

PRODUCT CATALOG



**YOUR SOURCE FOR HIGH QUALITY
HYDRAULIC VANE PRODUCTS**

FPO

FPO

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The Product information, specifications and descriptions contained in this catalog are subject to change without notice. All manufacturers names, numbers and descriptions are used for reference only. It is not implied any part listed is the product of any particular manufacturer.

Vane Pumps V10/V20

Model & Series	Ring Size - delivery US gpm @1200 RPM & 100psi (LPM @ 1200 RPM & 7 Bar)	Displacement In 3/r (cm 3/r)	Max. Speed r/min	Max. Pressure psi (bar)	Typical delivery US gpm (L/min) @ max. speed & pressure	Typical input power hp (KW) @ max. speed & pressure	Weight lb (kg)
V10	1 (3.79)	0.20 (03,3)	4800	2500 (172)	3.60 (13,6)	07.0 (05,2)	10 - 15 (4,5 - 6,8)
	2 (7.58)	0.40 (06,6)	4500	2500 (172)	7.30 (27,6)	13.6 (10,1)	
	3 (11.4)	0.60 (09,8)	4000	2500 (172)	9.40 (35,6)	17.8 (13,3)	
	4 (15.1)	0.80 (13,1)	3400	2500 (172)	10.9 (41,3)	20.4 (15,2)	
	5 (18.9)	1.00 (16,4)	3200	2500 (172)	12.8 (48,5)	22.8 (17,0)	
	6 (22.7)	1.19 (19,5)	3000	2500 (172)	14.6 (55,3)	26.0 (19,4)	
	7 (26.4)	1.39 (22,8)	2800	2500 (172)	16.0 (60,6)	28.0 (20,7)	
V20	6 (22.7)	1.19 (19,5)	3400	2500 (172)	16.1 (60,9)	29.0 (21,6)	16 - 18 (7,3 - 8,2)
	7 (26.4)	1.39 (22,8)	3000	2500 (172)	16.7 (63,2)	29.5 (22,0)	
	8 (30.2)	1.62 (26,5)	2800	2500 (172)	17.7 (67,0)	32.5 (24,2)	
	9 (34.0)	1.81 (29,7)	2800	2500 (172)	19.8 (75,0)	35.5 (26,5)	
	11 (41.6)	2.22 (36,4)	2500	2500 (172)	22.9 (86,7)	37.5 (28,0)	
	12 (45.4)	2.38 (39,0)	2400	2500 (172)	23.0 (87,1)	38.5 (28,5)	
	13 (49.2)	2.59 (42,4)	2400	2500 (172)	25.9 (98,0)	42.0 (31,0)	

Based on using petroleum oil at 120°F(49°C), viscosity 150 SUS at 100°F (32 cSt at 38°C), and 0 psi inlet pressure.

Single Pump ordering, operating specifications

F3 - V10 - 1 P 5 S - 1 C 20 L

1 2 3 4 5 6 7 8 9 10



- 1 Viton Seal**
Omit if not required
- 2 Pump & Series**
10 or 20
- 3 Mounting**
1 - 2-bolt flange, 3.25" pilot (Standard)
6 - 2-bolt flange, 4.00" pilot (Optional)
- 4 Inlet port connections**
P - 1" NPT Thread (V10 only)
1" NPT Thread (V20 only)
S - 1.3125 - 12 Straight thread (V10 only)
1.625 - 12 Straight thread (V20 only)
- 5 Ring Size**
(Delivery at 1200 r/min and 100 psi)
V10 - 1-7 gpm
V20 - 6-13 gpm
- 6 Outlet port connections**
P - 1/2" NPT thread (V10 only)
1.1875-12 Straight thread (V20 only)
S - .750-16 Straight thread (V10 only)
1.0625-12 Straight thread (V20 only)
- 7 Shaft**
1 - Straight Keyed
11 - Splined
38 - Splined
- 8 Position of outlet port**
(Viewed from cover end of pump)
A - Opposite inlet port
B - 90° CCW from inlet
C - Inline with inlet
D - 90° CW from inlet
- 9 Design**
- 10 Shaft rotation**
(Viewed from the shaft end of the pump)
L - Left handed (counterclockwise)
Omit for right hand

V10F/NF & V20F/NF Vane Pumps

FPO

Series	Delivery US gpm @1200 rpm 7bar (100 psi)	Displ. cm 3/r (in 3/r)	Max. r/min	Wt. (lb.) kg.
V10F	1	3,3 (.20)	4800	10 - 15 (4,5 - 6,8)
	2	6,6 (.40)	4500	
	3	9,8 (.60)	4000	
	4	13,1 (.80)	3400	
	5	16,4 (1.00)	3200	
	6	19,5 (1.19)	3000	
	7	22,8 (1.39)	2800	
V20F	6	19,5 (1.19)	3400	16 - 18 (7,3 - 8,2)
	7	22,8 (1.39)	3000	
	8	26,6 (1.62)	2800	
	9	29,7 (1.81)	2800	
	11	36,4 (2.22)	2500	
	12	39 (2.38)	2400	
	13	42,5 (2.59)	2400	



Double Pump ordering, operating specifications

FPO

F3 - V10 F - 1 P 5 P - 1 C 4G L

1 2 3 4 5 6 7 8 9 10 11

1 Viton Seal Omit if not required

2 Pump & Series 10 or 20

3 Integral Valve Options F - Flow control

4 Mounting 1 - 2 bolt flange (SAE "A" Size)

5 Inlet port connections

V-10F/NF Model

P - 1.3123" 12-Straight Thread

S - 1.1875" 12-Straight Thread

B - British Straight Parallel Pipe

V20 Model Series

P - 1 1/4" NPT Thread

S - 1.625 12-Straight Thread

6 Ring Size

Cam Ring Size & Rate Flow (@ 1200 rpm and 100 psi)

V10 - 1-7 gpm

V20 - 7-13 gpm

7 Outlet port connections

Code	Std. Cover	Flow Port Cover	
		Pressure	Tank
P	.50" NPT thd. (V10) 3/4" NPT thd. (V20)	- 3/4"-16 St. thd. (V10F & V20F)	- 1/2" NPT thd.
R	1.062"-12 St. thd. (V10)	-	-
S	.750"-16 St. thd. (V10) 1.062"-12 St. thd. (V20)	- 3/4"-16 St. thd. (V20F)	- 1-1/16"-12 St. thd. (V20F)
T	-	3/4"-16 St. thd. (V10F)	3/4"-16 St. thd. (V10F)
Y	.875" - 14 St. thd.	-	-

8 Shafts

9 Position of outlet port (Viewed from cover end of pump)

A - Opposite inlet port

B - 90° CCW from inlet

C - Inline wth inlet

D - 90° CW from inlet

10 Integral Valving

Orifice No.	Flow Rate in GPM (LPM)	Relief Valve Setting PSI (Bar)
2	2 gpm (7.5)	A - 2500 PSI (17.2)
3	3 gpm (11.3)	B - 500 PSI (34.5)
4	4 gpm (15.1)	C - 750 PSI (513.7)
5	5 gpm (18.9)	D - 1000 PSI (69)
6	6 gpm (22.7)	E - 1250 PSI (86.2)
7	7 gpm (26.5)	F - 1500 PSI (103.5)
8	8 gpm (30.2)	G - 1750 PSI (120.7)
9	9 gpm (34.0)	H - 2000 PSI (138)
10	10 gpm (37.8)	J - 2250 PSI (155.2)
11	11 gpm (41.6)	K - 2500 PSI (172.5)
12	12 gpm (45.4)	-

