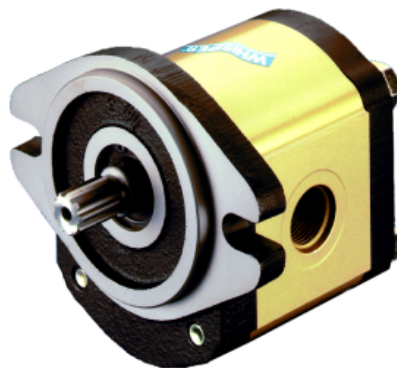


WHISPER 10 SERIES

Hydraulic Gear Pumps and Motors

PRESSURE

Max. continuous	3770 psi (260 bar)
Max. intermittent	4060 psi (280 bar)
Max. peak	4350 psi (300 bar)



DISPLACEMENT

From	0.06 in ³ /rev (1 cm ³ /rev)
To	0.60 in ³ /rev (9.9 cm ³ /rev)

SPEED

Min. speed	650 rpm
Max. speed	4000 rpm

WHISPER results from a new and original technology, covered by international patents. This technology is incorporated in a new series of low noise gear pumps and motors. The WHISPER pumps and motors solve the noise problem without affecting size and performance. WHISPER 10 series meets a wide range of mobile and industrial applications. SAE and EUROPEAN mounting flanges are available. Exceptionally large bearings make possible the most complete range of drive shafts in spline, parallel keyed, and tapered versions to meet all SAE, DIN, and EUROPEAN standards.

	WHISPER pump size	WHISPER motor size	Theoretical displacement		Min. (1) speed rpm	Max. (1) speed rpm	Max. (2) continuous pressure p₁		Pump flow (3) @ 1800 rpm @ p ₁	Motor torque (4) @ 100 psi	Approx. (5) weight	
			in ³ /rev	cm ³ /rev			psi	bar			kg	lb
WHISPER 10	WSP 10-1	WSM 10-1	0.06	1	650	4000	3770	260	0.46	0.84	1.40	3.09
	WSP 10-1,5 (6)	WSM 10-1,5 (6)	0.09	1.5	650	4000	3770	260	0.69	1.26	1.45	3.20
	WSP 10-2	WSM 10-2	0.12	2	650	4000	3770	260	0.92	1.68	1.50	3.31
	WSP 10-2,5 (6)	WSM 10-2,5 (6)	0.15	2.5	650	4000	3770	260	1.15	2.10	1.52	3.35
	WSP 10-3,15	WSM 10-3,15	0.19	3.1	650	4000	3770	260	1.42	2.60	1.54	3.40
	WSP 10-4	WSM 10-4	0.24	4	650	4000	3625	250	1.84	3.35	1.58	3.48
	WSP 10-5	WSM 10-5	0.30	4.9	650	4000	3625	250	2.25	4.10	1.65	3.64
	WSP 10-5,8 (7)	WSM 10-5,8 (7)	0.35	5.8	650	3500	3300	230	2.67	4.86	1.70	3.75
	WSP 10-6,3	WSM 10-6,3	0.38	6.2	650	3500	3300	230	2.85	5.20	1.73	3.81
	WSP 10-8	WSM 10-8	0.48	7.9	650	3500	2610	180	3.69	6.62	1.80	3.97
	WSP 10-10	WSM 10-10	0.60	9.9	650	3500	2030	140	4.64	8.30	1.90	4.19

Edition: 02.1998

- (1) Minimum speeds can be reduced, maximum speeds can be increased. For specific operating conditions consult CASAPPA technical dept. for recommendations and approval.
 - (2) Significantly higher intermittent pressures are allowed. Consult catalog or contact CASAPPA technical dept.
 - (3) Flow shown is minimum allowed for production pump at rated pressure with 10 wt oil at 110° Fahrenheit and can be used to calculate minimum volumetric efficiency under these conditions.
 - (4) Indicated torque is obtained by considering the average mechanical efficiency.
 - (5) Weight shown is for pump and motor with cast iron end-covers. There is a weight reduction for aluminum covers.
 - (6) Available only for single units with shaft code 81.
 - (7) Available only for single units with shafts code 81 and 86.
- Please contact your CASAPPA distributor for further assistance.

SHAFT OPTIONS

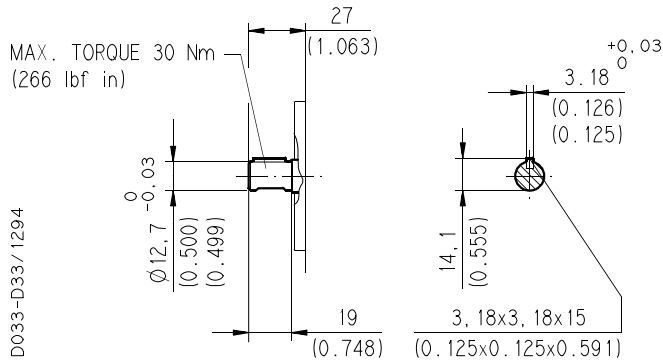
SAE "A-A" STRAIGHT

30

Mounting flange availability:

S0	R9	R8	B1	K2		
----	----	----	----	----	--	--

Dimensions refer to flange code S0



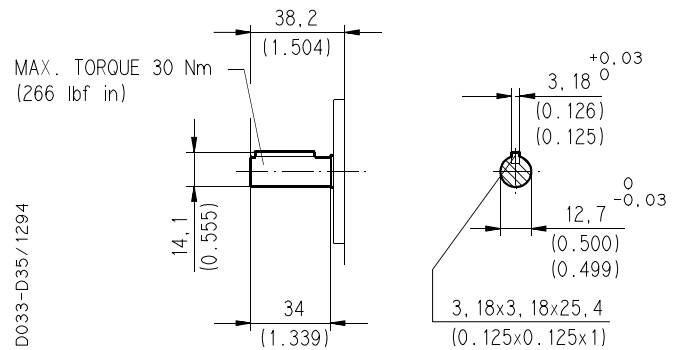
SAE STRAIGHT

36

Mounting flange availability:

R8	R9	W9				
----	----	----	--	--	--	--

Dimensions refer to flange code R8



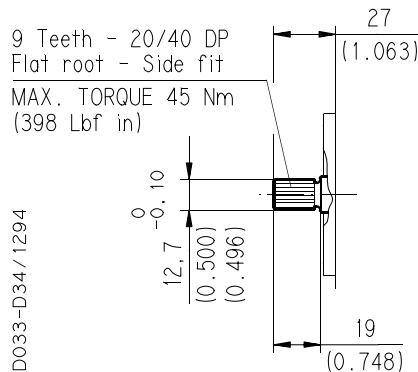
SAE "A-A" SPLINE

02

Mounting flange availability:

R9	R8	B1	K2			
----	----	----	----	--	--	--

Dimensions refer to flange code R9



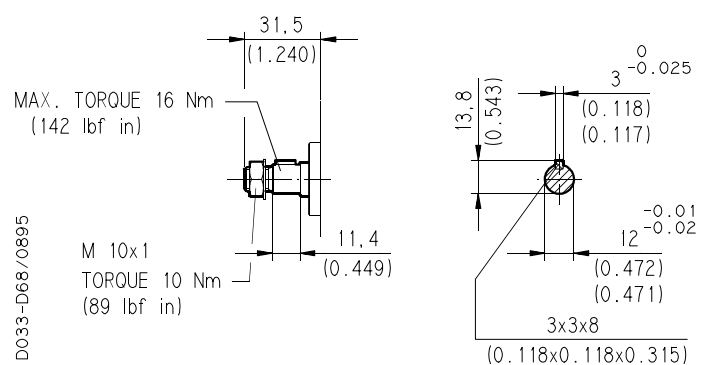
STRAIGHT

29

Mounting flange availability:

E8	E1	E7				
----	----	----	--	--	--	--

Dimensions refer to flange code E8



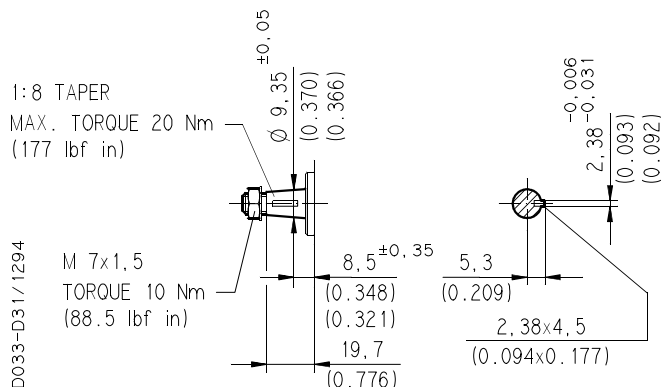
EUROPEAN TAPERED 1:8

81

Mounting flange availability:

E1						
----	--	--	--	--	--	--

Dimensions refer to flange code E1



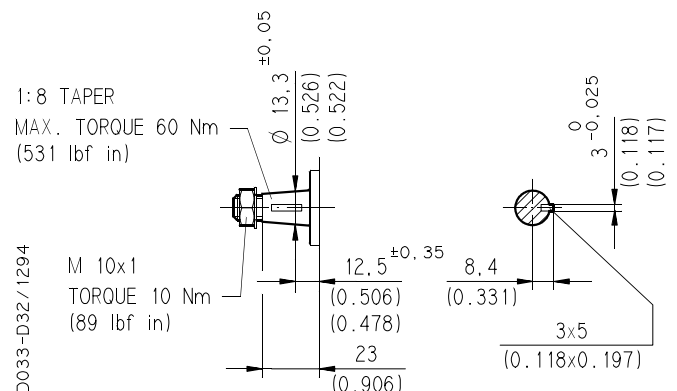
EUROPEAN TAPERED 1:8

86

Mounting flange availability:

E7	E1	E8				
----	----	----	--	--	--	--

Dimensions refer to flange code E7

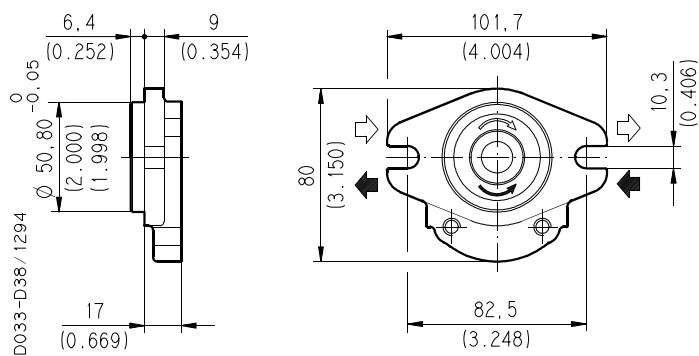


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MOUNTING FLANGE OPTIONS

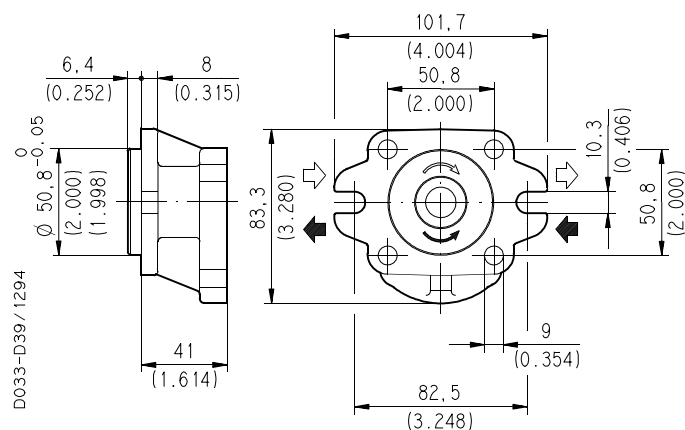
SAE "A-A" 2 BOLT

S0



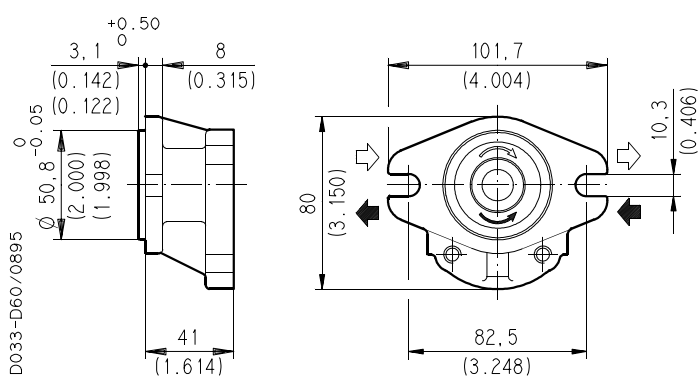
SAE "A-A" 2-4 BOLT

R9



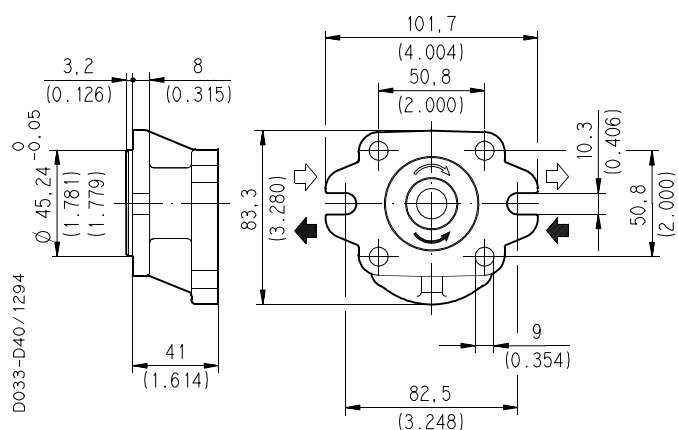
SAE 2 BOLT

W9



SAE 2-4 BOLT

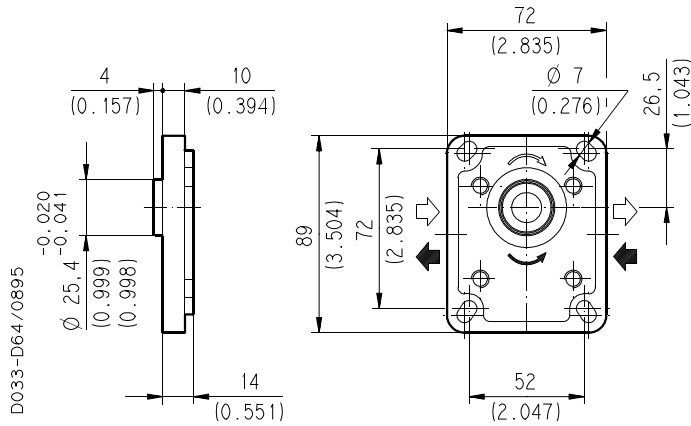
R8



MOUNTING FLANGE OPTIONS

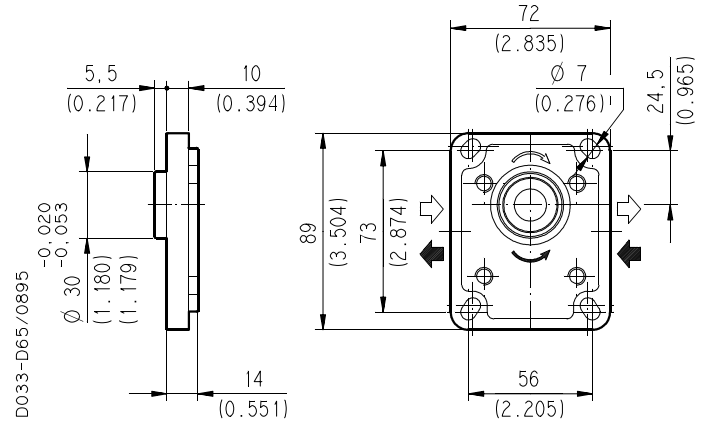
EUROPEAN RECTANGULAR

E1



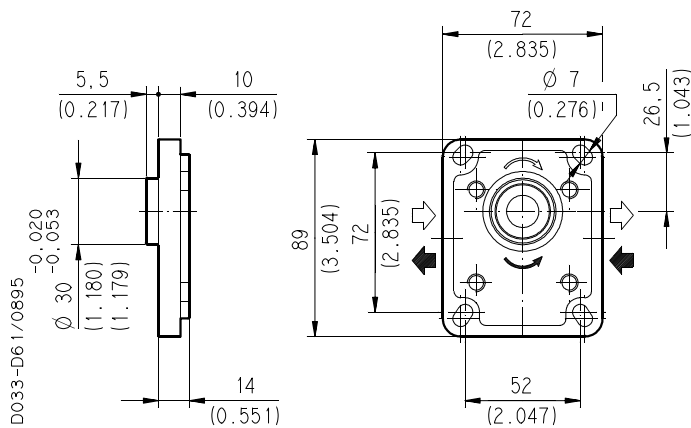
EUROPEAN RECTANGULAR

E7



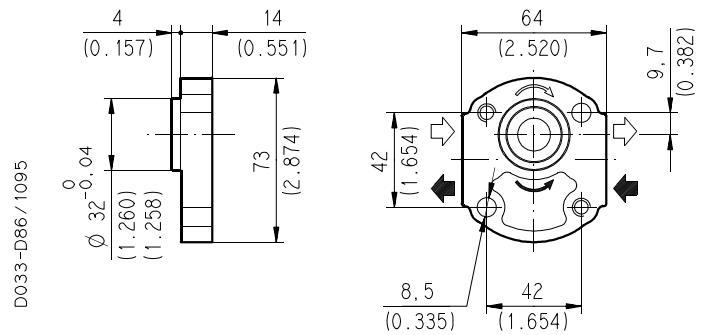
EUROPEAN RECTANGULAR

E8



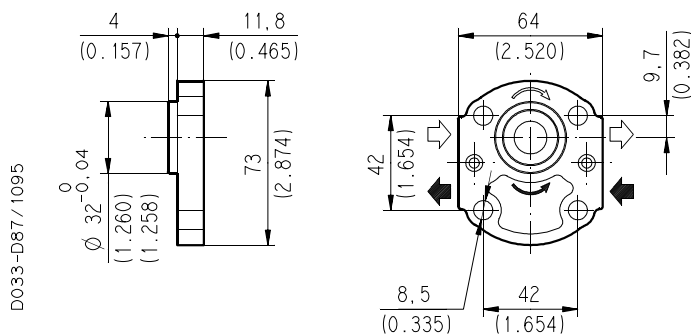
THROUGH 2 BOLTS (32 mm pilot)

