



Technology for Vacuum Systems

CHEMISTRY PUMPS CHEMISTRY PUMPING UNITS



Type: ME 16C NT, ME 16C NT + EK
ME 16C NT VARIO, PC 3016 NT VARIO
MD 12C NT, MD 12C NT + EK, MD 12C NT + AK + EK
MD 12C NT VARIO, PC 3012 NT VARIO
MV 10C NT, MV 10C NT + EK
MV 10C NT VARIO, PC 3010 NT VARIO

Instructions for repair

EN

**Original instructions
Keep for future use!**

This manual is only to be used and distributed in its complete and original form. It is strictly the users' responsibility to check carefully the validity of this manual with respect to his product.

Manufacturer:
VACUUBRAND GMBH + CO KG
Alfred-Zippe-Str. 4
97877 Wertheim
GERMANY

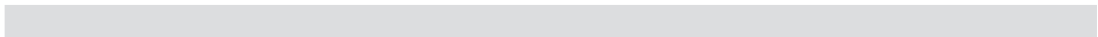
Phone:

- Head office +49 9342 808-0
- Sales +49 9342 808-5550
- Service +49 9342 808-5660

Fax: +49 9342 808-5555
E-Mail: info@vacuubrand.com
Web: www.vacuubrand.com

CONTENT

1	Introduction	5
1.1	User information	5
1.2	About this document.	6
1.2.1	Symbols and icons	6
1.2.2	Display conventions	7
2	Safety instructions	8
2.1	Target groups	8
2.2	Safety precautions	8
2.2.1	Personal responsibility	9
2.2.2	Eliminate sources of danger	9
2.3	Environmental protection	10
3	Notes concerning repair	11
3.1	Typical lifetime	11
3.2	Prior to maintenance and repair	12
3.3	After maintenance and repair	12
3.4	Replacing diaphragms and valves	13
4	Exploded drawings	14
5	Spare parts list	27
6	Service	35
6.1	Terms of service	35
6.2	Service requests	36
6.3	Return	36
7	Health and safety clearance form	37



1 Introduction

Make yourself familiar with the device.

Use this manual as reference for the repair of your device.

1.1 User information

Safety

Instructions for use
and safety

- Read this manual thoroughly and completely before starting repair. Keep this manual in an easily accessible location.
- Observe all safety instructions provided also in the instructions for use of the device and in the document "Safety instructions for vacuum equipment"! The document "Safety information for vacuum equipment - Sicherheitshinweise für Vakuumgeräte" is part of the instructions for use!
- In addition to this manual, adhere to any relevant local accident prevention regulations and comply with industrial safety regulations.

General

General
information

- The illustrations in this manual are provided as examples. They are intended to aid in your understanding.
- **VACUUBRAND GMBH + CO KG** reserves the right to modify or change the product design and/or technical specifications at any time without advanced notice.

Copyright

Copyright ©

The content of these instructions is protected by copyright. Only copies for internal use are allowed, e. g., for professional training.

© **VACUUBRAND GMBH + CO KG**

Contact

Contact us

- Please ask for replacement in case of incomplete instructions for use. Alternatively, you can download instructions for use on our web page: www.vacuubrand.com.
- Contact us regarding any questions about this product, if you need further information, or to provide us with feedback.
- When contacting our Customer Service Department, please be sure to have the data from the rating plate.

1.2 About this document

1.2.1 Symbols and icons

Safety symbols



Warning symbol.



Attention!

Observe precautions for handling electrostatic sensitive devices.

Additional icons



Refers to content of other documents.

Convention for additional notes

Additional notes

IMPORTANT! Information or specific use recommendation, which must be observed.






- ⇒ Helpful tips
- ⇒ Additional information

1.2.2 Display conventions

Warning levels

Convention for warnings

	DANGER
	<p>Indicates an imminent hazardous situation. Disregarding the situation will result in serious and even fatal injury or death. ⇒ Take appropriate action to avoid dangerous situation!</p>
	WARNING
	<p>Indicates a potentially hazardous situation. Disregarding the situation could result in serious, even fatal injury or massive damage to property. ⇒ Observe instruction to avoid dangerous situation!</p>
	CAUTION
	<p>Indicates a potentially hazardous situation. Disregarding the situation could result in slight or minor injury or damage to property. ⇒ Observe instruction to avoid dangerous situation!</p>

Individual step (single step)

Design of steps

⇒ Do the described step.

Result of action.

Multiple steps

Graphic

1. First step,
2. next step.

Result of action.

Follow steps in the described order.

2 Safety instructions

All safety instructions must be observed by all individuals working with the products described here.

Maintenance and repair are intended to ensure the functional condition or the return to function in the event of a failure.

Repair includes troubleshooting and remedy.

2.1 Target groups

Qualified personnel

Maintenance and repair may only be carried out by suitable qualified personnel.

The qualified personnel has to carry out the necessary work in accordance with the statutory requirements (e.g., safety at work, environmental protection).

The function and safety of the device must not be impaired.

The qualified personnel must be adequately informed of the risk involved in their intervention.

The qualified personnel must be adequately informed of potentially hazardous substances in the device.

2.2 Safety precautions

Quality standards and safety

Products of **VACUUBRAND GMBH + CO KG** are subject to high quality tests with goals for safety and operation. Prior to delivery each product has been tested thoroughly.

Nevertheless, during operation unforeseen dangerous situations may occur which may lead to injuries or damage of property.

Therefore observe the following chapter and take the appropriate safety precautions.

2.2.1 Personal responsibility

Qualification and
personal
responsibility

Ensure that only authorized and skilled personnel works with the equipment. This is particularly important with regard to troubleshooting and remedy.

- ⇒ Carefully read these instructions for repair before starting work.
- ⇒ Replace wear parts regularly.
- ⇒ Never operate a defective or damaged device.
- ⇒ Personal safety has top priority!
- ⇒ Always be conscious of safety.
- ⇒ Observe the owners' directives at work, the national accident prevention regulations and occupational safety provisions.

2.2.2 Eliminate sources of danger

Use only in proper
working condition

Only use the vacuum system when it is in proper working condition.

- ⇒ Carry out maintenance and repair outside the hazardous area, i.e., outside potential explosive atmospheres.

Safe work

The owner must determine additional protective measures to ensure safe personal protection if work has to carry out inside a hazardous area.

- ⇒ Observe the operating instructions of the owner.
- ⇒ Switch off the device prior to maintenance and repair.
- ⇒ Secure the device against restarting.

Dangerous voltage

Parts may carry dangerous voltages for some minutes even when the device is switched off.

To avoid fatal injuries to not carry out any work during this period.

- ⇒ Mark activities at the device appropriately, e. g. using a instruction plate. Ensure that the instruction plate is available also during temporary interruption.
- ⇒ Afterwards restore the protective equipment immediately, if you have deactivated safety functions and protective equipment due to maintenance or repair work.

- ⇒ Replace defective components by new components with the same order number or by equivalent components.
- ⇒ Prevent the entry of liquids or dust in the device.

Health hazards

The device may be contaminated with substances dangerous to health or otherwise dangerous substances.

Decontaminate or clean the device prior to maintenance or repair, if necessary.

Observe safety and protective measures when working with hazardous substances.

Ask regularly for actual material safety data sheets.

Observe the owners' hazardous substances operating instructions.

Wear your personal protective equipment.

2.3 Environmental protection

Observe environmental regulation

Observe the national and international environmental regulations for disposal of your product as well as spare parts. This is especially valid for all components that are contaminated with hazardous substances.

Dispose of chemicals, e. g., cleaning agent, according to regulations.

Scrapping and waste disposal

Proper disposal

As a result of increased environmental awareness and more stringent general requirements imposed by environmental legislation a proper scrapping and disposal of no longer usable or non-reparable equipment is required.


You may authorize us to dispose the equipment at your expense.


3 Notes concerning repair


IMPORTANT! Replace defective parts in any case.

3.1 Typical lifetime

Part	Operating hours
Diaphragm	15000
Valve	15000
Motor capacitor	10000 - 40000
Motor bearing	40000

	WARNING
	<p>Risk of injury due to a disassembled device. Operating a disassembled device may lead to personal injury.</p> <ul style="list-style-type: none"> ⇒ Never operated a opened or disassembled device. ⇒ Ensure that a disassembled device never starts unintentionally.

