RE 51055
Edition: 2022-07
Replaces: 2021-11

rexroth
A Bosch Company

Hydraulic power unit

Type CytroPac

CytroPac

- Component series 1X

Features

- Integrated frequency converter (variable-speed drive)
- Power 1.5 ... 4.0 kW with identical frame size and interfaces
- Power unit is suitable for S1 operation (continuous operation)
- Early warning signals in case of faults regarding oil level, temperature, return flow filter and frequency converter
- Easy commissioning through commissioning wizard (plug&play)
- Integrated cooling for motor and frequency converter, optionally also for active oil cooling
- Noise-reduced design
- Integrated oil drain facility and return flow filter
- Reduced oil volume due to degassing-optimized tank
- CytroPac UL (cULus-listed, optional)
- Sleep function to reduce the power consumption, e.g. during accumulator charging operation.

Contents

Features	1
Ordering code	2
Selection table	3 ... 5
Technical data	7, 8
Characteristic curves	9 ... 11
Dimensions:	12
Circuit diagram, hydraulic	13
Sensor and interface selection	15
CytroPac UL version (cULus-listed)	16
Electrical connections	17
Accessories (separate order)	21, 22
Project planning information	26
Further information	26

Ordering code

01	02	03	04	05	06	07	08	09	10	11	12
CYTROPAC	**– 1X**	**/ 20**	**/**			**/ 2**	**/**		**/ 1**	**/ 7035**	**/**

01	Hydraulic power unit	**CYTROPAC**
02	Component series 10 ... 19 (10 ... 19: unchanged installation and connection dimensions)	**1X**

Tank size

03	20 liters	**20**

Drive

04	Asynchronous motor with frequency converter	**AF**
	Asynchronous motor with frequency converter and STO	**ST**

Performance class

05	1.5 kW	**1**
	2.2 kW	**2**
	3.0 kW	**3**
	4.0 kW	**4**

Pump

06	Size 4	**AS04**
	Size 5	**AS05**
	Size 8	**AS08**
	Size 11	**AS11**
07	Maximum operating pressure (see characteristic curve page 9)	**2**

Sensor technology

08	Basic	**B**
	Premium RJ45	**P**
	Premium M12x1	**E**

Cooling type / maximum cooling power of fluid[1)]

09	Without additional cooling packages	**WA**
	500 ... 1000 Watt (1 cooling package) [2)]	**WB**
	1000 ... 1500 Watt (2 cooling packages) [2)]	**WC**
	1500 ... 2000 Watt (3 cooling packages) [2)]	**WD**

Filling

10	Return flow filter	**1**

Coloring

11	RAL 7035	**7035**

Further details

12	Without	**–**
	Additional tank port	**A1**
	UL-certified	**UL**

1) The connection to a cooling water supply for cooling the motor and the frequency converter must always be ensured before the operation, also in version WA.

2) Depending on the water inlet temperature, oil level, pressure and flow

☞ **Notice:**
The required operating pressure can be pre-set at the factory. Please indicate in the order. If there is no specification, the operating pressure is set at the factory to 20 bar.

Selection table

CytroPac power 1.5 kW

Power in kW	**Displacement** in cm³/r	**Sensor technology design**	**Cooling type**	**Material number**	**Material number STO**
1.5	4	Basic	WA	R901500001	R901501001
			WB	R901500002	R901501002
			WC	R901500003	R901501003
			WD	R901500004	R901501004
		Premium RJ45	WA	R901500009	R901501009
			WB	R901500010	R901501010
			WC	R901500011	R901501011
			WD	R901500012	R901501012
	5.5	Basic	WA	R901500013	R901501013
			WB	R901500014	R901501014
			WC	R901500015	R901501015
			WD	R901500016	R901501016
		Premium RJ45	WA	R901500021	R901501021
			WB	R901500022	R901501022
			WC	R901500023	R901501023
			WD	R901500024	R901501024
	8	Basic	WA	R901500025	R901501025
			WB	R901500026	R901501026
			WC	R901500027	R901501027
			WD	R901500028	R901501028
		Premium RJ45	WA	R901500033	R901501033
			WB	R901500034	R901501034
			WC	R901500035	R901501035
			WD	R901500036	R901501036
	11	Basic	WA	R901500037	R901501037
			WB	R901500038	R901501038
			WC	R901500039	R901501039
			WD	R901500040	R901501040
		Premium RJ45	WA	R901500045	R901501045
			WB	R901500046	R901501046
			WC	R901500047	R901501047
			WD	R901500048	R901501048

Selection table

CytroPac power 2.2 kW

Power in kW	**Displacement** in cm³/r	**Sensor technology design**	**Cooling type**	**Material number**	**Material number STO**
2.2	4	Basic	WA	R901500061	R901501061
			WB	R901500062	R901501062
			WC	R901500063	R901501063
			WD	R901500064	R901501064
		Premium RJ45	WA	R901500069	R901501069
			WB	R901500070	R901501070
			WC	R901500071	R901501071
			WD	R901500072	R901501072
	5.5	Basic	WA	R901500073	R901501073
			WB	R901500074	R901501074
			WC	R901500075	R901501075
			WD	R901500076	R901501076
		Premium RJ45	WA	R901500081	R901501081
			WB	R901500082	R901501082
			WC	R901500083	R901501083
			WD	R901500084	R901501084
	8	Basic	WA	R901500085	R901501085
			WB	R901500086	R901501086
			WC	R901500087	R901501087
			WD	R901500088	R901501088
		Premium RJ45	WA	R901500093	R901501093
			WB	R901500094	R901501094
			WC	R901500095	R901501095
			WD	R901500096	R901501096
	11	Basic	WA	R901500097	R901501097
			WB	R901500098	R901501098
			WC	R901500099	R901501099
			WD	R901500100	R901501100
		Premium RJ45	WA	R901500105	R901501105
			WB	R901500106	R901501106
			WC	R901500107	R901501107
			WD	R901500108	R901501108

Selection table

CytroPac power 3.0 kW

Power in kW	**Displacement** in cm³/r	**Sensor design**	**Cooling type**	**Material number**	**Material number STO**
3.0	4	Basic	WA	R901500121	R901501121
			WB	R901500122	R901501122
			WC	R901500123	R901501123
			WD	R901500124	R901501124
		Premium RJ45	WA	R901500129	R901501129
			WB	R901500130	R901501130
			WC	R901500131	R901501131
			WD	R901500132	R901501132
	5.5	Basic	WA	R901500133	R901501133
			WB	R901500134	R901501134
			WC	R901500135	R901501135
			WD	R901500136	R901501136
		Premium RJ45	WA	R901500141	R901501141
			WB	R901500142	R901501142
			WC	R901500143	R901501143
			WD	R901500144	R901501144
	8	Basic	WA	R901500145	R901501145
			WB	R901500146	R901501146
			WC	R901500147	R901501147
			WD	R901500148	R901501148
		Premium RJ45	WA	R901500153	R901501153
			WB	R901500154	R901501154
			WC	R901500155	R901501155
			WD	R901500156	R901501156
	11	Basic	WA	R901500157	R901501157
			WB	R901500158	R901501158
			WC	R901500159	R901501159
			WD	R901500160	R901501160
		Premium RJ45	WA	R901500165	R901501165
			WB	R901500166	R901501166
			WC	R901500167	R901501167
			WD	R901500168	R901501168

CytroPac power 4.0 kW

Power in kW	**Displacement** in cm³/r	**Sensor technology design**	**Cooling type**	**Material number**	**Material number STO**
4.0	4	Basic	WA	R901500181	R901501181
			WB	R901500182	R901501182
			WC	R901500183	R901501183
			WD	R901500184	R901501184
		Premium RJ45	WA	R901500189	R901501189
			WB	R901500190	R901501190
			WC	R901500191	R901501191
			WD	R901500192	R901501192
	5.5	Basic	WA	R901500193	R901501193
			WB	R901500194	R901501194
			WC	R901500195	R901501195
			WD	R901500196	R901501196
		Premium RJ45	WA	R901500201	R901501201
			WB	R901500202	R901501202
			WC	R901500203	R901501203
			WD	R901500204	R901501204
	8	Basic	WA	R901500205	R901501205
			WB	R901500206	R901501206
			WC	R901500207	R901501207
			WD	R901500208	R901501208
		Premium RJ45	WA	R901500213	R901501213
			WB	R901500214	R901501214
			WC	R901500215	R901501215
			WD	R901500216	R901501216
	11	Basic	WA	R901500217	R901501217
			WB	R901500218	R901501218
			WC	R901500219	R901501219
			WD	R901500220	R901501220
		Premium RJ45	WA	R901500225	R901501225
			WB	R901500226	R901501226
			WC	R901500227	R901501227
			WD	R901500228	R901501228

Technical data
(For applications outside these values, please consult us!)

