

# External gear motor AZMF



- ▶ Platform F
- ▶ Fixed displacement
- ▶ Size 8 ... 28
- ▶ Continuous pressure up to 250 bar
- ▶ Maximum start-up pressure up to 280 bar

## Features

- ▶ Consistently high quality due to high-volume series production
- ▶ Long service life
- ▶ Wide speed range
- ▶ Slide bearings for high loading
- ▶ Optional reversible version for 2- and 4-quadrant operation
- ▶ Numerous configuration variants available
- ▶ Output shafts according to ISO or SAE and customer-specific solutions
- ▶ Line connections: Connection flanges or screw-in threads
- ▶ High pressures though small installation space and low weight
- ▶ Wide viscosity and temperature range

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## Functional description

### General

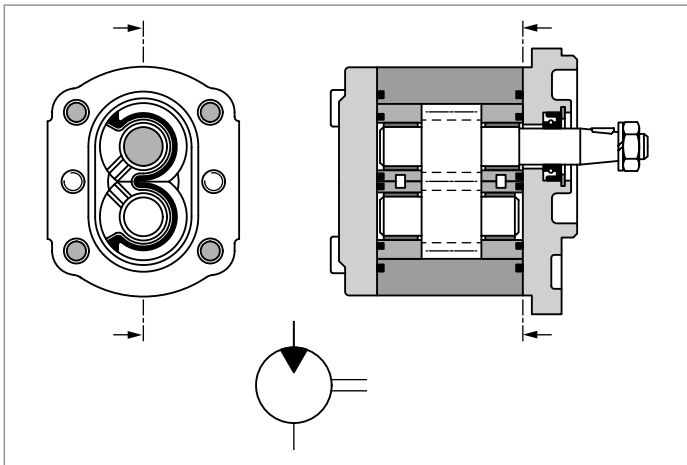
The key task of external gear motors is to convert hydraulic energy (flow and pressure) into mechanical energy (torque and rotational speed). To reduce heat loss, Rexroth external gear motors are designed to be extremely efficient. This efficiency is achieved through pressure-dependent gap sealing and high-precision manufacturing technology. Rexroth external gear motors are available in four platforms: Platforms B, F, N and G, with different gear wheel widths within a platform for different displacements. Additional versions with different flanges, shafts and valve attachments are also available.

At external gear motors, you distinguish between motors for one direction of rotation and reversible motors.

### Gear motor for one direction of rotation

These gear motors are designed asymmetrically, i.e., fixed high-pressure and low-pressure sides. This means reversing operation is not possible. Motors require a special start-up sequence to ensure good efficiency. Any leakage oil is drained internally. The shaft seal limits drainage pressure.

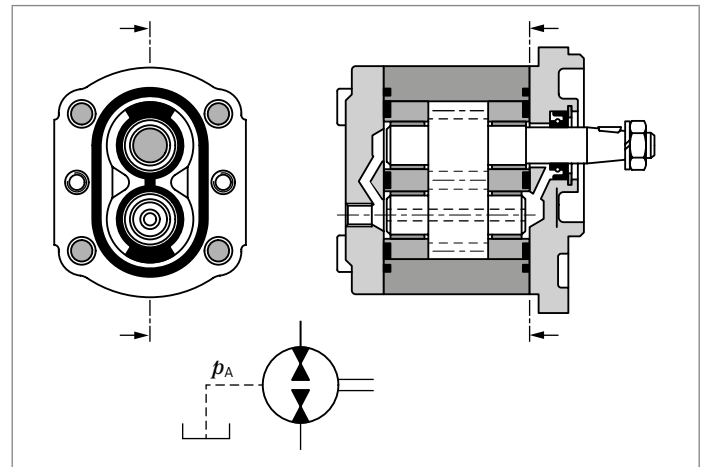
#### ▼ Gear motor for one direction of rotation



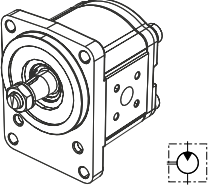
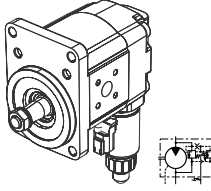
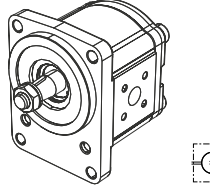
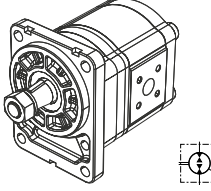
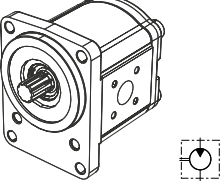
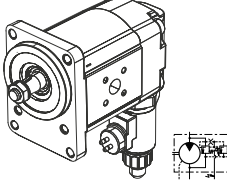
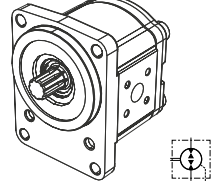
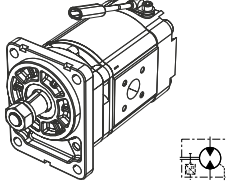
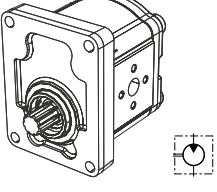
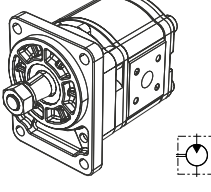
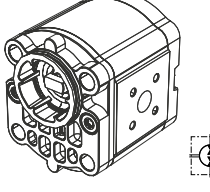
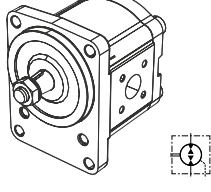
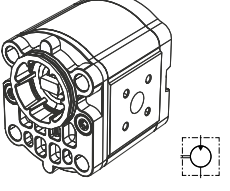
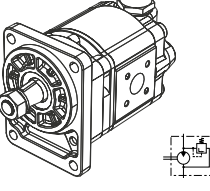
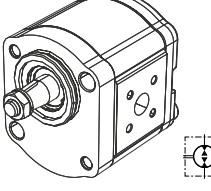
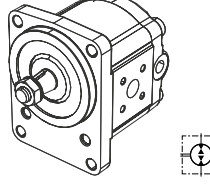
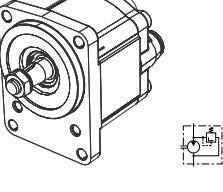
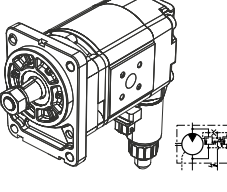
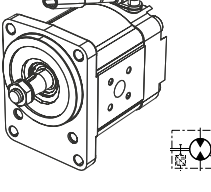
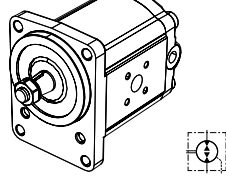
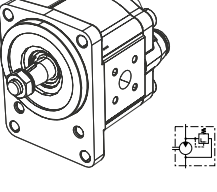
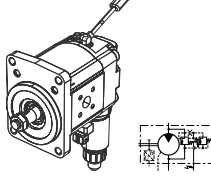
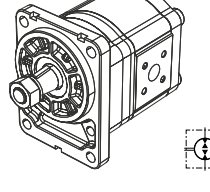
### Gear motor, reversible

Due to their symmetrical layout, the high-pressure and low-pressure chambers are separate from the bearing and shaft seal chambers. Any leakage oil is drained through a separate drain port in the housing cover. This drainage allows the motor to run in reverse, making series connections possible. Standard motors and pumps can only withstand up to approx. 3 bar abs. due to the connection between the shaft seal and the low-pressure side. The figure shows a reversible motor for 4-quadrant operation, i.e., output drive torque and drive torque in both directions (motor functions as a pump when the load is reversed).

#### ▼ Gear motor, reversible



## AZMF preferred types product overview

Version	Page	Version	Page	Version	Page	Version	Page
	16		22		32		38
	17		24		33		39
	18		26		34		40
	19		27		35		41
	20		28		36		42
	21		30		37		

## Type code

01	02	03	04	05	06	07	08	09	10	11	12	13	
<b>AZM</b>	<b>F</b>	-			-							-	

### External gear unit

01	External gear motor	<b>AZM</b>
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### Series

02	8 cm <sup>3</sup> /rev to 28 cm <sup>3</sup> /rev, high performance, platform F (5 cm <sup>3</sup> , upon request)	<b>F</b>
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### Series

03	Bearing pin Ø18 mm	<b>1</b>
	Bearing pin Ø20 mm	<b>2</b>

### Version

04	Phosphated	<b>0</b>
	Phosphated, pinned	<b>1</b>
	Corrosion-resistant, pinned	<b>2</b>
	with proportional valve	<b>3</b>

### Size (NG)

05	Geometric displacement $V_g$ [cm <sup>3</sup> ], see chapter "Technical data"	<b>005<sup>1)</sup></b>	<b>008</b>	<b>011</b>	<b>014</b>	<b>016</b>	<b>019</b>	<b>022</b>	<b>025</b>	<b>028</b>
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### Direction of rotation

06	Viewed on drive shaft	clockwise	<b>R</b>
		counter-clockwise	<b>L</b>
		reversible	<b>U</b>

### Drive shaft



07	Tapered shaft	1 : 5	B, N	<b>C</b>
		1 : 5	A	<b>S</b>
	Tang drive		T	<b>N</b>
	Splined shaft	DIN 5482 B17 × 14	B, O	<b>F</b>

### Suitable front cover

### Front cover

08	Outrigger bearing	Ø 80 mm	Type 1	<b>A</b>
	Rectangular flange	Ø 80 mm		<b>B</b>
		Ø 36.47 mm		<b>O</b>
	2-bolt mounting	Ø 50 mm		<b>N</b>
	4-bolt mounting	Ø 52 mm	with O-ring	<b>T</b>

### Line connection

09	Square flange		<b>20</b>
	Square flange		<b>30</b>

### Sealing material

10	NBR (nitrile rubber)	<b>M</b>
	FKM (fluoroelastomer)	<b>P</b>

1) On request

01	02	03	04	05	06	07	08	09	10	11	12	13	
<b>AZM</b>	<b>F</b>	-			-							-	

**End cover**

11	Without valve (standard)	<b>B</b>
	Pressure relief valve with residual flow internal	<b>D</b>
	Proportional pressure relief valve	<b>G</b>
	Drain port (axial)	<b>L</b>

**Valve setting pressure relief valve** (parameter only required for end cover with pressure relief valve)

12	Pressure relief valve e.g. 200 bar	<b>200XX</b>
	Proportional pressure relief valve e.g. 180 bar	<b>180XX</b>

**Special version**

13	Connection in end cover "D"	<b>S0076</b>
	Tang drive with coupling	<b>S0184</b>
	Proportional pressure relief valve with an internal resistor of 11.5 Ω	<b>S0458</b>
	Dust protection cover for shaft seal	<b>S0540</b>
	Dust protection cover for shaft seal, radial drain port in the end cover	<b>S0570</b>
	Proportional pressure relief valve KBVS.3	<b>S0689</b>
	Fan motor with speed sensor, pulse encoder wheel with 9 teeth	<b>S0747</b>

## Technical data

### ▼ Table of values

Size				8	11	14	16	19	22		
Series				Series 1x							
Displacement		$V_g$	cm <sup>3</sup>	8	11	14	16	19	22.5		
Motor inlet pressure		maximum continuous pressure	$p_1$	bar	250	250	250	250	210	180	
		maximum start-up pressure	$p_2$	bar	280	280	280	280	230	210	
		maximum pressure peak	$p_3$	bar	300	300	300	300	250	230	
		minimum inlet pressure abs. <sup>2)</sup>	$p_{min}$	bar	0.7	0.7	0.7	0.7	0.7	0.7	
Motor output pressure for		reversible motors	$p_A$	bar	≤ continuous pressure						
		non-reversible motors	abs.	$p_A$	bar	3	3	3	3	3	3
			upon start-up	$p_A$	bar	10	10	10	10	10	10
Motors with proportional pressure relief valve		max.	$p_A$	bar	40	40	40	40	40	40	
Pressure in the drain port maximum <sup>1)</sup>		abs.	$p_L$	bar	3	3	3	3	3	3	
		upon start-up	$p_L$	bar	10	10	10	10	10	10	
Rotational speed minimum with		$v = 12 \text{ mm}^2/\text{s}$	$p < 100 \text{ bar}$	$n_{min}$	rpm	500	500	500	500	500	
			$p = 100 \dots 180 \text{ bar}$	$n_{min}$	rpm	1000	1000	800	800	800	800
		$v = 25 \text{ mm}^2/\text{s}$	$p = 180 \text{ bar} \dots p_2$	$n_{min}$	rpm	1400	1200	1000	1000	1000	1000
at $p_2$	$n_{min}$		rpm	700	600	500	500	500	500		
Rotational speed maximum		at $p_2$	$n_{max}$	rpm	4000	3500	3000	3000	3000	2500	
Rotational speed maximum		at $p_2$ and 50% duty cycle	$n_{max}$	rpm	4500	4000	3500	3500	3500	3000	

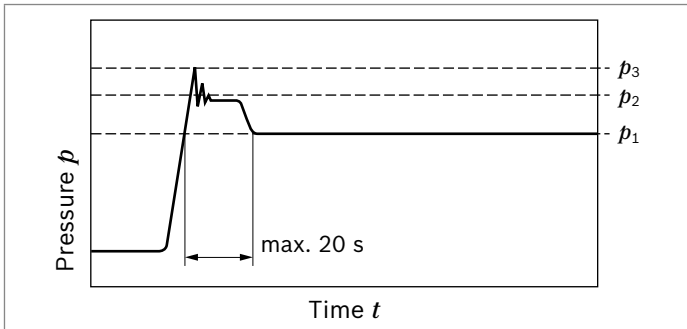
Size				19	22		
Series				Series 2x			
Displacement		$V_g$	cm <sup>3</sup>	19	22.5		
Motor inlet pressure		maximum continuous pressure	$p_1$	bar	250	220	
		maximum start-up pressure	$p_2$	bar	280	250	
		maximum pressure peak	$p_3$	bar	300	280	
		minimum inlet pressure abs. <sup>2)</sup>	$p_{min}$	bar	0.7	0.7	
Motor output pressure for		reversible motors	$p_A$	bar	≤ continuous pressure		
		non-reversible motors	abs.	$p_A$	bar	3	3
			upon start-up	$p_A$	bar	10	10
Motors with proportional pressure relief valve		max.	$p_A$	bar	40	40	
Pressure in the drain port maximum <sup>1)</sup>		abs.	$p_L$	bar	3	3	
		upon start-up	$p_L$	bar	10	10	
Rotational speed minimum with		$v = 12 \text{ mm}^2/\text{s}$	$p < 100 \text{ bar}$	$n_{min}$	rpm	500	500
			$p = 100 \dots 180 \text{ bar}$	$n_{min}$	rpm	800	800
		$v = 25 \text{ mm}^2/\text{s}$	$p = 180 \text{ bar} \dots p_2$	$n_{min}$	rpm	1000	1000
at $p_2$	$n_{min}$		rpm	800	800		
Rotational speed maximum		at $p_2$	$n_{max}$	rpm	3500	3500	
Rotational speed maximum		at $p_2$ and 50% duty cycle	$n_{max}$	rpm	4000	4000	

1) For reversible motors

2) To avoid low inlet pressures with fast reduction of the inlet amount and large flywheel mass of the consumer, an anti-cavitation valve with correspondingly low pressure drop is to be provided.

General data	
Installation position	No restrictions <sup>1)</sup>
Type of mounting	See offer drawing
Line connections	See chapter "Dimensions – line connection"
Direction of rotation viewed on drive shaft	One direction of rotation (motor rotation is only admissible in the indicated direction) or reversible.
Drive shaft loading	Axial and radial forces on request only

▼ **Pressure definition**



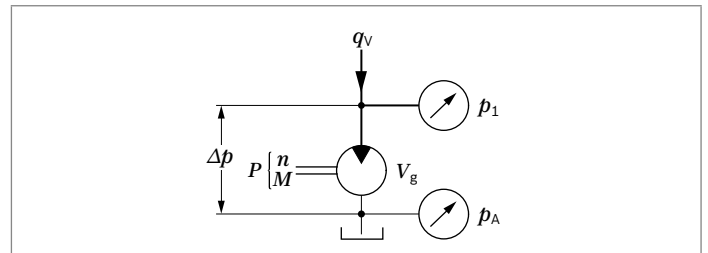
- $p_1$  Maximum continuous pressure
- $p_2$  Maximum start-up pressure
- $p_3$  Maximum pressure peak

**Determining characteristics**

Inlet flow	$q_v = \frac{V_g \times n}{1000 \times \eta_v}$	[l/min]
Rotational speed	$n = \frac{q_v \times 1000 \times \eta_v}{V_g}$	[rpm]
Torque	$M = \frac{V_g \times \Delta p \times \eta_{hm}}{20 \times \pi}$	[Nm]
Power	$P = \frac{2 \pi \times M \times n}{60000} = \frac{q_v \times \Delta p \times \eta_t}{600}$	[kW]

**Key**

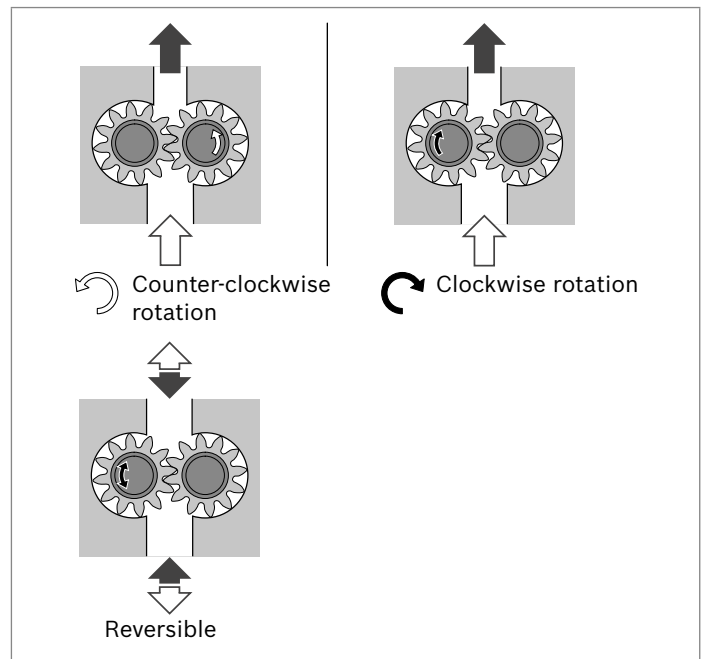
- $V_g$  Displacement per revolution [cm<sup>3</sup>]
- $\Delta p$  Differential pressure [bar] ( $\Delta p = p_1 - p_A$ )
- $n$  Rotational speed [rpm]
- $q_v$  Inlet flow [l/min]
- $M$  Torque [Nm]
- $P$  Power [kW]
- $\eta_v$  Volumetric efficiency<sup>2)</sup>
- $\eta_{hm}$  Hydraulic-mechanical efficiency<sup>2)</sup>
- $\eta_t$  Total efficiency ( $\eta_t = \eta_v \times \eta_{hm}$ )<sup>2)</sup>



**Notice**

- ▶ Please observe the safety requirements for the overall system.
- ▶ Please contact us regarding applications with frequent load cycles.
- ▶ In the "Diagrams/characteristic curves" chapter, you can find diagrams for a rough calculation.

▼ **Direction of rotation viewed on drive shaft**



1) For motors with proportional pressure relief valve, the installation position of the coil is ±45° downwards.

2) Parameter as a decimal, e.g. 0.9

## Hydraulic fluid

The external gear unit is designed for operation with HLP mineral oil according to DIN 51524 1–3. For higher loading, Bosch Rexroth recommends HLP according to DIN 51524 Part 2 as a minimum.<sup>1)</sup>

See the following data sheets for application instructions and requirements for selecting hydraulic fluid, behavior during operation as well as disposal and environmental protection before you begin project planning:

- ▶ 90220: Hydraulic fluids based on mineral oils and related hydrocarbons

### Explanation regarding the selection of hydraulic fluid

Selection of hydraulic fluid shall make sure that the operating viscosity in the operating temperature range is within the optimal range ( $v_{opt}$ ; see selection diagram).

