

GENERAL DATA PUMPS AND MOTORS

Series	Pump type PLP Motor type PLM	Displacement in ³ /rev (cm ³ /rev)	Max. pressure			Max. speed	Min. speed min ⁻¹
			p ₁	p ₂	p ₃		
			psi (bar)				
POLARIS 10	PL. 10•1	0.07 (1,07)	3770 (260)	4060 (280)	4205 (290)	4000	650
	PL. 10•1,5	0.10 (1,6)	3770 (260)	4060 (280)	4205 (290)	4000	650
	PL. 10•2	0.13 (2,13)	3770 (260)	4060 (280)	4205 (290)	4000	650
	PL. 10•2,5	0.16 (2,67)	3770 (260)	4060 (280)	4205 (290)	4000	650
	PL. 10•3,15	0.20 (3,34)	3770 (260)	4060 (280)	4205 (290)	4000	650
	PL. 10•4	0.26 (4,27)	3625 (250)	3915 (270)	4060 (280)	4000	650
	PL. 10•5	0.33 (5,34)	3625 (250)	3915 (270)	4060 (280)	4000	650
	PL. 10•5,8	0.38 (6,20)	3335 (230)	3625 (250)	3770 (260)	3500	650
	PL. 10•6,3	0.41 (6,67)	3335 (230)	3625 (250)	3770 (260)	3500	650
	PL. 10•8	0.52 (8,51)	2610 (180)	2900 (200)	3045 (210)	3500	650
PL. 10•10	0.65 (10,67)	2030 (140)	2320 (160)	2465 (170)	3500	650	
POLARIS 20	PL. 20•4	0.30 (4,95)	3625 (250)	4060 (280)	4350 (300)	4000	600
	PL. 20•6,3	0.40 (6,61)	3625 (250)	4060 (280)	4350 (300)	4000	600
	PL. 20•7,2	0,44 (7,29)	3625 (250)	4060 (280)	4350 (300)	4000	600
	PL. 20•8	0.50 (8,26)	3625 (250)	4060 (280)	4350 (300)	3500	600
	PL. 20•9	0.56 (9,17)	3625 (250)	4060 (280)	4350 (300)	3500	600
	PL. 20•10,5	0.66 (10,9)	3625 (250)	4060 (280)	4350 (300)	3500	600
	PL. 20•11,2	0.69 (11,23)	3625 (250)	4060 (280)	4350 (300)	3500	600
	PL. 20•14	0.89 (14,53)	3625 (250)	4060 (280)	4350 (300)	3500	500
	PL. 20•16	1.03 (16,85)	3625 (250)	4060 (280)	4350 (300)	3000	500
	PL. 20•19	1.16 (19,09)	2900 (200)	3190 (220)	3480 (240)	3000	500
	PL. 20•20	1.29 (21,14)	2900 (200)	3190 (220)	3480 (240)	3000	500
	PL. 20•24,5	1.52 (24,84)	2465 (170)	2755 (190)	3045 (210)	2500	500
	PL. 20•25	1.61 (26,42)	2465 (170)	2755 (190)	3045 (210)	2500	500
	PL. 20•27,8	1.72 (28,21)	1885 (130)	2175 (150)	2465 (170)	2000	500
PL. 20•31,5	2.01 (33,03)	1885 (130)	2175 (150)	2465 (170)	2000	500	
POLARIS 30	PL. 30•22	1.34 (21,99)	3625 (250)	3915 (270)	4060 (280)	3000	350
	PL. 30•27	1.63 (26,70)	3625 (250)	3915 (270)	4060 (280)	3000	350
	PL. 30•34	2.11 (34,55)	3480 (240)	3770 (260)	3915 (270)	3000	350
	PL. 30•38	2.40 (39,27)	3480 (240)	3770 (260)	3915 (270)	3000	350
	PL. 30•43	2.68 (43,98)	3335 (230)	3625 (250)	3770 (260)	3000	350
	PL. 30•51	3.16 (51,83)	3045 (210)	3335 (230)	3480 (240)	2500	350
	PL. 30•61	3.74 (61,26)	2755 (190)	3045 (210)	3190 (220)	2500	350
	PL. 30•73	4.50 (73,82)	2465 (170)	2755 (190)	2900 (200)	2500	350
	PL. 30•82	4.98 (81,68)	2320 (160)	2465 (170)	2610 (180)	2200	350
PL. 30•90	5.56 (91,10)	2175 (150)	2320 (160)	2465 (170)	2200	350	

p₁= Max. continuous pressure

p₂= Max. intermittent pressure

p₃= Max. peak pressure

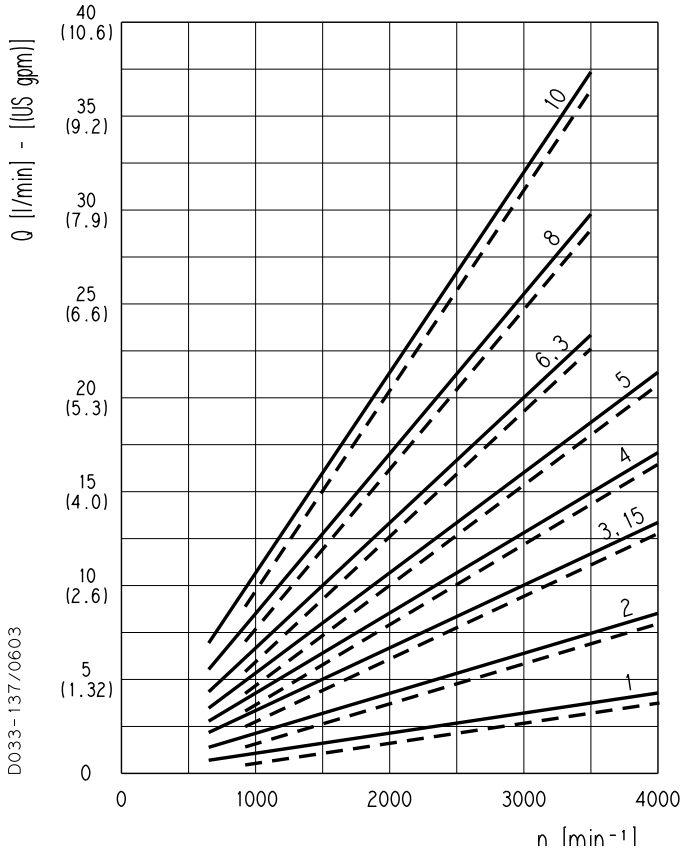
The values in the table refer to unidirectional pumps and motors. Reversible pumps and motors max pressures are 15% lower than those shown in table. For different working conditions please consult our sales department.

PLP 10

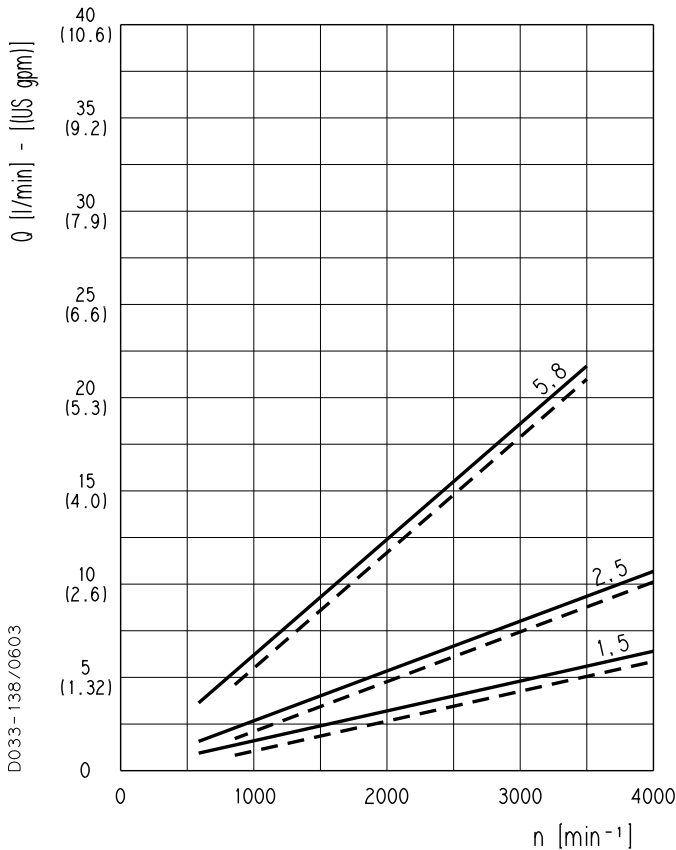
POLARIS 10 GEAR PUMPS PERFORMANCE CURVES

PLP 10

Each curve has been obtained at 122 °F (50°C), using oil with viscosity 168 SSU (36 cSt) at 104 °F (40°C) and at these pressures.