	WARNING
	<p>Damage due to an overaged motor capacitor. If an old motor capacitor fails, the capacitor may get hot. It may even melt or emit a flame,</p> <ul style="list-style-type: none"> ⇒ Check every capacitor regularly by measuring its capacity and estimating its operation time. Exchange old capacitors early enough to prevent a failure. ⇒ The capacitors have to be replaced by a qualified electrician.

	CAUTION
	<p>Damage due to defective wear parts. Defective wear parts may lead to failure of the device.</p> <ul style="list-style-type: none"> ⇒ Wear parts have to be replaced in time.

3.2 Prior to maintenance and repair

Preparation

Genuine spare parts

⇒ Use only genuine spare parts and accessories.

When using components of other manufacturers the safety and performance of the equipment as well as the electromagnetic compatibility of the equipment might be reduced.

Possibly the CE mark or the C/US conformity (see rating plate) becomes void if not using genuine spare parts.

- ⇒ Check that the required tools and parts are available and of the correct type before you start your work.
- ⇒ Check the operating sequence mentally using exploded view drawings, spare parts lists and circuit diagram on feasibility, safety requirements and consequences on safety and function of the equipment.
- ⇒ Vent the device.
- ⇒ Allow the device to cool down.
- ⇒ Separate the device from mains prior to maintenance or repair. Switch off the device and unplug.
- ⇒ Allow the capacitors to discharge.
- ⇒ Connect the person in charge to ground prior to any contact with electronic components to avoid damage from electrostatic discharges (ESD).

Separate from mains



3.3 After maintenance and repair

Testing

Testing

Check operability and safety after maintenance and repair.

- ⇒ Check the electrical safety according to IEC 61010 and national regulations after maintenance and repair.
- ⇒ Check the ultimate vacuum of the pump after maintenance and repair.

3.4 Replacing diaphragms and valves



Inspection and maintenance of the pump heads and replacement of diaphragms and valves is described in the instructions for use of the device.

Please ask for replacement in case of missing instructions for use. Alternatively, you can download instructions for use on our web page: www.vacuubrand.com.

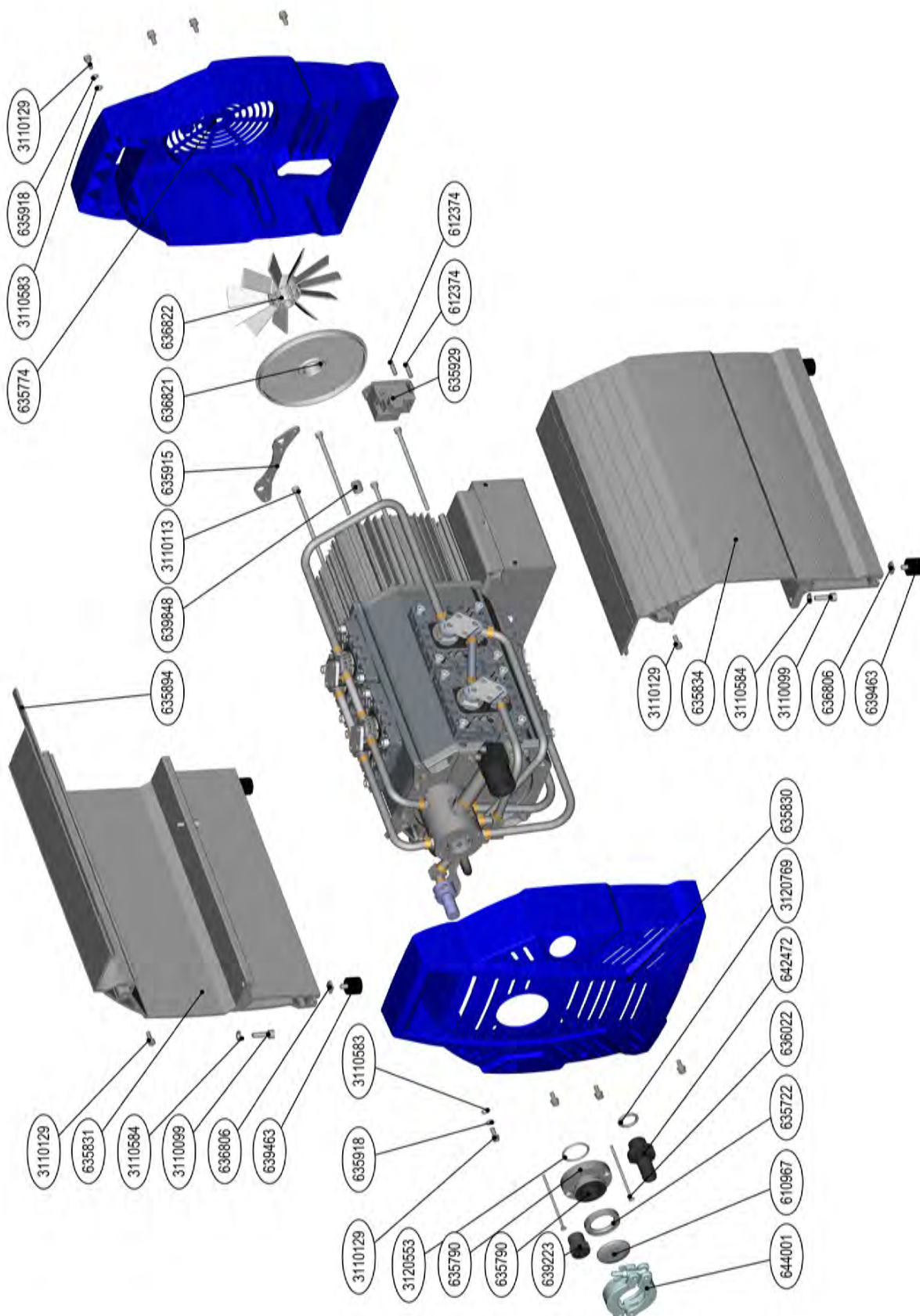


In case of problems return the device to the factory for inspection or repair if necessary.

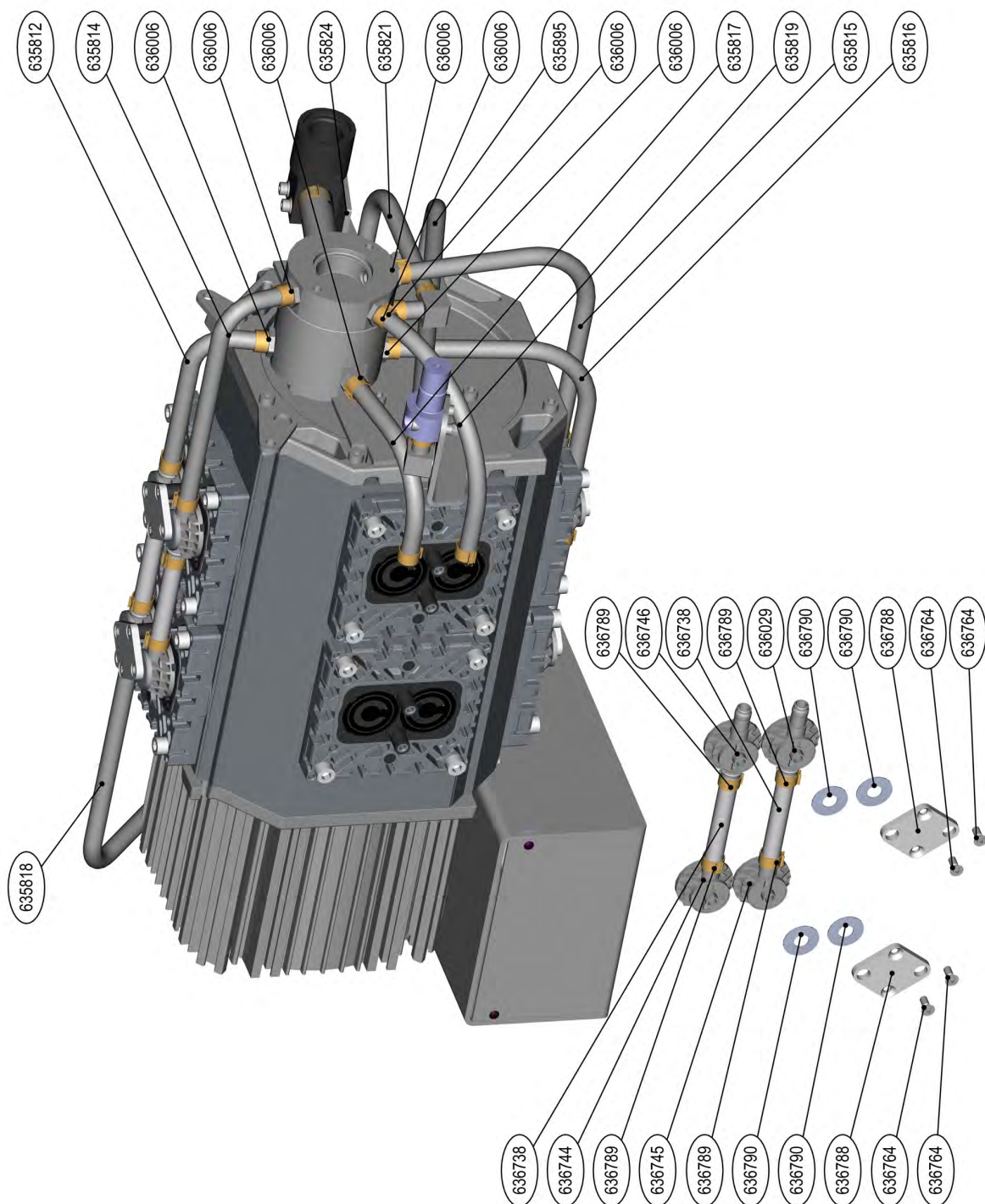
⇒ Observe section „Return“.

