RE 51057
Edition: 2024-01
Replaces: 2023-05

rexroth
A Bosch Company

Hydraulic power unit

CytroBox

- Component series 1X
- Maximum operating pressure 315 bar
- Maximum flow 160 l/min

Features

- Integrated drive controller
- Power up to 30 kW with identical frame size and interfaces
- Servo drive
- Reduced hydraulic fluid volume due to degassing-optimized tank
- Optional set-up of different hydraulic controls
- STO (Safe Torque Off)
- Acoustically optimized
- Easy setup via wizard (plug & play)

Contents

Ordering code

01	02		03	04	05		06	07		08	09		10	11		12	13
CYTROBOX	**–**		**/**		**A**		**/**			**/**	**00**		**/**			**/**		*****

01	Hydraulic power unit	**CYTROBOX**

Version

02	Standard	**N**
	Functionality extension [1)]	**F**

Tank version

03	Oscillating volume maximum 50 liters (standard)	**A**
	Standard with additional connection socket for tank expansion	**B**

Control cabinet

04	Position "top" (standard)	**A**

Cooling unit

05	Motor and hydraulic system water-cooled; control cabinet air-cooled (standard)	**A**
	Standard with water valve (electric); Control cabinet air-cooled (standard)	**B**
	Standard with circulation circuit (2nd plate heat exchanger for dirty water supply); Control cabinet air-cooled (standard)	**D**
	Standard with compressor cooler 4 kw (oil-air); Control cabinet air-cooled (standard)	**F**

Motor-pump group

06	A10FZO010 / MS2N07-E0BQL	**AA**
	A10FZO016 / MS2N07-E0BQL	**BA**
	A10FZO032 / MS2N10-F0BHL	**CB**
	A10FZO045 / MS2N10-F0BHL	**DB**
	A10FZO063 / MS2N10-F0BHL	**EB**
	A10VZO018 / MS2N07-E0BQL	**FA**
	A10VZO045 / MS2N10-F0BHL	**GB**

Converter

07	HCS03-0070	**A**
	HCS03-0100	**B**
	HCS03-0150	**C**

08	Without	**00**

Drive option

09	Standard	**0**
	Speed increase for pressure-holding operation (permissible up to a system pressure of 210 bar, not required in conjunction with particle sensor)	**H**

Oil cooling

10	Without (standard and with compressor coolers)	**0**
	Cooling power 4 kW	**A**
	Cooling power 10 kW	**B**

Oil treatment

11	Pressure filter (standard 10 µm)	**A**
	Pressure filter and return flow filter	**B**

Sensor technology

12	Standard sensor package	**AAA**
	For more sensor packages, see selection table on page 5	**e.g. AAE**

13	Further details in the plain text	*****

Ordering code

CytroBox selection table

Motor-pump group in cm³	Converter in A (max)	Oil cooling	Sensor package	Denomination	Material number
10	70	without	AAA	**CYTROBOX-N/AAA/AAA/000/0A/AAA**	R901600033
			AAB	**CYTROBOX-N/AAA/AAA/000/0A/AAB**	R901600001
			ABG	**CYTROBOX-N/AAA/AAA/000/0A/ABG**	R901600068
		4 kW	AAA	**CYTROBOX-N/AAA/AAA/000/AA/AAA**	R901600041
			AAB	**CYTROBOX-N/AAA/AAA/000/AA/AAB**	R901600003
			ABG	**CYTROBOX-N/AAA/AAA/000/AA/ABG**	R901600084
		10 kW	AAA	**CYTROBOX-N/AAA/AAA/000/BA/AAA**	R901600060
			AAB	**CYTROBOX-N/AAA/AAA/000/BA/AAB**	R901600092
			ABG	**CYTROBOX-N/AAA/AAA/000/BA/ABG**	R901600069
16	70	without	AAA	**CYTROBOX-N/AAA/BAA/000/0A/AAA**	R901600034
			AAB	**CYTROBOX-N/AAA/BAA/000/0A/AAB**	R901600005
			ABG	**CYTROBOX-N/AAA/BAA/000/0A/ABG**	R901600070
		4 kW	AAA	**CYTROBOX-N/AAA/BAA/000/AA/AAA**	R901600042
			AAB	**CYTROBOX-N/AAA/BAA/000/AA/AAB**	R901600007
			ABG	**CYTROBOX-N/AAA/BAA/000/AA/ABG**	R901600085
		10 kW	AAA	**CYTROBOX-N/AAA/BAA/000/BA/AAA**	R901600061
			AAB	**CYTROBOX-N/AAA/BAA/000/BA/AAB**	R901600093
			ABG	**CYTROBOX-N/AAA/BAA/000/BA/ABG**	R901600071
32	100	without	AAA	**CYTROBOX-N/AAA/CBB/000/0A/AAA**	R901600035
			AAB	**CYTROBOX-N/AAA/CBB/000/0A/AAB**	R901600009
			ABG	**CYTROBOX-N/AAA/CBB/000/0A/ABG**	R901600072
		4 kW	AAA	**CYTROBOX-N/AAA/CBB/000/AA/AAA**	R901600043
			AAB	**CYTROBOX-N/AAA/CBB/000/AA/AAB**	R901600011
			ABG	**CYTROBOX-N/AAA/CBB/000/AA/ABG**	R901600086
		10 kW	AAA	**CYTROBOX-N/AAA/CBB/000/BA/AAA**	R901600062
			AAB	**CYTROBOX-N/AAA/CBB/000/BA/AAB**	R901600094
			ABG	**CYTROBOX-N/AAA/CBB/000/BA/ABG**	R901600073
32	150	without	AAA	**CYTROBOX-N/AAA/CBC/000/0A/AAA**	R901600036
			AAB	**CYTROBOX-N/AAA/CBC/000/0A/AAB**	R901600013
			ABG	**CYTROBOX-N/AAA/CBC/000/0A/ABG**	R901600074
		4 kW	AAA	**CYTROBOX-N/AAA/CBC/000/AA/AAA**	R901600044
			AAB	**CYTROBOX-N/AAA/CBC/000/AA/AAB**	R901600015
			ABG	**CYTROBOX-N/AAA/CBC/000/AA/ABG**	R901600087
		10 kW	AAA	**CYTROBOX-N/AAA/CBC/000/BA/AAA**	R901600063
			AAB	**CYTROBOX-N/AAA/CBC/000/BA/AAB**	R901600095
			ABG	**CYTROBOX-N/AAA/CBC/000/BA/ABG**	R901600075

[1] Marking for individual solutions (e.g. mounted IH20 control plate) which have specific and amending documentation.

Ordering code

Motor-pump group in cm³	**Converter** in A (max)	**Oil cooling**	**Sensor package**	**Denomination**	**Material number**
45	100	without	AAA	**CYTROBOX-N/AAA/DBB/000/0A/AAA**	R901600037
			AAB	**CYTROBOX-N/AAA/DBB/000/0A/AAB**	R901600017
			ABG	**CYTROBOX-N/AAA/DBB/000/0A/ABG**	R901600076
		4 kW	AAA	**CYTROBOX-N/AAA/DBB/000/AA/AAA**	R901600045
			AAB	**CYTROBOX-N/AAA/DBB/000/AA/AAB**	R901600019
			ABG	**CYTROBOX-N/AAA/DBB/000/AA/ABG**	R901600088
		10 kW	AAA	**CYTROBOX-N/AAA/DBB/000/BA/AAA**	R901600064
			AAB	**CYTROBOX-N/AAA/DBB/000/BA/AAB**	R901600096
			ABG	**CYTROBOX-N/AAA/DBB/000/BA/ABG**	R901600077
45	150	without	AAA	**CYTROBOX-N/AAA/DBC/000/0A/AAA**	R901600038
			AAB	**CYTROBOX-N/AAA/DBC/000/0A/AAB**	R901600021
			ABG	**CYTROBOX-N/AAA/DBC/000/0A/ABG**	R901600078
		4 kW	AAA	**CYTROBOX-N/AAA/DBC/000/AA/AAA**	R901600046
			AAB	**CYTROBOX-N/AAA/DBC/000/AA/AAB**	R901600023
			ABG	**CYTROBOX-N/AAA/DBC/000/AA/ABG**	R901600089
		10 kW	AAA	**CYTROBOX-N/AAA/DBC/000/BA/AAA**	R901600065
			AAB	**CYTROBOX-N/AAA/DBC/000/BA/AAB**	R901600097
			ABG	**CYTROBOX-N/AAA/DBC/000/BA/ABG**	R901600079
63	100	without	AAA	**CYTROBOX-N/AAA/EBB/000/0A/AAA**	R901600039
			AAB	**CYTROBOX-N/AAA/EBB/000/0A/AAB**	R901600025
			ABG	**CYTROBOX-N/AAA/EBB/000/0A/ABG**	R901600080
		4 kW	AAA	**CYTROBOX-N/AAA/EBB/000/AA/AAA**	R901600047
			AAB	**CYTROBOX-N/AAA/EBB/000/AA/AAB**	R901600027
			ABG	**CYTROBOX-N/AAA/EBB/000/AA/ABG**	R901600090
		10 kW	AAA	**CYTROBOX-N/AAA/EBB/000/BA/AAA**	R901600066
			AAB	**CYTROBOX-N/AAA/EBB/000/BA/AAB**	R901600098
			ABG	**CYTROBOX-N/AAA/EBB/000/BA/ABG**	R901600081
63	150	without	AAA	**CYTROBOX-N/AAA/EBC/000/0A/AAA**	R901600040
			AAB	**CYTROBOX-N/AAA/EBC/000/0A/AAB**	R901600029
			ABG	**CYTROBOX-N/AAA/EBC/000/0A/ABG**	R901600082
		4 kW	AAA	**CYTROBOX-N/AAA/EBC/000/AA/AAA**	R901600048
			AAB	**CYTROBOX-N/AAA/EBC/000/AA/AAB**	R901600031
			ABG	**CYTROBOX-N/AAA/EBC/000/AA/ABG**	R901600091
		10 kW	AAA	**CYTROBOX-N/AAA/EBC/000/BA/AAA**	R901600067
			AAB	**CYTROBOX-N/AAA/EBC/000/BA/AAB**	R901600099
			ABG	**CYTROBOX-N/AAA/EBC/000/BA/ABG**	R901600083

