br>Lubrication<br>instructions                               | 9.4.2                         |

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                                     | Wert<br>Valeur<br>Value | Einheit<br>Unité<br>Unit | Tätigkeit / Action / Action   |                              |   |                                |                                  |   |                              | Thema<br>Objet<br>Topic   | Ort<br>Localisation<br>Location  | Bemerkungen<br>Remarques<br>Notes   | Schema<br>Schéma<br>Diagram                              | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|-------------------------------------|-------------------------|--------------------------|-------------------------------|------------------------------|---|--------------------------------|----------------------------------|---|------------------------------|---|--|---|--|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other            |                         |                          | Reinigen<br>Nettoyer<br>Clean | Prüfen<br>Contrôler<br>Check | Einstellen<br>Régler<br>Adjust              | Nachfüllen<br>Remplir<br>Refil | Ersetzen<br>Remplacer<br>Replace | Einölen<br>Lubrifier<br>To oil              | Diverse<br>Divers<br>Various |   |  |   |  |                               |
| 26.                       | X                                 |           |             |                                     |                         |                          | <input type="checkbox"/>      | <input type="checkbox"/>     |   |                                |                                  |   |                              | Abflusswege und Rücklaufkanal<br>Voies d'écoulement et conduit de retour<br>Outlet paths and return channel | Verschalung, Arbeitsraum<br>Capotage, salle de travail<br>Casing, working area   |   |  | 9.4.3<br>9.5                  |
| 27.                       | X                                 |           |             |                                     |                         |                          | <input type="checkbox"/>      | <input type="checkbox"/>     |   |                                |                                  |   |                              | Rückschlagventile<br>Vannes de retenue<br>Non return valves   | Kühlschmiermittelzuleitung am Schleifkopf<br>Dispositif d'aménée du lubrifiant de refroidissement sur la poupée porte-meule<br>Coolant supply line at the wheel-head |   | <a href="#">293250-2/3</a>                               | 9.4.3.2                       |
| 28.                       | X                                 |           |             |                                     |                         |                          | <input type="checkbox"/>      | <input type="checkbox"/>     |   |                                |                                  |   |                              | Kühlschmiermittelzuleitung<br>Dispositif d'aménée du fluide de refroidissement<br>Coolant supply line       | Obertisch / Werkstückspindel<br>Table supérieure / Broche porte-pièce<br>Upper table / Workhead  |   |  | 9.4.3.3<br>9.4.3.4            |
| 29.                       | X                                 |           |             |                                     |                         |                          | <input type="checkbox"/>      | <input type="checkbox"/>     |   |                                | <input type="checkbox"/>         |   |                              | Sichtscheiben<br>Regards<br>Inspection windows  | Maschinenverschalung<br>Capotage de la machine<br>Machine casing   |   | <a href="#">293396-1/1</a>                               | 9.5                           |
| 30.                       |                                   |           |             | X<br>2 Jahre<br>2 années<br>2 Years |                         |                          |                               |                              |   | <input type="checkbox"/>       |                                  |   |                              | Sichtscheiben<br>Regards<br>Inspection windows  | Maschinenverschalung<br>Capotage de la machine<br>Machine casing   |   | <a href="#">293396-1/1</a>                               | 9.5                           |
| 31.                       |                                   | X         |             |                                     |                         |                          | <input type="checkbox"/>      |                              |   |                                |                                  | <input type="checkbox"/>                    |                              | Auflageflächen<br>Surfaces d'appui<br>Bearing surfaces  | Tischaufbauten und Obertisch<br>Ensembles montés sur la table et table supérieure<br>Table assemblies and upper table  |   |  | 9.6                           |
| 32.                       |                                   |           |             | X<br>*)                             |                         |                          | <input type="checkbox"/>      |                              |   |                                |                                  | <input type="checkbox"/>                    |                              | Kontaktflächen<br>Surfaces de contact<br>Contact surfaces   | Spannmittel/-Aufnahme Werkstückspindelstock<br>Logement / Moyen de serrage de la poupée porte-pièce<br>Workholding fixture workhead                                  | *) bei Wechsel der Spannmittel<br>*) lors du changement du moyen de serrage<br>*) when changing the workholding fixture |  | 9.6                           |
| 33.                       |                                   |           | X           |                                     |                         |                          |                               | <input type="checkbox"/>     | Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                  |   |                              | Riemenspannung<br>Tension de la courroie<br>Belt tension  | Werkstückspindelstock<br>Poupée porte-pièce<br>Workhead  |   | <a href="#">293397-1/3</a><br><a href="#">293397-2/3</a> | 9.6.1                         |
| 34.                       |                                   |           | X           |                                     |                         |                          |                               | <input type="checkbox"/>     |   |                                | <input type="checkbox"/>         | Nach Bedarf<br>Selon besoin<br>If necessary |                              | Riemen<br>Courroie<br>Belt  | Werkstückspindelstock<br>Poupée porte-pièce<br>Workhead  |   | <a href="#">293397-1/3</a><br><a href="#">293397-2/3</a> | 9.6.1                         |

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                          | Wert<br>Valeur<br>Value | Einheit<br>Unité<br>Unit | Tätigkeit / Action / Action   |                              |                                |                                |   |   |   | Thema<br>Objet<br>Topic  | Ort<br>Localisation<br>Location  | Bemerkungen<br>Remarques<br>Notes  | Schema<br>Schéma<br>Diagram  | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|--------------------------|-------------------------|--------------------------|---|------------------------------|--------------------------------|--------------------------------|---|---|---|--|--|--|--|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other |                         |                          | Reinigen<br>Nettoyer<br>Clean   | Prüfen<br>Contrôler<br>Check | Einstellen<br>Régler<br>Adjust | Nachfüllen<br>Remplir<br>Refil | Ersetzen<br>Remplacer<br>Replace  | Einölen<br>Lubrifier<br>To oil  | Diverse<br>Divers<br>Various                                    |  |  |  |  |                               |
| 35.                       |                                   | X         |             |                          |                         |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>     |                                |                                |   | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |   | Zentrierspitze, Reitstockpinole<br>mit Konus, Einstellmutter<br><br>Pointe de centrage, fourreau<br>avec cône, écrou de réglage<br><br>Center sleeve, tailstock sleeve<br>with taper, set nut                    | Reitstock<br><br>Contre-poupée<br><br>Tailstock  |  |  | 9.6.2.1<br>9.6.2.2            |
| 36.                       |                                   | X         |             |                          |                         |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>     |                                |                                |   |   |   | Hebel<br><br>Levier<br><br>Lever   | Manueller Pinolenrückzug,<br>Reitstock<br><br>Rétraction manuelle de la<br>contre-pointe, contre-poupée<br><br>Manual sleeve retraction, tailstock |  |  | 9.6.2.1                       |
| 37.                       |                                   | X         |             |                          |                         |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>     |                                |                                |   |   |   | Skala und Skalaknopf<br>Cadran et bouton du cadran<br><br>Graduated scale and graduated<br>scale knob  | Mikroverstellung, Reitstock<br><br>Ajustage micrométrique,<br>contre-poupée<br><br>Micro-corrector, tailstock                                      |  |  | 9.6.2.3                       |
| 38.                       |                                   | X         |             |                          |                         |                          | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/>     |                                |                                | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary | <input type="checkbox"/><br>pflegen<br>entretien<br>maintenance | Kühlschmiermittel<br><br>Lubrifiant de refroidissement<br><br>Coolant-lubricant  | Kühlschmiermittel-Kreislauf<br><br>Circuit du lubrifiant<br>de refroidissement<br><br>Coolant-lubricant circulation<br>system                      | Entsprechend Lieferantendokumentation und den geltenden Gesetzen / Vorschriften<br>Conformément à la documentation du fournisseur et aux lois / prescriptions en vigueur<br>In accordance with the delivery documentation and valid laws / regulations | <a href="#">293250-1/3</a><br><a href="#">293250-2/3</a><br><a href="#">293250-3/3</a> | 9.4.3                         |
| 39.                       |                                   |           |             | X <sup>*)</sup>          |                         |                          |   |                              |                                |                                |   |   |   | Auswuchteinrichtung ELASO<br><br>Appareil d'équilibrage ELASO<br><br>ELASO balancing unit  | Zubehör<br><br>Accessoires<br><br>Accessories  | *)Entsprechend Lieferantendokumentation<br><br>*)Conformément à la documentation du fournisseur<br><br>*)In accordance with the delivery documentation   |  | 13.3.1                        |
| 40.                       |                                   |           |             | X <sup>*)</sup>          |                         |                          |   |                              |                                |                                |   |   |   | Separater Kühlmittelkreislauf<br>Schleifspindeltrieb<br><br>Circuit du refroidissement<br>séparé de la commande de la<br>broche porte-meule<br><br>Separate coolant circulation<br>system grinding spindle drive | Option<br><br>Option<br><br>Option   | *) entsprechend Lieferantendokumentation<br><br>*) conformément à la documentation du fournisseur<br><br>*) in accordance with the delivery documentation  |  | 13.4                          |

| Position<br>Pièce<br>Item | Intervall / Intervalle / Interval |           |             |                                     | Wert<br>Valeur<br>Value | Einheit<br>Unité<br>Unit | Tätigkeit / Action / Action   |                              |   |                                |                                  |   |                              | Thema<br>Objet<br>Topic                                      | Ort<br>Localisation<br>Location   | Bemerkungen<br>Remarques<br>Notes  | Schema<br>Schéma<br>Diagram | Anleitung<br>Manuel<br>Manual |
|---------------------------|-----------------------------------|-----------|-------------|-------------------------------------|-------------------------|--------------------------|-------------------------------|------------------------------|---|--------------------------------|----------------------------------|---|------------------------------|--|---|--|-----------------------------|-------------------------------|
|                           | 8<br>[h]                          | 50<br>[h] | 2000<br>[h] | Andere<br>Autre<br>Other            |                         |                          | Reinigen<br>Nettoyer<br>Clean | Prüfen<br>Contrôler<br>Check | Einstellen<br>Régler<br>Adjust  | Nachfüllen<br>Remplir<br>Refil | Ersetzen<br>Remplacer<br>Replace | Einölen<br>Lubrifier<br>To oil  | Diverse<br>Divers<br>Various |  |   |  |                             |                               |
| 41.                       |                                   | X         |             |                                     |                         |                          |                               | <input type="checkbox"/>     |   |                                |                                  |   |                              | Kühlmedium<br>produits réfrigérants<br>coolant               | Kühlkreislauf<br>Circuit du refroidissement<br>Coolant circulation  |  |                             | 13.4                          |
| 42.                       |                                   |           |             | X<br>*)                             |                         |                          |                               |                              |   |                                | <input type="checkbox"/>         |   |                              | Kühlmedium<br>produits réfrigérants<br>coolant               | Kühlkreislauf<br>Circuit du refroidissement<br>Coolant circulation  | *) jährlich  |                             | 13.4                          |
| 43.                       | X                                 |           |             |                                     | *)                      | bar                      |                               | <input type="checkbox"/>     | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                                |                                  |   |                              | Sperrluft<br><br>Air de barrage<br><br>Airlock               | CBN-Abrichtrolle<br><br>Molette de dressage CBN<br><br>CBN dressing roll  | *) bei Bedarf Druck messen<br>(gemäss Betriebsanleitung<br>9.4.2)<br><br>*) mesurer la pression en<br>cas de besoin (conformé-<br>ment au § 9.4.2 du mode<br>d'emploi)<br><br>*) if necessary, measure the<br>pressure (in accordance<br>with instruction manual<br>9.4.2) | <u>293249-4/4</u>           | 13.7.1<br>9.4.2               |
| 44.                       |                                   |           |             | X<br>3 Jahre<br>3 années<br>3 years |                         |                          |                               |                              |   |                                | <input type="checkbox"/>         |   |                              | Puffer-Batterie<br><br>Batterie tampon<br><br>Buffer battery | Elektrische Schwenkwinkelanzeige<br>Werkstückspindelstock<br><br>Afficheur électrique de l'angle<br>d'orientation de la poupée porte-<br>pièce<br><br>Electrical swivel angle display<br>workhead |  | 149028                      | 13.10                         |
| 45.                       |                                   |           |             | X<br>*)                             |                         |                          | <input type="checkbox"/>      | <input type="checkbox"/>     |   |                                |                                  | <input type="checkbox"/><br>Nach Bedarf<br>Selon besoin<br>If necessary |                              | Allgemein<br>Général<br>General                              | Zubehör<br>Accessoires<br>Accessories   | *) nach Gebrauch<br>*) selon l'utilisation<br>*) according to use  |                             | 13.x                          |