## Viscosity and temperature of hydraulic fluids

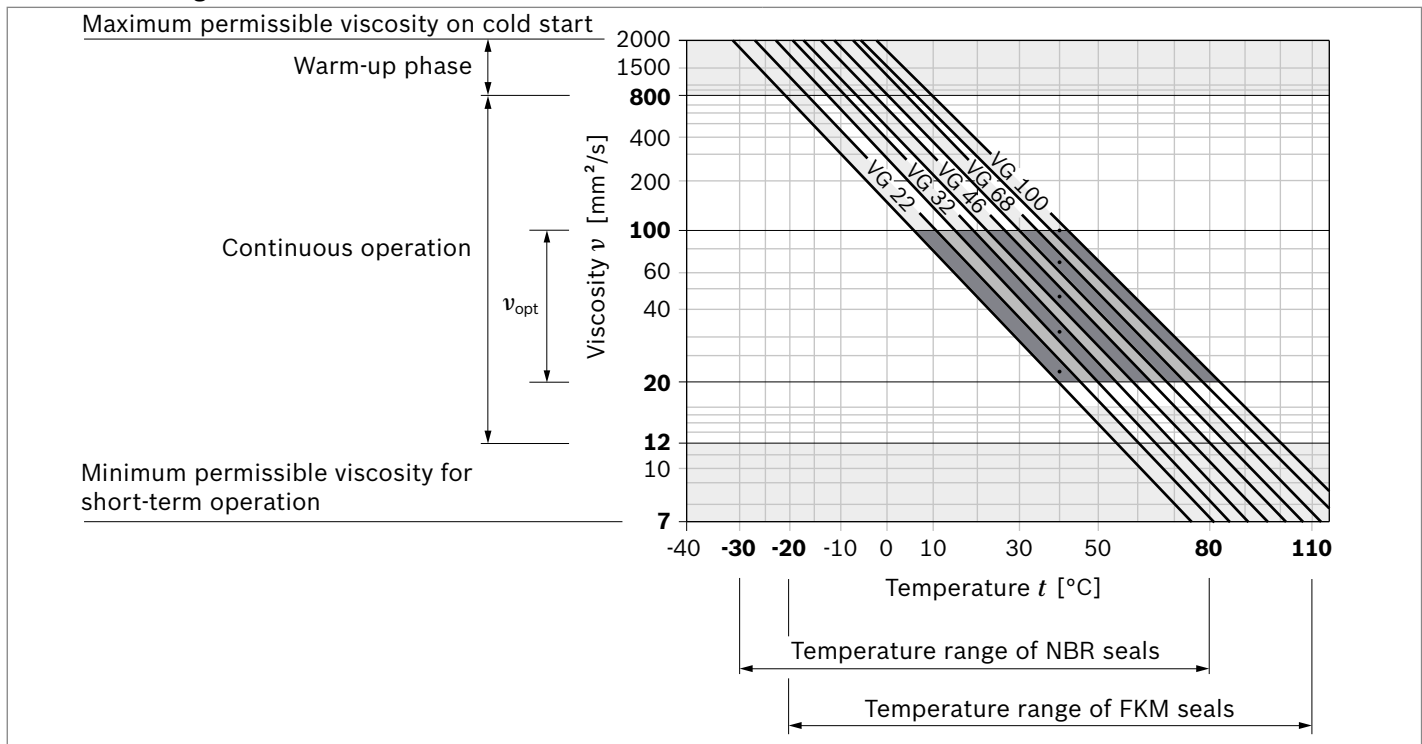
### Viscosity range

Permissible in continuous operation	$v = 12 \dots 800 \text{ mm}^2/\text{s}$
Recommended in continuous operation	$v_{opt} = 20 \dots 100 \text{ mm}^2/\text{s}$
Permissible for cold start	$v_{max} \leq 2000 \text{ mm}^2/\text{s}$

### Temperature range

With NBR seals (NBR = nitrile rubber)	$t = -30 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$
With FKM seals (FKM = fluoroelastomer)	$t = -20 \text{ }^\circ\text{C} \dots +110 \text{ }^\circ\text{C}$

### Selection diagram



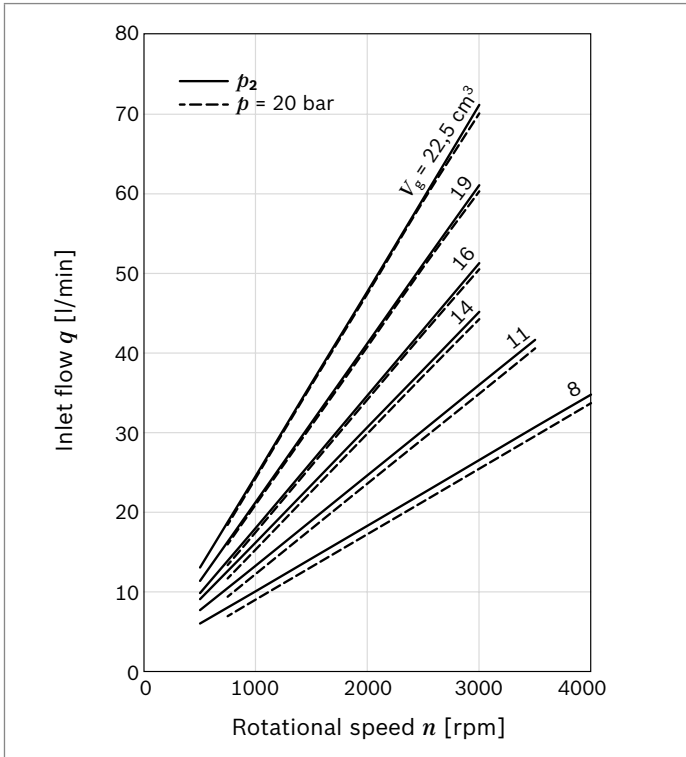
<sup>1)</sup> Other hydraulic fluids on request.



## Diagrams/characteristic curves

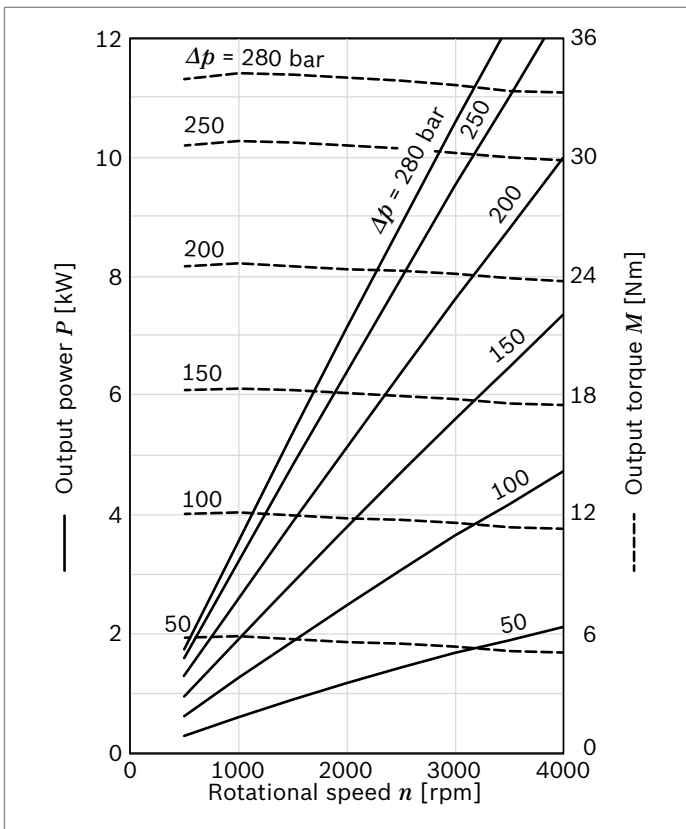
### Inlet flow characteristic curve

#### ▼ Inlet flow

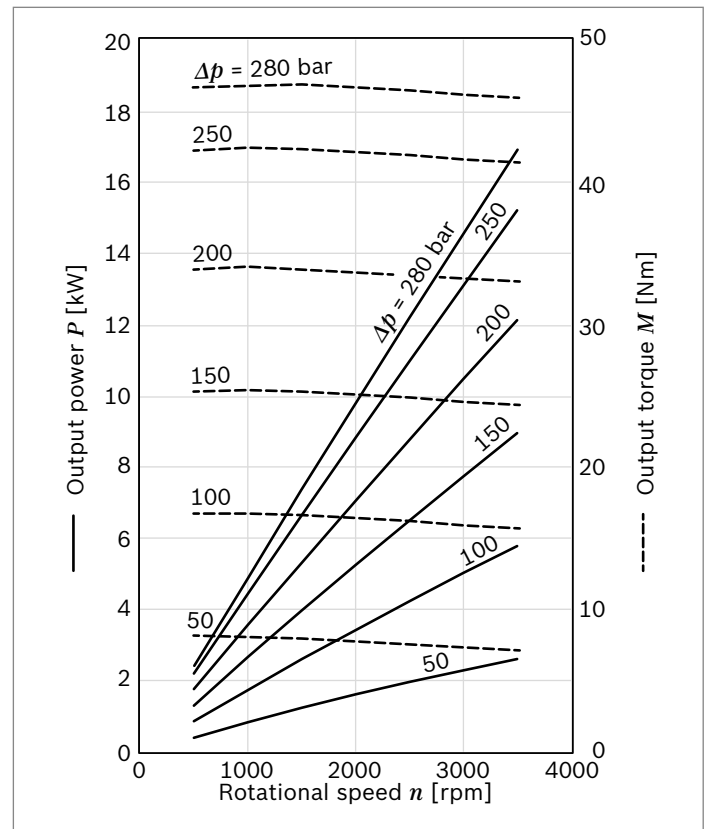


### Performance charts

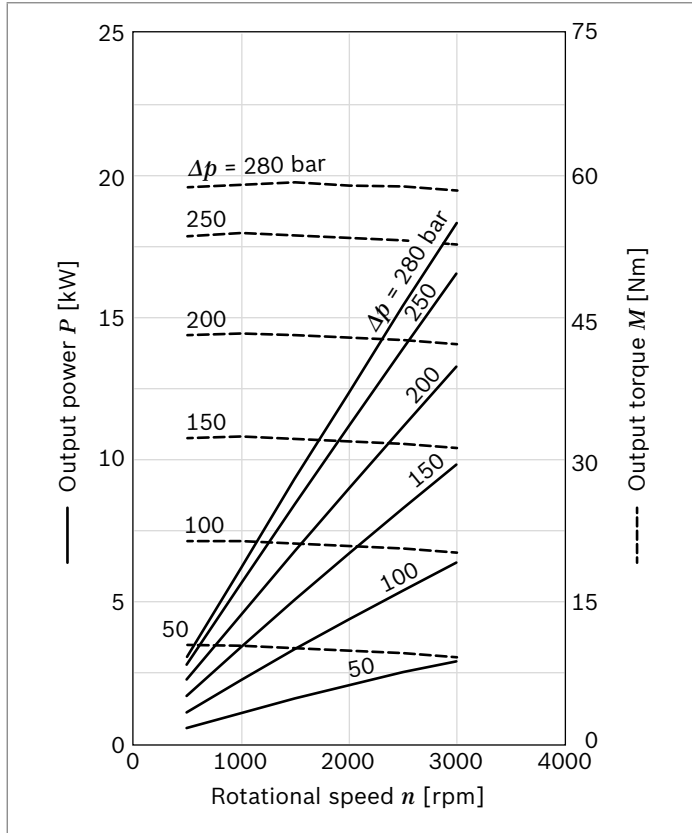
#### ▼ Size 8



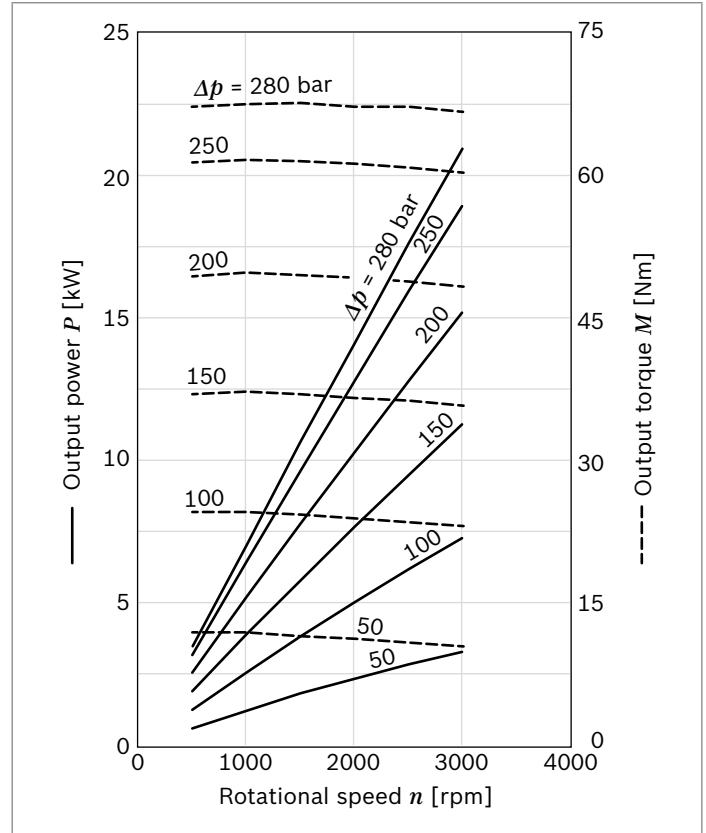
#### ▼ Size 11



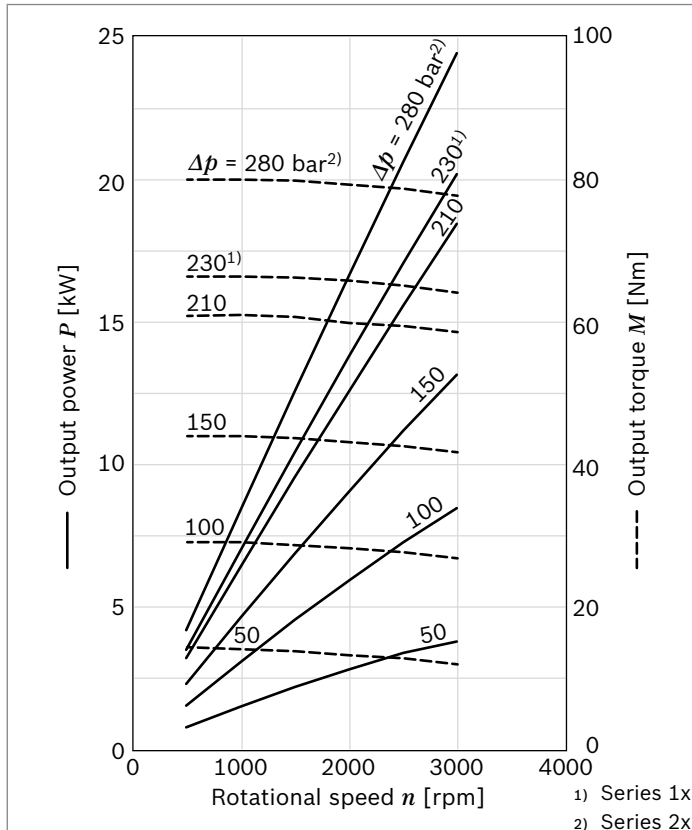
▼ **Size 14**



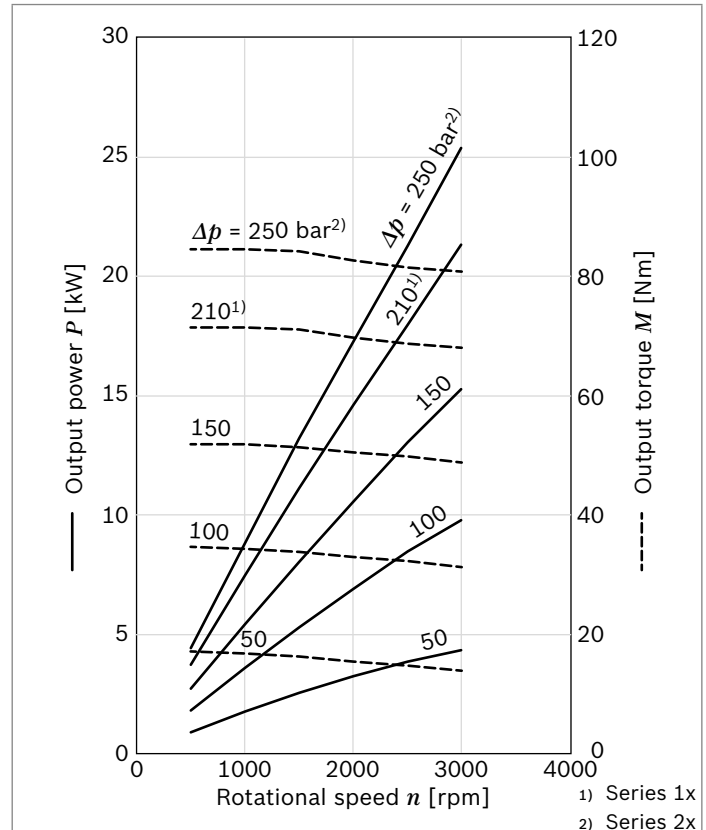
▼ **Size 16**



▼ **Size 19**



▼ **Size 22**



**Notice**

Characteristic curves measured at  $v = 32 \text{ mm}^2/\text{s}$  and  $t = 50 \text{ }^\circ\text{C}$ .

$P = f(n, p)$  incl.  $\eta_t$

$M = f(n, p)$  incl.  $\eta_{hm}$

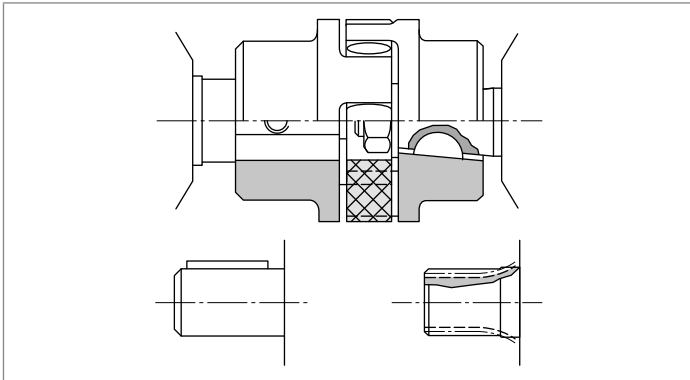
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## Output drives

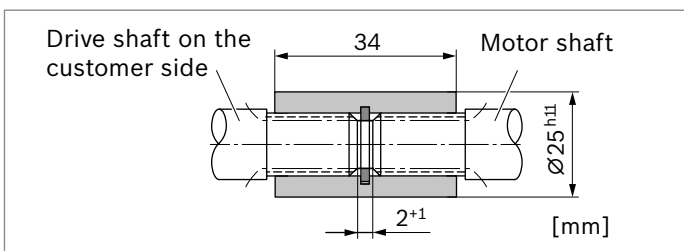
### 1. Elastic couplings

- ▶ The coupling should not transfer any radial or axial forces to the motor.
- ▶ The maximum radial runout deviation from the motor shaft to the spigot should not exceed 0.2 mm.
- ▶ See the coupling manufacturer's assembly instructions for permissible shaft misalignment tolerances.



### 2. Coupling sleeve

- ▶ To be used for splined shaft profile according to DIN and SAE
- ▶ Attention: Make sure no radial and axial forces act on the motor shaft and coupling sleeve. The coupling sleeve should freely move in the axial direction.
- ▶ Distance motor shaft – drive shaft on the customer side  $2^{+1}$  mm
- ▶ Reserve installation space for the retaining ring.
- ▶ Oil-bath or oil-mist lubrication required

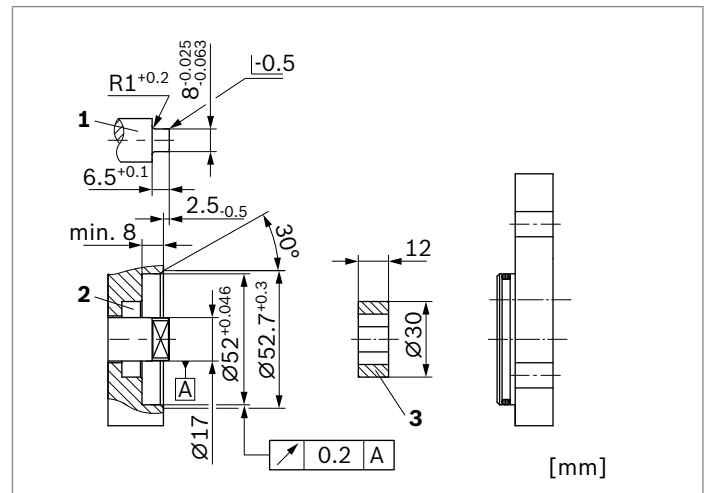


### 3. Tang drive coupling

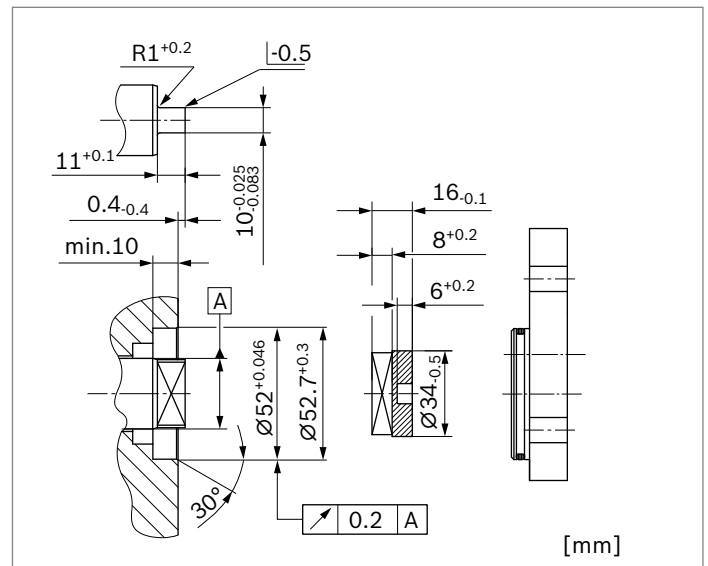
- ▶ For attaching the motor directly to consumers
- ▶ Motor drive shaft with special tang drive and driver (3)
- ▶ No shaft seal
- ▶ Output side installation and sealing according to following recommendations and dimensions
- ▶ Output shaft on the customer side (1)
  - Case hardening steel DIN EN ISO683-3, e.g. 20 MnCrS 5 case-hardened 0.6 deep; HRC 60±3
  - Seal ring contact surface ground without rifling  $R_{\max} \leq 4 \mu\text{m}$

- The maximum transmissible torque of 85 Nm applies to a claw height of 19 mm. With lower claw heights, e.g. 17 mm, the maximum transmissible torque decreases to 65 Nm.
- ▶ Radial shaft seal ring on the customer side (2)
  - Provide with rubber cover (see DIN 3760, type AS, or double-lipped ring)
  - Provide installation edges with 15° slant and/or shaft seal with protection sleeve

#### ▼ AZMF-1x

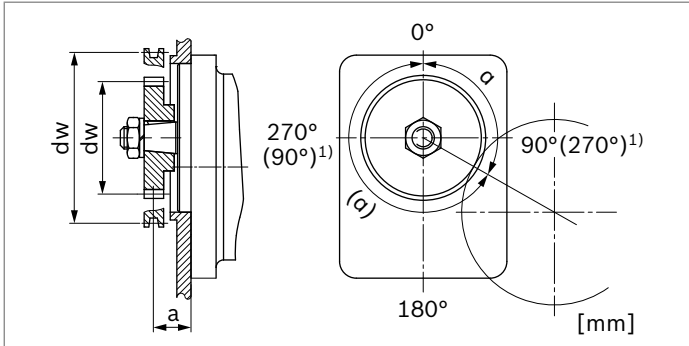


#### ▼ AZMF-2x



#### 4. V-belt and gear wheel without outrigger bearing

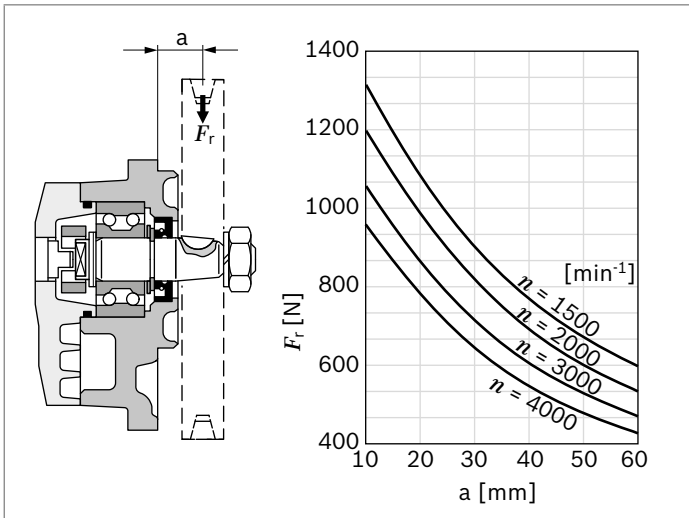
For V-belt or gear wheel output drives, please contact us and indicate the application and mounting conditions (dimensions a, dw and angle  $\alpha$ ).



