

# Fixed Displacement Vane Pump HV2010F/ HV2010P Series

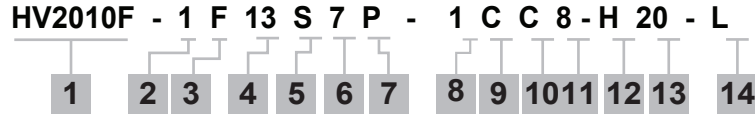
## Specifications

Model	Cartridge Position	Ring Size Delivery at 1200 r/min & 7 bar (100 psi)	Geometric Displacement	Delivery at 1500 r/min & 7 bar (100 psi)	Maximum Intermittent Pressure	Maximum Continuous Pressure	Maximum Speed	Weight
		USgpm	cm <sup>3</sup> /r (in <sup>3</sup> /r)	L/min (USgpm)	bar (psi)	bar (psi)	rpm	kg (lb)
HV2010	Shaft End	5	16.4 (1.00)	23.60 (6.25)	175 (2500)	160 (2250)	3400	15.4 (33.9)
		6	19.5 (1.19)	28.39 (7.50)			3400	
		7	22.8 (1.39)	33.11 (8.75)			3000	
		8	26.5 (1.62)	37.85 (10.00)			2800	
		9	29.7 (1.81)	42.57 (11.25)			2800	
		10	34.1 (2.08)	47.30 (12.51)			2500	
		11	36.4 (2.22)	52.04 (13.75)			2500	
		12	39.0 (2.38)	56.77 (15.00)			2400	
	13	42.4 (2.59)	61.50 (16.25)	150 (2200)	140 (2000)	2400		
	Cover End	1	3.3 (0.20)	4.70 (1.25)	175 (2500)	160 (2250)	3000	
		2	6.6 (0.40)	9.40 (2.50)				
		3	9.8 (0.60)	14.20 (3.75)				
		4	13.1 (0.80)	18.90 (5.00)				
		5	16.4 (1.00)	23.60 (6.25)				
6		19.5 (1.19)	28.40 (7.50)	150 (2200)				140 (2000)
7	22.8 (1.39)	33.10 (8.75)	140 (2000)	140 (2000)	2800			

\* A transient (peak) pressure 10% over the continuous pressure rating for 0.5 seconds or less duration is allowed.

