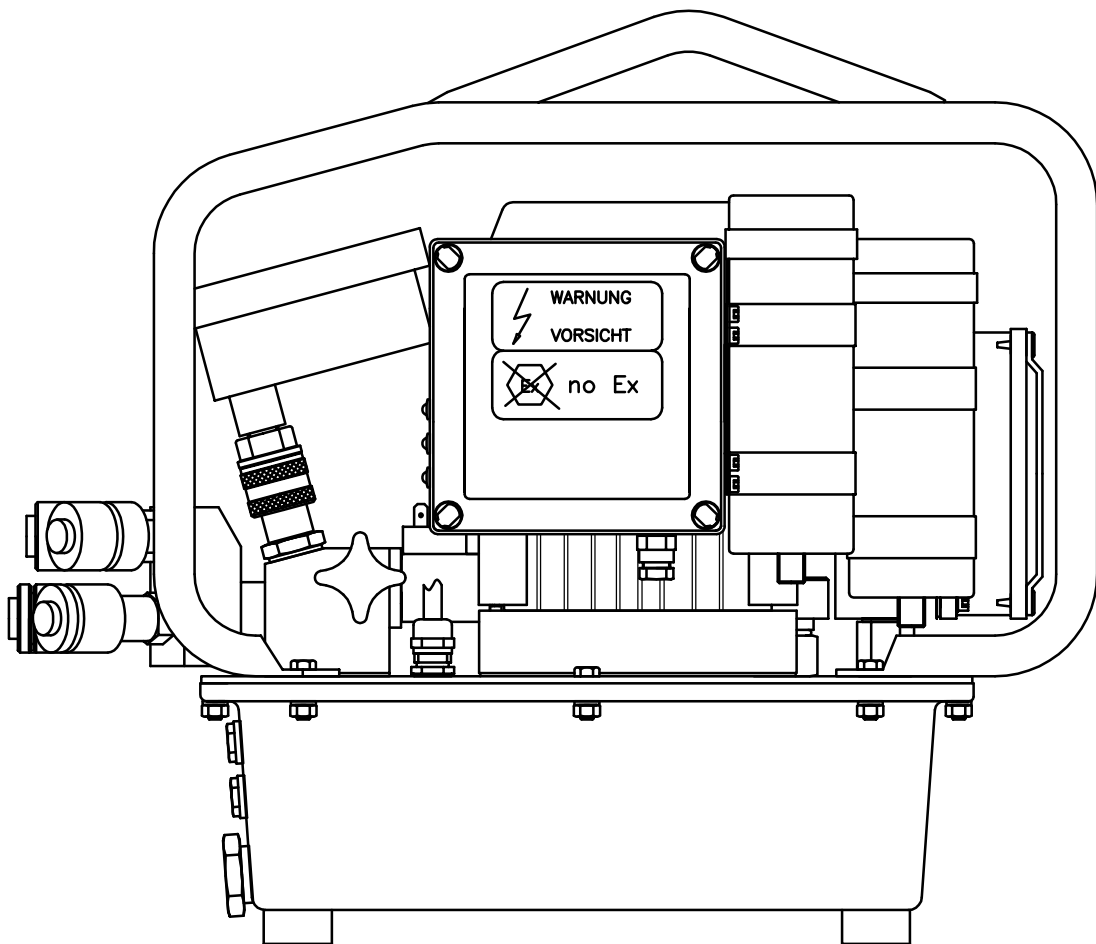


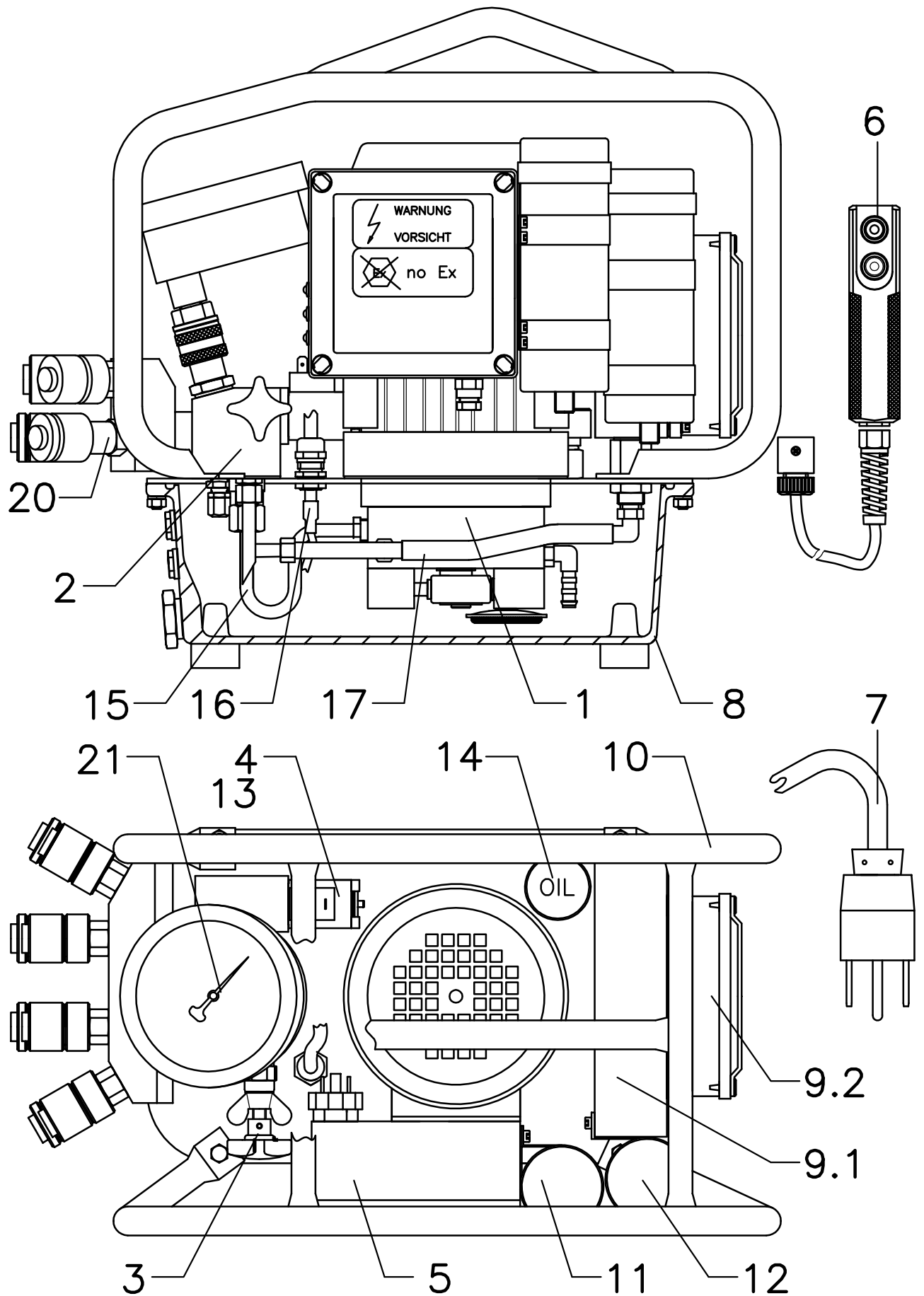
Parts List

Hydraulic Pump

HY-115

Serial No. 15 505 1515 to 15 505 1564





Item	Quantity	Name	Type	Part. No.
*1	1	motor-pump-unit complete	1,5-115-3	3 32814 00
*2	1	<i>Valve block compl. but without manometer, solenoid- valve and torque valve</i>		3 32886 00
*3	1	torque valve	DBE 4-700 VD	31 041 400
*4	1	solenoid valve	SHY-E4-W1	17 440 009
*5	1	electric-control-compl.	EPS5-115V	3 32887 00
6	1	remote control compl.	FB4-2-5m	3 32089 00
7	1	power supply	115V / 3,5m	3 32029 00
*8	1	oil tank compl.	G 5	3 32338 00
9	1	oil cooler compl.	115V	3 32309 00
		contents :		
9.1	1	cooler block		3 32307 00
9.2	1	fan motor, compl.	Gr.1,115V	3 32308 00
		contents :		
9.2.1	1	protective screen	127x127	40 380 028
9.2.2	4	cylinder head screw	M4x12-8.8 verz. ISO 4762	44 014 081

