

Hydraulic Double Vane Pump HV & HVQ Series

Catalogue 2025



BUREAU
VERITAS

Bureau Veritas Certification

FLO-TECH ENGINEERING CO., LTD.

47 SOI SUKSAWAD 14/18 JOMTONG, JOMTONG, BANGKOK 10150 THAILAND

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

**DESIGN & DEVELOP, PRODUCTION AND TRADING OF HYDRAULIC PUMP,
HYDRAULIC MOTOR, HYDRAULIC VALVE, PNEUMATIC VALVE,
POWER UNIT AND HYDRAULIC ACCESSORIES**

Original cycle start date:	17 March 2009
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	NA
Certification / Recertification cycle start date:	16 March 2024
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on:	16 March 2027

Certificate No.: TH022197

Version: 1

Issue date: 16 March 2024



0008

Signed on behalf of BVCH SAS UK Branch

Certification Body Address: 5th Floor, 66 Prescott Street, London, E1 8HG, United Kingdom

Local Office: Bureau Veritas Certification (Thailand) Ltd. 16th Floor, Bangkok Tower, 2170 New Petchburi Road, Bangkapi, Huaykwang, Bangkok 10310, Thailand

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: 66 2 670 4800



HOF Hydraulic Solutions Warranty Policy

Warranty

Flowlution Co.,Ltd, sole distributor of "HOF Hydraulic Solutions", Warrants all of its products to be free from defects in material and workmanship under normal operating conditions and proper application in accordance with the specifications for operation as described by the manufacturer for the period of twelve (12) months in service.

Limitations on Warranty

This Warranty is expressly in lieu of any other warranties expressed or implied. Buyer's sole and exclusive remedy under this Warranty shall be limited to the repair, replacement or exchange of warranted products at our option, F.O.B. our factory, or designated service center.

No special, incidental, consequential or other damage shall be recoverable. Flowlution Co.,Ltd shall not be liable for consequential damages or contingent liabilities including, but not limited to, loss of life, personal injury, loss of crops, loss due to fire or water damage, loss of business or business income, down time costs and trade or other commercial loss arising out of the failure of the product. Flowlution Co.,Ltd will in no event be liable for any sum in excess of the price received by it for the product for which liability is claimed or asserted.

No product shall be returned without prior authorization from Flowlution Co.,Ltd. Buyers and their agents shall prepay all transportation charges for the return of such products to Flowlution Co.,Ltd's factory or designated service center. There will be no acceptance of any charges for labor and/or parts incidental to the removal or remounting of product repaired or replaced under this Warranty.

The above Warranty does not cover conditions over which Flowlution Co.,Ltd has no control, including, without limitation, contamination, pressures in excess of recommended maximum, products damaged or subject to accident abuse or misuse after shipment from our factory, products altered or repaired by anyone other than Flowlution Co.,Ltd personnel, authorized Flowlution Co.,Ltd factory personnel or persons so designated in writing by Flowlution Co.,Ltd prior to commencement of said work.

A return goods authorization number must be obtained from Flowlution Co.,Ltd or Flowlution Co.,Ltd's authorized Service center, or Flowlution Co.,Ltd's authorized agent prior to any products being returned for Warranty.

For more details please contact info@flowlution.com or contact@hofhydraulic.com



High Performance Double Vane Pump 2520 HV/HVQ Series

Specifications :

2520 HV Series

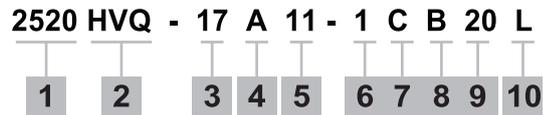
Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight	
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)	
2520HV	Shaft End	12	39 (2.47)	1800	172 (2500)	62.1 (16.4)	22.9 (30.8)	21.0 (46.2)	
		14	45 (2.78)			69.6 (18.4)	25.7 (34.5)		
		17	55 (3.39)			86.3 (22.8)	29.8 (40.0)		
		19	60.8 (3.72)			91.6 (25.4)	32.5 (43.5)		
		21	67 (4.13)			106.0 (28.0)	34.0 (45.6)		
	Cover End	2	7.0 (0.42)		206 (3000)	11.3 (3.00)	5.2 (7.0)		
		5	18 (1.10)			28.4 (7.5)	11.2 (15.0)		
		8	27 (1.67)			45.4 (12.0)	17.0 (22.8)		
		9	30.2 (1.84)			51.0 (13.5)	18.7 (25.1)		
		11	36 (2.22)			56.8 (15.0)	22.6 (30.3)		
		12	40 (2.47)			158 (2300)	62.1 (16.4)		25.1 (33.7)
		14	45 (2.78)			138 (2000)	69.6 (18.4)		28.3 (37.9)

2520 HVQ Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight		
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)		
2520HVQ & 2620HVQ	Shaft End	12	40 (2.45)	2500	206 (3000)	87.1 (23.0)	41.0 (55.0)	21.0 (46.2)		
		14	45 (2.77)			102.2 (27.0)	46.6 (62.5)			
		17	55 (3.37)			117.3 (31.0)	51.8 (69.5)			
		19	60.8 (3.72)			130.5 (34.5)	53.0 (71.0)			
		21	67 (4.12)			143.8 (38.0)	61.9 (83.0)			
	Cover End	2	7.0 (0.42)		2700	206 (3000)	15.9 (4.2)		7.3 (9.8)	
		5	18 (1.10)				37.9 (10.0)		16.4 (22.0)	
		8	27 (1.67)				60.6 (16.0)		24.2 (32.5)	
		9	30.2 (1.84)				71.5 (18.9)		32.9 (44.1)	
		11	36 (2.22)				75.0 (19.82)		33.9 (45.42)	
		12	39 (2.41)				158 (2300)		88.9 (23.5)	26.1 (35.0)
		14	45 (2.80)				138 (2000)		104.1 (27.5)	26.9 (36.0)

High Performance Double Vane Pump 2520 HV/HVQ Series

Ordering Code : Double Pump



1. Model :

- 2520 - Standard Bearing
- 2620 - Heavy Duty Bearing
- SAE B 2 bolts mounting flange J744

2. Series

- HV - Industrial
- HVQ - Mobile

3. Displacement P1

Volumetric displacement cm³/rev (in³/rev)

- 12 - 39.0 (2.47)
- 14 - 45.0 (2.78)
- 17 - 55.3 (3.39)
- 19 - 60.8 (3.72)
- 21 - 67.0 (4.13)

