

Electrohydraulic pumps

RE 10 104/12.12
Replaces:
RE 10 104/03.10

1/70

EHP

Nominal voltage (DC): 12...110 V
Size of pump: 1.0...22.5 cm³/rev



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Features

The staged modular principle means that electric motor and pump can be combined according to the required performance, guaranteeing:

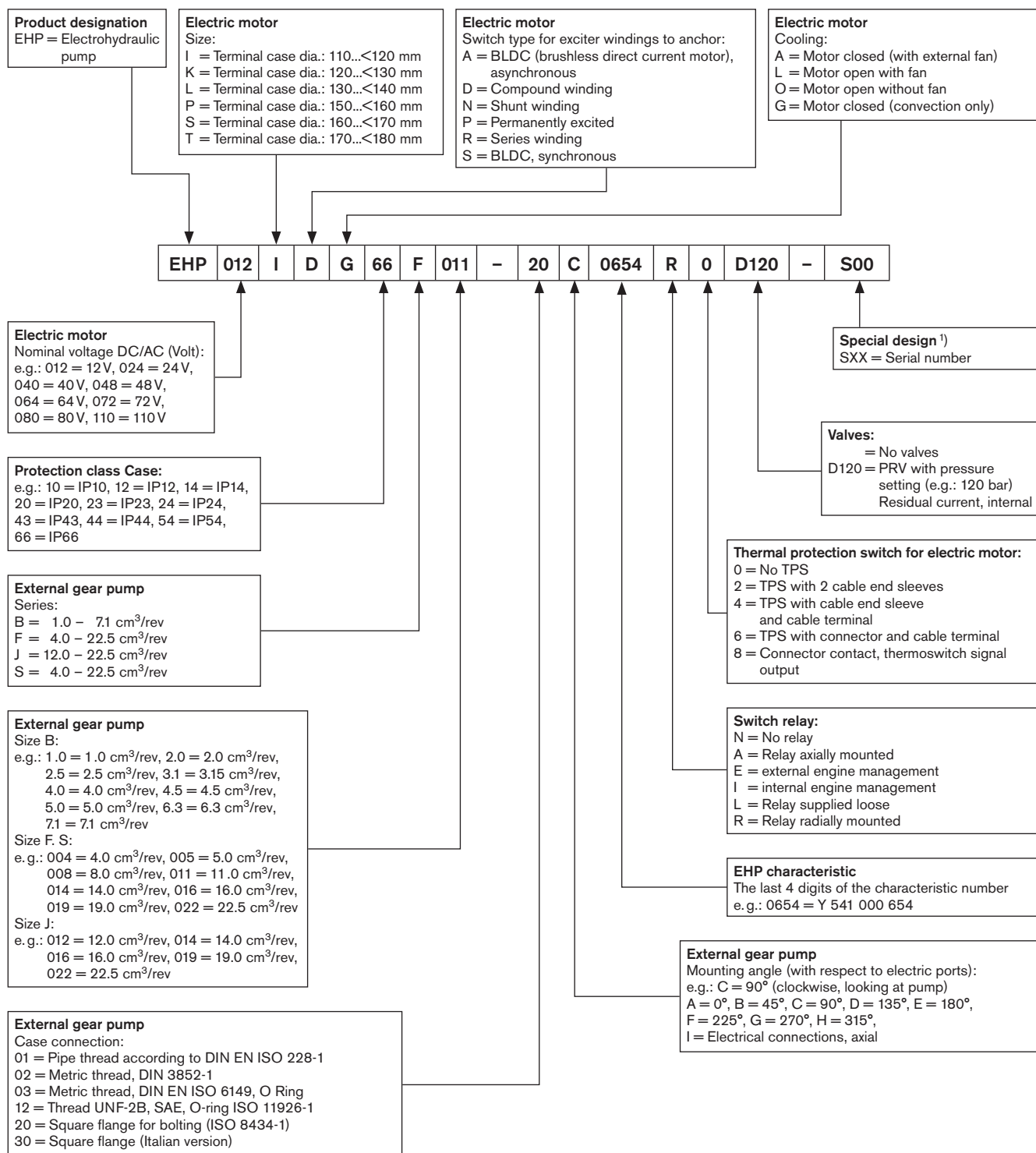
- high efficiency
- low noise
- high operating pressure
- compact dimensions
- long service life
- consistent quality

Application areas

As drive groups in vehicles, they are employed primarily for the lifting and steering functions.

Ordering code

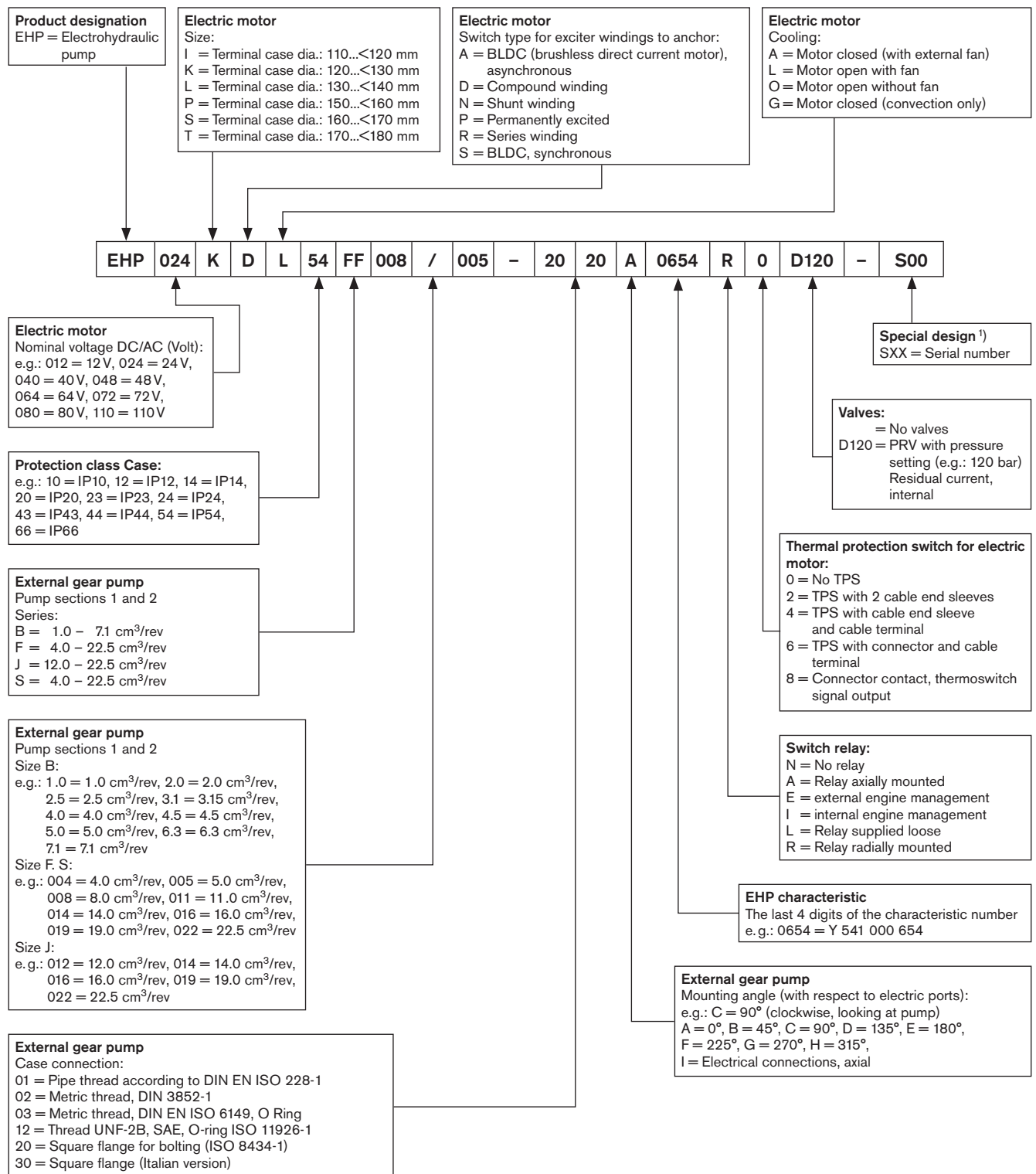
Electro-hydraulic single pump



¹⁾ In case of deviation from the standard version (for front/end cover and line connections), additional identification shall be provided in the form of a special number.

Ordering code

Electrohydraulic multiple pump



¹⁾ In case of deviation from the standard version (for front/end cover and line connections), additional identification shall be provided in the form of a special number.

Program overview

Part number	Page	Characteristic	Quotation drawing	Ordering code
0 541 200 082	8	Y 541 001 049	A 541 020 330	EHP12IDG54F004-20E1049A0D040
0 541 000 026	10	Y 541 001 414	A 541 110 111	EHP12IDG66B1.0-02A0414N0
0 541 100 075	10	Y 541 000 416	A 541 110 111	EHP12IDG66B3.0-02A0416N0
0 541 000 024	14	Y 541 001 015	A 541 110 190	EHP24IDG54B1.0-02A1015L4
0 541 100 070	14	Y 541 001 016	A 541 110 190	EHP24IDG54B2.0-02A1016L4
0 541 100 067	12	Y 541 001 018	A 541 110 190	EHP24IDG54B3.0-02A1018N0
0 541 100 071	14	Y 541 001 018	A 541 110 190	EHP24IDG54B3.0-02A1018L4
0 541 100 072	13	Y 541 001 018	A 541 110 190	EHP24IDG54B3.0-02A1018R0
0 541 100 074	14	Y 541 001 018	A 541 110 190	EHP24IDG54B3.0-02A1018N2
0 541 200 063	16	Y 541 000 388	A 541 020 083	EHP24IDG43F004-20A0388N0
0 541 300 057	18	Y 541 000 402	A 541 020 085	EHP24IDG54F005-20A0402N6
0 541 300 081	20	Y 541 001 042	A 541 020 305	EHP24IDG54F005-20A1042A6
0 541 400 065	20	Y 541 001 043	A 541 020 305	EHP24IDG54F008-20A1043N0
0 541 100 046	22	Y 541 000 406	A 541 110 101	EHP24IDG43B2.0-02A0406N0
0 541 100 052	24	Y 541 000 902	A 541 110 130	EHP24IDL12B3.0-20C0902N0
0 541 100 053		Y 541 000 903	A 541 110 130	EHP24IDL12B3.8-20C0903N0
0 541 200 068	26	Y 541 000 904	A 541 110 154	EHP24IDL12B4.6-20A0904N0
0 541 100 058	28	Y 541 000 902	A 541 110 162	EHP24IDL12B3.0-02A0902N0
0 541 500 071	30	Y 541 000 656	A 541 023 062	EHP24KDG66F011-12A0656N0D060
0 541 500 078	32	Y 541 000 656	A 541 023 066	EHP24KDG66F011-20A0656L0D050
0 541 300 058	34	Y 541 001 096	A 541 026 001	EHP24KDL20FB005/1.0-2002A0096N0
0 541 100 055	36	Y 541 000 611	A 541 114 010	EHP24KDG43B3.0-02A0611N0
0 541 200 067	38	Y 541 000 613	A 541 114 014	EHP24KDG43B4.6-20C0613N0
0 541 100 054	40	Y 541 000 612	A 541 114 016	EHP24KDG43B3.8-20C0612N0
0 541 200 083	42	Y 541 001 325	A 541 021 351	EHP24PRL20F004-20E1325N0
0 541 300 068		Y 541 001 326	A 541 021 351	EHP24PRL20F005-20E1326N0
0 541 400 075		Y 541 001 327	A 541 021 351	EHP24PRL20F008-20E1327N0
0 541 500 082		Y 541 001 328	A 541 021 351	EHP24PRL24F011-20E1328N0
0 541 600 043		Y 541 001 338	A 541 021 351	EHP24PRL24F016-20E1338N0
0 541 400 079		Y 541 001 327	A 541 021 367	EHP24PRL20F008-20C1327N0
0 541 400 083	48	Y 541 001 327	A 541 021 383	EHP24PRL20F008-01E1327N0
0 541 400 077	48	Y 541 001 335	A 541 021 358	EHP24PRL20S008-20E1335N0
0 541 500 083	48	Y 541 001 337	A 541 021 358	EHP24PRL20S011-20E1337N0
0 541 400 082	50	Y 541 001 335	A 541 021 382	EHP24PRL24S008-20G1335N0
0 541 300 069	52	Y 541 001 324	A 541 021 357	EHP24PRL20FB005/3.0-2002E1324N0
0 541 300 074	54	Y 541 001 341	A 541 021 368	EHP48PRL20F005-20E1341N0
0 541 400 080	54	Y 541 001 344	A 541 021 368	EHP48PRL20F008-20E1344N0
0 541 300 079	56	Y 541 001 341	A 541 021 379	EHP48PRL20F005-20A1341N0
0 541 400 078	58	Y 541 001 339	A 541 021 366	EHP48PRL20S008-20C1339N0
0 541 500 074	60	Y 541 001 173	A 541 022 166	EHP48SDL14S011-20A1173N0
0 541 300 032	62	Y 541 001 003	A 541 023 013	EHP72KDO14F005-20A1003N0

Other versions on request.

Technical data**General**

Installation position	Vertical, hydraulic pump at bottom; horizontal as shown in dimensions drawing. Condensation opening, if fitted, at bottom
Ambient temperature range	between -25 °C and +60 °C
Mounting	Saddle mounting with wire tie

Pump

Design	External gear pump				
Type	AZPB...		AZPF...	AZPJ...	AZPS...
Displacement	cm ³ /rev	1.0 – 7.1	4.0 – 22.5	12.0 – 22.5	4.0 – 22.5
Suction pressure	bar	min. 0.7 max. 3 (absolute)			
max. continuous pressure p_1^{**}		200 – 250	180 – 250	250	220 – 250
max. intermittent pressure p_2^{**}		230 – 280	210 – 280	280	250 – 280
max. peak pressure p_3^{**}		250 – 300	230 – 300	300	290 – 300
Line ports	AZPB/F/S: Thread, flange, others on request				
Fluids	– Mineral oil compliant with DIN 51524, 1–3, however under higher load at least HLP compliant with DIN 51524 Part 2 recommended. – Comply with RE 90220 – Further operating fluids possible after consultation				
Viscosity	12 ... 800 mm ² /s permitted range 20 ... 100 mm ² /s recommended range ... 2000 mm ² /s permitted for start up				
Temperature of hydraulic fluid	-25 ... +80 °C				
Filtration *)	At least cleanliness level 21/18/15 compliant with ISO 4406 (1999)				

Electric motor

Design	DC motor with compound or series winding					
Size (code)	I	K	L	P	S	T
Terminal case Ø mm	110 ... < 120	120 ... < 130	130 ... < 140	150 ... < 160	160 ... < 170	170 ... < 180
Voltage (volts)	12, 24, 40, 48, 72, 80 see overview of range					
Power output (kW)	1.5 ... 8.1, other outputs on request					
Protection class	see Program overview					

Diagrams

These are valid for operation under the following conditions:
 Ambient temperature +20 °C
 Electrolyte temperature +20 °C
 Motor temperature +20 °C
 Oil temperature +50 °C
 Viscosity $\nu = 32 \text{ mm}^2/\text{s}$
 S2, S3 see VDE 0530

Relay (not available in every version)

Voltage	12 V	24 V
Exciter current	1.5 A	0.9 A
Contact current at S3 = 12 %	350 A	
Contact current, continuous	150 A	
Protection class	IP54 / IP6K9K / IP66 auf Anfrage	

**) On hydraulic systems or devices with critical counter-reaction, such as steering valves, brake valves, the type of filtration selected must be adapted to the sensitivity of these devices/systems.
 Safety requirements pertaining to the whole systems are to be observed.
 Please contact us with respect to applications with high numbers of load cycles.

**) Detailed information, see series B: RE10087

F: RE10089

J: RE10094

S: RE10095

Project planning notes

1. Operating modes

The starting points for dimensioning electrohydraulic pump are pressure p and flow rate Q . However, the resulting power output P depends on the **operating mode**. Here, a distinction is made between:

Continuous operation S 1

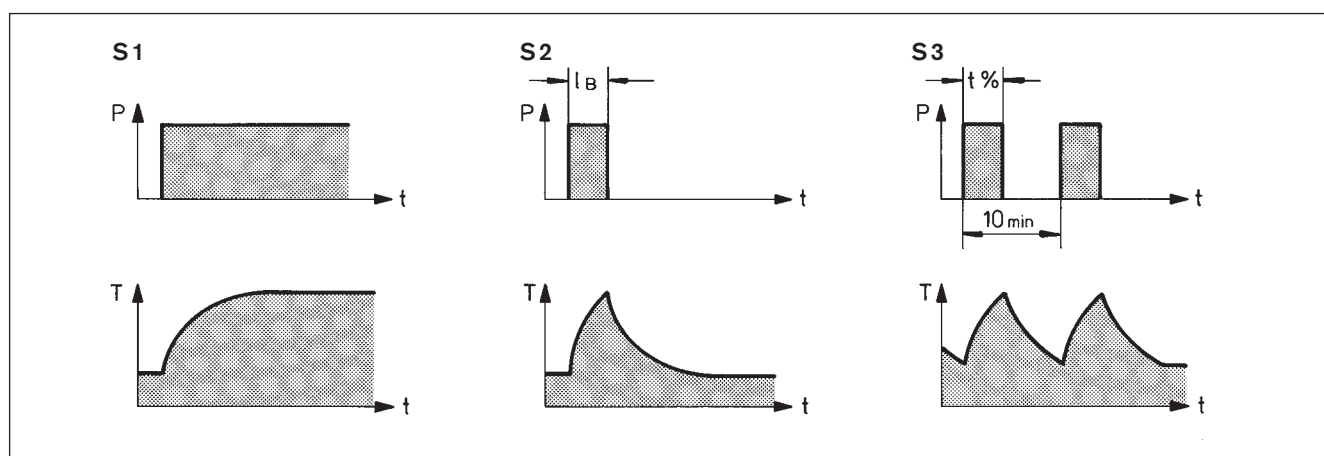
Operation with constant load, with a duration long enough for thermal equilibrium to be reached.

Short-term operation S 2

Operation with constant load. Of short duration so that thermal equilibrium is not reached. Example: S 2–60 min.

Intermittent operation S 3

Operation comprising a series of similar cycles (cycle duration 10 min), which include a time with constant load and a pause. Example: S 3–10 %



2. Motor characteristics

Speed and torque of a DC motor and thus the flow rate and pressure of the pump being driven are interdependent in accordance with the curves shown. The curve is determined by both the power output and the type of winding. A distinction is made between:

Shunt winding

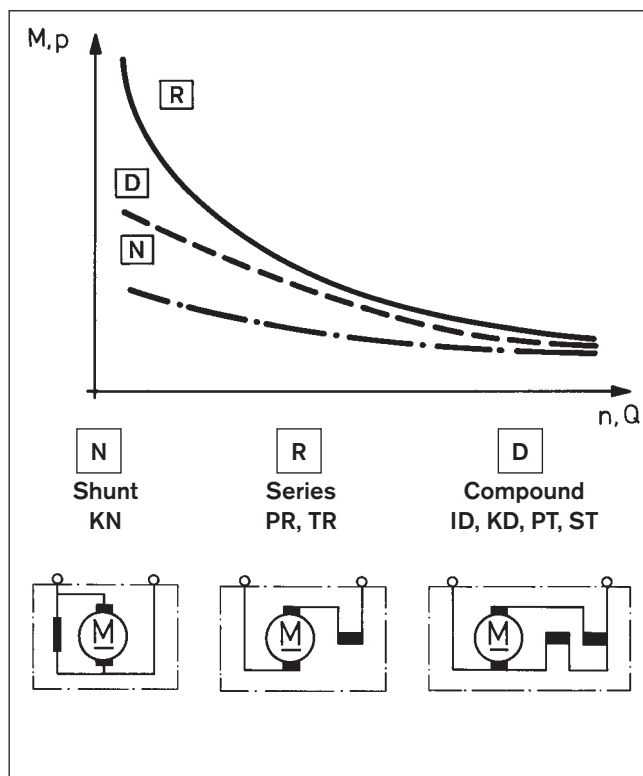
Benefit: Small change in speed with load fluctuation.
Drawback: Low start-up torque, current peaks.

Series winding

Benefit: High start-up torque
Drawback: "Motor overspeeding" without load

Compound winding

Compromise between shunt and series winding.



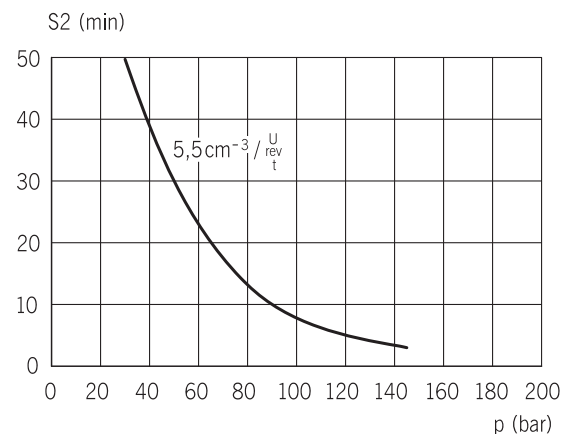
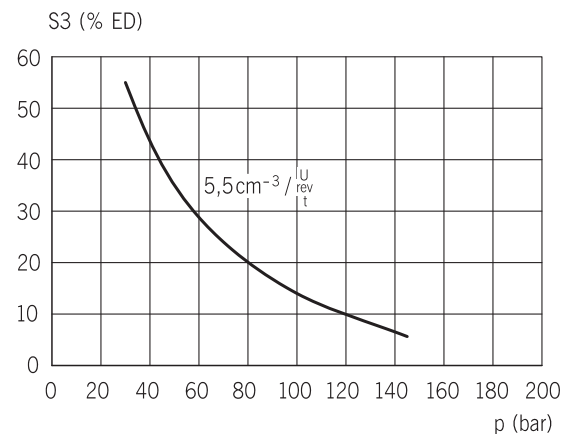
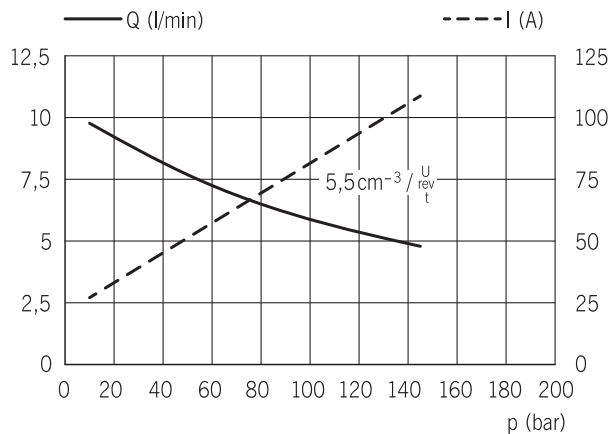
Project planning notes (continued)

3. Selection

It is not the power output figure (in watts) that is decisive for the selection, but rather the actuated time under the required operating conditions, see Characteristics. This prevents the motor from being either overloaded or dimensioned too large. It is expedient to select a suitable electrohydraulic pump on the basis of the diagrams for the different combinations. These show:

a) the flow rate Q (l/min) and the electric current consumption I (A) depending on pressure p .

b) the permissible pressure p depending on the operating mode S3 (%) or S2 (min).



Commissioning

Installation and commissioning

- Fill pump with hydraulic fluid before installation.
- Pipelines to be cleaned of dirt, cinders, sand, chips etc. before installation.
Pipes, in particular must be pickled or rinsed.
- Before the 1st commissioning, the overall hydraulic system is to be carefully vented.
- Cover up the radial lip-type shaft seal ring and the air vents when spraying and painting.
- Observe characteristics, in particular, speeds and pressures as well as negative pressure in the suction line.

You can find further information in our publication:
"General Operating Instructions for External Gear Units"
RE 07 012-B1.

Filter recommendation

We recommend that a full-flow filter always be used.

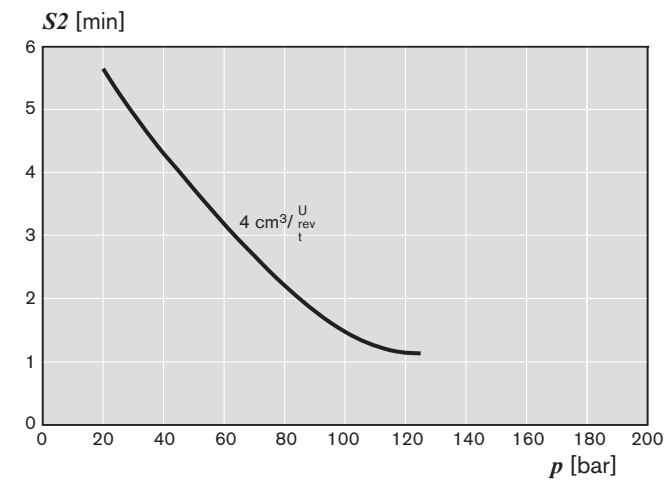
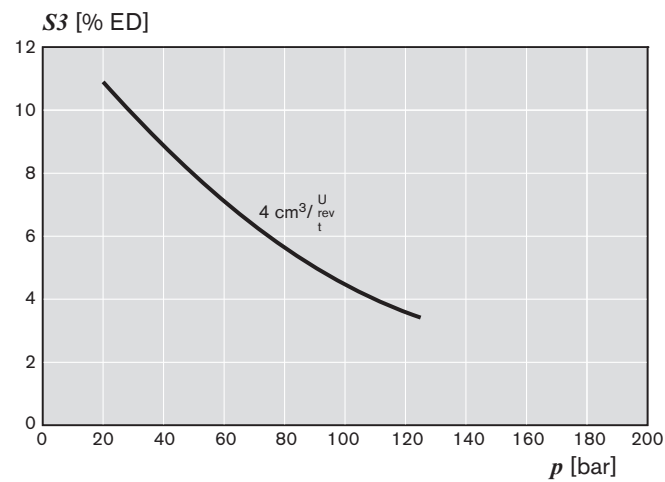
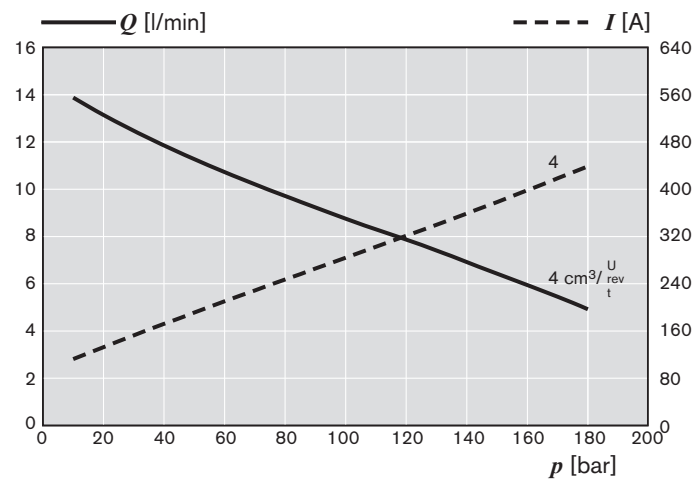
Electrical installation

Dimension the line cross section in accordance with the maximum current.

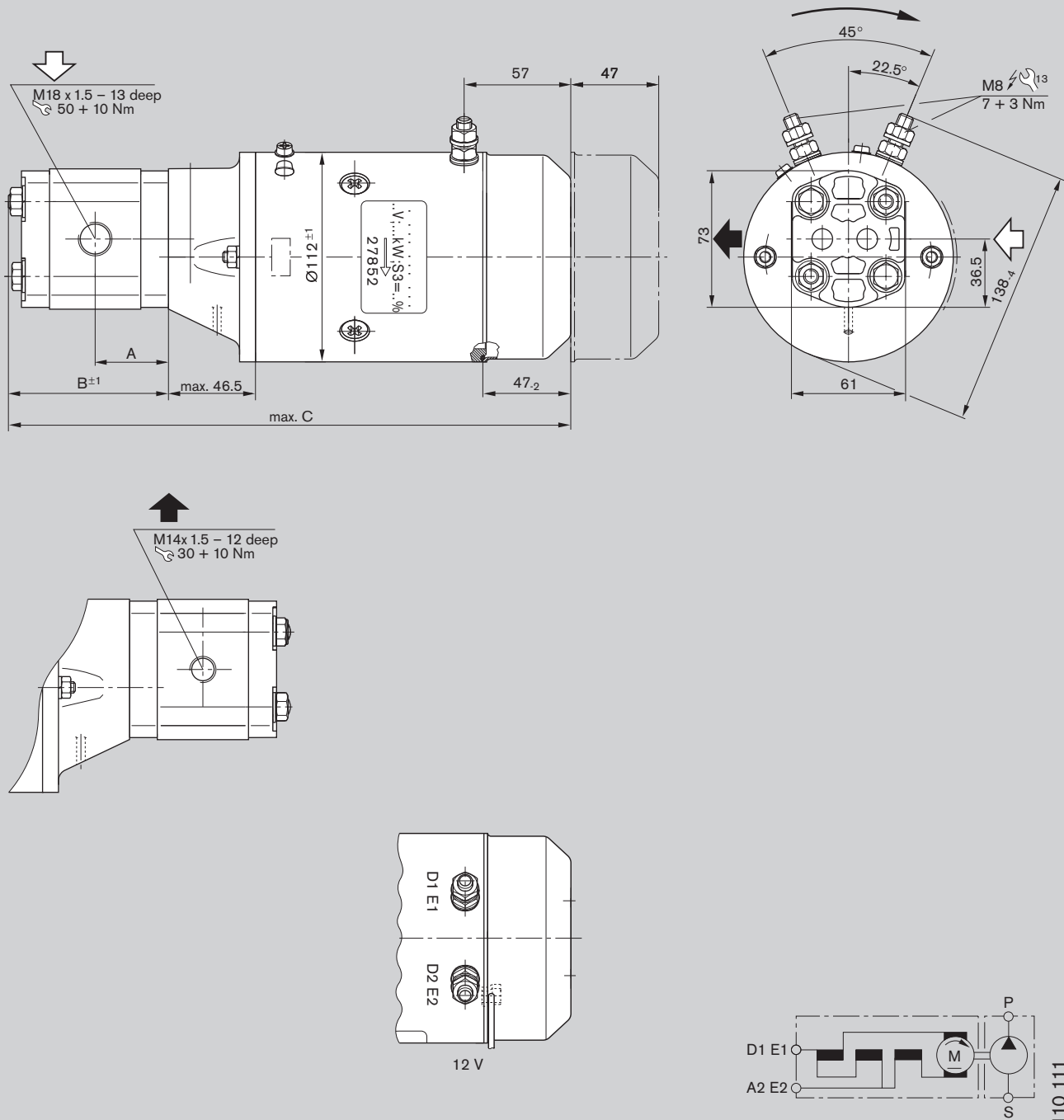
Polarity without influence on the direction of rotation.