11 Shaft rotation

(As viewed from the shaft end of the pump)

L - Left handed (counterclockwise)

Omit for right hand

FPO

Vane Pumps V2010/V2020

FPO

Shaft End							Cover End					
Model & Series	Ring Size gpm @1200 RPM & 100psi (LPM @ 1200)	Displ. cu.in/r (cm 3/r)	Max. rpm	Max. psi (bar)	Typical delivery US gpm (L/min) @ max. speed & pressure	Typical input hp (KW) @max. speed & pressure	Ring Size gpm @1200 RPM & 100psi (LPM @ 1200)	Displ. cu.in/r (cm 3/r)	Max. rpm	Max. psi (bar)	Typical delivery US gpm (L/min) @ max. speed & pressure	Typical input hp (KW) @max. speed & pressure
V2010	6 (22.7)	1.19 (19,5)	3000	2500 (172)	14.5 (54,9)	24.5 (18,3)	1 (3.79)	3.3 (,20)	3000	2500 (172)	2.0 (7,6)	4.5 (3,4)
	7 (26.4)	1.39 (22,8)	3000	2500 (172)	16.5 (62,5)	30.0 (22,4)	2 (7.58)	6.6 (,40)	3000	2500 (172)	4.7 (17,8)	9.0 (6,7)
	8 (30.2)	1.62 (26,5)	2800	2500 (172)	17.5 (66,2)	32.5 (24,2)	3 (11.4)	9.8 (,60)	3000	2500 (172)	7.0 (26,5)	13.4 (10,0)
	9 (34.0)	1.81 (29,7)	2800	2500 (172)	20.0 (75,7)	36.0 (26,8)	4 (15.1)	0.80 (13,1)	3000	2500 (172)	9.5 (36,0)	18.0 (13,4)
	11 (41.6)	2.22 (36,4)	2500	2500 (172)	23.0 (87,1)	37.5 (28,0)	5 (18.9)	1.00 (16,4)	3000	2500 (172)	12.0 (45,4)	21.5 (16,0)
	12 (45.4)	2.38 (39,0)	2400	2200 (152)	23.0 (87,1)	36.0 (26,8)	6 (22.7)	1.19 (19,5)	3000	2500 (172)	14.5 (54,9)	24.5 (18,3)
	13 (49.2)	2.59 (42,4)	2400	2200 (152)	26.0 (98,4)	39.0 (29,1)	7 (26.4)	1.39 (22,8)	2800	2500 (172)	16.0 (60,6)	24.0 (17,9)
V2020	6 (22.7)	1.19 (19,5)	3000	2500 (172)	14.5 (54,9)	24.5 (18,3)	6 (22.7)	1.19 (19,5)	3000	2500 (172)	14.5 (54,9)	26.0 (19,4)
	7 (26.4)	1.39 (22,8)	3000	2500 (172)	16.5 (62,5)	30.0 (22,4)	7 (26.4)	1.39 (22,8)	3000	2500 (172)	16.5 (62,5)	30.0 (22,4)
	8 (30.2)	1.62 (26,5)	2800	2500 (172)	17.5 (66,2)	32.5 (24,2)	8 (30.2)	1.62 (26,5)	2800	2500 (172)	17.5 (66,2)	32.5 (24,2)
	9 (34.0)	1.81 (29,7)	2800	2500 (172)	20.0 (75,7)	36.0 (26,8)	9 (34.0)	1.81 (29,7)	2800	2500 (172)	20.0 (75,7)	36.0 (26,8)
	11 (41.6)	2.22 (36,4)	2500	2500 (172)	23.0 (87,1)	37.5 (28,0)	11 (41.6)	2.22 (36,4)	2500	2500 (172)	23.0 (87,1)	7.5 (28,0)
	12 (45.4)	2.38 (39,0)	2400	2200 (152)	23.0 (87,1)	36.0 (26,8)						
	13 (49.2)	2.59 (42,4)	2400	2000 (132)	26.0 (98,4)	39.0 (26,4)						

Based on using petroleum oil at 120°F(49°C), viscosity 150 SUS at 100°F (32 cSt at 38°C), and 0 psi inlet pressure

FPO

Double Pump ordering, operating specifications

F3 - V2010 - 1 F 13 S 3 S - 1 CC 12 L

1 2 3 4 5 6 7 8 9 10 11 12



- 1** Viton Seal
Omit if not required
- 2** Vane Pump & Series
2010 or 2020
- 3** Mounting
1 - 2-bolt flange, 4.00" pilot (Standard)
6 - 2-bolt flange, 3.25" pilot (Optional)
- 4** Inlet port connections
F - 4-bolt flange 1.50 dia (V2010)
2.00 dia (V2020)
- 5** Ring Size (Shaft-end Pump)
(Delivery at 1200 r/min and 100 psi)
6 - 13 gpm
- 6** No. 1 outlet port (shaft end)
S - .750 - 16 straight thread (V2010)
1.062 - 12 straight thread (V2020)
- 7** Ring size (cover-end pump)
(Delivery at 1200 r/min and 100 psi)
V10 - 1-7 gpm
V20 - 6-11 gpm
- 8** No. 2 outlet port (cover end)
S - .750 - 16 straight thread (V2010)
1.062 - 12 straight thread (V2020)
- 9** Shaft
1 - Straight Keyed
11 - Splined
- 10** Position of outlet
(Viewed from cover end of pump)
- 11** Design
- 12** Shaft rotation
L - Left handed for counterclockwise
Omit for right hand

FPO

V & VQ Single Vane Pumps (10 & 12 Vane Design)

FPO

Model & Series	Ring Size - gpm @1200 RPM & 100psi (LPM @ 1200 RPM & 7 Bar)	Displacement cu.in/rev (cm3/rev)	Max. rpm VQ Series	Max. psi (bar) VQ Series	Max. rpm V-Series	Max. psi (bar) V-Series	Weight lb (kg)
25	12 (45,5)	02.45 (40)	2700	3000 (210)	1800	3000 (207)	32 (14,8)
	14 (53,1)	02.77 (45)	2700	3000 (210)	1800	3000 (207)	
	17 (64,4)	03.37 (55)	2500	3000 (210)	1800	3000 (207)	
	21 (79,6)	04.12 (67)	2500	3000 (210)	1800	3000 (207)	
35	25 (94,8)	04.98 (81)	2500	3000 (210)	1800	3000 (207)	50 (22,7)
	30 (113,7)	05.96 (97)	2500	3000 (210)	1800	3000 (207)	
	35 (132,6)	06.88 (112)	2400	3000 (210)	1800	3000 (207)	
	38 (144,0)	07.42 (121)	2400	3000 (210)	1800	3000 (207)	
45	42 (159,2)	08.46 (138)	2200	2500 (175)	1800	3000 (207)	75 (34)
	50 (189,5)	09.90 (162)	2200	2500 (175)	1800	3000 (207)	
	60 (227,4)	11.80 (193)	2200	2500 (175)	1800	3000 (207)	

Based on using petroleum oil at 120°F(49°C), viscosity 150 SUS at 100°F (32 cSt at 38°C), and 0 psi inlet pressure.