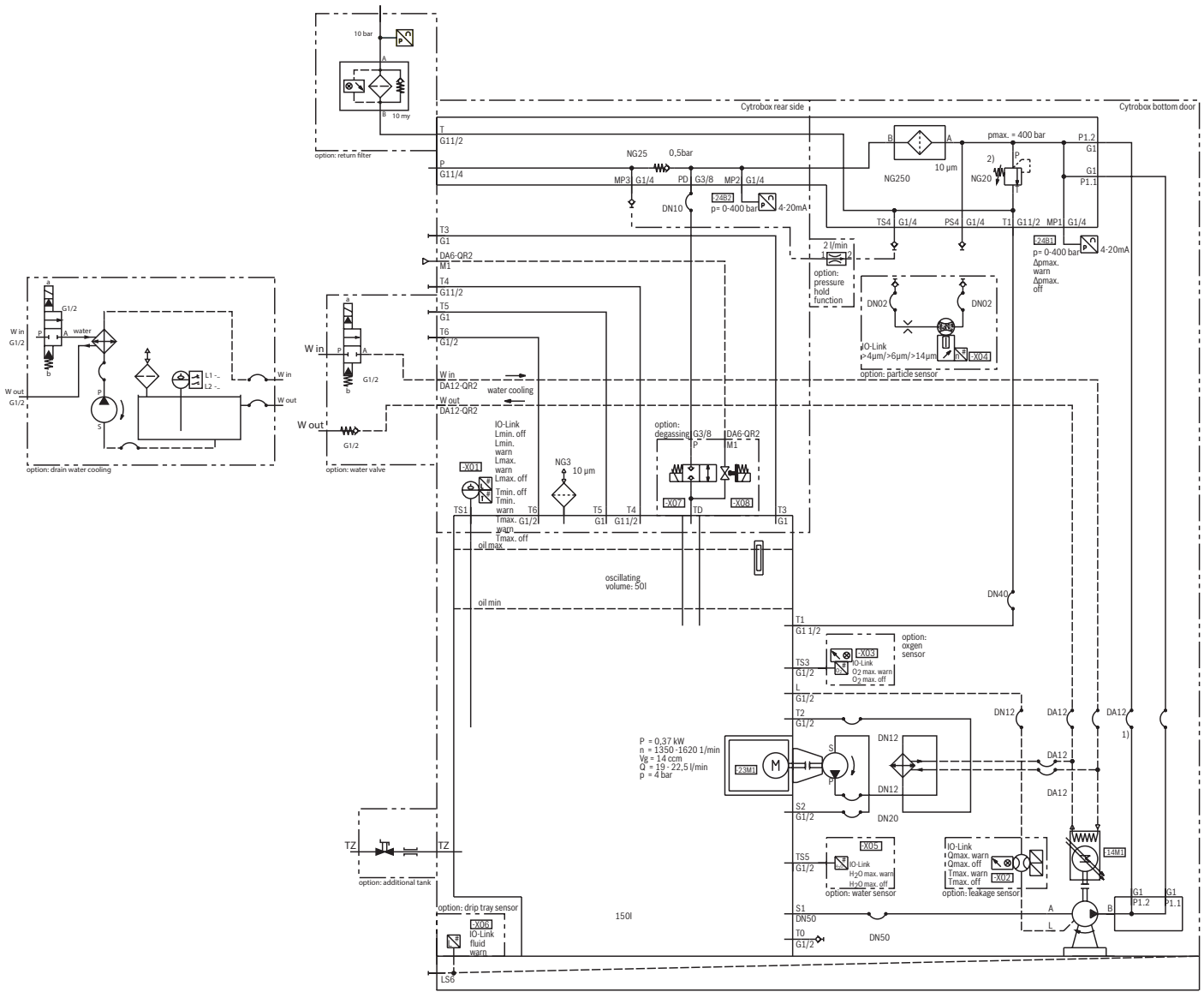
Ordering codes for sensors

Sensor selection table

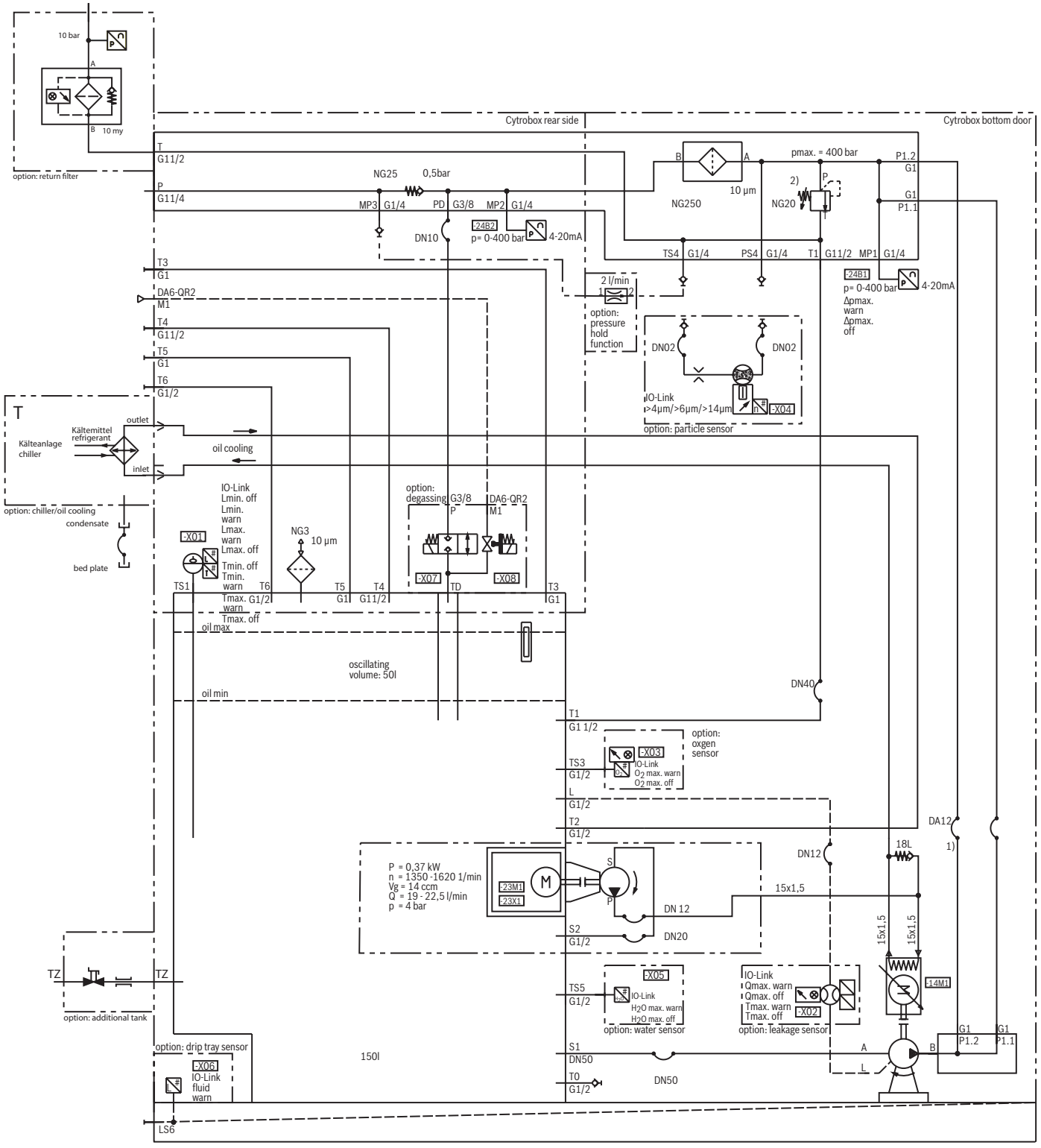
Type	Standard				Optional					
	Control pressure	Tank filling level	Tank temperature	Pressure filter contamination	Pump leakage flow	Pump leakage temperature	Water content in tank	Dissolved air share in tank	Dirt particles in tank	Oil pan leakage
AAA	✓	✓	✓	✓	–	–	–	–	–	–
AAB	✓	✓	✓	✓	✓	✓	–	–	–	–
AAC	✓	✓	✓	✓	–	–	✓	–	–	–
AAD	✓	✓	✓	✓	✓	✓	✓	–	–	–
AAE	✓	✓	✓	✓	–	–	–	✓	–	–
AAF	✓	✓	✓	✓	✓	✓	–	✓	–	–
AAG	✓	✓	✓	✓	–	–	✓	✓	–	–
AAH	✓	✓	✓	✓	✓	✓	✓	✓	–	–
AAI	✓	✓	✓	✓	–	–	–	–	✓	–
AAJ	✓	✓	✓	✓	✓	✓	–	–	✓	–
AAK	✓	✓	✓	✓	–	–	✓	–	✓	–
AAL	✓	✓	✓	✓	✓	✓	✓		✓	–
AAM	✓	✓	✓	✓	–	–	–	✓	✓	–
AAN	✓	✓	✓	✓	✓	✓	–	✓	✓	–
AAO	✓	✓	✓	✓	–	–	✓	✓	✓	–
AAP	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
AAR	✓	✓	✓	✓	–	–	–	–	–	✓
AAS	✓	✓	✓	✓	✓	✓	–	–	–	✓
AAT	✓	✓	✓	✓	–	–	✓	–	–	✓
AAU	✓	✓	✓	✓	✓	✓	✓	–	–	✓
AAV	✓	✓	✓	✓	–	–	–	✓	–	✓
AAW	✓	✓	✓	✓	✓	✓	–	✓	–	✓
AAX	✓	✓	✓	✓	–	–	✓	✓	–	✓
AAY	✓	✓	✓	✓	✓	✓	✓	✓	–	✓
AAZ	✓	✓	✓	✓	–	–	–	–	✓	✓
ABA	✓	✓	✓	✓	✓	✓	–	–	✓	✓
ABB	✓	✓	✓	✓	–	–	✓	–	✓	✓
ABC	✓	✓	✓	✓	✓	✓	✓	–	✓	✓
ABD	✓	✓	✓	✓	–	–	–	✓	✓	✓
ABE	✓	✓	✓	✓	✓	✓	–	✓	✓	✓
ABF	✓	✓	✓	✓	–	–	✓	✓	✓	✓
ABG	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

☞ **Notice:**
The sensors are connected to the drive controllers via IO-Link. Current data and limit values can be read and set via the Multi-Ethernet interface.