# Fixed Displacement Vane Pump HV2010F/ HV2010P Series

## Ordering Code : Double Pump

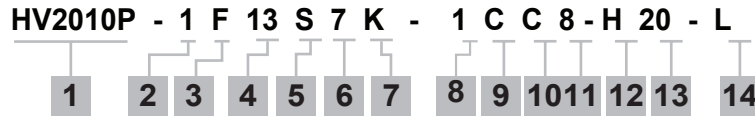


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|--|---|
| <p><b>1. Model :</b><br/>HV2010F - Flow Control Cover<br/>SAE B 2 bolts mounting flange J744</p> <p><b>2. Mounting</b><br/>1 - Bolt Flange</p> <p><b>3. Inlet Port Connection</b><br/>F - 4-bolt Flange Dia. 1.5"</p> <p><b>4. Displacement (at 1200 rpm)</b><br/>Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/rev)</p> <ul style="list-style-type: none"> <li>5 - 16.4 (1.00)</li> <li>6 - 19.5 (1.19)</li> <li>7 - 22.8 (1.39)</li> <li>8 - 26.5 (1.62)</li> <li>9 - 29.7 (1.81)</li> <li>10 - 34.1 (2.08)</li> <li>11 - 36.4 (2.22)</li> <li>12 - 39.0 (2.38)</li> <li>13 - 42.4 (2.59)</li> </ul> <p><b>5. Shaft End Outlet Port Connection</b><br/>S - 1" 1/16 - 12 UN(SAE#12)<br/>P - 3/4" NPT<br/>B - 3/4" BSP</p> <p><b>6. Displacement P2 (at 1200 rpm)</b><br/>Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/rev)</p> <ul style="list-style-type: none"> <li>1 - 3.3 (0.20)</li> <li>2 - 6.6 (0.40)</li> <li>3 - 9.8 (0.60)</li> <li>4 - 13.1 (0.80)</li> <li>5 - 16.4 (1.00)</li> <li>6 - 19.5 (1.19)</li> <li>7 - 22.8 (1.39)</li> </ul> <p><b>7. Cover End Outlet Port Connection</b><br/>P - 3/4" - 16 UNF(SAE#8) for outlet and<br/>1/2" NPT for tank port<br/>T - 3/4" - 16 UNF(SAE#8) for outlet and tank port</p> | <p><b>8. Type of shaft</b><br/>1 - Straight Keyed Shaft<br/>3 - Threaded with woodruff Keyed Shaft<br/>11 - Splined Shaft</p> <p><b>9. Shaft End Outlet Port Position (Viewed from cover end)</b><br/>A - Opposite inlet<br/>B - 90° CCW from inlet<br/>C - Inline with inlet<br/>D - 90° CW from inlet</p> <p><b>10. Cover End Outlet Port Position (Viewed from cover end)</b><br/>A - 135° CCW from inlet<br/>B - 45° CCW from inlet<br/>C - 45° CW from inlet<br/>D - 135° CW from inlet</p> <p><b>11. Flow rate Setting L/min (USgpm)</b><br/>2 - 7.6 (2)<br/>3 - 11.4 (3)<br/>4 - 15.2 (4)<br/>5 - 19.0 (5)<br/>6 - 22.7 (6)<br/>7 - 26.5 (7)<br/>8 - 30.3 (8)</p> <p><b>12. Pressure Setting bar (psi)</b><br/>A - 17 (250)<br/>B - 34 (500)<br/>C - 52 (750)<br/>D - 69 (1000)<br/>E - 86 (1250)<br/>F - 103 (1500)<br/>G - 121 (1750)<br/>H - 138 (2000)<br/>J - 150 (2250)<br/>K - 172 (2500)</p> <p><b>13. Design</b><br/>Subject to change. Installation dimension remain the same for designs - 20 through -29</p> <p><b>14. Shaft Rotation (viewed from shaft end)</b><br/>R - Turn right<br/>L - Turn left</p> |
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# Fixed Displacement Vane Pump