#### 5. Outrigger bearing

Motors with outrigger bearing are offered to eliminate possible problems with V-belt or gear wheel output drives. The diagrams show the radial load capacity in relation to a bearing service life of  $L_H = 1000$  h

##### ▼ Front cover A (type 1, with claw)



1) Values in parentheses refer to counter-clockwise rotation.

## Max. transmissible output torques

### Tapered shaft series 1x

Drive shaft		Front cover	$M_{\max}$	Size	$p_{2 \max}$
Code	Designation	Code	Nm		bar
C	1 : 5	B	155	8 ... 16	280
				19	230
				22	210
S	1 : 5 for front cover A	A	65	8 ... 14	280
				16	230
				19	190
				22	160

### Tapered shaft series 2x

Drive shaft		Front cover	$M_{\max}$	Size	$p_{2 \max}$
Code	Designation	Code	Nm		bar
C	1 : 5	B	155	19	280
				22	250
S	1 : 5 for front cover A	A	65	19	190
				22	160

### Tang drive 1x

Drive shaft		Front cover	$M_{\max}$	Size	$p_{2 \max}$
Code	Designation	Code	Nm		bar
N		T	65	8 ... 14	280
				16	230
				19	190

### Tang drive 2x

Drive shaft		Front cover	$M_{\max}$	Size	$p_{2 \max}$
Code	Designation	Code	Nm		bar
N		T	85	19	250
				22	210

### Splined shaft 1x

Drive shaft		Front cover	$M_{\max}$	Size	$p_{2 \max}$
Code	Designation	Code	Nm		bar
F	DIN 5482 B 17 × 14	B, O	100	8 ... 16	280
				19	230
				22	210

### Splined shaft 2x

Drive shaft		Front cover	$M_{\max}$	Size	$p_{2 \max}$
Code	Designation	Code	Nm		bar
F	DIN 5482 B 17 × 14	B, O	100	19	280
				22	250

## Gear motors with integrated valves; sensors

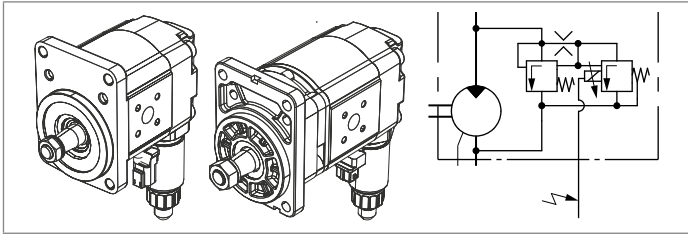
### Gear motor with integrated pilot operated proportional pressure relief valve

Gear motor with integrated pilot operated proportional pressure relief valve and shaft seal unloading thanks to three-chamber principle.

Gear motors without shaft seal unloading are not recommended due to the loading from the oil return, particularly with cold oil.

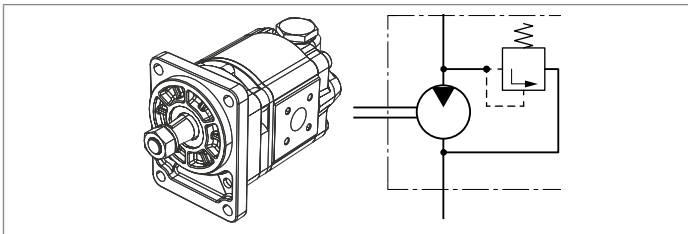
The basis of this drive unit is a motor of the "F" series. A proportional pressure relief valve is integrated in the end cover. This unit offers the following advantages:

- ▶ No piping necessary for the proportional pressure relief valve function
- ▶ Integrated pressure limitation
- ▶ Fail-safe behavior in case of power failure
- ▶ Drag speed almost zero
- ▶ Motor speed proportionally controllable
- ▶ Insensitive to pressure loads from the outlet.



### Gear motor with pressure relief valve

Return flow pressure  $\leq 3$  bar (10 bar during start-up)

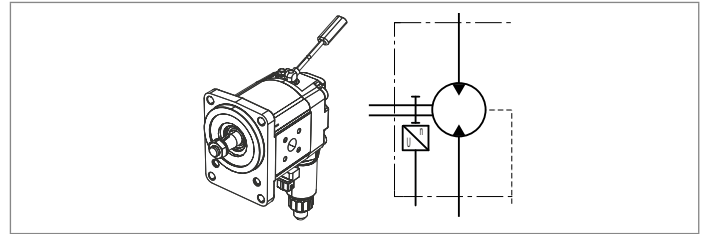


### Gear motor with integrated speed sensor

The Hall effect-based DSM1-10 speed sensor has been specially developed for use under harsh conditions in mobile working machines. The sensor detects the rotational speed signal of ferromagnetic gear wheels. As an active sensor, he delivers a signal with a constant amplitude that is independent of the rotational speed.

Due to its compact and robust design, the external gear motor with integrated speed sensor is particularly suitable for:

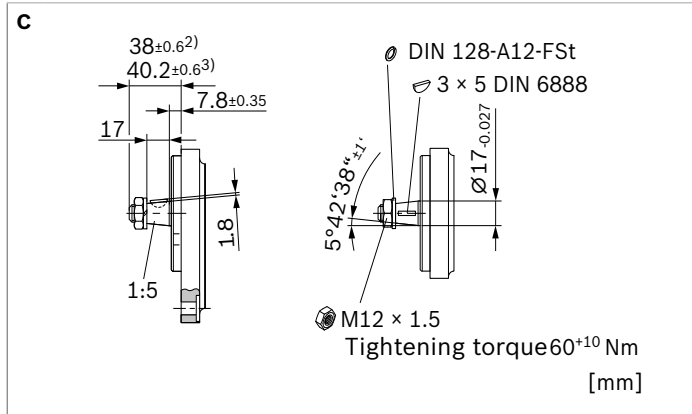
- ▶ Fan drives in buses, trucks and construction machinery from 7 to 20 kW
- ▶ As vibration drive for road rollers and pavers.



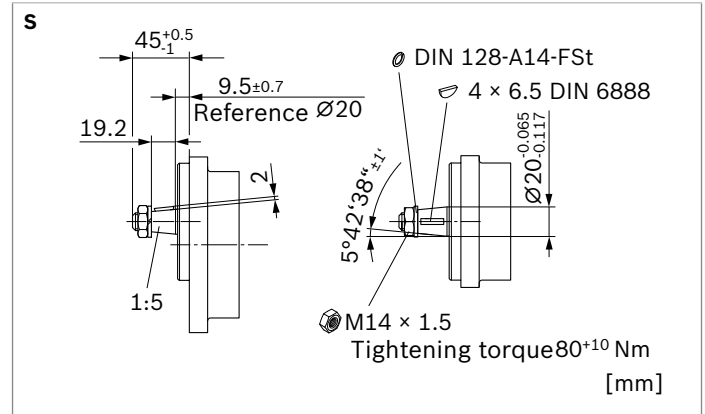
For further information see:  
 Speed sensor data sheet 95132.

**Dimensions – drive shaft<sup>1)</sup>**

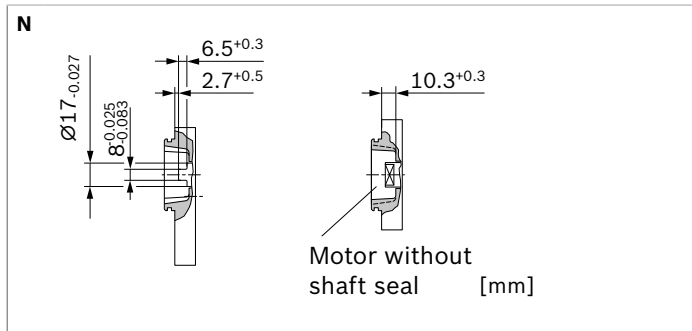
▼ **1:5 tapered shaft**



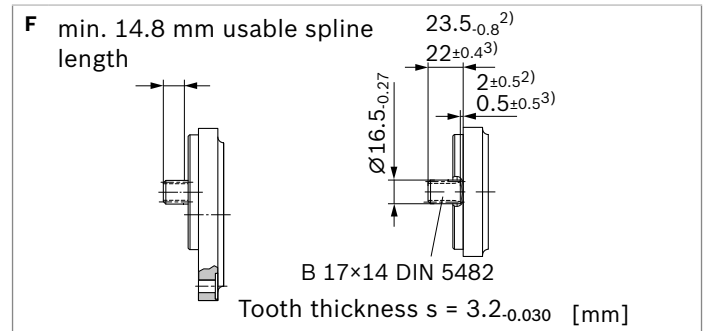
▼ **1:5 tapered shaft (for front cover A, G)**



▼ **Tang drive**

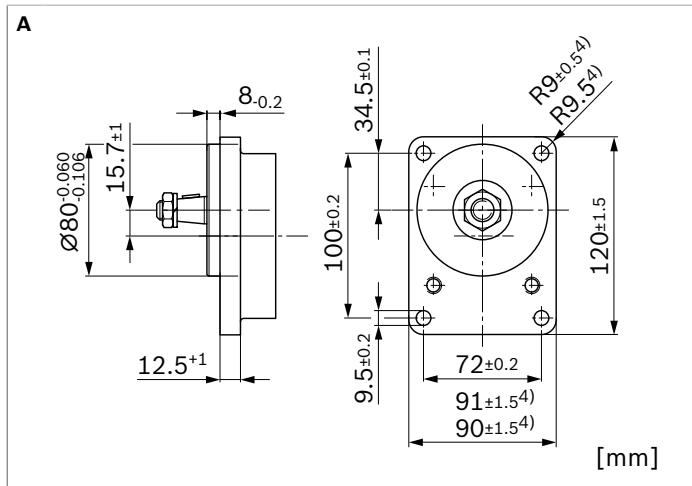


▼ **Splined shaft (DIN 5482 B17 x 14)**

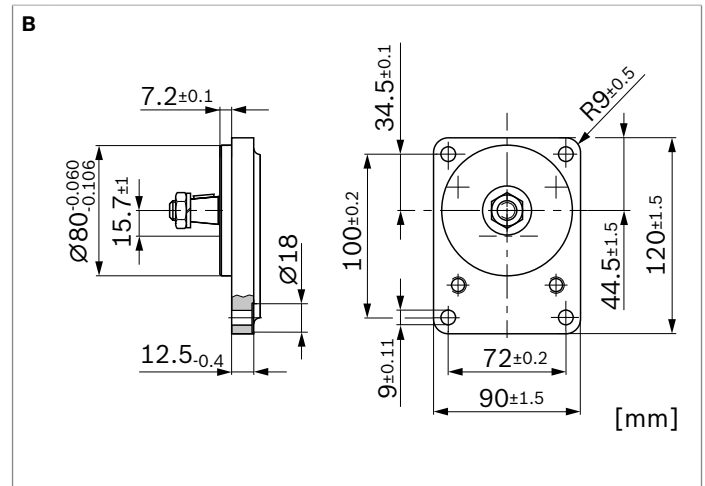


**Dimensions – front cover<sup>1)</sup>**

▼ **Outrigger bearing Ø80 mm, type 1**



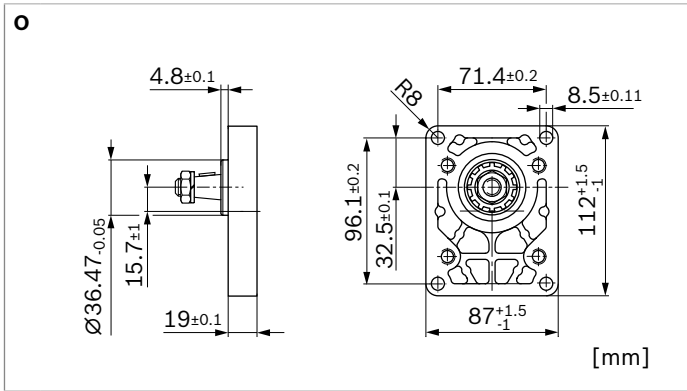
▼ **Rectangular flange Ø80 mm**



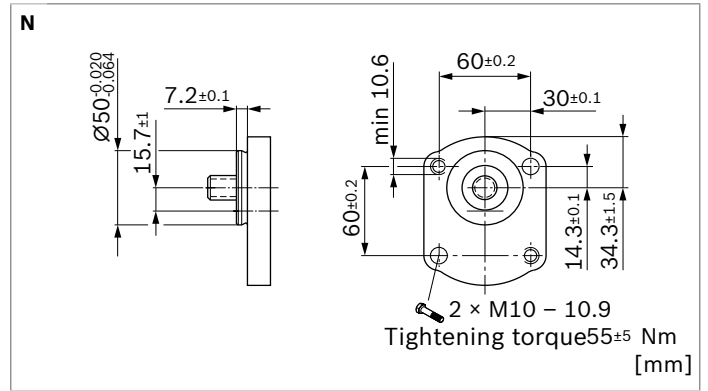
1) For other version, see offer drawing  
2) In combination with front cover B

3) In combination with front cover O  
4) Depending on the outrigger bearing

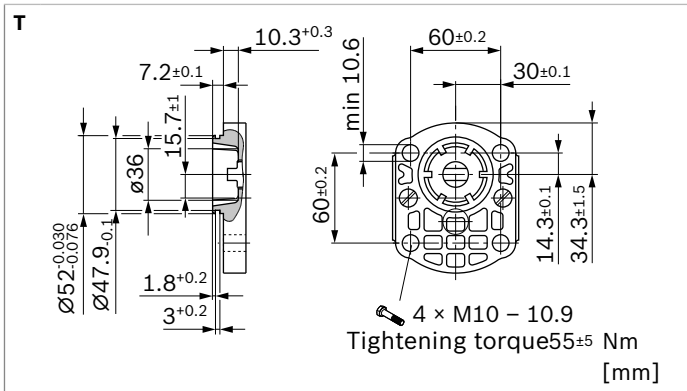
▼ Rectangular flange Ø36.47 mm



▼ 2-hole mounting Ø50 mm

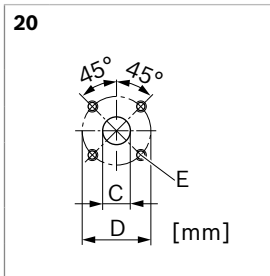


▼ 4-bolt mounting Ø52 mm with O-ring

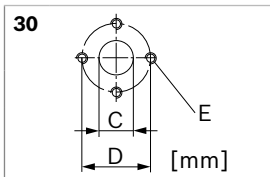


Dimensions – standard line connection <sup>1)</sup>

▼ Square flange



Direction of rotation	Size	Upstream side			Downstream side		
		C	D	E	C	D	E
right/left	8 ... 22	15	35	M6; 13 deep	20	40	M6; 13 deep
Direction of rotation	Size	Line connections					
		C	D	E			
reversible	8 ... 22	15	35	M6; 13 deep			



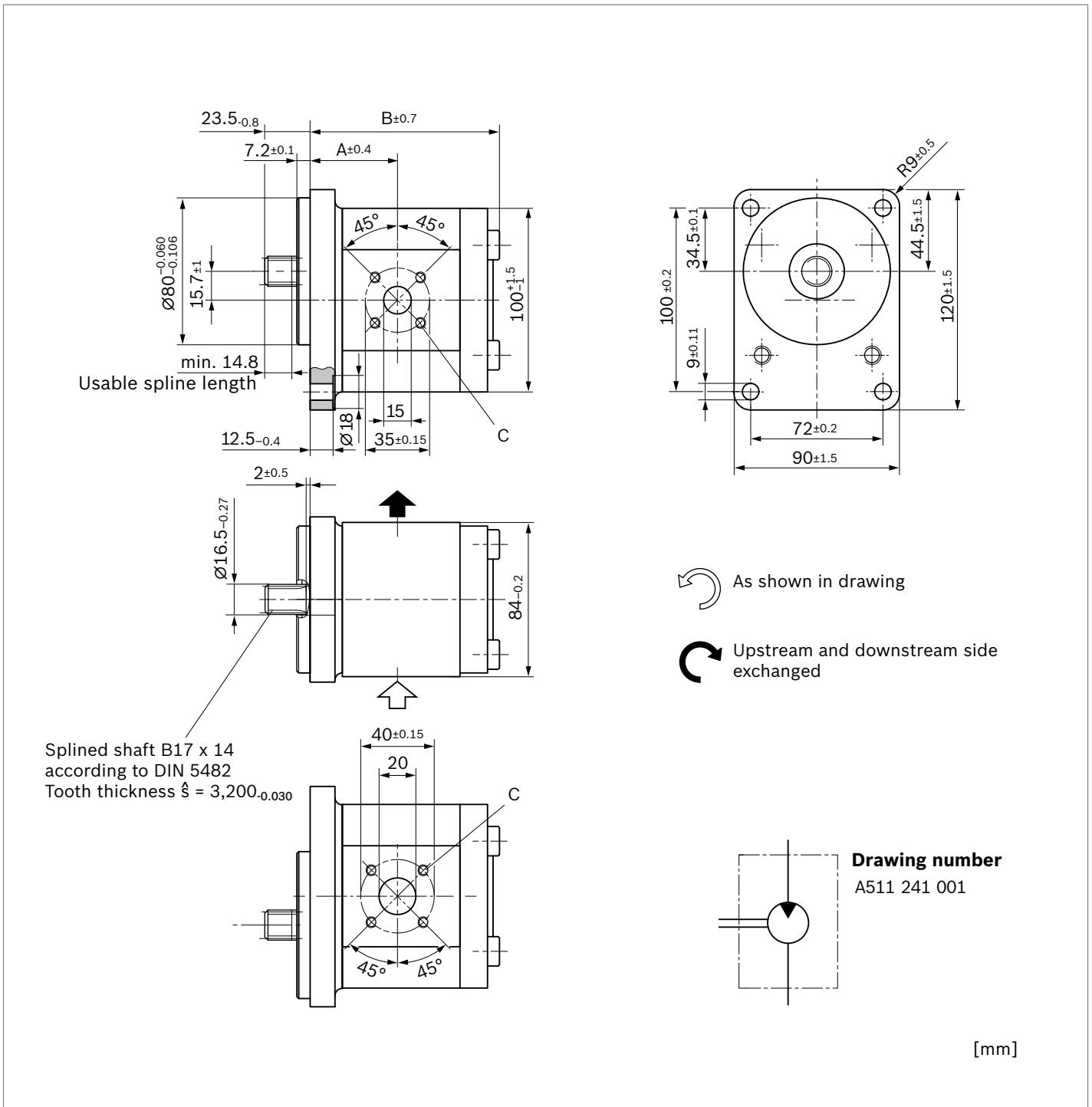
Direction of rotation	Size	Upstream side			Downstream side		
		C	D	E	C	D	E
right/left	8	13.5	30.2	M6; 13 deep	13.5	30.2	M6; 13 deep

<sup>1)</sup> Customer-specific versions may differ (see offer drawing)