4. Port Connection (4 bolts SAE flange J518C)

- A - UNC Port Connection
- AM - Metric Port Connection

5. Displacement P2

Volumetric displacement cm³/rev (in³/rev)

- 02 - 7.0 (0.43)
- 05 - 18.0 (1.10)
- 08 - 27.3 (1.67)
- 09 - 30.3 (1.85)
- 11 - 36.3 (2.22)
- 12 - 40.4 (2.47)
- 14 - 45.5 (2.78)

6. Type of shaft

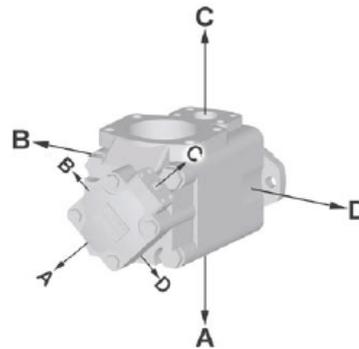
- 1 - Straight Keyed Shaft
- 11 - Splined Shaft
- 86 - Heavy Duty Straight Keyed Shaft

7. Shaft End Outlet Port Position (Viewed from cover end)

- A - Opposite inlet
- B - 90° CCW from inlet
- C - Inline with inlet
- D - 90° CW from inlet

8. Cover End Outlet Port Position (Viewed from cover end)

- A - 135° CCW from inlet
- B - 45° CCW from inlet
- C - 45° CW from inlet
- D - 135° CW from inlet



9. Design

Subject to change. Installation dimension remain the same for designs - 20 through -29

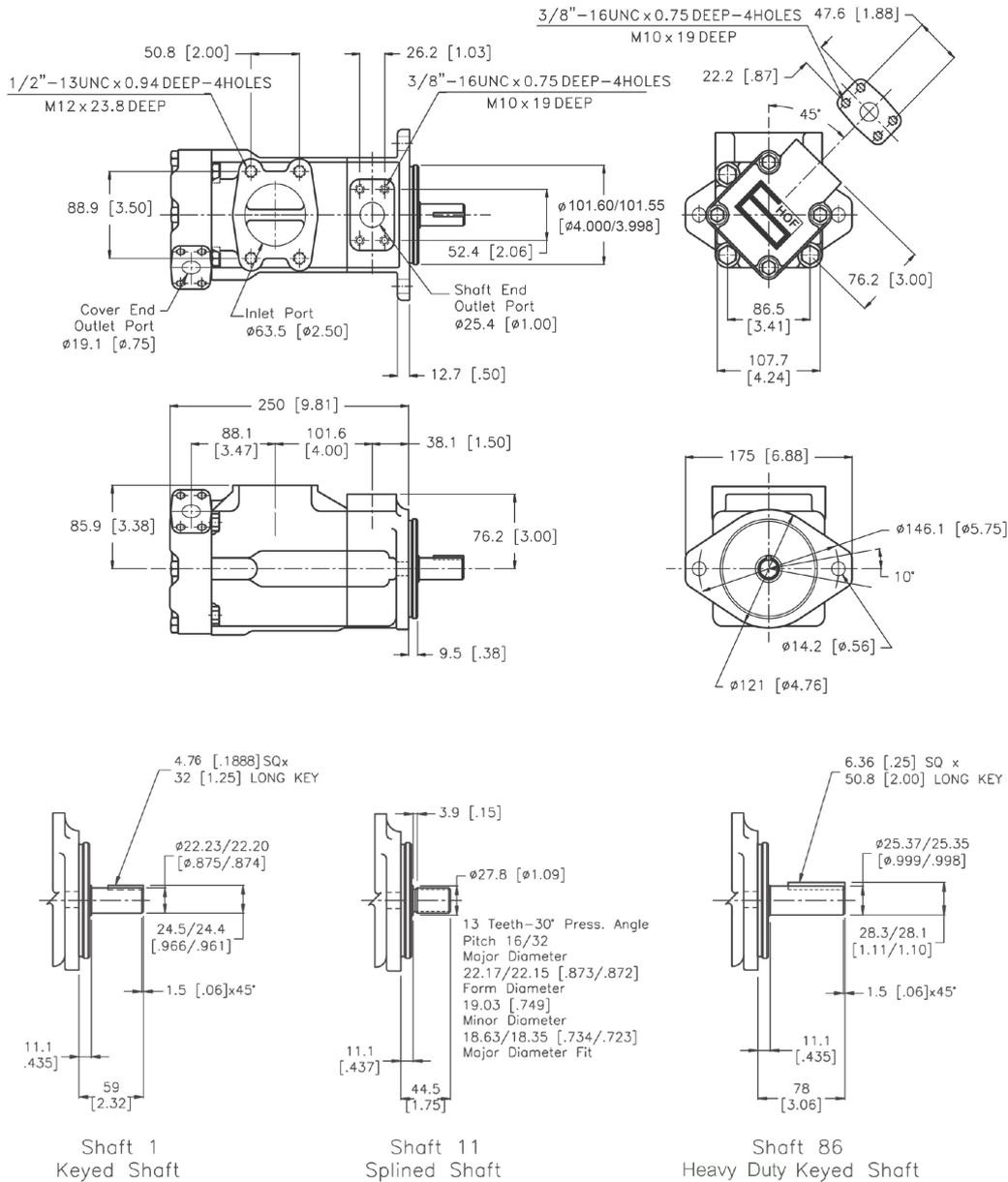
10. Shaft Rotation (viewed from shaft end)

- R - Turn right
- L - Turn left

High Performance Double Vane Pump 2520 HV/HVQ Series

Installation Dimension mm (inch)