## HV2010F/ HV2010P Series

### Ordering Code : Double Pump

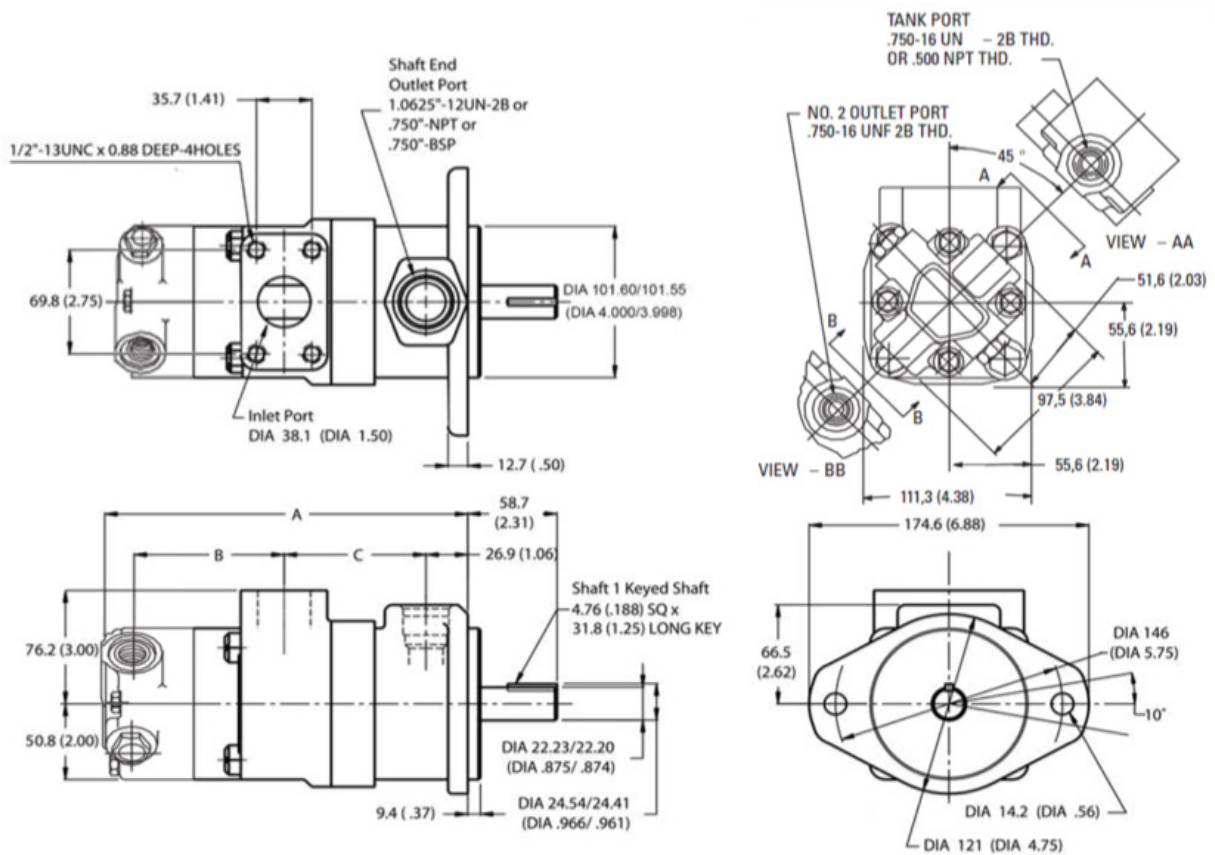


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|--|---|
| <p><b>1. Model :</b><br/>HV2010P - Priority Valve Cover<br/>SAE B 2 bolts mounting flange J744</p> <p><b>2. Mounting</b><br/>1 - Bolt Flange</p> <p><b>3. Inlet Port Connection</b><br/>F - 4-bolt Flange Dia. 1.5"</p> <p><b>4. Displacement (at 1200 rpm)</b><br/>Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/rev)</p> <ul style="list-style-type: none"> <li>5 - 16.4 (1.00)</li> <li>6 - 19.5 (1.19)</li> <li>7 - 22.8 (1.39)</li> <li>8 - 26.5 (1.62)</li> <li>9 - 29.7 (1.81)</li> <li>10 - 34.1 (2.08)</li> <li>11 - 36.4 (2.22)</li> <li>12 - 39.0 (2.38)</li> <li>13 - 42.4 (2.59)</li> </ul> <p><b>5. Shaft End Outlet Port Connection</b><br/>S - 1" 1/16 - 12 UN(SAE#12)<br/>P - 3/4" NPT<br/>B - 3/4" BSP</p> <p><b>6. Displacement P2 (at 1200 rpm)</b><br/>Volumetric displacement cm<sup>3</sup>/rev (in<sup>3</sup>/rev)</p> <ul style="list-style-type: none"> <li>1 - 3.3 (0.20)</li> <li>2 - 6.6 (0.40)</li> <li>3 - 9.8 (0.60)</li> <li>4 - 13.1 (0.80)</li> <li>5 - 16.4 (1.00)</li> <li>6 - 19.5 (1.19)</li> <li>7 - 22.8 (1.39)</li> </ul> <p><b>7. Cover End Outlet Port Connection</b><br/>K - 9/16" - 18 UNF for primary outlet and tank port 13. Design and 3/4" - 16 UNF(SAE#8) for secondary outlet</p> | <p><b>8. Type of shaft</b><br/>1 - Straight Keyed Shaft<br/>3 - Threaded with woodruff Keyed Shaft<br/>11 - Splined Shaft</p> <p><b>9. Shaft End Outlet Port Position (Viewed from cover end)</b><br/>A - Opposite inlet<br/>B - 90° CCW from inlet<br/>C - Inline with inlet<br/>D - 90° CW from inlet</p> <p><b>10. Cover End Outlet Port Position (Viewed from cover end)</b><br/>A - 135° CCW from inlet<br/>B - 45° CCW from inlet<br/>C - 45° CW from inlet<br/>D - 135° CW from inlet</p> <p><b>11. Flow rate Setting L/min (USgpm)</b><br/>2 - 7.6 (2)<br/>3 - 11.4 (3)<br/>4 - 15.2 (4)<br/>5 - 19.0 (5)<br/>6 - 22.7 (6)<br/>7 - 26.5 (7)<br/>8 - 30.3 (8)</p> <p><b>12. Pressure Setting bar (psi)</b><br/>A - 17 (250)<br/>B - 34 (500)<br/>C - 52 (750)<br/>D - 69 (1000)<br/>E - 86 (1250)<br/>F - 103 (1500)<br/>G - 121 (1750)<br/>H - 138 (2000)<br/>J - 150 (2250)<br/>K - 172 (2500)</p> <p><b>14. Shaft Rotation (viewed from shaft end)</b><br/>R - Turn right<br/>L - Turn left</p> |
|--|---|
- Subject to change. Installation dimension remain the same for designs - 20 through -29

