

HYDRAULIC GEAR
PUMPS AND
MOTORS

POLARIS[®]

HOW TO ORDER POLARIS 10 SINGLE UNITS

PLP10.5 **D** **0** **81** **E1** **L** **BB/BA** **N** **EL** **-** **-** **-** **FS**
 1 2 3 4 5 6 7 8 9 10 11 12 13

PLP 10-1 L 0 81 E1 L BB/BA N EL C L GA FS

1	Type	Pump type	Motor type
	0.07 in ³ /rev (1,07 cm ³ /rev)	PLP 10-1	PLM 10-1
	0.10 in ³ /rev (1,60 cm ³ /rev)	PLP 10-1,5	PLM 10-1,5
	0.13 in ³ /rev (2,13 cm ³ /rev)	PLP 10-2	PLM 10-2
	0.16 in ³ /rev (2,67 cm ³ /rev)	PLP 10-2,5	PLM 10-2,5
	0.20 in ³ /rev (3,34 cm ³ /rev)	PLP 10-3,15	PLM 10-3,15
	0.26 in ³ /rev (4,27 cm ³ /rev)	PLP 10-4	PLM 10-4
	0.33 in³/rev (5,34 cm³/rev)	PLP 10-5	PLM 10-5
	0.38 in ³ /rev (6,20 cm ³ /rev)	PLP 10-5,8	PLM 10-5,8
	0.41 in ³ /rev (6,67 cm ³ /rev)	PLP 10-6,3	PLM 10-6,3
	0.52 in ³ /rev (8,51 cm ³ /rev)	PLP 10-8	PLM 10-8
	0.65 in ³ /rev (10,67 cm ³ /rev)	PLP 10-10	PLP 10-10

2	Rotation	Code
	Left	S
	Right	D
	Reversible rear external drain	R
	Reversible side external drain	L
	Reversible internal drain	B

3	Version	Code
	Without outboard bearing	0

4	Drive shaft	Code
	European tapered 1:8	81
	European tapered 1:8	86
	SAE "AA" spline (9 teeth)	02
	SAE "AA" straight	30
	SAE straight	36
	Straight	29

5	Mounting flange	Code
	European	E1
	European	E7
	European	E8
	German 2 bolt	B1
	German 4 bolt	K2
	SAE "AA" 2 bolt	S0
	SAE "AA" 2-4 bolt	R9
	SAE 2-4 bolt	R8
	SAE 2 bolt	W9

Code	Ports position	6
L	Side	
P	Rear	

Code	Ports IN/OUT	7
GERMAN FLANGED PORTS		
Side	Rear	Type
BB/BA	PLP 10	1-1,5-2-2,5-3,15
BA/BB	PLM 10	4-5-5,8-6,3-8-10
GAS STRAIGHT THREAD PORTS (BSPP)		
Side	Rear	Type
GC/GC	GC/GC	PLP 10 1-1,5-2-2,5-3,15-4
		PLM 10
GD/GD	GD/GD	PLP 10 5-5,8-6,3-8-10
		PLM 10

SAE STRAIGHT THREAD PORTS (ODT)			
Side	Rear	Type	
OB/OA	OB/OA	PLP 10	1-1,5-2-2,5-3,15-4
OA/OB	OA/OB	PLM 10	5-5,8-6,3
OC/OB	OB/OB	PLP 10	8-10
OB/OC	OB/OB	PLM 10	

Code	Seals (a)	8
N	Buna (standard)	
V	Viton	

Code	Cover options (b)	9
	Cast iron mounting flange and rear cover (standard - no code)	
E	Aluminium mounting flange and cast iron rear cover	
L	Cast iron mounting flange and aluminium rear cover	
EL	Aluminium mounting flange and rear cover	

Code	Shaft seal options	10
C	High back pressure seal with wiper seal	
D	Standard seal with wiper seal	
H	High back pressure seal	

Replaces: 01/10.03

02/07.2006

HOW TO ORDER POLARIS 10 SINGLE UNITS

Replaces: 01/10.03

11	Drain port position - Rev. Rotation L	Code
	Side drain with side port position	L
	Side drain with bottom port position	*