PLP 10•1	—	290 psi (20 bar)
	- -	3770 psi (260 bar)
PLP 10•2	—	290 psi (20 bar)
	- -	3770 psi (260 bar)
PLP 10•3,15	—	290 psi (20 bar)
	- -	3770 psi (260 bar)
PLP 10•4	—	290 psi (20 bar)
	- -	3625 psi (250 bar)
PLP 10•5	—	290 psi (20 bar)
	- -	3625 psi (250 bar)
PLP 10•6,3	—	290 psi (20 bar)
	- -	3335 psi (230 bar)
PLP 10•8	—	290 psi (20 bar)
	- -	2610 psi (180 bar)
PLP 10•10	—	290 psi (20 bar)
	- -	2030 psi (140 bar)



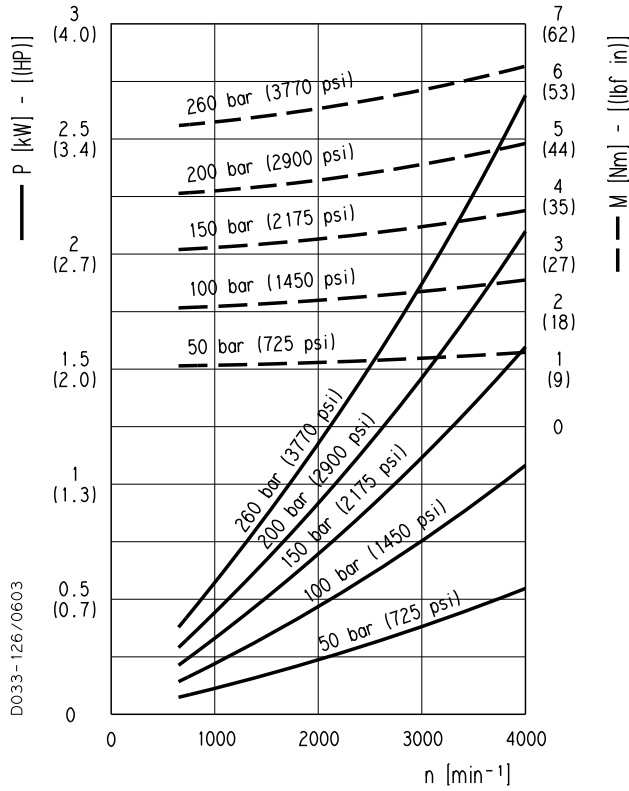
PLP 10•1,5	—	290 psi (20 bar)
	- -	3770 psi (260 bar)
PLP 10•2,5	—	290 psi (20 bar)
	- -	3770 psi (260 bar)
PLP 10•5,8	—	290 psi (20 bar)
	- -	3335 psi (230 bar)