Note the protection class and environmental conditions.

Characteristics
for A 541 020 330



Unit dimensions

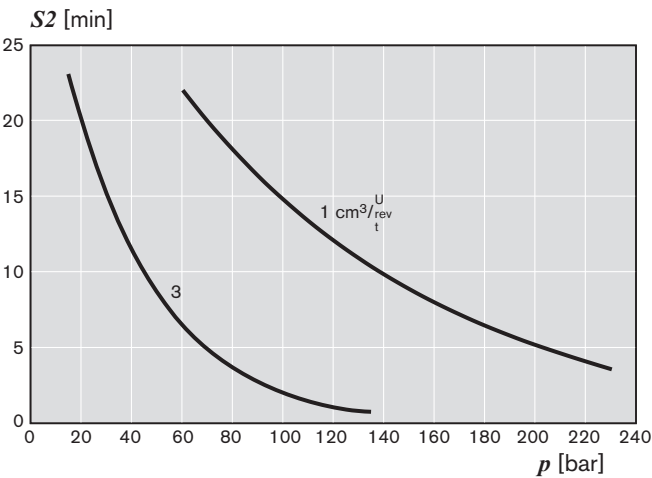
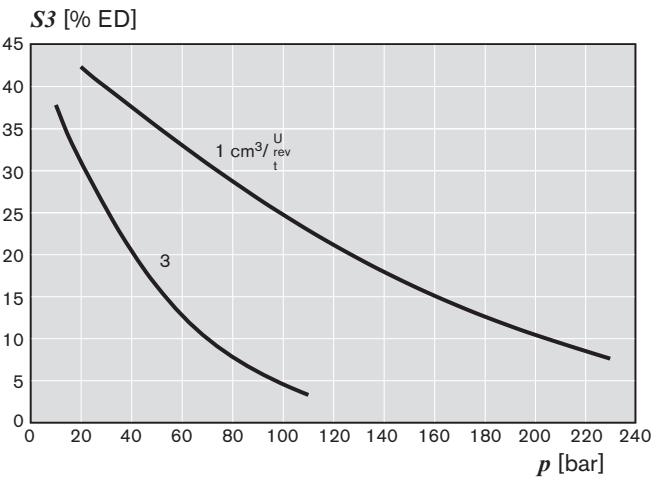
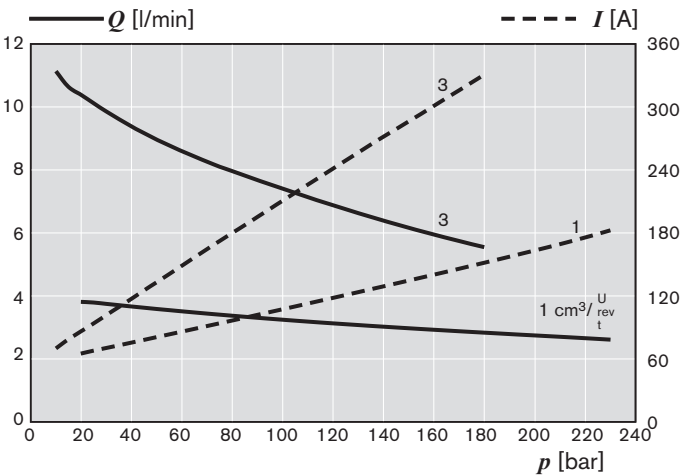


A 541 110 111

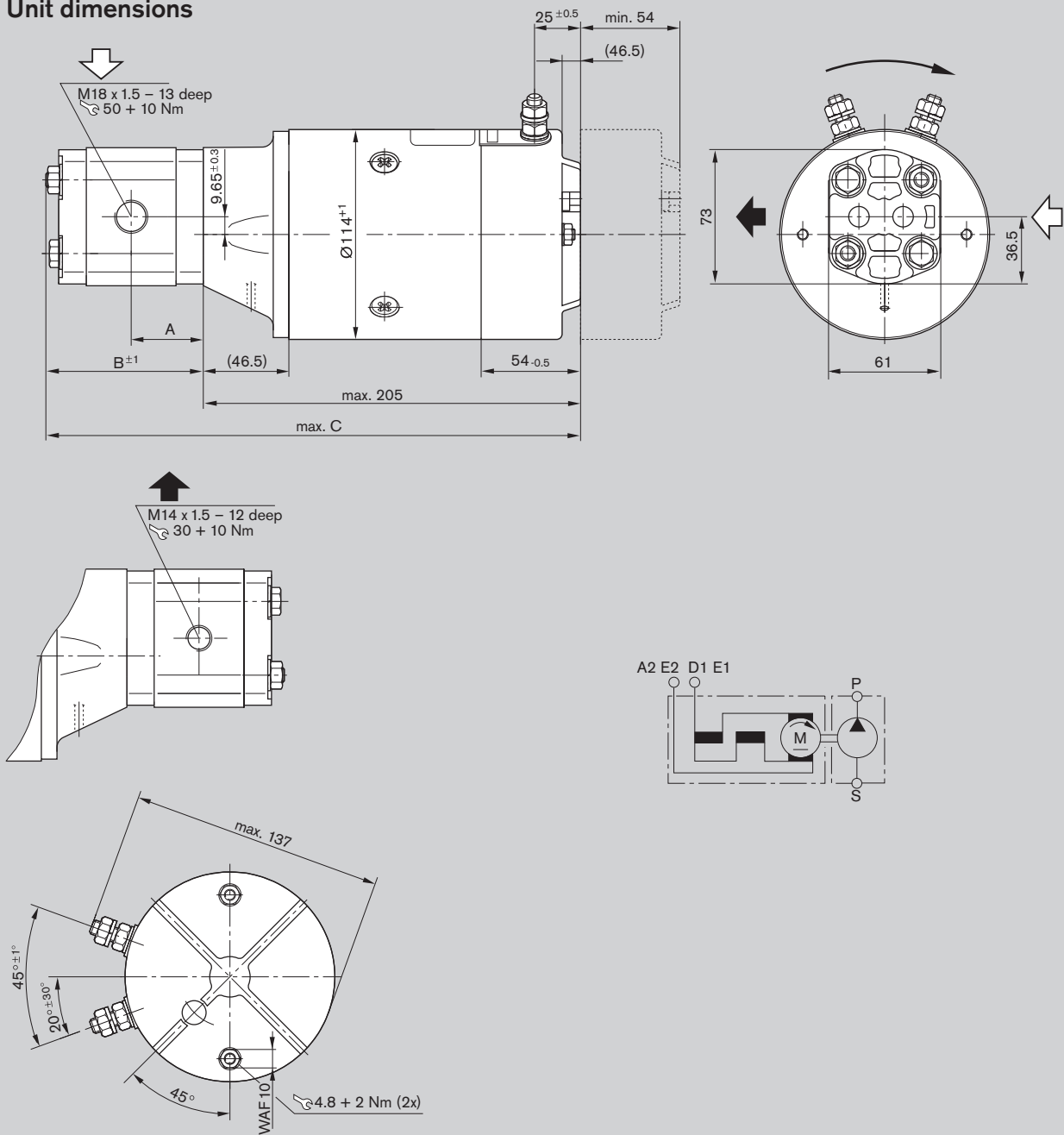
Type of protection:
Motor case IP 66
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP12IDG66B1.0-02A0414N0	1.0	35.0	76	292	8.5	0 541 000 026
EHP12IDG66B3.0-02A0416N0	3.0	39.2	86	302	8.5	0 541 100 075

Characteristics
for A 541 110 111



Unit dimensions



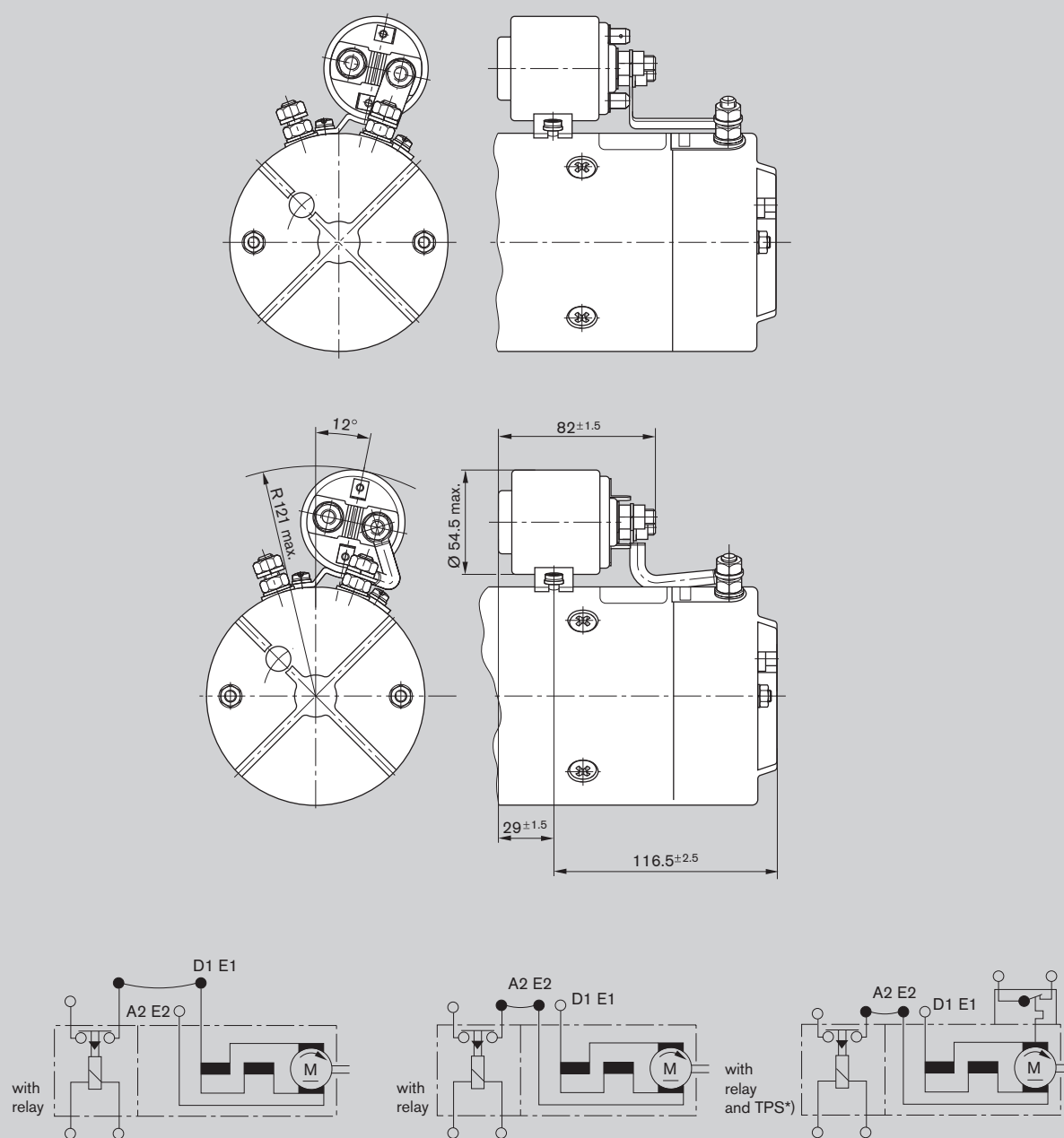
A 541 110 190_1

Type of protection:
Motor case IP 54
Ports IP 00

Ordering code	Displace- ment V [cm³/rev]	Dimension [mm]			TPS *)	Relay mounted	Relay loose	Weight [kg]	Part number
		A	B	C					
EHP24IDG54B3.0-02A1018N0	3.0	39.2	86	292	–	–		8.7	0 541 100 067

*) Thermal protection switch

Unit dimensions



A 541 110 190_2

Type of protection:

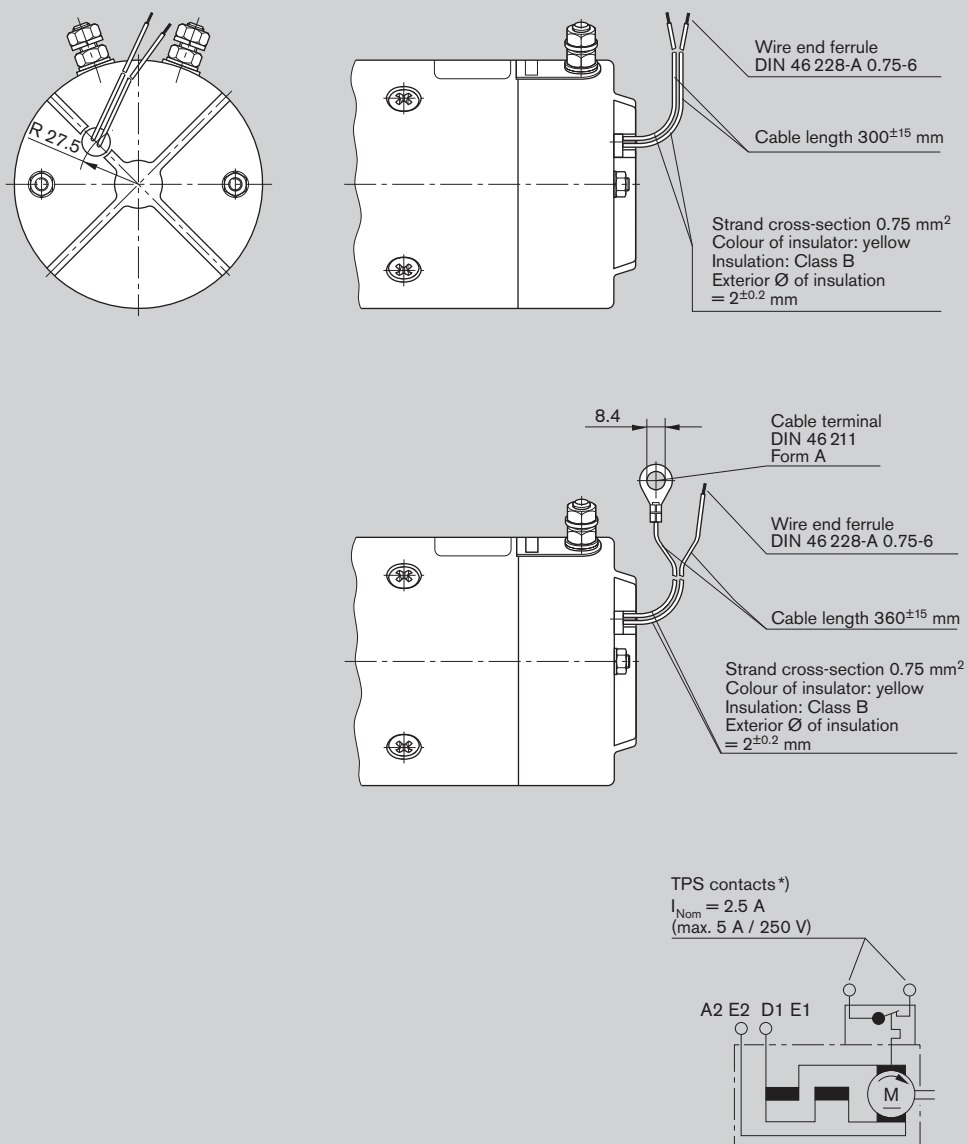
Motor case IP 54

Ports IP 00

Ordering code	Displacement	Dimension [mm]			TPS *)	Relay mounted	Relay loose	Weight [kg]	Part number
	V [cm ³ /rev]	A	B	C					
EHP24IDG54B3.0-02A1018R0	3.0	39	86	292	—	x		9.4	0 541 100 072

*) Thermal protection switch

Unit dimensions



A 541 110 190_3

Type of protection:

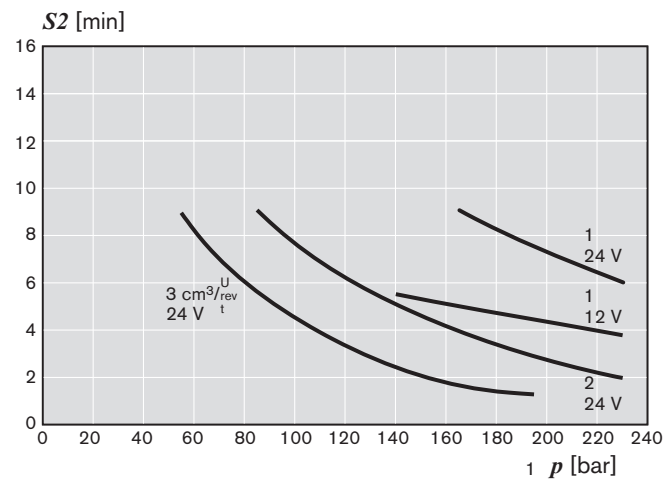
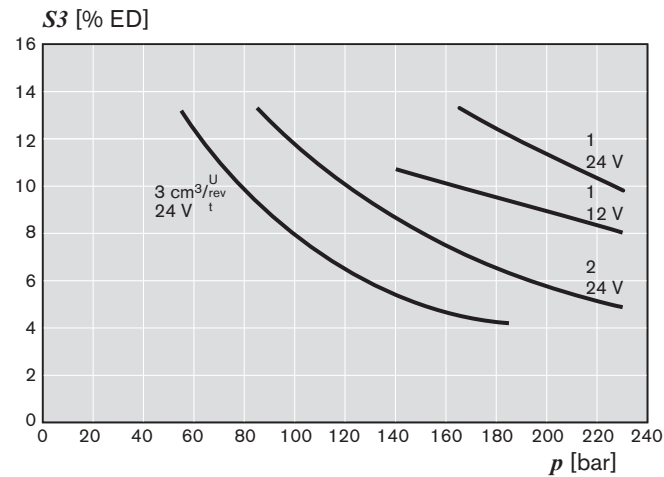
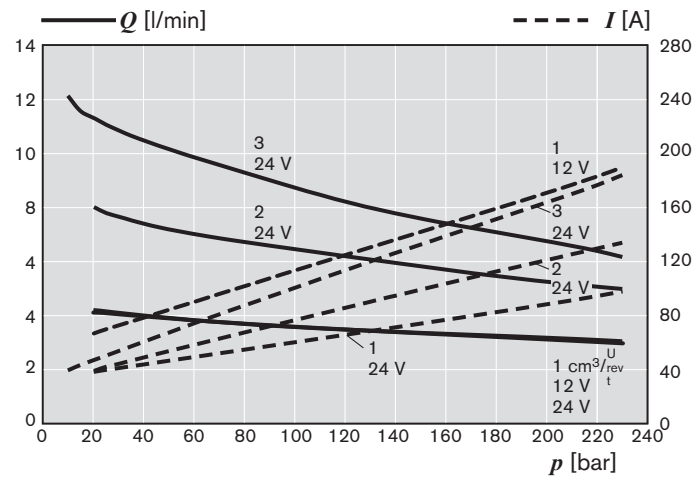
Motor case IP 54

Ports IP 00

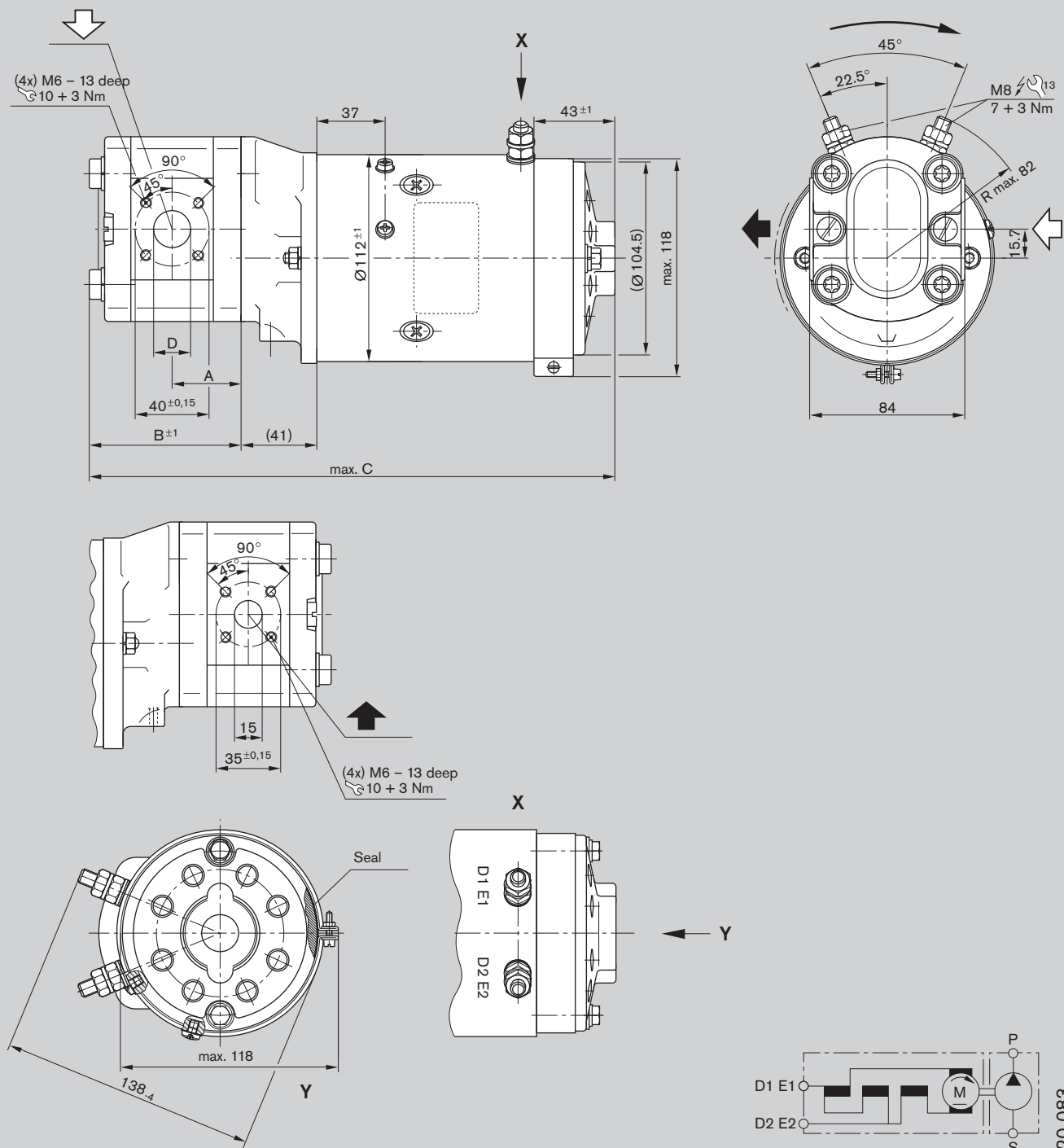
Ordering code	Displacement $V [cm^3/rev]$	Dimension [mm]			TPS *)	Relay mounted	Relay loose	Weight [kg]	Part number
		A	B	C					
EHP24IDG54B1.0-02A1015L4	1.0	35.0	76.0	282	x	—	1 547 211 007	8.4	0 541 000 024
EHP24IDG54B2.0-02A1016L4	2.0	37.1	81.0	287	x	—	1 547 211 007	8.5	0 541 100 070
EHP24IDG54B3.0-02A1018L4	3.0	39.0	86.0	292	x	—	1 547 211 007	8.7	0 541 100 071
EHP24IDG54B3.0-02A1018N2	3.0	39.2	86.0	292	x	—		8.7	0 541 100 074

*) Thermal protection switch

Characteristics
for A 541 110 190



Unit dimensions

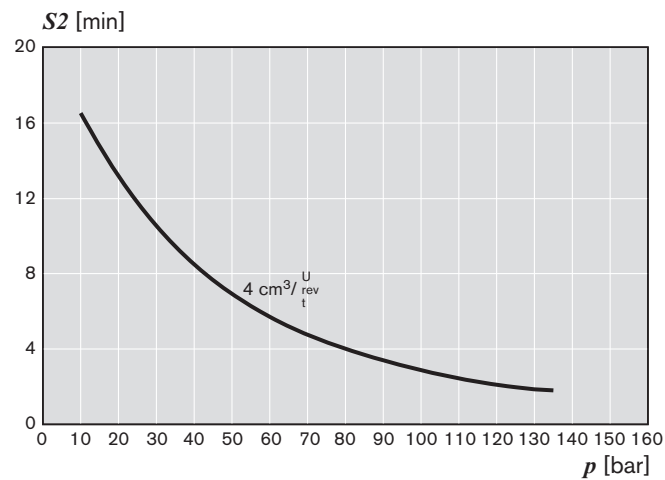
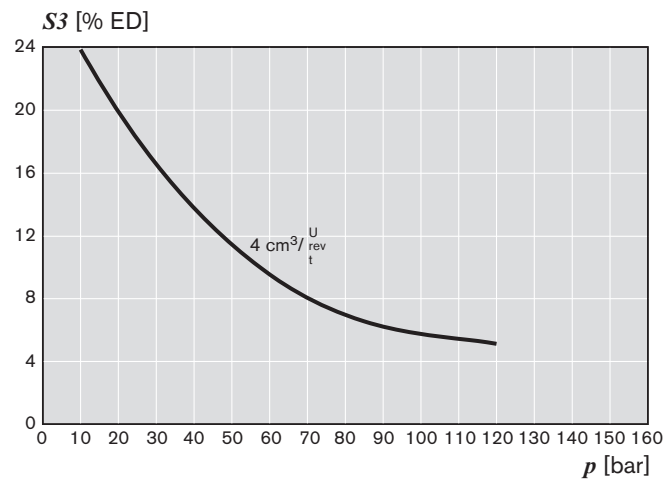
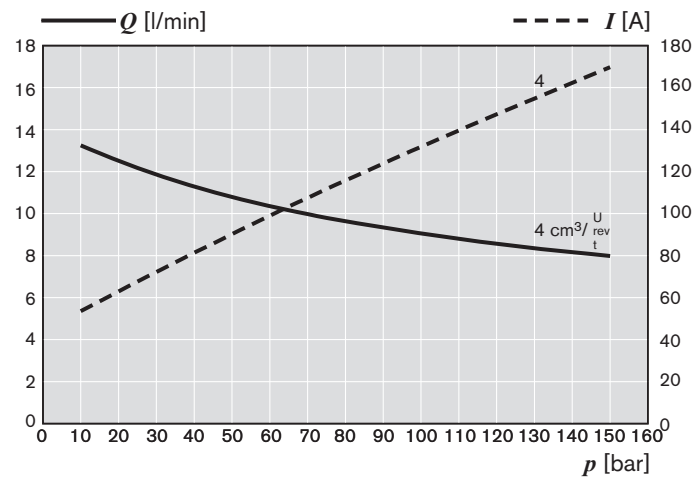