Circuit diagram: hydraulic



Circuit diagram: hydraulic with compressor cooler



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

General			
Installation position			Vertical
Line connections	▶ Pressure port		G1 1/4
	▶ Return flow		G1 1/2
Place of installation			Industrial building; stationary application
Ambient temperature range (during operation)		°C	+10 ... +40 [3]
Air humidity		%	5 ... 95 non-condensing
Installation height		m	Note reduction of performance from 1000
Weight (depending on configuration level) without oil		kg	500 ... 550
Corrosion protection class	▶ Tank		Plastic (PP)
	▶ Steel components		Galvanized, painted, powder-coated
	▶ Base		Polymer concrete
STO (Safe Torque Off) for safety-oriented applications			To SIL3 according to IEC 62061
			To category 4. PL e according to ISO 13849-1 (IndraDrive Mi with KCU02.2: category 3, PL e)

Hydraulic			
Maximum operating pressure		bar	315 (see characteristic curves)
Maximum flow		l/min	160 (see characteristic curves)
Maximum oscillating volume		l	50
Maximum tank capacity		l	150 [4]
Maximum return flow via T-port		l/min	200 (in the case of variation, please consult Bosch Rexroth)
Maximum temperature range of the hydraulic fluid		°C	+5 ... +70
Hydraulic fluids			Mineral oil HLP according to DIN 51524
Maximum admissible degree of contamination of the hydraulic fluid, cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Pressure filter [2]	▶ Filter rating	µm	10
Filling level monitoring	▶ Early warning		For pre-set values, see operating instructions 51057-B, functional description chapter - sensor evaluation
	▶ Shut-off		
Temperature monitoring (hydraulic fluid)	▶ Early warning		
	▶ Shut-off		
Pump	▶ Speed	rpm	< 200: Admissible with single action duration t<3 min; max. cycle ratio 80%; for a longer time component t>3 min please use A10VZO
			< 50 rpm: Pressure reduction through limited torque of the drive technology, speed increase option is to be selected
			Pressure-dependent concessions on request
	▶ Hydraulic fluid viscosity range (see data sheet 91485)	mm^2/s	≤ 1000 during cold start 1000 ... 400 warm-up phase 400 ... 16 continuous operation

1) The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and simultaneously increases the life cycle of the components. For the selection of the filters, see www.boschrexroth.com/filter

2) Directly mounted at the block

3) From an ambient temperature of 30°C, there is a reduction of performance of 2% per Kelvin of temperature increase

4) Up to 0.22 m^3 or 0.2 t, with the use of HLP oils according to DIN 51524, the hazard level A according to the AwSV (Ordinance on installations for the handling of water-polluting substances) consistently applies

☞ **Important notice on hydraulic fluids:**
For further information and data on the use of other hydraulic fluids, please contact us.

☞ **Notice:**
In the case of special installation conditions, please consult the sales department.

Technical data

(For applications outside these parameters, please consult us!)

Electric			
Voltage (according to IEC 60038)		V	400 ... 500 AC (±10 %)
Frequency		Hz	50/60
Protection class according to DIN EN 60529			IP54
Maximum pre-fuse protective motor switch (on the customer side)	▶ HCS03 - 0070	A	63
	▶ HCS03 - 0100	A	100
	▶ HCS03 - 0150	A	125

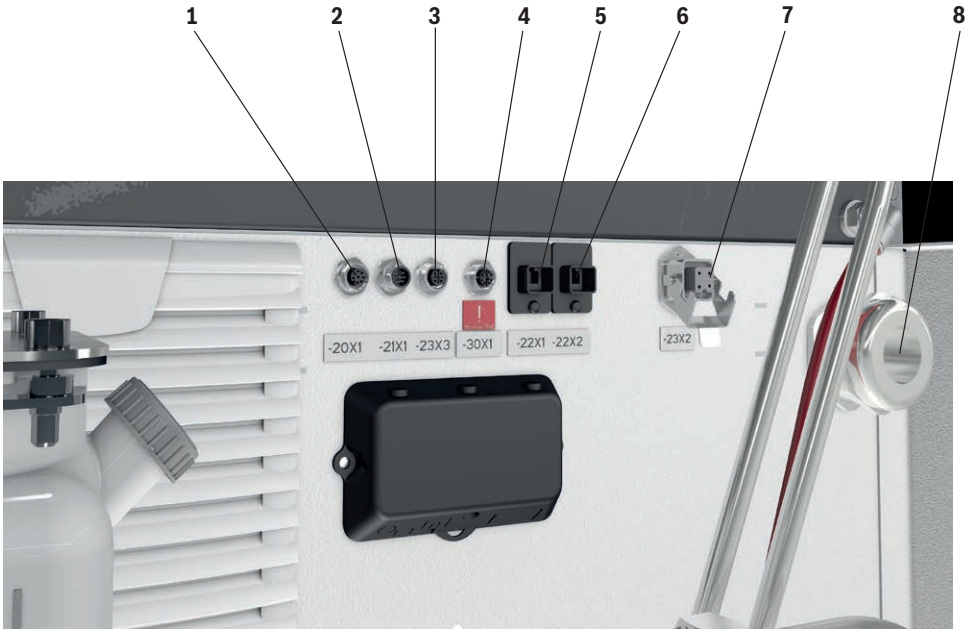
Cooling water supply [3] (standard, without compressor cooler)		
Volume flow	l/min	20
Inlet temperature	°C	15 ... 25
Connections		Quick-release coupling push-in Ø12 mm
Maximum glycol share	%	30
Maximum cooling water pressure	bar	< 6

[3] The project description R911347582 MS2N synchronous motors must also be observed. Maximum particle size ≤ 100 µm

☞ **Notice:**

- A cooling water supply must always be connected, the oil temperature can be set by means of parameters.
- The control cabinet is air-cooled and the electric motor is water-cooled. The hydraulic fluid is cooled by a circulation circuit with a plate heat exchanger. See 14 Characteristic Curves page

Electrical connections: Voltage supply, data interfaces



1 20X1: Digital input and output signals if control communication is not used

2 21X1: Safe Torque Off (STO)

3 23X3: Control of water valve / compressor cooler or additional dirty water module (optional).

4 30X1 CytroConnect (PoE; M12 bush X-coded 8-pole is wired by Rexroth)

5 22X1: Multi-Ethernet control communication (network output)

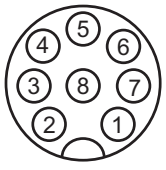
6 22X2: Multi-Ethernet control communication (network input)

7 23X2: Control compressor cooler (cartridge bush, MIN BUS assembly 3A; is wired by Rexroth upon selection of the option)

8 Cable bushing for power supply

☞ **Notice:**
For further information, see project planning description R911338961.

20X1 (position 1), digital inputs and outputs



(Mating connector)

M12x1; 8-pole
A-coded

Pin	Function	Input DI/output DO
1	Release	**DI**
2	Reset	**DI**
3	GND . Ext.	**DI**
4	Filter alarm	**DO**
5	Oil level alarm	**DO**
6	Temperature alarm	**DO**
7	Ready for operation, no error	**DO**
8	In operation	**DO**

Inputs: 24 VDC (high ≥11 V ; low ≤5 V)
Outputs: max. current 500 mA; total of all currents max. 2000 mA

Electrical connections: Voltage supply

21X1 (position 2), safety technology Safe Torque OFF (STO)

(Connector)
M 12x1; 8-pole
A - coded

Pin	Function
1	Input channel 2
2	0 V power supply
3	Input channel 1
4	+24 V power supply ±20%/0.7 A
5	Output channel 2
6	Output channel 1
7	Not used
8	Not used

