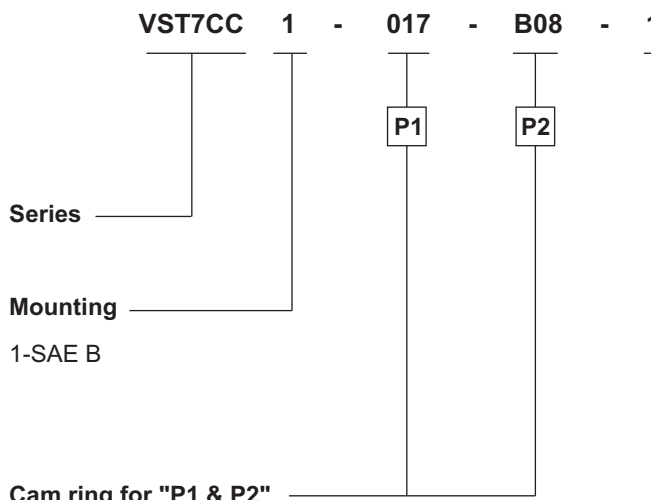


ORDERING CODE



Series

Mounting

1-SAE B

Cam ring for "P1 & P2"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)

B03 = 9.8 (0.60)

B04 = 12.8 (0.78)

B05 = 15.9 (0.97)

B06 = 19.8 (1.21)

B07 = 22.5 (1.37)

B08 = 24.9 (1.52)

B09 = 28.0 (1.71)

B10 = 31.8 (1.94)

B11 = 34.9 (2.13)

B12 = 40.9 (2.50)

B14 = 45.1 (2.75)

B15 = 50.0 (3.05)

B17 = 58.3 (3.56)

B20 = 63.8 (3.89)

B22 = 70.3 (4.29)

B25 = 79.3 (4.84)

Type of shaft

1 - Keyed (no SAE)

2 - Keyed (no SAE)

3 - Splined (SAE-BB)

5 - Splined (SAE-B)

Modifications

Mounting W/connection Variables

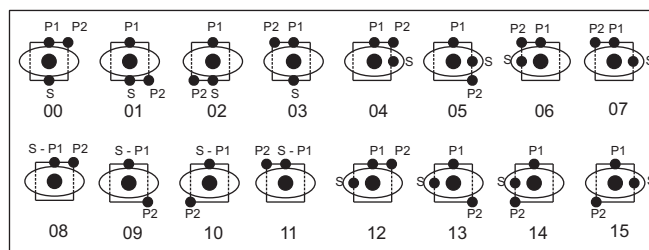
		P1=1"-S=2½"	
		1"	¾"
code	Unc	10	11
	Metric	1M	W1

Seal Class

1 - S1(for mineral oil)
 4 - S4(for fire resistant fluids)
 5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination

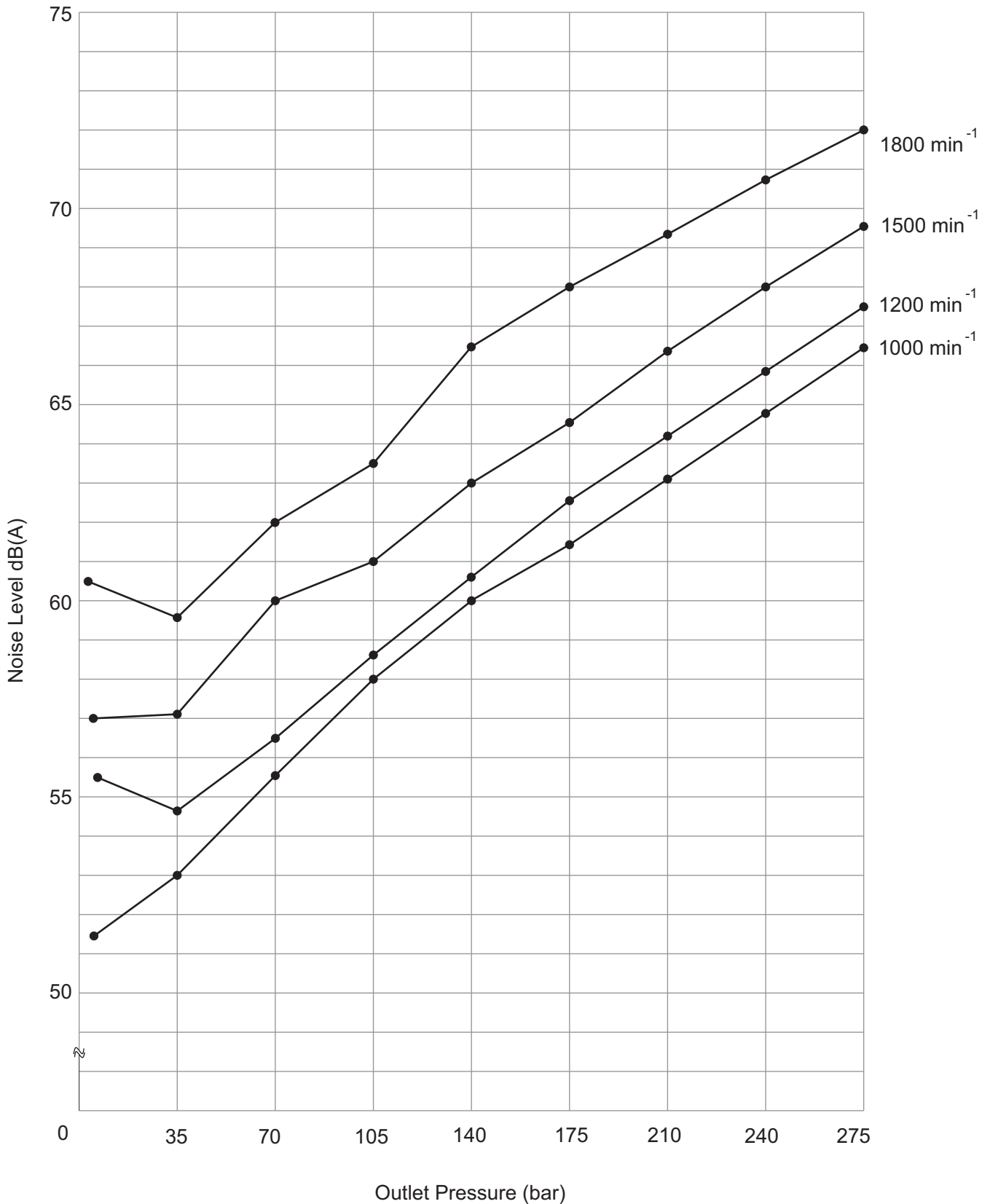


Direction of rotation (view on shaft end)

R - clockwise
 L - Counter - Clockwise



NOISE LEVEL (TYPICAL)
VST7CC - B17 - B08

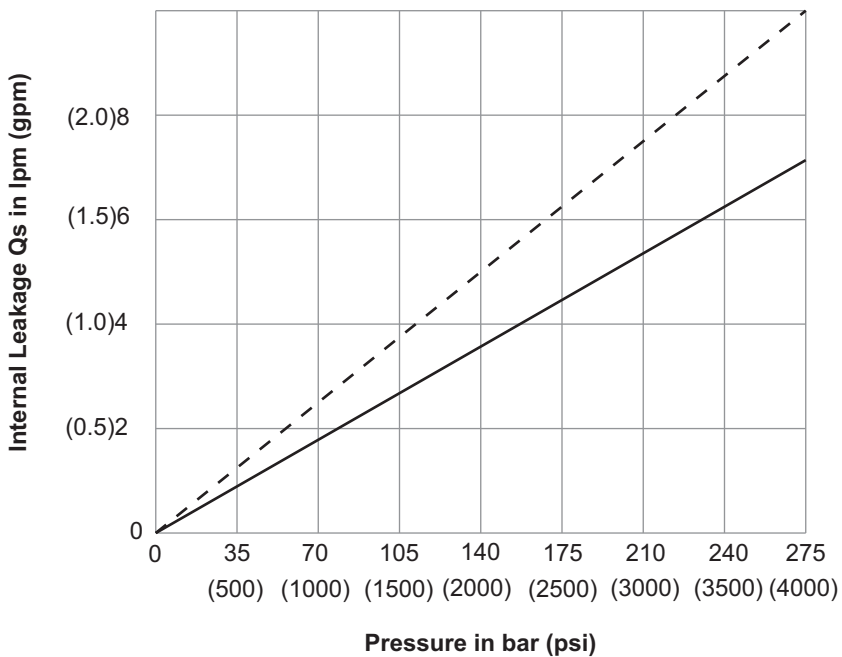


Measurement Conditions: UIISO VG32 oil at 50°C and measured 1m from rear of pump cover



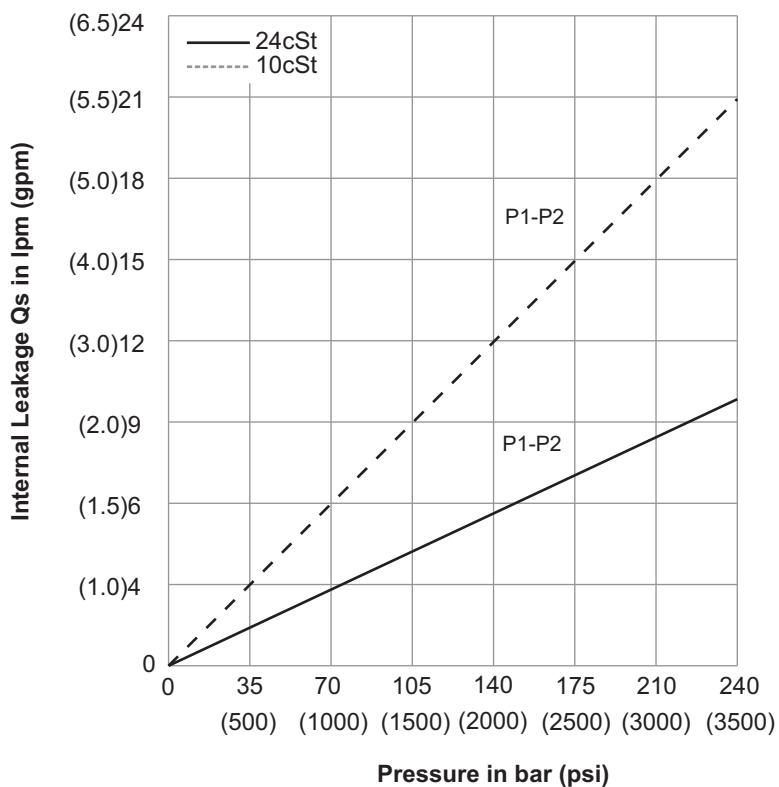
INTERNAL LEAKAGE (TYPICAL)

VST7CC B02 TO B15

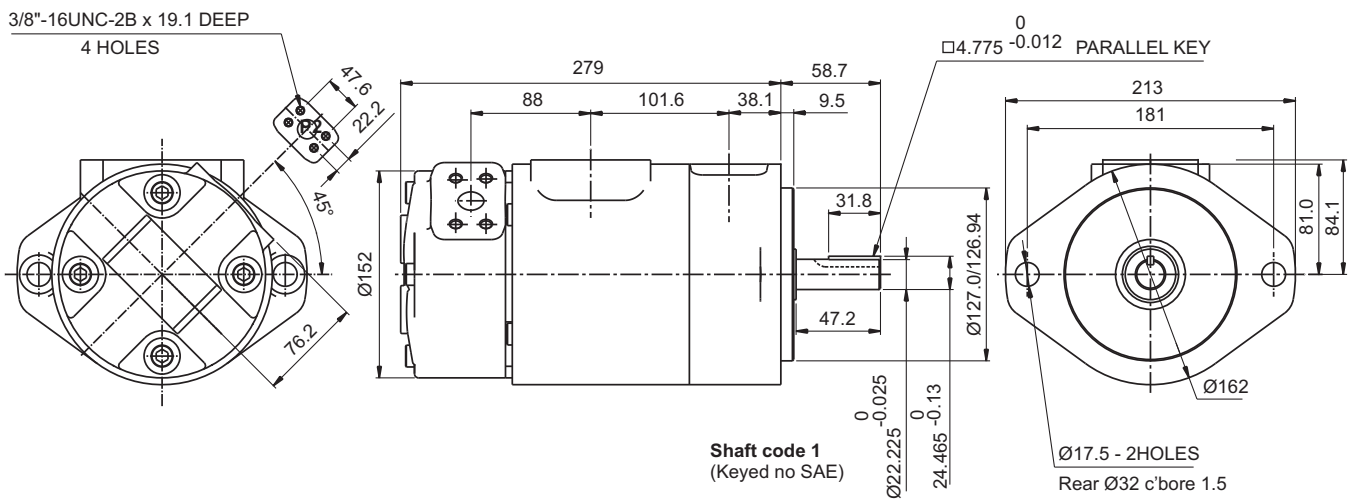
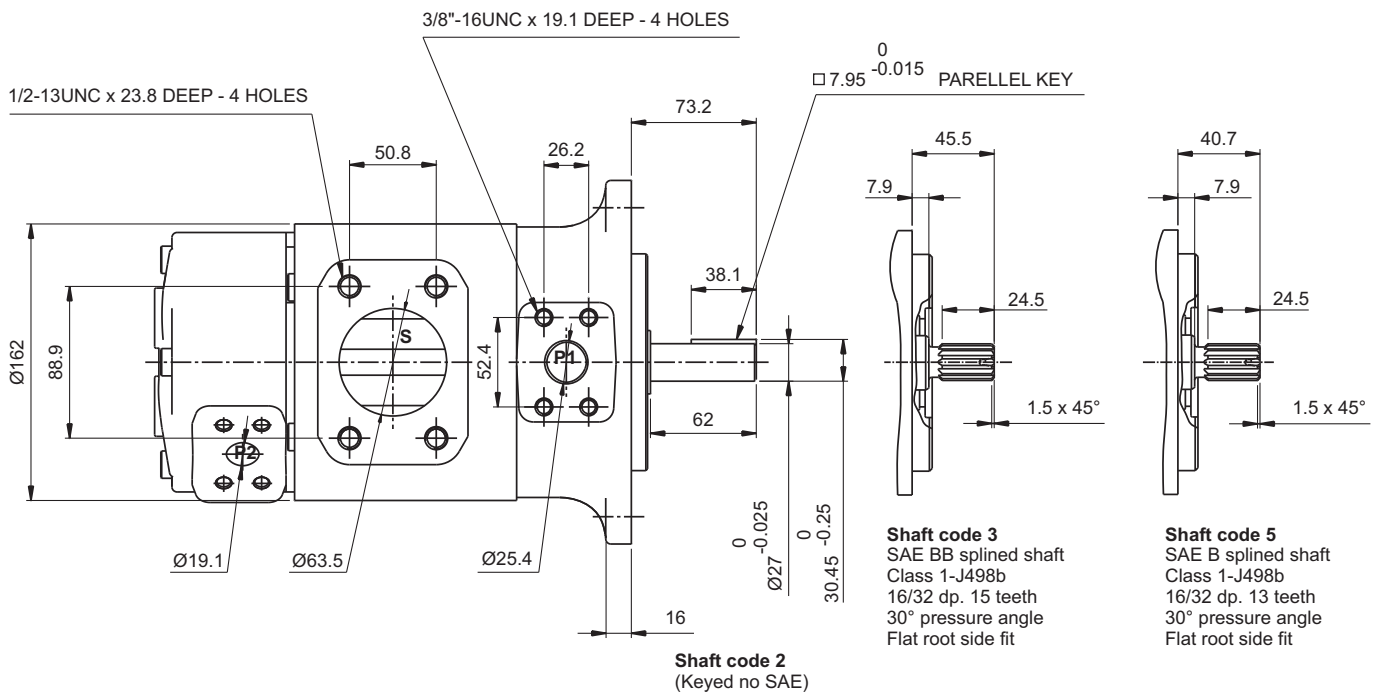


INTERNAL LEAKAGE (TYPICAL)

VST7CC B17 TO B25



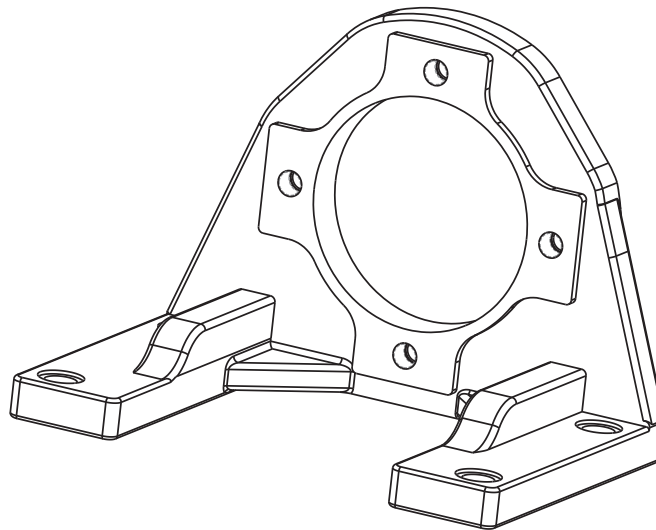
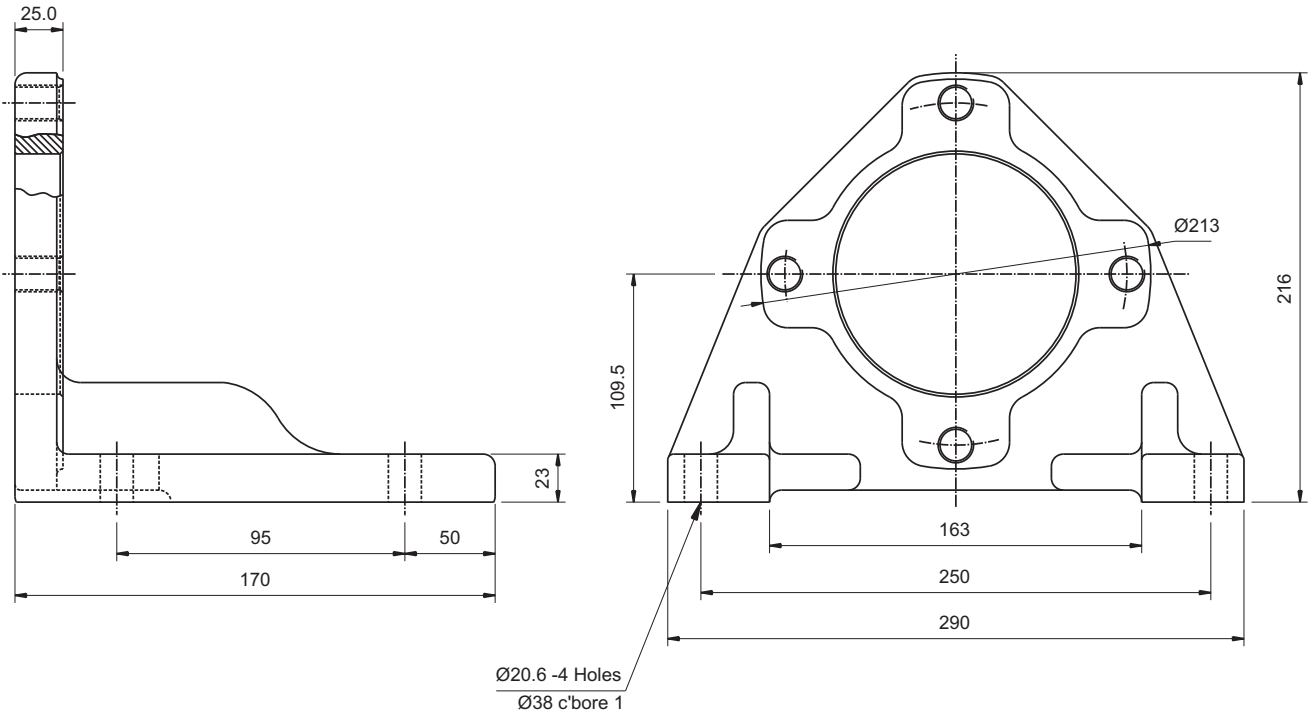
INSTALLATION DRAWING
FLANGE MOUNTING



Weight - 36.5 Kgs.

Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	12666 (14300)
2	18972 (21420)
3	28937 (32670)
4	18246 (20600)

INSTALLATION DRAWING
FOOT MOUNTING



Weight-9.5 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1 & P2	B02	0.35	5.7	2.29	8.70	1.72	6.50	–	–
	B03	0.60	9.8	3.88	14.7	3.30	12.5	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.49	17.0	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.68	21.5	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.13	27.0	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.19	31.0	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.25	35.0	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.43	39.5	10.04	38.0
	B10	1.94	31.8	12.62	47.8	11.88	45.0	11.23	42.5
	B11	2.13	34.9	13.81	52.26	13.21	50.0	12.81	48.5
	B12	2.50	40.9	16.25	61.50	15.59	59.0	15.19	57.5
	B14	2.75	45.1	17.81	67.65	17.04	64.5	16.77	63.5
	B15	3.08	50.5	20.25	76.64	19.55	74.0	19.15	72.5
	B17	3.56	58.3	23.10	87.45	22.32	84.5	22.06	83.5
	B20	3.89	63.8	25.28	95.70	24.70	93.5	24.30	92.0
B22	4.29	70.3	27.87	105.5	27.21	103.0	26.81	101.5	
B25	4.84	79.3	31.44	119.0	31.04	117.5	30.64	116.0	

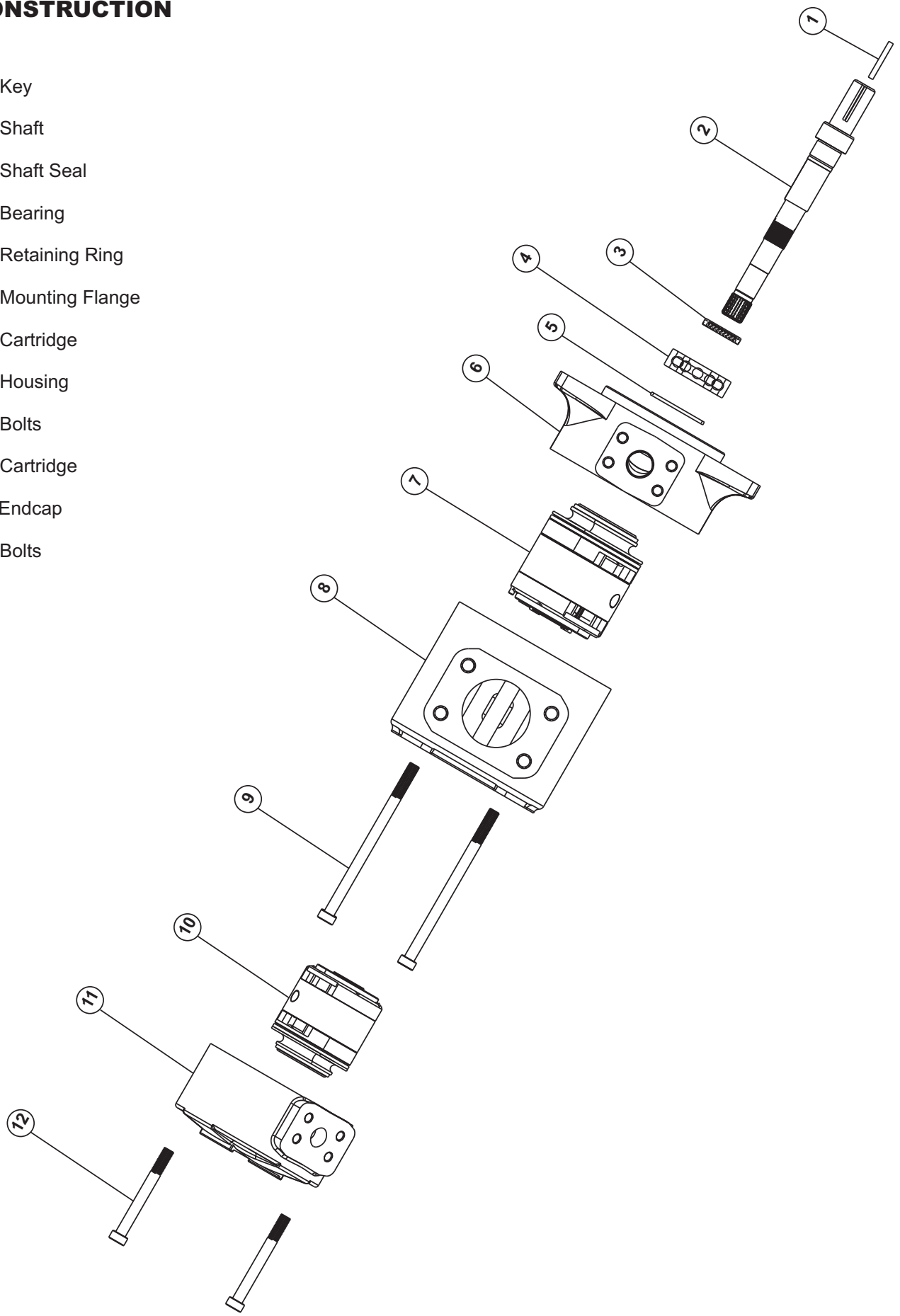
Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1 & P2	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43	
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

Max. cont. pressure 240 bar upto B12 and 210 bar from B14 to B25
 Measurement Conditions: ISO VG32 oil at 50°C



CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Bolts
- 10. Cartridge
- 11. Endcap
- 12. Bolts



ORDERING CODE

VST7DB - 042 - B10 - 1 R 00 - A 1 - 00 *

Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

014 = 43.9 (2.68)

017 = 55.0 (3.36)

020 = 66.0 (4.03)

022 = 70.3 (4.29)

024 = 81.1 (4.95)

028 = 89.9 (5.49)

031 = 99.1 (6.05)

035 = 113.4 (6.92)

038 = 120.6 (7.36)

042 = 137.5 (8.39)

Cam ring for "P2"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)

B03 = 9.8 (0.60)

B04 = 12.8 (0.78)

B05 = 15.9 (0.97)

B06 = 19.8 (1.21)

B07 = 22.5 (1.37)

B08 = 24.9 (1.52)

B09 = 28.0 (1.71)

B10 = 31.8 (1.94)

B11 = 34.9 (2.13)

B12 = 40.9 (2.50)

Type of shaft

1 - Keyed

2 - Keyed (no SAE)

3 - Splined (SAE C)

4 - Splined (spec. SAE C)

Modifications

Mounting W/connection Variables

	UNC		METRIC	
	00	01	M0	M1
P2	1"	3/4"	1"	3/4"

Seal Class

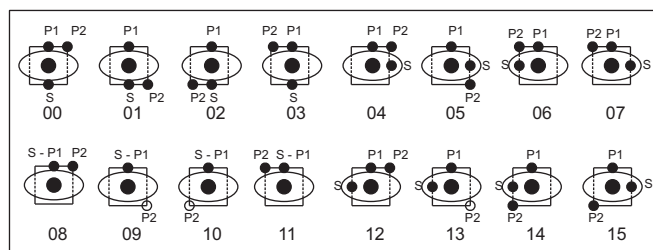
1 - S1(for mineral oil)

4 - S4(for fire resistant fluids)

5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



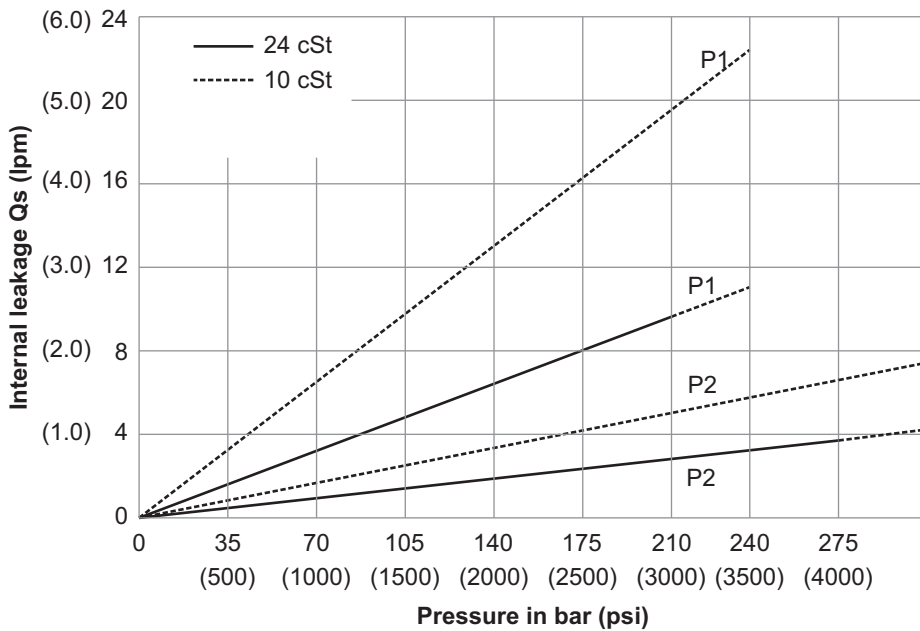
Direction of rotation
(view on shaft end)

R - clockwise

L - Counter - Clockwise

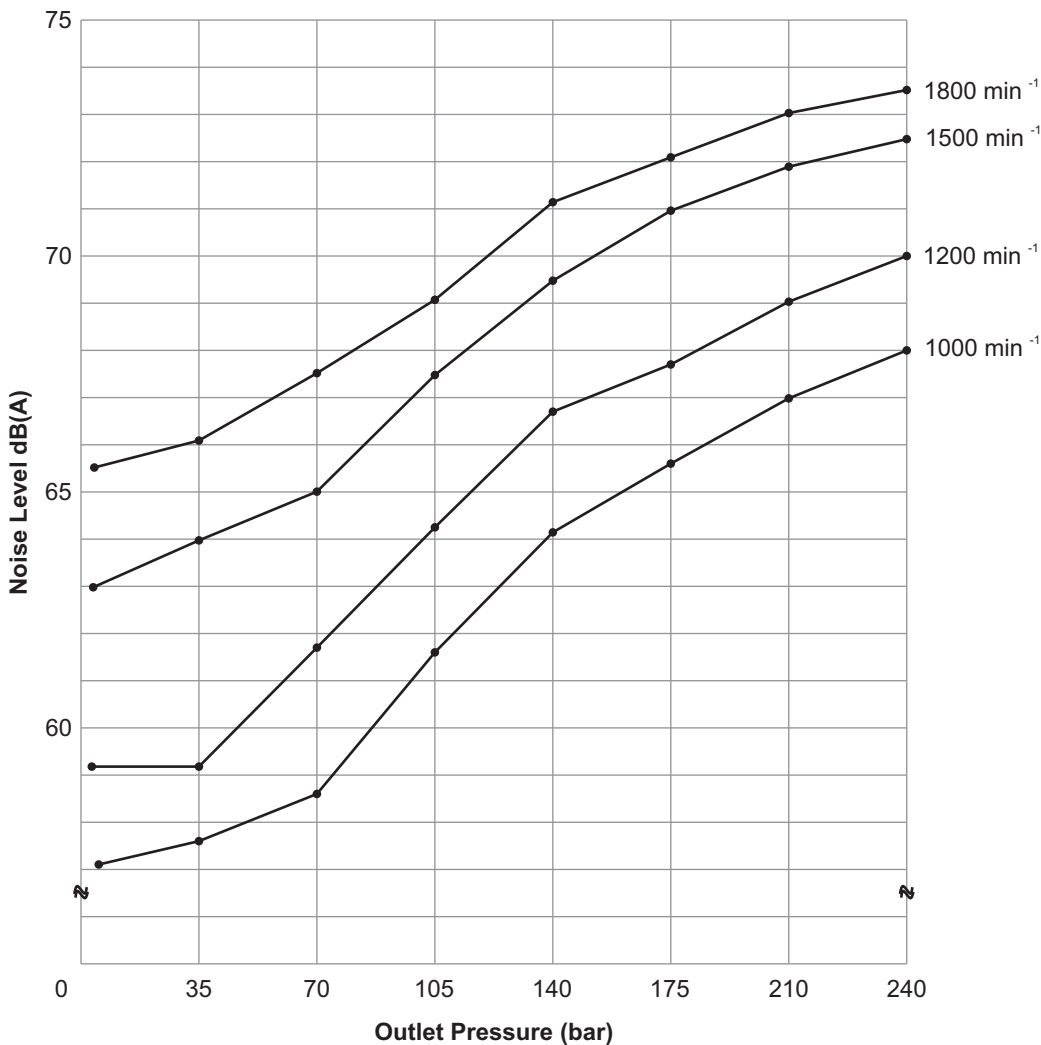


INTERNAL LEAKAGE (TYPICAL)