01/10.03

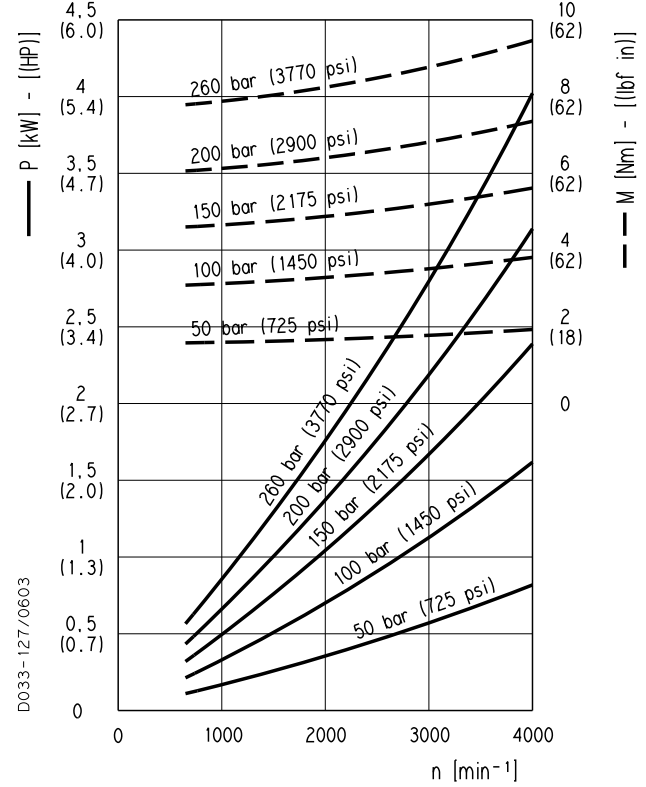
PLP 10

POLARIS 10 GEAR PUMPS PERFORMANCE CURVES

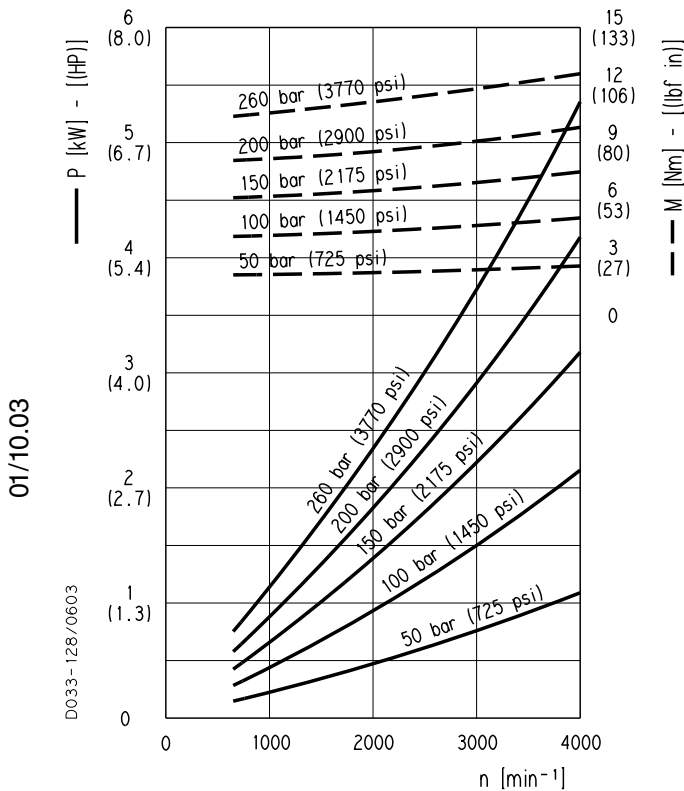
PLP 10•1



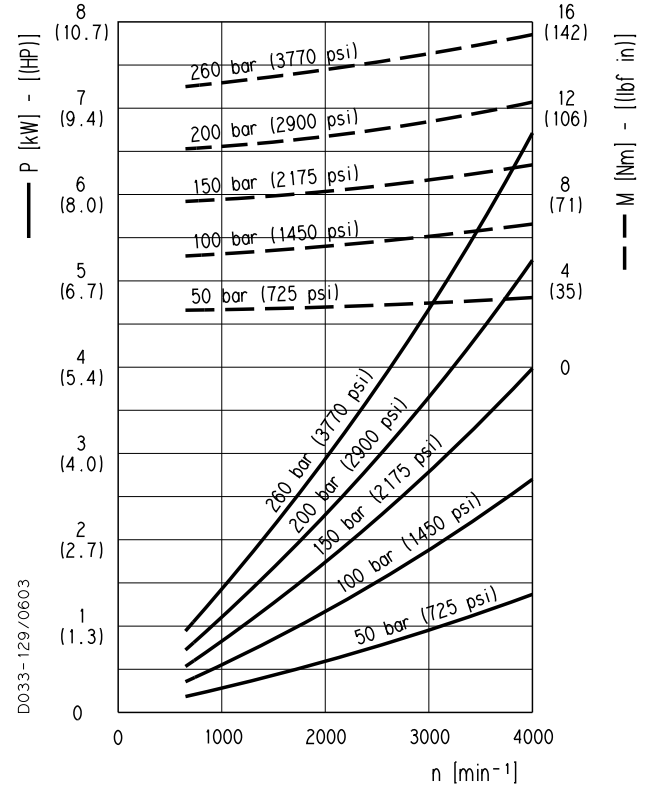
PLP 10•1,5



PLP 10•2



PLP 10•2,5

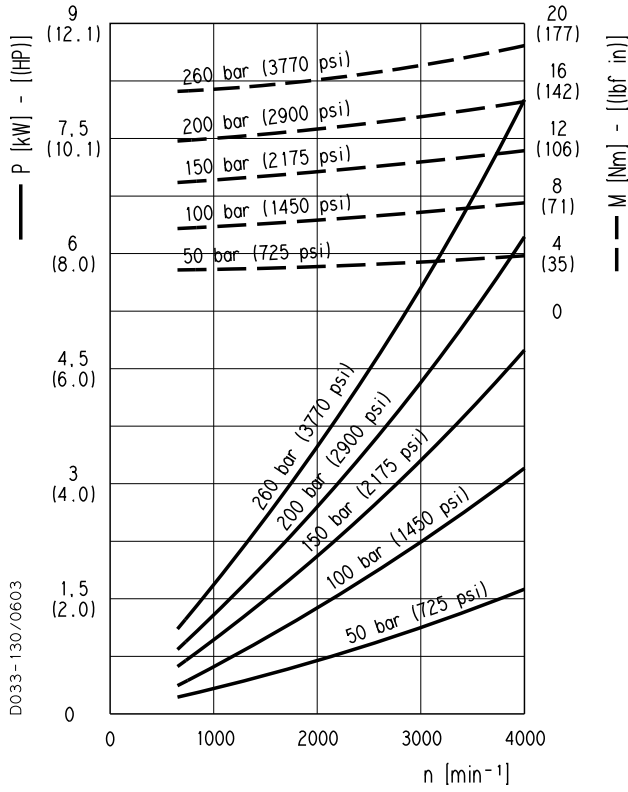


01/10.03

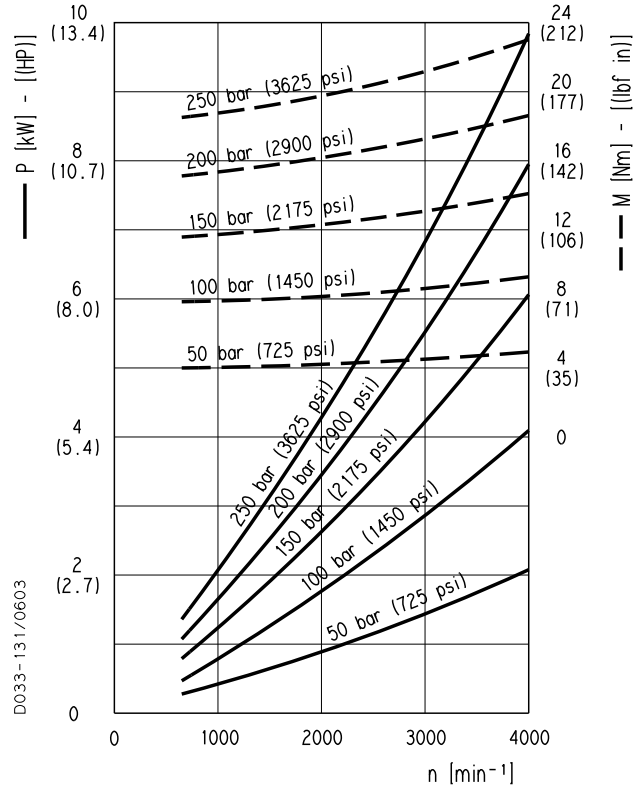
PLP 10

POLARIS 10 GEAR PUMPS PERFORMANCE CURVES

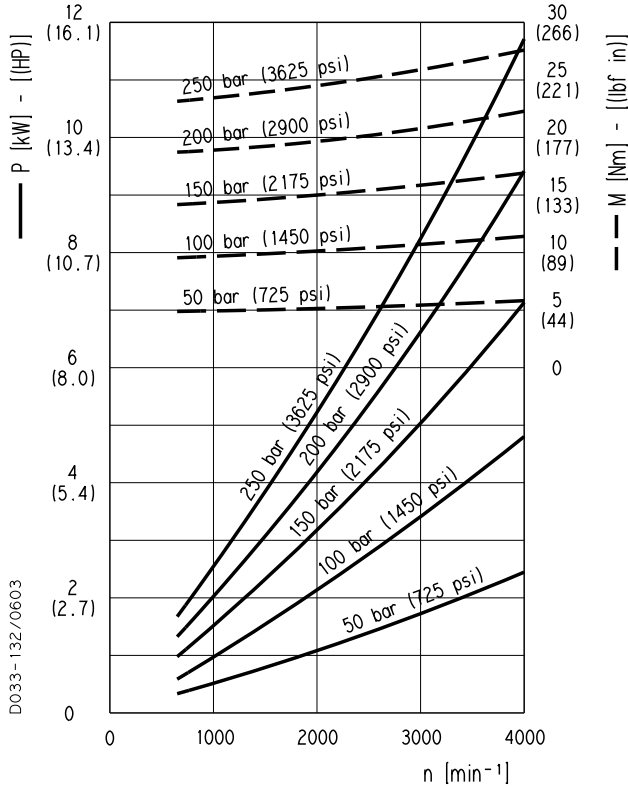
PLP 10•3,15



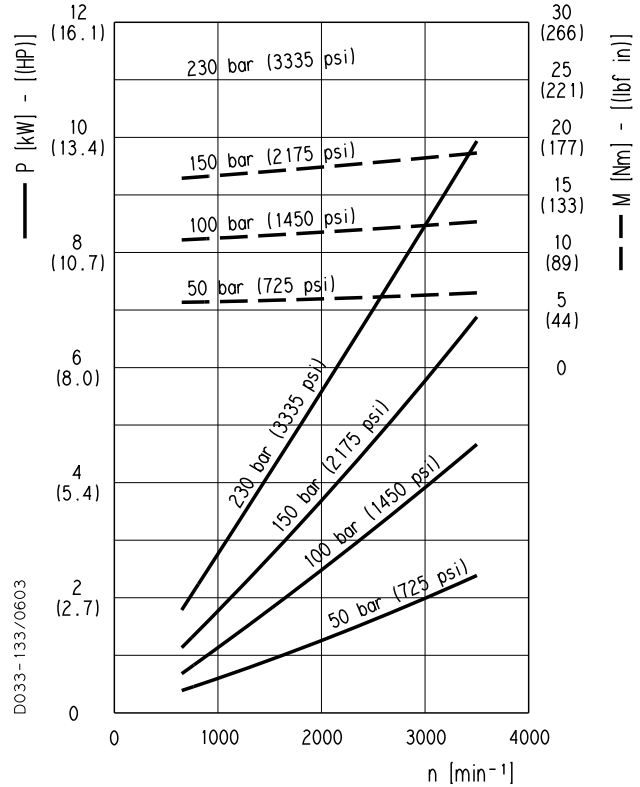
PLP 10•4



PLP 10•5



PLP 10•5,8

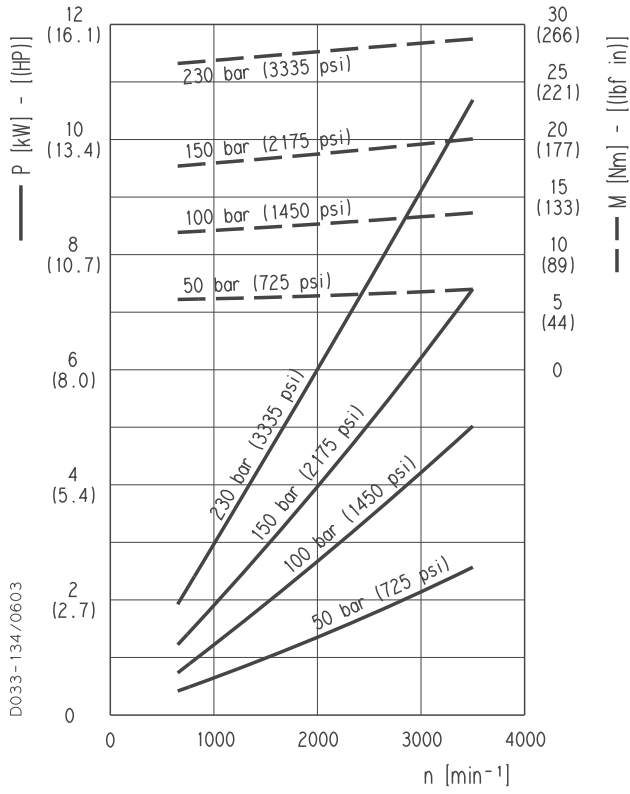


01/10.03

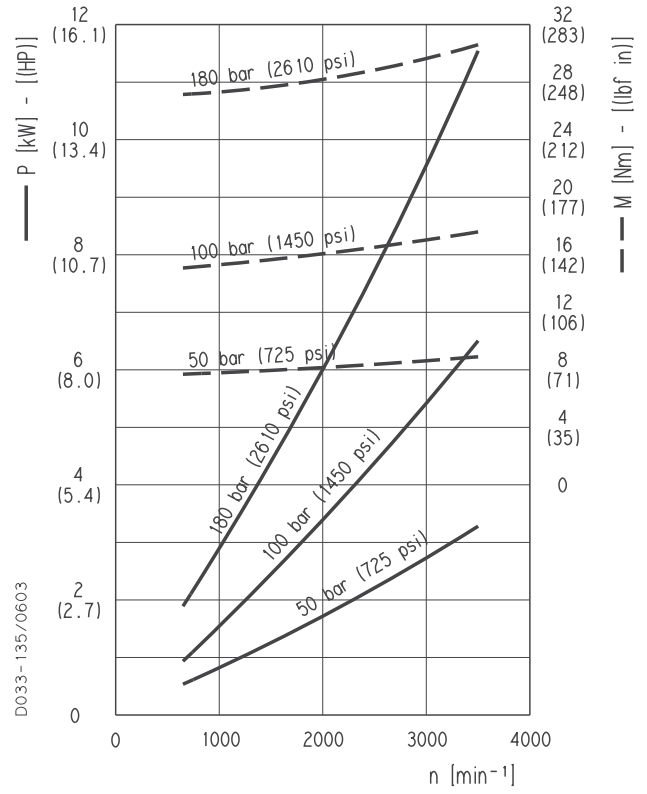
PLP 10

POLARIS 10 GEAR PUMPS PERFORMANCE CURVES

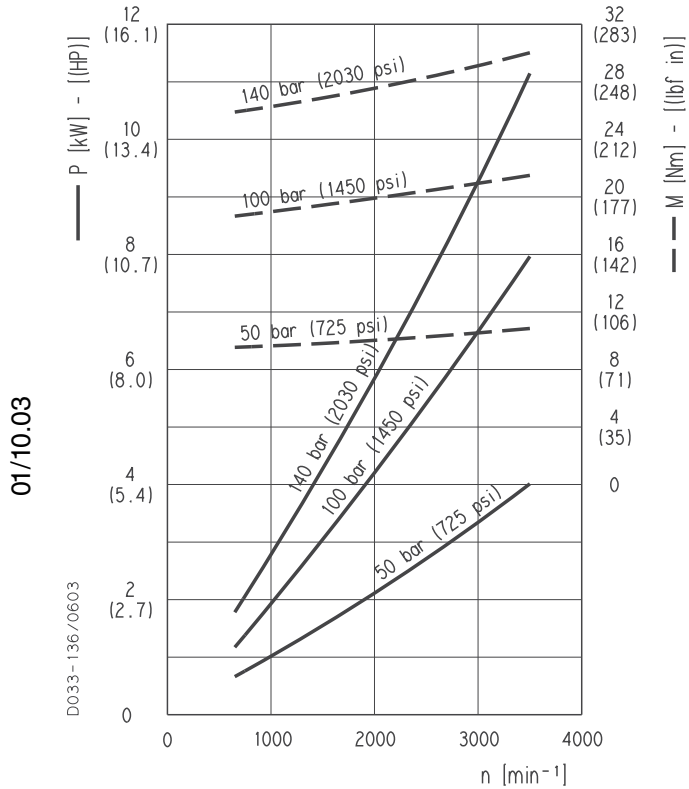
PLP 10•6,3



PLP 10•8



PLP 10•10