General			
Installation position			Vertical
Line connections	▶ Pressure port		G1/2
	▶ Return flow		G1/2 (via filter) G1 (2x, direct)
Place of installation			Industrial building with minor corrosion conditions Air humidity < 80%
Ambient temperature range (during operation)		°C	+10 ... +40
Material	▶ Oil tank		Polyamide
	▶ Hood ▶ Hood, UL version		Polyamide Steel
	▶ Central plate		GG, zinc thin layer-passivated (chromium VI-free)
Weight (depending on configuration level) without oil		kg	60 ... 65

Hydraulic			
Maximum operating pressure		bar	See characteristic curves from page 9
Maximum flow		l/min	See characteristic curves from page 9
Oscillating volume		l	10
Tank capacity		l	20
Maximum return flow via return flow filter		l/min	35
Temperature range hydraulic fluid		°C	+10 ... +65
Admissible hydraulic fluids			See table below
Maximum admissible degree of contamination of the hydraulic fluid; cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Return flow filter			35.0035CP H10XL-R00-0-M
	▶ Filter rating	µm	10
	▶ Cold start	°C	< 10 →maximum flow 10 l/min
	▶ Early warning	%	75
	▶ Shut-off	%	100
Filling level monitoring (residual volume)	▶ Early warning	l	10
	▶ Shut-off	l	7
Temperature monitoring	▶ Early warning	°C	60
	▶ Shut-off	°C	65
Pump			
	▶ Minimum flow	l/min	0.5 ... 2; depending on motor and pump size (see characteristic curve on page 11)
	▶ Viscosity range of hydraulic fluid	mm^2/s	12 ... 800 (admissible range, for start at most 2000) 20 ... 100 (recommended range)

Hydraulic fluid	**Classification**	**Suitable sealing materials**	**Standards**	**Data sheet**
Mineral oils	HLP ISO VG 32 HLP ISO VG 46 HLP ISO VG 68	NBR, FKM	DIN 51524	90220

☞ **Important notes on hydraulic fluids:**
- ▶ For further information and data on the use of other hydraulic fluids, please refer to the data sheets above or contact us.

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the life cycle of the components.
Available filters can be found at www.boschrexroth.com/filter.

Technical data
(For applications outside these values, please consult us!)

Electrical			
	▶ Performance class	kW	1.5; 2.2; 3.0; 4.0
	▶ Voltage (according to IEC 60038)	V	380 ... 480 AC (-15% / +10%)
	▶ Frequency	Hz	50/60
Protection class according to DIN EN 60529			IP 54
Maximum pre-fuse protective motor switch (on the customer side)	▶ Power 1.5 kW	max. A	10
	▶ Power 2.2 kW	max. A	16
	▶ Power 3.0 kW	max. A	20
	▶ Power 4.0 kW	max. A	20

Cooling water			
Requirement cooling water supply	▶ Flow[1)]	l/min	> 8
	▶ Inlet temperature	°C	15 ... 30
	▶ Connections		G1/2 (2x, cylindrical)
	▶ Maximum glycol share	%	50
	▶ Maximum cooling water pressure	bar	10

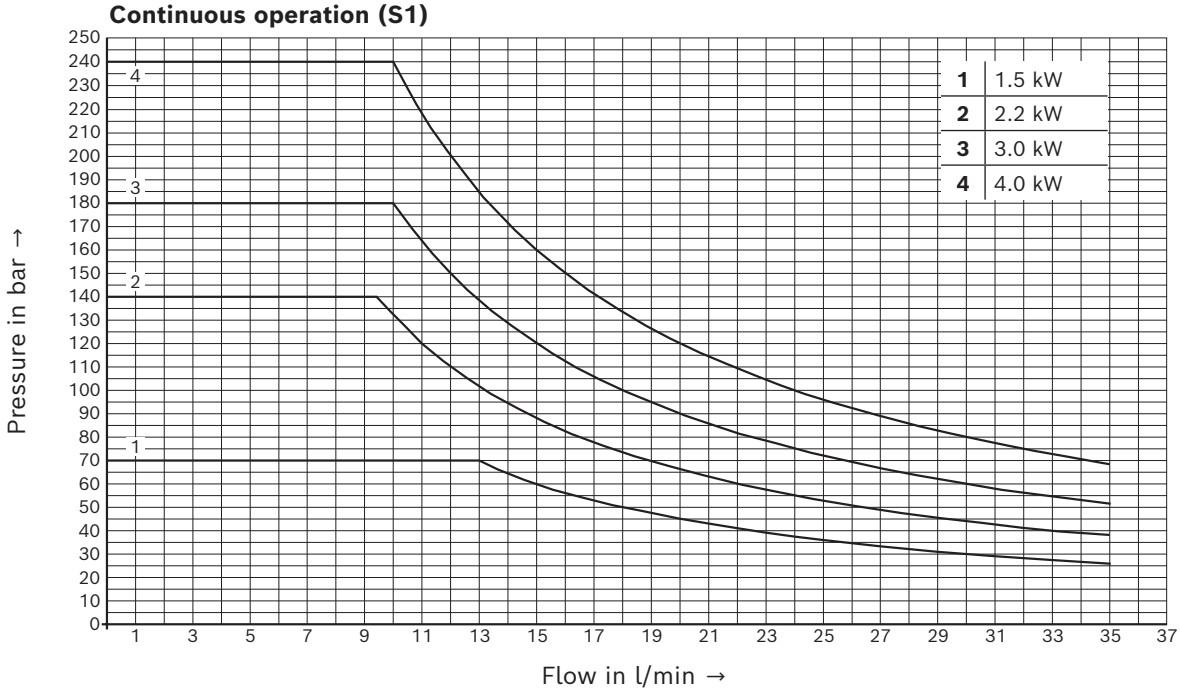
1) In case of deviating flow, please consult the product management.

☞ **Notice:**
The cooling water supply for cooling the motor and the frequency converter must always be activated before the operation. It must be ensured that the cooling water supply temperature does not fall below the dewpoint of the ambient air of the power unit.
Different coolant possible after consultation.

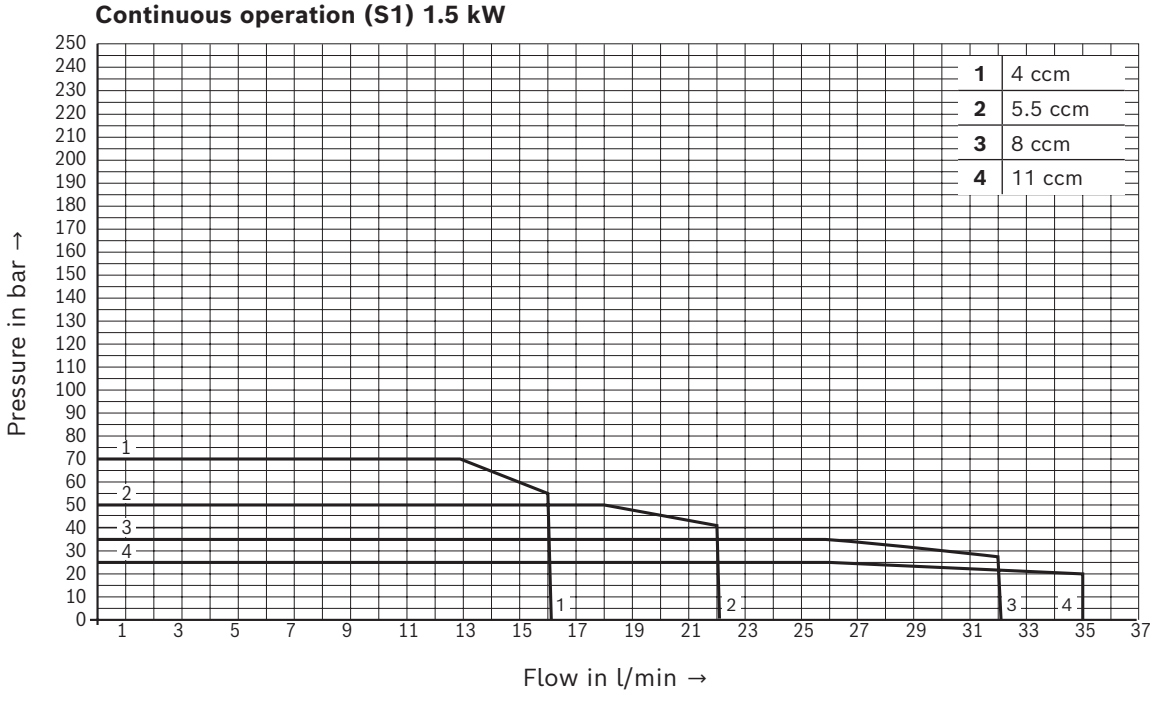
Characteristic curves

(measured with HLP32, ϑ_{oil} = 40 ±5 °C; voltage 380 V - 480 V)