A 541 020 083

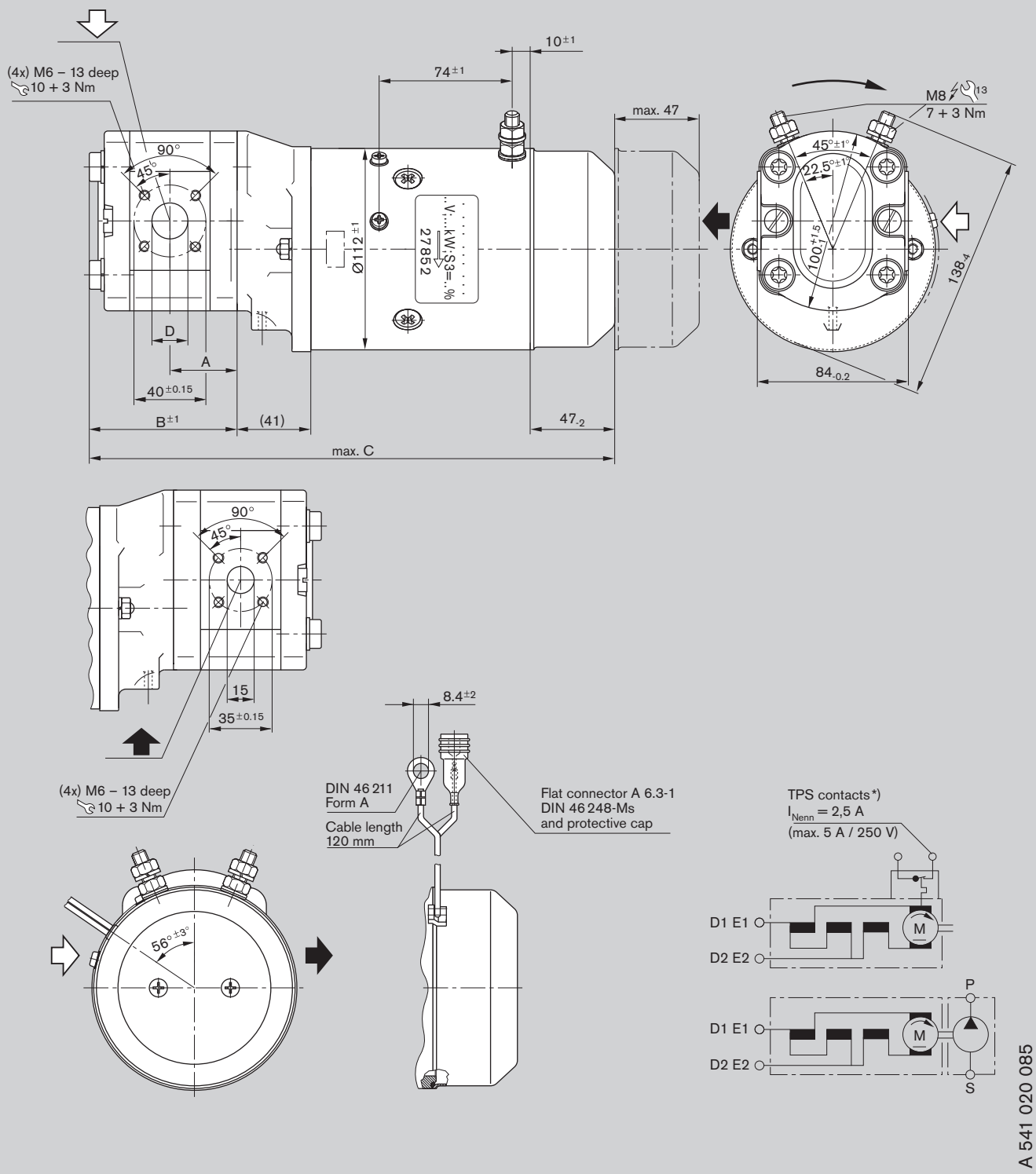
Type of protection:
Motor case IP 43
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]				Weight [kg]	Part number
		A	B	C	D		
EHP24IDG43F004-20A0388N0	4.0	37.3	82.5	293.5	15.0	10.0	0 541 200 063

Characteristics
for A 541 020 083



Unit dimensions

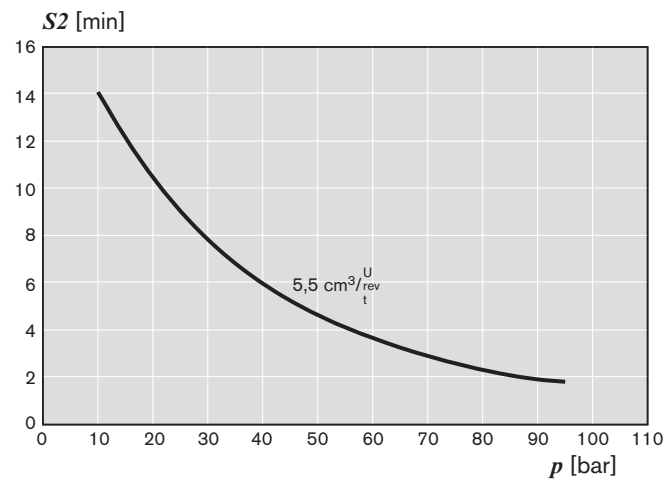
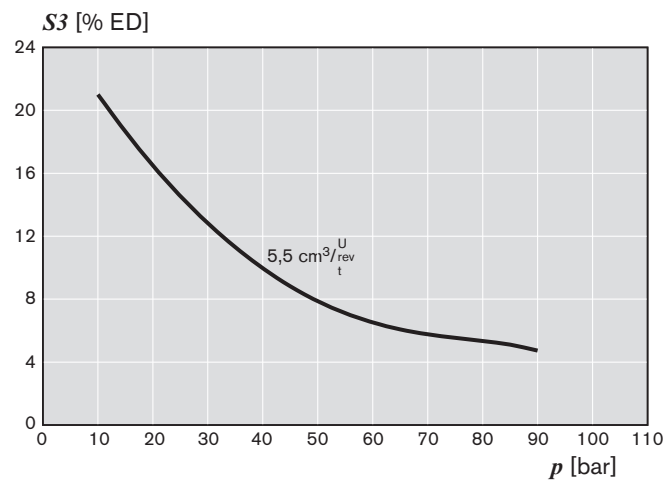
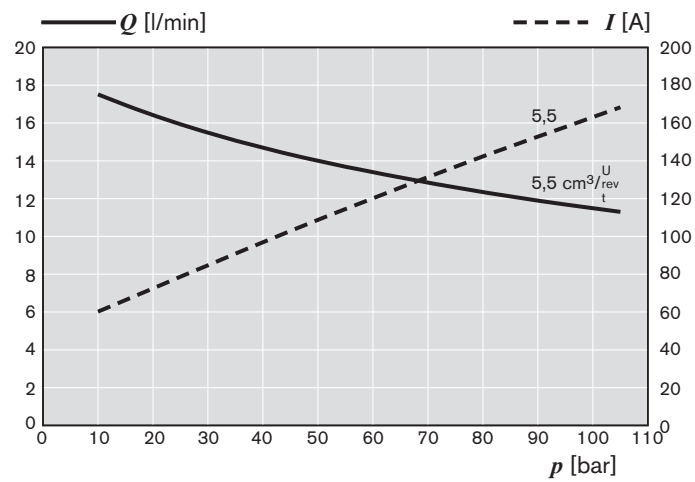


Type of protection:
Motor case IP 54
Ports IP 00

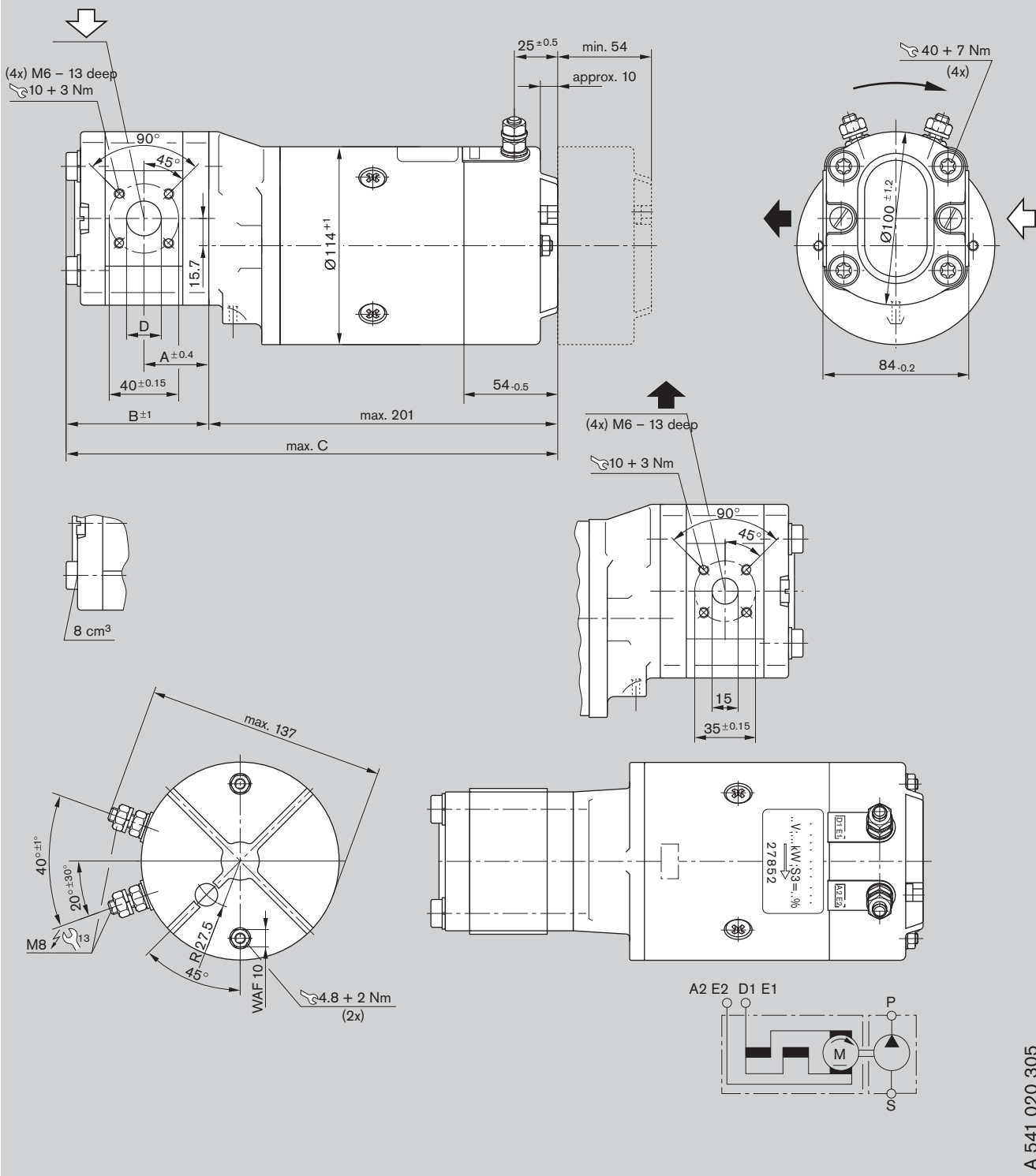
Ordering code	Displacement V [cm³/rev]	Dimension [mm]				TPS *)	Weight [kg]	Part number
		A	B	C	D			
EHP24IDG54F005-20A0402N6	5.5	38.6	85.0	296.0	15.0	x	10.1	0 541 300 057

*) Thermal protection switch

Characteristics
for A 541 020 085



Unit dimensions

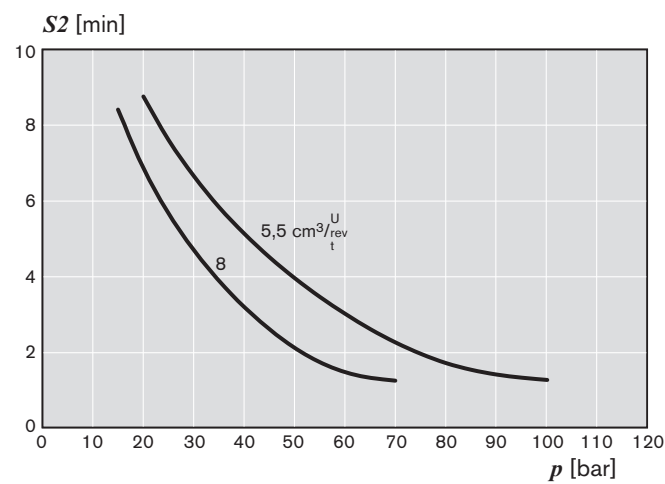
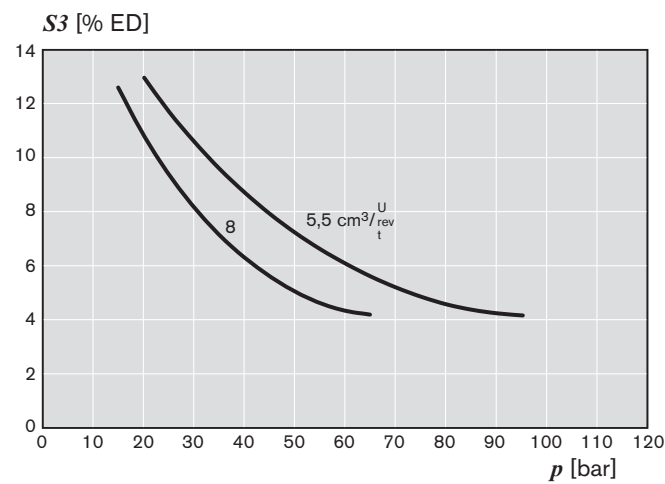
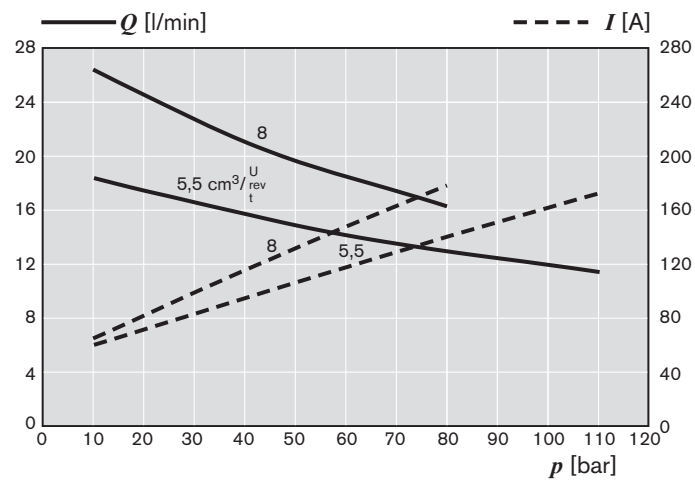


A 541 020 305

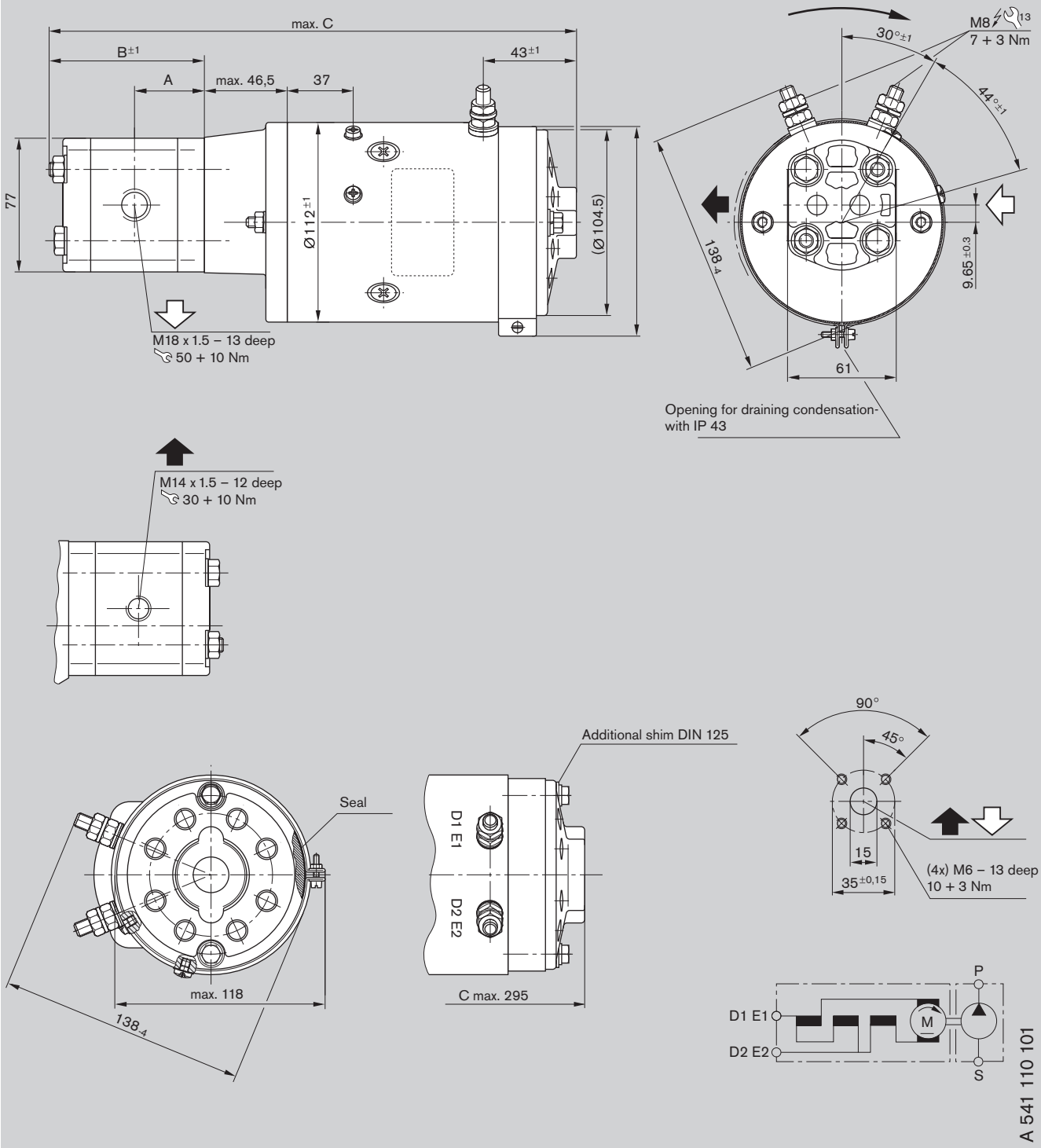
Type of protection:
Motor case IP 54
Ports IP 00

Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]				Weight [kg]	Part number
		A	B	C	D		
EHP24IDG54F005-20A1042A6	5.5	38.6	84.5	286.5	15.0	10.9	0 541 300 081
EHP24IDG54F008-20A1043N0	8.0	40.7	88.6	290.6	20.0	10.4	0 541 400 065

Characteristics
for A 541 020 305



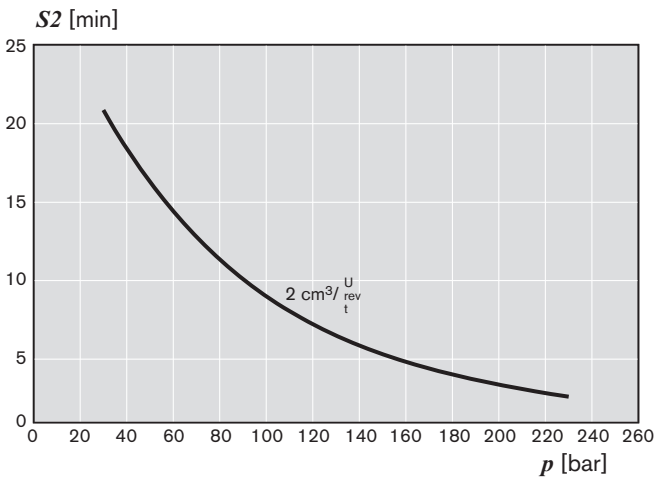
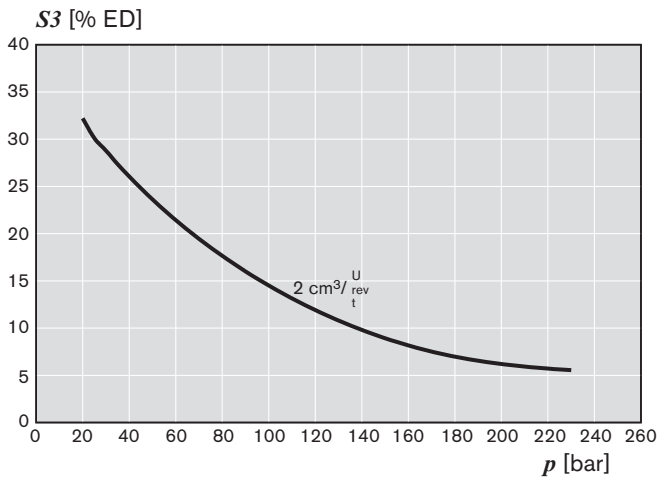
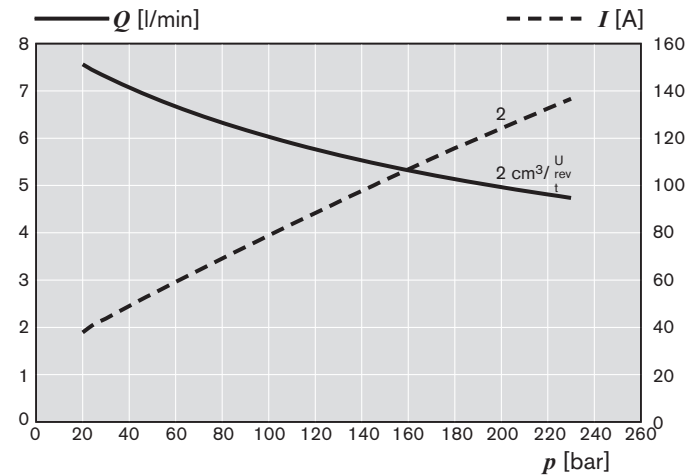
Unit dimensions



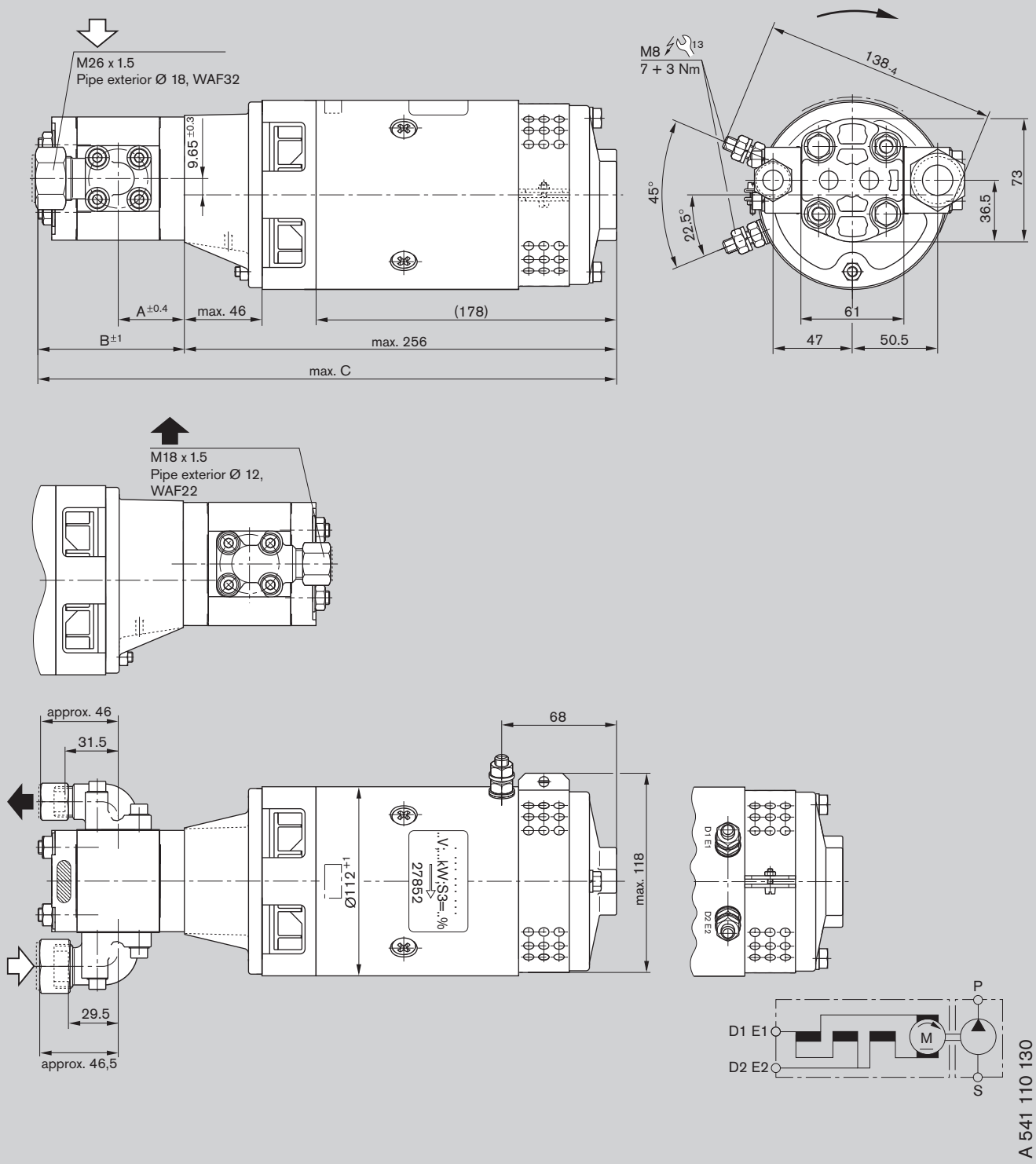
Type of protection:
Motor case IP 43
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24IDG43B2.0-02A0406N0	2.0	37.0	81.0	297.0	9.25	0 541 100 046

Characteristics
for A 541 110 101



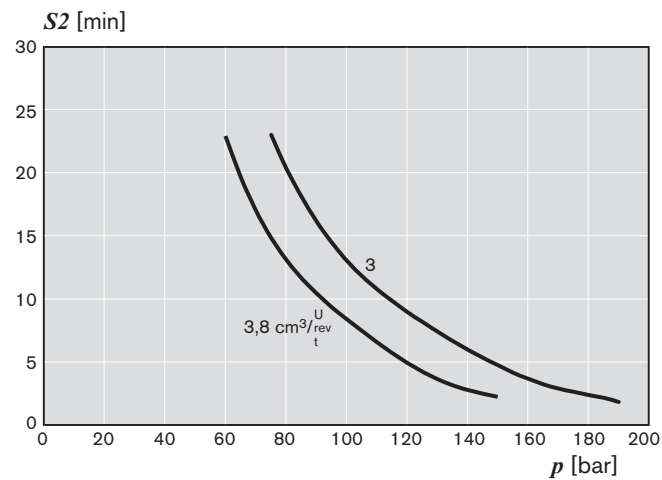
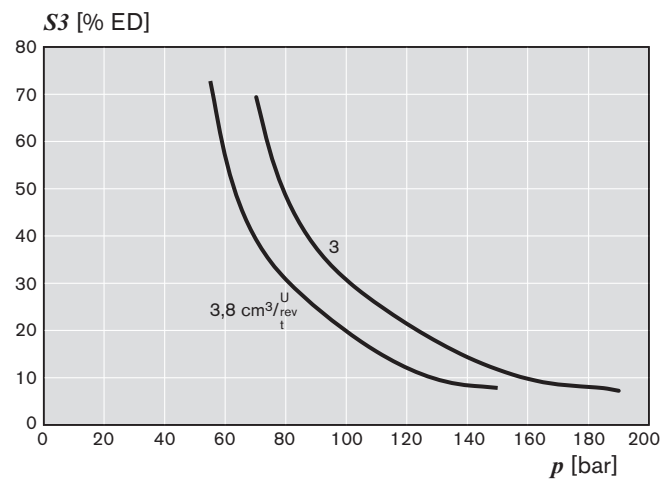
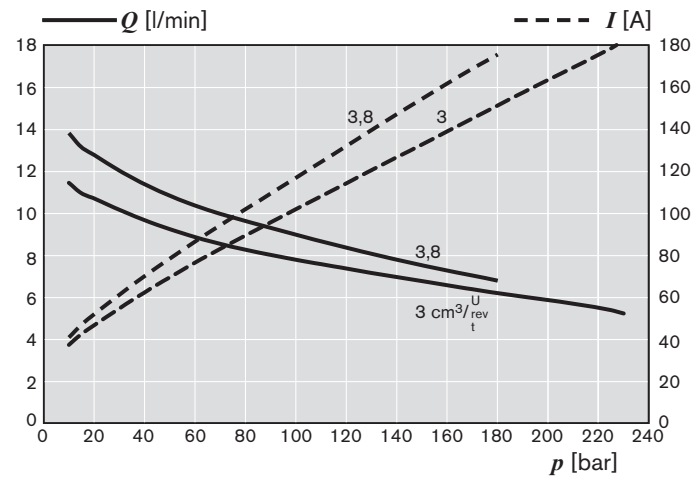
Unit dimensions