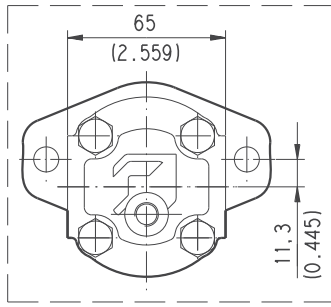
01/10.03

POLARIS 10

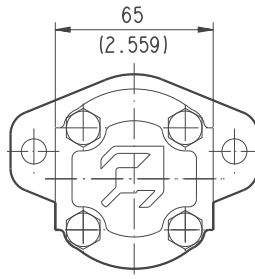
SINGLE UNITS SIDE PORTS

L

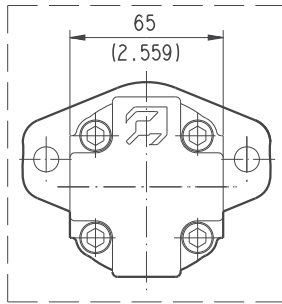
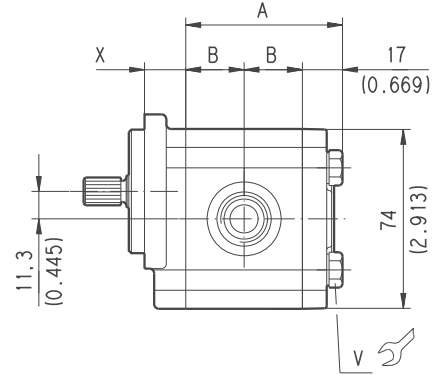
D033-180/0903



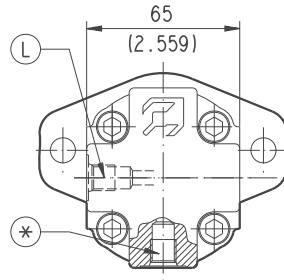
Reversible R



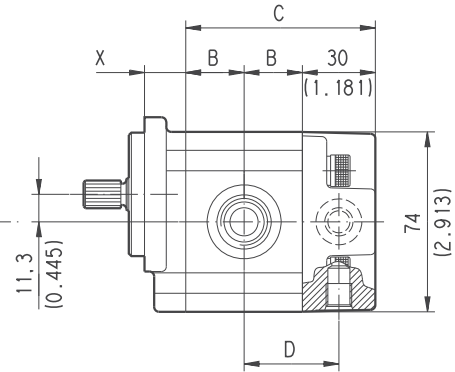
Single rotation S - D



Reversible B



Reversible L



Replaces: 01/10.03

Mounting flange type version 0	X
	mm (inch)
E1	14 (0.5512)
E7	14 (0.5512)
E8	14 (0.5512)
B1	14 (0.5512)
K2	11,8 (0.4646)
S0	17 (0.6693)
R8	41 (1.6142)
R9	41 (1.6142)
W9	41 (1.6142)

- For single rotation S - D and reversible rotation R the rear cover is available in cast iron and aluminium.
- For reversible rotation B and L the rear cover is in aluminium only.

