



QUICK BUILD PROGRAM



NEXT DAY DELIVERY

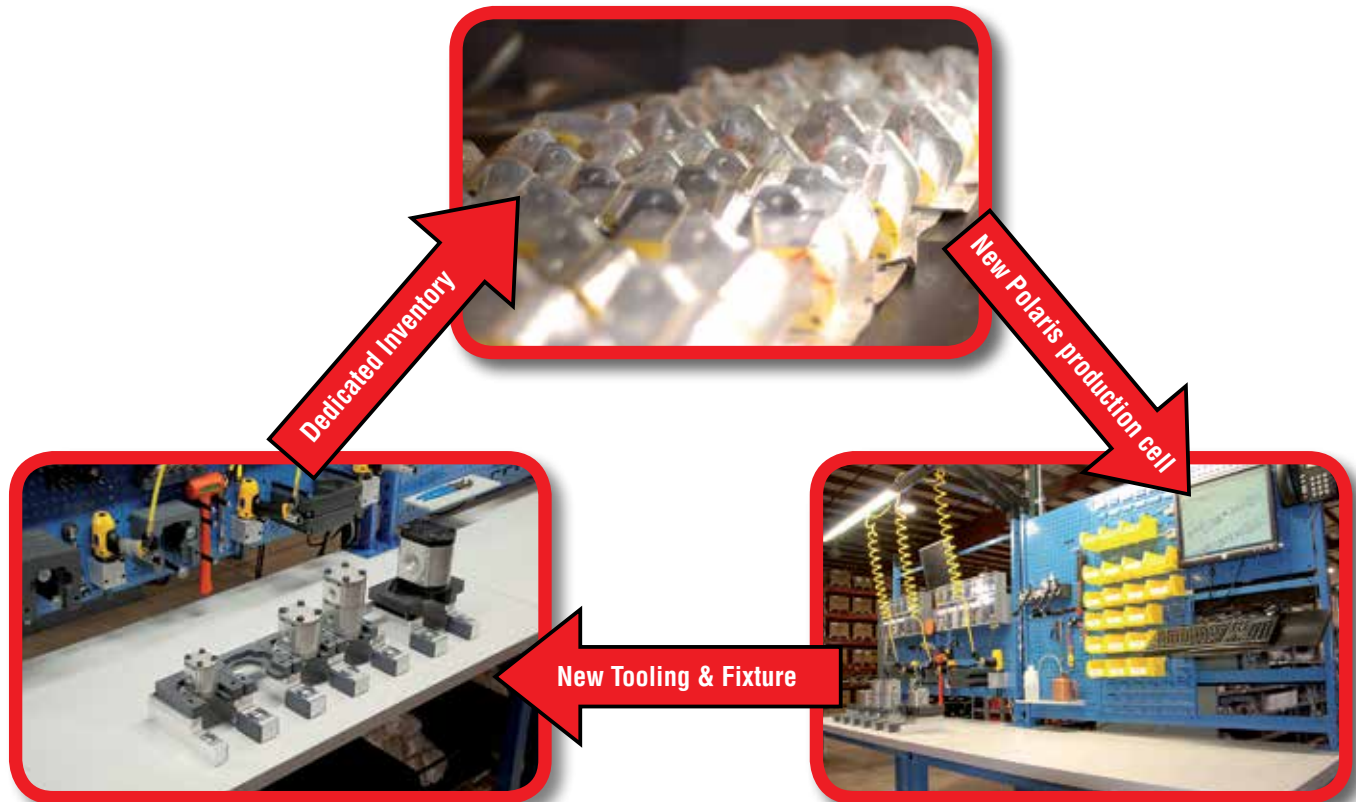
HYDRAULIC GEAR
PUMPS

POLARIS®

POLARIS QUICK BUILD PROGRAM

The “POLARIS” product line is a result of more than 50 years of Casappa experience. By combining large investments in research, product development, and personalized solution Casappa can offer a high efficiency product while maintaining its modular 3 piece design.

The modularity of the POLARIS product in conjunction with investments into infrastructure has allowed for Casappa to offer our “Quick Build” program. This newly developed program allows our network of distributors the ability to quickly deliver product to end customers in need.



ASK ABOUT OUR 24-HOUR TURNAROUND

01/03.2016



Modification from former edition.

FEATURES

Inlet pressure range for pumps	10 ÷ 22 psi - [0,7 ÷ 1,5 bar (abs.)]
Fluid temperature range with Buna N seals	Min -13 °F (-25 °C)
	Max continuous 176 °F (80 °C)
	Max peak 212 °F (100 °C)
Fluid	Mineral oil based hydraulic fluids to ISO/DIN. For other fluids please consult our technical sales department.
Viscosity range	From 60 to 456 SSU [12 to 100 mm ² /s (cSt)] recommended
	Up to 3410 SSU [750 mm ² /s (cSt)] permitted

See technical catalog for more information.

MULTIPLE PUMPS

POLARIS series pumps can be coupled together in combination. Input power requirements of each section varies, but the greater requirement must be at the drive shaft end, and progressively smaller to the rear.

Features and performances are the same as the corresponding single pumps, but pressures must be limited by the transmissible torque of the drive and connecting shafts.