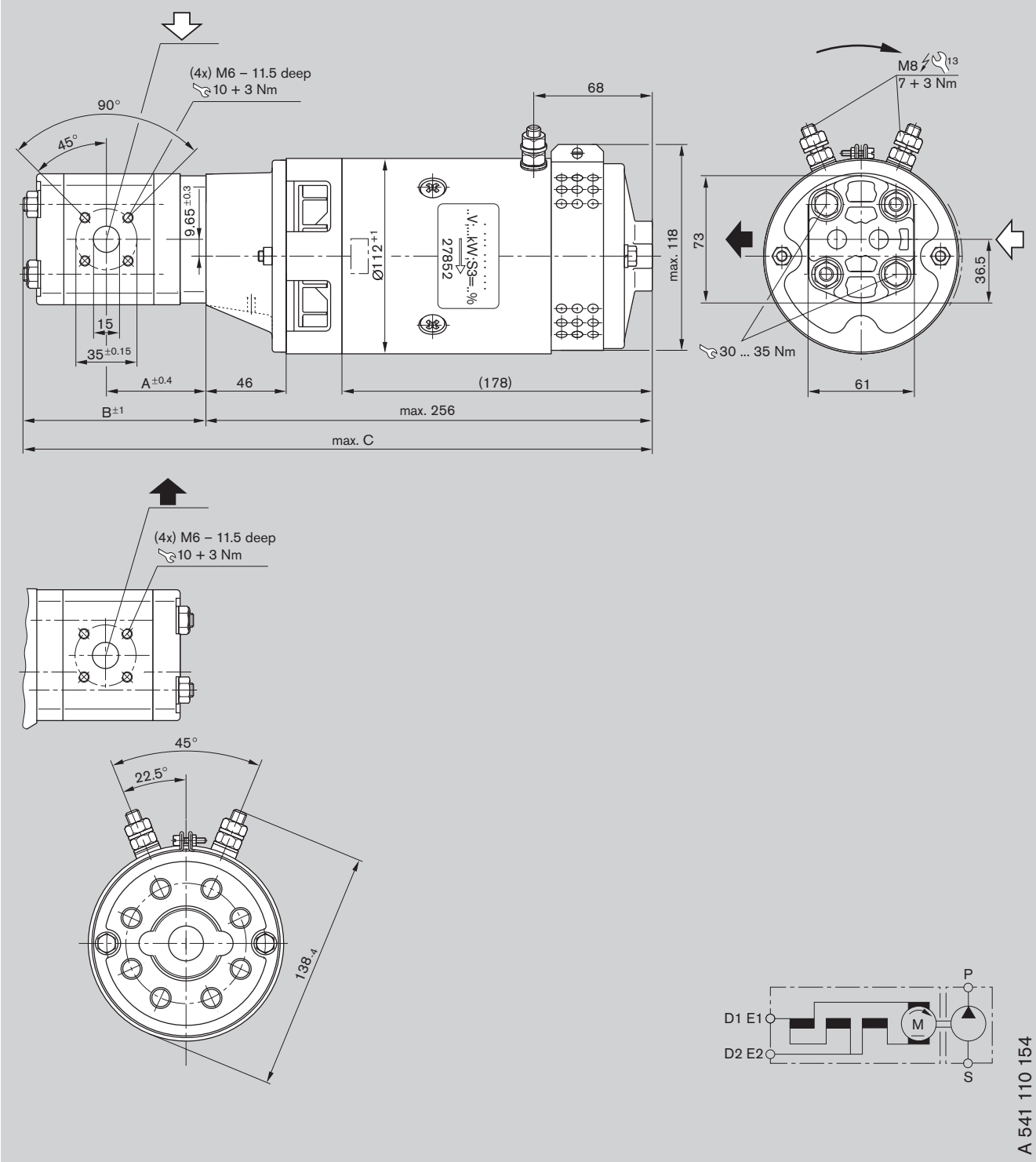
Type of protection:
Motor case IP 10
Ports IP 00

Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24IDL12B3.0-20C0902N0	3.0	39.2	86.0	343.0	10.5	0 541 100 052
EHP24IDL12B3.8-20C0903N0	3.8	40.7	91.0	348.0	10.6	0 541 100 053

Characteristics
for A 541 110 130



Unit dimensions

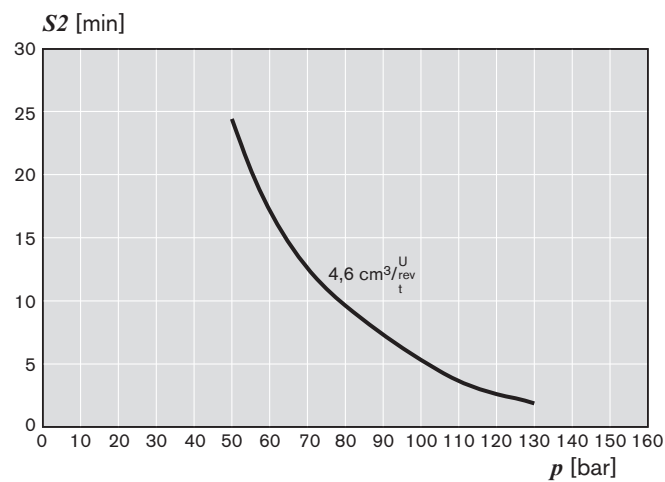
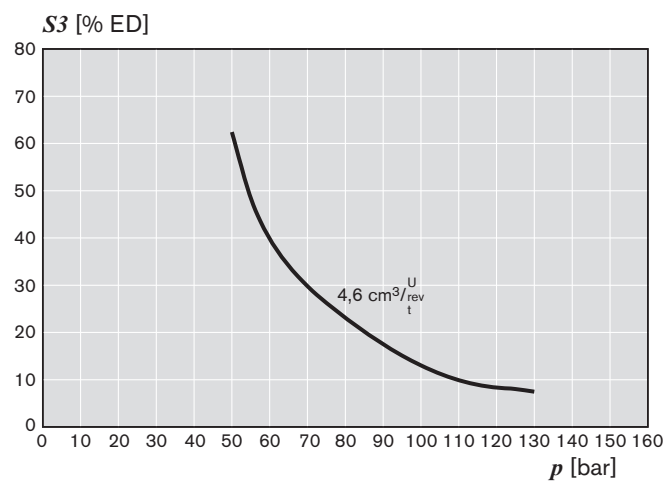
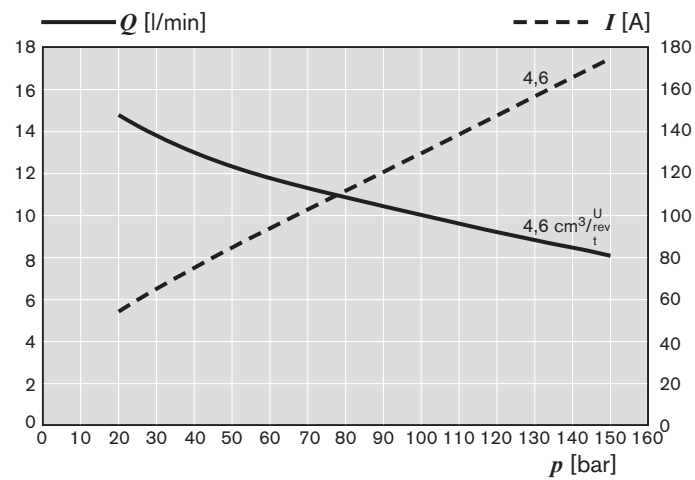


Type of protection:
Motor case IP 10
Ports IP 00

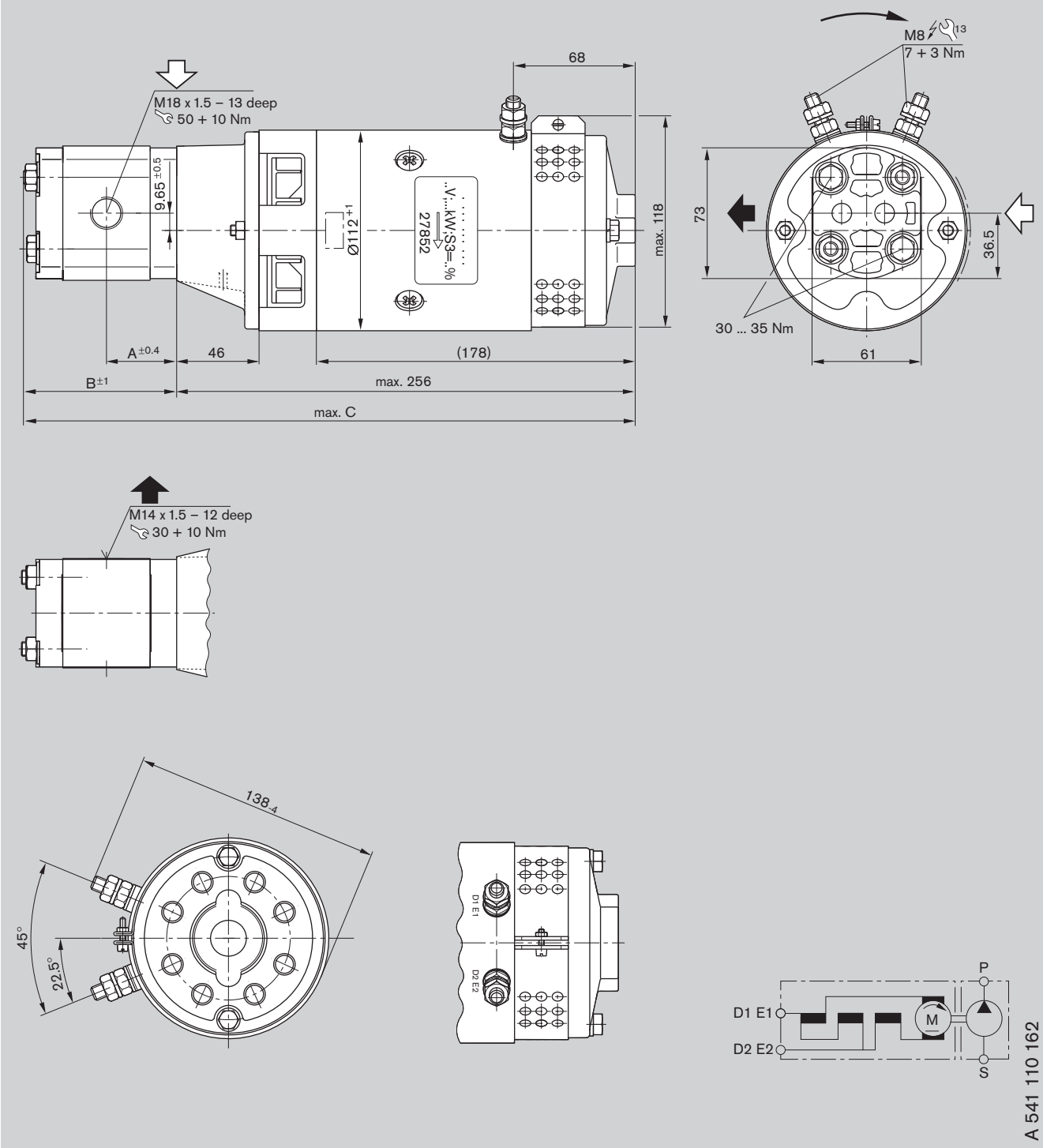
Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24IDL12B4.6-20A0904N0	4.6	42.0	91.0	348.0	10.7	0 541 200 068

A 541 110 154

Characteristics
for A 541 110 154



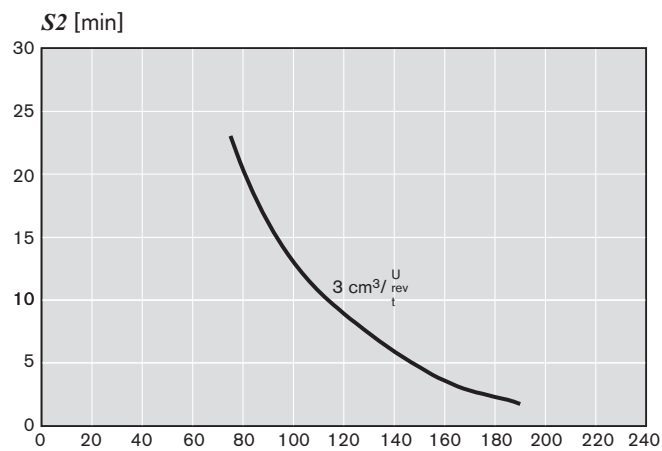
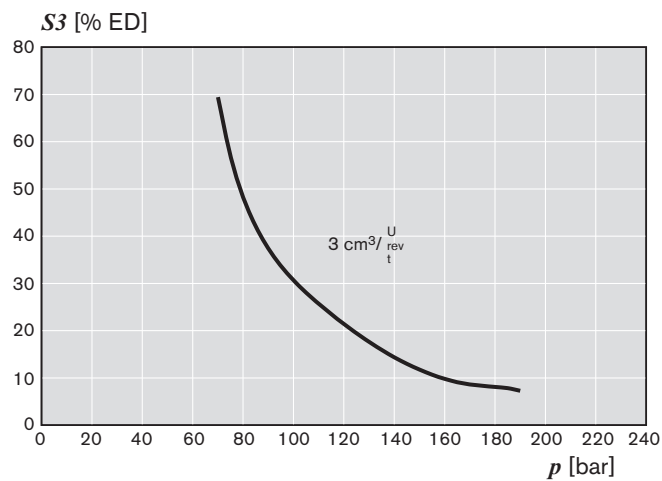
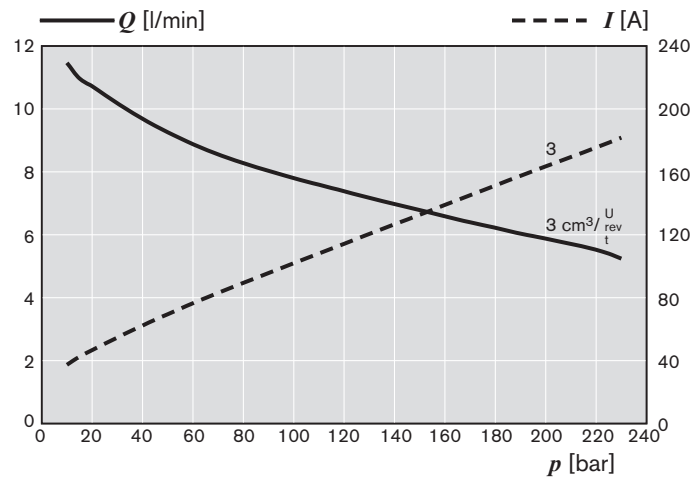
Unit dimensions



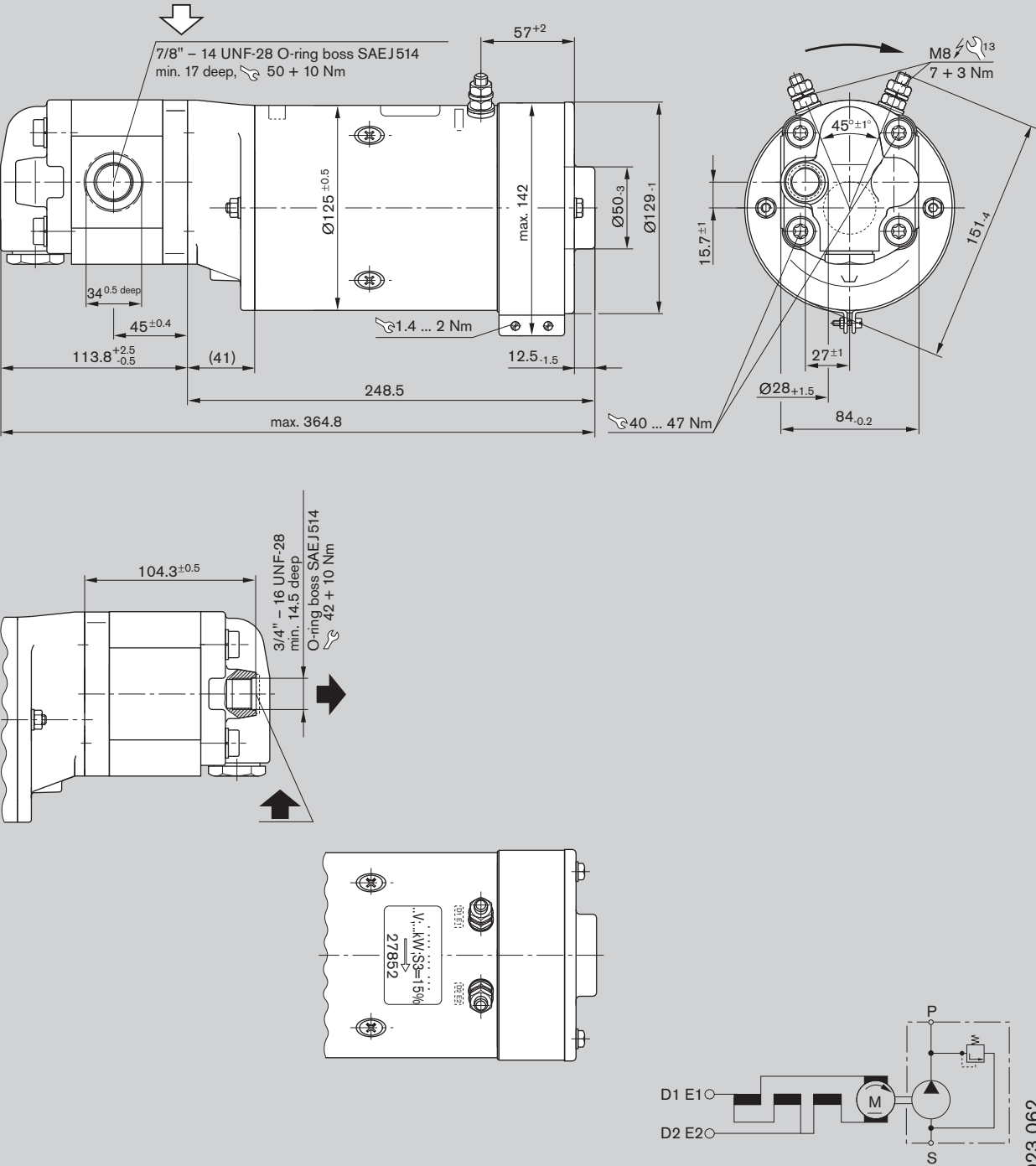
Type of protection:
Motor case IP 10
Ports IP 00

Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24IDL12B3.0-02A0902N0	3.0	39.0	86.0	343.0	9.9	0 541 100 058

Characteristics
for A 541 110 162



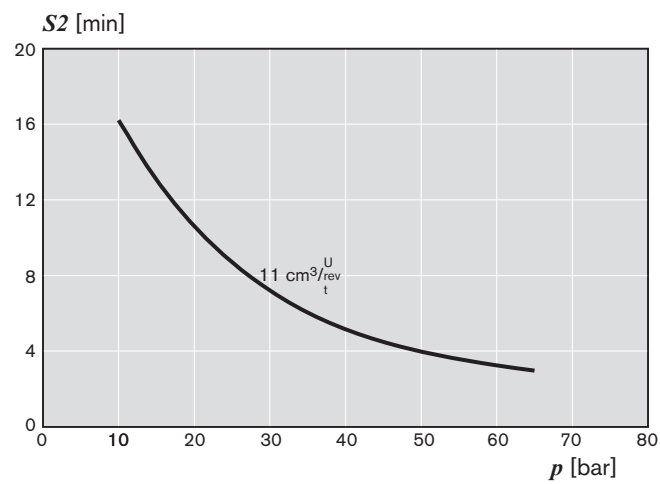
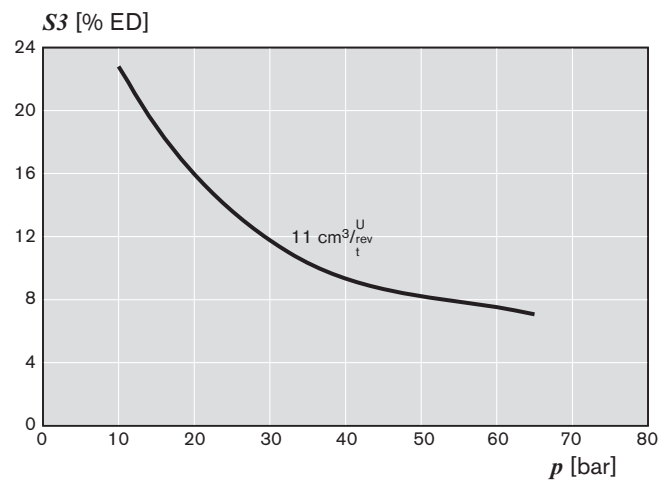
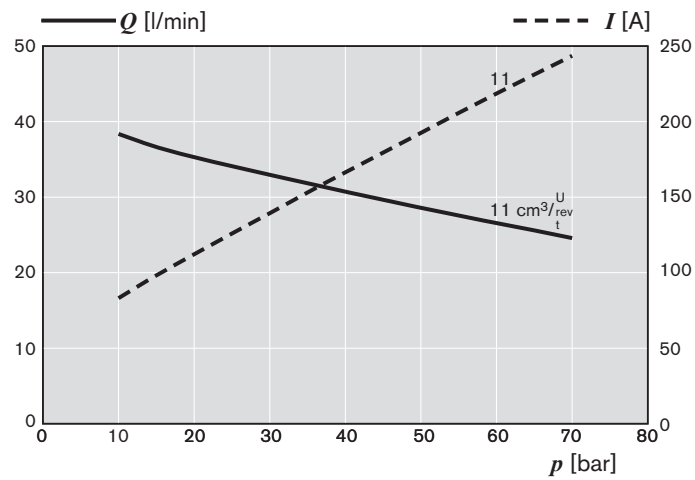
Unit dimensions



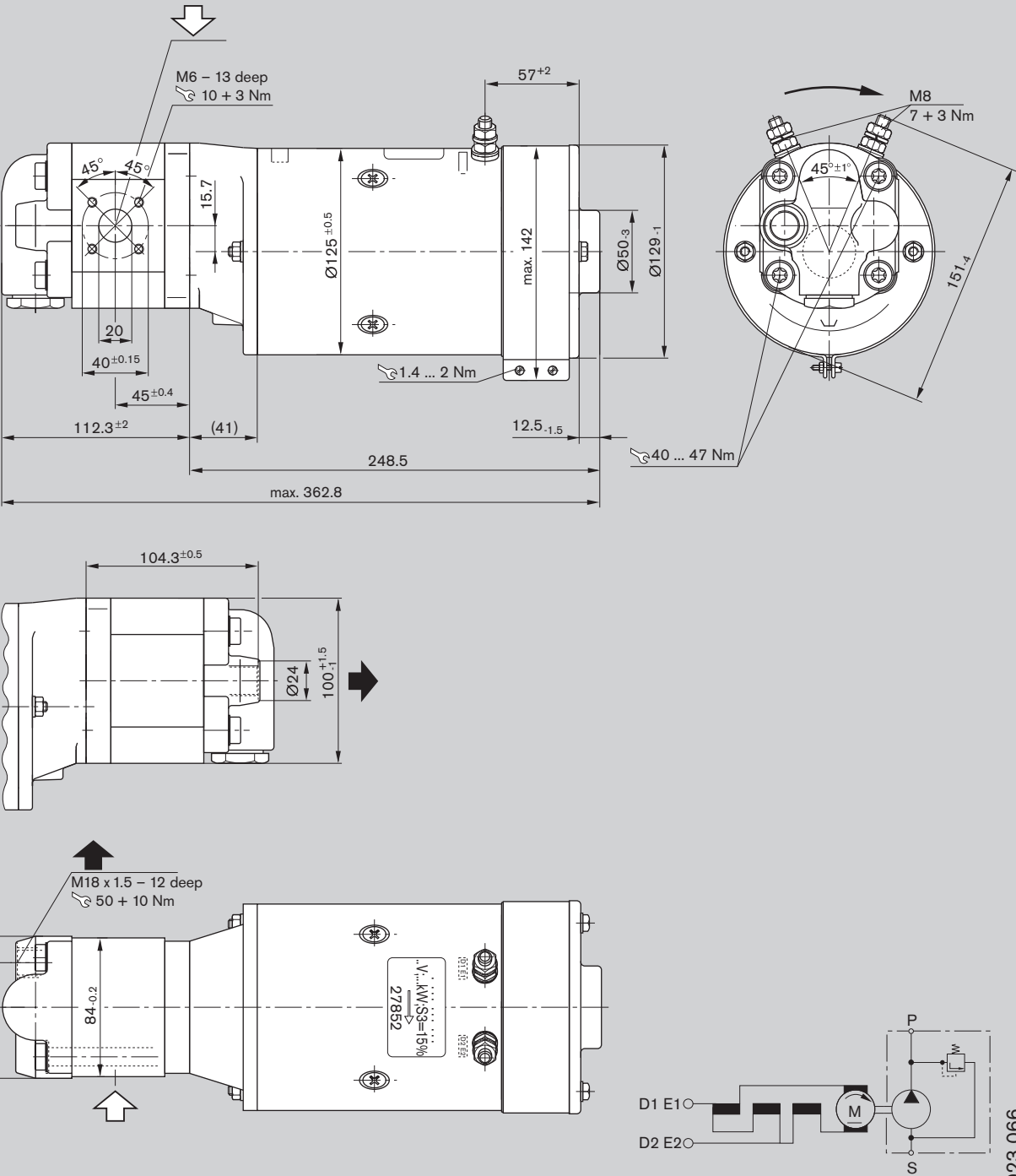
Type of protection:
Motor case IP 66
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			PRV [bar]	Weight [kg]	Part number
		A	B	C			
EHP24KDG66F011-12A0656N0D060	11.0	—	—	—	60 ⁺⁵	16.7	0 541 500 071

Characteristics
for A 541 023 062



Unit dimensions

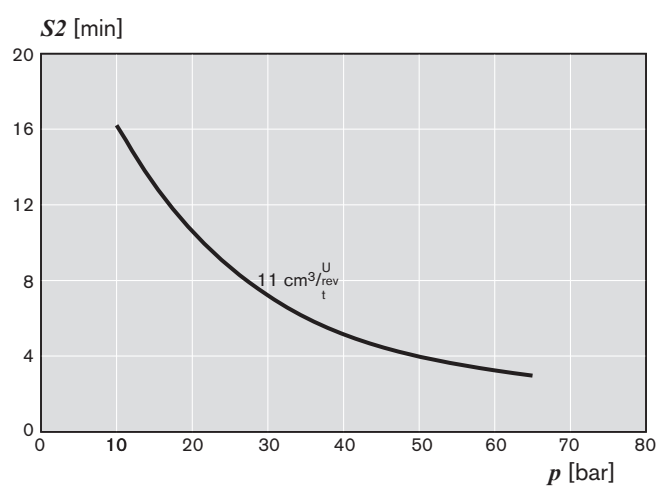
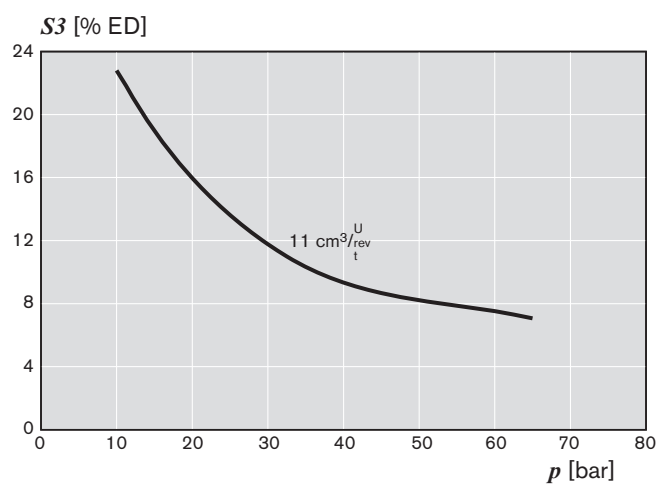
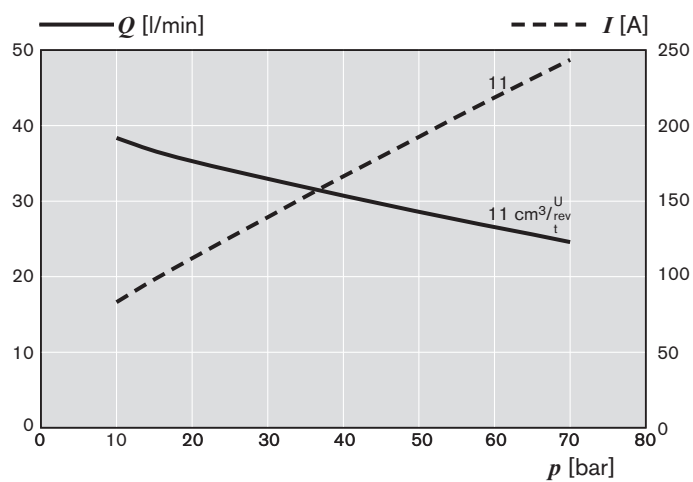