B1



THROUGH 4 BOLTS (32 mm pilot)

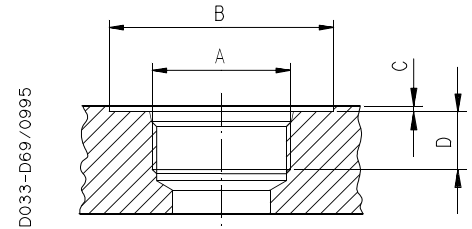
K2



PORT OPTIONS

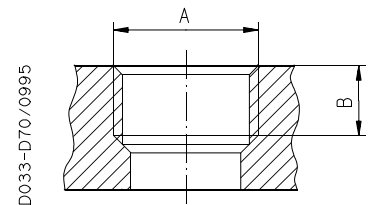
SAE STRAIGHT THREAD PORTS O-RING BOSS

CODE	NOMINAL SIZE	A	B	C	D
			mm (in)	mm (in)	mm (in)
03 (•)	1/4	7/16-20 UNF-2B	21 (0.827)	0,5 (0.020)	14 (0.551)
0A (•)	3/8	9/16-18 UNF-2B	26 (1.024)	0,5 (0.020)	15 (0.591)
0B	1/2	3/4-16 UNF-2B	32 (1.260)	0,5 (0.020)	15 (0.591)
0C	5/8	7/8-14 UNF-2B	35 (1.378)	0,5 (0.020)	17 (0.669)



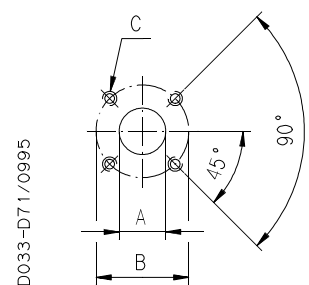
BSPP STRAIGHT THREAD PORTS

CODE	NOMINAL SIZE	A	B
			mm (in)
GA (•)	1/8	G 1/8	11 (0.433)
GC	3/8	G 3/8	14 (0.551)
GD	1/2	G 1/2	14 (0.551)



GERMAN 4 BOLT FLANGE

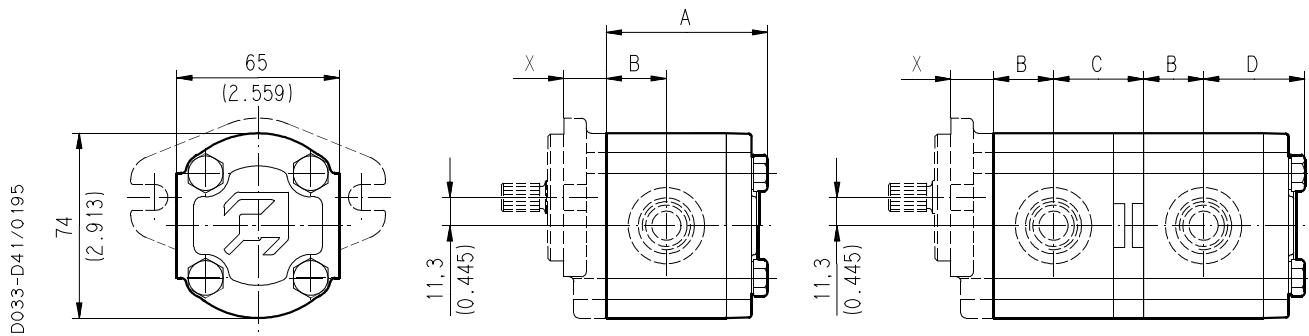
CODE	A	B	C
	mm (in)	mm (in)	Thread Depth mm (in)
BA	8 (0.315)	30 (1.181)	M 6 12 (0.472)
BB	13 (0.512)	30 (1.181)	M 6 12 (0.472)



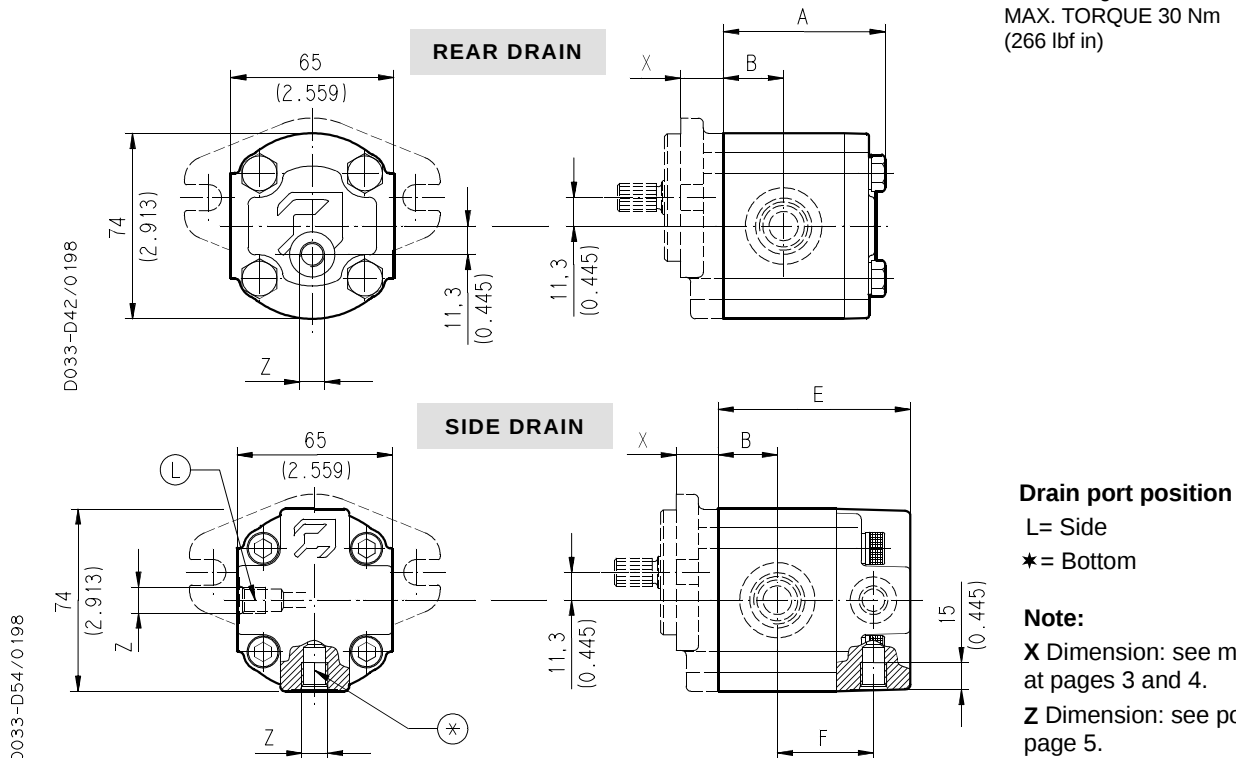
(•): Drain ports options.

SIDE PORTS PUMPS AND MOTORS DIMENSIONS

Unidirectional and bidirectional rotation with internal drain



Bidirectional rotation with external drain



Drain port position

L = Side
* = Bottom

Note:

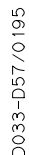
X Dimension: see mounting flanges at pages 3 and 4.

Z Dimension: see ports options at page 5.

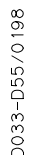
Pump size	Motor size	A (*)		B		C		D		E		F	
		mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)	mm	(in)
WSP 10-1	WSM 10-1	51,7	(2.035)	17,6	(0.693)	29,6	(1.165)	34,1	(1.343)	65,2	(2.567)	32,6	(1.283)
WSP 10-1,5	WSM 10-1,5	53,3	(2.098)	18,4	(0.724)					66,8	(2.630)	33,4	(1.315)
WSP 10-2	WSM 10-2	54,9	(2.161)	19,2	(0.756)	31,2	(1.228)	35,7	(1.406)	68,4	(2.693)	34,2	(1.346)
WSP 10-2,5	WSM 10-2,5	56,5	(2.224)	20	(0.787)					70	(2.756)	35	(1.378)
WSP 10-3,15	WSM 10-3,15	58,5	(2.303)	21	(0.827)	33	(1.299)	37,5	(1.476)	72	(2.835)	36	(1.417)
WSP 10-4	WSM 10-4	61,3	(2.413)	22,4	(0.882)	34,4	(1.354)	38,9	(1.531)	74,8	(2.945)	37,4	(1.472)
WSP 10-5	WSM 10-5	64,5	(2.539)	24	(0.945)	36	(1.417)	40,5	(1.594)	78	(3.071)	39	(1.535)
WSP 10-5,8	WSM 10-5,8	67,1	(2.642)	25,3	(0.996)					80,6	(3.173)	40,3	(1.587)
WSP 10-6,3	WSM 10-6,3	68,5	(2.697)	26	(1.024)	38	(1.496)	42,5	(1.673)	82	(3.228)	41	(1.614)
WSP 10-8	WSM 10-8	74	(2.913)	28,8	(1.134)	40,8	(1.606)	45,2	(1.780)	87,5	(3.445)	43,8	(1.724)
WSP 10-10	WSM 10-10	80,5	(3.169)	32	(1.260)	44	(1.732)	48,5	(1.909)	94	(3.701)	47	(1.850)

(*) For bidirectional rotation with internal drain pumps and motors, A dimension is replaced by E dimension.

Unidirectional and bidirectional rotation with internal drain



0033-D56/0198



★ = Bottom

Z Dimension: see ports options at page 5.

Pump size	Motor size	A		B	
		mm	(in)	mm	(in)
WSP 10-1	WSM 10-1	65,2	(2.567)	50,2	(1.976)
WSP 10-1,5	WSM 10-1,5	66,8	(2.630)	51,8	(2.039)
WSP 10-2	WSM 10-2	68,4	(2.693)	53,4	(2.102)
WSP 10-2,5	WSM 10-2,5	70	(2.756)	55	(2.165)
WSP 10-3,15	WSM 10-3,15	72	(2.835)	57	(2.244)
WSP 10-4	WSM 10-4	74,8	(2.945)	59,8	(2.354)
WSP 10-5	WSM 10-5	78	(3.071)	63	(2.480)
WSP 10-5,8	WSM 10-5,8	80,6	(3.173)	65,6	(2.583)
WSP 10-6,3	WSM 10-6,3	82	(3.228)	67	(2.638)
WSP 10-8	WSM 10-8	87,5	(3.445)	72,5	(2.854)
WSP 10-10	WSM 10-10	94	(3.701)	79	(3.110)

D041-001/02.98

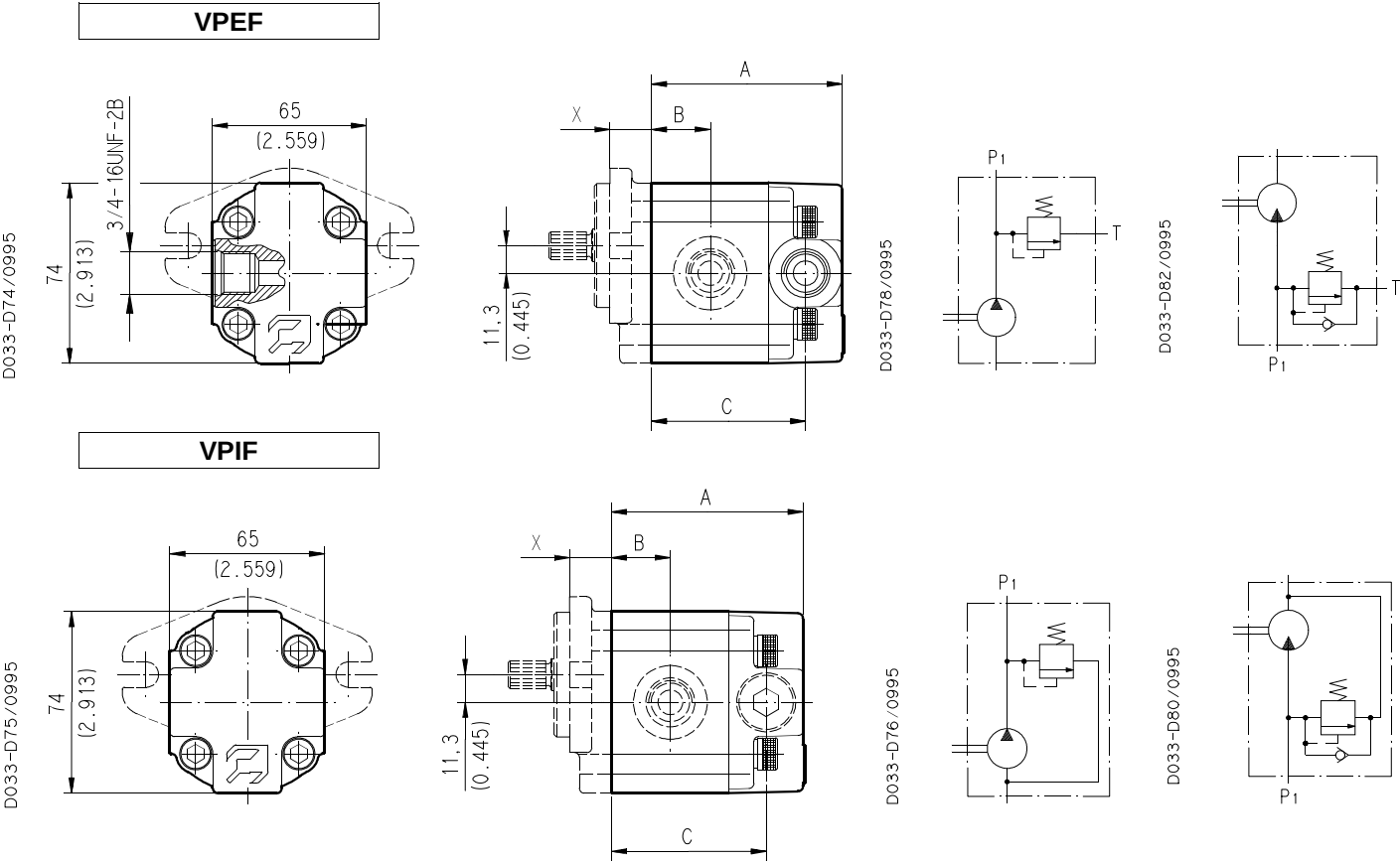
MAX. PRESSURE RELIEF VALVE FIXED SETTING

VPEF 35

Valve type:
VPEF:Fixed setting valve with external drain
VPIF:Fixed setting valve with internal drain

Fixed setting pressure value [bar]:
(see table below)

FIXED SETTING PRESSURE VALUE																			
bar	17	35	44	50	80	100	120	125	140	150	160	175	190	210	250	280	300	330	350
psi	247	508	638	725	1160	1450	1740	1813	2030	2175	2320	2538	2755	3045	3625	4060	4350	4785	5075



Pump size	Motor size	A		B		C	
		mm	(in)	mm	(in)	mm	(in)
WSP 10-1	WSM 10-1	65,2	(2.567)	17,6	(0.693)	50,2	(1.976)
WSP 10-1,5	WSM 10-1,5	66,8	(2.630)	18,4	(0.724)	51,8	(2.039)
WSP 10-2	WSM 10-2	68,4	(2.693)	19,2	(0.756)	53,4	(2.102)
WSP 10-2,5	WSM 10-2,5	70	(2.756)	20	(0.787)	55	(2.165)
WSP 10-3,15	WSM 10-3,15	72	(2.835)	21	(0.827)	57	(2.244)
WSP 10-4	WSM 10-4	74,8	(2.945)	22,4	(0.882)	59,8	(2.354)
WSP 10-5	WSM 10-5	78	(3.071)	24	(0.945)	63	(2.480)
WSP 10-5,8	WSM 10-5,8	80,6	(3.173)	25,3	(0.996)	65,6	(2.583)
WSP 10-6,3	WSM 10-6,3	82	(3.228)	26	(1.024)	67	(2.638)
WSP 10-8	WSM 10-8	87,5	(3.445)	28,8	(1.134)	72,5	(2.854)
WSP 10-10	WSM 10-10	94	(3.701)	32	(1.260)	79	(3.110)

Note:
X Dimension: see mounting flanges
at page 3 and 4.

