

## 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  $\text{cm}^3/\text{rev}$  ( $\text{in}^3/\text{rev}$ )

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  $\text{cm}^3/\text{rev}$  ( $\text{in}^3/\text{rev}$ )

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  $\text{cm}^3/\text{rev}$  ( $\text{in}^3/\text{rev}$ )

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)

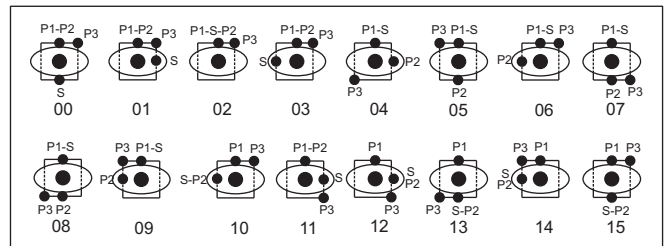
P1 = 1½"	P2 = 1¼"	S = 4"	
		P3	UNC
VST7EDB	1"	00	M0
	¾"	01	M1

### 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

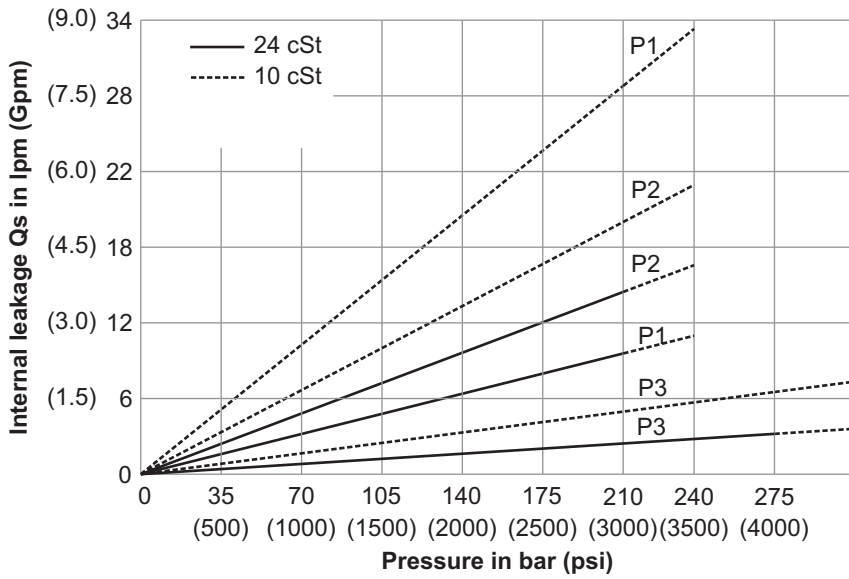
(view on shaft end)  
R - clockwise  
L - Counter - Clockwise