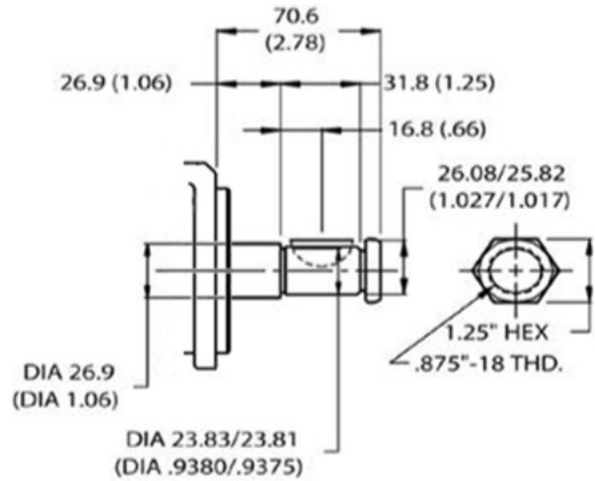
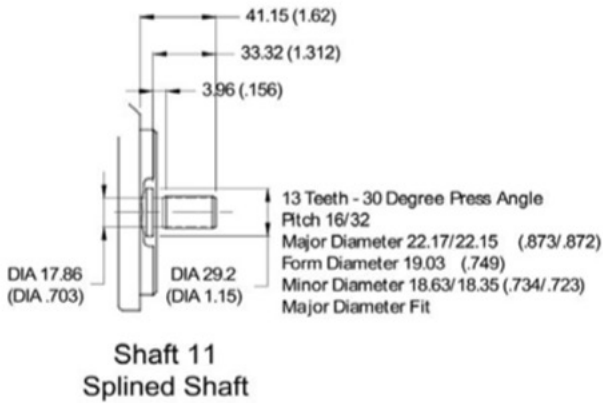
# Fixed Displacement Vane Pump HV2010F/ HV2010P Series