## **I3    Elektroschema Schéma électrique Wiring diagram**



| Position<br>Rep.<br>Item |        | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung   | Désignation   | Designation of part  | Einbauort<br>Position de montage<br>Location              | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|--------|-----------------------------------|---|---|--|---|--------------------------------------|--|--------------------------------------|
| A0                       | 0U     | /006.2                            | GEHÄUSE VORTRAFO<br>VORTRAFO T0.2                                 | ARMOIRE TRANSFORMATEUR<br>TRANSFORMATEUR T0.2   | TRANSFORMER BOX<br>TRANSFORMER T0.2                          | FREISTEHEND<br>ISOLE<br>FREE-STANDING                     | LAPP-TEXTIMA AG                      | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 147555                               |
| A1                       | 1U     | /014.1                            | FREQUENZUMFORMER<br>SCHLEIFSPINDEL(N)                             | CONV. DE FREQUENCE<br>BROCHES   | FREQUENCY CONVERTER<br>SPINDLE(S)                            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | VACON                                | NX5 12                                 | 160177                               |
| A101                     | 101U   | /037.1                            | AUSWUCHTGERÄT<br>GAP  | APPAREIL DE EQUILIBRAGE<br>GAP  | BALANCING UNIT<br>GAP  | PANEL   | ELASO                                | EBG 1500                               | 161509                               |
| A102                     | 102U   | /039.7                            | MODEM FÜR FERNDIAGNOSE  | MODEM POUR TELEDIAGNOSTIC   | MODEM FOR TELEDIAGNOSIS                                      | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ZYXEL PRESTIGE ISDN<br>ROUTER        | 202H                                   | 158678                               |
| A102.1                   | 102.1U | /039.7                            | STECKDOSE   | PRISE   | SOCKET   | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MURRELEKTRONIK                       | MIT MODEM<br>AVEC MODEM<br>WITH MODEM  | 146094                               |
| A2                       | 2U     | /013.2                            | FILTERAGGREGAT  | AGREGAT FILTRE  | FILTER ASSEMBLY  | FREISTEHEND<br>ISOLE<br>FREE-STANDING                     |                                      |  |                                      |
| A20.1                    | 20.1U  | /017.4                            | ENTLADUNGSEINHEIT   | UNITE DE DECHARGE   | DISCHARGE UNIT   | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A06B-6086-H500                         | 162057                               |
| A20                      | 20U    | /018.1                            | SERVOREGLER<br>ANTRIEB X/Z/C-ACHSE<br>SVM3-20/20/40               | SERVOREGULATEUR<br>AXE X/Z/C ENTRAINEMENT<br>SVM3-20/20/40                            | SERVOCONTROL<br>DRIVE X/Z/C-AXIS<br>SVM3-20/20/40            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A06B-6117-H304                         | 162055                               |
| A22                      | 22U    | /081.1                            | SERIELLE SCHNITTSTELLE<br>FÜR DATENAUSTAUSCH<br>RS 232            | INTERFACE SERIELLE<br>POUR ECHANGE DE DONNEES<br>RS 232                               | SERIAL INTERFACE<br>FOR DATA EXCHANGE<br>RS 232              | PANEL   | FANUC                                | LX660-4030-T010/L1R003                 | 143824                               |
| A24                      | 24U    | /021.1                            | SERVOREGLER<br>ANTRIEB INDEXIERACHSE<br>SVM1-12                   | SERVOREGULATEUR<br>AXE INDEXE ENTRAINEMENT<br>SVM1-12                                 | SERVOCONTROL<br>DRIVE INDEXING AXIS<br>SVM1-12               | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A06B-6117-H103                         | 162056                               |
| A25                      | 25U    | /038.6                            | ANZEIGELEKTRONIK<br>SCHWENKWINKELANZEIGE<br>WERKSTÜCKSPINDELSTOCK | INDICATION ELECTRONIQUE<br>D'AFFICHAGE D'ANGLE D'ORIENTATION<br>POUR PEEE PORTE-PIECE | ELECTRONIC DISPLAY<br>SWIVEL ANGLE INDICATOR<br>FOR WORKHEAD | PANEL   | KELLENBERGER                         | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 149031                               |
| A27                      | 27U    | /084.0                            | SEPERATE DETECTOR UNIT<br>FUER MASSTAEBE                          | SEPERATE DETECTORUNIT<br>POUR ECHELLES  | SEPERATE DETECTOR UNIT<br>FOR SCALES                         | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A02B-0236-C203                         | 143844                               |
| A3                       | 3U     | /013.4                            | LUFT/WASSER-WÄRMETAUSCHER<br>SCHLEIFKOPF                          | AIR/EAU-ECHANGEUR DE CHALEUR<br>TÊTE PORTE-MEULE                                      | AIR/WATER-HEAT EXCHANGER<br>WHEELHEAD                        | FREISTEHEND<br>ISOLE<br>FREE-STANDING                     | BURN ENGINEERING AG                  | WP2800-K5                              | 150650                               |
| A31.1                    | 31.1U  | /091.1                            | MASCHINENBEDIENFELD<br>KURZHUBTASTENPRINT                         | CONSOLE COMMANDE DE MACHINE<br>PRINT TOUCHE FAIBLE COURSE                             | MACHINE CONTROL CONSOLE<br>SHORT-STROKE KEY PRINT            | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145219                               |
| A31                      | 31U    | /092.1                            | MASCHINENBEDIENFELD<br>LANGHUBTASTENPRINT                         | CONSOLE COMMANDE DE MACHINE<br>PRINT TOUCHE LONGUE COURSE                             | MACHINE CONTROL CONSOLE<br>LONG-STROKE KEY PRINT             | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145219                               |

| Position<br>Rep.<br>Item | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung | Désignation                                    | Designation of part                                | Einbauort<br>Position de montage<br>Location              | Lieferant<br>Fournisseur<br>Supplier                      | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no.   |        |
|--------------------------|-----------------------------------|-------------|--|--|---|---|---------------------------------------|--|--------|
| A40                      | 40U                               | /037.5      | SICHERHEITSTEUERUNG<br>OMRON                   | COMMANDE DE SECURITE<br>OMRON                      | SAFETY CONTROL UNIT<br>OMRON                              | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | OMRON                                 | CMP2A-40CDR-D                          | 145353 |
| A53                      | 53U                               | /108.1      | ACTOR-SENSOR-BOX<br>SCHLEIFSCHEIBENSCHUTZ      | BOITE ACTEUR-PALPEUR<br>CAPOT DE PROTECT. DE MEULE | ACTOR SENSOR BOX<br>GRINDING WHEEL GUARD                  | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                 | LUMBERG                               | SB 8/LED 3-220/5M                      | 145493 |
| A57.1                    | 57.1U                             | /058.1      | AUSWERTEGERÄT<br>KELPOS                        | APPAREIL DE ANALYSE<br>KELPOS                      | EVALUATION UNIT<br>KELPOS                                 | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOVOMATIC                             | 15060.0020                             | 135559 |
| A70                      | 70U                               | /037.1      | CPU<br>FANUC STEUERUNG 21i                     | CPU<br>COMMANDE FANUC 21i                          | CPU<br>FANUC CONTROL SYSTEM 21i                           | PANEL   | FANUC                                 | A02B-0281-H120                         | 161998 |
| A70.1                    | 70.1U                             | /039.4      | FAST ETHERNET BOARD                            | FAST ETHERNET BOARD                                | FAST ETHERNET BOARD                                       | PANEL   | FANUC                                 | A02B-0236-J293                         | 153442 |
| A71.1                    | 71.1U                             | /090.0      | I/O-MODUL<br>MASCHINENBEDIENFELD<br>FANUC      | I/O-MODUL<br>CONSOLE COMMANDE DE MACHINE<br>FANUC  | I/O-MODUL<br>MACHINE CONTROL CONSOLE<br>FANUC             | PANEL   | FANUC                                 | A20B-2002-0470                         | 144100 |
| A71.2                    | 71.2U                             | /091.4      | TRAVELSTICK                                    | TRAVELSTICK  | TRAVELSTICK   | PANEL   | EAO                                   | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145219 |
| A71                      | 71U                               | /082.0      | TASTATUR MDI                                   | CLAVIER MDI  | KEYBOARD MDI  | PANEL   | FANUC                                 | A02B-0281-C125/TBE                     | 161999 |
| A75                      | 75U                               | /065.0      | ÜBERGABEMODUL<br>EGB1500<br>GAP                | PMC MODULE<br>EGB1500<br>GAP                       | PMC MODUL<br>EGB1500<br>GAP                               | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | KELLENBERGER                          | -----                                  | 158664 |
| A76.1                    | 76.1U                             | /057.3      | FRONTPLATTE<br>MESSTEUERUNG<br>MOVOMATIC ES124 | PLATINE AVANT<br>AUTO-CALIBRAGE<br>MOVOMATIC ES124 | FRONT PANEL<br>IN-PROCESS GAUGE SYSTEM<br>MOVOMATIC ES124 | PANEL   | MOVOMATIC                             | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145737 |
| A76                      | 76U                               | /038.2      | MESSTEUERUNG<br>MOVOMATIC ES124                | AUTO-CALIBRAGE.<br>MOVOMATIC ES124                 | IN-PROCESS GAUGE SYSTEM<br>MOVOMATIC ES124                | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOVOMATIC                             | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145737 |
| A81.1                    | 81.1U                             | /097.4      | PMC KARTE<br>EXTENTION MODULE 1                | CARTE PMC<br>EXTENTION MODULE 1                    | PMC BOARD<br>EXTENTION MODULE 1                           | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                 | A03B-0815-C003                         | 145332 |
| A81.2                    | 81.2U                             | /097.6      | PMC KARTE<br>EXTENTION MODULE 2                | CARTE PMC<br>EXTENTION MODULE 2                    | PMC BOARD<br>EXTENTION MODULE 2                           | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                 | A03B-0815-C003                         | 145332 |
| A81.3                    | 81.3U                             | /100.0      | ÜBERGABEMODUL<br>MASTER                        | PMC MODULE<br>MASTER                               | PMC MODUL<br>MASTER                                       | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | KELLENBERGER                          | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145757 |
| A81.4                    | 81.4U                             | /100.7      | ÜBERGABEMODUL<br>SLAVE                         | PMC MODULE<br>SLAVE                                | PMC MODUL<br>SLAVE  | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | KELLENBERGER                          | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 149045 |
| A81                      | 81U                               | /097.2      | PMC KARTE<br>BASIC MODULE                      | CARTE PMC<br>BASIC MODULE                          | PMC BOARD<br>BASIC MODULE                                 | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                 | A03B-0815-C001                         | 145331 |