Performance diagram for the project planning of the performance class



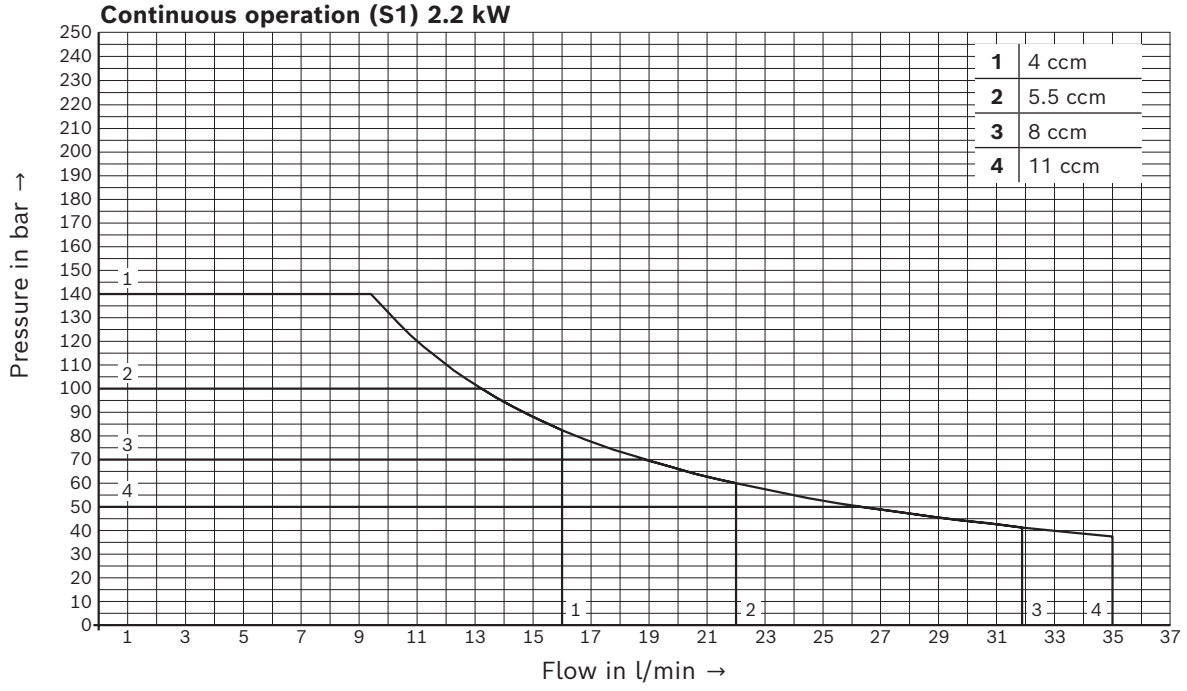
Performance diagram for selecting the pump



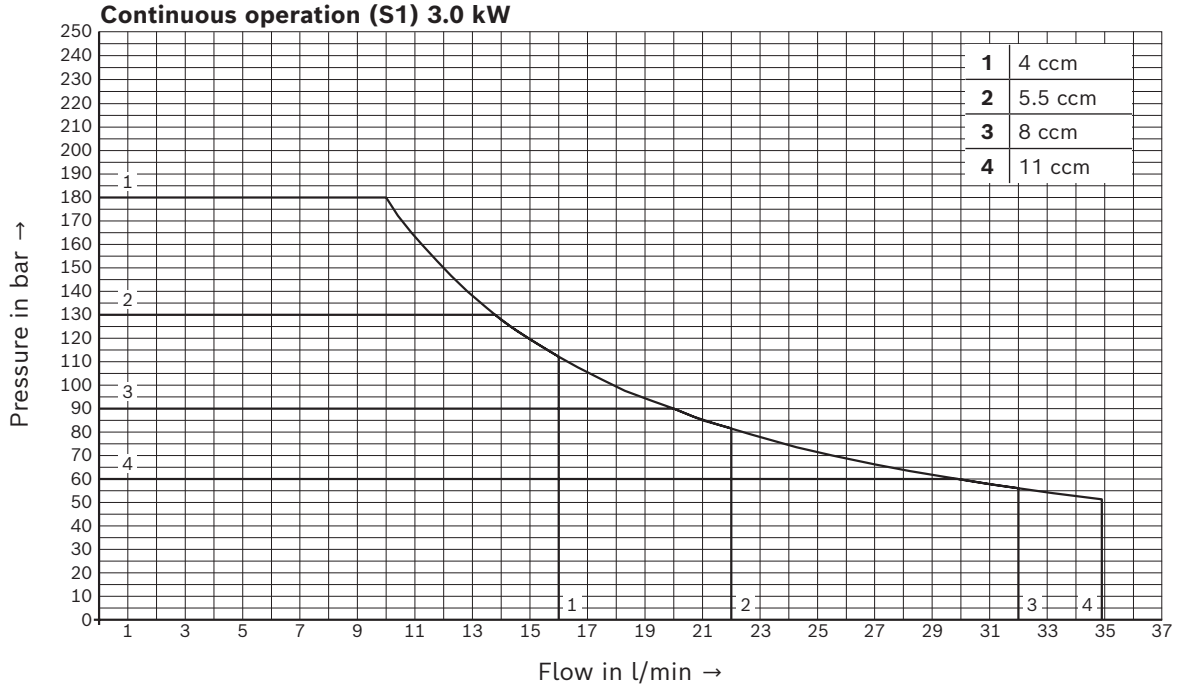
Characteristic curves

(measured with HLP32, ϑ_{oil} = 40 ±5 °C; voltage 380 V - 480 V)