The maximum rotational speed is that of the lowest rated speed of the single units incorporated.

DRIVE SHAFT SELECTION

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages. The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

01/03.2016



PICK DISPLACEMENT AND CORRESPONDING PORTS

AVAILABLE DISPLACEMENTS AND PORTS

Pump type	Displacement	Max. pressure			Max. speed	Min. speed	Ports code		
		p ₁	p ₂	p ₃					
	in ³ /rev (cm ³ /rev)	psi (bar)			min ⁻¹	Standard Inlet	Common Inlet	OUT	
PLP10.2,5	0.16 (2,67)	3770 (260)	4060 (280)	4205 (290)	4000	650	OB	OB	OA
PLP10.3,15	0.20 (3,34)	3770 (260)	4060 (280)	4205 (290)	4000	650	OB	OB	OA
PLP10.4	0.26 (4,27)	3625 (250)	3915 (270)	4060 (280)	4000	650	OB	OC	OA
PLP10.5	0.33 (5,34)	3625 (250)	3915 (270)	4060 (280)	4000	650	OB	OC	OA
PLP10.6,3	0.41 (6,67)	3335 (230)	3625 (250)	3770 (260)	3500	650	OC	OC	OB
PLP10.8	0.52 (8,51)	2610 (180)	2900 (200)	3045 (210)	3500	650	OC	OC	OB
PLP10.10	0.65 (10,67)	2030 (140)	2320 (160)	2465 (170)	3500	650	OC	OC	OB
PLP20.4	0.30 (4,95)	3625 (250)	4060 (280)	4350 (300)	4000	600	OC	OD	OC
PLP20.6,3	0.40 (6,61)	3625 (250)	4060 (280)	4350 (300)	4000	600	OC	OD	OC
PLP20.8	0.50 (8,26)	3625 (250)	4060 (280)	4350 (300)	3500	600	OC	OD	OC
PLP20.9	0.56 (9,17)	3625 (250)	4060 (280)	4350 (300)	3500	600	OC	OD	OC
PLP20.11,2	0.69 (11,23)	3625 (250)	4060 (280)	4350 (300)	3500	600	OC	OD	OC
PLP20.14	0.89 (14,53)	3625 (250)	4060 (280)	4350 (300)	3500	500	OD	OF	OC
PLP20.16	1.03 (16,85)	3625 (250)	4060 (280)	4350 (300)	3000	500	OD	OF	OC
PLP20.20	1.29 (21,14)	2900 (200)	3190 (220)	3480 (240)	3000	500	OD	OG	OC
PLP20.25	1.61 (26,42)	2465 (170)	2755 (190)	3045 (210)	2500	500	OD	OG	OC
PLP20.31,5	2.01 (33,03)	1885 (130)	2175 (150)	2465 (170)	2000	500	OD	OG	OC
PHP20.20	1.29 (21,14)	3600 (250)	4060 (280)	4350 (300)	3500	500	OG	OG	OC
PHP20.25	1.61 (26,42)	3335 (230)	3770 (260)	4060 (280)	3000	500	OG	OG	OC
PHP20.31,5	2.01 (33,03)	2900 (200)	3335 (230)	3625 (250)	2500	500	OG	OG	OC

p_1 = Max. continuous pressure

p_2 = Max. intermittent pressure

p_3 = Max. peak pressure

Replaces: 01/03.2016

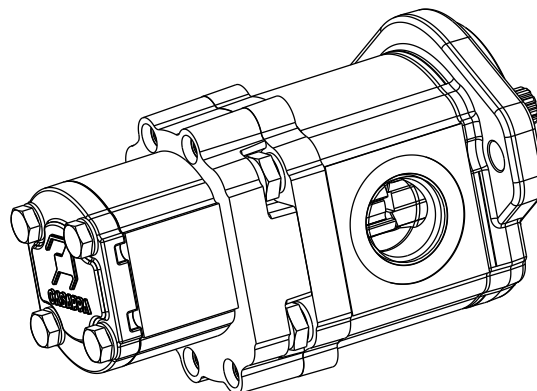
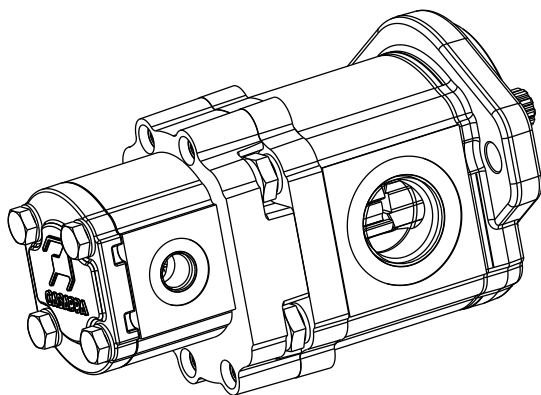
02/02.2017