4 Exploded drawings

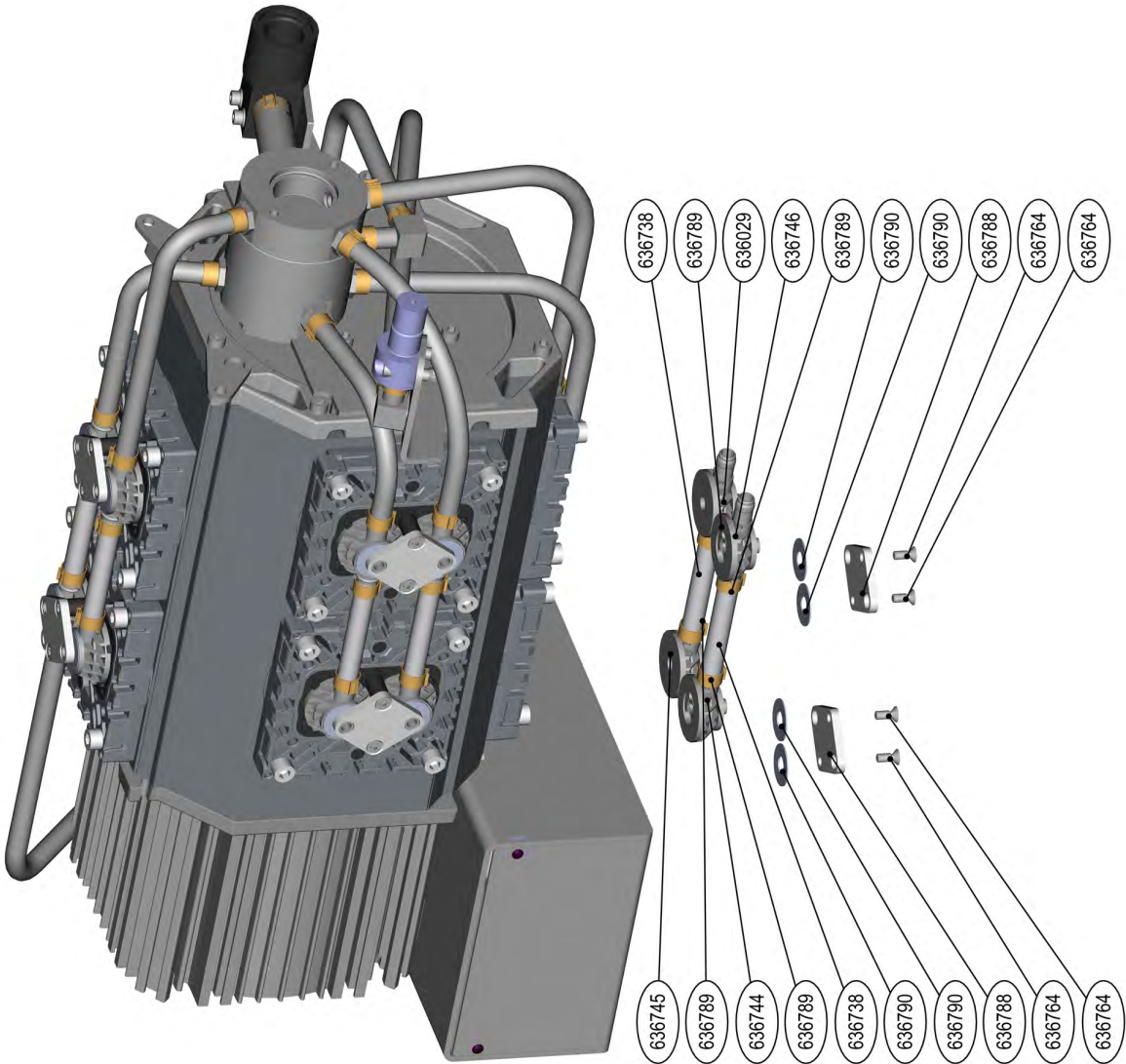
Spare parts for all types



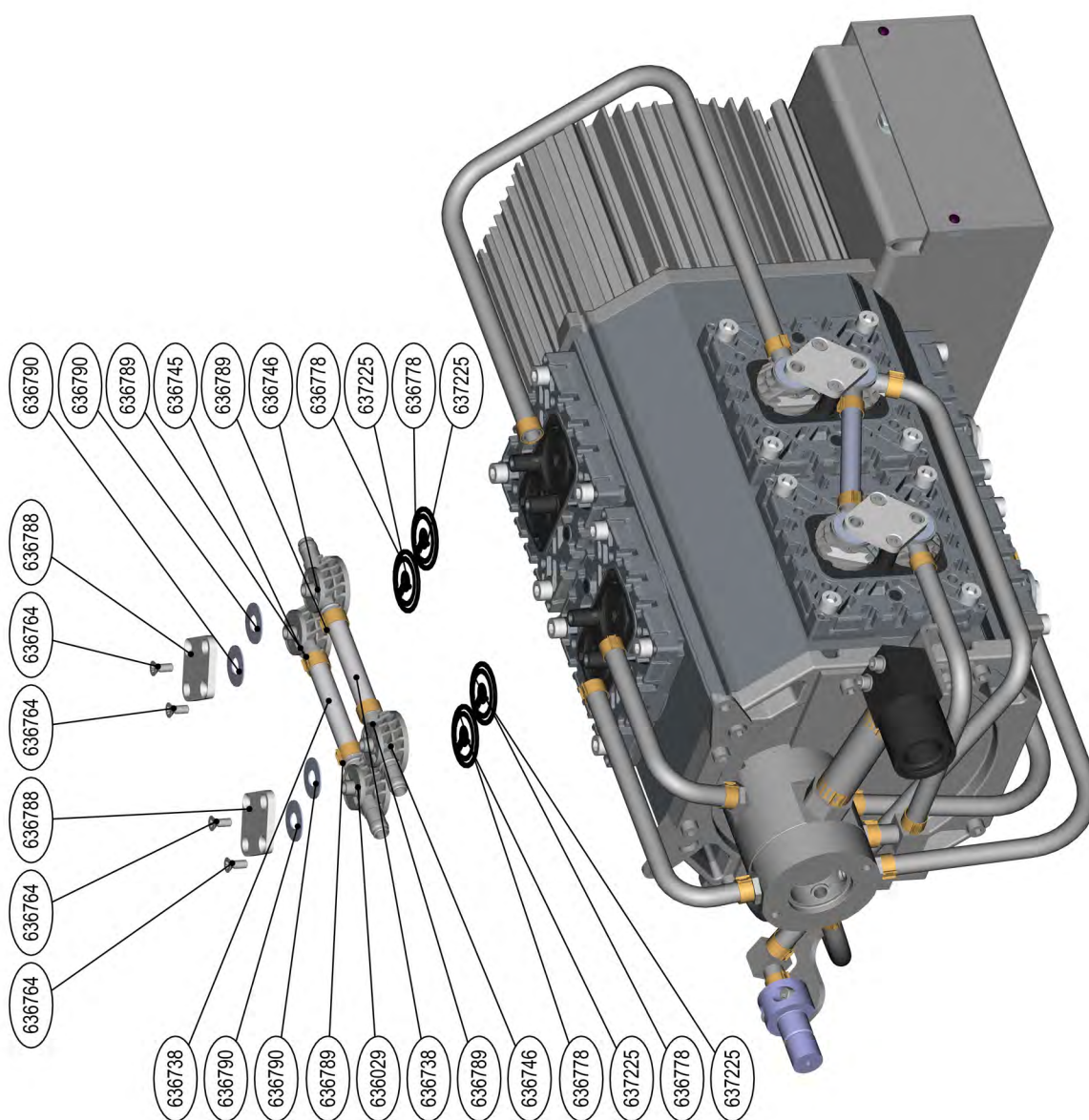
**Spare parts for MD 12 C NT / VARIO, MV 10C
NT / VARIO, PC 3010 / 3012 NT VARIO**



