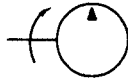


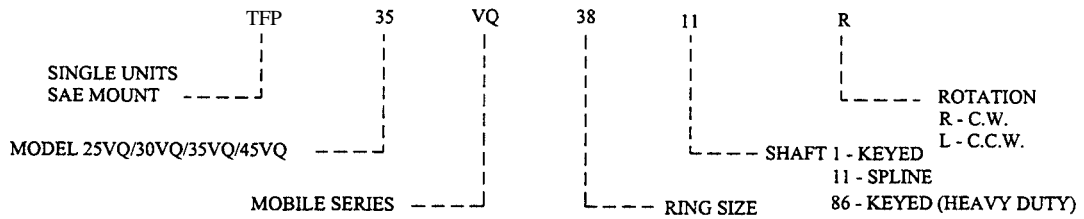
TFP HIGH PERFORMANCE MOBILE SINGLE INTRA-VANE PUMPS



- * 3000 PSI Maximum Operating Pressure
- * High Operating Speeds
- * Pressure Balanced Brass Flex Plates
- * Versatile
- * Compact
- * Contaminant Tolerant



◆ Single Pump Ordering Specifications



Values based on using anti-wear type petroleum oil 150 SUS at 100°F and 0 PSI inlet pressure.

MODEL SERIES	FLOW IN GPM @ 1200 RPM & 100 PSI	DISPL. in ³ /r	MAXIMUM SPEED (RPM)	MAXIMUM PRESSURE (PSI)	TYPICAL DELIVERY GPM @ max. speed & pressure	TYPICAL INPUT POWER (HP) @ max. speed & pressure	WEIGHT (lbs.)
20VQ	5	1.10	2700	3000	11.0	24.0	26
	8	1.67	2700	3000	17.0	35.0	
	11	2.22	2700	3000	23.0	47.5	
	12	2.41	2700	2300	22.5	38.0	
	14	2.80	2700	2000	30.0	39.0	
25VQ	12	2.45	2700	3000	23.0	55.0	32
	14	2.77	2700	3000	27.0	62.5	
	17	3.37	2500	3000	31.0	69.5	
	19	3.72	2500	3000	35.0	76.0	
	21	4.12	2500	3000	38.0	83.0	
30VQ	24	4.70	2700	3000	23.0	55.0	36
	28	5.50	2500	3000	31.0	69.5	
35VQ	21	4.12	2500	3000	38.0	83.0	50
	25	4.98	2500	3000	45.0	101.0	
	30	5.96	2500	3000	55.0	117.5	
	35	6.88	2400	3000	60.0	132.0	
	38	7.42	2400	3000	65.0	140.0	
45VQ	42	8.46	2200	2500	66.5	122.5	75
	47	9.54	2200	2500	71.0	131.00	
	50	9.90	2200	2500	79.0	141.00	
	57	11.20	2200	2500	92.0	160.00	
	60	11.80	2200	2500	96.0	170.00	

TFP offers a complete line of high performance single intra-vane pumps for mobile equipment. A large number of SAE mounts, shafts, and displacements, along with their high pressure and speed capabilities, provide the combination best suited for mobile applications. The cartridge assemblies are designed with two flex plates in hydrostatic balance which seal against the rotor to provide optimum running clearances for minimum internal leakage and friction. The bronze face of the flex plates provides excellent wear for cold-start conditions. The availability of our factory tested cartridges offers fast and efficient field serviceability, and the replacement pump cartridge reduces down time to increase productivity. These units can operate on a wide variety of fluids.

Contact the local representative with your requirements.