### Type of shaft

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

TP

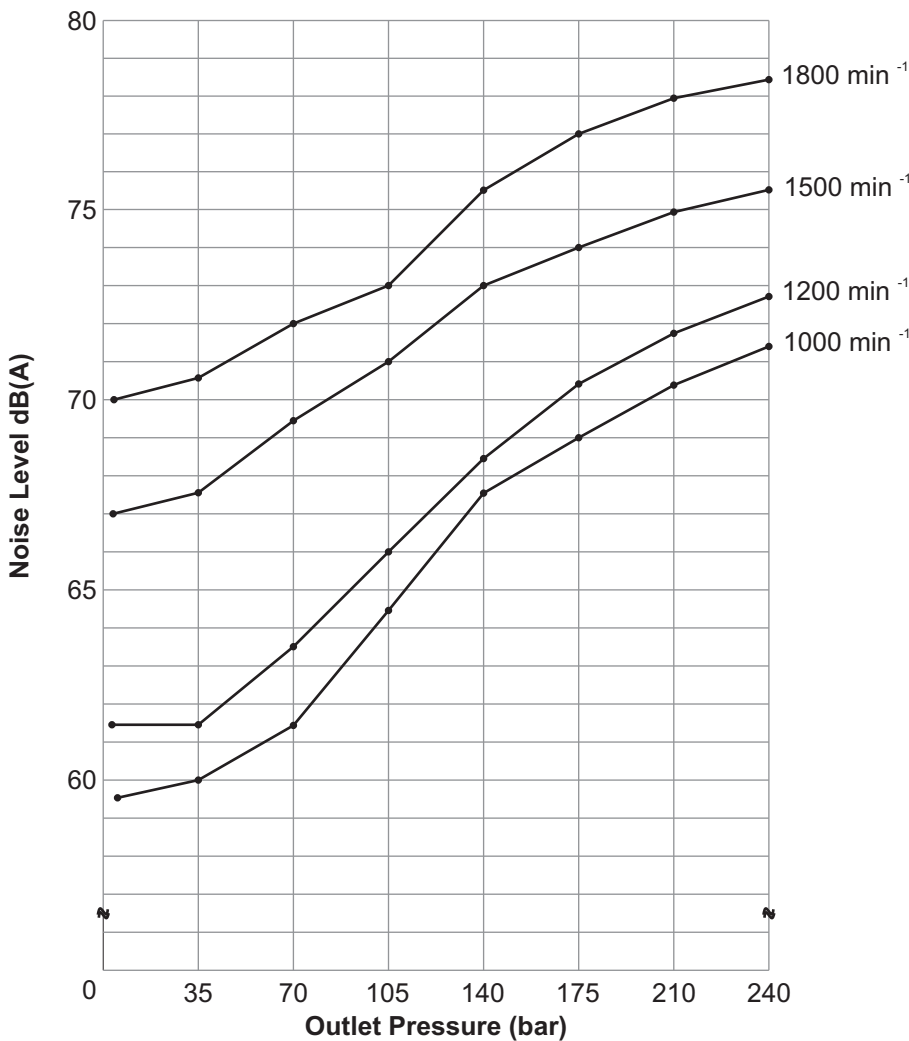
### INTERNAL LEAKAGE (TYPICAL)



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.