## Installation Dimension mm (inch)

### Double Pump HV2010F



# Fixed Displacement Vane Pump HV2010F/ HV2010P Series

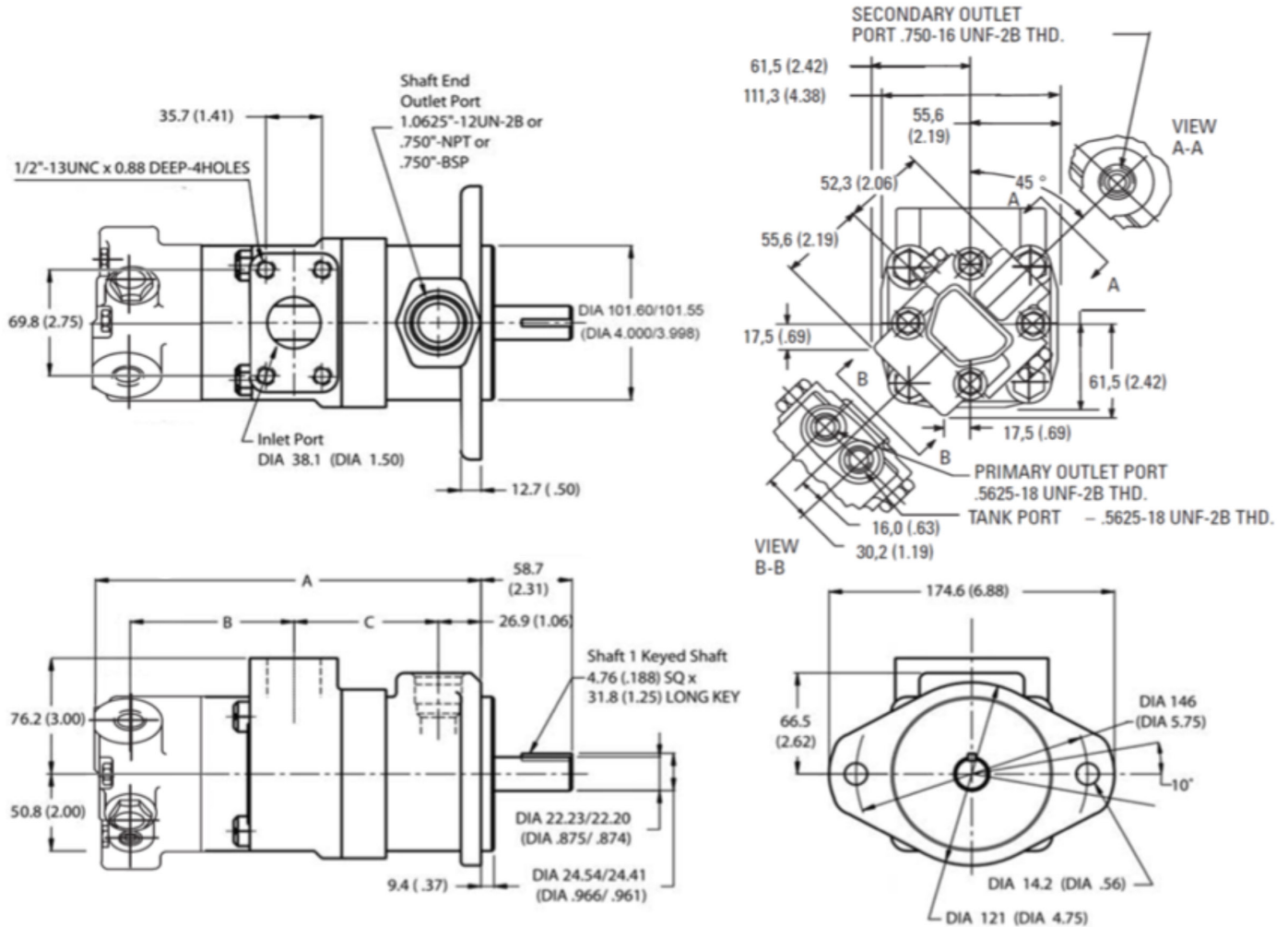


Delivery @ 1200 rpm & 7 bar (100psi)		Dimension		
Shaft End	Cover End	A	B	C
5, 6	1, 2, 3	219.7 (8.65)	93.5 (3.68)	80.0 (3.15)
	4, 5	226.0 (8.90)	99.8 (3.93)	
	6, 7	231.1 (9.10)	104.9 (4.13)	
7, 8, 9	1, 2, 3	226.1 (8.90)	93.5 (3.68)	86.4 (3.40)
	4, 5	232.4 (9.15)	99.8 (3.93)	
	6, 7	237.5 (9.35)	104.9 (4.13)	
10, 11	1, 2, 3	230.9 (9.09)	93.5 (3.68)	91.2 (3.59)
	4, 5	237.2 (9.34)	99.8 (3.93)	
	6, 7	242.3 (9.54)	104.9 (4.13)	
12, 13	1, 2, 3	234.4 (9.23)	93.5 (3.68)	94.7 (3.73)
	4, 5	240.8 (9.48)	99.8 (3.93)	
	6, 7	245.9 (9.68)	104.9 (4.13)	

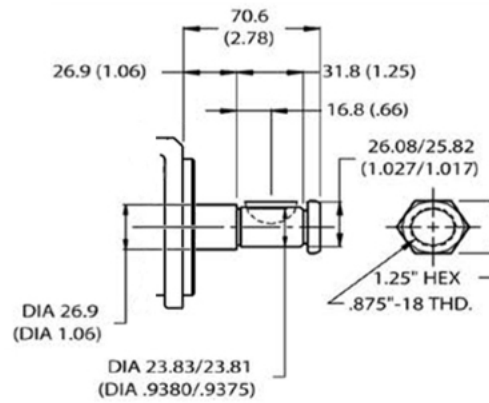
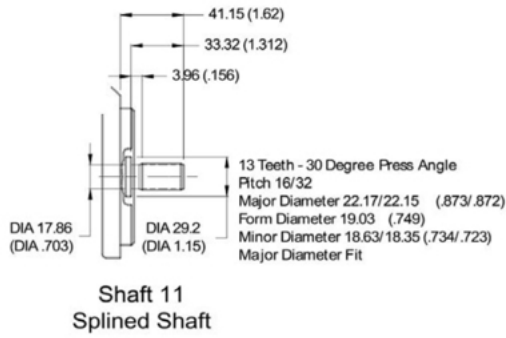
# Fixed Displacement Vane Pump HV2010F/ HV2010P Series