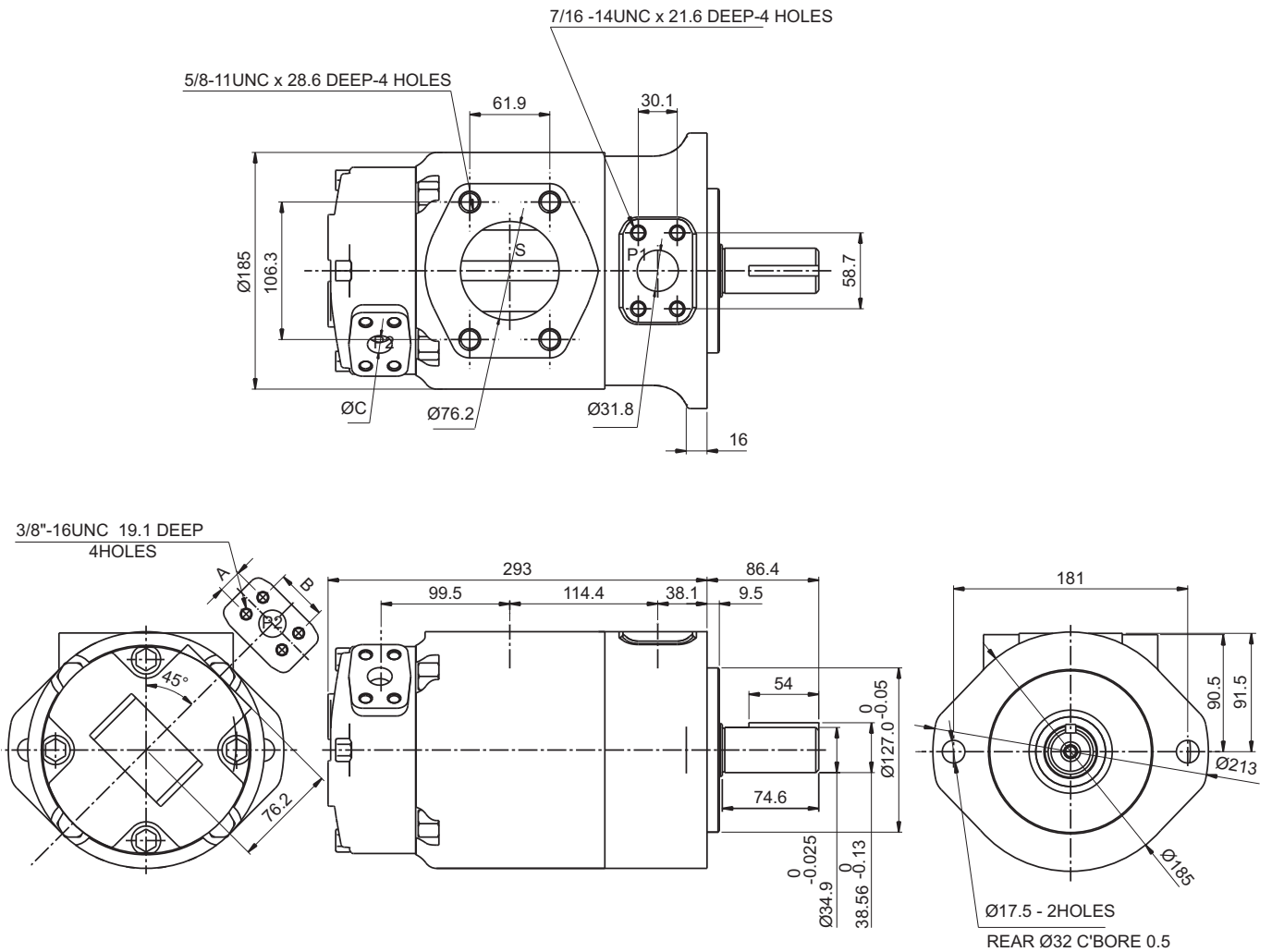
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL) VST7DB-035-017

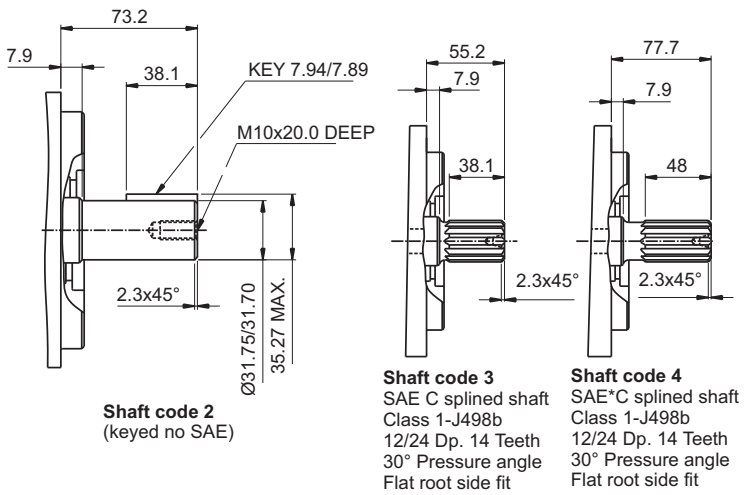


Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING
FLANGE MOUNTING



Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	38299 (43240)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)

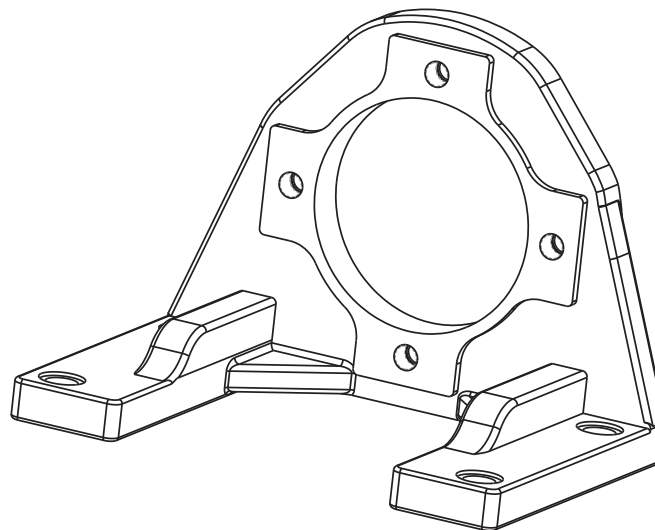
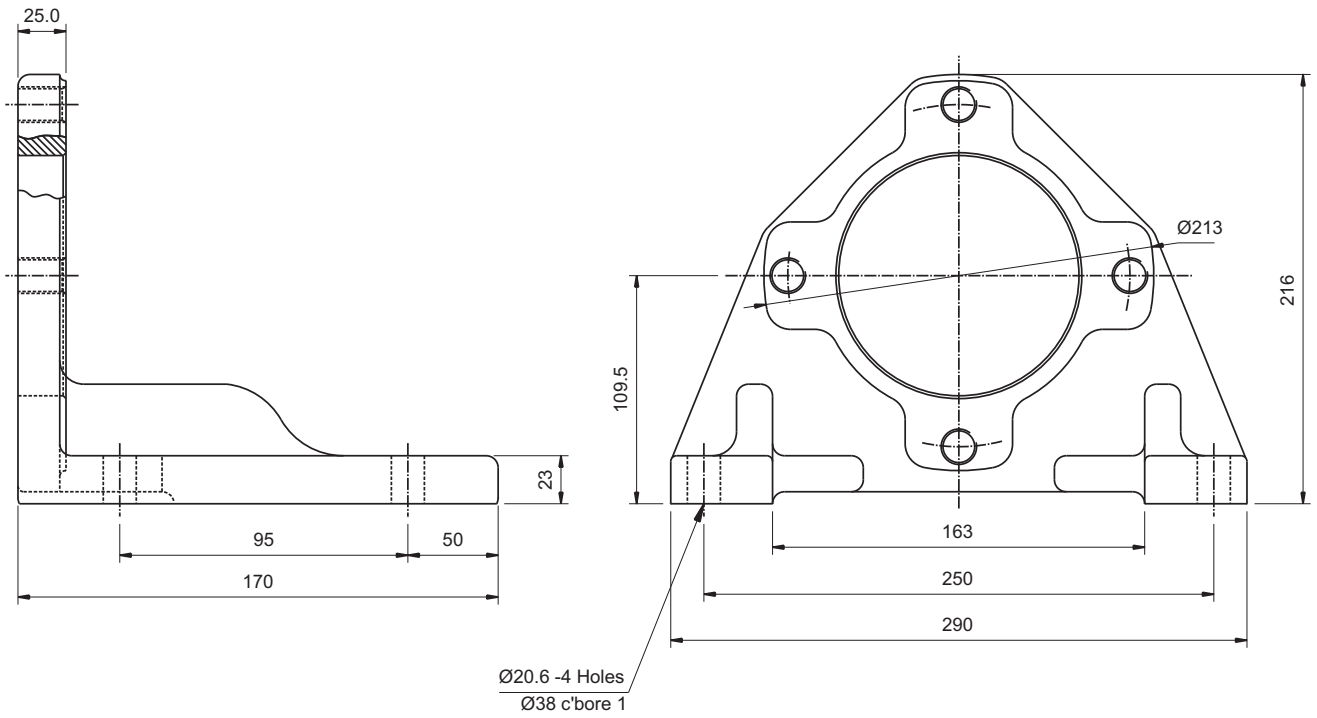


Alternate connect.variables		
	00 & M0	01 & M1
A	1.031 (26.2)	0.874 (22.2)
B	2.06 (52.4)	1.874 (47.6)
C	1.00 (25.4)	0.75 (19.05)

Weight - 46.0 Kgs.

INSTALLATION DRAWING
FOOT MOUNTING

DP



Weight-9.5 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	014	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	017	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	020	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	022	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	024	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	028	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	031	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	035	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	038	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	042	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74

DP

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	014	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	022	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	024	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

Max, int. pressure 240 bar

Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

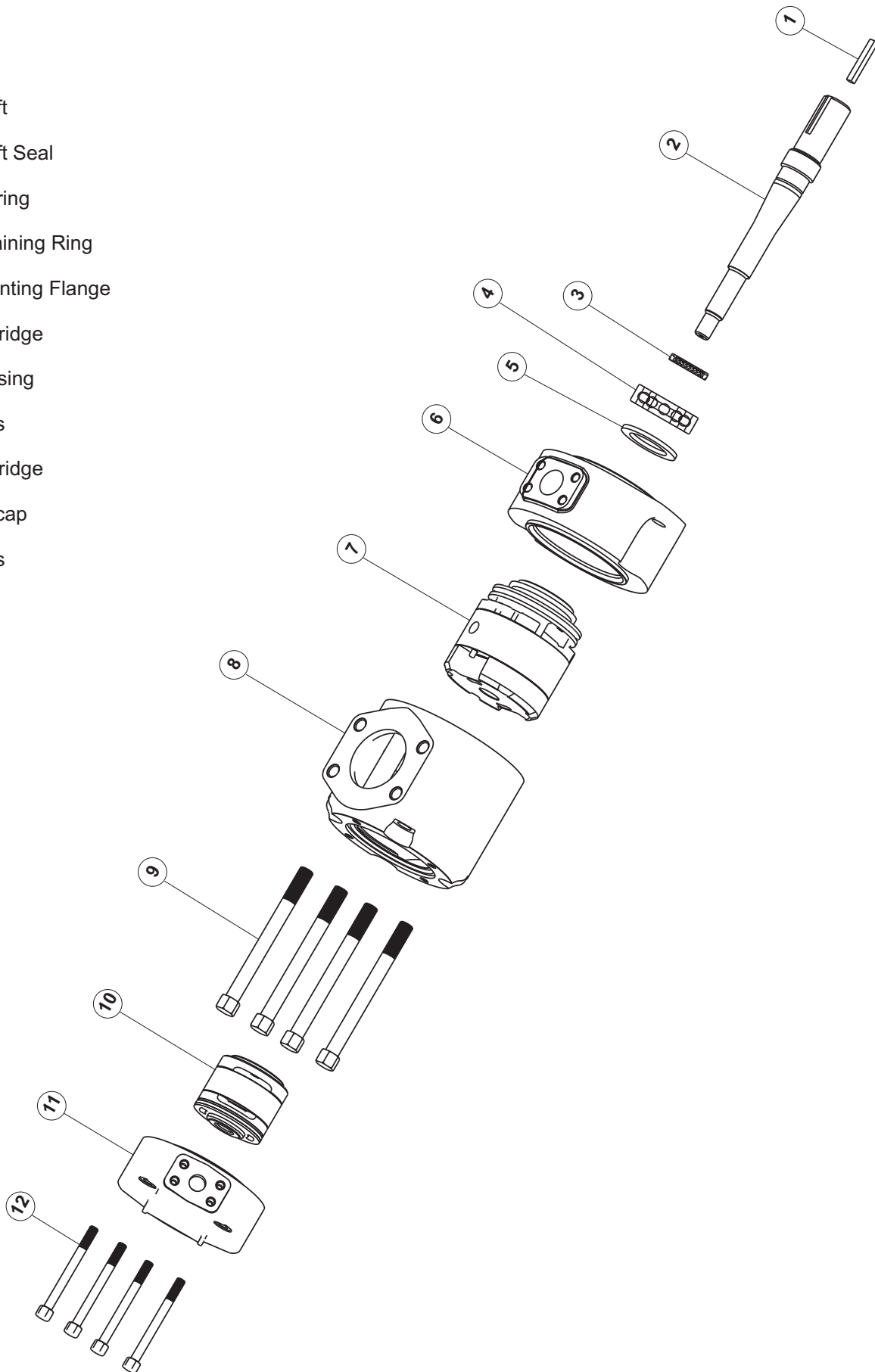
Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	–	–

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	–	–

B12 - 210 bar max int. and 175 bar max. cont.
 Max. Speed = 3000rpm
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Bolts
- 10. Cartridge
- 11. Endcap
- 12. Bolts



ORDERING CODE

VST7DC - 038 - 022 - 1 R 00 - A 1 - 11 *

Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

014 = 43.9 (2.68)

017 = 55.0 (3.36)

020 = 66.0 (4.03)

022 = 70.3 (4.29)

024 = 81.1 (4.95)

028 = 89.9 (5.49)

031 = 99.1 (6.05)

035 = 113.4 (6.92)

038 = 120.6 (7.36)

042 = 137.5 (8.39)

Cam ring for "P2"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)

B03 = 9.8 (0.60)

B04 = 12.8 (0.78)

B05 = 15.9 (0.97)

B06 = 19.8 (1.21)

B07 = 22.5 (1.37)

B08 = 24.9 (1.52)

B09 = 28.0 (1.71)

B10 = 31.8 (1.94)

B11 = 34.9 (2.13)

B12 = 40.9 (2.50)

B14 = 45.1 (2.75)

B15 = 50.0 (3.05)

B17 = 58.3 (3.56)

B20 = 63.8 (3.89)

B22 = 70.3 (4.29)

B25 = 79.3 (4.84)

Modifications

Mounting W/connection Variables

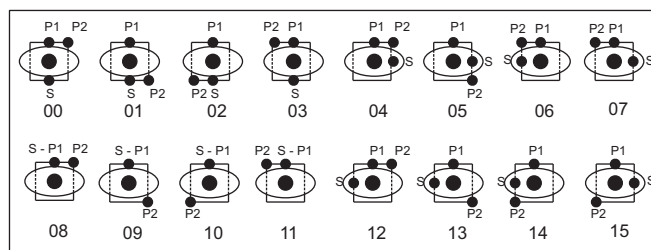
	UNC		METRIC	
	00	01	M0	M1
P2	1"	3/4"	1"	3/4"

Seal Class

- 1 - S1(for mineral oil)
- 4 - S4(for fire resistant fluids)
- 5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation (view on shaft end)

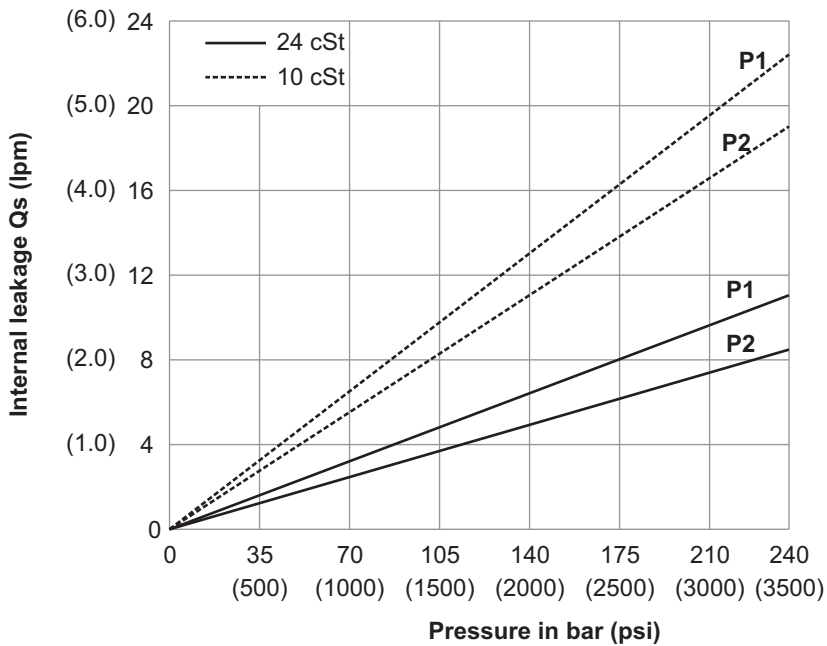
- R - clockwise
- L - Counter - Clockwise

Type of shaft

- 1 - Keyed
- 2 - Keyed (SAE-CC)
- 3 - Splined (SAE-C)



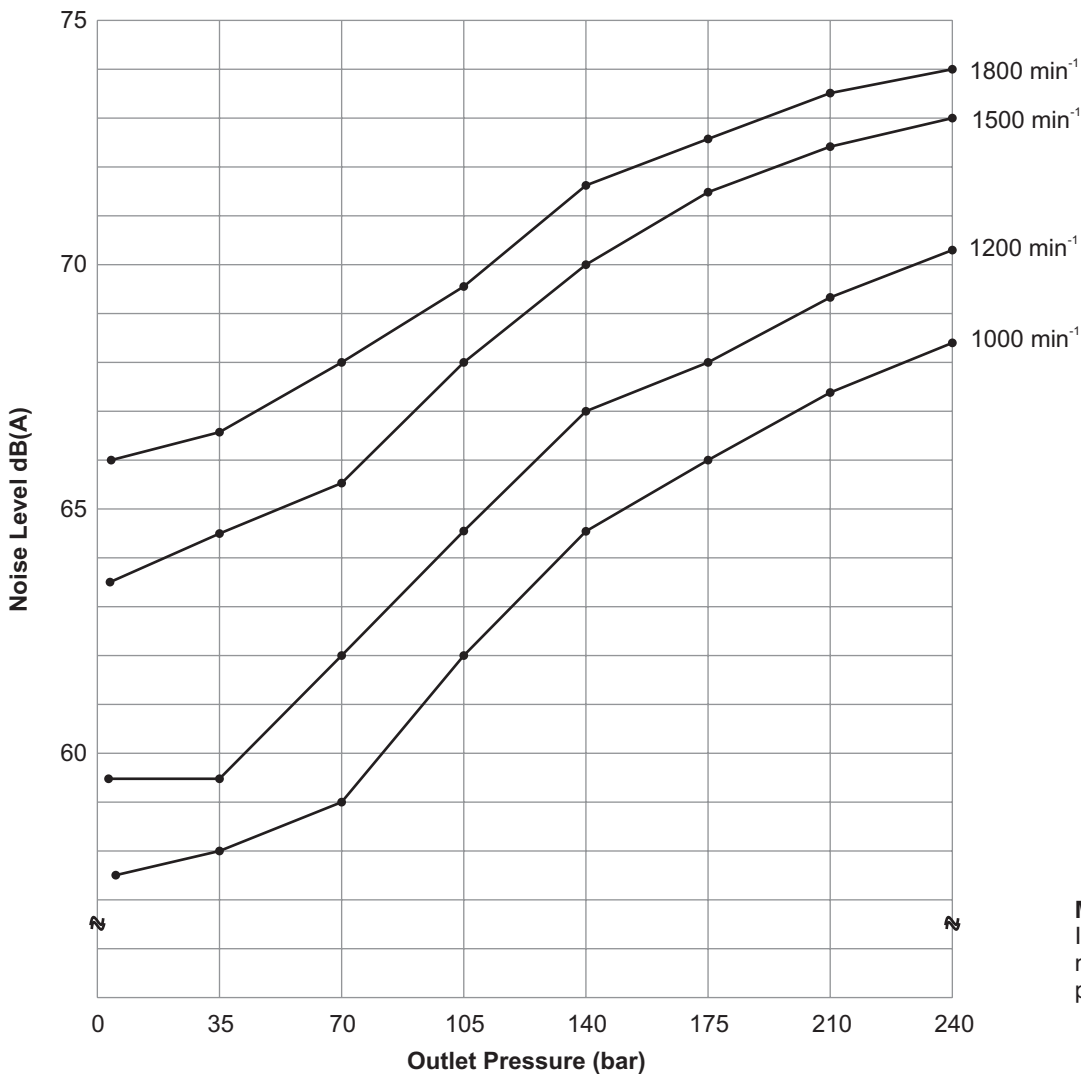
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.



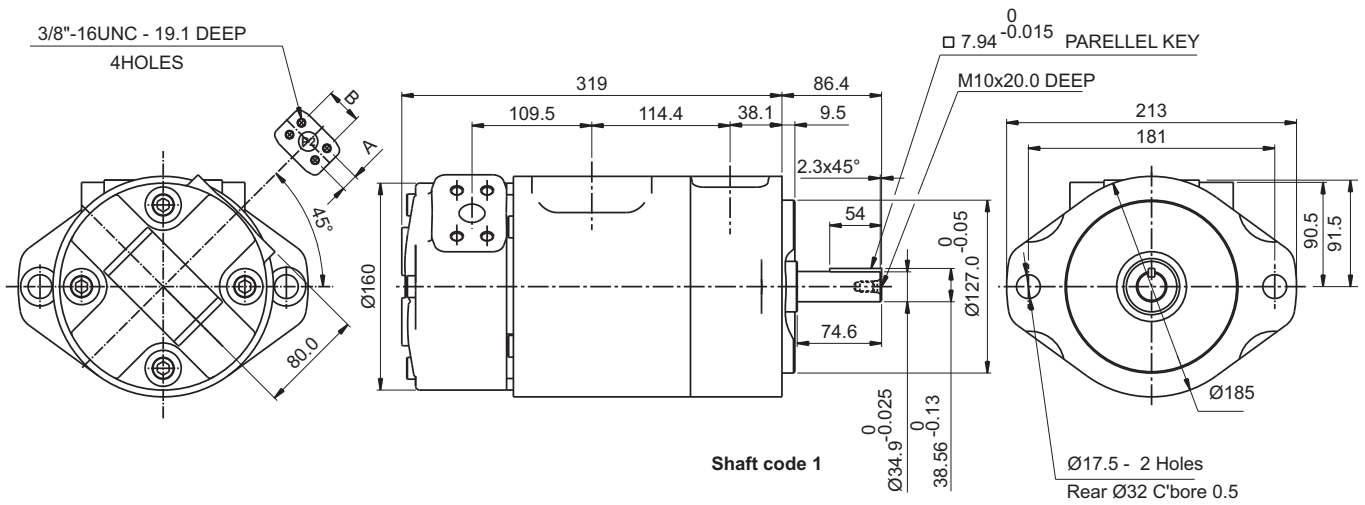
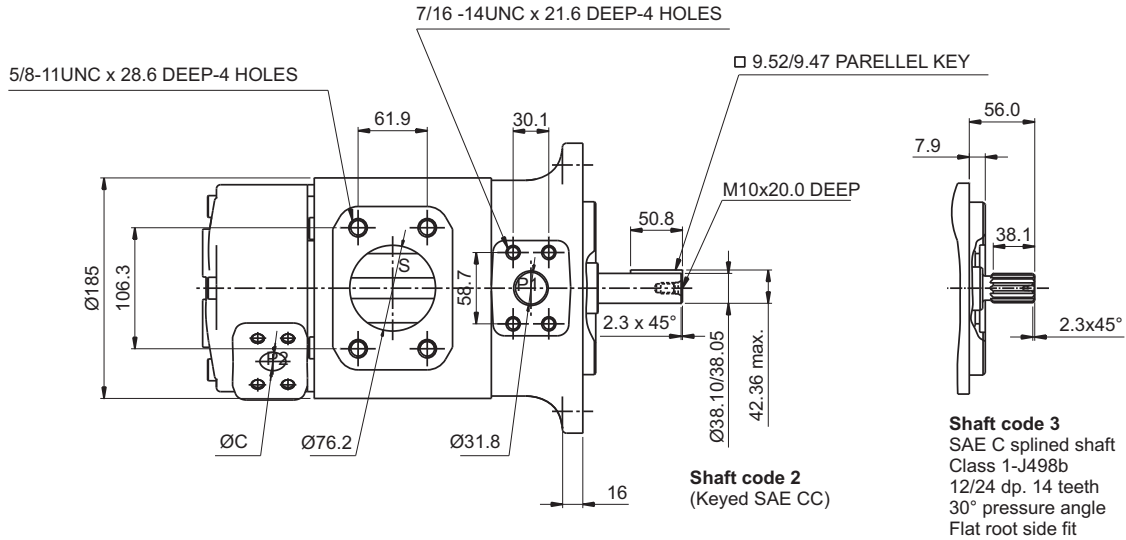
NOISE LEVEL (TYPICAL) VST7DC - 035 - B17



Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING
FLANGE MOUNTING

DP

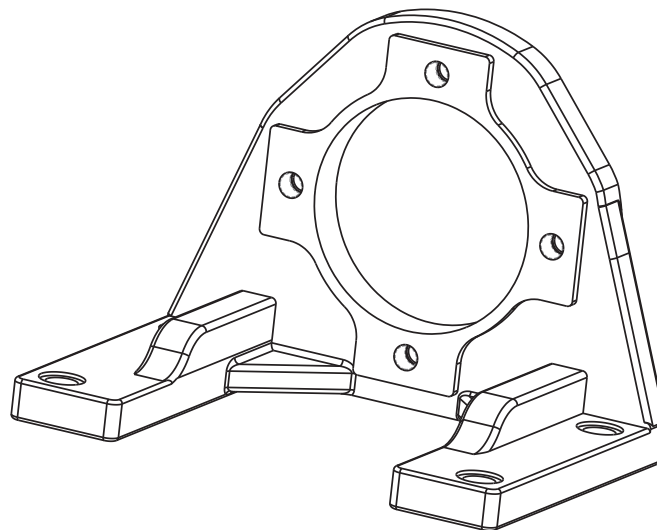
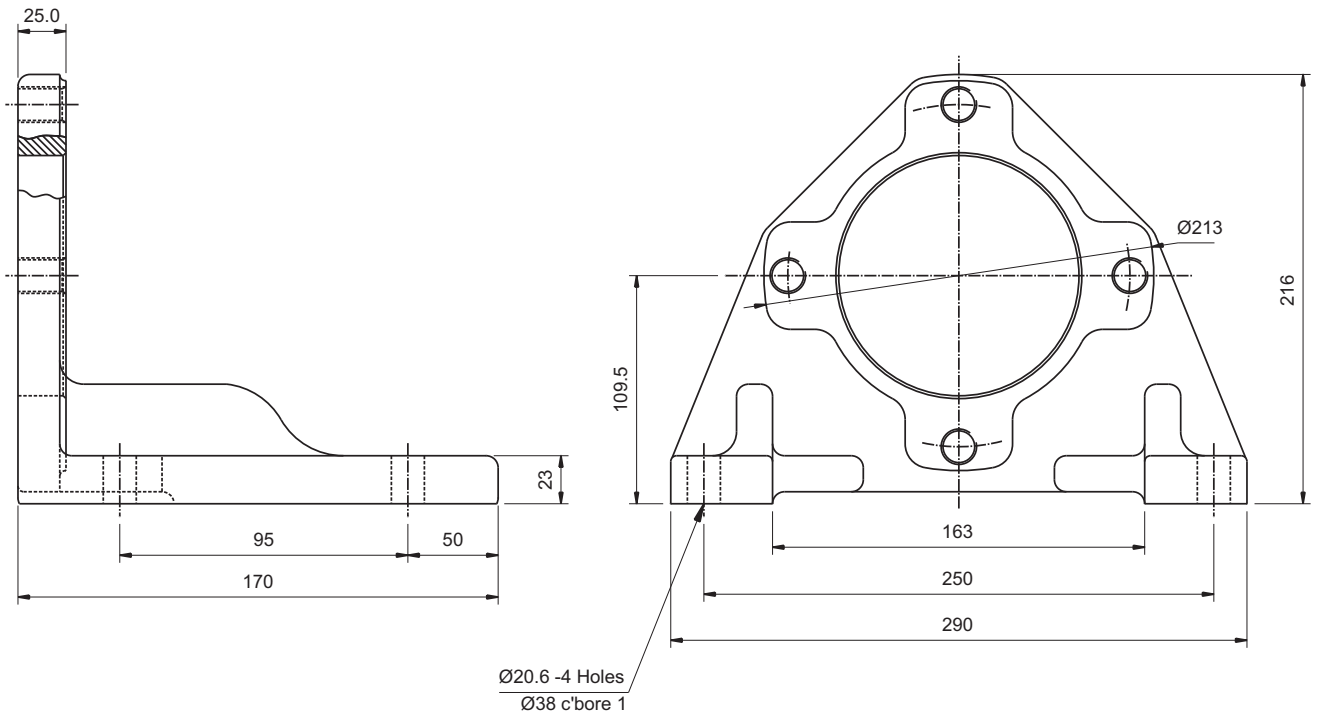


Weight - 48.0 Kgs.

Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	38299 (43240)
2	30638 (34590)
3	54207 (61200)
4	54207 (61200)

Alternate connect.variables		
	00 & M0	01 & M1
A	1.031 (26.2)	0.874 (22.2)
B	2.06 (52.4)	1.874 (47.6)
C	1.00 (25.4)	0.75 (19.05)

INSTALLATION DRAWING
FOOT MOUNTING



Weight-9.5 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	014	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	017	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	020	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	022	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	024	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	028	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	031	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	035	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	038	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	042	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	014	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	022	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	024	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

* Max, int. pressure 240 bar

* Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.70	3.52	13.32	2.91	11.00
	B04	0.78	12.8	5.07	19.20	4.71	17.83	4.09	15.50
	B05	0.97	15.9	6.31	23.90	5.94	22.49	5.28	20.00
	B06	1.21	19.8	7.85	29.70	7.49	28.35	6.87	26.00
	B07	1.37	22.5	8.90	33.70	8.56	32.40	7.79	29.50
	B08	1.52	24.9	9.88	37.40	9.51	35.99	8.85	33.50
	B09	1.71	28.0	11.07	41.90	10.72	40.58	10.04	38.00
	B10	1.94	31.8	12.62	47.80	12.24	46.33	11.23	42.50
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.50
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.50
	B14	2.75	45.1	17.81	67.42	17.46	66.09	16.77	63.50
	B15	3.08	50.5	20.25	76.64	19.55	74.00	19.15	72.50
	B17	3.56	58.3	23.10	87.45	22.32	84.50	22.06	83.50
	B20	3.89	63.8	25.28	95.70	24.70	93.50	24.30	92.00
	B22	4.29	70.3	27.87	105.5	27.21	103.00	26.81	101.50
B25	4.84	79.3	31.44	119.0	31.04	117.50	30.64	116.00	

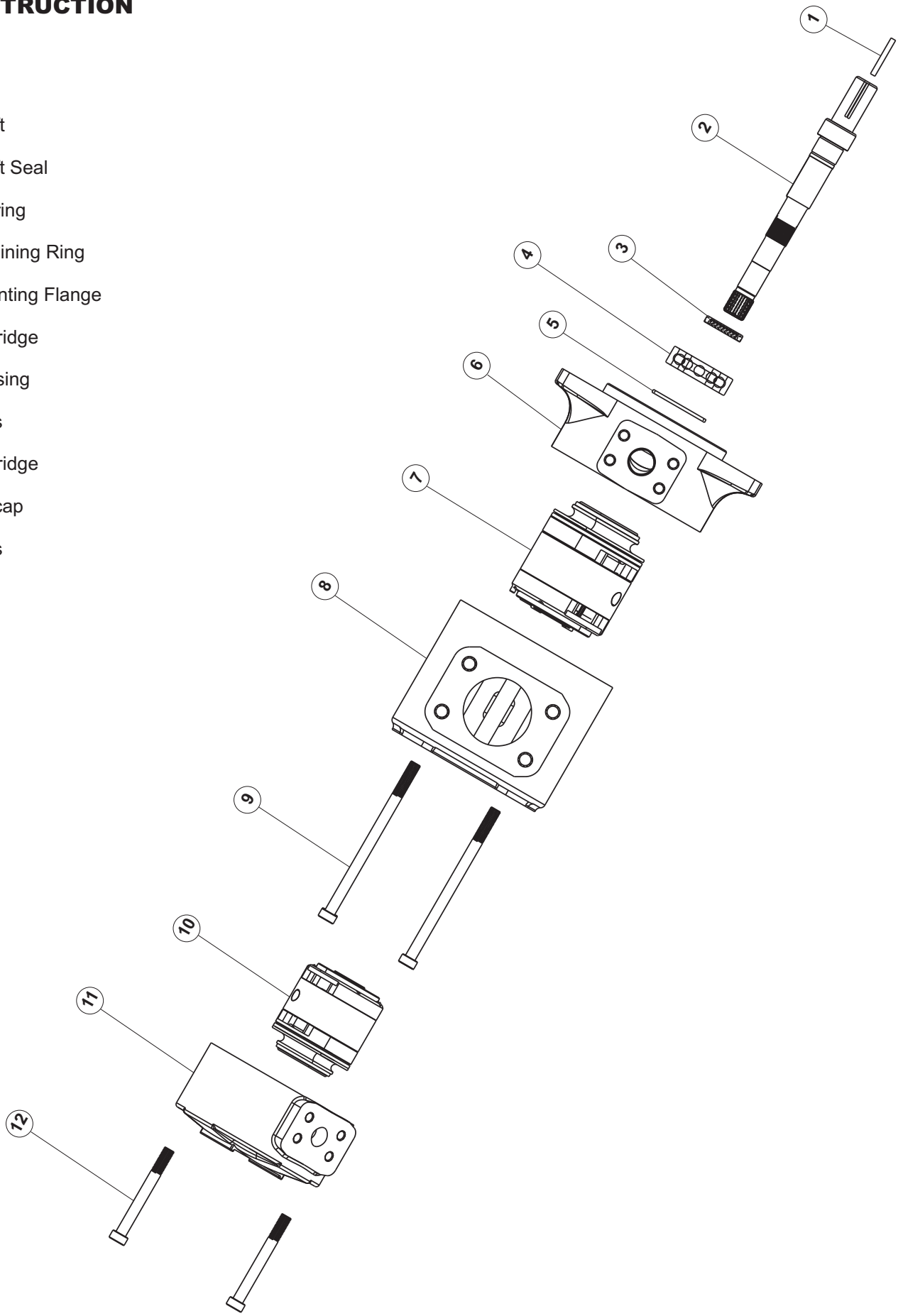


Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
	B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

* Max, int. pressure 240 bar
 * Max, cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Bolts
- 10. Cartridge
- 11. Endcap
- 12. Bolts



ORDERING CODE

VST7EB - 042 - B12 - 1 R 00 - A 1 - *

Series

VT7EB series-ISO 4 bolts 3019-2
Mounting flange 125-A2 HW

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

- 042 = 132.3 (8.07)
- 045 = 142.4 (8.69)
- 050 = 158.5 (9.67)
- 052 = 164.8 (10.06)
- 057 = 180.7 (11.02)
- 062 = 196.7 (12.00)
- 066 = 213.3 (13.02)
- 072 = 227.1 (13.86)
- 085 = 268.7 (16.40)

Cam ring for "P2"

Volumetric displacement cm^3/rev (in^3/rev)

- B02 = 5.7 (0.35)
- B03 = 9.8 (0.60)
- B04 = 12.8 (0.78)
- B05 = 15.9 (0.97)
- B06 = 19.8 (1.21)
- B07 = 22.5 (1.37)
- B08 = 24.9 (1.52)
- B09 = 28.0 (1.71)
- B10 = 31.8 (1.94)
- B11 = 34.9 (2.13)
- B12 = 40.9 (2.50)

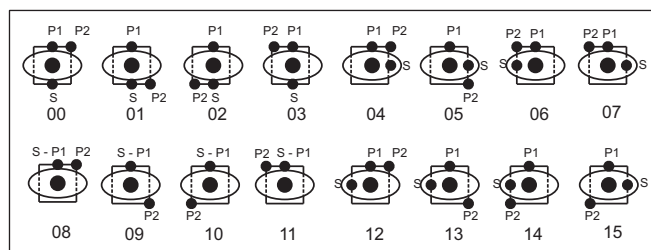
Modifications

Seal Class

- 1 - S1 (for mineral oil)
- 4 - S4 (for fire resistant fluids)
- 5 - S5 (for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation (view on shaft end)

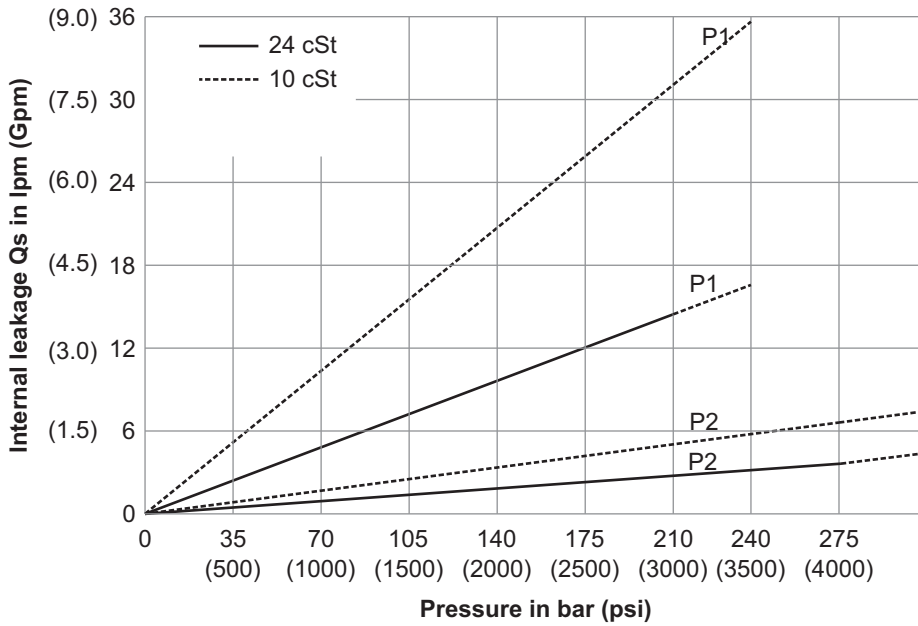
- R - clockwise
- L - Counter - Clockwise

Type of shaft

- 1 - Keyed
- 2 - Keyed (no SAE)
- 3 - Splined (SAE-C)
- 4 - Splined (SAE-CC)

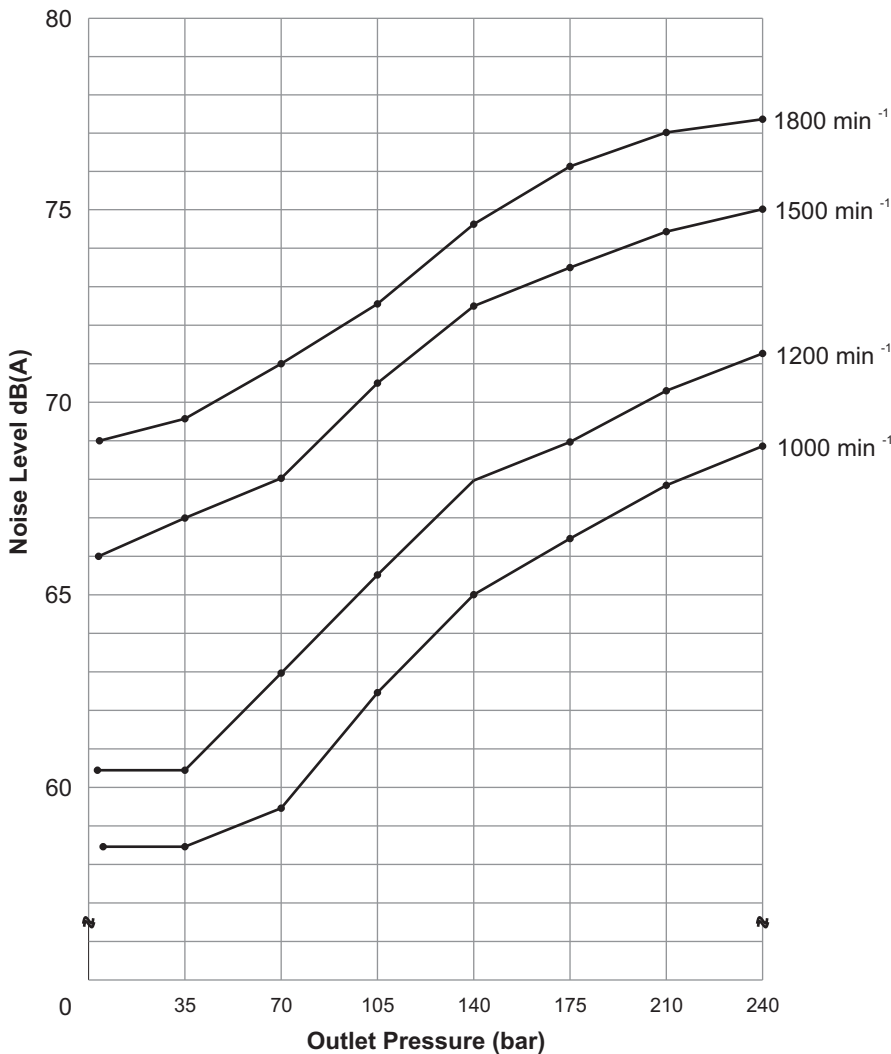


INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

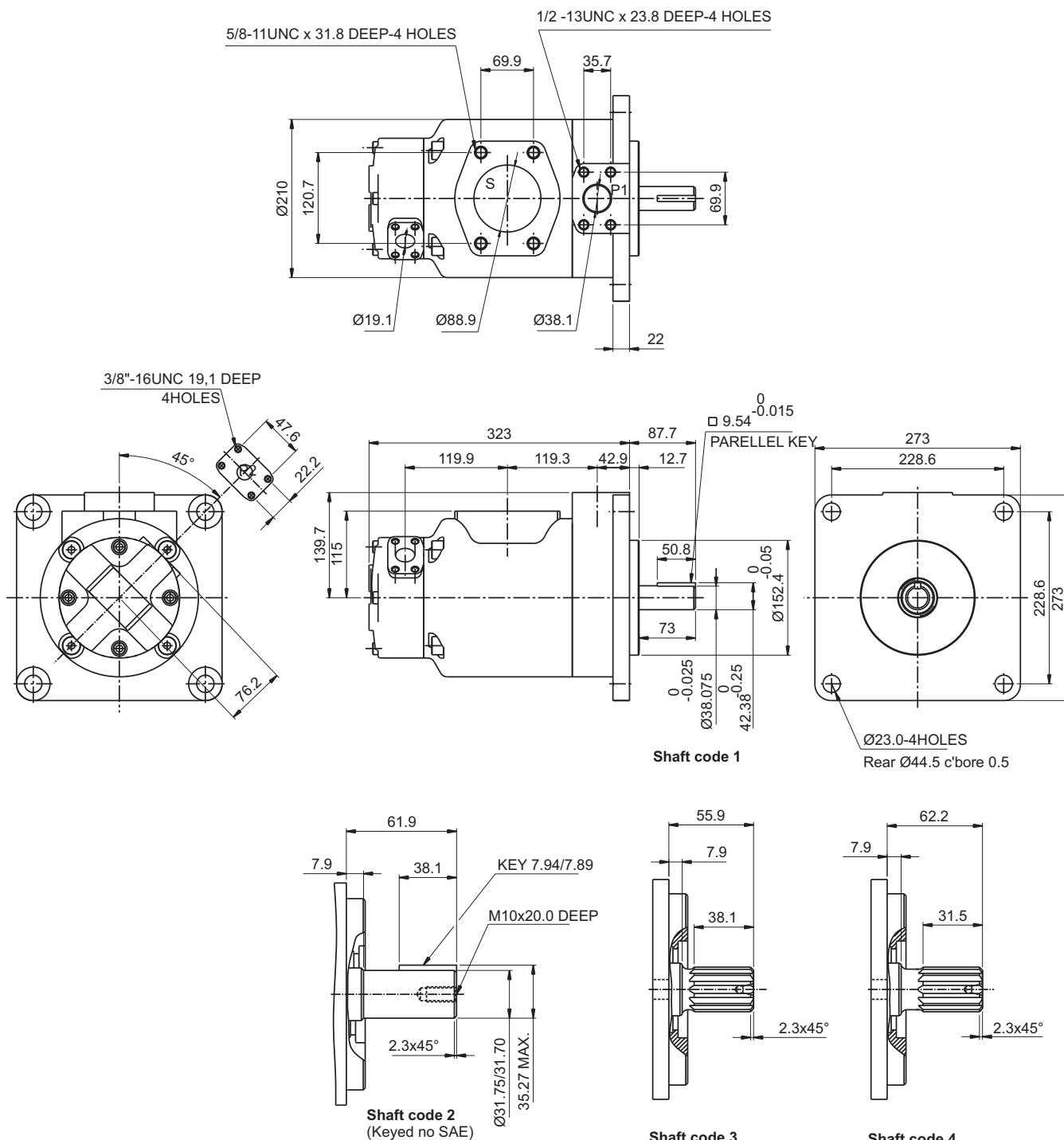
NOISE LEVEL (TYPICAL) VST7EB-050-B09



Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING

FLANGE MOUNTING



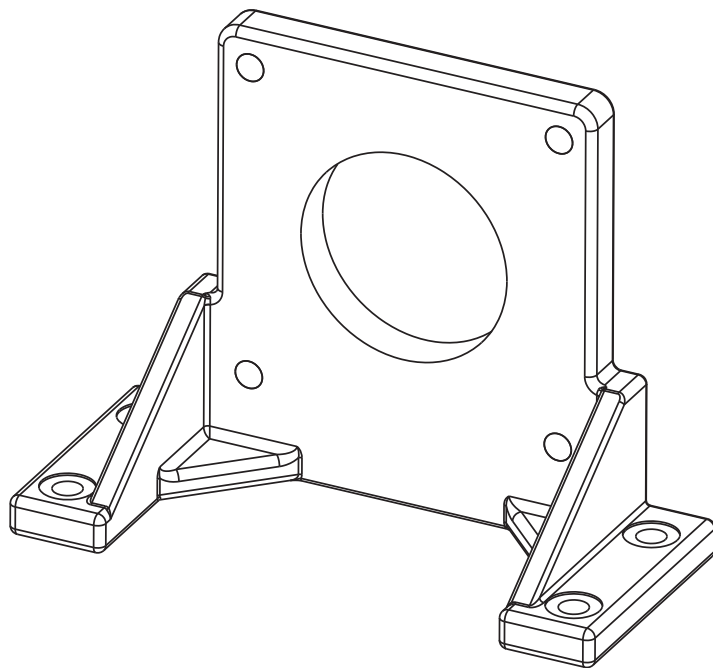
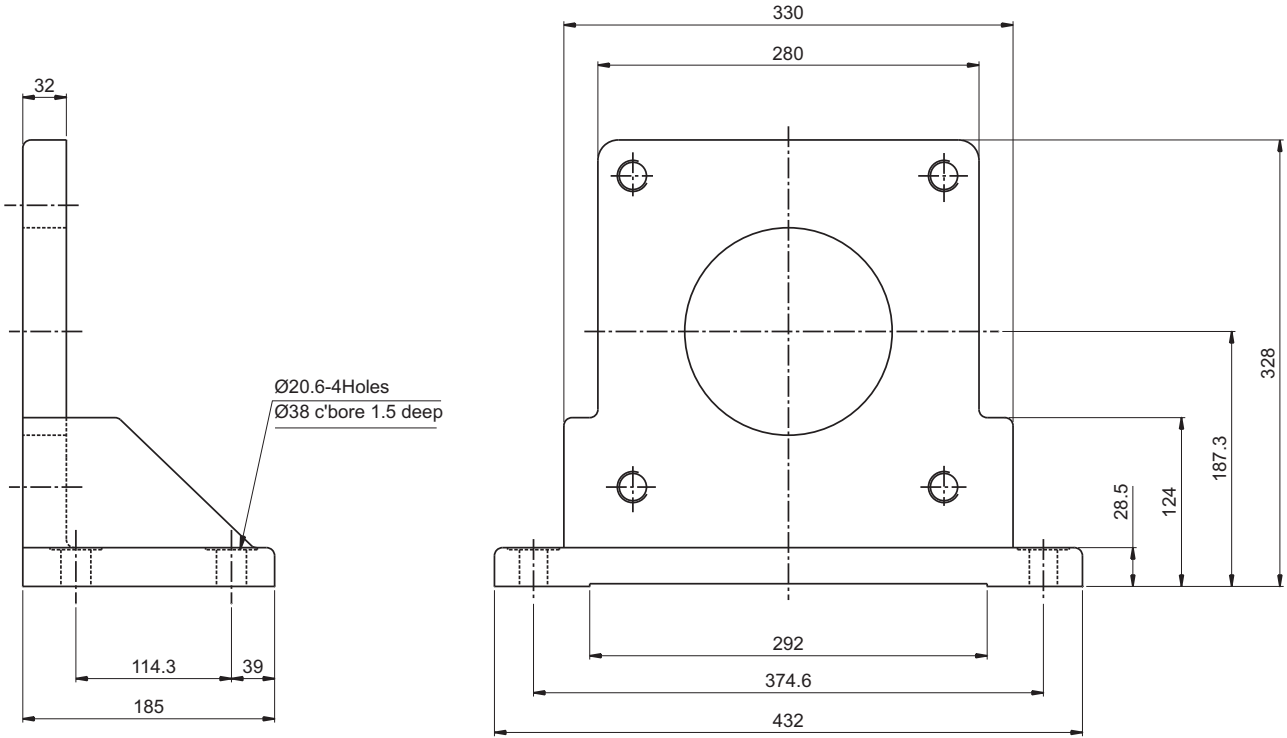
Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	60673 (68568)
2	30638 (34590)
3	54207 (61200)
4	60673 (68568)

Shaft code 3
SAE C splined shaft
Class 1-J498b
12/24 dp. 14 teeth
30° pressure angle
Flat root side fit

Shaft code 4
SAE CC splined shaft
Class 1-J498b
12/24 dp. 17 teeth
30° pressure angle
Flat root side fit

Weight - 74.0 Kgs.

INSTALLATION DRAWING
FOOT MOUNTING



Weight - 25 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3
	045	8.69	142.4	56.51	213.6	53.86	203.6	51.98	196.5
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6
	052	10.06	164.8	65.40	247.2	62.75	237.2	60.87	230.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9
	066	13.02	213.3	84.63	319.9	81.98	309.9	80.11	302.8
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5
	085	16.40	268.7	107.00	404.7	--	--	--	--

DP

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.69	142.4	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.06	164.8	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.02	213.3	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	9.25	6.9	110.77	82.6	187.07	139.5
	085	16.40	268.7	9.78	7.3	--	--	--	--

1) 085 = 90 bar(1300 psi) max.int. & 085 = 2000 rpm max.

Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	–	–

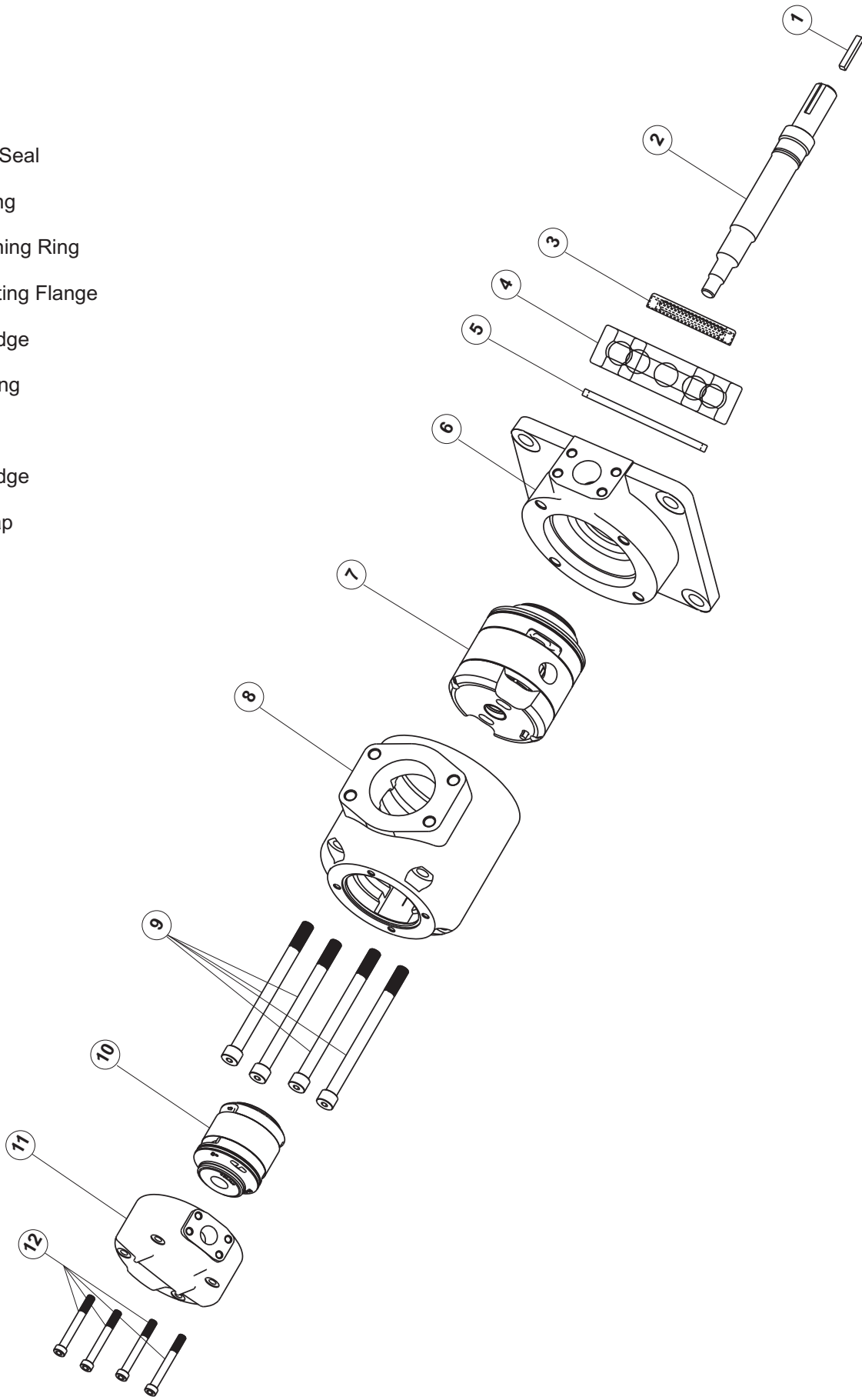


Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	–	–

Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Bolts
- 10. Cartridge
- 11. Endcap
- 12. Bolts



ORDERING CODE

VST7EC - 066 - 022 - 1 R 00 - A 1 - *

Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

- 042 = 132.3 (8.07)
- 045 = 142.4 (8.69)
- 050 = 158.5 (9.67)
- 052 = 164.8 (10.06)
- 057 = 180.7 (11.02)
- 062 = 196.7 (12.00)
- 066 = 213.3 (13.02)
- 072 = 227.1 (13.86)
- 085 = 268.7 (16.40)

Cam ring for "P2"

Volumetric displacement cm^3/rev (in^3/rev)

- B02 = 5.7 (0.35)
- B03 = 9.8 (0.60)
- B04 = 12.8 (0.78)
- B05 = 15.9 (0.97)
- B06 = 19.8 (1.21)
- B07 = 22.5 (1.37)
- B08 = 24.9 (1.52)
- B09 = 28.0 (1.71)
- B10 = 31.8 (1.94)
- B11 = 34.9 (2.13)
- B12 = 40.9 (2.50)
- B14 = 45.1 (2.75)
- B15 = 50.0 (3.05)
- B17 = 58.3 (3.56)
- B20 = 63.8 (3.89)
- B22 = 70.3 (4.29)
- B25 = 79.3 (4.84)

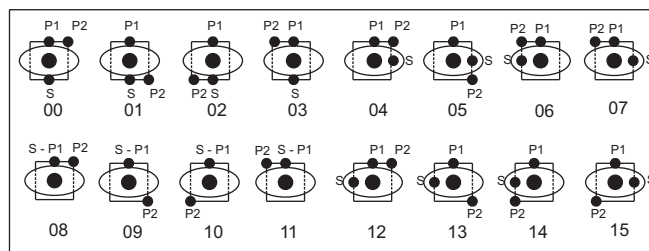
Modifications

Seal Class

- 1 - S1(for mineral oil)
- 4 - S4(for fire resistant fluids)
- 5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation
(view on shaft end)

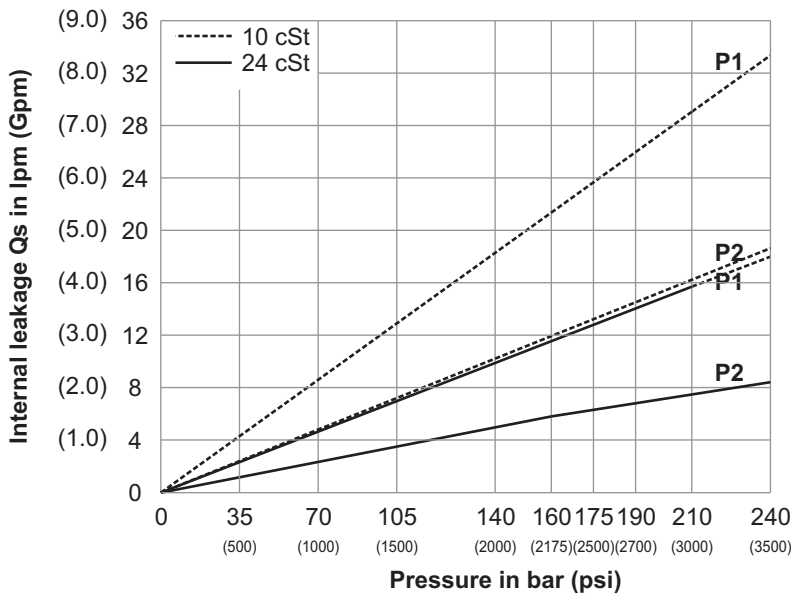
- R - clockwise
- L - Counter - Clockwise

Type of shaft

- 1 - Keyed
- 2 - Keyed (no SAE)
- 3 - Splined (SAE-C)
- 4 - Splined (SAE-CC)



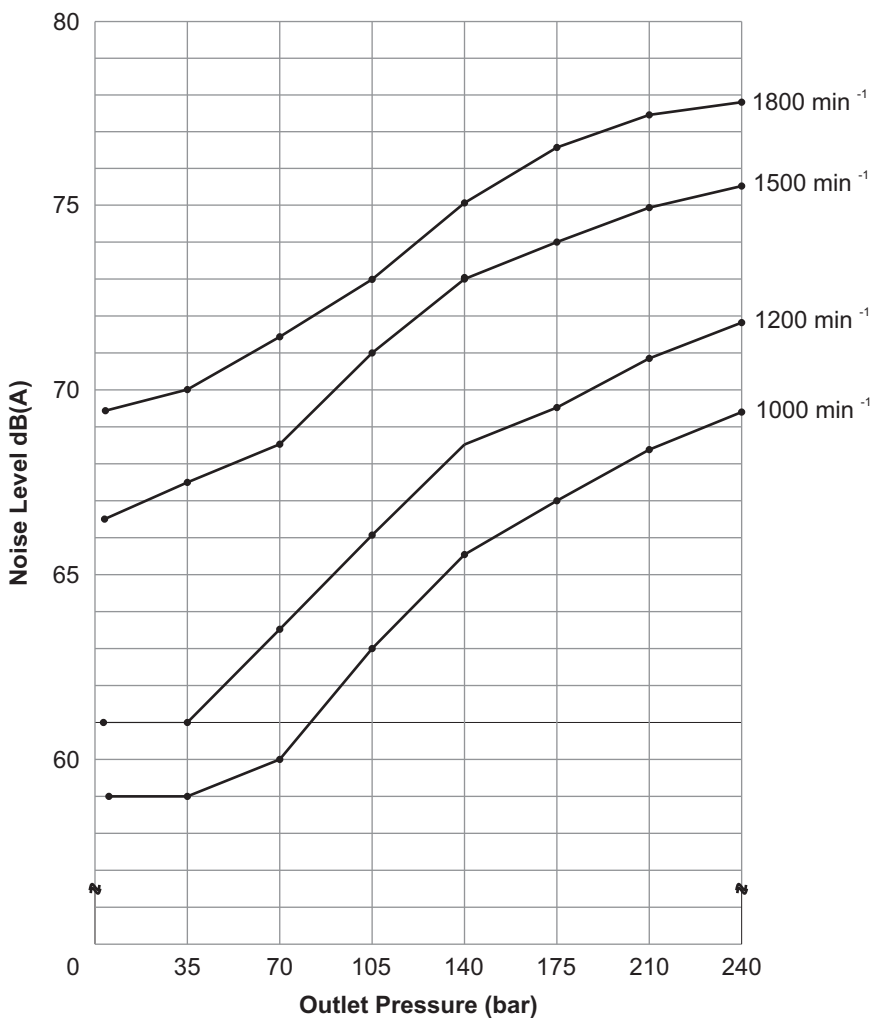
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.