***ASK ABOUT LARGER DISPLACEMENTS**

i.e. 35VQ - 42

TFP SINGLE VANE PUMPS



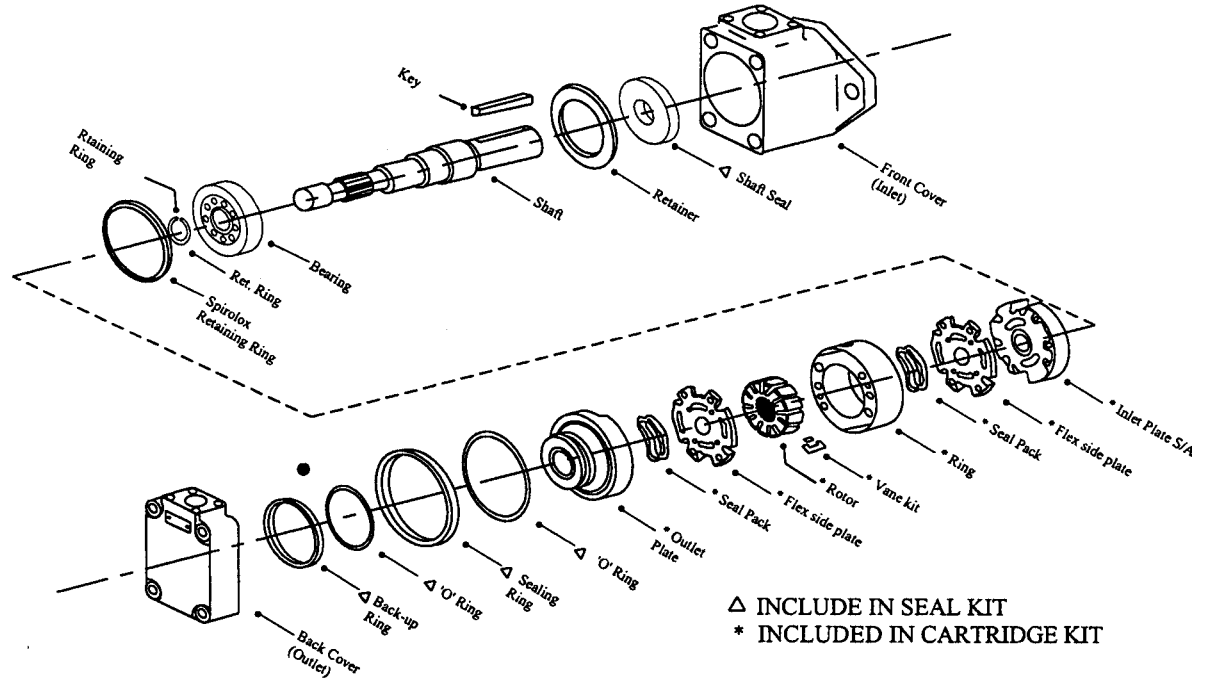
Performance Data - Typical Flows at 120° F, 10 W oil (128SUS), 0 PSI inlet

Flow in Gallons Per Minute (GPM).