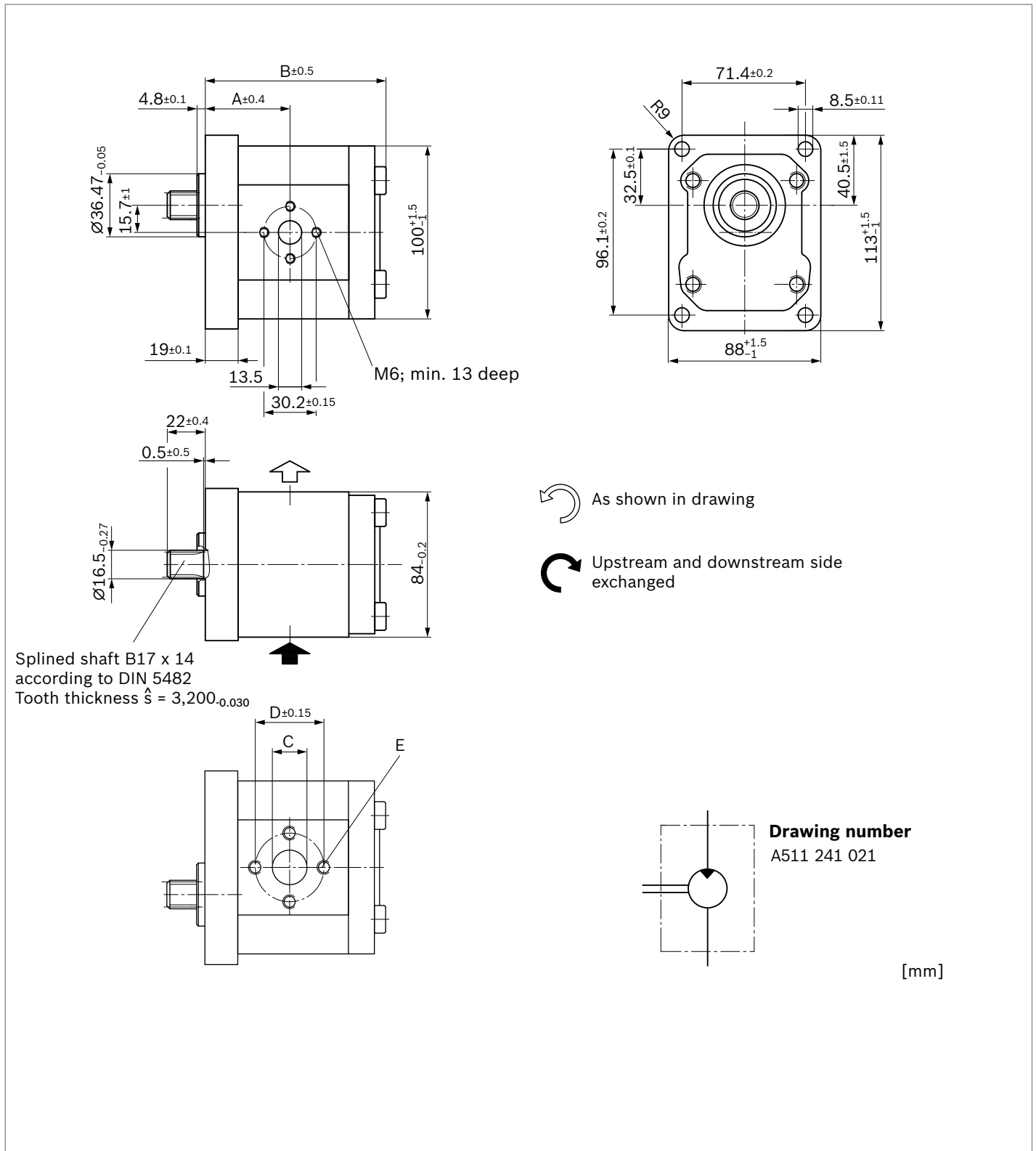


▼ **Splined shaft (DIN5482 B17 × 14) with rectangular flange Ø80 mm**  
**AZMF-...-x FB20MB**



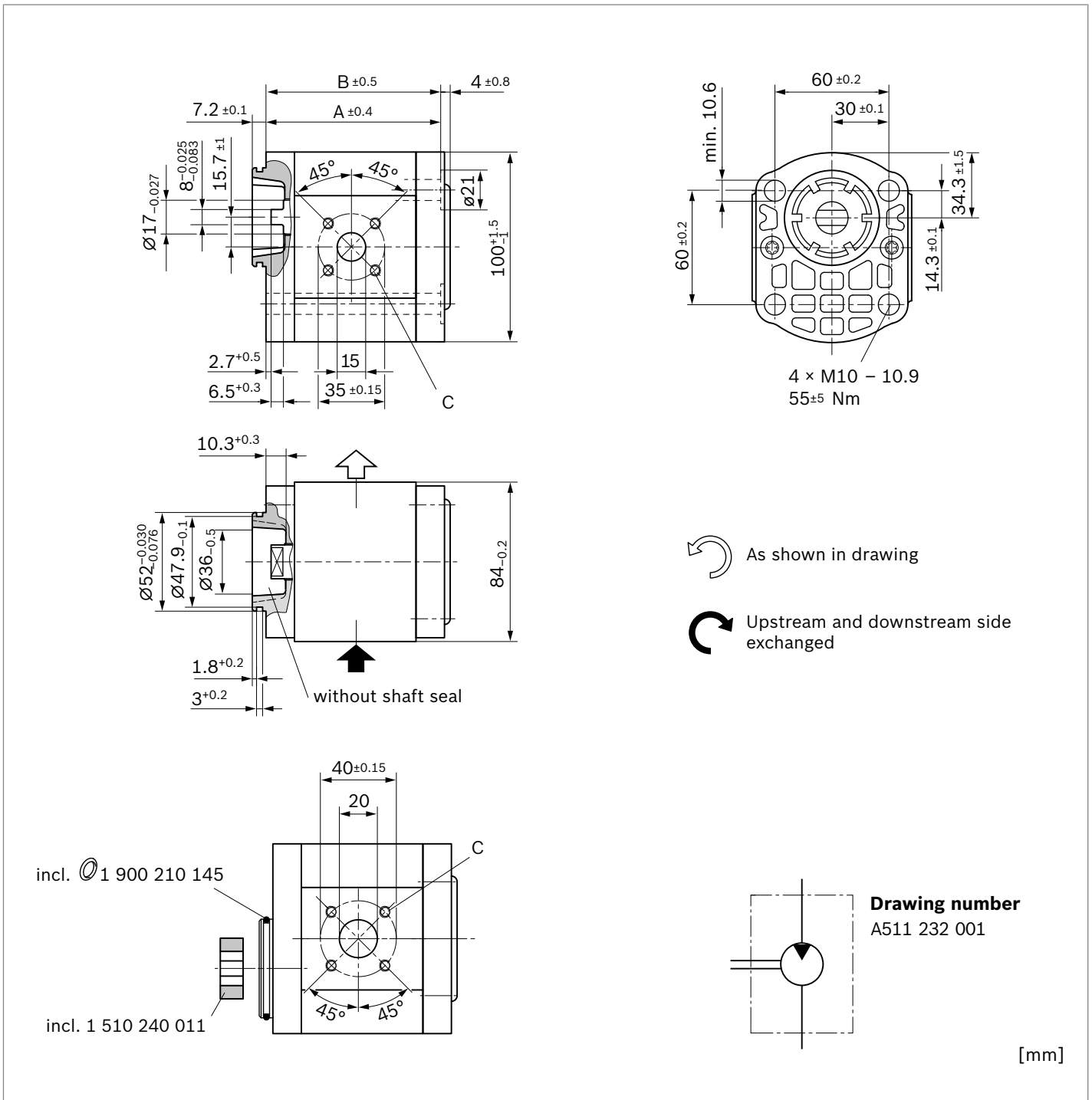
NG	Order number	Direction of rotation		Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
		Counter-clockwise	Clockwise			A	B	C
8	0511425301	0511425002		210	4000	43.2	91.0	M6; min. 13 deep
11	0511525301			210	3500	47.0	96.0	
16	0511625301	0511625001		210	3000	47.5	104.4	
19	0511625300	0511625002		180	3000	47.5	109.4	
22	0511725303	0511725004		180	3000	61.1	126.8	

▼ **Splined shaft (DIN5482 B17 × 14) with rectangular flange Ø36.47 mm**  
**AZMF-...-xFO30MB**



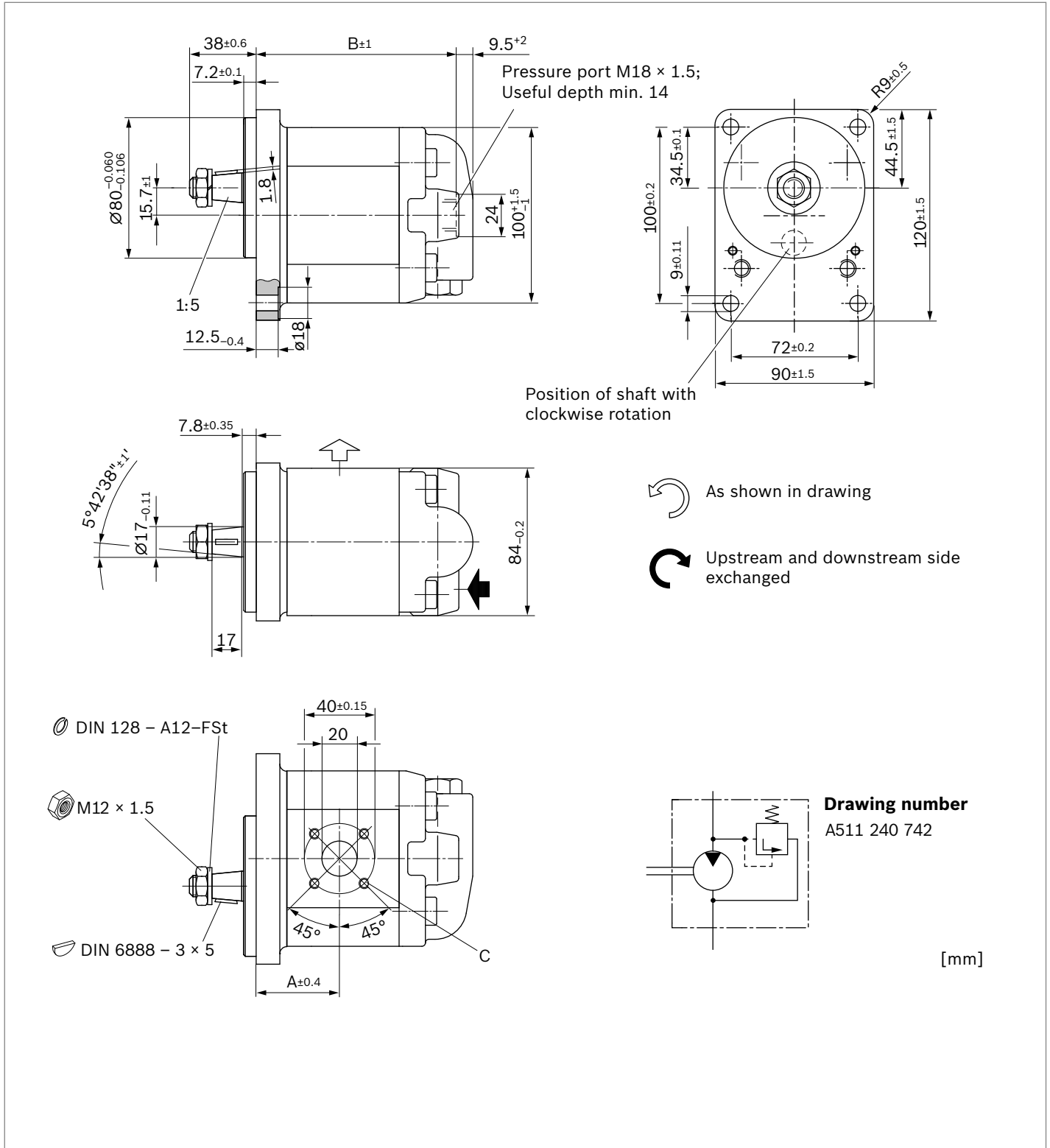
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions				
				A	B	C	D	E
8	0511425003	210	4000	44.9	90.7	13.5	30.2	M6; min. 13 deep

▼ Dihedral claw with 4-bolt mounting  $\varnothing 52$  mm with coupling  
 AZMF-...-xNT20MB-S0184



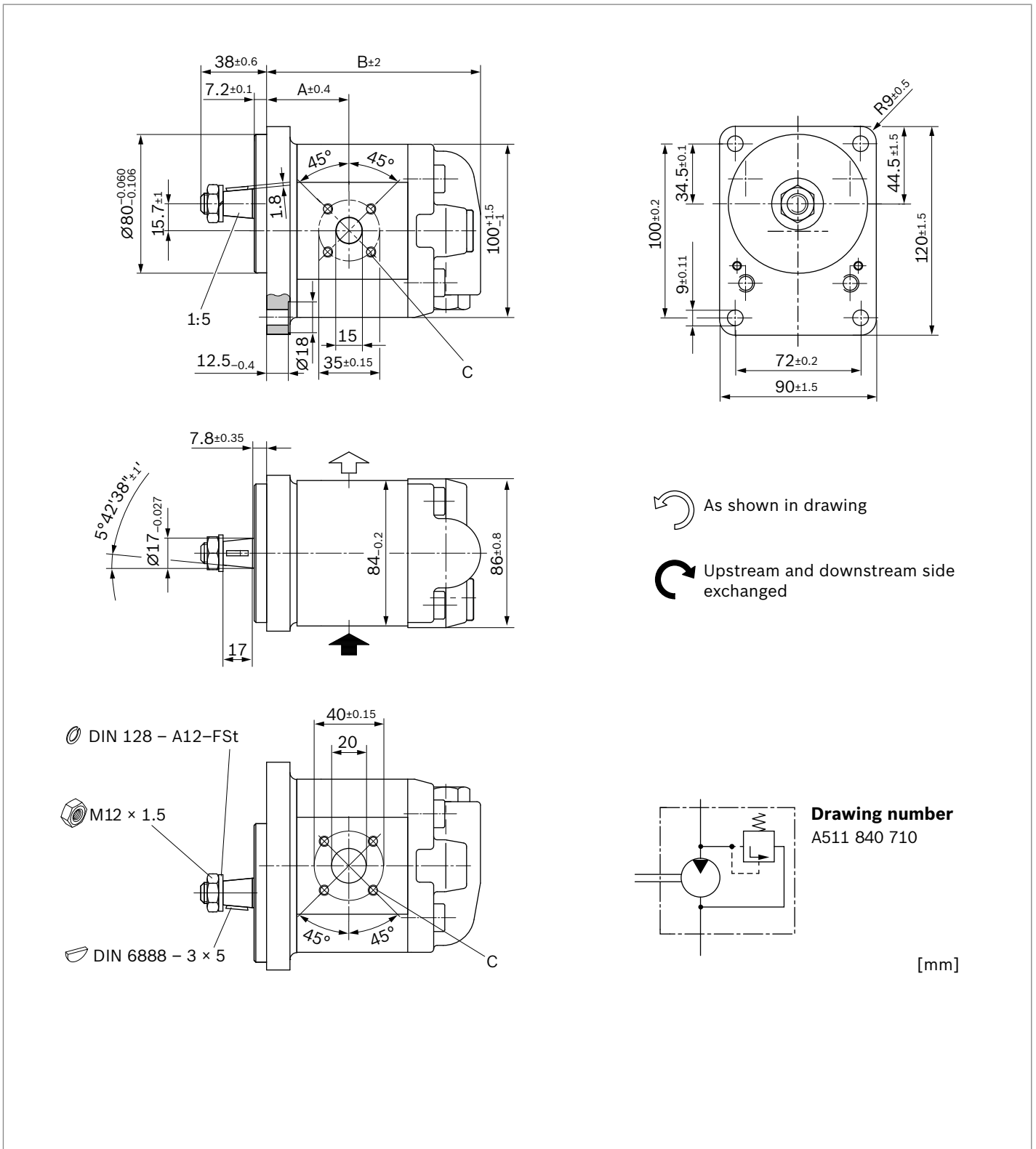
NG	Order number		Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
	Direction of rotation Counter-clockwise	Clockwise			A	B	C
8	0511415300	0511415001	250	4000	40.7	80.3	M6; min. 13 deep
11	0511515300	0511515001	250	3500	44.5	85.3	
16	0511615301	0511615002	220	3000	45.0	93.7	
19	0511615300	0511615001	190	3000	45.0	98.7	
22	0511715300	0511715001	160	3000	52.6	104.1	

▼ **1:5 tapered shaft with rectangular flange Ø80 mm, pressure relief valve with residual flow and suction port in the end cover**  
**AZMF-...-xCBxxxD150XX**



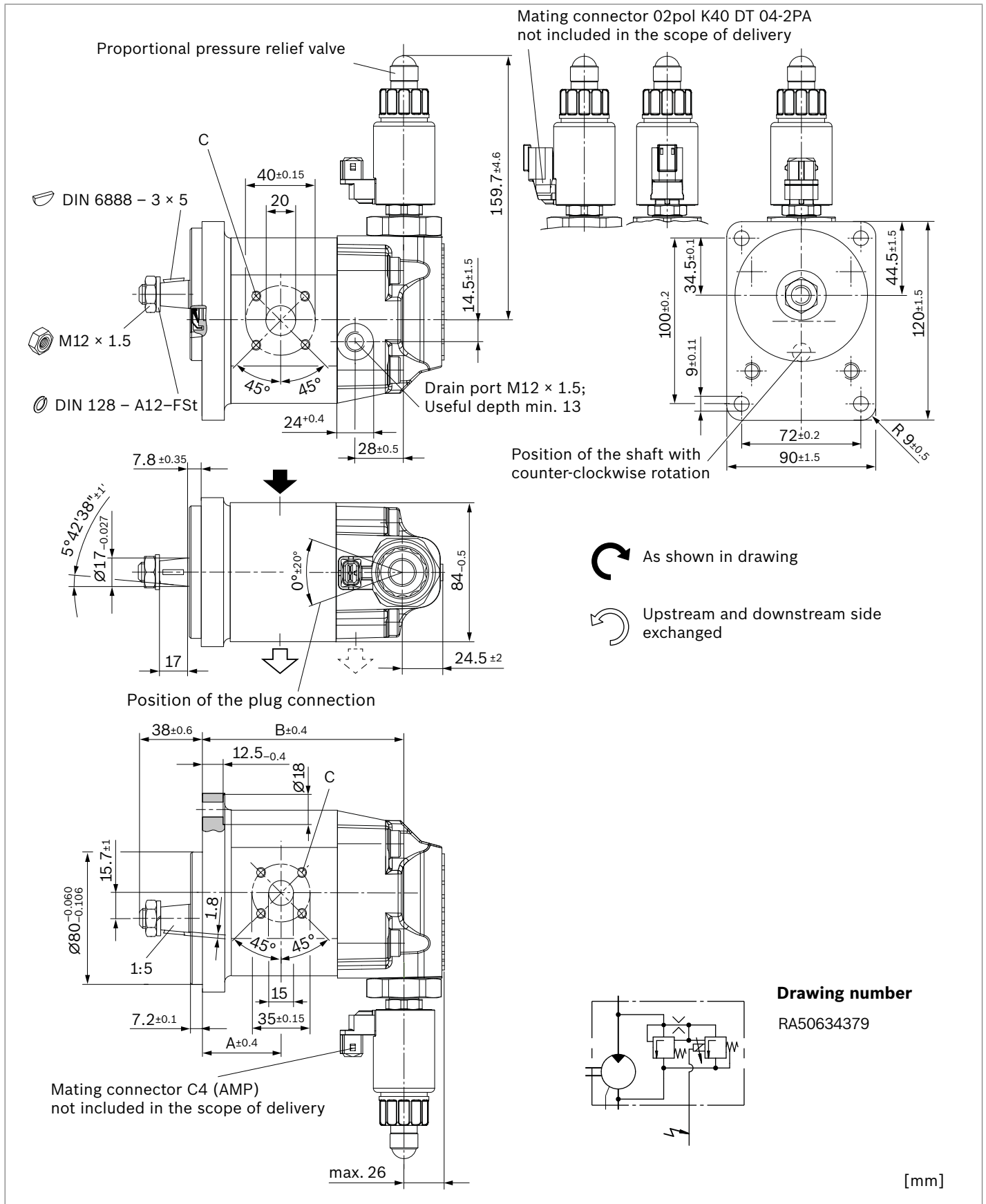
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions
	<b>Direction of rotation</b>			
	<b>Clockwise</b>			<b>A</b> <b>B</b> <b>C</b>
8	0511425008	150	4000	43.2                      101.8                      M6; min. 13 deep

▼ **1:5 tapered shaft with rectangular flange Ø80 mm, pressure relief valve with residual flow**  
**AZMF-...-xCB20MD**



NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
	Direction of rotation			A	B	C
	Counter-clockwise					
8	0511425304	150	3500	43.2	110.8	M6; min. 13 deep

▼ **1:5 tapered shaft with rectangular flange Ø80 mm and proportional pressure relief valve**  
**AZMF-...-xCB20PG**

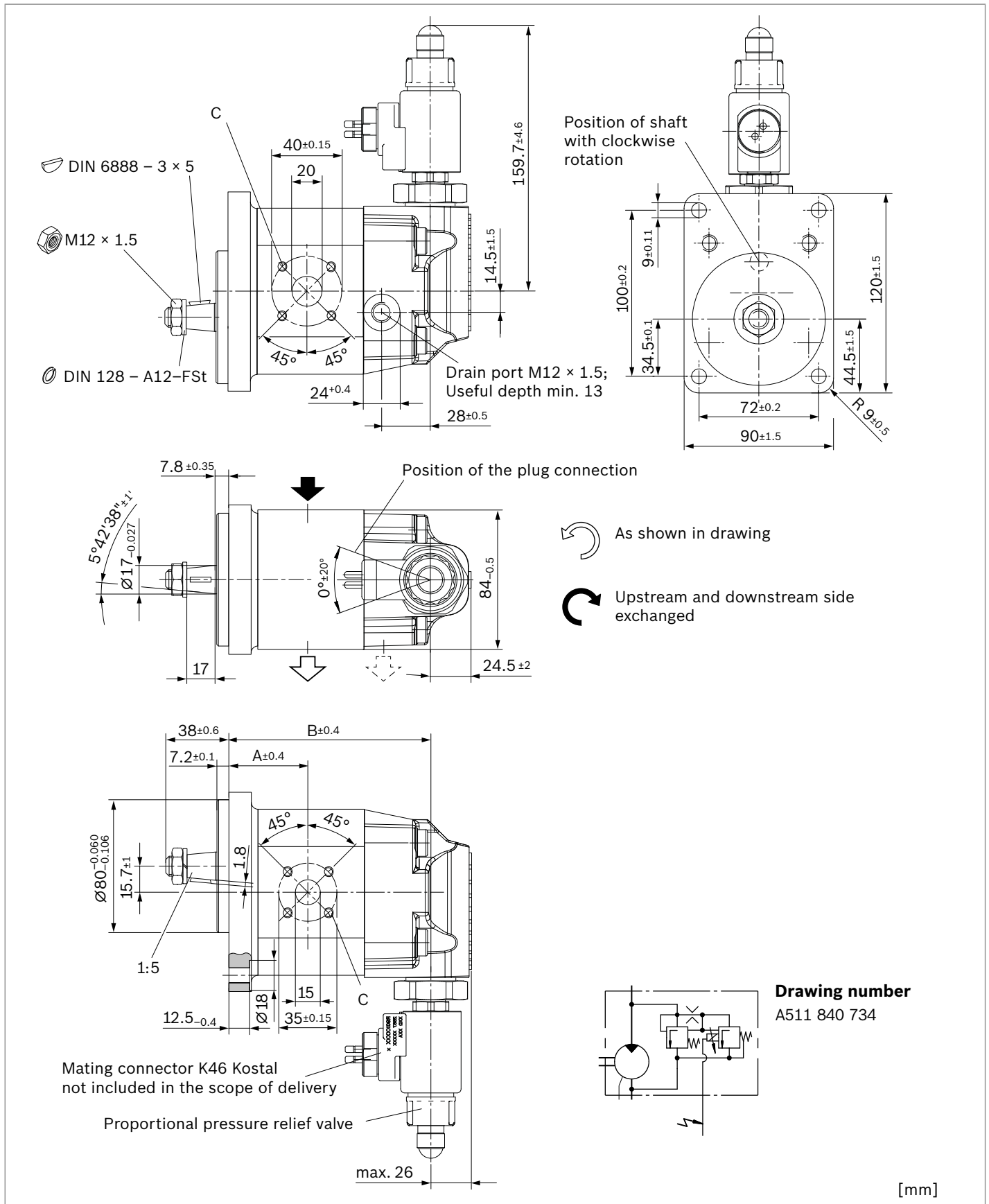


▼ 1:5 tapered shaft with rectangular flange Ø80 mm and proportional pressure relief valve  
AZMF-...-xCB20PG