## Installation Dimension mm (inch)

### Double Pump HV2010P



# Fixed Displacement Vane Pump HV2010F/ HV2010P Series



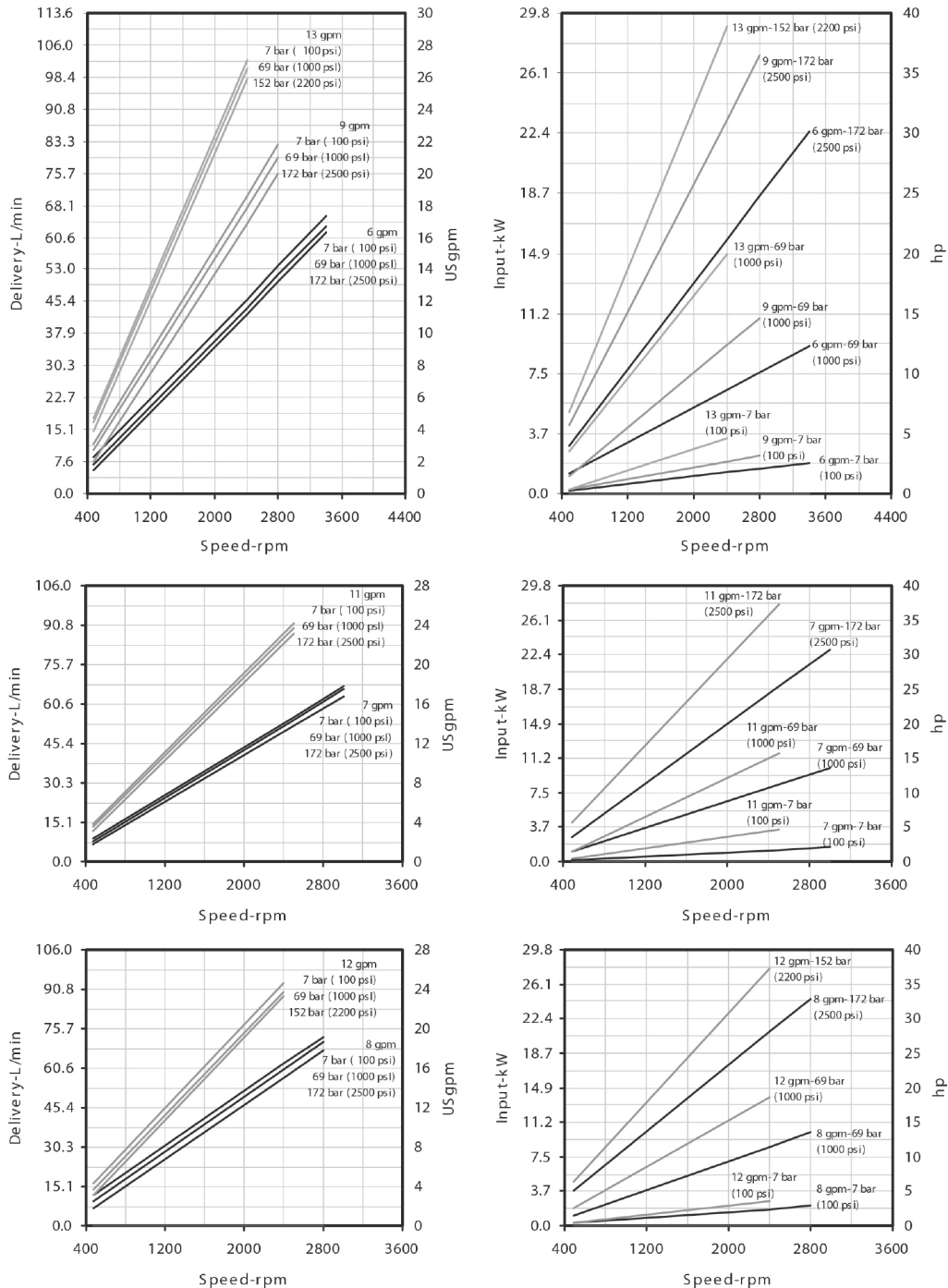
Delivery @ 1200 rpm & 7 bar (100psi)		Dimension		
Shaft End	Cover End	A	B	C
5, 6	1, 2, 3	221.2 (8.71)	93.5 (3.68)	80.0 (3.15)
	4, 5	227.5 (8.96)	99.8 (3.93)	
	6, 7	232.6 (9.16)	104.9 (4.13)	
7, 8, 9	1, 2, 3	227.6 (8.96)	93.5 (3.68)	86.4 (3.40)
	4, 5	233.9 (9.21)	99.8 (3.93)	
	6, 7	239.0 (9.41)	104.9 (4.13)	
10, 11	1, 2, 3	232.4 (9.15)	93.5 (3.68)	91.2 (3.59)
	4, 5	238.8 (9.40)	99.8 (3.93)	
	6, 7	243.8 (9.60)	104.9 (4.13)	
12, 13	1, 2, 3	236.0 (9.29)	93.5 (3.68)	94.7 (3.73)
	4, 5	242.3 (9.54)	99.8 (3.93)	
	6, 7	247.4 (9.74)	104.9 (4.13)	