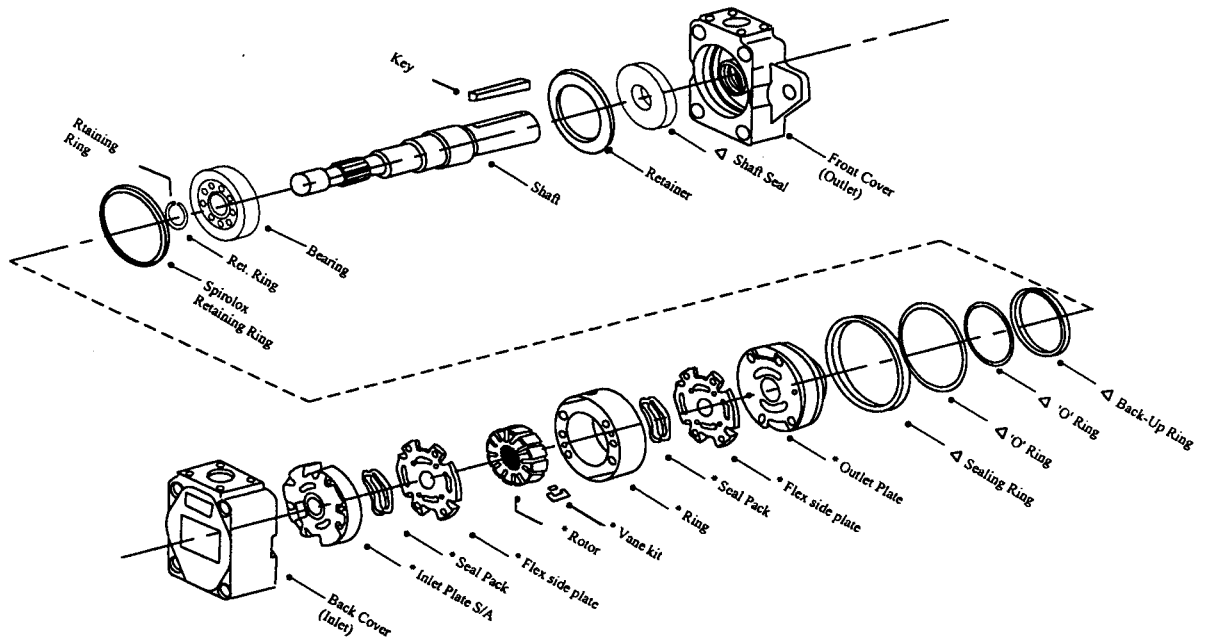
Pump Model	Displacement (in ³ /rev.)	R.P.M.	100 P.S.I. (INPUT H.P.)	1500 P.S.I. (INPUT H.P.)	3000 P.S.I. (INPUT H.P.)	
20 VQ	5 (1.10)	1200	5.0 (0.4)	4.3 (5.0)	4.0 (10.0)	
		1800	7.5 (1.5)	7.0 (8.5)	7.0 (16.5)	
		2400	10.0 (2.0)	10.2 (12.0)	9.5 (22.0)	
	8 (1.67)	1200	8.0 (1.0)	7.0 (8.0)	6.5 (16.5)	
		1800	12.0 (1.7)	11.5 (12.0)	10.5 (23.0)	
		2400	16.0 (2.8)	16.0 (17.0)	14.9 (32.0)	
	11 (2.22)	1200	11.0 (1.2)	9.8 (11.0)	8.5 (21.5)	
		1800	16.5 (2.8)	15.4 (18.0)	14.2 (31.0)	
		2400	22.0 (3.0)	21.0 (22.0)	20.0 (42.0)	
	12 (2.41)	1200	12.0 (1.5)	11.0 (12.5)	9.8 (22.0)	
		1800	18.0 (3.0)	17.2 (19.0)	16.0 (34.0)	MAX. PSI 2300
		2400	24.0 (3.0)	23.4 (23.5)	22.2 (45.0)	
14 (2.80)	1200	14.0 (2.0)	12.9 (13.5)	12.0 (27.5)	MAX. PSI 2200	
	1800	21.0 (3.0)	18.5 (20.0)	19.0 (39.5)		
	2400	28.0 (3.5)	27.0 (27.0)	26.4 (52.5)		
25 VQ	12 (2.47)	1200	12.0 (1.0)	9.5 (12.0)	7.5 (24.0)	
		1800	18.0 (2.5)	16.0 (17.0)	13.5 (35.0)	
		2400	24.0 (3.0)	22.5 (24.0)	20.0 (46.0)	
	14 (2.77)	1200	14.0 (2.0)	11.5 (13.5)	9.5 (26.5)	
		1800	21.0 (3.0)	18.0 (20.0)	16.0 (39.0)	
		2400	28.0 (3.5)	25.0 (25.0)	23.0 (52.0)	
	17 (3.37)	1200	17.0 (2.0)	14.0 (16.5)	12.0 (32.0)	
		1800	25.5 (3.0)	22.0 (24.0)	20.0 (47.0)	
		2400	34.0 (3.5)	31.0 (32.0)	29.0 (62.0)	
	19 (3.72)	1200	19.0 (3.0)	17.0 (20.0)	15.0 (39.0)	
		1800	28.5 (3.5)	25.5 (28.0)	24.0 (58.0)	
		2400	38.0 (4.5)	35.0 (36.0)	32.0 (70.0)	
21 (4.12)	1200	21.0 (2.0)	17.5 (20.0)	15.5 (39.0)		
	1800	31.5 (3.8)	28.0 (29.0)	25.5 (59.0)		
	2400	42.0 (4.5)	39.0 (39.0)	36.5 (76.0)		
30 VQ	24 (4.70)	1200	24.0 (2.2)	21.0 (22.0)	19.0 (46.0)	
		1800	36.0 (3.3)	33.0 (33.0)	31.5 (71.0)	
		2400	48.0 (4.4)	45.0 (47.0)	42.5 (95.0)	
	28 (5.50)	1200	28.0 (2.6)	26.0 (22.0)	23.5 (58.0)	
		1800	42.0 (5.0)	39.0 (33.0)	37.5 (77.0)	
		2400	56.0 (6.5)	52.5 (47.0)	49.5 (98.0)	
35 VQ	21 (4.12)	1200	21.0 (2.0)	17.5 (20.0)	15.5 (39.0)	
		1800	31.5 (3.8)	28.0 (29.0)	25.5 (59.0)	
		2400	42.0 (4.5)	39.0 (39.0)	36.5 (76.0)	
	25 (4.94)	1200	25.0 (2.5)	20.5 (23.0)	17.5 (46.0)	
		1800	37.0 (4.0)	33.5 (36.0)	30.0 (69.0)	
		2400	50.0 (4.5)	42.0 (46.5)	42.5 (92.0)	
	30 (5.96)	1200	30.0 (4.0)	25.0 (28.5)	25.5 (56.0)	
		1800	45.0 (5.0)	40.0 (43.0)	37.0 (82.0)	
		2400	60.0 (6.0)	55.0 (56.0)	52.5 (110.0)	
	35 (6.88)	1200	35.0 (4.0)	29.0 (33.0)	25.0 (67.0)	
		1800	52.5 (5.0)	46.0 (51.0)	42.0 (95.0)	
		2400	70.0 (5.5)	62.5 (64.0)	60.0 (125.0)	
38 (7.42)	1200	38.0 (4.5)	32.0 (35.5)	29.0 (69.0)		
	1800	57.0 (5.5)	50.5 (52.0)	47.0 (102.0)		
	2400	76.5 (6.0)	68.0 (69.0)	65.0 (136.0)		
45 VQ	42 (8.46)	1200	42.0 (4.0)	34.5 (39.5)	30.0 (68.0)	
		1800	63.0 (60.0)	56.5 (58.0)	52.0 (104.0)	
		2400	77.0 (7.0)	70.5 (72.0)	66.5 (123.0)	
	47 (9.45)	1200	47.0 (4.0)	39.0 (22.0)	34.0 (46.0)	
		1800	70.0 (5.0)	64.0 (33.0)	60.5 (71.0)	
		2400	94.0 (9.0)	86.0 (47.0)	80.5 (95.0)	
	50 (9.90)	1200	50.0 (4.0)	42.0 (48.0)	38.5 (78.0)	
		1800	75.0 (6.0)	65.5 (70.0)	62.0 (116.0)	
		2400	91.5 (8.0)	81.5 (86.0)	79.0 (141.0)	
	57 (11.20)	1200	57.0 (5.0)	49.0 (22.0)	45.5 (92.0)	
		1800	85.5 (7.5)	76.5 (33.0)	71.5 (125.0)	
		2400	104.5 (8.0)	94.5 (47.0)	89.5 (160.0)	
60 (11.80)	1200	60.0 (5.5)	51.0 (55.0)	47.0 (94.0)		
	1800	90.0 (7.0)	80.0 (82.0)	75.5 (138.0)		
	2400	110.0 (8.5)	99.0 (101.0)	96.0 (170.0)	MAX. PSI 2500	