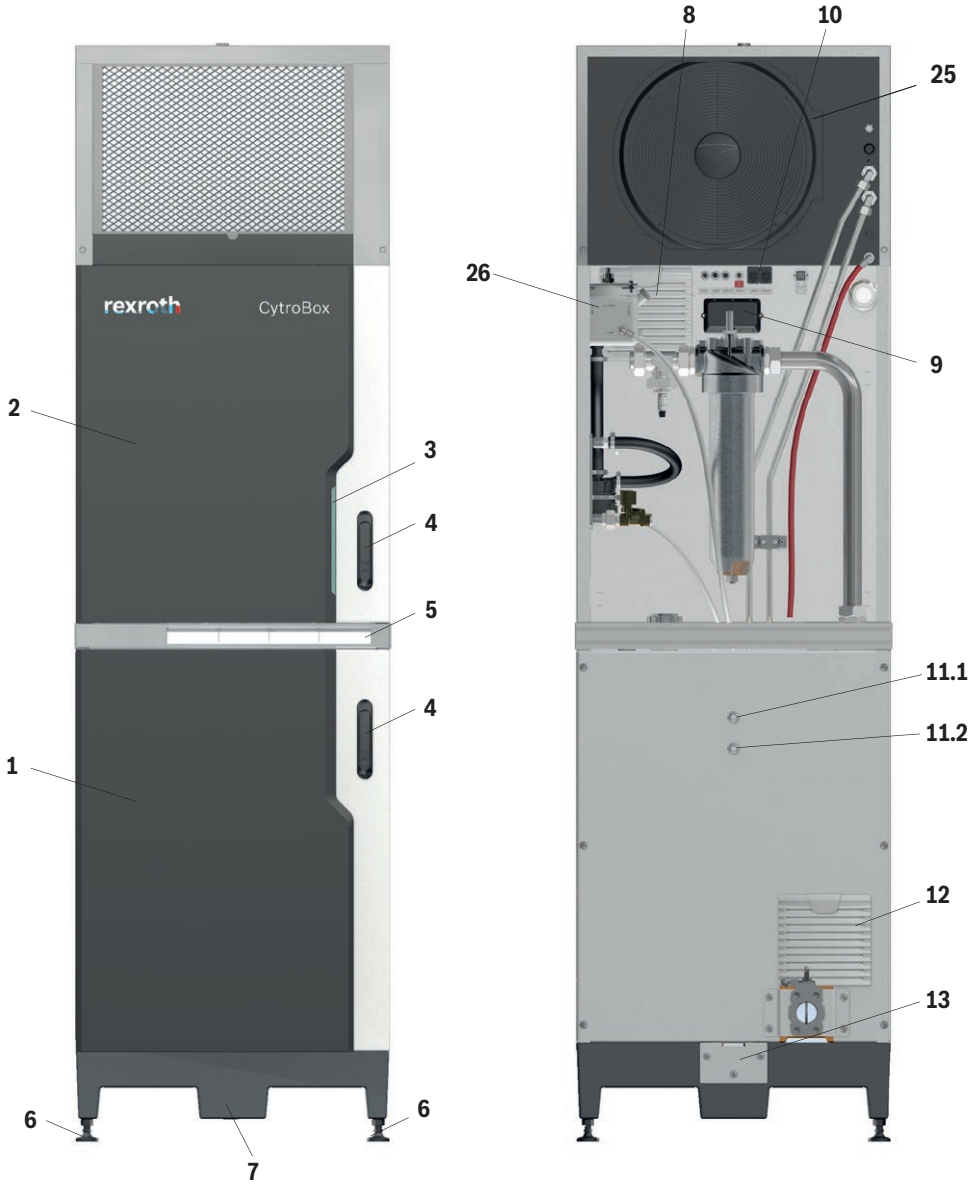
For further information on the connection possibilities, see R911332633

RJ45 (IP67)	Position	Port	Function
	5	22X1	Multi-Ethernet control communication
	6	22X2	

☞ **Notice:**
For RJ45 ports, only use suitable connectors (push-pull) in compliance with IP67, e.g.
R901469479 CONNECTOR IE-PS-V04P-RJ45-FH
R901471844 NETWORK CABLE RJ45/IP47-RJ45 5M

Mains connection voltage in VAC (±10%)	Maximum motor current	Mains fuse feed-in to EN 60204-1 (3-phase, with line choke) in A	PIN	Terminal	Cable cross-section in mm²	Cable gland
400 ... 500	70	63	L1	2	16 ... 25	M48
			L2	4		
			L3	6		
			GNYE	PE	16	
	100	100	L1	2	35 ... 50	M63
			L2	4		
			L3	6		
			GNYE	PE	25	
	150	125	L1	2	50 ... 70	M63
			L2	4		
			L3	6		
			GNYE	PE	25	

Interfaces

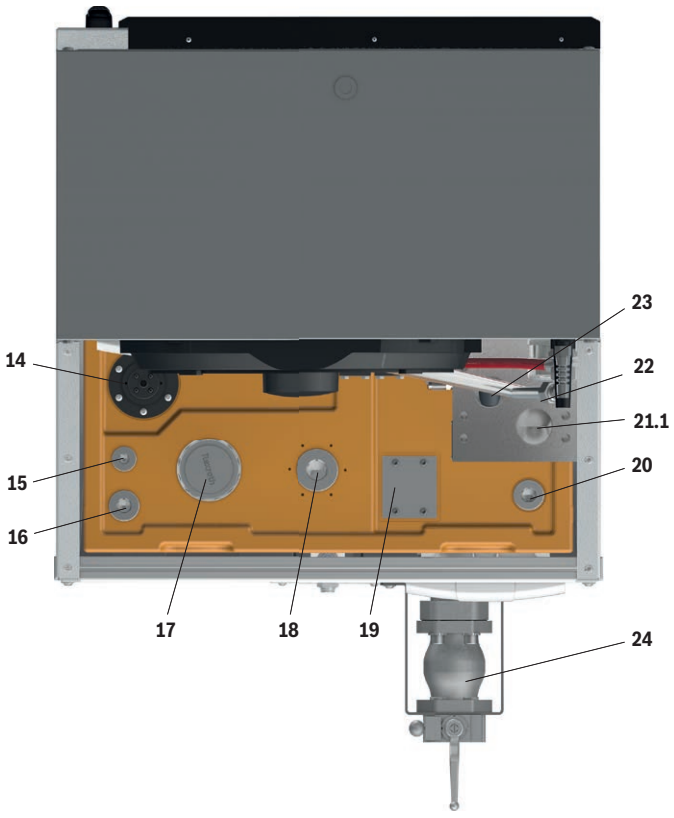


1 Hydraulic cabinet
2 Electrical cabinet
3 LED status display
4 Door opener
5 Air inlet at the electrical cabinet
6 Adjustable machine feet
7 Foundation made of polymer concrete
8 Air outlet at the electrical cabinet
9 CytroConnect LTE router
10 Electrical interfaces
11.1 Cooling water connection at the top, water on (push-in, Ø12 mm)
11.2 Cooling water connection at the bottom, water off (push-in, Ø12 mm)
12 Air inlet at the hydraulic cabinet
13 Drip tray discharge plate
25 Compressor cooler option
26 Dirty water module option

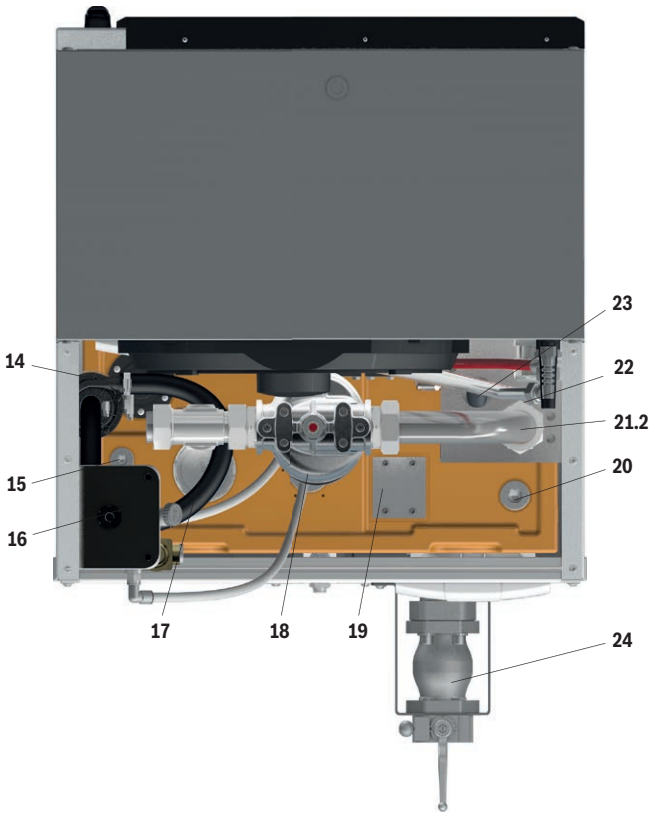
☞ **Notice:**
Cooling water connections 11.1 and 11.2 are not required for the operation of the CytroBox with compressor cooling

Interfaces

Standard version



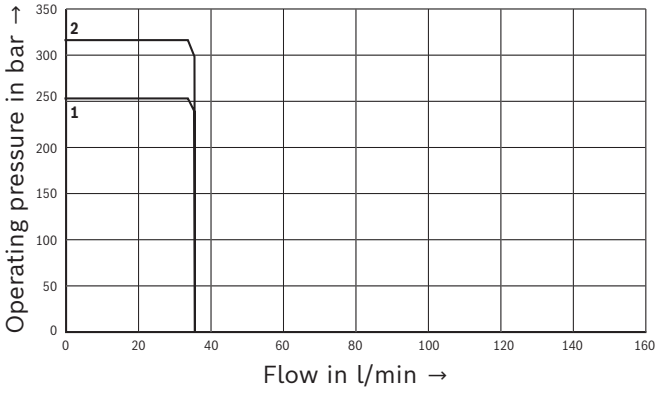
Version with dirty water module and return flow filter

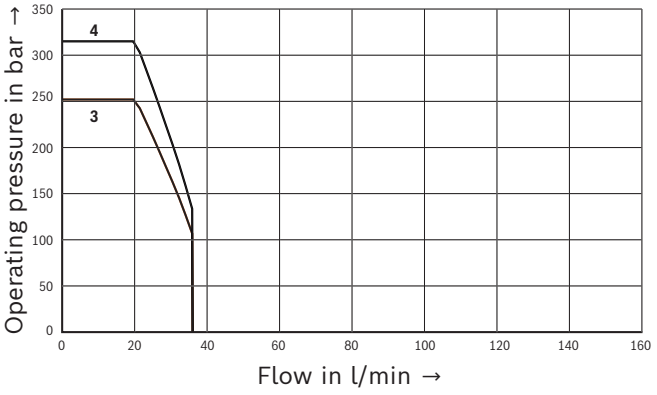


14 Level and temperature sensor
15 Tank spare port (G3/4)
16 Tank spare port (G1)
17 Breathing filter
18 Tank spare port (G1 1/2)
19 Connection for the degassing and drainage module (optional)
20 Tank spare port (G1)
21.1 Return flow filter option, return flow port (G1 1/2)
21.2 Return flow filter
22 Connection block; optional adapter for modular plate systems IH20
23 Pressure port P (G1 1/4)
24 Tank extension option SAE2 flange

