

HOW TO ORDER POLARIS 30 SINGLE UNITS

1	2	3	4	5	6	7	8	9	10
PLP 30-22	R	0	- 83	E3	- L	ED/EB	- N	- C	- FS

1	Type	Pump type	Motor type
1.34 in ³ /rev (21,99 cm ³ /rev)		PLP 30-22	PLM 30-22
1.63 in ³ /rev (26,70 cm ³ /rev)		PLP 30-27	PLM 30-27
2.11 in ³ /rev (34,55 cm ³ /rev)		PLP 30-34	PLM 30-34
2.40 in ³ /rev (39,27 cm ³ /rev)		PLP 30-38	PLM 30-38
2.68 in ³ /rev (43,98 cm ³ /rev)		PLP 30-43	PLM 30-43
3.16 in³/rev (51,83 cm³/rev)		PLP 30-51	PLM 30-51
3.74 in ³ /rev (61,26 cm ³ /rev)		PLP 30-61	PLM 30-61
4.50 in ³ /rev (73,82 cm ³ /rev)		PLP 30-73	PLM 30-73
4.98 in ³ /rev (81,68 cm ³ /rev)		PLP 30-82	PLM 30-82
5.56 in ³ /rev (91,10 cm ³ /rev)		PLP 30-90	PLM 30-90

2	Rotation	Code
Left		S
Right		D
Reversible rear external drain		R

3	Version	Code
Without outboard bearing		0

4	Drive shaft	Code
European tapered 1:8		83
European tapered 1:8		84
German tapered 1:5		56
Straight		41
SAE "B" spline		A8
SAE "BB" spline		A5
SAE "B" spline		04
SAE "BB" spline		05
SAE "B" straight		32
SAE "BB" straight		33

5	Mounting flange	Code
European		E3
European		E4
German		B3
SAE "B" 2 bolt		S5
SAE "B" 2 bolt		U3

6	Ports position	Code
Side		L

Code	Ports IN/OUT	7
GERMAN FLANGED PORTS		
Side		Type
BM/BL	PLP 30	22-27-34-38-43
BL/BM	PLM 30	46-51-61-73-82-90
EUROPEAN FLANGED PORTS		
Side		Type
ED/EB	PLP 30	22-27-34-38-43
EB/ED	PLM 30	46-51-61
EF/ED	PLP 30	73-82-90
ED/EF	PLM 30	
SAE FLANGED PORTS (SSM)		
Side		Type
MB/MA	PLP 30	22
MA/MB	PLM 30	27-34
MC/MB	PLP 30	38-43-46-51
MB/MC	PLM 30	61-73-82
MD/MC	PLP 30	90
MC/MD	PLM 30	
ME/MD	PLP 30	
MD/ME	PLM 30	
MF/ME	PLP 30	
ME/MF	PLM 30	
SAE FLANGED PORTS (SSS)		
Side		Type
SB/SA	PLP 30	22
SA/SB	PLM 30	27-34
SC/SB	PLP 30	38-43-46-51
SB/SC	PLM 30	61-73-82
SD/SC	PLP 30	90
SC/SB	PLM 30	
SE/SD	PLP 30	
SD/SE	PLM 30	
SF/SE	PLP 30	
SE/SF	PLM 30	
GAS STRAIGHT THREAD PORTS (BSPP)		
Side		Type
GF/GF	PLP 30	22-27-34-38-43-46-51
GG/GF	PLM 30	61-73
GF/GG	PLP 30	82-90
GH/GG	PLM 30	

01/10.03

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

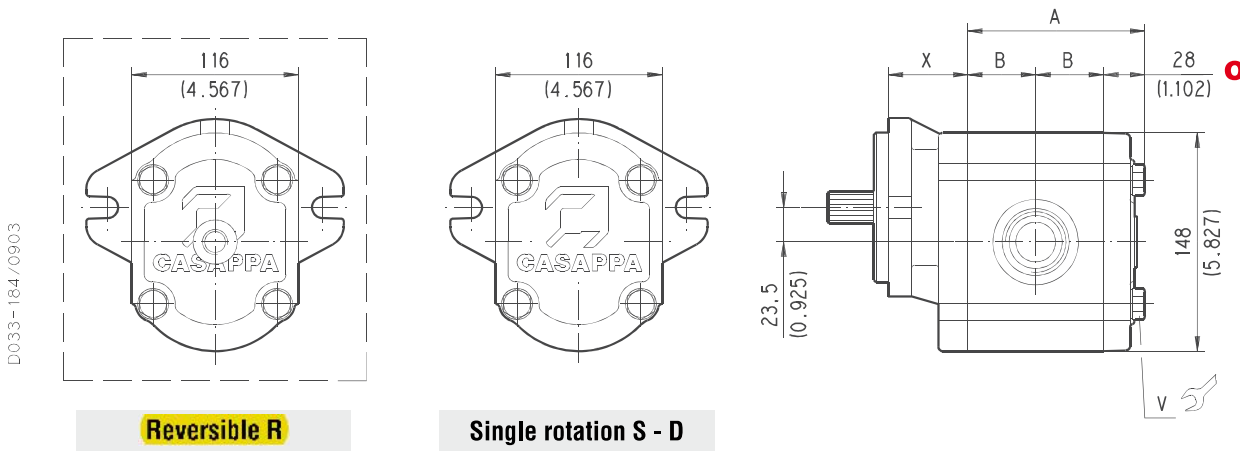
p₃= Max. peak pressure

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.