***ASK ABOUT LARGER DISPLACEMENTS**
***ASK ABOUT HIGH PRESSURE MODELS**

TFP MOBILE SINGLE VANE PUMP SERVICE PARTS INFORMATION



20VQ



25VQ/35VQ/45VQ

TFP MOBILE SINGLE VANE PUMPS SERVICE PARTS INFORMATION



CARTRIDGE CHART

PUMP SE	CARTRIDGE KITS	ROTOR	VANE	RING	FLEX PLATE	INLET PLATE	OUTLET PLATE	SHAFTS	
20VQ	5 497115N	402690N	922741N	333624N	416423N	419502N	497134N	1 151	497109N 497113N
	8 497118N			333625N					
	11 497120N	403539N	922743N	333626N		419501N			
	12 497121N			353901N					
	14 497122N			353902N					
25VQ	12 416439N	270597N	922710N	326984N	923956N	430805N	419079N	1 3 11 25 127	238755N 242747N 238929N 270187N 424457N
	14 416440N			326985N					
	17 416441N			326986N					
	19 421232N			326987N					
	21 416442N			326988N					
35VQ	21 413420N	262154N	922700N	394961N	923953N	430806N	412003N	1 11 19	233624N 242287N 275270N
	25 413421N			319396N					
	30 413422N			319397N					
	35 413418N			319398N					
	38 413419N			319399N					
45VQ	42 416435N	283271N	922701N	297510N	923954N	430807N	415382N	1 11 19	233369N 242885N 265575N
	47 421234N			297718N					
	50 416436N			297502N					
	57 421233N			306772N					
	60 416437N			297503N					

- All Cartridge assemblies are factory tested before shipping -

PUMP SE	BUNA SEAL KIT	VITON SEAL KIT	BUNA SHAFT SEAL	VITON SHAFT SEAL	SECONDARY SHAFT SEAL	BEARING	FRONT COVER	BACK COVER
20VQ	497123N	451471N	394976N	429286N	429283N	001704N	02-102335N	250824N
25VQ	920021N	920023N	394976N	429286N	429283N	1705N	942353N	224309N
35VQ	920015N	920029N	394973N	429284N	429281N	38441N	942355N	234248N
45VQ	920025N	920027N	394974N	429282N	429285N	131812N	942356N	229633N

BOLT TORQUES

PUMP SE	COVER BOLT (FT. LB.)	CARTRIDGE KIT (IN. LB.)
20VQ	50	30
25VQ	50	45
35VQ	100	100
45VQ	100	105

Cartridge Kit Rotation

To change Cartridge Kit rotation, reverse the location of the inlet and outlet Support Plates. Hand tighten the cartridge screws and use pump cover to align all the parts. Remove the cover and tighten the cartridge screws to the designated value. Sharp edge of vanes must lead in direction of rotation.

Filtration

For satisfactory service life use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or better.