Performance diagram for selecting the pump



Performance diagram for selecting the pump

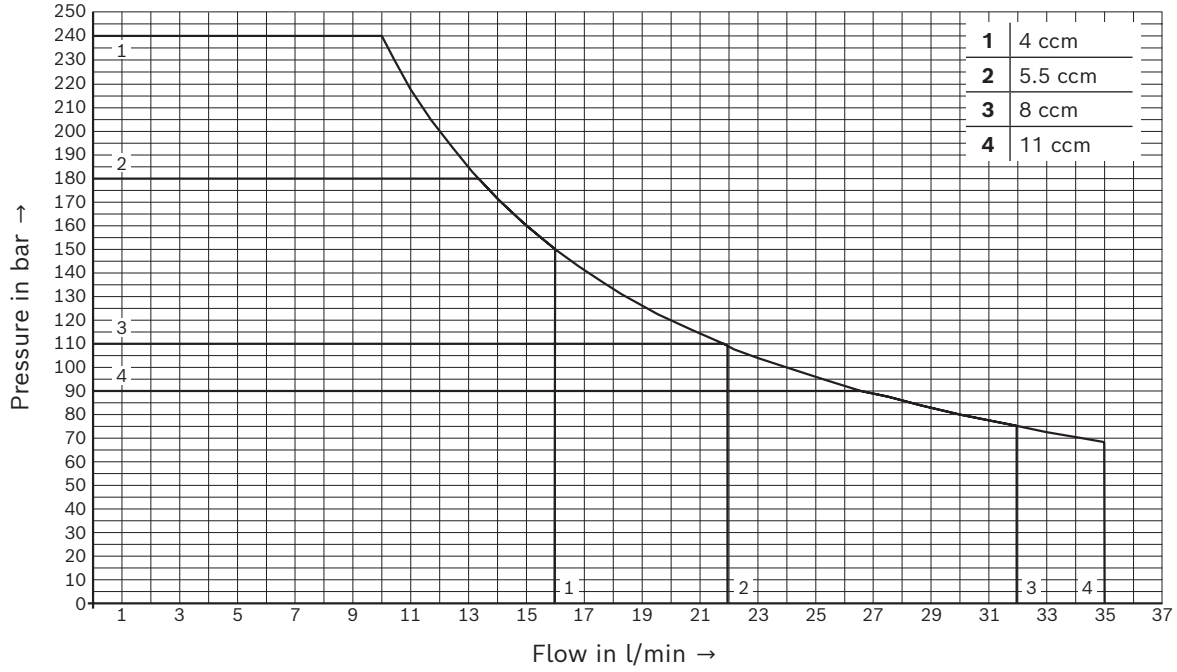


Characteristic curves

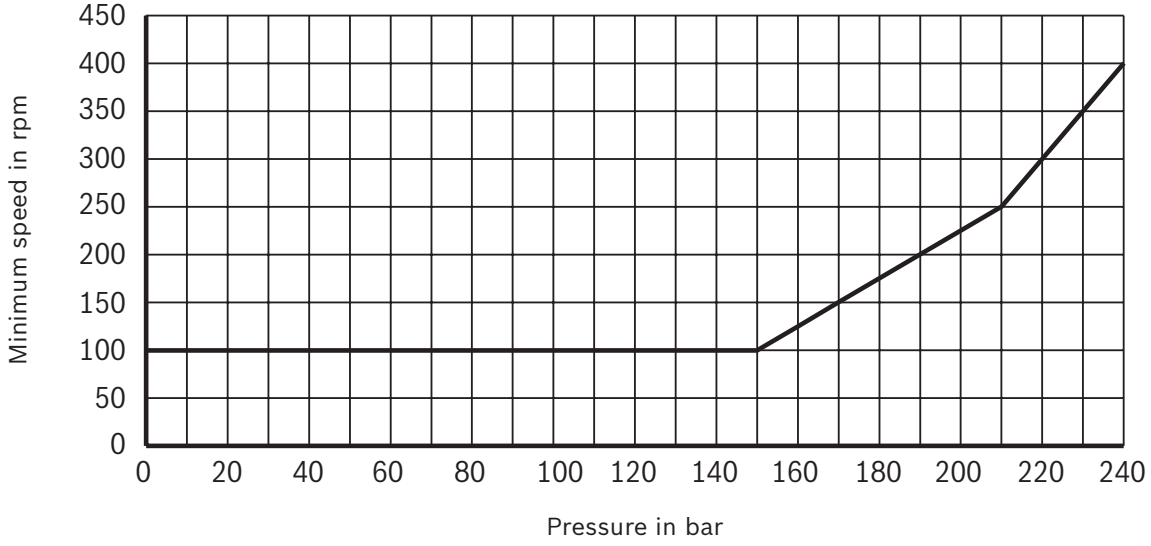
(measured with HLP32, ϑ_{oil} = 40 ±5 °C; voltage 380 V - 480 V)

Performance diagram for selecting the pump

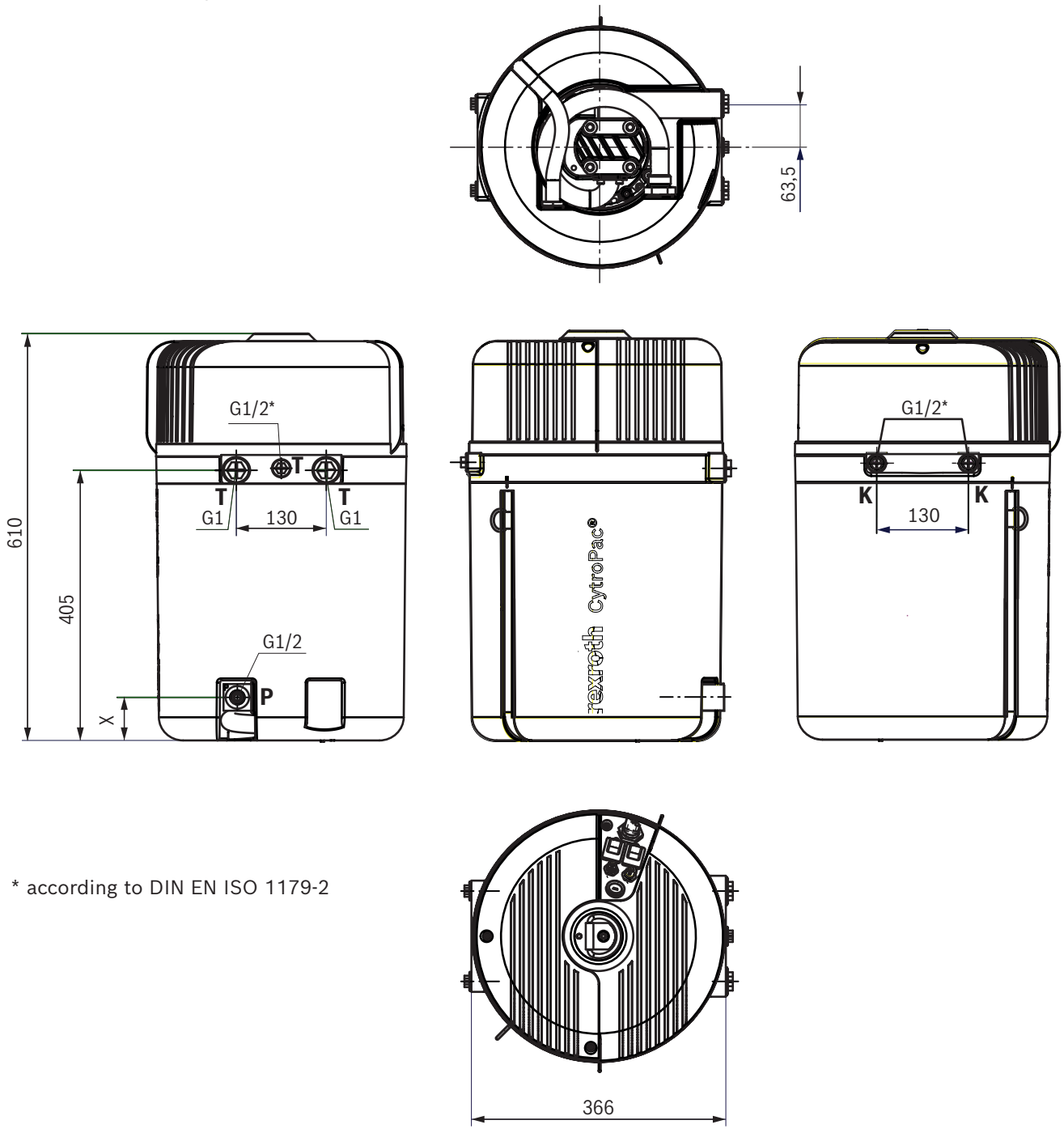
Continuous operation (S1) 4.0 kW



Minimum speed of drive unit



Dimensions:
(dimensions in mm)

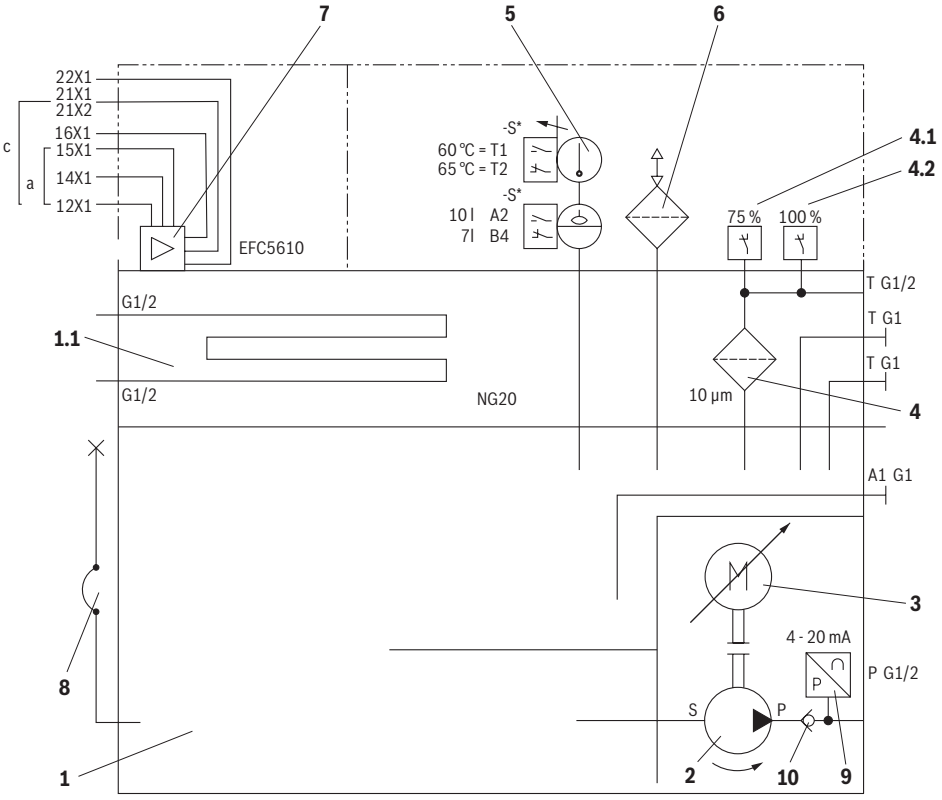


* according to DIN EN ISO 1179-2

X (port p)	Pump design
65	AS04
64	AS05
61	AS08
58	AS11

Notice:
The power unit must be set up on a level area, preferably on a damping mat.
For the fastening of the power unit, a fastening set (see Accessories) is available.
The cooling water ports K: G1/2 are to be designed with cylindrical fittings.