FPO

Double Pump ordering, operating specifications

25 VQ 12 - A - 1 - CC - 20 (L)

1 2 3 4 5 6 7 8

- | | | |
|---------------------------------|-------------------|-----------------|
| 1 Series | 4 Port Connection | 7 Design Number |
| 2 V - Industrial
VQ - Mobile | 5 Shaft | 8 Rotation |
| 3 V - Industrial | 6 Port Positions | |

Vane Pump Series

25V/VQ	3525V/VQ
35V/VQ	4520V/VQ
45V/VQ	4525V/VQ
2520V/VQ	4535V/VQ
3520V/VQ	

When Ordering please specify:

- Pump rotation
- Port position
- Cartridge gallonage
- Viton/Nitrile
- Single/Double seal
- Shaft Code

FPO



V & VQ Double Vane Pumps (10 & 12 Vane Design)

Shaft End							Cover End					
Model & Series	Ring Size gpm @1200 RPM & 100psi (LPM @ 1200 RPM & 7 Bar)	Displ. cu.in/r (cm 3/r)	Max. rpm VQ Series	Max. psi (bar) VQ Series	Max. rpm V Series	Max. psi (bar) V Series	Ring Size gpm @1200 RPM & 100psi (LPM @ 1200 RPM & 7 Bar)	Displ. cu.in/r (cm 3/r)	Max. rpm VQ Series	Max. psi (bar) VQ Series	Max. rpm V Series	Max. psi (bar) V Series
2520 45 (20)	12 (45,5)	02.45 (40)	2700	3000 (210)	1800	2500 (172)	05 (19,0)	1.10 (18)	2700	3000 (210)	1800	3000 (207)
	14 (53,1)	02.76 (45)	2700	3000 (210)	1800	2500 (172)	08 (30,3)	1.67 (27)	2700	3000 (210)	1800	3000 (207)
	17 (64,4)	03.37 (55)	2700	3000 (210)	1800	2500 (172)	11 (41,7)	2.22 (36)	2700	3000 (210)	1800	3000 (207)
	21 (79,6)	04.12 (67)	2700	3000 (210)	1800	2500 (172)	12 (45,5)	2.41 (39)	2700	2300 (160)	1800	3000 (207)
3520 77 (34)	14 (53,0)	2.80 (46)	2700	3000 (210)	1800	2500 (172)	14 (53,0)	2.80 (46)	2700	2000 (140)	1800	3000 (207)
	25 (94,8)	04.98 (81)	2500	3000 (210)	1800	2500 (172)	05 (19,0)	1.10 (18)	2500	3000 (210)	1800	3000 (207)
	30 (113,7)	05.96 (97)	2500	3000 (210)	1800	2500 (172)	08 (30,3)	1.67 (27)	2500	3000 (210)	1800	3000 (207)
	35 (132,6)	06.88 (112)	2400	3000 (210)	1800	2500 (172)	11 (41,7)	2.22 (36)	2500	3000 (210)	1800	3000 (207)
3525 76 (34,5)	38 (144,0)	07.42 (121)	2400	3000 (210)	1800	2500 (172)	12 (45,5)	2.41 (39)	2500	2300 (160)	1800	3000 (207)
	25 (94,8)	04.98 (81)	2500	3000 (210)	1800	2500 (172)	14 (53,0)	2.80 (46)	2500	2000 (140)	1800	3000 (207)
	30 (113,7)	05.96 (97)	2500	3000 (210)	1800	2500 (172)	05 (19,0)	1.10 (18)	2500	3000 (210)	1800	2500 (172)
	35 (132,6)	06.88 (112)	2400	3000 (210)	1800	2500 (172)	08 (30,3)	1.67 (27)	2500	3000 (210)	1800	2500 (172)
4520 94 (43)	38 (144,0)	07.42 (121)	2400	3000 (210)	1800	2500 (172)	17 (64,4)	3.37 (55)	2500	3000 (210)	1800	2500 (172)
	25 (94,8)	04.98 (81)	2500	3000 (210)	1800	2500 (172)	21 (79,6)	4.12 (67)	2500	3000 (210)	1800	2500 (172)
	30 (113,7)	05.96 (97)	2500	3000 (210)	1800	2500 (172)	12 (45,5)	2.41 (39)	2200	3000 (210)	1800	3000 (207)
	35 (132,6)	06.88 (112)	2400	3000 (210)	1800	2500 (172)	08 (30,3)	1.67 (27)	2200	3000 (210)	1800	3000 (207)
4525 101 (46)	60 (227,4)	11.80 (193)	2200	2500 (175)	1800	2500 (172)	11 (41,7)	2.22 (36)	2200	3000 (210)	1800	3000 (207)
	42 (159,2)	08.46 (138)	2200	2500 (175)	1800	2500 (172)	12 (45,5)	2.41 (39)	2200	2300 (160)	1800	3000 (207)
	50 (189,5)	09.90 (162)	2200	2500 (175)	1800	2500 (172)	14 (53,0)	2.80 (46)	2200	2000 (140)	1800	3000 (207)
	60 (227,4)	11.80 (193)	2200	2500 (175)	1800	2500 (172)	17 (64,4)	3.37 (55)	2200	3000 (210)	1800	2500 (172)
4535 118 (54)	21 (79,6)	4.12 (67)	2200	2500 (175)	1800	2500 (172)	21 (79,6)	4.12 (67)	2200	3000 (210)	1800	2500 (172)
	42 (159,2)	08.46 (138)	2200	2500 (175)	1800	2500 (172)	12 (45,5)	2.41 (39)	2200	3000 (210)	1800	2500 (172)
	50 (189,5)	09.90 (162)	2200	2500 (175)	1800	2500 (172)	14 (53,0)	2.80 (46)	2200	3000 (210)	1800	2500 (172)
	60 (227,4)	11.80 (193)	2200	2500 (175)	1800	2500 (172)	17 (64,4)	3.37 (55)	2200	3000 (210)	1800	2500 (172)

Based on using petroleum oil at 120°F(49°C), viscosity 150 SUS at 100°F (32 cSt at 38°C), and 0 psi inlet pressure.