Hydraulic Pump

HY-115

Item	Quantity	Name	Type	Part. No.
9.2.3	4	hex nut	M4-8 verz. ISO 4032	54 314 001
9.2.4	4	toothed washer	A-4.3 verz. DIN 6797	53 914 001
10	1	carrying handle		9 06773 00
11	1	Operating capacitor	120 μ F / 250V	3 32888 00
12	1	starting condensator	100 μ F / 250V	3 32889 00
13	1	solenoid valve cable	115V	3 32816 00
14	1	Air escape valve	T MDF-12	3 32890 00
15	1	pipework (valve block)		3 32891 00
16	1	<i>temperature sensor</i>		3 32818 00
17	1	pipework		3 32892 00
*20		Couplings		
*21		Manometer		
Technical Data		cut off point	ASE-4 ND (Item 1.5)	=7000 kPa 70 bar 1015 Psi
		cut off point	ASE-4 MD (Item 1.5)	=25900 kPa 295 bar 4278 Psi

* : These parts are listed separately

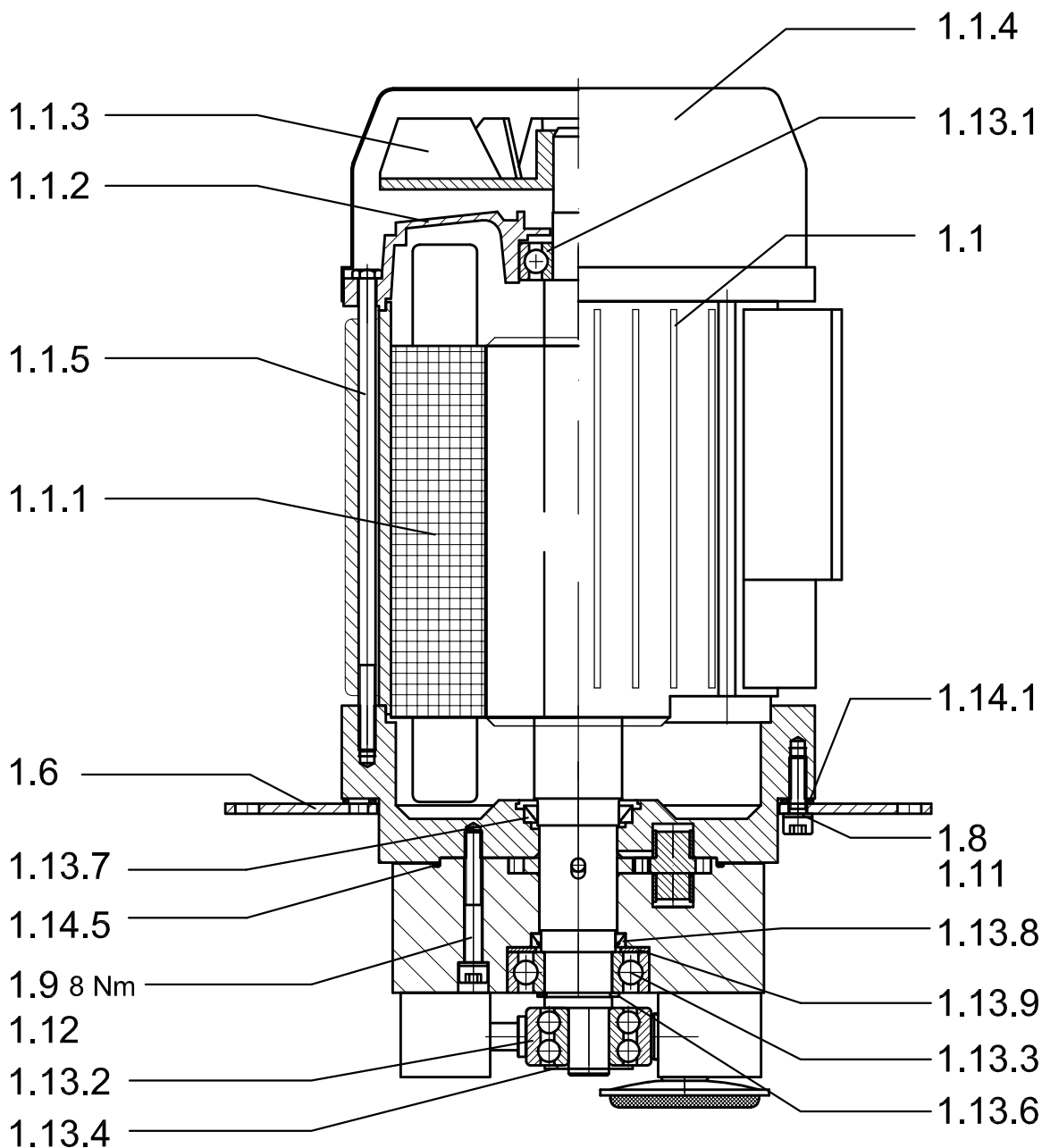
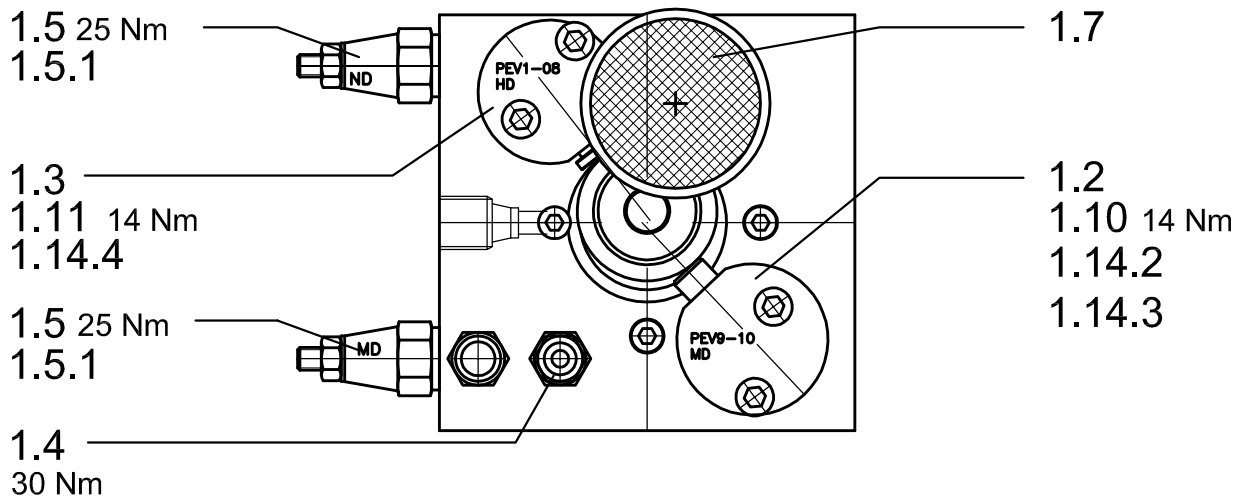
Item

1

Motor-Pump-Unit complete

1,5-115-3

Art. 3 32814 00



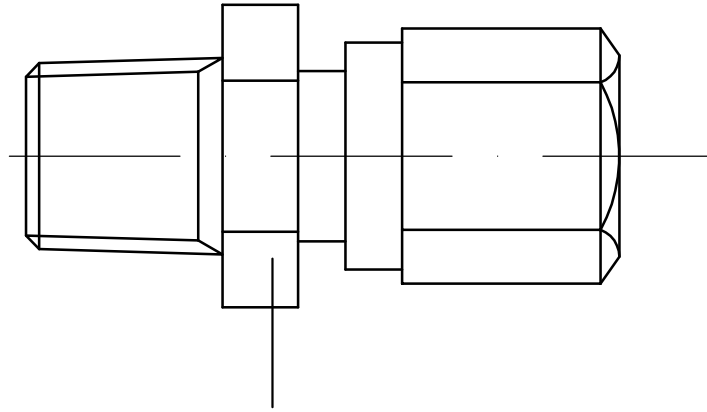
Item	1	Motor-Pump-Unit complete	1,5-115-3	Art. 3 32814 00
Item	Quantity	Name	Type	Part. No.
1.1	1	motor unit complete but without rotor and electriccontrol	M71-110/75-115V	3 32819 00
1.1.1	1	motor-housing	M71-110/75-115V	3 32820 00
1.1.2	1	end plate	M 71	40 240 035
1.1.3	1	fan wheel	M 71	40 250 005
1.1.4	1	fan housing	M 71	40 250 022
1.1.5	4	hexagon screw	M5x140	45 015 371
1.2	1	middle-pressure-pump, compl.	PEV 9-10 rd	18 221 101
1.3	1	high-pressure-pump, compl.	PEV 1-08 rd	18 211 081
*1.4	1	Max. pressur valve	DBT 1,5-750	17 830 813
*1.5	2	cut off valve	ASE-4	31 043 067
1.6	1	cover	G5/M71	2 06331 03
1.7	1	screen filter	SF 05-A-1/4	3 32362 00
1.8	4	cylinder head screw	M5x18-8.8 verz. DIN EN ISO 4762	50 115 111
1.9	3	cylinder head screw	M5x40-8.8 verz. DIN EN ISO 4762	50 115 221
1.10	4	cylinder head screw	M6x30-10.9 verz. DIN EN ISO 4762	44 016 181
1.11	4	sealing ring	5x9x1 WE DIN 7603	51 405 091
1.12	3	locking ring	A5 DIN 7980	51 215 001