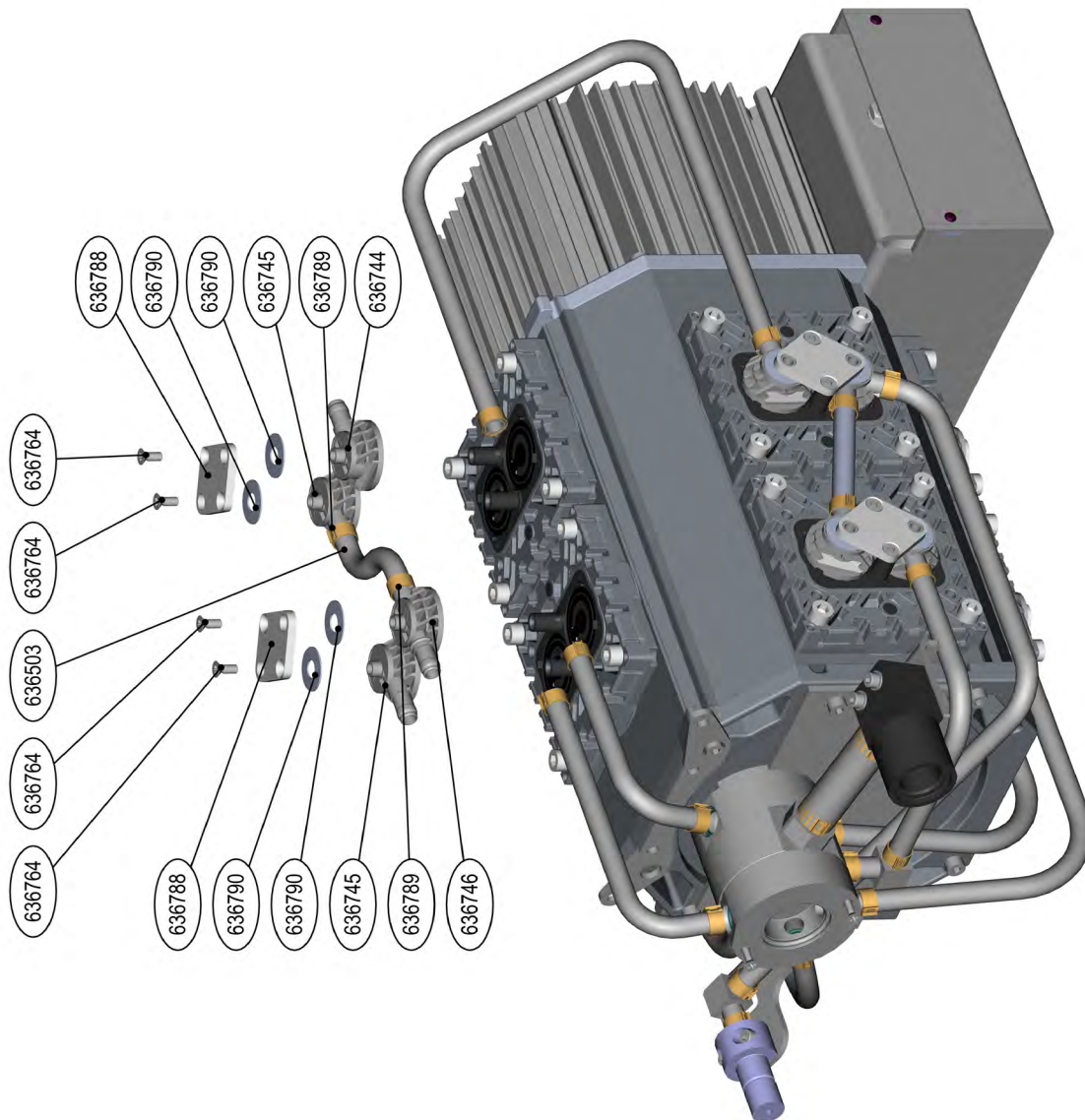
Spare parts for MD 12 C NT / VARIO, MV 10C
NT / VARIO, PC 3010 / 3012 NT VARIO



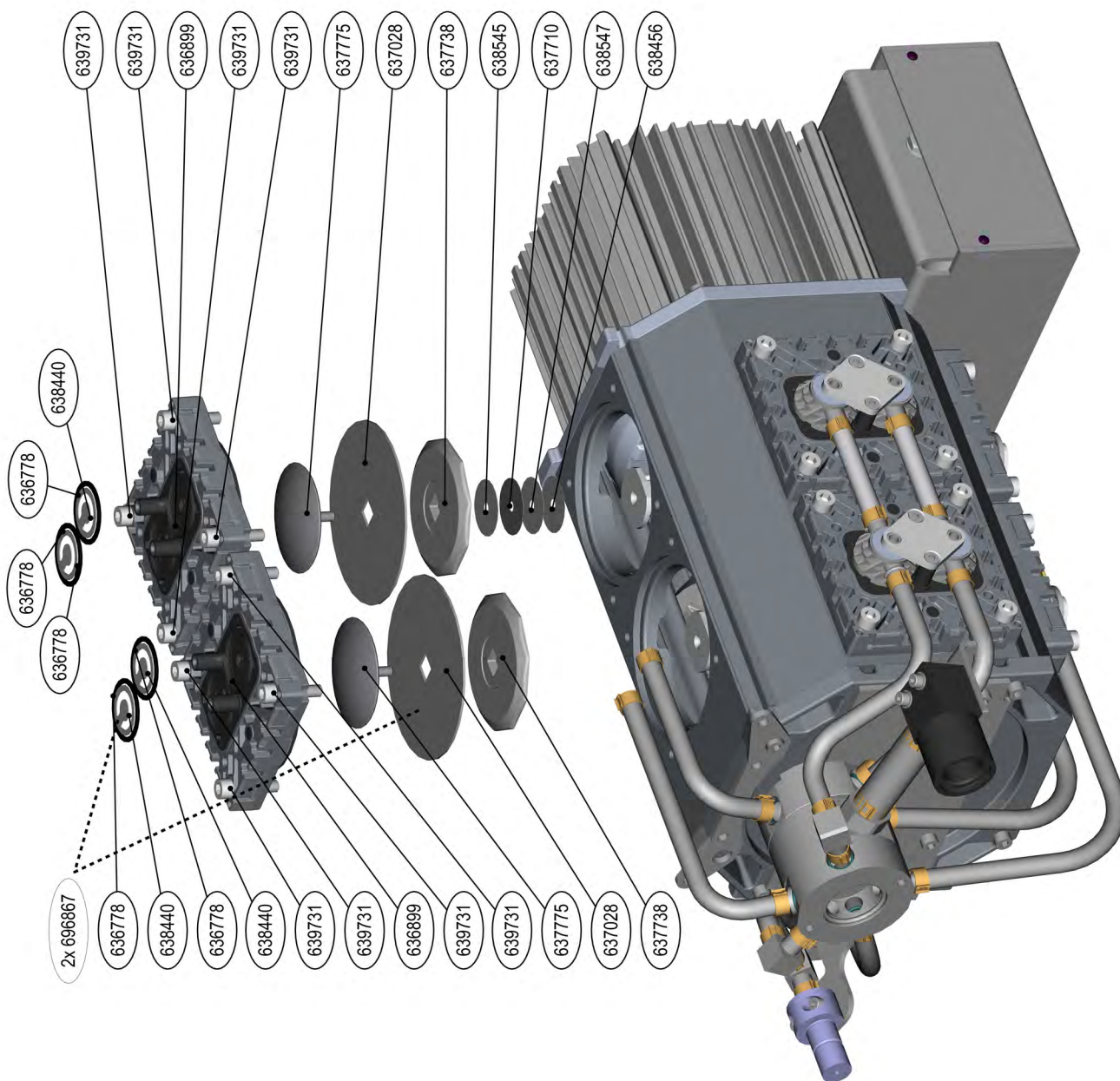
Spare parts for MD 12 C NT / VARIO, PC 3012 NT VARIO