Double Pump ordering, operating specifications

3525 VQ 35 A 17 S - 1 - CC - 20 (L)

1 2 3 4 5 6 7 8 9 10

- 1 Series
- 2 V - Industrial VQ - Mobile
- 3 Shaft End gpm
- 4 Port Connection
- 5 Cover End gpm
- 6 Mounting
- 7 Shaft Code
- 8 Port Position
- 9 Design
- 10 Rotation

VTM Pumps



Model & Series	Delivery GPM @ 1200 RPM 100 PSI	Displacement cu.in/rev	Max. Speed - Rpm @ 100 PSI	Max. Speed - Rpm @ 1500 PSI	Max. Speed - Rpm @ 2000 PSI	Max. Pressure PSI	Approx. Weight lbs.
VTM28	1	.21	7000	5000	-	1500	14
	1.5	.31	7000	4500	-	1500	
	2	.38	7000	4200	-	1500	
	4	.79	7000	2800	-	1500	
	5	.96	6000	2600	-	1500	
	6	1.18	5000	2500	-	1500	
VTM42	1	.21	7000	5000	4250	2000	14
	1.5	.31	7000	4500	4000	2000	
	2	.38	7000	4200	3800	2000	
	4	.79	7000	2800	2800	2000	
	5	.96	6000	2600	2300	2000	
	6	1.18	5000	2500	2000	2000	

Pump ordering, operating specifications

VT M 42 - 60 - 20 - T5 - (F) (S) ** - *1 - 14

- 1
2
3
4
5
6
7
8
9
10
11



- 1 Vane Type**
- 2 Mobile Application**
- 3 Series 42**
- 4 Capacity**
 10 - 1.0 US GPM
 15 - 1.5 US GPM
 20 - 2.0 US GPM
 40 - 4.0 US GPM
 50 - 5.0 US GPM
 60 - 6.0 US GPM
- 5 Controlled Flow**
 (1500 rpm @ 100 psi)
 07 - 0.7 US GPM
 15 - 1.5 US GPM
 20 - 2.0 US GPM
 25 - 2.5 US GPM
 30 - 3.0 US GPM
 35 - 3.5 US GPM
 40 - 4.0 US GPM
 45 - 4.5 US GPM
 50 - 5.0 US GPM
 55 - 5.5 US GPM
 60 - 6.0 US GPM
 65 - 6.5 US GPM
 75 - 7.5 US GPM

- 6 Relief Valve Setting**
 02 - 250 psi
 03 - 300 psi
 05 - 500 psi
 07 - 750 psi
 08 - 850 psi
 10 - 1000 psi
 12 - 1250 psi
 15 - 1500 psi
 17 - 1750 psi
 20 - 2000 psi
 35 - 3500 psi
- 7 Filter Parts**
- 8 Inlet Screen**
- 9 Pump Rotation**
 (Viewed from Shaft End)
 R - Clockwise
 L - Counterclockwise
- 10 Shaft No. 1**
- 11 Design**

For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 18/15 or cleaner. Selections from Vickers OFP, OFR, and OFRS series are recommended.

Caterpillar Pumps

Here are just a few of the Caterpillar pumps we can supply.

- | | |
|--------|--------|
| 9J5050 | 9J8182 |
| 9J5070 | 9J8195 |
| 9J5053 | 3G7636 |
| 3G7640 | 9J5080 |
| 9J5075 | 9J5051 |
| 9J5048 | 9T0486 |
| 3G5810 | |

Contact our Sales Department with your Caterpillar number and we will do the rest.



Triple Pumps

2520 VQV10 Triple Pump

F3 2520VQ S V10 S 17 A 8 S 3 - S 297 B C A 4 G - 20 R

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

1 F3 - Viton seal (Omit if not required)

2 Double Pump Series

3 SAE Mounting

4 Single Pump series

5 Cover option for V10 pump

S – Standard Cover, F – Integral Flow & relief valve

6 SAE rate Flow, Shaft –End Pump

12 gpm, 14 gpm, 17 gpm, 19 gpm, 21 gpm

7 Double pump port connection

A – All SAE 4 bolt flange

8 SAE rate flow, Center Pump

5 gpm, 8 gpm, 9 gpm, 11 gpm, 12 gpm, 14 gpm

9 Outlet port connection – No. 3

Standard Cover

S - .750 – 16 st. thd.

Flow Control Cover

T - .750 – 16 st. thd, control port & Tank

10 SAE rate flow, cover end pump

1 – 7 gpm

11 Shaft Seal

S – Double, *Blank* – Single seal

12 Shaft

277 – SAE B Spline, 297 – SAE BB Spline

13 Outlet port position – No. 1 (see table below)

14 Outlet port position – No. 2

15 Outlet port position – No. 3

Position viewed from cover end	No 1	No. 2	No. 3
Opposite inlet	A	-	A
135 CCW from inlet	-	A	-
90 CCW from inlet	B	-	B
45 CCW from inlet	-	B	-
Inline with inlet	C	-	C
45 CW from inlet	-	C	-
90 CW from inlet	D	-	D
135 CW from inlet	-	D	-

16 Control flow rate, V10F - only (Omit for standard cover)

3 gpm - 11 L/min

6 gpm - 23 L/min

4 gpm - 15 L/min

7 gpm - 27 L/min

5 gpm - 19 L/min

8 gpm - 30 L/min

17 Relief valve setting - V10F only

A – 17 bar (250 PSI)

F – 100 bar (1500 PSI)

B – 35 bar (500 PSI)

G – 121 bar (1750 PSI)

C – 52 bar (750 PSI)

H – 140 bar (2000 PSI)

D – 70 bar (1000 PSI)

J – 155 bar (2250 PSI)

E – 86 bar (1250 PSI)

K – 175 bar (2500 PSI)

18 Design - 20

19 Shaft rotation (Viewed from the shaft end of pump)

L – Left hand (counter clockwise), R – Right hand

3525 VQV10 Triple Pump

(F3) - 3525VQ S V10 * - * * * * * - * * * * * * * - 20 *

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

1 Special seals

F3 - Viton "O" Rings and shaft seals

2 Pump series designation

35**VQ - Shaft end pump

**25VQ - Center pump

3 Body mounting flange

S - SAE mounting per J-744 101-2

4 Pump series designation

V10 cover end pump

5 V10 pump cover options

S - Standard cover

F - Flow control and relief cover

P - Priority valve and relief cover

6 SAE rated capacity

(VQ shaft - end cartridge)

21 - 21 USgpm 35 - 35 USgpm

25 - 25 USgpm 38 - 38 USgpm

30 - 30 USgpm

7 VQ port connections

(inlet & outlet #1 & #2)

A - 4 bolt flange (inch threads)

8 Rated capacity

(VQ center cartridge)

12 - 12 USgpm

19 - 19 USgpm

14 - 14 USgpm

21 - 21 USgpm

17 - 17 USgpm

9 V10 port connections

V10s standard covers and outlet #3

S - .750 - 16 Str/ thd. Y - .875 - 14 Str. thd.

P - 1/2" - NPT thd. R - 1.062 - 12 Str. thd.

V10F flow/relief control cover

T - .750 - 16 Str. thd. .750 - 16 Str. thd.

P - .750 - 16 Str. thd. 1/2" - NPT thd.