A 541 023 066

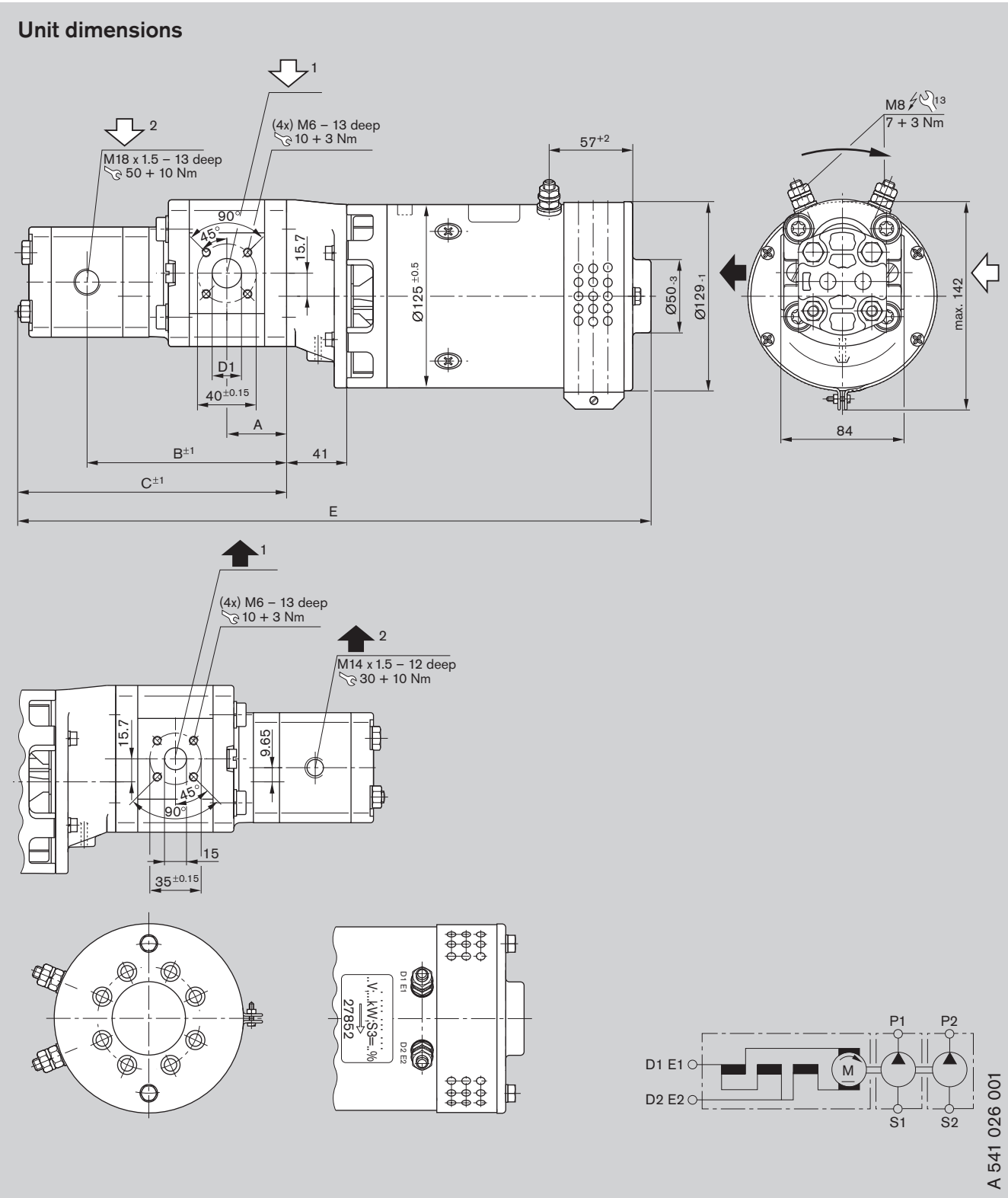
Type of protection:
Motor case IP 66
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Relay, supplied loose	PRV [bar]	Weight [kg]	Part number
		A	B	C				
EHP24KDG66F011-20A0656L0D050	11.0	—	—	—	1 547 211 007	50 ⁺⁵	16.7	0 541 500 078

Characteristics for A 541 023 066



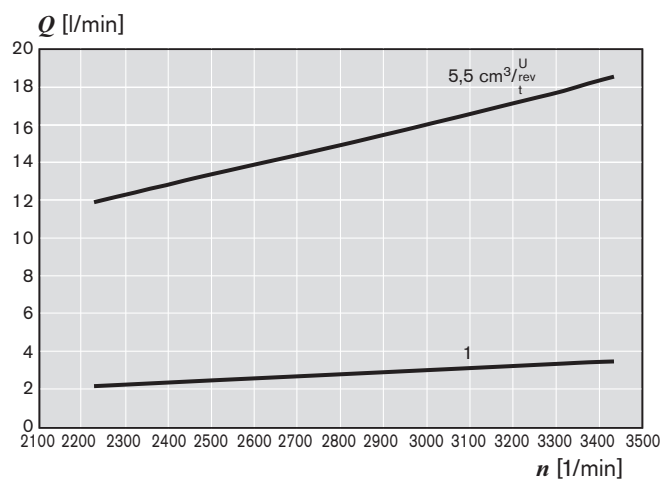
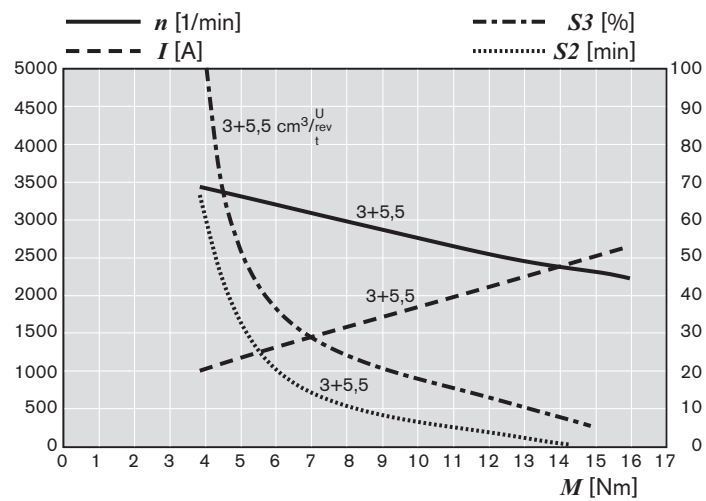
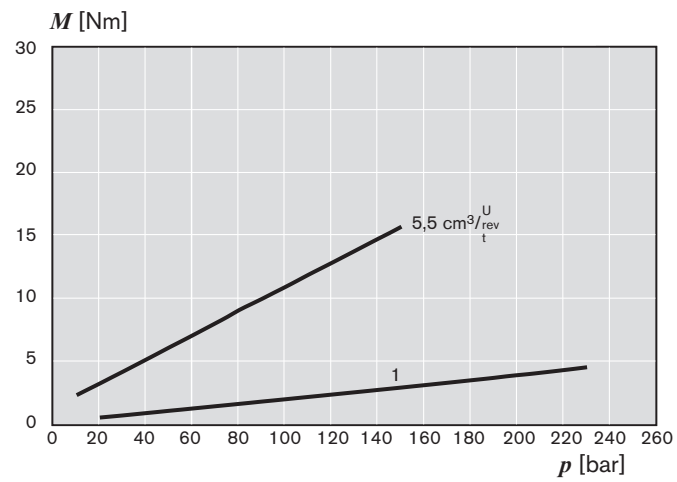
Unit dimensions



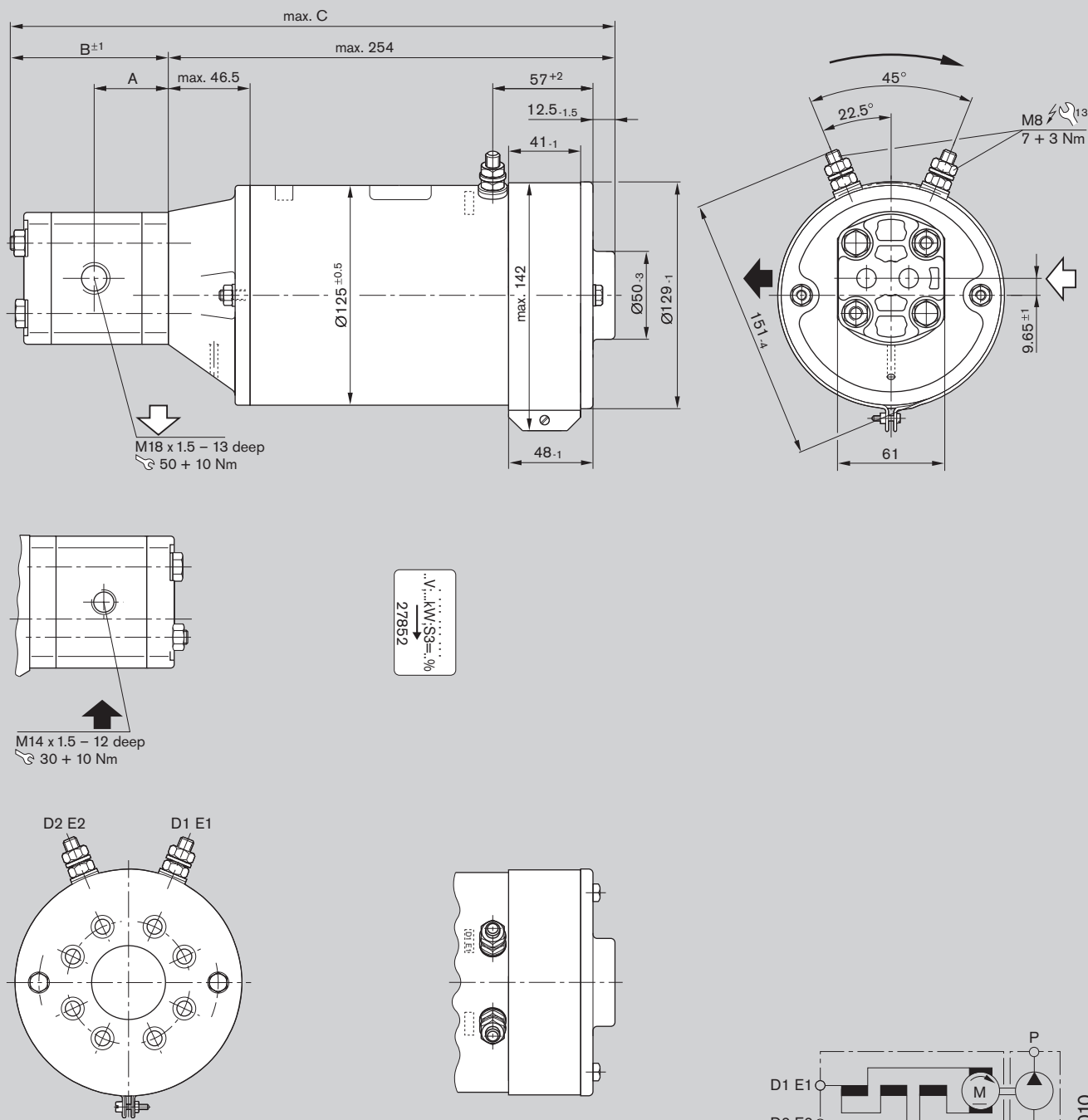
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displace- ment V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24KDL20FB005/1.0-2002A1096N0	5.5 + 1.0	39.0	124.7	165.7	20	0 541 300 058

Characteristics for A 541 001 096



Unit dimensions

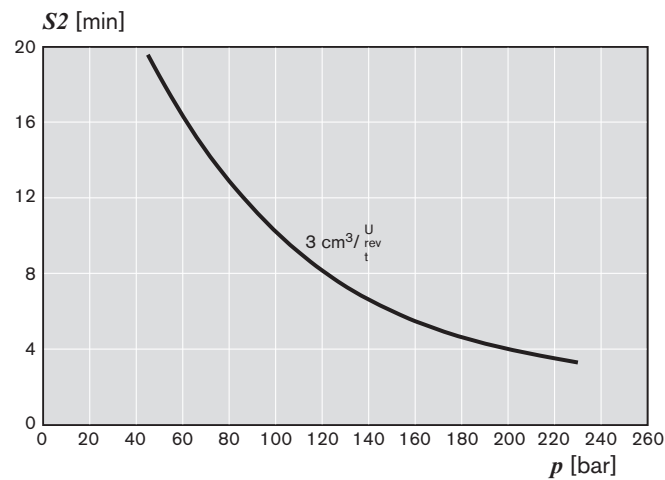
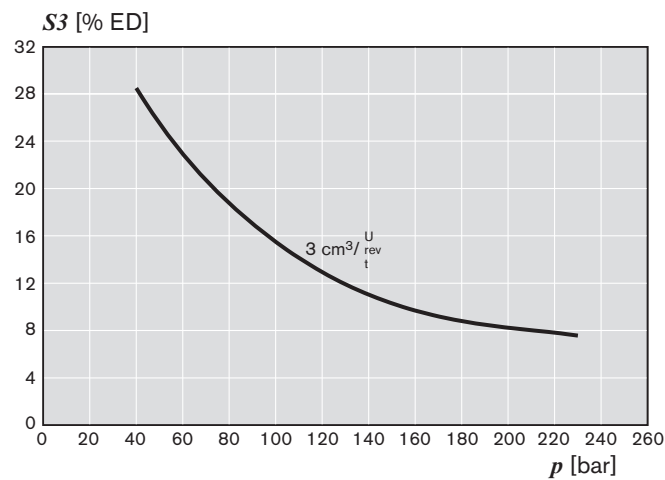
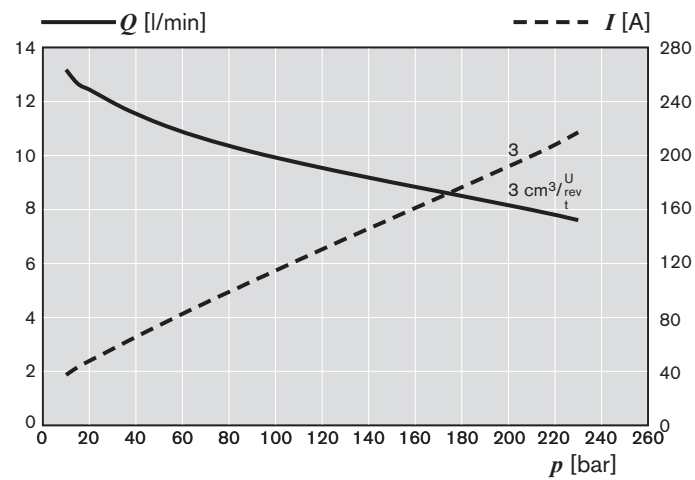


A 541 114 010

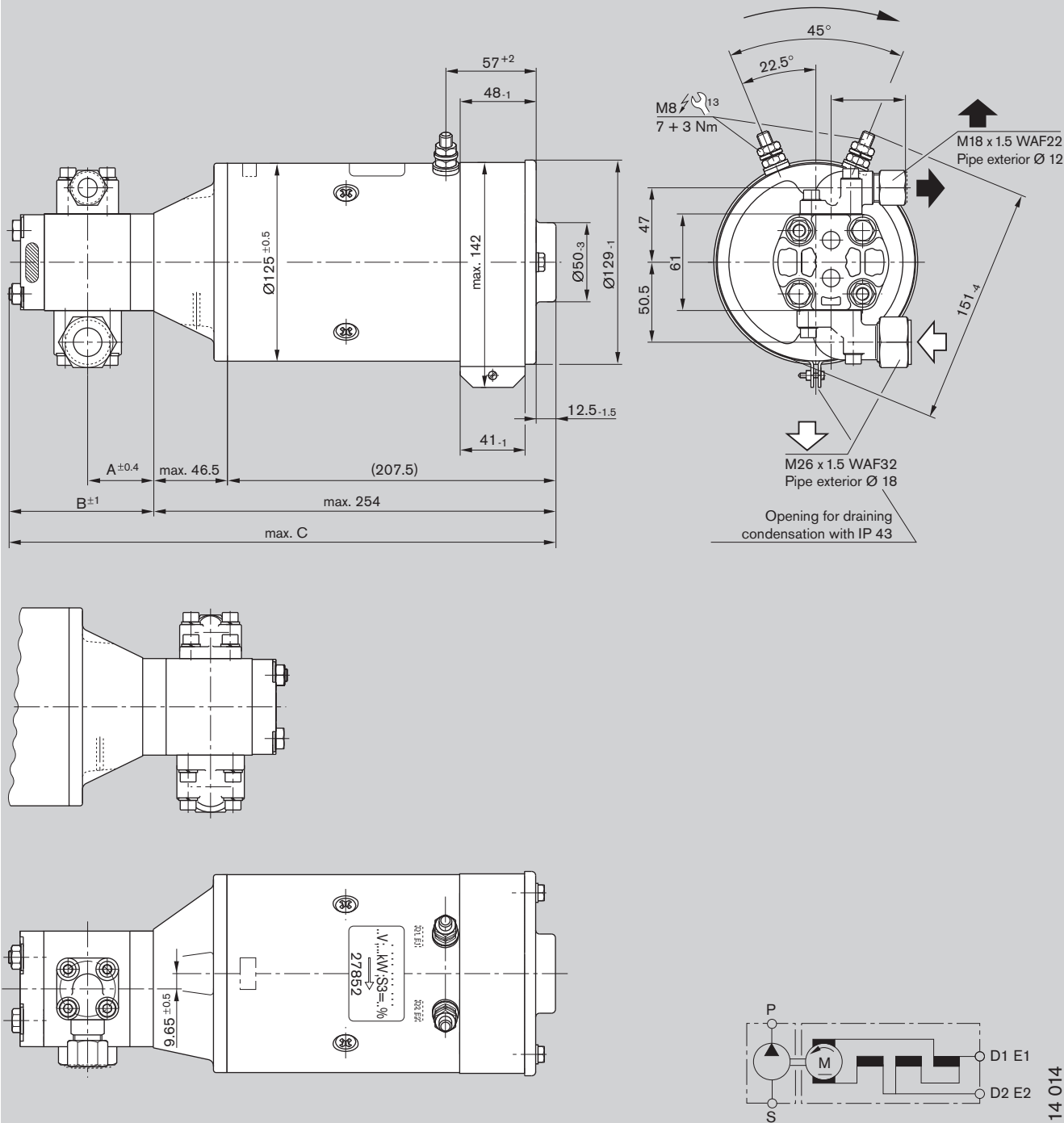
Type of protection:
Motor case IP 43
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24KDG43B3.0-02A0611N0	3.0	39.2	86.0	341.0	13.5	0 541 100 055

Characteristics
for A 541 114 010



Unit dimensions

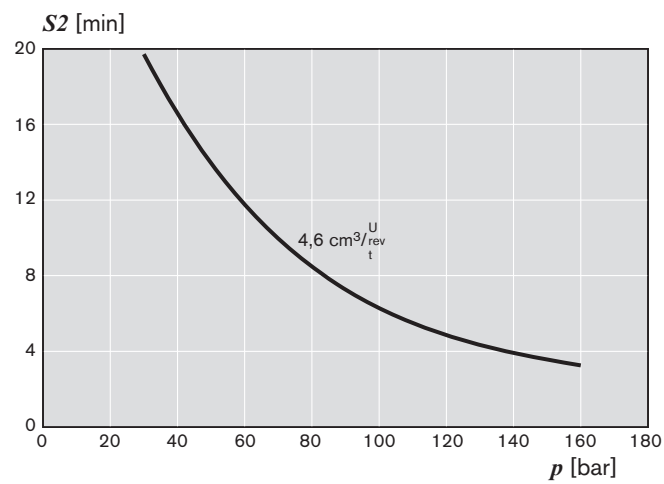
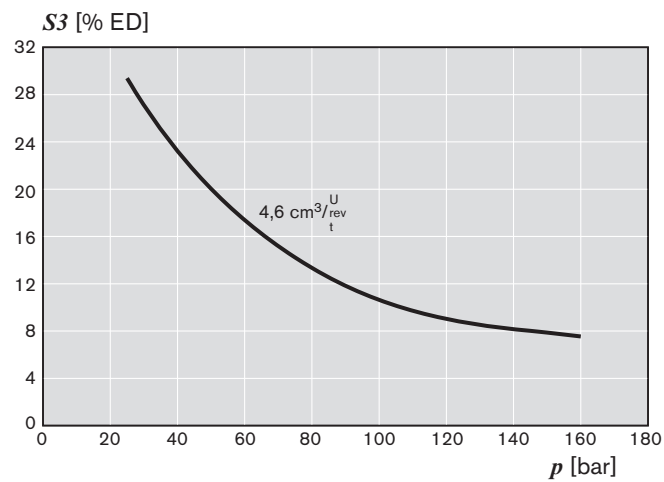
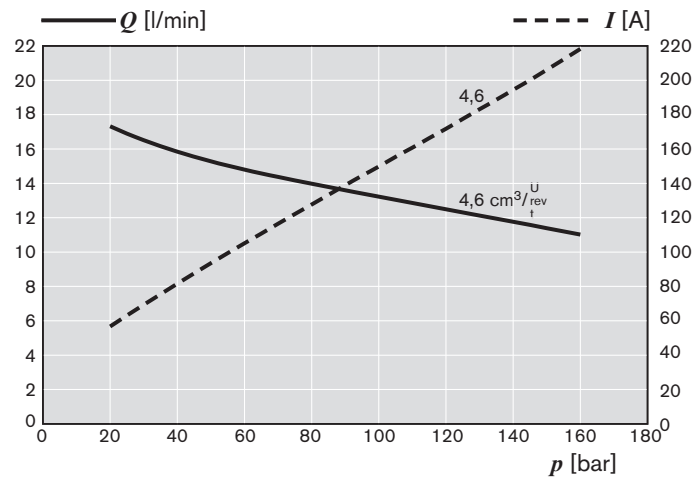


Type of protection:
Motor case IP 43
Ports IP 00

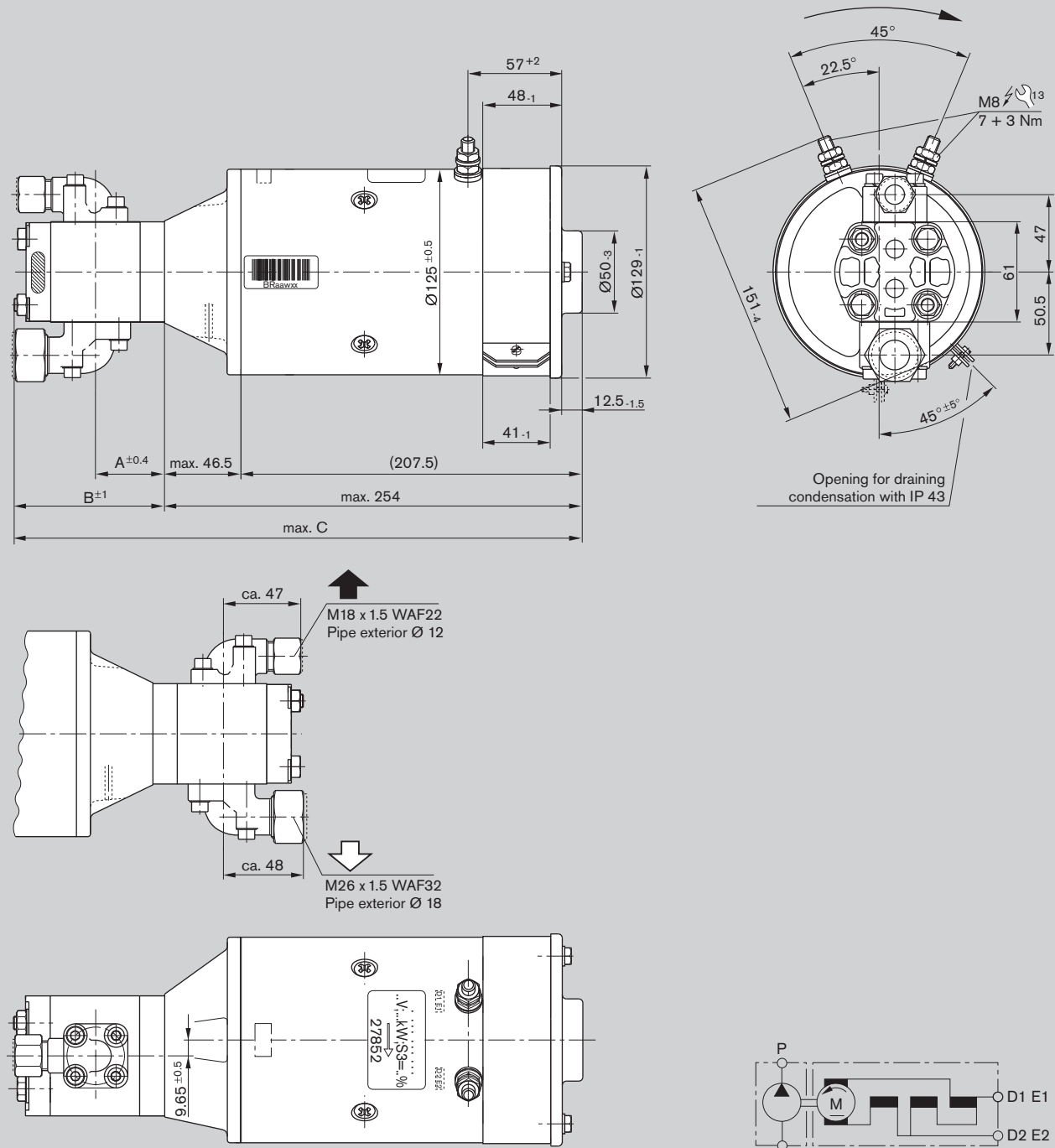
Ordering code	Displacement V [cm ³ /rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24KDG43B4.6-20C0613N0	4.6	42.0	91.0	346.0	14.1	0 541 200 067

A 541 114 014

Characteristics
for A 541 114 014



Unit dimensions

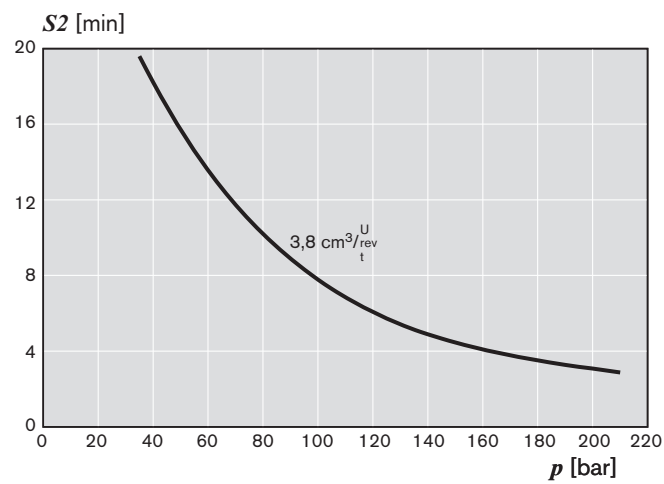
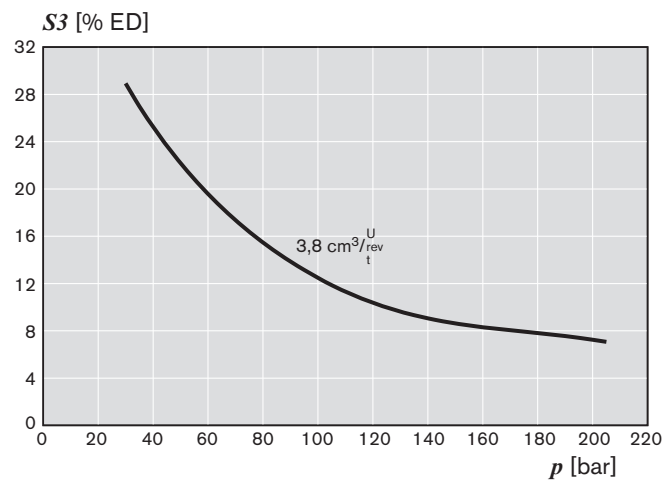
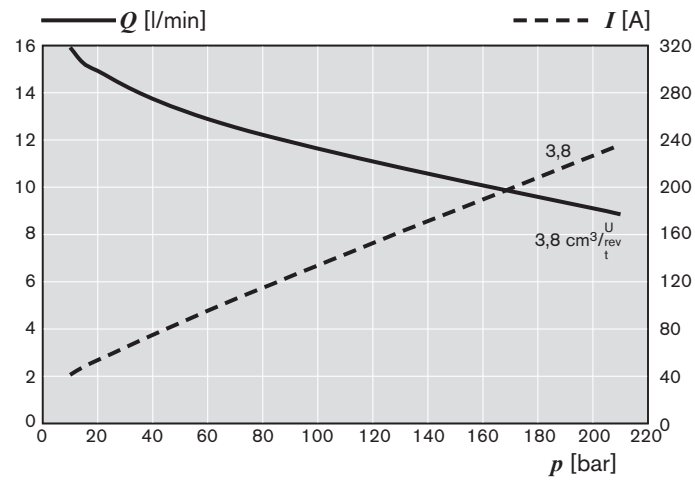