| Position<br>Rep.<br>Item |         | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung   | Désignation   | Designation of part  | Einbauort<br>Position de montage<br>Location            | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|---------|-----------------------------------|---|---|--|---|--------------------------------------|--|--------------------------------------|
| A87                      | 87U     | /059.1                            | KEL-SET   | KEL-SET   | KEL-SET  | MASCHINE<br>MACHINE<br>MACHINE                          | MARPOSS                              | A90                                    | 130068                               |
| A88                      | 88U     | /091.4                            | OVERRIDESCHALTER  | COMMUTATEUR OVERRIDE  | OVERRIDE SWITCH  | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145219                               |
| B101                     | 101 MI  | /064.6                            | SCHWINGUNGS-AUFNEHMER<br>AUSWUCHTEN<br>SENSOR                 | CAPTEUR DE OSCILLATIONS<br>EQUILIBRAGE<br>PALPEUR               | VIBRATION DAMPER<br>BALANCE<br>SENSOR                                    | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD               | ELASO                                | VA5                                    | 156218                               |
| B102                     | 102 PRS | /110.1                            | INITIATOR<br>DREHZAHLPULS<br>AUSWUCHTGERÄT                    | PREPARATEUR<br>IMPULSION DE RÉGIME<br>APPAREIL DE EQUILIBRAGE   | PROXIMITY SWITCH<br>SPEED IMPULSE<br>BALANCING UNIT                      | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD               | BAUMER ELECTRIC AG                   | IFF 08.26.35/L1/L                      | 145279                               |
| B20                      | 20SE    | /090.2                            | HANDRAD   | VOLANT  | HANDWHEEL  | PANEL   | PEWATRON AG                          | OVM-01-2-321                           | 124384                               |
| B21.2                    | 21.2PRS | /113.1                            | INITIATOR<br>STILLSTANDSÜBERWACHUNG<br>WERKSTÜCKSPINDELSTOCK  | PREPARATEUR<br>SURVEILLANCE DE ARRET<br>POUPEE PORTE-PIECE      | PROXIMITY SWITCH<br>STANDSTILL CONTROL<br>WORKHEAD.                      | WERKSTÜCKSPINDELSTOCK<br>POUPEE PORTE-PIECE<br>WORKHEAD | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                 | 145497                               |
| B21                      | 21TACH  | /020.4                            | ABSOLUTDREHGEBER<br>WERKSTÜCKSPINDEL<br>A8/3000i A64 CE, IP67 | ENCODEUR ABSOLUT<br>BROCHE PORTE-PIECE<br>A8/3000i A64 CE, IP67 | ABSOLUTE ROTARY ENCODER<br>WORK-HOLDING SPINDLE<br>A8/3000i A64 CE, IP67 | WERKSTÜCKSPINDELSTOCK<br>POUPEE PORTE-PIECE<br>WORKHEAD | FANUC                                | A06B-0227-B200/0100                    | 162050                               |
| B22                      | 22TACH  | /018.4                            | ABSOLUTDREHGEBER<br>X-ACHSE<br>AC4/3000i A64 CE               | ENCODEUR ABSOLUT<br>AXE X<br>AC4/3000i A64 CE                   | ABSOLUTE ROTARY ENCODER<br>X-AXIS<br>AC4/3000i A64 CE                    | X-ACHSE<br>AXE X<br>X-AXIS                              | FANUC                                | A06B-0221-B100                         | 162049                               |
| B22.1                    | 22.1PRS | /113.4                            | INITIATOR<br>STILLSTANDSÜBERWACHUNG<br>X-ACHSE                | PREPARATEUR<br>SURVEILLANCE DE ARRET<br>AXE X                   | PROXIMITY SWITCH<br>STANDSTILL CONTROL<br>X-AXIS                         | X-ACHSE<br>AXE X<br>X-AXIS                              | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                 | 145496                               |
| B22.2                    | 22.2SE  | /076.2                            | MASSSTAB<br>X-ACHSE<br>LC 491                                 | EHELLE<br>AXE X<br>LC 491                                       | SCALE<br>X-AXIS<br>LC 491  | X-ACHSE<br>AXE X<br>X-AXIS                              | HEIDENHAIN                           | LC 491 F ML 370                        | 159164                               |
| B23                      | 23TACH  | /019.4                            | ABSOLUTDREHGEBER<br>Z-ACHSE<br>AC4/3000i A64 CE               | ENCODEUR ABSOLUT<br>AXE Z<br>AC4/3000i A64 CE                   | ABSOLUTE ROTARY ENCODER<br>Z-AXIS<br>AC4/3000i A64 CE                    | Z-ACHSE<br>AXE Z<br>Z-AXIS                              | FANUC                                | A06B-0221-B100                         | 162049                               |
| B23.1                    | 23.1PRS | /113.6                            | INITIATOR<br>STILLSTANDSÜBERWACHUNG<br>Z-ACHSE                | PREPARATEUR<br>SURVEILLANCE DE ARRET<br>AXE Z                   | PROXIMITY SWITCH<br>STANDSTILL CONTROL<br>Z-AXIS                         | Z-ACHSE<br>AXE Z<br>Z-AXIS                              | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                 | 145496                               |
| B23.2                    | 23.2SE  | /076.5                            | MASSSTAB<br>Z-ACHSE<br>LC 491                                 | EHELLE<br>AXE Z<br>LC 491                                       | SCALE<br>Z-AXIS<br>LC 491  | Z-ACHSE<br>AXE Z<br>Z-AXIS                              | HEIDENHAIN                           | LC 491 F ML 1240                       | 159162                               |
| B24.2                    | 24.2MS  | /104.8                            | INITIATOR<br>INDEXIER-ACHSE<br>ABGESENKT                      | PREPARATEUR<br>AXE INDEXE<br>BAISSE                             | PROXIMITY SWITCH<br>INDEXING AXIS.<br>LOWERED                            | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD               | BALLUFF AG                           | BES 3D11-PAF7LO-ZA8A0-PU08             | 145496                               |
| B24                      | 24TACH  | /021.4                            | ABSOLUTDREHGEBER<br>INDEXIERACHSE<br>A2/5000i A64 CE IP67     | ENCODEUR ABSOLUT<br>AXE INDEXE<br>A2/5000i A64 CE IP67          | ABSOLUTE ROTARY ENCODER<br>INDEXING AXIS<br>A2/5000i A64 CE IP67         | INDEXIERACHSE<br>AXE INDEXE<br>INDEXING AXIS            | FANUC                                | A06B-0373-B575/7075                    | 162053                               |

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| B25                      | 25SE    | /060.1                            | DREHGEBER<br>SCHWENKWINKELANZEIGE<br>WERKSTÜCKSPINDELSTOCK     | ENCODEUR ALIMENTATION<br>D'AFFICHAGE D'ANGLE D'ORIENTATION<br>POUPEE PORTE-PIECE | ROTARY ENCODER<br>SWIVEL ANGLE INDICATOR<br>FOR WORKHEAD      | WERKSTÜCKSPINDELSTOCK<br>POUPEE PORTE-PIECE<br>WORKHEAD            | HEIDENHAIN                           | RON285                                | 150736                               |
| B4.2                     | 4.2PS   | /107.2                            | DRUCKSCHALTER<br>UMLAUFSCHMIERUNG                              | COMMUTATEUR PRESSION<br>GRAISSAGE CIRCULATION                                    | PRESSURE SWITCH<br>LUBRICATION CIRCUIT                        | SCHMIERAGGREGAT<br>GROUPE DE LUBRIFICATION<br>LUBRICATION ASSEMBLY | SUCO                                 | 0166 40503 I 019                      | 145224                               |
| B4                       | 4FLS    | /107.2                            | SCHWIMMERSCHALTER<br>ÖLNIVEAU<br>UMLAUFSCHMIERUNG              | INTERRUPTEUR A FLOTTEUR<br>NIVEAU DE HUILE<br>GRAISSAGE CIRCULATION              | FLOAT SWITCH<br>OIL LEVEL<br>LUBRICATION.                     | SCHMIERAGGREGAT<br>GROUPE DE LUBRIFICATION<br>LUBRICATION ASSEMBLY | HEINRICH KÜBLER                      | AFMS-L165-SB                          | 130430                               |
| B51                      | 51PS    | /107.1                            | DRUCKSCHALTER<br>PNEUMATIK                                     | COMMUTATEUR PRESSION<br>PNEUMATIQUE  | PRESSURE SWITCH<br>PNEUMATIC SYSTEM                           | WARTUNGSEINHEIT<br>UNITE D' ENTRETIEN<br>MAINTENANCE UNIT          | SUCO                                 | 0166 40503 I 019                      | 145224                               |
| B54.1                    | 54.1PRS | /108.7                            | INITIATOR<br>SCHLEIFSCHIEBENSCHUTZ<br>HAUPTSCHIEBE GESCHLOSSEN | PREPARATEUR<br>CAPOT DE PROTECT. DE MEULE<br>MEULE PRINCIPALE FERMEE             | PROXIMITY SWITCH<br>GRINDING WHEEL GUARD<br>MAIN WHEEL CLOSED | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | FESTO                                | SMT-8-PS-K-LED-24                     | 145178                               |
| B54                      | 54PRS   | /108.6                            | INITIATOR<br>BERÜHRUNGSSCHUTZ<br>HAUPTSCHIEBE GESCHLOSSEN      | PREPARATEUR<br>PROTECTION<br>MEULE PRINCIPALE FERMEE                             | PROXIMITY SWITCH<br>GUARD<br>MAIN WHEEL CLOSED                | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | FESTO                                | SMT-8-PS-K-LED-24                     | 145178                               |
| B55.1                    | 55.1PRS | /108.3                            | INITIATOR<br>SCHLEIFSCHIEBENSCHUTZ<br>2. SCHIEBE GESCHLOSSEN   | PREPARATEUR<br>CAPOT DE PROTECT. DE MEULE<br>2IEME MEULE FERMEE                  | PROXIMITY SWITCH<br>GRINDING WHEEL GUARD<br>2ND WHEEL CLOSED  | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | FESTO                                | SMT-8-PS-K-LED-24                     | 145178                               |
| B55                      | 55PRS   | /108.2                            | INITIATOR<br>BERÜHRUNGSSCHUTZ<br>2. SCHIEBE GESCHLOSSEN        | PREPARATEUR<br>PROTECTION<br>2IEME MEULE FERMEE                                  | PROXIMITY SWITCH<br>GUARD<br>2ND WHEEL CLOSED                 | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | FESTO                                | SMT-8-PS-K-LED-24                     | 145178                               |
| B56.1                    | 56.1PRS | /108.5                            | INITIATOR<br>SCHLEIFSCHIEBENSCHUTZ<br>INNENSCHIEBE OFFEN       | PREPARATEUR<br>CAPOT DE PROTECT. DE MEULE<br>MEULE INTERIEURE OUVERT             | PROXIMITY SWITCH<br>GRINDING WHEEL GUARD<br>INNER WHEEL OPEN  | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | BAUMER ELECTRIC AG                   | IFF 08.26.35/L1/L                     | 145279                               |
| B56                      | 56PRS   | /108.4                            | INITIATOR<br>BERÜHRUNGSSCHUTZ<br>INNEN OFFEN                   | PREPARATEUR<br>PROTECTION A L' INTERIEUR<br>OUVERT                               | PROXIMITY SWITCH<br>GUARD INSIDE<br>OPEN                      | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | BAUMER ELECTRIC AG                   | IFF 08.26.35/L1/L                     | 145279                               |
| B57.3                    | 57.3PRS | /108.8                            | INITIATOR<br>KELPOS<br>IN MESSPOSITION                         | PREPARATEUR<br>KELPOS<br>EN POSITION DE MESURE                                   | PROXIMITY SWITCH<br>KELPOS<br>IN MEASURING POSITION           | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | BAUMER ELECTRIC AG                   | IFRM 06PI788/PL                       | 145284                               |
| B57                      | 57SE    | /108.9                            | MESSTASTER<br>KELPOS<br>MOVOMATIC C25                          | PALPEUR<br>KELPOS<br>MOVOMATIC C25   | MEASURING PIN<br>KELPOS<br>MOVOMATIC C25                      | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | MOVOMATIC                            | 10274.0001                            | 145286                               |
| B75                      | 75MI    | /062.7                            | MIKROFON<br>GAP-CONTROL<br>SCHLEIFSPINDEL T1/T2                | MICROPHONE<br>GAP CONTROL<br>PORTE-MEULE T1/T2                                   | MICROPHONE<br>GAP CONTROL<br>GRINDING SPINDLE T1/T2           | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | ELASO                                | USS2                                  | 154249                               |
| B75.1                    | 75.1MI  | /062.7                            | MIKROFON<br>GAP-CONTROL<br>WERKSTUECKSPINDELSTOCK              | MICROPHONE<br>GAP CONTROL<br>POUPEE PORTE-PIECE                                  | MICROPHONE<br>GAP CONTROL<br>WORKHEAD                         | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                          | ELASO                                |                                       | 161283                               |
| B77                      | 77MH    | /056.2                            | MESSKOPF TMP91<br>PASSIVES<br>LÄNGSPOSITIONIEREN               | TÊTE DE MESURE TMP91<br>PASSIF<br>POSITIONNEMENT LONGITUDINAL                    | GAUGE HEAD TMP91<br>PASSIVE<br>FLAGGING DEVICE                | OBERTISCH<br>TABLE SUPERIEURE<br>UPPER TABLE                       | MOVOMATIC                            | 10218.0205                            | 132633                               |