Item	1	Motor-Pump-Unit complete	1,5-115-3	Art. 3 32814 00
Item	Quantity	Name	Type	Part. No.
Item	1.13	Set of bearings		3 32499 00
contents :				
1.13.1	1	ball bearing	6202.2RSR	40 600 042
1.13.2	1	ball bearing	4301	40 600 080
1.13.3	1	ball bearing	6004	40 600 027
1.13.4	1	locking ring	ZA 12	40 600 059
1.13.6	1	locking ring	20x1,2 DIN 471	52 302 001
1.13.7	1	oil seal	24x32x5 BA	47 002 089
1.13.8	1	oil seal	22x28x4 BAOF	47 002 083
1.13.9	1	washer		2 06351 00
Item	1.14	Set of seals		3 32539 00
contents :				
1.13.7	1	oil seal	24x32x5 BA	47 002 089
1.13.8	1	oil seal	22x28x4 BAOF	47 002 083
1.14.1	1	seal	M 71	2 05898 00
1.14.2	1	o-ring	8x1,5-90 NBR	49 000 821
1.14.3	1	o-ring	6,5x1,5-90 NBR	49 000 641

Item	1	Motor-Pump-Unit complete	1,5-115-3	Art. 3 32814 00
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Item	Quantity	Name	Type	Part. No.
1.14.4	2	o-ring	5,5x1,5-90 NBR	49 000 551
1.14.5	1	o-ring	82x1,5-70 NBR	49 008 214
1.13.4	1	locking ring	ZA 12	40 600 059
1.13.6	1	locking ring	20x1,2 DIN 471	52 302 001

* : These parts are listed seperately

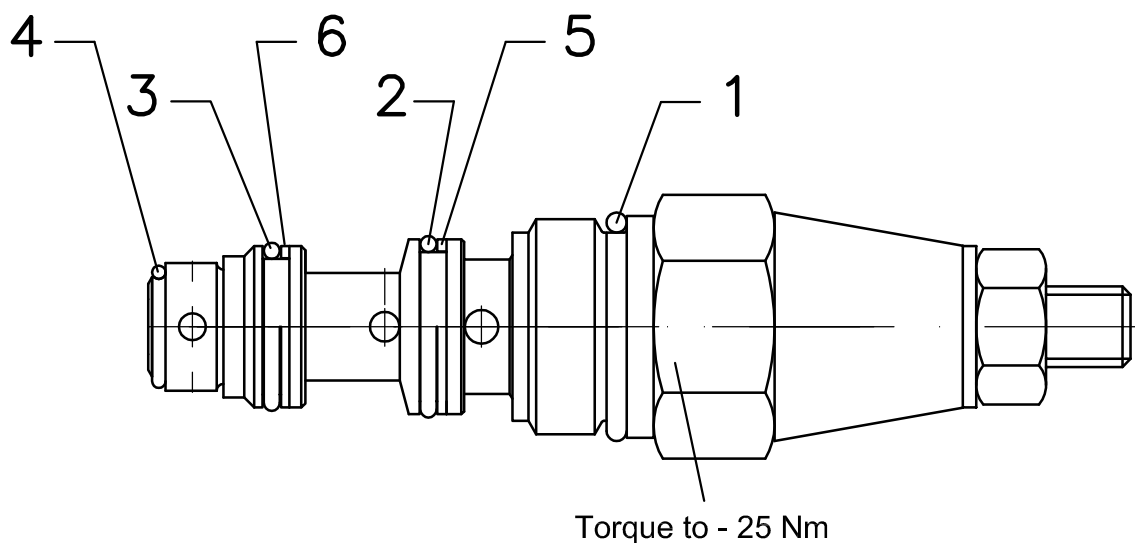


Hexagon - 14 mm

Torque to - 30 Nm

Warning: This Valve is adjusted by the factory.
The manipulation of the adjustment may cause damage
of the system and / or personal injure.
Assembly or disassembly only possible with
Hexagon 14 mm.

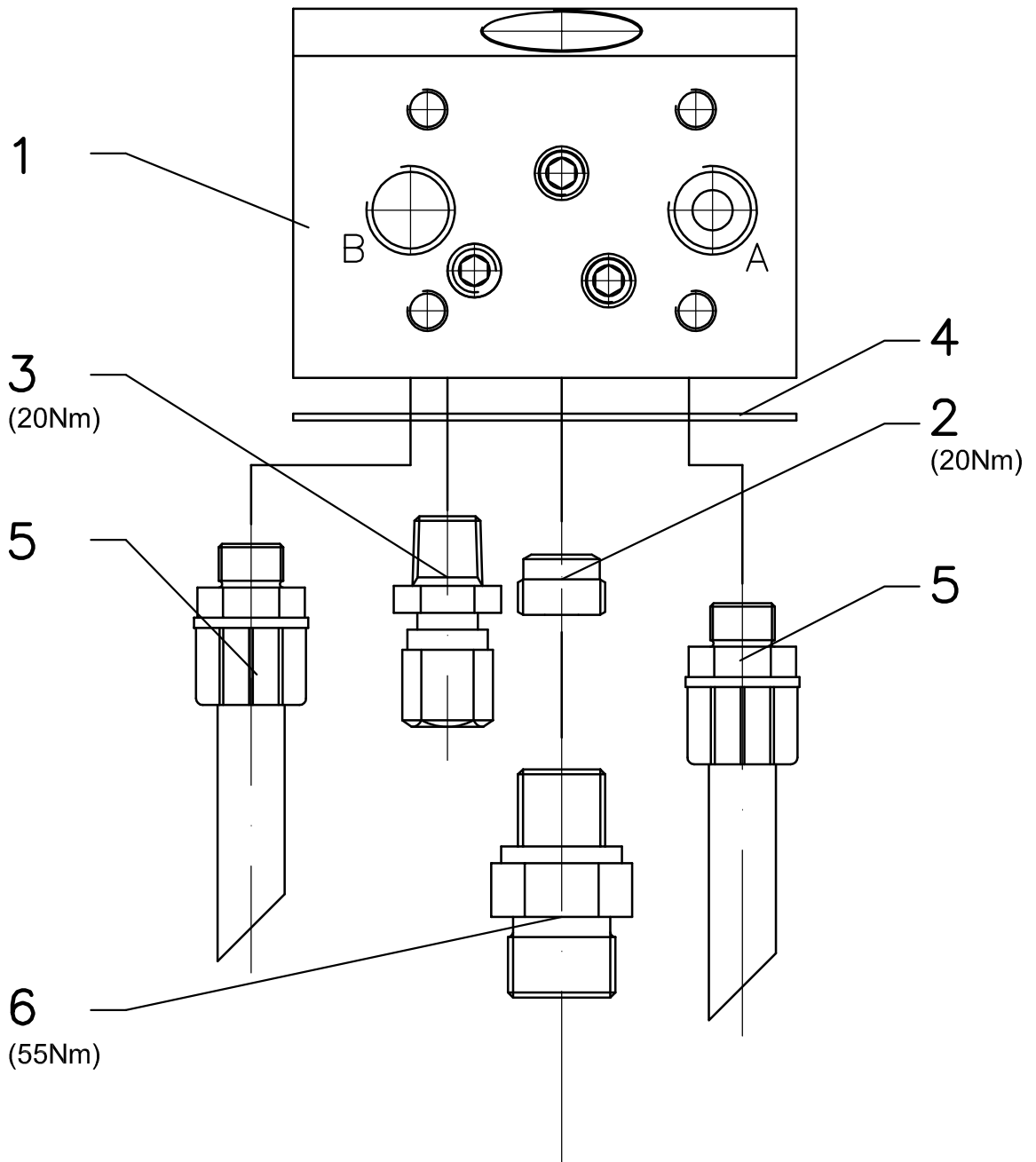
Item	1.5	Cut Off Valve compl.	ASE - 4	Art. 31 043 067
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Item	1.5.1	Seal Kit for Cut Off Valve compl.	Art. 31 090 259
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contents:

Item	Quantity	Name	Type	Part. No.
1	1	o-ring	14x1,5-90NBR	49 001 421
2	1	o-ring	10,3x1,2-90NBR	49 001 011
3	1	o-ring	10x1,2-90NBR	49 001 021
4	1	o-ring	7x1-90NBR	49 000 731
5	1	ring	11,2/13x0,7-POM	47 003 031
6	1	ring	10,2/12x0,6-POM	47 003 033



Item : **3**

Warning:

Assembly or disassembly only
possible with hexagon 14 mm.