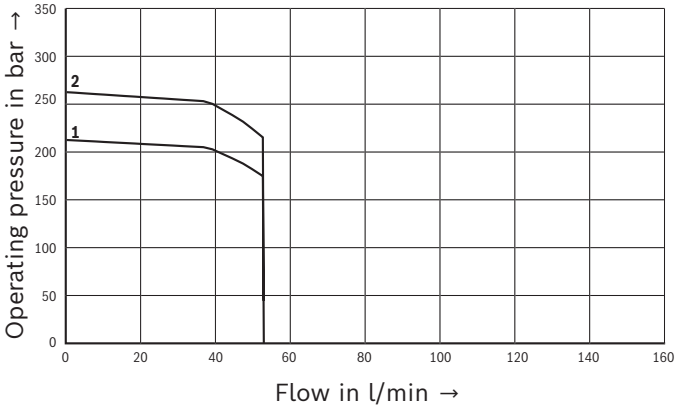
Characteristic curves

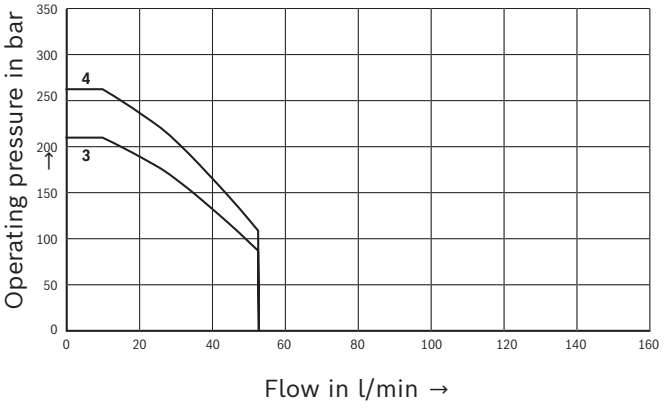
Version A10FZO010-MS2N07-E0BNL-HCS03.1E-**W0070**



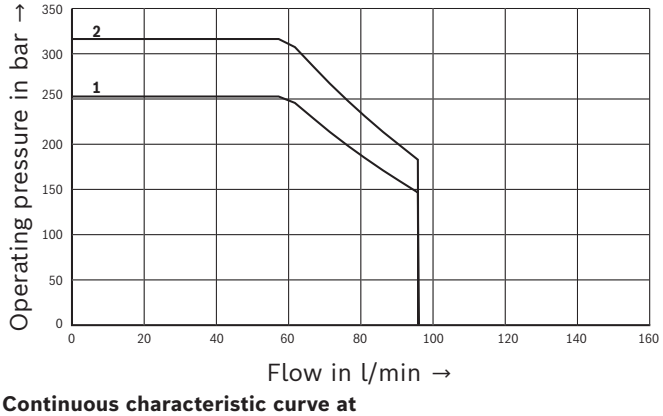


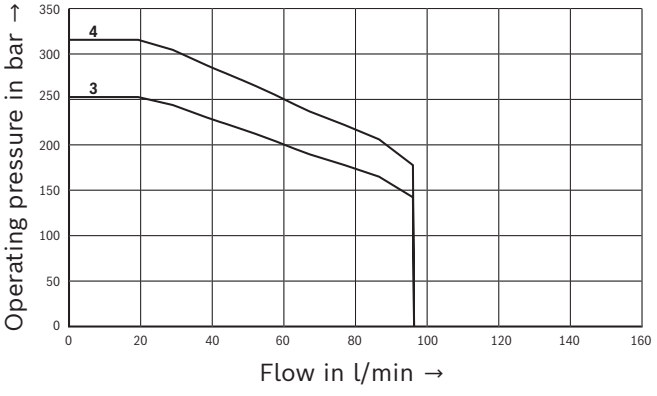
Version A10FZO016-MS2N07-E0BNL-HCS03.1E-**W0070**





Version A10FZO032-MS2N10-F0BHL-HCS03.1E-**W0100**





Continuous characteristic curve at

1 40 °C ambient temperature

2 30 °C ambient temperature

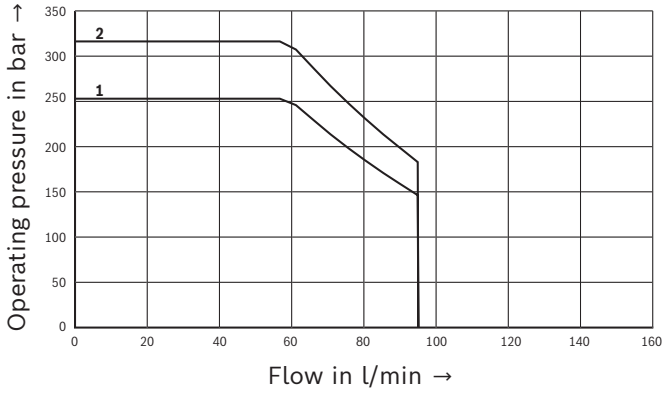
3 40 °C Ambient temperature compressor-cooled

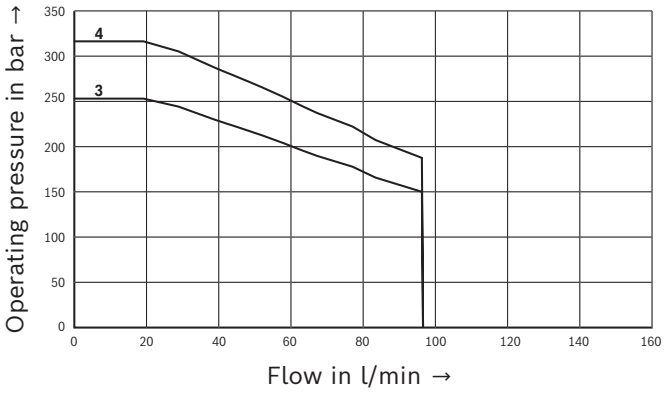
4 30 °C ambient temperature compressor-cooled

☞ **Notice:**
At ambient temperatures > 30 °C, the power characteristic curve is reduced by 2% per Kelvin temperature increase. Maximum ambient temperature 40 °C.

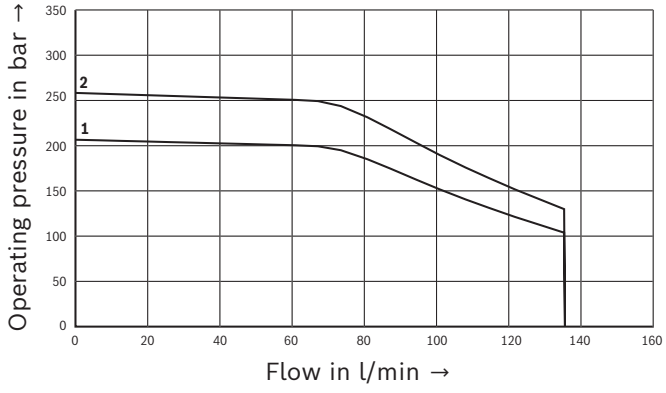
Characteristic curves

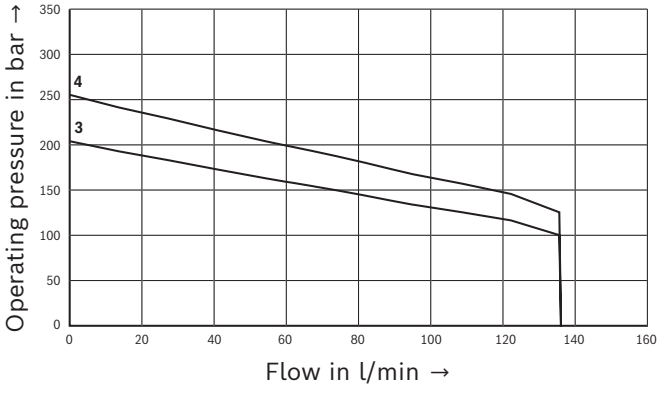
Version A10FZO032-MS2N10-F0BHL-HCS03.1E-**W0150**



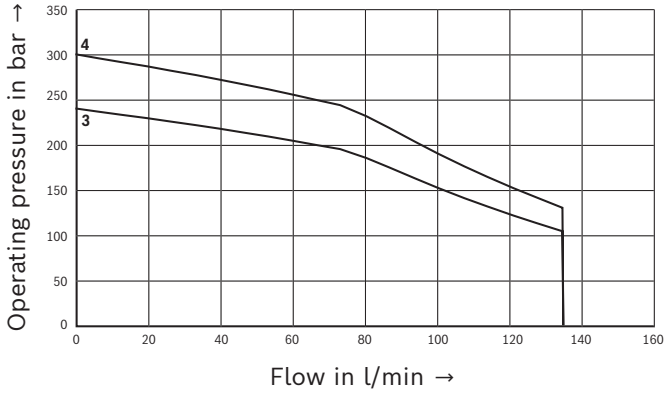


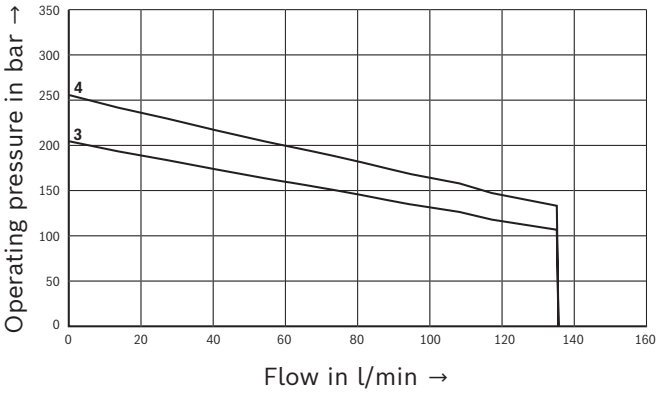
Version A10FZO045-MS2N10-F0BHL-HCS03.1E-**W0100**