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| B79                      | 79MH     | /056.6                            | MESSKOPF CR100/CR257<br>DURCHMESSER                      | TÊTE DE MESURE CR100/CR257<br>DIAMETRE  | GAUGE HEAD CR100/CR257<br>DIAMETER                       | OBERTISCH<br>TABLE SUPERIEURE<br>UPPER TABLE              | MOVOMATIC                            |  |                                      |
| F102                     | 102FU    | /039.7                            | SICHERUNG MODEM  | FUSIBLE MODEM   | FUSE MODEM   | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-C005/1                             | 144877                               |
| F20                      | 20FU     | /016.5                            | SICHERUNGSAUTOMAT<br>SERVOANTRIEBE<br>FANUC              | COUPE-CIRCUIT AUTOMATIQUE<br>SERVOREGULATEUR<br>FANUC                         | AUTOMATIC CUTOUT<br>SERVODRIVES<br>FANUC                 | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-3-C10                              | 145348                               |
| F32                      | 32FU     | /029.3                            | SICHERUNGSAUTOMAT<br>AUSGÄNGE 24VDC<br>FANUC-PMC         | COUPE-CIRCUIT AUTOMATIQUE<br>SORTIES 24 VCC<br>PMC FANUC                      | AUTOMATIC CUTOUT<br>OUTPUTS 24VDC<br>FANUC PMC           | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-C6                                 | 145466                               |
| F33                      | 33FU     | /029.5                            | SICHERUNGSAUTOMAT<br>EINGÄNGE 24VDC<br>FANUC-PMC         | COUPE-CIRCUIT AUTOMATIQUE<br>ENTREES 24 VCC<br>PMC FANUC                      | AUTOMATIC CUTOUT<br>INPUTS 24VDC<br>FANUC PMC            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-C4                                 | 145465                               |
| F34                      | 34FU     | /029.6                            | SICHERUNGSAUTOMAT<br>MASCHINENLAMPE<br>SCHRANKLÜFTER     | COUPE-CIRCUIT AUTOMATIQUE<br>LAMPE DE LA MACHINE<br>VENTILATEUR DE LA ARMOIRE | AUTOMATIC CUTOUT<br>MACHINE LAMP<br>CUBICLE FAN          | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-C3                                 | 145432                               |
| F35                      | 35FU     | /029.8                            | SICHERUNGSAUTOMAT<br>SPEISUNG<br>FANUC-CPU               | COUPE-CIRCUIT AUTOMATIQUE<br>ALIMENTATION<br>CPU FANUC                        | AUTOMATIC CUTOUT<br>POWER SUPPLY<br>FANUC CPU            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-C6                                 | 145466                               |
| F42                      | 42FU     | /026.7                            | SICHERUNGSAUTOMAT<br>BETRIEBSSPANNUNG<br>SERVOVERSTÄRKER | COUPE-CIRCUIT AUTOMATIQUE<br>TENSION DE COMMANDE<br>SERVOAMPLIFICATEUR        | AUTOMATIC CUTOUT<br>OPERATING VOLTAGE<br>SERVO AMPLIFIER | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOELLER                              | FAZ-C4                                 | 145465                               |
| G102                     | 102PSU   | /039.7                            | STECKERNETZTEIL  | BLOC D ALIMENTATION   | WALL POWER SUPPLY  | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ZYXEL                                | MIT MODEM<br>AVEC MODEM<br>WITH MODEM  | 158678                               |
| G20.1                    | 20.1BATT | /067.6                            | PUFFERBATTERIE<br>REFERENZ<br>X/Z/C-ACHSE                | BATTERIE TAMPON.<br>REFERENCE<br>AXES X/Z/C                                   | BUFFER BATTERY<br>REFERENCE<br>X/Z/C-AXIS                | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A06B-6114-K504                         | 162060                               |
| G20                      | 20PSU    | /017.0                            | EINSPEISEMODUL<br>SERVOVERSTÄRKER<br>IPSR .3 CE          | MODULE DE ALIMENTATION<br>SERVOAMPLIFICATEUR<br>IPSR .3 CE                    | SUPPLY MODULE<br>SERVO AMPLIFIER<br>IPSR-3 CE            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A06B-6115-H003                         | 162054                               |
| G24.1                    | 24.1BATT | /068.6                            | PUFFERBATTERIE<br>REFERENZ<br>INDEXIERACHSE              | BATTERIE TAMPON<br>REFERENCE<br>AXE INDEXE                                    | BUFFER BATTERY<br>REFERENCE<br>INDEXING AXIS             | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A06B-6114-K504                         | 162060                               |
| G31                      | 31PSU    | /029.2                            | NETZGERÄT 24VDC<br>3X400-500VAC/24VDC<br>20A             | UNITE DE ALIMENTATION DE COURA<br>3X400-500VAC/24VDC<br>20A                   | POWER PACK 24VDC<br>3X400-500VAC/24VDC<br>20A            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | SIEMENS                              | 6EP1436-3BA00                          | 145542                               |
| H1.1                     | 1.1LT    | /094.5                            | MELDELAMPE ROT<br>AUSSENSPINDEL<br>GESTOPPT              | TEMOIN LUMINEUX ROUGE<br>BROCHE EXTERIEURE<br>ARRETE                          | PILOT LAMP RED<br>OD SPINDLE<br>STOPPED                  | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144322                               |
| HI                       | 1LT      | /094.3                            | MELDELAMPE GRÜN<br>AUSSENSPINDEL<br>GESTARTET            | TEMOIN LUMINEUX VERT<br>BROCHE EXTERIEURE<br>DEMARRE                          | PILOT LAMP GREEN<br>OD SPINDLE<br>STARTED                | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144321                               |

| Position<br>Rep.<br>Item |        | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung  | Désignation   | Designation of part   | Einbauort<br>Position de montage<br>Location              | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
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| H11.1                    | 11.1LT | /094.1                            | MELDELAMPE ROT<br>INNENSPINDEL<br>GESTOPPT                 | TEMOIN LUMINEUX ROUGE<br>BROCHE INTERIEURE.<br>ARRETE         | PILOT LAMP RED<br>INNER SPINDLE<br>STOPPED                  | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144322                               |
| H11                      | 11LT   | /093.9                            | MELDELAMPE GRÜN<br>INNENSPINDEL<br>GESTARTET               | TEMOIN LUMINEUX VERT<br>BROCHE INTERIEURE.<br>DEMARRE         | PILOT LAMP GREEN<br>INNER SPINDLE<br>STARTED                | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144321                               |
| H40.1                    | 40.1LT | /092.6                            | MELDELAMPE GELB<br>TÜRENTRIEGELUNG<br>ANGEFORDERT          | TEMOIN LUMINEUX JAUNE<br>DEVERROUILLAGE DE PORTE<br>DEMANDE   | PILOT LAMP YELLOW<br>DOOR UNLOCKING DEVICE<br>REQUESTED     | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145517                               |
| H41                      | 41LT   | /094.7                            | MELDELAMPE GRÜN<br>MASCHINE<br>HOCHGEFAHREN                | TEMOIN LUMINEUX VERT<br>MACHINE<br>ACCROISSEMENT DE PUISSANCE | PILOT LAMP GREEN<br>MACHINE<br>RUN-UP                       | PANEL   | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145515                               |
| H45                      | 45LT   | /036.6                            | MASCHINENLAMPE   | LAMPE DE LA MACHINE   | MACHINE LAMP  | QUERTRÄGER<br>TRAVERSE<br>CROSSBEAM                       | WALDMANN<br>LICHTTECHNIK AG          | 445852                                 | 150161                               |
| K1                       | 1M     | /040.2                            | HAUPTSCHÜTZ<br>HAUPTSPINDEL<br>EIN                         | CONTACTEUR PRINCIPAL<br>BROCHE PRINCIPALE<br>MARCHE           | MAIN CONTACTOR<br>MAIN SPINDLE<br>ON                        | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | TELEMECANIQUE                        | LPI-K12013BD3                          | 145192                               |
| K11                      | 11M    | /106.9                            | SCHÜTZ<br>INNENSPINDEL<br>EIN                              | CONTACTEUR<br>BROCHE INTERIEURE<br>MARCHE                     | CONTACTOR<br>INNER SPINDLE<br>ON                            | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | TELEMECANIQUE                        | LPI-K12013BD3                          | 145192                               |
| K40.1                    | 40.1M  | /040.1                            | HAUPTSCHÜTZ 2<br>LEISTUNG NOT-AUS<br>CONNECTED UNITS       | CONTACTEUR PRINCIPAL 2<br>PUISSANCE ARRET DE URGENCE          | MAIN CONTACTOR 2<br>POWER EMERGENCY                         | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | TELEMECANIQUE                        | LC1-D253BL                             | 145543                               |
| K40                      | 40M    | /106.6                            | HAUPTSCHÜTZ 1<br>LEISTUNG NOT-AUS<br>GESCHALTETE AGGREGATE | CONTACTEUR PRINCIPAL 1<br>PUISSANCE                           | MAIN CONTACTOR 1<br>POWER<br>CONNECTED UNITS                | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | TELEMECANIQUE                        | LC1-D253BL                             | 145543                               |
| M1                       | 1MTR   | /012.1                            | MOTOR<br>HAUPTSPINDEL<br>GESCHALTETE AGGREGATE             | MOTEUR<br>BROCHE PRINCIPALE<br>AGGREGATS INTERCALÉS           | MOTOR<br>MAIN SPINDLE<br>CONNECTED UNITS                    | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                 | LANDERT MOTOREN AG                   | 100-MK-4-05                            | 159811                               |
| M11                      | MTR    | /014.2                            | MOTOR<br>INNENSCHLEIFEN<br>3W 3x400V/6.7A                  | MOTEUR<br>RECTIFICATION INTERIEURE<br>3W 3x400V/6.7A          | MOTOR<br>ID GRINDING<br>3W 3x400V/6.7A                      | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                 | LANDERT MOTOREN AG                   | 71-MK-2-03                             | 159812                               |
| M21                      | 21MTR  | /020.1                            | SERVOMOTOR<br>WERKSTÜCKSPINDEL<br>A8/3000i A64 CE, IP67    | SERVOMOTEUR<br>BROCHE PORTE-PIECE<br>A8/3000i A64 CE, IP67    | SERVOMOTOR<br>WORK-HOLDING SPINDLE<br>A8/3000i A64 CE, IP67 | WERKSTÜCKSPINDELSTOCK<br>POUPEE PORTE-PIECE<br>WORKHEAD   | FANUC                                | A06B-0227-B200/0100                    | 162050                               |
| M22                      | 22MTR  | /018.1                            | SERVOMOTOR<br>X-ACHSE<br>AC4/3000i A64 CE                  | SERVOMOTEUR<br>AXE X<br>AC4/3000i A64 CE                      | SERVOMOTOR<br>X-AXIS<br>AC4/3000i A64 CE                    | X-ACHSE<br>AXE X<br>X-AXIS                                | FANUC                                | A06B-0221-B100                         | 162049                               |
| M23                      | 23MTR  | /019.1                            | SERVOMOTOR<br>Z-ACHSE<br>AC4/3000i A64 CE                  | SERVOMOTEUR<br>AXE Z<br>AC4/3000i A64 CE                      | SERVOMOTOR<br>Z-AXIS<br>AC4/3000i A64 CE                    | Z-ACHSE<br>AXE Z<br>Z-AXIS                                | FANUC                                | A06B-0221-B100                         | 162049                               |
| M24                      | 24MTR  | /021.1                            | SERVOMOTOR<br>INDEXIERACHSE<br>A2/5000i A64 CE             | SERVOMOTEUR<br>AXE INDEXE<br>A2/5000i A64 CE                  | SERVOMOTOR<br>INDEXING AXIS<br>A2/5000i A64 CE              | INDEXIERACHSE<br>AXE INDEXE<br>INDEXING AXIS              | FANUC                                | A06B-0205-B100/0100                    | 162053                               |