Circuit diagram, hydraulic



1 Oil tank

1.1 Central plate (integrated heat exchanger)
* Feed/return flow can be exchanged

2 Pump

3 Motor

4 Return flow filter

4.1 Filter contamination sensor 75%

4.2 Filter contamination sensor 100%

5 Filling level and temperature sensor

6 Breathing filter

7 Frequency converter

8 Opt. oil level check and oil drain

9 Pressure load cell

10 Check valve

11 Filling coupling (optional)

Electrical connections

Sensor technology configuration: "Basic"

12X1: Feed-in/voltage supply

15X1: 24 V interface (M12x1, 8-pole)

14X1: Mini USB service interface

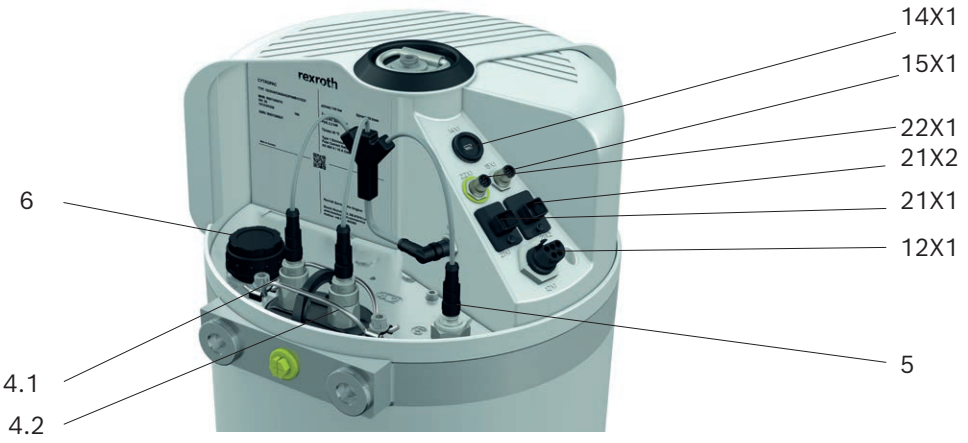
22X1: STO interface (optional)

Sensor technology configuration: "Premium" in addition:

21X1: Multi-Ethernet interface, network input

21X2: Multi-Ethernet interface, network output

22X1: STO interface (optional)



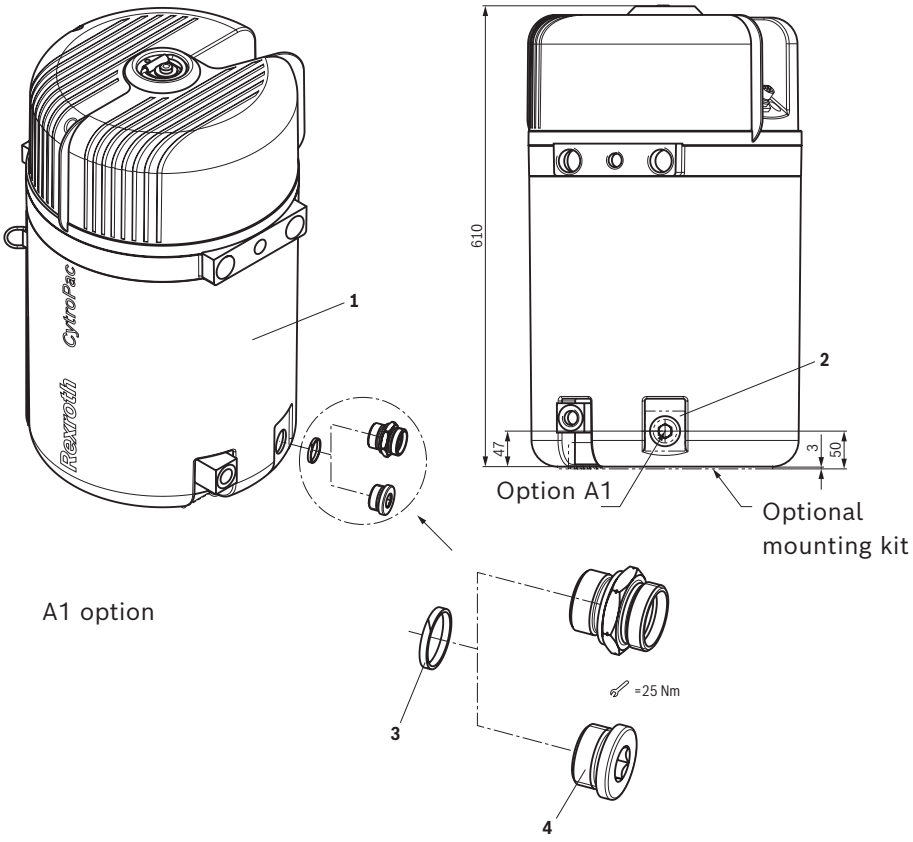
STO functionality (Safe Torque Off)
The STO function is used if separation from the mains is required to prevent an unexpected start-up. By means of this function, the energy supply of the motor can be safely interrupted.
In this case, the drive cannot generate any torque / force and thus no dangerous movements.

Prestart Control (pressure drop/excessive pressure compensation)
By means of a control signal, the drive unit is already accelerated before hydraulic actuators are connected. This reduces the collapse of pressure and you can possibly do without a hydraulic accumulator.

A1 option
With the A1 option, the CytroPac is available with another tank port. The port is designed in size G1" and is located next to the pressure port.

Sleep function
By means of the integrated pressure monitoring, the hydraulic power unit is automatically switched off if the command pressure is reached at a current flow below the set threshold value or respectively switched on if the pressure is dropping.
This increases the energy efficiency and you can, for example, realize an accumulator charging circuit without additional control signals (see R911378635 Sytronix quick guide).

Notice:
For further information, refer to the EFC operating instructions R911369847.



Pos.	Component designation	Material number
1	CYTROPAC-1X	
2	SQUARE NUT 53X53X8 / G1	R901483146
3	CENTERING RING 32X28.6X3 (G1) *PVC	R901483194
4	PLUG SCREW DCCS10001-G1A-ST+EP-&	R913011613

Sensor and interface selection

		Basic	Premium
Sensor technology	Filling level sensor early warning (10 liters)	✓	✓
	Filling level sensor shut-off (7 liters)	✓	✓
	Oil temperature sensor early warning (60 °C)	✓	✓
	Oil temperature sensor shut-off (65 °C)	✓	✓
	Filter contamination sensor early warning (75%)	✓	✓
	Filter contamination sensor shut-off (100%)	✓	✓
	Shut-off overtemperature of the drive unit	✓	✓
Analysis	Wiring and evaluation of the sensor technology by machine control necessary	✓	–
	Wiring and evaluation of the sensor technology integrated in the power unit	–	✓
	Read-out of all power unit parameters for condition monitoring	–	✓
Interfaces	Input (24 V) enable power unit	✓	✓
	Input (24 V) reset power unit	✓	✓
	USB service interface	✓	✓
	Output - power unit ready for operation (24 V); fault 0 V	✓	✓
	Output - power unit early warning (24 V)	–	✓
	Multi-Ethernet interface	–	✓
Functions	Sleep function for accumulator charging circuit	✓	✓
	Up to four parameter configurations (e.g. pressure ratings)	✓	✓
	Prestart Control	✓	✓
	Error visualization via LED strip	–	✓
	Access to and adjustment of all power unit parameters (e.g. pressure ratings, flows)	–	✓

CytroPac UL version (cULus-listed)

The CytroPac is optionally available with cULus-listing and is therefore approved for the American and Canadian market.

The main difference to the standard is the newly designed steel hood and the UL-approved power connector with 5 m line, which is included in the scope of delivery.

The CytroPac can be found in the UL database by searching with file number E492120: https://iq.ulprospector.com/info/

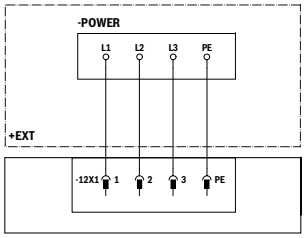
Preferred types [1)]

Material number	Denomination
R901522117	CYTROPAC-1X/20/ST2AS04/2/P/WB/1/7035/UL
R901522121	CYTROPAC-1X/20/ST2AS04/2/P/WD/1/7035/UL
R901522118	CYTROPAC-1X/20/ST2AS05/2/P/WB/1/7035/UL
R901522122	CYTROPAC-1X/20/ST2AS05/2/P/WD/1/7035/UL
R901522119	CYTROPAC-1X/20/ST2AS08/2/P/WB/1/7035/UL
R901522124	CYTROPAC-1X/20/ST2AS08/2/P/WD/1/7035/UL
R901522120	CYTROPAC-1X/20/ST2AS11/2/P/WB/1/7035/UL
R901522125	CYTROPAC-1X/20/ST2AS11/2/P/WD/1/7035/UL
R901522126	CYTROPAC-1X/20/ST4AS04/2/P/WB/1/7035/UL
R901522130	CYTROPAC-1X/20/ST4AS04/2/P/WD/1/7035/UL
R901522127	CYTROPAC-1X/20/ST4AS05/2/P/WB/1/7035/UL
R901522131	CYTROPAC-1X/20/ST4AS05/2/P/WD/1/7035/UL
R901522128	CYTROPAC-1X/20/ST4AS08/2/P/WB/1/7035/UL
R901522132	CYTROPAC-1X/20/ST4AS08/2/P/WD/1/7035/UL
R901522129	CYTROPAC-1X/20/ST4AS11/2/P/WB/1/7035/UL
R901522133	CYTROPAC-1X/20/ST4AS11/2/P/WD/1/7035/UL

[1)] Individual configurations can be created on request from a minimum order quantity of 5 units.