Triple Pumps

4535 VQV10 Triple Pump

(F3) - 4535VQ S V10 * - * * * * * - * * * * * * * - 20 *

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

1 Special seals
F3 - Viton "O" Rings and shaft seals

2 Pump series designation
45**VQ - Shaft end pump
**35VQ - Center pump

3 Body mounting flange
S - SAE mounting per J-744 101-2

4 Pump series designation
V10 cover end pump

5 V10 pump cover options
S - Standard cover
F - Flow control and relief cover
P - Priority valve and relief cover

6 SAE rated capacity
(VQ shaft - end cartridge)
42 - 42 USgpm 57 - 57 USgpm
47 - 47 USgpm 60 - 60 USgpm
50 - 50 USgpm

7 VQ port connections
(inlet & outlet #1 & #2)
A - 4 bold flange (inch threads)
AM - 4 bolt flange (metric threads)

8 SAE rated capacity
(VQ center cartridge)
21 - 21 USgpm 35 - 35 USgpm
25 - 25 USgpm 38 - 38 USgpm
30 - 30 USgpm

9 V10 port connections
V10S standard covers and outlet #3
S - .750 - 16 Str. thd.
P - 1/2" - NPT thd.
Y - .875 - 14 Str. thd.
R - 1.062 - 12 Str. thd.

V10F flow/relief control cover

	<i>Outlet #3</i>	<i>Tank Port</i>
T -	.750 - 16 Str. thd.	.750 - 16Str. thd.
P -	.750 - 16 Str. thd.	1/2" - NPT thd.

V10P priority control covers

	<i>Primary</i>	<i>Secondary</i>	<i>Tank</i>
	<i>Port Str. thd.</i>	<i>Port Str. thd.</i>	<i>Port Str. thd.</i>
K -	.5625-18	.750-16	.5625-18

10 SAE rated capacity
(V10 cover end cartridge)
1 - 1 USgpm 5 - 5 USgpm
2 - 2 USgpm 6 - 6 USgpm
3 - 3 USgpm 7 - 7 USgpm
4 - 4 USgpm

11 Shaft seal
Blank - Single seal
S - Double seal

12 Shaft type
297 - All Series

13 Port orientation (Outlet #1)
(Viewed from cover end of pump;
refer to table on next page)

14 Port orientation (Outlet #2)
(Viewed from cover end of pump;
refer to table on next page)

15 Port orientation (Outlet #3 or primary outlet)
(Viewed from cover end of pump;
refer to table on next page)

16 Controlled flow rate, V10F & V10P
(Omit for standard cover)

3 - 3 USgpm	6 - 6 USgpm
4 - 4 USgpm	7 - 7 USgpm
5 - 5 USgpm	8 - 8 USgpm

17 Relief valve pressure setting, V10F & V10P (Omit for standard cover)

A - 250 psi	F - 1500 psi
B - 500 psi	G - 1750 psi
C - 750 psi	H - 2000 psi
D - 1000 psi	J - 2250 psi
E - 1250 psi	K - 2500 psi

18 Design (Subject to change)

19 Rotation
(Viewed from shaft end of pump)
L - Left hand for counterclockwise
R - Right hand for clockwise

V10P priority control covers

	<i>Primary</i>	<i>Secondary</i>	<i>Tank</i>
	<i>Port Str. thd.</i>	<i>Port Str. thd.</i>	<i>Port Str. thd.</i>
K -	.5625-18	.750-16	.5625-18

10 SAE rated capacity (V10 Cover end cartridge)
1 - 1 USgpm 5 - 5 USgpm
2 - 2 USgpm 6 - 6 USgpm
3 - 3 USgpm 7 - 7 USgpm
4 - 4 USgpm

11 Shaft seal
Blank - Single seal
S - Double seal

12 Shaft type
297 - All series

13 Port orientation (Outlet #1)
(Viewed from cover end of pump; refer to
table on next page)

14 Port orientation (Outlet #2)
(Viewed from cover end of pump; refer to
table on next page)

15 Port orientation (Outlet #3 or primary outlet)
(Viewed from cover end of pump; refer to
table on next page)

16 Controlled flow rate, V10F & V10P
(Omit for standard cover)

3 - 3 USgpm	6 - 6 USgpm
4 - 4 USgpm	7 - 7 USgpm
5 - 5 USgpm	8 - 8 USgpm

17 Relief valve pressure setting, V10F & V10P (Omit for standard cover)

A - 250 psi	F - 1500 psi
B - 500 psi	G - 1750 psi
C - 750 psi	H - 2000 psi
D - 1000 psi	J - 2250 psi
E - 1250 psi	K - 2500 psi

18 Design (Subject to change)

19 Rotation
(Viewed from shaft end of pump)
L - Left hand for counterclockwise
R - Right hand for clockwise

VQ Replacement Cartridge Kits

20VQ Series

Description	Vickers #
20VQ05 gpm	417053
20VQ05 gpm - Viton	421588
20VQ08 gpm	417054
20VQ08 gpm - Viton	421589
20VQ09 gpm	423096
20VQ09 gpm - Viton	423097
20VQ11 gpm	416427
20VQ11 gpm - Viton	423097
20VQ12 gpm	416428
20VQ12 gpm - Viton	421590
20VQ14 gpm	416429
20VQ14 gpm - Viton	421592

20VQ Series Specifications		6 lbs	5	8	11	12	14
Displacement	Cu.in./rev. (cc/ rev.)	1.1 (18)	1.7 (27)	2.2 (36)	2.4 (39)	2.8 (46)	
Max. Pressure	Continuous psi (Bar)	3000 (206)	3000 (206)	3000 (206)	2300 (159)	2000 (138)	
Min. Speed	Below 1000 psi Above 1000 psi	600 1000	600 1000	600 1000	600 1000	600 1000	
Max. Speed, RPM		2700	2700	2700	2700	2700	
Typical Flow at Max. Speed & Pressure	GPM (Liters/ Min)	11 (43)	17 (64)	23 (86)	23 (86)	24 (90)	
Typical Input HP at Max. Speed & Pressure	HP (KW)	25 (18)	32 (24)	49 (37)	32 (24)	36 (27)	

*Rotation must be specified when ordering

*Also available without Bushing

25VQ Series

Description	Vickers #
25VQ12 gpm	416439
25VQ12 gpm - Viton	421570
25VQ14 gpm	416440
25VQ14 gpm - Viton	421571
25VQ17 gpm	416441
25VQ17 gpm - Viton	421572
25VQ19 gpm	421232
25VQ19 gpm - Viton	421573
25VQ21 gpm	416442
25VQ21 gpm - Viton	421574

25VQ Series Specifications		8 lbs	12	14	17	19	21
Displacement	Cu.in./rev. (cc/ rev.)	2.4 (40)	2.8 (45)	3.4 (55)	3.7 (60)	4.1 (68)	
Max. Pressure	Continuous psi (Bar)	3000 (206)	3000 (206)	3000 (206)	2300 (159)	2000 (138)	
Min. Speed	Below 1000 psi Above 1000 psi	600 1000	600 1000	600 1000	600 1000	600 1000	
Max. Speed, RPM		2700	2700	2500	2500	2500	
Typical Flow at Max. Speed & Pressure	GPM (Liters/ Min)	25 (96)	28 (108)	32 (122)	36 (137)	40 (153)	
Typical Input HP at Max. Speed & Pressure	HP (KW)	25 (40)	32 (50)	49 (51)	32 (56)	36 (63)	

*Rotation must be specified when ordering

*Also available without Bushing



VQ Replacement Cartridge Kits

FPO

30VQ Series

Description	Vickers #
35VQ21gpm	413420
35VQ25 gpm	413421
35VQ25 gpm - Viton	421583