MAX. PRESSURE RELIEF VALVE ADJUSTABLE SETTING

VPER

/ TS

Valve type:

VPER: Adjustable setting valve with external drain

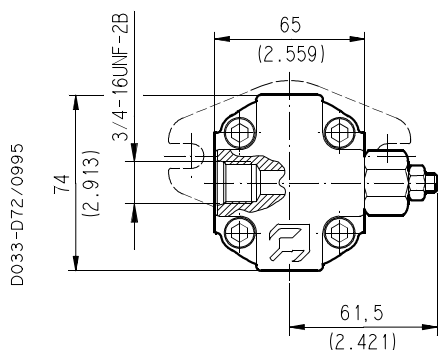
VPIR: Adjustable setting valve with internal drain

Pressure range code:
(see table below)

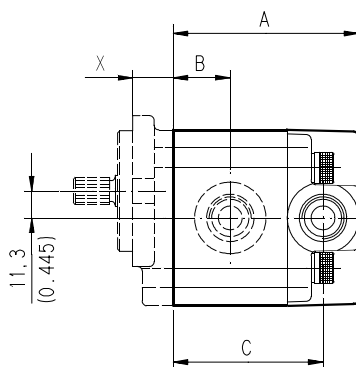
SETTING PRESSURE RANGE

Code	bar	psi
TV	20 ÷ 75	290 ÷ 1090
TS	75 ÷ 220	1090 ÷ 3190

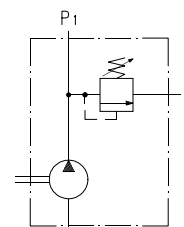
VPER



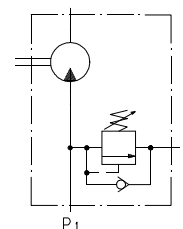
D033-D72/0995



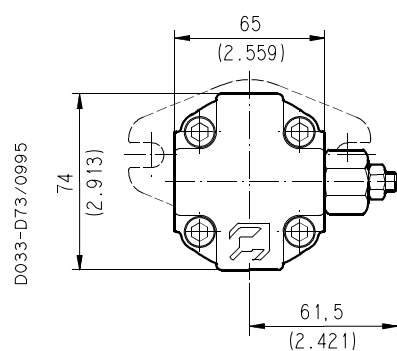
D033-D79/0995



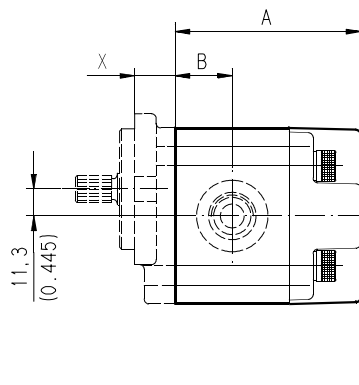
D033-D83/0995



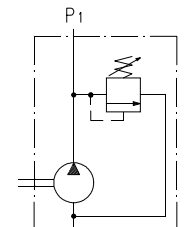
VPIR



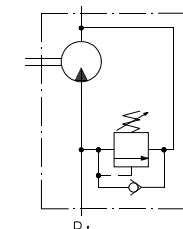
D033-D73/0995



D033-D77/0995



D033-D81/0995



Pump size	Motor size	A		B		C	
		mm	(in)	mm	(in)	mm	(in)
WSP 10-1	WSM 10-1	65,2	(2.567)	17,6	(0.693)	50,2	(1.976)
WSP 10-1,5	WSM 10-1,5	66,8	(2.630)	18,4	(0.724)	51,8	(2.039)
WSP 10-2	WSM 10-2	68,4	(2.693)	19,2	(0.756)	53,4	(2.102)
WSP 10-2,5	WSM 10-2,5	70	(2.756)	20	(0.787)	55	(2.165)
WSP 10-3,15	WSM 10-3,15	72	(2.835)	21	(0.827)	57	(2.244)
WSP 10-4	WSM 10-4	74,8	(2.945)	22,4	(0.882)	59,8	(2.354)
WSP 10-5	WSM 10-5	78	(3.071)	24	(0.945)	63	(2.480)
WSP 10-5,8	WSM 10-5,8	80,6	(3.173)	25,3	(0.996)	65,6	(2.583)
WSP 10-6,3	WSM 10-6,3	82	(3.228)	26	(1.024)	67	(2.638)
WSP 10-8	WSM 10-8	87,5	(3.445)	28,8	(1.134)	72,5	(2.854)
WSP 10-10	WSM 10-10	94	(3.701)	32	(1.260)	79	(3.110)

Note: For X dimension see mounting flanges at page 3 and 4.

HOW TO ORDER SINGLE PUMPS AND MOTORS

1	2	3	4	5	6	7	8	9	10	11						
WSP 10-2	S	0	-	30	S0	-	L	OB/OA	-	N	-	EL	-	L	OA	-
12	13															
H	-	VPER ...														

1	Size	PUMP CODE	MOTOR CODE
	in ³ /rev		
	cm ³ /rev		
0.06	1	WSP 10-1	WSM 10-1
0.09	1.5	WSP 10-1,5	WSM 10-1,5
0.12	2	WSP 10-2	WSM 10-2
0.15	2.5	WSP 10-2,5	WSM 10-2,5
0.19	3.1	WSP 10-3,15	WSM 10-3,15
0.24	4	WSP 10-4	WSM 10-4
0.30	4.9	WSP 10-5	WSM 10-5
0.35	5.8	WSP 10-5,8	WSM 10-5,8
0.38	6.2	WSP 10-6,3	WSM 10-6,3
0.48	7.9	WSP 10-8	WSM 10-8
0.60	9.9	WSP 10-10	WSM 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
No outboard bearing		0
With outboard bearing (only W9 flange)		1

4	Drive shaft	CODE
	SAE "A-A" straight	30
	SAE straight	36
	SAE "A-A" spline	02
	Straight	29
	European tapered 1:8	81
	European tapered 1:8	86

5	Mounting flange	CODE
SAE "A-A" 2 bolt	S0	
SAE "A-A" 2-4 bolt	R9	
SAE 2 bolt	W9	
SAE 2-4 bolt	R8	
European rectangular (25,4 mm pilot, 52x72 mm bolt pattern)	E1	
European rectangular (30 mm pilot, 56x73 mm bolt pattern)	E7	
European rectangular (30 mm pilot, 52x72 mm bolt pattern)	E8	
Through 2 bolt (32 mm pilot, 42x42 mm bolt pattern)	B1	
Through 4 bolt (32 mm pilot, 42x42 mm bolt pattern)	K2	

6	Ports position	CODE
Side		L
Rear		P

CODE	Inlet/outlet ports	7
SAE STRAIGHT THREAD PORTS O-RING BOSS		
Side ports	Rear ports	Series and size
OB/OA	OB/OA	WSP 10 1 - 1,5 - 2 - 2,5 - 3,15
OA/OB	OA/OB	WSM 10 4 - 5 - 5,8 - 6,3
OC/OB	OB/OB	WSP 10 8 - 10
OB/OC	OB/OB	WSM 10
BSPP STRAIGHT THREAD PORTS		
Side ports	Rear ports	Series and size
GC/GC	GC/GC	WSP 10 1 - 1,5 - 2 - 2,5
		WSM 10 3,15 - 4
GD/GD	GD/GD	WSP 10 5 - 5,8 - 6,3 - 8 - 10
		WSM 10
GERMAN 4 BOLT FLANGE		
Side ports	Rear ports	Series and size
BB/BA		WSP 10 1 - 1,5 - 2 - 2,5 - 3,15
BA/BB		WSM 10 4 - 5 - 5,8 - 6,3 - 8 - 10

CODE	Seals	8
N	Buna (standard)	
V	Viton	

CODE	Cover options	9
EL	Aluminum mounting flange and rear cover	
L	Cast iron mounting flange and aluminum rear cover	

CODE	Drain port positions	10
L	Side	
*	Bottom	

CODE	Drain ports	11
SAE STRAIGHT THREAD PORTS O-RING BOSS		
03	7/16-20 UNF-2B	
OA	9/16-18 UNF-2B	
BSPP STRAIGHT THREAD PORTS		
GA	G 1/8	

CODE	Shaft seal options	12
C	High back pressure seal with wiper seal	
D	Standard seal with wiper seal	
H	High back pressure seal	

CODE	Max. pressure relief valve	13
VPEF ...	Fixed setting with external drain	
VPIF ...	Fixed setting with internal drain	
VPER ...	Adjustable setting with external drain	
VPIR ...	Adjustable setting with internal drain	

HOW TO ORDER MULTIPLE PUMPS

DOUBLE PUMPS

1	2	3	4	5	1	4	5	6	7	8							
WSP 10-2	-	30	S0	-	L	OB/OA	/	10-2	-	L	OB/OA	-	S	-	N	-	EL
Front section								Rear section									

1	Pump size		CODE
	in ³ /rev	cm ³ /rev	
	0.06	1	WSP 10-1
	0.09	1.5	WSP 10-1,5
	0.12	2	WSP 10-2
	0.15	2.5	WSP 10-2,5
	0.19	3.1	WSP 10-3,15
	0.24	4	WSP 10-4
	0.30	4.9	WSP 10-5
	0.35	5.8	WSP 10-5,8
	0.38	6.2	WSP 10-6,3
	0.48	7.9	WSP 10-8
	0.60	9.9	WSP 10-10

2	Drive shaft	CODE
	SAE "A-A" straight	30
	SAE straight	36
	SAE "A-A" spline	02
	Straight	29
	European tapered 1:8	81
	European tapered 1:8	86

3	Mounting flange	CODE
	SAE "A-A" 2 bolt	S0
	SAE "A-A" 2-4 bolt	R9
	SAE 2 bolt	W9
	SAE 2-4 bolt	R8
	European rectangular (25,4 mm pilot, 52x72 mm bolt pattern)	E1
	European rectangular (30 mm pilot, 56x73 mm bolt pattern)	E7
	European rectangular (30 mm pilot, 52x72 mm bolt pattern)	E8
	Through 2 bolt (32 mm pilot, 42x42 mm bolt pattern)	B1
	Through 4 bolt (32 mm pilot, 42x42 mm bolt pattern)	K2

4	Ports position	CODE
	Side	L
	Rear	P

CODE	Inlet/outlet ports	5
SAE STRAIGHT THREAD PORTS O-RING BOSS		
Side ports	Pump size	
OB/OA	WSP 10	1 - 1,5 - 2 - 2,5 - 3,15 4 - 5 - 5,8 - 6,3
OC/OB	WSP 10	8 - 10
BSPP STRAIGHT THREAD PORTS		
Side ports	Series and size	
GC/GC	WSP 10	1 - 1,5 - 2 - 2,5 - 3,15 - 4
GD/GD	WSP 10	5 - 5,8 - 6,3 - 8 - 10
GERMAN 4 BOLT FLANGE		
Side ports	Pump size	
BB/BA	WSP 10	1 - 1,5 - 2 - 2,5 - 3,15 4 - 5 - 5,8 - 6,3 - 8 - 10

CODE	Rotation	6
S	Left	
D	Right	

CODE	Seals	7
N	Buna (standard)	
V	Viton	

CODE	Cover options	8
EL	Aluminum mounting flange and rear cover	
L	Cast iron mounting flange and aluminum rear cover	

TRIPLE PUMPS

1	2	3	4	5	1	4	5	1	4	5	6	7	8									
WSP10-2	-	30	S0	-	L	OB/OA	/	10-2	-	L	OB/OA	/	10-2	-	L	OB/OA	-	S	-	N	-	EL
Front section							Intermediate section							Rear sections								

ORDER EXAMPLE

SINGLE PUMPS AND MOTORS

Standard pump **WSP 10-2 S 0-30 S0-L OB/OA-N**

Standard motor **WSM10-2 S 0-30 S0-L OA/OB-N**

Pump with special features **WSP 10-2 S 0-30 S0-L OB/OA-N-EL-VPER/TS**

MULTIPLE PUMPS

Standard double pump **WSP 10-2 02 S0-L OB/OA / 10-2 L OB/OA-S-N**

TRIPLE PUMPS

Standard triple pump **WSP 10-2 02 S0-L OB/OA / 10-2 L OB/OA / 10-2 L OB/OA-S-N**

Triple pump with special features **WSP 10-2 02 S0-L OB/OA / 10-2 L OB/OA / 10-2 L OB/OA-S-N-EL**



CASAPPA S.p.A. - Parma - Italy - Tel.: + 39 521 304111 - Fax: + 39 521 804600

CASAPPA Corp. - Batavia, IL 60510 U.S.A. - Phone: 630 761-0041 - Fax: 630 761-0048

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CASAPPA SARL - Janneyrias - France - Tel.: + 33 4 78767617 - Fax: + 33 4 78767629

www.casappa.com
e-mail: info@casappa.com

WHISPER 20 SERIES

Hydraulic Gear Pumps and Motors

PRESSURE

Max. continuous	4060 psi (280 bar)
Max. intermittent	4350 psi (300 bar)
Max. peak	4640 psi (320 bar)



DISPLACEMENT

From	0.29 in ³ /rev (4,8 cm ³ /rev)
To	1.99 in ³ /rev (32,6 cm ³ /rev)

SPEED

Min. speed	500 rpm
Max. speed	4000 rpm

WHISPER results from a new and original technology, covered by international patents. This technology is incorporated in a new series of low noise gear pumps and motors. The WHISPER pumps and motors solve the noise problem without affecting size and performance. WHISPER 20 series meets a wide range of mobile and industrial applications. SAE and EUROPEAN mounting flanges are available. Exceptionally large bearings make possible the most complete range of drive shafts in spline, parallel keyed, and tapered versions to meet all SAE, DIN, and EUROPEAN standards.

	WHISPER pump size	WHISPER motor size	Theoretical displacement		Min. (1) speed	Max. (1) speed	Max. (2) continuous pressure p ₁		Pump flow (3) @ 1800 rpm @ p ₁	Motor torque (4) @ 100 psi	Approx. (5) weight	
			in ³ /rev	cm ³ /rev	rpm	rpm	psi	bar	US gpm	lbf in	kg	lb
WHISPER 20	WSP 20-4	WSM 20-4	0.29	4.8	600	4000	4060	280	2.14	4.03	3.80	8.38
	WSP 20-6,3	WSM 20-6,3	0.39	6.5	600	4000	4060	280	2.90	5.45	3.85	8.48
	WSP 20-8	WSM 20-8	0.50	8.3	600	3500	4060	280	3.75	6.96	3.90	8.60
	WSP 20-9	WSM 20-9	0.55	9	600	3500	4060	270	4.06	7.52	3.98	8.78
	WSP 20-11,2	WSM 20-11,2	0.67	11.1	600	3500	3900	270	5.01	9.31	4.05	8.93
	WSP 20-14	WSM 20-14	0.87	14.4	500	3500	3770	260	6.61	12.08	4.15	9.15
	WSP 20-16	WSM 20-16	1.01	16.6	500	3000	3625	250	7.67	13.92	4.30	9.48
	WSP 20-20	WSM 20-20	1.27	20.8	500	3000	2900	200	9.61	17.44	4.45	9.81
	WSP 20-25	WSM 20-25	1.58	26	500	2500	2465	170	11.8	21.80	4.70	10.36
	WSP 20-31,5	WSM 20-31,5	1.99	32.6	500	2000	1855	130	15.11	27.34	4.90	10.80

- (1) Minimum speeds can be reduced, maximum speeds can be increased. For specific operating conditions consult CASAPPA technical dept. for recommendations and approval.
- (2) Significantly higher intermittent pressures are allowed. Consult catalog or contact CASAPPA technical dept.
- (3) Flow shown is minimum allowed for production pump at rated pressure with 10 wt oil at 110° Fahrenheit and can be used to calculate minimum volumetric efficiency under these conditions.
- (4) Indicated torque is obtained by considering the average mechanical efficiency.
- (5) Weight shown is for standard pump and motor with cast iron end-covers. There is a weight reduction for aluminum covers. Please contact your CASAPPA distributor for further assistance.