PORT DIMENSION

STANDARD INLET PORT CONFIGURATION

COMMON INLET PORT CONFIGURATION

Replaces: 01/03.2016



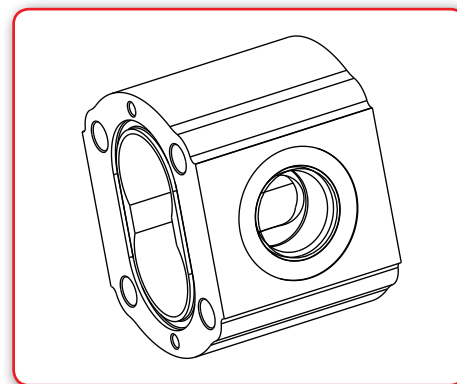
SAE STRAIGHT THREAD PORTS J514

ODT

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

See technical catalog for tightening torque

CODE	Nominal size	Thread size	Dash number
OA	3/8"	9/16" - 18 UNF - 2B	-6
OB	1/2"	3/4" - 16 UNF - 2B	-8
OC	5/8"	7/8" - 14 UNF - 2B	-10
OD	3/4"	1 1/16" - 12 UNF - 2B	-12
OF	1"	1 5/16" - 12 UNF - 2B	-16
OG	1" 1/4	1 5/8" - 12 UNF - 2B	-20
** Used in common inlet to denote omitted inlet port			

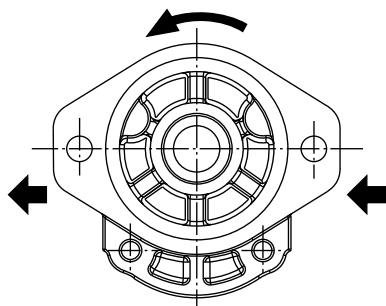


AVAILABLE QUICK BUILD ROTATIONS



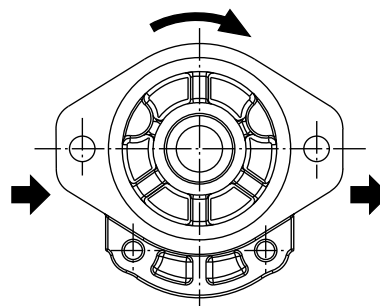
Counter-clockwise rotation

S



Clockwise rotation

D



02/02.2017



DRIVE SHAFT AND MOUNTING FLANGE AVAILABILITY

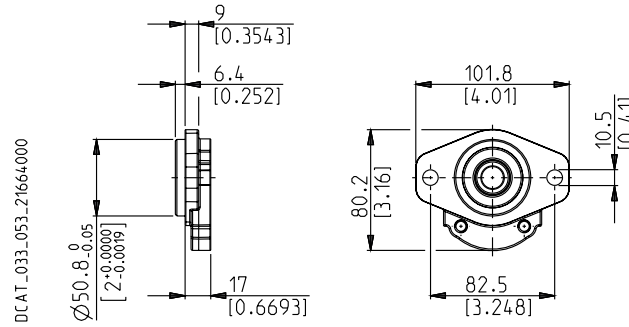
SAE "AA"

MOUNTING FLANGE

SAE "A-A" 2 BOLTS

S0

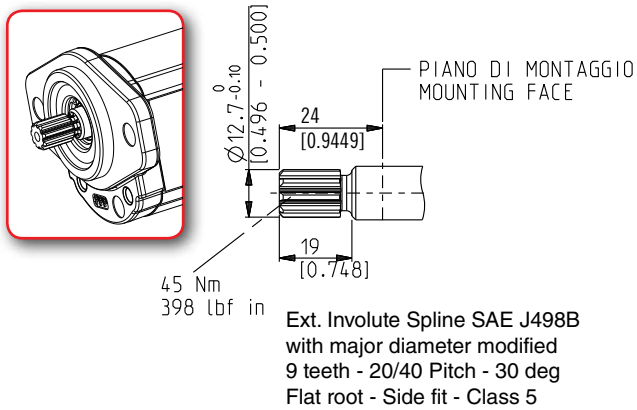
Mounting flange and rear cover in aluminium (order code **EL**)



DRIVE SHAFT

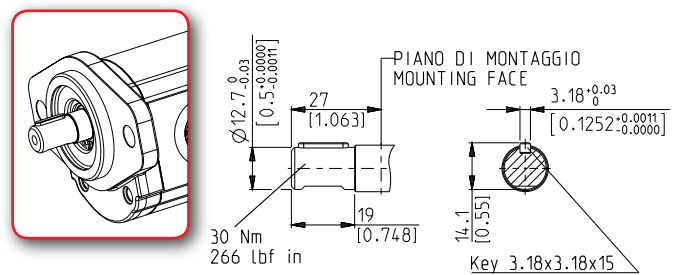
SAE "AA" SPLINE

02



SAE "AA" STRAIGHT

30





DRIVE SHAFT AND MOUNTING FLANGE AVAILABILITY

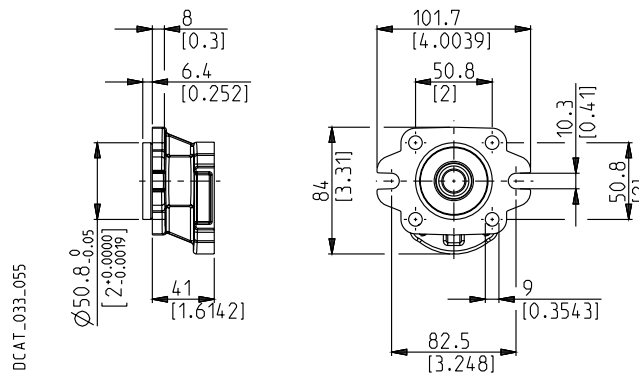
SAE "AA"