| Position<br>Rep.<br>Item |         | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung   | Désignation  | Designation of part   | Einbauort<br>Position de montage<br>Location                       | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
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| M4                       | 4MTR    | /013.4                            | MOTOR<br>UMLAUFSCHMIERUNG                             | MOTEUR<br>GRAISSAGE CIRCULATION                                    | MOTOR<br>LUBRICATION  | SCHMIERAGGREGAT<br>GROUPE DE LUBRIFICATION<br>LUBRICATION ASSEMBLY | ETR SA MARTIGNY                      | 0.12KW, 0.5A, 400/460V                 | 139197                               |
| M6                       | 6MTR    | /013.7                            | MOTOR<br>SCHLEIFNEBELABSAUGUNG                        | MOTEUR<br>ASPIR. POUSS. DE MEULAGE                                 | MOTOR<br>DUST EXTRACTION UNIT                                       | VERSCHALUNG<br>REVETEMENT<br>MACHINE CABINET                       | MARTIN WETTER AG                     | 1.1kW/2.8A 3x400/460V                  | 144698                               |
| Q0.2                     | 0.2CB   | /006.3                            | ANLAGENHAUPTSCHALTER<br>VORTRAFO T0.2                 | COMMUTATEUR PRINCIPAL<br>TRANSFORMATEUR T0.2                       | PLANT MASTER SWITCH.<br>TRANSFORMER T0.2                            | GEHÄUSE VORTRAFO<br>ARMOIRE TRANSFORMATEUR<br>TRANSFORMER BOX      | MOELLER                              | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 147555                               |
| Q0                       | 0CB     | /007.2                            | ANLAGEHAUPTSCHALTER                                   | COMMUTATEUR PRINCIPAL  | PLANT MASTER SWITCH   | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | MOELLER                              | PI-32/V/SVB                            | 145349                               |
| Q1                       | 1IOL    | /012.1                            | MOTORSCHUTZSCHALTER<br>FREQUENZUMFORMER<br>SPINDEL(N) | DISJONCTEUR PROTECTEUR<br>CONV. DE FREQUENCE<br>BROCHES            | MOTOR PROTECTION SWITCH<br>FREQUENCY CONVERTER<br>SPINDLE(S)        | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME143AEI13TQ                        | 145188                               |
| Q2                       | 2IOL    | /013.2                            | MOTORSCHUTZSCHALTER<br>FILTERAGGREGAT                 | DISJONCTEUR PROTECTEUR<br>AGREGAT FILTRE                           | MOTOR PROTECTION SWITCH<br>FILTER ASSEMBLY                          | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME103AEI13TQ                        | 145186                               |
| Q20                      | 20IOL   | /016.2                            | MOTORSCHUTZSCHALTER<br>AUTO-TRAFO<br>FANUC STEUERUNG  | DISJONCTEUR PROTECTEUR<br>AUTO-TRANSFORMATEUR<br>COMMANDE FANUC    | MOTOR PROTECTION SWITCH<br>AUTO-TRANSFORMER<br>FANUC CONTROL SYSTEM | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME103AEI13TQ                        | 145186                               |
| Q3                       | 3IOL    | /029.2                            | MOTORSCHUTZSCHALTER<br>WÄRMETAUSCHER<br>SCHLEIFKOPF   | DISJONCTEUR PROTECTEUR<br>ECHANGEUR DE CHALEUR<br>TÊTE PORTE-MEULE | MOTOR PROTECTION SWITCH<br>HEAT EXCHANGER<br>WHEELHEAD              | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME063AEI13TQ                        | 145184                               |
| Q31                      | 31IOL   | /029.2                            | MOTORSCHUTZSCHALTER<br>24VDC NETZGERÄT                | DISJONCTEUR PROTECTEUR<br>BLOC ALIMENTATION 24 VCC                 | MOTOR PROTECTION SWITCH<br>24VDC POWER PACK                         | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME063AEI13TQ                        | 145184                               |
| Q4                       | 4IOL    | /014.1                            | MOTORSCHUTZSCHALTER<br>UMLAUFSCHMIERUNG               | DISJONCTEUR PROTECTEUR<br>GRAISSAGE CIRCULATION                    | MOTOR PROTECTION SWITCH<br>LUBRICATION                              | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME043AEI13TQ                        | 145183                               |
| Q40                      | 40IOL   | /026.3                            | MOTORSCHUTZSCHALTER<br>STEUERTRANSFORMATOR            | DISJONCTEUR PROTECTEUR<br>TRANSFORMATEUR DE COMMANDE               | MOTOR PROTECTION SWITCH<br>TRAFO T40                                | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME063AEI13TQ                        | 145184                               |
| Q6                       | 6IOL    | /014.6                            | MOTORSCHUTZSCHALTER<br>SCHLEIFNEBELABSAUGUNG          | DISJONCTEUR PROTECTEUR<br>ASPIR. POUSS. DE MEULAGE                 | MOTOR PROTECTION SWITCH<br>DUST EXTRACTION UNIT                     | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | TELEMECANIQUE                        | GV2ME073AEI13TQ                        | 145185                               |
| RC20.1                   | 20.1SUP | /016.7                            | ÜBERSpannungs-<br>ABLEITER<br>FANUC ANTRIEBE          | LIMITEUR<br>DE TENSION<br>ENTRAINEMENT FANUC                       | SURGE<br>ABSORBER<br>FANUC DRIVES                                   | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | FANUC                                | A06B-6077-K142                         | 139637                               |
| RC20.2                   | 20.2SUP | /026.5                            | ÜBERSpannungs-<br>ABLEITER<br>FANUC ANTRIEBE          | LIMITEUR<br>DE TENSION<br>ENTRAINEMENT FANUC                       | SURGE<br>ABSORBER<br>FANUC DRIVES                                   | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | FANUC                                | A06B-6077-K142                         | 139637                               |
| RC20.3                   | 20.3SUP | /026.7                            | ÜBERSpannungsABLEITER<br>FANUC ANTRIEBE               | LIMITEUR DE TENSION<br>ENTRAINEMENT FANUC                          | SURGE ABSORBER<br>FANUC DRIVES                                      | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE          | FANUC                                | A06B-6077-K142                         | 139637                               |

| Position<br>Rep.<br>Item |         | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung                                  | Désignation                                   | Designation of part                            | Einbauort<br>Position de montage<br>Location   | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|---------|-----------------------------------|--|---|--|--|--------------------------------------|--|--------------------------------------|
| RC20                     | 20SUP   | /016.6                            | ÜBERSpannungs-<br>ABLEITER<br>FANUC ANTRIEBE | LIMITEUR<br>DE TENSION<br>ENTRAINEMENT FANUC  | SURGE<br>ABSORBER<br>FANUC DRIVES              | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE                              | FANUC                                | A06B-6077-K142                         | 139637                               |
| RC6                      | 6SUP    | /013.7                            | ENTSTÖRGLIED                                 | ANTIPARASITE                                  | SUPPRESSOR                                     | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE                              | LÜTZE                                | LCR-M1-0490/IS&SOCKEL<br>700499        | 142029                               |
| S1.1                     | 1.1PB   | /094.5                            | TASTER<br>AUSSENSPINDEL<br>STOP              | PALPEUR<br>BROCHE EXTERIEURE<br>STOP          | SWITCH<br>OD SPINDLE<br>STOP                   | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144322                               |
| S1                       | 1PB     | /094.3                            | TASTER<br>AUSSENSPINDEL<br>START             | PALPEUR<br>BROCHE EXTERIEURE<br>DEMARRAGE     | SWITCH<br>OD SPINDLE<br>START                  | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144321                               |
| S11.1                    | 11.1PB  | /094.1                            | TASTER<br>INNENSPINDEL<br>STOP               | PALPEUR<br>BROCHE INTERIEURE<br>STOP          | SWITCH<br>INNER SPINDLE<br>STOP                | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144322                               |
| S11                      | 11PB    | /093.8                            | TASTER<br>INNENSPINDEL<br>START              | PALPEUR<br>BROCHE INTERIEURE<br>DEMARRAGE     | SWITCH<br>INNER SPINDLE<br>START               | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 144321                               |
| S40                      | 40PB    | /114.1                            | NOT-AUS-TASTER                               | BOUON ARRET DE URGENCE                        | EMERGENCY BUTTON                               | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145219                               |
| S40.1                    | 40.1PB  | /092.5                            | TASTER<br>ANFORDERUNG<br>TÜRENTRIEGELUNG     | PALPEUR<br>REQUETE<br>DEVERROUILLAGE DE PORTE | SWITCH<br>REQUIREMENT<br>DOOR UNLOCKING DEVICE | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145517                               |
| S40.2                    | 40.2PB  | /095.4                            | ZUSTIMMTASTE                                 | TOUCHE OK                                     | OK KEY   | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145526                               |
| S40.3                    | 40.3PB  | /095.5                            | ZUSTIMMTASTE 2                               | TOUCHE OK 2                                   | OK KEY 2                                       | PANEL  | SCHMERSAL                            | ZSD 6                                  | 160325                               |
| S41                      | 41PB    | /094.6                            | TASTER<br>MASCHINENFREIGABE                  | PALPEUR<br>DEVERROUILLAGE DE LA MACHINE       | SWITCH<br>MACHINE RELEASE                      | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145515                               |
| S53                      | 53KS    | /092.7                            | SCHLÜSSELSCHALTER<br>EINRICHTEN<br>EIN       | INTERRUPTEUR A CLE<br>AJUSTAGE<br>MARCHE      | KEY SWITCH<br>SET<br>ON                        | PANEL  | EAO                                  | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145516                               |
| S60                      | 60FTS   | /107.4                            | FUSSTASTER RECHTS                            | BOUON A COMMANDE A PIED<br>DROIT              | FOOT-OPERATED BUTTON RH                        | ELEKTROSCHRANK GESTECKT<br>ARMOIRE ELECTR. CONNECTEE<br>ELECTRICS CUBICLE<br>CONNECTED | SCHMERSAL                            | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145453                               |
| S60.1                    | 60.1FTS | /107.4                            | FUSSTASTER LINKS                             | BOUON A COMMANDE A PIED<br>GAUCHE             | FOOT-OPERATED BUTTON LH                        | ELEKTROSCHRANK GESTECKT<br>ARMOIRE ELECTR. CONNECTEE<br>ELECTRICS CUBICLE<br>CONNECTED | SCHMERSAL                            | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145453                               |
| T0.2                     | 0.2T    | /006.3                            | VORTRAFO<br>18kVA                            | TRANSFORMATEUR<br>18kVA                       | TRANSFORMER<br>18kVA                           | GEHÄUSE VORTRAFO<br>ARMOIRE TRANSFORMATEUR<br>TRANSFORMER BOX                          | LAPP-TEXTIMA AG                      | 3x200-220/400V 50/60Hz                 | 147555                               |



| Position<br>Rep.<br>Item |     | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung  | Désignation  | Designation of part  | Einbauort<br>Position de montage<br>Location                          | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-----|-----------------------------------|--|--|--|---|--------------------------------------|---------------------------------------|--------------------------------------|
| T20                      | 20T | /016.2                            | AUTO-TRANSFORMATOR<br>SERVOANTRIEBE<br>FANUC                       | AUTO-TRANSFORMATEUR.<br>SERVOREGULATEUR<br>FANUC                     | AUTO-TRANSFORMER<br>SERVO DRIVES<br>FANUC                    | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE             | BÄCHLI                               | 3KVA 3x400/460V-3x230V<br>50/60Hz     | 145356                               |
| T40                      | 40T | /026.3                            | STEUERTRANSFORMATOR<br>630VA<br>400V-460/230V 50/60Hz              | TRANSFORMATEUR DE COMMANDE<br>630VA<br>400V-460/230V 50/60Hz         | CONTROL TRANSFORMER<br>630VA<br>400V-460/230V 50/60Hz        | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE             | ELTRA GmbH                           | 630VA, 400-460V / 230V 50/60HZ        | 145355                               |
| W0.2                     |     | /006.1                            | LEISTUNGSKABEL<br>VORTRAFO   | CABLE DE PUISSANCE<br>TRANSFORMATEUR                                 | POWER CABLE<br>TRANSFORMER                                   | VORTRAFO/ MASCHINE<br>TRANSFORMATEUR/ MACHINE<br>TRANSFORMER/ MACHINE | BASIX                                | POWERFLEX XY 4x10mm2                  | 142604                               |
| W54                      |     | /076.3                            | SIGNALKABEL<br>MASSSTAB<br>X-ACHSE                                 | CABLE DE SIGNALISATION<br>ECHELLE<br>AXE X                           | SIGNAL CABLE<br>SCALE<br>X-AXIS                              | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                               | HEIDENHAIN                           | 532759-06                             | 159166                               |
| W64                      |     | /076.6                            | SIGNALKABEL<br>MASSSTAB<br>Z-ACHSE                                 | CABLE DE SIGNALISATION<br>ECHELLE<br>AXE Z                           | SIGNAL CABLE<br>SCALE<br>Z-AXIS                              | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                               | HEIDENHAIN                           | 532759-06                             | 159166                               |
| W170                     |     | /059.2                            | KABEL KEL-SET  | CABLE KEL-SET  | CABLE KEL-SET  | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                               | BASIX                                | COLORFLEX CY 2x0.5mm2                 | 160179                               |
| W186                     |     | /064.4                            | SIGNALKABEL<br>VIBRATIONSAUFNEHMER<br>SCHLEISCHBEIEN T1/T2         | CABLE DE SIGNALISATION<br>RECEVEUR DE VIBRATION<br>MEULE T1/T2       | SIGNAL CABLE<br>VIBRATION PICK-UP<br>GRINDING WHEEL T1/T2    | MASCHINE<br>MACHINE<br>MACHINE  | ELASO                                | 16159                                 | 156218                               |
| W187                     |     | /064.4                            | VERLAENGERUNGSKABEL<br>VIBRATIONSAUFNEHMER<br>SCHLEISCHBEIEN T1/T2 | PROLONGATEUR<br>RECEVEUR DE VIBRATION<br>MEULE T1/T2                 | EXTENSION CABLE<br>VIBRATION PICK-UP<br>GRINDING WHEEL T1/T2 | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                               | ELASO                                | 18311                                 | 156219                               |
| W302                     |     | /064.1                            | SIGNALKABEL<br>DREHZAHL KEL-BALANCE<br>SCHLEISCHBEIEN T1/T2        | CABLE DE SIGNALISATION<br>VITESSE DE ROT. KEL-BALANCE<br>MEULE T1/T2 | SIGNAL CABLE<br>SPEED KEL-BALANCE<br>GRINDING WHEEL T1/T2    | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE             | BASIX                                | COLORFLEX CY 2x0.5mm2                 | 154693                               |
| W375                     |     | /064.6                            | SIGNALKABEL<br>MIKROPHON<br>KEL-TOUCH SPINDEL T1/T2                | CABLE DE SIGNALISATION<br>MICROPHONE<br>KEL-TOUCH BROCHE T1/T2       | SIGNAL CABLE<br>MICROPHONE<br>KEL-TOUCH SPINDLE T1/T2        | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                               | ELASO                                | USS 2                                 | 154249                               |
| W376                     |     | /064.6                            | VERLAENGERUNGSKABEL<br>MIKROPHON<br>KEL-TOUCH SPINDEL T1/T2        | PROLONGATEUR<br>MICROPHONE<br>KEL-TOUCH BROCHE T1/T2                 | EXTENSION CABLE<br>MICROPHONE<br>KEL-TOUCH SPINDLE T1/T2     | MASCHINE<br>MACHINE<br>MACHINE  | ELASO                                |                                       | 161534                               |
| W379                     |     | /064.8                            | SIGNALKABEL<br>MIKROPHON<br>KEL-TOUCH WSP                          | CABLE DE SIGNALISATION<br>MICROPHONE<br>KEL-TOUCH POUPE PORTE PIECES | SIGNAL CABLE<br>MICROPHONE<br>KEL-TOUCH WORKHEAD             | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                               | ELASO                                |                                       | 161283                               |
| W380                     |     | /064.9                            | VERLAENGERUNGSKABEL<br>MIKROPHON<br>KEL-TOUCH WSP                  | PROLONGATEUR<br>MICROPHONE<br>KEL-TOUCH POUPE PORTE PIECES           | EXTENSION CABLE<br>MICROPHONE<br>KEL-TOUCH WORKHEAD          | MASCHINE<br>MACHINE<br>MACHINE  | ELASO                                | 18812                                 | 161511                               |
| W416                     |     | /083.8                            | OPTISCHES KABEL  | CABLE OPTIQUE  | OPTICAL CABLE  | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE             | FANUC                                | A66L-6001-0026/L2R003                 | 143847                               |
| W681                     |     | /065.5                            | SIGNALKABEL<br>EBG1500 – XL81.1                                    | CABLE DE SIGNALISATION<br>EBG1500 – XL81.1                           | SIGNAL CABLE<br>EBG1500 – XL81.1                             | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE             | BASIX                                | 8x0.34mm2 COLORFLEX CY                | 161311                               |