SHAFT OPTIONS

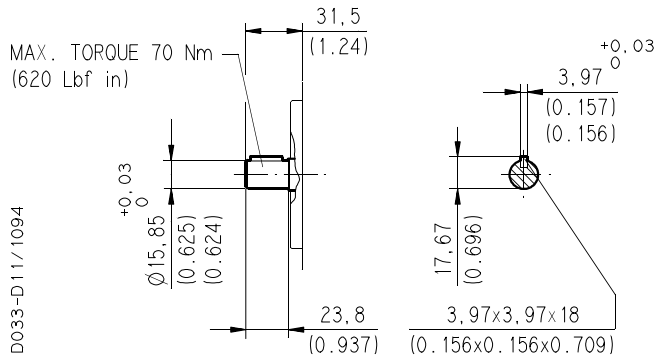
SAE "A" STRAIGHT (5/8"dia)

31

Mounting flange availability:

S1	S2				
----	----	--	--	--	--

Dimensions refer to flange code S1



SAE "B" STRAIGHT

32

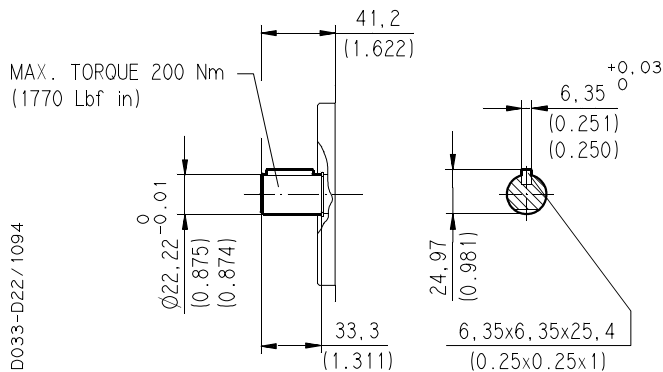
Not available with size:

20-4	20-8	20-9	20-11,2		
------	------	------	---------	--	--

Mounting flange availability:

S1	S2	S5			
----	----	----	--	--	--

Dimensions refer to flange code S5



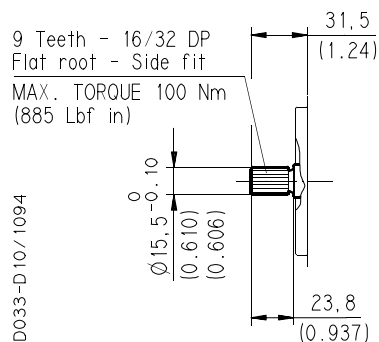
SAE "A" SPLINE (9 T)

03

Mounting flange availability:

S1	S2				
----	----	--	--	--	--

Dimensions refer to flange code S1



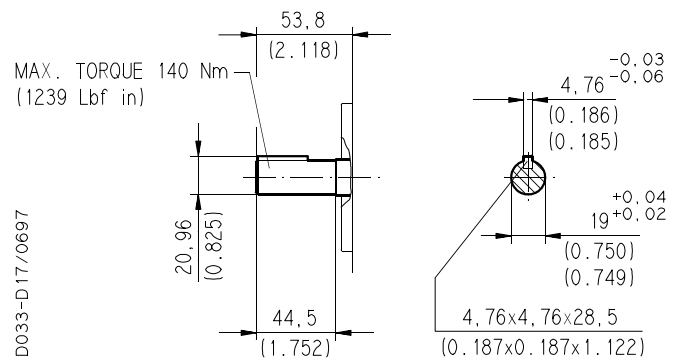
STRAIGHT (3/4"dia 2" length)

49

Mounting flange availability:

S1	S2				
----	----	--	--	--	--

Dimensions refer to flange code S1



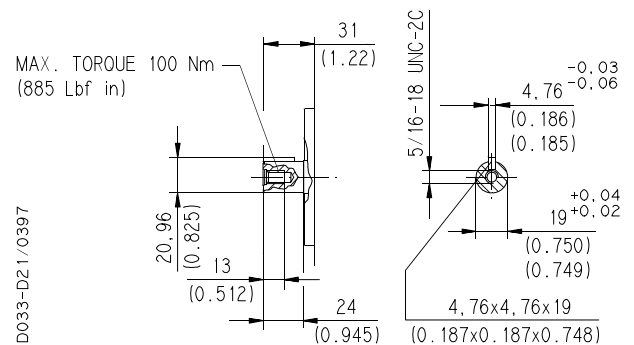
STRAIGHT (3/4"dia)

50

Mounting flange availability:

S1	S2				
----	----	--	--	--	--

Dimensions refer to flange code S1



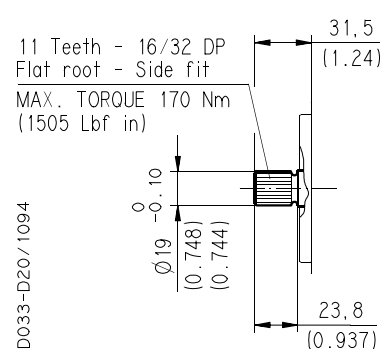
SAE SPLINE (11 T)

07

Mounting flange availability:

S1	S2				
----	----	--	--	--	--

Dimensions refer to flange code S1



D041-001/02.98

SHAFT OPTIONS

SAE "B" SPLINE (13 T)

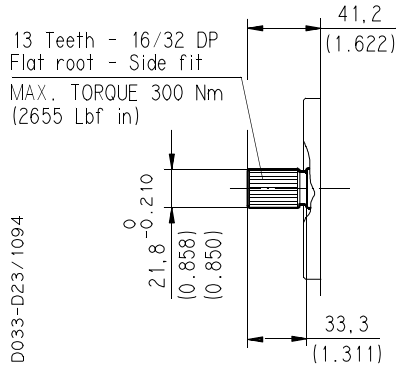
04

Not available with size:

20-4	20-8	20-9			
------	------	------	--	--	--

Mounting flange availability:

S1	S2	S5			
----	----	----	--	--	--

Dimensions refer to flange code **S5**


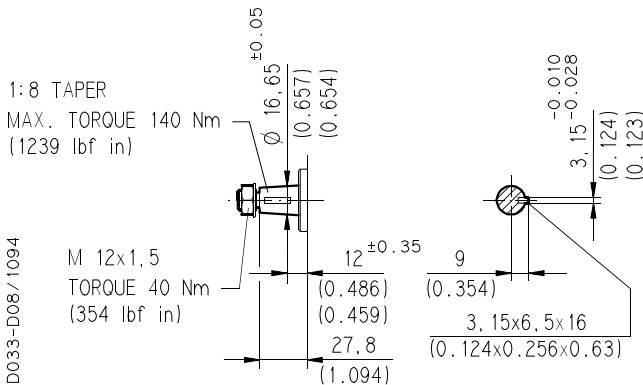
D033-D23/1094

EUROPEAN TAPERED 1:8

82

Mounting flange availability:

S1	S2	E2			
----	----	----	--	--	--

Dimensions refer to flange code **E2**


D033-D08/1094

EUROPEAN STRAIGHT

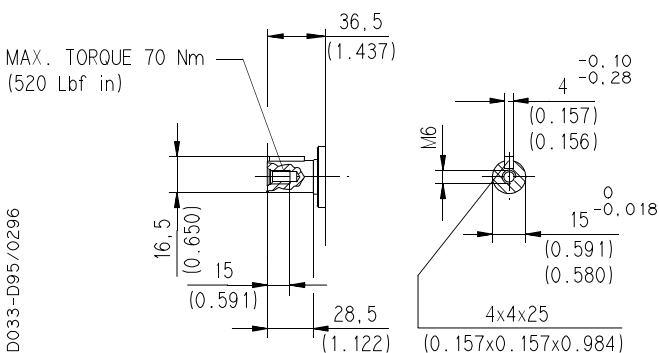
46

Not available with size:

20-9	20-25	20-31,5			
------	-------	---------	--	--	--

Mounting flange availability:

E2					
----	--	--	--	--	--

Dimensions refer to flange code **E2**


D033-D95/0296

DIN 5482 SPLINE

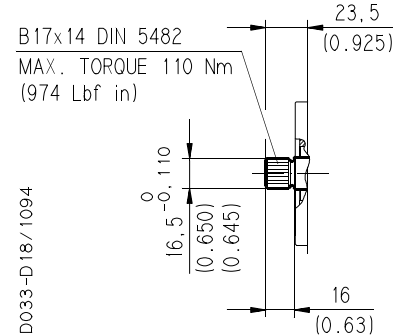
12

Not available with size:

20-9	20-31,5				
------	---------	--	--	--	--

Mounting flange availability:

S1	S2	B2	B4	B5	E2
----	----	----	----	----	----

Dimensions refer to flange code **B2**


D033-D18/1094

GERMAN TAPERED 1:5

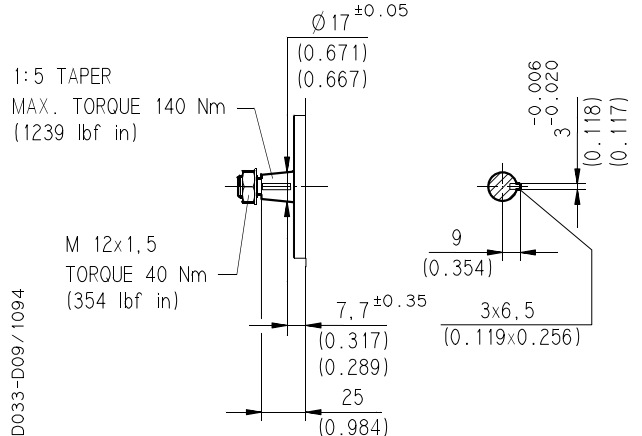
54

Not available with size:

20-9	20-31,5				
------	---------	--	--	--	--

Mounting flange availability:

B2	B4	B5			
----	----	----	--	--	--

Dimensions refer to flange code **B4** and **B5**


D033-D09/1094

TANG

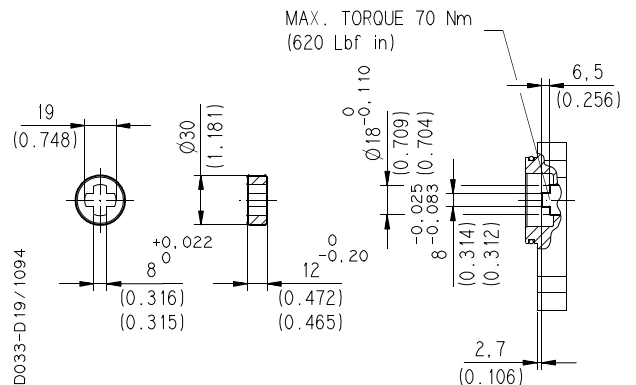
95

Not available with size:

20-9	20-31,5				
------	---------	--	--	--	--

Mounting flange availability:

B6					
----	--	--	--	--	--

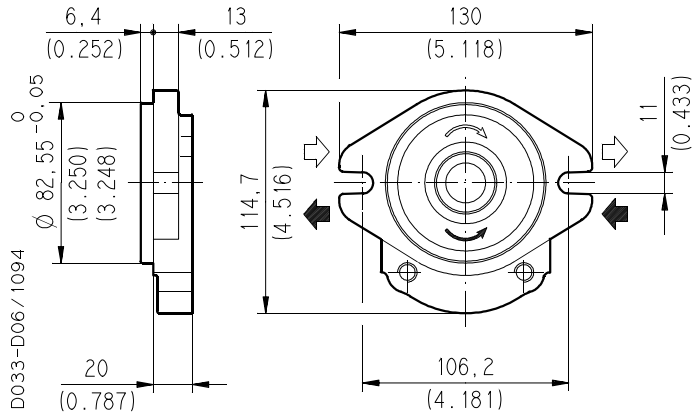
Dimensions refer to flange code **B6**


D033-D19/1094

MOUNTING FLANGE OPTIONS

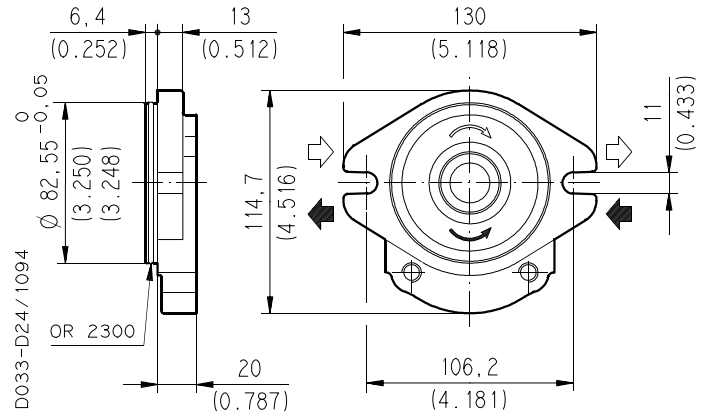
SAE "A" 2 BOLT

S1



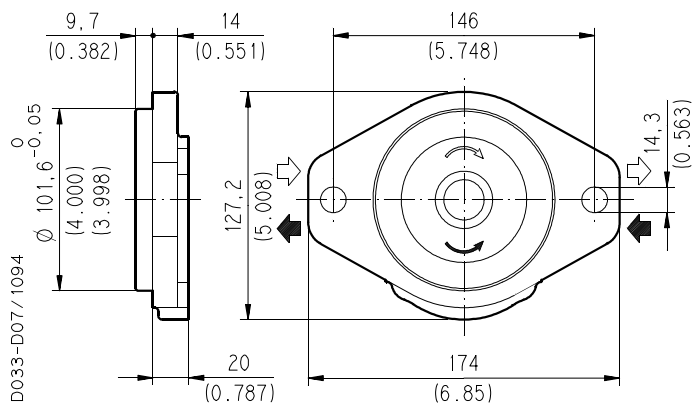
SAE "A" 2 BOLT

S2



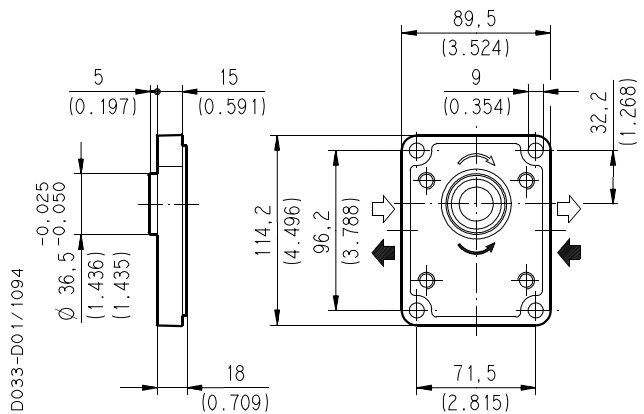
SAE "B" 2 BOLT

S5



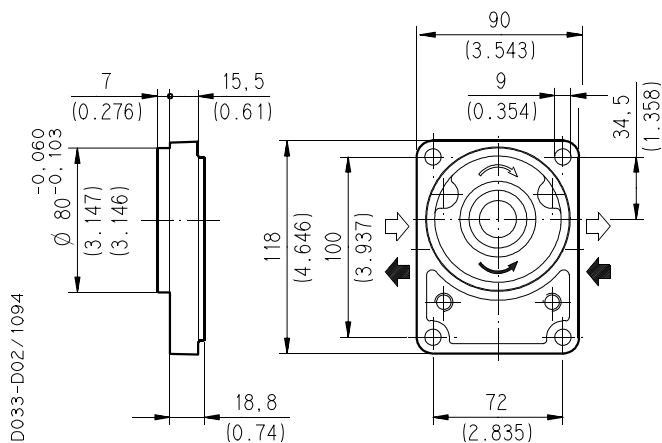
EUROPEAN RECTANGULAR

E2



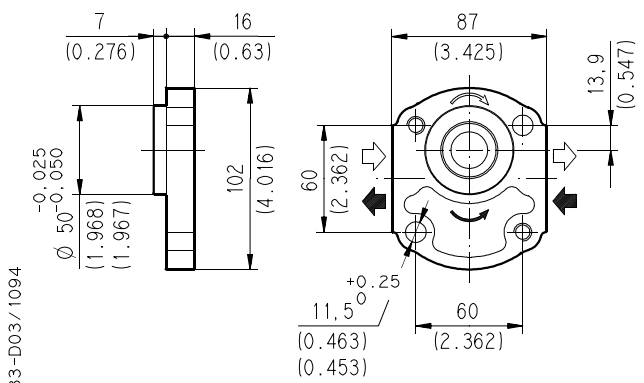
GERMAN RECTANGULAR

B2



THROUGH 2 BOLT (50 mm pilot)

