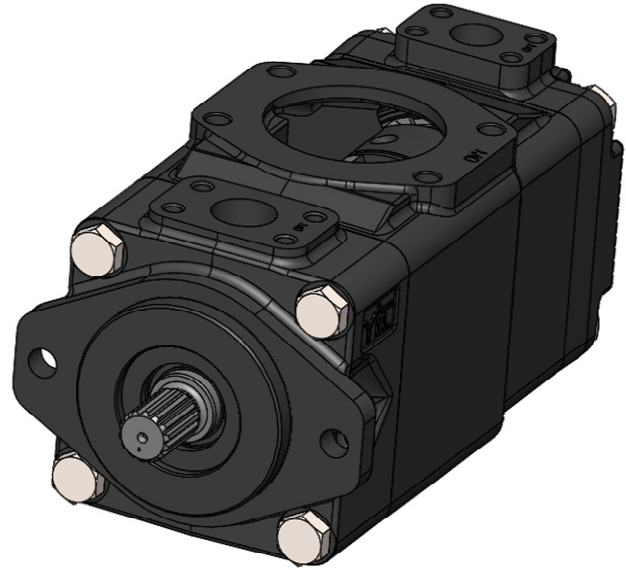
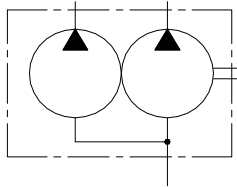


■ HPV43 SERIES – HIGH PRESSURE HIGH SPEED VANE PUMPS

These Double Pump consist of HPV4 and one HPV3 Pumps are designed for high-pressure applications. Suitable for mobile applications like Drill rigs, Hydraulic Presses, Railways & Construction Equipment's.

Graphic Symbol :



■ Specifications:

Model Number	Geometric Displacement cm ³ /rev.				Max. Oper. Pressure Kgf/cm ²	Shaft Speed Range r/min.		Mass (Approx.) Kg.	
	Series	1st Section	Series	2 nd Section		Max.	Min.	Flange Mounting	Foot Mounting
HPV43	042	132.8	14	47.6	240*1	2200	600	41.1	N/A
	045	142.4	17	58.2					
	050	158.5	20	66.0					
	052	164.8	24	79.5					
	057	180.7	28	89.7					
	062	196.7	31	98.3					
	066	213.3	35	110.0					
	072	227.1	38	120.3					
	085	269.8	42	136.0					
			45	145.7					
		50	158.0						
		61	190.5						

*1 Large Volume Pumps Series 085 is 75 Kgf/cm² @ 2000 RPM max.

In Tandem Pump different Max. operating pressure for Small and Large Volume pumps.

- Small Volume Pumps Series 28, 31 is 210 Kgf/cm².
- Large Volume Pumps Series 50 is 210 Kgf/cm².
- Large Volume Pumps Series 61 is 120 Kgf/cm² max. Intermittent, 80 Kgf/cm² continuous.
- All other Large Pumps are limited to max. pressure of 240Kfg/cm².

■ Operating Characteristics - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3000 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
P1	042	8.07	132.3	52.50	198.5	49.87	188.5	47.96	181.3	6.97	5.2	66.25	49.4	110.77	82.6
	045	8.70	142.4	56.51	213.6	53.86	203.6	51.98	196.5	70.94	5.4	70.94	52.9	118.95	88.7
	050	9.67	158.5	62.88	237.7	60.24	227.7	58.36	220.6	78.45	5.7	78.45	58.5	131.82	98.3
	052	0.00	164.8	65.40	247.2	62.75	237.2	60.87	230.1	81.53	5.8	81.53	60.8	136.92	102.1
	057	11.02	180.7	71.71	271.1	69.07	261.1	67.19	254.0	89.04	6.1	89.04	66.4	143.35	106.9
	062	12.00	196.7	78.04	295.0	75.04	285.0	73.52	277.9	96.42	6.4	96.42	71.9	162.67	121.3
	066	13.00	213.3	84.63	319.9	81.98	309.9	80.11	302.8	104.20	6.7	104.20	77.7	175.94	131.2
	072	13.86	227.1	90.11	340.6	87.46	330.6	85.58	323.5	110.77	6.9	110.77	82.6	187.07	139.5
	085	16.40	269.8	107.00	404.7	105.21	397.7	--	--	87.56	7.3	87.56	65.3	--	-

* For instructions regarding changing the port positions, consult YUKEN INDIA LTD.