| Position<br>Rep.<br>Item | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung                                       | Désignation   | Designation of part                                     | Einbauort<br>Position de montage<br>Location              | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-----------------------------------|---|---|---|---|--------------------------------------|--|--------------------------------------|
| W682                     | /063.7                            | SIGNALKABEL<br>FREQUENZUMFORMER<br>SCHLEIFSPINDEL | CABLE DE SIGNALISATION<br>CONVERTISSEUR FREQUENCE<br>BROCHE | SIGNAL CABLE<br>FREQUENCY CONVERTER<br>GRINDING SPINDLE | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | 8x0.34mm2 COLORFLEX CY                 | 161312                               |
| W683                     | /065..7                           | SIGNALKABEL<br>EBG1500 – XL81.15                  | CABLE DE SIGNALISATION<br>EBG1500 – XL81.15                 | SIGNAL CABLE<br>EBG1500 – XL81.15                       | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | 8x0.34mm2 COLORFLEX CY                 | 161313                               |
| W700                     | /013.2                            | LEISTUNGSKABEL<br>FILTERAGGREGAT                  | CABLE DE PUISSANCE<br>AGREGAT FILTRE                        | POWER CABLE<br>FILTER ASSEMBLY                          | ES/FILTER<br>AE/FILTRE<br>EC/FILTER                       |                                      |  |                                      |
| W701                     | /013.4                            | LEISTUNGSKABEL<br>SCHMIERUNG                      | CABLE DE PUISSANCE<br>LUBRIFICATION                         | POWER CABLE<br>LUBRICATION                              | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | BASIX                                | 4x1.0mm2 MULTINORMKABEL<br>CY          | 145358                               |
| W702                     | /012.6                            | LEISTUNGSKABEL<br>HAUPTSPINDEL                    | CABLE DE PUISSANCE<br>BROCHE PRINCIPALE                     | POWER CABLE<br>MAIN SPINDLE                             | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | HELUKABEL                            | TOPSERV 113<br>4x1,5 mm2 + 2x1mm2      | 145793                               |
| W703                     | /014.6                            | LEISTUNGSKABEL<br>INNENSPINDEL                    | CABLE DE PUISSANCE<br>BROCHE INTERIEURE.                    | POWER CABLE<br>INNER SPINDLE                            | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | HELUKABEL                            | TOPSERV 113<br>4x1,5 mm2 + 2x1mm2      | 145793                               |
| W704                     | /018.2                            | LEISTUNGSKABEL<br>SERVOMOTOR                      | CABLE DE PUISSANCE<br>SERVOMOTEUR<br>AXE X                  | POWER CABLE<br>SERVOMOTOR<br>X-AXIS                     | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | FANUC                                | LX660-8077-T265/L4R003                 | 161143                               |
| W705                     | /018.6                            | SIGNALKABEL<br>SERVOMOTOR<br>X-ACHSE              | CABLE DE SIGNALISATION<br>SERVOMOTEUR<br>AXE X              | SIGNAL CABLE<br>SERVOMOTOR<br>X-AXIS                    | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | FANUC                                | LX660-4077-T297/L4R003                 | 162046                               |
| W706                     | /019.2                            | LEISTUNGSKABEL<br>SERVOMOTOR<br>Z-ACHSE           | CABLE DE PUISSANCE<br>SERVOMOTEUR<br>AXE Z                  | POWER CABLE<br>SERVOMOTOR<br>Z-AXIS                     | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | FANUC                                | LX660-8077-T265/L7R003                 | 162044                               |
| W707                     | /019.6                            | SIGNALKABEL<br>SERVOMOTOR<br>Z-ACHSE              | CABLE DE SIGNALISATION<br>SERVOMOTEUR<br>AXE Z              | SIGNAL CABLE<br>SERVOMOTOR<br>Z-AXIS                    | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | FANUC                                | LX660-4077-T297/L7R003                 | 162047                               |
| W708                     | /020.2                            | LEISTUNGSKABEL<br>SERVOMOTOR<br>WERKSTÜCKSPINDEL  | CABLE DE PUISSANCE<br>SERVOMOTEUR<br>BROCHE PORTE-PIECE     | POWER CABLE<br>SERVOMOTOR<br>WORK-HOLDING SPINDLE       | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | FANUC                                | LX660-8077-T265/L8R003                 | 161144                               |
| W709                     | /020.6                            | SIGNALKABEL<br>SERVOKABEL<br>WERKSTÜCKSPINDEL     | CABLE DE SIGNALISATION<br>SERVOKABEL<br>BROCHE PORTE-PIECE  | SIGNAL CABLE<br>SERVOKABEL<br>WORK-HOLDING SPINDLE      | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | FANUC                                | LX660-4077-T297/L8R003                 | 161140                               |
| W711                     | /036.7                            | KABEL<br>MASCHINENLAMPE                           | CABLE<br>LAMPE DE LA MACHINE                                | CABLE<br>MACHINE LAMP                                   | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | WALDMANN<br>LICHTTECHNIK AG          | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 150161                               |
| W712                     | /114.0                            | KABEL<br>NOT-AUS-TASTER                           | CABLE<br>BOUTON ARRÊT DE URGENCE                            | CABLE<br>EMERGENCY BUTTON                               | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | BASIX                                | COLORFLEX CY 4x0.5mm2                  | 145361                               |
| W713                     | /114.3                            | KABEL<br>TÜRVERRIEGELUNG                          | CABLE<br>VERROUILLAGE DE LA PORTE                           | CABLE<br>DOOR LOCKING DEVICE                            | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | BASIX                                | SUPERRFLEX N PUR 7x0.75mm2             | 152196                               |

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| W714                     | /108.4                            | KABEL<br>SCHLEIFSCHEIBENSCHUTZ                     | CABLE<br>CAPOT DE PROTECTION DE MEULE                                | CABLE<br>GRINDING WHEEL GUARD                           | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | LUMBERG                              | 3x0.75+8x0.3mm2   | 145493                               |
| W715                     | /113.3                            | KABEL<br>INITIATOR<br>WERKSTÜCKSPINDEL             | CABLE<br>PREPARATEUR<br>BROCHE PORTE-PIECE                           | CABLE<br>PROXIMITY SWITCH<br>WORK-HOLDING SPINDLE       | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | LUMBERG                              | RKMV 3-90/10M   | 145363                               |
| W716                     | /063.2                            | KABEL FREQUENZUMFORMER<br>SOLLWERT<br>INNENSPINDEL | CABLE CONVERTISS. FREQUENCE<br>VALEUR PRESCRITE<br>BROCHE INTERIEURE | CABLE FREQUENCY CONVERTER<br>SET VALUE<br>INNER SPINDLE | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | BASIX                                | COLORFLEX CY 2x0.5mm2                                       | 145364                               |
| W717                     | /063.2                            | SIGNALKABEL<br>FREQUENZUMFORMER<br>INNENSPINDEL    | CABLE DE SIGNALISATION<br>CONV. DE FREQUENCE<br>BROCHE INTERIEURE.   | SIGNAL CABLE<br>FREQUENCY CONVERTER<br>INNER SPINDLE    | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | COLORFLEX XY 6x0.5mm2                                       | 145365                               |
| W718                     | /092.8                            | SIGNALKABEL<br>TASTATURFELD<br>EAO                 | CABLE DE SIGNALISATION<br>CLAVIER<br>EAO                             | SIGNAL CABLE<br>KEYBOARD<br>EAO                         | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | 3M                                   | FLACHRUNDKABEL<br>CABLE MEPLAT<br>ROUND FLAT CABLE<br>34POL | 145366                               |
| W719                     | /081.0                            | OPTISCHES KABEL<br>VERBINDUNG<br>CPU-VERSTÄRKER    | CABLE OPTIQUE<br>CONNEXION<br>CPU-AMPLIFICATEUR                      | OPTICAL CABLE<br>CONNECTION<br>CPU-AMPLIFIER            | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | FANUC                                | A66L-6001-0026/L3R003                                       | 145333                               |
| W720                     | /107.4                            | KABEL<br>FUSSTASTER<br>PINOLE                      | CABLE<br>BOUTON A COMMANDE A PIED<br>FOURREAU                        | CABLE<br>FOOT-OPERATED BUTTON<br>SLEEVE                 | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | SCHMERSAL AG                         | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY                      | 145453                               |
| W721                     | /098.6                            | FLACHBANDKABEL<br>DI/DO INTERFACE                  | CABLE<br>DI/DO INTERFACE   | FLAT CABLE<br>DI/DO INTERFACE                           | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A03B-0815-K101  | 147556                               |
| W722                     | /098.6                            | FLACHBANDKABEL<br>DI/DO INTERFACE                  | CABLE<br>DI/DO INTERFACE   | FLAT CABLE<br>DI/DO INTERFACE                           | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | FANUC                                | A03B-0815-K101  | 147556                               |
| W724                     | /107.1                            | KABEL<br>DRUCKSCHALTER<br>PNEUMATIK                | CABLE<br>COMMUTATEUR PRESSION<br>PNEUMATIQUE                         | CABLE<br>PRESSURE SWITCH<br>PNEUMATIC SYSTEM            | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | BASIX                                | 2x0.5mm2 COLORFLEX XY                                       | 145369                               |
| W725                     | /107.2                            | KABEL<br>DRUCKSCHALTER<br>UMLAUFSCHMIERUNG         | CABLE<br>COMMUTATEUR PRESSION<br>GRAISSAGE CIRCULATION               | CABLE<br>PRESSURE SWITCH<br>LUBRICATION                 | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | BASIX                                | 2x0.5mm2 COLORFLEX XY                                       | 145492                               |
| W726                     | /107.2                            | KABEL<br>SCHWIMMERSCHALTER<br>UMLAUFSCHMIERUNG     | CABLE<br>INTERRUPTEUR A FLOTTEUR<br>GRAISSAGE CIRCULATION            | CABLE<br>FLOAT SWITCH<br>LUBRICATION                    | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | BASIX                                | 2x0.5mm2 COLORFLEX XY                                       | 145492                               |
| W727                     | /013.7                            | LEISTUNGSKABEL<br>SCHLEIFNEBELAUGUNG               | CABLE DE PUISSANCE<br>ASPIR. POUSS. DE MEULAGE                       | POWER CABLE<br>DUST EXTRACTION UNIT                     | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                   | BASIX                                | 4x1.0mm2 MULTINORMKABEL<br>CY                               | 145370                               |
| W728                     | /037.2                            | SPEISUNGSKABEL<br>CPU<br>ANZEIGE                   | CABLE DE ALIMENTATION<br>CPU<br>AFFICHAGE                            | POWER CABLE.<br>CPU<br>DISPLAY                          | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | FANUC                                | LX660-8024-T010/L3R003                                      | 145506                               |
| W735                     | /012.1                            | LEISTUNGSKABEL<br>A1 - K1                          | CABLE DE PUISSANCE<br>A1 - K1  | POWER CABLE<br>A1 - K1                                  | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | INTERFLX H OR UL CSA<br>7xAWG17                             | 145966                               |