NG	Order number		Maximum pressure at the pressure relief valve [bar]	Maximum rotational speed [rpm]	Dimensions			Valve		Connector
	Direction of rotation				A	B	C	Order number	Voltage [V]	
	Counter-clockwise	Clockwise								
8		0511425018	185	3000	43.2	109.0	M6; min. 13 deep	901070391	24	C4 (2pol.)
		0511425017	110	3000	43.2	109.0		901104239	24	C4 (2pol.)
11	0511525314		185	3000	42.0	114.0		901122391	24	C4 (2pol.)
		0511525025	220 <sup>1)</sup>	3000	42.0	114.0		901122151	24	K40 (2pol.)
		0511525024	220 <sup>1)</sup>	3000	42.0	114.0		901122405	24	C4 (2pol.)
	0511525315	0511525019	130	3000	42.0	114.0		901122416	24	C4 (2pol.)
14		0511525020	220 <sup>1)</sup>	3000	42.0	119.0		901070405	24	C4 (2pol.)
		0511525015	220 <sup>1)</sup>	3000	42.0	119.0		901070386	12	C4 (2pol.)
		0511525016	185	3000	42.0	119.0		901070387	12	C4 (2pol.)
		0511525017	155	3000	42.0	119.0		901070407	12	C4 (2pol.)
	0511525026	110	3000	42.0	119.0		901070756	12	K40 (2pol.)	
16	0511625315		155	3000	42.0	122.4		907047407	12	C4 (2pol.)
		0511625034	110	3000	42.0	122.4		901070756	12	K40 (2pol.)
		0511625033	250	3000	42.0	122.4		901250625	24	K40 (2pol.)
	0511625317	0511625029	220 <sup>1)</sup>	3000	42.0	122.4		901070736	12	K40 (2pol.)
	0511625313		220 <sup>1)</sup>	3000	42.0	122.4		901070386	12	C4 (2pol.)
		0511625030	220 <sup>1)</sup>	3000	42.0	122.4		907047405	24	C4 (2pol.)
		0511625024	220 <sup>1)</sup>	3000	42.0	122.4		901070386	12	C4 (2pol.)
19	0511625311		185	3000	47.5	127.4		901122391	24	C4 (2pol.)
	0511625312		220 <sup>1)</sup>	3000	47.5	127.4		901122151	24	K40 (2pol.)
		0511625026	220 <sup>1)</sup>	3000	47.5	127.4		901070736	12	K40 (2pol.)
		0511625027	220 <sup>1)</sup>	3000	47.5	127.4		901122405	24	C4 (2pol.)
		0511625023	150 <sup>1)</sup>	3000	47.5	127.4		901122386	12	C4 (2pol.)
22		0511725029	220 <sup>1)</sup>	3000	55.1	132.8		901070405	24	C4 (2pol.)
		0511725031	220 <sup>1)</sup>	3000	55.1	132.8		901070736	12	K40 (2pol.)
		0511725035	220 <sup>1)</sup>	3000	55.1	132.8		901236512	24	C4 (2pol.)
		0511725028	220 <sup>1)</sup>	3000	55.1	132.8		901070386	12	C4 (2pol.)

1) Short-term

▼ **1:5 tapered shaft with rectangular flange  $\varnothing 80$  mm and proportional pressure relief valve with an internal resistor of 11.5  $\Omega$**   
**AZMF-13-xCB20PG-S0458**





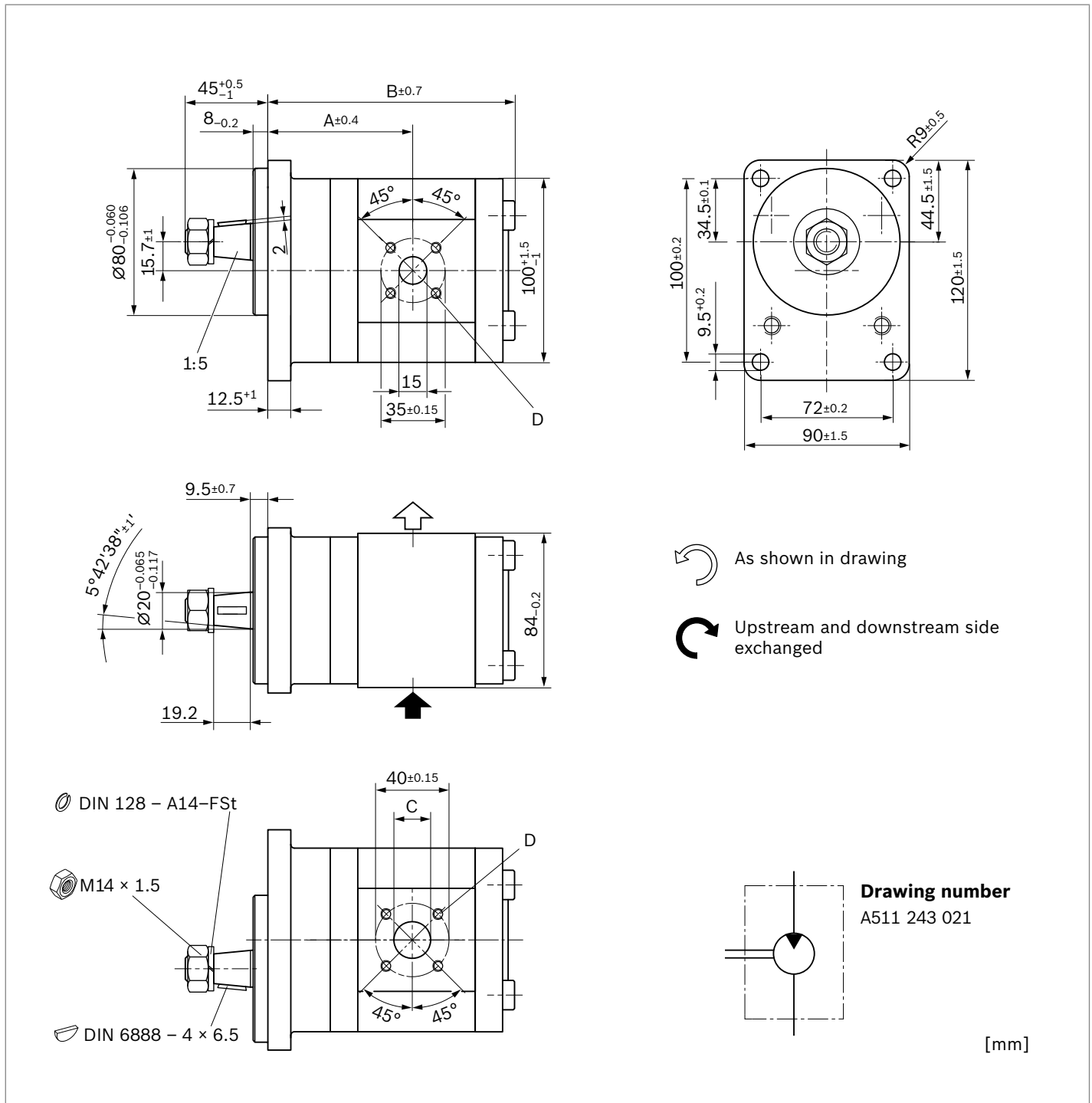
▼ **1:5 tapered shaft with rectangular flange Ø80 mm and proportional relief valve with an internal resistor of 11.5 Ω**  
**AZMF-13-xCB20PG-S0458**

NG	Order number		Maximum pressure at the pressure relief valve [bar]	Maximum rotational speed [rpm]	Dimensions			Valve		Connector
	Direction of rotation				A	B	C	Order number	Voltage [V]	
	Counter-clockwise	Clockwise								
11	0511525313		185	3500	42.0	114.0	M6; min. 13 deep	901101014	24	K46 (Kostal)
16	0511625316	0511625025	220 <sup>1)</sup>	3000	47.5	122.4		901101327	24	K46 (Kostal)
22	0511725314		220 <sup>1)</sup>	3000	55.1	132.8		901101327	24	K46 (Kostal)
		0511725040	220 <sup>1)</sup>	3000	55.1	132.8		901267110	24	K46 (Kostal)
		0511725039	220 <sup>1)</sup>	3000	55.1	132.8		901267111	12	K46 (Kostal)

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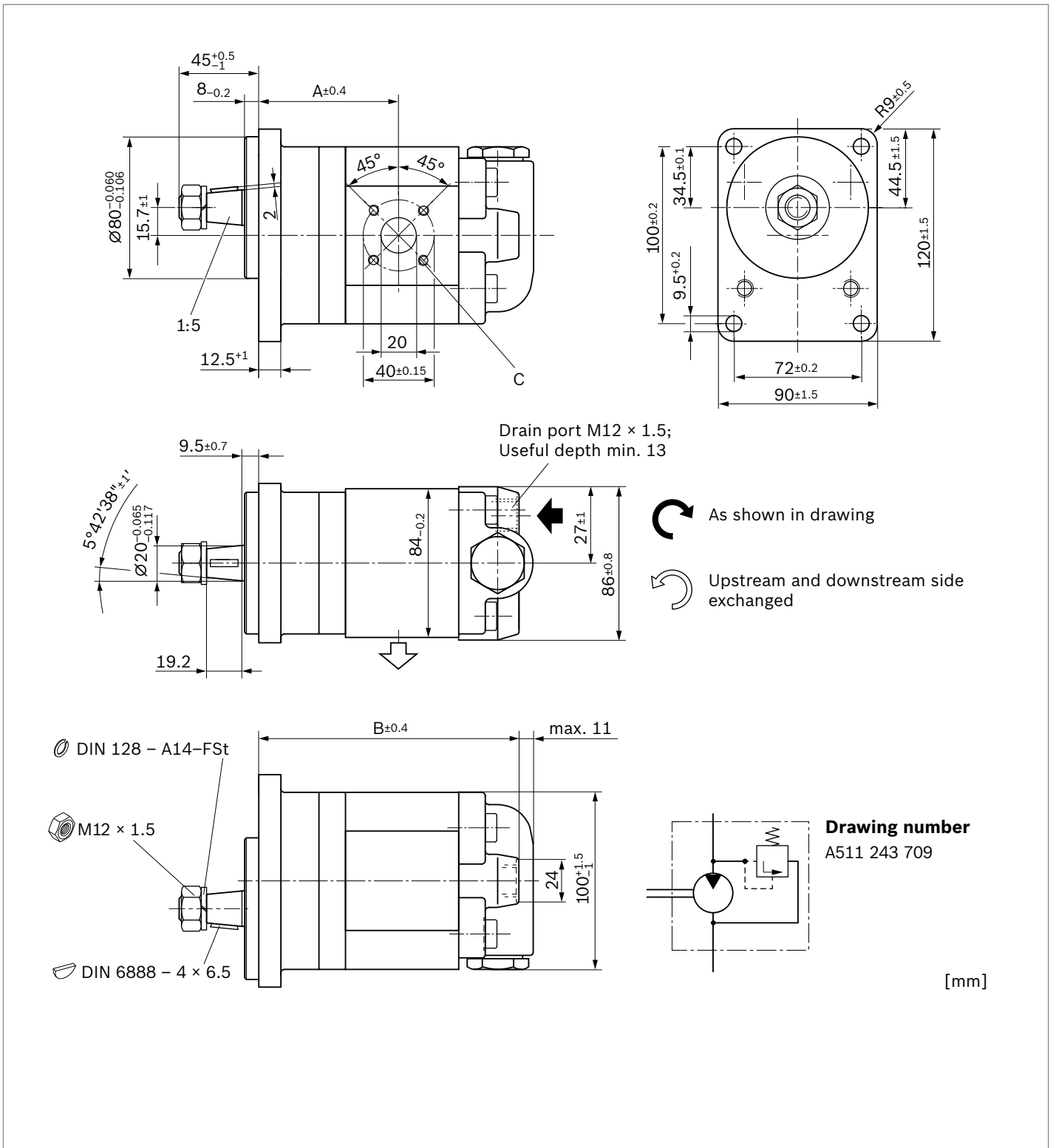
1) Short-term

▼ **1:5 tapered shaft with outboard bearing Ø80 mm**  
**AZMF-...-xSA20MB**



NG	Order number	Direction of rotation		Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
		Counter-clockwise	Clockwise			A	B	C	D
8	0511445300	0511445001	0511445001	280	4000	74.7	120.6	20	M6;
11	0511545300	0511545001	0511545001	280	3500	78.5	125.6	20	min. 13 deep
16	0511645300	0511645001	0511645001	230	3000	79.0	134.0	20	
19	0511645302			210	3000	79.0	139.0	20	
22	0511745300	0511745001	0511745001	190	2500	92.6	156.4	20	

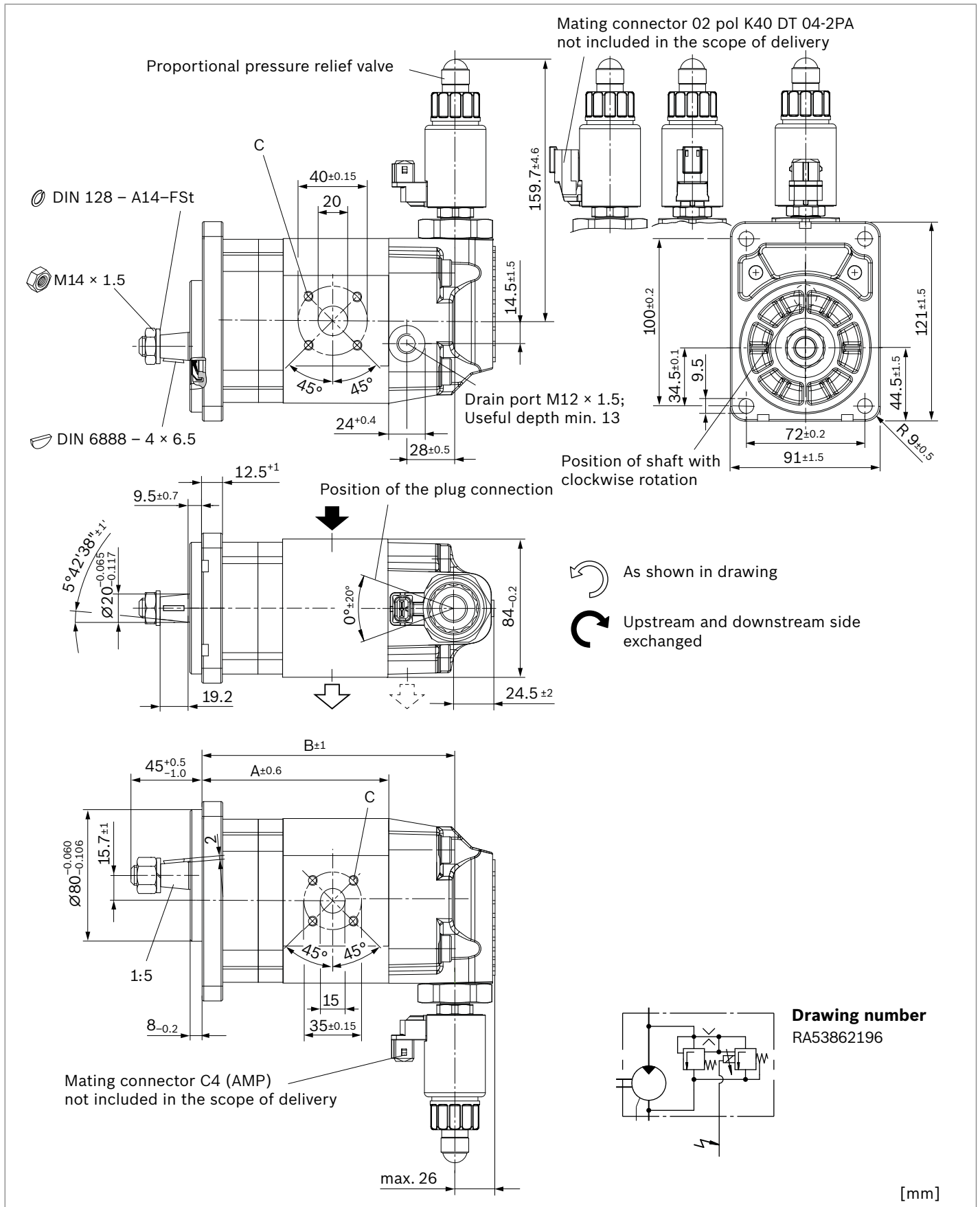
▼ 1:5 tapered shaft with outboard bearing Ø80 mm and port in end cover "D"  
 AZMF-...-xSA20MDx-S0076



[mm]

NG	Order number		Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
	Direction of rotation Counter-clockwise	Clockwise			A	B	C
8		0511445003	200	4000	74.7	133.1	M6;
11	0511545302	0511545003	150	3500	79.1	138.1	min. 13 deep

▼ **1:5 tapered shaft with outboard bearing Ø80 mm and proportional pressure relief valve**  
**AZMF-...-xSA20PGx**

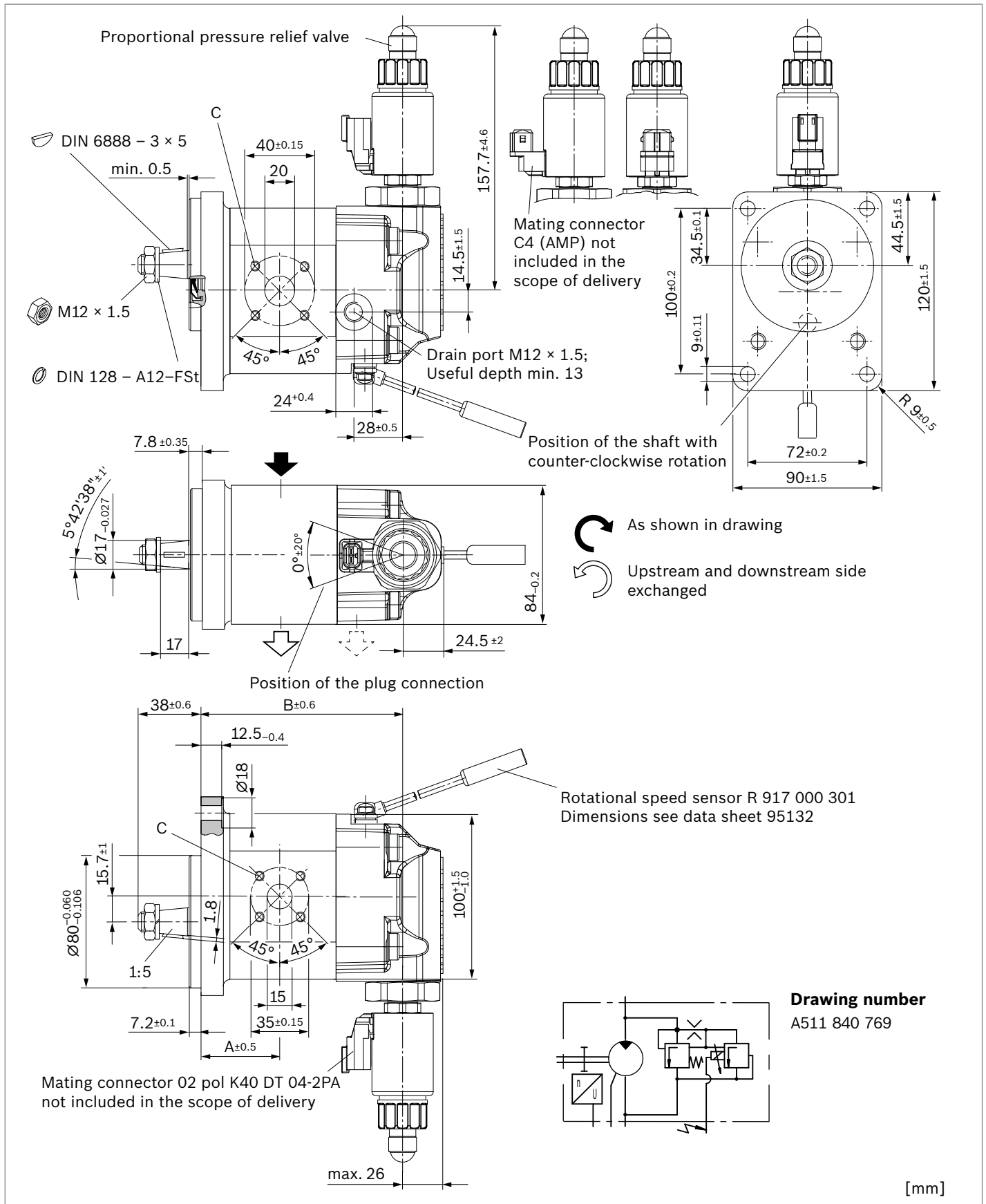


▼ **1:5 tapered shaft with outboard bearing Ø80 mm and proportional pressure relief valve**  
**AZMF-...-xSA20PGx**