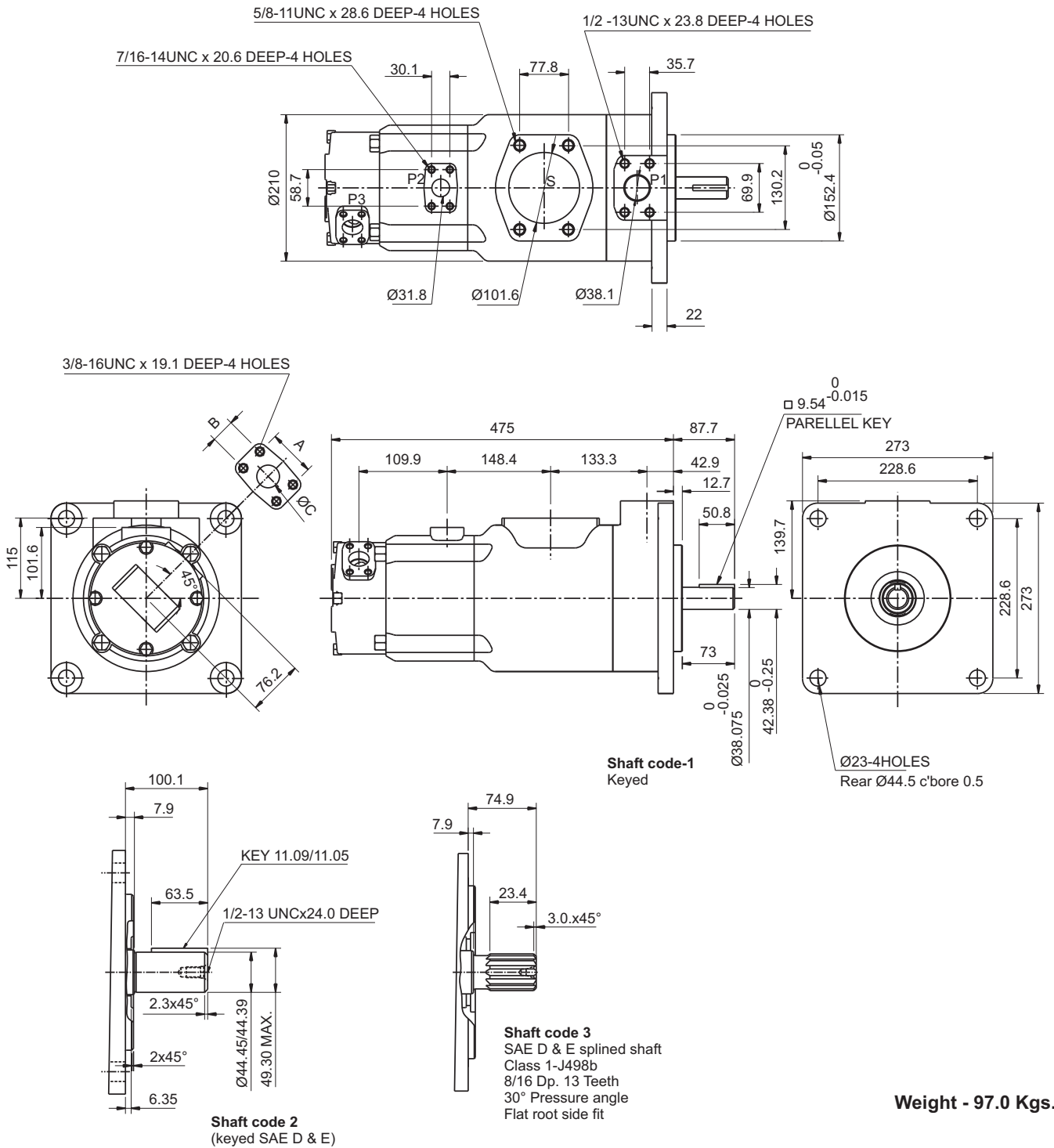


### NOISE LEVEL (TYPICAL) VST7EDB-062-028-B10



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

**INSTALLATION DRAWING**  
**FLANGE MOUNTING**

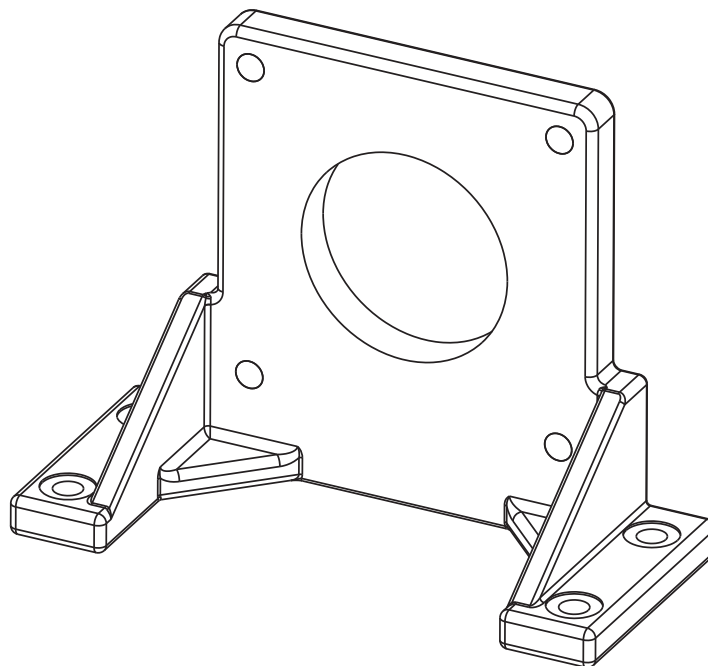
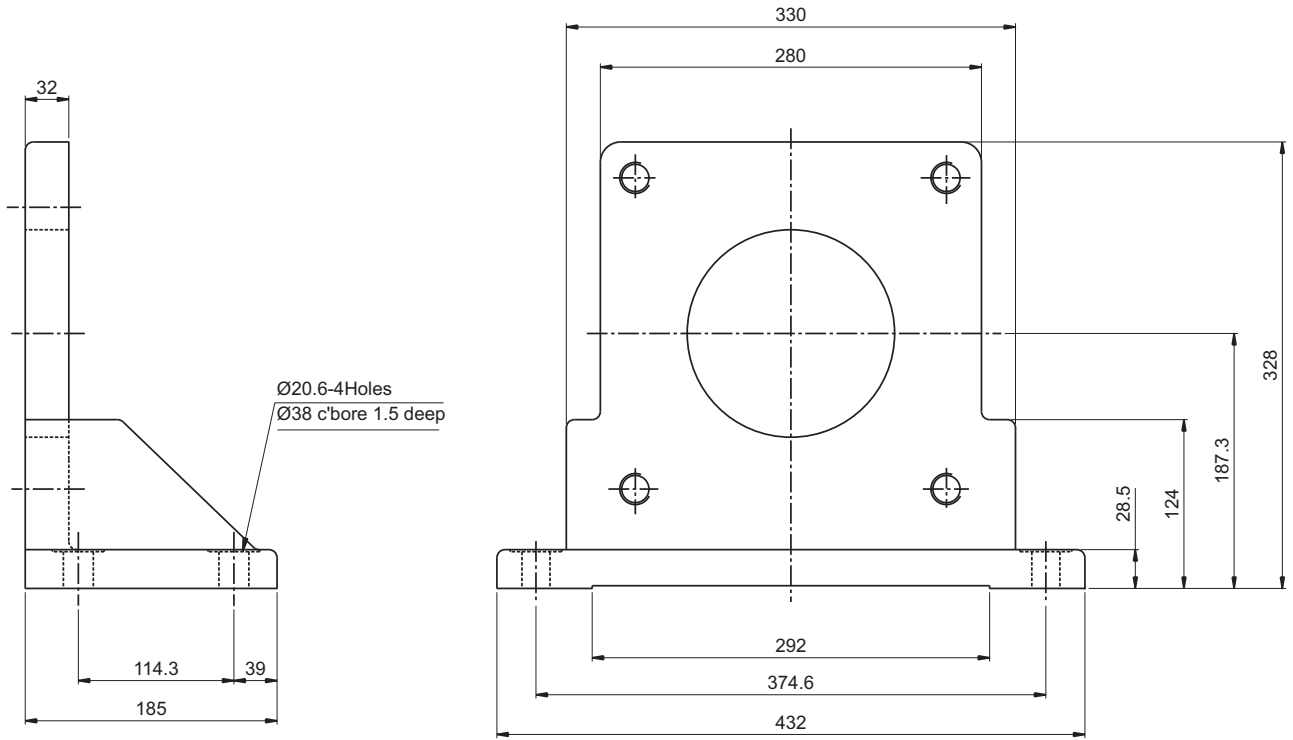


Shaft torque limits in <sup>3</sup> / rev x psi (ml / rev x bar)	
Shaft	Vp x p max. (P1+P2+P3)
1	101506 (114715)
2	104818 (118458)
3	112312 (126928)

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 Vp		Flow q (lpm) & n = 1500 rpm					
				p = 0 bar (0 psi)		p=140bar(2000psi)		p=240bar(3500psi)	
		in <sup>3</sup> /rev	cm <sup>3</sup> /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 Vp		Input Power p & n = 1500 rpm					
				p = 7 bar (100 psi)		p = 140bar(2000psi)		p = 240bar(3500psi)	
		in <sup>3</sup> /rev	cm <sup>3</sup> /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. &amp; 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 <sup>3</sup> /rev	cm <sup>3</sup> /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 <sup>3</sup> /rev	cm <sup>3</sup> /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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	gpm	lpm	gpm	lpm	gpm	lpm
<b>P3</b>	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 <sup>3</sup> /rev	cm <sup>3</sup> /rev	hp	kw	hp	kw	hp	kw
<b>P3</b>	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.