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| W736                     | /081.3                            | KABEL<br>RS-232-SCHNITTSTELLE                         | CABLE<br>INTERFACE RS-232                                       | CABLE<br>RS232 INTERFACE                               | PANEL  | FANUC                                | LX660-4030-T010/L1R003                | 143824                               |
| W737                     | /111.1                            | KABEL<br>PNEUMATIKVENTIL<br>PINOLE ENTSPANNEN         | CABLE<br>SOUPAPE PNEUMATIQUE<br>DETENDRE LE FOURREAU            | CABLE<br>PNEUMATIC VALVE<br>SLEEVE RELEASE             | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W738                     | /111.2                            | KABEL<br>PNEUMATIKVENTIL<br>PINOLE SPANNEN            | CABLE<br>SOUPAPE PNEUMATIQUE<br>TENDRE LE FOURREAU              | CABLE<br>PNEUMATIC VALVE<br>SLEEVE TIGHTEN             | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W739                     | /111.3                            | KABEL<br>PNEUMATIKVENTIL<br>SCHUTZKAPPE HAUPTSCHLEIBE | CABLE<br>SOUPAPE PNEUMATIQUE<br>CAPOT PROTECT. MEULE PRINCIPALE | CABLE<br>PNEUMATIC VALVE<br>PROTECTION CAP MAIN WHEEL  | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W740                     | /111.4                            | KABEL<br>PNEUMATIKVENTIL<br>SCHUTZKAPPE 2. SCHEIBE    | CABLE<br>SOUPAPE PNEUMATIQUE<br>CAPOT PROTECT. 2IEME MEULE      | CABLE<br>PNEUMATIC VALVE<br>PROTECTION CAP 2ND WHEEL   | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W741                     | /111.5                            | KABEL<br>PNEUMATIKVENTIL<br>SCHUTZKAPPE INNENSCHLEIBE | CABLE<br>SOUPAPE PNEUMATIQUE<br>CAPOT PROTECT. MEULE INTERIEURE | CABLE<br>PNEUMATIC VALVE<br>PROTECTION CAP INNER WHEEL | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W742                     | /111.6                            | KABEL<br>PNEUMATIKVENTIL<br>WASSER HAUPTSCHLEIBE      | CABLE<br>SOUPAPE PNEUMATIQUE<br>EAU MEULE PRINCIPALE            | CABLE<br>PNEUMATIC VALVE<br>WATER MAIN WHEEL           | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W743                     | /111.7                            | KABEL<br>PNEUMATIKVENTIL<br>WASSER 2. SCHEIBE         | CABLE<br>SOUPAPE PNEUMATIQUE<br>EAU 2IEME MEULE                 | CABLE<br>PNEUMATIC VALVE<br>WATER 2ND WHEEL            | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W744                     | /111.8                            | KABEL<br>PNEUMATIKVENTIL<br>WASSER INNENSCHLEIBE      | CABLE<br>SOUPAPE PNEUMATIQUE<br>EAU MEULE INTERIEURE            | CABLE<br>PNEUMATIC VALVE<br>WATER INNER WHEEL          | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W745                     | /111.9                            | KABEL<br>HAUPTVENTIL<br>PNEUMATIK                     | CABLE<br>SOUPAPE PRINCIPAL<br>PNEUMATIQUE                       | CABLE<br>MAIN VALVE<br>PNEUMATIC SYSTEM                | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VBDIA-1-1-15/3m                       | 145445                               |
| W746                     | /112.1                            | KABEL<br>PNEUMATIKVENTIL<br>ENTLASTUNGEN              | CABLE<br>SOUPAPE PNEUMATIQUE<br>SUPPORTS PNEUMATIQUES           | CABLE<br>PNEUMATIC VALVE<br>AIR CUSHIONS               | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W747                     | /112.2                            | KABEL<br>PNEUMATIKVENTIL<br>KELPOS                    | CABLE<br>SOUPAPE PNEUMATIQUE<br>KELPOS                          | CABLE<br>PNEUMATIC VALVE<br>KELPOS                     | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W748                     | /112.3                            | KABEL<br>HYDRAULIKVENTIL<br>INDEXIERACHSE             | CABLE<br>SOUPAPE HYDRAULIQUE<br>AXE INDEXE                      | CABLE<br>HYDRAULIC VALVE<br>INDEXING AXIS              | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VADIA-1-3-15/5m                       | 145495                               |
| W749                     | /123.7                            | KABEL<br>PNEUMATIKVENTIL<br>MESSKOPF 1                | CABLE<br>SOUPAPE PNEUMATIQUE<br>TÊTE DE MESURE 1                | CABLE<br>PNEUMATIC VALVE<br>GAUGE HEAD 1               | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |
| W750                     | /123.8                            | KABEL<br>PNEUMATIKVENTIL<br>MESSKOPF 2                | CABLE<br>SOUPAPE PNEUMATIQUE<br>TÊTE DE MESURE 2                | CABLE<br>PNEUMATIC VALVE<br>GAUGE HEAD 2               | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | LUMBERG                              | VC1A-1-3-15/2m                        | 145494                               |

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| W751                     | /082.2                            | KABEL<br>MDI SIGNAL                                     | CABLE<br>SIGNAL MDI  | CABLE<br>MDI SIGNAL  | PANEL   | FANUC                                | A02B-0236-K813                         | 144114                               |
| W753                     | /082.7                            | SIGNALKABEL<br>I/O-LINK<br>CPU-TASTATUR                 | CABLE DE SIGNALISATION<br>I/O LINK<br>CPU-CLAVIER                          | SIGNAL CABLE<br>I/O LINK<br>CPU-KEYBOARD                   | PANEL   | FANUC                                | LX660-2007-T010/L1R003                 | 143838                               |
| W755                     | /090.3                            | KABEL<br>MPG  | CABLE<br>MPG   | CABLE<br>MPG   | PANEL   | FANUC                                | LX660-8018-T001/L500R0                 | 143839                               |
| W756                     | /090.4                            | KABEL<br>I/O-LINK<br>TASTATUR - RACK 1                  | CABLE<br>I/O LINK<br>CLAVIER - RACK 1                                      | CABLE<br>I/O LINK<br>KEYBOARD -RACK 1                      | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | FANUC                                | LX660-2007-T010/L3R003                 | 139556                               |
| W757                     | /113.1                            | KABEL<br>INITIATOR<br>STILLSTANDSÜBERWACHUNG            | CABLE<br>PREPARATEUR<br>SURVEILLANCE DE ARRET                              | CABLE<br>PROXIMITY SWITCH<br>STANDSTILL CONTROL            | WERKSTÜCKSPINDELSTOCK<br>POUPEE PORTE-PIECE<br>WORKHEAD   | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                 | 145497                               |
| W758                     | /058.7                            | SIGNALKABEL<br>KELPOS<br>MOVOMATIC                      | CABLE DE SIGNALISATION<br>KELPOS<br>MOVOMATIC                              | SIGNAL CABLE<br>KELPOS<br>MOVOMATIC                        | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | COLORFLEX XY 4x0.5mm2                  | 145467                               |
| W759                     | /049.2                            | SIGNALKABEL<br>SICHERHEITSTEUERUNG<br>EINGÄNGE          | CABLE DE SIGNALISATION<br>COMMANDE DE SECURITE<br>ENTREES                  | SIGNAL CABLE<br>SAFETY CONTROL UNIT<br>INPUTS              | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | COLORFLEX XY 21x0.5mm2                 | 145967                               |
| W760                     | /052.4                            | SIGNALKABEL<br>SICHERHEITSTEUERUNG<br>AUSGÄNGE          | CABLE DE SIGNALISATION<br>COMMANDE DE SECURITE<br>SORTIES                  | SIGNAL CABLE<br>SAFETY CONTROL UNIT<br>OUTPUTS             | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | BASIX                                | COLORFLEX XY 12x0.5mm2                 | 145468                               |
| W761                     | /113.4                            | KABEL<br>INITIATOR<br>STILLSTAND X-ACHSE                | CABLE<br>PREPARATEUR<br>POINT DE ARRET X-AXE                               | CABLE<br>PROXIMITY SWITCH<br>STANDSTILL X-AXIS             | X-ACHSE<br>AXE X<br>X-AXIS                                | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                 | 145496                               |
| W762                     | /113.6                            | KABEL<br>INITIATOR<br>STILLSTAND Z-ACHSE                | CABLE<br>PREPARATEUR<br>POINT DE ARRET Z-AXE                               | CABLE<br>PROXIMITY SWITCH<br>STANDSTILL Z-AXIS             | Z-ACHSE<br>AXE Z<br>Z-AXIS                                | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                 | 145496                               |
| W763                     | /038.2                            | NETZKABEL<br>MESSTEUERUNG<br>MOVOMATIC                  | CABLE DE RESEAU<br>AUTO-CALIBRAGE<br>MOVOMATIC                             | NET CABLE<br>IN-PROCESS GAUGE SYSTEM<br>MOVOMATIC          | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOVOMATIC                            | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145737                               |
| W764                     | /056.6                            | SIGNALKABEL<br>MESSTEUERUNG<br>MOVOMATIC ES124          | CABLE DE SIGNALISATION<br>AUTO-CALIBRAGE<br>MOVOMATIC ES124                | SIGNAL CABLE<br>IN-PROCESS GAUGE SYSTEM<br>MOVOMATIC ES124 | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOVOMATIC                            | 12555.0049                             | 144667                               |
| W765                     | /057.4                            | VERBINDUNGSKABEL<br>FRONTPLATTE<br>MESSTEUERUNG         | CABLE DE CONNEXION.<br>PLATINE AVANT<br>AUTO-CALIBRAGE                     | CONNECTION CABLE<br>FRONT PANEL<br>IN-PROCESS GAUGE SYSTEM | ES/PANEL<br>AE/PANEL<br>EC/PANEL                          | MOVOMATIC                            | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145737                               |
| W766                     | /056.3                            | MESSKOPFZWISCHENKABEL<br>PASSIVES<br>LÄNGSPOSITIONIEREN | CABLE INTERMEDIAIRE TÊTE DE MEULE<br>PASSIF<br>POSITIONNEMENT LONGITUDINAL | GAUGE HEAD CABLE<br>PASSIVE<br>FLAGGING DEVICE             | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOVOMATIC                            | 12563.0078                             | 136017                               |
| W767                     | /056.6                            | MESSKOPFZWISCHENKABEL<br>DURCHMESSER 1                  | CABLE INTERMEDIAIRE TÊTE DE MEULE<br>DIAMETRE 1                            | GAUGE HEAD CABLE<br>DIAMETER 1                             | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | MOVOMATIC                            | 12563.0078                             | 136017                               |