12	Drain port		Code
IN/OUT GERMAN FLANGED PORTS			
Type		Side	Rear
1-1,5-2-2,5-3,15	PLP 10	GA	
4-5-5,8-6,3-8-10	PLM 10		
IN/OUT GAS STRAIGHT THREAD PORTS (BSPP)			
Type		Side	Rear
1-1,5-2-2,5-3,15	PLP 10	GA	GA
4-5-5,8-6,3-8-10	PLM 10		
IN/OUT SAE STRAIGHT THREAD PORTS (ODT)			
Type		Side	Rear
1-1,5-2-2,5-3,15	PLP 10	03	03
4-5-5,8-6,3-8-10	PLM 10		

13	Shaft arrangement	Code
	Female spline	FS

- (a) Choose the seals according to the temperature shown on page 4.
- (b) Mounting flange material on page 58 ÷ 60
Rear cover material on page 32 ÷ 33

02/07.2006

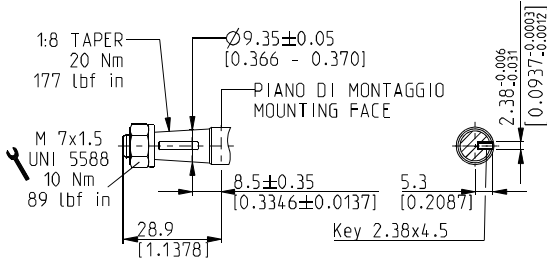
POLARIS 10

DRIVE SHAFTS

EUROPEAN TAPERED 1:8

81

Mounting face refer to flange code **E1**

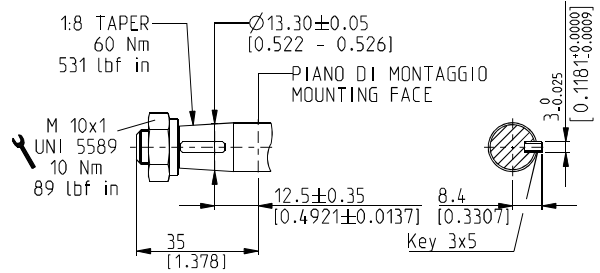


DCAT_033_041

EUROPEAN TAPERED 1:8

86

Mounting face refer to flange code **E7**



DCAT_033_042

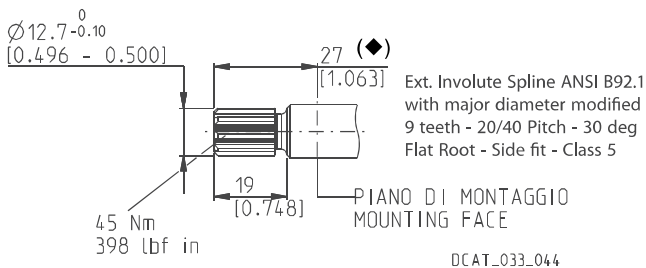
SAE "AA" SPLINE

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**

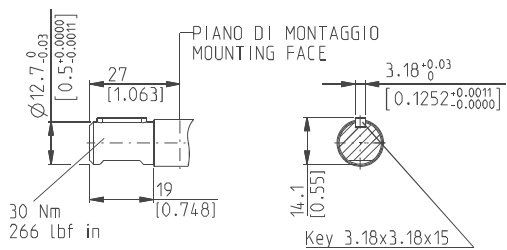
SAE "AA" STRAIGHT

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

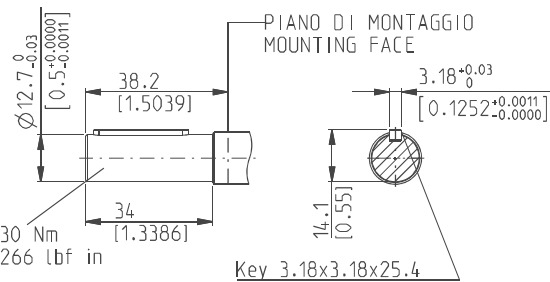
SAE STRAIGHT

36

Not available with size:

10•1,5	10•2,5
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Mounting face refer to flange code **R8**



DCAT_033_046

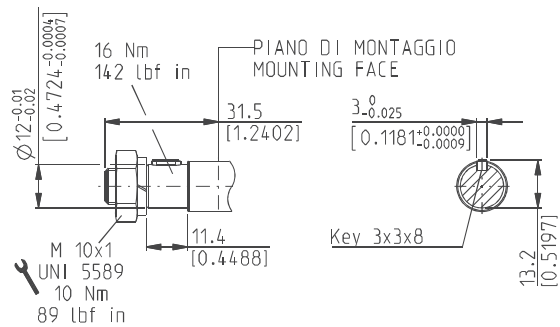
STRAIGHT

29

Not available with size:

10•5,8

Mounting face refer to flange code **E8**



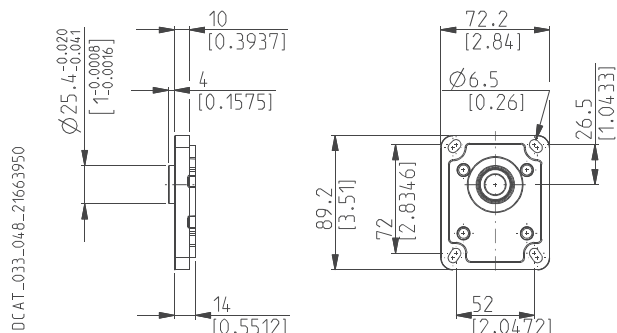
DCAT_033_043

01/10.03

POLARIS 10 MOUNTING FLANGES AND TABLE OF COMPATIBILITY

EUROPEAN E1

Material: cast iron and aluminium



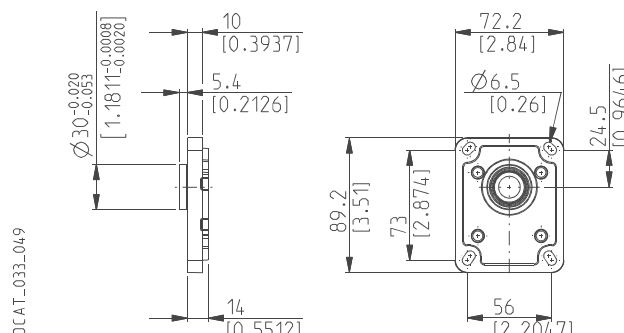
DRIVE SHAFTS
See page 52

VERSIONS	81	02	29	86
See page 47				
0	#	X	X	X

Standard combination
X Available combination

EUROPEAN E7

Material: cast iron and aluminium



DRIVE SHAFTS
See page 52

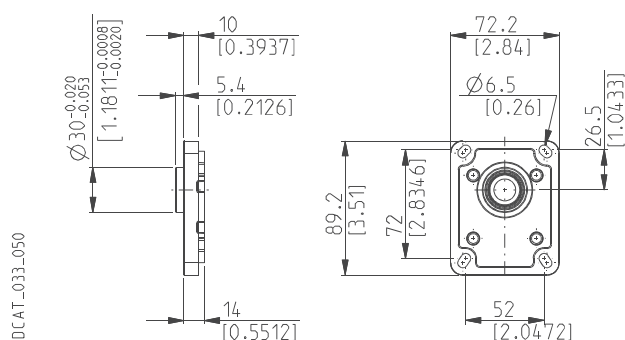
VERSIONS	86	29	30
See page 47			
0	#	X	X

Standard combination
X Available combination

Replaces: 01/10.03

EUROPEAN E8

Material: cast iron and aluminium



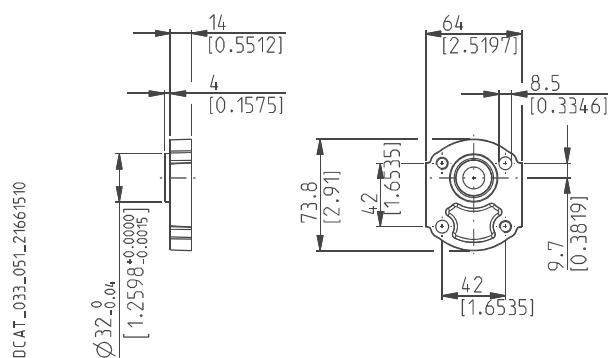
DRIVE SHAFTS
See page 52

VERSIONS	29	02
See page 47		
0	#	X

Standard combination
X Available combination

GERMAN 2 BOLTS B1

Material: aluminium



DRIVE SHAFTS
See page 52

VERSIONS	30	86
See page 47		
0	#	X

Standard combination
X Available combination

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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

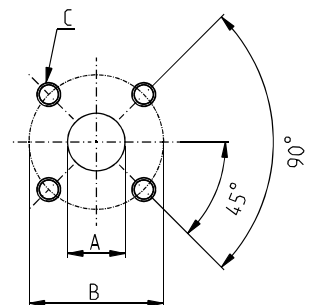
GERMAN FLANGED PORTS - 4 Bolts

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)
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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