Version A10FZO045-MS2N10-F0BHL-HCS03.1E-**W0150**





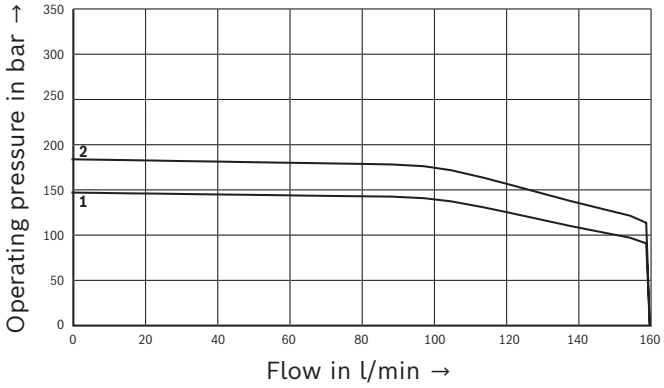
Continuous characteristic curve at

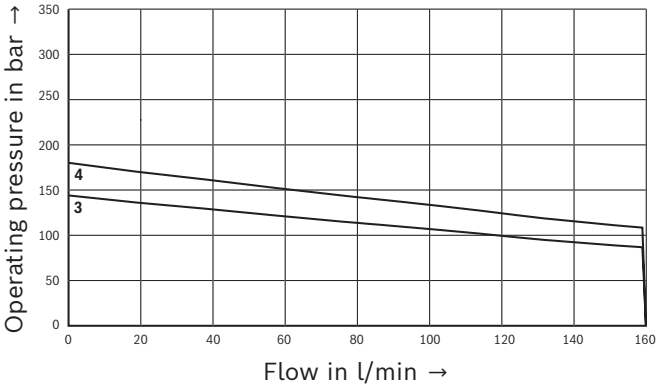
- **1** 40 °C ambient temperature
- **2** 30 °C ambient temperature
- **3** 40 °C Ambient temperature compressor-cooled
- **4** 30 °C ambient temperature compressor-cooled

☞ **Notice:**
At ambient temperatures > 30 °C, the power characteristic curve is reduced by 2% per Kelvin temperature increase. Maximum ambient temperature 40 °C.

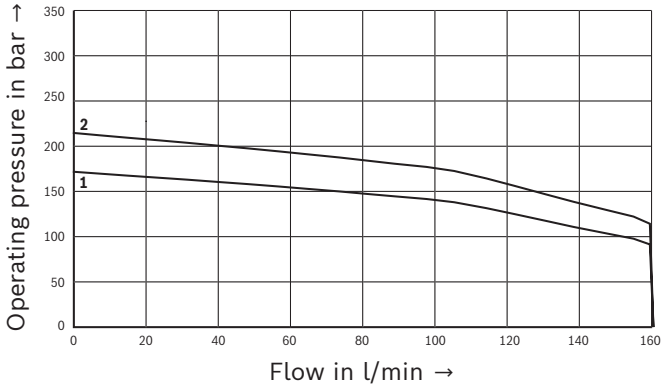
Characteristic curves

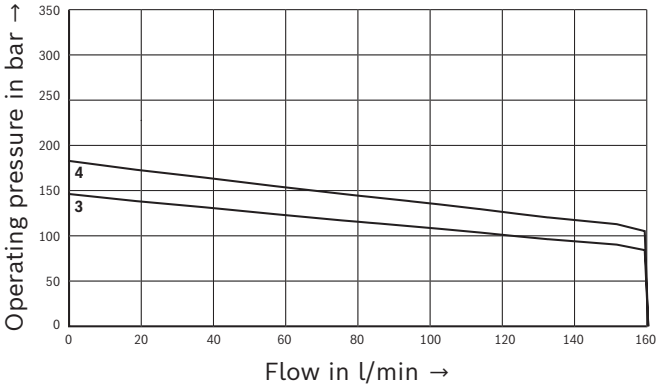
Version A10FZO063-MS2N10-F0BHL-HCS03.1E-**W0100**





Version A10FZO063-MS2N10-F0BHL-HCS03.1E-**W0150**





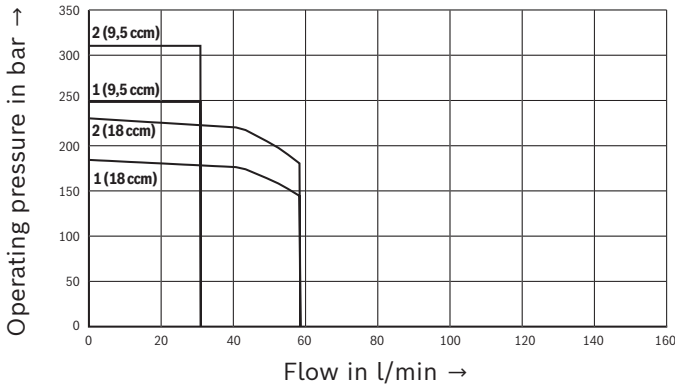
Continuous characteristic curve at

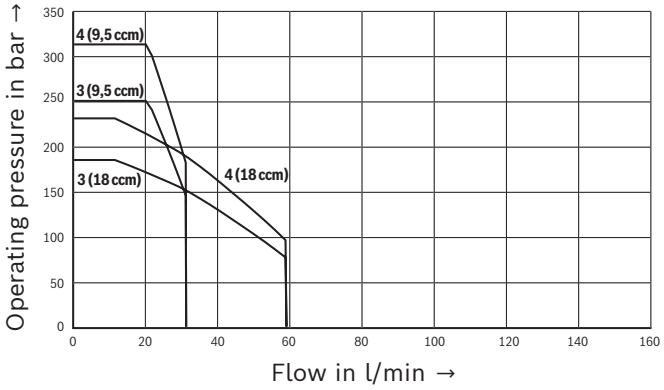
- **1** 40 ºC ambient temperature
- **2** 30 ºC ambient temperature
- **3** 40 ºC Ambient temperature compressor-cooled
- **4** 30 ºC ambient temperature compressor-cooled

☞ **Notice:**
At ambient temperatures > 30 °C, the power characteristic curve is reduced by 2% per Kelvin temperature increase. Maximum ambient temperature 40 °C.

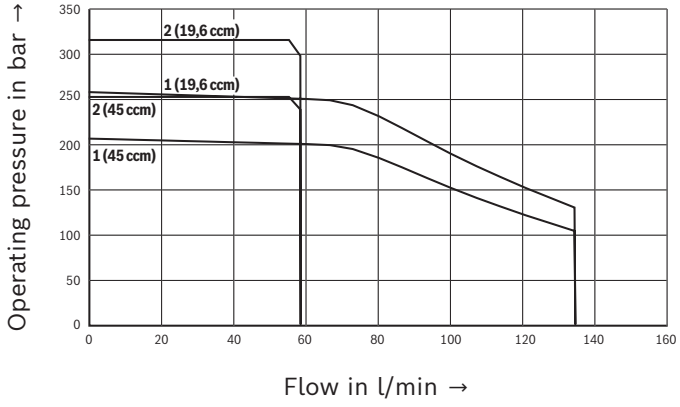
Characteristic curves (two-point adjustment)

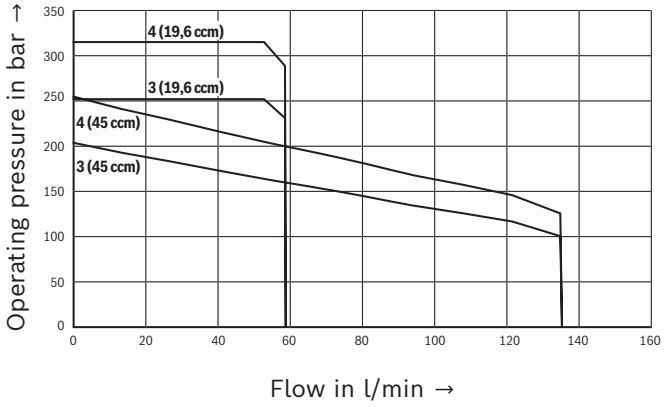
VersionA10VZO018-MS2N7-E0BNL-HCS03.1E-**W0070**



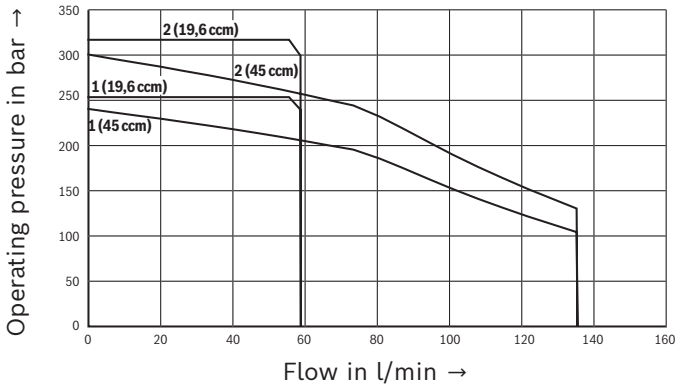


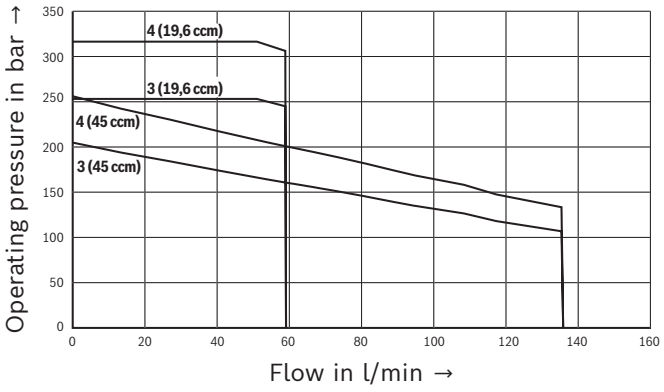
VersionA10VZO045-MS2N10-F0BHL-HCS03.1E-**W0100**