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| W768                     | /068.8                            | OPTISCHES KABEL<br>VERBINDUNG<br>A20 - A24           | CABLE OPTIQUE<br>CONNEXION<br>A20 - A24   | OPTICAL CABLE<br>CONNECTION<br>A20 - A24                    | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE        | FANUC                                | A02B-0236-K851                          | 143836                               |
| W769                     | /038.6                            | KABEL<br>SPEISUNG<br>SCHWENKWINKELANZEIGE            | CABLE ALIMENTATION D'AFFICHAGE<br>D'ANGLE D'ORIENTATION                             | CABLE SUPPLY-LINE<br>SWIVEL ANGLE INDICATOR                 | ES/PANEL<br>AE/PANEL<br>EC/PANEL                                 | BASIX                                | POWERFLEX XY<br>2x0.5 mm2               | 145968                               |
| W770                     | /060.2                            | KABEL<br>DREHGEBER<br>SCHWENKWINKELANZEIGE           | CABLE ENCODEUR<br>ALIMENTATION D'AFFICHAGE<br>D'ANGLE D'ORIENTATION                 | CABLE<br>ROTARY ENCODER<br>SWIVEL ANGLE INDICATOR           | WERKSTÜCKSPINDELSTOCK<br>POUPEE PORTE-PIECE<br>WORKHEAD          | HEIDENHAIN                           | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY  | 150736                               |
| W771                     | /060.5                            | KABEL VERLÄNGERUNG DREHGEBER<br>SCHWENKWINKELANZEIGE | CABLE PROLONGATION<br>ENCODEUR ALIMENTATION<br>D'AFFICHAGE D'ANGLE<br>D'ORIENTATION | EXTENSION CABLE<br>ROTARY ENCODER<br>SWIVEL ANGLE INDICATOR | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                          | HELUKABEL AG                         | SUPERTRONIC<br>-C- PUR<br>12 x 0.34 mm2 | 160178                               |
| W773                     | /062.8                            | KABEL<br>GAP-MIKROFON                                | CABLE<br>MICROPHONE GAP   | CABLE<br>GAP MICROPHONE                                     | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                        | MOVOMATIC                            | BAUGRUPPE                               | 138611                               |
| W774                     | /062.8                            | VERBINDUNGSKABEL<br>GAP-CONTROL-X75.2                | CABLE DE CONNEXION<br>GAP-CONTROL-X75.2   | CONNECTION CABLE<br>GAP-CONTROL-X75.2                       | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE        | ETAMIC S.A.                          | I2556.0026                              | 139743                               |
| W775                     | /104.8                            | KABEL<br>INITIATOR<br>INDEXIER-ACHSE                 | CABLE<br>PREPARATEUR<br>AXE INDEXE.   | CABLE<br>PROXIMITY SWITCH<br>INDEXING AXIS                  | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                        | BALLUFF AG                           | 3D11-PAF7LO-ZA8A0-PU08                  | 145520                               |
| W776                     | /039.2                            | KABEL SPEISUNG<br>AUSWUCHTGERÄT<br>ELASO EB-500M/24  | CABLE ALIMENTATION<br>APPAREIL DE EQUILIBRAGE<br>ELASO EB-500M/24                   | CABLE FEED<br>BALANCING UNIT<br>ELASO EB-500M/24            | PANEL  | BASIX                                | POWERFLEX 2x0.5mm <sup>2</sup> XY       | 145523                               |
| W777                     | /061.7                            | KABEL<br>DREHZAHLIMPULS<br>SCHLEIFSPINDEL            | CABLE<br>IMPULSION DE RÉGIME BROCHE<br>PORTE-MEULE                                  | CABLE<br>REV-COUNTER<br>GRINDING SPINDEL                    | SCHLEIFKOPF<br>TÊTE DE MEULE<br>WHEELHEAD                        | LUMBERG                              | RKMV 3-90/10M                           | 145973                               |
| W778                     | /021.2                            | LEISTUNGSKABEL<br>SERVOMOTOR<br>INDEXIERACHSE        | CABLE DE PUISSANCE<br>SERVOMOTEUR<br>AXE INDEXE                                     | POWER CABLE<br>SERVOMOTOR<br>INDEXING AXIS                  | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                          | FANUC                                | LX660-8077-T260/L5R003                  | 162045                               |
| W779                     | /021.6                            | SIGNALKABEL<br>SERVOMOTOR<br>INDEXIERACHSE           | CABLE DE SIGNALISATION<br>SERVOMOTEUR<br>AXE INDEXE                                 | SIGNAL CABLE<br>SERVOMOTOR<br>INDEXING AXIS                 | ES/MASCHINE<br>AE/MACHINE<br>EC/MACHINE                          | FANUC                                | LX660-4077-T296/L5R003                  | 162048                               |
| W781                     | /61.7                             | KABEL<br>DREHZAHL<br>AUSWUCHTGERÄT                   | CABLE<br>RÉGIME<br>DISPOSITIF D'ÉQUILIBRAGE   | CABLE<br>REVOLUTIONS OF THE<br>BALANCING UNIT               | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE        | BASIX                                | COLORFLEX XY 2x0,5 mm2                  | 145540                               |
| W783                     | /013.5                            | KABEL LUFT/WASSER-<br>WÄRMETAUSCHER<br>SCHLEIFKOPF   | CABLE AIR/EAU-<br>ECHANGEUR DE CHALEUR<br>TÊTE PORTE-MEULE                          | CABLE AIR/WATER-<br>HEAT EXCHANGER<br>WHEELHEAD             | ES/WÄRMETAUSCHER<br>AE/ECHANGEUR DE CHALEUR<br>EC/HEAT EXCHANGER | BASIX                                | MULTINORMKABEL CY<br>4x1,0 mm2          | 150650                               |
| W789                     | /095.5                            | KABEL ZUSTIMMTASTE 2                                 | CABLE TOUCHE OK 2   | CABLE OK KEY 2  | PANEL  | HELUKABEL                            | PURO-JZ-HF-CY 7x0.75mm2                 | 160888                               |
| W889                     | /064.4                            | VERBINDUNGSKABEL<br>EBG1500 - PRINT                  | CABLE DE CONNEXION<br>EBG1500 - X75.12  | CONNECTION CABLE<br>EBG1500 - X75.12                        | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE        | DISTRELEG                            | D-SUB KABEL 25 POLIG                    | 154688                               |

| Position<br>Rep.<br>Item | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung  | Désignation  | Designation of part  | Einbauort<br>Position de montage<br>Location             | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no.  | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-----------------------------------|--|--|--|--|--------------------------------------|--|--------------------------------------|
| W904                     | /039.7                            | SPEIUNGSKABEL MODEM  | CABLE D'ALIMENTATION MODEM   | POWER CABLE MODEM  | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ZYXEL                                | -----                                  | 149063                               |
| W917                     | /039.7                            | KABEL MODEM – CPU  | CABLE MODEM – CPU  | CABLE MODEM – CPU  | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | DISTRELEC                            | UNINET PATCHKABEL KAT. 5               | 146970                               |
| Y24                      | 24SOL                             | /112.3<br>HYDRAULIKVENTIL<br>INDEXIER-ACHSE<br>HEBEN                           | SOUPAPE HYDRAULIQUE<br>AXE INDEXE<br>LEVER                                   | HYDRAULIC VALVE<br>INDEXING AXIS<br>LIFT                     | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ATOS SPA                             | DHI-0631/2-X24DC                       | 145222                               |
| Y50.1                    | 50.1SOL                           | /111.6<br>PNEUMATIKVENTIL<br>WASSER HAUPTSCHLEIBE<br>ÖFFNEN                    | SOUPAPE PNEUMATIQUE<br>EAU MEULE PRINCIPALE<br>OUVRIER                       | PNEUMATIC VALVE<br>WATER MAIN WHEEL<br>OPEN                  | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 037 102                          | 145404                               |
| Y50.2                    | 50.2SOL                           | /111.7<br>PNEUMATIKVENTIL<br>WASSER 2. SCHEIBE<br>ÖFFNEN                       | SOUPAPE PNEUMATIQUE<br>EAU 2IEME MEULE<br>OUVRIER                            | PNEUMATIC VALVE<br>WATER 2ND WHEEL<br>OPEN                   | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 037 102                          | 145404                               |
| Y50.3                    | 50.3SOL                           | /111.8<br>PNEUMATIKVENTIL<br>WASSER INNENSCHLEIBE<br>ÖFFNEN                    | SOUPAPE PNEUMATIQUE<br>EAU MEULE INTERIEURE<br>OUVRIER                       | PNEUMATIC VALVE<br>WATER INNER WHEEL<br>OPEN                 | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 037 102                          | 145404                               |
| Y51                      | 51SOL                             | /111.9<br>HAUPTVENTIL<br>PNEUMATIK   | SOUPAPE PRINCIPAL<br>PNEUMATIQUE   | MAIN VALVE<br>PNEUMATIC SYSTEM                               | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | BAUGRUPPE<br>SOUS-ENSEMBLE<br>ASSEMBLY | 145754                               |
| Y52                      | 52SOL                             | /112.1<br>PNEUMATIKVENTIL<br>ENTLASTUNGEN<br>EIN                               | SOUPAPE PNEUMATIQUE<br>RELEVAGES<br>MARCHE                                   | PNEUMATIC VALVE<br>AIR CUSHIONS<br>ON                        | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 037 102                          | 145404                               |
| Y54                      | 54SOL                             | /111.3<br>PNEUMATIKVENTIL<br>SCHLEIFSCHEIBENSCHUTZ<br>HAUPTSCHLEIBE SCHLIESSEN | SOUPAPE PNEUMATIQUE<br>CAPOT DE PROTECT. DE MEULE<br>FERMER MEULE PRINCIPALE | PNEUMATIC VALVE<br>GRINDING WHEEL GUARD<br>CLOSE MAIN WHEEL  | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 038 126                          | 145403                               |
| Y55                      | 55SOL                             | /111.4<br>PNEUMATIKVENTIL<br>SCHLEIFSCHEIBENSCHUTZ<br>2. SCHEIBE SCHLIESSEN    | SOUPAPE PNEUMATIQUE<br>CAPOT DE PROTECT. DE MEULE<br>FERMETURE 2IEME MEULE   | PNEUMATIC VALVE<br>GRINDING WHEEL GUARD<br>CLOSE 2ND WHEEL   | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 038 126                          | 145403                               |
| Y56                      | 56SOL                             | /111.5<br>PNEUMATIKVENTIL<br>SCHLEIFSCHEIBENSCHUTZ<br>INNENSCHLEIBE SCHLIESSEN | SOUPAPE PNEUMATIQUE<br>CAPOT DE PROTECT. DE MEULE<br>FERMER MEULE INTERIEURE | PNEUMATIC VALVE<br>GRINDING WHEEL GUARD<br>CLOSE INNER WHEEL | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 038 126                          | 145403                               |
| Y57.2                    | 57.2SOL                           | /112.2<br>PNEUMATIKVENTIL<br>KELPOS IN<br>MESSPOSITION                         | SOUPAPE PNEUMATIQUE<br>KELPOS IN<br>POSITION DE MESURE                       | PNEUMATIC VALVE<br>KELPOS IN<br>MEASURING POSITION           | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0 820 038 126                          | 145403                               |
| Y60.1                    | 60.1SOL                           | /111.2<br>PNEUMATIKVENTIL<br>PINOLE SPANNEN                                    | SOUPAPE PNEUMATIQUE<br>TENDRE LE FOURREAU                                    | PNEUMATIC VALVE<br>SLEEVE TIGHTEN                            | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0820 039 116                           | 145405                               |
| Y60                      | 60SOL                             | /111.1<br>PNEUMATIKVENTIL<br>PINOLE ENTSPANNEN                                 | SOUPAPE PNEUMATIQUE<br>DETENDRE LE FOURREAU                                  | PNEUMATIC VALVE<br>SLEEVE RELEASE                            | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0820 039 116                           | 145405                               |
| Y77                      | 77SOC                             | /123.7<br>PNEUMATIKVENTIL<br>MESSKOPF 1 IN<br>MESSPOSITION                     | SOUPAPE PNEUMATIQUE<br>TÊTE DE MESURE 1 IN<br>POSITION DE MESURE             | PNEUMATIC VALVE<br>GAUGE HEAD 1 IN<br>MEASURING POSITION     | ELEKTROSTRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0820 038 126                           | 145403                               |

| Position<br>Rep.<br>Item |       | Blatt Nr.<br>Page no.<br>Page no. | Bezeichnung                                      | Désignation  | Designation of part                                      | Einbauort<br>Position de montage<br>Location              | Lieferant<br>Fournisseur<br>Supplier | Bestell-Nr.<br>Référence<br>Order no. | Ident.-Nr.<br>No. d'ident.<br>ID-no. |
|--------------------------|-------|-----------------------------------|--|--|--|---|--------------------------------------|---------------------------------------|--------------------------------------|
| Y79                      | 79SOC | /123.8                            | PNEUMATIKVENTIL<br>MESSKOPF 2 IN<br>MESSPOSITION | SOUPAPE PNEUMATIQUE<br>TÊTE DE MESURE 2 IN<br>POSITION DE MESURE | PNEUMATIC VALVE<br>GAUGE HEAD 2 IN<br>MEASURING POSITION | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | ROBERT BOSCH AG                      | 0820 038 126                          | 145403                               |
| Y92                      | 92SOL | /114.3                            | TÜRVERRIEGELUNG                                  | VERROUILLAGE DE LA PORTE   | DOOR LOCKING DEVICE                                      | MASCHINE<br>MACHINE<br>MACHINE                            | SCHMERSAL                            | AZM 170-02ZRK/24VDC                   | 142503                               |
| Z0                       | 0FIL  | /006.7                            | NETZFILTER<br>30A                                | PARASURTENSEUR<br>30A  | LINE FILTER<br>SURGE PROTECTOR<br>30A                    | ELEKTROSCHRANK<br>ARMOIRE ELECTRIQUE<br>ELECTRICS CUBICLE | SCHAFFNER ALTRAC                     | FN258-30/33                           | 133627                               |