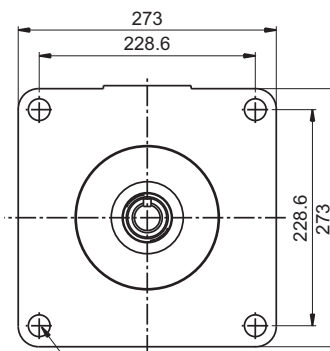
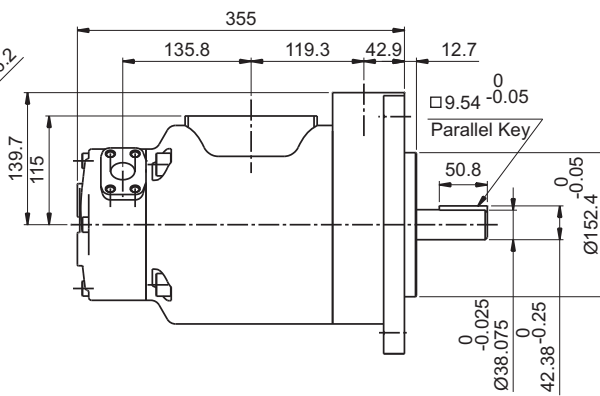
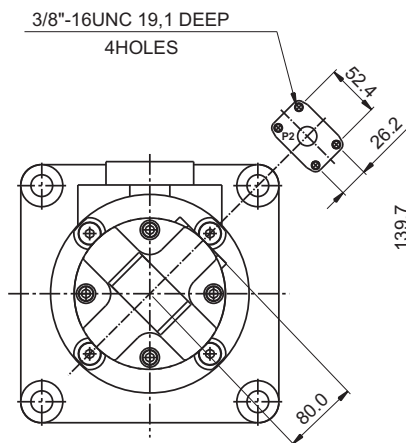
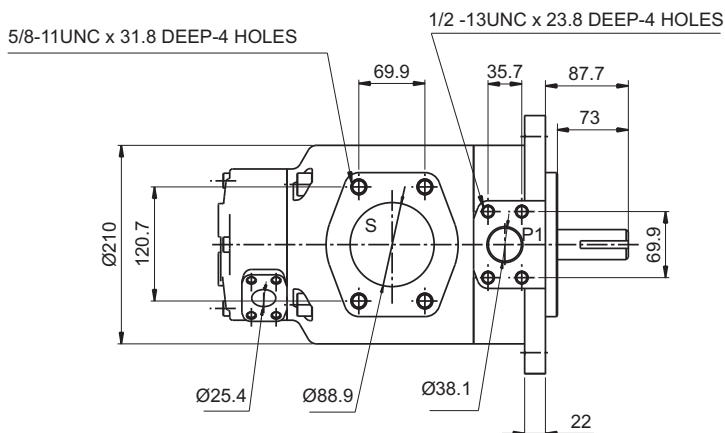
NOISE LEVEL (TYPICAL) VST7EC-050-B25



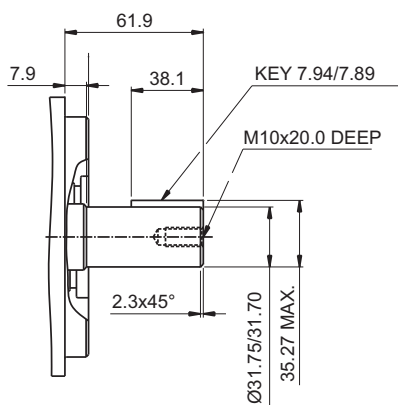
Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING

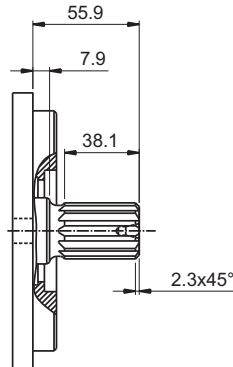
FLANGE MOUNTING



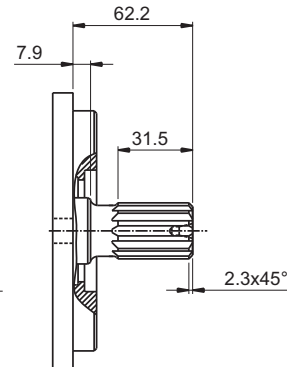
Shaft code 1
(keyed)



Shaft code 2
(Keyed no SAE)



Shaft code 3
SAE C splined shaft
Class 1-J498b
12/24 dp. 14 teeth
30° pressure angle
Flat root side fit

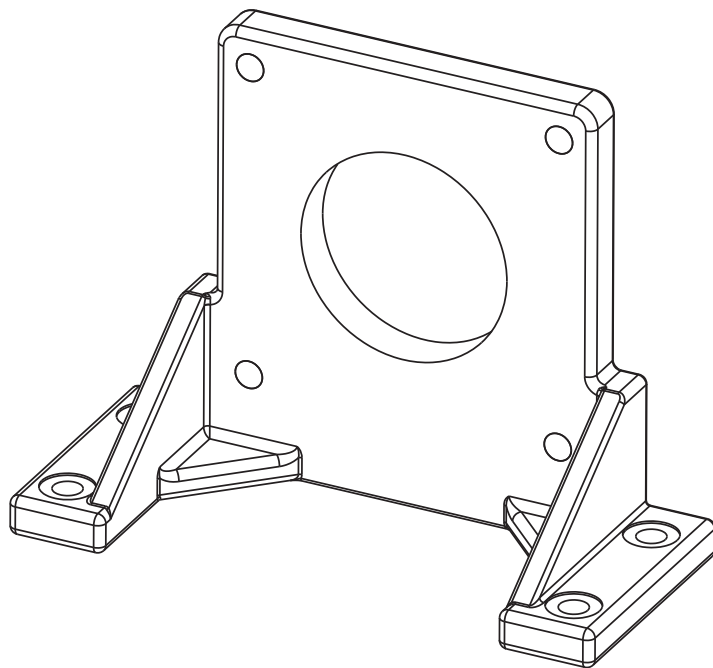
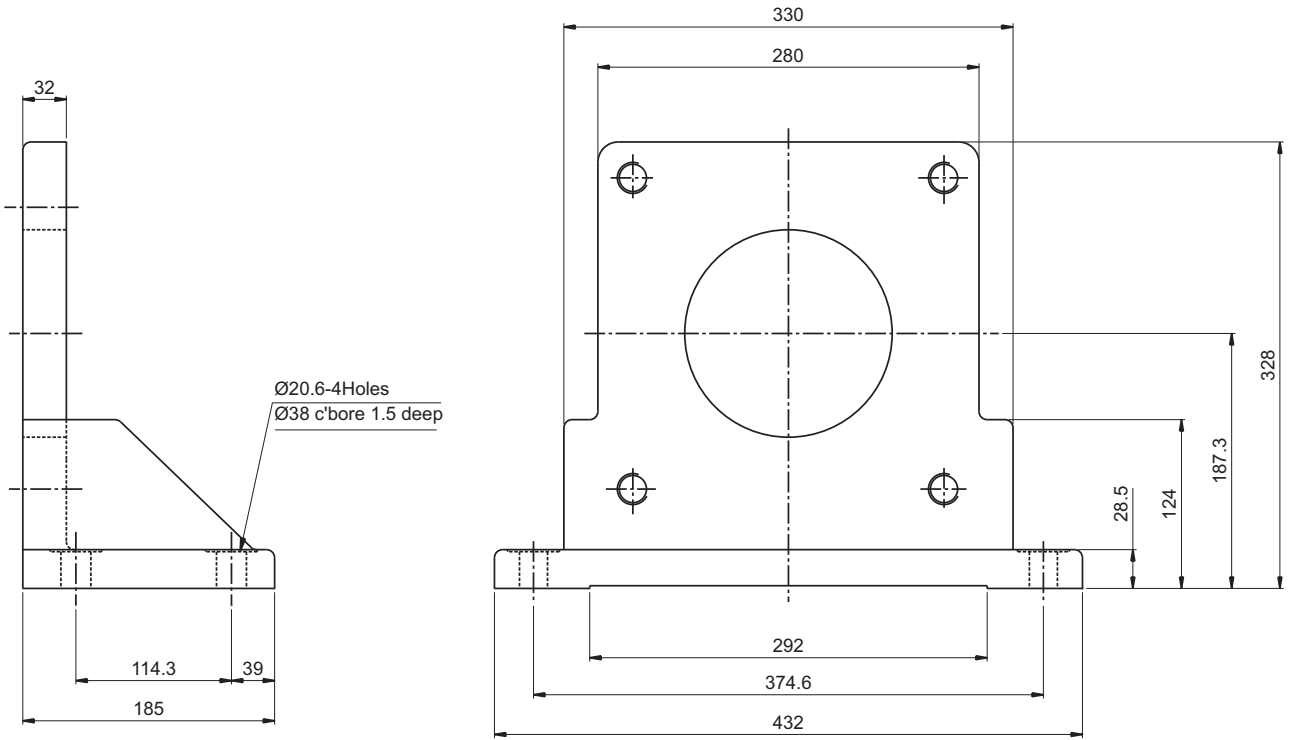


Shaft code 4
SAE CC splined shaft
Class 1-J498b
12/24 dp. 17 teeth
30° pressure angle
Flat root side fit

Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	64044 (72306)
2	30638 (34590)
3	54207 (61200)
4	67582 (76376)

Weight-80.0 Kgs.

INSTALLATION DRAWING
FOOT MOUNTING



Weight - 25 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3
	045	8.69	142.4	56.51	213.6	53.86	203.6	51.98	196.5
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6
	052	10.06	164.8	65.40	247.2	62.75	237.2	60.87	230.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9
	066	13.02	213.3	84.63	319.9	81.98	309.9	80.11	302.8
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5
	085	16.40	268.7	107.00	404.7	--	--	--	--

Pressure port	Series	Volumetric Displacement Vp		Input Power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.69	142.4	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.06	164.8	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.02	213.3	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	9.25	6.9	110.77	82.6	187.07	139.5
	085	16.40	268.7	9.78	7.3	--	--	--	--

* Max, int. pressure 240 bar

* Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

Note : 085 = 90 bar (1300 psi) max. int. & 085 = 2000 rpm max.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140bar (2000psi)		p = 240bar (3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.5
	B14	2.75	45.1	17.81	67.42	17.46	66.09	16.77	63.5
	B15	3.08	50.5	20.25	76.64	19.55	74.0	19.15	72.5
	B17	3.56	58.3	23.10	87.45	22.32	84.5	22.06	83.5
	B20	3.89	63.8	25.28	95.70	24.70	93.5	24.30	92.0
	B22	4.29	70.3	27.87	105.5	27.21	103.0	26.81	101.5
B25	4.84	79.3	31.44	119.0	31.04	117.5	30.64	116.0	

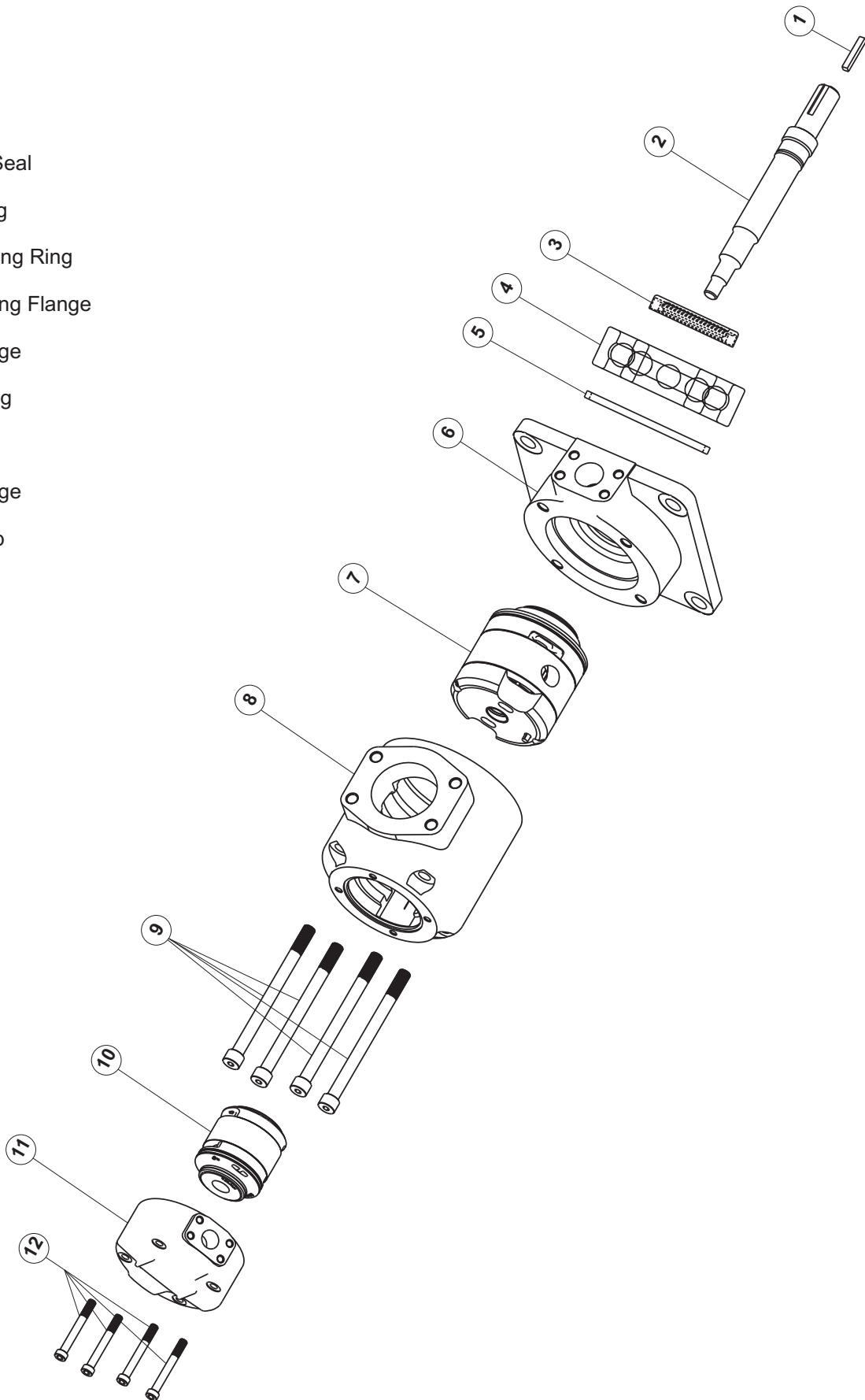


Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
	B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

* Max, int. pressure 240 bar
 * Max, cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Bolts
- 10. Cartridge
- 11. Endcap
- 12. Bolts



ORDERING CODE

VST7ED - 042 - B22 - 1 R 00 - A 1 01 *

Series

Cam ring for "P1"

Volumetric displacement cm³/rev (in³/rev)

- 042 = 132.3 (8.07)
- 045 = 142.4 (8.69)
- 050 = 158.5 (9.67)
- 052 = 164.8 (10.06)
- 057 = 180.7 (11.02)
- 062 = 196.7 (12.00)
- 066 = 213.3 (13.02)
- 072 = 227.1 (13.86)
- 085 = 268.7 (16.40)

Cam ring for "P2"

Volumetric displacement cm³/rev (in³/rev)

- B14 = 43.9 (2.68) B28 = 89.9 (5.49)
- B17 = 55.0 (3.36) B31 = 99.1 (6.05)
- B20 = 66.0 (4.03) B35 = 113.4 (6.92)
- B22 = 70.3 (4.29) B38 = 120.6 (7.36)
- B24 = 81.1 (4.95) B42 = 137.5 (8.39)

Type of shaft

- 1 - Keyed
- 2 - Keyed (no SAE)
- 3 - Splined (SAE-C)
- 4 - Splined (SAE-CC)
- 5 - Keyed (ISO/R775 - G38M)

Modifications

Mounting W/connection variables 4 bolts SAE flange J518

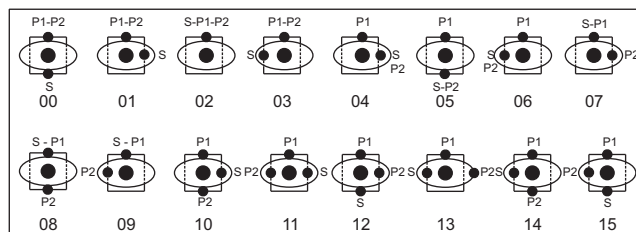
P1= 1½" P2= 1¼" S=4"		
VST7ED		
TYPE	UNC	METRIC
Code	01	M1

Seal Class

- 1 - S1(for mineral oil)
- 4 - S4(for fire resistant fluids)
- 5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination

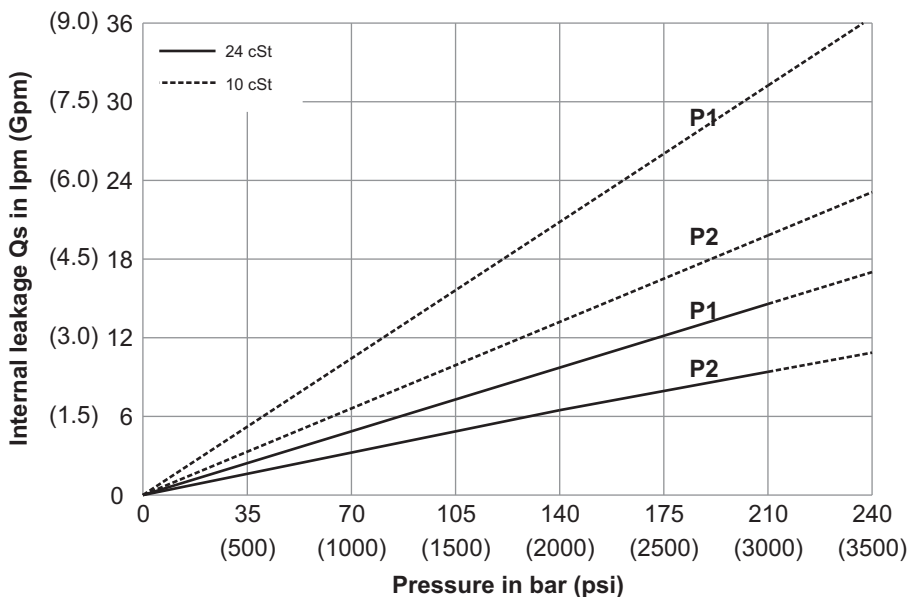


Direction of rotation (view on shaft end)

- R - clockwise
- L - Counter - Clockwise

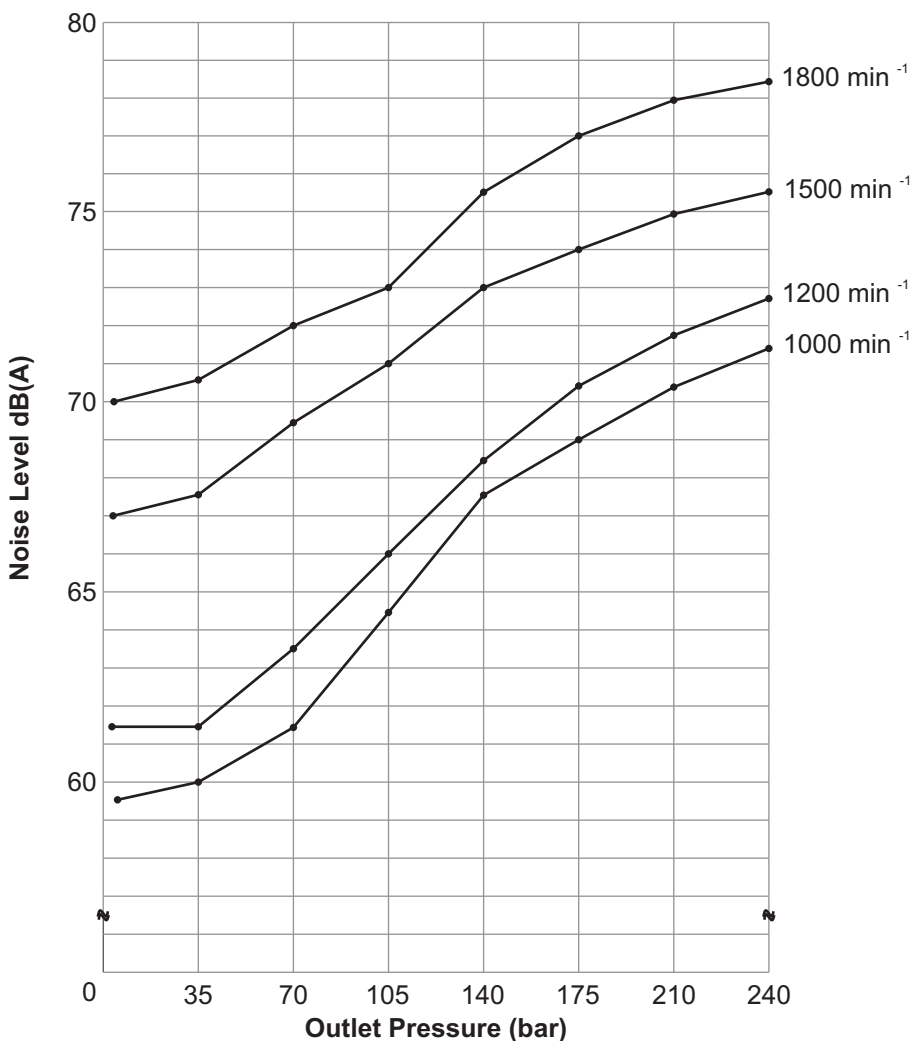


INTERNAL LEAKAGE (TYPICAL)



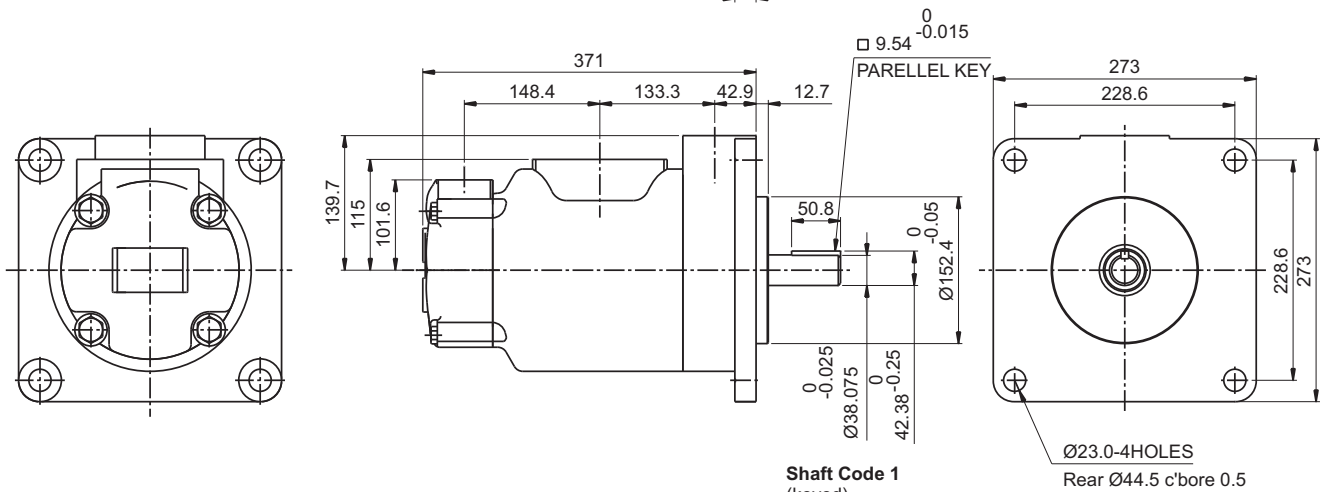
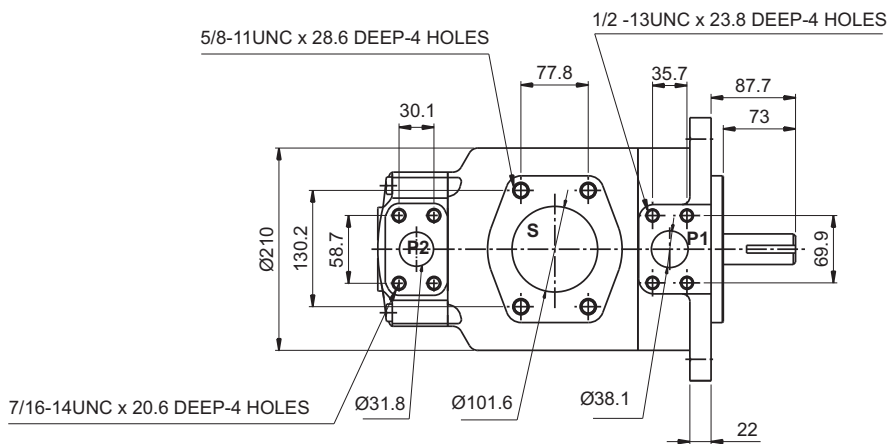
Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL) VST7ED-050-B31



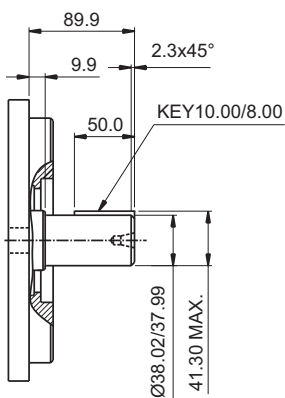
Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING
FLANGE MOUNTING

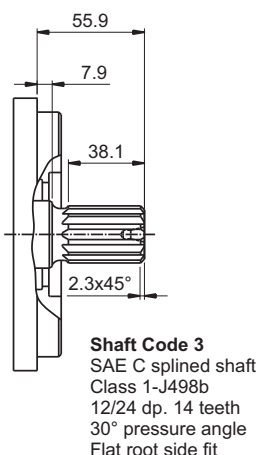


Shaft Code 1
(keyed)

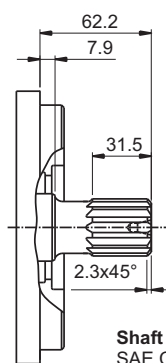
Ø23.0-4HOLES
Rear Ø44.5 c'bore 0.5



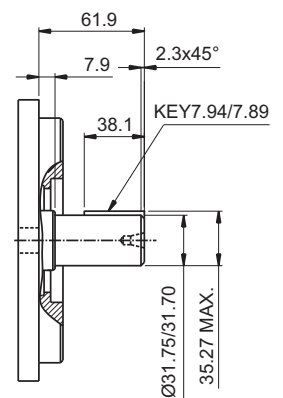
Shaft Code 5
(Keyed Iso/R775-G38M)



Shaft Code 3
SAE C splined shaft
Class 1-J498b
12/24 dp, 14 teeth
30° pressure angle
Flat root side fit



Shaft Code 4
SAE CC splined shaft
Class 1-J498b
12/24 dp, 17 teeth
30° pressure angle
Flat root side fit

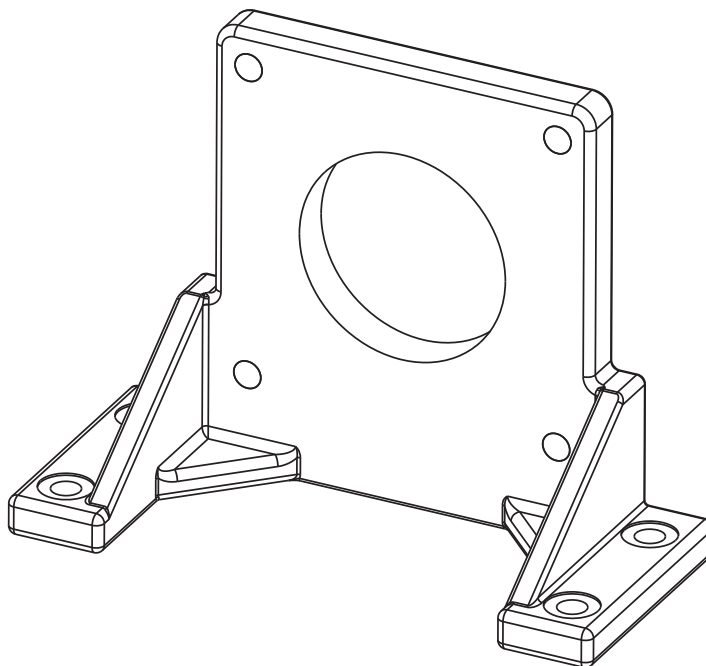
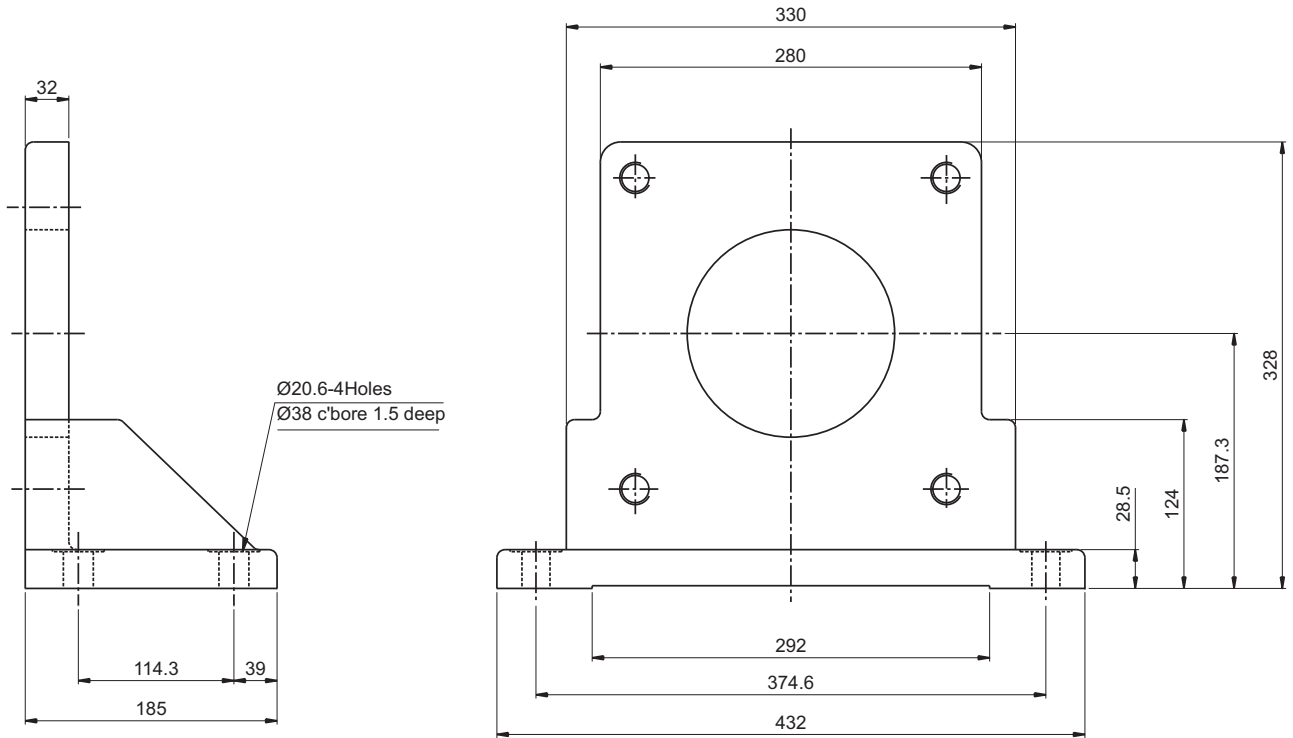


Shaft Code 2
(Keyed non SAE)

Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2)
1	64039 (72372)
2	30638 (34590)
3	54207 (61200)
4	60673 (68568)
5	60673 (68568)

Weight-88.5 Kgs.

INSTALLATION DRAWING FOOT MOUNTING



Weight - 25 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3
	045	8.69	142.4	56.51	213.6	53.86	203.6	51.98	196.5
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6
	052	10.06	164.8	65.40	247.2	62.75	237.2	60.87	230.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9
	066	13.02	213.3	84.63	319.9	81.98	309.9	80.11	302.8
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5
	085	16.40	268.7	107.00	404.7	105.21	397.7	--	--



Pressure port	Series	Volumetric Displacement Vp		Input power p&n at 1500rpm					
				p = 7 bar (100 psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.69	142.4	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.06	164.8	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.02	213.3	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	9.25	6.9	110.77	82.6	187.07	139.5
	085	16.40	268.7	9.78	7.3	87.56	65.3	--	--

* Max, int. pressure 240 bar

* Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

Note : 085 = 90 bar (1300 psi) max. int. & 085 = 2000 rpm max.