*Rotation must be specified when ordering
* Also available without Bushing

35VQ Series

Description	Vickers #
35VQ21gpm	413420
35VQ25 gpm	413421
35VQ25 gpm - Viton	421583
35VQ30 gpm	413422
35VQ30 gpm - Viton	421584
35VQ35 gpm	413418
35VQ35gpm - Viton	421585
35VQ38 gpm	413419
35VQ38 gpm - Viton	421586
35VQ21 gpm - Viton	-

*Rotation must be specified when ordering
* Also available without Bushing

35VQ Series Specifications		4 lbs	21	25	30	35	38
Displacement	Cu.in./rev.	4.2	5.0	6.0	6.9	7.4	
	(cc/ rev.)	(69)	(82)	(98)	(113)	(122)	
Max. Pressure	Continuous psi	3000	3000	3000	2300	2000	
	(Bar)	(206)	(206)	(206)	(206)	(206)	
Min. Speed	Below 1000 psi	600	600	600	600	600	
	Above 1000 psi	1000	1000	1000	1000	1000	
Max. Speed, RPM		2500	2500	2500	2400	2400	
Typical Flow at Max. Speed & Pressure	GPM	27	47	57	64	69	
	(Liters/ Min)	(101)	(178)	(215)	(242)	(263)	
Typical Input HP at Max. Speed & Pressure	HP	92	98	122	129	142	
	(KW)	(68)	(73)	(91)	(96)	(106)	

45VQ Series

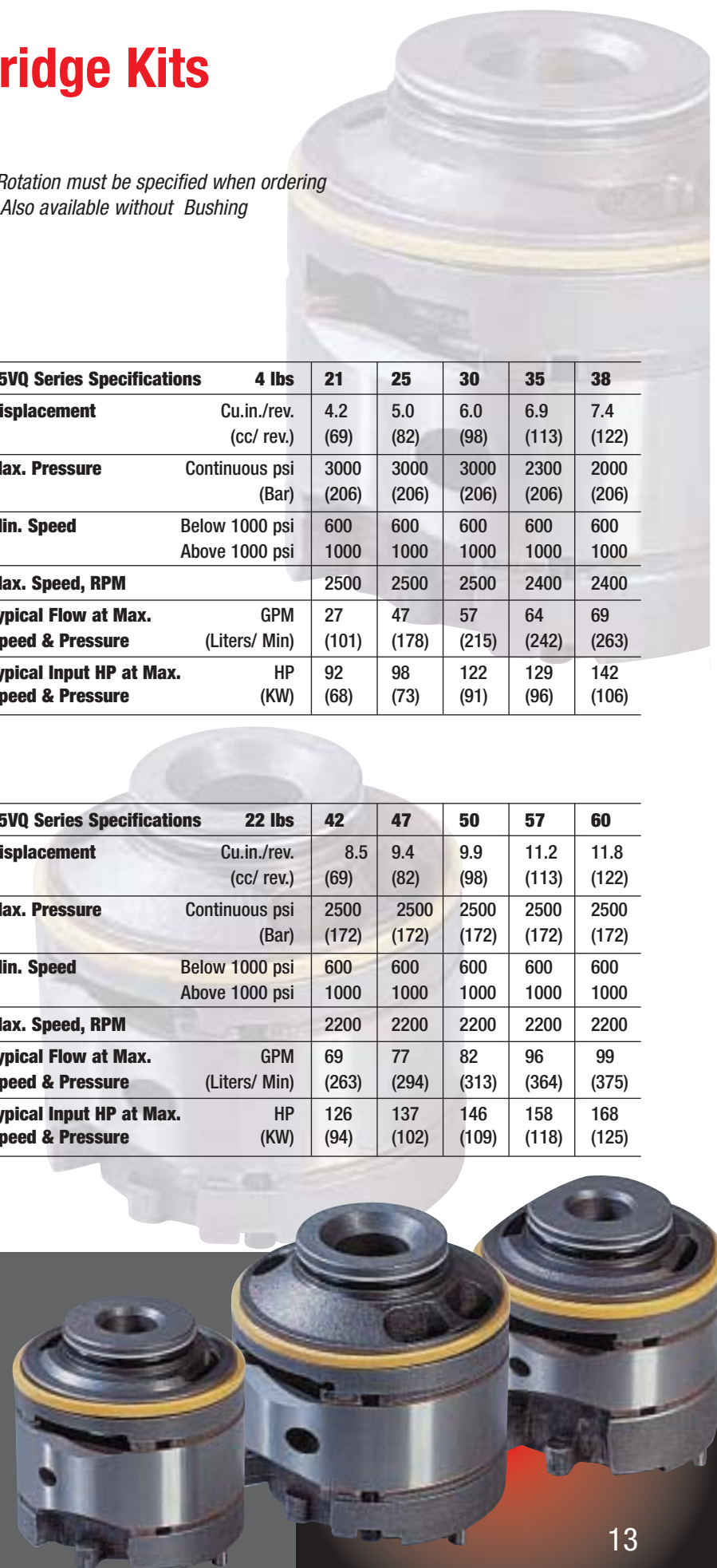
Description	Vickers #
45VQ42 gpm	416435
45VQ42 gpm - Viton	419511
45VQ47 gpm	421234
45VQ47 gpm - Viton	421954
45VQ50 gpm	416436
45VQ50 gpm - Viton	419510
45VQ57 gpm	421233
45VQ57 gpm - Viton	421955
45VQ60 gpm	416437
45VQ60 gpm - Viton	419509

*Rotation must be specified when ordering
* Also available without Bushing

45VQ Series Specifications		22 lbs	42	47	50	57	60
Displacement	Cu.in./rev.	8.5	9.4	9.9	11.2	11.8	
	(cc/ rev.)	(69)	(82)	(98)	(113)	(122)	
Max. Pressure	Continuous psi	2500	2500	2500	2500	2500	
	(Bar)	(172)	(172)	(172)	(172)	(172)	
Min. Speed	Below 1000 psi	600	600	600	600	600	
	Above 1000 psi	1000	1000	1000	1000	1000	
Max. Speed, RPM		2200	2200	2200	2200	2200	
Typical Flow at Max. Speed & Pressure	GPM	69	77	82	96	99	
	(Liters/ Min)	(263)	(294)	(313)	(364)	(375)	
Typical Input HP at Max. Speed & Pressure	HP	126	137	146	158	168	
	(KW)	(94)	(102)	(109)	(118)	(125)	

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V Series Replacement Cartridge Kits

20V Series

Description	Vickers #
20V05 gpm	102507
20V05 gpm - Viton	102507
20V08 gpm	102508
20V08 gpm - Viton	102508
20V11 gpm	102509
20V11 gpm - Viton	102509
20V12 gpm	102510
20V12 gpm - Viton	102510
20V14 gpm	102511
20V14 gpm - Viton	102511