Item : **2**

pasted into with nut locking LOXEAL 83.54

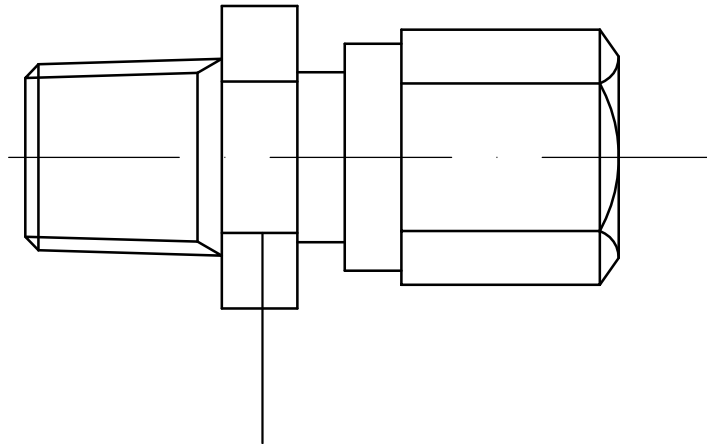
Item : **6**

pasted into with nut locking LOXEAL 55.03

Item	2	Valve Block compl.	NG4	Art. 3 32886 00
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Item	Quantity	Name	Type	Part. No.
1	1	valve block	4/2-NG4	3 32885 00
2	1	check valve	RVB 6	12 010 206
*3	1	pressure valve	DBT 1,5-100/110	31 090 802
4	1	seal		30 045 212
5	2	tank pipe	G 1/8-8/6	31 090 851
6	1	screw in socket	GE 08-SR 1/4"	48 008 006

* : These parts are listed seperately

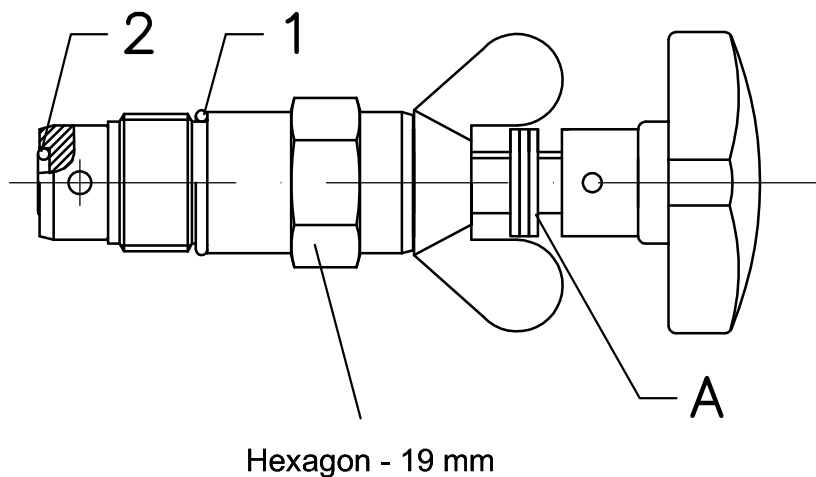


Hexagon - 14 mm

Torque to - 20 Nm

**Warning: This Valve is adjusted by the factory.
The manipulation of the adjustment may cause damage
of the system and / or personal injure.
Assembly or disassembly only possible with
Hexagon 14 mm.**

Item	3	Torque Valve	DBE 4-700 VD	Art. 31 041 400
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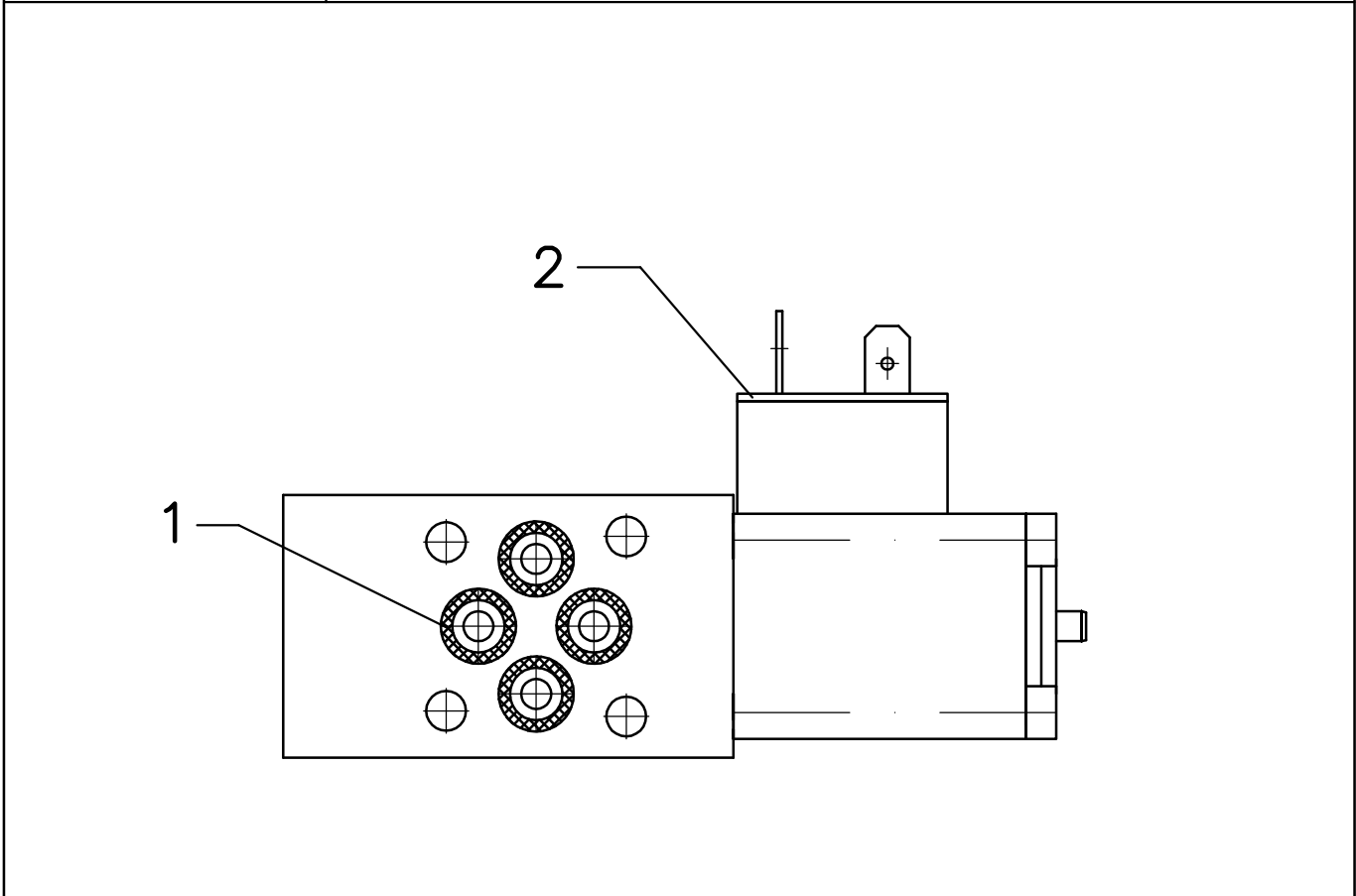


Advice: In case of pressure loss a pressure of 700 bar (10.000 psi) can be reached by removing some shim rings ("A").

Item	3.1	Seal Kit for Torque Valve	Art. 31 090 785
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Item	Quantity	Name	Type	Part. No.
1	1	o-ring	16x1,5-90 NBR	49 001 621
2	1	o-ring	6x1,5-90 NBR	49 000 621