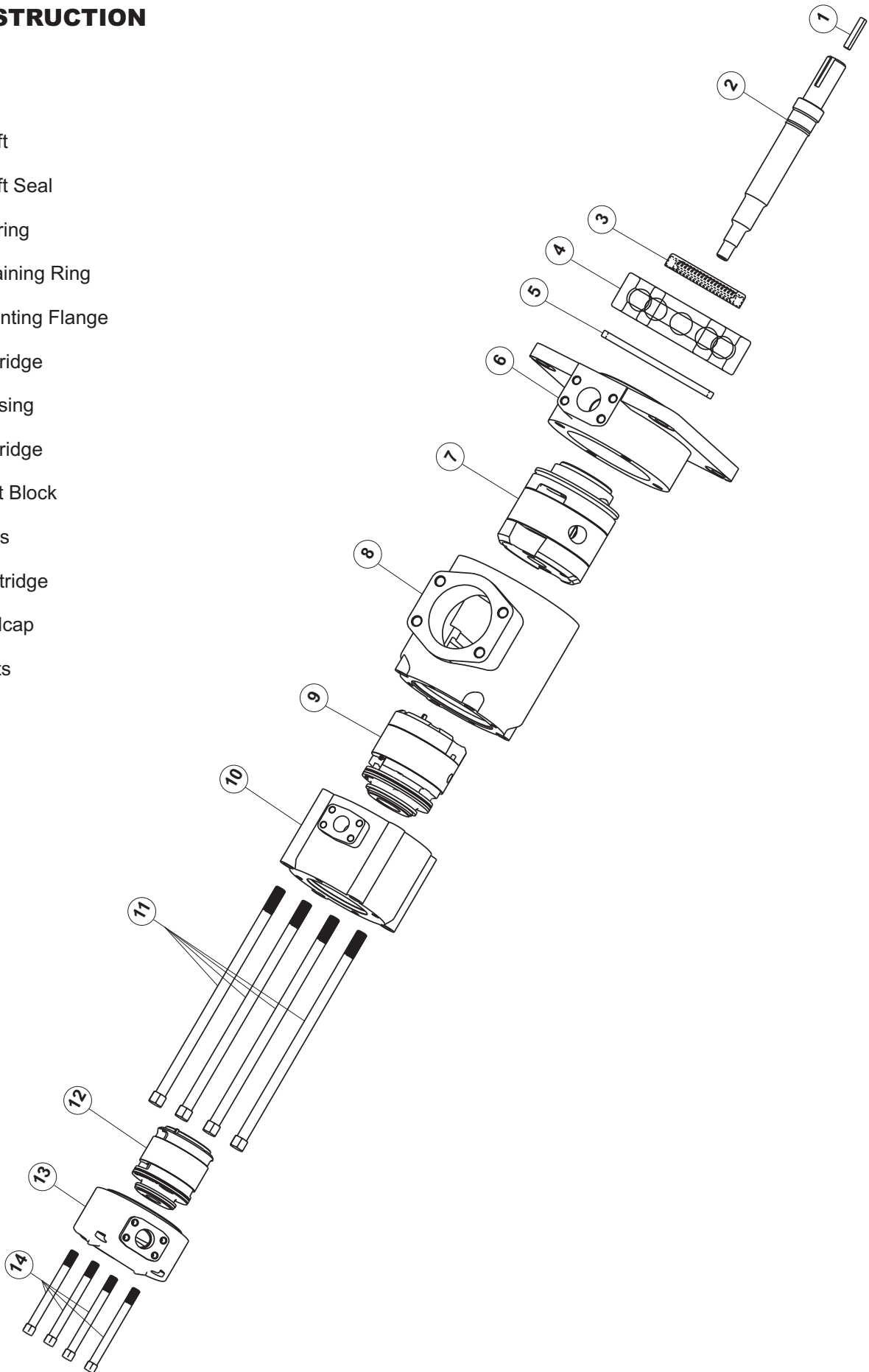
B12 = Max, int. pressure 210 bar(3000 psi)

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