*Rotation must be specified when ordering
 * Also available without Bushing

20V Series Specifications	6 lbs	5	8	11	12	14
Displacement	Cu.in./rev. (cc/ rev.)	1.0 (16)	1.5 (25)	2.1 (35)	2.3 (38)	2.7 (44)
Max. Pressure	Continuous psi (Bar)	3000 (206)	3000 (206)	3000 (206)	2500 (172)	2200 (138)
Min. Speed	Below 1000 psi Above 1000 psi	600 1000	600 1000	600 1000	600 1000	600 1000
Max. Speed, RPM		1800	1800	1800	1800	1800
Typical Flow at Max. Speed & Pressure	GPM (Liters/ Min)	7 (27)	11 (43)	13 (50)	16 (59)	20 (74)
Typical Input HP at Max. Speed & Pressure	HP (KW)	13 (17)	21 (28)	29 (39)	26 (35)	25 (34)

25V Series

Description	Vickers #
25V12 gpm	102532
25V12 gpm - Viton	102532
25V14 gpm	102533
25V14 gpm - Viton	102533
25V17 gpm	102534
25V17 gpm - Viton	102534
25V21 gpm	102535
25V21 gpm - Viton	102535

*Rotation must be specified when ordering
 * Also available without Bushing

25V Series Specifications	8 lbs	12	14	17	21
Displacement	Cu.in./rev. (cc/ rev.)	2.3 (38)	2.7 (44)	3.3 (54)	4.0 (66)
Max. Pressure	Continuous psi (Bar)	2500 (206)	2500 (206)	2500 (206)	2500 (159)
Min. Speed	Below 1000 psi Above 1000 psi	600 1000	600 1000	600 1000	600 1000
Max. Speed, RPM		1800	1800	1800	1800
Typical Flow at Max. Speed & Pressure	GPM (Liters/ Min)	14 (54)	17 (64)	23 (87)	27 (101)
Typical Input HP at Max. Speed & Pressure	HP (KW)	26 (35)	31 (42)	37 (50)	46 (62)



VQ Replacement Cartridge Kits

35V Series

FPO

Description	Vickers #
35V25 gpm	102552
35V25 gpm – Viton	102552
35V30 gpm	102553
35V30 gpm – Viton	102553
35V35 gpm	102554
35V35 gpm – Viton	102554
35V38 gpm	102555
35V38 gpm – Viton	102555

*Rotation must be specified when ordering
 * Also available without Bushing

35V Series Specifications		14 lbs	25	30	35	38
Displacement	Cu.in./rev. (cc/ rev.)		4.8 (79)	5.8 (95)	6.7 (110)	7.3 (120)
Max. Pressure	Continuous psi (Bar)		2500 (172)	2500 (172)	2500 (172)	2500 (172)
Min. Speed	Below 1000 psi Above 1000 psi		600 1000	600 1000	600 1000	600 1000
Max. Speed, RPM			1800	1800	1800	1800
Typical Flow at Max. Speed & Pressure	GPM (Liters/ Min)		32 (27)	40 (43)	48 (50)	51 (59)
Typical Input HP at Max. Speed & Pressure	HP (KW)		55 (74)	66 (88)	77 (130)	83 (111)

45V Series

FPO

Description	Vickers #
45V42 gpm	102572
45V42 gpm – Viton	102576
45V50 gpm	102574
45V50 gpm – Viton	102577
45V60 gpm	102575
45V60 gpm – Viton	102578

*Rotation must be specified when ordering
 * Also available without Bushing

45V Series Specifications		42	50	60	
Displacement	Cu.in./rev. (cc/ rev.)		8.1 (132)	9.6 (158)	11.6 (189)
Max. Pressure	Continuous psi (Bar)		2500 (172)	2500 (172)	2500 (172)
Min. Speed	Below 1000 psi Above 1000 psi		600 1000	600 1000	600 1000
Max. Speed, RPM			1800	1800	1800
Typical Flow at Max. Speed & Pressure	GPM (Liters/ Min)		56 (211)	67 (252)	83 (310)
Typical Input HP at Max. Speed & Pressure	HP (KW)		92 (123)	109 (146)	131 (176)



FPO

Components

VQ Rotors

Series	Vickers #
20VQ(Short)	402690
20VQ	403539
25VQ	270597
30VQ	262152
35VQ	262154
45VQ	283871

VQ Series Rotors

Series	Vickers #
25V	584618
35V	575478
45V	578000

Bearings

Series	Vickers #
20VQ Std.	98574
25VQ Std.	1705
26VQ Hvy.Duty	232750
35VQ Std.	38441
45VQ Std.	131812

Flex Plate Kits

Series	Vickers #
20VQ	923955
25VQ	923956
30VQ	923956
35VQ	923953
45VQ	923954

Flex Plates are also available individually

V Series Vane Kits

Series	Vickers #
25V	941214
35V	941019
45V	941049

V Series Cam Rings

Series	Vickers #
25V12	584610
25V14	584612
25V17	584614
25V21	584616
35V25	576210
35V30	576212
35V35	576214
35V38	575476
45V42	581679
45V50	581680
45V60	578904

V10 Cam Rings

Series	Vickers #
V10 #1	317674
V10 #2	317675
V10 #3	317676
V10 #4	317677
V10 #5	317678
V10 #6	355641
V10 #7	331813

VQ Vane Kits

Series	Vickers #
20VQ(L)	922741
20VQ	922743
25VQ	922710
30VQ	922648
35VQ	922700
45VQ	922701

VQ Cam Rings

Series	Vickers #
20VQ05	333624
20VQ08	333625
20VQ09	374799
20VQ11	333626
20VQ12	353901
20VQ14	353902
25VQ12	326984
25VQ14	326985
25VQ17	326986
25VQ19	326987
25VQ21	326988
30VQ24	234470
30VQ28	224525
35VQ21	394961
35VQ25	319396
35VQ30	319397
35VQ35	319398
35VQ38	319399
45VQ42	297510
45VQ47	297718
45VQ50	297502
45VQ57	306772
45VQ60	297503