Operating Characteristics - TYPICAL (24 cST)

Pressure port	Series	Volumetric Displacement Vp		Flow q & n = 1500 rpm						Input power p & n = 1500 rpm					
				p = 0 bar (0 psi)		p = 140 bar (2000 psi)		p = 240 bar (3500 psi)		p = 7 bar (100 psi)		p = 140 bar (2000 psi)		p = 240 bar (3000 psi)	
		in ³ /rev	cm ³ /rev	gpm	lpm	gpm	lpm	gpm	lpm	hp	kw	hp	kw	hp	kw
P2	014	2.90	47.6	18.88	71.4	16.42	62.1	14.78	55.9	3.08	2.3	24.81	18.5	41.03	30.6
	017	3.55	58.2	23.1	87.3	20.6	78.0	18.99	71.8	3.35	2.5	29.77	22.2	49.62	37.0
	020	4.00	66.0	26.19	99.0	23.73	89.77	220.08	83.5	3.75	2.8	33.39	24.9	55.92	41.7
	024	4.80	79.5	31.56	119.3	29.10	110.0	27.46	103.08	4.02	3.0	39.69	29.6	66.78	49.8
	028	5.50	89.7	35.58	134.5	33.12	125.2	31.48	119.0	4.29	3.2	44.52	33.2	74.96	55.9
	031	6.00	98.3	39.00	147.5	26.53	138.1	34.89	131.9	4.42	3.3	48.54	36.2	81.80	61.0
	035	6.80	111.0	44.04	166.5	41.58	157.2	39.94	151.0	4.69	3.5	54.58	40.7	92.13	68.7
	038	7.30	120.3	47.72	180.4	45.26	171.1	43.62	164.9	4.96	3.7	58.87	43.9	99.64	74.3
	042	8.30	136.0	53.96	204.0	51.50	194.7	49.86	188.5	5.36	4.0	66.25	49.4	112.24	83.7
	045	8.89	145.7	57.80	218.5	55.34	209.2	53.70	203.0	5.50	4.1	70.81	52.8	120.02	89.5
	050	9.64	158.0	62.69	237.0	60.23	227.7	59.25	224.0	5.90	4.4	76.44	57.0	113.98	85.0
	061	11.62	190.5	76.25	285.7	73.54	278.0	--	--	6.16	4.6	81.26	60.6	--	--

Model Number Designation

HPV43	M	Y	-42	-50	-F	-R	A	A	A	-M0	-K1	-10
Model Number	Rotor	Port Connection	Nominal Displacement	Nominal Displacement	Type of Mounting	Direction of Rotation	Discharge Port Position (Large Volume)	Discharge Port Position (Small Volume)	Suction Port Position	Mounting Connection Variables	Type of Shaft	Design Number
As Viewed From Shaft End												
HPV43	M : Mobile (Omit for UNC)	Y : Metric Port Connection (Omit for UNC)	042 045 050 052 057 062 066 072 085	014 017 020 024 028 031 035 038 042 045 050 061	F: Flange Mtg.	R: Clockwise (Normal) L: Counter clockwise				M0, M1 Metric port connection (Refer table below) U0, U1 UNC port connection (Refer table below)	K1- Keyed (no SAE) K2- Keyed (SAE CC) S1- Splined (SAE-A) S2- Splined (SAE-B)	10

Hydraulic Fluids

- Suction Pressure**
 Suction line pressure limit -0.20Kgf/cm^2 to $+0.30\text{Kgf/cm}^2$
- Cleanliness**
 Contamination level should be within NAS class 9. Use of $100\mu\text{m}$ (150 mesh) tank filter on suction side, 50mm above the tank bottom surface.
- Alignment of Shaft**
 Employ a flexible coupling whenever possible & avoid stress from bending or thrust. Maximum permissible misalignment is less than 0.1mm (0.004Inches) TIR & maximum permissible misangular is less than 0.2° .

Instructions

- Precautions at starting**
 At an initial operation or at an operation after a long rest, the pump may have difficulty in sucking up fluids. In such cases, an air bleed valve should be installed before hand in the discharge side (Model No.ST1001-※-10※), or discharge air by slightly slackening the connection on the discharge side. At starting, operate the pump intermittently as far as possible with no load.
- Other Precautions**
 If a pump is used at speed below 1200 r/min, install the pump with the suction port upside so that the pump can suck up fluid easily at starting.

Spare Parts List

List of Seals

Sl. No.	Name of Part	Part Number	Qty.
1	O-Ring	D-PKH4-0541	1
2		D-PKH4-0540	1
3		D-PKH4-0538	1
4		D-PKH4-0208	1
5		D-PKH4-0209	1
6		D-PKH4-0210	1
7	Backup-Ring	D-PKH4-0542	1
8	Backup-Ring	D-PKH4-0185	1
9	Oil Seal (NOK)	41.28x60.32x9.5	1