A 541 114 016

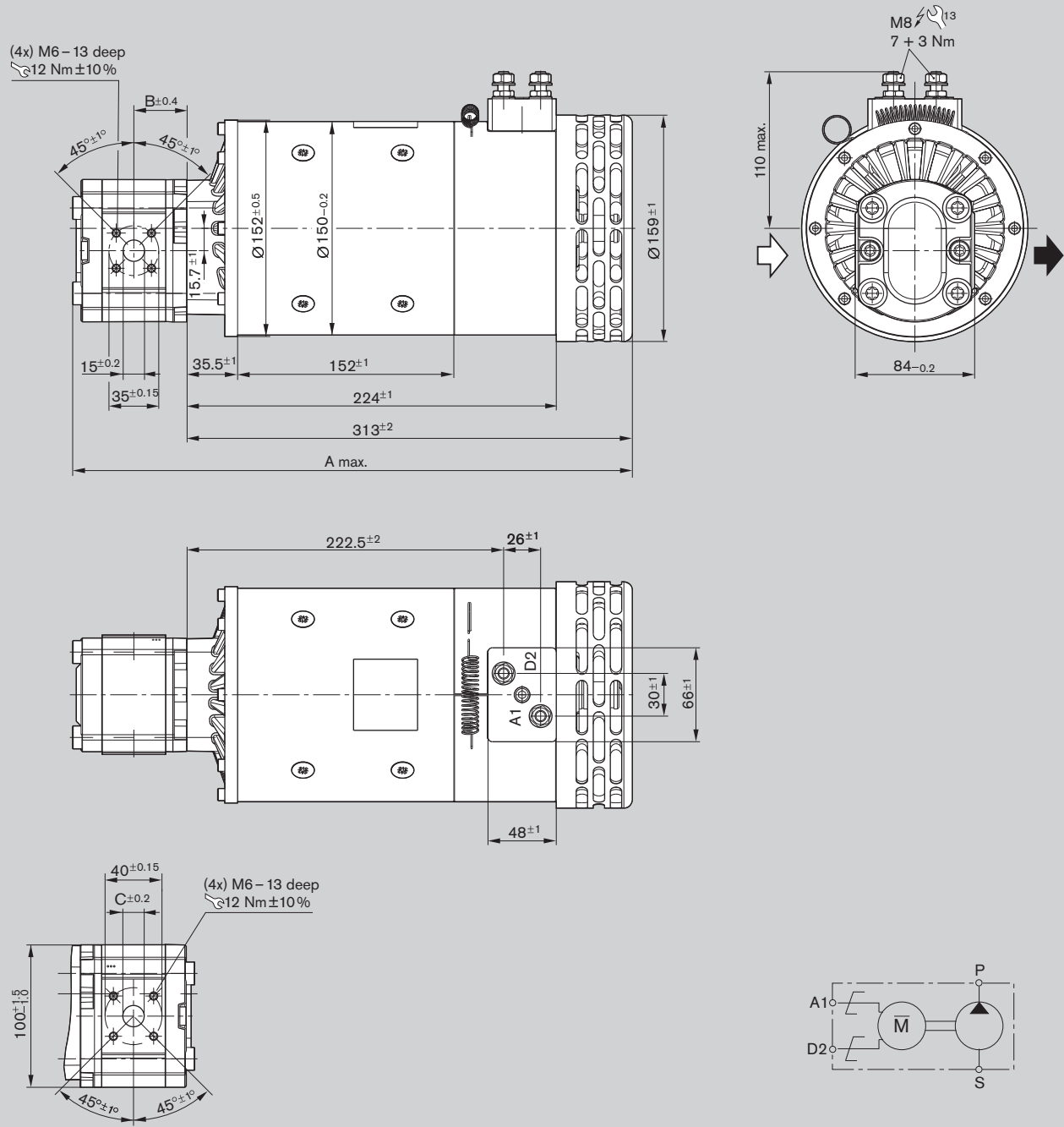
Type of protection:
Motor case IP 43
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24KDG43B3.8-20C0612N0	3.8	41.0	91.0	346.0	14.3	0 541 100 054

Characteristics
for A 541 114 016



Unit dimensions

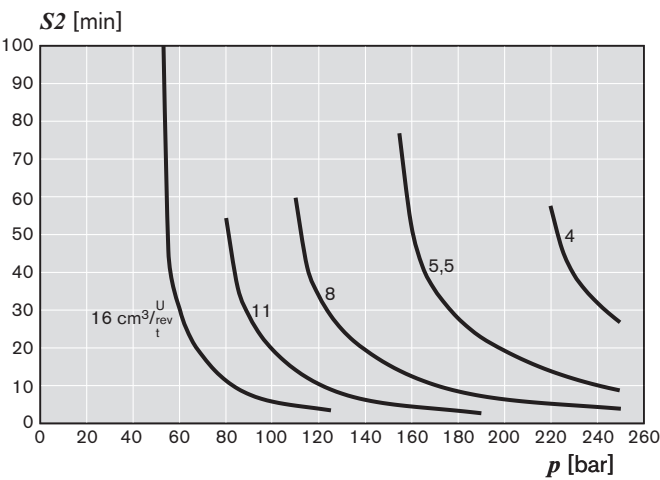
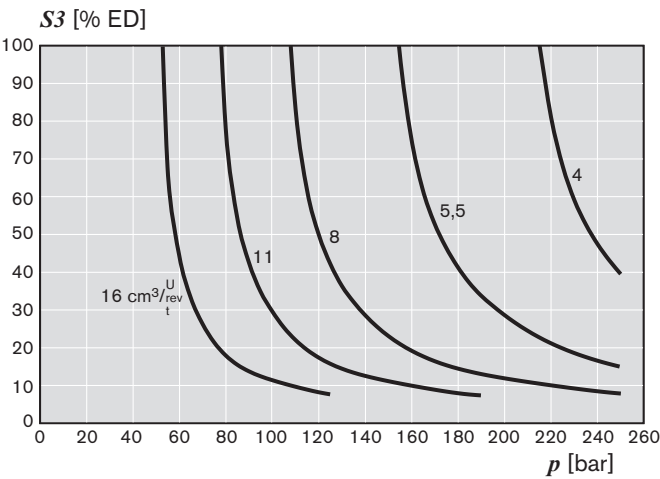
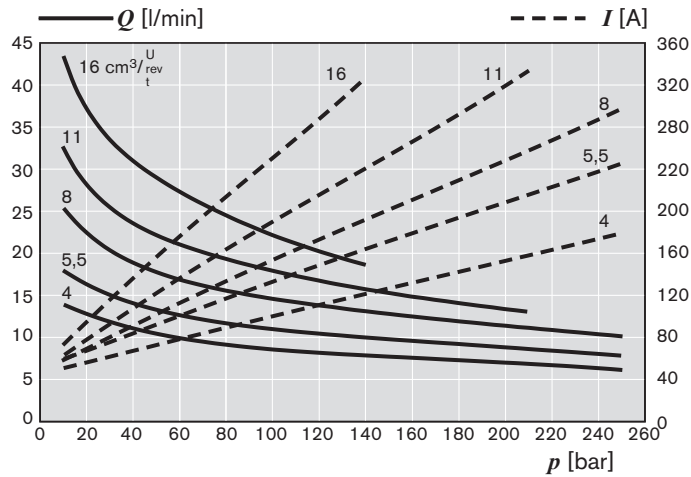


A 541 021 351

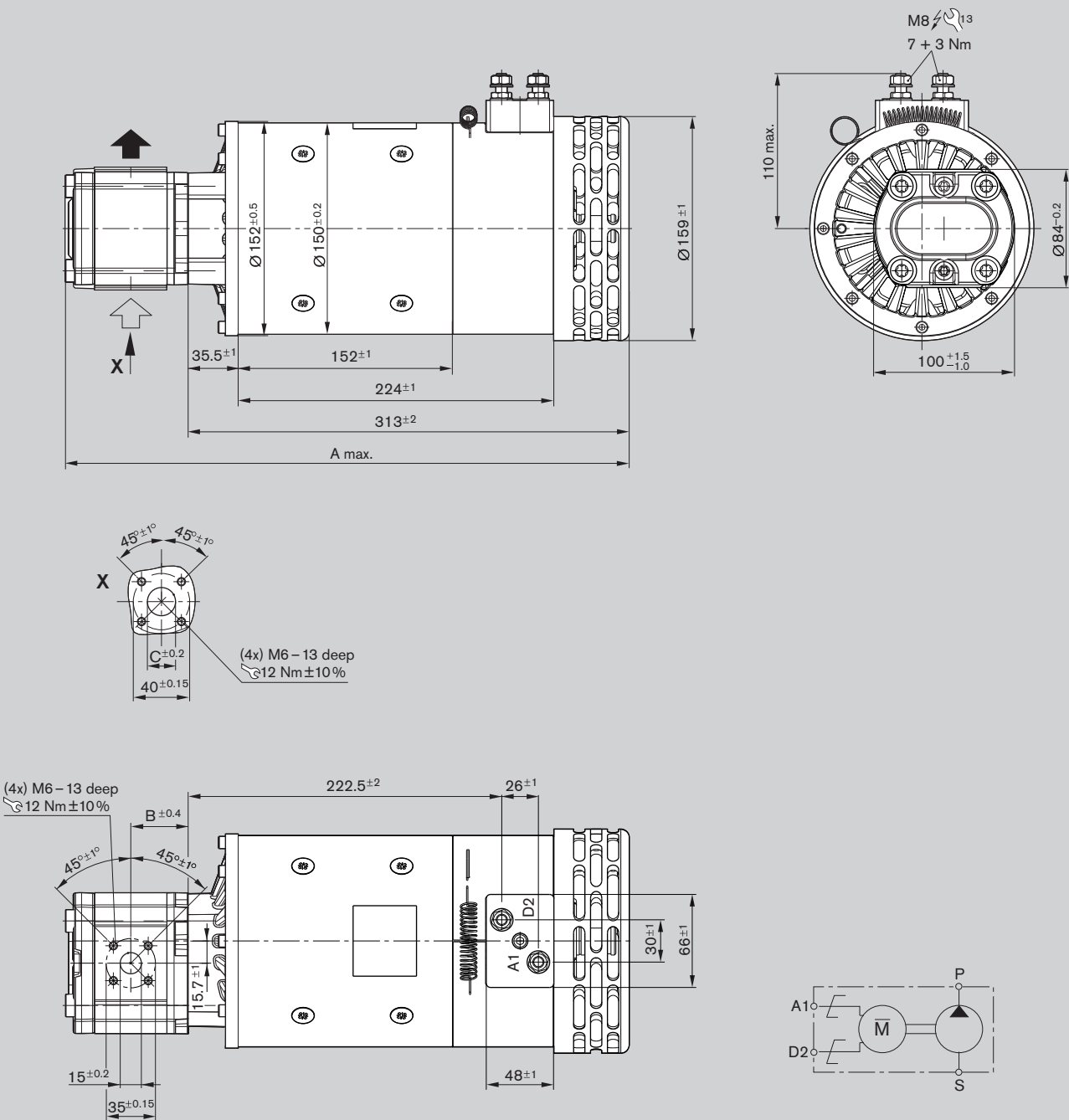
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24PRL20F004-20E1325N0	4.0	396.0	37.4	15.0	20.4	0 541 200 083
EHP24PRL20F005-20E1326N0	5.5	399.0	38.6	15.0	20.4	0 541 300 068
EHP24PRL20F008-20E1327N0	8.0	403.0	40.7	20.0	20.5	0 541 400 075
EHP24PRL20F011-20E1328N0	11.0	408.0	44.5	20.0	20.7	0 541 500 082
EHP24PRL20F016-20E1338N0	16.0	416.0	45.0	20.0	20.9	0 541 600 043

Characteristics
for A 541 021 351



Unit dimensions

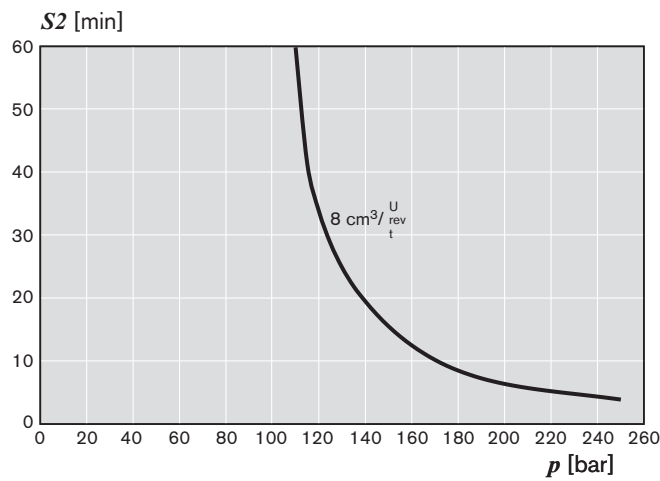
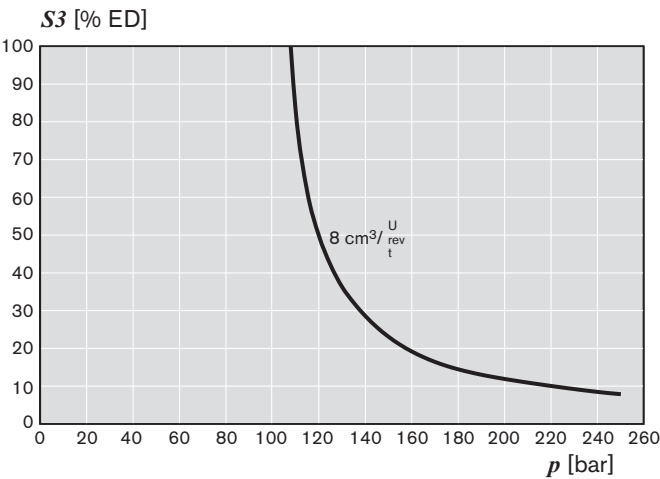
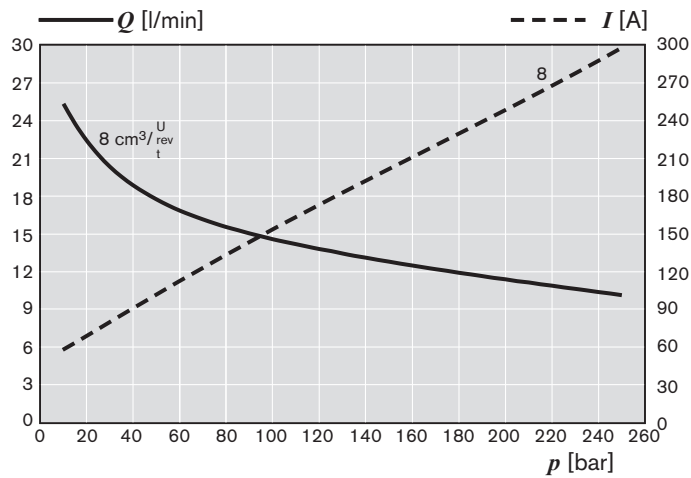


A 541 021 367

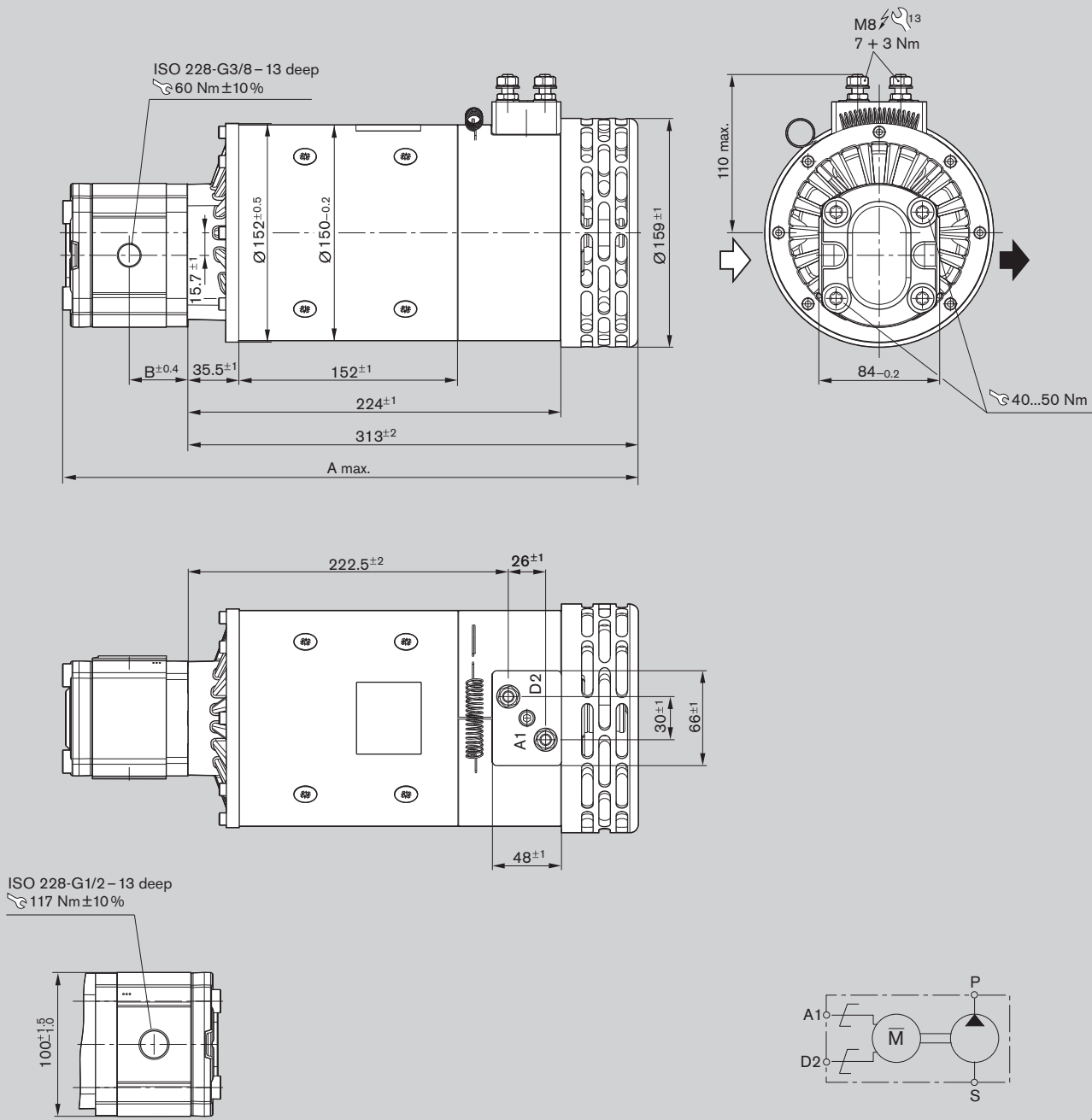
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			kg	Part number
		A	B	C		
EHP24PRL20F008-20C1327N0	8.0	403	40.7	20	20.5	0 541 400 079

Characteristics
for A 541 021 367



Unit dimensions

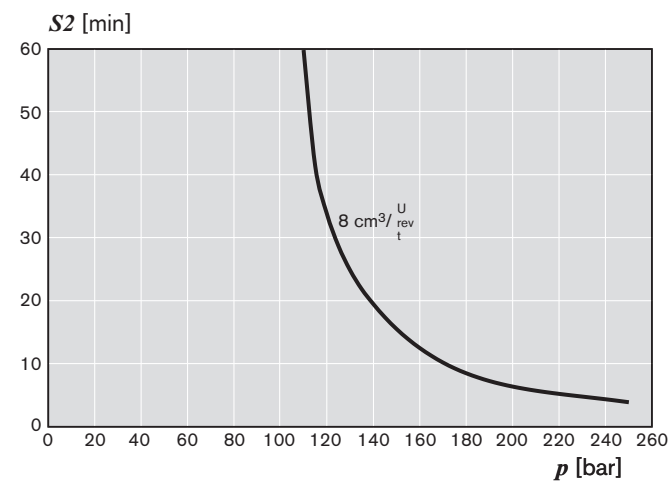
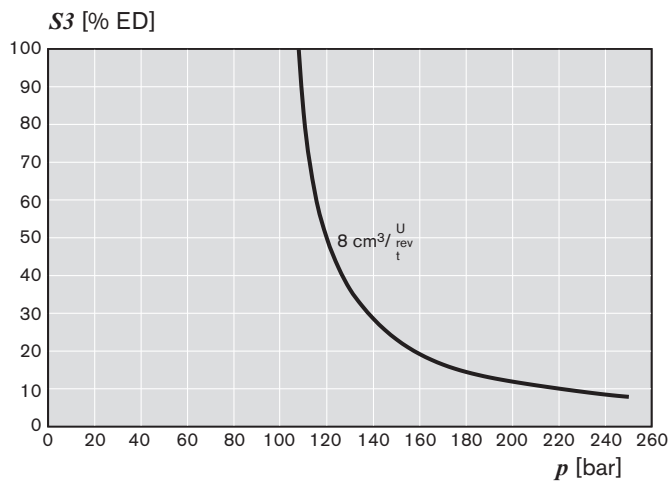
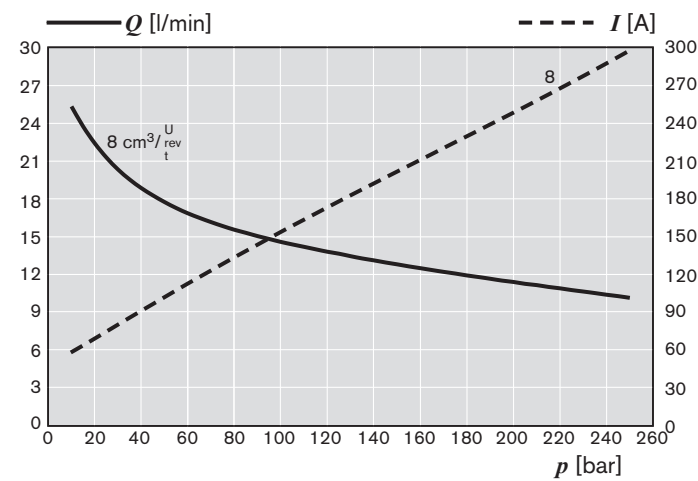


A 541 021 383

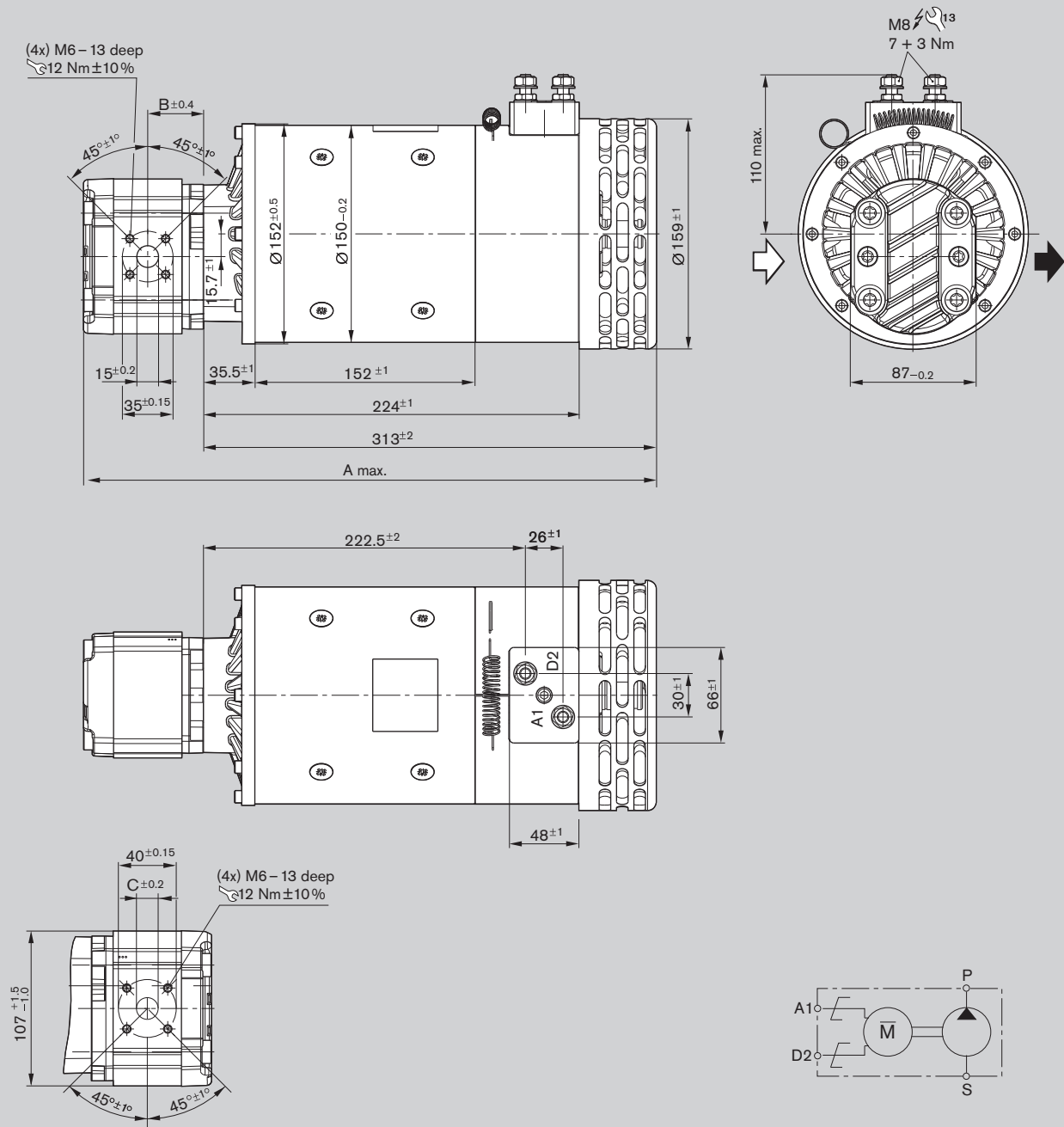
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]		Weight [kg]	Part number
		A	B		
EHP24PRL20F008-01E1327N0	8.0	403	40.7	20.5	0 541 400 083

Characteristics
for A 541 021 383



Unit dimensions

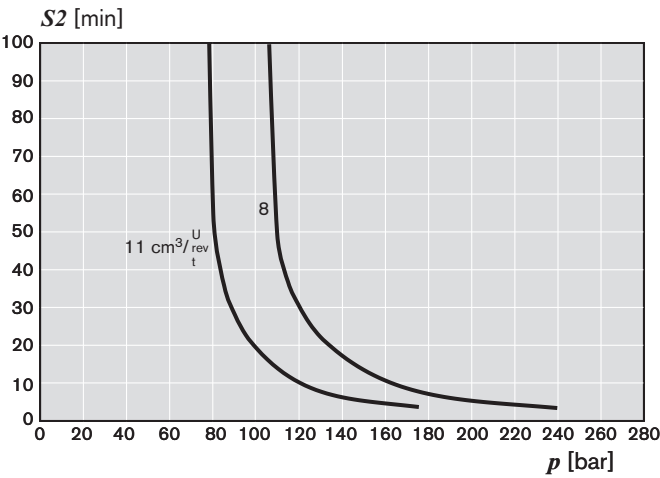
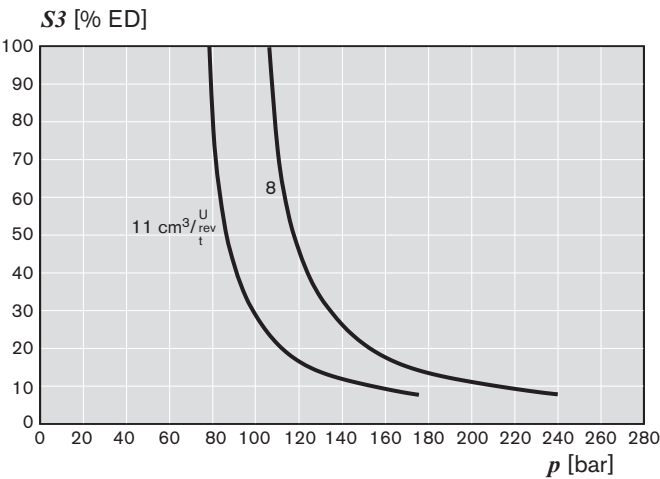
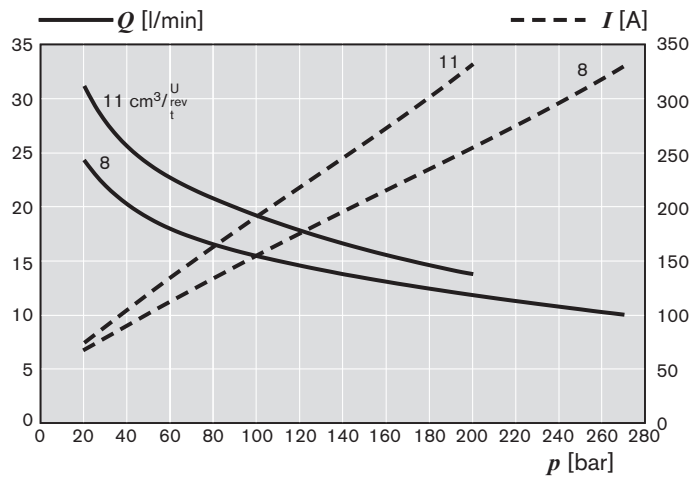