MOUNTING FLANGE

SAE "A-A" 2-4 BOLTS

R9

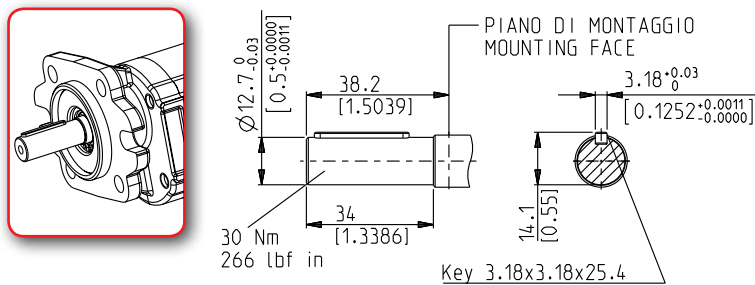
Cast iron mounting flange and aluminium rear cover (order code **L**)



DRIVE SHAFT

SAE "AA" STRAIGHT - EXTENDED LENGTH

36





DRIVE SHAFT AND MOUNTING FLANGE AVAILABILITY

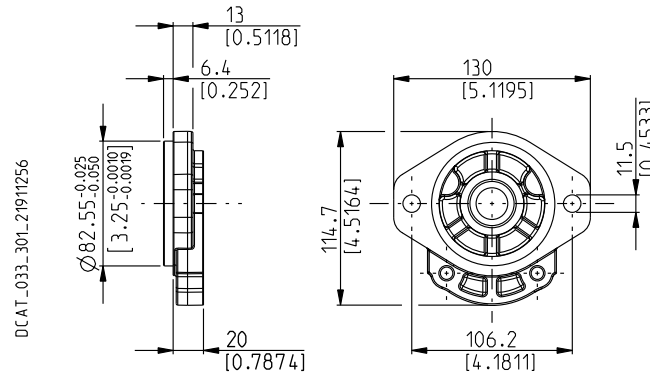
SAE "A"

MOUNTING FLANGE

SAE "A" 2 BOLTS

S1

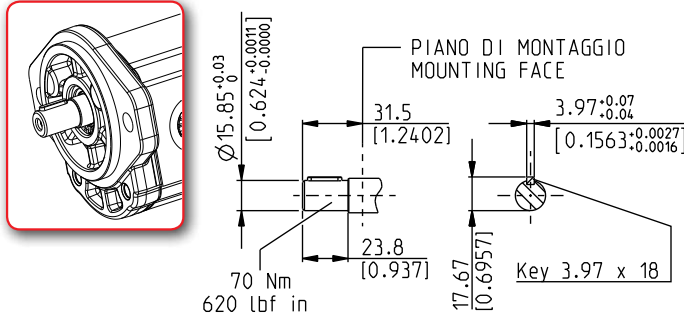
Mounting flange and rear cover in aluminium (order code **EL**)



DRIVE SHAFT

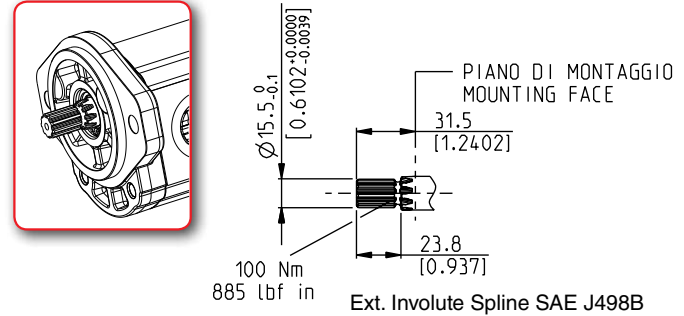
SAE "A" STRAIGHT

31



SAE "A" 9 TOOTH SPLINE

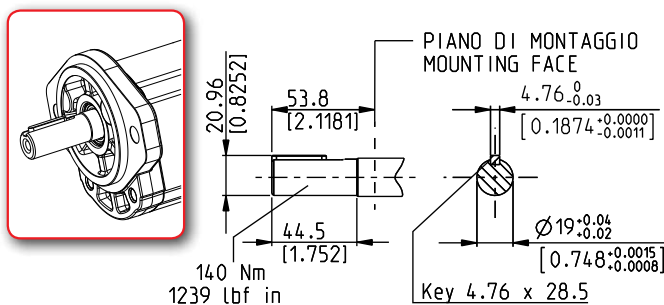
03



Ext. Involute Spline SAE J498B
with major diameter modified
9 teeth - 16/32 Pitch - 30 deg
Flat root - Side fit - Class 1