DRAIN PORTS POSITION
L = Side * = Bottom

DRIVE SHAFTS: see page 52

MOUNTING FLANGE: see page 58 ÷ 60

PORTS: see page. 69 ÷ 74

Mounting flange material	Screw tightening torque
	Nm (lbf in)
Aluminium	25 ±2,5 (199 ÷ 243)
Cast iron	

Pump type	A	B	C	D
Motor type	mm (inch)	mm (inch)	mm (inch)	mm (inch)
PL. 10•1	52,2 (2.0551)	17,6 (0.6929)	65,2 (2.5669)	32,6 (1.2835)
PL. 10•1,5	53,8 (2.1181)	18,4 (0.7244)	66,8 (2.6299)	33,4 (1.3150)
PL. 10•2	55,4 (2.1811)	19,2 (0.7559)	68,4 (2.6929)	34,2 (1.3465)
PL. 10•2,5	57 (2.2441)	20 (0.7874)	70 (2.7559)	35 (1.3780)
PL. 10•3,15	59 (2.3228)	21 (0.8268)	72 (2.8346)	36 (1.4173)
PL. 10•4	61,8 (2.4331)	22,4 (0.8819)	74,8 (2.9449)	37,4 (1.4724)
PL. 10•5	65 (2.5591)	24 (0.9449)	78 (3.0709)	39 (1.5354)
PL. 10•5,8	67,6 (2.6614)	25,3 (0.9961)	80,6 (3.1732)	40,3 (1.5866)
PL. 10•6,3	69 (2.7165)	26 (1.0236)	82 (3.2283)	41 (1.6142)
PL. 10•8	74,5 (2.9331)	28,75 (1.1319)	87,5 (3.4449)	43,75 (1.7224)
PL. 10•10	81 (3.1890)	32 (1.2598)	94 (3.7008)	47 (1.8504)

02/07.2006

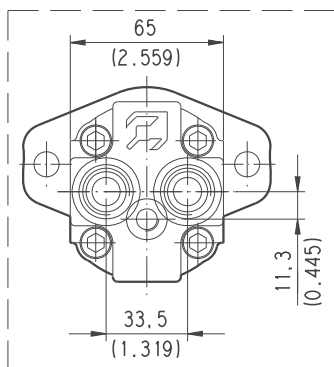
POLARIS 10

SINGLE UNITS REAR PORTS

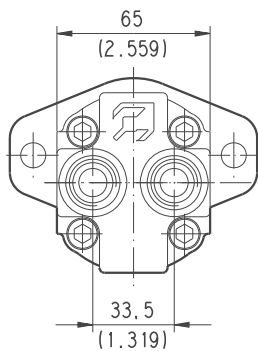
P

Replaces: 01/10.03

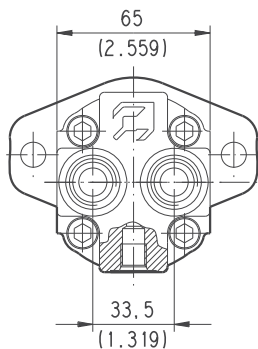
D033-181/0903



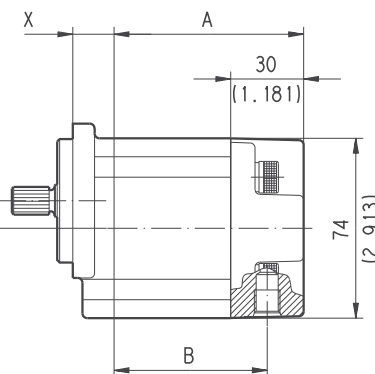
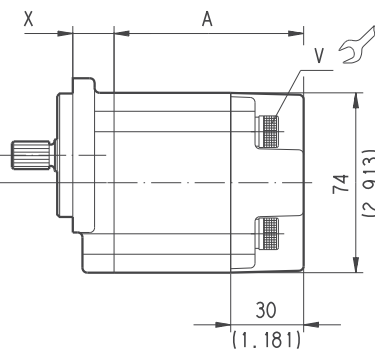
Reversible R



Single rotation S - D and Reversible B



Reversible L



Mounting flange type version 0	X
	mm (inch)
E1	14 (0.5512)
E7	14 (0.5512)
E8	14 (0.5512)
B1	14 (0.5512)
K2	11,8 (0.4646)
S0	17 (0.6693)
R8	41 (1.6142)
R9	41 (1.6142)
W9	41 (1.6142)

● Rear cover in aluminium only.

DRIVE SHAFTS: see page 52
MOUNTING FLANGE: see page 58 ÷ 60
PORTS: see page 69 ÷ 74

Mounting flange material	Screw tightening torque Nm (lbf in)
	V
Aluminium	25 ±2,5 (199 ÷ 243)
Cast iron	

● 02/07.2006

Pump type Motor type	A	B
	mm (inch)	mm (inch)
PL. 10•1	65,2 (2.5669)	50,2 (1.9764)
PL. 10•1,5	66,8 (2.6299)	51,8 (2.0394)
PL. 10•2	68,4 (2.6929)	53,4 (2.0124)
PL. 10•2,5	70 (2.7559)	55 (2.1654)
PL. 10•3,15	72 (2.8346)	57 (2.2441)
PL. 10•4	74,8 (2.9449)	59,8 (2.3543)
PL. 10•5	78 (3.0709)	63 (2.4803)
PL. 10•5,8	80,6 (3.1732)	65,6 (2.5827)
PL. 10•6,3	82 (3.2283)	67 (2.6378)
PL. 10•8	87,5 (3.4449)	72,5 (2.8543)
PL. 10•10	94 (3.7008)	79 (3.1102)

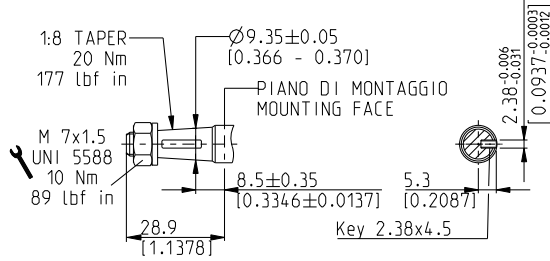
POLARIS 10

DRIVE SHAFTS

EUROPEAN TAPERED 1:8

81

Mounting face refer to flange code **E1**

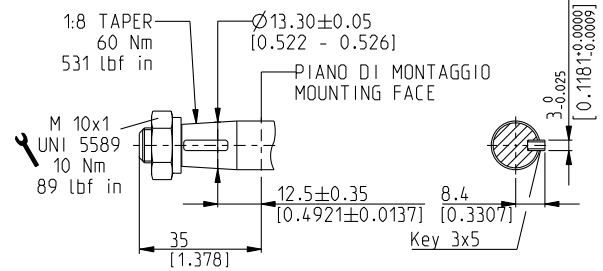


DCAT_033_041

EUROPEAN TAPERED 1:8

86

Mounting face refer to flange code **E7**



DCAT_033_042

SAE "AA" SPLINE

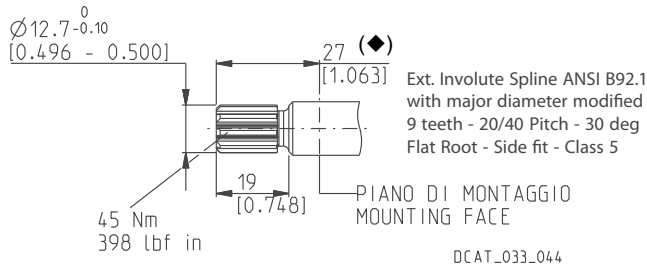
02

Not available with size:

10•8 With flange: E1, E8, K2, S0

10•1,5 - 10•2,5 - 10•5,8 With flange: R8, R9

Mounting face refer to flange code **R9**



DCAT_033_044

(◆) 24 (0.9449) with flange code **S0**

SAE "AA" STRAIGHT

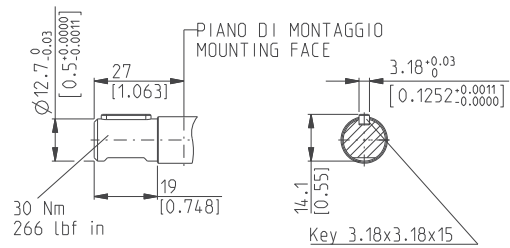
30

Not available with size:

10•1,5 - 10•2,5 - 10•5,8 With flange: E7, B1, K2, R8, R9

10•2,5 - 10•5,8 With flange: S0

Mounting face refer to flange code **S0**



DCAT_033_045

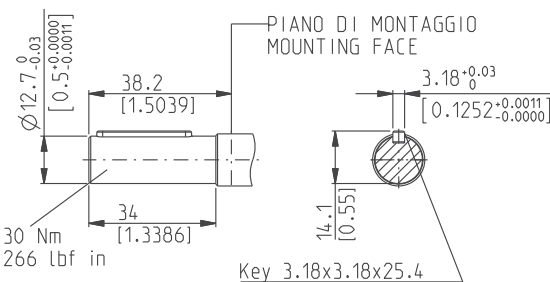
SAE STRAIGHT

36

Not available with size:

10•1,5 10•2,5

Mounting face refer to flange code **R8**



DCAT_033_046

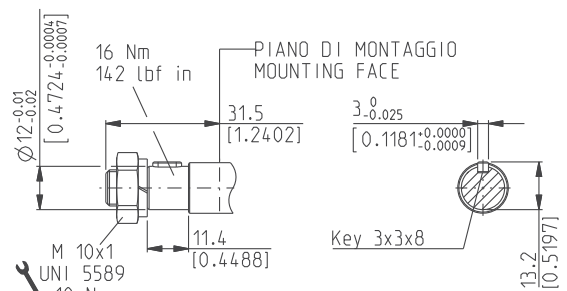
STRAIGHT

29

Not available with size:

10•5,8

Mounting face refer to flange code **E8**



DCAT_033_043

01/10.03

POLARIS 10

MOUNTING FLANGES AND TABLE OF COMPATIBILITY

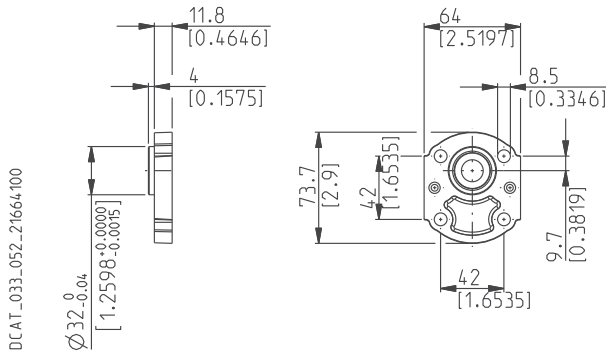
GERMAN 4 BOLTS

K2

Material: aluminium



Replaces: 01/10.03



DRIVE SHAFTS
See page 52

VERSIONS
See page 47

02

30

0

X

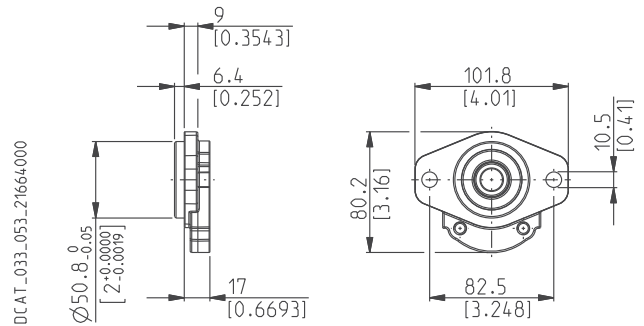
X

Standard combination
X Available combination

SAE "A-A" 2 BOLTS

S0

Material: cast iron and aluminium



DRIVE SHAFTS
See page 52

VERSIONS
See page 47

30

02

86

0

#

X

X

Standard combination
X Available combination

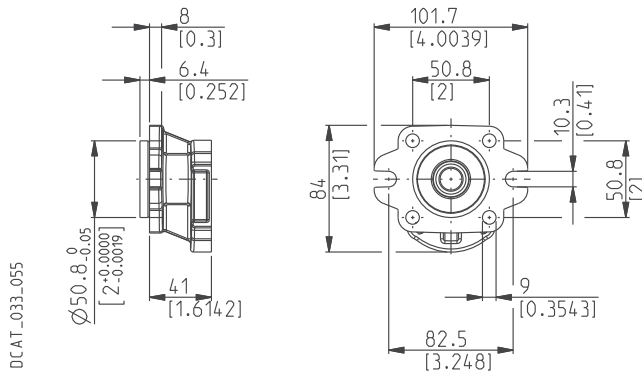
SAE "A-A" 2-4 BOLTS

R9

Material: cast iron



02/07.2006



DRIVE SHAFTS
See page 52

VERSIONS
See page 47

02

30

36

0

#

X

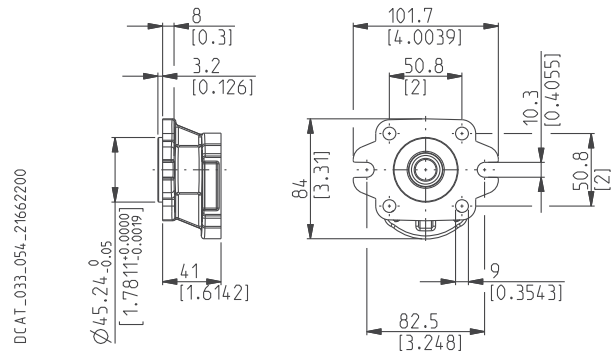
#

Standard combination
X Available combination

SAE 2-4 BOLTS

R8

Material: cast iron



DRIVE SHAFTS
See page 52

VERSIONS
See page 47

02

30

36

0

#

X

#

Standard combination
X Available combination

POLARIS 10 MOUNTING FLANGES AND TABLE OF COMPATIBILITY

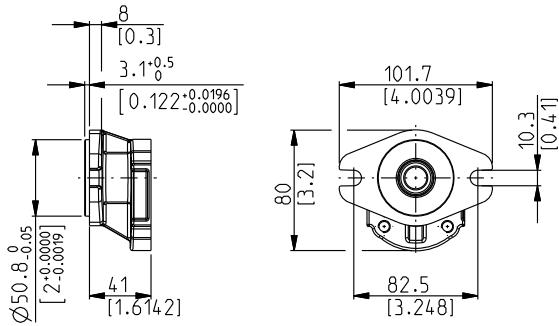
SAE 2 BOLTS

W9

Material: cast iron



DCAT_033_057_21662215



DRIVE SHAFTS
See page 52

VERSIONS

See page 47

36

0

#

Standard combination

X Available combination

Replaces: 01/10.03

02/07.2006

IN/OUT PORTS TYPE


PORTS TYPE	SIDE PORTS												REAR PORTS					
	German		European		Split SSM		Spit SSS		Gas BSPP		SAE ODT		Gas BSPP		SAE ODT			
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT		
Pump type	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Motor type	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN
PL. 10•1	BB	BA							GC	GC	OB	OA	GC	GC	OB	OA		
PL. 10•1,5	BB	BA							GC	GC	OB	OA	GC	GC	OB	OA		
PL. 10•2	BB	BA							GC	GC	OB	OA	GC	GC	OB	OA		
PL. 10•2,5	BB	BA							GC	GC	OB	OA	GC	GC	OB	OA		
PL. 10•3,15	BB	BA							GC	GC	OB	OA	GC	GC	OB	OA		
PL. 10•4	BB	BA							GC	GC	OB	OA	GC	GC	OB	OA		
PL. 10•5	BB	BA							GD	GD	OB	OA	GD	GD	OB	OA		
PL. 10•5,8	BB	BA							GD	GD	OB	OA	GD	GD	OB	OA		
PL. 10•6,3	BB	BA							GD	GD	OB	OA	GD	GD	OB	OA		
PL. 10•8	BB	BA							GD	GD	OC	OB	GD	GD	OB	OB		
PL. 10•10	BB	BA							GD	GD	OC	OB	GD	GD	OB	OB		
PL. 20•4	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•6,3	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•7,2	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•8	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•9	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•10,5	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•11,2	BE	BC	EA	EA	MA	MA	SA	SA	GD	GD	OC	OC	GD	GD	OC	OC		
PL. 20•14	BE	BC	EB	EA	MB	MA	SB	SA	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•16	BE	BC	EB	EA	MB	MA	SB	SA	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•19	BE	BC	EB	EA	MB	MA	SB	SA	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•20	BE	BC	EB	EA	MB	MA	SB	SA	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•24,5	BE	BC	EB	EA	MC	MB	SC	SB	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•25	BE	BC	EB	EA	MC	MB	SC	SB	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•27,8	BE	BC	EB	EA	MC	MB	SC	SB	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 20•31,5	BE	BC	EB	EA	MC	MB	SC	SB	GE	GD	OD	OC	GE	GD	OD	OC		
PL. 30•22	BM	BL	ED	EB	MB	MA	SB	SA	GF	GF	OF	OD						
PL. 30•27	BM	BL	ED	EB	MC	MB	SC	SB	GF	GF	OF	OD						
PL. 30•34	BM	BL	ED	EB	MC	MB	SC	SB	GF	GF	OF	OD						
PL. 30•38	BM	BL	ED	EB	MD	MC	SD	SC	GF	GF	OG	OF						
PL. 30•43	BM	BL	ED	EB	MD	MC	SD	SC	GF	GF	OG	OF						
PL. 30•46	BM	BL	ED	EB	MD	MC	SD	SC	GF	GF	OG	OF						
PL. 30•51	BM	BL	ED	EB	MD	MC	SD	SC	GF	GF	OG	OF						
PL. 30•61	BM	BL	ED	EB	ME	MD	SE	SD	GG	GF	OH	OG						
PL. 30•73	BM	BL	EF	ED	ME	MD	SE	SD	GG	GF	OH	OG						
PL. 30•82	BM	BL	EF	ED	ME	MD	SE	SD	GH	GG	OH	OG						
PL. 30•90	BM	BL	EF	ED	MF	ME	SF	SE	GH	GG	OH	OG						