Electrical connections

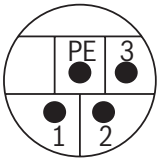
12X1: Feed-in / voltage supply



Voltage	3P 380 V ... 480 VAC (-15% / +10%)
Frequency	50/60 Hz
Assignment	L1/L2/L3/PE
Rotating field	Rotating field right
Pre-fuse on the customer side	Power 1.5 kW → maximum 10 A Power 2.2 kW → maximum 16 A Power 3.0 kW → maximum 20 A Power 4.0 kW → maximum 20 A

Feed-in of voltage supply including pre-fuse and mains contactor are to be realized by the customer.

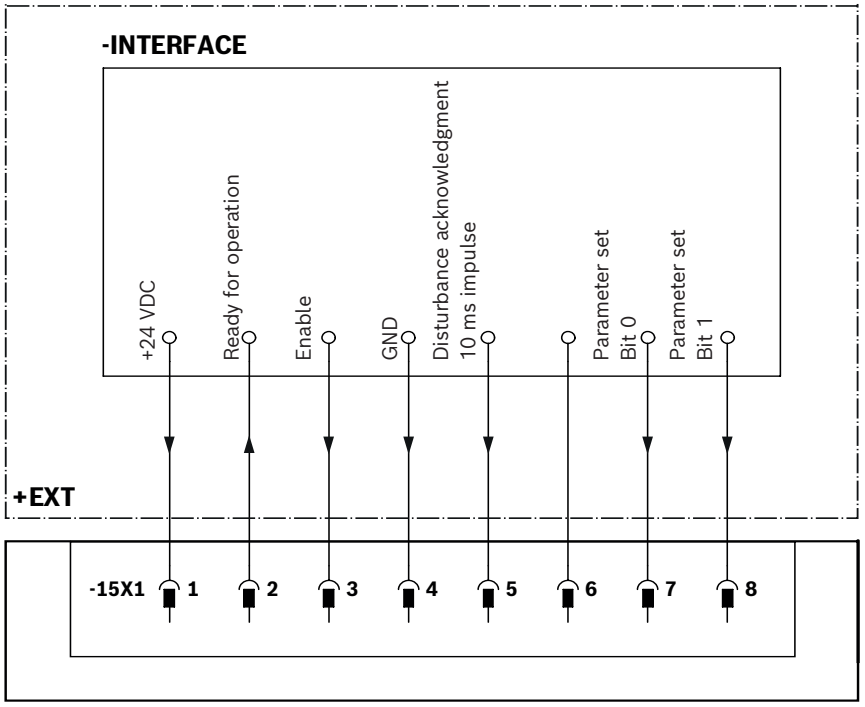
12X1: Connector



Pin	Function
1	L1
2	L2
3	L3

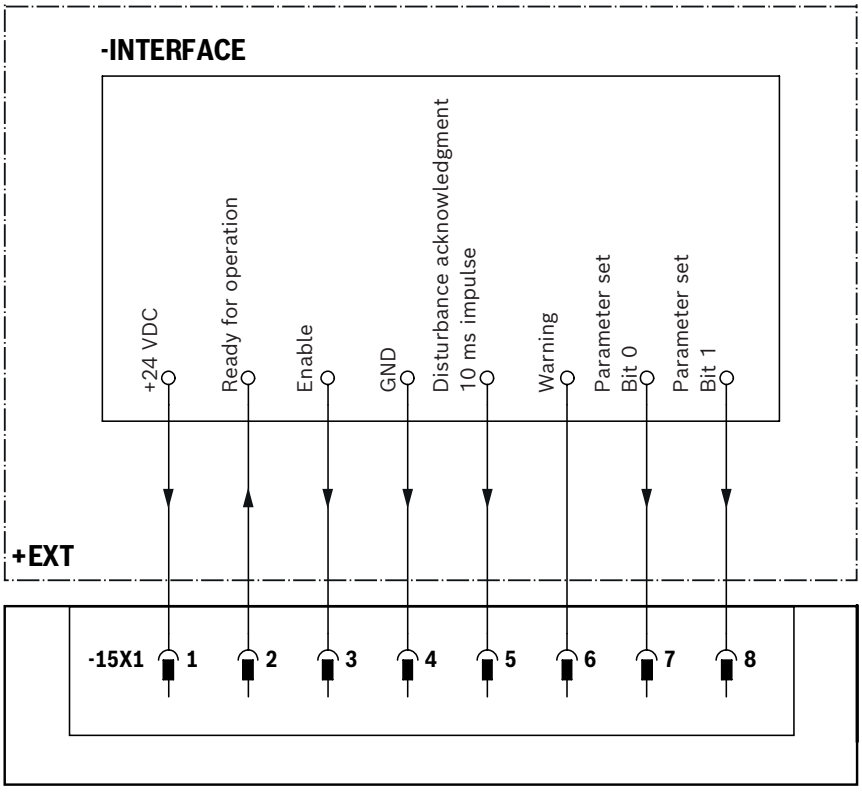
14X1: USB to the frequency converter

15X1: 24 V interface (Basic)



Note:
If no Ready for operation → then Fault

15X1: 24 V interface (Premium)



☞ **Note:**
If no Ready for operation → then Fault

15X1: 24 V interface (Basic and Premium)

(Connector)
M12x1; 8-pole,
A-coded

Pin	Function	Basic	Premium
1	Voltage supply 24 VDC	✓	✓
2	Ready for operation	✓	*
3	Enable	✓	*
4	Ground	✓	✓
5	Fault acknowledgment	✓	*
6	Warning	–	*
7	Selection of pressure command value bit 0	✓	*
8	Selection of pressure command value bit 1	✓	*

***** These functions can be realized via fieldbus.

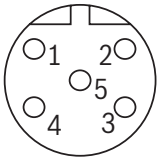
Pin 8 bit 1	Pin 7 bit 0		Parameter	Designation
0	0	Parameter set 1	F1.05	Pressure command digital setting 0
0	1	Parameter set 2	F1.06	Pressure command digital setting 1
1	0	Parameter set 3	F1.07	Pressure command digital setting 2
1	1	Parameter set 4	F1.08	Pressure command digital setting 3

☞ **Note:**
In the "Premium" configuration level, the sensors are wired with the integrated control and evaluated at the factory.
The sensor conditions are signaled via the integrated LED strip and can be read out via the USB service interface.
Changing the operating pressure:
In the Basic version, up to four pressure ratings can be set.
The settings are described accordingly in the operating instructions R.51055-B CytroPac.

21X1 / 21X2: Multi-Ethernet interface

Device socket IP67 Push-Pull

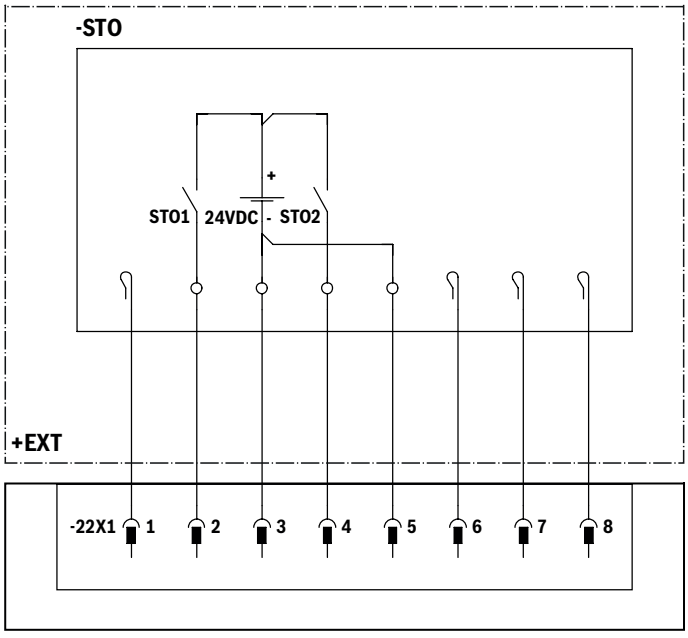
21X1 / 21X2: Alternative version "E" (Premium-M12)



Pin	Function
1	TxD +
2	RxD +
3	TxD +
4	RxD +
5	Not used

M12x1; 4-pole, D-coded
(bushing)