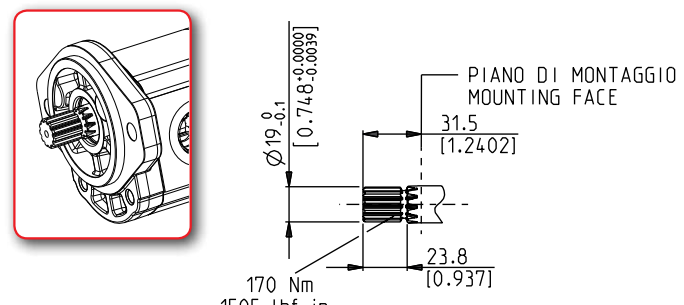
3/4" STRAIGHT KEYED

49



SAE "A" 11 TOOTH SPLINE

07



Ext. Involute Spline ANSI B92.1
with major diameter modified
11 teeth - 16/32 Pitch - 30 deg
Flat root - Side fit - Class 5

01/03.2016



DRIVE SHAFT AND MOUNTING FLANGE AVAILABILITY

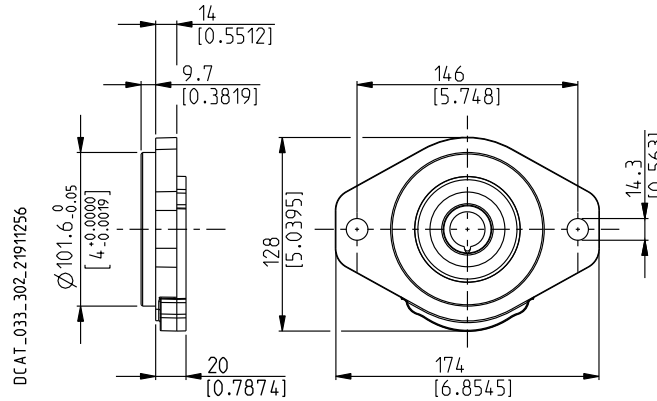
SAE "B"

MOUNTING FLANGE

SAE "B" 2 BOLTS

S5

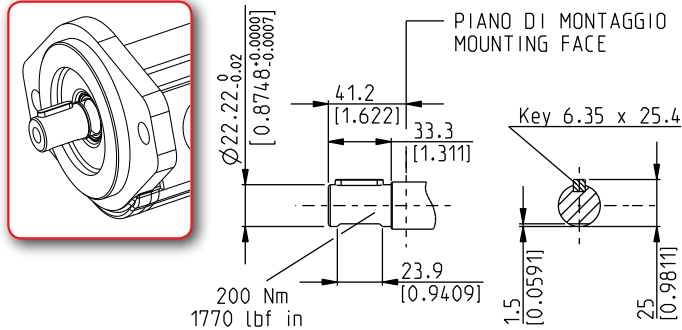
Cast iron mounting flange and aluminium rear cover (order code **L**)



DRIVE SHAFT

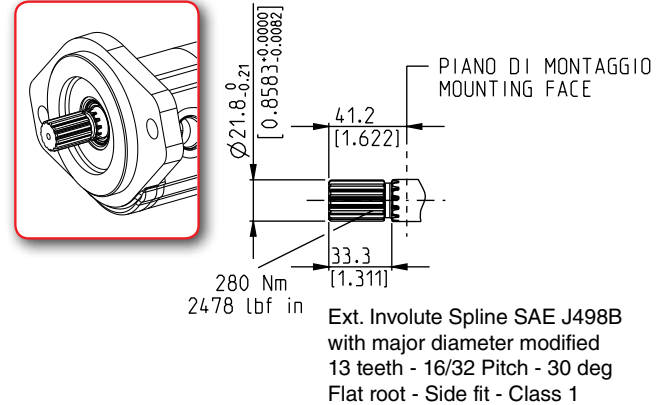
SAE "B" STRAIGHT: 7/8" KEYED

32



SAE "B" 13 TOOTH SPLINE

04



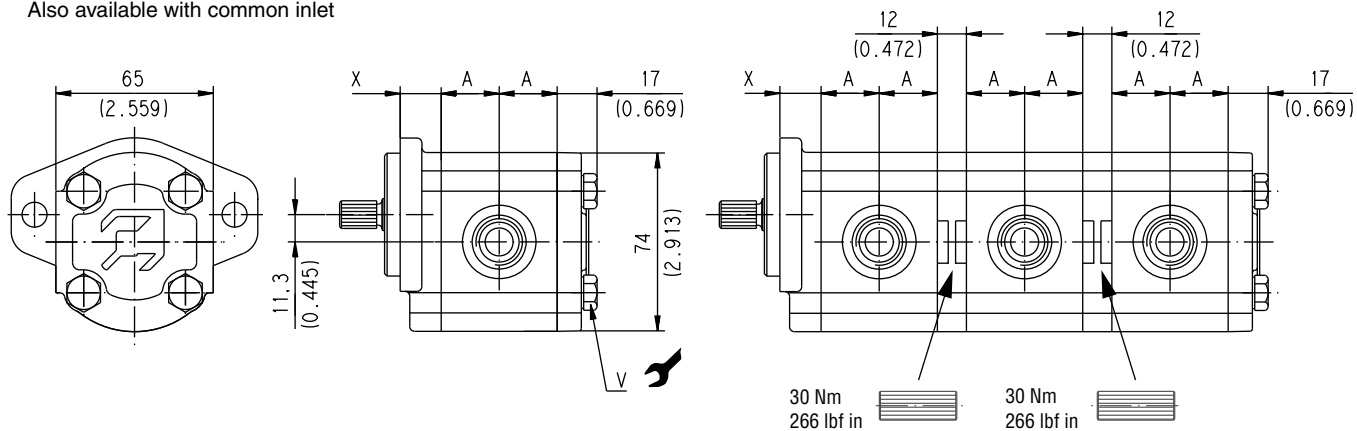
Replaces: 01/03.2016

02/02.2017

POLARIS 10 DIMENSION

PLP10/PLP10

Also available with common inlet



Mounting flange	X
	mm (inch)
S0	17 (0.66937)
R9	41 (1.6142)