VersionA10VZO045-MS2N10-F0BHL-HCS03.1E-**W0150**





Continuous characteristic curve at

1 40 °C ambient temperature

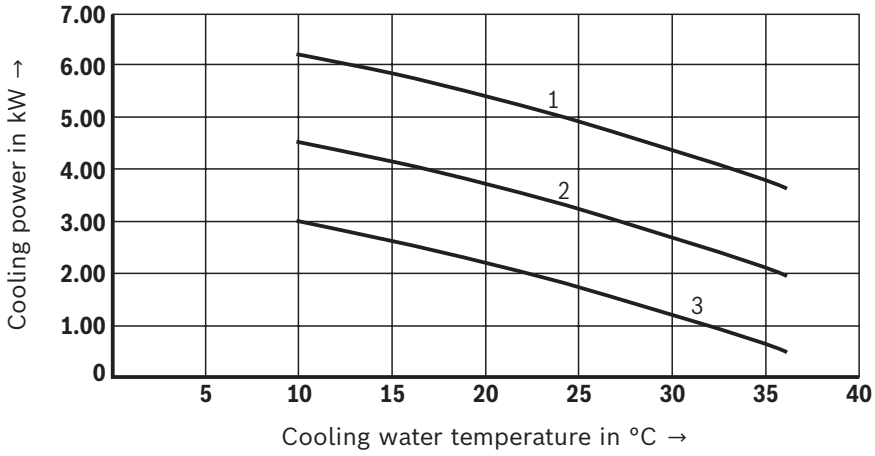
2 30 °C ambient temperature

3 40 °C Ambient temperature compressor-cooled

4 30 °C ambient temperature compressor-cooled

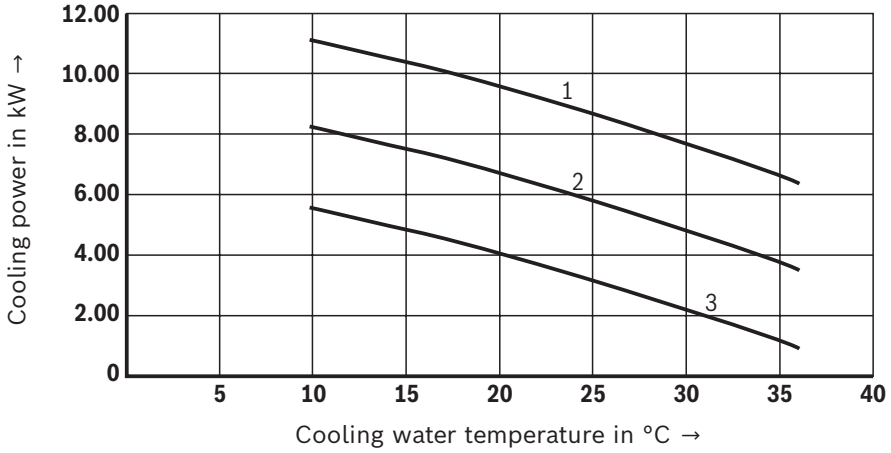
Characteristic curves: Oil cooling

Cooling power of plate heat exchanger with 4 kW



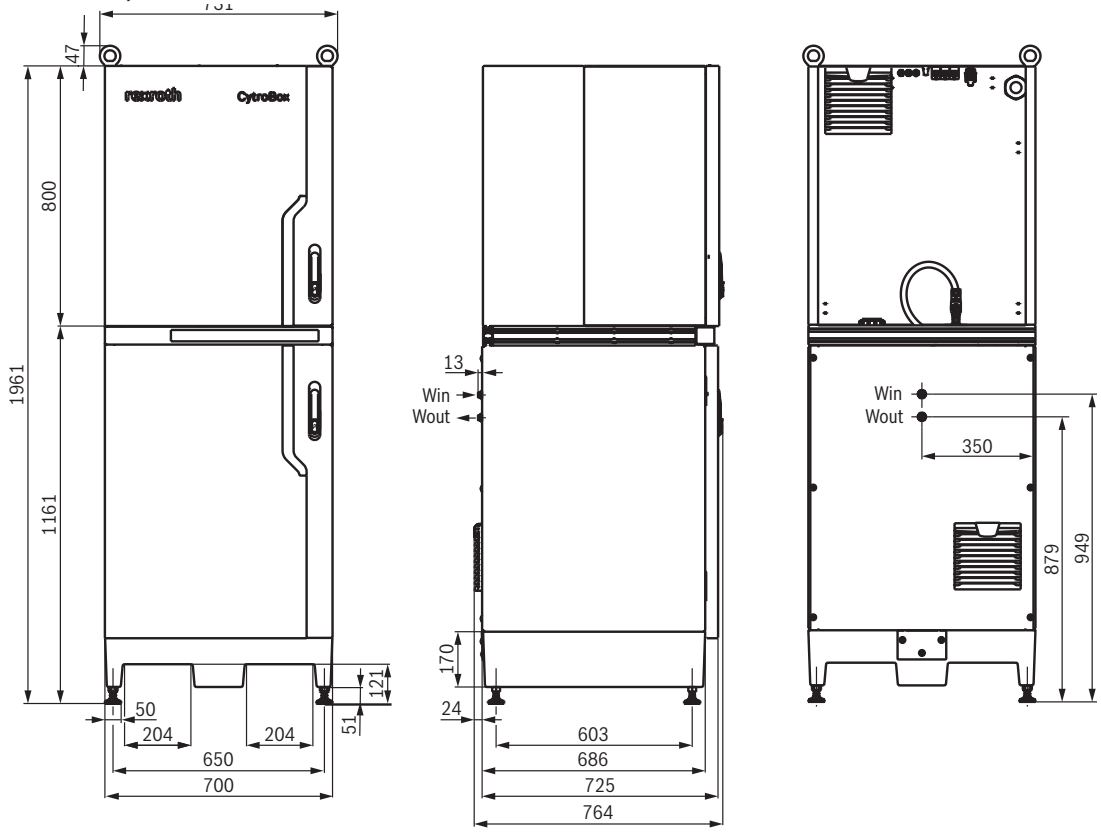
1 60 °C
2 50 °C
3 40 °C

Cooling power of plate heat exchanger with 10 kW

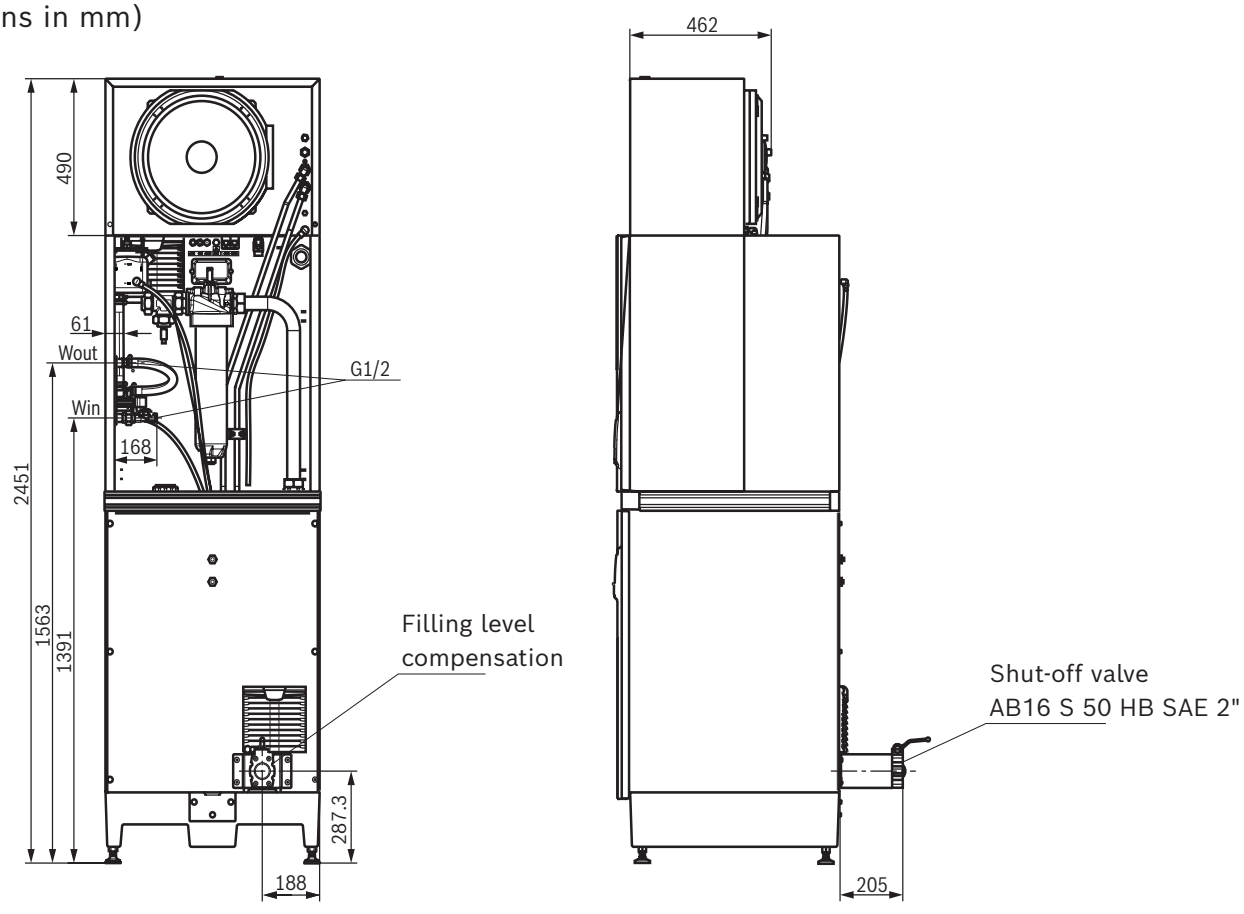


1 60 °C
2 50 °C
3 40 °C

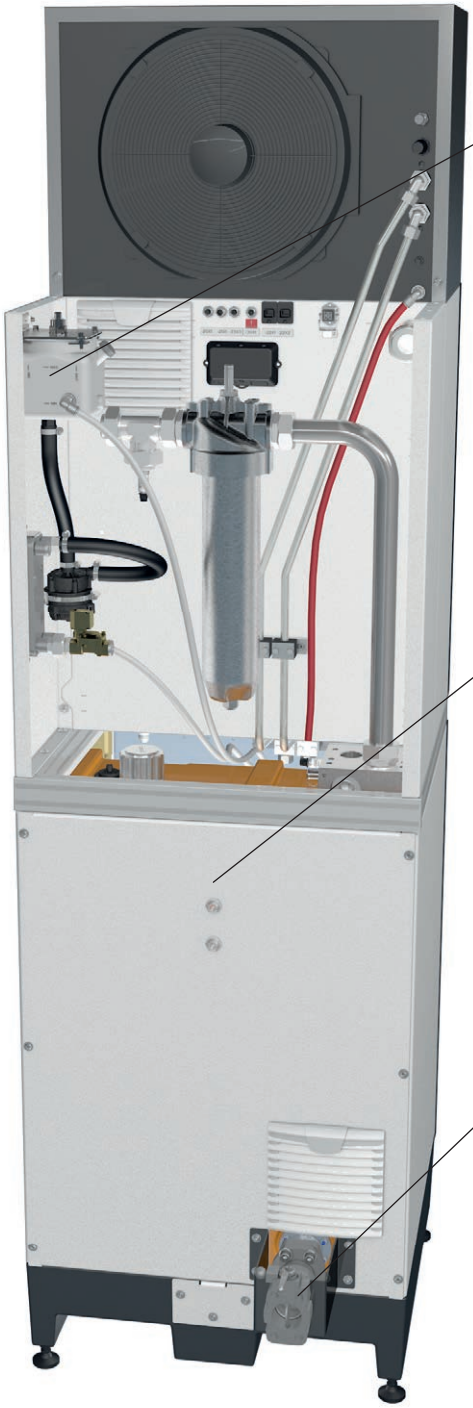
Dimensions
(dimensions in mm)



Dimensions: With optional extensions
(dimensions in mm)



Options for the design of the CytroBox



Dirty water cooling option R901521673:
To select the CytroBox internal cooling circuit as an option, the required cooling water purity should exceed the maximum particle size of 100 µm.
The control takes place through the software functionality of the CytroBox, which means that no external control is necessary.
For water input/output port, see the Interfaces page 12

Water valve option R901527470:
Supply of cooling water according to requirements.
The control takes place through the software functionality of the CytroBox, which means that no external control is necessary.
Water input and output port unchanged (see Interfaces, page 12)

Tank expansion option R901540424:
Tank expansion port via a SAE 2 flange (details in Dimensions chapter, page 19)
Option required for operation of several CytroBoxes in a master/slave combination.

This option cannot be retrofitted.

Options for the design of the CytroBox

Compressor cooler (4 kW: R901540041):
Internal CytroBox cooling circuit (no external cooling water supply and no additional oil cooling required), only admissible in connection with hydraulic fluid HLP46.
The cooling water connections 11.1 and 11.2 (see page 12) may not be connected.
The control takes place through the software functionality of the CytroBox, which means that no external control is necessary.

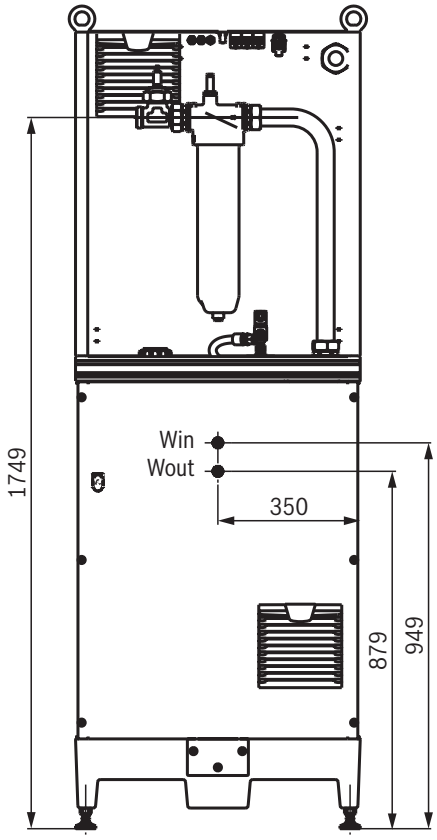
☞ **Notice:**
The waste heat is released into the environment. There is a danger of the accumulation of heat in small rooms which can be prevented with an adequate air exchange. In this respect, it should be noted that the stated environmental conditions are to be observed.

Return flow filter unit option R901527423:
An optional return flow filter (10 µm 110LEN400) is available for the CytroBox as an assembly. It is mounted on the rear on tank port G 1½ and contains a type HM20 pressure sensor for the back pressure measurement, see page 23.
For a simplified installation of the return line, the filter unit can be slewed outwards by 90°.
Filter level monitoring through the software functionality of the CytroBox.

Speed increase option with pressure-holding operation R9015670121:
For further information, see the "Technical data" chapter (page 8) in point "Pump" → minimum flow rate / speed
Not applicable required for particle sensor option

☞ **Notice:**
Please check the hydraulic fittings after each slewing of the optional return flow filter unit.