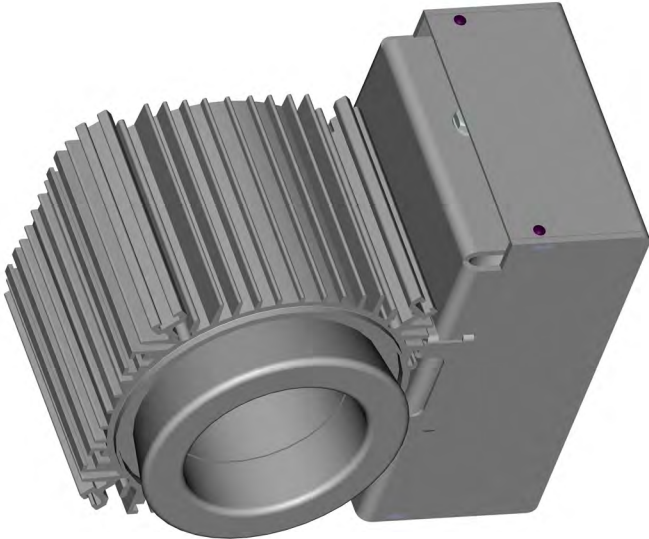
Spare parts for MV 10C NT / VARIO, PC 3010 NT VARIO