B4

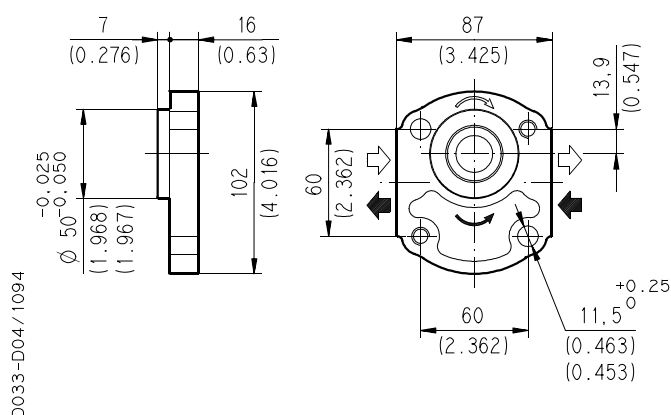


D041-001/02.98

MOUNTING FLANGE OPTIONS

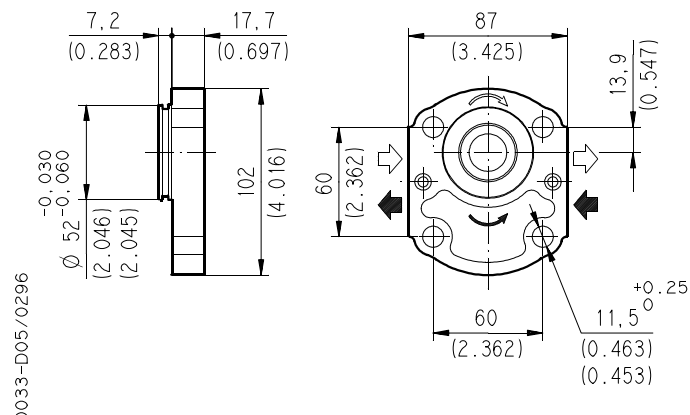
THROUGH 2 BOLT (50 mm pilot)

B5



THROUGH 4 BOLT (52 mm pilot)

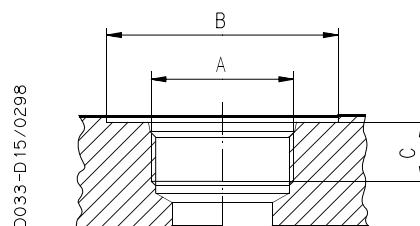
B6



PORT OPTIONS

SAE STRAIGHT THREAD PORTS O-RING BOSS

CODE	NOMINAL SIZE	A	B	C
			mm (in)	mm (in)
03 (•)	1/4	7/16-20 UNF-2B	21 (0.827)	12 (0.472)
OA (•)	3/8	9/16-18 UNF-2B	26 (1.024)	12 (0.472)
OC	5/8	7/8-14 UNF-2B	34 (1.339)	17 (0.669)
OD	3/4	1-1/16-12 UNF-2B	41 (1.614)	20 (0.787)

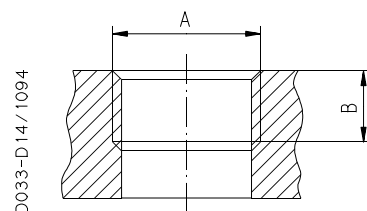


(•): Drain ports options.

BSPP STRAIGHT THREAD PORTS

D041-001/02.98

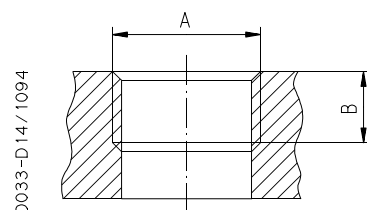
CODE	NOMINAL SIZE	A	B
			mm (in)
GB (•)	1/4	G 1/4	12 (0.472)
GD	1/2	G 1/2	17 (0.669)
GE	3/4	G 3/4	18 (0.709)



(•): Drain ports options.

METRIC THREAD PORTS

CODE	NOMINAL SIZE	A	B
			mm (in)
TA (•)	1/8	M 10x1	12 (0.472)

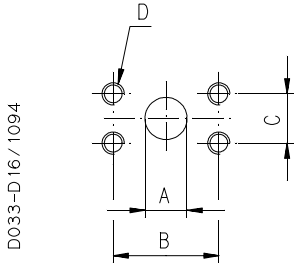


(•): Drain ports options.

PORT OPTIONS

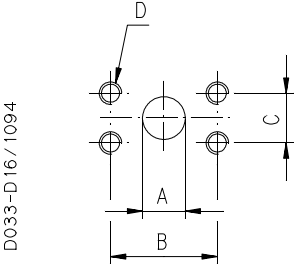
METRIC SAE SPLIT PORTS SAE J518 C (STANDARD PRESSURE SERIES)

CODE	NOMINAL SIZE	A	B	C	D
		mm (in)	mm (in)	mm (in)	Thread Depth mm (in)
MA	1/2	12,7 (0.5)	38,1 (1.5)	17,48 (0.688)	M 8 14 (0.55)
MB	3/4	19,1 (0.75)	47,63 (1.875)	22,23 (0.875)	M 10 14 (0.55)
MC	1	25,4 (1)	52,37 (2.062)	26,19 (1.031)	



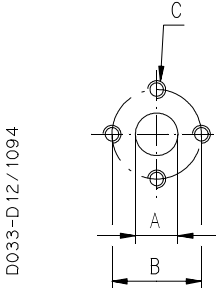
SAE SPLIT PORTS SAE J518 C (STANDARD PRESSURE SERIES)

CODE	NOMINAL SIZE	A	B	C	D
		mm (in)	mm (in)	mm (in)	Thread Depth mm (in)
SA	1/2	12,7 (0.5)	38,1 (1.5)	17,48 (0.688)	5/16-18 UNC-2B 14 (0.55)
SB	3/4	19,1 (0.75)	47,63 (1.875)	22,23 (0.875)	3/8-16 UNC-2B 14 (0.55)
SC	1	25,4 (1)	52,37 (2.062)	26,19 (1.031)	



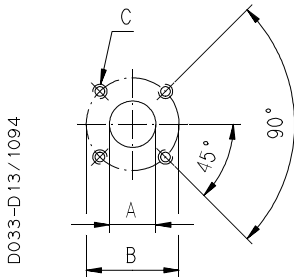
EUROPEAN 4 BOLT FLANGE

CODE	A	B	C
	mm (in)	mm (in)	Thread Depth mm (in)
EA	13 (0.512)	30 (1.181)	M 6 12 (0.472)
EB	19 (0.748)	40 (1.57)	M 8 14 (0.551)



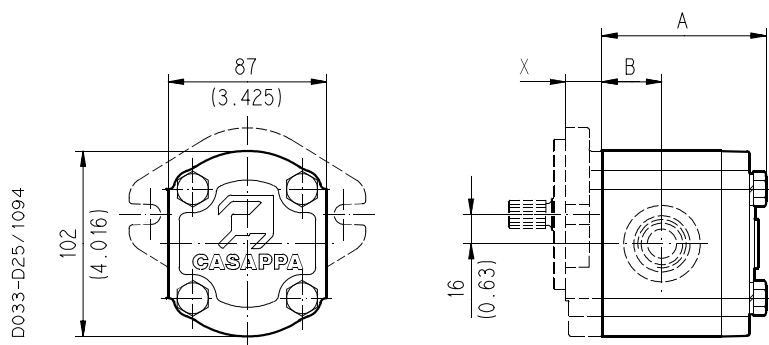
GERMAN 4 BOLT FLANGE

CODE	A	B	C
	mm (in)	mm (in)	Thread Depth mm (in)
BC	15 (0.59)	35 (1.378)	M 6 13 (0.511)
BE	20 (0.787)	40 (1.57)	M 6 13 (0.511)

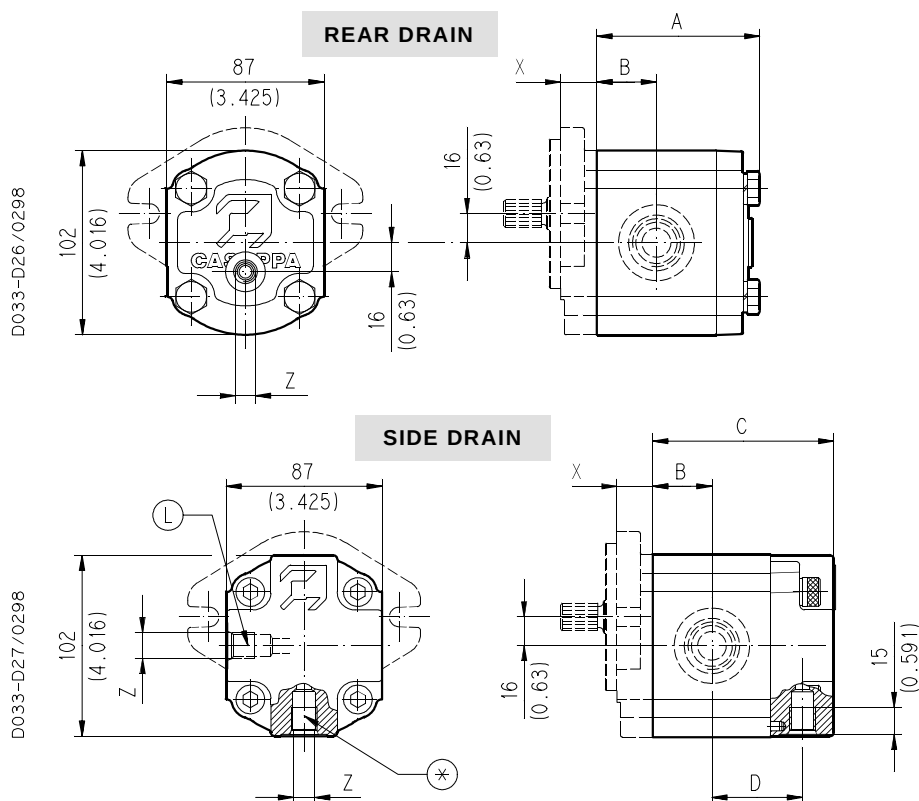


SIDE PORTS PUMPS AND MOTORS DIMENSIONS

Unidirectional and bidirectional rotation with internal drain



Bidirectional rotation with external drain



Drain port position

L= Side

*= Bottom

Note:

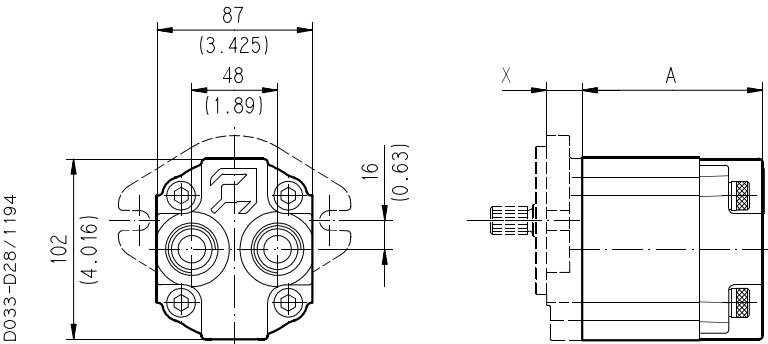
X Dimension: see mounting flanges at pages 4 and 5.

Z Dimension: see ports options at pages 5 and 6.

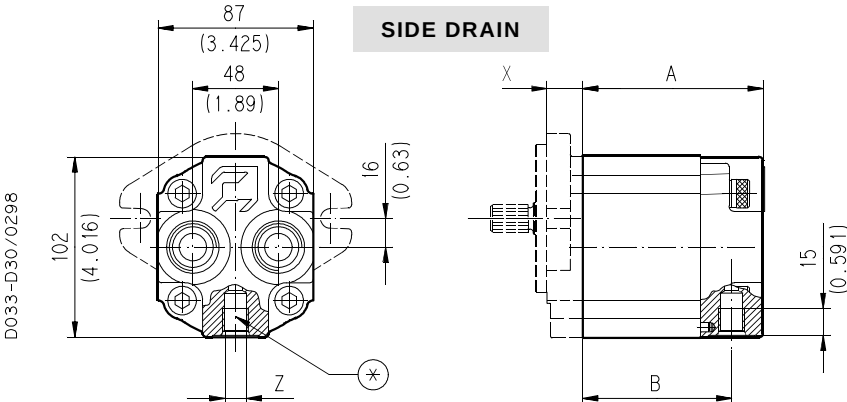
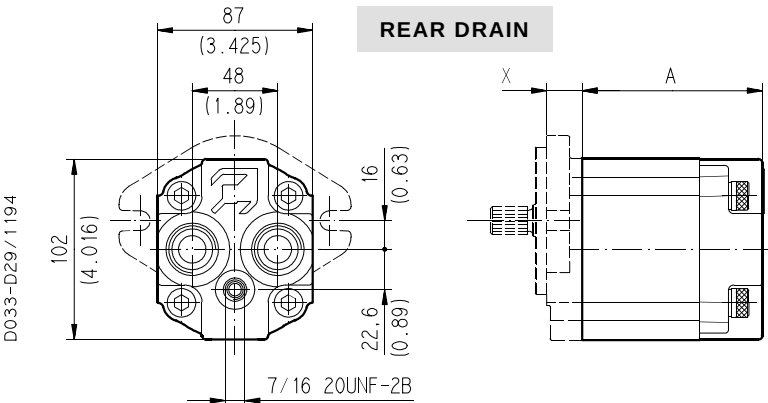
Pump size	Motor size	A		B		C		D	
		mm	(in)	mm	(in)	mm	(in)	mm	(in)
WSP 20-4	WSM 20-4	75,1	(2.957)	25,8	(1.016)	86,6	(3.409)	43,3	(1.705)
WSP 20-6,3	WSM 20-6,3	77,5	(3.051)	27	(1.063)	89	(3.504)	44,5	(1.752)
WSP 20-8	WSM 20-8	80,1	(3.154)	28,3	(1.114)	91,6	(3.606)	45,8	(1.803)
WSP 20-9	WSM 20-9	81,3	(3.200)	28,9	(1.138)	92,8	(3.654)	46,4	(1.827)
WSP 20-11,2	WSM 20-11,2	84,5	(3.327)	30,5	(1.201)	96	(3.780)	48	(1.890)
WSP 20-14	WSM 20-14	89,5	(3.524)	33	(1.299)	101	(3.976)	50,5	(1.988)
WSP 20-16	WSM 20-16	93,1	(3.665)	34,8	(1.370)	104,6	(4.118)	52,3	(2.059)
WSP 20-20	WSM 20-20	99,5	(3.917)	38	(1.496)	111	(4.370)	55,5	(2.185)
WSP 20-25	WSM 20-25	107,5	(4.232)	42	(1.654)	119	(4.685)	59,5	(2.343)
WSP 20-31,5	WSM 20-31,5	117,5	(4.626)	47	(1.850)	129	(5.079)	64,5	(2.539)

REAR PORTS PUMPS AND MOTORS DIMENSIONS

Unidirectional and bidirectional rotation with internal drain



Bidirectional rotation with external drain



Drain port position

★= Bottom

Note:

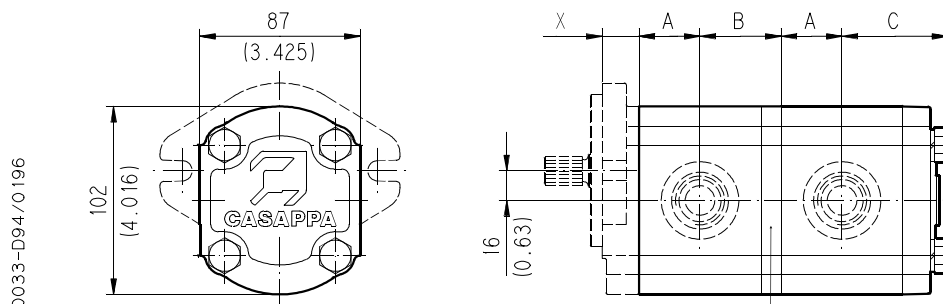
X Dimension: see mounting flanges at pages 4 and 5.

Z Dimension: see ports options at pages 5 and 6.