Return flow filter (optional)



Accessories

▶ Electrical

20X1, analog / digital input signals

Order number	Designation	Comment	Scope of delivery [2]
R913002119	LINE CONNECTOR 8P 7000-17081-2910500	Straight shielded 8-pole M12 connector with free PUR line end, length: 5 m (8 x 0.25 mm² /Ø7.0 mm) 24 VAC/DC, max. 1.5 A; IP67	1*
R913002641	LINE CONNECTOR 8P 7000-17081-2911000	Straight shielded 8-pole M12 connector with free PUR line end, length: 10 m (8 x 0.25 mm² /Ø7.0 mm) 24 VAC/DC, max. 1.5 A; IP67	1

21X1, Safe Torque OFF (STO)

Order number	Designation	Comment	Scope of delivery [2]
R913002121	MATING CONNECTOR 8P 7000-17121-2910500	Straight bush, shielded 8-pole M12, with free PUR line end; length: 5 m (8 x 0.25 mm² /Ø7.0 mm) 24 VAC/DC, max. 1.5 A; IP67	1*
R901467712	MATING CONNECTOR 7000-17041-3771000	Straight bush with cable support sleeve 8-pole M12, with free PUR line end; length: 10 m (8 x 0.34 mm² /Ø6.2 mm) 30 VAC/DC, max. 2.0 A; IP65 and IP67 in plugged and screwed condition	1

21X1 / 22X2 / 30X1, Multi-Ethernet interface / CytroConnect [1]

Order number	Designation	Comment	Scope of delivery [2]
R901469479	CONNECTOR IE-PS-V04P-RJ45-FH	Connector without cable	1
R901471844	NETWORK CABLE RJ45/IP67-RJ45 5M	Length: 5 m Certificate: CAT 6 A / RoHS	1*
R901471845	NETWORK CABLE RJ45/IP67-RJ45 10M	Length: 10 m Certificate: CAT 6 A / RoHS	1
R901492613	NETWORK CABLE RJ45/IP67-RJ45 20M	Length: 20 m Certificate: CAT 6 A / RoHS	1

▶ Mechanical

Order number	Designation	Comment	Scope of delivery [2]
R901500465	COUPLING SOCKET CEJN567-G1/2-020-105&	Counterpart filling coupling	1*
1823391944	FITTING QR2-S-RVA-DA12-DA12	Pneumatic angle for cooling water connection	2*
R901527423	INLINE FILTER CB-ASSEMBLY-RETURN FLOW FILTER	Optional assembly return flow filter 10 µm including pressure sensor HM20	1
R901570714	AGEV2-38270-ZA/M/J50-IH20A	Adapter plate for IH20 size A blocks for direct assembly	1
R901525039	AGEV2-38263-ZA/M/J50-IH20B	Adapter plate for IH20 size B blocks for direct assembly	1

[1] We recommend the use of the Multi-Ethernet cable provided by Rexroth (IP67 rating).

[2] Components marked with * are included in the standard scope of delivery (R901525149) for each CytroBox

Project planning information

- Design
  Sytronix Size - SvP 7020. Only selected converter and motor-pump combinations can be realized.
- Size&Select Assistant design tool
  https://www.boschrexroth.com/ics/projects/sizing/
- Connectivity
  The default 4G interface enables connection of the CytroBox to the CytroConnect Service. This way, additional Cloud-based functions are available.
  For detailed information, see www.Cytroconnect.com

Further information

▶ Hydraulic power unit CytroBox	Instructions 51057
▶ Hydraulic fluids on mineral oil basis	Data sheet 90220
▶ Environmentally compatible hydraulic fluids	Data sheet 90221
▶ Rexroth IndraDrive	R911332633
▶ IndraDrive control parts	R911338961
▶ MS2N synchronous servo motors	R911347582
▶ Project planning description	Instructions R911332633
▶ Information on available spare parts	
▶ IndraDrive integrated safety technology "Safe Torque Off" (from MPx-16)	