Spare parts for ME 16C NT / VARIO, PC 3016 NT VARIO



Spare parts for all types



636015 / 120 V

635844 / 230 V

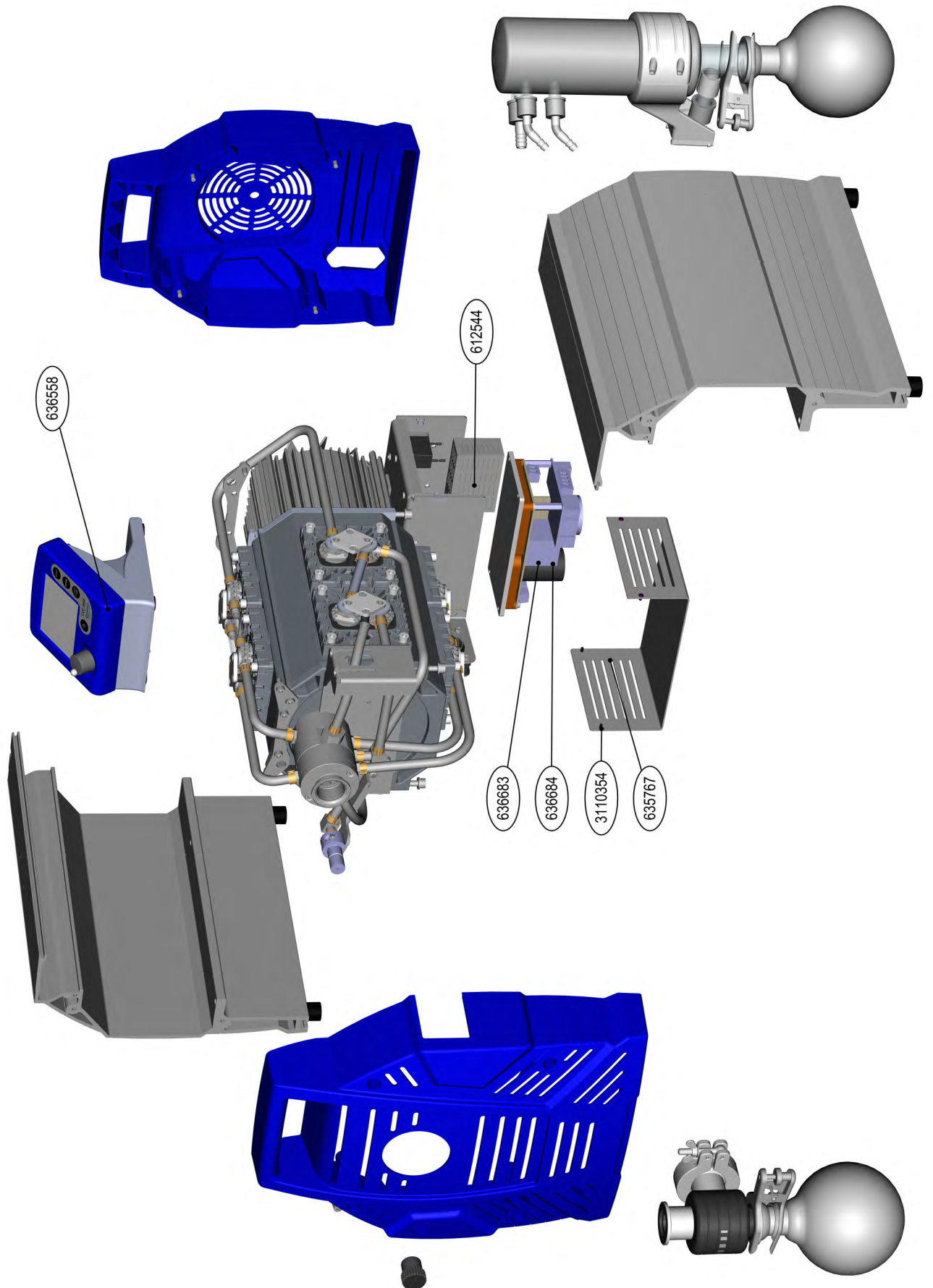
635892 / 120 V / VARIO

635893 / 230 V / VARIO

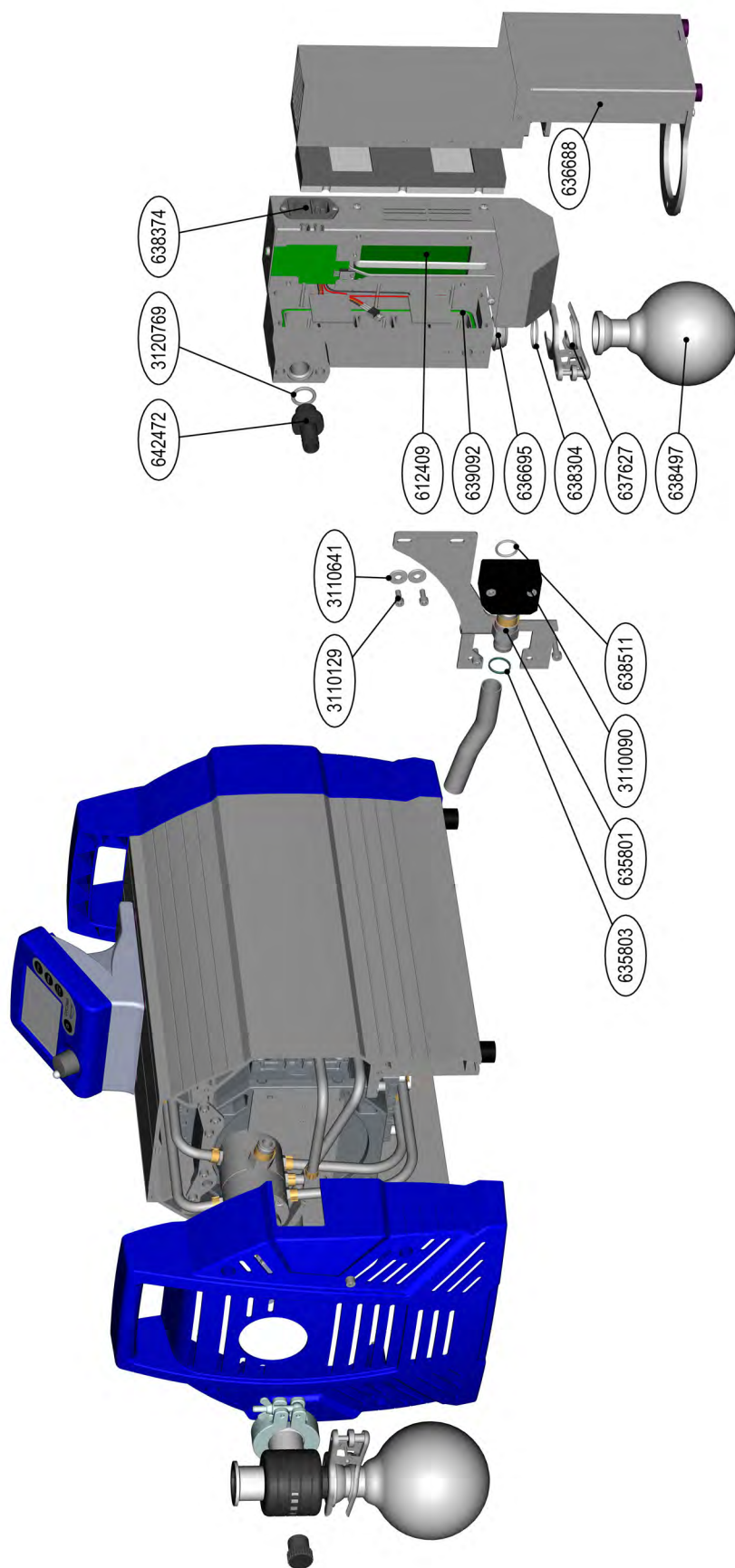


635964

Spare parts for VARIO pumps



Spare parts for pumps with emission condenser Peltronic



5 Spare parts list

	Bezeichnung	Designation	Désignation
610967	Blindflansch, PE, KF DN 20	Blind flange, PE, KF DN 20	Obturateur, PE, KF DN 20
610998	Schutzkappe DN 20/25	Protective cap DN 20/25	Couvercle protecteur DN 20/25
612091	Drehknopf	Selection knob	Bouton de navigation
612374	Sicherung 5x20 8AT	Fuse 5x20 8AT	Fusible 5x20 8AT
612409	Netzteil 130W 24V DC	Power supply 130W 24V DC	Chargeur 130W 24V DC
612544	Netzteil 25W 24V DC	Power supply 25W 24V DC	Chargeur 25W 24V DC
635722	Zentrierung KF DN 20/25C	Centring ring KF DN 20/25C	Bague de centrage KF DN 20/25C
635758	Schlauch, gerade, PTFE, 10/8 mm	Hose, straight, PTFE, 10/8 mm	Tuyau plan, PTFE, 10/8 mm
635767	Abdeckung für Frequenzumrichter	Cover for frequency converter	Carter de protection pour convertisseur de fréquence
635774	Verkleidung Lüfterseite für 8-Zylinder-NT-Pumpen	Casing for fan side for eight-cylinder NT pumps	Revêtement côté ventilateur pour pompe à membrane NT 8 têtes
635782	Verteilerträgerplatte	Distributor support plate	Plaque de support de distributeur
635783	Anschluss, gewinkelt	Adapter, angulated	Adaptateur, angulaire
635784	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635785	Halteblech EK	Holder EK	Console EK
635786	Stützring	Supporting ring	Anneau de support
635787	Halteblech Gasballast	Holder gas ballast	Tôle de fixation pour lest d'air
635790	Verteilerkleinflansch KF DN 25 NT	Distributor small flange KF DN 25 NT	Petite bride KF DN 25 de distributeur NT
635791	Verteilerkleinflansch KF DN 25	Distributor small flange KF DN 25	Petite bride KF DN 25 de distributeur
635796	Druckverteiler für MD/MV C NT	Pressure distributor for MD/MV C NT	Distributeur de pression pour MD/MV C NT
635797	Saug-/Druckverteiler MD/MV C NT	Inlet/outlet side gas distributor ME 16C NT	Distributeur d'aspiration/de refoulement ME 16C NT
635798	Druckverteiler ME 16C NT	Pressure distributor ME 16C NT	Distributeur de pression ME 16C NT
635800	Saugverteiler ME 16C NT	Inlet side gas distributor ME 16C NT	Distributeur d'aspiration ME 16C NT
635801	Schlauchwelle DN 18/16mm	Hose nozzle DN 18/16mm	Embout cannelé DN 16/18mm
635802	Gasballastrohr	Gas ballast tube	Tuyau de la vanne de lest d'air
635803	O-Ring, 17mm x 1,5mm, FPM	O-ring, 17mm x 1.5mm, FPM	Joint torique, 17mm x 1,5mm, FPM

635804	Deckplatte für Abscheider	Cover plate for catchpots	Plaque de recouvrement pour séparateur
635805	Einschraubflansch, PP, KF DN 25/G 1/2	Screw-in flange, PP, KF DN 25/G 1/2	Petite bride à filetage intérieur, PP, KF DN 25/G 1/2
635806	Clip	Clip	Clip de fixation
635812	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635813	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635814	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635815	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635816	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635817	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635818	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635819	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635820	Schlauch, geformt, PTFE, 10/8 mm	Formed hose, PTFE, 10/8 mm	Tuyau modelé, PTFE, 10/8 mm
635821	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635822	Halblech Lüfter	Holder fan	Console ventilateur
635824	Halblech Schlauchwelle	Retaining plate for hose nozzle	Tôle de fixation pour embout cannelé
635824	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635830	Verkleidung Einlassseite für 8-Zylinder-NT-Pumpen (Chemie-Version ohne EK)	Casing inlet side for eight-cylinder NT pumps (chemistry design w/o EK)	Revêtement avant pour pompe à membrane NT 8 têtes (version chimie sans EK)
635831	Abdeckung links	Cover left	Couvercle à gauche
635833	Verkleidung Einlassseite für 8-Zylinder-NT-Pumpen (Pumpstand-Version)	Casing inlet side for eight-cylinder NT pumps (version pumping units)	Revêtement avant pour pompe à membrane NT 8 têtes (version groupe de pompage)
635834	Abdeckung rechts	Cover right	Couvercle à droite
635835	Schlauchschelle 17,0mm	Hose clip 17.0mm	Collier de serrage 17,0mm
635844	Stator mit Elektronik 230V	Stator with electronics 230V	Stator avec électronique 120V
635887	Abdeckung für Elektronik	Cover for electronics	Carter de protection pour électronique
635892	Stator mit Frequenzrichter 120V	Stator with frequency converter 120V	Stator avec convertisseur de fréquence 120V

	Stator mit Frequenzumrichter 230V	Stator with frequency converter 230V	Stator avec convertisseur de fréquence 230V
635893	Leiste	Strip	Liston
635894	Schlauchbogen, PTFE, 10/8 mm	Bent hose, PTFE, 10/8 mm	Tuyau coudé, PTFE, 10/8 mm
635915	Halblech	Holder	Console
635916	Kondensator 20µF / 450V	Capacitor 20µF / 450V	Condensateur 20µF / 450V
635918	Tellerfeder für NT-Membranpumpen	Disc spring for NT diaphragm pumps	Rondelles-ressort pour pompe à membrane NT
635929	Stecker KG mit Sicherung 8A	Plug IEC with fuse 8A	Fiche mâle IEC avec fusible 8A
635935	Kondensator 8µF / 330V	Capacitor 8µF / 330V	Condensateur 8µF / 330V
635936	Kondensator 50µF / 250V	Capacitor 50µF / 250V	Condensateur 50µF / 250V
635940	Distanzring	Distance ring	Bague entretoise
635959	Distanzhülse	Distance sleeve	Douille entretoise
635964	Rumpfpumpe für 8-zyl. Membranpumpe NT	Basic pump for 8 cyl. diaphragm pump NT	Pompe nue pour pompe à membrane à 8 têtes NT
636006	Schlauchwelle DN 10/8mm	Hose nozzle DN 10/8mm	Embout cannelé DN 10/8mm
636015	Stator mit Elektronik 120V	Stator with electronics 120V	Stator avec électronique 230V
636022	Senkschraube M4x80mm, Edelstahl	Countersunk screw M4x80mm, stainless steel	Vis à tête fraisée M4x80mm, inox
636029	Ventilinsel Einlass 2-fach 180°	Valve head IN, double, 180°	Tête de clapet, double, IN 180°
636047	Distanzhülse	Distance sleeve	Douille entretoise
636098	Zylinderstift 4x10mm	Cylindrical pin 4x10mm	Goupille cylindrique 4x10mm
636348	Wellenfeder 17x22x20,25	Wave spring 17x22x20.25	Ressort ondulé 17x22x20,25
636468	Schlauchwelle DN 8mm, 90°, mit Rohransatz 10/8mm	Hose nozzle DN 8mm, 90°, with tube 10/8mm	Embout cannelé DN 8mm, 90°, 10/8mm
636503	Schlauch, geformt, PTFE, 10/8 mm	Formed hose, PTFE, 10/8 mm	Tuyau modelé, PTFE, 10/8 mm
636533	Schlauch, gerade, PTFE, 10/8 mm	Hose, straight, PTFE, 10/8 mm	Tuyau plan, PTFE, 10/8 mm
636546	Gegenhalter für EK 500 kompakt	Clamp for EK 500 compact	Contre-support pour EK 500 compact
636547	Halterung für EK 500 kompakt	Holder for EK 500 compact	Support pour EK 500 compact
636551	Isolierhülle für EK/IK 500 kompakt	Insulating cover for EK/IK 500 compact	Gaine isolante pour EK/IK 500 compact