# Fixed Displacement Vane Pump HV2010F/ HV2010P Series

## Performance Characteristics

### HV20, Shaft End of HV20

Based on viscosity 32 cSt (150 SSU) oil at 49°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)



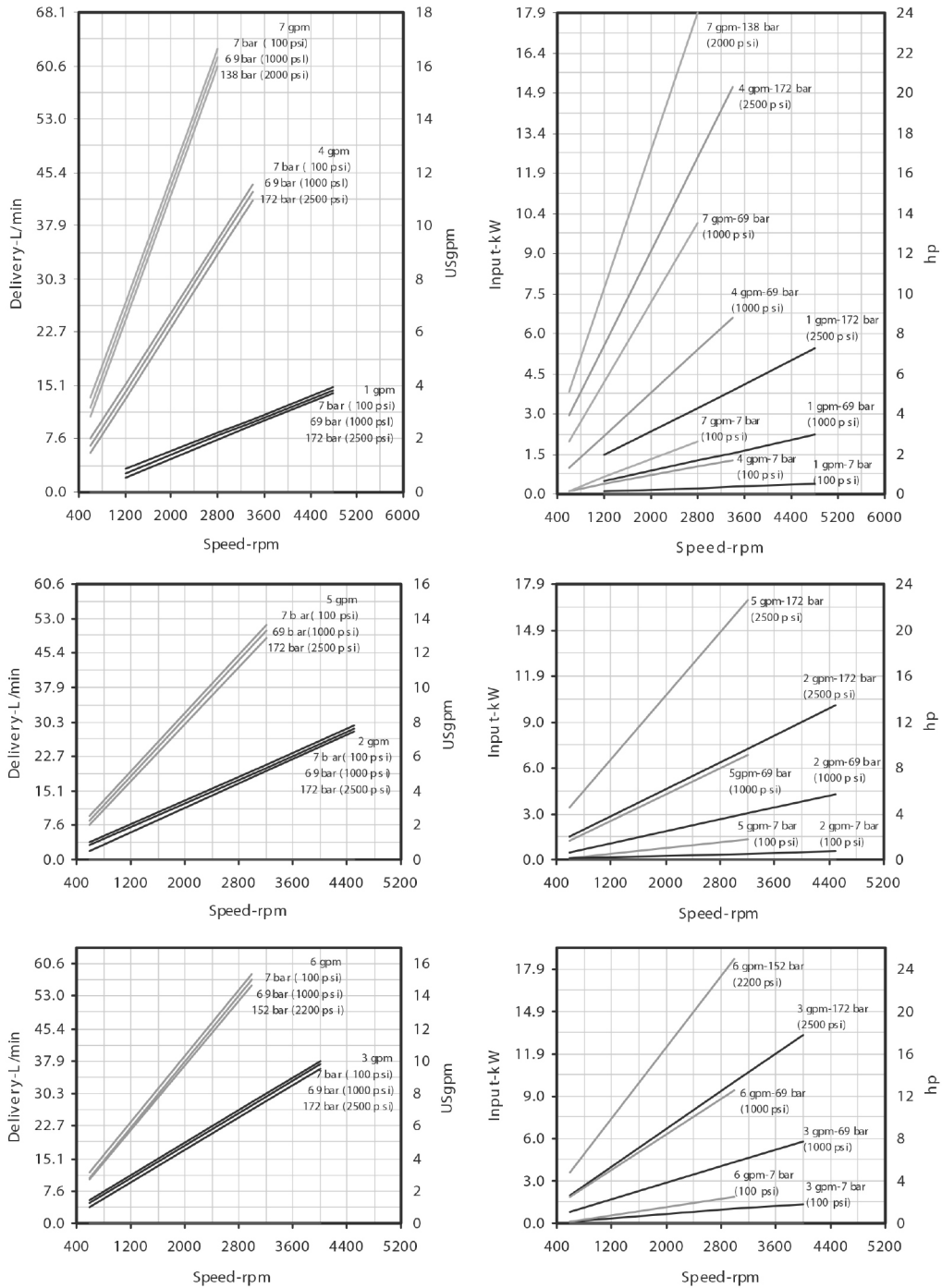
For the Cover End cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge.