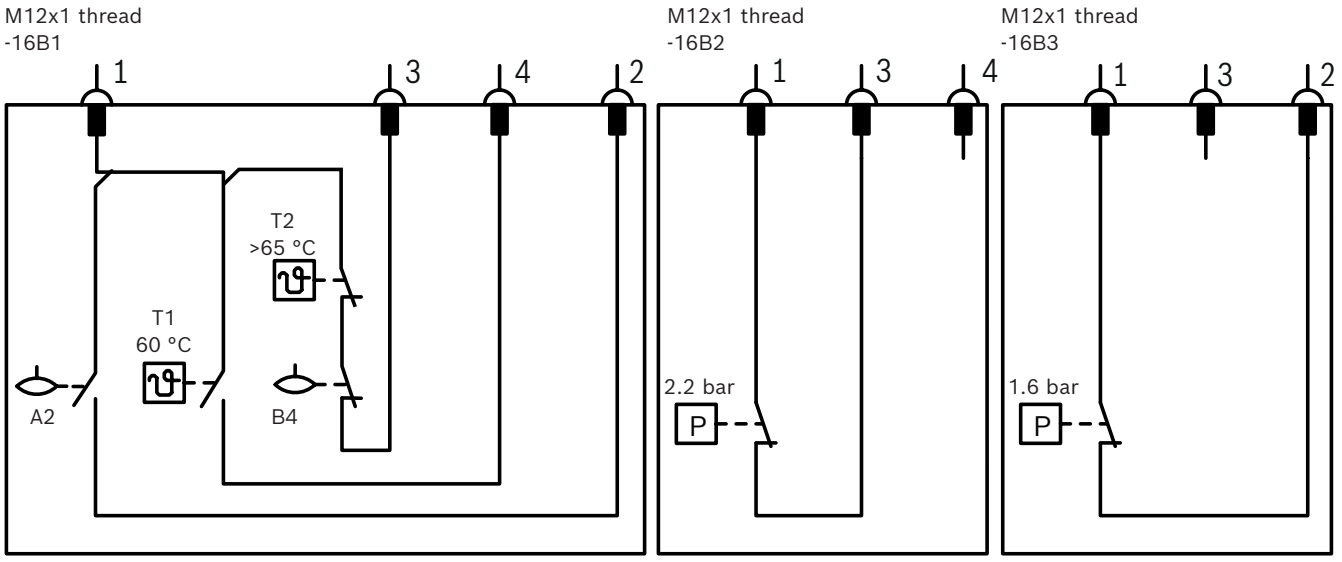
22X1: Safe Torque OFF (STO)



(Connector)
M12x1; 8-pole,
A-coded

Pin	Function
1	Not used (NC)
2	STO 1 +
3	STO 1 -
4	STO 2 +
5	STO 2 -
6	Not used (NC)
7	Not used (NC)
8	Not used (NC)

Filling level, temperature and filter contamination sensor



Filling level/
temperature sensor

Filter contamination
sensor 100%

Filter contamination
sensor 75%

Notice:
In the "Basic" configuration, the sensors have to be wired and evaluated on the customer side.

Notice:
Circuit diagram representation in the ready for operation state, without filling level and temperature warnings.

Filling level/temperature sensor

Pin	Function
1	Voltage supply 24 VDC
2	Pre-warning level
3	Switch-off level and temperature
4	Early warning temperature

M12x1; 4-pole, A-coded
(Connector)

Filter contamination sensor 100%

Pin	Function
1	Voltage supply 24 VDC
3	Early warning 100% at 2.2 bar

M12x1; 4-pole, A-coded
(Connector)

Filter contamination sensor 75%

Pin	Function
1	Voltage supply 24 VDC
2	Pre-warning 75% at 1.6 bar

M12x1; 4-pole, A-coded
(Connector)

Notice:
Use only suitable connectors and/or lines with IP67 rating.
Optionally available, see chapter Accessories on page 21

Accessories (separate order)

Electric

12X1	Voltage supply		
R901460889	MATING CONNECTOR 0DEG *OPT.CYTROPA&		Straight power connector without cable (including manual unlocking) **mandatory for operation**
R901477770	MATING CONNECTOR 99.401.3537.7		Straight power connector with cable, open end; length: 2 m
R901533758	MATING CONNECTOR 99.402.3537.7 UL		Straight power connector with cable, open end; length: 5 m
R901477936	MATING CONNECTOR 10M CABLE OPEN END 9&		Straight power connector with cable, open end; length: 10 m
R901460842	MANUAL OPERATION RST20/25 SW		Manual unlocking for power connector (for tool-free disconnection)

14X1	USB - service interface		
R901544088	USB CABLE USB 2.0 A/MINI-B 5 M&		USB cable with ferrite core, A/Mini - B; length: 5 m **USB mobile phone or charging cables are not suitable and susceptible to fault!**

15X1 / 22X1	Enable customer interface / STO		
R913002121	MATING CONNECTOR	8P 7000-17-2910500	Straight bush, shielded 8-pole M12, with free PUR line end; length: 5 m (8x0.25 mm^2 / d=7.0 mm); 24 VAC/DC, max. 1.5 A, IP67
R901467712	MATING CONNECTOR	7000-17041-3771000	Straight bush with cable support sleeve 8-pole M12, with free PUR line end; length: 10 m (8x0.34 mm^2 / d=6.2 mm); 30 VAC/DC, max. 2 A, IP65 and IP67 in stretched and screwed condition
R901525292	CONTACT JUMPER	CYTROPAC-STO-DEACTIVE&	Contact jumper for port 22X1 to be able to deactivate the STO functionality

21X1 / 21X2	Multi-Ethernet interface[1)]		
R901469479	CONNECTOR	IE-PS-V04P-RJ45-FH	Connector without cable
R901471844	NETWORK CABLE	RJ45/IP67-RJ45 5M	Length: 5 m; certificate: CAT 6A /RoHS
R901471845	NETWORK CABLE	RJ45/IP67-RJ45 10M	Length: 10 m; certificate: CAT 6A /RoHS
R901492613	NETWORK CABLE	RJ45/IP67-RJ45 20M	Length: 20 m; certificate: CAT 6A /RoHS
R901559448	NETWORK CABLE	M12-D-IP67/RJ45 5M	CAT5, 4-pole, PUR, shielded, straight connector M12 / IP67, coding: D, on straight connector RJ45 / IP20; length: 5 m
R901559450	NETWORK CABLE	M12-D-IP67/RJ45 10M	CAT5, 4-pole, PUR, shielded, straight connector M12 / IP67, coding: D, on straight connector RJ45 / IP20; length: 10 m
R901559451	NETWORK CABLE	M12-D-IP67/RJ45 20M	CAT5, 4-pole, PUR, shielded, straight connector M12 / IP67, coding: D, on straight connector RJ45 / IP20; length: 20 m

	General		
R901451741	CABLE SET	K160601NNZ	Optional cable set for Basic version to connect the sensors for filter contamination (early warning, shut-off) and level and temperature with one supply line

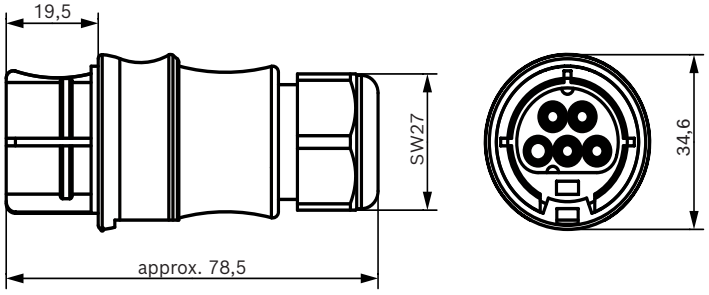
1) We recommend using the Multi-Ethernet cable provided by Bosch Rexroth with regard to IP67 rating.

Accessories (separate order)

	Mounting kit		
Mechanical	R901460890	MOUNTING KIT BASE285 *OPT CYTROPAC	Foot mounting assembly kit
	Filling device		
Mechanical	R901460916	FUEL UNIT MD-012-2*OPT.CYTROPAC	Filling device assembly kit
Mechanical	R900988089	COUPLING SOCKET MD-012-0-WR521-19-1	Counterpart quick-release coupling
	Connection accessories		
Mechanical	R901460961	CONNECTION ACCESSORIES HYDR.CON*OPT. CYTROPAC	Oil and water fitting assembly kit
	Oil pan		
Mechanical	R920062334	OIL PAN CYTROPAC - 600X 500X 105-ES	Optional oil pan (stainless steel according to WHG)
	Filter element (return flow filter)		
Mechanical	R928035258	35.0035CP H10XL-R00-0-M	
	Filter element (air filter)		
Mechanical	R901470062	AIR FILTER TMDF/1/BRC	Standard
Mechanical	R901471242	AIR FILTER TMDF/1/BR	Air filter without filling strainer
	Pressure limitation unit		
Mechanical	R901519129	PRESSURE LIMITATION UNIT 200BAR/2900PSI - CYT&	Set pressure up to 200 bar
Mechanical	R901519130	PRESSURE LIMITATION UNIT 315BAR/4568PSI - CYT&	Set pressure up to 315 bar