NG	Order number		Maximum pressure at the pressure relief valve [bar]	Maximum rotational speed [rpm]	Dimensions			Valve		Connector
	Direction of rotation				A	B	C	Order number	Voltage [V]	
	Counter-clockwise	Clockwise								
8	0511445303		170	3000	74.7	140.5	M6; min. 13 deep	901265439	12	K40 (2pol.)
	0511445304		220	3000	74.7	140.5		901070717	24	K40 (2pol.)
16		0511645018	220	3000	78.9	153.8		901036405	24	C4 (2pol.)
		0511645013	220	3000	78.9	153.8		901036386	12	C4 (2pol.)
		0511645014	185	3000	78.9	153.8		901036387	12	C4 (2pol.)
		0511645015	155	3000	78.9	153.8		901036407	12	C4 (2pol.)
		0511645016	130	3000	78.9	153.8		901036402	12	C4 (2pol.)
		0511645311		220 <sup>1)</sup>	3000	78.9	158.8		901070717	24

1) Short-term

▼ **1:5 tapered shaft with rectangular flange Ø80 mm and proportional pressure relief valve KBVS.3**  
**AZMF-13-xCB20PX-S0689**



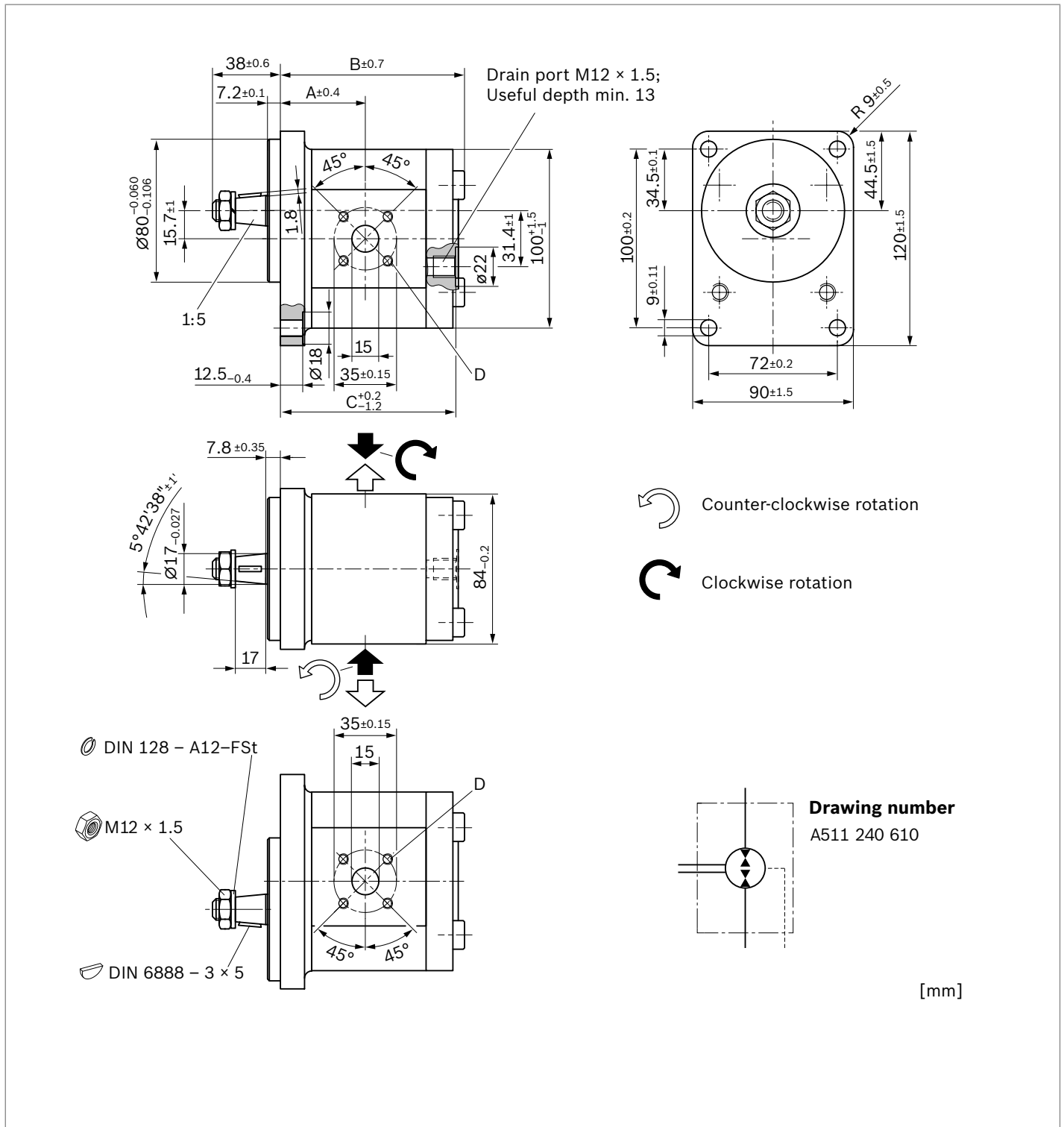
▼ **1:5 tapered shaft with rectangular flange Ø80 mm and proportional relief valve from BRI-CC**  
**AZMF-13-xCB20Px-S0689**

NG	Order number		Maximum pressure at the pressure relief valve [bar]	Maximum rotational speed [rpm]	Dimensions			Valve		Connector
	Direction of rotation				A	B	C	Order number	Voltage [V]	
	Counter-clockwise	Clockwise								
16	0511625318		185	3000	47.5	122.4	M6; min. 13 deep	901036387	12	C4 (2pol.)
19		0511625028	220	3000	47.5	127.4		901036386	12	C4 (2pol.)
22		0511725032	220 <sup>1)</sup>	2500	55.1	132.8		901036386	12	C4 (2pol.)

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1) Short-term

▼ **1:5 tapered shaft with rectangular flange Ø80 mm and axial drain port**  
**AZMF-...-xUCB20xL**

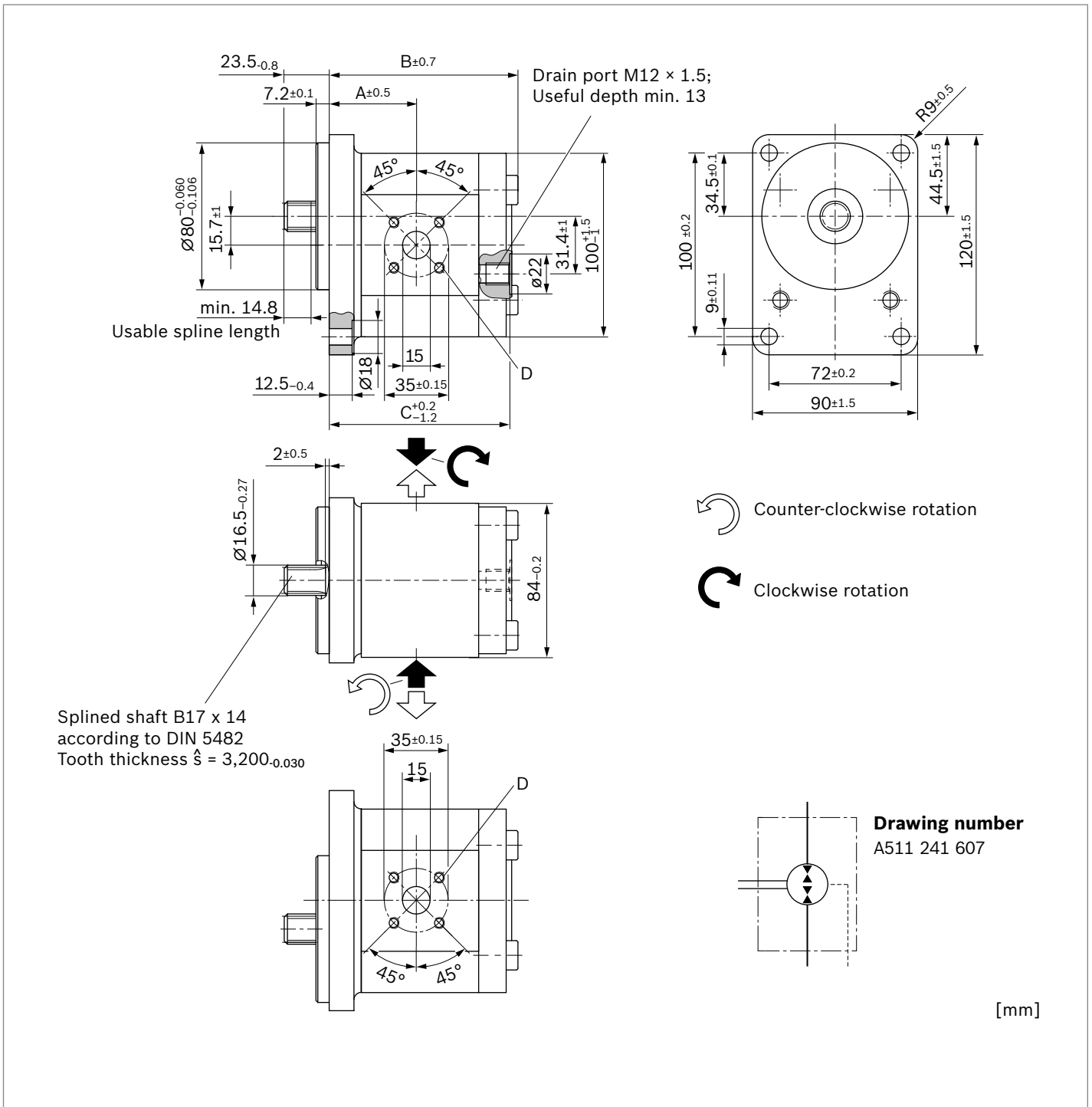


[mm]

NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
8	0511425601	250	4000	43.2	89.5	85.8	M6;
11	0511525604	250	3500	47.0	95.9	90.8	min. 13 deep
16	0511625602	250	3000	47.5	104.3	99.2	



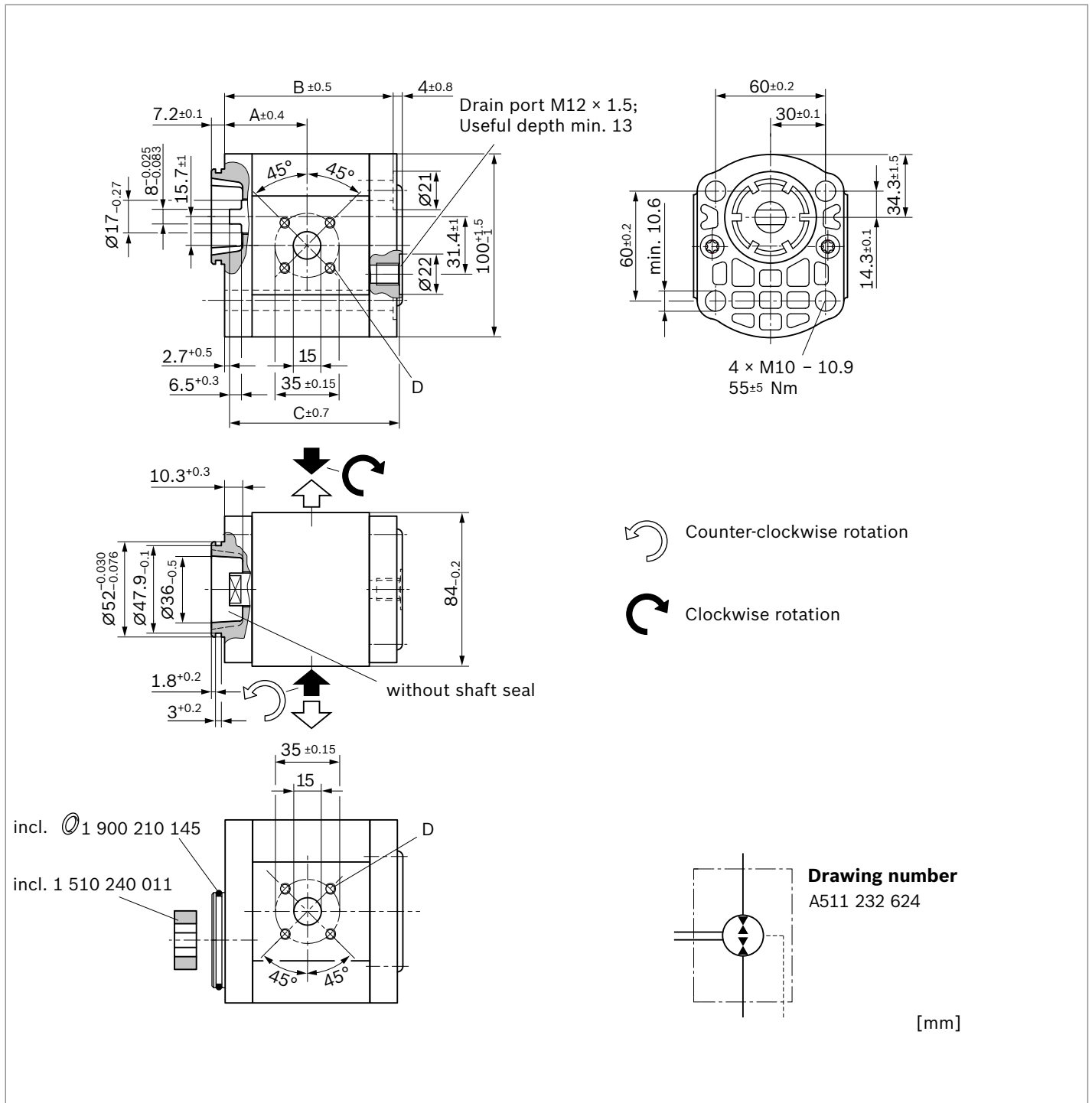
▼ **Splined shaft (DIN5482 B17 × 14) with rectangular flange Ø80 mm and axial drain port AZMF-...-xUFB20xL**



[mm]

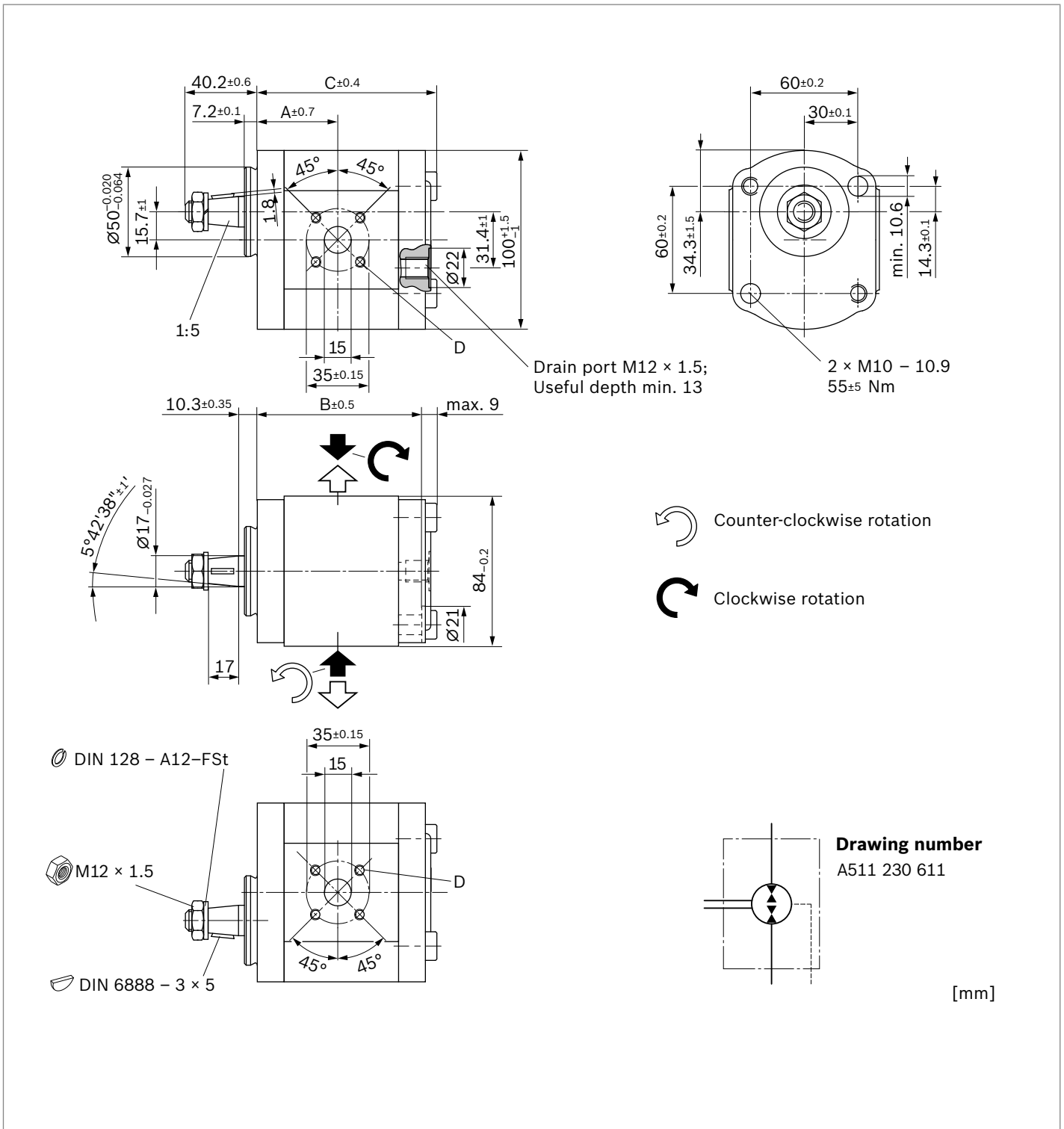
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
8	0511425603	250	4000	43.2	91.0	85.8	M6; min. 13 deep
11	0511525601	250	3500	47.0	96.0	90.8	
16	0511625603	250	3000	47.5	104.4	99.2	
19	0511625605	210	3000	47.5	109.4	104.2	
22	0511725602	180	2500	55.1	114.8	109.6	

▼ Tang drive with 4-bolt mounting  $\varnothing 52$  mm and axial drain port  
AZMF-...-xUNT20ML



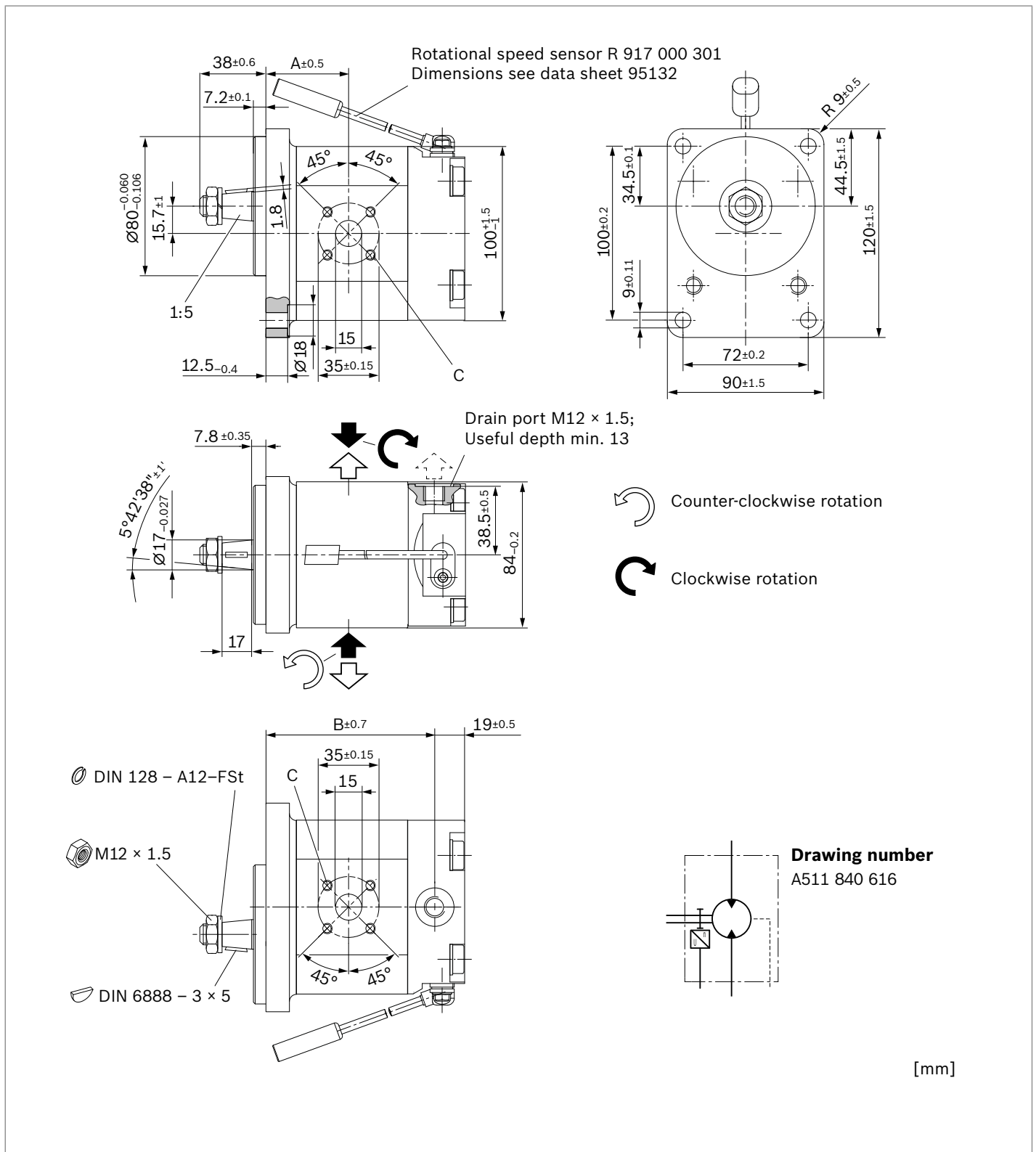
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
8	0511415605	250	4000	40.7	80.3	82.8	M6;
11	0511515602	250	3500	44.5	85.3	87.8	min. 13 deep
16	0511615607	220	3000	45.0	93.7	96.2	
19	0511615608	190	3000	45.0	98.7	101.2	
22	0511715601	160	3000	52.6	104.1	106.6	

▼ **1:5 tang drive Tapered shaft with rectangular flange Ø80 mm and axial drain port**  
**AZMF-...-xUCN20ML**



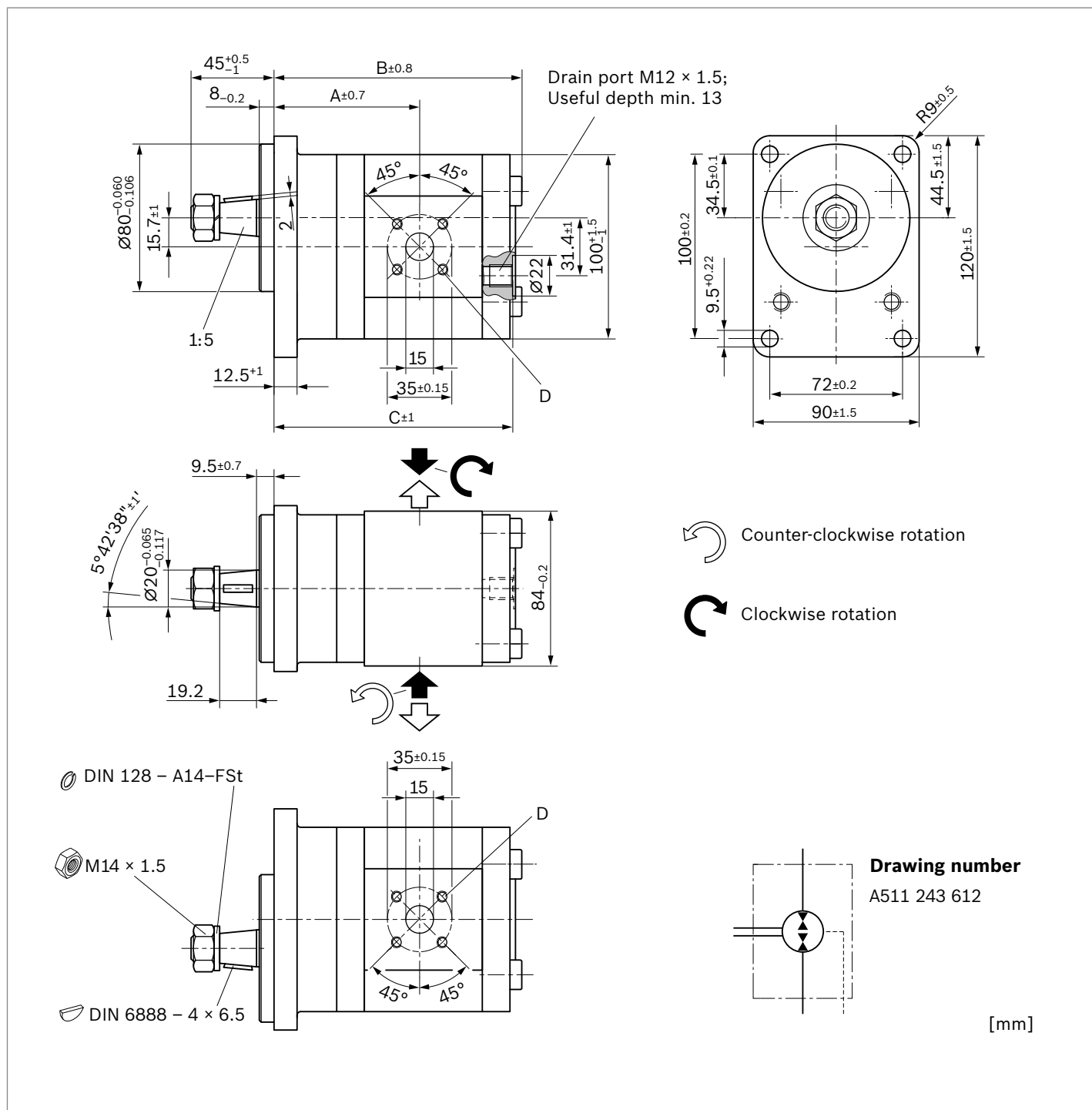
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
8	0511415606	210	4000	40.7	80.3	83.3	M6;
11	0511515607	150	3500	44.5	85.3	88.3	min. 13 deep
	0511515601	210	3500	44.5	85.3	88.3	

▼ **1:5 tapered shaft with rectangular flange Ø80 mm and fan motor with speed sensor, pulse encoder wheel with 9 teeth**  
**AZMF-11-xUCB20PX-S0747**



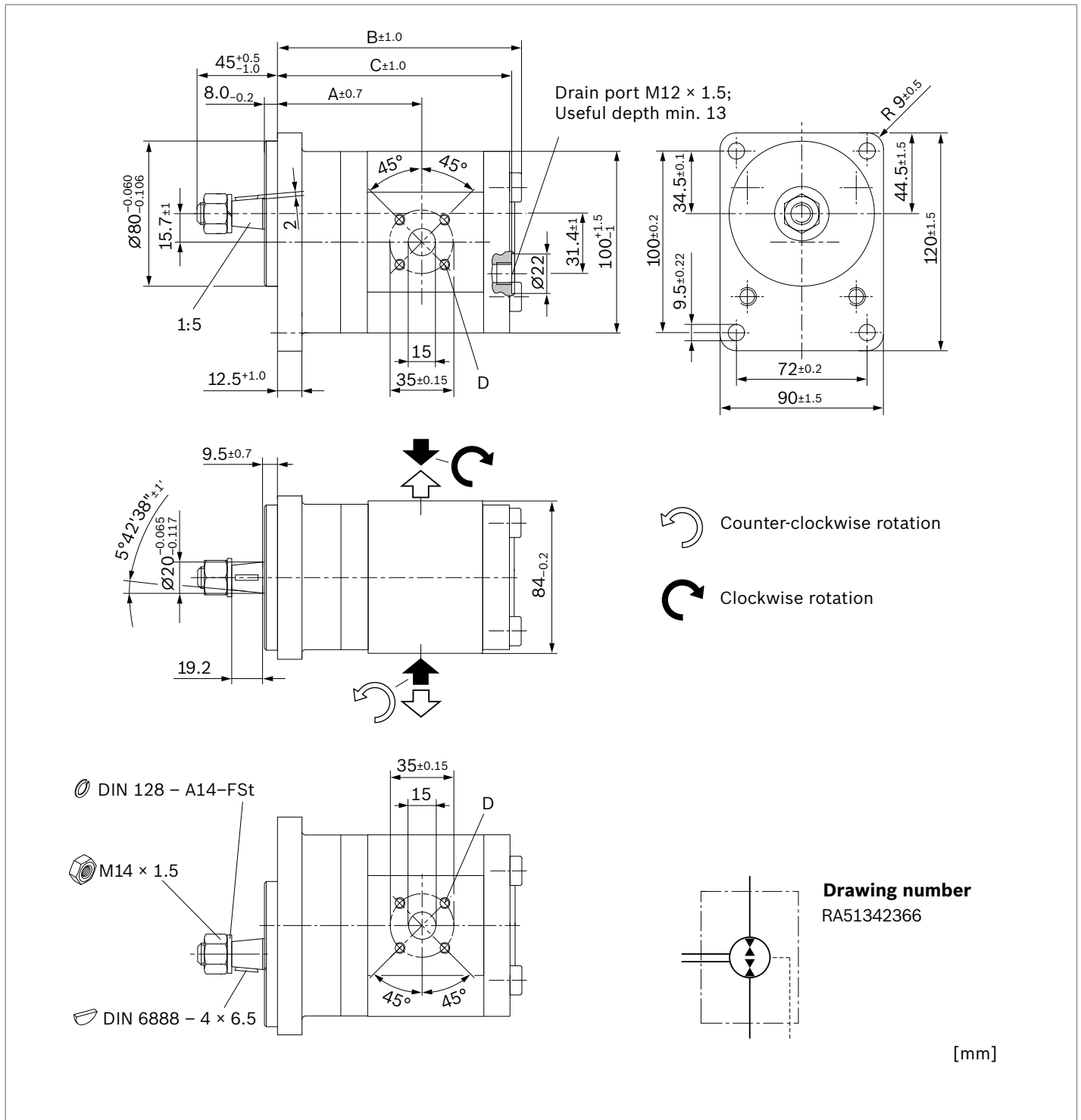
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
				A	B	C
16	0511625627	250	3000	47.5	96.2	M6; min. 13 deep

▼ 1:5 tapered shaft with outrigger bearing  $\varnothing 80$  mm and axial drain port  
AZMF-10-xUSA20ML



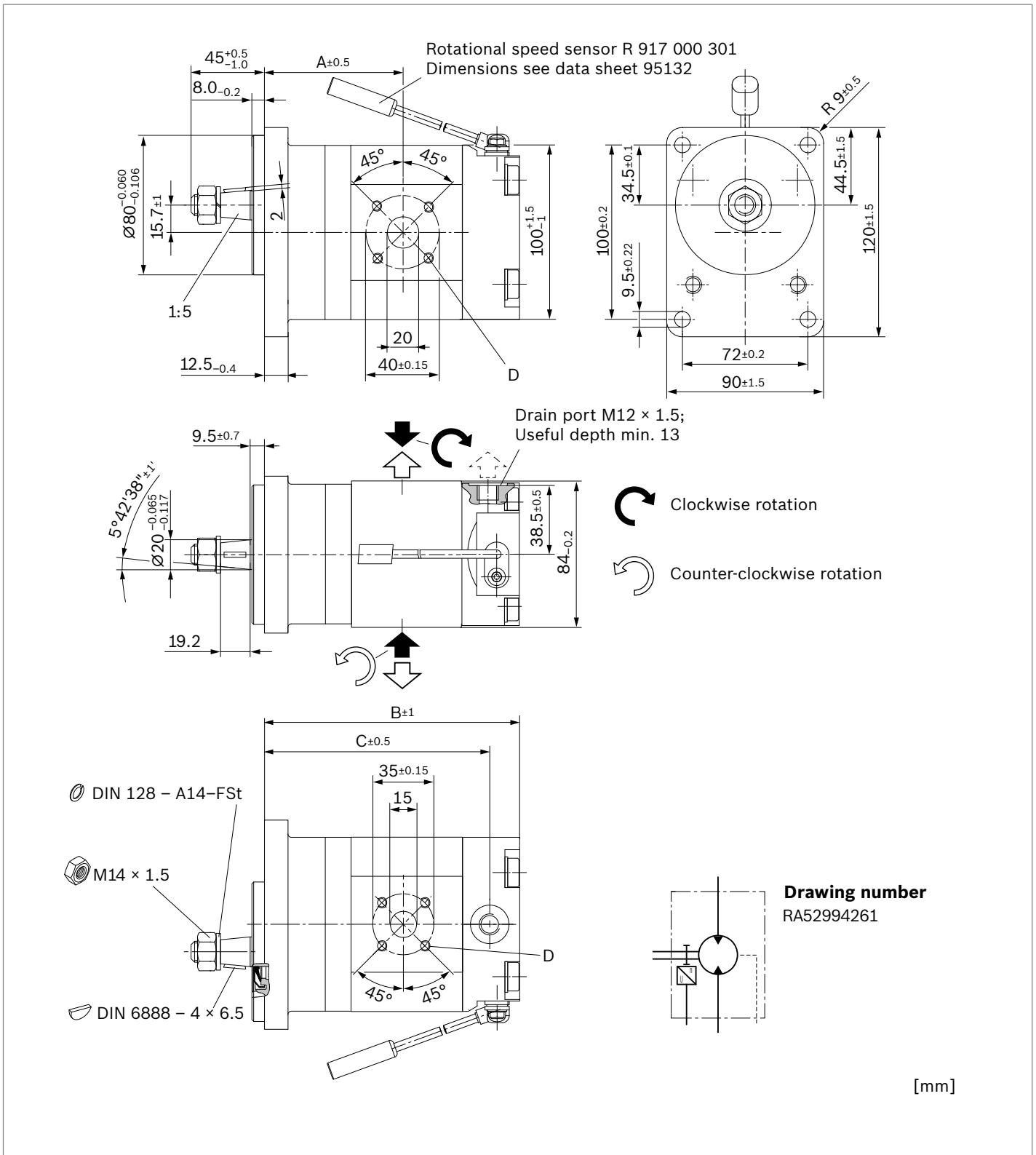
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
8	0511445601	250	4000	74.8	120.8	116.9	M6; min 13 deep
11	0511545601	250	3500	78.6	125.8	121.9	
14	0511545607	250	3000	79.0	130.6	126.8	
16	0511645601	230	3000	79.1	134.2	130.3	
19	0511645603	190	3000	79.1	139.2	135.3	

▼ **1:5 tapered shaft with outrigger bearing  $\varnothing 80$  mm and axial drain port**  
**AZMF-12-xUSA20PL**



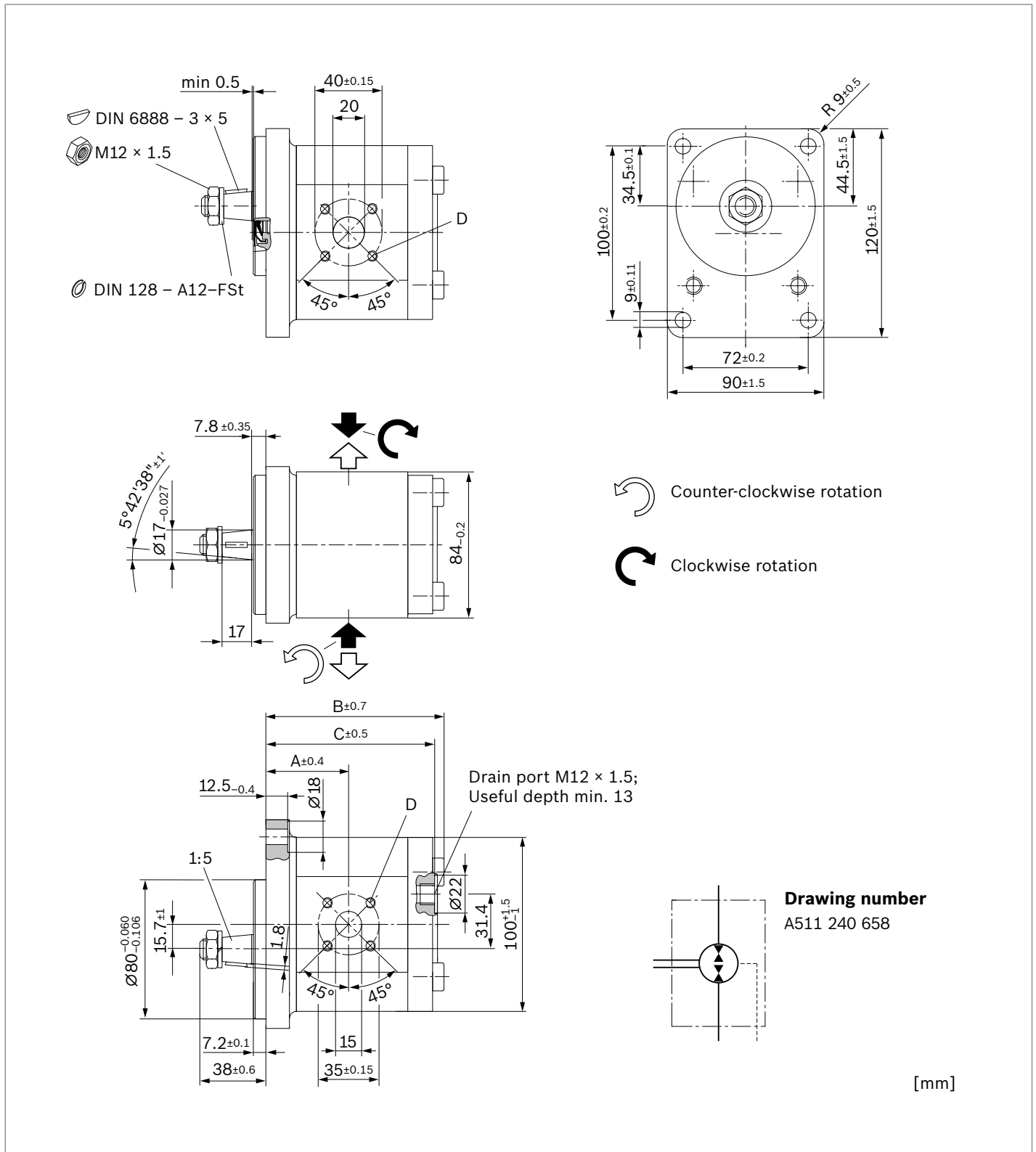
NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
8	0511445602	250	4000	74.7	120.8	117.0	M6;
11	0511545606	250	3500	78.5	125.8	121.8	min. 13 deep
14	0511545609	250	3000	79.0	130.6	126.8	
16	0511645608	230	3000	79.1	134.2	130.3	

▼ **1:5 tapered shaft with outrigger bearing  $\varnothing 80$  mm and fan motor with speed sensor, pulse encoder wheel with 9 teeth**  
**AZMF-13-xUSA20PL-S0747**



NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
19	0511645610	210	3000	79.0	151.7	132.7	M6; min. 13 deep

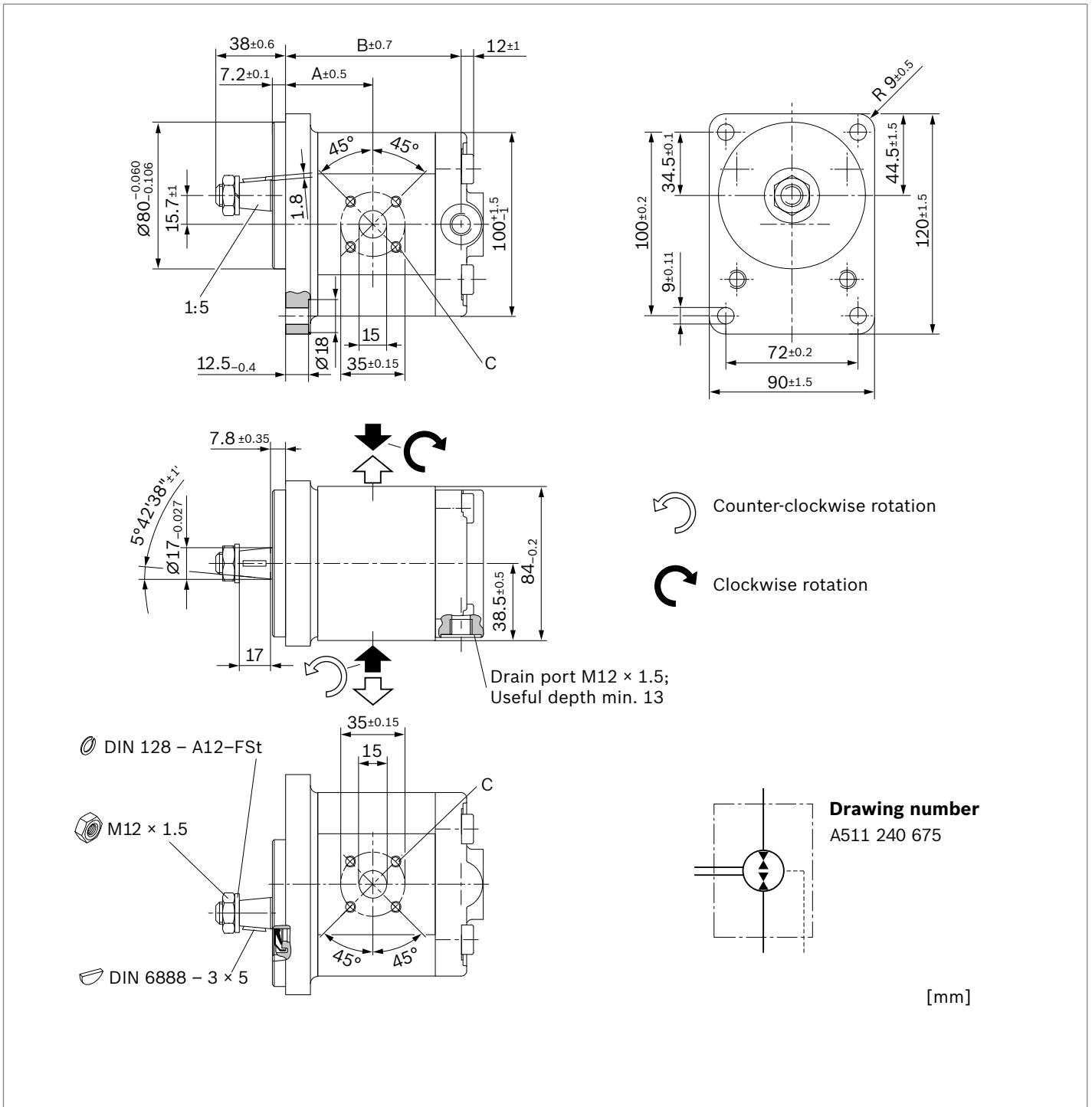
▼ **1:5 tapered shaft with rectangular flange Ø80 mm and dust protection cover for shaft seal**  
**AZMF- ...-xUCB20PL-S0540**



NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions			
				A	B	C	D
11	0511525609	210	3500	47.0	94.2	90.8	M6; min. 13 deep

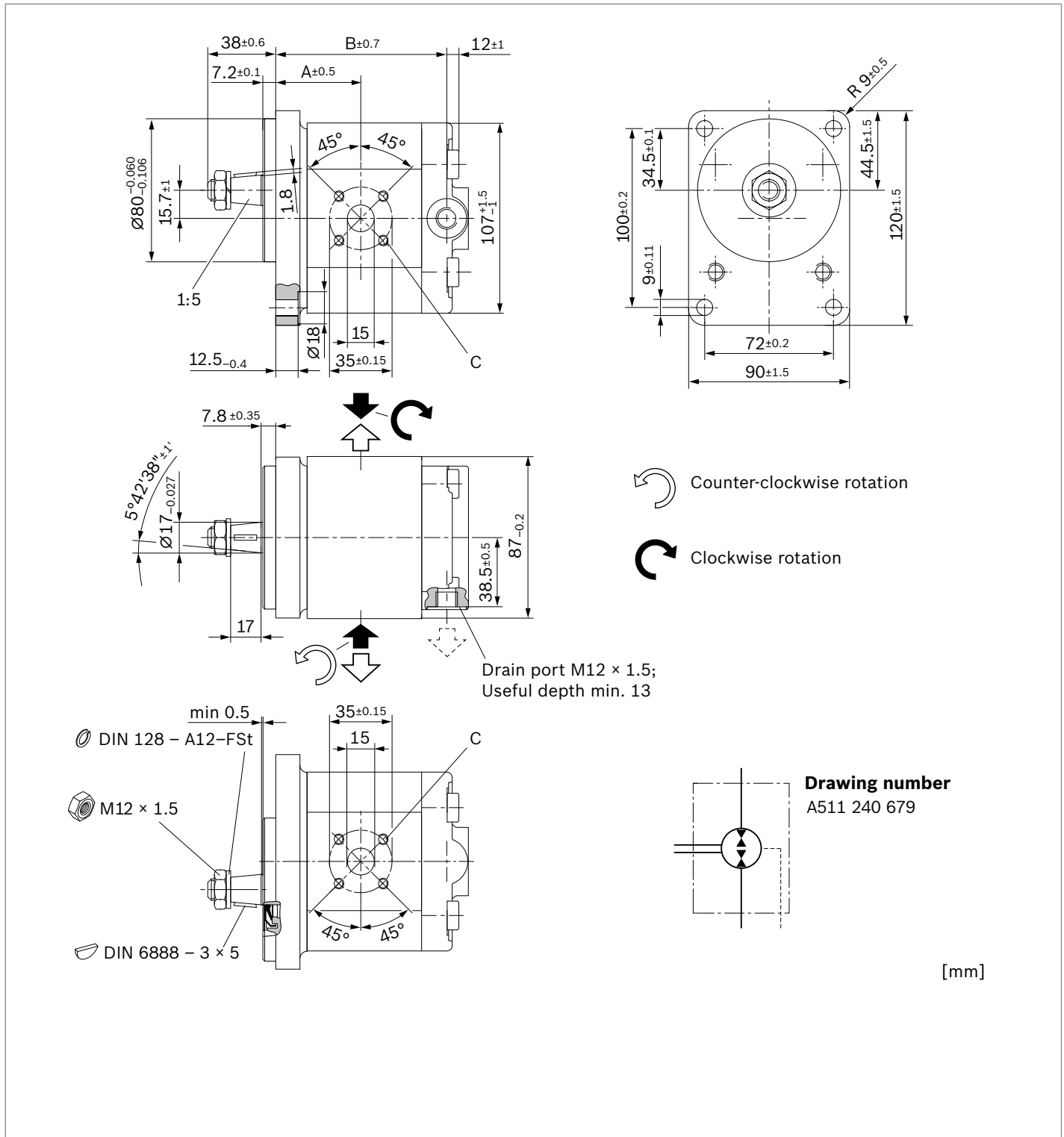


▼ 1:5 tapered shaft with rectangular flange Ø80 mm and dust protection cover for shaft seal, radial drain port in the end cover  
**AZMF-12-xUCB20PL-S0570**



NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
				A	B	C
8	0511425608	250	4000	43.2	82.8	M6; min.13 deep
11	0511525613	250	3500	47.0	87.8	
14	0511525614	250	3000	47.5	92.8	
16	0511625620	250	3000	47.8	96.2	

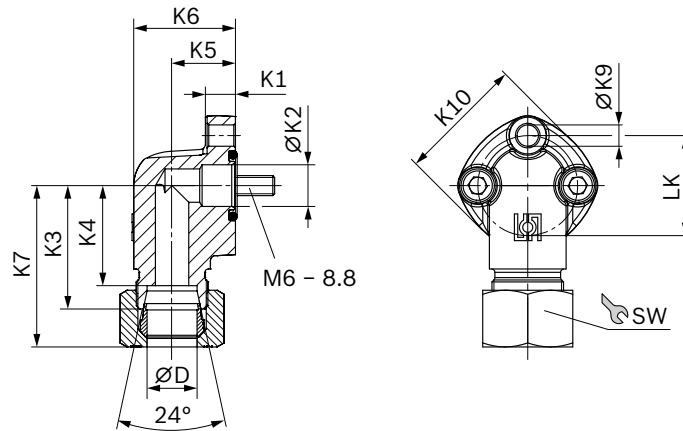
▼ **1:5 tapered shaft with rectangular flange Ø80 mm and dust protection cover for shaft seal, radial drain port in the end cover**  
**AZMF-...-xUCB20PL-S0570**



NG	Order number	Maximum start-up pressure $p_2$ [bar]	Maximum rotational speed [rpm]	Dimensions		
				A	B	C
19	0511625621	250	3000	58.4	113.2	M6; min. 13 deep
22	0511725617	250	3000	61.1	118.6	

**Accessories**▼ **90° angle flange, 3-hole, for square flange 30 (see chapter "Line connection")**

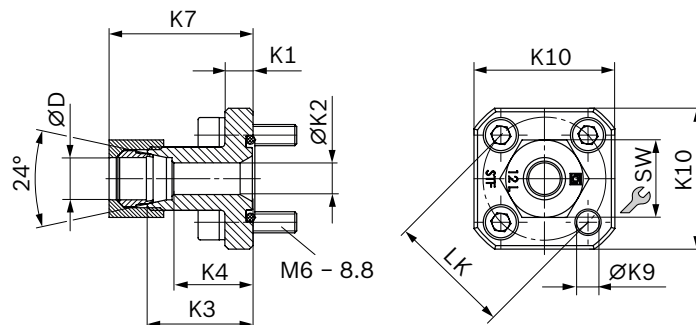
Complete fitting with O-ring, metric screw set, nut and cutting ring.



LK	D	Series <sup>1)</sup>	Material number	$p_{max}$	K1	K2	K3	K4	K5	K6	K7	K9	K10	SW	Screws	O-ring	Weight
mm	mm			bar	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	3 ×	NBR	kg
30	12	L	1515702146	250	9	12.5	37	30	19	30.5	46	6.4	38	22	M6 × 25	16 × 2.5	0.18

▼ **Straight flange, for square flange 20 (see chapter "Line connection")**

Complete fitting with O-ring, metric screw set, nut and cutting ring.

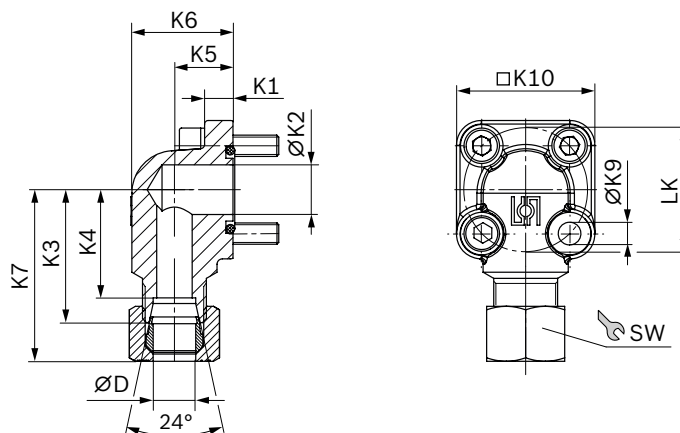


LK	D	Series <sup>1)</sup>	Material number	$p_{max}$	K1	K2	K3	K4	K7	K9	K10	SW	Screws	O-ring	Weight
mm	mm			bar	mm	mm	mm	mm	mm	mm	mm	mm	4 ×	NBR	kg
35	10	L	1515702064	315	8	7	30	23.0	38.0	6.5	40	19	M6 × 22	20 × 2.5	0.13
35	12	L	1515702065	315	8	9	30	23.0	38.5	6.5	40	22	M6 × 22	20 × 2.5	0.14
35	15	L	1515702066	250	8	11	30	23.0	39.0	6.5	40	27	M6 × 22	20 × 2.5	0.15
40	15	L	1515702067	100	8	11	35	28.0	44.0	6.5	40	27	M6 × 22	26 × 2.5	0.16
40	18	L	1515702068	100	8	14	35	27.5	44.0	6.5	40	32	M6 × 22	26 × 2.5	0.17
40	22	L	1515702069	100	8	18	35	27.5	45.0	6.5	40	36	M6 × 22	26 × 2.5	0.16
40	28	L	1515702008	100	8	19	35	27.5	45.0	6.5	40	41	M6 × 22	26 × 2.5	0.18

1) See DIN EN ISO 8434-1

▼ **90° angle flange, for square flange 20 (see chapter "Line connection")**

Complete fitting with O-ring,  
metric screw set, nut and  
cutting ring.



LK	D	Series <sup>1)</sup>	Material number	$p_{max}$	K1	K2	K3	K4	K5	K6	K7	K9	K10	SW	Screws	O-ring	Weight	
mm	mm			bar	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	2 ×	2 ×	NBR	kg
35	10	L	1515702070	315	8	14	37.5	30.5	16.5	28.5	45.0	6.4	39	19	M6 × 22	M6 × 35	20 × 2.5	0.18
35	12	L	1515702071	315	8	14	37.5	30.5	16.5	28.5	46.0	6.4	39	22	M6 × 22	M6 × 35	20 × 2.5	0.19
35	15	L	1515702072	250	8	14	37.5	30.5	16.5	28.5	46.0	6.4	39	27	M6 × 22	M6 × 35	20 × 2.5	0.20
35	16	S	1515702002	315	8	15	38.0	29.5	20.0	33.0	49.0	6.4	39	30	M6 × 22	M6 × 40	20 × 2.5	0.25
35	18	L	1515702006	250	8	15	37.5	30.0	20.0	33.0	47.0	6.4	39	32	M6 × 22	M6 × 40	20 × 2.5	0.22
35	20	S	1515702017	315	8	15	45.0	34.5	25.0	38.0	57.0	6.4	39	36	M6 × 22	M6 × 45	20 × 2.5	0.30
40	15	L	1515702073	100	9	20	38.0	31.0	22.5	38.0	47.0	6.4	42	27	M6 × 22	M6 × 22	26 × 2.5	0.26
40	18	L	1515702074	100	9	20	38.0	30.5	22.5	38.0	47.5	6.4	42	32	M6 × 22	M6 × 22	26 × 2.5	0.27
40	20	S	1515702011	250	9	20	40.0	29.5	22.5	37.0	52.0	6.4	42	36	M6 × 22	M6 × 45	26 × 2.5	0.26
40	22	L	1515702075	100	9	20	38.0	30.5	22.5	38.0	48.0	6.4	42	36	M6 × 22	M6 × 22	26 × 2.5	0.27
40	28	L	1515702010	100	9	20	40.0	32.5	28.0	44.0	50.5	6.4	42	41	M6 × 22	M6 × 50	26 × 2.5	0.37
40	35	L	1515702018	100	9	20	41.0	30.5	34.0	53.0	53.0	6.4	42	50	M6 × 22	M6 × 60	26 × 2.5	0.41

1) See DIN EN ISO 8434-1

## Project planning notes

### Technical data

All specified technical data is based on manufacturing tolerances and apply with certain constraints.

Note that this makes certain deviations possible and that technical data may vary with certain constraints (e.g., viscosity).

Motors delivered by Bosch Rexroth are tested for function and performance.

The motor should only be operated with the permissible data (see page chapter "Technical data").

### Characteristic curves

When dimensioning the gear motor, observe the maximum possible application data based on the characteristic curves.

### Filtration of the hydraulic fluid

Since the majority of premature failures in gear motors occur due to contaminated hydraulic fluid, filtration should at least maintain a cleanliness level of 20/18/15 as defined by ISO 4406.

This can reduce contamination to a permissible degree in terms of particle size and concentration.

Bosch Rexroth generally recommends full-flow filtration. Basic contamination of the hydraulic fluid used may not exceed level 20/18/15 according to ISO 4406. Experience has shown that even new fluids are often above this value. In this case, a filling device with a special filter should be used.

Bosch Rexroth does not accept any warranty for wear due to contamination.

### Drain line

For reversible motors and/or motors that can be loaded by the return flow, a drain line is to be connected directly at the reservoir. Ensure adequate dimensioning.

### Further information

Installation drawings and dimensions are valid at date of publication, subject to modifications.

Further information and notes on project planning can be found in the "General instruction manual for external gear units" (07012-B1, Chapter 5.5).

## Order number overview

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0511425001	AZMF-11-008RCB20MB	16
0511525311	AZMF-11-011LCB20KB	16
0511525300	AZMF-11-011LCB20MB	16
0511525001	AZMF-11-011RCB20MB	16
0511525304	AZMF-11-014LCB20MB	16
0511625005	AZMF-11-016RCB20MB	16
0511625308	AZMF-11-019LCB20MB	16
0511625009	AZMF-11-019RCB20KB	16
0511625003	AZMF-11-019RCB20MB	16
0511425300	AZMF-12-008LCB20MB	16
0511725304	AZMF-22-022LCB20MB	16
0511725005	AZMF-22-022RCB20MB	16
0511425301	AZMF-10-008LFB20MB	17
0511425002	AZMF-10-008RFB20MB	17
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0511625001	AZMF-10-016RFB20MB	17
0511625300	AZMF-10-019LFB20MB	17
0511625002	AZMF-10-019RFB20MB	17
0511725303	AZMF-22-022LFB20MB	17
0511725004	AZMF-22-022RFB20MB	17
0511425003	AZMF-10-008 RFO30MB	18
0511415300	AZMF-11-008LNT20MB-S0184	19
0511415001	AZMF-11-008RNT20MB-S0184	19
0511515300	AZMF-11-011LNT20MB-S0184	19
0511515001	AZMF-11-011RNT20MB-S0184	19
0511615301	AZMF-11-016LNT20MB-S0184	19
0511615002	AZMF-11-016RNT20MB-S0184	19
0511615300	AZMF-11-019LNT20MB-S0184	19
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0511715300	AZMF-11-022LNT20MB-S0184	19
0511715001	AZMF-11-022RNT20MB-S0184	19
0511425008	AZMF-11-008RCB20MD150xx	20
0511425304	AZMF-12-008LCB20MD150xx	21
0511425017	AZMF-13-008RCB20PG110xx	23
0511425018	AZMF-13-008RCB20PG185xx	23
0511525315	AZMF-13-011LCB20PG130xx	23
0511525314	AZMF-13-011LCB20PG185xx	23
0511525019	AZMF-13-011RCB20PG130xx	23
0511525024	AZMF-13-011RCB20PG220xx	23
0511525025	AZMF-13-011RCB20PG220xx	23
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0511525017	AZMF-13-014RCB20PG155xx	23
0511525016	AZMF-13-014RCB20PG185xx	23
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0511525020	AZMF-13-014RCB20PG220xx	23
0511625315	AZMF-13-016LCB20PG155xx	23

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0511625317	AZMF-13-016LCB20PG220xx	23
0511625034	AZMF-13-016RCB20PG110xx	23
0511625024	AZMF-13-016RCB20PG220xx	23
0511625029	AZMF-13-016RCB20PG220xx	23
0511625030	AZMF-13-016RCB20PG220xx	23
0511625033	AZMF-13-016RCB20PG250xx	23
0511625311	AZMF-13-019LCB20PG185xx	23
0511625312	AZMF-13-019LCB20PG220xx	23
0511625023	AZMF-13-019RCB20PG220xx	23
0511625026	AZMF-13-019RCB20PG220xx	23
0511625027	AZMF-13-019RCB20PG220xx	23
0511725028	AZMF-13-022RCB20PG220xx	23
0511725029	AZMF-13-022RCB20PG220xx	23
0511725031	AZMF-13-022RCB20PG220xx	23
0511725035	AZMF-13-022RCB20PG220xx	23
0511525313	AZMF-13-011LCB20PG185xx-S0458	25
0511625316	AZMF-13-016LCB20PG220xx-S0458	25
0511625025	AZMF-13-016RCB20PG220xx-S0458	25
0511725314	AZMF-13-022LCB20PG220xx-S0458	25
0511725039	AZMF-13-022RCB20PG220xx-S0458	25
0511725040	AZMF-13-022RCB20PG220xx-S0458	25
0511445300	AZMF-10-008LSA20MB	26
0511445001	AZMF-10-008RSA20MB	26
0511545300	AZMF-10-011LSA20MB	26
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0511645001	AZMF-10-016RSA20MB	26
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0511745300	AZMF-10-022LSA20MB-S0012	26
0511745001	AZMF-10-022RSA20MB-S0012	26
0511445003	AZMF-x-008RSA20MD200xx-S0076	27
0511545302	AZMF-x-011LSA20MD150xx-S0076	27
0511545003	AZMF-x-011RSA20MD150xx-S0076	27
0511445303	AZMF-13-008LSA20PG170xx	29
0511445304	AZMF-13-008LSA20PG220xx	29
0511645016	AZMF-13-016RSA20PG130xx	29
0511645015	AZMF-13-016RSA20PG155xx	29
0511645014	AZMF-13-016RSA20PG185xx	29
0511645013	AZMF-13-016RSA20PG220xx	29
0511645018	AZMF-13-016RSA20PG220xx	29
0511645311	AZMF-13-019LSA20PG220xx	29
0511625318	AZMF-13-016LCB20Px185xx-S0689	31
0511625028	AZMF-13-019RCB20Px220xx-S0689	31
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0511525601	AZMF-10-011UFB20ML	33
0511625603	AZMF-10-016UFB20ML	33
0511625605	AZMF-10-019UFB20ML	33
0511725602	AZMF-10-022UFB20ML	33
0511415605	AZMF-11-008UNT20ML-S0184	34
0511515602	AZMF-11-011UNT20ML-S0184	34
0511615607	AZMF-11-016UNT20ML-S0184	34
0511615608	AZMF-11-019UNT20ML-S0184	34
0511715601	AZMF-11-022UNT20ML-S0184	34
0511415606	AZMF-12-008UCN20ML	35
0511515601	AZMF-11-011UCN20ML	35
0511515607	AZMF-11-011UCN20ML	35
0511625627	AZMF-11-016UCB20Px-S0747	36
0511445601	AZMF-10-008USA20ML	37
0511545601	AZMF-10-011USA20ML	37
0511545607	AZMF-10-014USA20ML	37
0511645601	AZMF-10-016USA20ML	37
0511645603	AZMF-10-019USA20ML	37
0511445602	AZMF-12-008USA20PL	38
0511545606	AZMF-12-011USA20PL	38
0511545609	AZMF-12-014USA20PL	38
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0511525609	AZMF-12-011UCB20PL-S0540	40
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0511525614	AZMF-12-014UCB20Px-S0570	41
0511625620	AZMF-12-016UCB20Px-S0570	41
0511625621	AZMF-22-019UCB20PX-S0570	42
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## AZ Configurator

With our practical product selector, it will take you next to no time to find the right solution for your applications, no matter whether you are looking for Standard Performance or any other external gear unit.

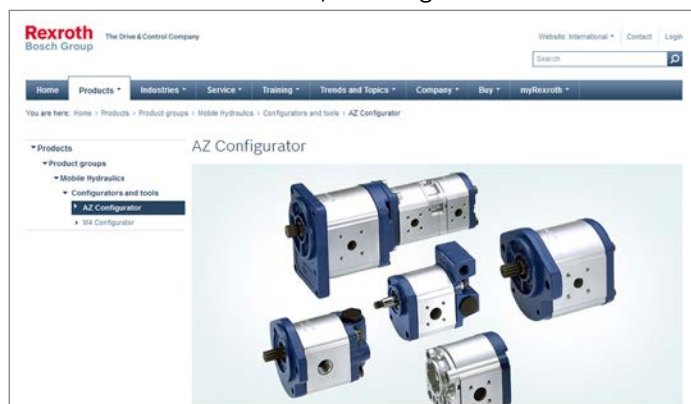
Based on a selection of features, the selector guides you through all of the products available for order. By clicking on the order number, you can view and download the following product information: data sheet, dimension sheet, instruction manual, operating conditions and tightening torques.

You can order your selection directly via our online shop and benefit from an additional discount of 2% in this way. And if you need something really quickly, simply use our fast delivery and preferred programs (GoTo). Your order will then be dispatched within 10 business days.

You also have the possibility of easily and conveniently configuring your custom external gear unit with our AZ Configurator. All the data required for the project planning of external gear units can be obtained through the menu navigation.

For an existing configuration, the result is the order number, the type code and further information. If your configuration does not result in an orderable product, our online tools give you the possibility of sending a project request directly to Bosch Rexroth. We will then get in contact with you.

Link: [www.boschrexroth.de/az-configurator](http://www.boschrexroth.de/az-configurator)



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