01/10.03

EXTERNAL DRAIN PORTS

IN/OUT PORTS TYPE	SIDE PORTS						REAR PORTS	
	German	European	Split SSM	Spit SSS	Gas BSPP	SAE ODT	Gas BSPP	SAE ODT
PL. 10	GA	-	-	-	GA	03	GA	03
PL. 20	TA	GB	GB	03	GB	03	GB	03
PL. 30	GC	GC	GC	OA	GC	OA	-	-


DRAIN PORTS SIZES

 Tightening torque for low pressure side port

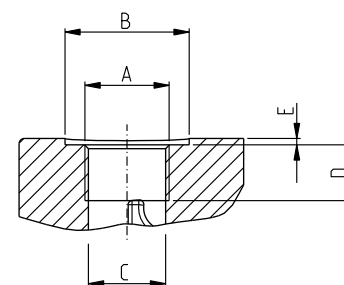
GAS STRAIGHT THREAD PORTS

BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	NOMINAL SIZE	A	Ø B	Ø C	D	E	 Nm (lbf in)
			mm (in)	mm (in)	mm (in)	mm (in)	
GA	1/8"	G 1/8	16,5 (0.6496)	8,75 (0.3444)	12 (0.4724)	1 (0.0394)	5 ^{+0,25} (44 ÷ 46)
GB	1/4"	G 1/4	21,5 (0.8465)	12 (0.4724)	15 (0.5906)	1,5 (0.0591)	15 ⁺¹ (133 ÷ 142)


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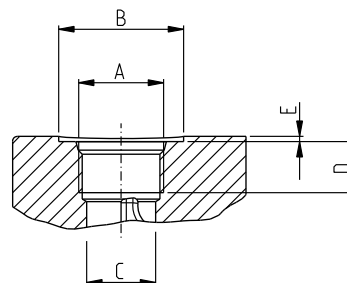
METRIC STRAIGHT THREAD PORTS ISO 6149

METRIC

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	Ø B	Ø C	D	E	 Nm (lbf in)
		mm (in)	mm (in)	mm (in)	mm (in)	
TA	M 10x1	22 (0.8661)	9 (0.3543)	13 (0.5118)	0,5 (0.0197)	10 ^{+0,5} (89 ÷ 93)


DCAT_006_027_21060524



SAE STRAIGHT THREAD PORTS J514

ODT


American straight UNC-UNF 60° conforms to ANSI B 1.1


CODE	A	Ø B	Ø C	D	E	 Nm (lbf in)
		mm (in)	mm (in)	mm (in)	mm (in)	
03	7/16"-20 UNF-2B	21 (0.8267)	9,5 (0.3740)	14 (0.5512)	1 (0.0394)	12 ⁺¹ (106 ÷ 115)

Other drain ports are shown on subsequent pages.

01/10.03

PORTS SIZE

 Tightening torque for low pressure side port



 Tightening torque for high pressure side port [values obtained at 5075 psi (350 bar)]

For reversible rotation, please consult only the tightening torque for high pressure side port

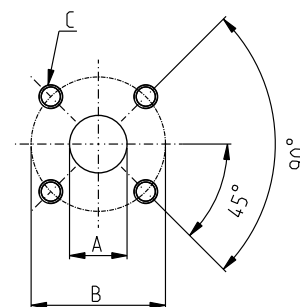
GERMAN FLANGED PORTS - 4 Bolts

GERMAN

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C		
	mm (in)	mm (in)	Thread Depth mm (in)	Nm (lbf in)	Nm (lbf in)
BA	8 (0.3150)	30 (1.1811)	M6 12 (0.4724)	8 ^{+0.5} (71 ÷ 75)	8 ^{+0.5} (71 ÷ 75)
BB	13 (0.5118)	30 (1.1811)	M6 12 (0.4724)	8 ^{+0.5} (71 ÷ 75)	8 ^{+0.5} (71 ÷ 75)
BC	15 (0.5906)	35 (1.3780)	M6 12 (0.4724)	8 ^{+0.5} (71 ÷ 75)	8 ^{+0.5} (71 ÷ 75)
BE	20 (0.7874)	40 (1.5748)	M6 12 (0.4724)	8 ^{+0.5} (71 ÷ 75)	8 ^{+0.5} (71 ÷ 75)
BL	19 (0.7480)	55 (2.1654)	M8 18 (0.7087)	15 ⁺¹ (133 ÷ 142)	20 ⁺¹ (177 ÷ 186)
BM	27 (1.0630)	55 (2.1654)	M8 18 (0.7087)	15 ⁺¹ (133 ÷ 142)	20 ⁺¹ (177 ÷ 186)



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EUROPEAN FLANGED PORTS - 4 Bolts

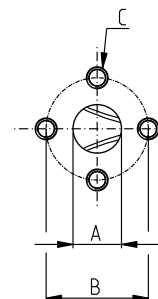
EUROPEAN

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C		
	mm (in)	mm (in)	Thread Depth mm (in)	Nm (lbf in)	Nm (lbf in)
EA	13 (0.5118)	30 (1.1811)	M 6 13 (0.5118)	8 ^{+0.5} (71 ÷ 75)	8 ^{+0.5} (71 ÷ 75)
EB	19 (0.7480)	40 (1.5748)	M 8 14 (0.5512)	15 ⁺¹ (133 ÷ 142)	15 ⁺¹ (133 ÷ 142)
			M 8 (◆) 18 (0.7087)	15 ⁺¹ (◆) (133 ÷ 142)	15 ⁺¹ (◆) (133 ÷ 142)
ED	27 (1.0630)	51 (2.0079)	M 10 18 (0.7087)	20 ⁺¹ (177 ÷ 186)	30 ^{+2.5} (266 ÷ 288)
EF	33 (1.2992)	62 (2.4409)	M 12 18 (0.7087)	25 ⁺¹ (221 ÷ 230)	50 ^{+2.5} (443 ÷ 465)


01/10.03


DCAT_006_024_21060533



(◆) For POLARIS 30

PORTS SIZES

 Tightening torque for low pressure side port



 Tightening torque for high pressure side port [values obtained at 5075 psi (350 bar)]

For reversible rotation, please consult only the tightening torque for high pressure side port

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI

SSM

Metric thread ISO 60° to ISO/R 262



CODE	A	B	C	D		
	mm (in)	mm (in)	mm (in)	Thread Depth mm (in)	Nm (lbf in)	Nm (lbf in)
MA	12,5 (0.4921)	38,1 (1.50)	17,5 (0.6890)	M 8	15 ⁺¹	15 ⁺¹
				14 (0.5512)	(133 ÷ 142)	(133 ÷ 142)
				M 8 (◆)	20 ⁺¹ (◆)	20 ⁺¹ (◆)
MB	19 (0.7480)	47,6 (1.8740)	22,2 (0.8740)	22 (0.8661)	(177 ÷ 186)	(177 ÷ 186)
				M 10	20 ⁺¹	25 ⁺¹
				14 (0.5512)	(177 ÷ 186)	(266 ÷ 288)
MC	25,4 (1.0000)	52,4 (2.0630)	26,2 (1.0315)	M 10 (◆)	20 ⁺¹ (◆)	35 ^{+2,5} (◆)
				22 (0.8661)	(177 ÷ 186)	(310 ÷ 332)
				M 10	20 ⁺¹	25 ⁺¹
MD	30,5 (1.2008)	58,7 (2.3110)	30,2 (1.1890)	14 (0.5512)	(177 ÷ 186)	(266 ÷ 288)
				M 10 (◆)	20 ⁺¹ (◆)	35 ^{+2,5} (◆)
				22 (0.8661)	(177 ÷ 186)	(310 ÷ 332)
ME	39,3 (1.5472)	69,8 (2.7480)	35,7 (1.4055)	M 12	30 ^{+2,5}	60 ⁺⁵
				22 (0.8661)	(266 ÷ 288)	(531 ÷ 575)
MF	51 (2.0079)	77,8 (3.0630)	42,9 (1.6890)	M 12	30 ^{+2,5}	60 ⁺⁵
				22 (0.8661)	(266 ÷ 288)	(531 ÷ 575)