V
Screws tightening torque Nm (lbf in)
25 $\pm 2,5$ (199 $\div$ 243)

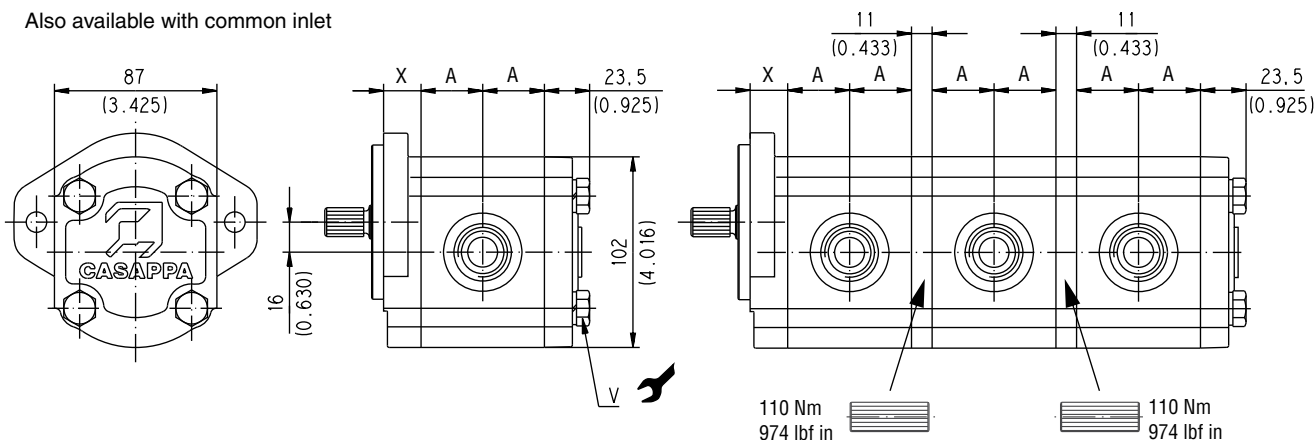
Pump type	A
	mm (inch)
PLP 10•2,5	20 (0.7874)
PLP 10•3,15	21 (0.8268)
PLP 10•4	22,4 (0.8819)
PLP 10•5	24 (0.9449)
PLP 10•6,3	26 (1.0236)
PLP 10•8	28,75 (1.1319)
PLP 10•10	32 (1.2598)

POLARIS 20 DIMENSION

PLP20/PLP20

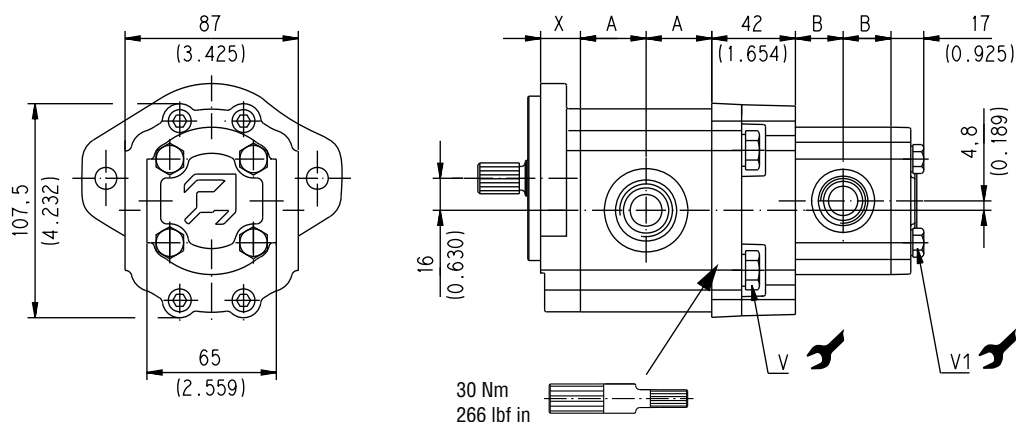
Also available with common inlet

Replaces: 01/03.2016



PLP20/PLP10

Also available with common inlet



Mounting flange	X
	mm (inch)
S1	20 (0.787)
S5	20 (0.787)

V	V1
Screws tightening torque Nm (lbf in)	
45 $\pm 4,5$ (358 $\div$ 438)	25 $\pm 2,5$ (199 $\div$ 243)

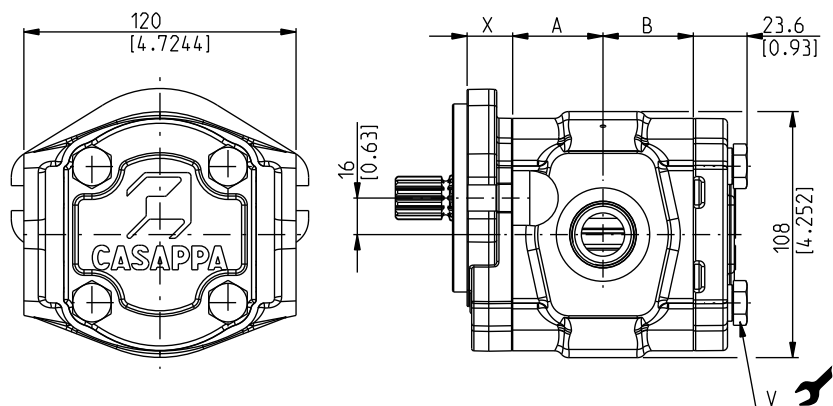
02/02.2017

Pump type	A
	mm (inch)
PLP20.4	25,75 (1.0138)
PLP20.6,3	27 (1.0630)
PLP20.8	28,25 (1.1122)
PLP20.9	28,9 (1.1378)
PLP20.11,2	30,5 (1.2008)
PLP20.14	33 (1.2992)
PLP20.16	34,75 (1.3681)
PLP20.20	38 (1.4961)
PLP20.25	42 (1.6535)
PLP20.31,5	47 (1.8504)

Pump type	B
	mm (inch)
PLP 10•2,5	20 (0.7874)
PLP 10•3,15	21 (0.8268)
PLP 10•4	22,4 (0.8819)
PLP 10•5	24 (0.9449)
PLP 10•6,3	26 (1.0236)
PLP 10•8	28,75 (1.1319)
PLP 10•10	32 (1.2598)

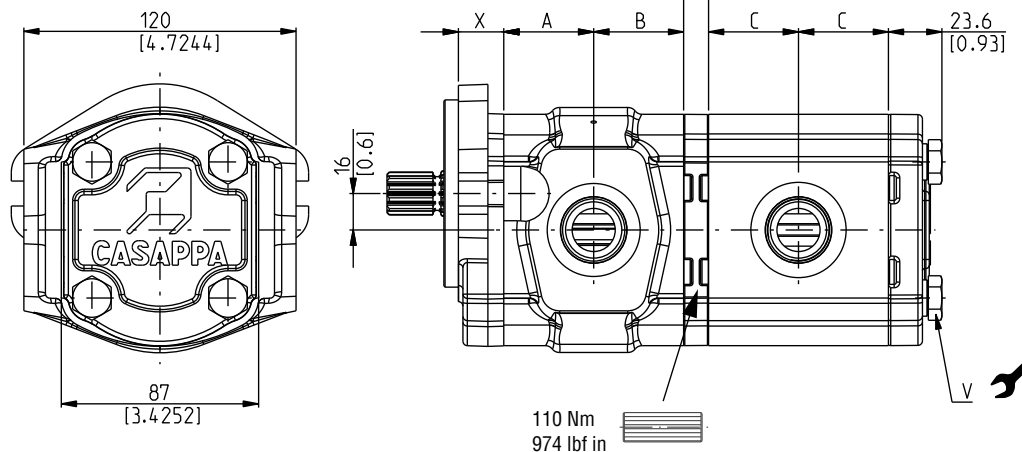
POLARIS PH DIMENSION

PHP20



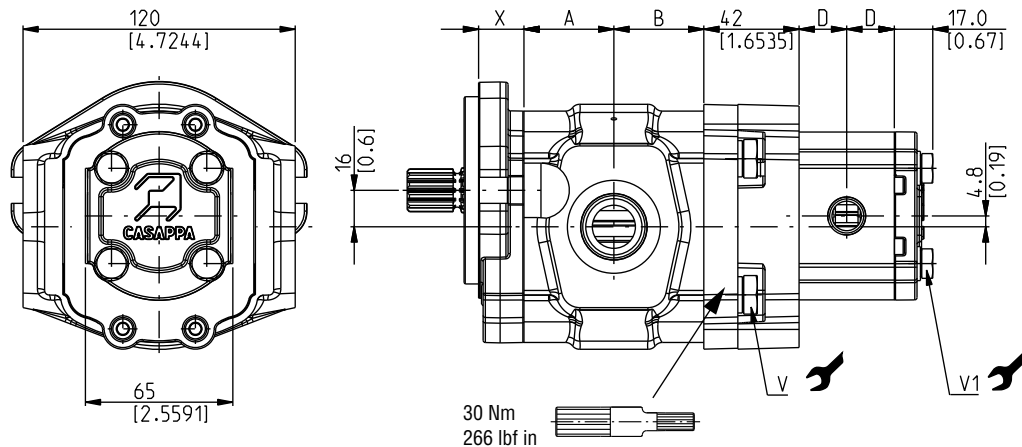
PHP20/PLP20

Also available with common inlet



PHP20/PLP10

Also available with common inlet



Replaces: 02/02.2017

03/03.2017

POLARIS PH DIMENSION

Replaces: 02/02.2017

Mounting flange	X
	mm (inch)
S1	20 (0.787)
S5	20 (0.787)

V	V1
Screws tightening torque Nm (lbf in)	
45 $\pm 4,5$ (358 $\div$ 438)	25 $\pm 2,5$ (199 $\div$ 243)

	INLET SIDE		O	OUTLET SIDE	
Pump type	A	B		A	B
	mm (inch)	mm (inch)		mm (inch)	mm (inch)
PHP 20•20	42 (1.6535)	34 (1.3386)		38 (1.4961)	38 (1.4961)
PHP 20•25	42 (1.6535)	42 (1.6535)		42 (1.6535)	42 (1.6535)
PHP 20•31,5	47 (1.8504)	47 (1.8504)		47 (1.8504)	47 (1.8504)

	O
Pump type	C
	mm (inch)
PLP20.4	25,75 (1.0138)
PLP20.6,3	27 (1.0630)
PLP20.8	28,25 (1.1122)
PLP20.9	28,9 (1.1378)
PLP20.11,2	30,5 (1.2008)
PLP20.14	33 (1.2992)
PLP20.16	34,75 (1.3681)
PLP20.20	38 (1.4961)
PLP20.25	42 (1.6535)
PLP20.31,5	47 (1.8504)

	O
Pump type	D
	mm (inch)
PLP 10•2,5	20 (0.7874)
PLP 10•3,15	21 (0.8268)
PLP 10•4	22,4 (0.8819)
PLP 10•5	24 (0.9449)
PLP 10•6,3	26 (1.0236)
PLP 10•8	28,75 (1.1319)
PLP 10•10	32 (1.2598)

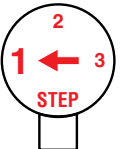
03/03.2017

HOW TO ASSEMBLE CASAPPA MODEL CODE

- STEP 1** Select from list of available displacements and corresponding ports
- STEP 2** Select from list of available rotations
- STEP 3** Select from list of available drive shaft and mounting flange

HOW TO ORDER SINGLE UNITS

o

				
PLP10.4	S	0 - 02S0	- L OB/OA	- N - EL
PLP20.14	S	0 - 31S1	- L OD/OC	- N - EL
PHP20.20	S	0 - 32S5	- L OG/OC	- N - L

Build your own model code: 0 - - L - N -

Order example:

PLP10.4S0-02S0-LOB/OA-N-EL

PLP20.14S0-31S1-LOD/OC-N-EL

PHP20.20S0-32S5-LOG/OC-N-L

Replaces: 01/03.2016

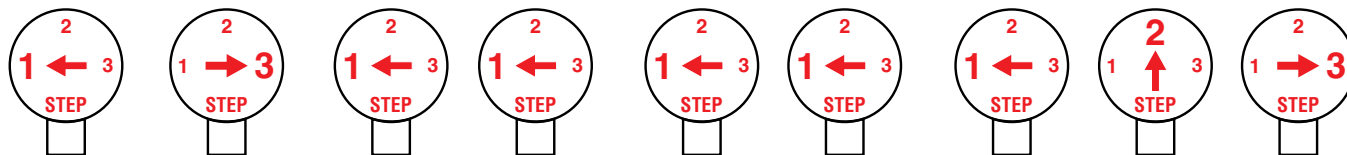
o 02/02.2017

HOW TO ASSEMBLE CASAPPA MODEL CODE

HOW TO ORDER MULTIPLE PUMPS

0

Replaces: 01/03.2016



Same groups

PLP10.4	-	02S0	- L	OB/OA	/	10.4	- L	OB/OA	/	10.4	- L	OB/OA	-	S	-	EL
PLP20.14	-	31S1	- L	OD/OC	/	20.14	- L	OD/OC	/	20.14	- L	OD/OC	-	S	-	EL

Different groups

PLP20.14	-	31S1	- L	OD/OC	/	20.14	- L	OD/OC	/	10.4	- L	OB/OA	-	S	-	EL
PHP20.20	-	32S5	- L	OG/OC	/	PL20.14	- L	OD/OC	/	10.4	- L	OB/OA	-	S	-	L

With common inlet

PLP20.14	-	31S1	- L	OF/OC	/	20.8	- L	**/OC	/	20.4	- L	**/OC	-	S	-	EL
----------	---	------	-----	-------	---	------	-----	-------	---	------	-----	-------	---	---	---	----

Front section

Intermediate section

Rear section

Repeat for additional sections

Build your own model code:

	-		- L		/		- L		/		- L		-		-	
--	---	--	-----	--	---	--	-----	--	---	--	-----	--	---	--	---	--

Front section

Intermediate section

Rear section

Repeat for additional sections

Order example:

Multiple pump with 4 sections

PLP20.14-31S1-LOD/OC/20.14-LOD/OC/20.14-LOD/OC/20.4-LOC/OC-S-EL

Triple pump different groups

PHP20.20-32S5-LOG/OC/20.14-LOD/OC/10.4-LOB/OA-S-L

Triple pump with common inlet

PLP20.14-31S1-LOF/OC/20.8-L**/OC/20.4-L**/OC-S-EL

02/02.2017

QBPL 03 T A

Edition: 03/03.2017

Replaces: QBPL 02 T A



CASAPPA CORP.
1390 Pierson Drive
BATAVIA, IL 60510
www.casappa.com

Please contact your local
Casappa Dealer for ordering
information