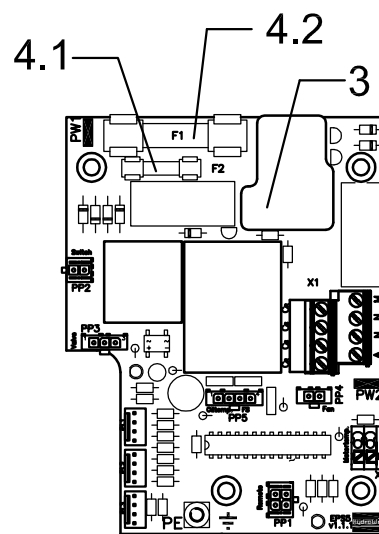
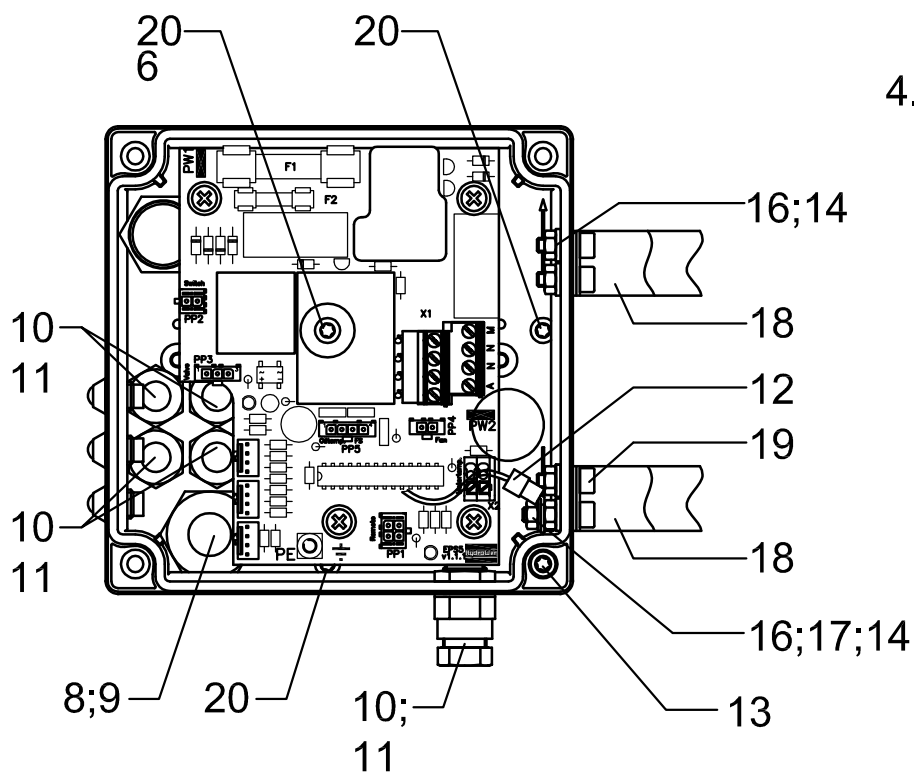
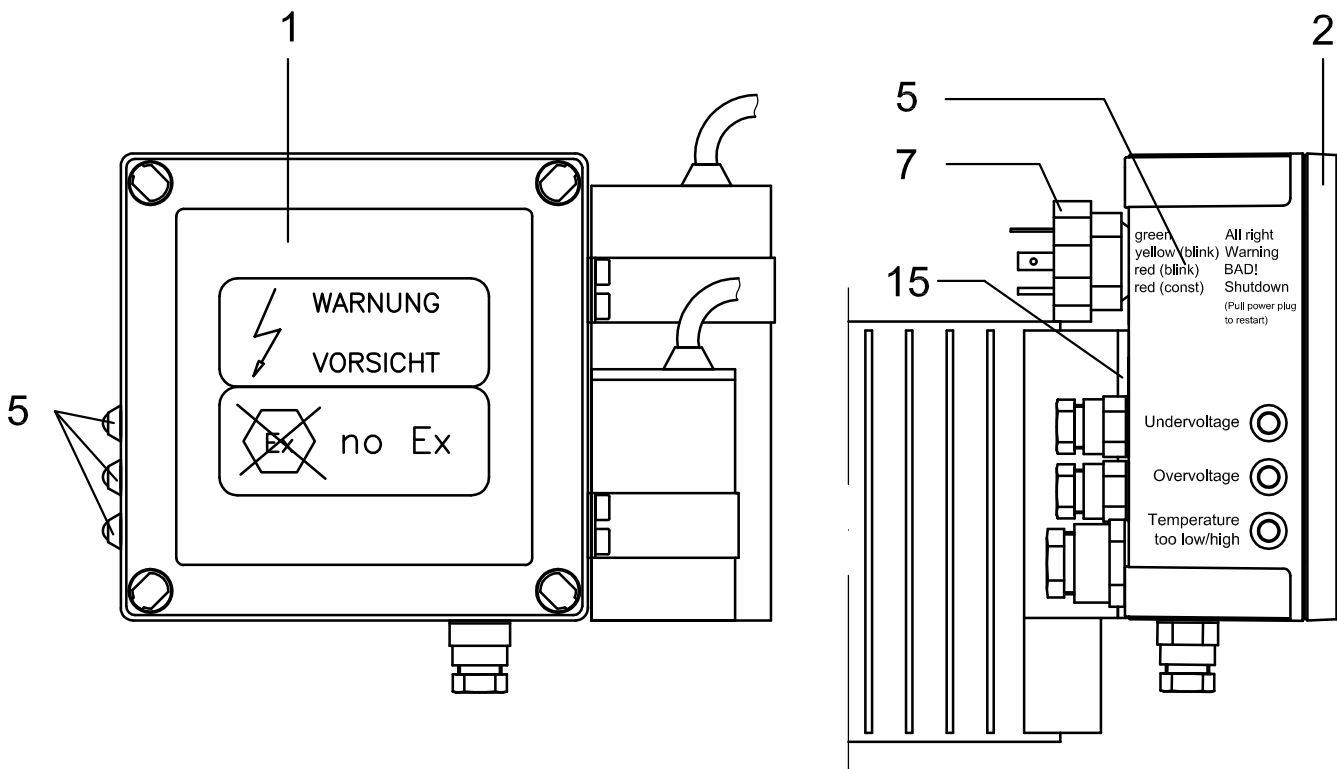
Item	4	Solenoid valve	SHY-E4-W1	Art. 17 440 009
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Item	4.1	Seal Kit for solenoid valve		Art. 31 091 159
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contents :

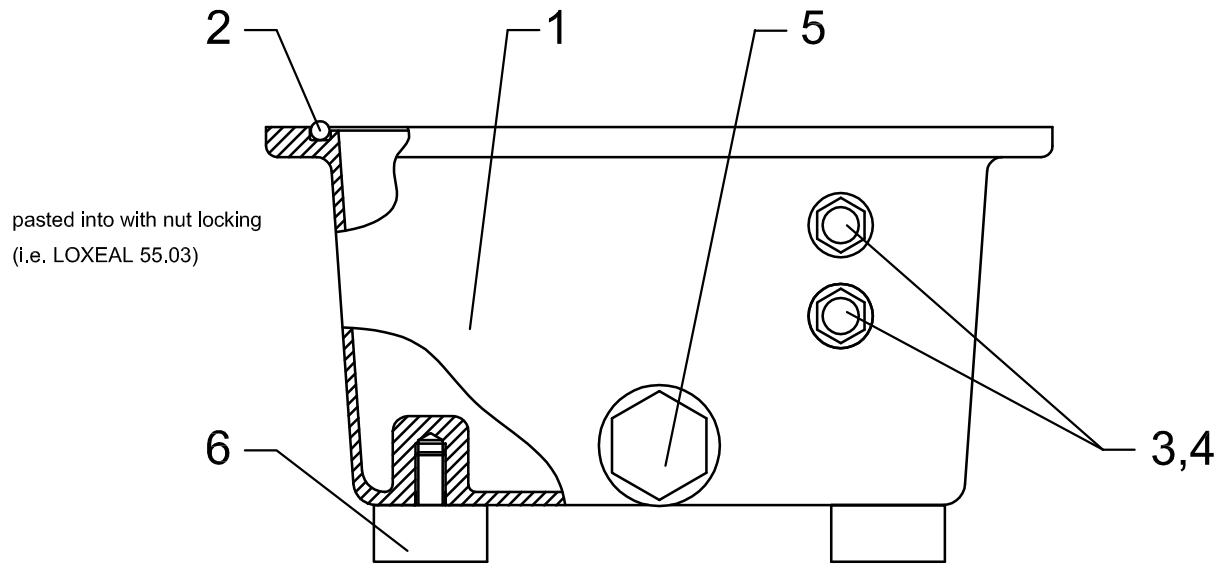
Item	Quantity	Name	Type	Part. No.
1	4	o-ring	7x1,5-90 NBR	49 000 721
2	1	seal	GM 207-3	40 060 024



Item	5	Electric Control compl.	EPS5-115V	Art. 3 32887 00
Item	Quantity	Name	Type	Part. No.
1	1	<i>cover complete with cover, LED and PG-screwings</i>		3 32893 00
2	1	housing cover		3 32025 00
3	1	circuit board	EPS5-115V	3 32894 00
4.1	1	fuse F1	630mA-Ø5x20	40 350 091
4.2	1	fuse F2	30A-Ø6,3x32	40 350 104
5	1	LED, RGB		3 32895 00
6	1	<i>washer</i>	A4,3-verz. DIN 9021	46 351 420
7	1	plug for remote control		3 32896 00
8	1	cable thread joint	M20	40 220 149
9	1	locknut	M20	40 120 121
10	5	cable thread joint	M12 (Conus)	40 220 071
11	5	locknut	M12-Ms	40 120 030
12	1	earthing cable		3 32027 00
13	1	tapping screw	3,5x19 verz. ISO 14585c	46 556 104
14	4	sealing ring	M4-Polyamid	47 002 057