POLARIS 30

SINGLE UNITS SIDE PORTS

L



Replaces: 02/07.2006

Mounting flange type version 0	X mm (inch)
E3	24 (0.945)
E4	25 (0.984)
B3	28 (1.102)
S5	54 (2.1260)
U3	20,8 (0.819)

Rear cover in cast iron only.

DRIVE SHAFTS:
see page 56 and page 57
MOUNTING FLANGE:
see page 66 ÷ 68
PORTS: see page. 69 ÷ 74

Mounting flange material	Screw tightening torque Nm (lbf in) V
Cast iron	100 ±10 (797 ÷ 974)

Pump type Motor type	A mm (inch)	B mm (inch)
PL. 30•22	106 (4.1732)	39 (1.5354)
PL. 30•27	109 (4.2913)	40,5 (1.5945)
PL. 30•34	114 (4.4882)	43 (1.6929)
PL. 30•38	117 (4.6063)	44,5 (1.7520)
PL. 30•43	120 (4.7244)	46 (1.8110)
PL. 30•51	125 (4.9212)	48,5 (1.9094)
PL. 30•61	131 (5.1575)	51,5 (2.0276)
PL. 30•73	139 (5.4724)	55,5 (2.1850)
PL. 30•82	144 (5.6693)	58 (2.2835)
PL. 30•90	150 (5.9055)	61 (2.4016)

03/02.2012

POLARIS 30

DRIVE SHAFTS

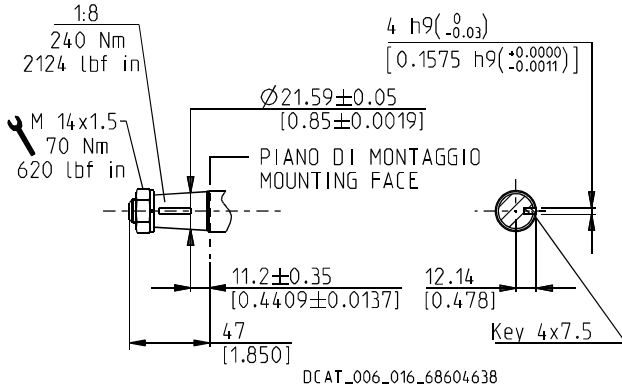
EUROPEAN TAPERED 1:8

83

Not available with size:

30•82 30•90

Mounting face refer to flange code **E3**



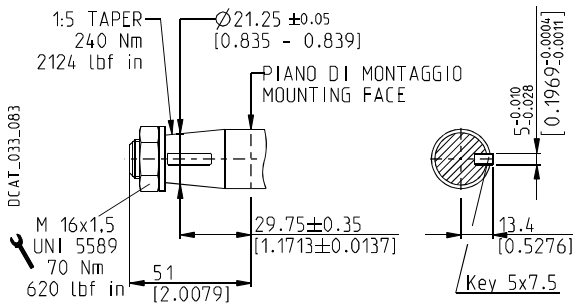
GERMAN TAPERED 1:5

56

Not available with size:

30•61 30•73 30•82 30•90

Mounting face refer to flange code **B3**



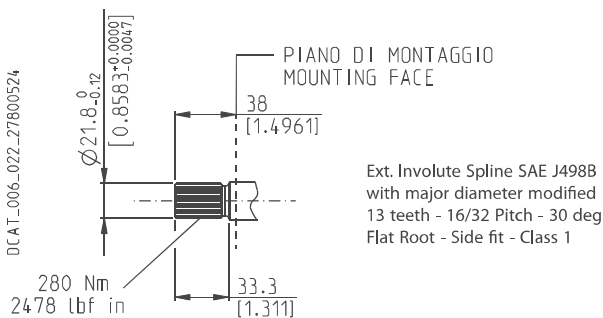
SAE "B" SPLINE

A8

Not available with size:

30•82 30•90

Mounting face refer to flange code **U3**



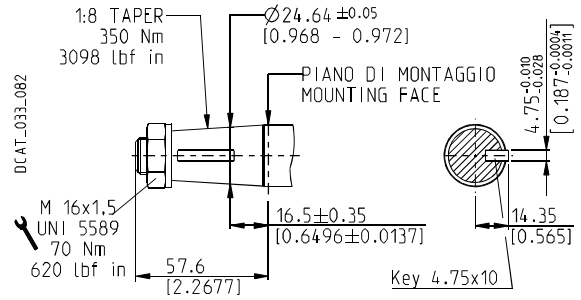
EUROPEAN TAPERED 1:8

84

Not available with size:

30•22 30•27 30•34 30•38

Mounting face refer to flange code **E4**



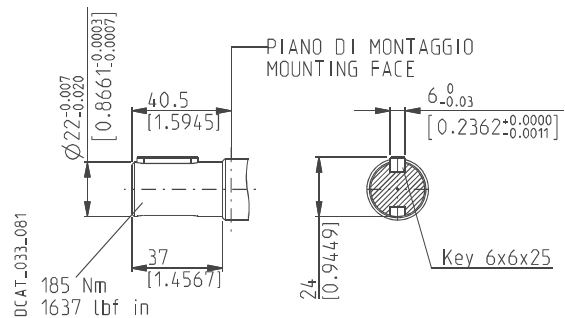
STRAIGHT

41

Not available with size:

30•82 30•90

Mounting face refer to flange code **E3**



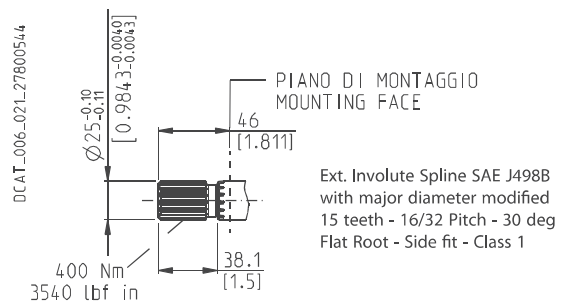
SAE "BB" SPLINE

A5

Not available with size:

30•22 30•38 30•82 30•90

Mounting face refer to flange code **U3**



01/10.03

POLARIS 30

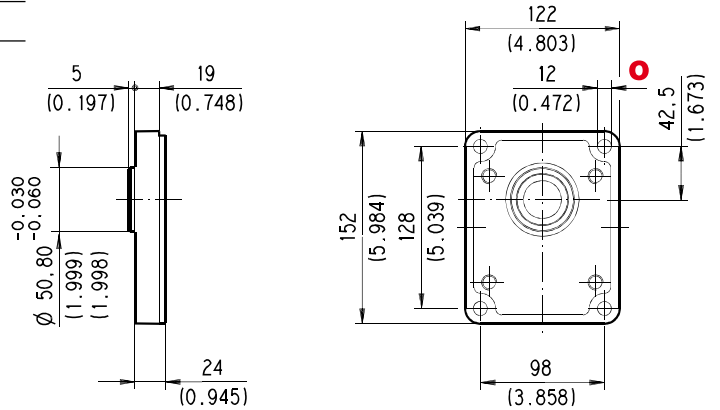
MOUNTING FLANGES AND TABLE OF COMPATIBILITY

EUROPEAN

E3

Material: cast iron ○

D033-199/0706



Replaces: 01/10.03

DRIVE SHAFTS

See page 56 and 57

VERSIONS See page 47	83	41	04	05	32	33	A5	A8
0	#	#	X	X	X	X	X	X

Standard combination

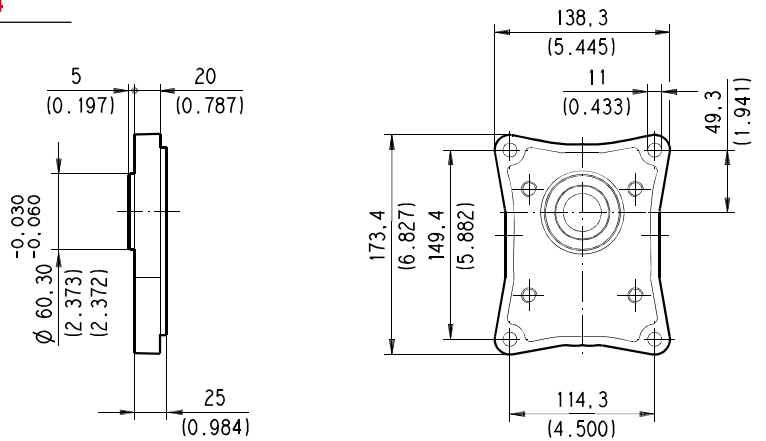
X Available combination

EUROPEAN

E4

Material: cast iron ○

D033-200/0703



○ 02/07.2006

DRIVE SHAFTS

See page 56 and 57

VERSIONS See page 47	84	41	A5	A8
0	#	X	X	X

Standard combination

X Available combination

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

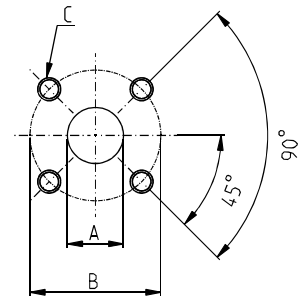
GERMAN FLANGED PORTS - 4 Bolts

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

01/10.03

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)
			M 12 18 (0.7087)	25 ⁺¹ (221 ÷ 230)	50 ^{+2,5} (443 ÷ 465)
EF	33 (1.2992)	62 (2.4409)	M 12 18 (0.7087)	25 ⁺¹ (221 ÷ 230)	50 ^{+2,5} (443 ÷ 465)

(◆) For POLARIS 30

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