(◆) For POLARIS 30

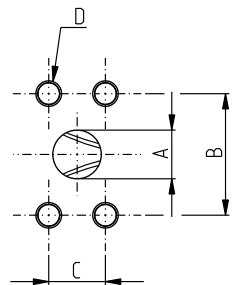
SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI

SSS

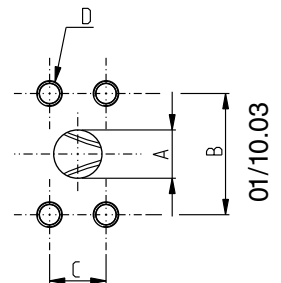
American straight thread UNC-UNF 60° conforms to ANSI B 1.1

CODE	A	B	C	D		
	mm (in)	mm (in)	mm (in)	Thread Depth mm (in)	Nm (lbf in)	Nm (lbf in)
SA	12,5 (0.4921)	38,1 (1.50)	17,5 (0.6890)	5/16-18 UNC-2B	15 ⁺¹	15 ⁺¹
				14 (0.5512)	(133 ÷ 142)	(133 ÷ 142)
				5/16-18 UNC-2B (◆)	20 ⁺¹ (◆)	20 ⁺¹ (◆)
SB	19 (0.7480)	47,6 (1.8740)	22,2 (0.8740)	22 (0.8661)	(177 ÷ 186)	(177 ÷ 186)
				3/8-16 UNC-2B	20 ⁺¹	20 ⁺¹
				14 (0.5512)	(177 ÷ 186)	(177 ÷ 186)
SC	25,4 (1.0000)	52,4 (2.0630)	26,2 (1.0315)	3/8-16 UNC-2B (◆)	30 ^{+2,5} (◆)	20 ⁺¹ (◆)
				22 (0.8661)	(266 ÷ 288)	(177 ÷ 186)
				3/8-16 UNC-2B	20 ⁺¹	25 ⁺¹
SD	30,5 (1.2008)	58,7 (2.3110)	30,2 (1.1890)	14 (0.5512)	(177 ÷ 186)	(221 ÷ 230)
				3/8-16 UNC-2B (◆)	20 ⁺¹ (◆)	30 ^{+2,5} (◆)
SE	39,3 (1.5472)	69,8 (2.7480)	35,7 (1.4055)	22 (0.8661)	(177 ÷ 186)	(266 ÷ 288)
				1/2-13 UNC-2B	30 ^{+2,5}	70 ⁺⁵
SF	51 (2.0079)	77,8 (3.0630)	42,9 (1.6890)	22 (0.8661)	(266 ÷ 288)	(620 ÷ 664)
				1/2-13 UNC-2B	30 ^{+2,5} (◆)	70 ⁺⁵

(◆) For POLARIS 30



DCAT_006_025_21064252



DCAT_006_028_21060740

01/10.03

PORTS SIZES



Tightening torque for low pressure side port



Tightening torque for high pressure side port [values obtained at 5075 psi (350 bar)]

For reversible rotation, please consult only the tightening torque for high pressure side port

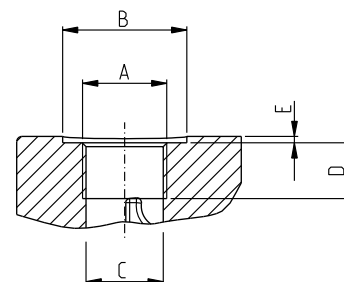
Replaces: 01/10.03

GAS STRAIGHT THREAD PORTS

BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

DCAT_006_026_21064779



CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm (in)	mm (in)	mm (in)	mm (in)	Nm (lbf in)	Nm (lbf in)
GC	3/8"	G 3/8	30 (#) (1.1811)	15 (0.5906)	10 (#) (0.3937)	2 (#) (0.0787)	15 ⁺¹ (#) (133 ÷ 142)	—
			—		14 (0.5512)	—	15 ⁺¹ (133 ÷ 142)	25 ⁺¹ (221 ÷ 230)
GD	1/2"	G 1/2	—	19 (0.7480)	14 (0.5512)	—	20 ⁺¹ (177 ÷ 186)	50 ^{+2,5} (443 ÷ 465)
			—		17 (◆) (0.6693)	—	—	—
GE	3/4"	G 3/4	—	24,5 (0.9646)	18 (0.7087)	—	30 ^{+2,5} (266 ÷ 288)	90 ⁺⁵ (797 ÷ 841)
GF	1"	G 1	—	30,5 (1.2008)	18 (0.7086)	—	50 ^{+2,5} (443 ÷ 465)	130 ⁺¹⁰ (1151 ÷ 1239)
GG	1" 1/4	G 1 1/4	—	39 (1.5354)	22 (0.8661)	—	60 ⁺⁵ (531 ÷ 575)	170 ⁺¹⁰ (1505 ÷ 1593)
GH	1" 1/2	G 1 1/2	—	45 (1.7716)	24 (0.9448)	—	70 ⁺⁵ (620 ÷ 664)	210 ⁺¹⁵ (1859 ÷ 1992)

(#) = Drain port

(◆) For POLARIS 20

02/07.2006

PORTS SIZES



Tightening torque for low pressure side port



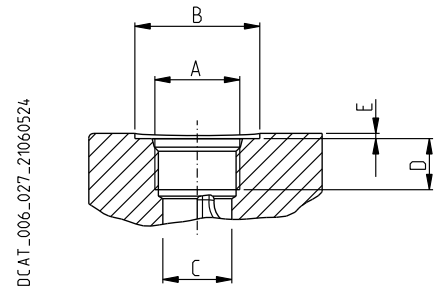
Tightening torque for high pressure side port [values obtained at 5075 psi (350 bar)]

For reversible rotation, please consult only the tightening torque for high pressure side port

SAE STRAIGHT THREAD PORTS J514

ODT

American straight thread UNC-UNF 60° conforms to ANSI B 1.1



CODE	Nominal size	A	Ø B		Ø C		D	E		
			mm (in)	mm (in)	mm (in)	mm (in)				
OA	3/8"	9/16" - 18 UNF - 2B	26 (1.0236)	13 (0.5118)	15 (0.5906)	1	15 ⁺¹	25 ⁺¹		
						(0.03934)	(133 ÷ 142)	(221 ÷ 230)		
OB	1/2"	3/4" - 16 UNF - 2B	32 (1.2598)	17,5 (0.690)	15 (0.5906)	—	20 ⁺¹	45 ^{+2,5}		
							(177 ÷ 186)	(398 ÷ 420)		
OC	5/8"	7/8" - 14 UNF - 2B	35 (1.3780)	20,5 (0.8071)	15 (◆) (0.5906)	0,5	30 ^{+2,5}	70 ⁺⁵		
					17 (0.6693)	(0.0197)	(266 ÷ 288)	(620 ÷ 664)		
OD	3/4"	1 1/16" - 12 UNF - 2B	42 (1.6535)	24,8 (0.9764)	20 (0.7874)	0,5 (0.0197)	40 ^{+2,5}	120 ⁺¹⁰		
OF	1"	1 5/16" - 12 UNF - 2B	49 (1.9291)	30,5 (1.2008)	20 (0.7874)	0,5 (0.0197)	60 ⁺⁵	170 ⁺¹⁰		
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58 (2.2835)	39,1 (1.5394)	20 (0.7874)	0,5 (0.0197)	70 ⁺⁵	200 ⁺¹⁵		
OH	1" 1/2	1 7/8" - 12 UNF - 2B	65 (2.5591)	45 (1.7717)	20 (0.7874)	0,5 (0.0197)	100 ⁺⁵	270 ⁺¹⁵		

(#) = Drain port

(◆) For POLARIS 10

01/10.03