636684	Umrichter 230 V	Frequency converter 230 V	Convertisseur 230 V
636688	Stützblech	Support plate	Tôle de support
636695	Kugelschiffanschluss, 1/4 NPT	Spherical joint connection, 1/4 NPT	Raccord à rodage sphérique, 1/4 NPT
636738	Schlauch, gerade, PTFE, 10/8 mm	Hose, straight, PTFE, 10/8 mm	Tuyau plan, PTFE, 10/8 mm
636739	Schlauch, gerade, PTFE, 10/8 mm	Hose, straight, PTFE, 10/8 mm	Tuyau plan, PTFE, 10/8 mm
636744	Ventilinsel Auslass 1-fach	Valve head EX, single	Tête de clapet, seule, EX
636745	Ventilinsel Einlass, 1-fach	Valve head IN, single	Tête de clapet, seule, IN
636746	Ventilinsel Auslass 2-fach 180°	Valve head EX, double, 180°	Tête de clapet, double, EX 180°
636747	Ventilinsel Auslass 2-fach 90°	Valve head EX, double, 90°	Tête de clapet, double, EX 90°
636762	Schraube M3x18mm, Torx	Screw M3x18mm, Torx	Vis M3x18mm, Torx
636764	Senkschraube M4x10mm, Edelstahl, Torx	Countersunk screw M4x10mm, stainless steel, Torx	Vis à tête fraisée M4x10mm, inox, Torx
636778	O-Ring, 26mm x 2mm, FPM	O-ring, 26mm x 2mm, FPM	Joint torique, 26mm x 2mm, FPM
636788	Spannpratze	Clamping plate	Griffe
636789	Schlauchschele D 10,5	Hose clamp D 10.5	Collier de serrage pour tuyau D 10,5
636790	Satz Tellerfedern für NT-Membranpumpen	Set of disc springs for NT diaphragm pumps	Lot de rondelles-ressort pour pompe à membrane NT
636791	Linsenkopfschraube M4x22mm, Torx	Round head screw M4x22mm, Torx	Vis à tête bombée M4x22mm, Torx
636792	Linsenkopfschraube M4x6mm, Edelstahl, Torx	Round head screw M4x6mm, stainless steel, Torx	Vis à tête cylindrique bombée 6 pan creux M4x6mm, inox, Torx
636792	Linsenkopfschraube M4x6mm, Edelstahl, Torx	Round head screw M4x6mm, stainless steel, Torx	Vis à tête bombée M4x6mm, inox, Torx
636805	Gewindeplatte M4	Threaded plate M4	Plaque fileté M4
636806	Gewindeplatte M6	Threaded plate M6	Plaque fileté M6
636821	Abschlussdeckel	End cover	Couvercle
636822	Lüfter	Fan	Ventilateur
636847	Toleranzring 18x10mm	Tolerance ring 18x10mm	Bague de tolérance 18x10mm

636883	Schlauchwelle DN 6/10mm, 40°, mit Rohransatz 10/8mm	Hose nozzle DN 6/10mm, 40°, with tube 10/8mm	Embout cannelé DN 6/10mm, 40°, 10/8mm
636899	Kopfdeckel NT-Chemiembranpumpe	Head cover NT chemistry diaphragm pump	Couvercle de tête pour pompe PTFE
636947	Linsenkopfschraube M4x18mm, Torx	Round head screw M4x18mm, Torx	Vis à tête bombée M4x18mm, Torx
636975	O-Ring 28 mm x 2 mm	O-ring 28 mm x 2 mm	Joint torique 28 mm x 2 mm
637028	Membrane PTFE (groß)	Diaphragm PTFE (large)	Membrane PTFE (grande)
637225	Ein- und Auslassventil D24, FFKM 0,5 (Ersatz für Best.Nr. 639714)	Inlet and outlet valve D24, FFKM 0.5 (replacement for cat.no. 639714)	Joint de clapet d'entrée et de sortie D24, FFKM 0,5 (remplace réf. 639714)
637627	Kugelschliffklemme, KS 35 / 25, VA	Joint clip, KS 35 / 25, VA	Pince pour rodages sphériques KS 35 / 25, VA
637657	Rändelmutter M14x1 für Schlauchver- schraubung DN 10/8mm, ohne Klemmung	Knurled nut M14x1mm for hose fitting DN 10/8mm, w/o locking ring	Ecrou moleté M 14x1, pour raccord pour tuyau 10/8mm, sans bague de serrage
637658	Klemmung 10mm für Rändelmutter M14x1 (637657)	Locking ring 10mm for knurled nut M14x1 (637657)	Bague de serrage D10 pour écrou moleté M 14x1 (637657)
637710	Distanzscheibe 0,4mm	Shim 0.4mm	Rondelle 0,4mm
637738	Membranzstützscheibe 8,2mm, groß	Diaphragm support disc 8.2mm, large	Disque du support de membrane 8,2mm
637757	PTFE - Schutzfolie	PTFE protection foil	PTFE ruban de film
637775	Membranzspannscheibe für Chemie-Membranpumpen, groß	Diaphragm clamping disc for chemistry diaphragm pumps, large	Disque de tension de membrane C
638304	O-Ring, 28mm x 2,5mm, FEP	O-ring, 28mm x 2.5mm, FEP	Joint torique 28mm x 2,5mm, FEP
638374	Ein-/Ausschalter mit Kaltgerätestecker, Einbau	Main switch with instrument socket	Commutateur avec prise femelle
638440	Ein- und Auslassventil D24, PTFE 0,5	Inlet and outlet valve D24, PTFE 0.5	Joint de clapet d'entrée et de sortie D24, PTFE 0,5
638456	Distanzscheibe 0,1mm	Shim 0.1mm	Rondelle 0,1mm
638497	Rundkolben 500ml mit Kugelschliff, beschichtet	Round bottom flask 500ml with spherical joint, coated	Ballon rond 500 ml, revêtu, avec raccord à rodage sphérique
638511	O-Ring, 16 mm x 2 mm, FPM	O-ring, 16 mm x 2 mm, FPM	Joint torique, 16mm x 2mm, FPM