A 541 021 358

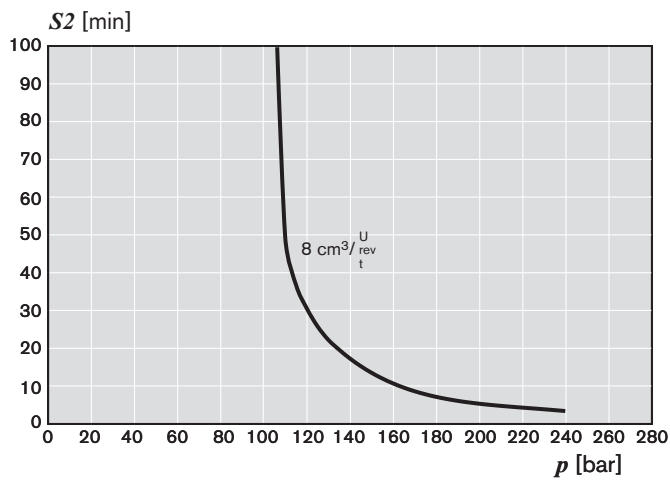
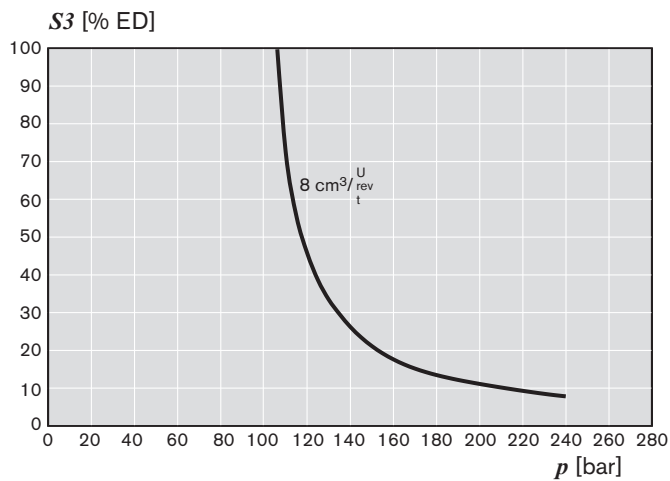
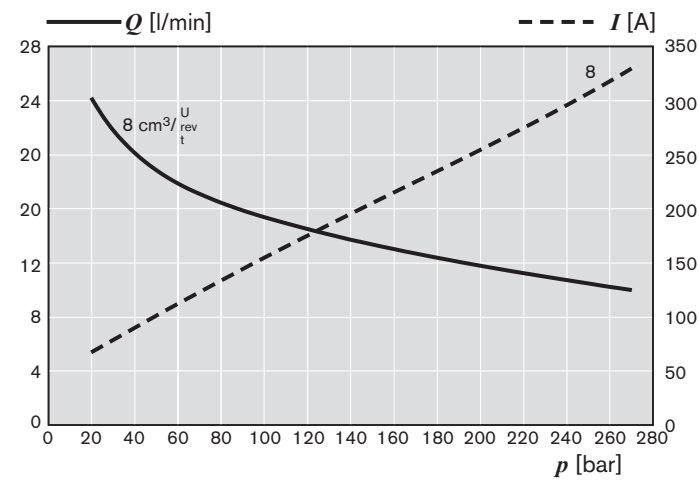
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP24PRL24S008-20E1335N0	8.0	403	40.7	20	20.6	0 541 400 077
EHP24PRL24S011-20E1337N0	11.0	408	44.5	20	20.7	0 541 500 083

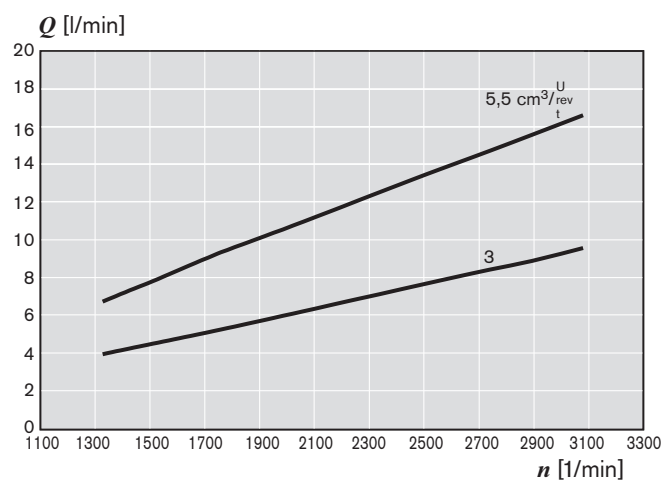
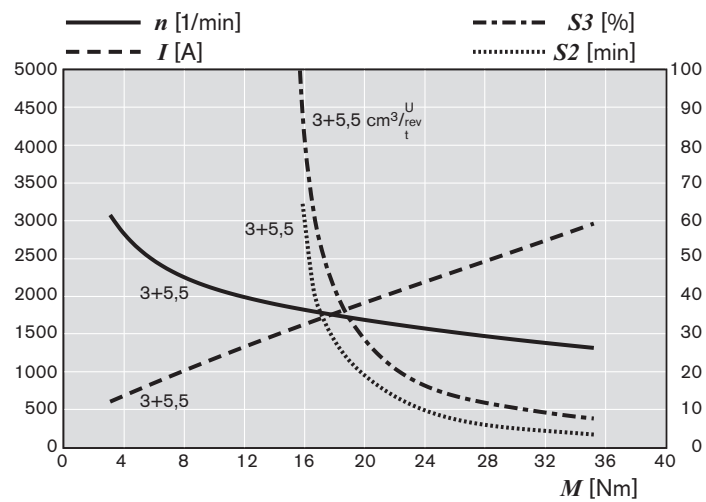
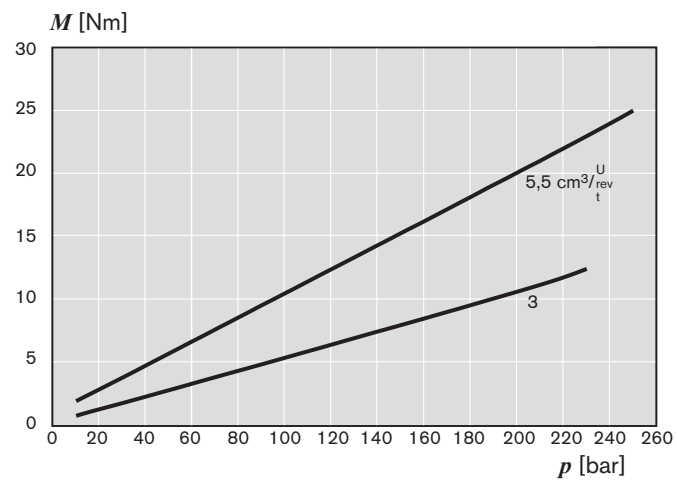
Characteristics
for A 541 021 358



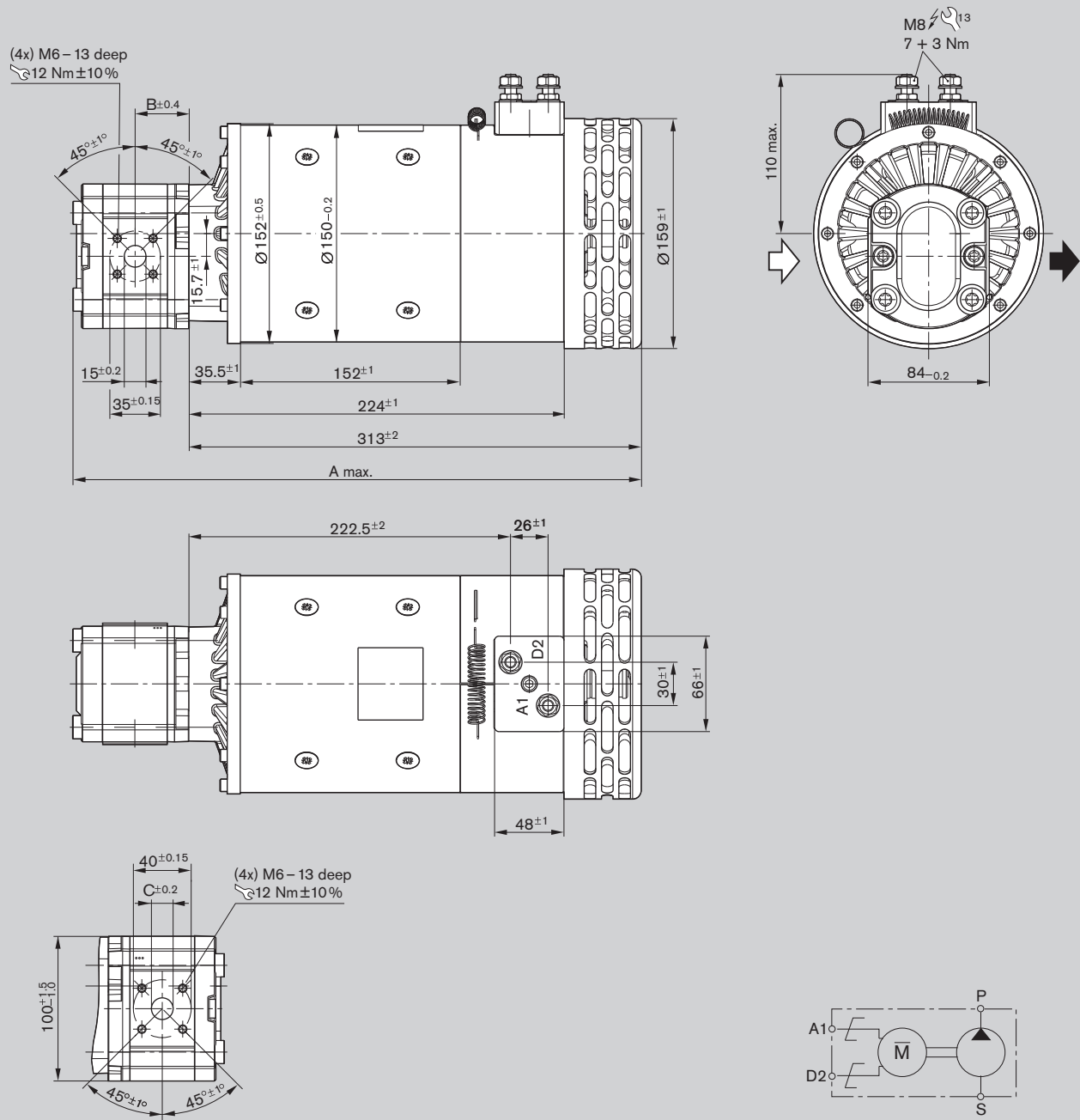
Characteristics
for A 541 021 382



Characteristics for A 541 021 357



Unit dimensions

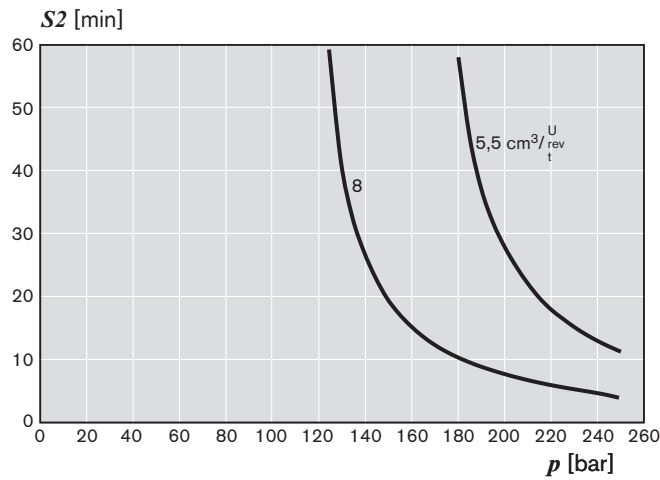
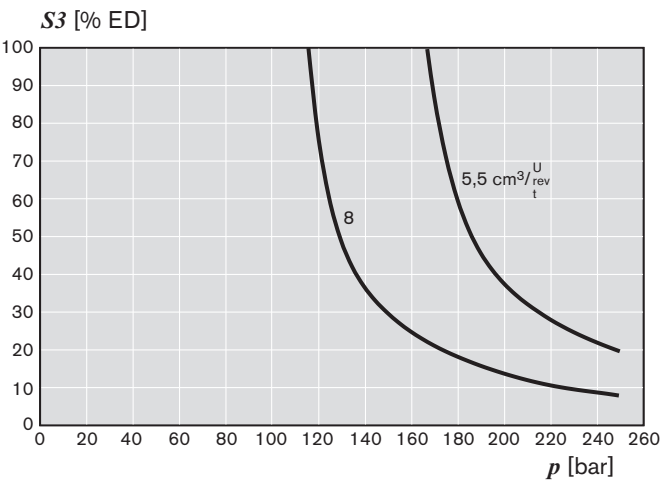
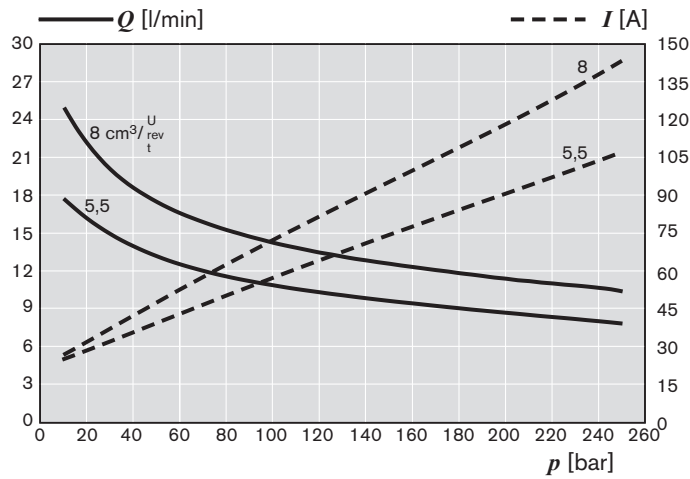


A 541 021 368

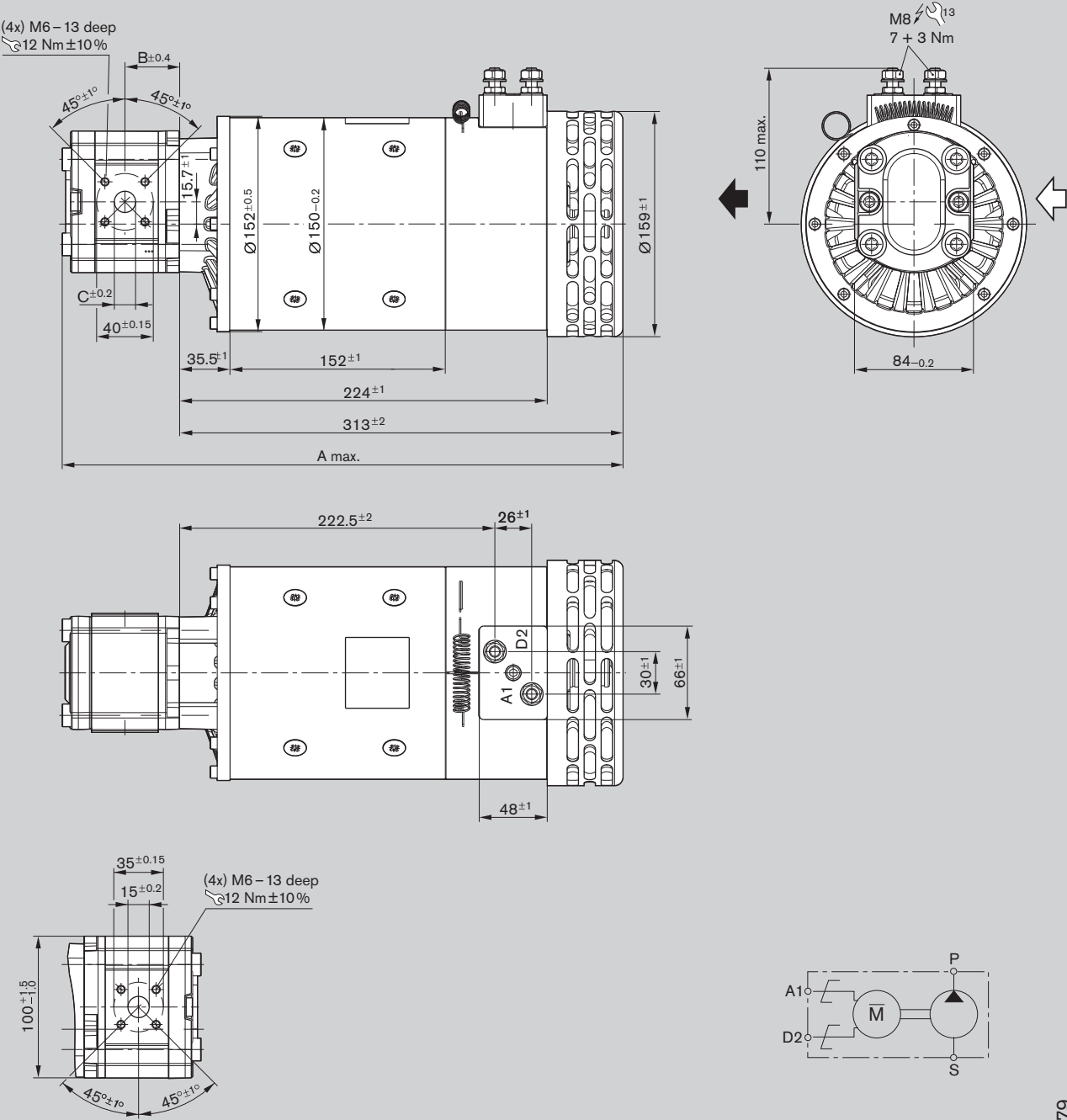
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP48PRL20F005-20E1341N0	5.5	399	38.6	15	20.4	0 541 300 074
EHP48PRL20F008-20E1344N0	8.0	403	40.7	20	20.5	0 541 400 080

Characteristics
for A 541 021 368



Unit dimensions

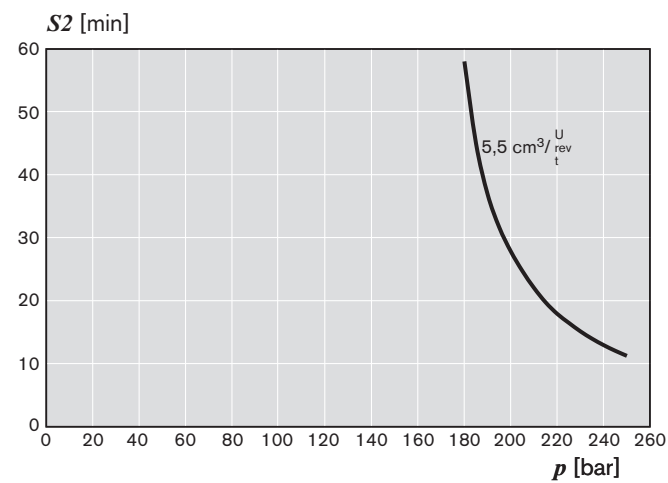
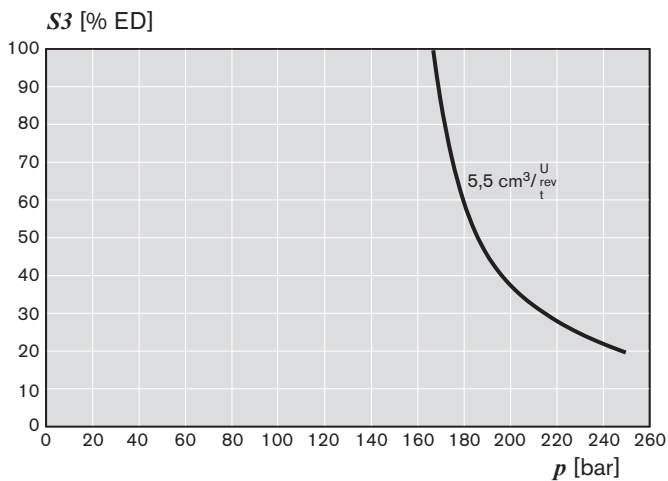
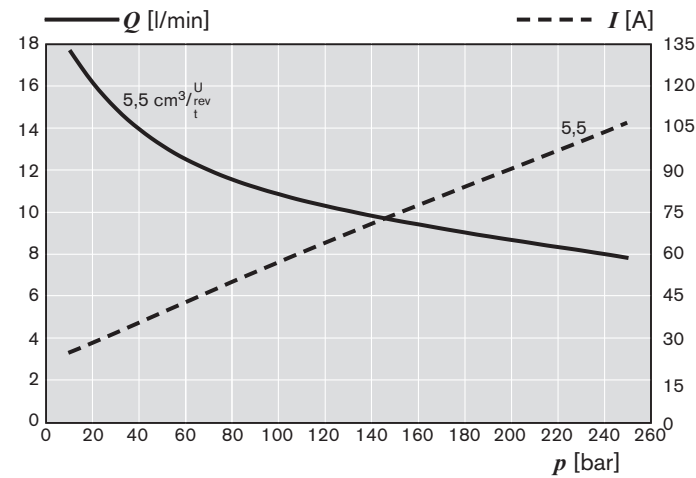


A 541 021 379

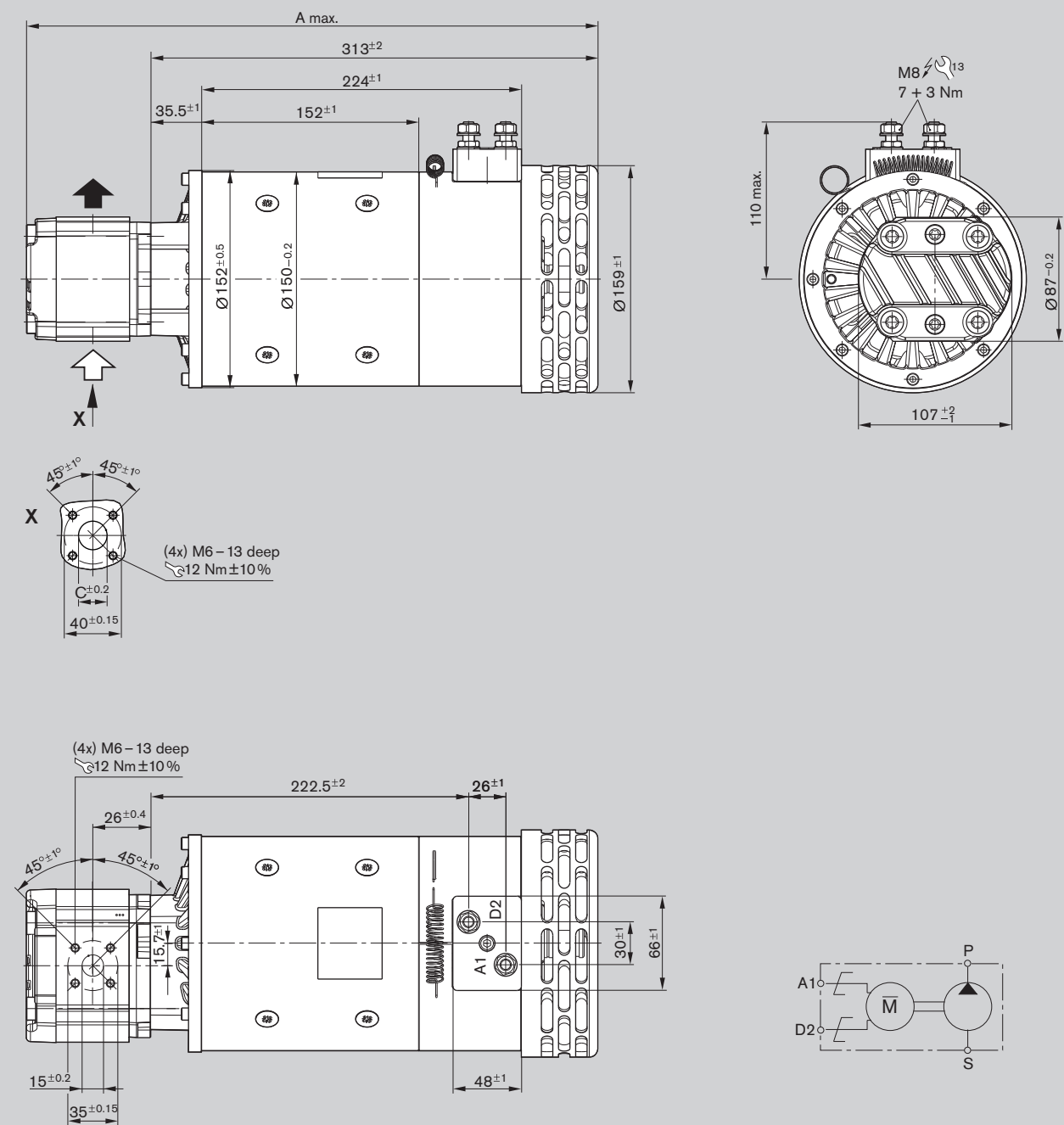
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement V [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP48PRL20F005-20A1341N0	5.5	399	38.6	15	20.4	0 541 300 079

Characteristics
for A 541 021 379



Unit dimensions

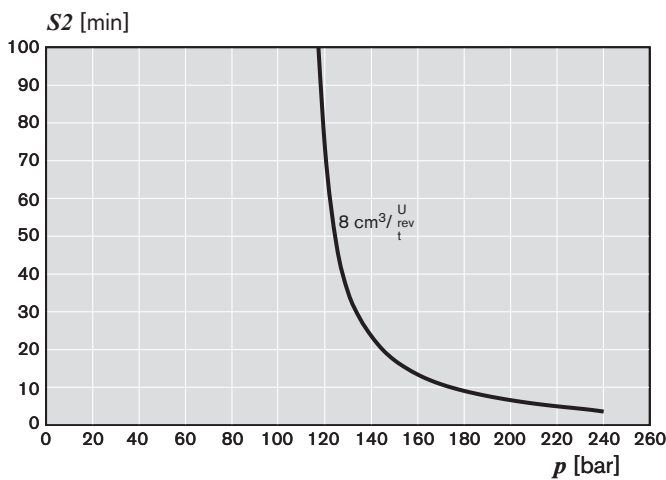
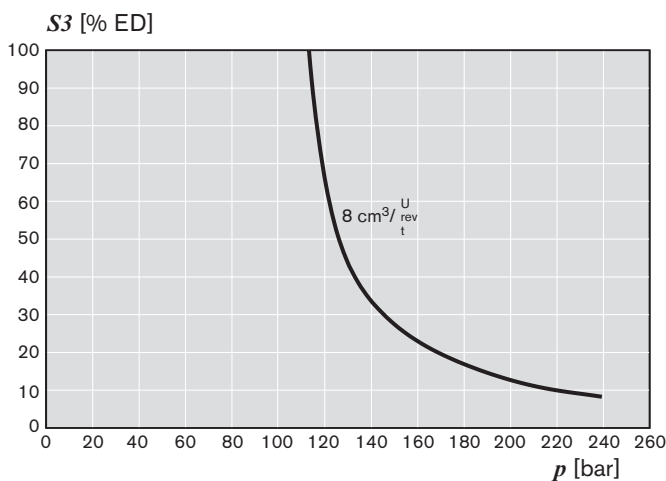
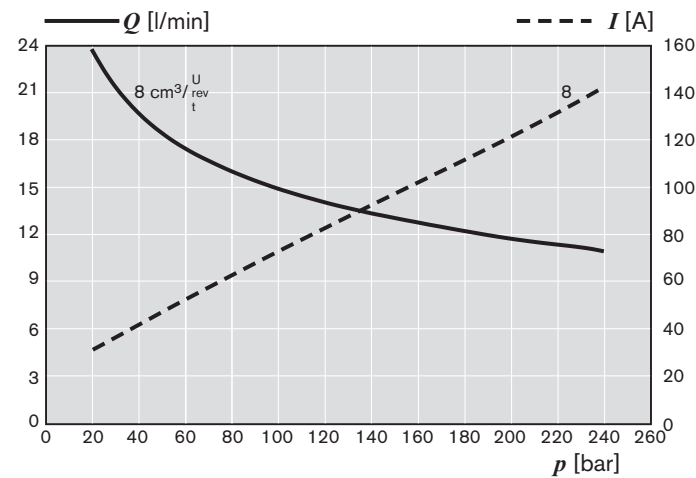