Pump size	Motor size	A		B	
		mm	(in)	mm	(in)
WSP 20-4	WSM 20-4	86,6	(3.409)	69,1	(2.720)
WSP 20-6,3	WSM 20-6,3	89	(3.504)	71,5	(2.815)
WSP 20-8	WSM 20-8	91,6	(3.606)	74,1	(2.917)
WSP 20-9	WSM 20-9	92,8	(3.654)	75,3	(2.965)
WSP 20-11,2	WSM 20-11,2	96	(3.780)	78,5	(3.091)
WSP 20-14	WSM 20-14	101	(3.976)	83,5	(3.287)
WSP 20-16	WSM 20-16	104,6	(4.118)	87,1	(3.429)
WSP 20-20	WSM 20-20	111	(4.370)	93,5	(3.681)
WSP 20-25	WSM 20-25	119	(4.685)	101,5	(3.996)
WSP 20-31,5	WSM 20-31,5	129	(5.079)	111,5	(4.390)

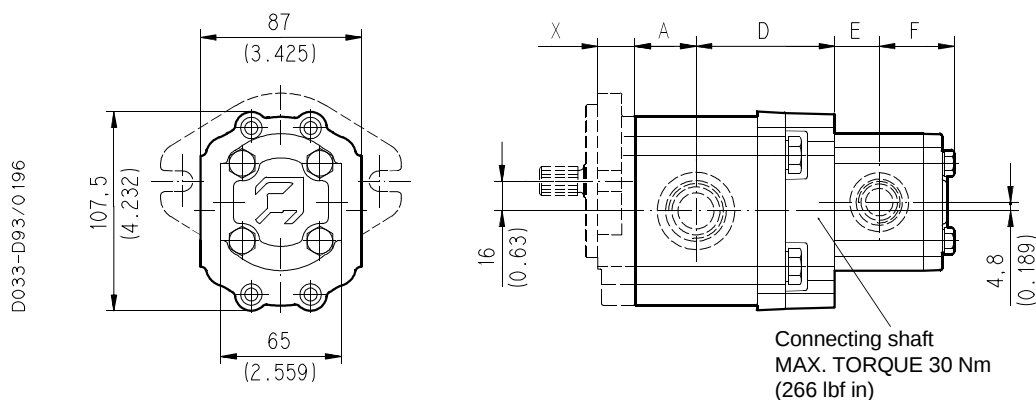
MULTIPLE PUMPS DIMENSION

Multiple pumps same groups WSP 20/20



Connecting shaft
MAX. TORQUE 110 Nm
(974 lbf in)

Multiple pumps different groups WSP 20/10



Connecting shaft
MAX. TORQUE 30 Nm
(266 lbf in)

Pump size	A		B		C		D	
	mm	(in)	mm	(in)	mm	(in)	mm	(in)
WSP 20-4	25,8	(1.016)	36,8	(1.449)	49,3	(1.941)	67,8	(2.669)
WSP 20-6,3	27	(1.063)	38	(1.496)	50,5	(1.988)	69	(2.717)
WSP 20-8	28,3	(1.114)	39,3	(1.547)	51,8	(2.039)	70,3	(2.768)
WSP 20-9	28,9	(1.138)	39,9	(1.571)	52,4	(2.063)	70,9	(2.791)
WSP 20-11,2	30,5	(1.201)	41,5	(1.634)	54	(2.126)	72,5	(2.854)
WSP 20-14	33	(1.299)	44	(1.732)	56,5	(2.224)	75	(2.953)
WSP 20-16	34,8	(1.370)	45,8	(1.803)	58,3	(2.295)	76,8	(3.024)
WSP 20-20	38	(1.496)	49	(1.929)	61,5	(2.421)	80	(3.150)
WSP 20-25	42	(1.654)	53	(2.087)	65,5	(2.579)	84	(3.307)
WSP 20-31,5	47	(1.850)	58	(2.283)	70,5	(2.776)	89	(3.504)

Pump size (1)	E		F	
	mm	(in)	mm	(in)
WSP 10-1	17,6	(0.693)	34,1	(1.343)
WSP 10-2	19,2	(0.756)	35,7	(1.406)
WSP 10-3,15	21	(0.827)	37,5	(1.476)
WSP 10-4	22,4	(0.882)	38,9	(1.531)
WSP 10-5	24	(0.945)	40,5	(1.594)
WSP 10-6,3	26	(1.024)	42,5	(1.673)
WSP 10-8	28,8	(1.134)	45,3	(1.783)
WSP 10-10	32	(1.260)	48,5	(1.909)

(1) Technical data of WHISPER 10 are shown in the respective catalogue.

HOW TO ORDER SINGLE PUMPS AND MOTORS

1	2	3	4	5	6	7	8	9	10	11	11						
WSP 20-8	S	0	-	03	S1	-	L	OC/OC	-	N	-	EL	-	L	OA	-	H

1	Size	PUMP CODE	MOTOR CODE
in ³ /rev	cm ³ /rev		
0.29	4.8	WSP 20-4	WSM 20-4
0.39	6.5	WSP 20-6,3	WSM 20-6,3
0.50	8.3	WSP 20-8	WSM 20-8
0.55	9	WSP 20-9	WSM 20-9
0.67	11.1	WSP 20-11,2	WSM 20-11,2
0.87	14.4	WSP 20-14	WSM 20-14
1.01	16.6	WSP 20-16	WSM 20-16
1.27	20.8	WSP 20-20	WSM 20-20
1.58	26	WSP 20-25	WSM 20-25
1.99	32.6	WSP 20-31,5	WSM 20-31,5

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

3	Version	CODE
No outboard bearing		0

4	Drive shaft	CODE
SAE "A" straight (5/8" dia)		31
Straight (3/4" dia 2" lenght)		49
SAE "B" straight		32
Straight (3/4" dia)		50
SAE "A" spline (9T - 16/32 DP)		03
SAE "A" spline (11T - 16/32 DP)		07
SAE "B" spline (13T - 16/32 DP)		04
DIN 5482 Spline shaft (B17x14 9T)		12
European tapered 1:8		82
German tapered 1:5		54
Tang		95

5	Mounting flange	CODE
	SAE "A" 2 bolt	S1
	SAE "A" 2 bolt	S2
	SAE "B" 2 bolt	S5
	European rectangular (36,5 mm pilot, 71,4x96,2 mm bolt pattern)	E2
	German rectangular (80 mm pilot, 72x100 mm bolt pattern)	B2
	Through 2 bolt (50 mm pilot, 60x60 mm bolt pattern)	B4
	Through 2 bolt (50 mm pilot, 60x60 mm bolt pattern)	B5
	Through 4 bolt (52 mm pilot, 60x60 mm bolt pattern)	B6

6	Ports position	CODE
Side		L
Rear		P

1	Pump size	CODE
SAE STRAIGHT THREAD PORTS O-RING BOSS		
Series and size		Side ports
4 - 6,3 - 8 9 - 11,2	WSP 20	OC/OC
	WSM 20	OC/OC
14 - 16 - 20 25 - 31,5	WSP 20	OD/OC
	WSM 20	OC/OD

CODE	Inlet/outlet ports	7
BSPP STRAIGHT THREAD PORTS		
Side ports	Rear ports	Series and size
GD/GD	GD/GD	WSP 20 WSM 20
GE/GD	GE/GD	WSP 20 WSM 20
GD/GE	GD/GE	WSP 20 WSM 20
METRIC SAE SPLIT PORTS SAE J518 C		
Side ports	Rear ports	Series and size
MA/MA		WSP 20 WSM 20
MB/MA		WSP 20 WSM 20
MA/MB		WSP 20 WSM 20
MC/MB		WSP 20 WSM 20
MB/MC		WSP 20 WSM 20
SAE SPLIT PORTS SAE J518 C		
Side ports	Rear ports	Series and size
SA/SA		WSP 20 WSM 20
SB/SA		WSP 20 WSM 20
SA/SB		WSP 20 WSM 20
SC/SB		WSP 20 WSM 20
SB/SC		WSP 20 WSM 20
EUROPEAN 4 BOLT FLANGE		
Side ports	Rear ports	Series and size
EA/EA		WSP 20 WSM 20
EB/EA		WSP 20 WSM 20
EA/EB		WSP 20 WSM 20
GERMAN 4 BOLT FLANGE		
Side ports	Rear ports	Series and size
BE/BC		WSP 20 WSM 20
BC/BE		WSP 20 WSM 20

CODE	Seals	8
N	Buna (standard)	
V	Viton	

CODE	Cover options	9
EL	Aluminum mounting flange and rear cover	

CODE	Drain port positions	10
L	Side	
*	Bottom	

CODE	Drain ports	11
SAE STRAIGHT THREAD PORTS O-RING BOSS		
03	7/16-20 UNF-2B	
OA	9/16-18 UNF-2B	
BSPP STRAIGHT THREAD PORTS		
GB	G 1/4	
METRIC PORTS		
TA	M 10x1	

CODE	Shaft seal options	12
C	High back pressure seal with wiper seal	
D	Standard seal with wiper seal	
H	High back pressure seal	

HOW TO ORDER MULTIPLE PUMPS

DOUBLE PUMPS

1	2	3	4	5	1	4	5	6	7	8							
WSP 20-8	-	03	S1	-	L	OC/OC	/	20-8	-	L	OC/OC	-	S	-	N	-	EL
Front section								Rear section									

1	Pump size		CODE
	in ³ /rev	cm ³ /rev	
	0.29	4.8	WSP 20-4
	0.39	6.5	WSP 20-6,3
	0.50	8.3	WSP 20-8
	0.55	9	WSP 20-9
	0.67	11.1	WSP 20-11,2
	0.87	14.4	WSP 20-14
	1.01	16.6	WSP 20-16
	1.27	20.8	WSP 20-20
	1.58	26	WSP 20-25
	1.99	32.6	WSP 20-31,5

2	Drive shaft	CODE
	SAE "A" straight (5/8" dia)	31
	Straight (3/4" dia 2" lenght)	49
	SAE "B" straight	32
	Straight (3/4" dia)	50
	SAE "A" spline (9T - 16/32 DP)	03
	SAE "A" spline (11T - 16/32 DP)	07
	SAE "B" spline (13T - 16/32 DP)	04
	DIN 5482 Spline shaft (B17x14 9T)	12
	European tapered 1:8	82
	German tapered 1:5	54
	Tang	95

3	Mounting flange	CODE
	SAE "A" 2 bolt	S1
	SAE "A" 2 bolt	S2
	SAE "B" 2 bolt	S5
	European rectangular (36,5 mm pilot, 71,4x96,2 mm bolt pattern)	E2
	German rectangular (80 mm pilot, 72x100 mm bolt pattern)	B2
	Through 2 bolt (50 mm pilot, 60x60 mm bolt pattern)	B4
	Through 2 bolt (50 mm pilot, 60x60 mm bolt pattern)	B5
	Through 4 bolt (52 mm pilot, 60x60 mm bolt pattern)	B6

4	Ports position	CODE
	Side	L

CODE	Inlet/outlet ports	5
SAE STRAIGHT THREAD PORTS O-RING BOSS		
Side ports	Pump size	
OC/OC	WSP 20	4 - 6,3 - 8 - 9 - 11,2
OD/OC	WSP 20	14 - 16 - 20 - 25 - 31,5
BSPP STRAIGHT THREAD PORTS		
Side ports	Series and size	
GD/GD	WSP 20	4 - 6,3 - 8 - 9 - 11,2
GE/GD	WSP 20	14 - 16 - 20 - 25 - 31,5
METRIC SAE SPLIT PORTS SAE J518 C		
Side ports	Pump size	
MA/MA	WSP 20	4 - 6,3 - 8 - 9 - 11,2
MB/MA	WSP 20	14 - 16 - 20
MC/MB	WSP 20	25 - 31,5
SAE SPLIT PORTS SAE J518 C		
Side ports	Pump size	
SA/SA	WSP 20	4 - 6,3 - 8 - 9 - 11,2
SB/SA	WSP 20	14 - 16 - 20
SC/SB	WSP 20	25 - 31,5
EUROPEAN 4 BOLT FLANGE		
Side ports	Pump size	
EA/EA	WSP 20	4 - 6,3 - 8 - 9 - 11,2
EB/EA	WSP 20	14 - 16 - 20 - 25 - 31,5
GERMAN 4 BOLT FLANGE		
Side ports	Pump size	
BE/BC	WSP 20	4 - 6,3 - 8 - 9 - 11,2 14 - 16 - 20 - 25

CODE	Rotation	6
S	Left	
D	Right	

CODE	Seals	7
N	Buna (standard)	
V	Viton	

CODE	Cover options	8
EL	Front and rear cover in aluminum	

TRIPLE PUMPS

1	2	3	4	5	1	4	5	1	4	5	6	7	8									
WSP20-8	-	03	S1	-	L	OC/OC	/	20-8	-	L	OC/OC	/	20-8	-	L	OC/OC	-	S	-	N	-	EL
Front section							Intermediate section							Rear sections								

ORDER EXAMPLE

SINGLE PUMPS AND MOTORS

Standard pump **WSP 20-8 S 0-03 S1-L OC/OC-N**

Standard motor **WSM 20-8 S 0-03 S1-L OC/OC-N**

Pump with special features **WSP 20-8 S 0-03 S1-L OC/OC-N-EL**

DOUPLE PUMPS

Standard double pump **WSP 20-8 03 S1-L OC/OC / 20-8 L OC/OC-S-N**

Standard double pump different groups **WSP 20-8 03 S1-L OC/OC / 10-2 L OB/OA-S-N**

Double pump with special features **WSP 20-8 03 S1-L OC/OC / 20-8 L OC/OC-S-N-EL**

TRIPLE PUMPS

Standard triple pumps **WSP 20-8 03 S1-L OC/OC / 20-8 L OC/OC/20-8 L OC/OC-S-N**

Standard triple pump different groups **WSP 20-8 03 S1-L OC/OC / 20-8 L OC/OC/ 10-2 OB/OA-S-N**

Triple pump with special features **WSP 20-8 03 S1-L OC/OC / 20-8 L OC/OC/ 20-8 L OC/OC-S-N-EL**



CASAPPA S.p.A. - Parma - Italy - Tel.: + 39 521 304111 - Fax: + 39 521 804600

CASAPPA Corp. - Batavia, IL 60510 U.S.A. - Phone: 630 761-0041 - Fax: 630 761-0048

CASAPPA GmbH - Stuttgart - Germany - Tel.: + 49 711 7811770 - Fax: + 49 711 7811771

CASAPPA SARL - Janneyrias - France - Tel.: + 33 4 72462112 - Fax: + 33 4 72462100

www.casappa.com
e-mail: info@casappa.com

WHISPER 30 SERIES

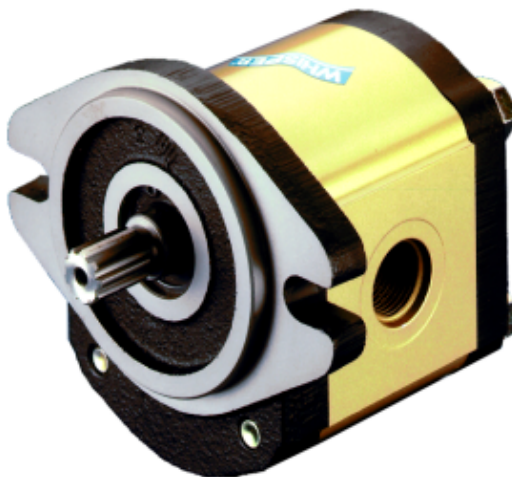
Hydraulic Gear Pumps and Motors

PRESSURE

Max. continuous	3625 psi (250 bar)
Max. intermittent	3900 psi (270 bar)
Max. peak	4060 psi (280 bar)

DISPLACEMENT

From	1.33 in ³ /rev (21,89 cm ³ /rev)
To	5.53 in ³ /rev (90,66 cm ³ /rev)



SPEED

Min. speed	350 rpm
Max. speed	3000 rpm

WHISPER results from a new and original technology, covered by international patents. This technology is incorporated in a new series of low noise gear pumps and motors. The WHISPER pumps and motors solve the noise problem without affecting size and performance. WHISPER 30 series meets a wide range of mobile and industrial applications. SAE and EUROPEAN mounting flanges are available. Exceptionally large bearings make possible the most complete range of drive shafts in spline, parallel keyed, and tapered versions to meet all SAE, DIN, and EUROPEAN standards.

	WHISPER pump size	WHISPER motor size	Theoretical displacement		Min. (1) speed	Max. (1) speed	Max. (2) continuous pressure p ₁		Pump flow (3) @ 1800 rpm @ p ₁	Motor torque (4) @ 100 psi	Approx. weight	
			in ³ /rev	cm ³ /rev	rpm	rpm	psi	bar	US gpm	lbf in	kg	lb
WHISPER 30	WSP 30-22	WSM 30-22	1.33	21.89	350	3000	3625	250	9.83	18.36	11.00	24.26
	WSP 30-27	WSM 30-27	1.62	26.58	350	3000	3625	250	11.94	22.30	11.10	24.47
	WSP 30-34	WSM 30-34	2.09	34.39	350	3000	3480	240	15.45	28.84	11.20	24.70
	WSP 30-38	WSM 30-38	2.35	38.53	350	3000	3480	240	17.31	32.31	11.30	24.92
	WSP 30-43	WSM 30-43	2.67	43.77	350	3000	3300	230	19.66	36.71	11.55	25.47
	WSP 30-51	WSM 30-51	3.15	51.59	350	2500	3040	210	23.42	43.26	11.80	26.02
	WSP 30-61	WSM 30-61	3.72	60.97	350	2500	2755	190	27.97	51.13	12.00	26.46
	WSP 30-73	WSM 30-73	4.48	73.47	350	2500	2465	170	33.35	61.61	12.50	27.56
	WSP 30-82	WSM 30-82	4.96	81.29	350	2200	2320	160	36.90	68.17	12.70	28.00
	WSP 30-90	WSM 30-90	5.53	90.66	350	2200	2175	150	42.02	76.03	13.00	28.66

Edition: 02.1998

- (1) Minimum speeds can be reduced, maximum speeds can be increased. For specific operating conditions consult CASAPPA technical dept. for recommendations and approval.
- (2) Significantly higher intermittent pressures are allowed. Consult catalog or contact CASAPPA technical dept.
- (3) Flow shown is minimum allowed for production pump at rated pressure with 10 wt oil at 110° Fahrenheit and can be used to calculate minimum volumetric efficiency under these conditions.
- (4) Indicated torque is obtained by considering the average mechanical efficiency.
Please contact your CASAPPA distributor for further assistance.