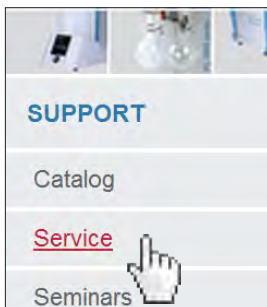
638545	Distanzscheibe 0,2mm	Shim 0.2mm	Rondelle 0,2mm
638547	Distanzscheibe 0,15mm	Shim 0.15mm	Rondelle 0,15mm
638821	Überdruckventilschlauch, Silikon	Overpressure relief valve hose, silicone	Souape de surpression, silicone
638901	Steckfuß	Plug-in rubber foot	Pied caoutchouc insérable
639092	O-Ring, 140mm x 3mm, FPM	O-ring, 140mm x 3mm, FPM	Joint torique, 140mm x 3mm, FPM
639223	Gasballastkappe	Gas ballast cap	Capuchon pour le lest d'air
639463	Gummipuffer mit Gewinde M6x8	Rubber foot with thread M6x8	Pied caoutchouc M6x8
639725	Senkschraube M4x60mm, Edelstahl	Countersunk screw M4x60mm, stainless steel	Vis à tête fraisée M4x60mm, inox
639731	Zylinderschraube M6x25mm	Filister-head screw M6x25mm	Vis à tête cylindrique M6x25mm
639848	Toleranzring 12x12mm	Tolerance ring 12x12mm	Bague de tolérance 12x12mm
639917	Schlauchwelle DN 10mm für Auslaß Emissionskondensator	Hose nozzle DN 10mm for outlet emission condenser	Embout cannelé DN 10mm (refoulement de condenseur)
639934	Dichtung PTFE/Silikon GL 18	Sealing ring PTFE/silicone GL 18	Joint PTFE/silicone GL 18
639935	Schraubverbindungskappe GL 18	Union nut GL 18	Ecrou raccord GL 18
639947	Schraubverbindungskappe GL 14	Union nut GL 14	Ecrou raccord GL 14
639948	Schlauchwelle DN 6-8mm für Kühlmittel (Emissionskondensator)	Hose nozzle DN 6-8mm for coolant (emission condenser)	Embout cannelé DN 6-8mm
640106	Kondensator 16µF / 450V	Capacitor 16µF / 450V	Condensateur 16µF / 450V
642472	Schlauchwelle DN 15mm, Gewinde G1/2	Hose nozzle DN 15mm, thread G1/2	Embout cannelé DN 15mm, G1/2
644001	Spannring, Aluminium, DN 20/25 KF	Clamping ring, aluminium, NW 20/25 KF	Collier de serrage, aluminium, DN 20/25 KF
696839	Dichtungssatz für MD 12C NT, MV 10C NT	Set of diaphragms and valves for MD 12C NT, MV 10C NT	Set de membranes et clapets pour MD 12C NT, MV 10C NT
696867	Dichtungssatz für ME 8C NT	Set of diaphragms and valves for ME 8C NT	Set de membranes et clapets pour ME 8C NT
3110079	Distanzscheibe 0,4mm	Shim 0.4mm	Rondelle 0,4mm

3110089	Zylinderschraube M5x20mm, Edelstahl	Filister-head screw M5x20mm, stainless steel	Vis à tête cylindrique M5x20mm, inox
3110090	Zylinderschraube M5x25mm, Edelstahl	Filister-head screw M5x25mm, stainless steel	Vis à tête cylindrique M5x25mm, inox
3110099	Zylinderschraube M6x20mm, Edelstahl	Filister-head screw M6x20mm, stainless steel	Vis à tête cylindrique M6x20mm, inox
3110113	Zylinderschraube M5x115mm	Filister-head screw M5x115mm	Vis à tête cylindrique M5x115mm
3110129	Zylinderschr. M5x12 A2 LF ISO 4762	Zylinderschraube M5x12mm, Edelstahl	Filister-head screw M5x12mm, stainless steel
3110354	Linsenkopfschraube M3x6mm, Edelstahl	Round head screw M3x6mm, stainless steel	Vis à tête cylindrique bombée 6 pan creux M3x6mm, inox
3110354	Linsenkopfschraube M3x6mm, Edelstahl	Round head screw M3x6mm, stainless steel	Vis à tête bombée M3x6mm, inox
3110383	Flachkopfschraube M4x8 A2	Oval head screw M4x8 A2	Vis à tête cylindrique bombée M4x8 A2
3110394	Flachkopfschraube M4x6mm, Edelstahl	Oval head screw M4x6mm, stainless steel	Vis à tête cylindrique bombée M4 x 6mm
3110583	Unterlegscheibe 5,3	Washer B 5,3 DIN 125	Rondelle B 5,3 DIN 125
3110584	Unterlegscheibe 6,4mm, Edelstahl	Washer 6.4mm, stainless steel	Rondelle 6,4mm, inox
3110641	Unterlegscheibe 6,4	Washer 6.4	Rondelle 6,4
3111271	Fächerscheibe A 4,3 vernickelt	Serrated lock washer A 4.3 plated	Rondelle éventail A 4,3 nickelée
3111274	Fächerscheibe A 3,2 verzinkt	Serrated lock washer A 3.2 galvanised	Rondelle éventail A 3,2 zinguée
3120553	O-Ring, 28mm x 2,5mm, FPM	O-ring, 28mm x 2.5mm, FPM	Joint torique, 28mm x 2,5mm, FPM
3120769	O-Ring, 18mm x 3,5mm, FPM	O-ring, 18mm x 3.5mm, FPM	Joint torique, 18mm x 3,5mm, FPM
3120788	O-Ring, 10mm x 1,5mm, FPM	O-ring, 10mm x 1.5mm, FPM	Joint torique, 10mm x 1,5mm, FPM
3126138	Zylinderschraube M4x30mm, Edelstahl	Filister-head screw M4x30mm, stainless steel	Vis à tête cylindrique M4x30mm, inox

6 Service

Service range

Take advantage of the comprehensive service range of **VACUUBRAND GMBH + CO KG**.



Service in detail

- product guidance and practical solutions,
- fast delivery of spare parts and accessories,
- professional maintenance,
- immediate repairs processing,
- service on the spot¹,
- return, disposal.

⇒ For further information visit our website
www.vacuubrand.com.

6.1 Terms of service

Service, including notification of claim, repair order, calibration, or return, always requires the same steps to be taken for smooth handling.



⇒ Reduce downtime, speed up the handling. Keep the required data and documents ready when contacting the service department.

Advantage: Your order can be quickly and easily processed. A short description or photos may help for error location.

Meet the terms of
service

Returns Process

1. Contact your local dealer or our service department².
2. Request a RMA number for your order.
3. Return your product including:
 - RMA number,
 - repair order,
 - short error description,
 - Health and safety clearance form.

¹ -> Some services are not available in all areas.

² -> Tel: +49 9342 808-5660, Fax: +49 9342 808-5555,
service@vacuubrand.com

6.2 Service requests

Contact

Service request
and service order

1. Contact your local dealer or our service department.
2. Inform us which service features you require.
3. Send us your service request providing the following information:
 - serial number and type from rating plate,
 - a short description of your request, e. g., error description for repair order, exchange etc..
 - Our service will provide you with a RMA number.
 - Clearance for return.

6.3 Return

Sending in

Send in your
product
(return)

1. Pack your product securely for transportation.
2. Mark the RMA number on the outside of the packaging.
3. Enclose the „Health and safety clearance from“, duly completed and signed by an authorized person.
4. Send in your product.

7 Health and safety clearance form

Health and safety clearance form

1. Device (Model):
2. Serial no.:
3. Reason for return / malfunction:

4. Has the device been used in a copper process step (e.g., semiconductor production): yes no

5. Substances (gases, liquids, solids, biological material, e. g. bacteria, viruses) in contact with the device / which have been pumped:

.....

.....

.....

6. Risk level of the used biological material: none 1 2* 3** 4**

* Contact the VACUUBRAND service absolutely before dispatching the device.

** Devices which have been in contact with biological substances of risk level 3 or 4 cannot be checked, maintained or repaired. Also decontaminated devices must not returned to VACUUBRAND due to a residual risk.

7. Radioactive contamination: yes no

8. Prior to return to the factory the device has been decontaminated: yes no
Description of the decontamination method and the test / verification procedure:

.....

.....

9. All parts of the device are free of hazardous, harmful substances: yes no

10. Protective measures required for service staff:

.....

11. If the paint is damaged, we wish a repaint or a replacement of parts for reason of appearance (repaint and replacement at customer's expense): yes no

12. Legally binding declaration

We assure for the returned device that all substances, which have been in contact with the device are listed in section 5 and that the information is complete and that we have not withheld any information. We declare that all measures - where applicable - have been taken listed in section "Repair - Maintenance - Return - Calibration". By our signature below, we acknowledge that we accept liability for any damage caused by providing incomplete or incorrect information and that we shall indemnify VACUUBRAND from any claims as regards damages from third parties. We are aware that as expressed in § 823 BGB (Public Law Code of Germany) we are directly liable for injuries or damages suffered by third parties, particularly VACUUBRAND employees occupied with handling/repairing the product. Shipping of the device must take place according to regulations.

Name: Signature:

Job title: Company's seal:

Date:

Release for repair grant by VACUUBRAND (date / signature):.....

Protective measures: Protective gloves, safety goggles Hood External cleaning

Manufacturer:

VACUUBRAND GMBH + CO KG
Alfred-Zippe-Str. 4
97877 Wertheim
GERMANY

Phone:

- Head office +49 9342 808-0
- Sales +49 9342 808-5550
- Service +49 9342 808-5660

Fax: +49 9342 808-5555

E-Mail: info@vacuubrand.com

Web: www.vacuubrand.com