OPERATING CHARACTERISTICS (24 cSt)

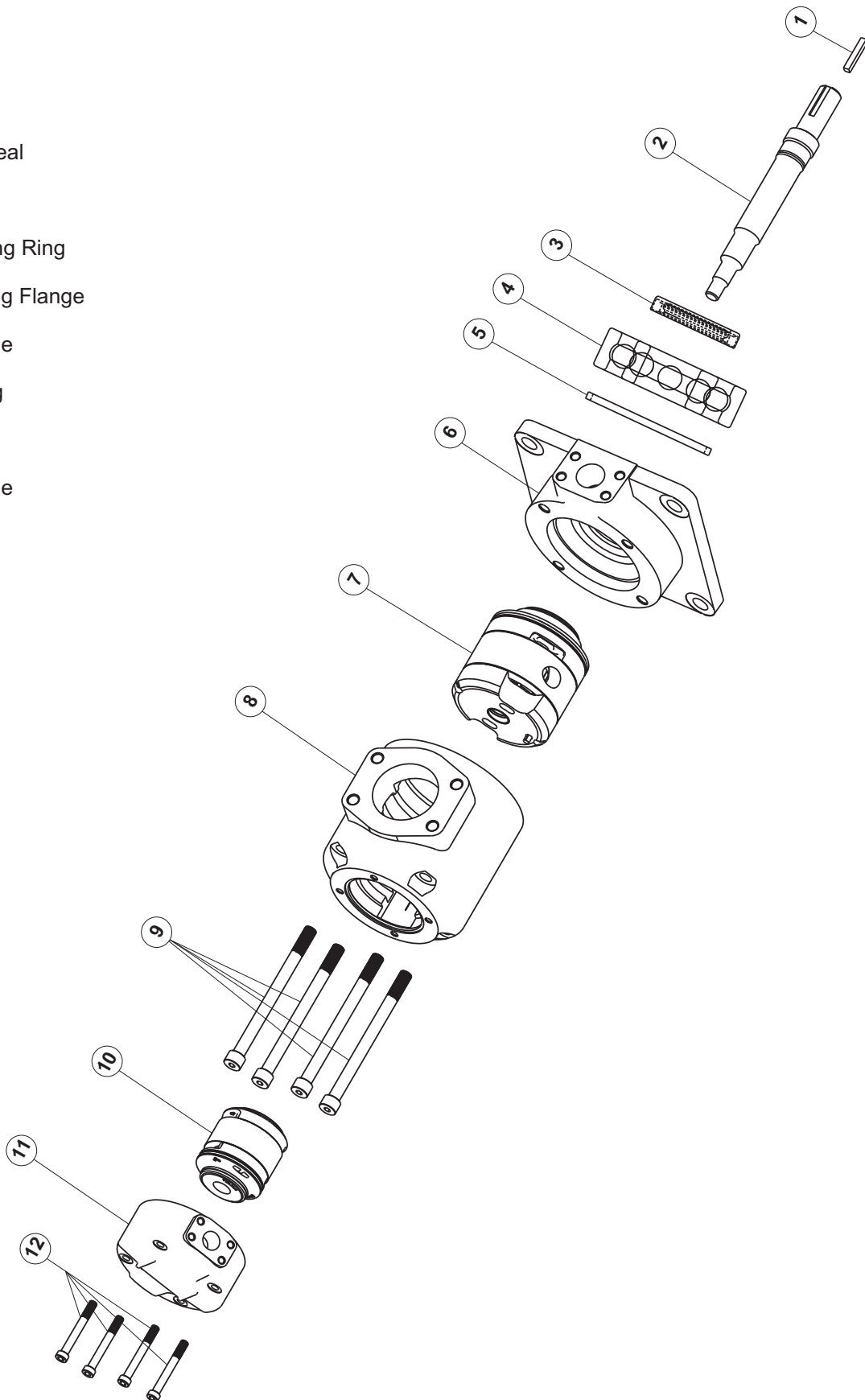
Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	B14	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	B17	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	B20	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	B22	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	B24	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	B28	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	B31	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	B35	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	B38	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	B42	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	B14	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	B17	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	B20	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	B22	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	B24	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	B28	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	B31	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	B35	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	B38	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	B42	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

Max. int. pressure 240 bar
 Max. cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

1. Key
2. Shaft
3. Shaft Seal
4. Bearing
5. Retaining Ring
6. Mounting Flange
7. Cartridge
8. Housing
9. Bolts
10. Cartridge
11. Endcap
12. Bolts



ORDERING CODE

VST7CBB - 022 - B09 - B02 1 R 00 - B 1 - 01 *

Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)

B03 = 9.8 (0.60)

B04 = 12.8 (0.78)

B05 = 15.9 (0.97)

B06 = 19.8 (1.21)

B07 = 22.5 (1.37)

B08 = 24.9 (1.52)

B09 = 28.0 (1.71)

B10 = 31.8 (1.94)

B11 = 34.9 (2.13)

B12 = 40.9 (2.50)

B14 = 45.1 (2.75)

B15 = 50.0 (3.05)

B17 = 58.3 (3.56)

B20 = 63.8 (3.89)

B22 = 70.3 (4.29)

B25 = 79.3 (4.84)

Cam ring for "P2" & "P3"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)

B03 = 9.8 (0.60)

B04 = 12.8 (0.78)

B05 = 15.9 (0.97)

B06 = 19.8 (1.21)

B07 = 22.5 (1.37)

B08 = 24.9 (1.52)

B09 = 28.0 (1.71)

B10 = 31.8 (1.94)

B11 = 34.9 (2.13)

B12 = 40.9 (2.50)

Modifications

Mounting W/connection Variables

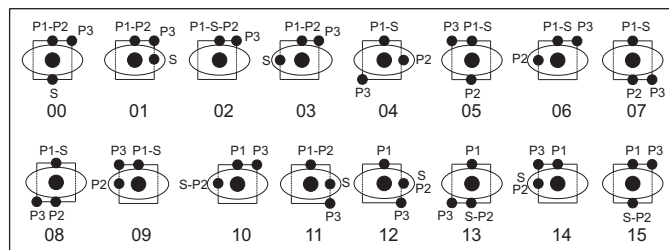
CODE		S = 2 1/2" SAE 4-Bolt Pad.		
UNC	METRIC	P1	P2	P3
01	W0	1" SAE 4 bolt Pad.	3/4" SAE 4 bolt Pad.	SAE 8,3/4" 16 UNF-2B O'ring Boss
11	W1			3/4" SAE 4 bolt Pad.
02	W2	SAE 16,1 5/16" 12 UNF-2B O'ring Boss	SAE 12,1 1/16" 12 UNF-2B O'ring Boss	SAE 8,3/4" 16 UNF-2B O'ring Boss

Seal Class

- 1 - S1 (for mineral oil)
- 4 - S4 (for fire resistant fluids)
- 5 - S5 (for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation

(view on shaft end)

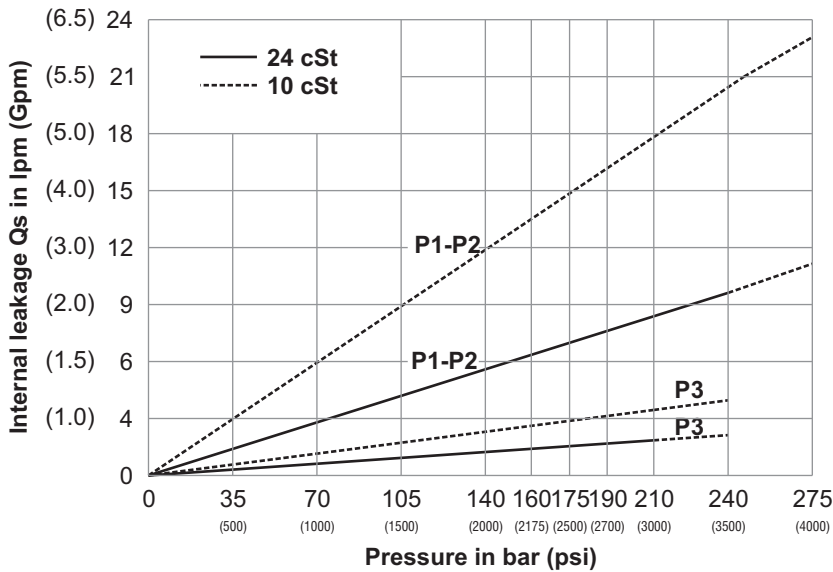
- R - clockwise
- L - Counter - Clockwise

Type of shaft

- 1 - Keyed
- 2 - Keyed (SAE-BB)
- 3 - Splined (SAE-BB)
- 5 - Splined (SAE-B)
- E - Splined

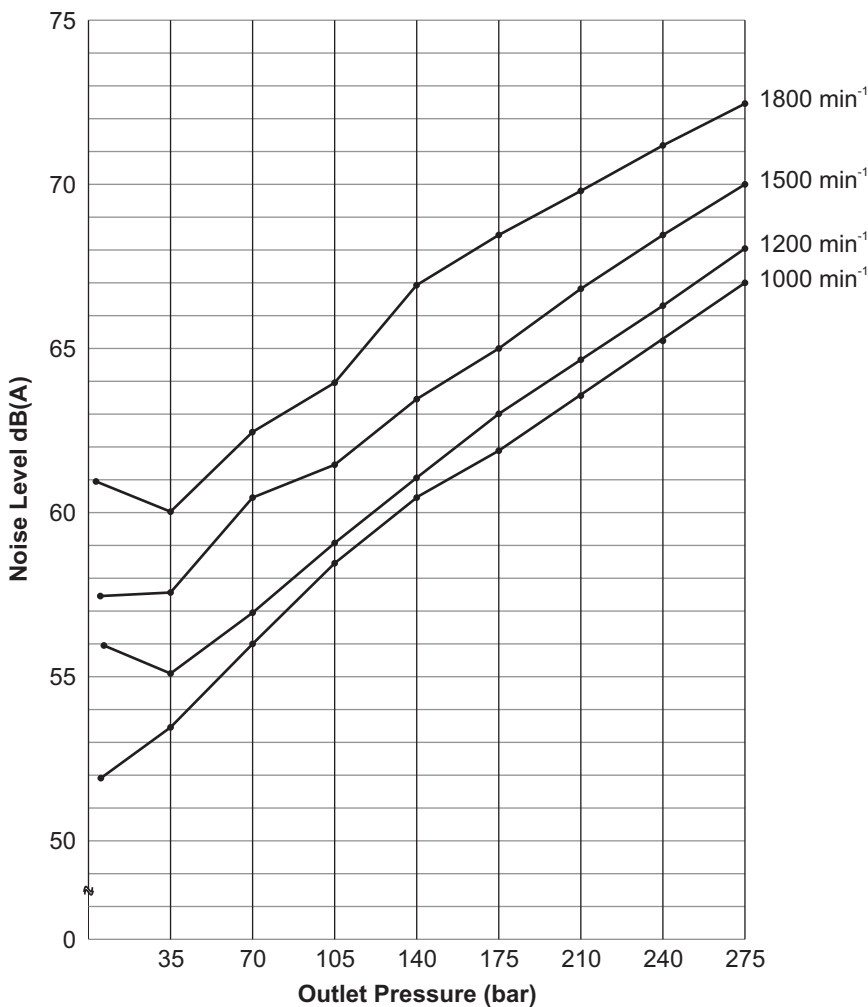


INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

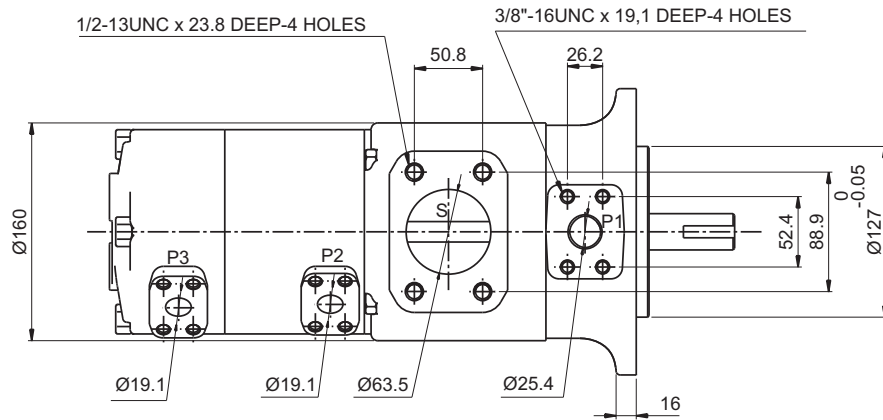
NOISE LEVEL (TYPICAL) VST7CBB-B22-B09-B02



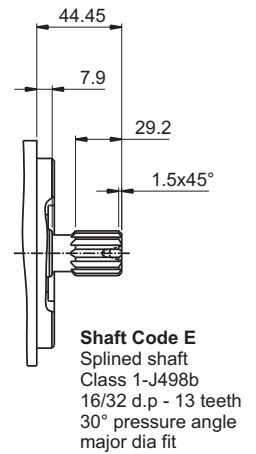
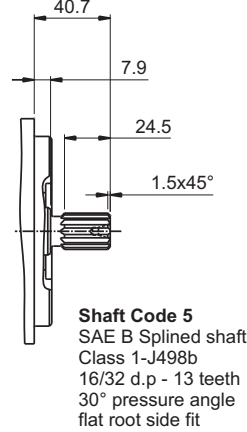
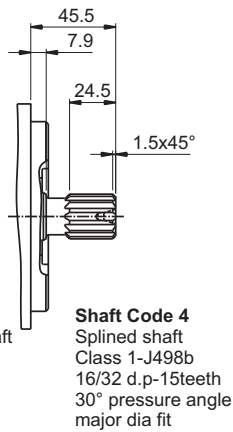
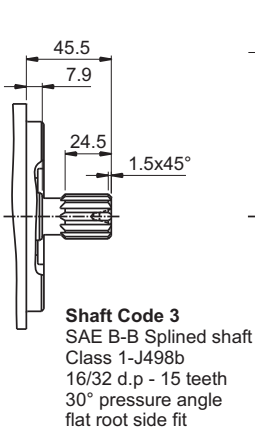
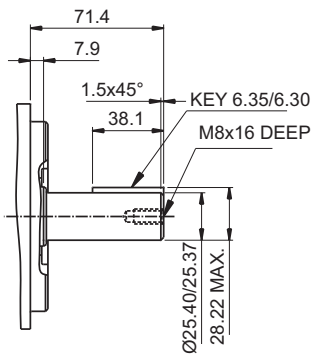
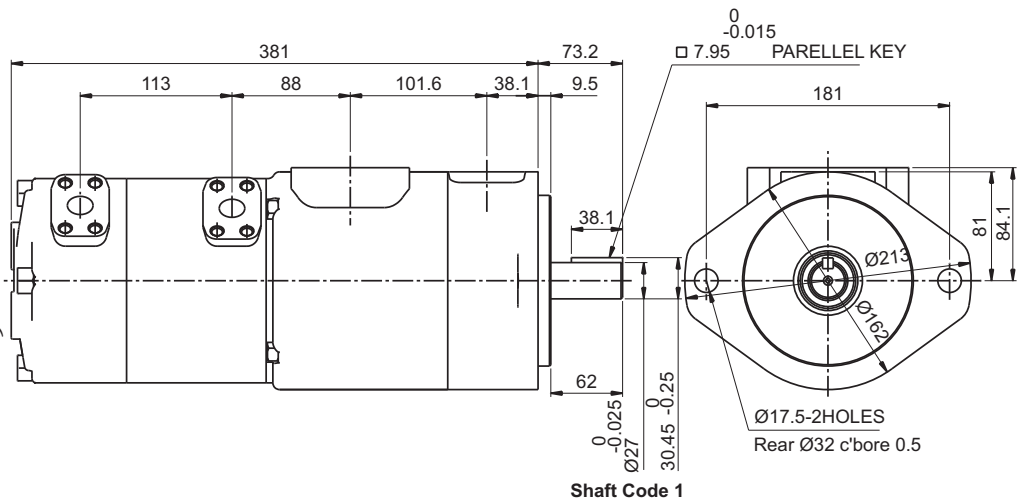
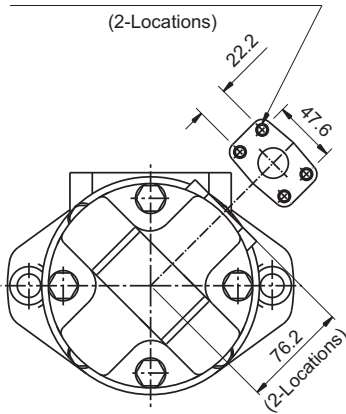
Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING

FLANGE MOUNTING



3/8-16UNC x 19.1 DEEP-4 HOLES
(2-Locations)

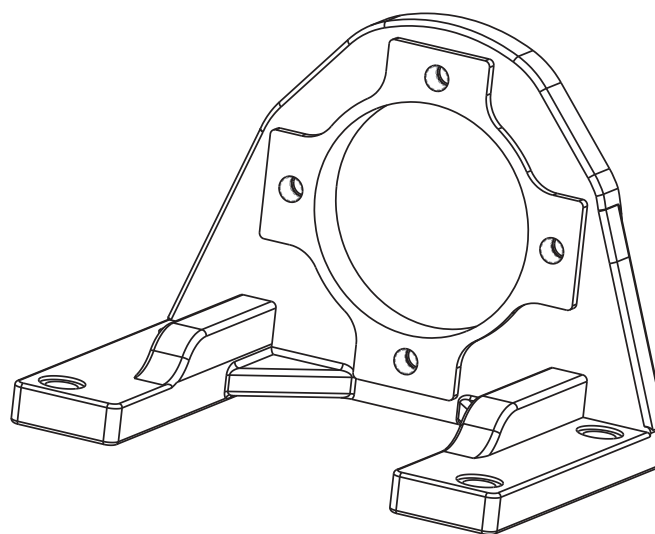
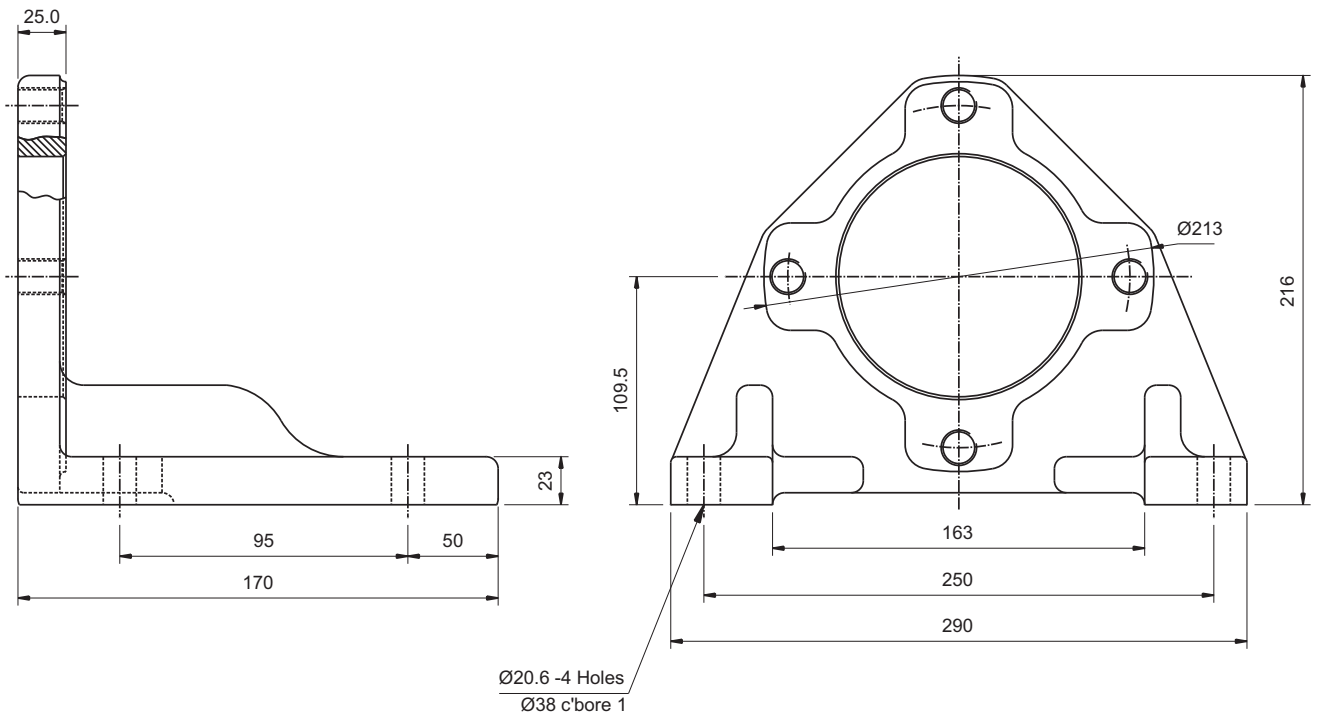


Shaft torque limits V x P max. (P1+ P2+ P3)

Shaft	in ³ /rev x psi (ml/rev x bar)
1	12666 (14300)
2	18972 (21470)
3	28937 (32670)
4	28937 (32670)
5	18246 (20600)
E	18246 (20600)

Weight - 40.0 Kgs.

INSTALLATION DRAWING
FOOT MOUNTING



Weight-9.5 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	B02	0.35	5.7	2.29	8.70	1.72	6.50	1.32	5.0
	B03	0.60	9.8	3.88	14.7	3.30	12.5	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.49	17.0	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.68	21.5	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.13	27.0	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.19	31.0	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.25	35.0	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.43	39.5	10.04	38.0
	B10	1.94	31.8	12.62	47.8	11.88	45.0	11.23	42.5
	B11	2.13	34.9	13.81	52.26	13.21	50.0	12.81	48.5
	B12	2.50	40.9	16.25	61.50	15.59	59.0	15.19	57.5
	B14	2.75	45.1	17.81	67.65	17.04	64.5	16.77	63.5
	B15	3.08	50.5	20.25	76.64	19.55	74.0	19.15	72.5
	B17	3.56	58.3	23.10	87.45	22.32	84.5	22.06	83.5
	B20	3.89	63.8	25.28	95.70	24.70	93.5	24.30	92.0
	B22	4.29	70.3	27.87	105.5	27.21	103.0	26.81	101.5
B25	4.84	79.3	31.44	119.0	31.04	117.5	30.64	116.0	



Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p=7 bar (100 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	B02	0.35	5.7	0.62	0.46	3.08	2.30	5.14	3.83
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
	B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

Max, cont. pressure 240 bar upto B12, 210 bar from B14 - B25

Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2 & P3	B02	0.35	5.7	2.29	8.70	1.72	6.50	–	–
	B03	0.60	9.8	3.88	14.7	3.30	12.5	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.49	17.0	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.68	21.5	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.13	27.0	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.19	31.0	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.25	35.0	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.43	39.5	10.04	38.0
	B10	1.94	31.8	12.62	47.8	11.88	45.0	11.23	42.5
	B11	2.13	34.9	13.81	52.26	13.21	50.0	12.81	48.5
	B12	2.50	40.9	16.25	61.50	15.59	59.0	15.19	57.5

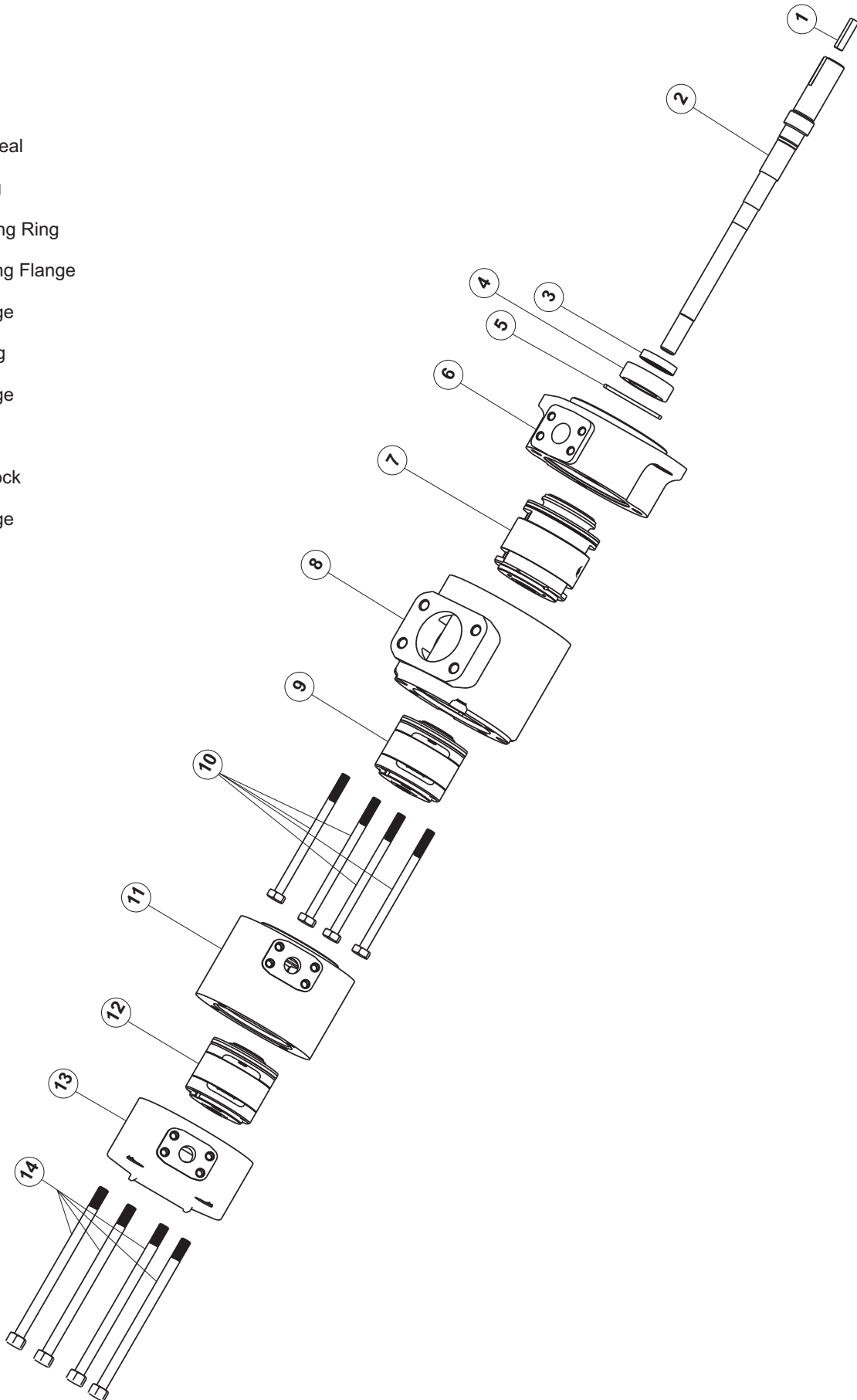


Pressure port	Series	Volumetric Displacement Vp		Input Power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2 & P3	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83

-- Not to use because internal leakage greater than 50 of theoretical flow.
 Up to B12 = Max, int. pressure 210 bar(3000 psi)
 Max, cont. pressure 175 bar(2500 psi), Except B02
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Cartridge
- 10. Bolts
- 11. Port Block
- 12. Cartridge
- 13. Endcap
- 14. Bolts



TP

ORDERING CODE

VST7DBB - 038 - B12 - B08 - 1 R 00 - A 1 - M1 *

Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

014 = 43.9 (2.68)

017 = 55.0 (3.36)

020 = 66.0 (4.03)

022 = 70.3 (4.29)

024 = 81.1 (4.95)

028 = 89.9 (5.49)

031 = 99.1 (6.05)

035 = 113.4 (6.92)

038 = 120.6 (7.36)

042 = 137.5 (8.39)

Cam ring for "P2" & "P3"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)

B03 = 9.8 (0.60)

B04 = 12.8 (0.78)

B05 = 15.9 (0.97)

B06 = 19.8 (1.21)

B07 = 22.5 (1.37)

B08 = 24.9 (1.52)

B09 = 28.0 (1.71)

B10 = 31.8 (1.94)

B11 = 34.9 (2.13)

B12 = 40.9 (2.50)

Type of shaft

1 - Keyed

2 - Keyed (SAE CC)

3 - Splined (SAE C)

4 - Splined (SAE CC)

Modifications

Mounting W/connection Variables

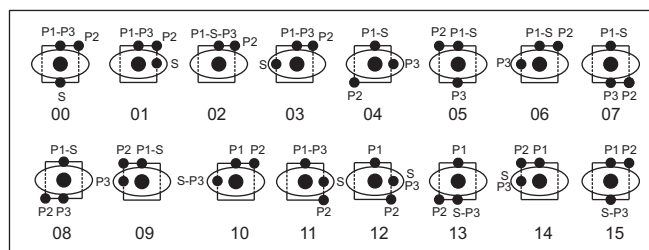
P1=1 1/4" P2=1" P3=3/4" S=4"	
UNC	METRIC
01	M1

Seal Class

1 - S1(for mineral oil)
4 - S4(for fire resistant fluids)
5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



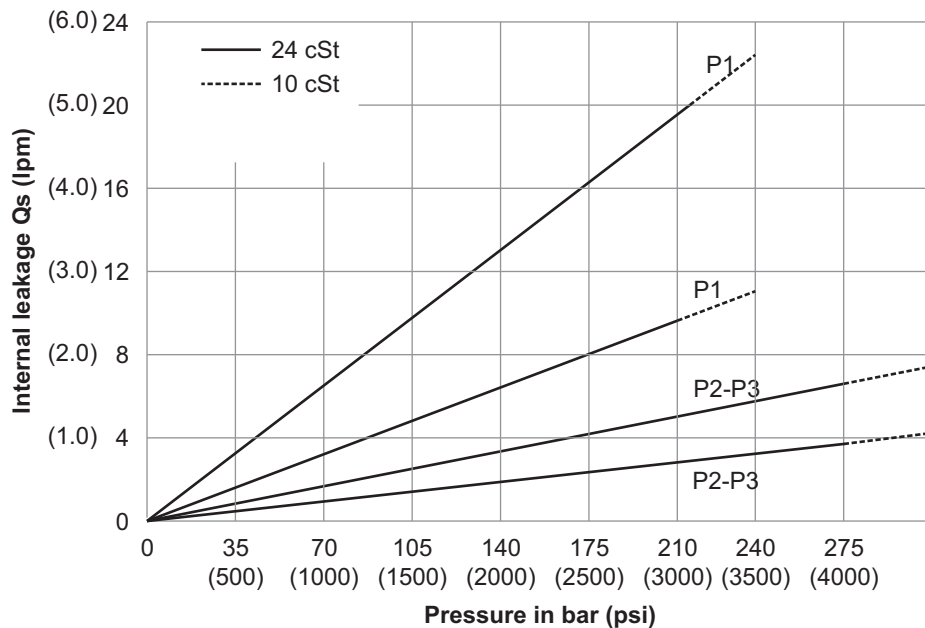
Direction of rotation
(view on shaft end)

R - clockwise

L - Counter - Clockwise

TP

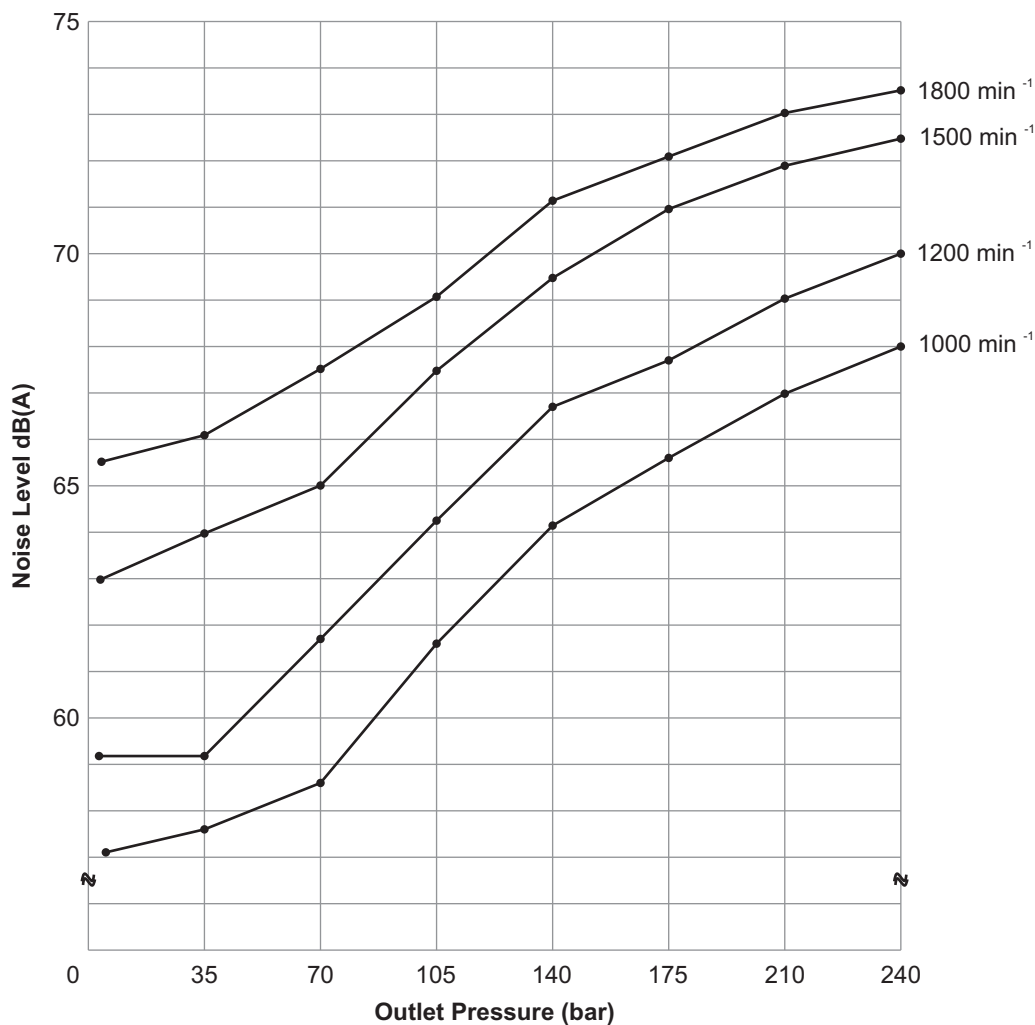
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