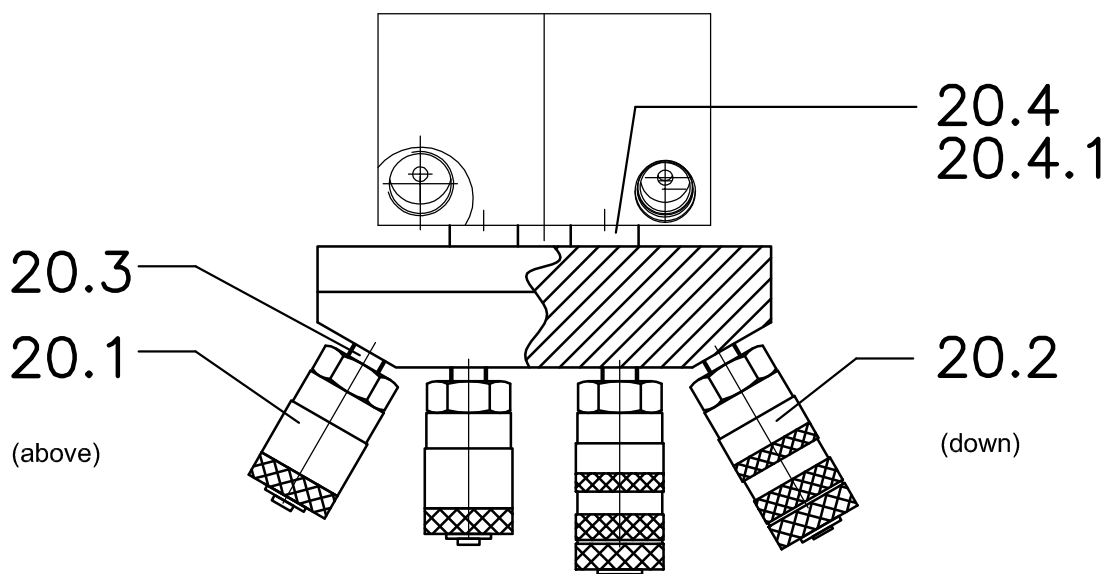
Item	5	Electric Control compl.	EPS5-115V	Art. 3 32887 00
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Item	Quantity	Name	Type	Part. No.
15	1	Sealing for clamp box		40 060 016
16	5	hex nut	M4-8 verz. ISO 4032	54 314 001
17	1	toothed washer	A-4.3 verz. DIN 6797	53 914 001
18	4	tensioning belt	Ø50	40 360 005
19	4	cylinder head screw	M4x14-8.8 verz. ISO 4762	44 014 091
20	3	tapping screw	3,5x13 verz. ISO 14585c	46 556 103



Item	Quantity	Name	Type	Part. No.
1	1	tank	G 5	32 091 027
2	1	seal	Ø290x5 - 70 NBR	49 029 054
3	2	sight glass	GN 541-11 G3/8"-A	40 300 004
4	2	nut	G3/8"-Ms	40 030 001
5	1	plug	GN 740-3/8"	40 430 039
6	4	rubber feet	Ø30/15-M8x14	40 020 002

Item	20	4-Tool Adapter - Pioneer	Art. 10 490 019
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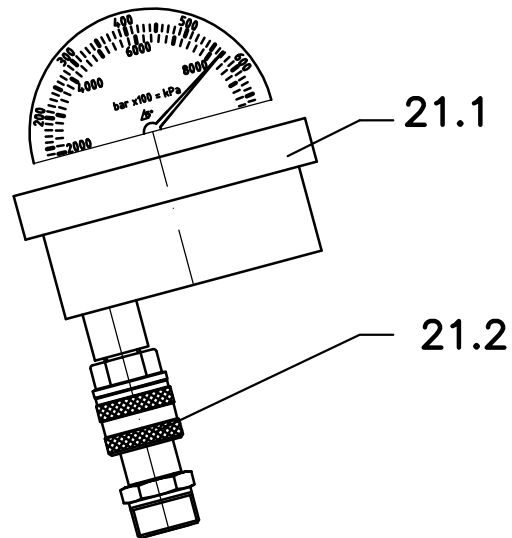


Item	Quantity	Name	Type	Part. No.
20		4-Tool Adapter compl.	Pioneer	10 490 019
		contents :		
20.1	4	Pioneer screw male coupling	3010-2	40 230 009
20.2	4	Pioneer screw female coupling	3050-2	40 230 010
20.3	4	double nipple	1/4" NPTF	30 042 202
20.4	2	adapter, compl.		3 32459 00

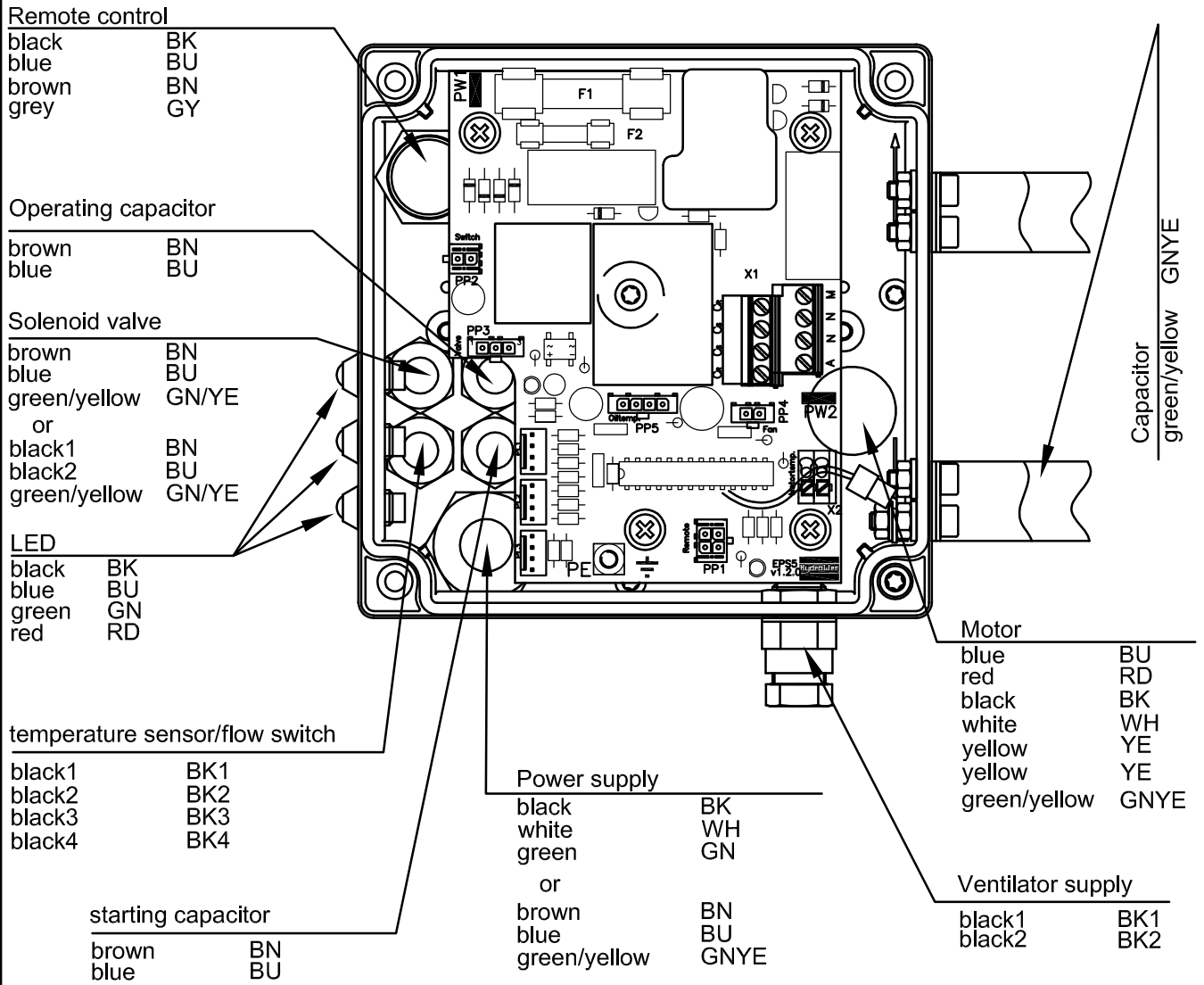
Item	20.4.1	Seal Kit for adapter compl.	Art. 3 32460 00
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contents :