FPO

FPO

FPO

Components

offers a broad selection of shafts
 • Standard • Splined • Keyed

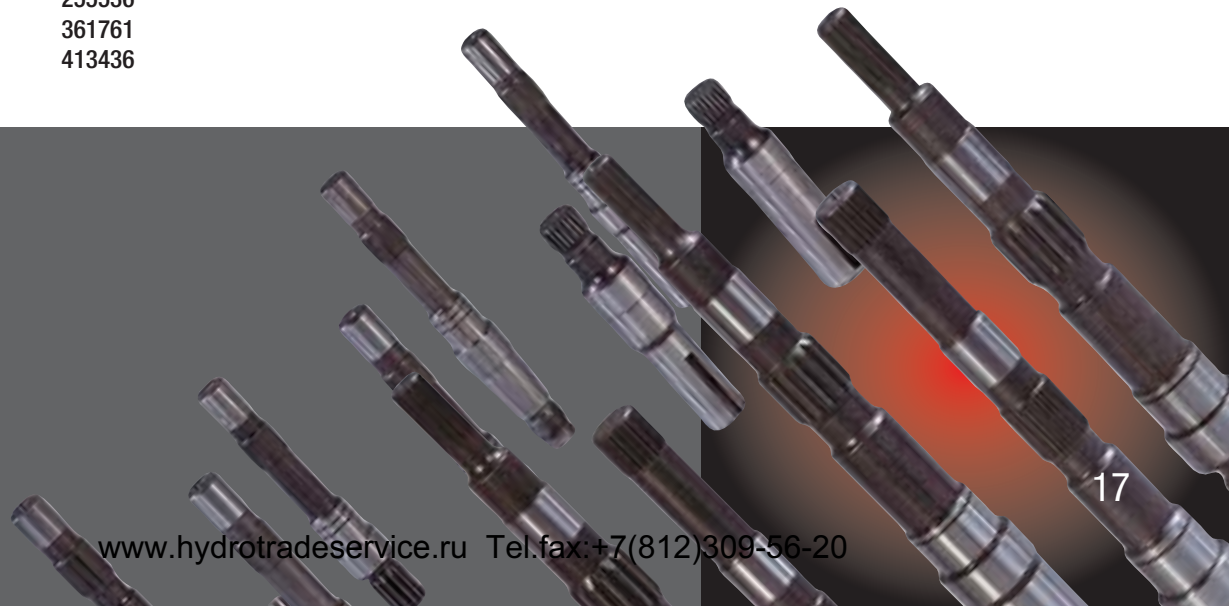
Shafts

<u>Shaft-Code</u>	<u>Vickers #</u>
25V/VQ Keyed #1	238755
25V/VQ Keyed W/Nut #3	242747
25V/VQ Splined #11	238929
25V/VQ HD Keyed #86	419082
25V/VQ Tapered #5	242784
25V/VQ 14 Tooth # 25	270187
25V/VQ 14 Tooth # 127	424457
35V/VQ Keyed #1	233624
35V/VQ Splined (14 tooth) #4	247803
35V/VQ Splined #11	242287
35V/VQ X-long Splined #19	275270
35V/VQ HD Keyed #86	392669
35V/VQ 14 Tooth #127	417331
45V/VQ 14 Tooth #111	413020
45V/VQ Keyed #1	233369
45V/VQ Splined (14 tooth) #4	233370
45V/VQ Splined #11	242885
45V/VQ X-long Splined #19	265575
45V/VQ HD Keyed #86	361760
45V/VQ Splined #130	422541
2520V/VQ Keyed #1	254964
2520V/VQ Splined #11	254848
2520V/VQ X-long Splined #25	293360
2520V/VQ Splined #123	413433
2520V/VQ HD Keyed # 86	419083
3520V/VQ Keyed #1	258249
3520V/VQ Splined #11	258250
3520V/VQ X-long Splined #19	260604
3520V/VQ HD Keyed #86	394571
3520V/VQ 14 Tooth # 114	413434
3525V/VQ Keyed #1	243448
3525V/VQ Splined #11	243449
3525V/VQ X-long Splined #19	247019
3525V/VQ HD Keyed #86	394036
3525V/VQ 14 Tooth #111	413023
4520V/VQ Keyed #1	255533
4520V/VQ Splined #11	255536
4520V/VQ HD Keyed #86	361761
4520V/VQ 14 Tooth # 114	413436

offers a growing range of components for
 cartridges and vane pumps.

We can cross reference most manufacturers
 numbers
 including Vickers and Caterpillar
 In addition to the items shown, now produces
 a full range of housings for vane pumps.

<u>Shaft-Code</u>	<u>Vickers #</u>
4525V/VQ Keyed #1	233524
4525V/VQ Splined #11	233527
4525V/VQ X-long Splined #19	247102
4525V/VQ HD Keyed #86	361762
4525V/VQ 14 Tooth # 114	413024
4535V/VQ Keyed #1	289083
4535V/VQ Splined #11	289084
4535V/VQ X-long Splined #19	280904
4535V/VQ HD Keyed #86	361763
4535V/VQ 14 Tooth # 114	413027
V10 Keyed #1	374338
V10 Splined #11	374339
V10 13 Tooth #12	375480
V10 11 Tooth #38	387481
V10 Keyed #3	374340
V20 Keyed #1	280372
V20 Thr. Key #3	280504
V20 Woodruff Key #6	297330
V20 Splined #11	280515
V20 Splined #15	294922
V20 Splined #38	328096
V2020 Keyed #1	308686
V2020 Thr. Key #3	308925
V2020 Splined #11	308926
V2020 Splined #51	385517
V210 Square Key #1	116644
V210 Thr. Key #3	120037
V210 Key Slot #6	131420
V2010 #1	351249
V2010 #3	321214
V2010 #11	321215



Seal Kits/ Seal Packs

Series	Description	Vickers#	Series	Description	Vickers#
20VQ	Seal Pack*	433762	25 & 30V	Standard V Seal Kit	922850
25VQ	Single Seal Kit	920021		V Seal Kit - Viton	919656
	Single Seal Kit - Viton	920023	35V	Standard Seal Kit	922851
	Double Seal Kit	920022		Seal Kit - Viton	919262
	Double Seal Kit - Viton	920024	45V	Standard Seal Kit	919850
	Seal Pack*	433764		Seal Kit - Viton	919632
35VQ	Single Seal Kit	920015	2520V	Standard Seal Kit	922856
	Single Seal Kit	920029		Seal Kit - Viton	919303
	Double Seal Kit	920016	3520V	Standard Seal Kit	922859
	Double Seal Kit - Viton	920030		Seal Kit - Viton	919304
	Seal Pack*	433766	3525V	Standard Seal Kit	922862
45VQ	Single Seal Kit	920025		Seal Kit - Viton	919305
	Single Seal Kit - Viton	920027	4520V	Standard Seal Kit	922863
	Double Seal Kit	920026		Seal Kit - Viton	919616
	Double Seal Kit - Viton	920028			
	Seal Pack*	433768			
2520VQ	Single Seal Kit	920040			
	Single Seal Kit - Viton	920042			
	Double Seal Kit	920041			
	Double Seal Kit - Viton	920043			
3520VQ	Single Seal Kit	920048			
	Single Seal Kit - Viton	920050			
	Double Seal Kit	920049			
	Double Seal Kit - Viton	920051			
3525VQ	Single Seal Kit	920056			
	Single Seal Kit - Viton	920058			
	Double Seal Kit	920057			
	Double Seal Kit - Viton	920059			
4520VQ	Single Seal Kit	920060			
	Single Seal Kit - Viton	920062			
	Double Seal Kit	920061			
	Double Seal Kit - Viton	920063			
4525VQ	Single Seal Kit	920068			
	Single Seal Kit - Viton	920070			
	Double Seal Kit	920069			
	Double Seal Kit - Viton	920071			
4535VQ	Single Seal Kit	920072			
	Single Seal Kit - Viton	920074			
	Double Seal Kit	920073			
	Double Seal Kit - Viton	920075			

* Seal Pack includes retainer and o-ring

Note: All double seal kits include primary & secondary shaft seals.

Flex Plate Kits

Series	Description	Vickers#
V20	Primary	229235
V200	Primary	229236
25VQ &	Primary	394976
30VQ	Primary - Viton	429286
	Secondary	429283
35VQ	Primary	394973
	Primary - Viton	429284
	Secondary	429281
45VQ	Primary	394974
	Primary - Viton	429285
	Secondary - Viton	429282