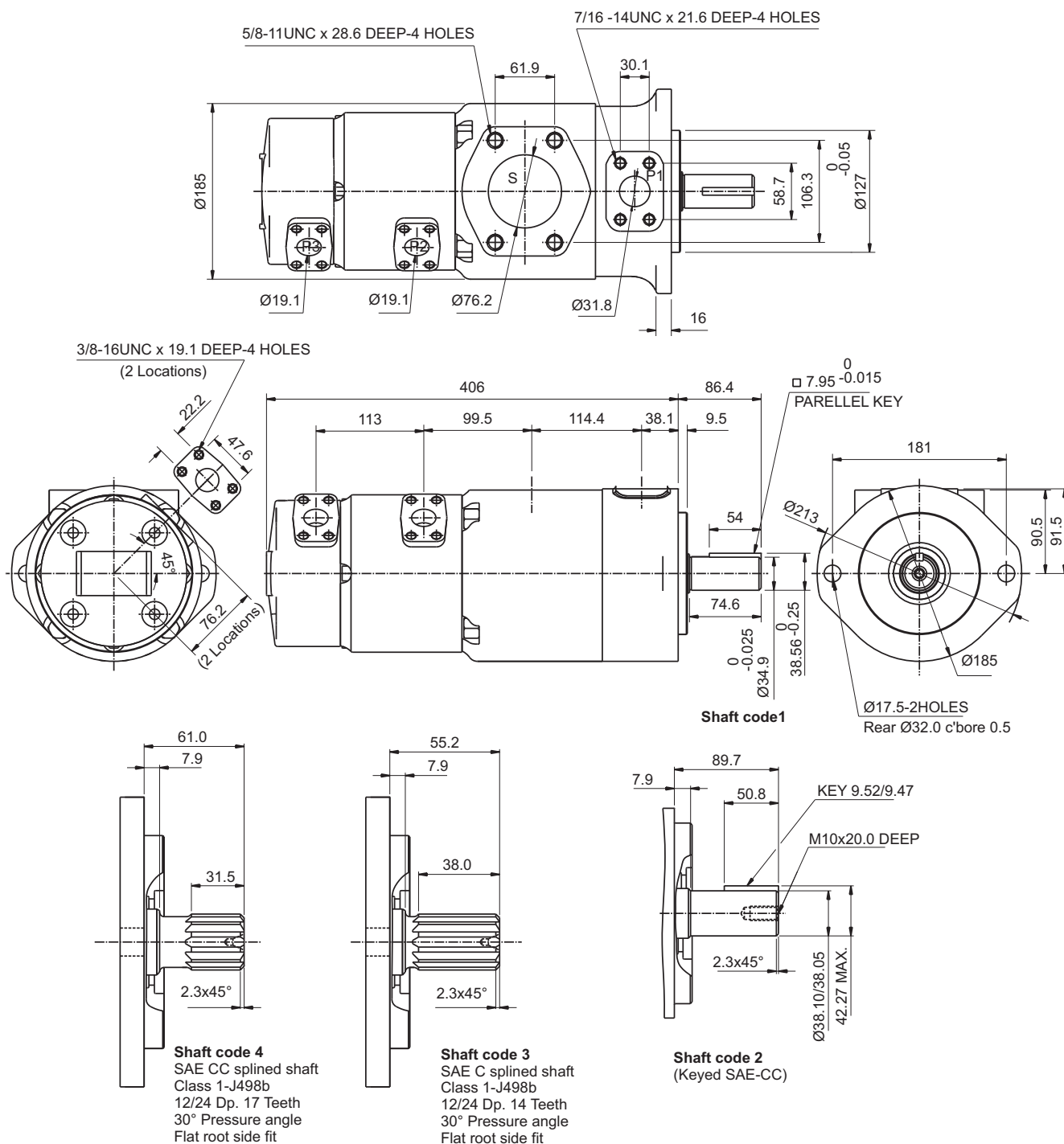


NOISE LEVEL (TYPICAL) VST7DBB-038-B12-B08



Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

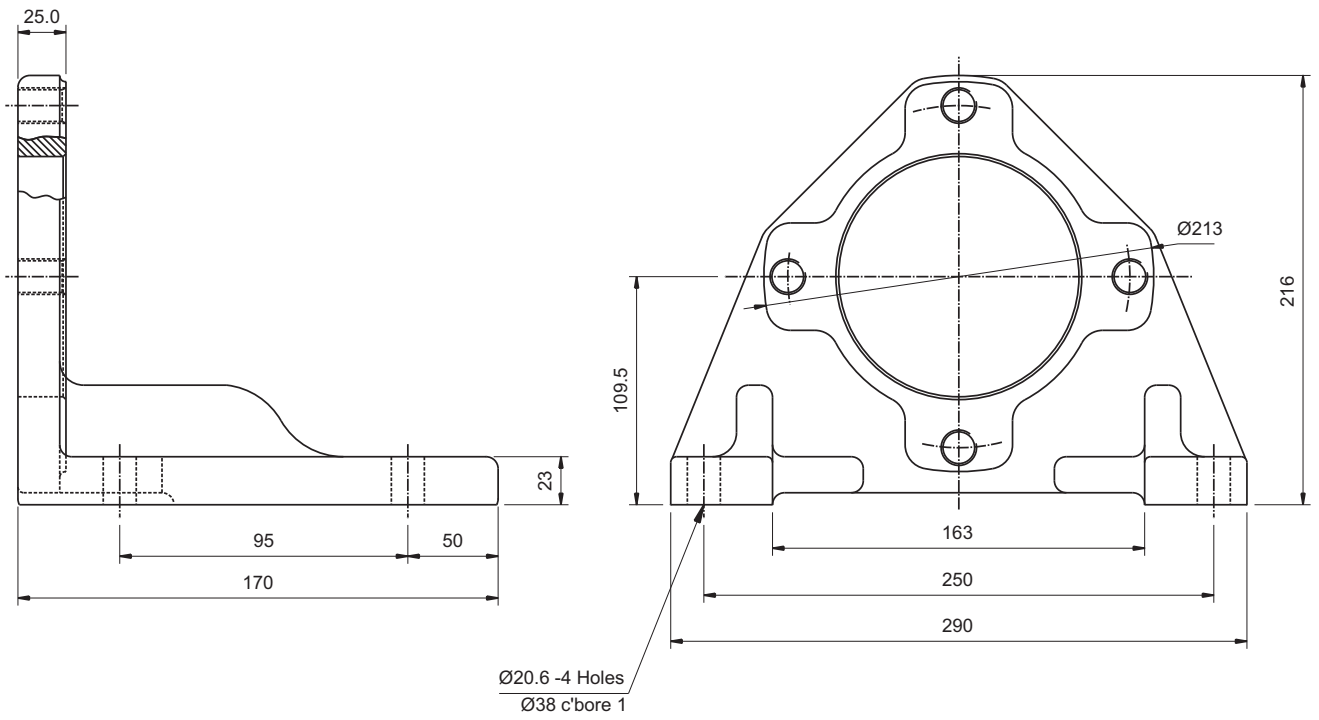
INSTALLATION DRAWING
FLANGE MOUNTING



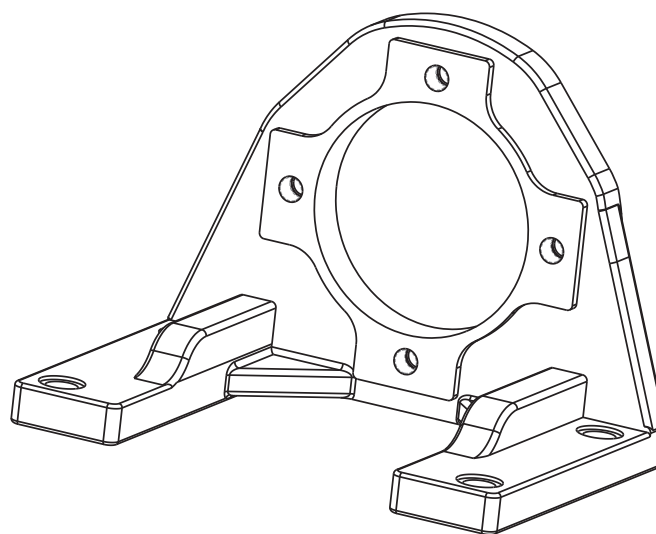
Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	38299 (43240)
2	58901 (66500)
3	54027 (61200)
4	58901 (66500)

Weight - 60.5 Kgs.

INSTALLATION DRAWING
FOOT MOUNTING



TP



Weight-9.5 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	014	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	017	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	020	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	022	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	024	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	028	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	031	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	035	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	038	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	042	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74



Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	014	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	022	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	024	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

Max, int. pressure 240 bar
 Max, cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2 & P3	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.5

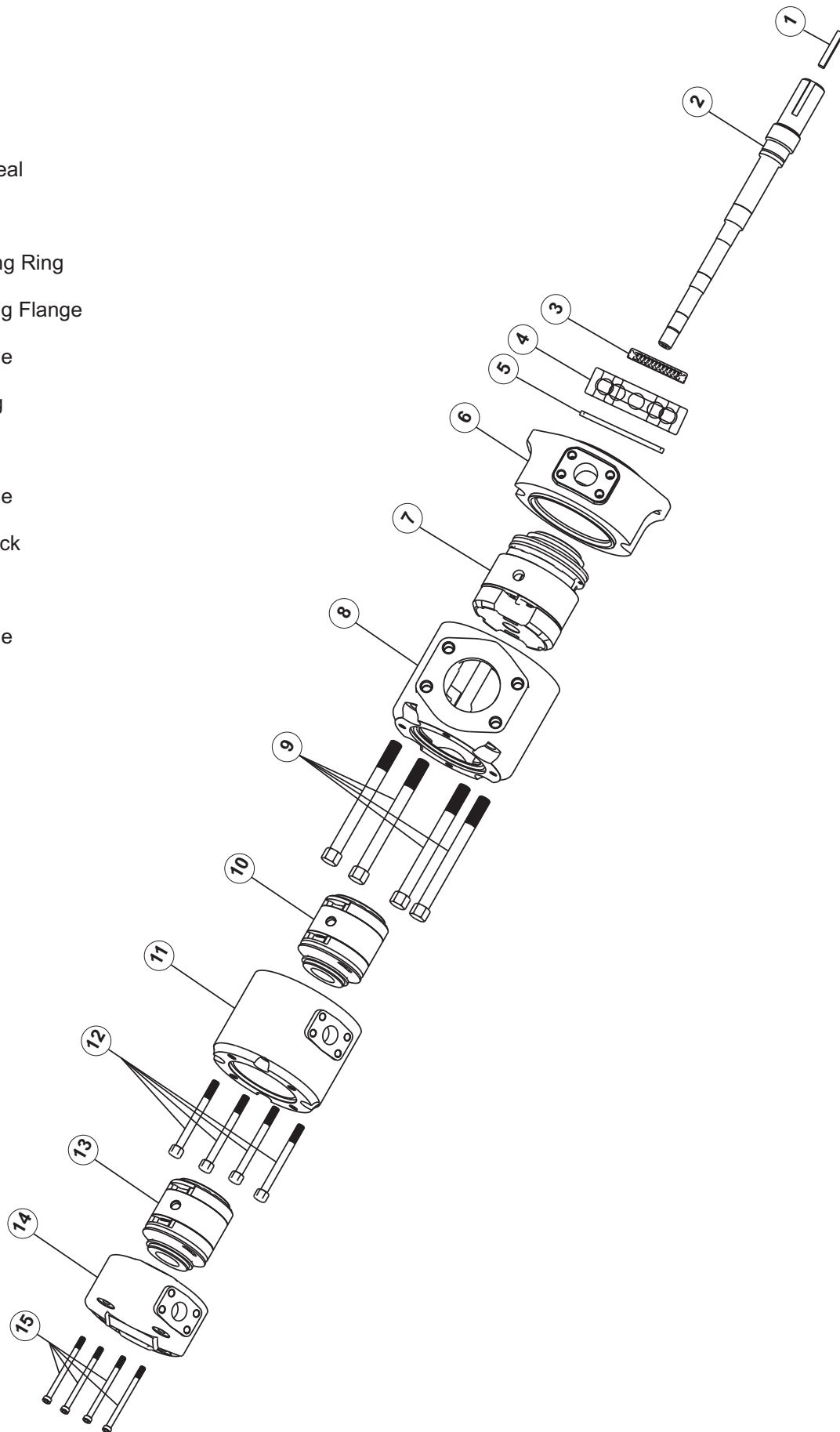
TP

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2 & P3	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83

-- Not to use because internal leakage greater than 50 of theoretical flow.
 Max, int. pressure 210 bar(3000 psi)
 Max, cont. pressure 175 bar(2500 psi), Except B02
 Measurement Conditions: ISO VG32 oil at 50°C

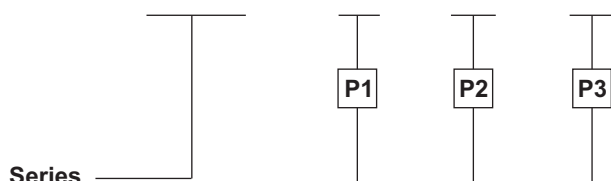
CONSTRUCTION

1. Key
2. Shaft
3. Shaft Seal
4. Bearing
5. Retaining Ring
6. Mounting Flange
7. Cartridge
8. Housing
9. Bolts
10. Cartridge
11. Port Block
12. Bolts
13. Cartridge
14. Endcap
15. Bolts



ORDERING CODE

VST7DCC - 038 - 022 - B08 1 R 00 - B 1 - 00 *



Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

- 014 = 43.9 (2.68)
- 017 = 55.0 (3.36)
- 020 = 66.0 (4.03)
- 022 = 70.3 (4.29)
- 024 = 81.1 (4.95)
- 028 = 89.9 (5.49)
- 031 = 99.1 (6.05)
- 035 = 113.4 (6.92)
- 038 = 120.6 (7.36)
- 042 = 137.5 (8.39)

Cam ring for "P2" & "P3"

Volumetric displacement cm^3/rev (in^3/rev)

- B02 = 5.7 (0.35)
- B03 = 9.8 (0.60)
- B04 = 12.8 (0.78)
- B05 = 15.9 (0.97)
- B06 = 19.8 (1.21)
- B07 = 22.5 (1.37)
- B08 = 24.9 (1.52)
- B09 = 28.0 (1.71)
- B10 = 31.8 (1.94)
- B11 = 34.9 (2.13)
- B12 = 40.9 (2.50)
- B14 = 45.1 (2.75)
- B15 = 50.0 (3.05)
- B17 = 58.3 (3.56)
- B20 = 63.8 (3.89)
- B22 = 70.3 (4.29)
- B25 = 79.3 (4.84)

Modifications

Mounting W/connection Variables

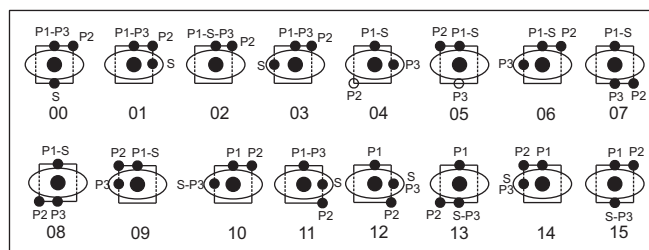
	UNC		METRIC	
	00	01	M0	M1
P2	1"	3/4"	1"	3/4"

Seal Class

- 1 - S1(for mineral oil)
- 4 - S4(for fire resistant fluids)
- 5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation (view on shaft end)

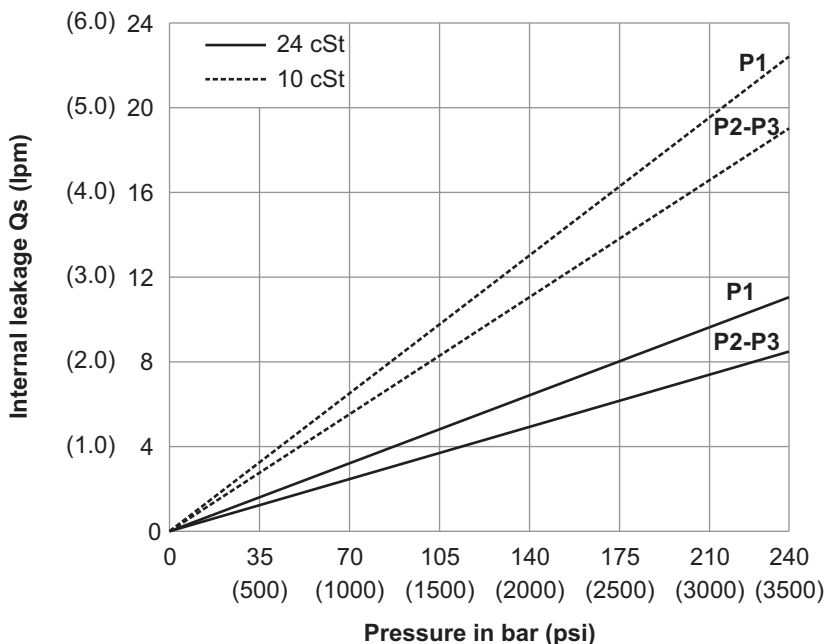
- R - clockwise
- L - Counter - Clockwise

Type of shaft

- 1 - Keyed
- 2 - Keyed (SAE CC)
- 3 - Splined (SAE-C)
- 4 - Splined (SAE-CC)
- 5 - Keyed(no SAE)

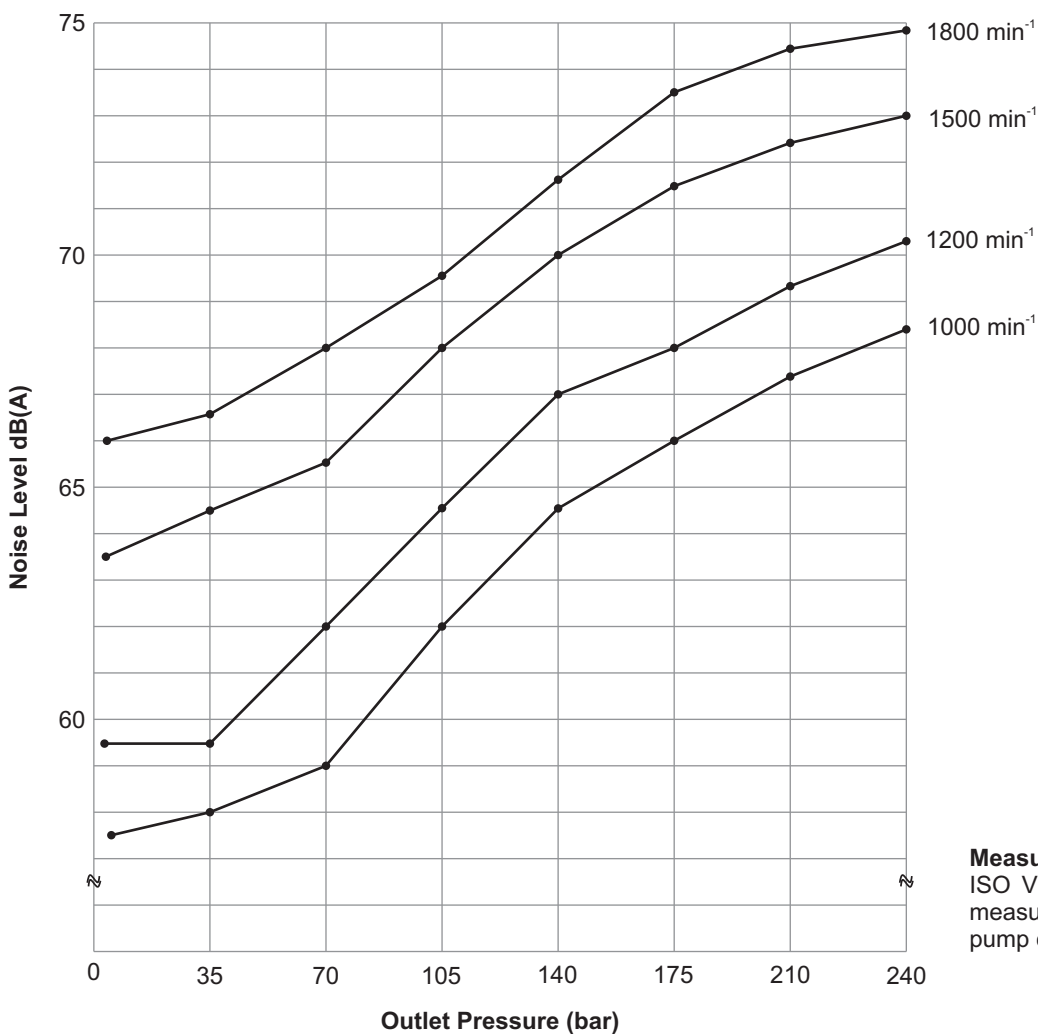


INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

NOISE LEVEL (TYPICAL) VST7DCC-038-B22-B08

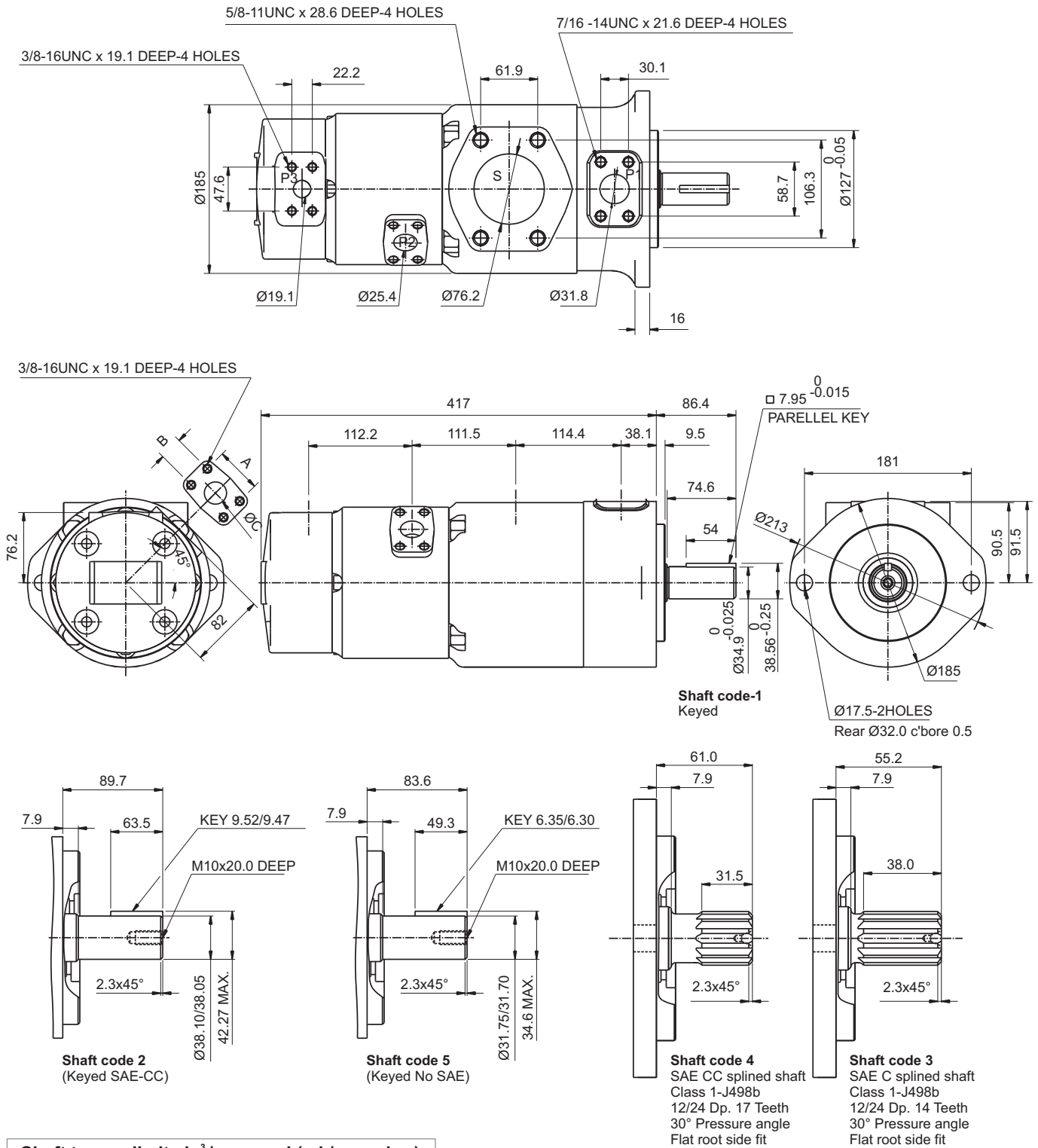


Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover



INSTALLATION DRAWING

FLANGE MOUNTING

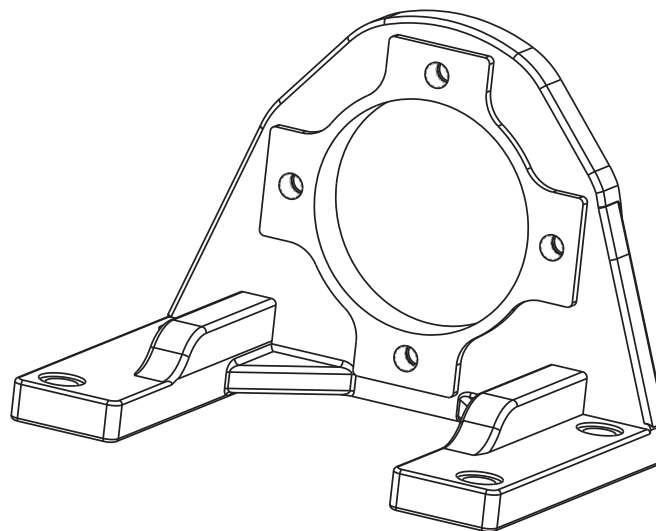
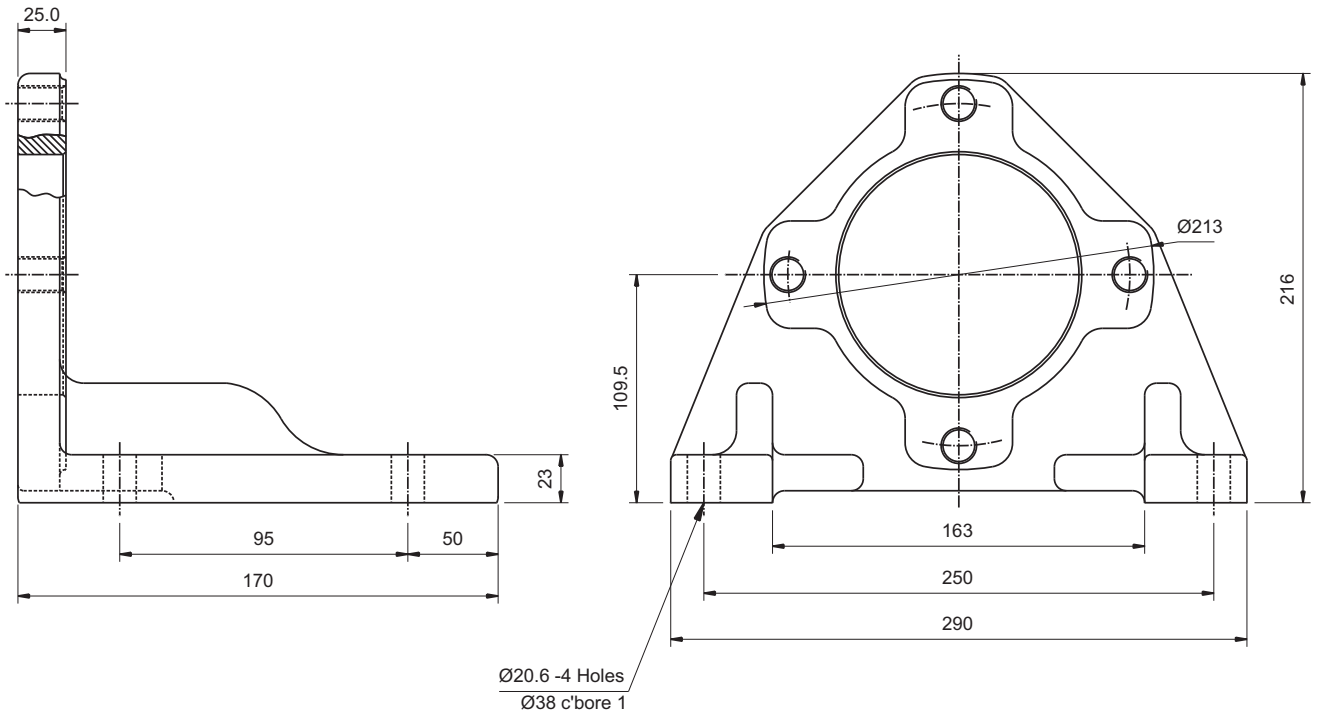


Weight - 62.5 Kgs.

Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	38299 (43240)
2	58209 (66500)
3	54027 (61200)
4	58902 (66500)

PORT	CODE	A	B	C
P3	00 & M0	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)
	01 & M1	1.874 (47.6)	0.874 (22.2)	0.75 (19.05)

INSTALLATION DRAWING
FOOT MOUNTING



Weight-9.5 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	014	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	017	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	020	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	022	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	024	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	028	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	031	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	035	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	038	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	042	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74

TP

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	014	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	022	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	024	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

Max, int. pressure 240 bar
 Max, cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2 & P3	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.70	3.52	13.32	2.91	11.00
	B04	0.78	12.8	5.07	19.20	4.71	17.83	4.09	15.50
	B05	0.97	15.9	6.31	23.90	5.94	22.49	5.28	20.00
	B06	1.21	19.8	7.85	29.70	7.49	28.35	6.87	26.00
	B07	1.37	22.5	8.90	33.70	8.56	32.40	7.79	29.50
	B08	1.52	24.9	9.88	37.40	9.51	35.99	8.85	33.50
	B09	1.71	28.0	11.07	41.90	10.72	40.58	10.04	38.00
	B10	1.94	31.8	12.62	47.80	12.24	46.33	11.23	42.50
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.50
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.50
	B14	2.75	45.1	17.81	67.42	17.46	66.09	16.77	63.50
	B15	3.08	50.5	20.25	76.64	19.55	74.00	19.15	72.50
	B17	3.56	58.3	23.10	87.45	22.32	84.50	22.06	83.50
	B20	3.89	63.8	25.28	95.70	24.70	93.50	24.30	92.00
	B22	4.29	70.3	27.87	105.5	27.21	103.00	26.81	101.50
B25	4.84	79.3	31.44	119.0	31.04	117.50	30.64	116.00	

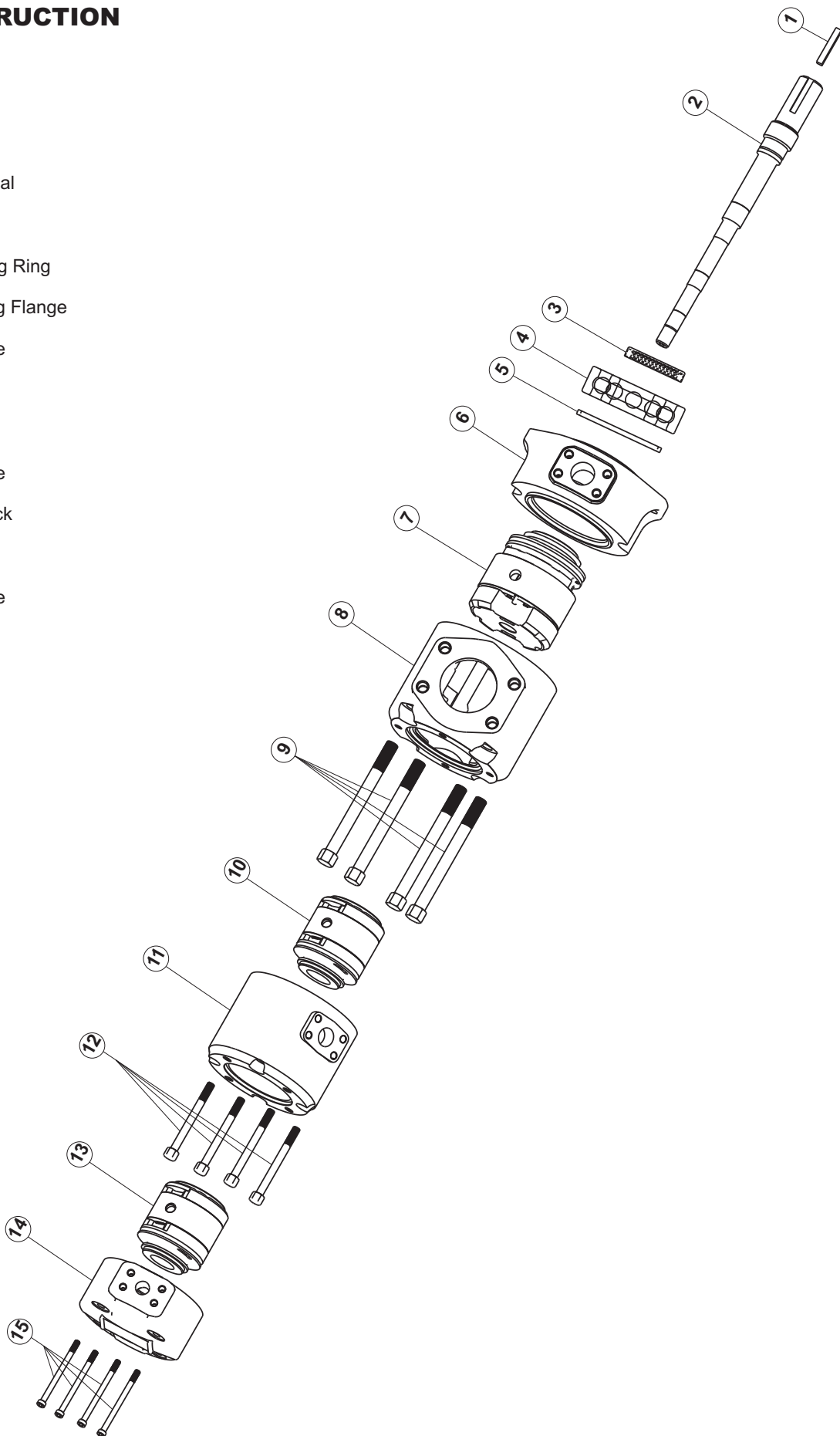


Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2 & P3	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
	B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

Max, cont. pressure 240 bar upto B12, 210 bar from B14 - B25
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

1. Key
2. Shaft
3. Shaft Seal
4. Bearing
5. Retaining Ring
6. Mounting Flange
7. Cartridge
8. Housing
9. Bolts
10. Cartridge
11. Port Block
12. Bolts
13. Cartridge
14. Endcap
15. Bolts