# Fixed Displacement Vane Pump HV2020F/ HV2020P Series

## HV10, Cover End of HV2010

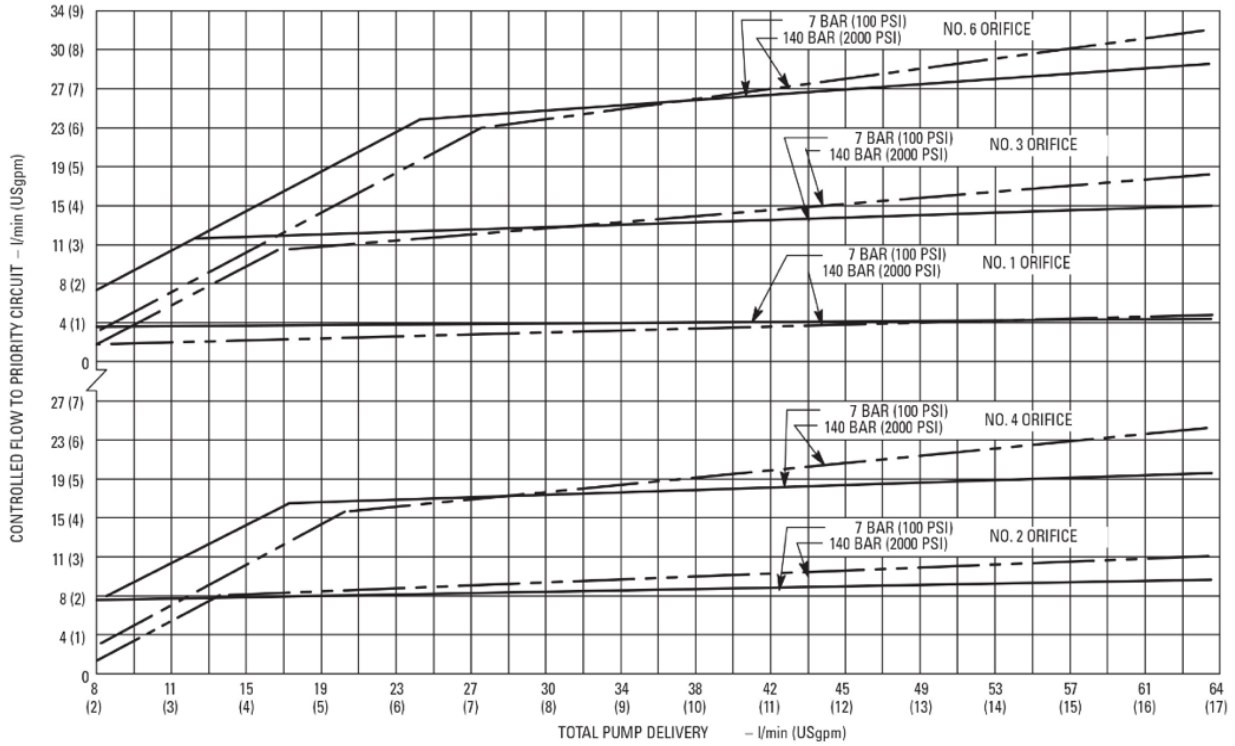
Based on viscosity 32 cSt (150 SSU) oil at 49°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)



For the Cover End cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge.

# Fixed Displacement Vane Pump HV2020F/ HV2020P Series

Priority Valve : HV2010P



# Fixed Displacement Vane Pump HV2020F/ HV2020P Series

## Flow Control : HV2010F