A 541 021 366

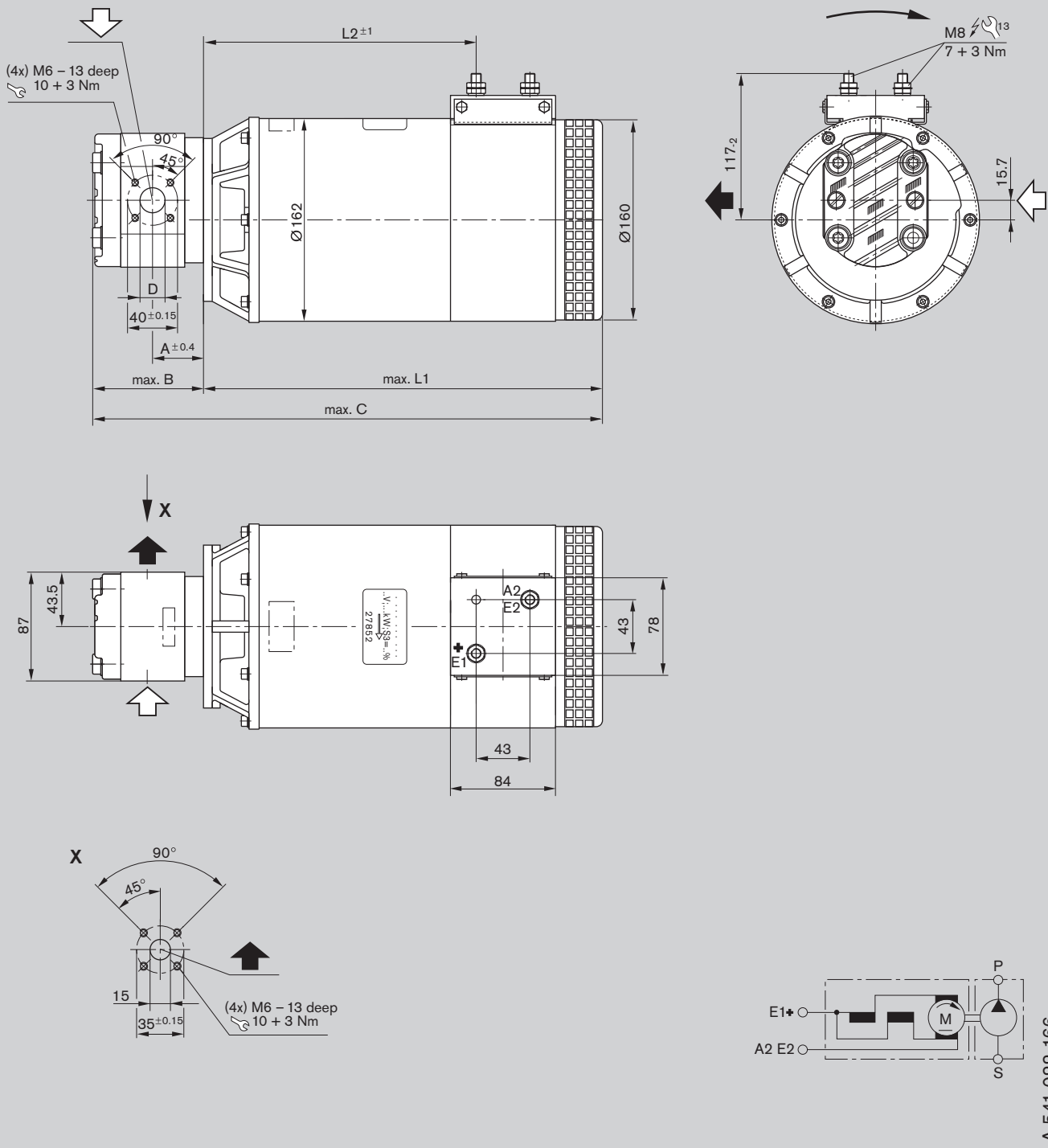
Type of protection:
Motor case IP 20
Ports IP 00

Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]			Weight [kg]	Part number
		A	B	C		
EHP48PRL20S008-20C1339N0	8.0	403	40.7	20	20.6	0 541 400 078

Characteristics
for A 541 021 366



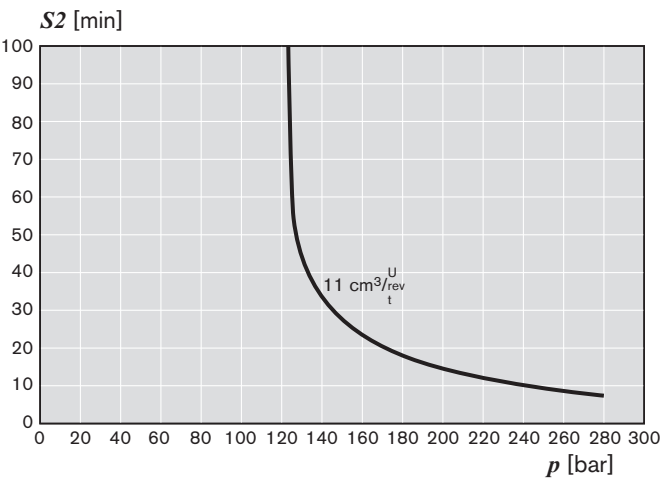
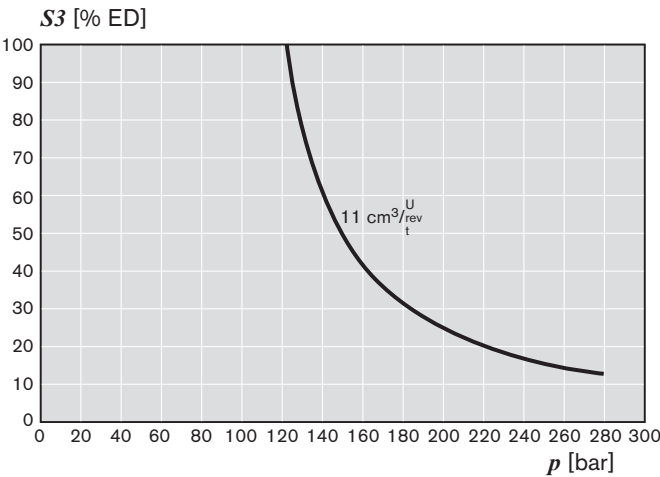
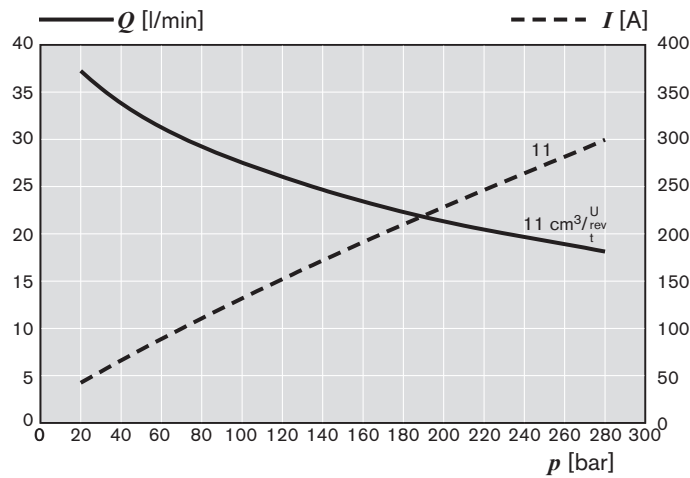
Unit dimensions



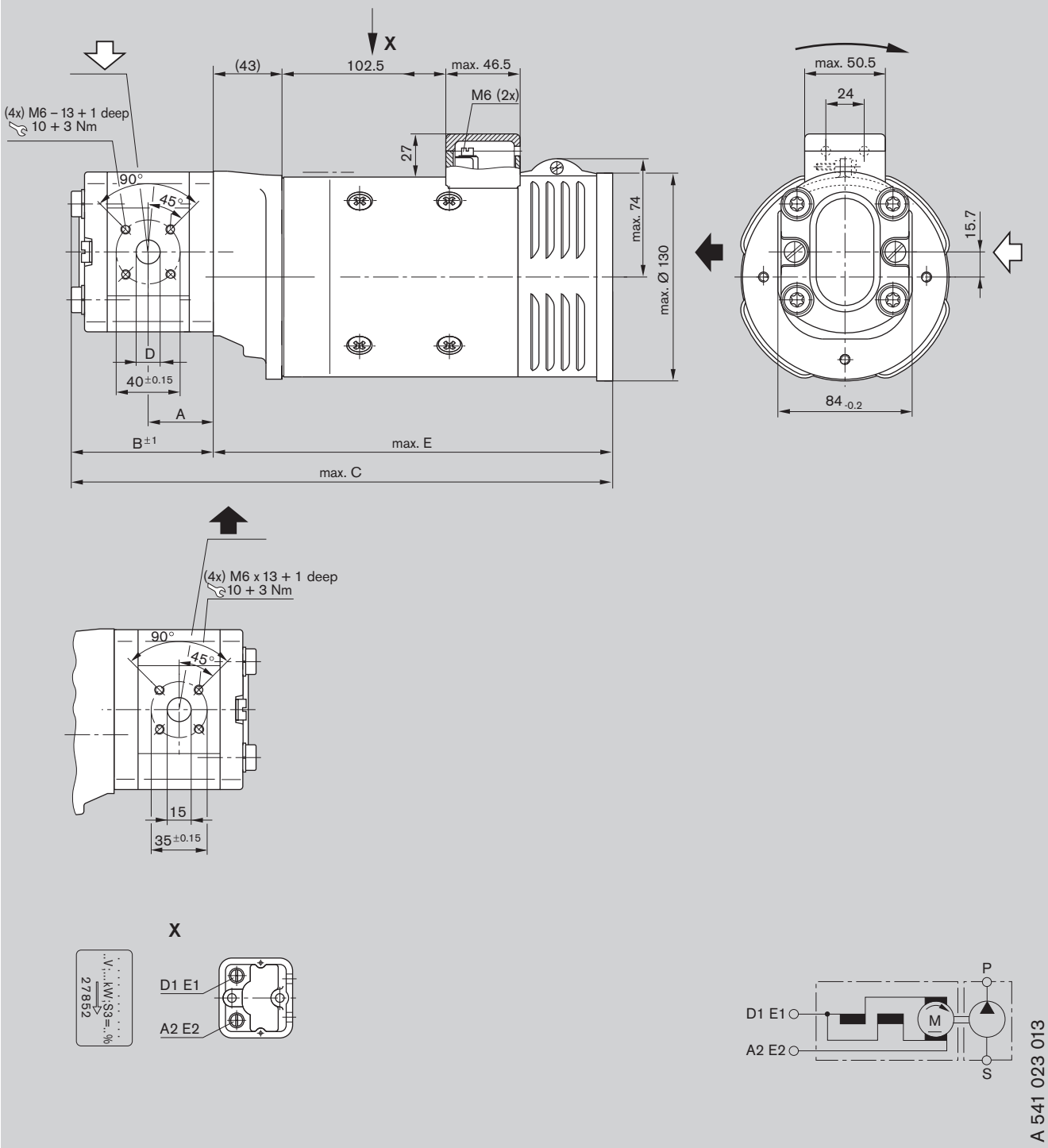
Type of protection:
Motor case IP 10
Ports IP 00

Ordering code	Displace- ment V [cm³/rev]	Dimension [mm]						Weight [kg]	Part number
		A	B	C	D	L1	L2		
EHP48SDL14S011-20A1173N0	11.0	45.5	94.2	461.0	20.0	366.0	262.5	26	0 541 500 074

Characteristics
for A 541 022 166



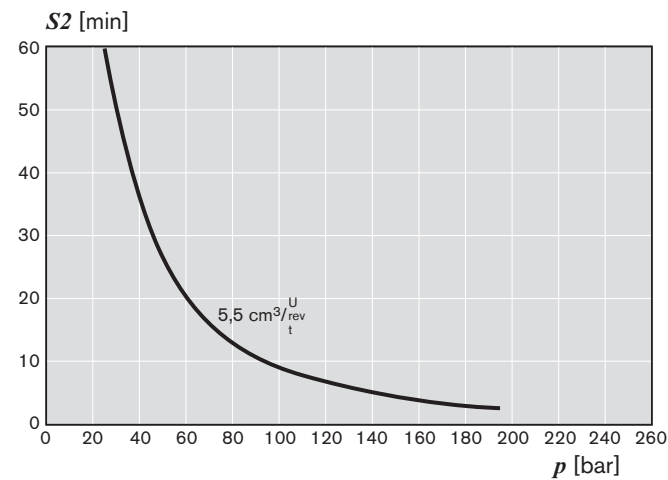
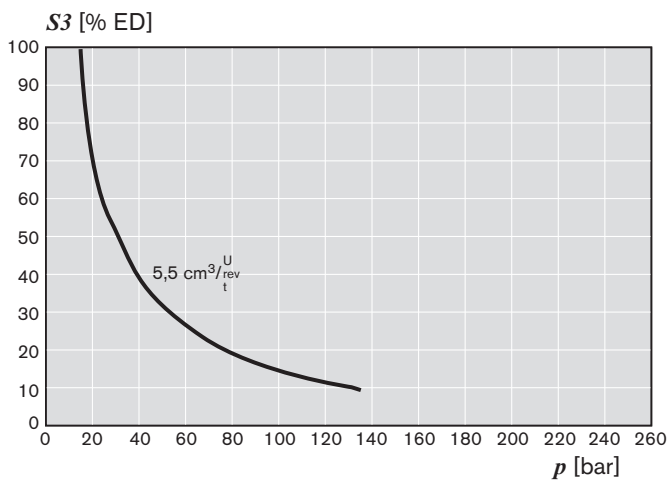
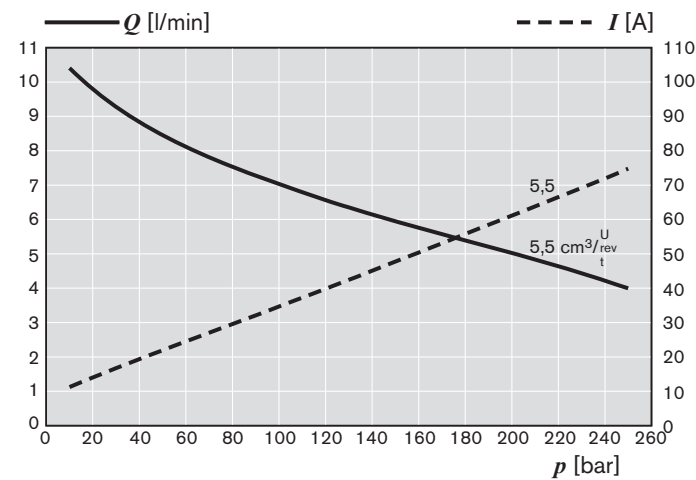
Unit dimensions



Type of protection:
Motor case IP 10
Ports IP 44

Ordering code	Displacement <i>V</i> [cm³/rev]	Dimension [mm]					Weight [kg]	Part number
		A	B	C	D	E		
EHP72KDO14F005-20A1003N0	5.5	38.6	85.0	336.0	15.0	250.0	15.0	0 541 300 032

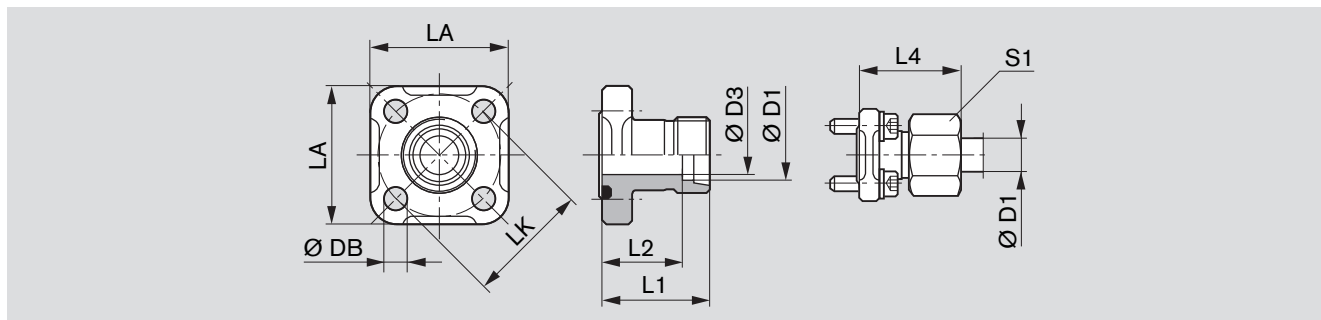
Characteristics
for A 541 023 013



Accessories

Fittings that can be used for square flange **20**

Gear pump flange, straight

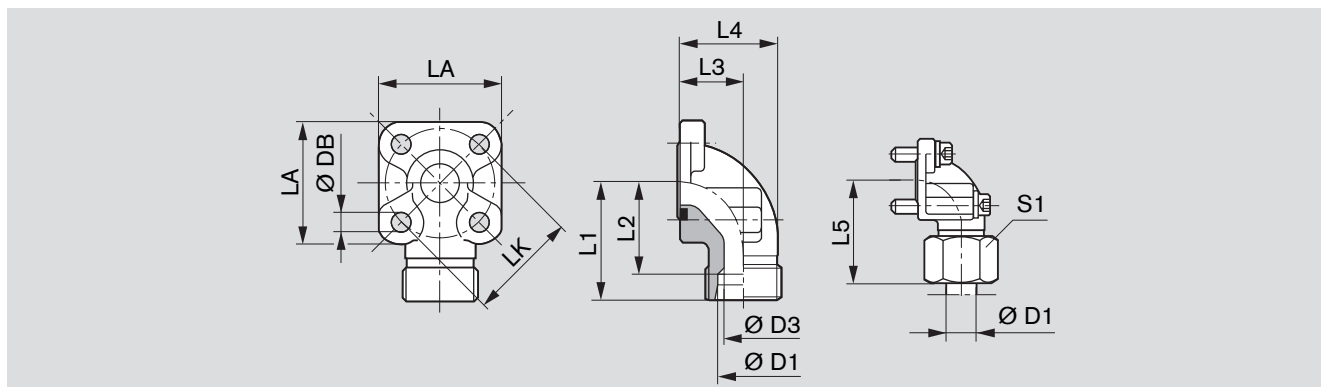


LK	D1	D3	L1	L2	L4	LA	S1	DB	Screws (metric) 4x	Seal ring	Part number	p [bar]
35	10L	8	30	23.0	39.0	40	19	6.4	M 6 x 22	20 x 2.5	1 515 702 064	315
35	12L	10	30	23.0	39.0	40	22	6.4	M 6 x 22	20 x 2.5	1 515 702 065	315
35	15L	12	30	23.0	38.0	40	27	6.4	M 6 x 22	20 x 2.5	1 515 702 066	250
40	15L	12	35	28.0	43.0	42	27	6.4	M 6 x 22	24 x 2.5	1 515 702 067	100
40	18L	15	35	27.5	44.0	42	32	6.4	M 6 x 22	24 x 2.5	1 515 702 068	100
40	22L	19	35	27.5	44.5	42	36	6.4	M 6 x 22	24 x 2.5	1 515 702 069	100
40	28L	24	42	27.5	44.5	42	41	6.4	M 6 x 22	24 x 2.5	1 515 702 008	100

Complete fittings with seal ring, metric screw set, nuts and olive.

Fittings that can be used for square flange **20**

Gear pump flange, 90° angle

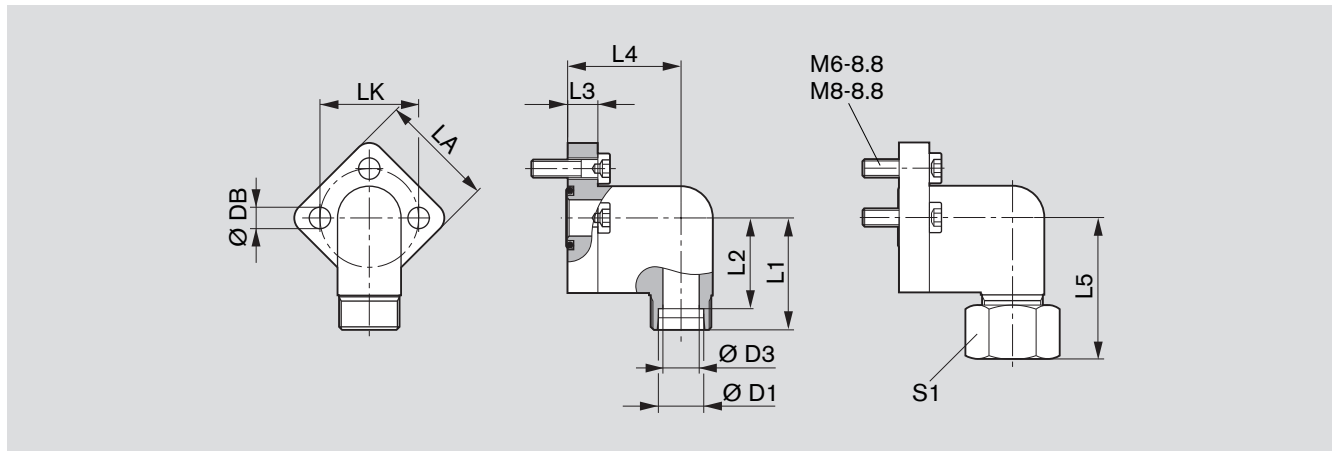


LK	D1	D3	L1	L2	L3	L4	L5	LA	S1	DB	Screws 2x	2x	Seal ring	Part number	p [bar]
35	10L	8	38	31.0	16.5	26.5	47.0	40	19	6.4	M 6 x 22	M 6 x 35	20 x 2.5	1 515 702 070	315
35	12L	10	38	31.0	16.5	26.5	47.0	40	22	6.4	M 6 x 22	M 6 x 35	20 x 2.5	1 515 702 071	315
35	15L	12	38	31.0	16.5	26.5	46.0	40	27	6.4	M 6 x 22	M 6 x 35	20 x 2.5	1 515 702 072	250
35	16S	12	38	29.5	20.0	31.0	48.0	40	30	6.4	M 6 x 22	M 6 x 40	20 x 2.5	1 515 702 002	315
35	18L	15	38	29.5	20.0	31.0	47.0	40	32	6.4	M 6 x 22	M 6 x 40	20 x 2.5	1 545 702 006	250
35	20S	16	45	34.5	25.0	38.0	56.0	40	36	6.4	M 6 x 22	M 6 x 45	20 x 2.5	1 515 702 017	315
40	15L	12	38	31.0	22.5	36.5	46.0	42	27	6.4	M 6 x 22	M 6 x 22	24 x 2.5	1 515 702 076	100
40	18L	15	38	30.5	22.5	36.5	47.0	42	32	6.4	M 6 x 22	M 6 x 22	24 x 2.5	1 515 702 074	100
40	20S	16	40	29.5	22.5	35.5	50.0	42	36	6.4	M 6 x 22	M 6 x 45	24 x 2.5	1 515 702 011	250
40	22L	19	38	30.5	22.5	36.5	47.5	42	36	6.4	M 6 x 22	M 6 x 22	24 x 2.5	1 515 702 075	100
40	28L	22	40	32.5	28.0	43.0	49.0	42	41	6.4	M 6 x 20	M 6 x 50	24 x 2.5	1 515 702 010	100
40	35L	31	41	30.5	32.0	55.0	52.0	42	50	6.4	M 6 x 22	M 6 x 60	24 x 2.5	1 515 702 018	100

Complete fittings with seal ring, metric screw set, nuts and olive.

Fittings that can be used for square flange **30**

Gear pump flange, 3-hole, 90° angle



LK	D1	D3	L1	L2	L3	L4	L5	LA	S1	DB	Screws 3x	Seal ring NBR *)	Weight [kg]	Part number	p [bar]
30	12L	10	37	30.0	10	37.5	46	38	22	6.4	M 6 x 22	16 x 2.5	0.13	1 515 702 146	250
30	15L	12	37	30.0	10	37.5	47	38	27	6.4	M 6 x 22	16 x 2.5	0.14	1 515 702 147	250
30	18L	15	37	30.0	10	37.5	47	38	32	6.4	M 6 x 22	16 x 2.5	0.17	1 515 702 148	160
40	22L	19	43	35.5	14	41.0	53	48	36	8.4	M 8 x 30	24 x 2.5	0.29	1 515 702 149	160
40	28L	24	43	35.5	14	41.0	53	48	41	8.4	M 8 x 30	24 x 2.5	0.40	1 515 702 150	160

Complete fittings with seal ring, metric screw set, nuts and olive. *) NBR = Perbunan®

Note

The permissible tightening torques can be found in our publication:

“General operating instructions for external gear units”

RE 07 012-B1.

For further information about the product electrohydraulic pump with regard to new projects, accessories and spare parts, and for general questions, please contact

BRM-AZ.info@boschrexroth.de

You will also find the EHP configurator in the internet, at:

www.boschrexroth.com/azconfigurator

Rexroth Bosch Group	Project specification Electrohydraulic pump (EHP)	Hydraulics DC-MA/SPP3 1/4
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This project specification is intended as a guide for customer-specific projects, from the initial inquiry to the approval for a new product.

Full details under **1. Project details** are the basis for effective project management.

Detailed figures are the requirement for optimal design.

2. Project management is maintained internally by DC-MA/SPP3.

If any details are missing under **3. Technical data**, the Bosch Rexroth AG terms and conditions of supply and the figures stated in the catalogs and general operating conditions shall apply.

4. Customer requirements are to be submitted as completely as possible.

1. Project details	Sales person: e-mail: Telephone:						Department: Date: Customer number:				
	Customer/contact: e-mail:						Customer number: Telephone:				
	Customer vehicle/project										
	Application, project description (task of EHP in the system, e.g. implement hydraulics, emergency steering, etc.)										
		Proposal	A sample	B sample	C sample	D sample	SOP	Year 1	Year 2	Year 3	Year 4
	Deadline										
	Quantity										
	€/unit										
	Additional business ☐				Competition						
	Replacement business ☐				Target price						
Description of product (e.g. EHP24KDG66F004-20A0653N0)											
Particular technical requirements and application conditions to be stated in section 3. If any details are missing, compliance with the operating conditions Y 541... (see table on page 4) and the figures in the catalog will be assumed.											
Particular features (ZA 08916) and systems (remarks, sketches, notes, specifications, drawings, etc.)											

2. Project management	Development location		Project category* S		N = Platform/new development A = Application development S = Series	
			* R = Fundamental R&D development V = Variant development M = Modification to series			
	Modification no.	Description	Date	Originator	Checked	
	Produceability declaration required?			Project Manager:		
Yes ☐ No ☐			Project number:			

Rexroth
 Bosch Group

Project specification

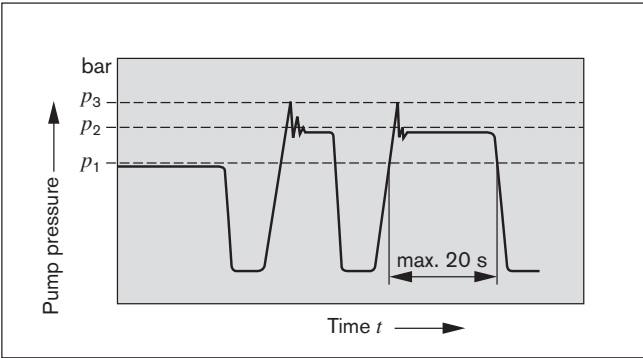
Electrohydraulic pump (EHP)

 Hydraulics
 DC-MA/SPP3

2/4

3. Technical data	Operating voltage of motor (volts)				
	Motor voltage type Direct current (DC) ☐ Alternating current (AC) ☐				
	Protection class Motor (IP)				
	Thermal contact (yes/no)				
	Relay (yes/no) If yes: axial or radial				
	Displacement [l/min] at working pressure [bar]	PT1	PT2	PT3	PT4
	Displacement [l/min] at maximum pressure [bar]	PT1	PT2	PT3	PT4
	Actuated time S2 in min				
	Actuated time S3 in %				
	Seals FPM ☐ NBR ☐ HNBR ☐ Radial shaft seal ring FPM/otherwise NBR ☐				
	Multiple pumps	Tang (light through drive) ☐ Splined shaft (heavy through drive) ☐ Separation of medium ☐ Common suction port ☐			
	Auxiliary function	PRV adjustment ± bar at l/min SRV adjustment ± l/min Residual current, external ☐ Residual current, internal ☐ Electrical connection Prop. PRV 12 V ☐ 24 V ☐ Connector AMP Junior Timer (C4) ☐ DEUTSCH (K40) ☐			
	Particular notes (e.g. surface protection ...)				
	Other (load complex etc.)				
	Medium temperature	min	°C	max	°C
	Ambient temperature	min	°C	max	°C
	Operating medium				
	Viscosity range				
	Cleanliness level				
	Filter grade	β	≧	– Suction filter	
		β	≧	– Pressure filter	
	Ambient conditions (e.g. dust, spray water)				
	Additional stress				
	Noise requirements				
Installation position					
Interfaces					

Rexroth Bosch Group	Project specification Electrohydraulic pump (EHP)	Hydraulics DC-MA/SPP3 3/4
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4. Customer demands	Legislation, standards	
	Patents, licenses	
	Additional customer demands (e.g. documentation, modification announcements, QM system, APQG, ...)	
	Safety functions or limitations	
	Acceptance	Without testing ☐ Testing at customer ☐ BR acceptance ☐ (subject to charge) Initial sample test report ☐ Volume Additional examination Additional documentation
	Certificate	
	Terms of delivery	
	Labeling	
	Packaging	Differing from standard packaging ☐ Lattice box (reusable, EU only) ☐ SLC (= small load carrier, reusable, EU only) ☐ Wooden crate (disposable, sea freight only) ☐ Non-reusable packaging (rest of world) ☐ Customer wish
	Customer specification	
	Prototype version	
	Recycling	
	Service agreement	
	Repair	
	Warranty	
Service life	Hours Load cycles	
Always state load complex with service life requirement (cf. example)		
 p_1 max. continuous pressure p_2 max. intermittent pressure p_3 max. peak pressure		

Date, Signature of issuing party	Date, Signature of customer	Date, Signature of DC-MA/SPP3
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Rexroth Bosch Group	Project specification Electrohydraulic pump (EHP)	Hydraulics DC-MA/SPP3 3/4
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Operating conditions

EHP	Y 541 or quotation drawing
Information Tightening torque	Y 510 202 040

Remarks: