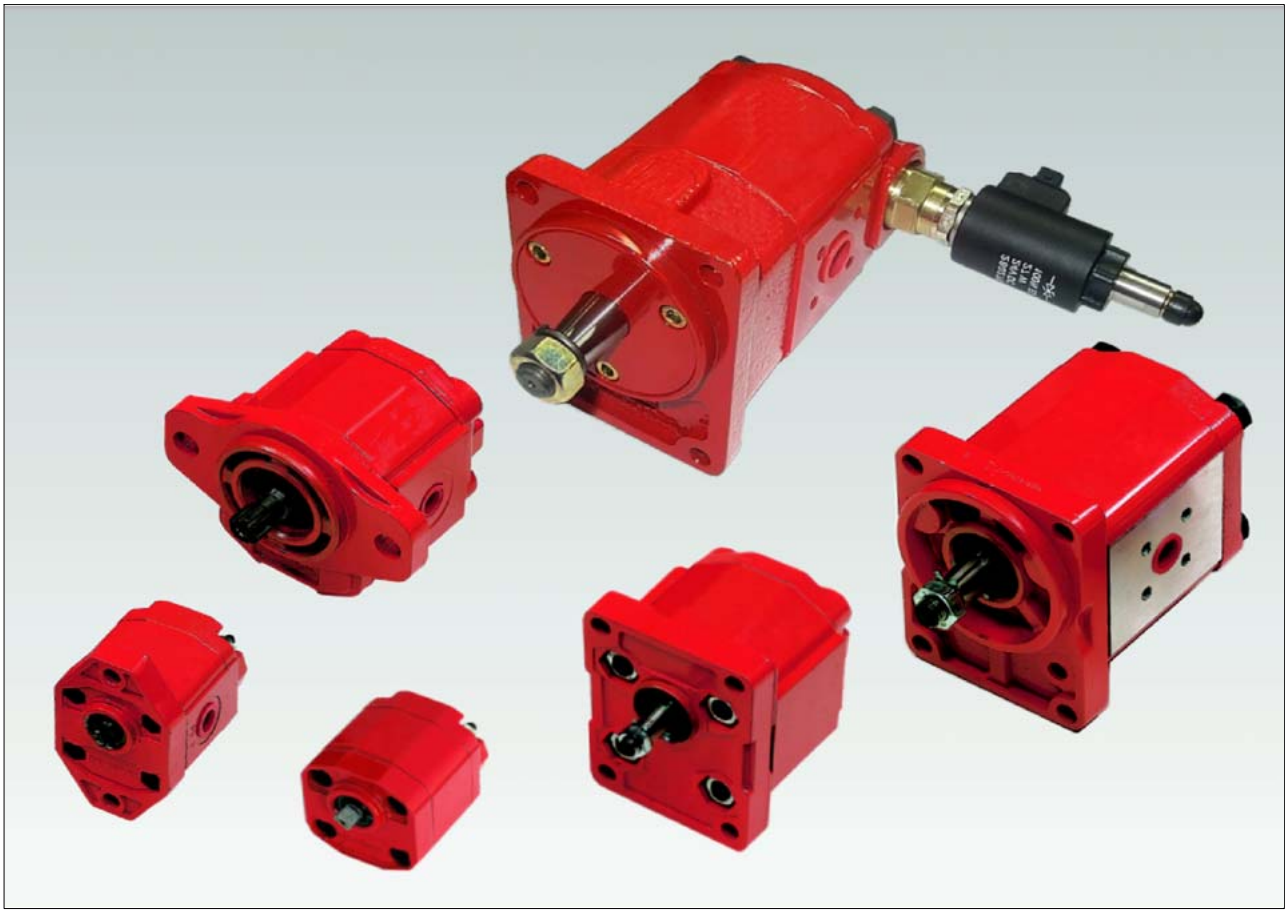
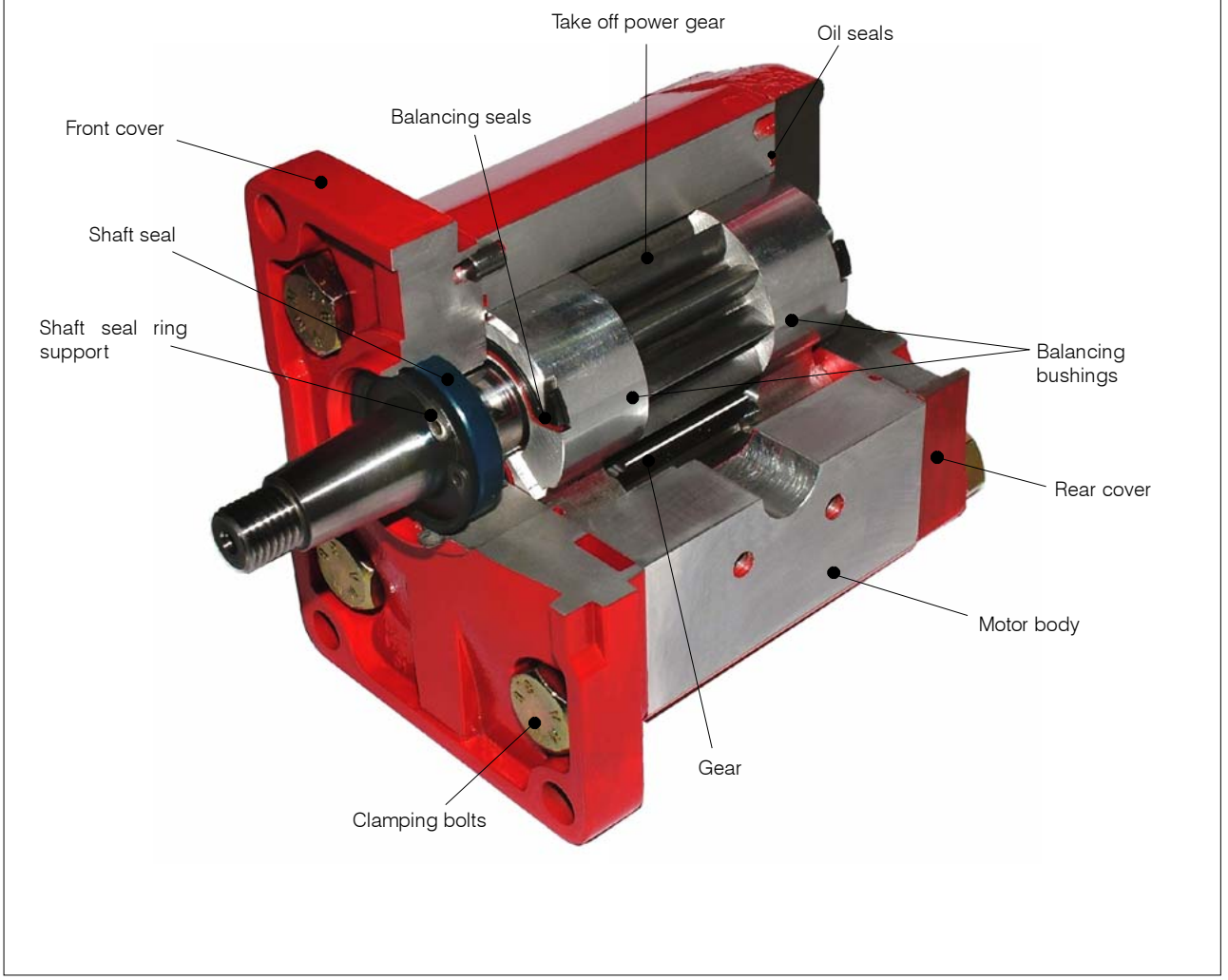
Gear Motors



Classification: 420.40.10.00
Reference: 200-P-991225-E-00 / 11.05



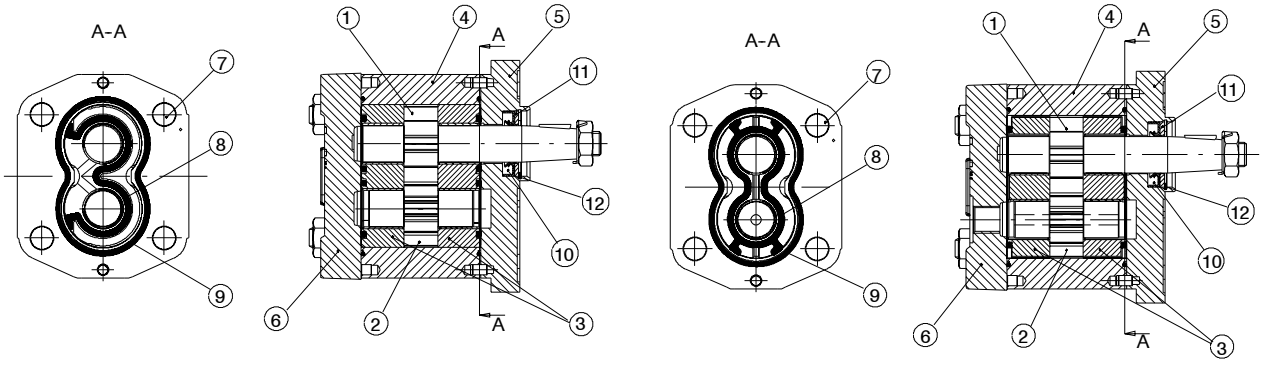
Contents

1 General information

1.1 Introduction to the product

Gear motors are widely used in modern hydraulic systems due to their high performance, long service life, and low purchase and maintenance costs.
Product development has made it possible to achieve high operating pressures, excellent volumetric and mechanical efficiency, and lower noise levels, in operation, by means of:
- meticulous CAD design of the gear teeth and balancing areas
- an exacting choice of high-performance materials
- carefully controlled heat treatments
- increasingly tight coupling tolerances, and a high standard of surface finish.
- dedicated first running in cycle for motors specifically set up Bucher Hydraulics S.p.A. has achieved these results by constantly improving its design, control, and manufacturing techniques in line with the latest technological developments, while simultaneously introducing a Quality Control System which ensures that every single product offers the same high standards.

Product description



1 - Take off power gear
2 - Gear
3 - Balancing bushings
4 - Motor body
5 - Front cover
6 - Rear cover
7 - Clamping bolts
8 - Pressure balancing seals
9 - Oil seals
10 - Shaft seal
11 - Shaft seal ring support
12 - Seeger elastic ring

Referring to the motor shown in the figure, feeding pressurised oil (Q - Δp) into the inlet port of the motor, the gear 1 and 2 turn, and power, as torque and speed (M - n) can be obtained at the output shaft end.
The gears are made from high strength steel alloy.
The bushings (3) serve a dual purpose:
- to act as a bearing for the gears
- to balance axial and radial thrust in proportion to the change in operating pressure.

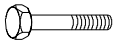
The gears-bushings assembly is fitted inside the motor body (4), in which generally the inlet and outlet ports are formed. The motor body is made of high strength extruded aluminium alloy. The front cover (5), which also acts as a mounting flange, and the rear cover (6) are connected to one another by clamping bolts (7).
The motor assembly is completed by a series of seals:
- Balancing seals (8) can be fitted in recesses in the bushings as shown in the figure, or in the covers. Their purpose is to delimit the longitudinal balancing area separating the high and low pressure zones.
- Oil seals (9) prevent oil from leaking out.
- A shaft seal with a steel supporting ring (11) locked by a seeger elastic ring (12) purpose of preventing oil leaks from the gear shaft end and preventing dust or other pollutants from entering the motor itself. Unless otherwise specified, the seals are nitrile NBR compound offering high mechanical strength and heat resistance.
Viton FKM seals are available on request.
(see 2.2 Recommended fluids/Allowed temperatures)

Versions available

The Bucher Hydraulics S.p.A. product range includes motors of groups APM05-APM100-APM200 (corresponding to the common group denominations: 05-1-2).
For front flange, shaft- end and inlet-outlet versions, motors are available in many and different European, American and special customised configurations. Moreover motors of the groups 05 and 2 are also available in the reversible rotating version with external threaded drain port. For the group 2, the version with internal drain connection, which does not require any hose, is also available.
Bucher Hydraulics S.p.A. will examine any request for special versions, features, and customisations not shown in this catalogue. To make such a request, please contact our Sales Department.

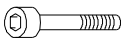
1.2 Non-standard symbols used in the text


Check nut

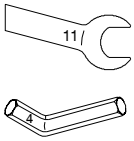

Hexagonal-head screw (TE screw)


O-Ring

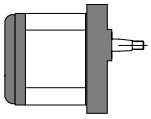

Lock washer


Socket head screw (TCE screw)


Woodruff key



Dinamometric spanners

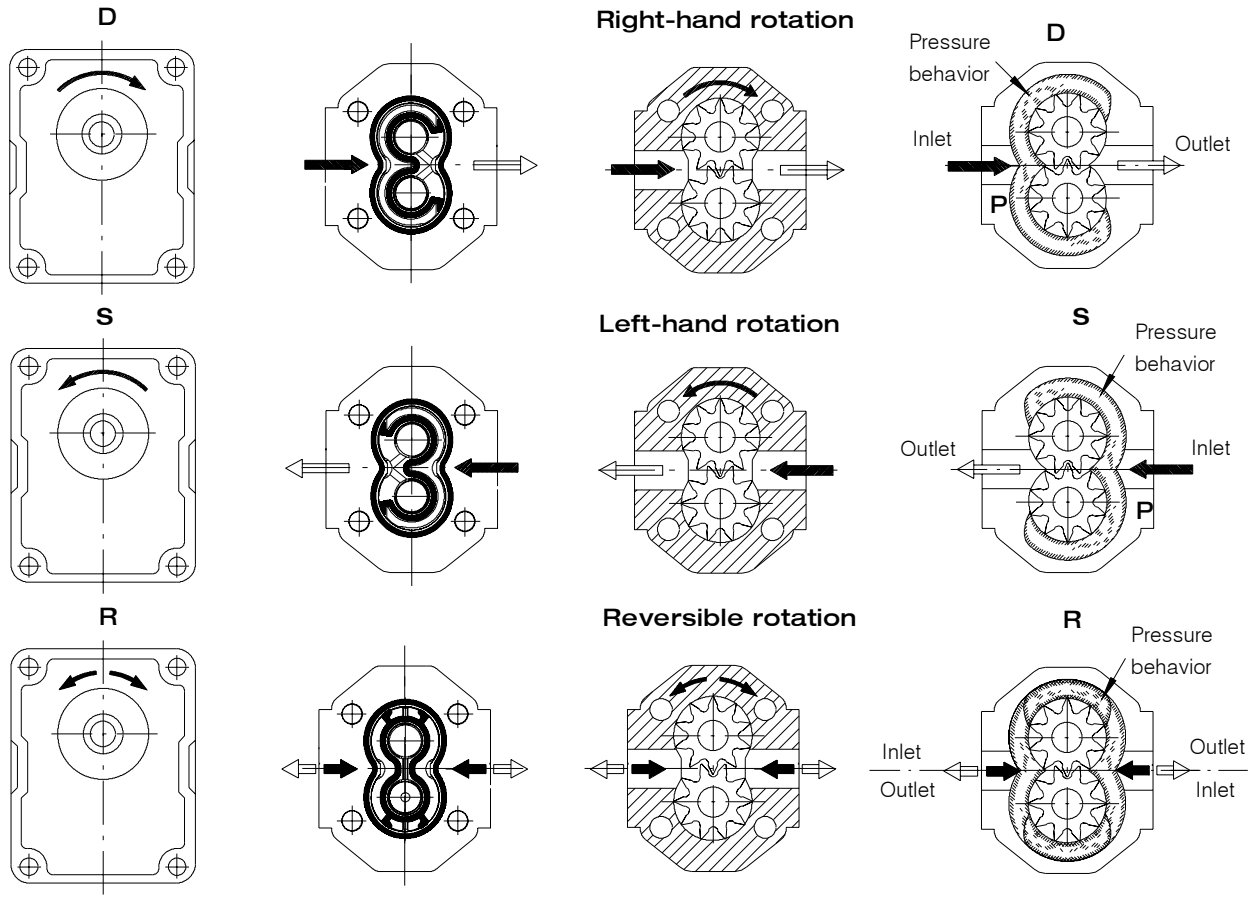

Version with front and rear cover in cast iron, available


Square key

2 Technical information

2.1 Identifying the rotation direction

The rotation direction of a gear motor is identified by looking at the motor from the front and with the take off shaft turned upwards (see figures below).
Motors with clockwise rotation (D) have a take off shaft which turns clockwise, with the inlet port on the left and the outlet port on the right.
Motors with counterclockwise rotation (S) have a take off shaft which turns counterclockwise, with the inlet port on the right and the outlet port on the left.
The figure also shows the pressure flow inside the motors as the oil is transferred from the inlet port to the outlet port.
As regards reversible motors (R), the ports are alternatively for high and low pressure.
Motors with a unidirectional rotation (D or S) have the denomination APM. Motors with reversible rotation have the denomination APMR.
It is possible to change the rotation direction of the entire range of motors without having to replace any component, except for the AP100 group, for which it is necessary to replace the front cover.
To ensure a good technical result, we recommend in any case that such inversion be carried out at our factory.
Technical descriptions are available on request, which show the correct procedure for the motor rotation inversion.



2.2 Recommended fluids/Allowed temperatures

We recommend using only mineral oil-based hydraulic fluids that comply with the ISO/DIN standards.
Viscosity range: recommended **20 ÷ 120 mm²/s (cSt)**
permitted up to **700 mm²/s (cSt)**
Operating temperature

Type of seals	Temperature	
	APM05 APMR05	APM100 APM200-APMR200
Buna N	-15 ÷ 65° C	-15 ÷ 80° C
Viton*	-10 ÷ 80° C	-10 ÷ 120° C

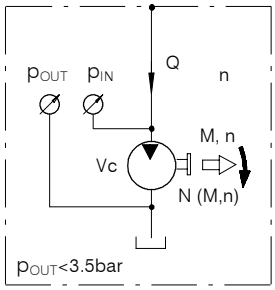
*** Caution! – Use of motors at temperatures above 80°C must always be agreed upon with our Technical Office, and in any case this can cause a significant worsening in the volumetric efficiency.**
For use under conditions different from those indicated in this catalogue, please contact our Sales Department.

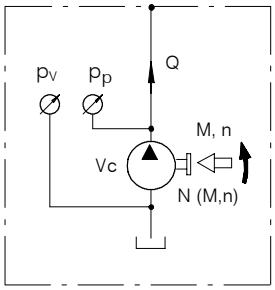
2.3 Outlet

2.3.1 Unidirectional motors

As a matter of principle, unidirectional motors correspond to counter rotating pumps. The balancing seals are not symmetric and, consequently, two different pressure sides: inlet High-pressure and outlet Low-pressure side, which must not be exchanged each other, are defined. The outlet Low-pressure side loads the back side of the oil retaining shaft seal, a dedicated steel ring for supporting it, is adopted. The maximum outlet Low-pressure value is limited by the shaft seal and its support and it must be **M1 ≤ 3.5 bar (50 PSI)**, although the real value is related to the shaft speed: for detailed information, please, contact our Sales Dept.
To keep P out below the suggested value, the following must be avoided:
- long distance between motor and tank
- long stretches of piping
- special features such as: bends; reductions in diameter; quick couplings; etc.

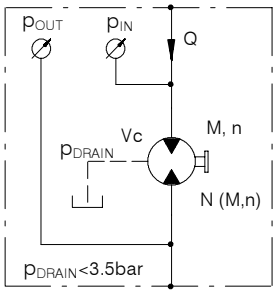
Having filtration on the return it is also advisable to choose a filter of a suitable size to minimise any pressure drop and to take measures to prevent gradual clogging over time.

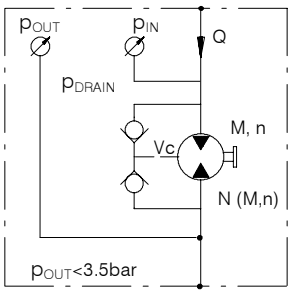




2.3.2 Reversible motors

Reversible rotating motors have symmetric balancing seals and both port, inlet and outlet, can be, alternatively, operate as inlet High-pressure and outlet Low-pressure port. A sealed area is connected to the back side of the oil retaining shaft seal and its pressure must be limited connecting it to the tank, through a drain threaded port, which is generally, placed on the motor rear cover.
The drain hose must be chosen in order to avoid that the pressure at the drain port does not exceed 3,5 bar.
Motors with internal drain connection, are available, but adopting this solution the outlet Low-pressure side must be ≤3,5 bar.





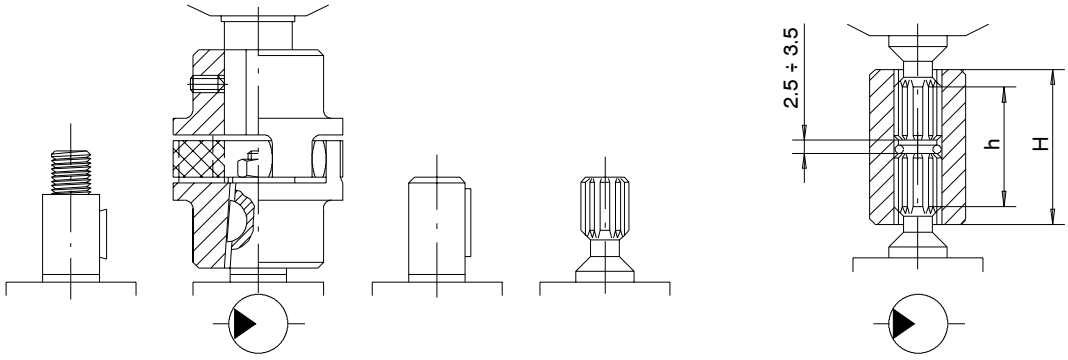
2.4 Filtration

A short service life of a gear motor is normally due to the presence of impurities in the oil.
It is therefore essential to have an effective filter in the system and to carry out regular maintenance to ensure a long, trouble-free service life.
When possible and compatible with the hydraulic circuit installed, Bucher Hydraulics S.p.A. recommends that the system have total filtration (high and low pressure, return).
In any case, the filtering system must constantly ensure an oil contamination class equal to or less than those shown in the following table.

Operating pressure	**> 170 bar 2430 PSI**	**< 170 bar 2430 PSI**
Contamination class NAS 1638	**9**	**10**
Contamination class ISO 4406	**18/15**	**19/16**
Obtain with filter $ß_x$ = 75	**20**	**25**

We also recommend that an adequate air filter be installed on the tank to prevent contaminating substances such as dust, sand, etc. from getting into the oil, as these substances can enter the tank through the air flow caused by the level variations in the tank itself.

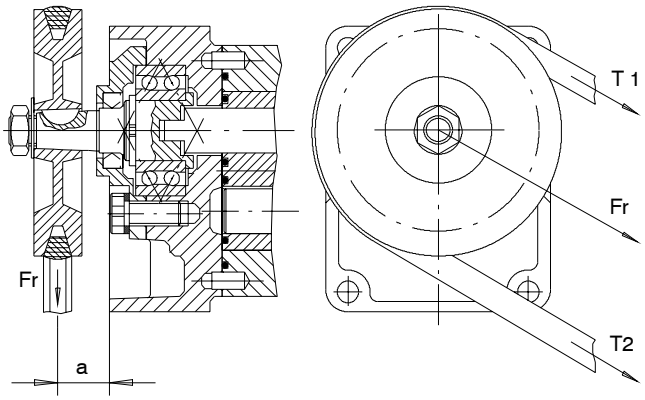
2.5 Gear Motor-driven unit Coupling



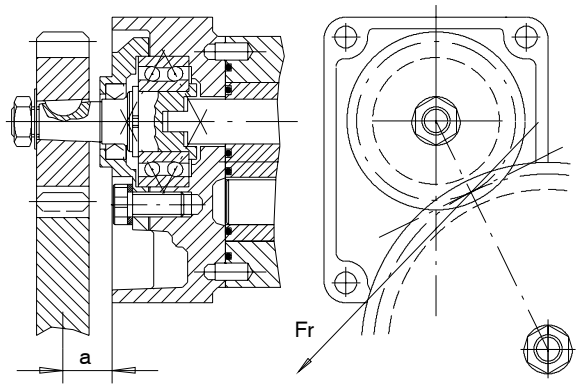
Absolutely no radial or axial forces should be transmitted to the motor shaft in the gear motor-driven unit coupling.
Such forces cause rapid and irregular wear on the balancing surface of the bushings and gear supports, with a consequent worsening in motor performance.
The coupling joint must be able to absorb any discrepancies in the coaxial alignment of the gear motor-driven unit shafts without placing any load on the motor shaft.
In the couplings between splined shafts, the connecting sleeve must be free to move along its axis.
The length of the sleeve must be sufficient to cover the splined sections of the gear motor-driven unit shafts completely in any position.

The distance between the ends of the shafts must be between **2.5 ÷ 3.5 mm (.10" ÷ .14")**.
Make sure that the splined coupling is suitably lubricated to protect it against rapid deterioration.
If there are radial and/or axial loads on the take off shaft, such as when it is coupled to a V-belt and pulley or pair of gear wheels, it should be fitted with a front cover with supporting bearings. (See examples 1 and 2)
Depending on the motor model concerned, these supports can replace the front cover of the motor (e.g. 201 K8 and 201 K0) or can be fitted in addition to and over the front cover.

(Example 1)



(Example 2)



The allowed radial load values "Fr" in relation to "a" are shown in the diagrams of each version equipped with cover with support bearings.

2.6 General installation precautions

In addition to the recommendations regarding fluids, filtration, coupling, etc., we suggest the following:
- For unidirectional motors check always the rotation direction of the motor's take off shaft; it must be compatible with the rotation direction of the motor itself.
- Be particularly careful in cleaning and make sure, when connecting the high and low pressure piping, that no chips, rag threads, teflon tape, etc. get into the motor circulation system.
- Check the tightness of the high and low pressure fittings, the correct positioning of the O-Ring, and make sure there is no dirt between the flange and the motor body.
- To ensure the best heat distribution inside the tank, make sure the return pipe is not too close to the pump's suction piping.

The pipes themselves should be below oil tank level to prevent the formation of foam.
- Do not subject the motors to operating conditions different from those indicated on section 2.8; for extreme operations, always contact our Technical Department.
- Never use fluids different from those indicated in section 2.2.
- Ambient temperature range: -20 ÷ +50°C
- Any mounting position is allowed
- In the event of motor painting, do not use solvents or paints that are incompatible with the material of the seals. Do not bake paint with excessively high temperatures. Do not paint over the product identification plate; the warranty will not be valid if this plate is illegible.

2.6.1 Directives and standards

- Atex:

The equipment and protective systems of these catalogue ARE NOT intended for use in potentially explosive atmospheres that is to say where there is an explosive atmosphere referred to in Article 2 of the Directive 99/92/EC and referred to Article 1.3 of the Directive 94/9/EC.

- Machinery safety

Hydraulic motors are excluded by Directive 98/37/EC

- ISO 9001: 2000

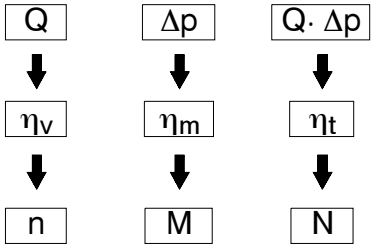
Bucher Hydraulics S.p.A. is certified for research, development and production of directional control valves, gear pumps and motors , power units, electro motors pumps, cartridge valves and integrated manifolds for hydraulic applications.

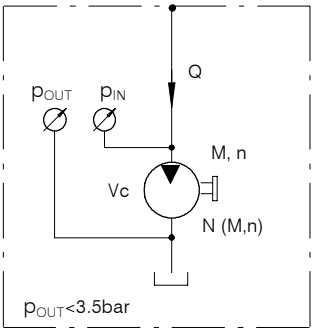
2.7 Calculating the specifications of a gear motor

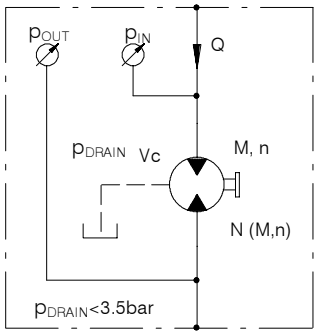
The following parameters are defined:

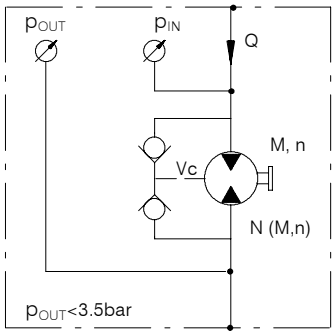
Vc = (cm^3/r) motor displacement;
n = (r/min) no. of rpms of the outlet shaft;
Q = (l/min) flow rate;
Δp = (bar) P_{IN}-P_{OUT}, operating Δp pressure;
M = (Nm) outlet torque;
N = (kW) outlet power;
η_v = (%) volumetric efficiency;
η_m = (%) mechanical efficiency;
η_t = (%) total efficiency ($\eta_t = \eta_v \cdot \eta_m$)

2.7.1 Parameter relationships









$$Q = \frac{Vc \cdot n}{10 \cdot \eta_v} \qquad \Delta p = \frac{M}{1.592 \cdot Vc \cdot \eta_m} \cdot 10^4$$

$$Vc = \frac{10 \cdot Q}{n} \cdot \eta_v \qquad Vc = 1.592 \cdot \frac{M}{\Delta p \cdot \eta_m} \cdot 10^4$$

$$n = \frac{10 \cdot Q}{Vc} \cdot \eta_v \qquad M = 1.592 \cdot Vc \cdot \Delta p \cdot \eta_m \cdot 10^{-4} \qquad N = \frac{Q \cdot \Delta p}{6.12 \cdot 10^4} \cdot \eta_t$$

Example

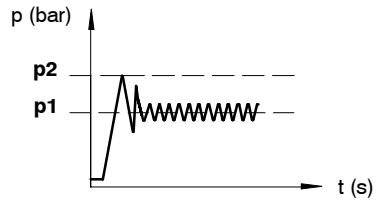
APM100/2.5 Vc= 2.5 cm^3/r Q= 4 l/min Δp=200 bar ηv= 94% η_m= 87%

$$n = \frac{10 \cdot 4}{2.5} \cdot 94 = 1500 \text{ r/min.} \qquad \eta_t = 0.94 \cdot 0.87 = 0.82 = 82\%$$

$$N = \frac{4 \cdot 200 \cdot 82}{6.12 \cdot 10^4} = 1.07 \text{ kW} \qquad M = 1.592 \cdot 2.5 \cdot 200 \cdot 87 \cdot 10^{-4} = 7 \text{ Nm}$$

2.8 High inlet pressure

Pressure levels:
p1 = continuous pressure
p2 = max. peak pressure



Application of motor operating at a high number of load cycles has to be submitted to our approval

APM05	Displacement		Max. pressure				n min.	n max.
Type	cm^3/rev	Cu. In. P. R.	P1		P2			
			bar	P.S.I.	bar	P.S.I.	r/min	r/min
APM05/0.5	0.5	.030	190	2700	230	3300	800	7000
APM05/0.75	0.75	.045	190	2700	230	3300	800	7000
APM05/0.9	0.9	.055	190	2700	230	3300	800	7000
APM05/1.2	1.2	.073	170	2400	200	2900	700	6000
APM05/1.6	1.6	.097	170	2400	200	2900	700	6000
APMR05/0.5	0.5	.030	170	2400	210	3000	800	7000
APMR05/0.75	0.75	.045	170	2400	210	3000	800	7000
APMR0.5/0.9	0.9	.055	170	2400	210	3000	800	7000
APMR05/1.2	1.2	.073	150	2200	180	2600	700	6000

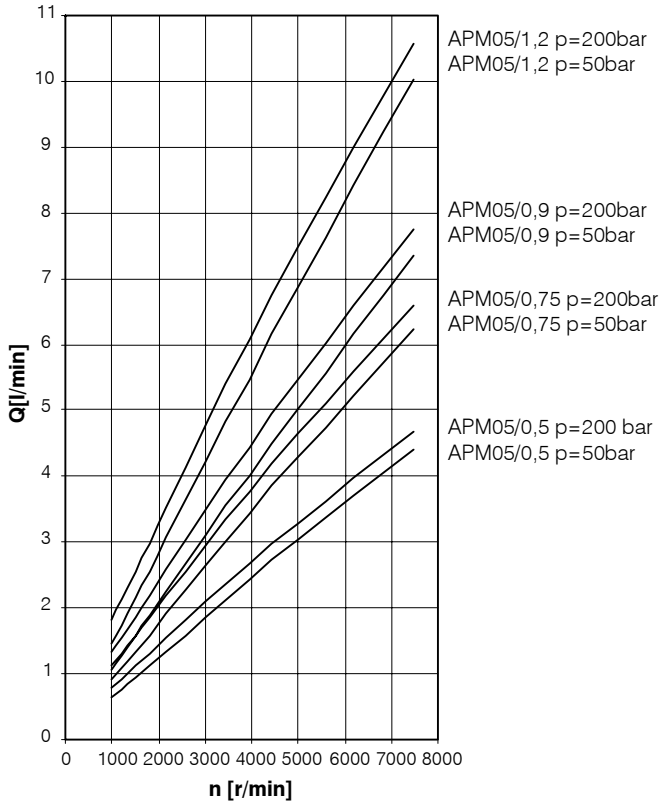
APM100	Displacement		Max. pressure				n min.	n max.
Type	cm^3/rev	Cu. In. P. R.	P1		P2			
			bar	P.S.I.	bar	P.S.I.	r/min	r/min
APM100/2.5	2.5	.152	210	3000	280	4000	650	5000
APM100/3.5	3.5	.213	210	3000	250	3600	650	4000
APM100/4.3	4.3	.262	210	3000	250	3600	550	4000
APM100/5	5.0	.305	210	3000	250	3600	500	3500
APM100/6.5	6.5	.396	190	2700	240	3400	500	3000
APM100/8	7.8	.476	180	2600	230	3300	500	3000
APM100/10	10.0	.610	150	2150	200	2900	500	2500

APM200	Displacement		Max. pressure				n min.	n max.
Type	cm^3/rev	Cu. In. P. R.	P1		P2			
			bar	P.S.I.	bar	P.S.I.	r/min	r/min
APM200/8.5	8.3	.506	220	3150	250	3600	650	4000
APM200/11	11.0	.671	210	3000	250	3600	650	4000
APM200/15	15.0	.915	210	3000	250	3600	650	3500
APM200/19	18.9	1.159	200	2900	240	3400	650	3000
APM200/22	21.9	1.342	190	2800	230	3300	600	3000
APM200/26	25.9	1.586	180	2600	220	3150	600	2500
APFM200/8.5	8.3	.506	220	3150	250	3600	650	4000
APFM200/11	11.0	.671	210	3000	250	3600	650	4000
APFM200/15	15.0	.915	210	3000	250	3600	650	3500
APFM200/19	18.9	1.159	200	2900	240	3400	650	3000
APFM200/22	21.9	1.342	190	2800	230	3300	600	3000
APFM200/26	25.9	1.586	180	2600	220	3150	600	2500
APMR200/8.5	8.3	.506	220	3150	250	3600	650	4000
APMR200/11	11.0	.671	210	3000	250	3600	650	4000
APMR200/15	15.0	.915	210	3000	250	3600	650	3500
APMR200/19	18.9	1.159	200	2900	240	3400	650	3000
APMR200/22	21.9	1.342	190	2800	230	3300	600	3000
APMR200/26	25.9	1.586	180	2600	220	3150	600	2500

N.B.: Please contact our Sales Department if even one of the operating limits indicated in the tables above (temperature, pressure, rpm) is exceeded, as well as in the case of two or more maximum values at the same time, or for applications with particularly heavy-duty cycles.

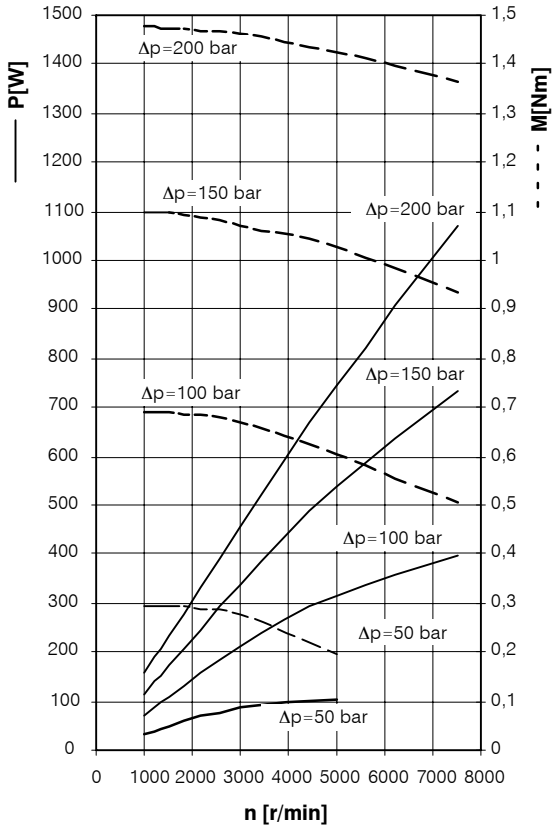
2.9 Diagrams

APM05

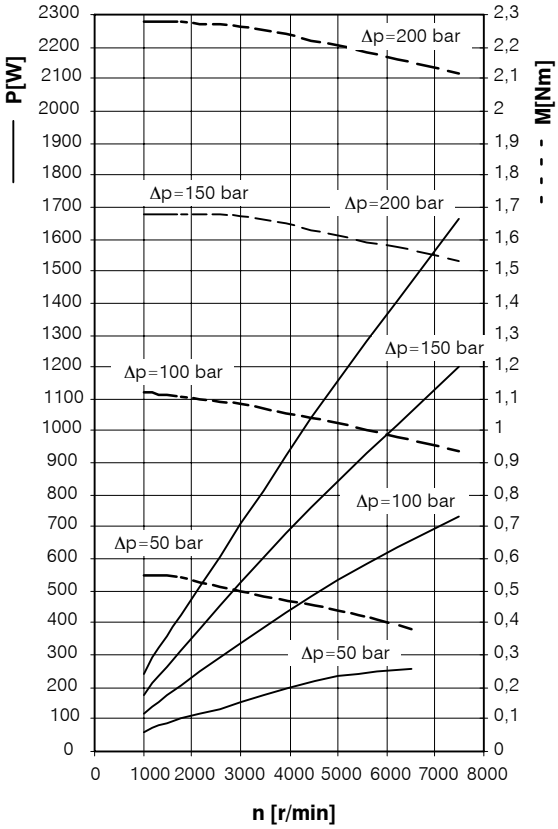


Oil viscosity: 37 mm^2/s
Oil temperature: 40° C

APM05/0.5



APM05/0.75



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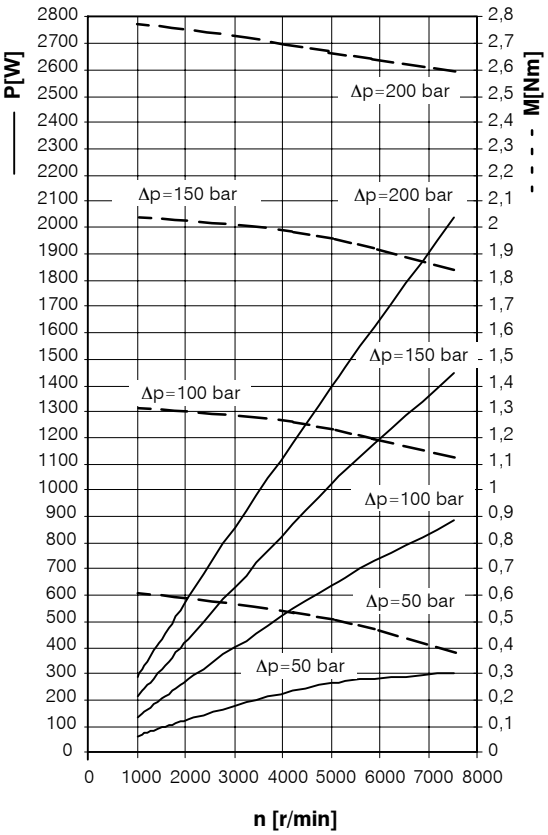
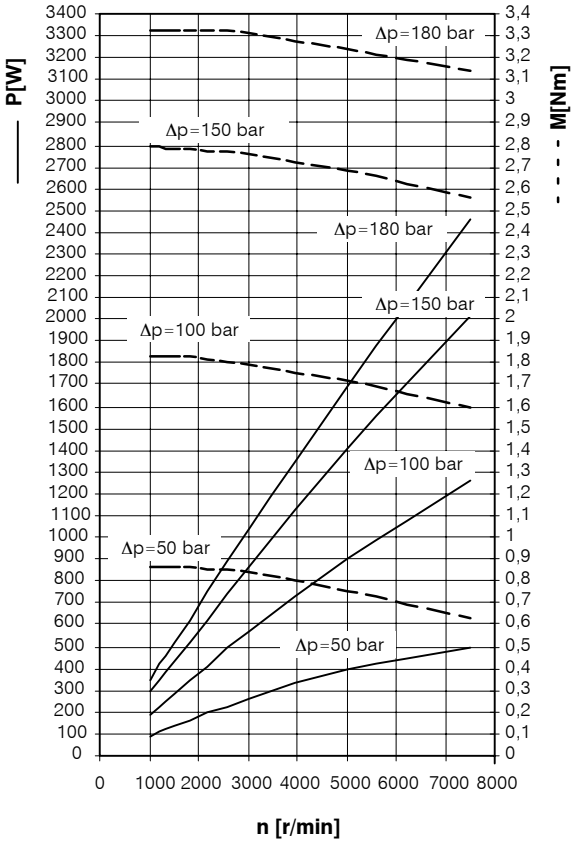
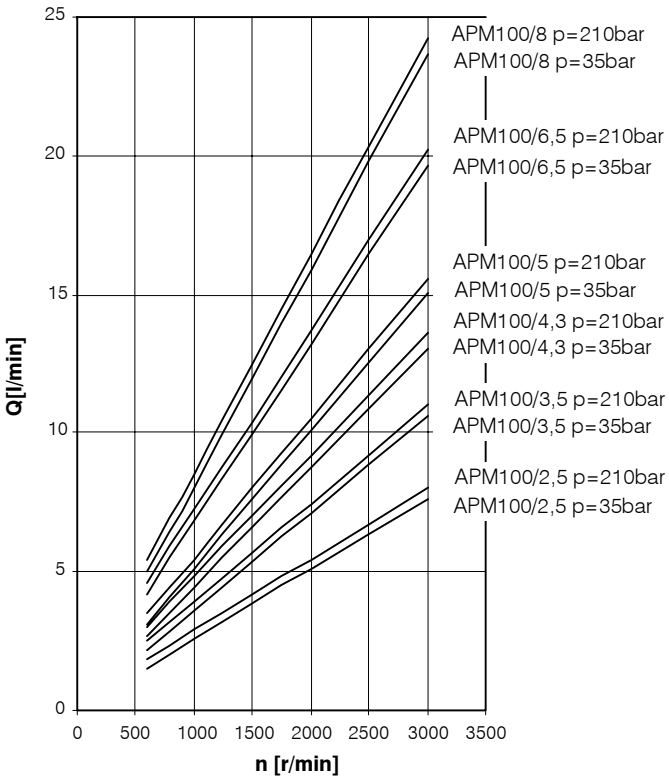


APM05/1.2

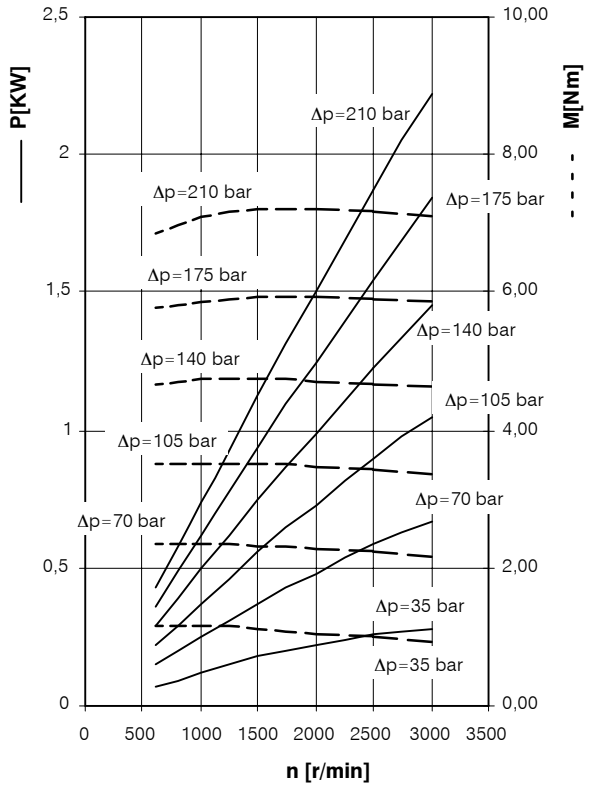


APM100

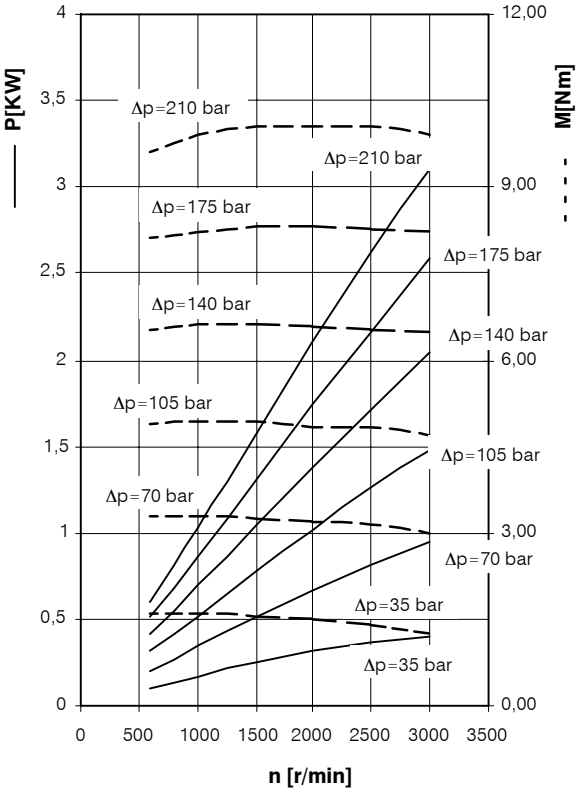


Oil viscosity: 37 mm^2/s
Oil temperature: 40° C

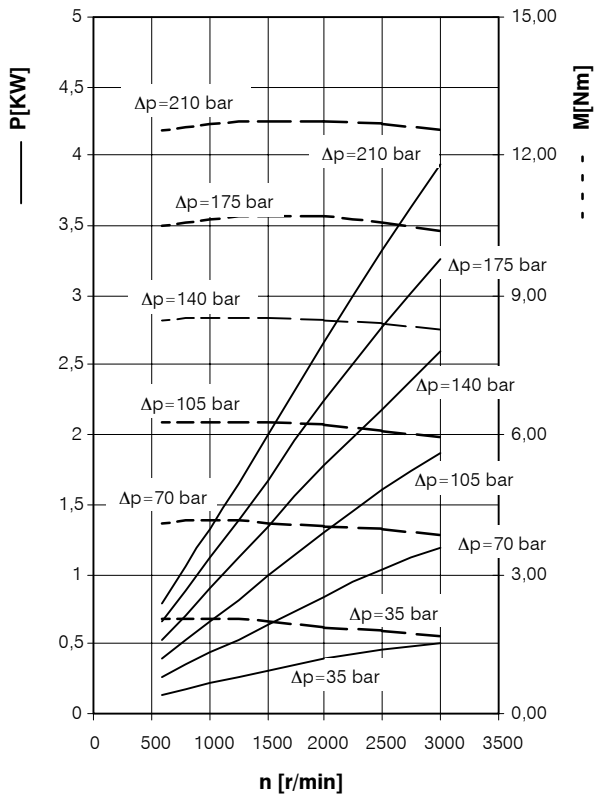
APM100/2.5



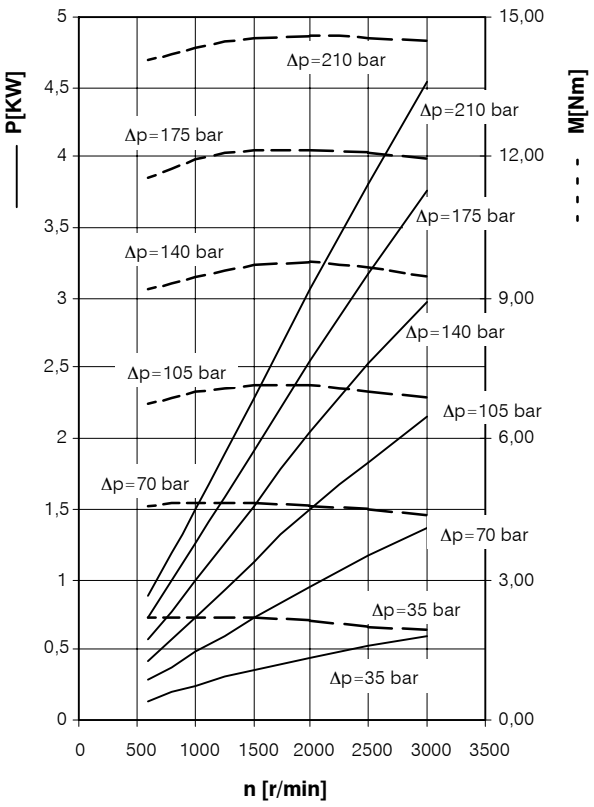
APM100/3.5



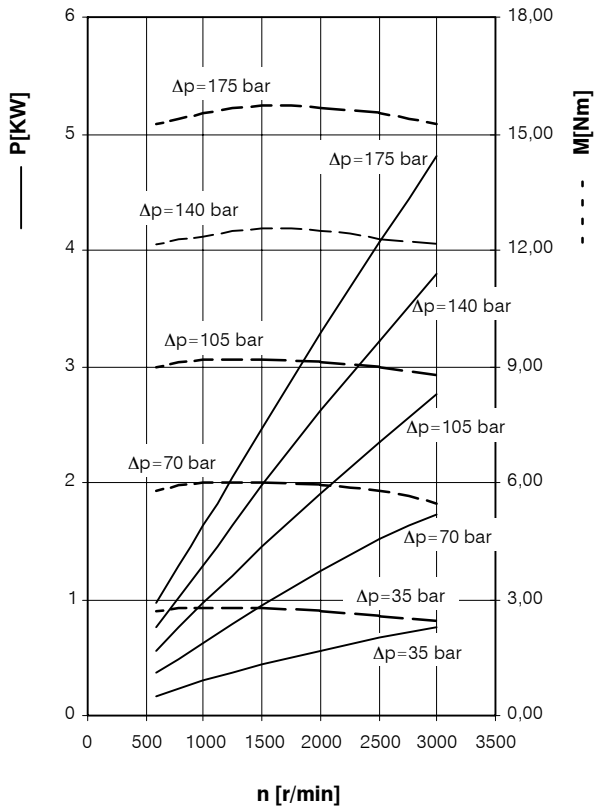
APM100/4.3



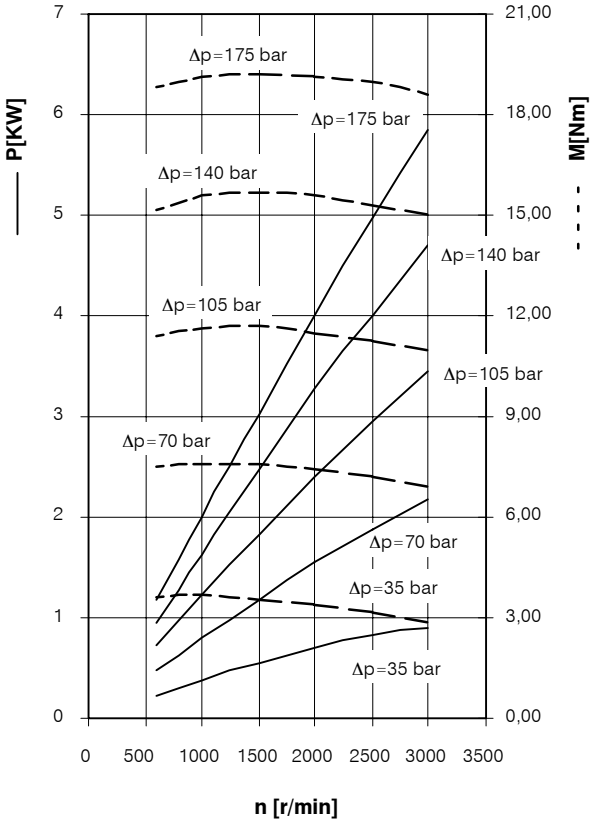
APM100/5



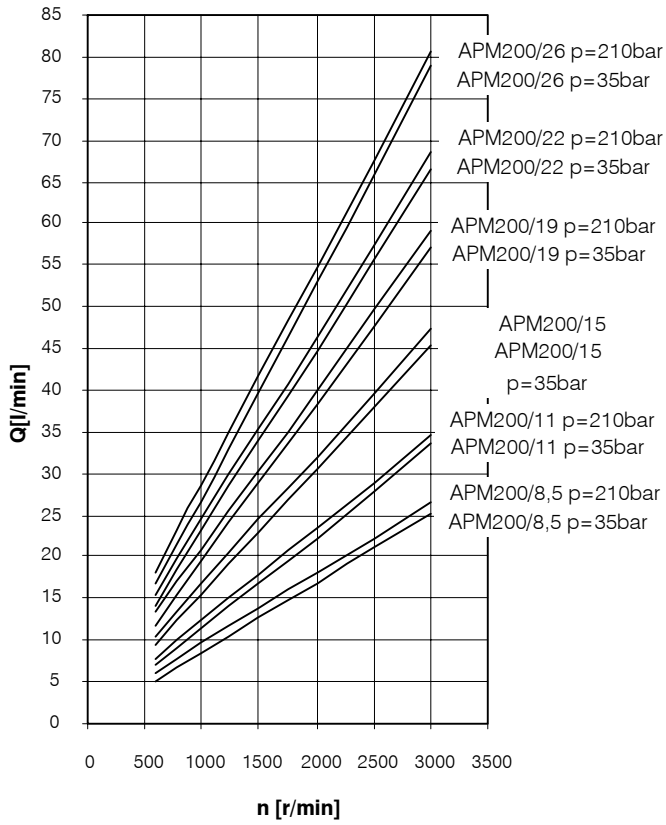
APM100/6.5



APM100/8

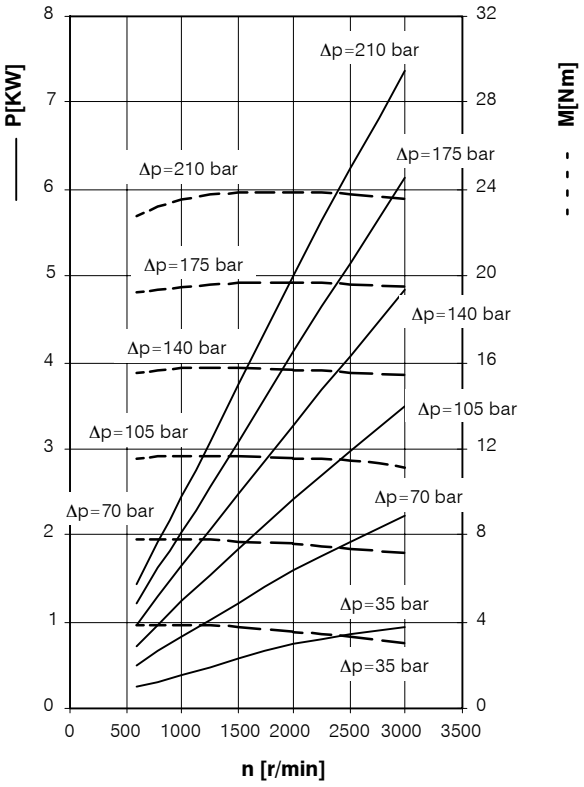


APM200

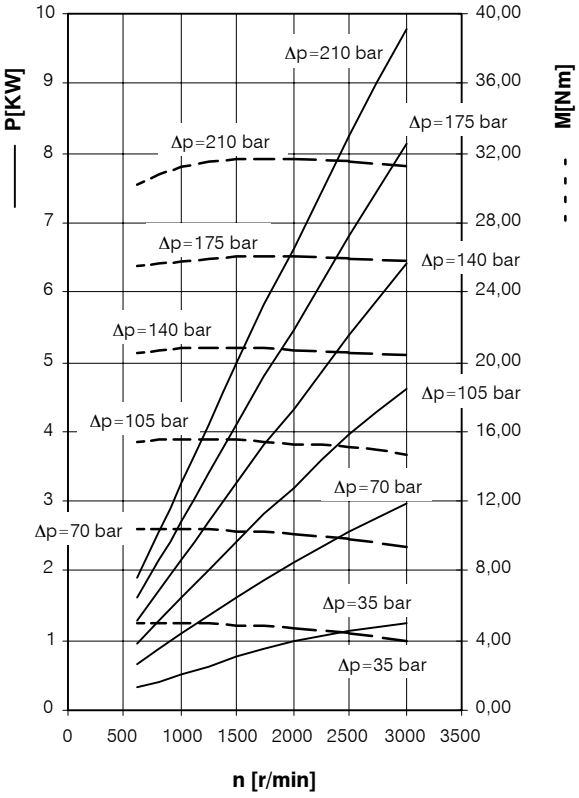


Oil viscosity: 37 mm^2/s
Oil temperature: 40° C

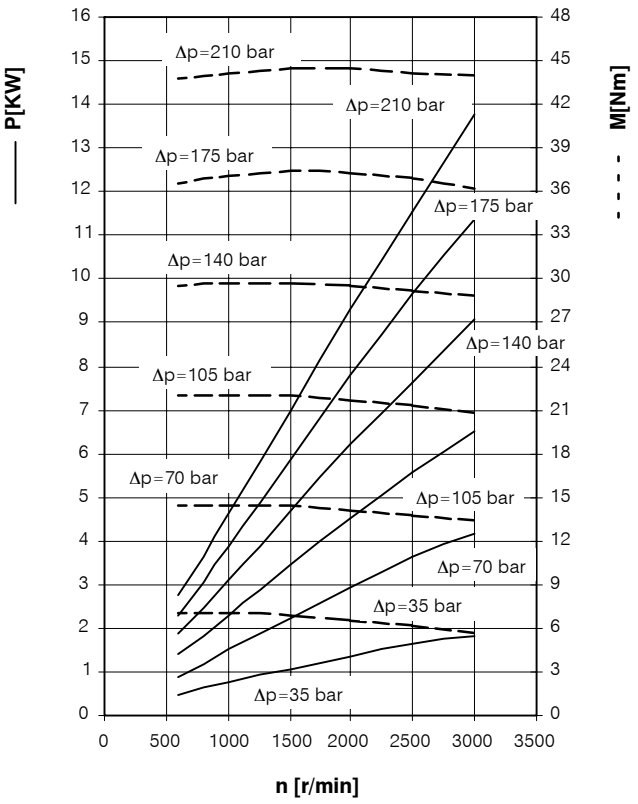
APM200/8.5



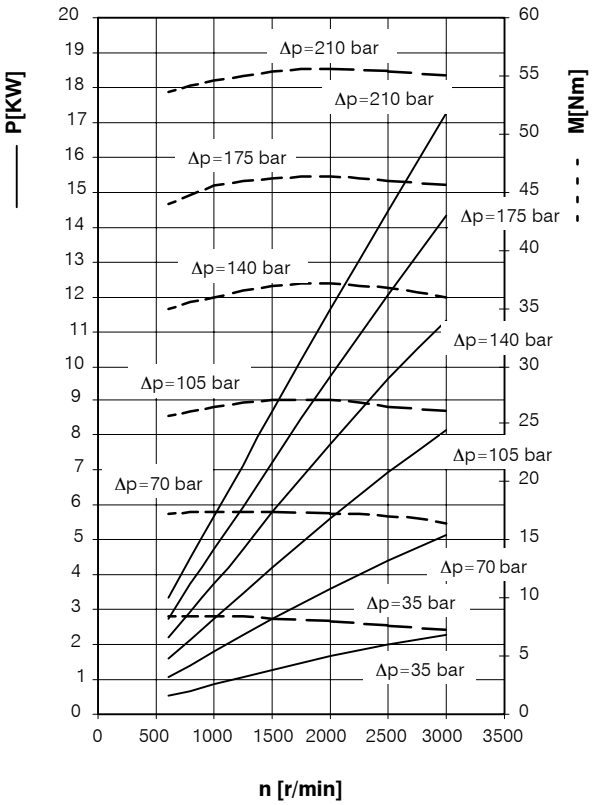
APM200/11



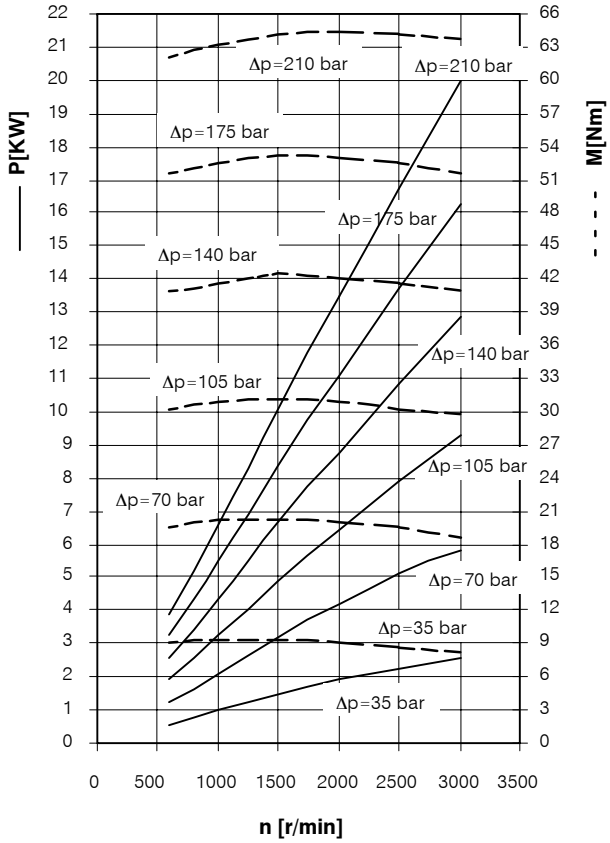
APM200/15



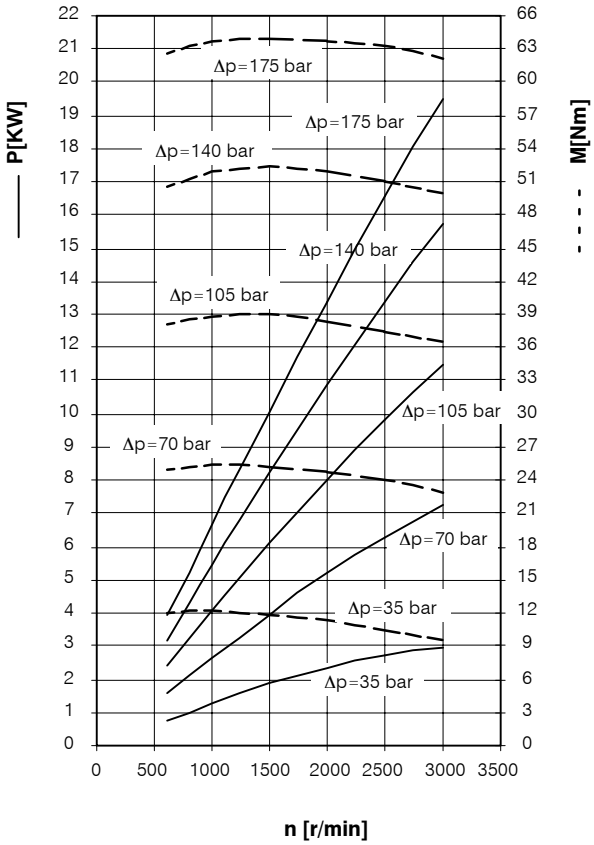
APM200/19



APM200/22

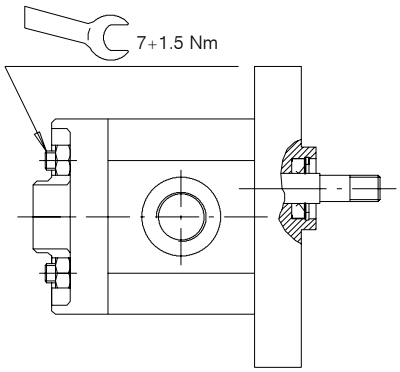


APM200/26

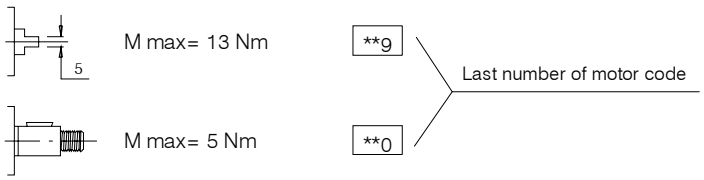


3 Gear motors group APM05

APM05	Displacement		Max. pressure				n min.	n max.
Type	cm³/rev	Cu.In. P.R.	P1		P2			
			bar	P.S.I.	bar	P.S.I.	r/min	r/min
APM05/0.5	0.5	.030	190	2700	230	3300	800	7000
APM05/0.75	0.75	.045	190	2700	230	3300	800	7000
APM05/0.9	0.9	.055	190	2700	230	3300	800	7000
APM05/1.2	1.2	.073	170	2400	200	2900	700	6000
APM05/1.6	1.6	.097	170	2400	200	2900	700	6000
APMR05/0.5	0.5	.030	170	2400	210	3000	800	7000
APMR05/0.75	0.75	.045	170	2400	210	3000	800	7000
APMR0.5/0.9	0.9	.055	170	2400	210	3000	800	7000
APMR05/1.2	1.2	.073	150	2200	180	2600	700	6000



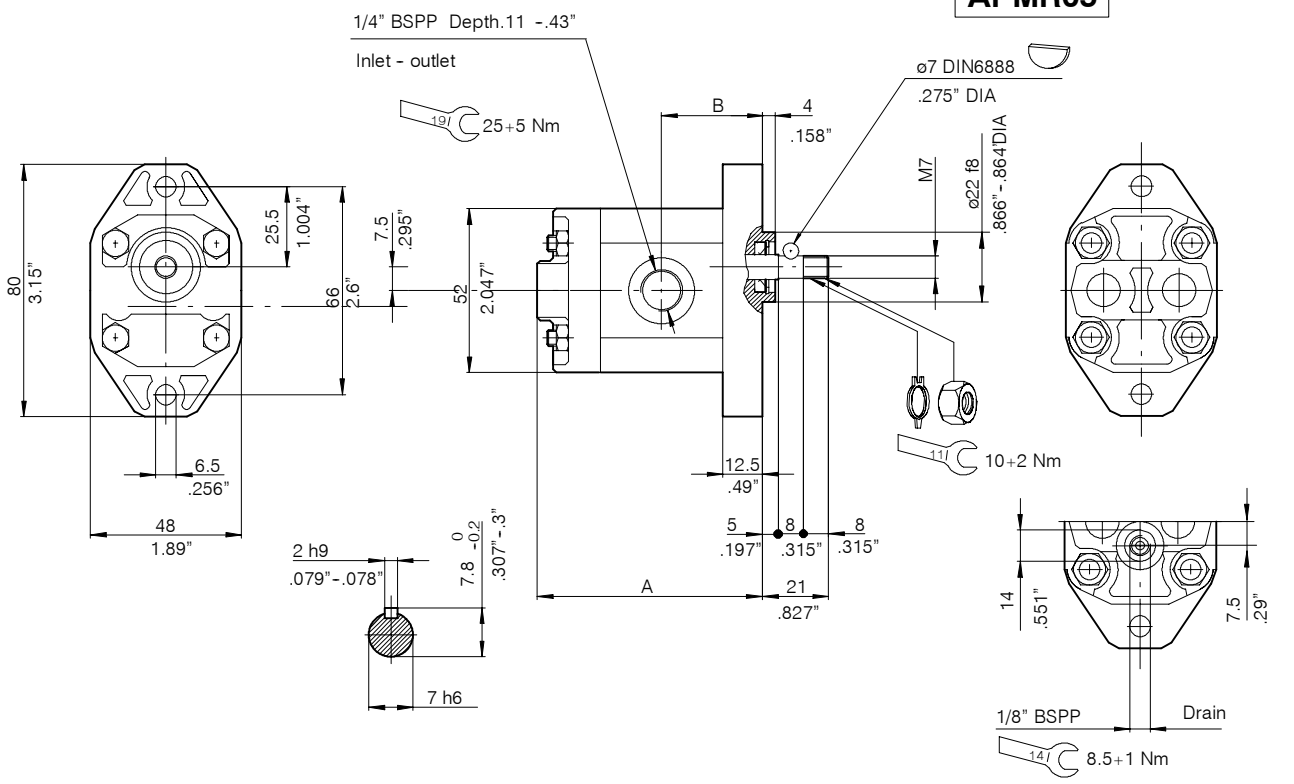
Max torque allowed by the shaft end configuration



Notes:

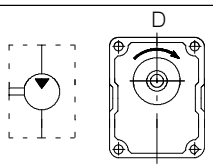
- **For codes and dimensions regarding accessories, see section 6.**
- **For the types of motors without ordering code, contact our Sales Department.**
- **For reversible motors inlet and outlet ports have same sizes as per inlet unidirectional rotation**

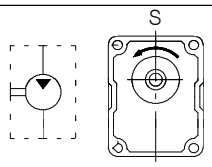
Group **APM05** / **APMR05** Code **810**



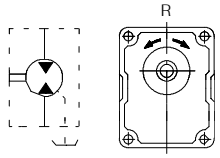
Type	Displacement cm³/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM05/0.5	0.5	67	2.64	30.5	1.2
APM05/0.75	0.75	69	2.72	31.5	1.24
APM05/0.9	0.9	70.5	2.77	32	1.26
APM05/1.2	1.2	73	2.87	33.5	1.32

Unidirectional gear motor

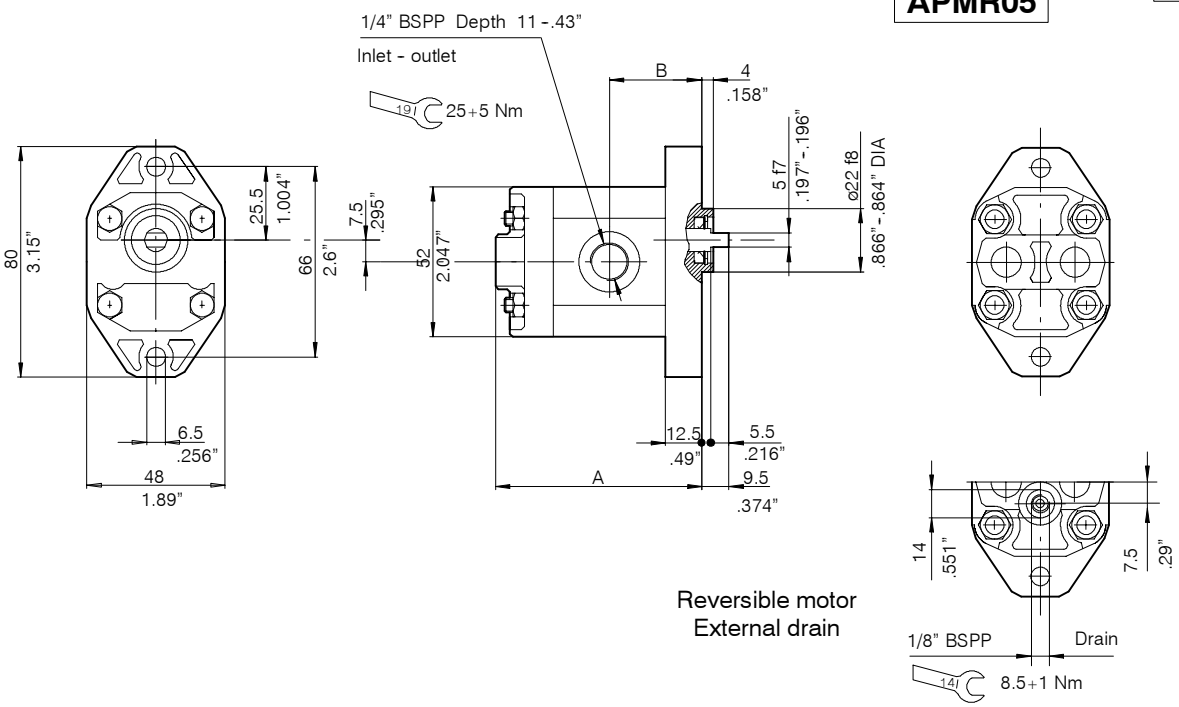
Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		
APM05/0.75 D	**200.1004.6150.1**	
APM05/0.9 D	**200.1005.6150.3**	
APM05/1.2 D	**200.1006.6150.1**	

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S	**200.1006.6160.5**	

Reversible gear motor

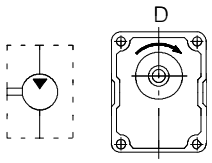
Type	**Order Code**	**Reversible motor**
APMR05/0.5	**200.1003.6140.1**	
APMR05/0.75		
APMR05/0.9		
APMR05/1.2		

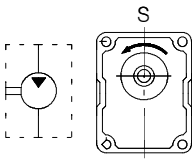
Group **APM05** / **APMR05** Code **819**



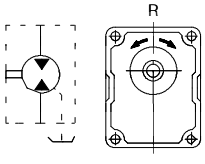
Type	Displacement cm³/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM05/0.5	0.5	67	2.64	30.5	1.2
APM05/0.75	0.75	69	2.72	31.5	1.24
APM05/0.9	0.9	70.5	2.77	32.3	1.26
APM05/1.2	1.2	73	2.87	33.5	1.32
APM05/1.6	1.6	77	3.03	35.5	1.40
APM05/2.3	2.3	83	3.27	39.5	1.55

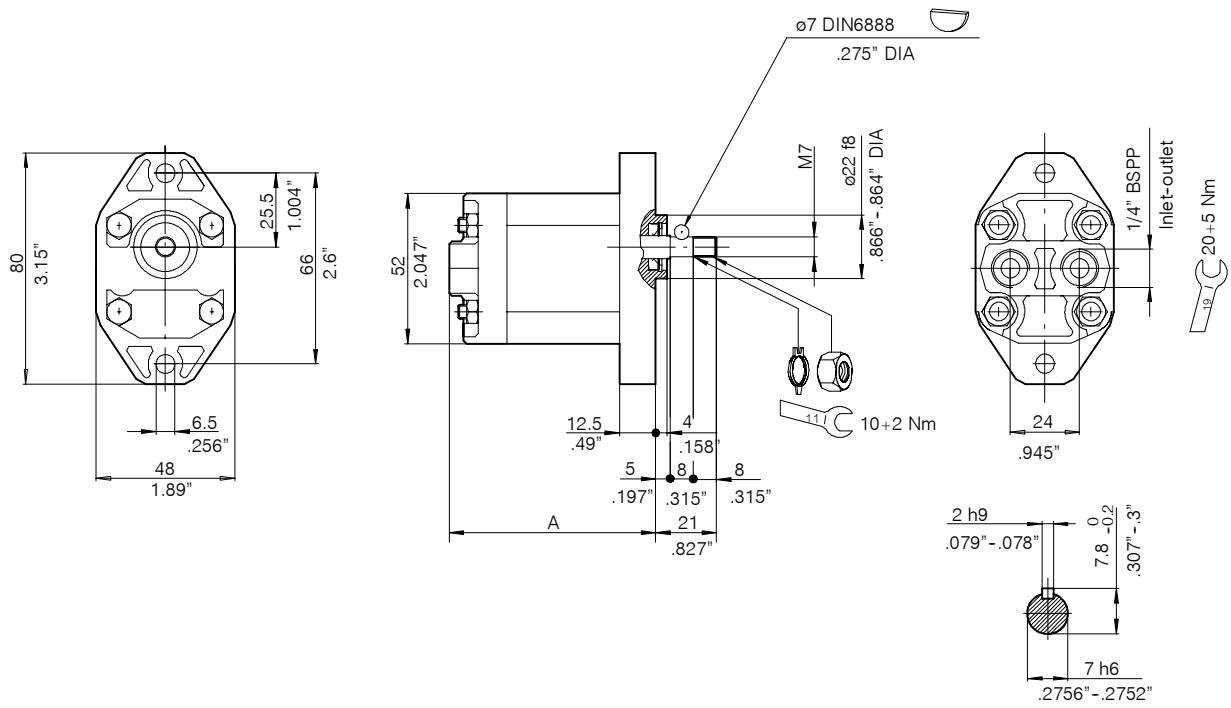
Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		
APM05/0.75 D		
APM05/0.9 D		
APM05/1.2 D		
APM05/1.6 D	**200100864201**	
APM05/2.3 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		
APM05/1.6 S	**200100864601**	
APM05/2.3 S		

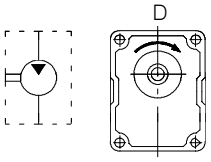
Reversible gear motor

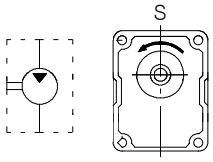
Type	**Order Code**	**Reversible motor**
APMR05/0.5		
APMR05/0.75		
APMR05/0.9		
APMR05/1.2		
APMR05/1.6		
APMR05/2.3		

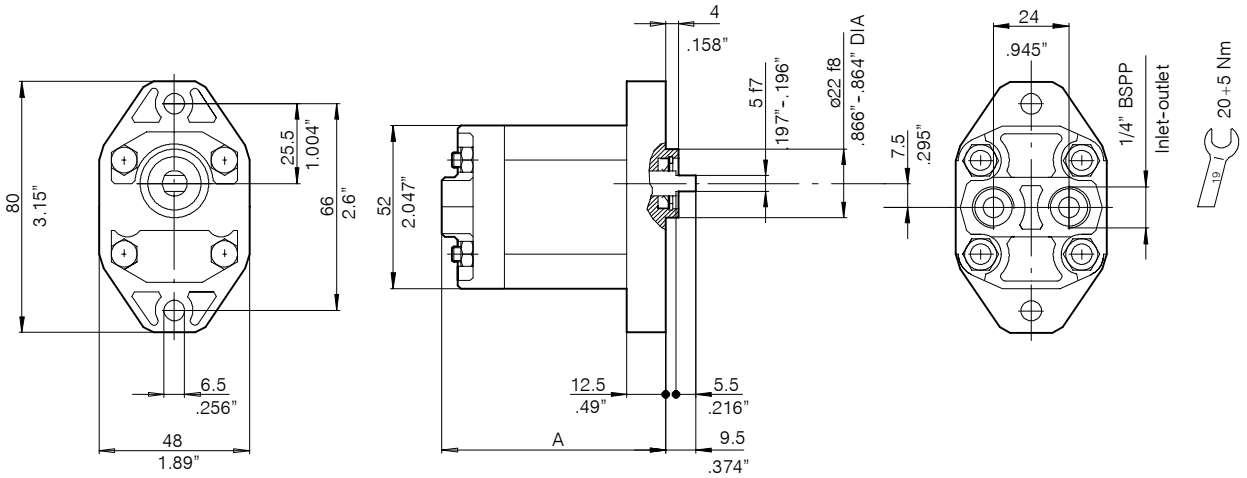


Type	Displacement cm^3/rev	Dimensions	
		A	
		mm	inch.
APM05/0.5	0.5	67	2.64
APM05/0.75	0.75	69	2.72
APM05/0.9	0.9	70.5	2.77
APM05/1.2	1.2	73	2.87

Unidirectional gear motor

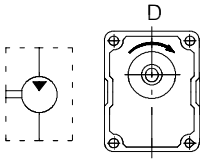
Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		
APM05/0.75 D	**200100460201**	
APM05/0.9 D	**200100560202**	
APM05/1.2 D		

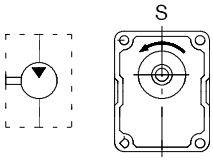
Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		



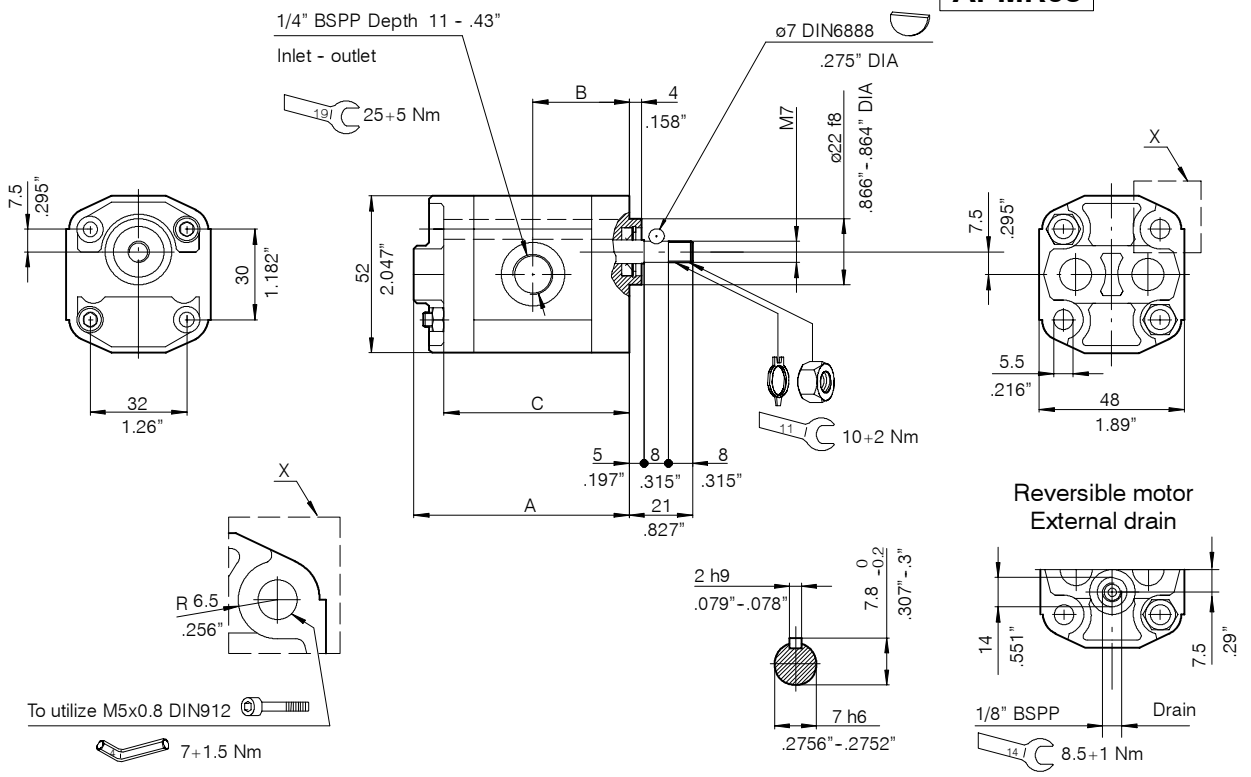
Type	Displacement cm³/rev	Dimensions	
		A	
		mm	inch.
APM05/0.5	0.5	67	2.64
APM05/0.75	0.75	69	2.72
APM05/0.9	0.9	70.5	2.77
APM05/1.2	1.2	73	2.87
APM05/1.6	1.6	77	3.03
APM05/1.6	1.6	77	3.03
APM05/2.3	2.3	83	3.27

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		
APM05/0.75 D		
APM05/0.9 D		
APM05/1.2 D		
APM05/1.6 D		
APM05/2.3 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		
APM05/1.6 S		
APM05/2.3 S		

Group **APM05** **APMR05** Code **830**



Type	Displacement cm³/rev	Dimensions					
		A		B		C	
		mm	inch.	mm	inch.	mm	inch.
APM05/0.5	0.5	67	2.64	30.5	1.2	56	2.20
APM05/0.75	0.75	69	2.72	31.5	1.24	58	2.28
APM05/0.9	0.9	70.5	2.77	32	1.26	59.5	2.34
APM05/1.2	1.2	73	2.87	33.5	1.32	62	2.44

Unidirectional gear motor

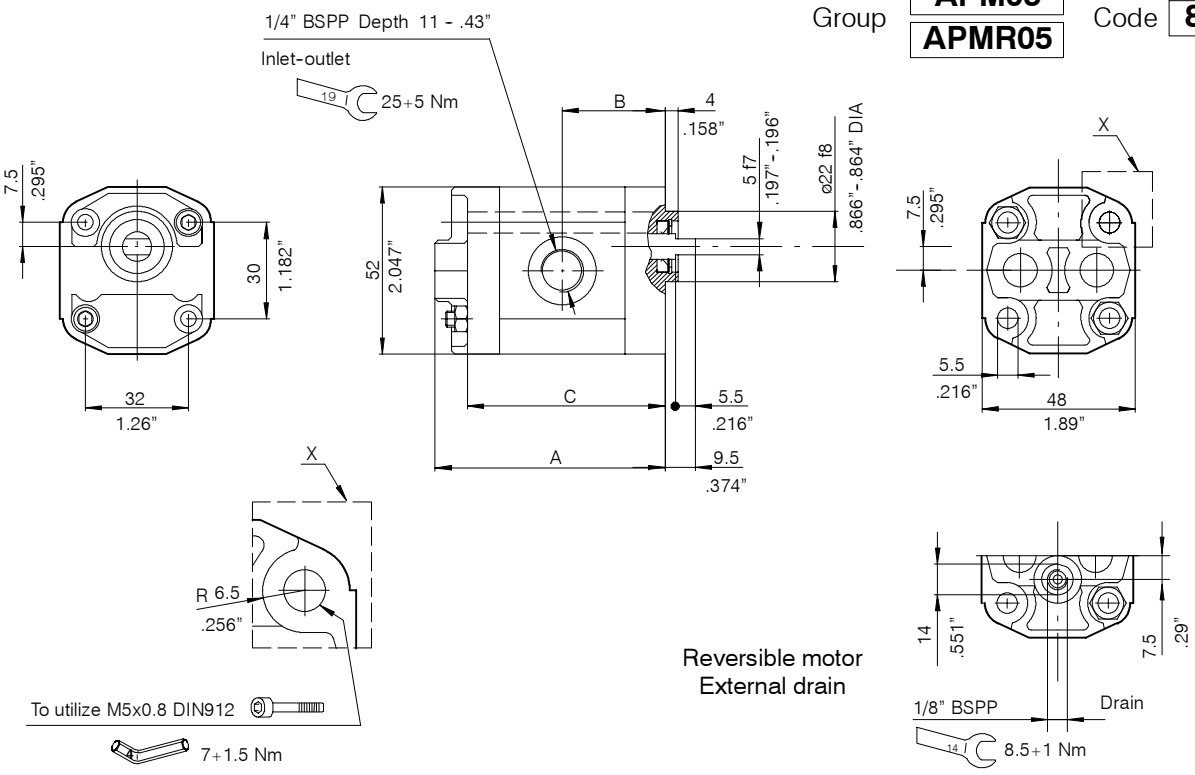
Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		D
APM05/0.75 D		
APM05/0.9 D		
APM05/1.2 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		S
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		

Reversible gear motor

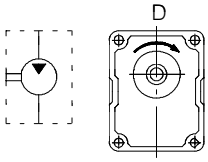
Type	**Order Code**	**Reversible motor**
APMR05/0.5		R
APMR05/0.75		
APMR05/0.9		
APMR05/1.2		

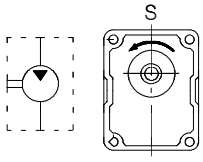
Group **APM05** **APMR05** Code **839**



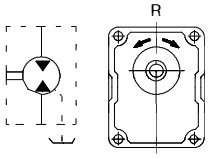
Type	Displacement cm³/rev	Dimensions					
		A		B		C	
		mm.	inch.	mm	inch.	mm	inch.
APM05/0.5	0.5	67	2.64	30.5	1.2	56	2.20
APM05/0.75	0.75	69	2.72	31.5	1.24	58	2.28
APM05/0.9	0.9	70.5	2.77	32	1.26	59.5	2.34
APM05/1.2	1.2	73	2.87	33.5	1.32	62	2.44
APM05/1.6	1.6	77	3.03	35.5	1.40	66	2.60
APM05/2.3	2.3	83	3.27	39.5	1.55		

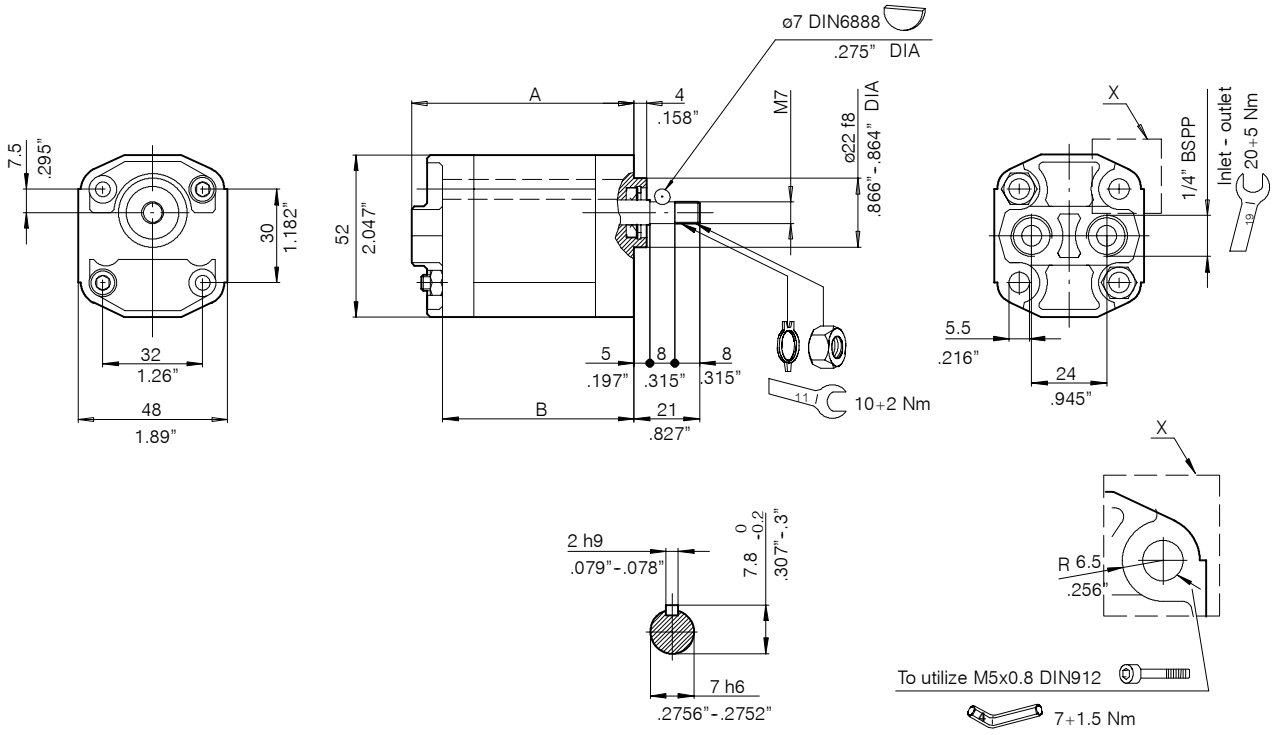
Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		
APM05/0.75 D		
APM05/0.9 D		
APM05/1.2 D		
APM05/1.6 D		
APM05/2.3 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		
APM05/1.6 S	**200100834602**	
APM05/2.3 S		

Reversible gear motor

Type	**Order Code**	**Reversible motor**
APMR05/0.5		
APMR05/0.75		
APMR05/0.9		
APMR05/1.2		
APMR05/1.6		
APMR05/2.3		

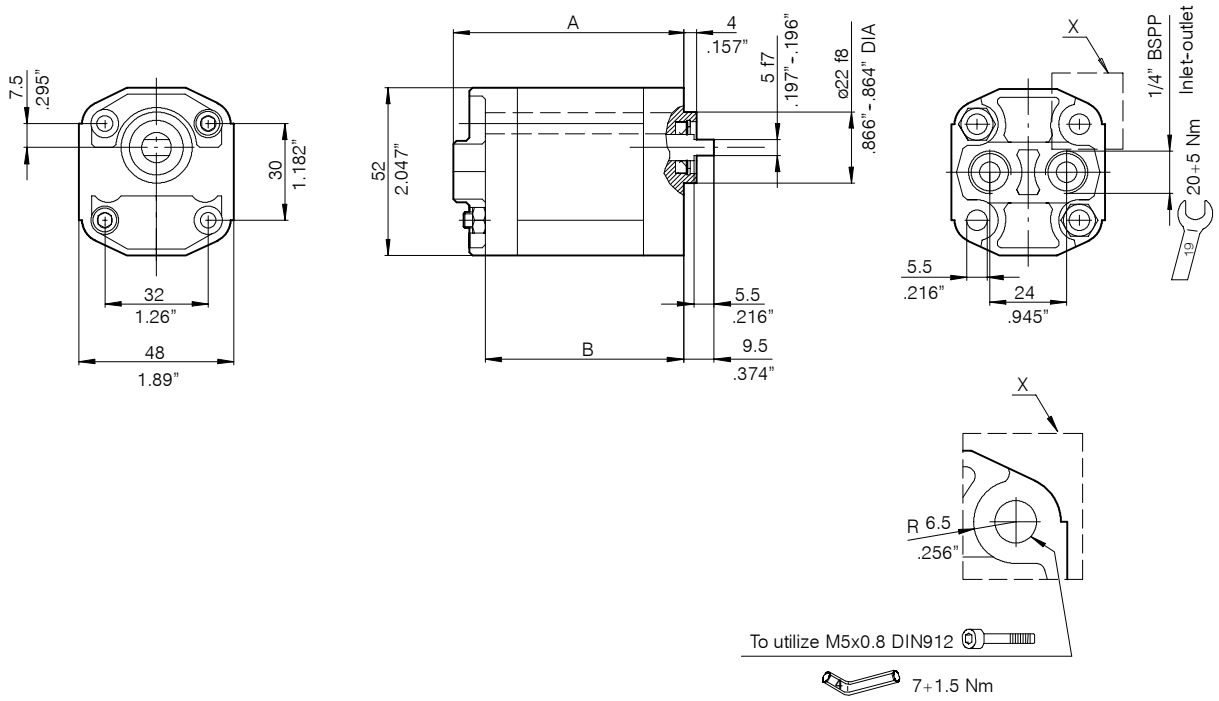


Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM05/0.5	0.5	67	2.64	56	2.20
APM05/0.75	0.75	69	2.72	58	2.28
APM05/9	0.9	70.5	2.77	59.5	2.34
APM05/1.2	1.2	73	2.87	62	2.44

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		D
APM05/0.75 D		
APM05/0.9 D		
APM05/1.2 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		S
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		



Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM05/0.5	0.5	67	2.64	56	2.20
APM05/0.75	0.75	69	2.72	58	2.28
APM05/0.9	0.9	70.5	2.77	59.5	2.34
APM05/1.2	1.2	73	2.87	62	2.44
APM05/1.6	1.6	77	3.03	66	2.60
APM05/2.3	2.3	83	3.27		

Unidirectional gear motor

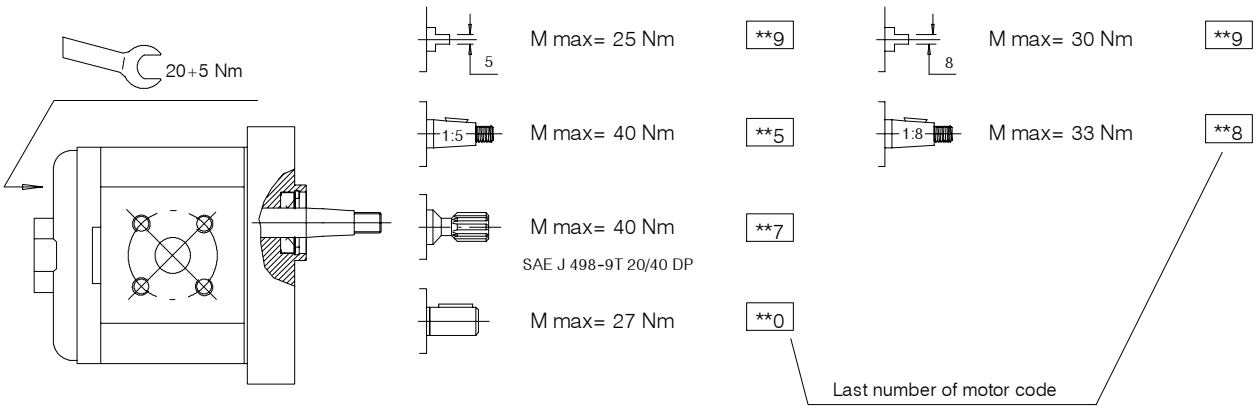
Type	**Order Code**	**Clockwise rotation: D**
APM05/0.5 D		D
APM05/0.75 D		
APM05/0.9 D		
APM05/1.2 D		
APM05/1.6 D		
APM05/2.3 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM05/0.5 S		S
APM05/0.75 S		
APM05/0.9 S		
APM05/1.2 S		
APM05/1.6 S		
APM05/2.3 S		

4 Gear motors group APM100

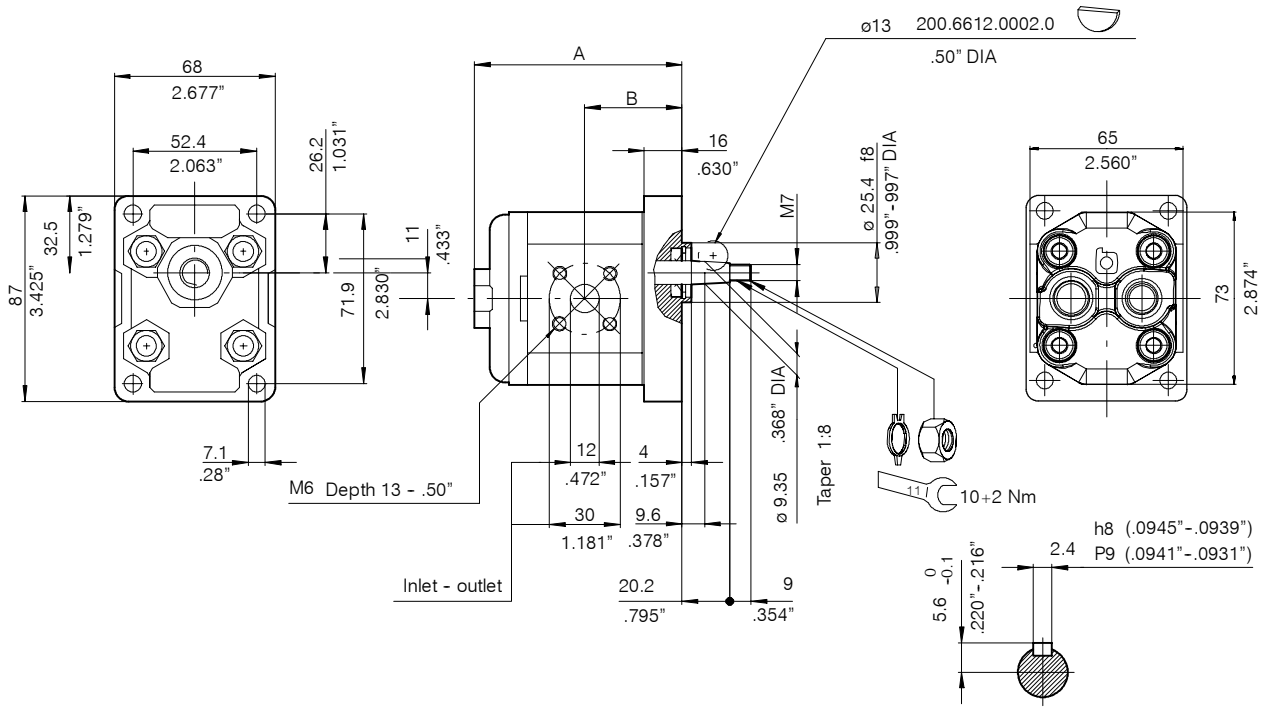
APM100	Displacement		Max. pressure				n min.	n max.
Type	cm^3/rev	Cu.In. P.R.	P1		P2			
			bar	P.S.I.	bar	P.S.I.	r/min	r/min
APM100/2.5	2.5	.152	210	3000	280	4000	650	5000
APM100/3.5	3.5	.213	210	3000	250	3600	650	4000
APM100/4.3	4.3	.262	210	3000	250	3600	550	4000
APM100/5	5	.305	210	3000	250	3600	500	3500
APM100/6.5	6.5	.396	190	2700	240	3400	500	3000
APM100/8	7.8	.476	180	2600	230	3300	500	3000
APM100/10	10	.610	150	2150	200	2900	500	2500

Max torque allowed by the shaft end configuration



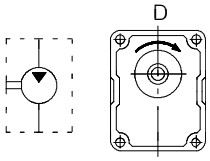
Notes:

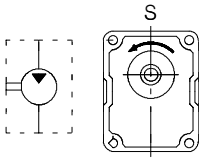
- **For codes and dimensions regarding accessories, see section 6.**
- **For the types of motors without ordering code, contact our Sales Department.**
- **For reversible motors inlet and outlet ports have same sizes as per inlet unidirectional rotation**

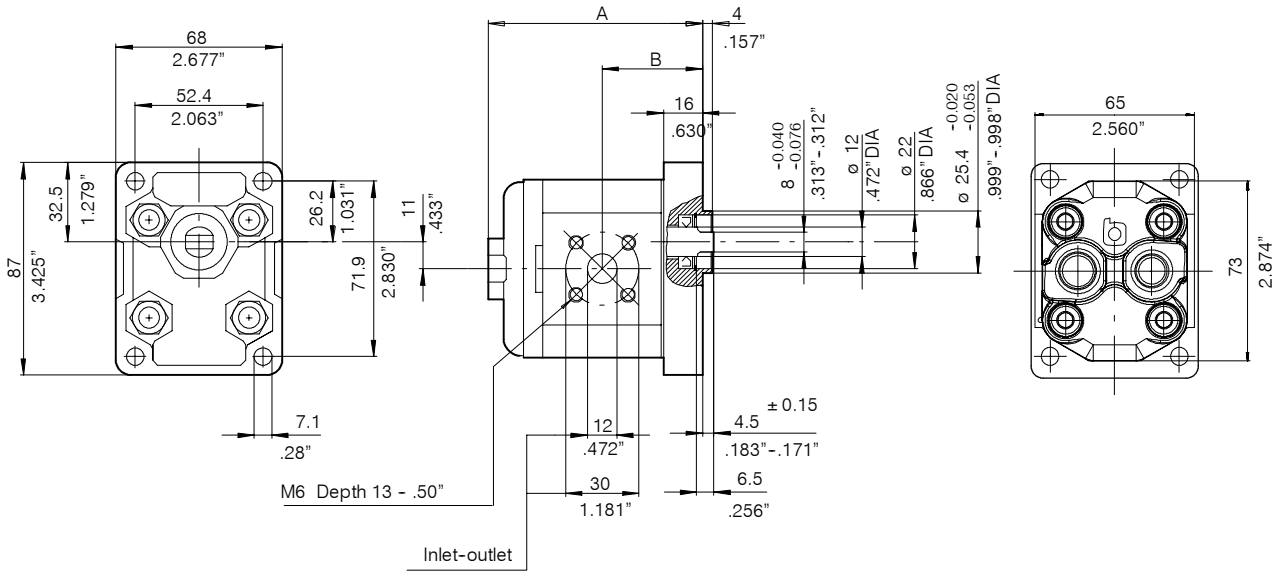


Type	Displacement cm³/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	88	3.46	41	1.61
APM100/3.5	3.5	92	3.62	43.5	1.71
APM100/4.3	4.3	96	3.78	45	1.77
APM100/5	5	98.5	3.88	46.5	1.83
APM100/6.5	6.5	103.5	4.07	49	1.93
APM100/8	7.8	109	4.29	52	2.05

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D	**200101313209**	
APM100/3.5 D	**200101413501**	
APM100/4.3 D	**200101513501**	
APM100/5 D	**200101613501**	
APM100/6.5 D	**200101713501**	
APM100/8 D	**200101813501**	

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S	**200101313601**	
APM100/3.5 S	**200101413601**	
APM100/4.3 S	**200101513601**	
APM100/5 S	**200101613601**	
APM100/6.5 S	**200101713601**	
APM100/8 S		

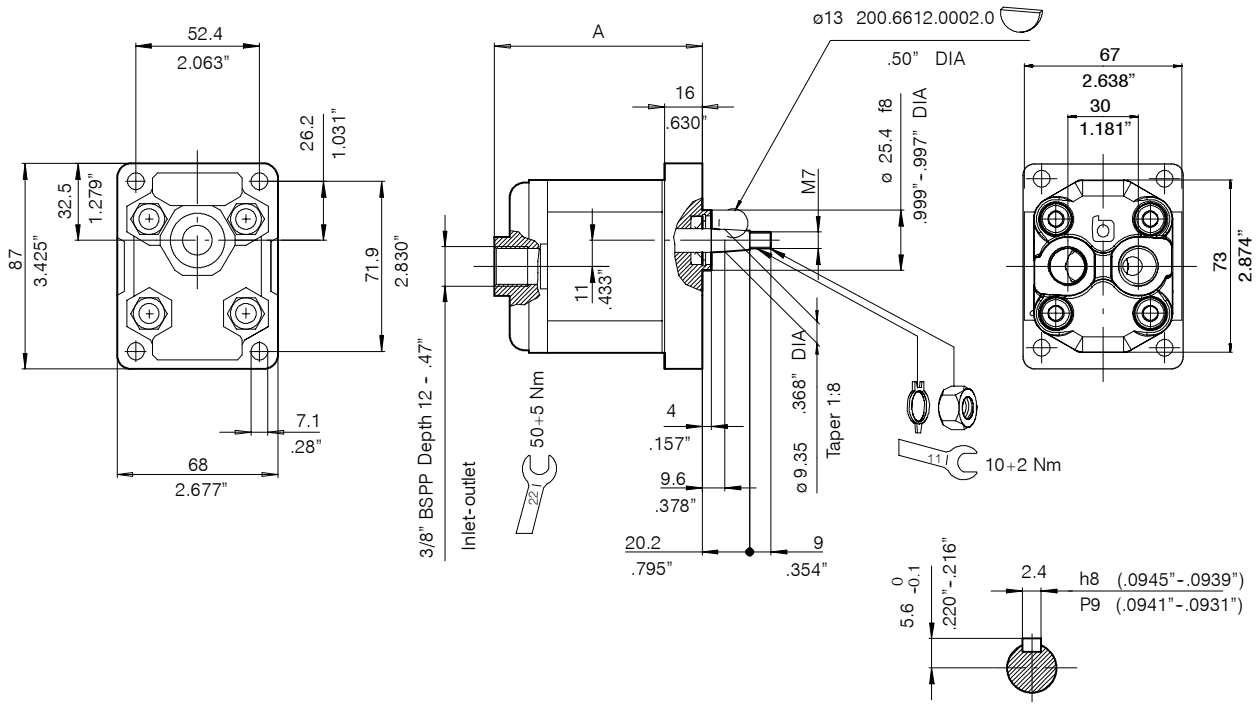


Type	Displacement cm³/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	88	3.46	41	1.61
APM100/3.5	3.5	92	3.62	43.5	1.71
APM100/4.3	4.3	96	3.78	45	1.77
APM100/5	5	98.5	3.88	46.5	1.83
APM100/6.5	6.5	103.5	4.07	49	1.93
APM100/8	7.8	109	4.29	52	2.05
APM100/10	10	118	4.64	56.5	2.22

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		D
APM100/3.5 D		
APM100/4.3 D	**200101514501**	
APM100/5 D		
APM100/6.5 D		
APM100/8 D		
APM100/10 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		S
APM100/3.5 S		
APM100/4.3 S	**200101514601**	
APM100/5 S		
APM100/6.5 S		
APM100/8 S		
APM100/10 S		

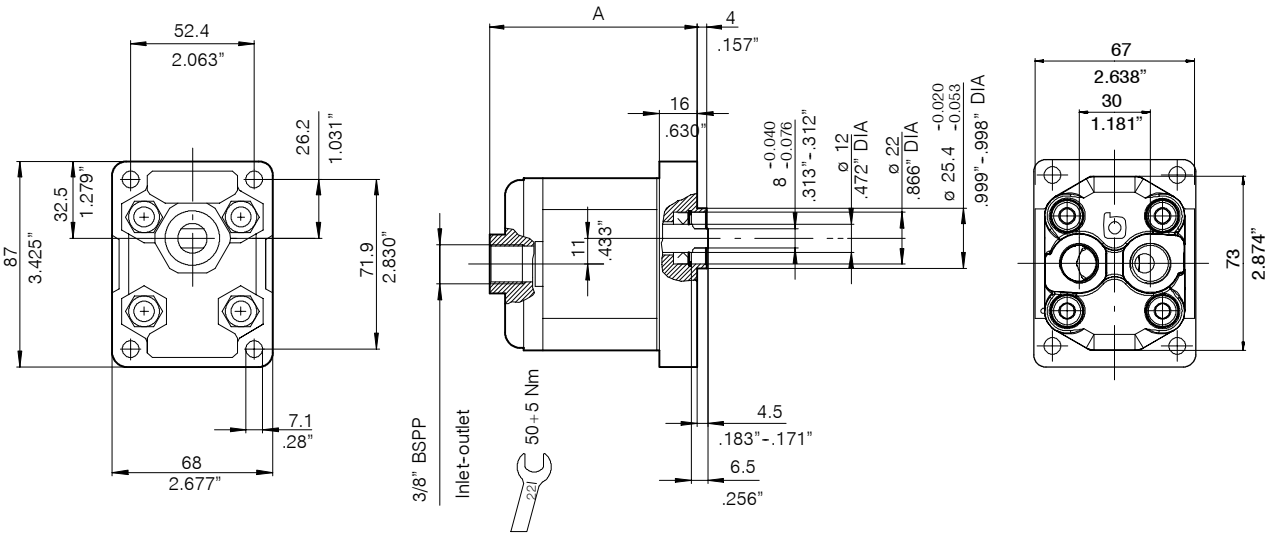


Type	Displacement cm^3/rev	Dimensions	
		A	
		mm	inch.
APM100/2.5	2.5	88	3.46
APM100/3.5	3.5	92	3.62
APM100/4.3	4.3	96	3.78
APM100/5	5	98.5	3.88
APM100/6.5	6.5	103.5	4.07
APM100/8	7.8	109	4.29

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		D
APM100/3.5 D		
APM100/4.3 D	**200101513502**	
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		S
APM100/3.5 S		
APM100/4.3 S	**200101513602**	
APM100/5 S		
APM100/6.5 S		
APM100/8 S		

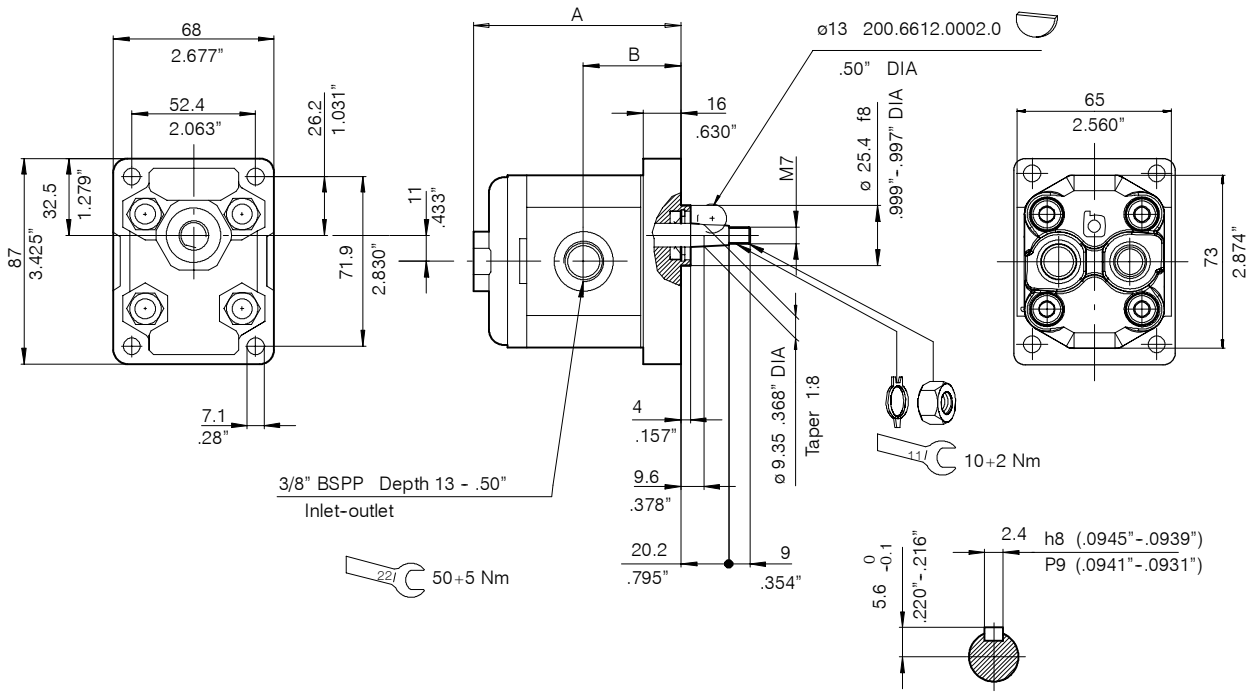


Type	Displacement cm^3/rev	Dimensions	
		A	
		mm	inch.
APM100/2.5	2.5	88	3.46
APM100/3.5	3.5	92	3.62
APM100/4.3	4.3	96	3.78
APM100/5	5	98.5	3.88
APM100/6.5	6.5	103.5	4.07
APM100/8	7.8	109	4.29
APM100/10	10	118	4.64

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		D
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D		
APM100/6.5 D		
APM100/8 D		
APM100/10 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S	**200101314601**	S
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S		
APM100/6.5 S		
APM100/8 S		
APM100/10 S		

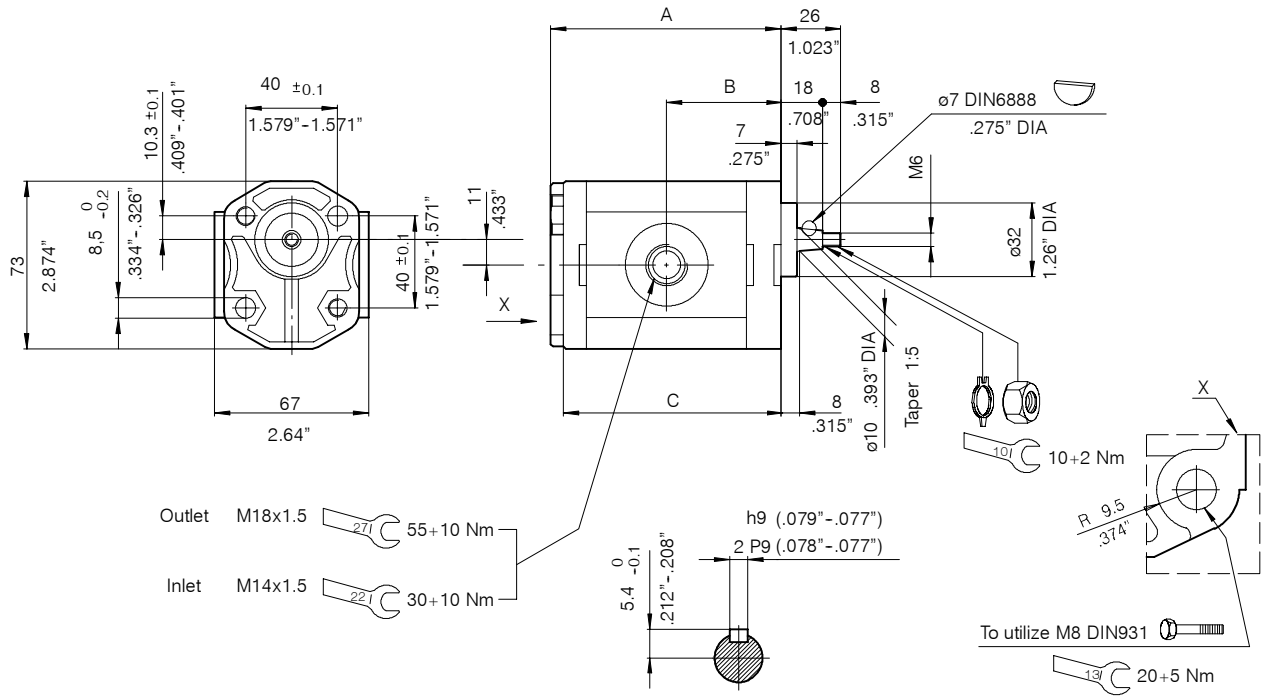


Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	88	3.46	41	1.61
APM100/3.5	3.5	92	3.62	43.5	1.71
APM100/4.3	4.3	96	3.78	45	1.77
APM100/5	5	98.5	3.88	46.5	1.83
APM100/6.5	6.5	103.5	4.07	49	1.93
APM100/8	7.8	109	4.29	52	2.05

Unidirectional gear motor

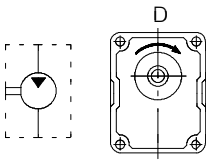
Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		D
APM100/3.5 D		
APM100/4.3 D	**200101513503**	
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

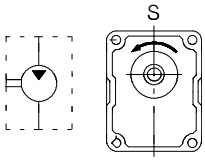
Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S	**200101313602**	S
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S		
APM100/6.5 S		
APM100/8 S		



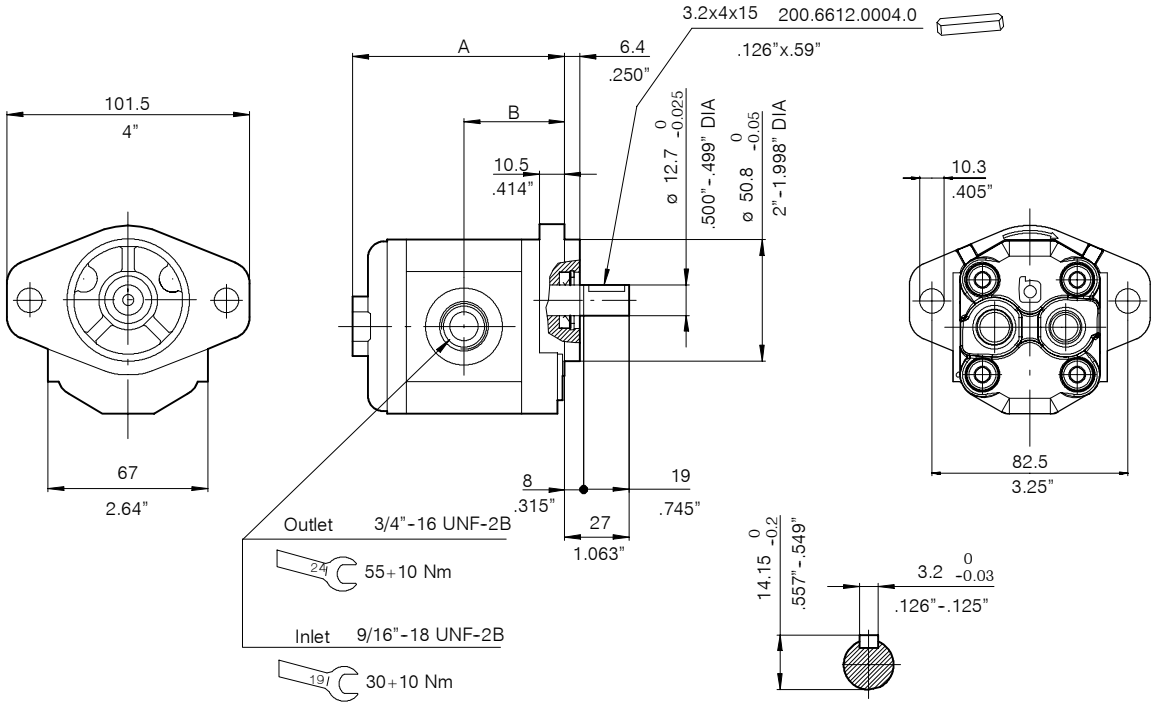
Type	Displacement cm³/rev	Dimensions					
		A		B		C	
		mm	inch.	mm	inch.	mm	inch.
APM100/2.5	2.5	79	2.99	39	1.53	75.5	2.97
APM100/3.5	3.5	83	3.27	41	1.61	80	3.15
APM100/4.3	4.3	87	3.42	43	1.69	83.5	3.29
APM100/5	5	89.5	3.52	44.5	1.75	86	3.38
APM100/6.5	6.5	94.5	3.72	47	1.85	91	3.58
APM100/8	7.8	100	3.98	50	1.97	97	3.81

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		
APM100/3.5 S	**200101442601**	
APM100/4.3 S	**200101542604**	
APM100/5 S	**200101642603**	
APM100/6.5 S		
APM100/8 S		

Group **APM100** Code **880**



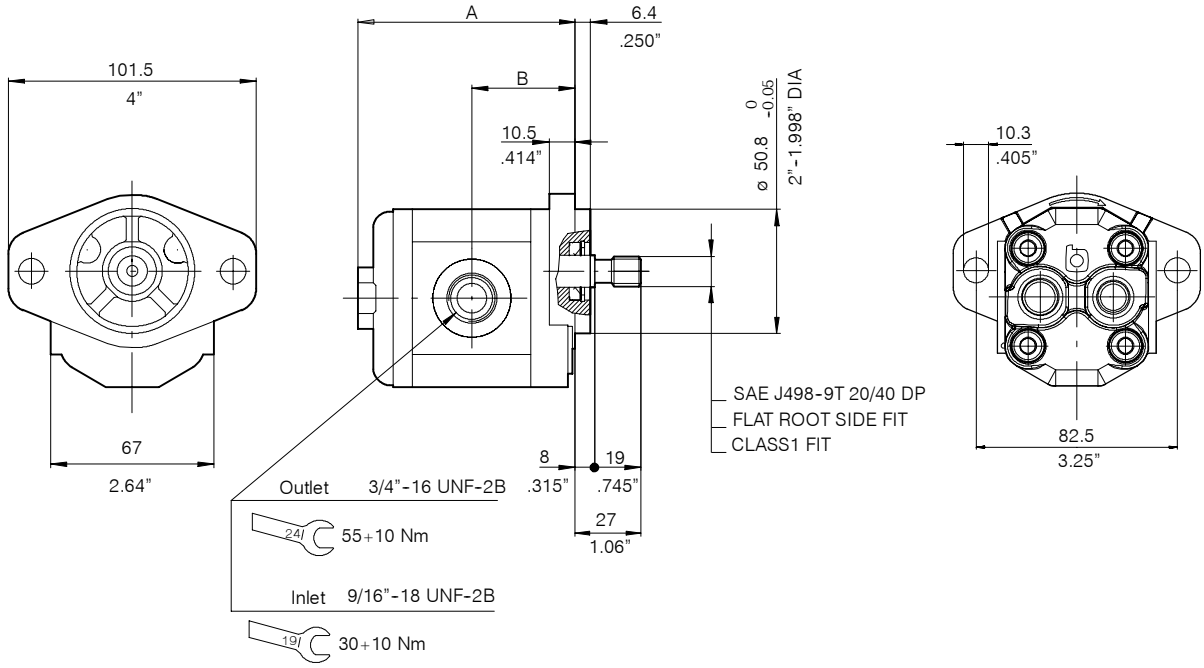
Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	89	3.50	42	1.65
APM100/3.5	3.5	93	3.66	44.5	1.75
APM100/4.3	4.3	97	3.82	46	1.81
APM100/5	5	99.5	3.92	47.5	1.87
APM100/6.5	6.5	104.5	4.11	50	1.97
APM100/8	8	110	4.33	53	2.09

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D	**200101380501**	D
APM100/3.5 D	**200101480501**	
APM100/4.3 D	**200101580501**	
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

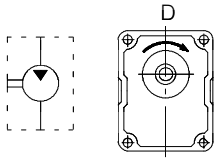
Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S	**200101380601**	S
APM100/3.5 S	**200101480601**	
APM100/4.3 S	**200101580601**	
APM100/5 S		
APM100/6.5 S		
APM100/8 S		

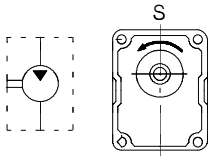
Group **APM100** Code **887S**

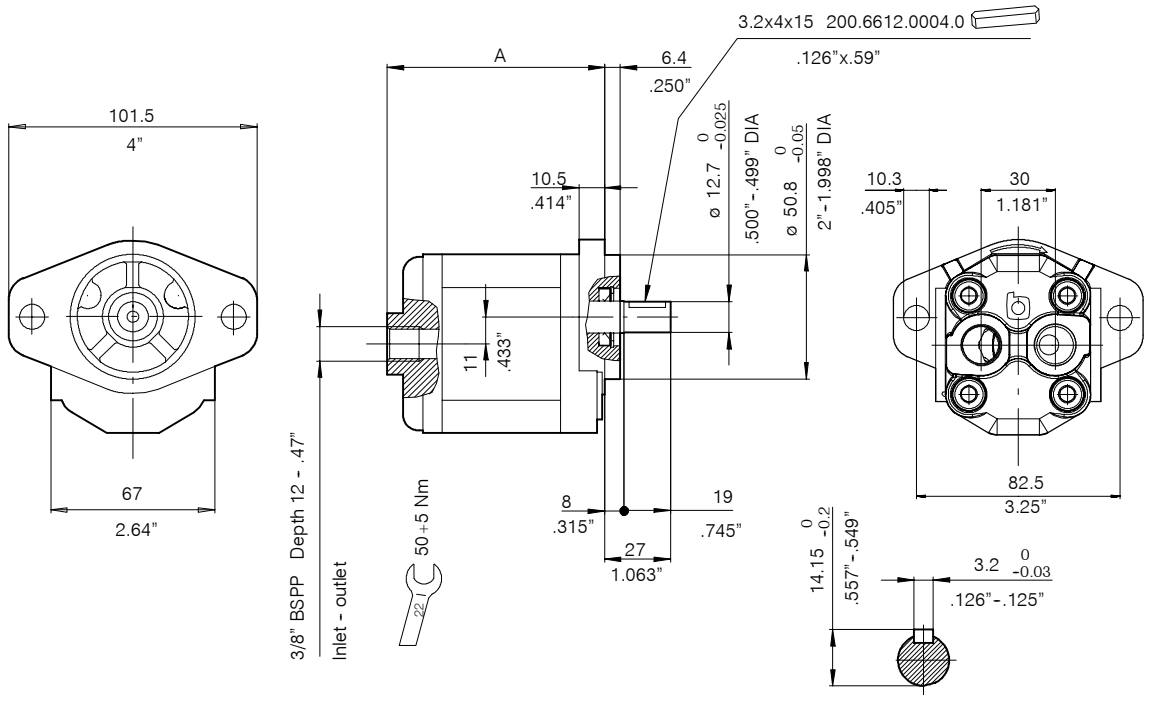


Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	89	3.50	42	1.65
APM100/3.5	3.5	93	3.66	44.5	1.75
APM100/4.3	4.3	97	3.82	46	1.81
APM100/5	5	99.5	3.92	47.5	1.87
APM100/6.5	6.5	104.5	4.11	50	1.97
APM100/8	7.8	110	4.33	53	2.09

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D	**200101386501**	
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S		
APM100/6.5 S		
APM100/8 S		

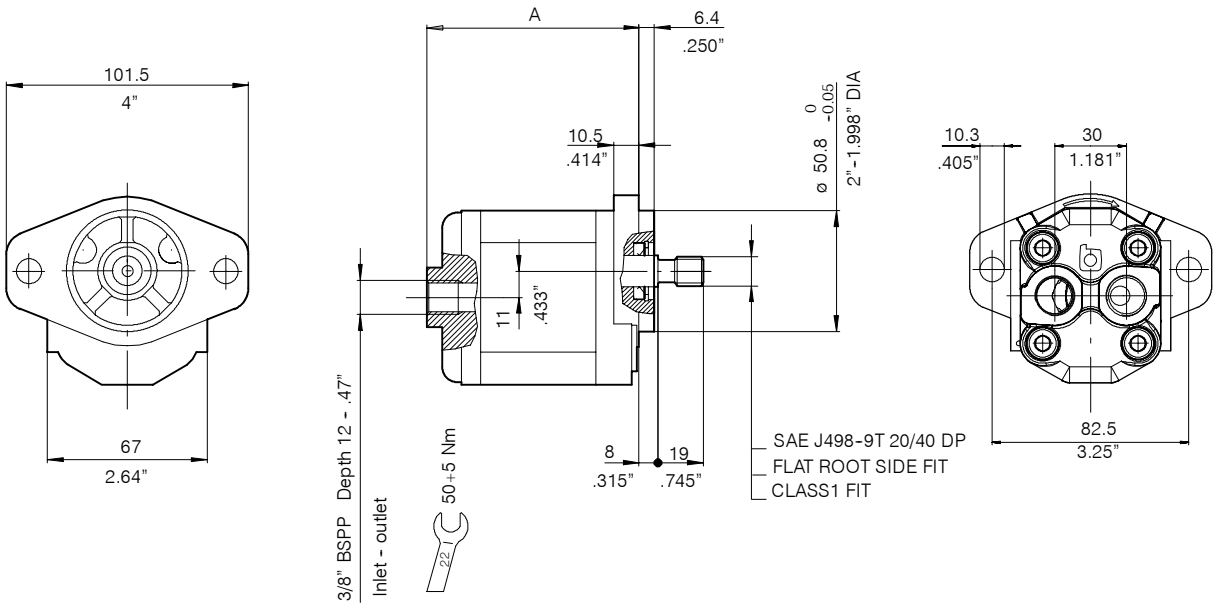


Type	Displacement cm^3/rev	Dimensions	
		A	
		mm	inch.
APM100/2.5	2.5	89	3.50
APM100/3.5	3.5	93	3.66
APM100/4.3	4.3	97	3.82
APM100/5	5	99.5	3.92
APM100/6.5	6.5	104.5	4.11
APM100/8	7.8	110	4.33

Unidirectional gear motor

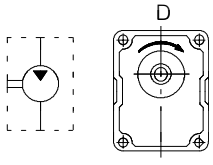
Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		D
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D	**200101680501**	
APM100/6.5 D		
APM100/8 D		

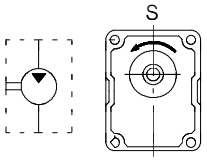
Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		S
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S	**200101680602**	
APM100/6.5 S		
APM100/8 S		



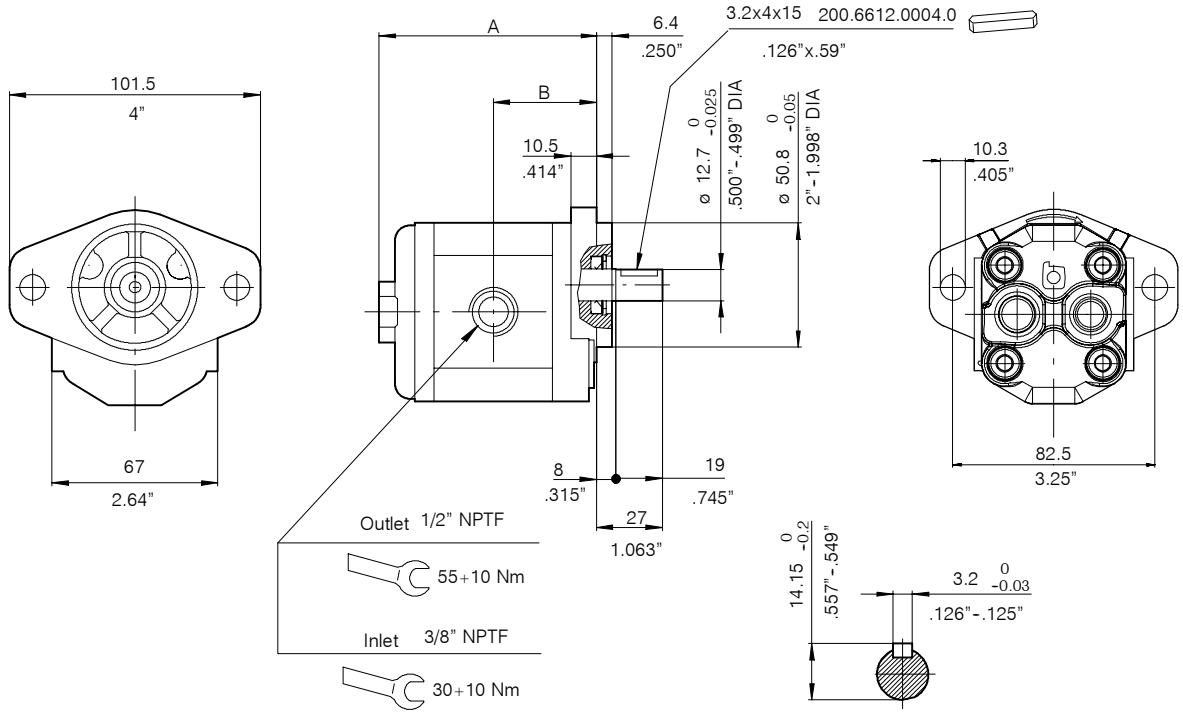
Type	Displacement cm^3/rev	Dimensions	
		A	
		mm	inch.
APM100/2.5 D	2.5	89	3.50
APM100/3.5 D	3.5	93	3.66
APM100/4.3 D	4.3	97	3.82
APM100/5 D	5	99.5	3.92
APM100/6.5 D	6.5	104.5	4.11
APM100/8 D	8	110	4.33

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

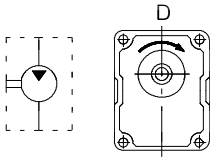
Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S		
APM100/6.5 S		
APM100/8 S		

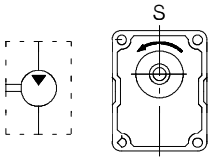
Group **APM100** Code **880 NPTF**



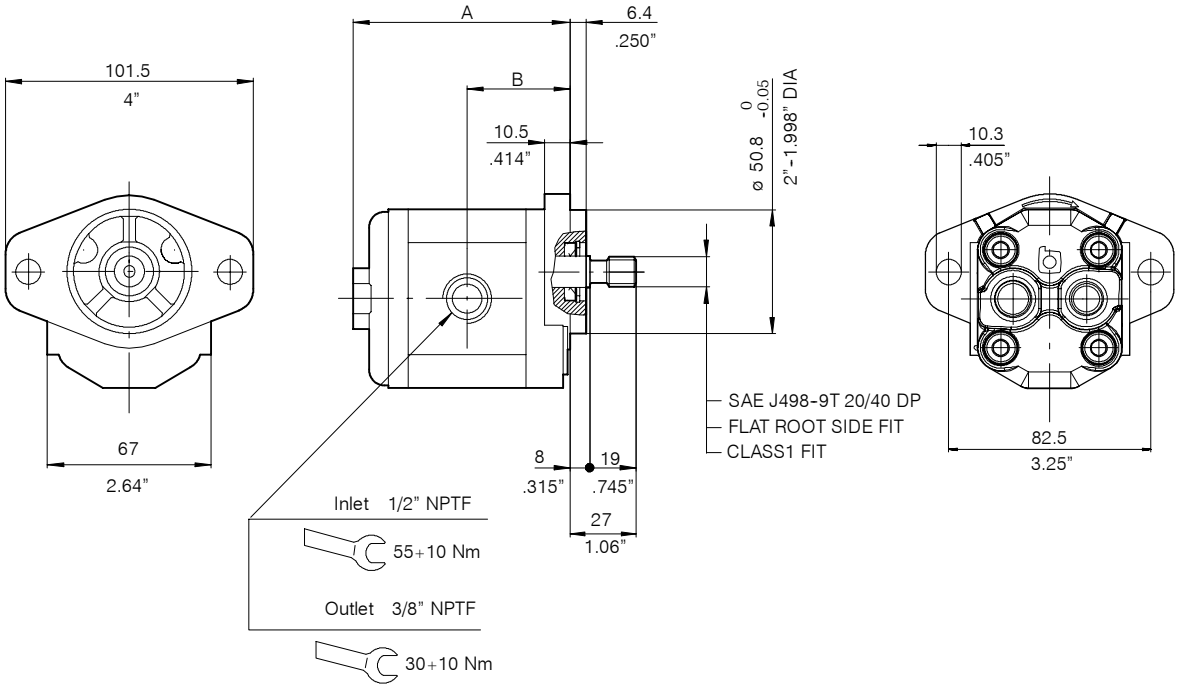
Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	89	3.50	42	1.65
APM100/3.5	3.5	93	3.66	44.5	1.75
APM100/4.3	4.3	97	3.82	46	1.81
APM100/5	5	99.5	3.92	47.5	1.87
APM100/6.5	6.5	104.5	4.11	50	1.97
APM100/8	8	110	4.33	53	2.09

Unidirectional gear motor

Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

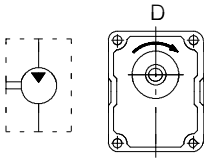
Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S		
APM100/6.5 S		
APM100/8 S		

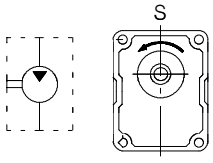
Group **APM100** Code **887S NPTF**



Type	Displacement cm^3/rev	Dimensions			
		A		B	
		mm	inch.	mm	inch.
APM100/2.5	2.5	89	3.50	42	1.65
APM100/3.5	3.5	93	3.66	44.5	1.75
APM100/4.3	4.3	97	3.82	46	1.81
APM100/5	5	99.5	3.92	47.5	1.87
APM100/6.5	6.5	104.5	4.11	50	1.97
APM100/8	7.8	110	4.33	53	2.09

Unidirectional gear motor

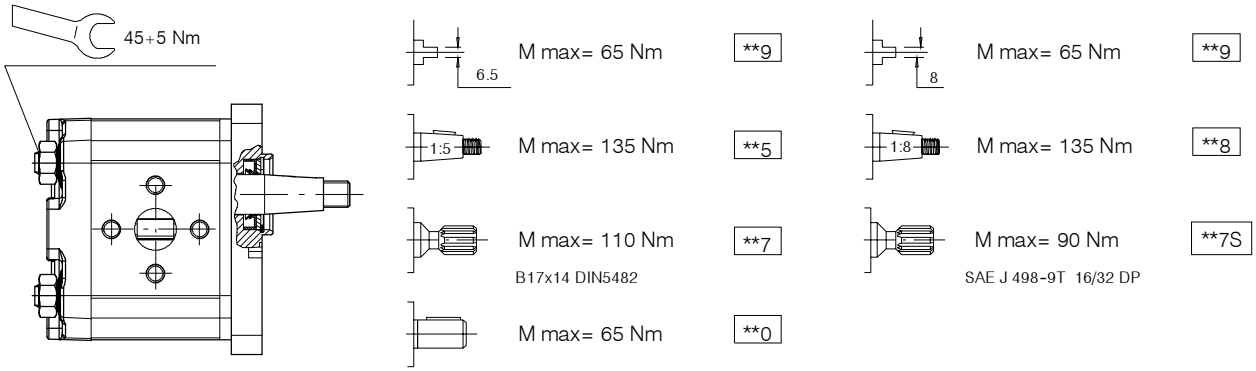
Type	**Order Code**	**Clockwise rotation: D**
APM100/2.5 D		
APM100/3.5 D		
APM100/4.3 D		
APM100/5 D		
APM100/6.5 D		
APM100/8 D		

Type	**Order Code**	**C.clockwise rotation: S**
APM100/2.5 S		
APM100/3.5 S		
APM100/4.3 S		
APM100/5 S		
APM100/6.5 S		
APM100/8 S		

5 Gear motors group APM200

APM200	Displacement		Max. pressure				n min.	n max.
Type	cm^3/rev	Cu.In. P.R.	P1		P2			
			bar	P.S.I.	bar	P.S.I.	r/min	r/min
APM200/8.5	8.3	.506	220	3150	250	3600	650	4000
APM200/11	11.0	.671	210	3000	250	3600	650	4000
APM200/15	15.0	.915	210	3000	250	3600	650	3500
APM200/19	18.9	1.159	200	2900	240	3400	650	3000
APM200/22	21.9	1.342	190	2750	230	3300	600	3000
APM200/26	25.9	1.586	180	2600	220	3150	600	2500
APFM200/8.5	8.3	.506	220	3150	250	3600	650	4000
APFM200/11	11.0	.671	210	3000	250	3600	650	4000
APFM200/15	15.0	.915	210	3000	250	3600	650	3500
APFM200/19	18.9	1.159	200	2900	240	3400	650	3000
APFM200/22	21.9	1.342	190	2750	230	3300	600	3000
APFM200/26	25.9	1.586	180	2600	220	3150	600	2500
APMR200/8.5	8.3	.506	220	3150	250	3600	650	4000
APMR200/11	11.0	.671	210	3000	250	3600	650	4000
APMR200/15	15.0	.915	210	3000	250	3600	650	3500
APMR200/19	18.9	1.159	200	2900	240	3400	650	3000
APMR200/22	21.9	1.342	190	2750	230	3300	600	3000
APMR200/26	25.9	1.586	180	2600	220	3150	600	2500

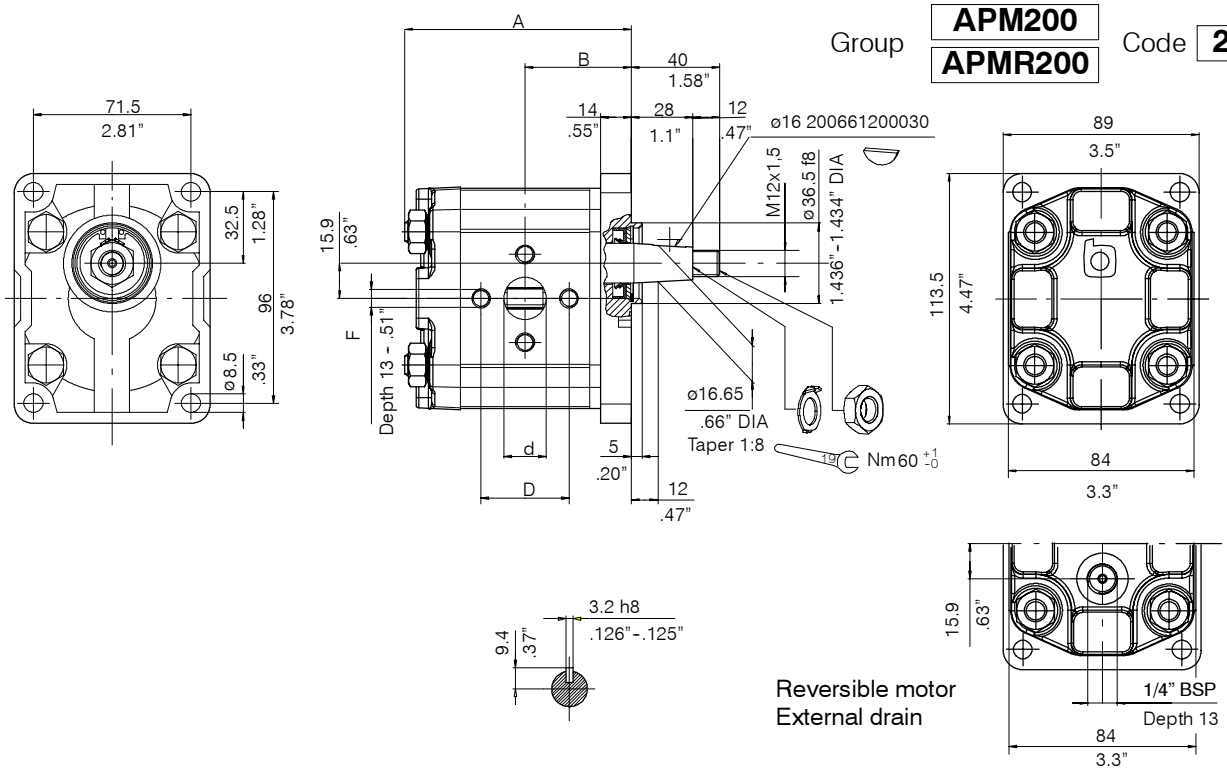
Max torque allowed by the shaft end configuration



Notes:

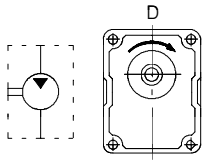
- **For codes and dimensions regarding accessories, see section 6.**
- **For the types of motors without ordering code, contact our Sales Department.**
- **For reversible motors inlet and outlet ports have same sizes as per inlet unidirectional rotation**

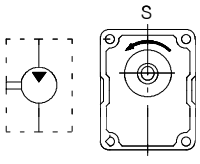
Group **APM200** **APMR200** Code **218**



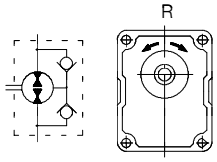
Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	88	3.46	40.3	1.59	13.5	.53	30	1.18	M6X1	13.5	.53	30	1.18	M6X1
APM200/11	10.95	104	4.09	48.3	1.90	19	.75	40	1.58	M8X1.25					
APM200/15	14.95														
APM200/19	18.9	114	4.50	54.3	2.14						19	.75	40	1.58	M8X1.25
APM200/22	21.9	118	4.64	56.5	2.22										
APM200/26	25.9														

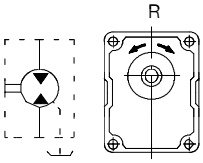
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D	**200.1023.1350.3**	
APM200/11 D	**200.1024.1350.4**	
APM200/15 D	**200.1025.1350.3**	
APM200/19 D	**200.1026.1350.3**	
APM200/22 D	**200.1027.1350.2**	
APM200/26 D	**200.1028.1350.1**	

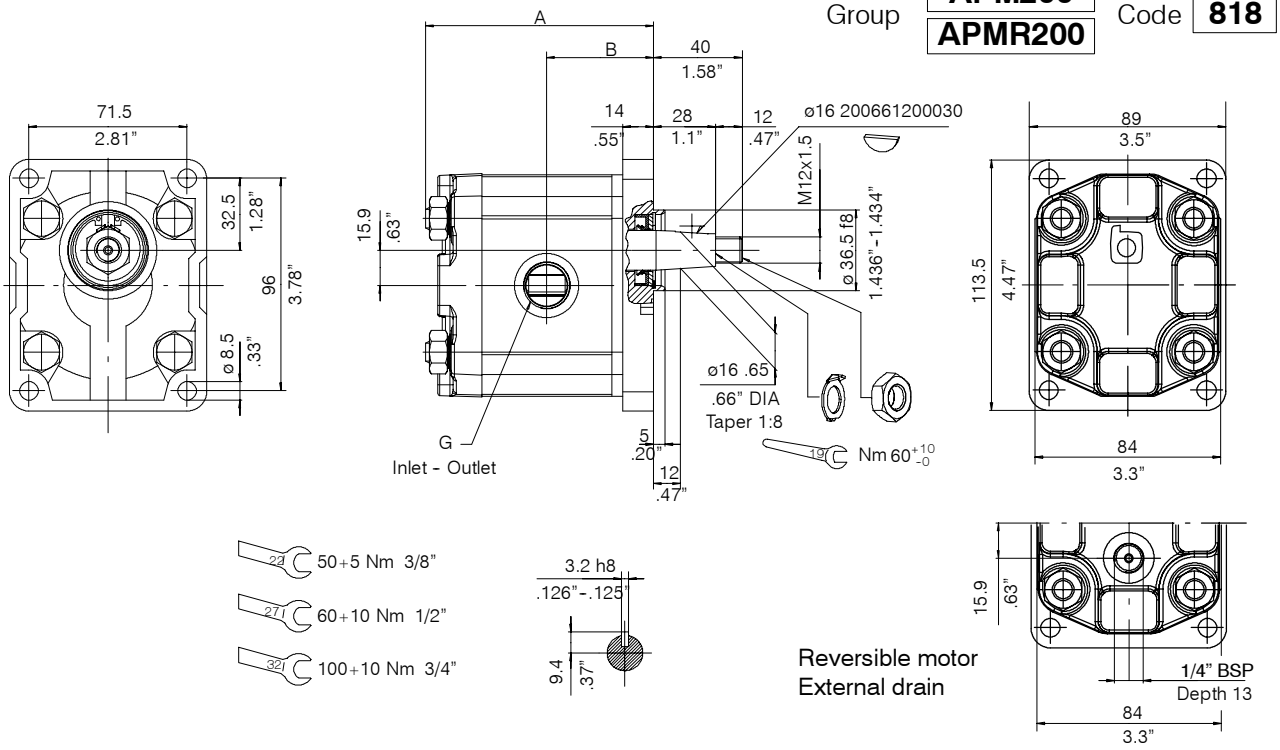
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S	**200.1023.1360.4**	
APM200/11 S	**200.1024.1360.3**	
APM200/15 S	**200.1025.1360.3**	
APM200/19 S	**200.1026.1360.2**	
APM200/22 S	**200.1027.1360.2**	
APM200/26 S	**200.1028.1360.3**	

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

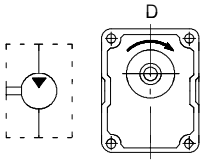
Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

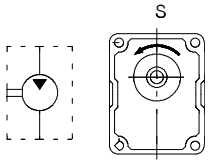
Group **APM200** / **APMR200** Code **818**



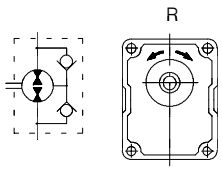
Type	Displacement cm³/rev	Dimensions				Outlet	Inlet
		A		B		G	G
		mm	inch.	mm	inch.	BSPP	BSPP
APM200/8.5	8.3	88	3.46	40.3	1.59	3/8"	3/8"
APM200/11	10.95	104	4.09	48.3	1.90	1/2"	
APM200/15	14.95						
APM200/19	18.9	114	4.50	54.3	2.14	3/4"	1/2"
APM200/22	21.9	118	4.64	56.5	2.22		
APM200/26	25.9						

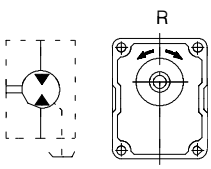
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D	**200.1023.1320.7**	
APM200/11 D		
APM200/15 D	**200.1025.1350.5**	
APM200/19 D	**200.1026.1350.4**	
APM200/22 D		
APM200/26 D		

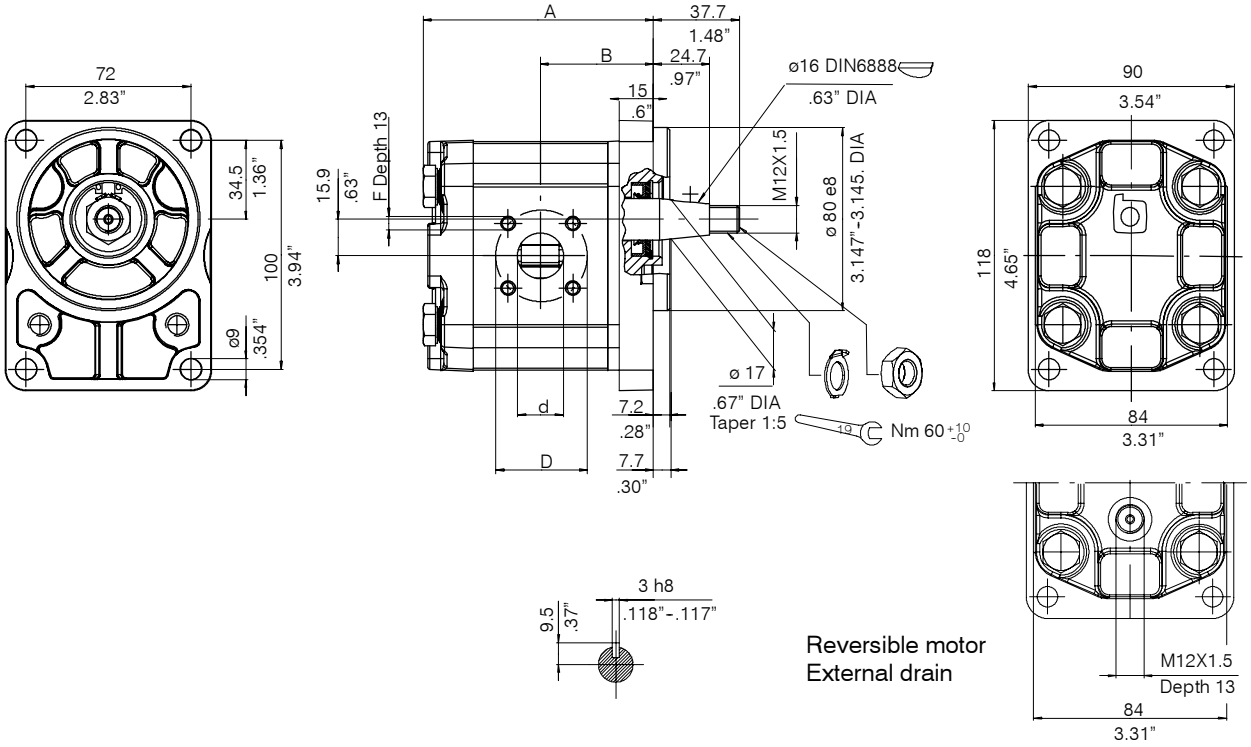
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S	**200.1026.1360.3**	
APM200/22 S		
APM200/26 S		

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

Group **APM200** / **APMR200** Code **225**



Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	85	3.35	41.3	1.63	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	101	4	49.3	1.94	20	.79								
APM200/15	14.95														
APM200/19	18.9	113	4.44	55.3	2.18										
APM200/22	21.9	117	4.60	57.5	2.26										

Unidirectional motor

Type	**Order Code**	**Clockwise rotation: D**
APM200/8.5 D	**200.1023.2250.1**	D
APM200/11 D	**200.1024.2250.3**	
APM200/15 D		
APM200/19 D		
APM200/22 D		

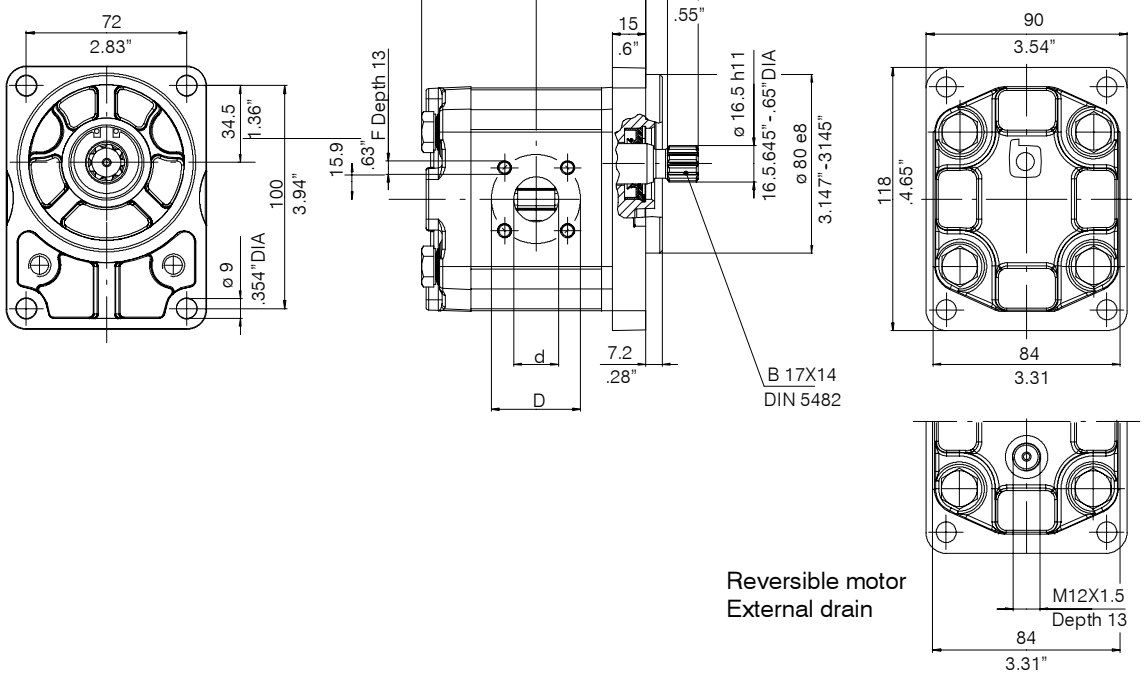
Type	**Order Code**	**Counterclockwise rotation: S**
APM200/8.5 S		S
APM200/11 S	**200.1024.2260.1**	
APM200/15 S		
APM200/19 S		
APM200/22 S		

Reversible motor

Type	**Order Code**	**Reversible motor Internal drain**
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		

Type	**Order Code**	**Reversible motor External drain**
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		

Group **APM200** / **APMR200** Code **227**



Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	85	3.35	41.3	1.63	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	101	4	49.3	1.94	20	.79								
APM200/15	14.95														
APM200/19	18.9	113	4.44	55.3	2.18										
APM200/22	21.9	117	4.60	57.5	2.26										
APM200/26	25.9														

Unidirectional motor

Type	**Order Code**	**Clockwise rotation: D**
APM200/8.5 D		D
APM200/11 D	**200.1024.2520.3**	
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D		

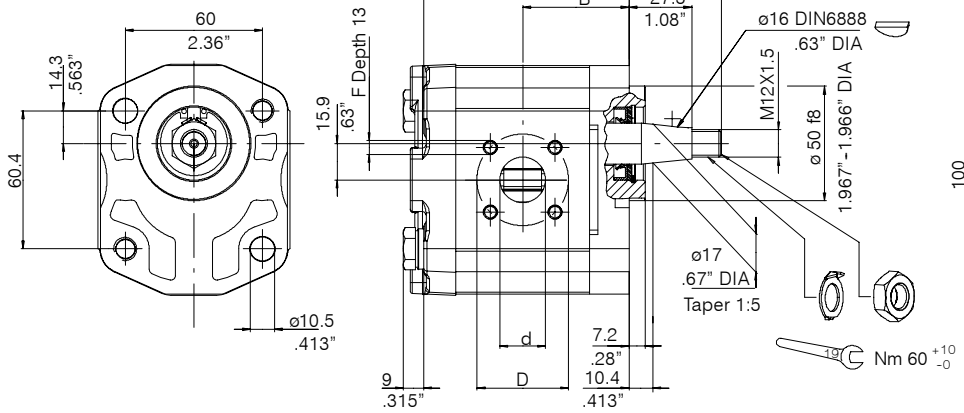
Type	**Order Code**	**Counterclockwise rotation: S**
APM200/8.5 S	**200.1023.2560.2**	S
APM200/11 S		
APM200/15 S		
APM200/19 S	**200.1026.2560.1**	
APM200/22 S	**200.1027.2530.3**	
APM200/26 S	**200.1028.2530.2**	

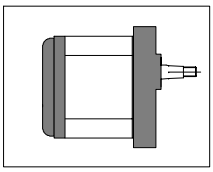
Reversible motor

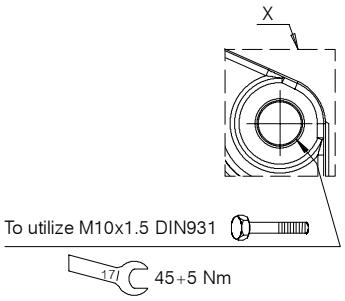
Type	**Order Code**	**Reversible motor Internal drain**
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

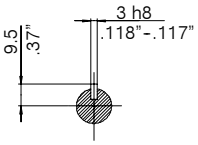
Type	**Order Code**	**Reversible motor External drain**
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

Group **APM200** / **APMR200** Code **235**

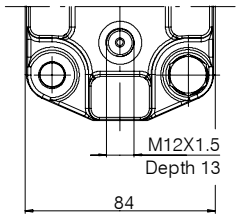








Reversible motor
External drain



Type	Displacement cm³/rev	Dimensions A mm	A inch	B mm	B inch	Outlet d mm	d inch	D mm	D inch	F mm	Inlet d mm	d inch	D mm	D inch	F mm
APM200/8.5	8.3	74	2.9	40	1.57	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	90	3.55	46.5	1.83	20	.79								
APM200/15	14.95														
APM200/19	18.9	102	4	52.3	2.06										
APM200/22	21.9	106	4.17	54.5	2.15	20	.79	40	1.58	M6X1	15	.59	35	1.38	M6X1

Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D		D
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		

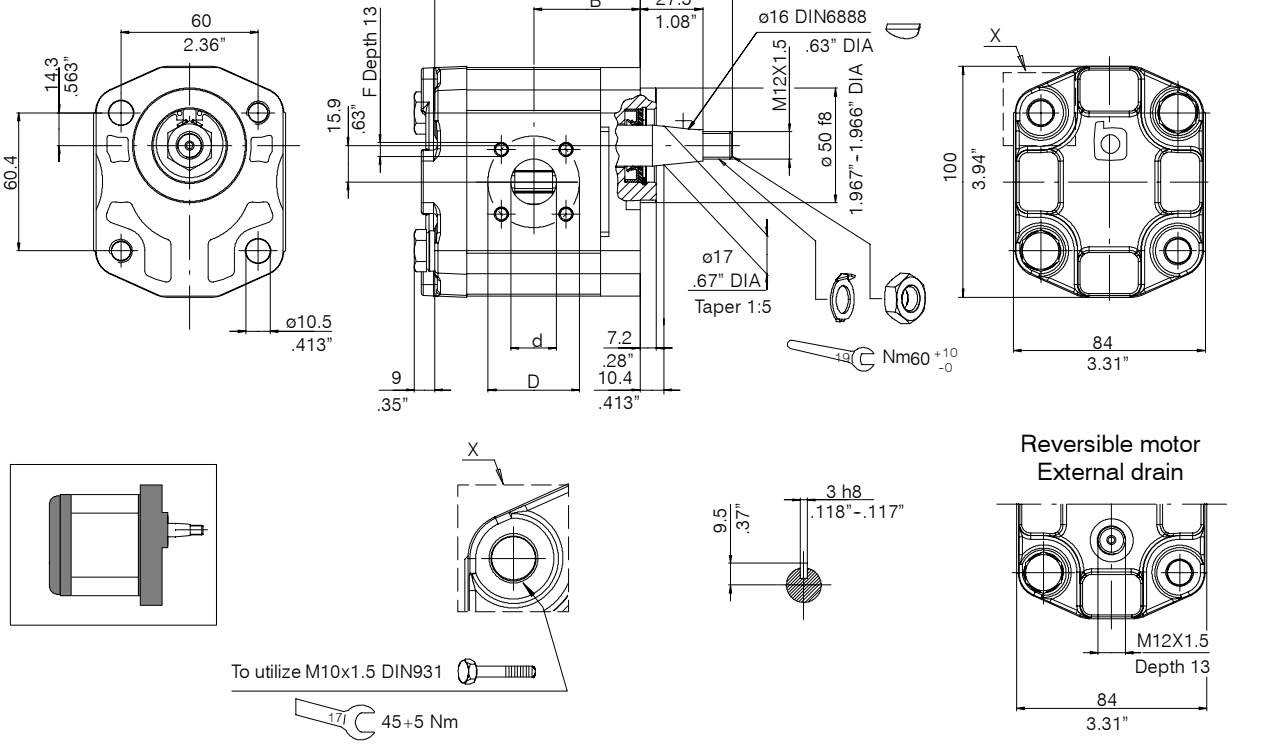
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S	**200.1023.3260.1**	S
APM200/11 S	**200.1024.3260.1**	
APM200/15 S		
APM200/19 S		
APM200/22 S		

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		

Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		

Group **APM200** / **APMR200** Code **245**



Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	74	2.9	40	1.57	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	90	3.55	46.5	1.83	20	.79								
APM200/15	14.95														
APM200/19	18.9	102	4	52.3	2.06										
APM200/22	21.9	106	4.17	54.5	2.15										

Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D		D
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		

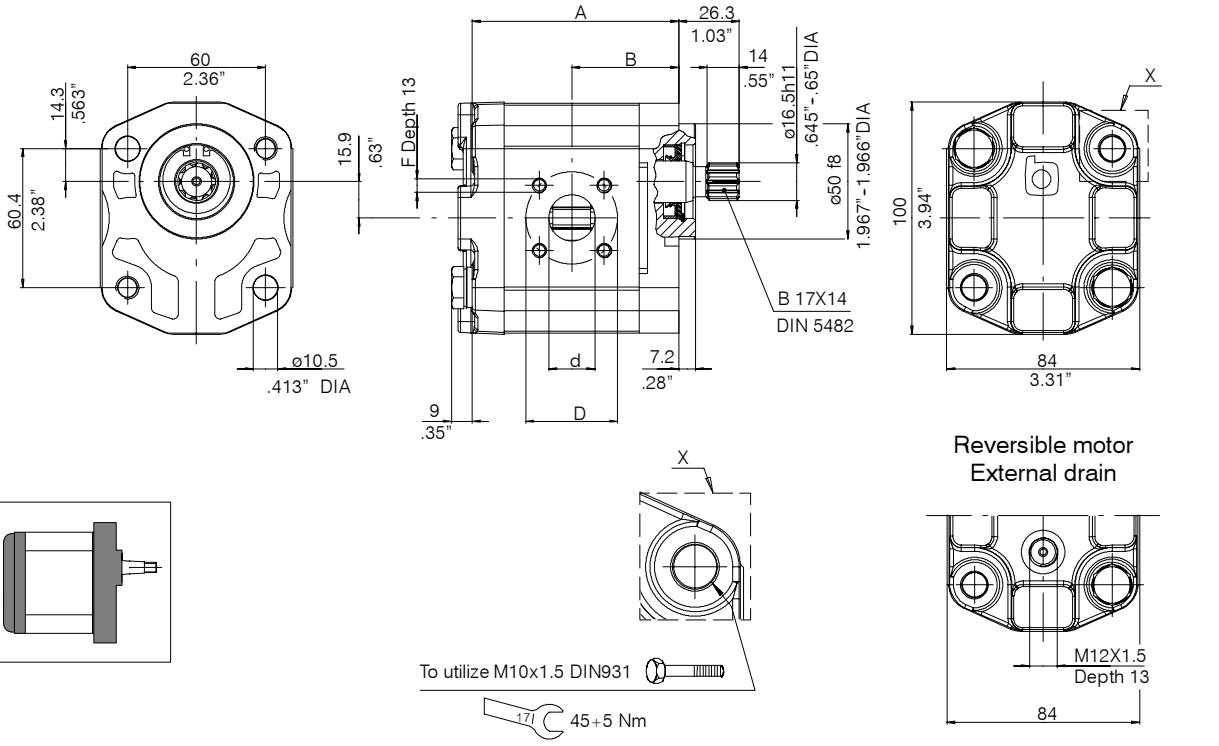
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		S
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		

Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		

Group **APM200** / **APMR200** Code **237**



Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	74	2.9	40	1.57	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	90	3.55	46.5	1.83	20	.79								
APM200/15	14.95														
APM200/19	18.9	102	4	52.3	2.06										
APM200/22	21.9	106	4.17	54.5	2.15										

Unidirectional motor

Type	**Order Code**	**Clockwise rotation: D**
APM200/8.5 D		D
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		

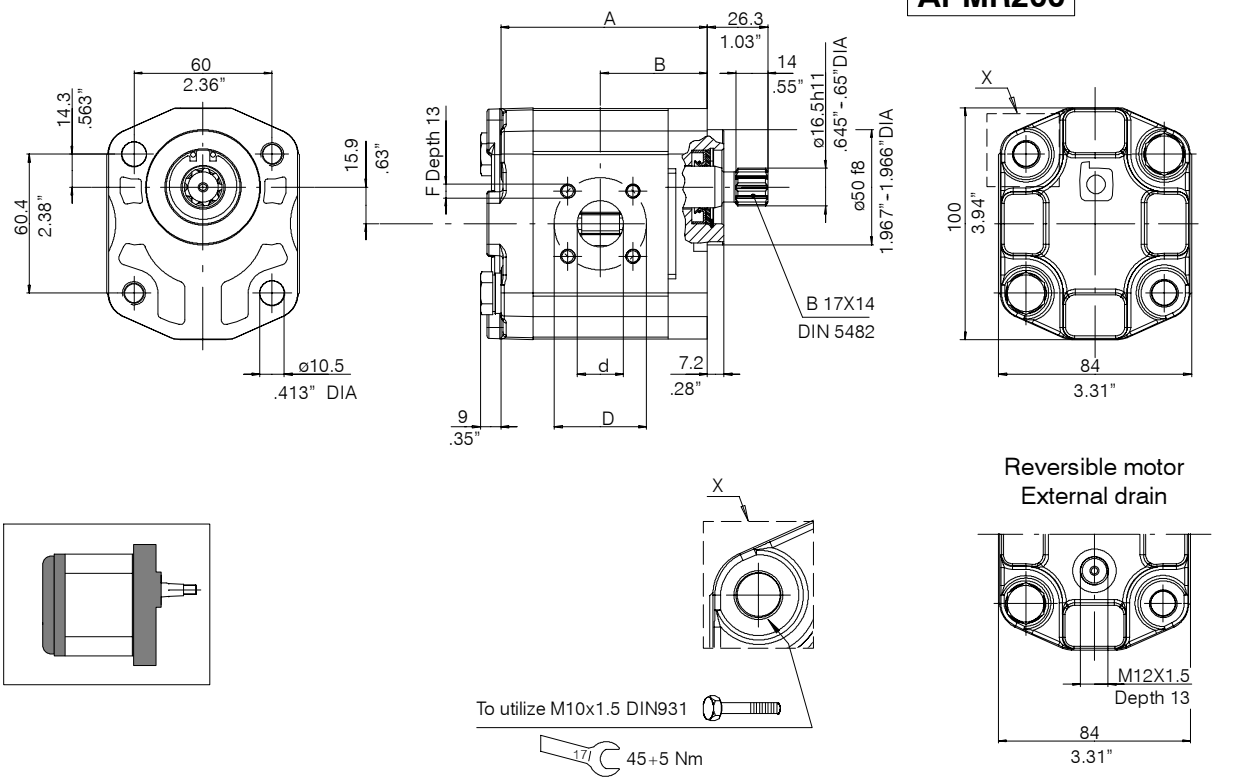
Type	**Order Code**	**Counterclockwise rotation: S**
APM200/8.5 S		S
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		

Reversible motor

Type	**Order Code**	**Reversible motor Internal drain**
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		

Type	**Order Code**	**Reversible motor External drain**
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		

Group **APM200** / **APMR200** Code **247**



Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	74	2.9	40	1.57	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	90	3.55	46.5	1.83	20	.79								
APM200/15	14.95														
APM200/19	18.9	102	4	52.3	2.06										
APM200/22	21.9	106	4.17	54.5	2.15										

Unidirectional motor

Type	**Order Code**	**Clockwise rotation: D**
APM200/8.5 D		D
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		

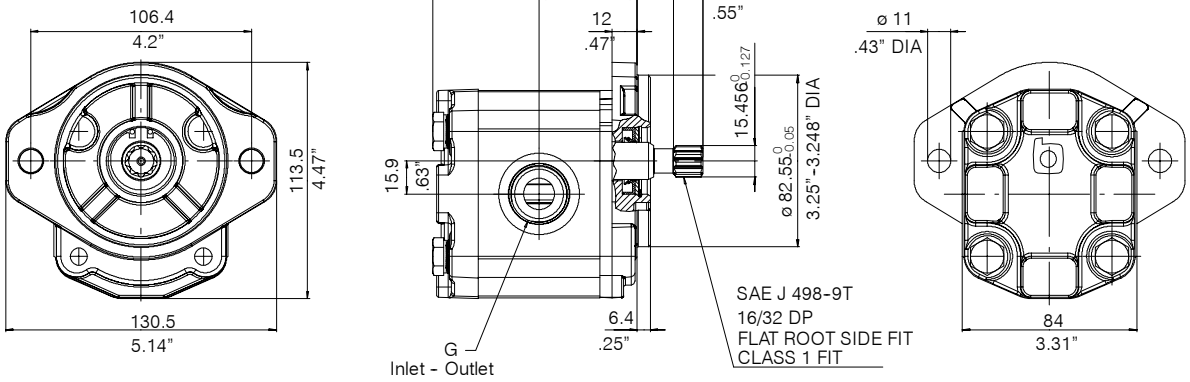
Type	**Order Code**	**Counterclockwise rotation: S**
APM200/8.5 S		S
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		

Reversible motor

Type	**Order Code**	**Reversible motor Internal drain**
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		

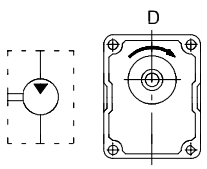
Type	**Order Code**	**Reversible motor External drain**
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		

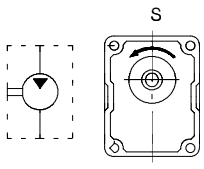
Group **APM200** / **APMR200** Code **887S**



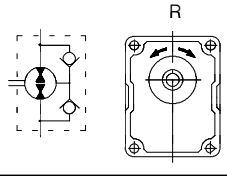
Type	Displacement cm³/rev	Dimensions				Outlet	Inlet
		A		B		G	G
		mm	inch	mm	inch	12UNF	14UNF
APM200/8.5	8.3	82.5	3.23	39.5	1.55	1-1/16	7/8
APM200/11	10.95	98.5	3.9	47.5	1.87		
APM200/15	14.95						
APM200/19	18.9	110.5	4.35	53.5	2.11		
APM200/22	21.9	115	4.53	55.5	2.18		
APM200/26	25.9						

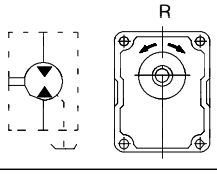
Unidirectional motor

Type	**Order Code**	**Clockwise rotation: D**
APM200/8.5 D	**200.1023.8650.1**	
APM200/11 D	**200.1024.8650.1**	
APM200/15 D		
APM200/19 D	**200.1026.8650.2**	
APM200/22 D		
APM200/26 D		

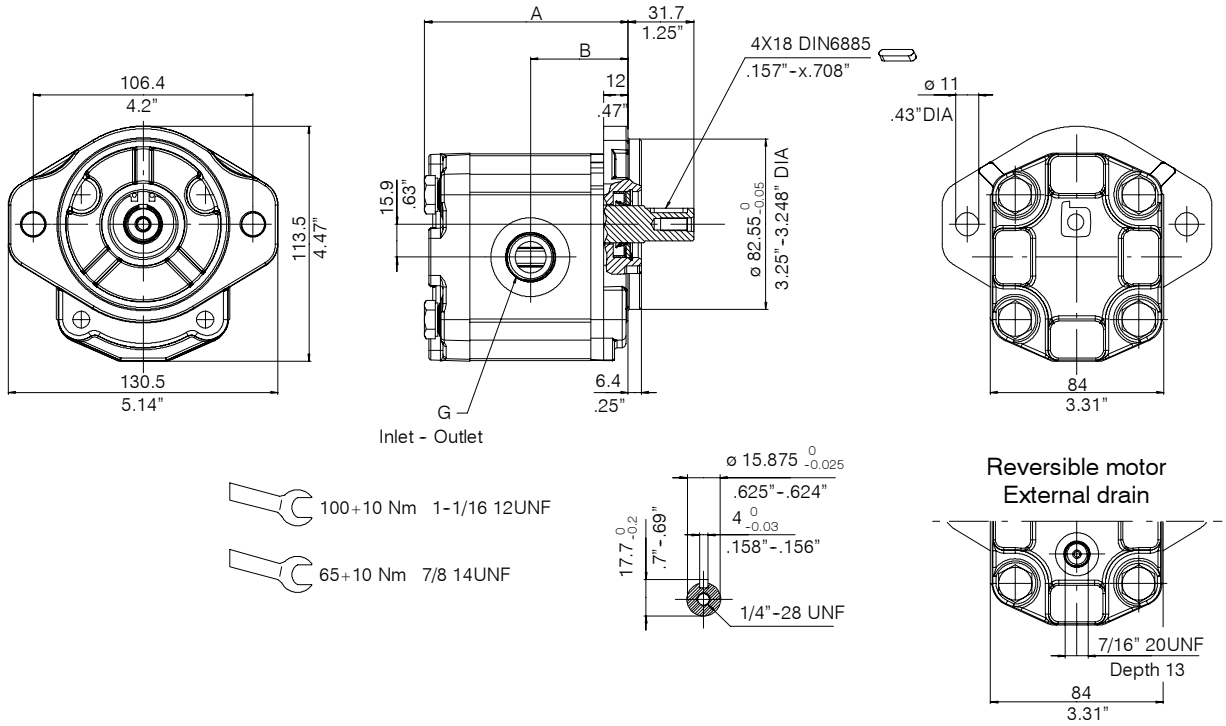
Type	**Order Code**	**Counterclockwise rotation: S**
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

Reversible motor

Type	**Order Code**	**Reversible motor Internal drain**
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

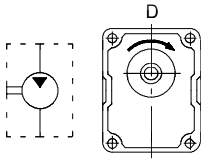
Type	**Order Code**	**Reversible motor External drain**
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

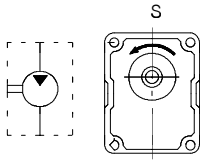
Group **APM200** / **APMR200** Code **880**



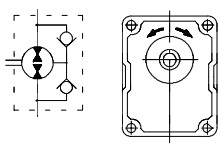
Type	Displacement cm³/rev	Dimensions				Outlet	Inlet
		A		B		G	G
		mm	inch	mm	inch	12UNF	14UNF
APM200/8.5	8.3	82.5	3.23	39.5	1.55	1-1/16	7/8
APM200/11	10.95	98.5	3.9	47.5	1.87		
APM200/15	14.95						
APM200/19	18.9	110.5	4.35	53.5	2.11		
APM200/22	21.9	115	4.53	55.5	2.18		
APM200/26	25.9						

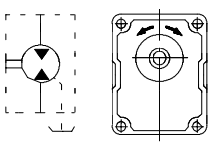
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D	**200.1023.8050.2**	
APM200/11 D	**200.1024.8050.1**	
APM200/15 D	**200.1025.8050.3**	
APM200/19 D	**200.1026.8050.1**	
APM200/22 D	**200.1027.8050.1**	
APM200/26 D	**200.1028.8050.1**	

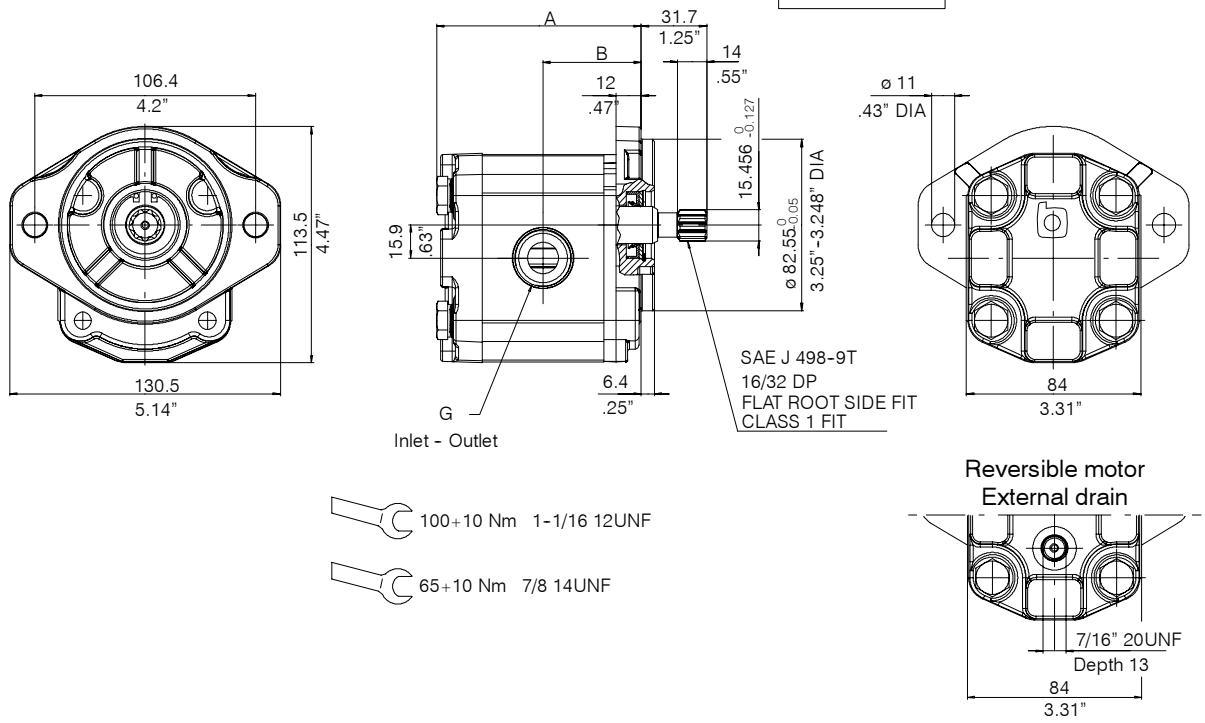
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S	**200.1023.8060.1**	
APM200/11 S	**200.1024.8060.2**	
APM200/15 S	**200.1025.8060.1**	
APM200/19 S		
APM200/22 S		
APM200/26 S		

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

Group **APM200** / **APMR200** Code **887S NPTF**



Type	Displacement cm³/rev	Dimensions				Outlet	Inlet
		A		B		G	G
		mm	inch	mm	inch	NPTF	NPTF
APM200/11	10.95	98.5	3.9	47.5	1.87	3/4"	1/2"
APM200/15	14.95						
APM200/19	18.9	110.5	4.35	53.5	2.11		
APM200/22	21.9	115	4.53	55.5	2.18		
APM200/26	25.9						

Unidirectional motor

Type	**Order Code**	**Clockwise rotation: D**
APM200/11 D		D
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D		

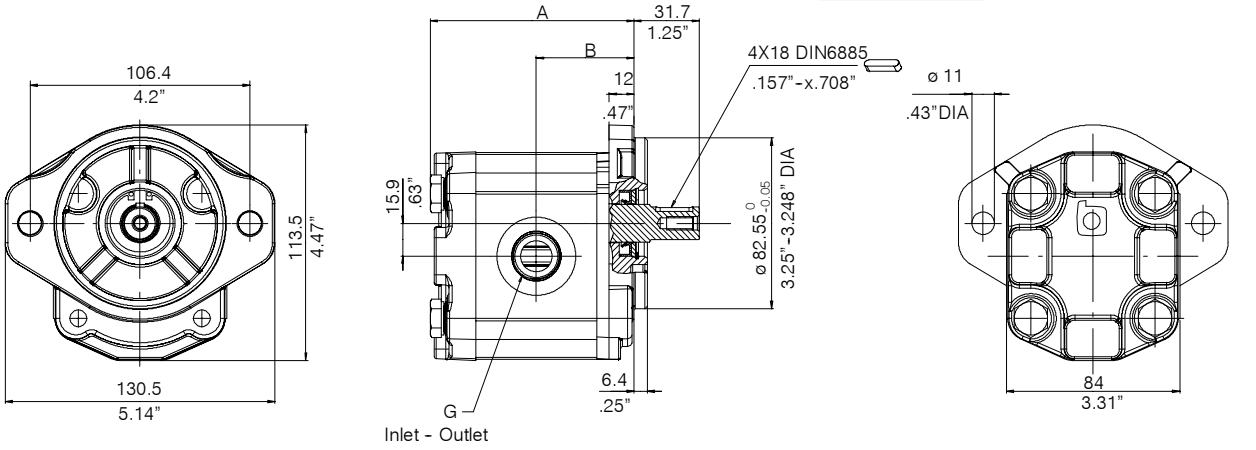
Type	**Order Code**	**Counterclockwise rotation: S**
APM200/11 S		S
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

Reversible motor

Type	**Order Code**	**Reversible motor Internal drain**
APMR200/11 ID		R
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

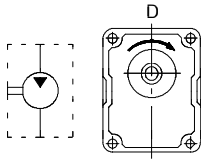
Type	**Order Code**	**Reversible motor External drain**
APMR200/11 ED		R
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

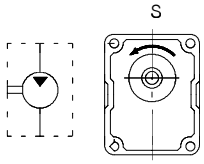
Group **APM200** / **APMR200** Code **880 NPTF**



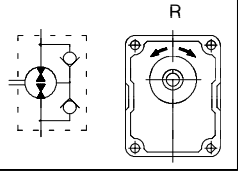
Type	Displacement cm³/rev	Dimensions				Outlet	Inlet
		A		B		G	G
		mm	inch	mm	inch	NPTF	NPTF
APM200/8.5	8.3	82.5	3.23	39.5	1.55	1/2"	1/2"
APM200/11	10.95	98.5	3.9	47.5	1.87	3/4"	1/2"
APM200/15	14.95						
APM200/19	18.9	110.5	4.35	53.5	2.11		
APM200/22	21.9	115	4.53	55.5	2.18		
APM200/26	25.9						

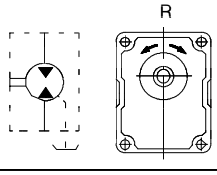
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D		
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D		

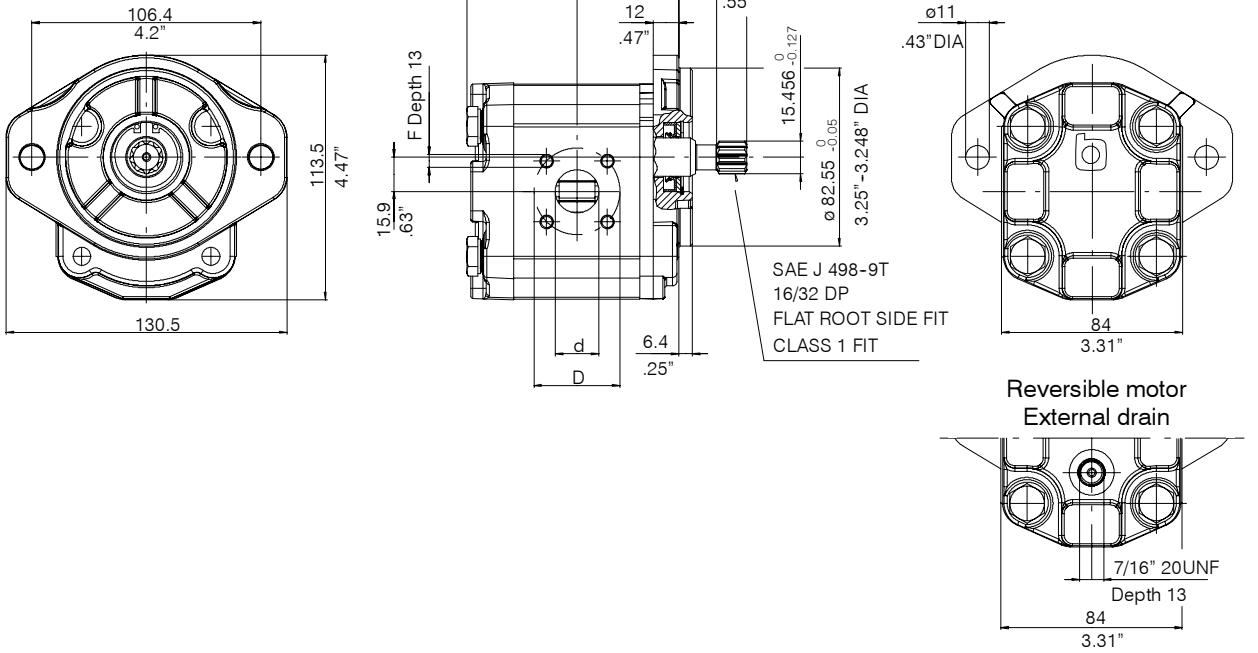
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

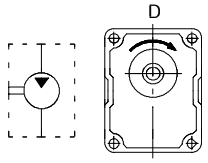
Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

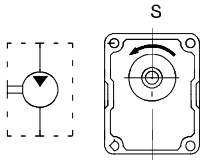
Group **APM200** / **APMR200** Code **287S-B**



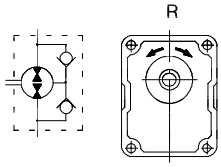
Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	82.5	3.23	39.5	1.55	15	.59	40	1.58	M6X1	13.5	.53	35	1.38	M6X1
APM200/11	10.95	98.5	3.9	47.5	1.87	20	.79								
APM200/15	14.95														
APM200/19	18.9	110.5	4.35	53.5	2.11										
APM200/22	21.9	115	4.53	55.5	2.18										
APM200/26	25.9														

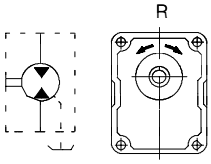
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D		
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D	**200.1028.8650.1**	

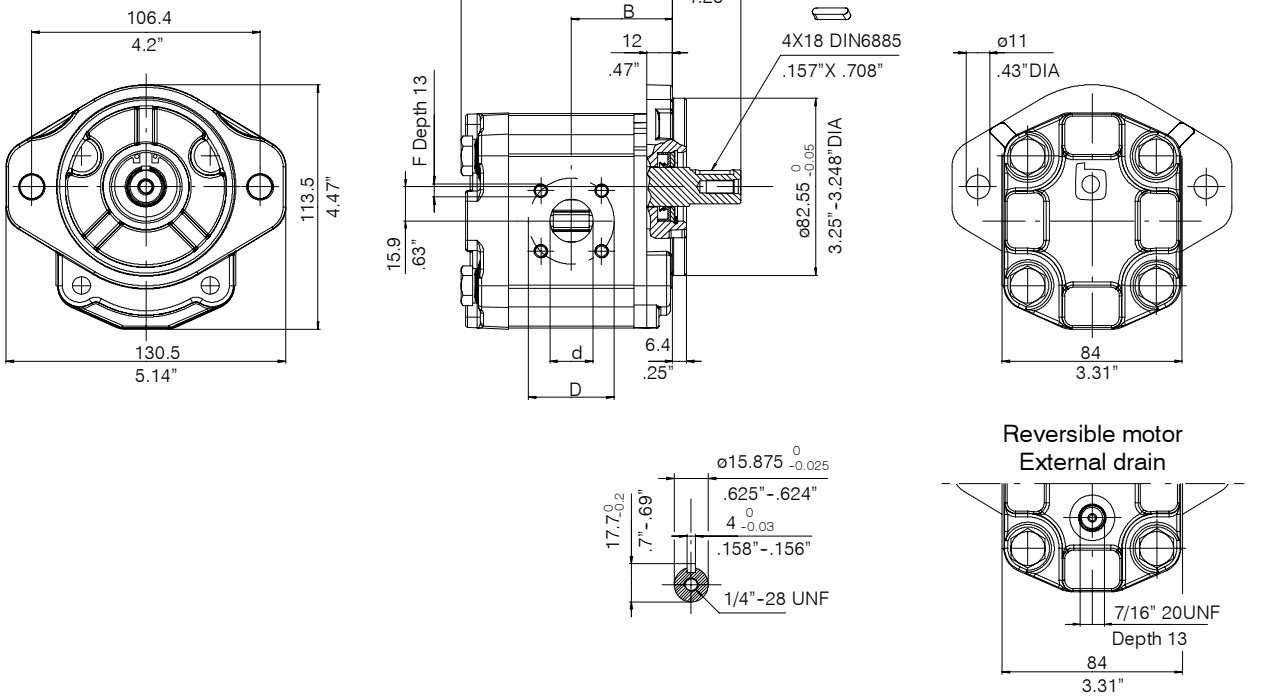
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

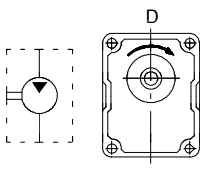
Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

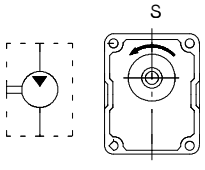
Group **APM200** / **APMR200** Code **280B**



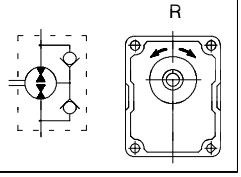
Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	82.5	3.23	39.5	1.55	15	.59	40	1.58	M6X1	13.5	.53	35	1.38	M6X1
APM200/11	10.95	98.5	3.9	47.5	1.87	20	.79								
APM200/15	14.95														
APM200/19	18.9	110.5	4.35	53.5	2.11										
APM200/22	21.9	115	4.53	55.5	2.18										
APM200/26	25.9														

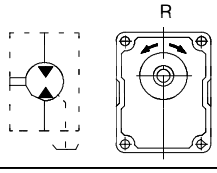
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D		
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D		

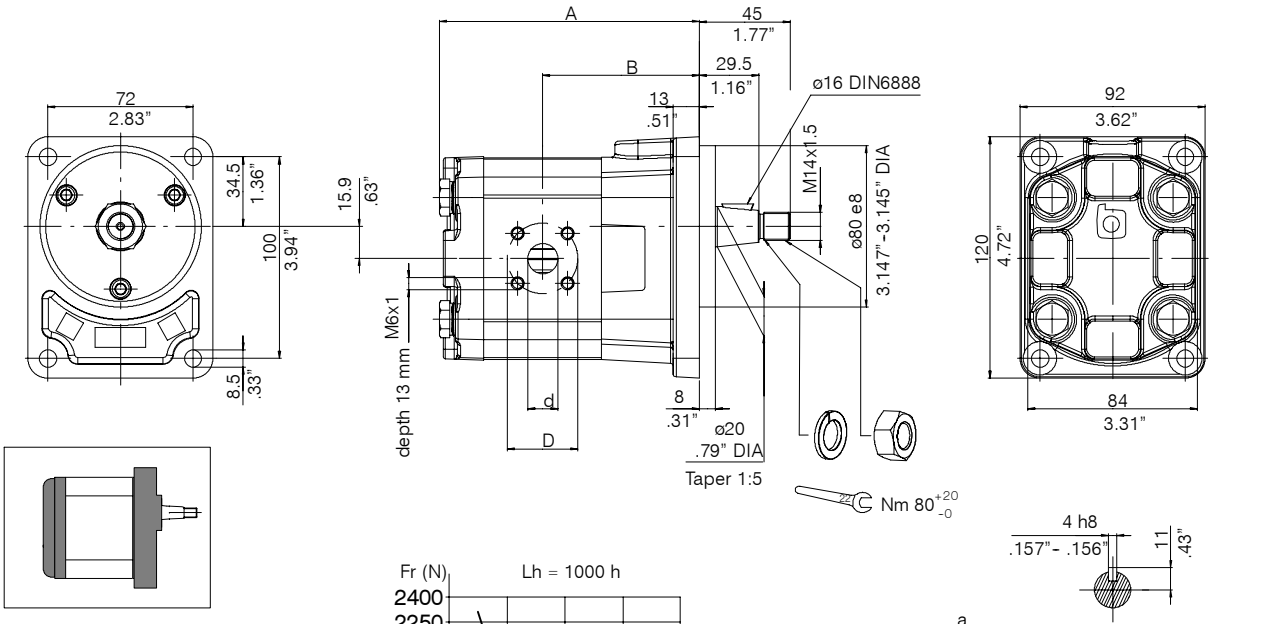
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

Reversible motor

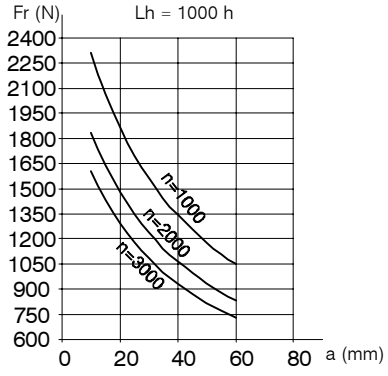
Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

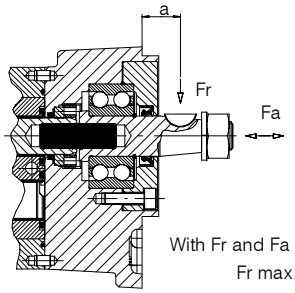
Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

Group **APM200** Code **225 2K2**



Max pressure (M max= 65 Nm)			
Motor	bar (PSI)		
	P1	P2	P3
APM200/15	180 (2600)	210 (3000)	230 (3300)
APM200/19	140 (2000)	165 (2400)	185 (2650)
APM200/22	120 (1700)	145 (2050)	165 (2350)
APM200/26	100 (1450)	120 (1750)	140 (2000)

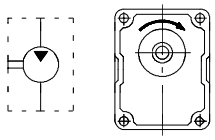


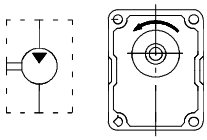


With Fr and Fa the max radial load is:
Fr max.= Fr - (0.7 Fa)

Type	Displacement cm^3/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	113	4.45	70	2.75	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	129	5.08	78	3.06	20	.79								
APM200/15	14.95														
APM200/19	18.9	141	5.55	84	3.30										
APM200/22	21.9	145.5	5.73	86	3.39										
APM200/26	25.9														

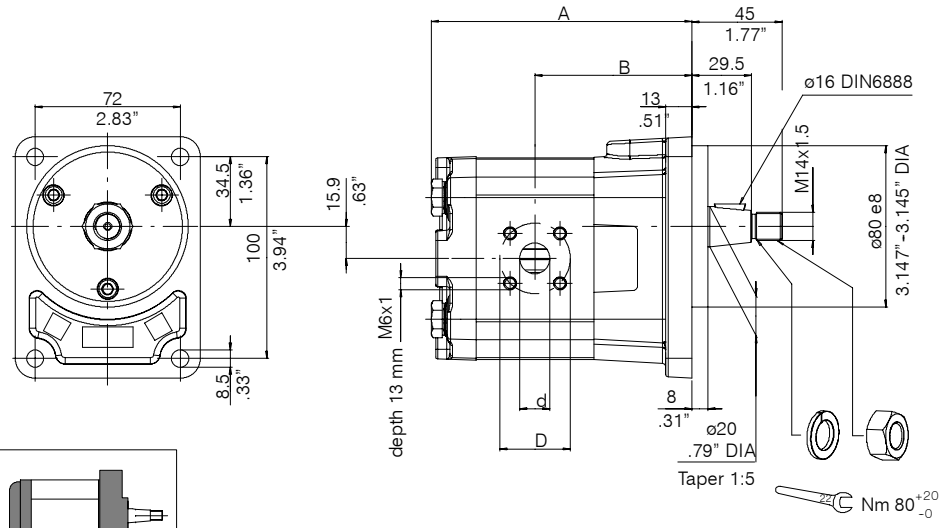
Unidirectional motor

Type	Order Code	Clockwise rotation: D
APM200/8.5 D		
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D		

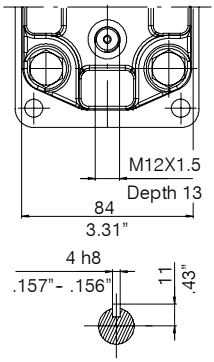
Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

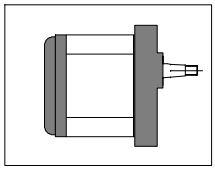
N.B.: With respect to the standards, the maximum pressures of some versions of this motor are reduced in relation to the max. torque allowed to the shaft.

Group **APMR200** Code **225 2K1**

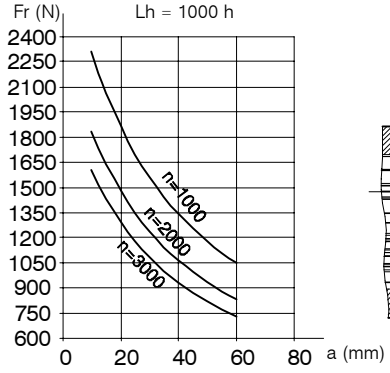


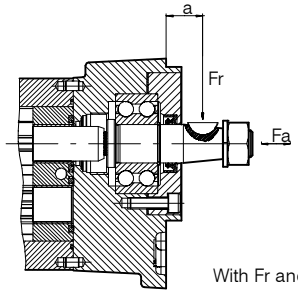
Reversible motor
External drain





Max pressure (M max= 65 Nm)			
Motor	bar (PSI)		
	P1	P2	P3
APMR200/15	180 (2600)	210 (3000)	230 (3300)
APMR200/19	140 (2000)	165 (2400)	185 (2650)
APMR200/22	120 (1700)	145 (2050)	165 (2350)
APMR200/26	100 (1450)	120 (1750)	140 (2000)





With Fr and Fa the max radial load is:
Fr max.= Fr - (0.7 Fa)

Type	Displacement cm^3/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APMR200/8.5	8.3	113	4.45	70	2.75	15	.59	35	1.38	M6X1	15	.59	35	1.38	M6X1
APMR200/11	10.95	129	5.08	78	3.06										
APMR200/15	14.95														
APMR200/19	18.9	141	5.55	84	3.30										
APMR200/22	21.9	145.5	5.73	86	3.39										
APMR200/26	25.9														

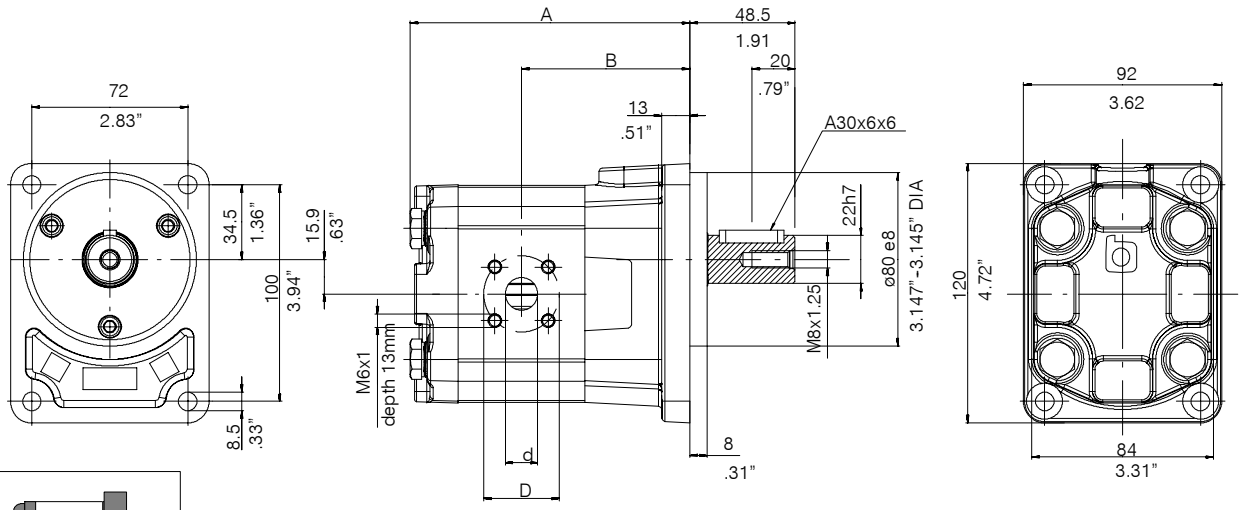
Reversible motor

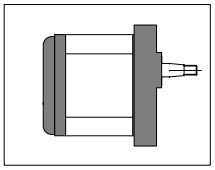
Type	**Order Code**	**Reversible motor Internal drain**
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

Type	**Order Code**	**Reversible motor External drain**
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

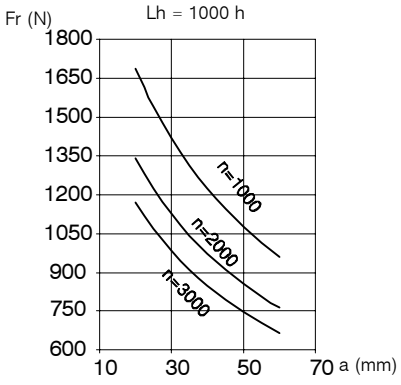
N.B.: With respect to the standards, the maximum pressures of some versions of this motor are reduced in relation to the max. torque allowed to the shaft.

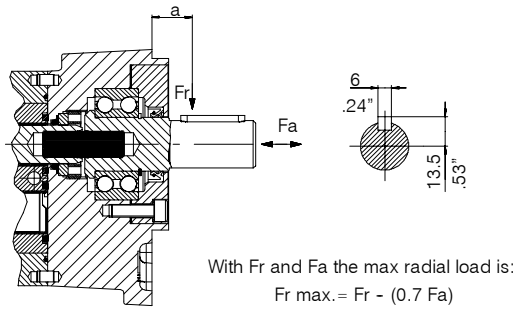
Group **APM200** Code **220 2T2**





Max pressure (M max= 65 Nm)			
Motor	bar (PSI)		
	P1	P2	P3
APM200/15	180 (2600)	210 (3000)	230 (3300)
APM200/19	140 (2000)	165 (2400)	185 (2650)
APM200/22	120 (1700)	145 (2050)	165 (2350)
APM200/26	100 (1450)	120 (1750)	140 (2000)

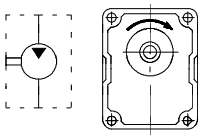


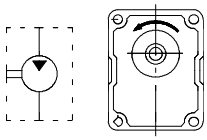


With Fr and Fa the max radial load is:
Fr max.= Fr - (0.7 Fa)

Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APM200/8.5	8.3	113	4.45	70	2.75	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APM200/11	10.95	129	5.08	78	3.06	20	.79								
APM200/15	14.95														
APM200/19	18.9	141	5.55	84	3.30										
APM200/22	21.9	145.5	5.73	86	3.39										
APM200/26	25.9														

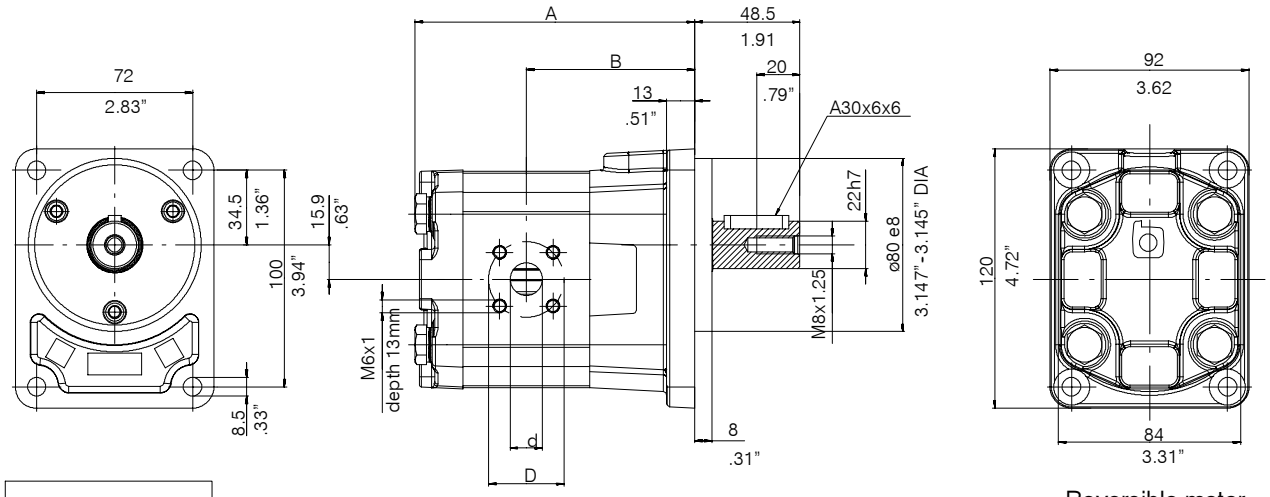
Unidirectional motor

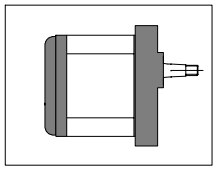
Type	Order Code	Clockwise rotation: D
APM200/8.5 D		
APM200/11 D		
APM200/15 D		
APM200/19 D		
APM200/22 D		
APM200/26 D		

Type	Order Code	Counterclockwise rotation: S
APM200/8.5 S		
APM200/11 S		
APM200/15 S		
APM200/19 S		
APM200/22 S		
APM200/26 S		

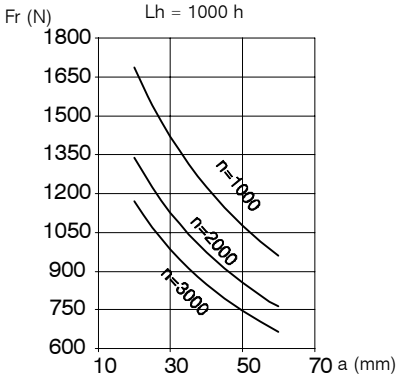
N.B.: With respect to the standards, the maximum pressures of some versions of this motor are reduced in relation to the max. torque allowed to the shaft.

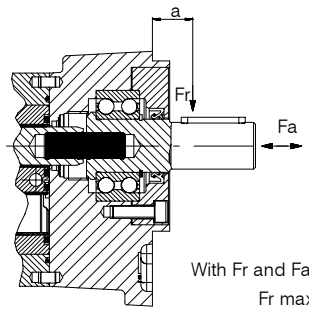
Group **APMR200** Code **220 2T1**



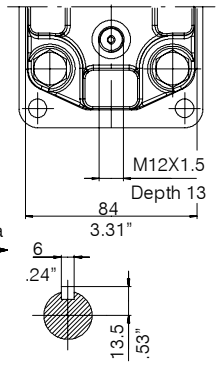


Max pressure (M max= 65 Nm)			
Motor	bar (PSI)		
	P1	P2	P3
APMR200/15	180 (2600)	210 (3000)	230 (3300)
APMR200/19	140 (2000)	165 (2400)	185 (2650)
APMR200/22	120 (1700)	145 (2050)	165 (2350)
APMR200/26	100 (1450)	120 (1750)	140 (2000)





Reversible motor
External drain



With Fr and Fa the max radial load is:
Fr max.= Fr - (0.7 Fa)

Type	Displacement cm³/rev	Dimensions A mm	A inch	B mm	B inch	Outlet d mm	d inch	D mm	D inch	F mm	Inlet d mm	d inch	D mm	D inch	F mm
APMR200/8.5	8.3	113	4.45	70	2.75	15	.59	35	1.38	M6X1	15	.59	35	1.38	M6X1
APMR200/11	10.95	129	5.08	78	3.06										
APMR200/15	14.95														
APMR200/19	18.9	141	5.55	84	3.30										
APMR200/22	21.9	145.5	5.73	86	3.39										
APMR200/26	25.9														

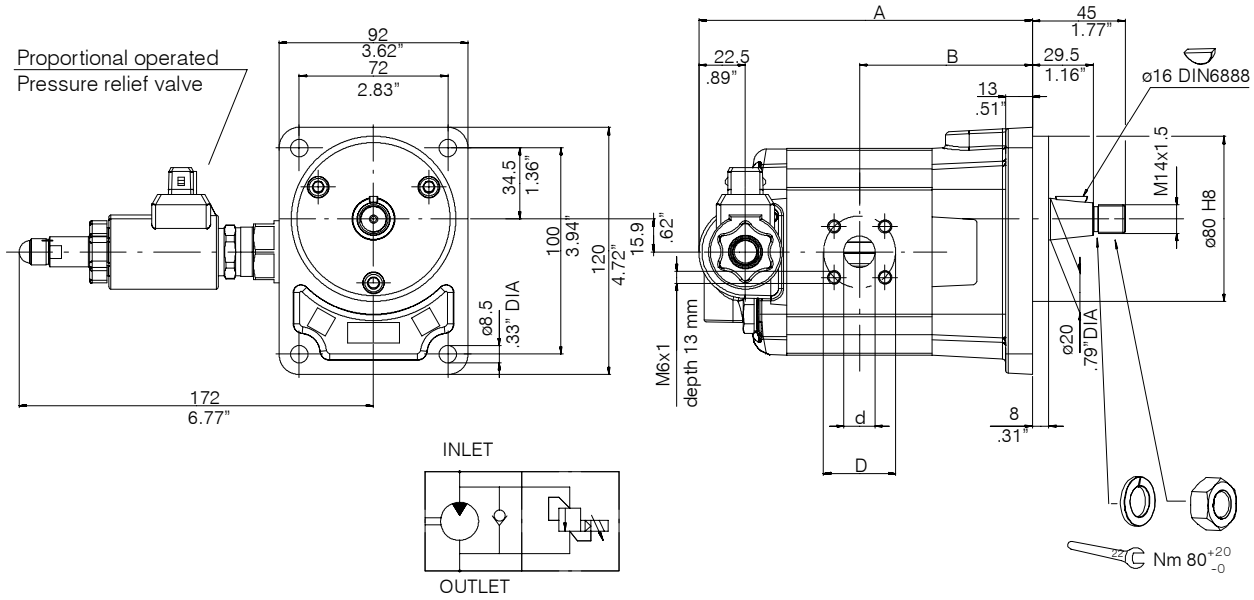
Reversible motor

Type	Order Code	Reversible motor Internal drain
APMR200/8.5 ID		R
APMR200/11 ID		
APMR200/15 ID		
APMR200/19 ID		
APMR200/22 ID		
APMR200/26 ID		

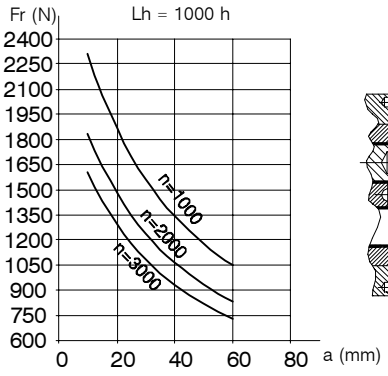
Type	Order Code	Reversible motor External drain
APMR200/8.5 ED		R
APMR200/11 ED		
APMR200/15 ED		
APMR200/19 ED		
APMR200/22 ED		
APMR200/26 ED		

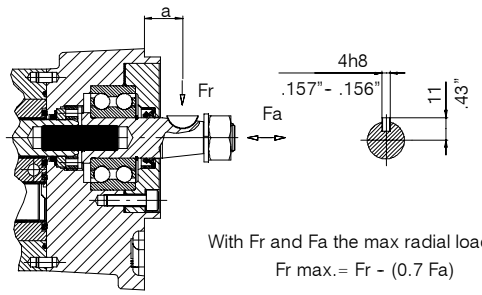
N.B.: With respect to the standards, the maximum pressures of some versions of this motor are reduced in relation to the max. torque allowed to the shaft.

Group **APFM200** Code ***



Max pressure (M max= 65 Nm)			
Motor	bar (PSI)		
	P1	P2	P3
APFM200/15	180 (2600)	210 (3000)	230 (3300)
APFM200/19	140 (2000)	165 (2400)	185 (2650)
APFM200/22	120 (1700)	145 (2050)	165 (2350)
APFM200/26	100 (1450)	120 (1750)	140 (2000)



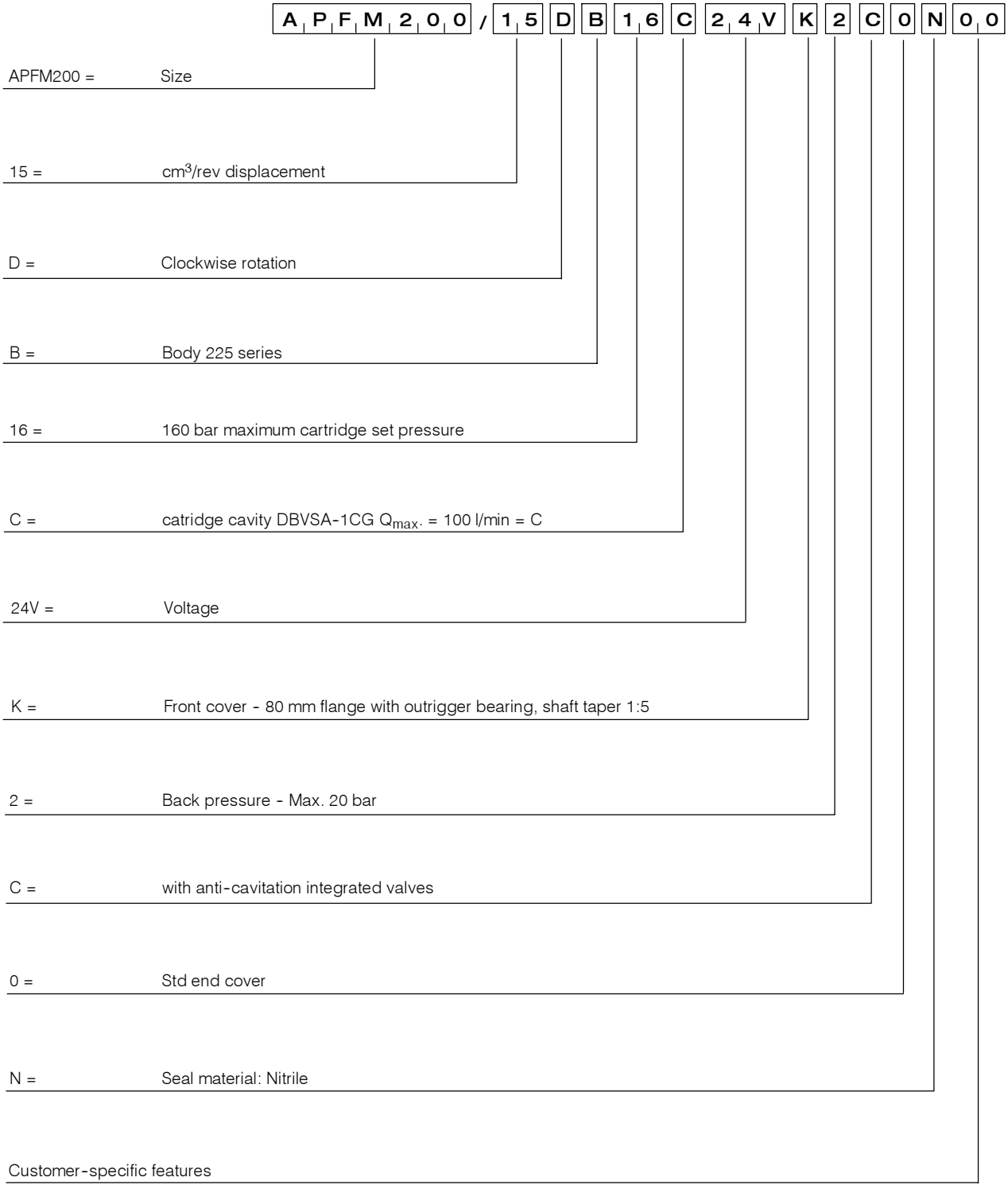


With Fr and Fa the max radial load is:
Fr max.= Fr - (0.7 Fa)

Type	Displacement cm³/rev	Dimensions				Outlet					Inlet				
		A		B		d		D		F	d		D		F
		mm	inch	mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	inch	mm
APFM200/8.5	8.3	70	2.76	134	5.28	15	.59	40	1.58	M6X1	15	.59	35	1.38	M6X1
APFM200/11	10.95	78	3.07	150	5.91	20	.79								
APFM200/15	14.95														
APFM200/19	18.9	84	3.31	162	6.38										
APFM200/22	21.9	86	3.39	166	6.33										
APFM200/26	25.9														

*** : For more and detailed information look at the specific catalogue: 100-P-000062-E "Hydraulic Drive System for Engine Cooling Fans" .

Example of Fan Drive Motor ordering code

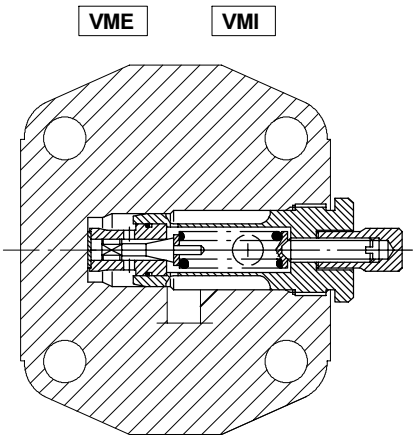


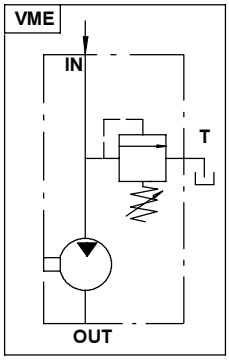
For more and detailed information look at the specific catalogue: 100-P-000062-E "Hydraulic Drive System for Engine Cooling Fans"

Unidirectional motor APM200 with pressure relief valve VM

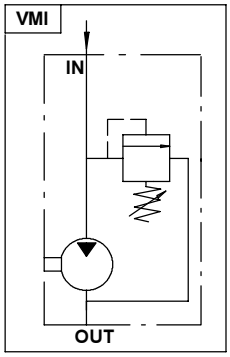
Unidirectional APM200 gear motor can be provided by a rear cover with a built in pressure relief valve **VM**.

For the composition product code exemple see page 61/64.



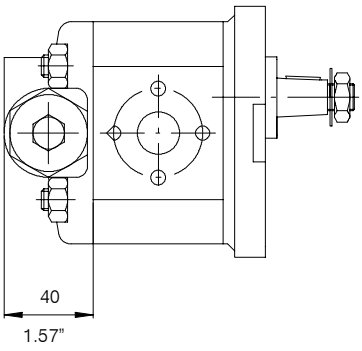


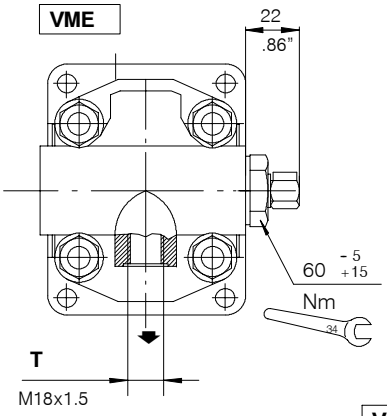
External relief valve return to tank

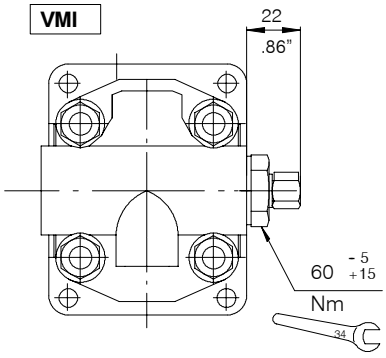


Internal relief valve return into motor low pressure side

Standard setting values for VM





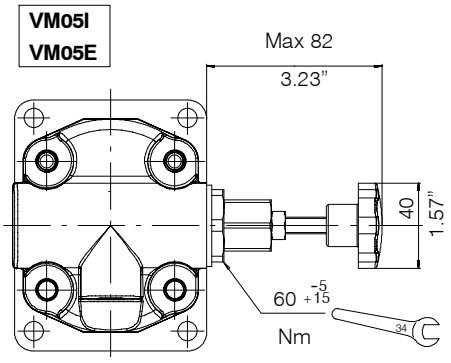


Note: all the above drawings are refered to counterclockwise rotation motors.
For any other dimension look at the correspondent motor code.

Type	VME / VMI	06	15
Bar	±10%	60	150

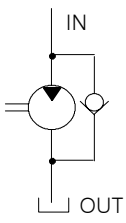
(spring **YE** with adjustment range 30÷80 bar)

(spring **GR** with adjustment range 70÷ 210 bar)



Integrated anti-cavitation valves

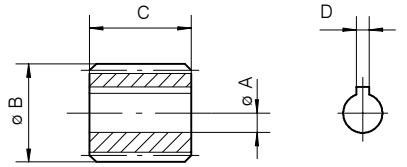
APM200 gear motor can be equipped with integrated anti-cavitation valves.
No change of external dimensions and any extra tank connection is required.
Specify on motor code description adding + C.
Ex: APM200/15 S 225 + C



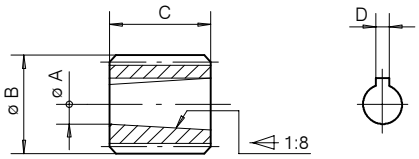
6 Accessories

6.1 Splined couplings

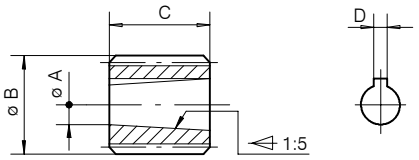
Material: UNI5331 16 CrNi4Pb Hardness 58 - 60 HRc (*) UNI5332 38NiCrMo4Pb R= 950 - 1050 N/mm^2



Type	Motor group	Order code	Spline profile DIN 5482	A		B		C		D		n. of feet
				mm	inch	mm	inch	mm	inch	mm	inch	
GSH-06	**APM05**	**200.5314.20001**	20X17	7	.27	19.5	.76	9	.35	2	.08	12



Type	Motor group	Order code	Spline profile DIN 5482	A		B		C		D		n. of feet
				mm	inch	mm	inch	mm	inch	mm	inch	
GSH-1-12	**APM100**	**200.5315.30001**	20X17	8	.31	19.5	.77	14.5	.57	2.4	.09	12
GSH-1-14	**APM100**	**200.5315.30002**	25x22			24.5	.96					14
GSH-2-14*	**APM200**	**200.5315.40001**	25x22	14.2	.56			22	.87	3.2	.12	
GSH-2-15	**APM200**	**200.5315.40002**	28x25			27.5	1.08					15
GSH-2-18	**APM200**	**200.5315.40003**	35x31			34.5	1.36					18



Type	Motor group	Order code	Spline profile DIN 5482	A		B		C		D		n. of feet
				mm	inch	mm	inch	mm	inch	mm	inch	
GSH-1B-12	**APM100**	**200.5314.30001**	20X17	7.6	.3	19.5	.77	12	.47	2	.08	12
GSH-2B-14*	**APM200**	**200.5314.40001**	25x22	13	.5	24.5	.96	20	.79	3	.12	14
GSH-2B-15	**APM200**	**200.5314.40002**	28x25			27.5	1.08					15
GSH-2B-18	**APM200**	**200.5314.40003**	35x31			34.5	1.36					18

6.2 Motors seal kit NBR standard type

APM05	
Motor code	**Seal kit**
APM05/810	200.9740.0018.0
APM05/819	
APM05/310	
APM05/319	
APM05/830	
APM05/839	
APM05/330	
APM05/339	
APMR05/810	200.9740.0026.0
APMR05/819	
APMR05/830	
APMR05/839	

APM100	
Motor code	**Seal kit**
APM100/218	200.9740.0031.0
APM100/219	
APM100/318	
APM100/319	
APM100/818	
APM100/845	
APM100/880	200.9740.0034.0
APM100/887S	
APM100/380	
APM100/387S	
APM100/887S NPTF	200.9740.0097.0
APM100/880 NPTF	
APM100/2218	200.9740.0098.0
APM100/518	200.9740.0093.0

APM200	
Motor code	**Seal kit**
APM200/218	200.9740.0073.0
APM200/818	
APM200/225	
APM200/227	
APM200/235	
APM200/245	
APM200/237	
APM200/247	
APM200/887S	
APM200/880	
APM200/887S NPTF	
APM200/880 NPTF	
APM200/287S-B	
APM200/280B	
APFM200	200.9740.0135.0
APM200/2K2	
APM200/2T2	200.9740.0138.0
APM200/2K1	200.9740.0136.0
APMR200/2T1	200.9740.0137.0
APMR200/218	200.9740.0134.0
APMR200/818	
APMR200/225	
APMR200/227	
APMR200/235	
APMR200/245	
APMR200/237	
APMR200/247	
APMR200/887S	
APMR200/880	
APMR200/887S NPTF	
APMR200/880 NPTF	
APMR200/287S-B	
APMR200/280B	

Note: For type of motors without ordering code, contact our Sales Department.

7 Composition of product code

7.1 Motor

Type	Rotation	Code
APM05/ **	*	****
APMR05/ **		****
APM100/ **	*	****
APM200/ **	*	****

Examples	Order code
APM05/0.75 D 310	200100460201
APMR05/0,5 810	200100361401
APM100/4,3 S 218	200101513601
APM200/26 D 287 S-B	200102886501

7.2 Motor with valve

Type	Rotation	Code	Valve
APM200/ **	*	****	****
APM200/ **	*	****	****
APM200/ **	*	****	****
APM200/ **	*	****	****

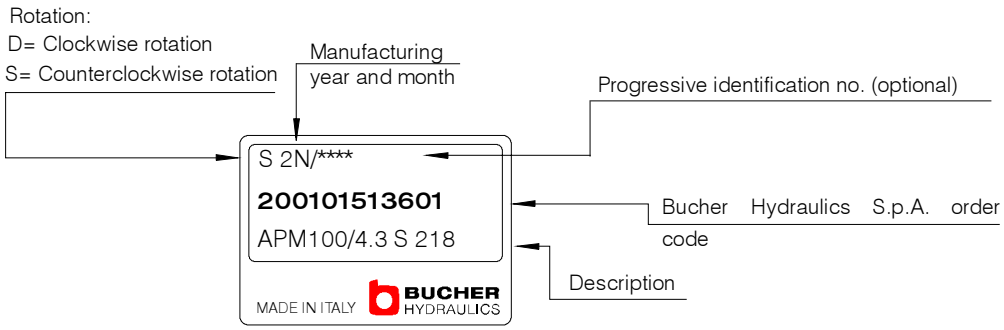
Examples	Order code
APM200/15 S 218 15VME	200102513605
APM200/6,5 S 218 15VMI	200102213606
APM200/8,5 D 218 12VRI	200102313504
APM200/6,5 D 235 + C	200102232501

7.3 Motor with bearing support

Type	Rotation	Code	Support
APM200/ **	*	****	****
APM200/ **	*	****	****

Examples	Order code
APM200/22 D 225 2K2+C	200102722508

7.4 Product identification plate



7.5 Motor weight

Motor	Weight Kg
APM05/0.5	0.45
APM05/0.75	0.45
APM05/0.9	0.48
APM05/1.2	0.50
APM05/1.6	0.50
APM05/2.3	0.55

Motor	Weight Kg
APM100/2.5	1.03
APM100/3.5	1.07
APM100/4.3	1.12
APM100/5	1.18
APM100/6.5	1.23
APM100/8	1.28
APM100/10	1.35

Motor	Weight Kg
APM200/8.5	1.95
APM200/11	2.33
APM200/15	2.34
APM200/19	2.65
APM200/22	2.78
APM200/26	2.82

N.B.: The weight refers to motors with version code 810 (APM05) – 218 (APM100 – APM200). Limited weight variations are possible for motors having a different code.

Manufacturing month	Manufacturing year							
	2000	2001	2002	2003	2004	2005	2006	2007
January	0M	1M	2M	3M	4M	5M	6M	7M
February	0N	1N	2N	3N	4N	5N	6N	7N
March	0P	1P	2P	3P	4P	5P	6P	7P
April	0Q	1Q	2Q	3Q	4Q	5Q	6Q	7Q
May	0R	1R	2R	3R	4R	5R	6R	7R
June	0S	1S	2S	3S	4S	5S	6S	7S
July	0T	1T	2T	3T	4T	5T	6T	7T
August	0U	1U	2U	3U	4U	5U	6U	7U
September	0V	1V	2V	3V	4V	5V	6V	7V
October	0Z	1Z	2Z	3Z	4Z	5Z	6Z	7Z
November	0X	1X	2X	3X	4X	5X	6X	7X
December	0Y	1Y	2Y	3Y	4Y	5Y	6Y	7Y

BUCHER HYDRAULICS www.bucherhydraulics.com

Germany
Phone +49 7742 85 20
Fax +49 7742 71 16
info.de@bucherhydraulics.com

France
Phone +33 389 64 22 44
Fax +33 389 65 28 78
info.fr@.bucherhydraulics.com

Netherlands
Phone +31 79 34 26 24 4
Fax +31 79 34 26 28 8
info.nl@bucherhydraulics.com

UK
Phone +44 24 76 35 35 61
Fax +44 24 76 35 35 72
info.uk@bucherhydraulics.com

USA
Phone +1 262 605 82 80
Fax +1 262 605 82 78
info.wi@bucherhydraulics.com

Switzerland
Phone +41 33 67 26 11 1
Fax +41 33 67 26 10 3
info.ch@bucherhydraulics.com

Italy
Phone +39 0522 92 84 11
Fax +39 0522 51 32 11
info.it@bucherhydraulics.com

Austria
Phone +43 6216 44 97
Fax +43 6216 44 97 4
info.at@bucherhydraulics.com

China
Phone +86 512 6 322 12 99
Fax +86 512 6 322 10 33
info.sh@bucherhydraulics.com

Product Center (Elevator)
Phone +41 41 757 03 33
Fax +41 41 755 16 49
info.nh@bucherhydraulics.com

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