SHAFT OPTIONS

EUROPEAN TAPERED 1:8

83

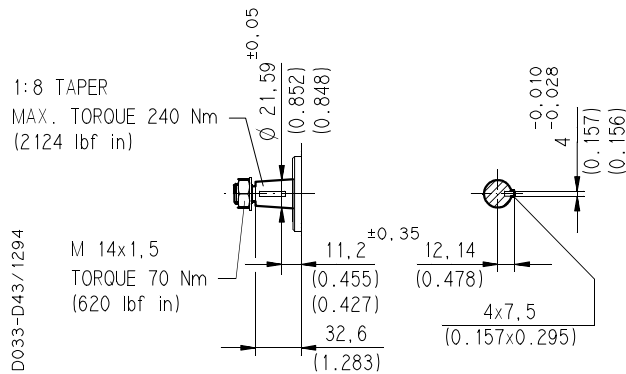
Not available with size:

30-82	30-90				
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Mounting flange availability:

E3					
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Dimensions refer to flange code E3



EUROPEAN TAPERED 1:8

84

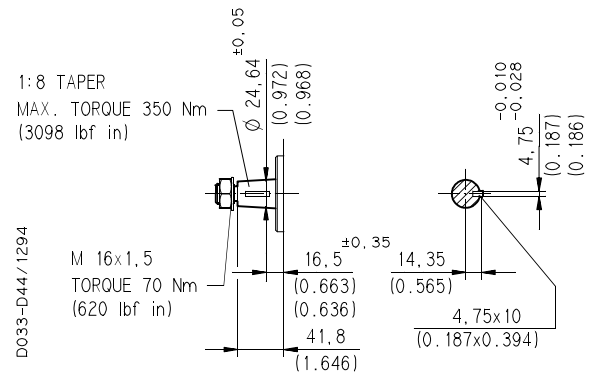
Not available with size:

30-22	30-27	30-34	30-38		
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Mounting flange availability:

E4					
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Dimensions refer to flange code E4



GERMAN TAPERED 1:5

56

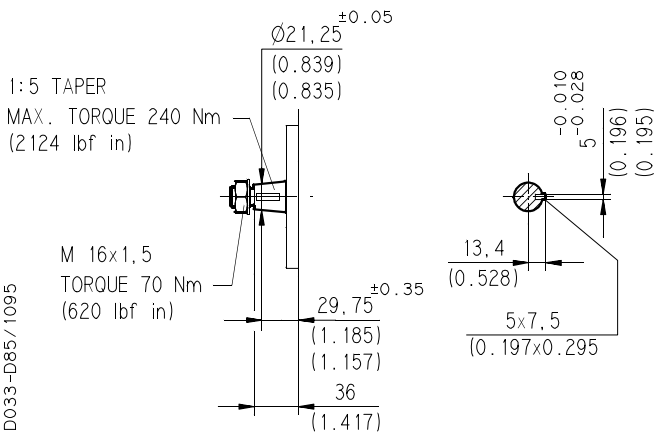
Not available with size:

30-61	30-73	30-82	30-90		
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Mounting flange availability:

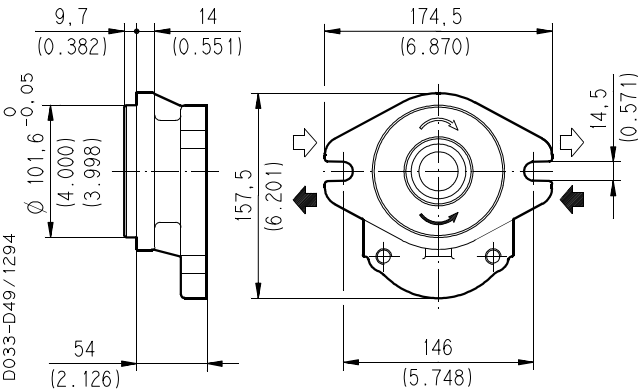
B3					
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Dimensions refer to flange code B3

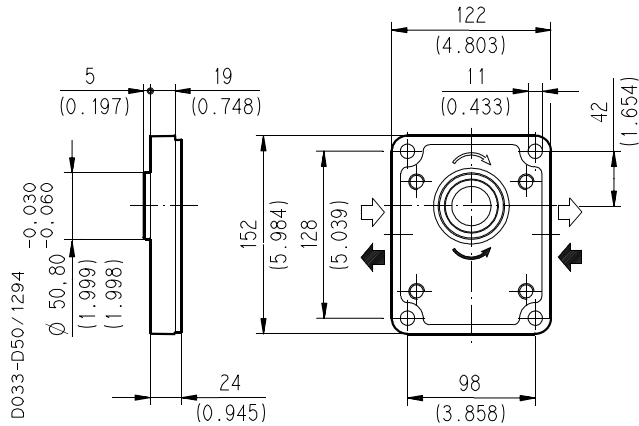


MOUNTING FLANGE OPTIONS

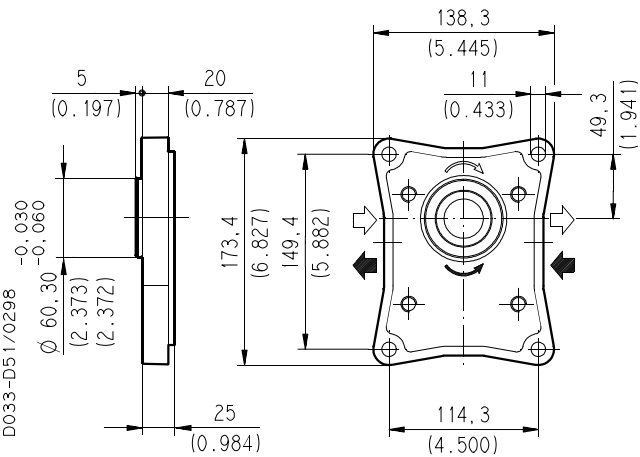
SAE "B" 2 BOLT S5



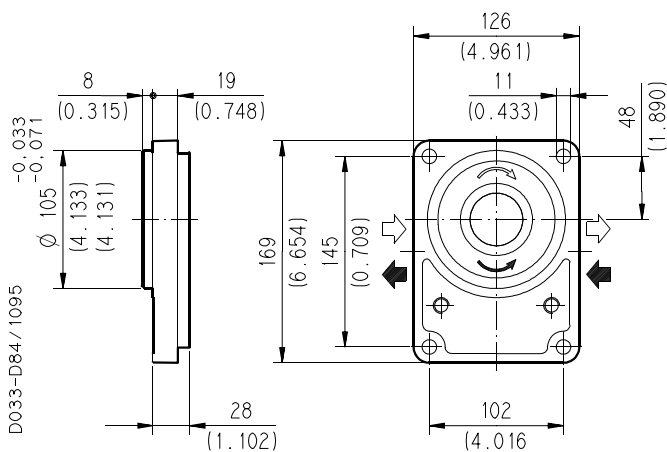
EUROPEAN RECTANGULAR E3



EUROPEAN RECTANGULAR E4



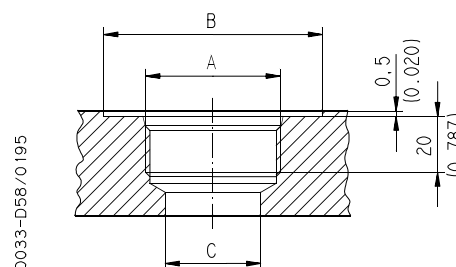
GERMAN RECTANGULAR B3



PORT OPTIONS

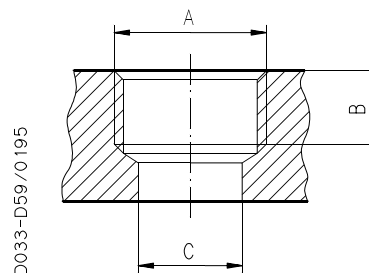
SAE STRAIGHT THREAD PORTS O-RING BOSS

CODE	NOMINAL SIZE	A	B	C
			mm (in)	mm (in)
OD	5/8	1-1/16-12 UN-2B	41 (1.614)	19 (0.748)
OF	1	1-5/16-12 UN-2B	49 (1.929)	27 (1.063)
OG	1-1/4	1-5/8-12 UN-2B	58 (2.283)	32 (1.260)
OH	1-1/2	1-7/8-12 UN-2B	65 (2.559)	32 (1.260)



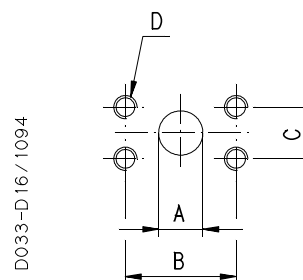
BSPP STRAIGHT THREAD PORTS

CODE	NOMINAL SIZE	A	B	C
			mm (in)	mm (in)
GF	1	G 1	22 (0.866)	27 (1.063)
GG	1-1/4	G 1-1/4	22 (0.866)	33 (1.299)
GH	1-1/2	G 1-1/2	24 (0.945)	38 (1.496)



METRIC SAE SPLIT PORTS SAE J518 C (STANDARD PRESSURE SERIES)

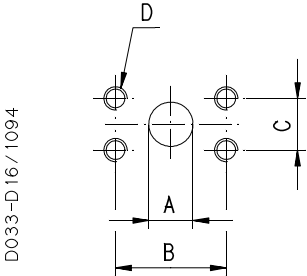
CODE	NOMINAL SIZE	A	B	C	D
		mm (in)	mm (in)	mm (in)	Thread Depth mm (in)
MA	1/2	12,5 (0.492)	38,1 (1.500)	17,5 (0.689)	M 8 22 (0.866)
MB	3/4	19 (0.748)	47,6 (1.874)	22,2 (0.874)	M 10 22 (0.866)
MC	1	25,4 (1.000)	52,4 (2.063)	26,2 (1.031)	
MD	1 1/4	30,5 (1.201)	58,7 (2.311)	30,2 (1.189)	
ME	1 1/2	39,3 (1.547)	69,8 (2.748)	35,7 (1.406)	M 12 22 (0.866)
MF	2	51 (2.008)	77,8 (3.063)	42,9 (1.689)	



PORT OPTIONS

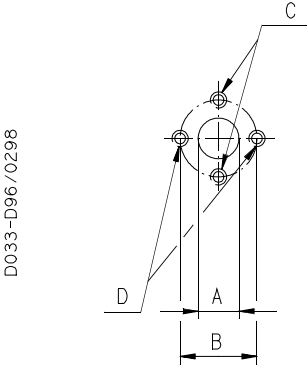
SAE SPLIT PORTS SAE J518 C (STANDARD PRESSURE SERIES)

CODE	NOMINAL SIZE	A	B	C	D
		mm (in)	mm (in)	mm (in)	Thread Depth mm (in)
SA	1/2	12,5 (0.492)	38,1 (1.500)	17,5 (0.689)	5/16-18 UNC-2B 22 (0.866)
SB	3/4	19 (0.748)	47,6 (1.874)	22,2 (0.874)	3/8-16 UNC-2B 22 (0.866)
SC	1	25,4 (1.000)	52,4 (2.063)	26,2 (1.031)	
SD	1 1/4	30,5 (1.201)	58,7 (2.311)	30,2 (1.189)	7/16-14 UNC-2B 22 (0.866)
SE	1 1/2	39,3 (1.547)	69,8 (2.748)	35,7 (1.406)	1/2-13 UNC-2B 22 (0.866)
SF	2	51 (2.008)	77,8 (3.063)	42,9 (1.689)	



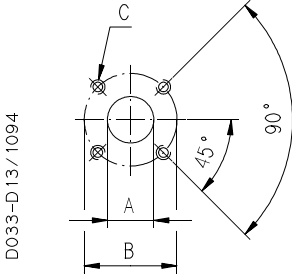
EUROPEAN 4 BOLT FLANGE

CODE	A	B	C	D
	mm (in)	mm (in)	Thread Depth mm (in)	Thread Depth mm (in)
EB	19 (0.748)	40 (1.575)	M 8 18 (0.709)	M 8 18 (0.709)
ED	27 (1.063)	51 (2.008)	M 10 18 (0.709)	M 10 18 (0.709)
EF	33 (1.299)	62 (2.441)	M12 10 (0.394)	M12 18 (0.709)



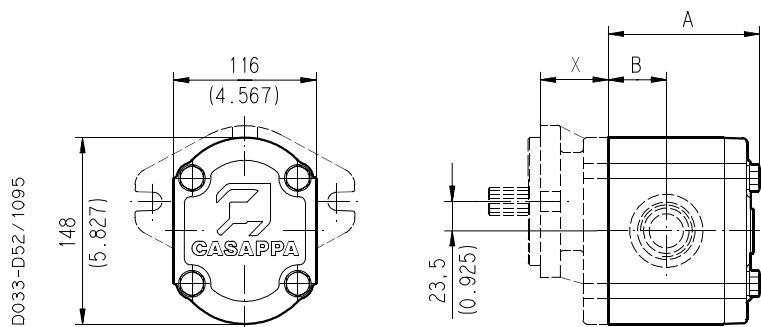
EUROPEAN 4 BOLT FLANGE

CODE	A	B	C
	mm (in)	mm (in)	Thread Depth mm (in)
BL	19 (0.748)	55 (2.165)	M 8 18 (0.709)
BM	27 (1.063)	55 (2.165)	M 8 18 (0.709)

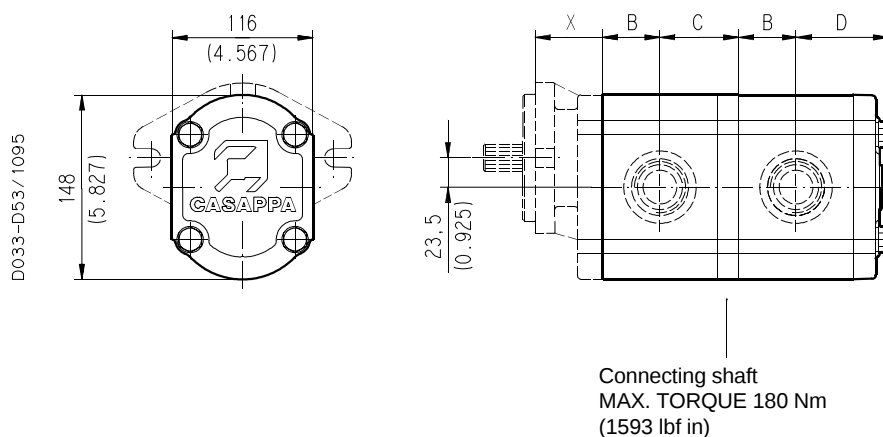


DIMENSIONS

Single pumps and motors



Multiple pumps same groups WSP 30/30

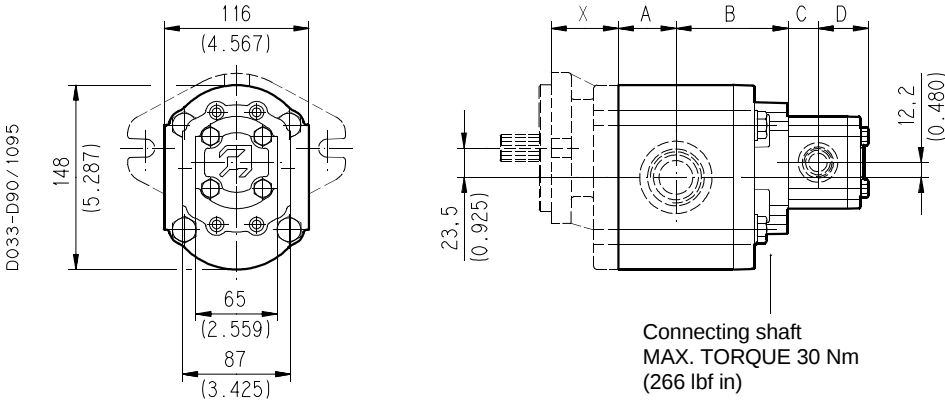


Note: For X dimension see mounting flanges at page 4.