TP

ORDERING CODE

VST7ECB - 062 - B28 - B10 - 1 R 00 - A 1 01 *

Series

SAE 4 bolts
Mounting Flange (J744)

Cam ring for "P1"

Volumetric displacement cm³/rev (in³/rev)

042 = 132.3 (8.07)
045 = 142.4 (8.69)
050 = 158.5 (9.67)
052 = 164.8 (10.06)
057 = 180.7 (11.02)
062 = 196.7 (12.00)
066 = 213.3 (13.02)
072 = 227.1 (13.86)
085 = 268.7 (16.40)

Cam ring for "P2"

Volumetric displacement cm³/rev (in³/rev)

B02 = 5.7 (0.35) B11 = 34.9 (2.13)
B03 = 9.8 (0.60) B12 = 40.9 (2.50)
B04 = 12.8 (0.78) B14 = 45.1 (2.75)
B05 = 15.9 (0.97) B15 = 50.0 (3.05)
B06 = 19.8 (1.21) B17 = 58.3 (3.56)
B07 = 22.5 (1.37) B20 = 63.8 (3.89)
B08 = 24.9 (1.52) B22 = 70.3 (4.29)
B09 = 28.0 (1.71) B25 = 79.3 (4.84)
B10 = 31.8 (1.94)

Cam ring for "P3"

Volumetric displacement cm³/rev (in³/rev)

B02 = 5.7 (0.35)
B03 = 9.8 (0.60)
B04 = 12.8 (0.78)
B05 = 15.9 (0.97)
B06 = 19.8 (1.21)
B07 = 22.5 (1.37)
B08 = 24.9 (1.52)
B09 = 28.0 (1.71)
B10 = 31.8 (1.94)
B11 = 34.9 (2.13)
B12 = 40.9 (2.50)

Modifications

Mounting W/connection
variables 4 bolts
SAE flange (J518)

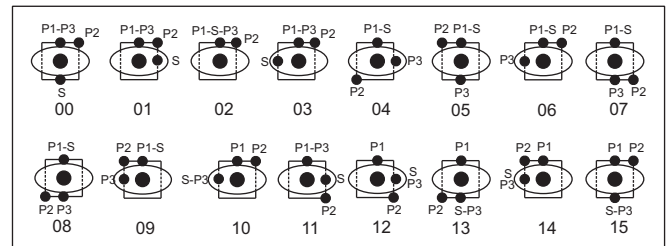
	P1 = 1½"	P2 = 1¼"	S = 4"
	P3	UNC	METRIC
VST7ECB	1"	00	M0
	¾"	01	M1

Seal Class

1 - S1(for mineral oil)
4 - S4(for fire resistant fluids)
5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation

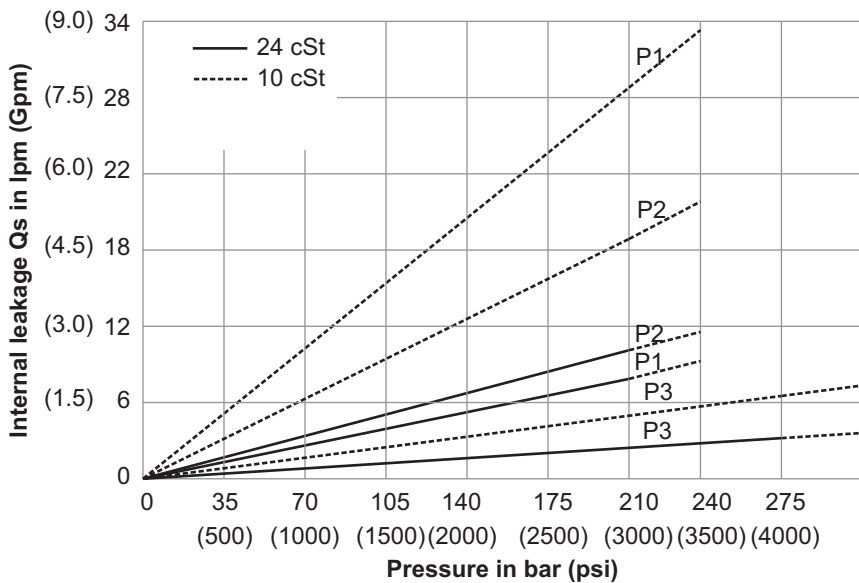
(view on shaft end)
R - clockwise
L - Counter - Clockwise

Type of shaft

1 - Keyed
2 - Keyed (SAE D&E)
3 - Splined (SAE D&E)



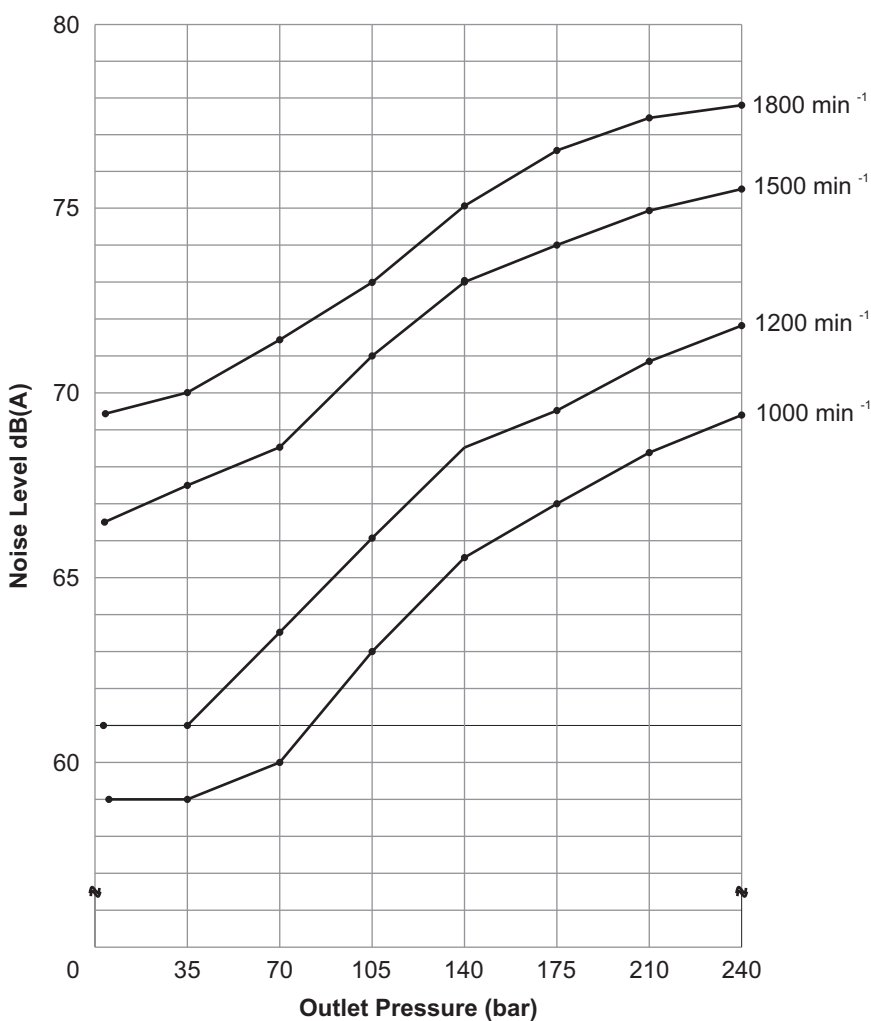
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

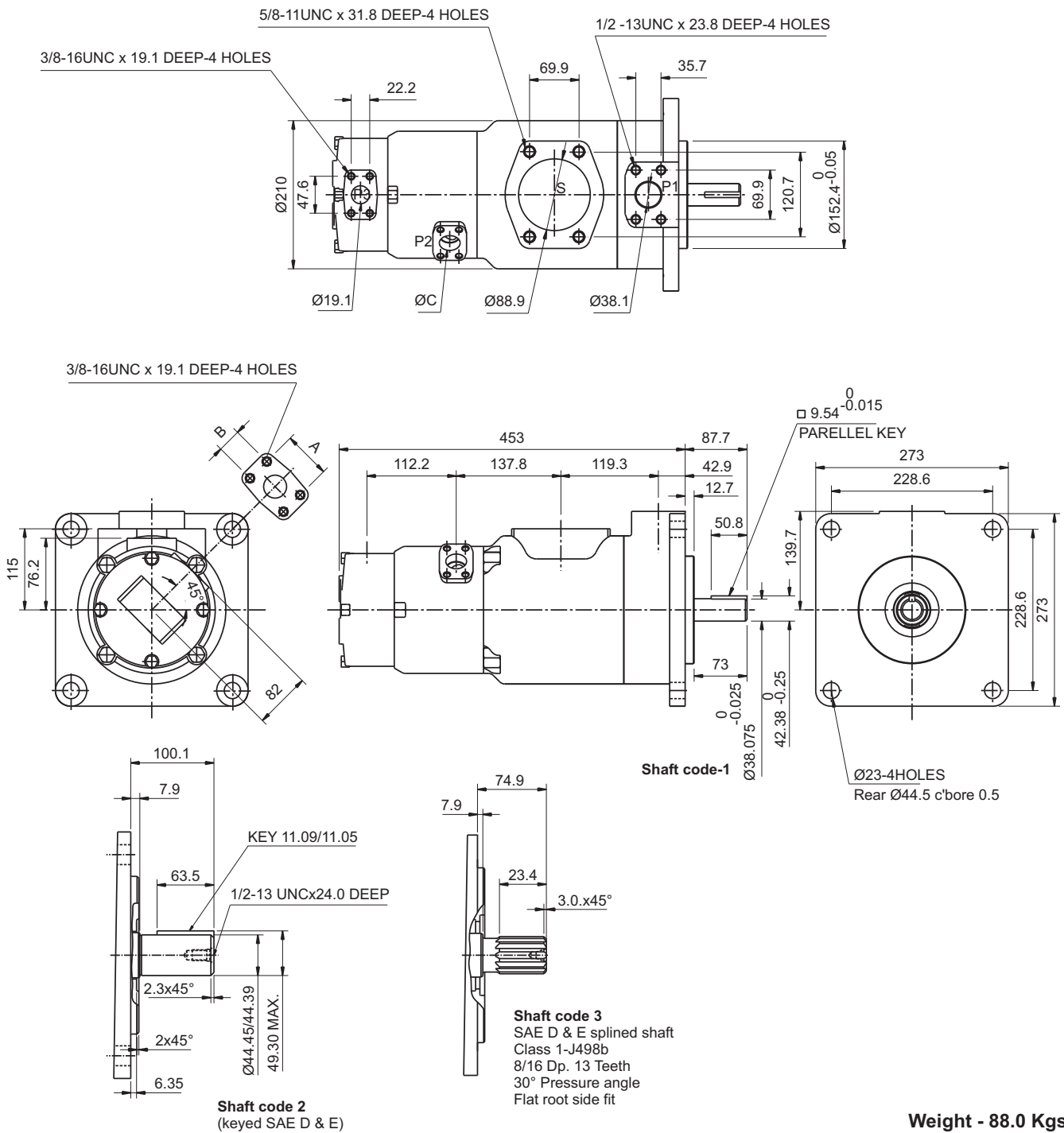


NOISE LEVEL (TYPICAL) VST7ECB-050-B11-B08



Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING
FLANGE MOUNTING



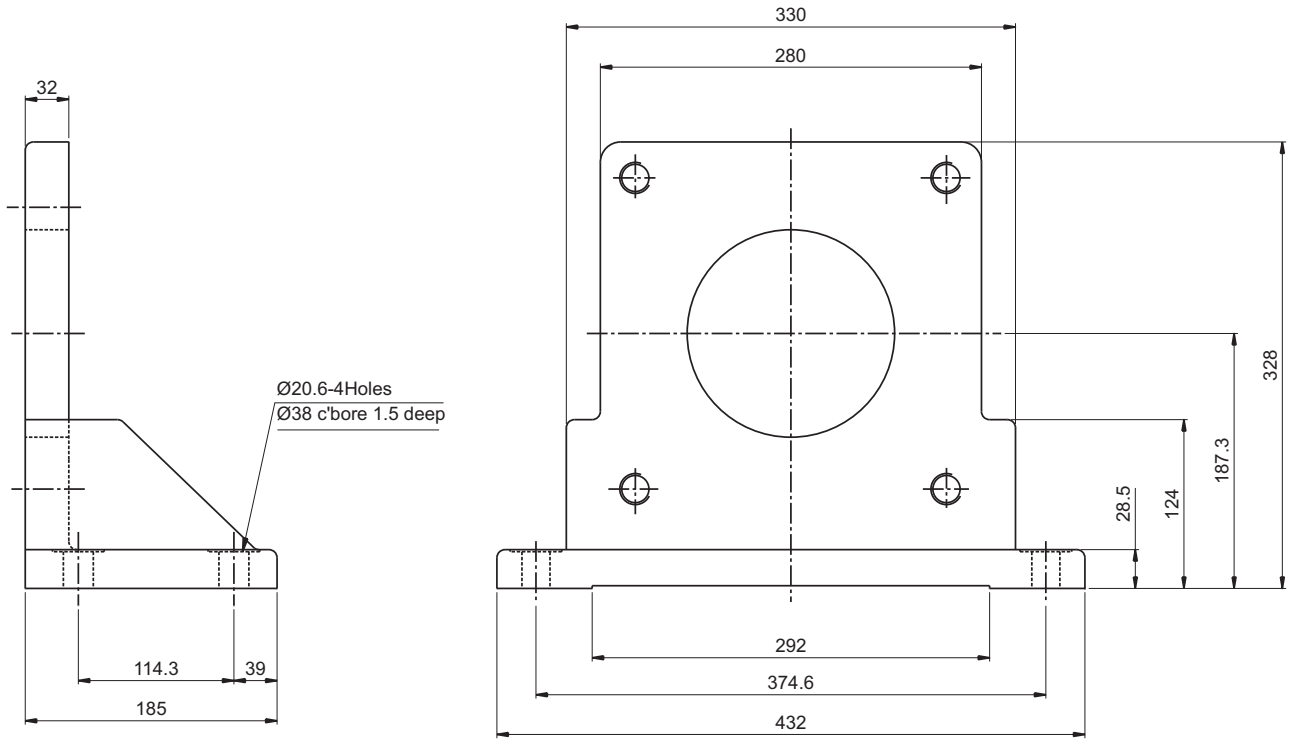
Weight - 88.0 Kgs.

Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	101506 (114715)
2	104818 (118458)
3	112312 (126928)

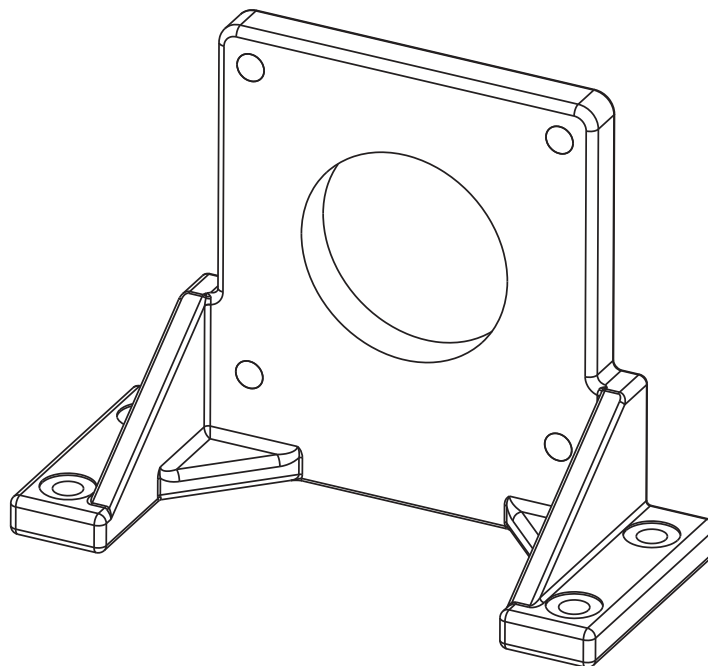
PORT	CODE	A	B	ØC
P3	00 & M0	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)
	01 & M1	1.874 (47.6)	0.874 (22.2)	0.75 (19.0)

INSTALLATION DRAWING

FOOT MOUNTING



TP



Weight - 25 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3
	045	8.69	142.4	56.51	213.6	53.86	203.6	51.98	196.5
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6
	052	10.06	164.8	65.40	247.2	62.75	237.2	60.87	230.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9
	066	13.02	213.3	84.63	319.9	81.98	309.9	80.11	302.8
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5
	085	16.40	268.7	107.00	404.7	–	–	--	--

TP

Pressure port	Series	Volumetric Displacement Vp		Input Power p & n = 1500 rpm					
				p = 7 bar (10 0 psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.69	142.4	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.06	164.8	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.02	213.3	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	9.25	6.9	110.77	82.6	187.07	139.5
	085	16.40	268.7	9.78	7.3	–	–	--	--

* Max, int. pressure 240 bar

* Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

Note : 085 = 90 bar (1300 psi) max. int. & 085 = 2000 rpm max.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140bar (2000psi)		p = 240bar (3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.5
	B14	2.75	45.1	17.81	67.42	17.46	66.09	16.77	63.5
	B15	3.08	50.5	20.25	76.64	19.55	74.0	19.15	72.5
	B17	3.56	58.3	23.10	87.45	22.32	84.5	22.06	83.5
	B20	3.89	63.8	25.28	95.70	24.70	93.5	24.30	92.0
	B22	4.29	70.3	27.87	105.5	27.21	103.0	26.81	101.5
B25	4.84	79.3	31.44	119.0	31.04	117.5	30.64	116.0	

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
	B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

Max, cont. pressure 240 bar upto B12, 210 bar from B14 - B25

Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P3	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.5

TP

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P3	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83

-- Not to use because internal leakage greater than 50 of theoretical flow.

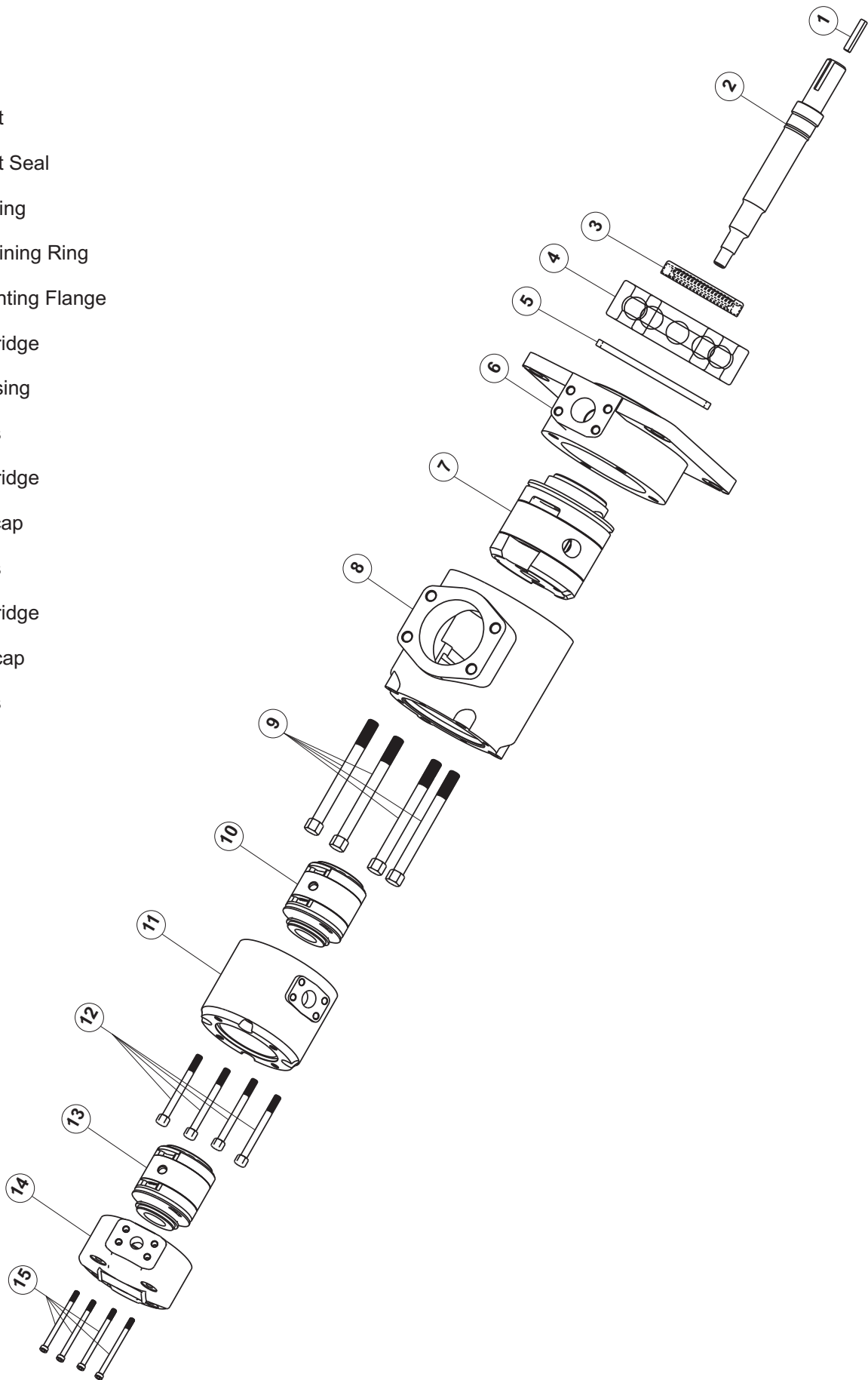
B12 = Max, int. pressure 210 bar(3000 psi)

Max, cont. pressure 175 bar(2500 psi), Except B02

Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Bolts
- 10. Cartridge
- 11. Endcap
- 12. Bolts
- 13. Cartridge
- 14. Endcap
- 15. Bolts



TP

ORDERING CODE

VST7EDB - 062 - 028 - B10 - 1 R 00 - A 1 01 *

Series

SAE 4 bolts
Mounting flange (J744)

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

042 = 132.3 (8.07)
045 = 142.4 (8.69)
050 = 158.5 (9.67)
052 = 164.8 (10.06)
057 = 180.7 (11.02)
062 = 196.7 (12.00)
066 = 213.3 (13.02)
072 = 227.1 (13.86)
085 = 268.7 (16.40)

Cam ring for "P2"

Volumetric displacement cm^3/rev (in^3/rev)

014 = 43.9 (2.68) 028 = 89.9 (5.49)
017 = 55.0 (3.36) 031 = 99.1 (6.05)
020 = 66.0 (4.03) 035 = 113.4 (6.92)
022 = 70.3 (4.29) 038 = 120.6 (7.36)
024 = 81.1 (4.95) 042 = 137.5 (8.39)

Cam ring for "P3"

Volumetric displacement cm^3/rev (in^3/rev)

B02 = 5.7 (0.35)
B03 = 9.8 (0.60)
B04 = 12.8 (0.78)
B05 = 15.9 (0.97)
B06 = 19.8 (1.21)
B07 = 22.5 (1.37)
B08 = 24.9 (1.52)
B09 = 28.0 (1.71)
B10 = 31.8 (1.94)
B11 = 34.9 (2.13)
B12 = 40.9 (2.50)

Modifications

Mounting W/connection
variables 4 bolts
SAE flange (J518)

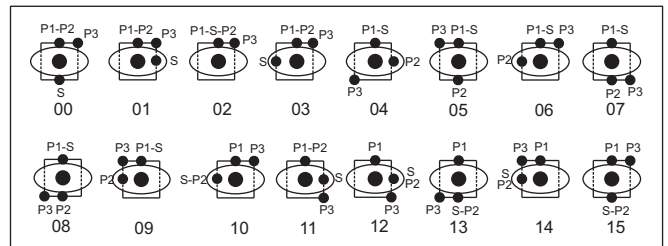
P1 = 1½"	P2 = 1¼"	S = 4"	
		P3	UNC
VST7EDB	1"	00	M0
	¾"	01	M1

Seal Class

1 - S1(for mineral oil)
4 - S4(for fire resistant fluids)
5 - S5(for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation

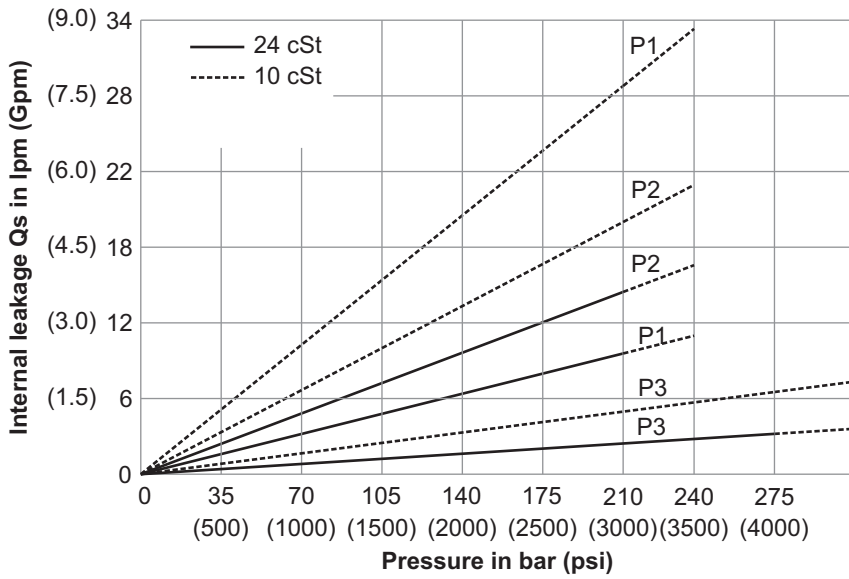
(view on shaft end)
R - clockwise
L - Counter - Clockwise

Type of shaft

1 - Keyed
2 - Keyed (SAE D&E)
3 - Splined (SAE D&E)



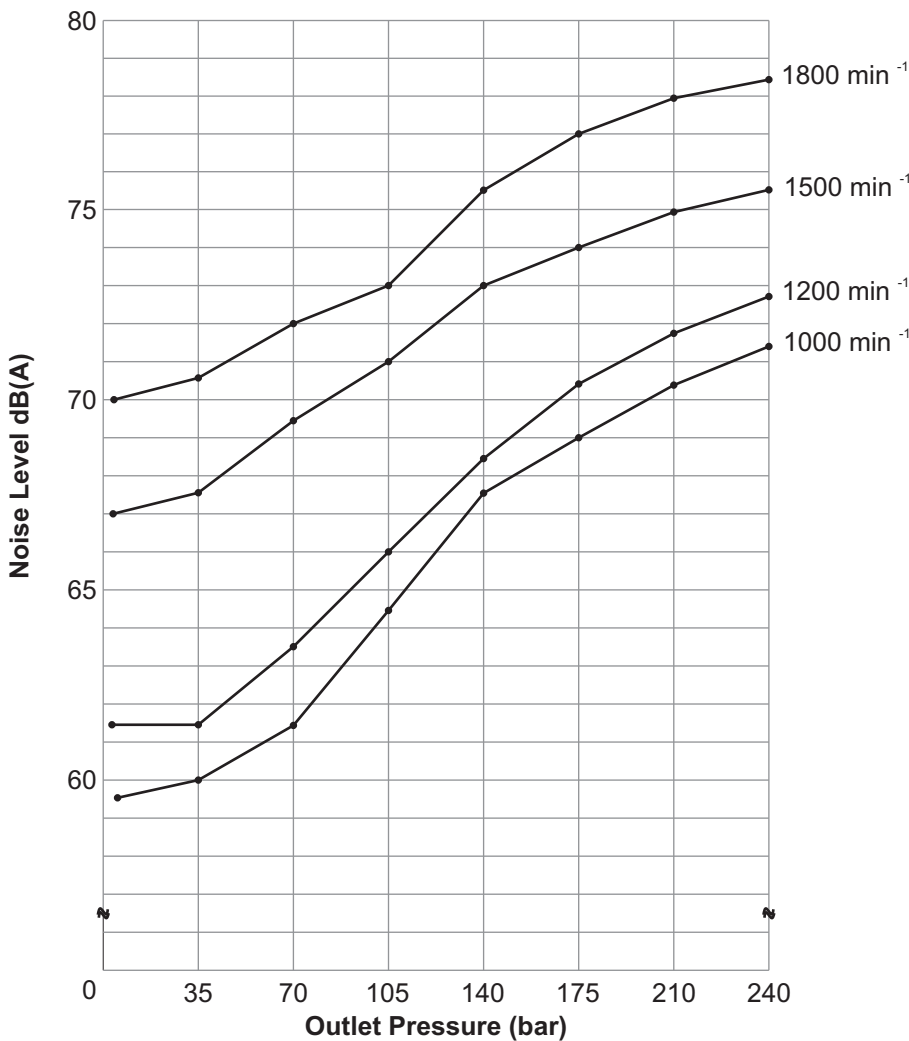
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50% of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.