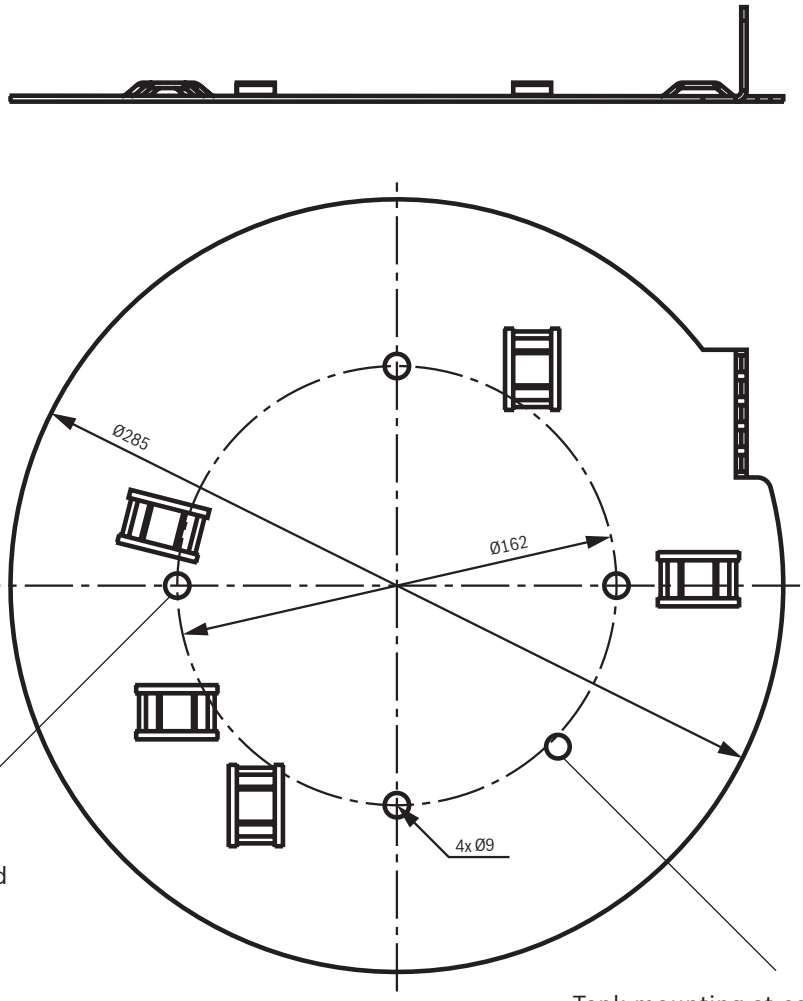
Power connector (12X1)

Material number	Denomination
R901460889	MATING CONNECTOR 0DEG *OPT.CYTROPAC



Foot mounting

Material number	Denomination	
R901460890	MOUNTING KIT BASE285 *OPT.CYTROPAC	Foot mounting assembly kit

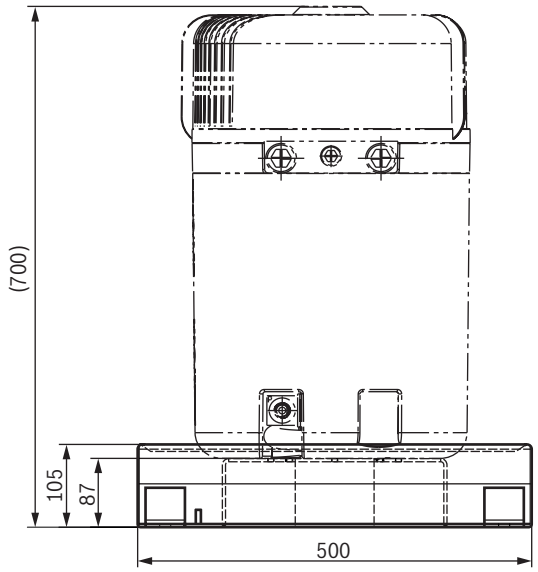


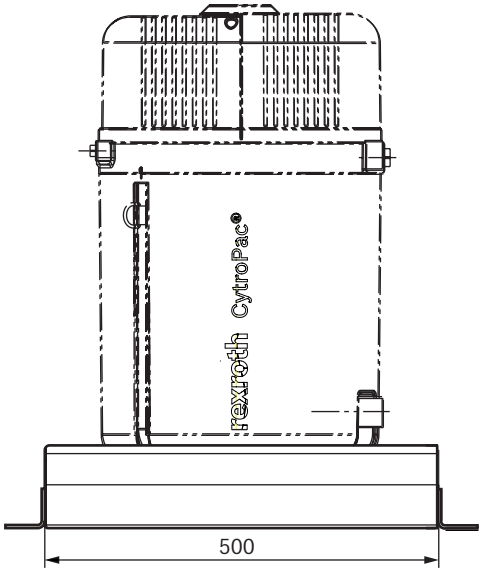
Foot mounting with 4x hexagon socket head cap screw M8 x 20 mm (not included in the scope of delivery)

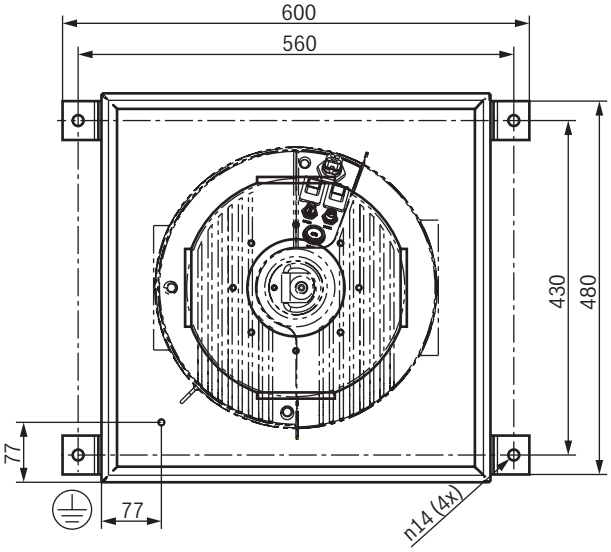
Tank mounting at central plate with 1x hexagon socket head cap screw M6 x 430 mm (not included in the scope of delivery)

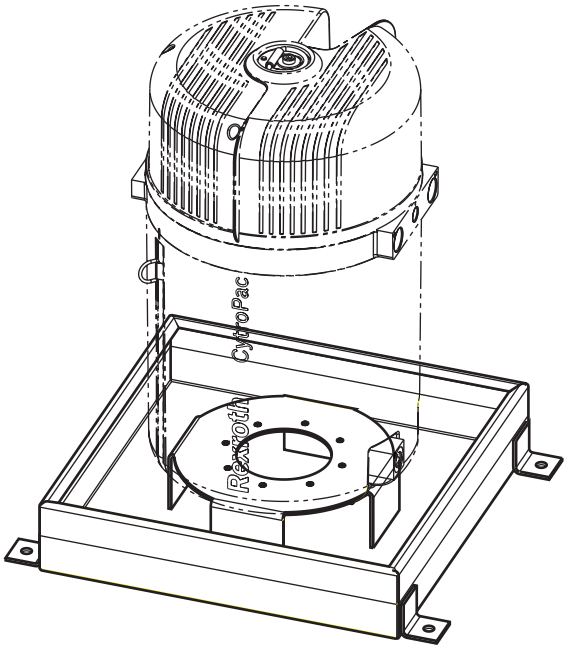
Oil pan

Material number	Denomination	
R920062334	OIL PAN CYTROPAC - 600X 500X 105-ES	Optional oil pan









Pressure limitation (optional)

Material number	Denomination
R901519129	PRESSURE LIMITATION UNIT 200BAR/2900PSI - CYT&
R901519130	PRESSURE LIMITATION UNIT 315BAR/4568PSI - CYT&

Contents assembly kit:
- Pressure relief valve DBDS (R. 25402)
- Minimess connection
- Hose
- Fittings

Technical data

Hydraulic		
Size	NG	6
Set pressure	bar	up to 200 (R901519129)
	bar	up to 315 (R901519130)
Port P		16S

Project planning information

- It has to be ensured before the commissioning that on the customer side, a pressure relief valve (set pressure 10% over nominal pressure, however at most 260 bar) has been installed in the pressure line.
- The feed-in and 24 V supply must be secured on the customer side, as described on page 17.
- For the cooling of the motor and the frequency converter, the power unit must imperatively be connected to cooling water.
- The connection of the power unit to the machine must be realized by means of hydraulic hoses (no rigid pipeline admissible).
- It must be ensured on the customer side that the cooling water supply temperature does not fall below the dewpoint of the ambient air of the power unit.
- The maximum operating pressure of 240 bar must not be exceeded.

Further information

- Hydraulic fluids on mineral oil basis
- Environmentally compatible hydraulic fluids
- Selection of filters
- Information on available spare parts
- EFC operating instructions
- Quick guide FcP 5020