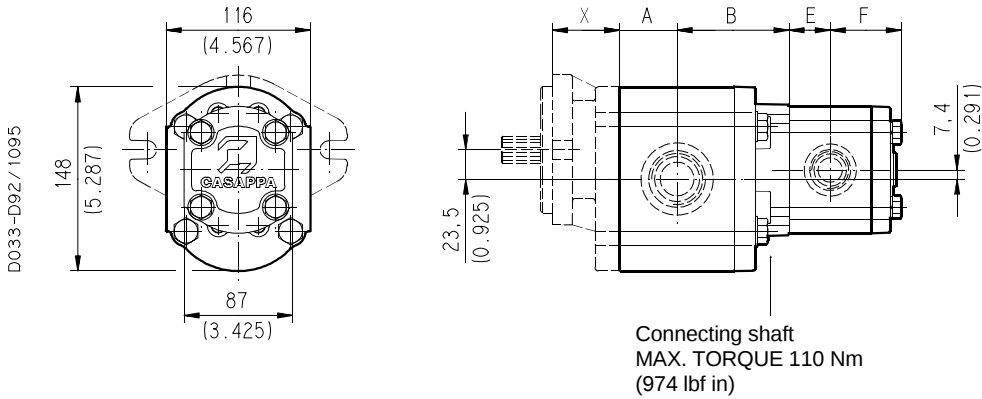
Pump size	Motor size	A		B		C		D	
		mm	(in)	mm	(in)	mm	(in)	mm	(in)
WSP 30-22	WSM 30-22	106	(4.173)	39	(1.535)	56	(2.205)	67	(2.638)
WSP 30-27	WSM 30-27	109	(4.291)	40,5	(1.594)	57,5	(2.264)	68,5	(2.697)
WSP 30-34	WSM 30-34	114	(4.488)	43	(1.693)	60	(2.362)	71	(2.795)
WSP 30-38	WSM 30-38	117	(4.606)	44,5	(1.752)	61,5	(2.421)	72,5	(2.854)
WSP 30-43	WSM 30-43	120	(4.724)	46	(1.811)	63	(2.480)	74	(2.913)
WSP 30-51	WSM 30-51	125	(4.921)	48,5	(1.909)	65,5	(2.579)	76,5	(3.012)
WSP 30-61	WSM 30-61	131	(5.157)	51,5	(2.028)	68,5	(2.697)	79,5	(3.130)
WSP 30-73	WSM 30-73	139	(5.472)	55,5	(2.185)	72,5	(2.854)	83,5	(3.287)
WSP 30-82	WSM 30-82	144	(5.669)	58	(2.283)	75	(2.953)	86	(3.386)
WSP 30-90	WSM 30-90	150	(5.906)	61	(2.402)	78	(3.071)	89	(3.504)

MULTIPLE PUMPS DIFFERENT GROUPS DIMENSIONS

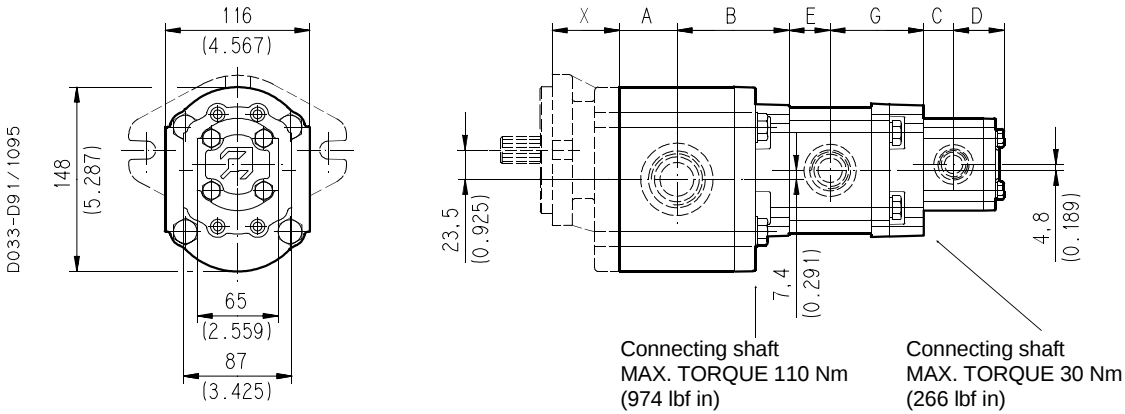
WSP 30/10



WSP 30/20



WSP 30/20/10



D041-001/02.98

MULTIPLE PUMPS DIFFERENT GROUPS DIMENSIONS

WHISPER 30

Pump size	A		B	
	mm	(in)	mm	(in)
WSP 30-22	39	(1.535)	83	(3.268)
WSP 30-27	40,5	(1.594)	84,5	(3.327)
WSP 30-34	43	(1.693)	87	(3.425)
WSP 30-38	44,5	(1.752)	88,5	(3.484)
WSP 30-43	46	(1.811)	90	(3.543)
WSP 30-51	48,5	(1.909)	92,5	(3.642)
WSP 30-61	51,5	(2.028)	95,5	(3.760)
WSP 30-73	55,5	(2.185)	99,5	(3.917)
WSP 30-82	58	(2.283)	102	(4.016)
WSP 30-90	61	(2.402)	105	(4.134)

WHISPER 10

Pump size (1)	C		D	
	mm	(in)	mm	(in)
WSP 10-1	17,6	(0.693)	34,1	(1.343)
WSP 10-2	19,2	(0.756)	35,7	(1.406)
WSP 10-3,15	21	(0.827)	37,5	(1.476)
WSP 10-4	22,4	(0.882)	38,9	(1.531)
WSP 10-5	24	(0.945)	40,5	(1.594)
WSP 10-6,3	26	(1.024)	42,5	(1.673)
WSP 10-8	28,8	(1.134)	45,3	(1.783)
WSP 10-10	32	(1.260)	48,5	(1.909)

WHISPER 20

Pump size (1)	E		F		G	
	mm	(in)	mm	(in)	mm	(in)
WSP 20-4	25,8	(1.016)	49,3	(1.941)	67,8	(2.669)
WSP 20-6,3	27	(1.063)	50,5	(1.988)	69	(2.717)
WSP 20-8	28,3	(1.114)	51,8	(2.039)	70,3	(2.768)
WSP 20-9	28,9	(1.138)	52,4	(2.063)	70,9	(2.791)
WSP 20-11,2	30,5	(1.201)	54	(2.126)	72,5	(2.854)
WSP 20-14	33	(1.299)	56,5	(2.224)	75	(2.953)
WSP 20-16	34,8	(1.370)	58,3	(2.295)	76,8	(3.024)
WSP 20-20	38	(1.496)	61,5	(2.421)	80	(3.150)
WSP 20-25	42	(1.654)	65,5	(2.579)	84	(3.307)
WSP 20-31,5	47	(1.850)	70,5	(2.776)	89	(3.504)

(1) Technical data of WHISPER 10 and 20 are shown in the respective catalogues.

HOW TO ORDER SINGLE PUMPS AND MOTORS

1	2	3	4	5	6	7	8	9				
WSP 30-34	S	0	–	04	S5	–	L	OF/OD	–	N	–	H

1	Size	PUMP CODE	MOTOR CODE
in ³ /rev	cm ³ /rev		
1.33	21.89	WSP 30-22	WSM 30-22
1.62	26.58	WSP 30-27	WSM 30-27
2.09	34.39	WSP 30-34	WSM 30-34
2.35	38.53	WSP 30-38	WSM 30-38
2.67	43.77	WSP 30-43	WSM 30-43
3.15	51.59	WSP 30-51	WSM 30-51
3.72	60.97	WSP 30-61	WSM 30-61
4.48	73.47	WSP 30-73	WSM 30-73
4.96	81.29	WSP 30-82	WSM 30-82
5.53	90.66	WSP 30-90	WSM 30-90

2	Rotation	CODE
Left		S
Right		D

3	Version	CODE
No outboard bearing		0

4	Drive shaft	CODE
SAE "B" straight		32
SAE "B-B" straight		33
SAE "B" spline		04
SAE "B-B" spline		05
SAE "B" spline (special)		08
Straight		41
European tapered 1:8		83
European tapered 1:8		84
German tapered 1:5		56

5	Mounting flange	CODE
SAE "B" 2 bolt		S5
European rectangular (50,8 mm pilot, 98x128 mm bolt pattern)		E3
European rectangular (60,3 mm pilot, 114,3x149,4 mm bolt pattern)		E4
German rectangular (105 mm pilot, 102x145 mm bolt pattern)		B3

6	Ports position	CODE
Side		L

7	Inlet/outlet ports	CODE
SAE STRAIGHT THREAD PORTS O-RING BOSS		
Series and size		Side ports
WSP 30	22 - 27 - 34	OF/OD
WSM 30		OD/OF
WSP 30	38 - 43 - 51	OG/OF
WSM 30		OF/OG
WSP 30	61 - 73 - 82 - 90	OH/OG
WSM 30		OG/OH

CODE	Inlet/outlet ports	7
BSPP STRAIGHT THREAD PORTS		
Side ports	Series and size	
GF/GF	WSP 30 22 - 27 - 34 - 38 - 43 - 51	
GG/GF	WSM 30	
GF/GG	WSP 30 61 - 73	
GH/GG	WSM 30	
GG/GH	WSP 30 82 - 90	
	WSM 30	
METRIC SAE SPLIT PORTS SAE J518 C		
Side ports	Series and size	
MB/MA	WSP 30 22	
MA/MB	WSM 30	
MC/MB	WSP 30 27 - 34	
MB/MC	WSM 30	
MD/MC	WSP 30 38 - 43 - 51	
MC/MD	WSM 30	
ME/MD	WSP 30 61 - 73 - 82	
MD/ME	WSM 30	
MF/ME	WSP 30 90	
ME/MF	WSM 30	
SAE SPLIT PORTS SAE J518 C		
Side ports	Series and size	
SB/SA	WSP 30 22	
SA/SB	WSM 30	
SC/SB	WSP 30 27 - 34	
SB/SC	WSM 30	
SD/SC	WSP 30 38 - 43 - 51	
SC/SD	WSM 30	
SE/SD	WSP 30 61 - 73 - 82	
SD/SE	WSM 30	
SF/SE	WSP 30 90	
SE/SF	WSM 30	
EUROPEAN 4 BOLT FLANGE		
Side ports	Series and size	
ED/EB	WSP 30 22 - 27 - 34 - 38 - 43 - 51 - 61 (mounting flange E3)	
EB/ED	WSM 30	
ED/ED	WSP 30 43 - 51 (mounting flange E4)	
ED/ED	WSM 30	
EF/ED	WSP 30 73 (mounting flange E3 - E4)	
ED/EF	WSM 30 61 - 82 - 90 (mounting flange E4)	
GERMAN 4 BOLT FLANGE		
Side ports	Series and size	
BM/BL	WSP 30 22 - 27 - 34 - 38 - 43 - 51	
BL/BM	WSM 30	

CODE	Seals	8
N	Buna (standard)	
V	Viton	

CODE	Shaft seal options	9
C	High back pressure seal with wiper seal	
D	Standard seal with wiper seal	
H	High back pressure seal	

HOW TO ORDER MULTIPLE PUMPS

DOUBLE PUMPS

1	2	3	4	5	1	4	5	6	7	8							
WSP 30-34	-	04	S5	-	L	OF/OD	/	30-34	-	L	OF/OD	-	S	-	N	-	
Front section								Rear section									

1	Pump size		CODE
	in ³ /rev	cm ³ /rev	
	1.33	21.89	WSP 30-22
	1.62	26.58	WSP 30-27
	2.09	34.39	WSP 30-34
	2.35	38.53	WSP 30-38
	2.67	43.77	WSP 30-43
	3.15	51.59	WSP 30-51
	3.72	60.97	WSP 30-61
	4.48	73.47	WSP 30-73
	4.96	81.29	WSP 30-82
	5.53	90.66	WSP 30-90

2	Drive shaft	CODE
	SAE "B" straight	32
	SAE "B-B" straight	33
	SAE "B" spline	04
	SAE "B-B" spline	05
	SAE "B" spline (special)	08
	Straight	41
	European tapered 1:8	83
	European tapered 1:8	84
	German tapered 1:5	56

3	Mounting flange	CODE
	SAE "B" 2 bolt	S5
	European rectangular (50,8 mm pilot, 98x128 mm bolt pattern)	E3
	European rectangular (60,3 mm pilot, 114,3x149,4 mm bolt pattern)	E4
	German rectangular (105 mm pilot, 102x145 mm bolt pattern)	B3

4	Ports position	CODE
	Side	L

5	Inlet/outlet ports	CODE
SAE STRAIGHT THREAD PORTS O-RING BOSS		
	Series and size	Side ports
WSP 30	22 - 27 - 34	OF/OD
WSP 30	38 - 43 - 51	OG/OF
WSP 30	61 - 73 - 82 - 90	OH/OG

CODE	Inlet/outlet ports	5
BSPP STRAIGHT THREAD PORTS		
Side ports	Series and size	
GF/GF	WSP 30	22 - 27 - 34 - 38 - 43 - 51
GG/GF	WSP 30	61 - 73
GH/GG	WSP 30	82 - 90
METRIC SAE SPLIT PORTS SAE J518 C		
Side ports	Series and size	
MB/MA	WSP 30	22
MC/MB	WSP 30	22 - 27 - 34
MD/MC	WSP 30	38 - 46 - 51
ME/MD	WSP 30	61 - 73 - 82
MF/ME	WSP 30	90
SAE SPLIT PORTS SAE J518 C		
Side ports	Series and size	
SB/SA	WSP 30	22
SC/SB	WSP 30	27 - 34
SD/SC	WSP 30	38 - 46 - 51
SE/SD	WSP 30	61 - 73 - 82
SF/SE	WSP 30	90
EUROPEAN 4 BOLT FLANGE		
Side ports	Series and size	
ED/EB	WSP 30	22 - 27 - 34 - 38 - 43 - 51 - 61 (mounting flange E3)
ED/ED	WSP 30	43 - 51 (mounting flange E4)
EF/ED	WSP 30	73 (mounting flange E3 and E4) 61 - 82 - 90 (mounting flange E4)
GERMAN 4 BOLT FLANGE		
Side ports	Series and size	
BM/BL	WSP 30	22 - 27 - 34 - 38 - 43 - 51

CODE	Rotation	6
S	Left	
D	Right	

CODE	Seals	7
N	Buna (standard)	
V	Viton	

CODE	Special covers	8
L	Cast iron mounting flange and aluminum rear cover (b)	

(a) Technical data of WHISPER 10 and 20 are shown in the respective catalogue.

(b) Only for multiple pumps different groups.

TRIPLE PUMPS

1	2	3	4	5	1	4	5	1	4	5	6	7	8									
WSP30-34	-	04	S5	-	L	OF/OD	/	30-34	-	L	OF/OD	/	30-34	-	L	OF/OD	-	S	-	N	-	
Front section								Intermediate section				Rear sections										

ORDER EXAMPLE

SINGLE PUMPS AND MOTORS

Standard pump **WSP 30-34 S 0-04 S5-L OF/OD-N**Standard motor **WSM 30-34 S 0-04 S5-L OD/OF-N**Pump with special features **WSM 30-34 S 0-04 S5-L OD/OF-N-C**

DOUBLE PUMPS

Standard double pump same groups **WSP 30-34 04 S5-LOF/OD / 30-34 L OF/OD-S-N**Standard double pump different groups **WSP 30-34 04 S5-LOF/OD / 10-2 L OB/OA-S-N**Double pump with special features **WSP 30-34 04 S5-LOF/OD / 10-2 L OB/OA-S-N-L**

TRIPLE PUMPS

Standard triple pump same groups **WSP 30-34 04 S5-L OF/OD / 30-34 L OF/OD / 30-34 L OF/OD-S-N**Standard triple pump different groups **WSP 30-34 04 S5-L OF/OD / 20-8 L OC/OC / 10-2 L OB/OA-S-N**Triple pump with special features **WSP 30-34 04 S5-L OF/OD / 20-8 L OC/OC / 10-2 L OB/OA-S-N-L****CASAPPA S.p.A. - Parma - Italy - Tel.: + 39 521 304111 - Fax: + 39 521 804600****CASAPPA Corp. - Batavia, IL 60510 U.S.A. - Phone: 630 761-0041 - Fax: 630 761-0048****CASAPPA GmbH - Stuttgart - Germany - Tel.: + 49 711 7811770 - Fax: + 49 711 7811771****CASAPPA SARL - Janneyrias - France - Tel.: + 33 4 72462112 - Fax: + 33 4 72462100**

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