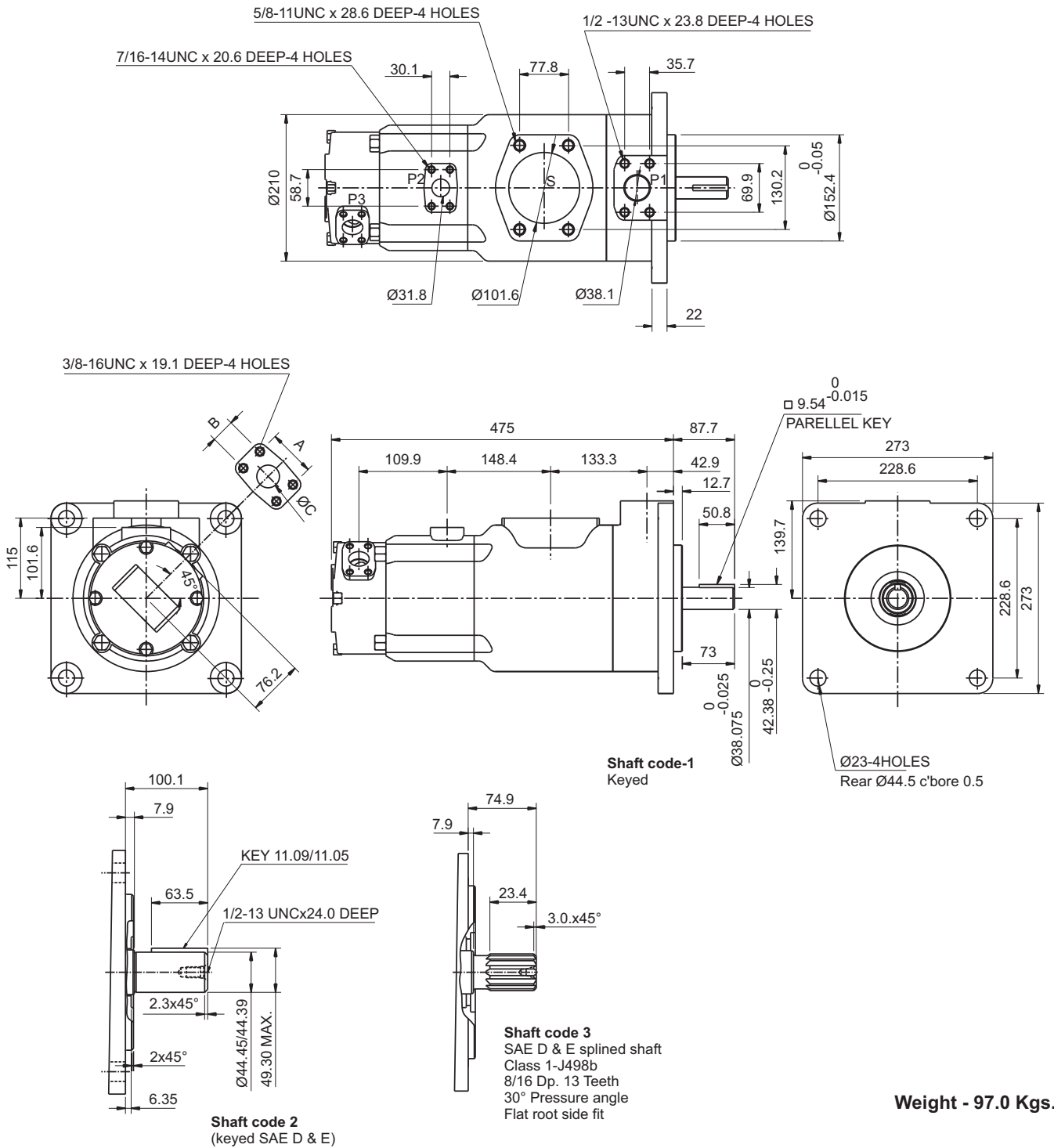
NOISE LEVEL (TYPICAL) VST7EDB-062-028-B10



Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

INSTALLATION DRAWING

FLANGE MOUNTING

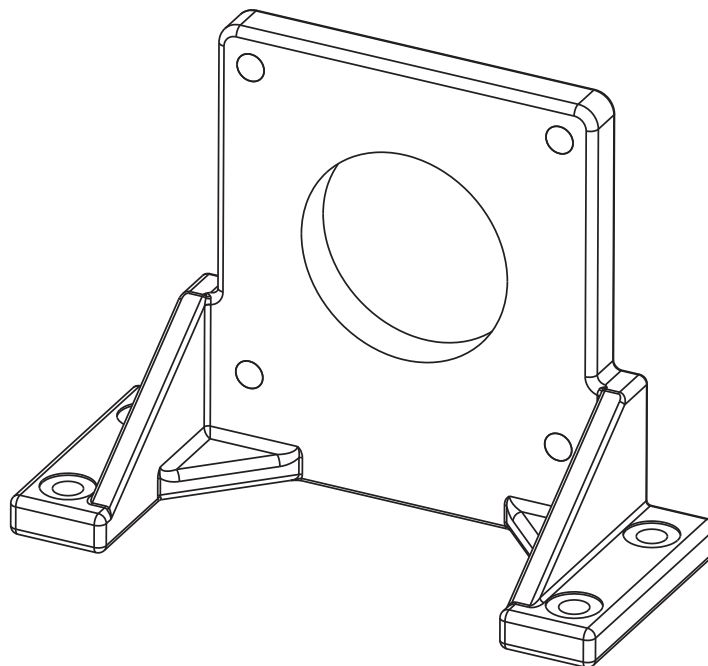
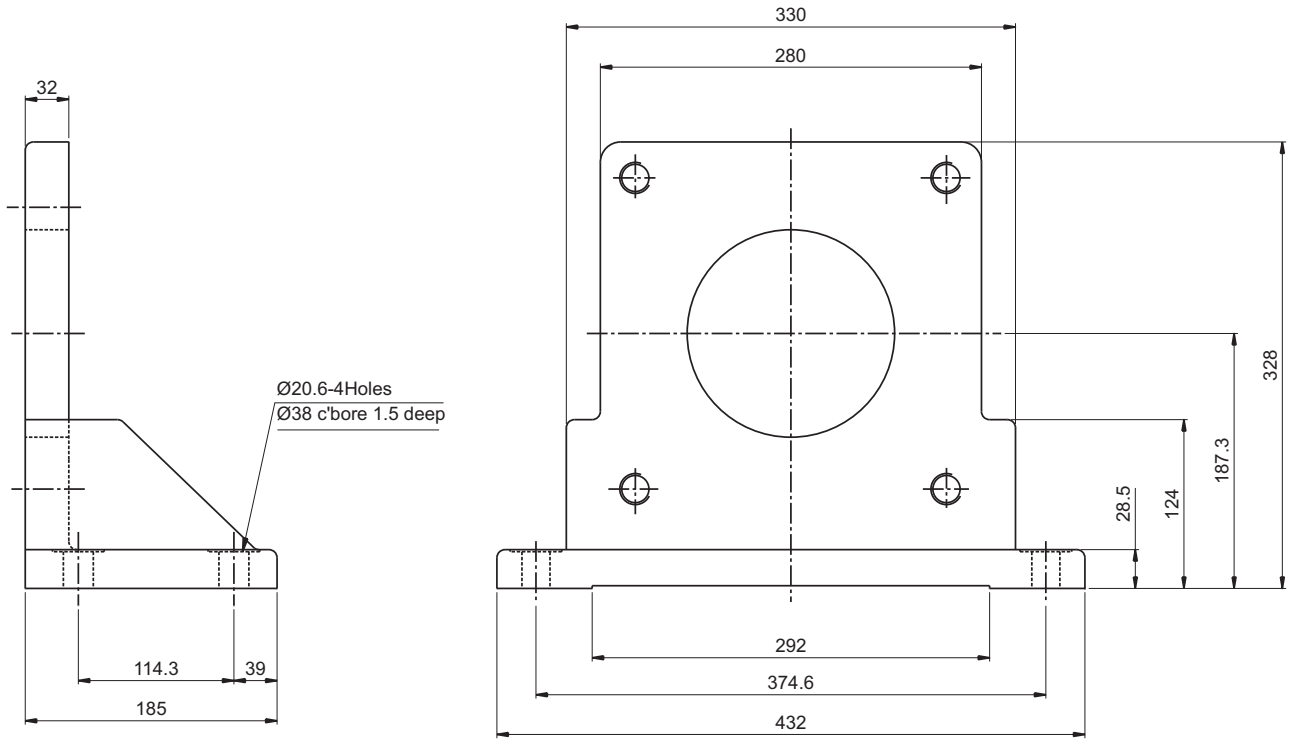


Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	101506 (114715)
2	104818 (118458)
3	112312 (126928)

PORT	CODE	A	B	ØC
P3	00 & M0	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)
	01 & M1	1.874 (47.6)	0.874 (22.2)	0.75 (19.0)

INSTALLATION DRAWING

FOOT MOUNTING



Weight - 25 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement V _p		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3
	045	8.69	142.4	56.51	213.6	53.86	203.6	51.98	196.5
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6
	052	10.06	164.8	65.40	247.2	62.75	237.2	60.87	230.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9
	066	13.02	213.3	84.63	319.9	81.98	309.9	80.11	302.8
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5
	085	16.40	268.7	107.00	404.7	105.21	397.7	--	--

TP

Pressure port	Series	Volumetric Displacement V _p		Input Power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.69	142.4	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.06	164.8	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.02	213.3	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	9.25	6.9	110.77	82.6	187.07	139.5
	085	16.40	268.7	9.78	7.3	87.56	65.3	--	--

* Max, int. pressure 240 bar

* Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

Note : 085 = 90 bar (1300 psi) max. int. & 085 = 2000 rpm max.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	014	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	017	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	020	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	022	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	024	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	028	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	031	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	035	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	038	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	042	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74

TP

Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	014	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	022	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	024	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

Max, int. pressure 240 bar
 Max, cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P3	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.5

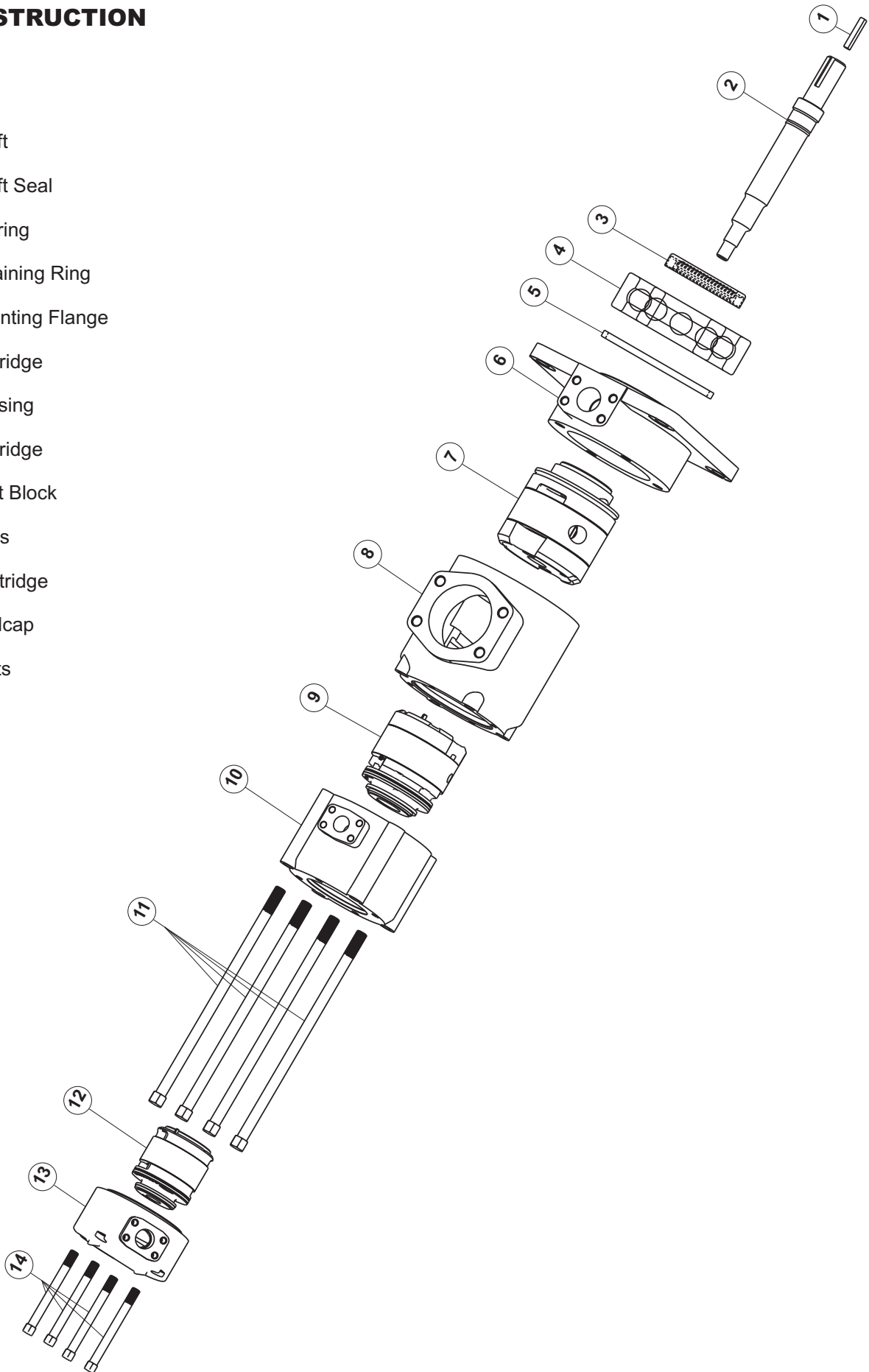


Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P3	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83

-- Not to use because internal leakage greater than 50 of theoretical flow.
 B12 = Max, int. pressure 210 bar(3000 psi)
 Max, cont. pressure 175 bar(2500 psi), Except B02
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Cartridge
- 10. Port Block
- 11. Bolts
- 12. Cartridge
- 13. Endcap
- 14. Bolts



TP

ORDERING CODE

VST7EDC - 062 - B28 - B10 1 R 00 - A 1 - 01 *

Series

Cam ring for "P1"

Volumetric displacement cm^3/rev (in^3/rev)

- 042 = 132.3 (8.07)
- 045 = 142.4 (8.69)
- 050 = 158.5 (9.67)
- 052 = 164.8 (10.06)
- 057 = 180.7 (11.02)
- 062 = 196.7 (12.00)
- 066 = 213.3 (13.02)
- 072 = 227.1 (13.86)
- 085 = 268.7 (16.40)

Cam ring for "P2"

Volumetric displacement cm^3/rev (in^3/rev)

- 014 = 43.9 (2.68) 028 = 89.9 (5.49)
- 017 = 55.0 (3.36) 031 = 99.1 (6.05)
- 020 = 66.0 (4.03) 035 = 113.4 (6.92)
- 022 = 70.3 (4.29) 038 = 120.6 (7.36)
- 024 = 81.1 (4.95) 042 = 137.5 (8.39)

Cam ring for "P3"

Volumetric displacement cm^3/rev (in^3/rev)

- B02 = 5.7 (0.35) B11 = 34.9 (2.13)
- B03 = 9.8 (0.60) B12 = 40.9 (2.50)
- B04 = 12.8 (0.78) B14 = 45.1 (2.75)
- B05 = 15.9 (0.97) B15 = 50.0 (3.05)
- B06 = 19.8 (1.21) B17 = 58.3 (3.56)
- B07 = 22.5 (1.37) B20 = 63.8 (3.89)
- B08 = 24.9 (1.52) B22 = 70.3 (4.29)
- B09 = 28.0 (1.71) B25 = 79.3 (4.84)
- B10 = 31.8 (1.94)

Modifications

Mounting W/connection Variables

4 bolts SAE flange (J518)

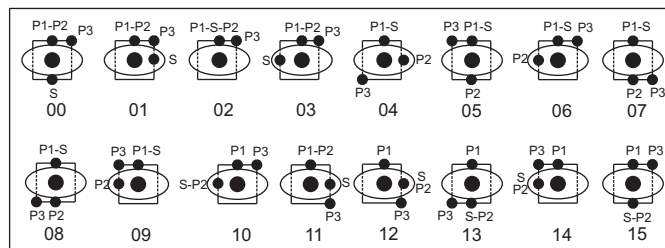
P1 = 1 1/2" P2 = 1 1/4" S = 4"			
	P3	UNC	METRIC
VST7EDC	1"	00	M0
	3/4"	01	M1

Seal Class

- 1 - S1 (for mineral oil)
- 4 - S4 (for fire resistant fluids)
- 5 - S5 (for mineral oil and fire resistant fluids)

Design Letters

Porting Combination



Direction of rotation (view on shaft end)

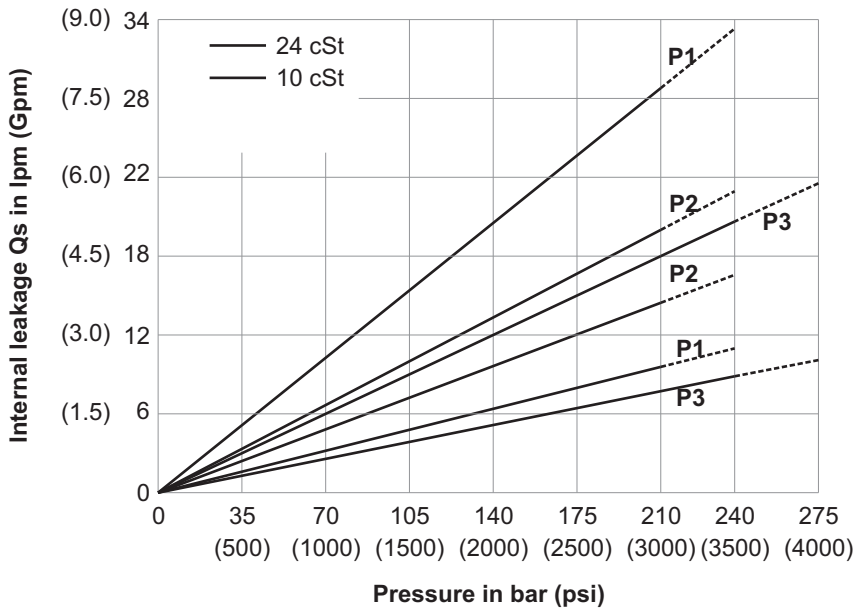
- R - clockwise
- L - Counter - Clockwise

Type of shaft

- 1 - Keyed
- 2 - Keyed (SAE D&E)
- 3 - Splined (SAE D&E)



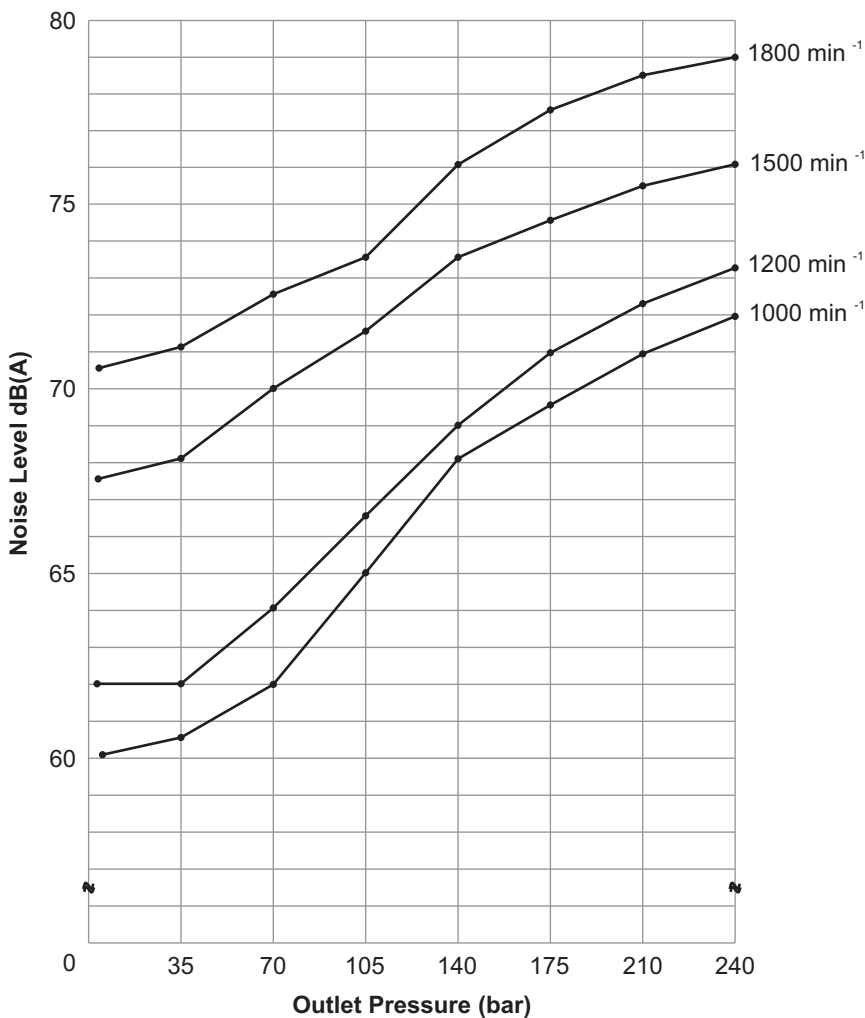
INTERNAL LEAKAGE (TYPICAL)



Do not operate pump more than 5 seconds at any speed or viscosity if internal leakage is more than 50 of theoretical flow. Total leakage is the sum of each section loss at its operating conditions.

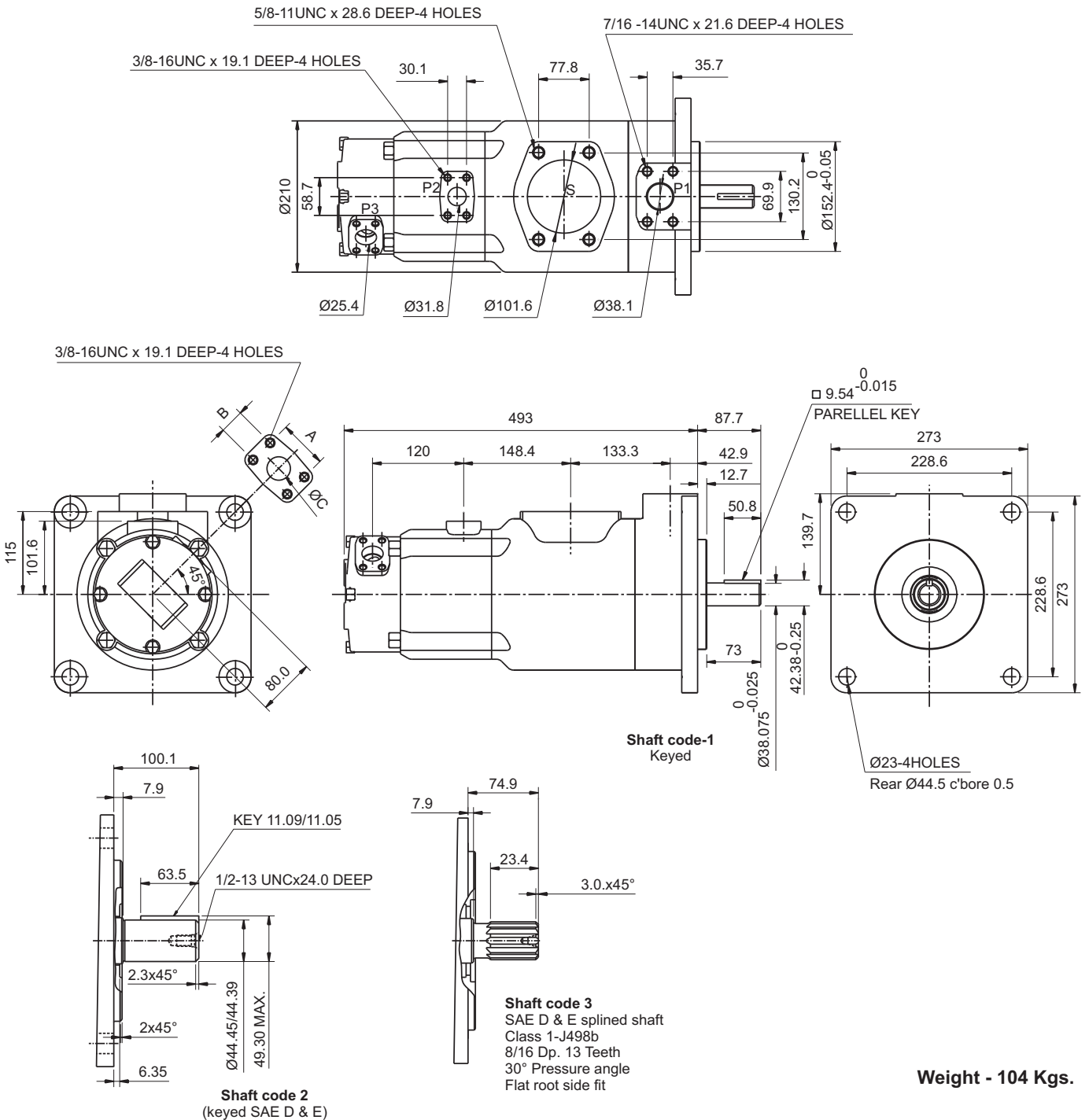


NOISE LEVEL (TYPICAL) VST7EDC-050-031-B08



Measurement Conditions:
ISO VG32 oil at 50°C and measured 1m from rear of pump cover

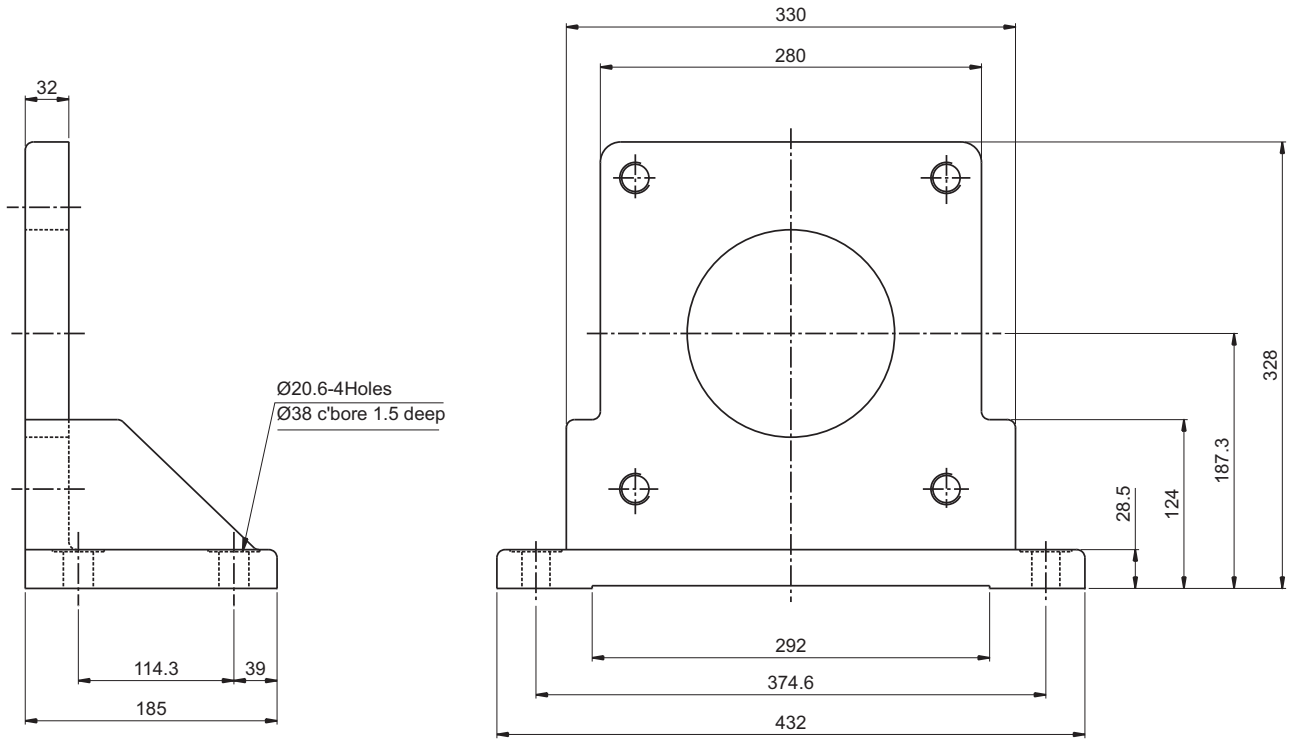
INSTALLATION DRAWING
FLANGE MOUNTING



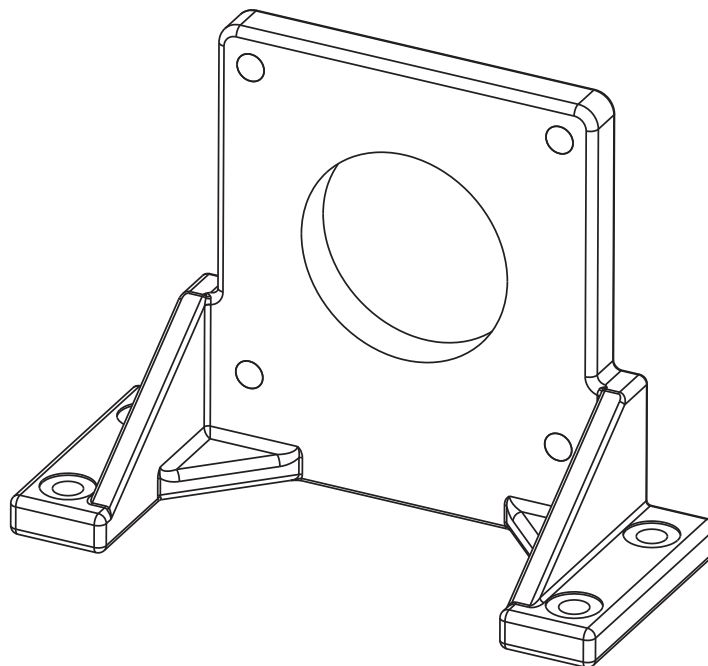
Shaft torque limits in ³ / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	101506 (114715)
2	104818 (118458)
3	112312 (126928)

PORT	CODE	A	B	ØC
P3	00 & M0	2.06 (52.4)	1.03 (26.2)	1.00 (25.4)
	01 & M1	1.874 (47.6)	0.874 (22.2)	0.75 (19.0)

INSTALLATION DRAWING
FOOT MOUNTING



TP



Weight - 25 Kgs.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3
	045	8.69	142.4	56.51	213.6	53.86	203.6	51.98	196.5
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6
	052	10.06	164.8	65.40	247.2	62.75	237.2	60.87	230.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0
	062	12.00	196.7	78.04	295.0	75.40	285.0	73.52	277.9
	066	13.02	213.3	84.63	319.9	81.98	309.9	80.11	302.8
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5
	085	16.40	268.7	107.00	404.7	--	--	--	--



Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.69	142.4	7.24	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	7.64	5.7	78.45	58.5	131.82	98.3
	052	10.06	164.8	7.78	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	8.18	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	8.58	6.4	96.42	71.9	162.67	121.3
	066	13.02	213.3	8.98	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	9.25	6.9	110.77	82.6	187.07	139.5
	085	16.40	268.7	9.78	7.3	--	--	--	--

* Max, int. pressure 240 bar

* Max, cont. pressure 210 bar

Measurement Conditions: ISO VG32 oil at 50°C

Note : 085 = 90 bar (1300 psi) max. int. & 085 = 2000 rpm max.

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P2	014	2.68	43.9	18.88	71.40	16.42	62.10	14.78	55.95
	017	3.36	55.0	23.10	87.30	20.60	78.00	18.99	71.88
	020	4.03	66.0	26.19	99.00	23.73	89.70	22.08	83.58
	022	4.29	70.3	28.85	109.21	26.41	99.97	25.31	95.81
	024	4.95	81.1	31.56	119.3	29.10	110.00	27.46	103.95
	028	5.49	89.9	35.58	134.50	33.12	125.20	31.48	119.16
	031	6.05	99.1	39.00	147.50	36.53	138.10	34.89	132.07
	035	6.92	113.4	44.04	166.50	41.58	157.20	39.94	151.18
	038	7.36	120.6	47.72	180.40	45.26	171.10	43.62	165.12
	042	8.39	137.5	53.96	204.00	51.50	194.70	49.86	188.74



Pressure port	Series	Volumetric Displacement Vp		Input power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P2	014	2.68	43.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.36	55.0	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.03	66.0	3.75	2.8	33.39	24.9	55.92	41.7
	022	4.29	70.3	4.00	2.9	36.50	27.7	63.80	46.6
	024	4.95	81.1	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.49	89.9	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.05	99.1	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.92	113.4	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.36	120.6	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.39	137.5	5.36	4.0	66.25	49.4	112.24	83.7

Max, int. pressure 240 bar
 Max, cont. pressure 210 bar
 Measurement Conditions: ISO VG32 oil at 50°C

OPERATING CHARACTERISTICS (24 cSt)

Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm
P3	B02	0.35	5.7	2.29	8.70	1.94	7.34	–	–
	B03	0.60	9.8	3.88	14.7	3.52	13.32	2.91	11.0
	B04	0.78	12.8	5.07	19.2	4.71	17.83	4.09	15.5
	B05	0.97	15.9	6.31	23.9	5.94	22.49	5.28	20.0
	B06	1.21	19.8	7.85	29.7	7.49	28.35	6.87	26.0
	B07	1.37	22.5	8.90	33.7	8.56	32.40	7.79	29.5
	B08	1.52	24.9	9.88	37.4	9.51	35.99	8.85	33.5
	B09	1.71	28.0	11.07	41.9	10.72	40.58	10.04	38.0
	B10	1.94	31.8	12.62	47.8	12.24	46.33	11.23	42.5
	B11	2.13	34.9	13.81	52.27	13.49	51.07	12.81	48.5
	B12	2.50	40.9	16.25	61.51	15.89	60.15	15.19	57.5
	B14	2.75	45.1	17.81	67.42	17.46	66.09	16.77	63.5
	B15	3.08	50.5	20.25	76.64	19.55	74.0	19.15	72.5
	B17	3.56	58.3	23.10	87.45	22.32	84.5	22.06	83.5
	B20	3.89	63.8	25.28	95.70	24.70	93.5	24.30	92.0
	B22	4.29	70.3	27.87	105.5	27.21	103.0	26.81	101.5
B25	4.84	79.3	31.44	119.0	31.04	117.5	30.64	116.0	



Pressure port	Series	Volumetric Displacement Vp		Flow q (lpm) & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)	
		in ³ /rev	cm ³ /rev	hp	kw	hp	kw	hp	kw
P3	B02	0.35	5.7	0.62	0.46	3.08	2.30	–	–
	B03	0.60	9.8	0.71	0.53	4.96	3.70	8.35	6.23
	B04	0.78	12.8	0.78	0.58	6.37	4.75	10.77	8.03
	B05	0.97	15.9	0.86	0.64	7.78	5.80	13.18	9.83
	B06	1.21	19.8	0.95	0.71	9.49	7.08	16.40	12.23
	B07	1.37	22.5	1.01	0.75	10.74	8.01	18.28	13.63
	B08	1.52	24.9	1.06	0.79	12.00	8.95	20.42	15.23
	B09	1.71	28.0	1.14	0.85	13.39	9.99	22.84	17.03
	B10	1.94	31.8	1.23	0.92	15.13	11.28	25.25	18.83
	B11	2.13	34.9	1.30	0.97	16.69	12.45	28.46	21.23
	B12	2.50	40.9	1.45	1.08	19.51	14.55	33.29	24.83
	B14	2.75	45.1	1.54	1.15	21.23	15.83	36.52	27.23
	B15	3.08	50.5	1.68	1.25	24.21	18.05	41.34	30.83
	B17	3.56	58.3	1.85	1.38	27.49	20.50	47.24	35.23
	B20	3.89	63.8	1.98	1.48	30.31	22.60	51.80	38.63
	B22	4.29	70.3	2.13	1.59	33.27	24.81	56.89	42.43
B25	4.84	79.3	2.35	1.75	37.82	28.20	64.68	48.23	

Max, cont. pressure 240 bar upto B12, 210 bar from B14 - B25
 Measurement Conditions: ISO VG32 oil at 50°C

CONSTRUCTION

- 1. Key
- 2. Shaft
- 3. Shaft Seal
- 4. Bearing
- 5. Retaining Ring
- 6. Mounting Flange
- 7. Cartridge
- 8. Housing
- 9. Cartridge
- 10. Port Block
- 11. Bolts
- 12. Cartridge
- 13. Endcap
- 14. Bolts