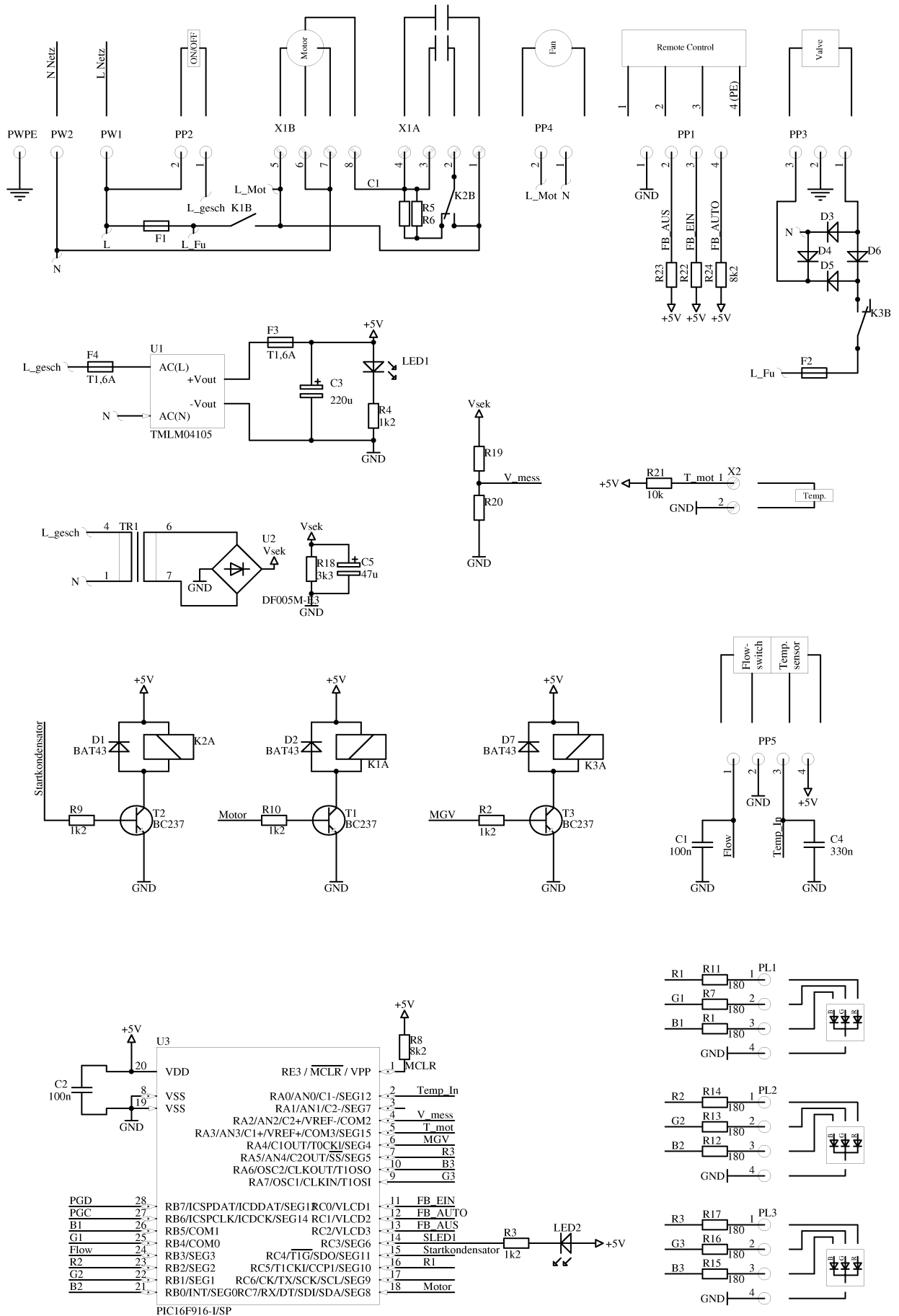
1	o-ring	14x1,5-90NBR	49 001 421
1	o-ring	8x1,5-90NBR	49 000 821



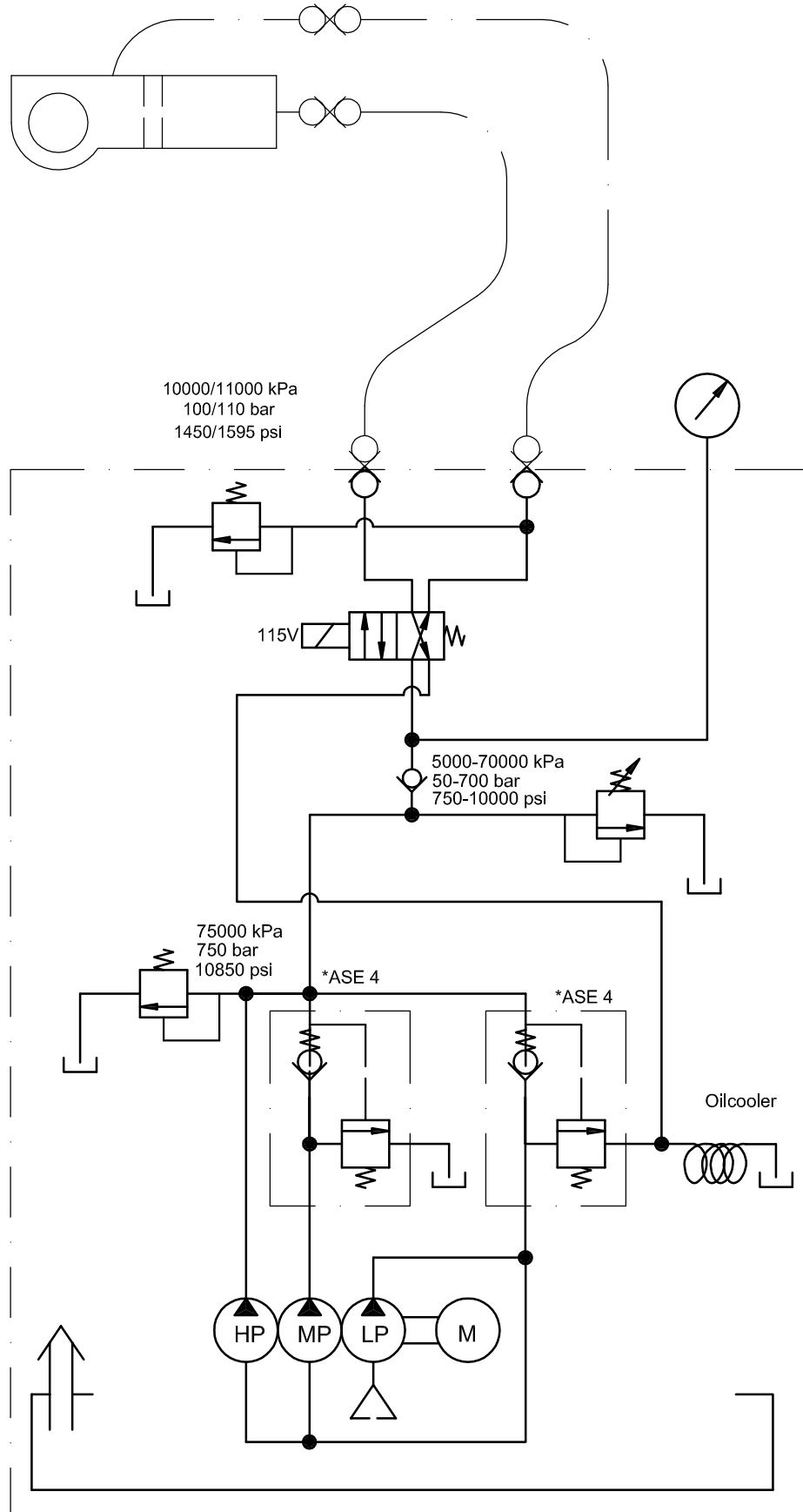
Item	Quantity	Name	Type	Part. No.
21.1	1	manometer	NG100-1%FS	40 540 019
21.2	1	Skip-more-adapter		9 06767 00



Component	Cable colour	Clamp	Component	Cable colour	Clamp
Motor	black	BK	Operating capacitor	brown	BN
	white	WH		blue	BU
	red	RD		green/yellow	GNYE
	blue	BU			
	yellow	YE			
	yellow	YE			
Power supply	black	BK	Solenoid valve	blue	BU
	white	WH		brown	BN
	green	GN		green/yellow	GNYE
or			or		
Power supply	brown	BN	Solenoid valve	black1	BN
	blue	BU		black2	BU
	green/yellow	GNYE		green/yellow	GNYE
Remote-control	grey	GY	Starting capacitor	brown	BN
	brown	BN		blue	BU
	blue	BU		green/yellow	GNYE
	black	BK			
LED	black	BK	Ventilator supply	black1	BK1
	blue	BU		black2	BK2
	green	GN			
	red	RD			
temperature sensor/ flow switch	black1	BK1	temperature sensor/ flow switch	black1	BK1
	black2	BK2		black2	BK2
	black3	BK3			
	black4	BK4			



Hydraulic Schematic Diagram



* : cut off point see side 4

Change of oil product name

The oil used so far named **AralVitam HF32** is now named **Hyspin HVI32** with the identic performance.

Both oils can be mixed with each other.



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	Hyspin HVI 32
Product code	460892-DE04
SDS no.	460892
Product type	Liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	Hydraulic fluid. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
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1.3 Details of the supplier of the safety data sheet

Supplier	BP Europa SE Industrial Lubricants & Services Erkelenzer Straße 20 D-41179 Mönchengladbach Germany
	Telefon: +49 (0)2161 909-30 Telefax: +49 (0)2161 909-392
E-mail address	MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER	Carechem: +44 (0) 1235 239 670 (24 hours)
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	Mixture
---------------------------	---------

Classification according to Directive 1999/45/EC [DPD]

This product is not classified according to EU legislation.

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

Risk phrases	This product is not classified according to EU legislation.
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Safety phrases	Not applicable.
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Supplemental label elements	Not applicable.
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Special packaging requirements

Containers to be fitted with child-resistant fastenings	Not applicable.
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Tactile warning of danger	Not applicable.
----------------------------------	-----------------

2.3 Other hazards

Other hazards which do not result in classification	Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.
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SECTION 3: Composition/information on ingredients

Substance/mixture	Mixture
--------------------------	---------

Highly refined mineral oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

This product does not contain any hazardous ingredients at or above regulated thresholds.

Product name Hyspin HVI 32	Product code 460892-DE04	Page: 1/7
Version 1	Date of issue 10 February 2011	Format Germany (Germany)
		Language ENGLISH

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.
---------------------------	---

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide)

5.3 Advice for firefighters

Special precautions for fire-fighters	No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Immediately contact emergency personnel. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

6.4 Reference to other sections
 See Section 1 for emergency contact information.
 See Section 5 for firefighting measures.
 See Section 8 for information on appropriate personal protective equipment.
 See Section 12 for environmental precautions.
 See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures
 Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene
 Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities
 Store and use only in equipment/containers designed for use with this product. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).

Not suitable
 Prolonged exposure to elevated temperature.

7.3 Specific end use(s)

Recommendations
 See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

ACGIH TLVs

Base oil - unspecified **ACGIH (United States).**
 TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier. Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures
 If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived No Effect Level

No DELs available.

Predicted No Effect Concentration

No PNEC available.

8.2 Exposure controls

Appropriate engineering controls
 Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Hygiene measures
 Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection
 Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure. In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn. Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used. Use filter type P or comparable standard. Air-filtering respirators, also called air-purifying respirators, will not be adequate under conditions of oxygen deficiency (i.e. low oxygen concentration), and would not be considered suitable where airborne concentrations of chemicals with a significant hazard are present. In these cases air-supplied breathing apparatus will be required. A combination filter for particles, organic gases and vapours (boiling point >65°C) may be

SECTION 8: Exposure controls/personal protection

required if mist or fume is present as well as vapour. Use filter type AP or comparable standard.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eye/face protection

Safety glasses with side shields.

Skin protection**Hand protection**

Wear protective gloves if prolonged or repeated contact is likely.

Wear chemical resistant gloves.

Recommended: Nitrile gloves.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Skin and body

Use of protective clothing is good industrial practice.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Physical state	Liquid.
Colour	Amber.
Odour	Oily.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	<-30 °C
Flash point	Closed cup: 186°C (366.8°F) [Pensky-Martens.] Open cup: 200°C (392°F) [Cleveland.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density	871 kg/m ³ (0.871 g/cm ³) at 15°C
Solubility(ies)	insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 32 mm ² /s (32 cSt) at 40°C Kinematic: 6.3 mm ² /s (6.3 cSt) at 100°C
Explosive properties	Not available.
Oxidising properties	Not available.

9.2 Other information

No additional information.

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SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous polymerisation will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	No specific data.
10.5 Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion No known significant effects or critical hazards.

Skin contact No known significant effects or critical hazards.

Eye contact No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation No specific data.

Ingestion No specific data.

Skin contact No specific data.

Eye contact No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Inhalation Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion Ingestion of large quantities may cause nausea and diarrhoea.

Skin contact Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Eye contact Potential risk of transient stinging or redness if accidental eye contact occurs.

Potential chronic health effects

General No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Environmental hazards Not classified as dangerous

12.2 Persistence and degradability

Biodegradable

12.3 Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Mobility Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

PBT Not applicable.

vPvB Not applicable.

12.6 Other adverse effects

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste

Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal

Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations. Recycle, if possible.

Special precautions

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
14.6 Special precautions for user	Not available.	Not available.	Not available.	Not available.
Additional information	-	-	-	-

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other regulations

REACH Status

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

United States inventory (TSCA 8b)

All components are listed or exempted.

Australia inventory (AICS)

All components are listed or exempted.

Canada inventory

All components are listed or exempted.

China inventory (IECSC)

All components are listed or exempted.

Japan inventory (ENCS)

Not determined.

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SECTION 15: Regulatory information

Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.
National regulations	
Hazard class for water	1 Appendix No. 4

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms

ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 CSA = Chemical Safety Assessment
 CSR = Chemical Safety Report
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 DPD = Dangerous Preparations Directive [1999/45/EC]
 DSD = Dangerous Substances Directive [67/548/EEC]
 EINECS = European Inventory of Existing Commercial chemical Substances
 ES = Exposure Scenario
 EUH statement = CLP-specific Hazard statement
 EWC = European Waste Catalogue
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 OECD = Organisation for Economic Co-operation and Development
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SADT = Self-Accelerating Decomposition Temperature
 SVHC = Substances of Very High Concern
 STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
 STOT-SE = Specific Target Organ Toxicity - Single Exposure
 TWA = Time weighted average
 UN = United Nations
 UVCB = Complex hydrocarbon substance
 VOC = Volatile Organic Compound
 vPvB = Very Persistent and Very Bioaccumulative

Full text of abbreviated H statements

Not applicable.

Full text of classifications [CLP/GHS]

Not applicable.

Full text of abbreviated R phrases

Not applicable.

Full text of classifications [DSD/DPD]

Not applicable.

History

Date of issue/ Date of revision

10/02/2011.

Date of previous issue

No previous validation.

Prepared by

Product Stewardship

 Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

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EC-DECLARATION OF CONFORMITY OF THE MACHINERY

In accordance with the EC machine directive 2006/42/EC of 17. May 2006, appendix II A

We hereby declare that the following described partly completed machines in their conceptions, constructions and forms put by us on the market, are in conformity with all the relevant essential health and safety requirements of the EC machinery directive 2006/42/EC as amended and the national laws and regulations adopting this directive. In case of alteration of the partly completed machine, not agreed upon by us, this declaration will lose its validity.

Name and address of the manufacturer:

HydroWer-Hydraulik GmbH
Am Leveloh 15b
DE – 45549 Sprockhövel (Germany)

Types: JetPro 5-230, JetPro 5.2, JetPro 5.3, JetPro 6.3, JetPro 10-230, JetPro 10.3, JetPro 12-230, JetPro 12.3, JetStream 115, JetStream 230, JetPro 18.3, JetPro 36.3, JetStream 460, JetPro 4.2, JetPro 115, JetPro 230, MiniJet 115, MiniJet 230, HYTORC G115, HYTORC G230, AE 6.3, MiniAir, JetAir 6.2, HYTORC G-Air, JetAir 12.3, JetAir 12, JetAir 24.3, AE 11.2, AE 7.2, Pressure intensifier HD25, MiniJet-So/200-230V, CP 10A-230V, CP 10A-115V, CP 12A-230V, HYSTREAM115, HYSTREAM230, HYSTREAM-Air, JetPro-S-115, JetPro-S-230 ; HYTORC 115; HYTORC 230; HYTORC Air; HY-115 ;HY-230 ; HY-Air

Furthermore we explain the agreement with further, likewise for the product valid directives/regulations:

Directive 2006/42/EC	EN ISO 4413:2010	safety requirements for fluid power systems
	EN ISO 60204: 2006	safety of machinery electrical equipment
	EN ISO 60335-1: 2012	safety of electrical
Directive 2004/108/EC	EN 55014-1 : 2006/A2:2011	electromagnetic compatibility (EMV)
	EN 55014-2 : 1997/A2:2008	electromagnetic compatibility (EMC)
	EN 61000-3-2 : 2006	electromagnetic compatibility (EMV)
	EN 61000-3-3 : 2008	electromagnetic compatibility (EMC)

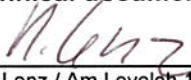
UL AWM Style 21098 or 2587, UL AWM Style 4476 / 3529, UL 508/UL 50, E147323, E15012, E13393, E99479, E86615 for US-Market

Applicable Harmonized Standards 2006/42/EC

DIN EN ISO 12100:2010	safety of machinery
DIN EN 60204-1 2006	safety of machinery electrical equipment

Authorised to compile the relevant technical documentation

Sprockhövel / 20.02.2014
place / date


Rüdiger Lenz / Am Leveloh 15b / DE - 45549 Sprockhövel

Managing director

Sprockhövel / 20.02.2014
place / date


Karl Heinz Werner