Double Pump 2520HV/HVQ



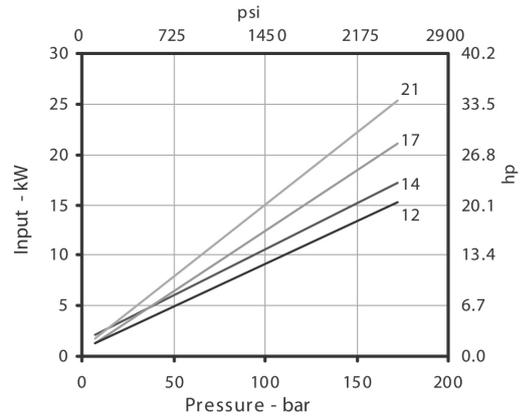
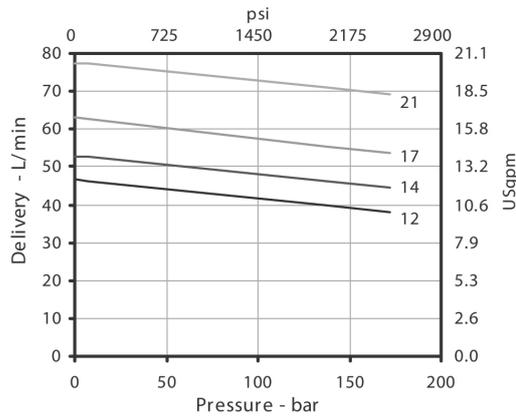
High Performance Double Vane Pump 2520 HV/HVQ Series

Performance Characteristics

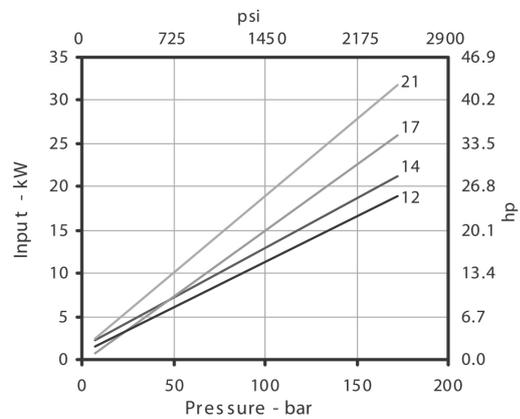
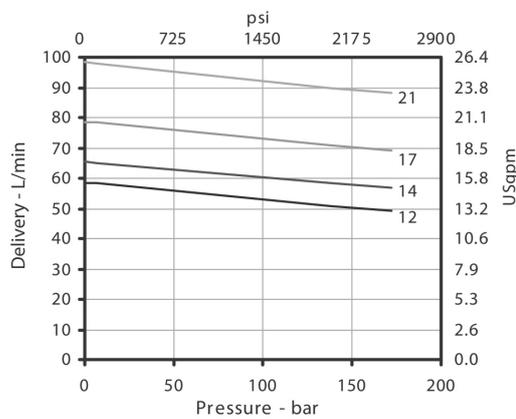
25HV, Shaft End of 25HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

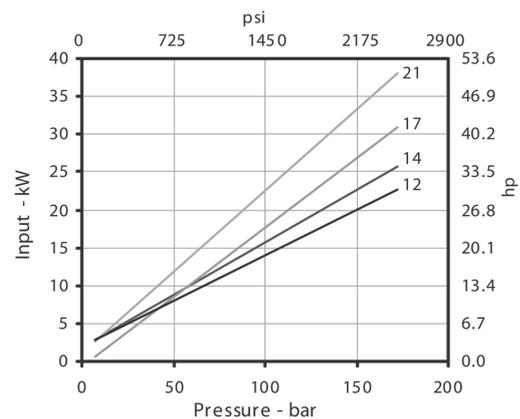
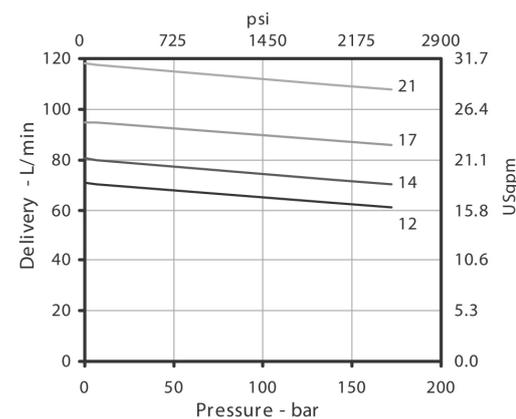
At 1200 rpm



At 1500 rpm



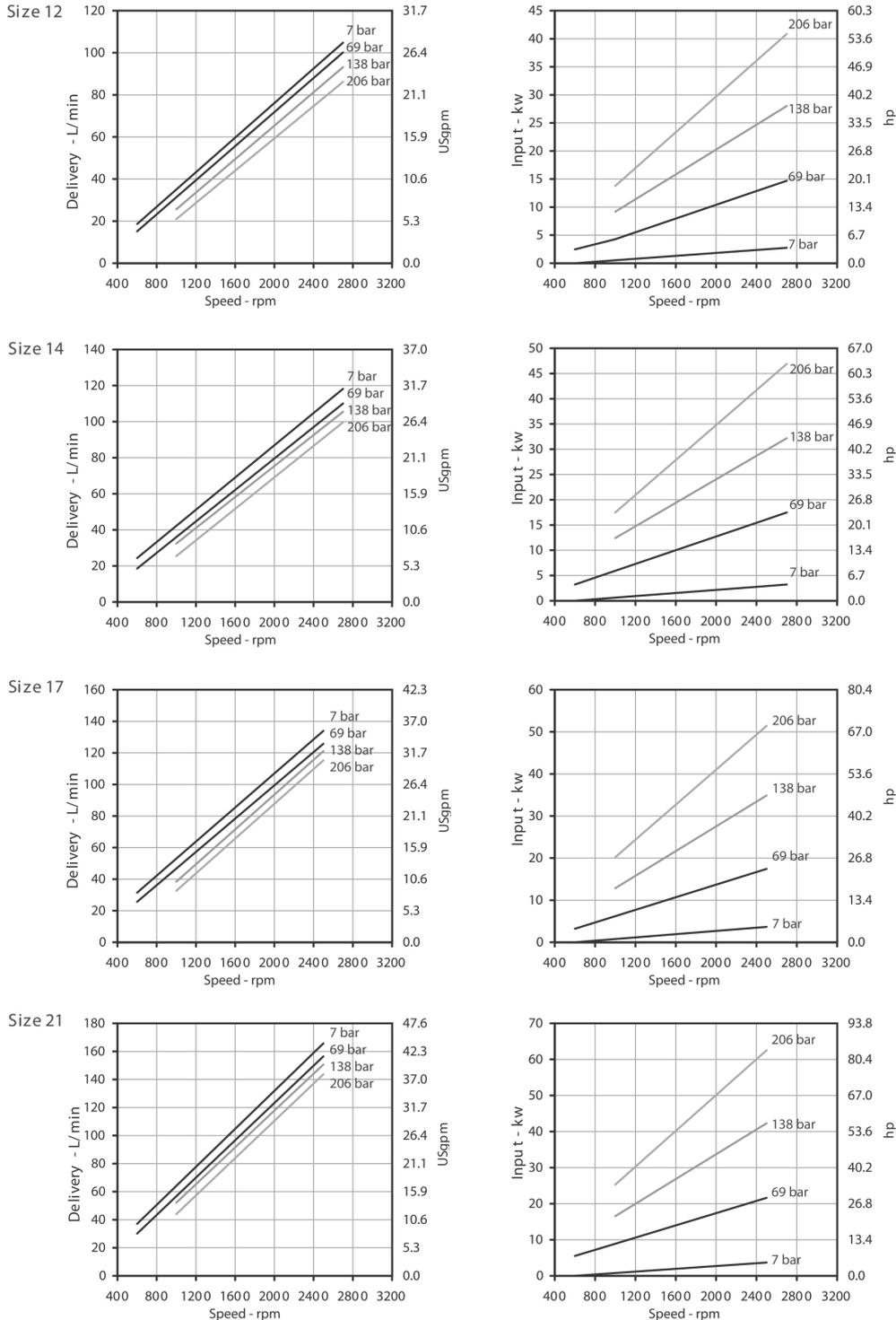
At 1800 rpm



High Performance Double Vane Pump 2520 HV/HVQ Series

25HVQ, Shaft End of 25HVQ

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)



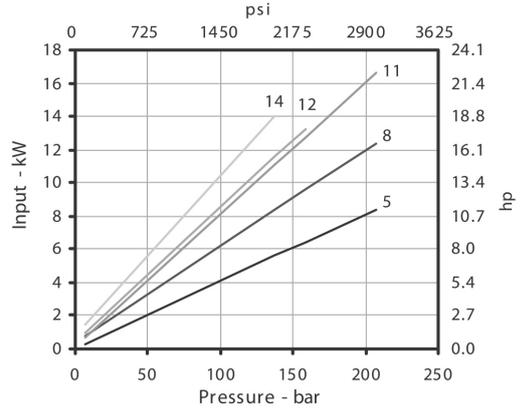
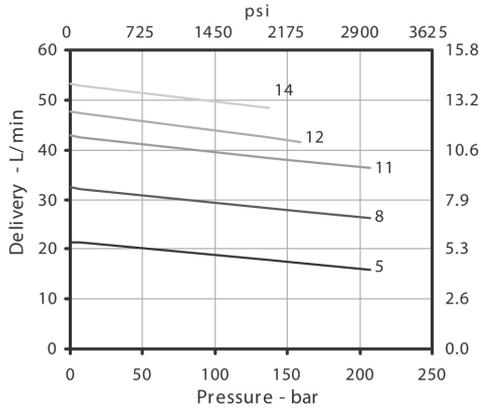
For the Cover End Cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge

High Performance Double Vane Pump 2520 HV/HVQ Series

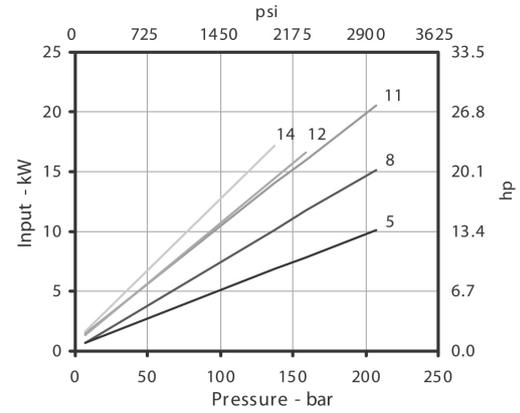
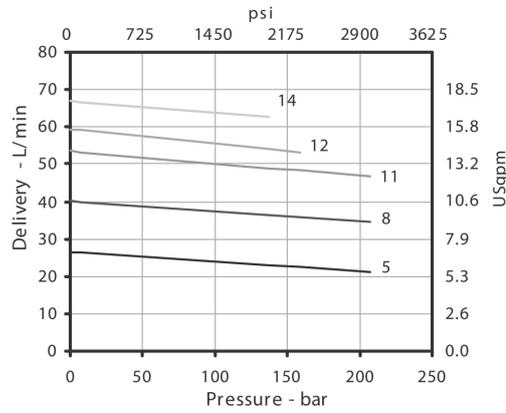
20HV, Cover End of 20HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

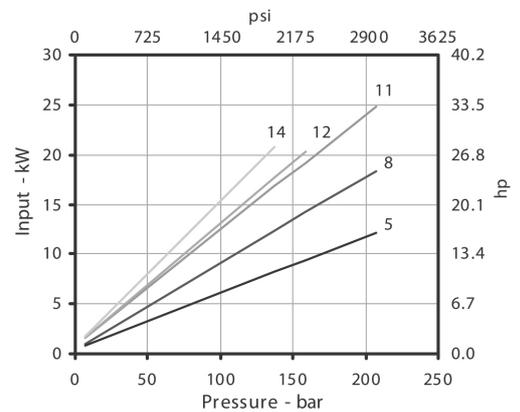
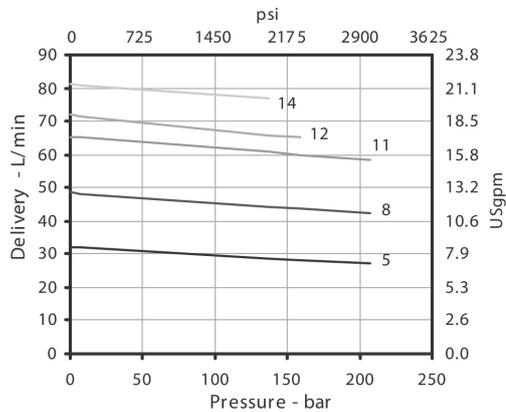
At 1200 rpm



At 1500 rpm



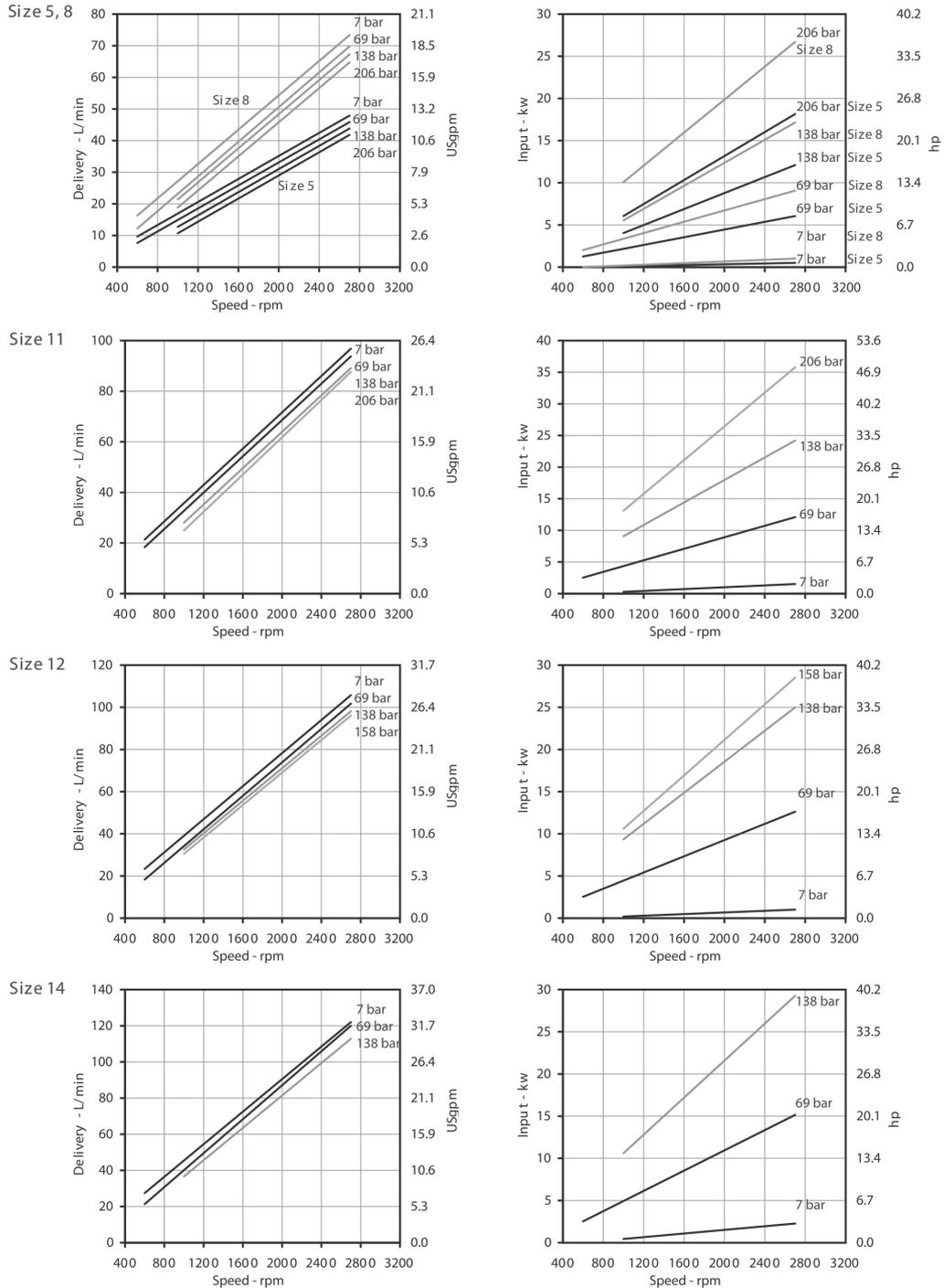
At 1800 rpm



High Performance Double Vane Pump 2520 HV/HVQ Series

20HVQ, Cover End of 20HVQ

Based on SAE 10W Fluid at 82°C (180°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

High Performance Double Vane Pump 3520 HV/HVQ Series

Specifications :

3520 HV Series

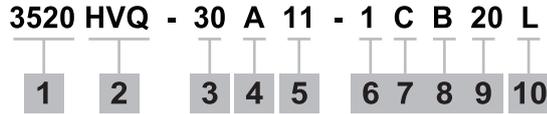
Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight	
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)	
3520HV	Shaft End	21	68.3 (4.18)	1800	172 (2500)	106.3 (28.1)	33.9 (45.5)	31.2 (68.6)	
		25	81.0 (4.94)			124.9 (33.0)	45.5 (61.0)		
		30	97.0 (5.91)			154.4 (40.8)	54.5 (73.0)		
		32	100.9 (6.15)			167.0 (44.0)	56.7 (76.0)		
		35	112.0 (6.83)			181.7 (48.0)	61.5 (82.4)		
		38	121.0 (7.37)			193.8 (51.2)	65.9 (88.3)		
	Cover End	2	7.0 (0.42)		206 (3000)	11.3 (3.00)	5.2 (7.0)		
		5	18.0 (1.10)			28.4 (7.5)	11.2 (15.0)		
		8	27.0 (1.67)			45.4 (12.0)	17.0 (22.8)		
		9	30.2 (1.84)			51.0 (13.5)	18.7 (25.1)		
		11	36.0 (2.22)			56.8 (15.0)	22.6 (30.3)		
		12	40.0 (2.47)			158 (2300)	62.1 (16.4)		25.1 (33.7)
		14	45.0 (2.78)			138 (2000)	69.6 (18.4)		28.3 (37.9)

3520 HVQ Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight	
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)	
3520HVQ & 3620HVQ	Shaft End	21	68.3 (4.18)	2500	206 (3000)	143.8 (38.0)	55.0 (73.9)	31.2 (68.6)	
		25	81.0 (4.94)			145.7 (38.5)	66.4 (89.0)		
		30	97.0 (5.91)			177.9 (47.0)	77.6 (104.0)		
		32	100.9 (6.15)			199.0 (52.6)	80.5 (109.5)		
		35	112.0 (6.83)			208.2 (55.0)	89.5 (120.0)		
		38	121.0 (7.37)			223.3 (59.0)	97.0 (130.0)		
	Cover End	2	7.0 (0.42)		206 (3000)	15.0 (4.0)	6.1 (8.2)		
		5	18.0 (1.10)			37.9 (10.0)	16.4 (22.0)		
		8	27.0 (1.67)			60.6 (16.0)	24.2 (32.5)		
		9	30.2 (1.84)			67.8 (17.9)	27.5 (36.8)		
		11	36.0 (2.22)			69.5 (18.35)	31.4 (42.05)		
		12	40.0 (2.47)			158 (2300)	88.9 (23.5)		26.1 (35.0)
		14	45.0 (2.78)			138 (2000)	104.1 (27.5)		26.9 (36.0)

High Performance Double Vane Pump 3520 HV/HVQ Series

Ordering Code : Double Pump



1. Model :

- 3520 - Standard Bearing
- 3620 - Heavy Duty Bearing
- SAE C 2 bolts mounting flange J744

2. Series

- HV - Industrial
- HVQ - Mobile

3. Displacement P1

- Volumetric displacement cm³/rev (in³/rev)
- 21 - 68.3 (4.18)
 - 25 - 81.0 (4.94)
 - 30 - 97.0 (5.91)
 - 32 - 100.9 (6.15)
 - 35 - 112.0 (6.83)
 - 38 - 121.0 (7.37)

4. Port Connection (4 bolts SAE flange J518C)

- A - UNC Port Connection
- AM - Metric Port Connection

5. Displacement P2

- Volumetric displacement cm³/rev (in³/rev)
- 02 - 7.0 (0.43)
 - 05 - 18.0 (1.10)
 - 08 - 27.3 (1.67)
 - 09 - 30.3 (1.85)
 - 11 - 36.3 (2.22)
 - 12 - 40.4 (2.47)
 - 14 - 45.5 (2.78)

6. Type of shaft

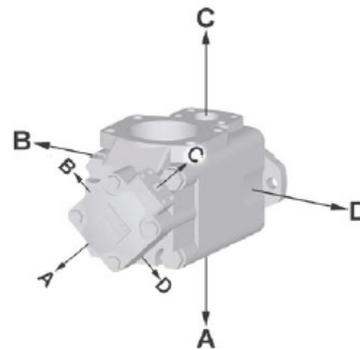
- 1 - Straight Keyed Shaft
- 11 - Splined Shaft
- 86 - Heavy Duty Straight Keyed Shaft

7. Shaft End Outlet Port Position (Viewed from cover end)

- A - Opposite inlet
- B - 90° CCW from inlet
- C - Inline with inlet
- D - 90° CW from inlet

8. Cover End Outlet Port Position (Viewed from cover end)

- A - 135° CCW from inlet
- B - 45° CCW from inlet
- C - 45° CW from inlet
- D - 135° CW from inlet



9. Design

Subject to change. Installation dimension remain the same for designs - 20 through -29

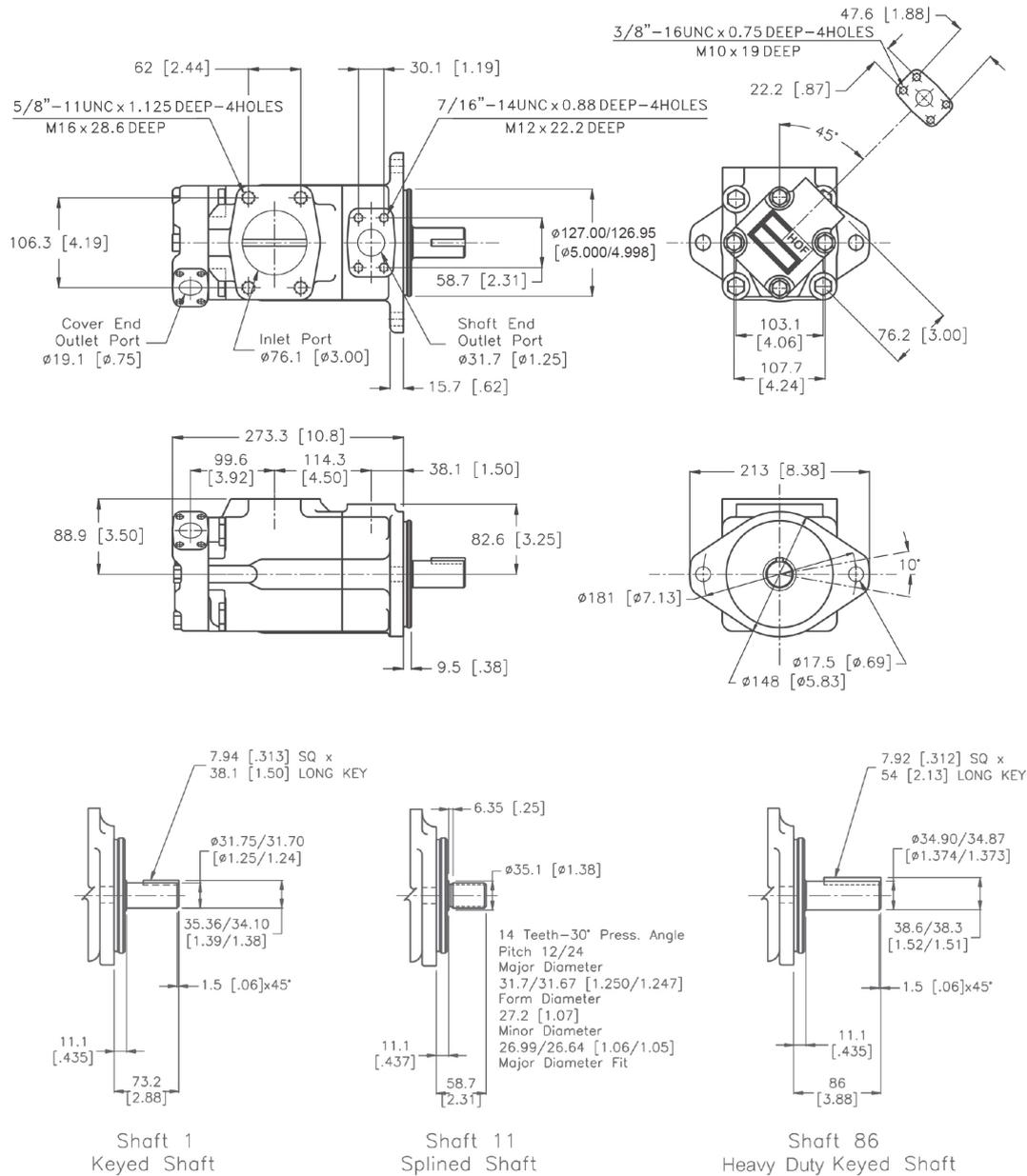
10. Shaft Rotation (viewed from shaft end)

- R - Turn right
- L - Turn left

High Performance Double Vane Pump 3520 HV/HVQ Series

Installation Dimension mm (inch)

Double Pump 3520HV/HVQ



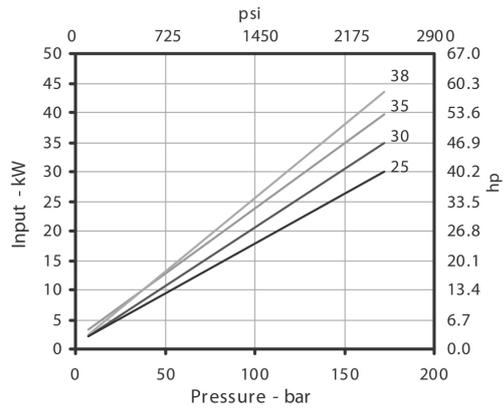
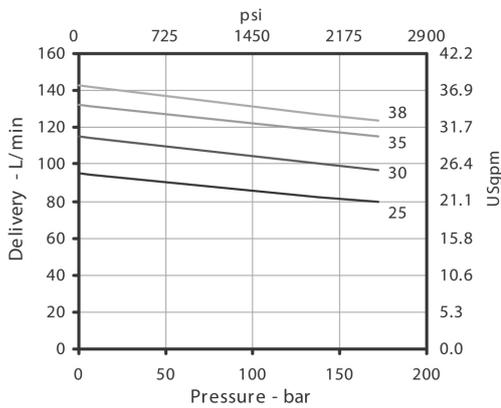
High Performance Double Vane Pump 3520 HV/HVQ Series

Performance Characteristics

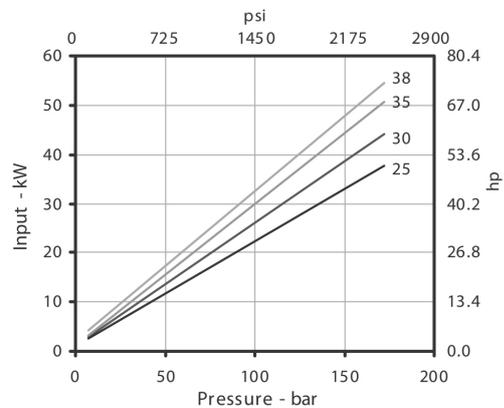
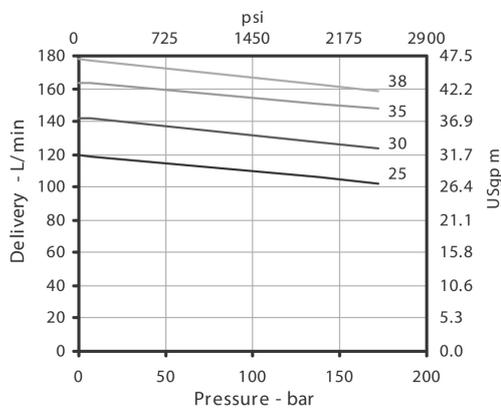
35HV, Shaft End of 35HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

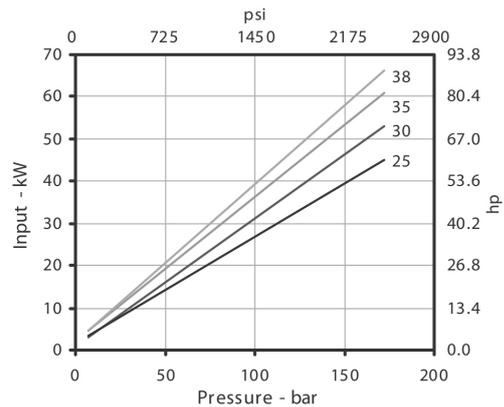
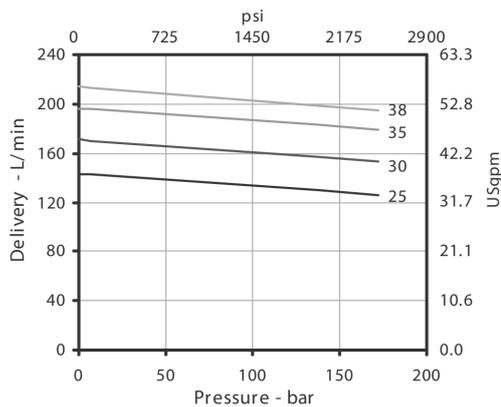
At 1200 rpm



At 1500 rpm



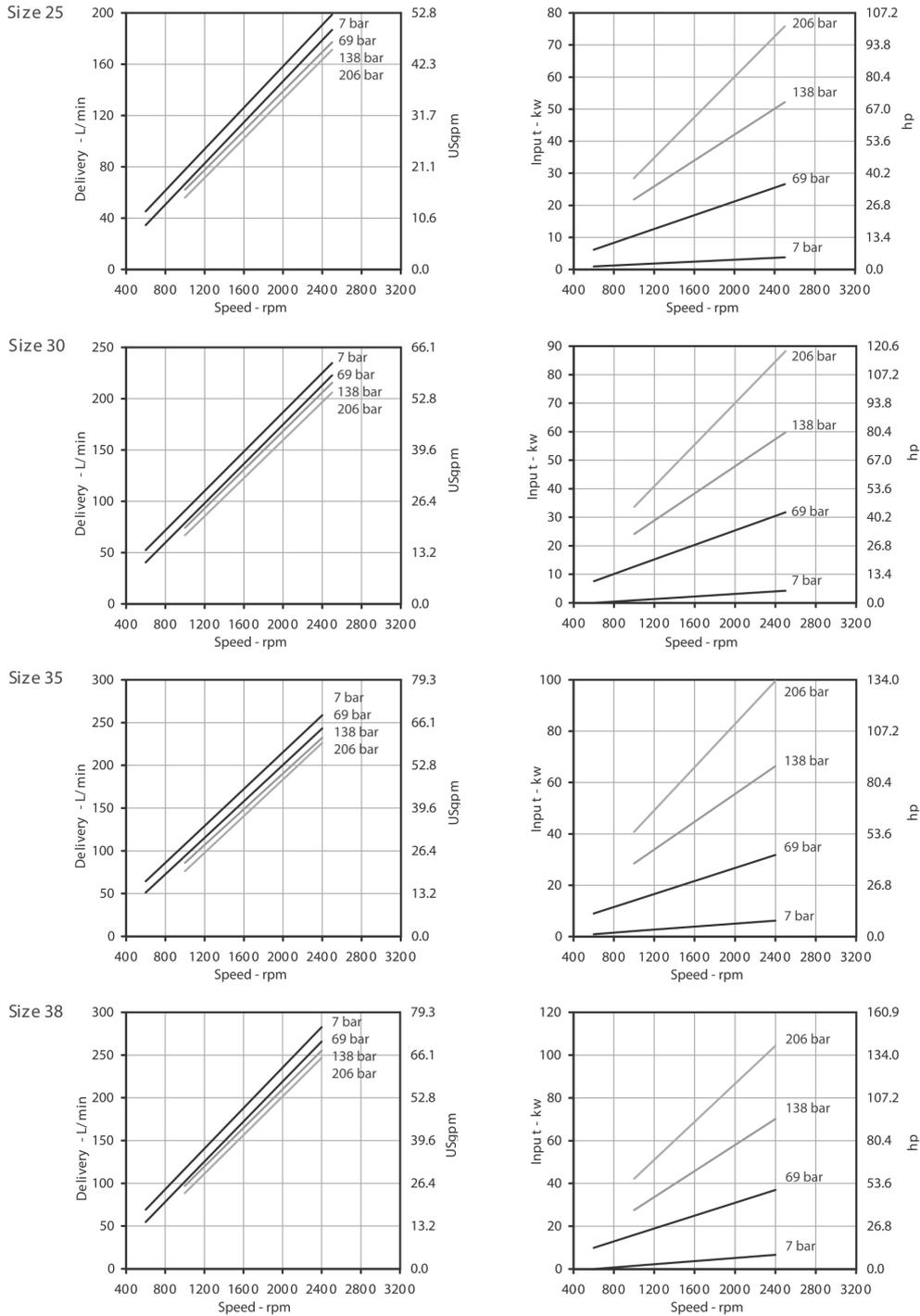
At 1800 rpm



High Performance Double Vane Pump 3520 HV/HVQ Series

35HVQ, Shaft End of 35HVQ

Based on SAE 10W Fluid at 82°C (180°F) and pump inlet at 0 PSIG (14.7 PSIA)



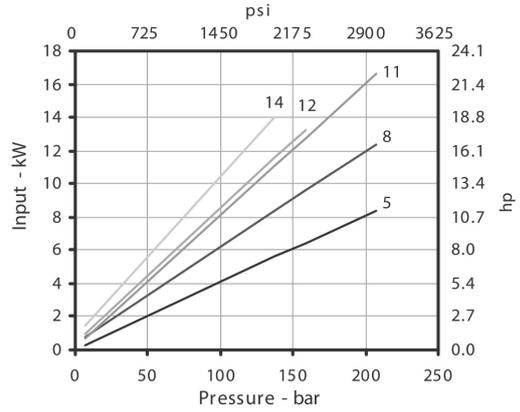
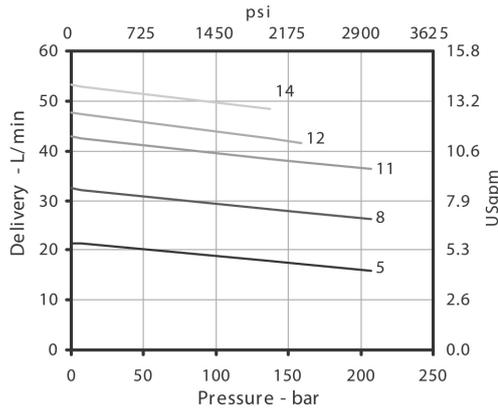
For the Cover End Cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge

High Performance Double Vane Pump 3520 HV/HVQ Series

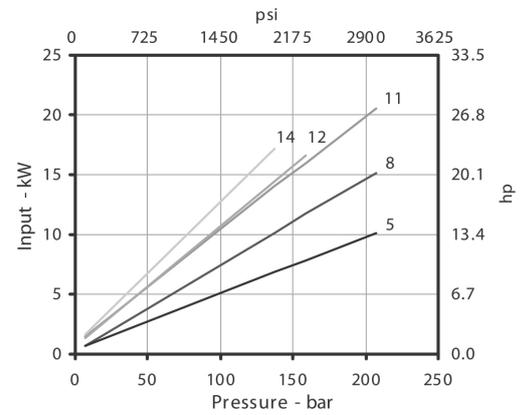
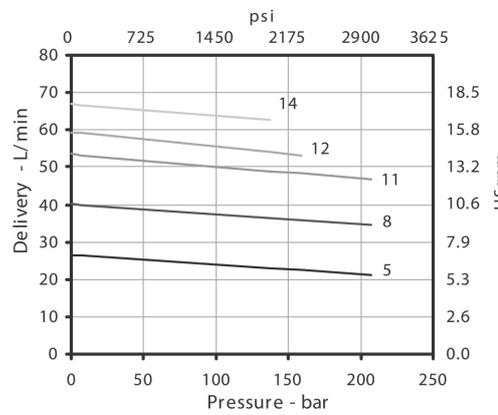
20HV, Cover End of 20HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

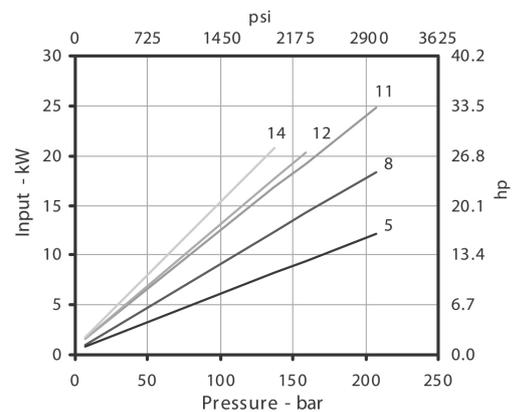
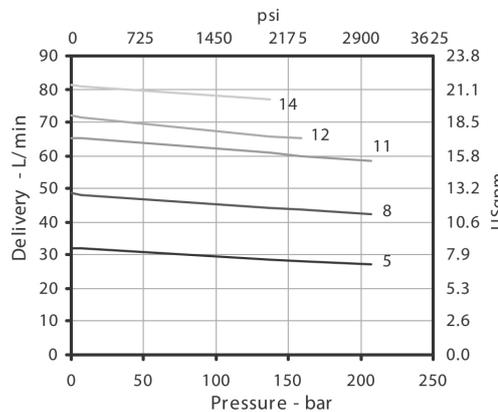
At 1200 rpm



At 1500 rpm



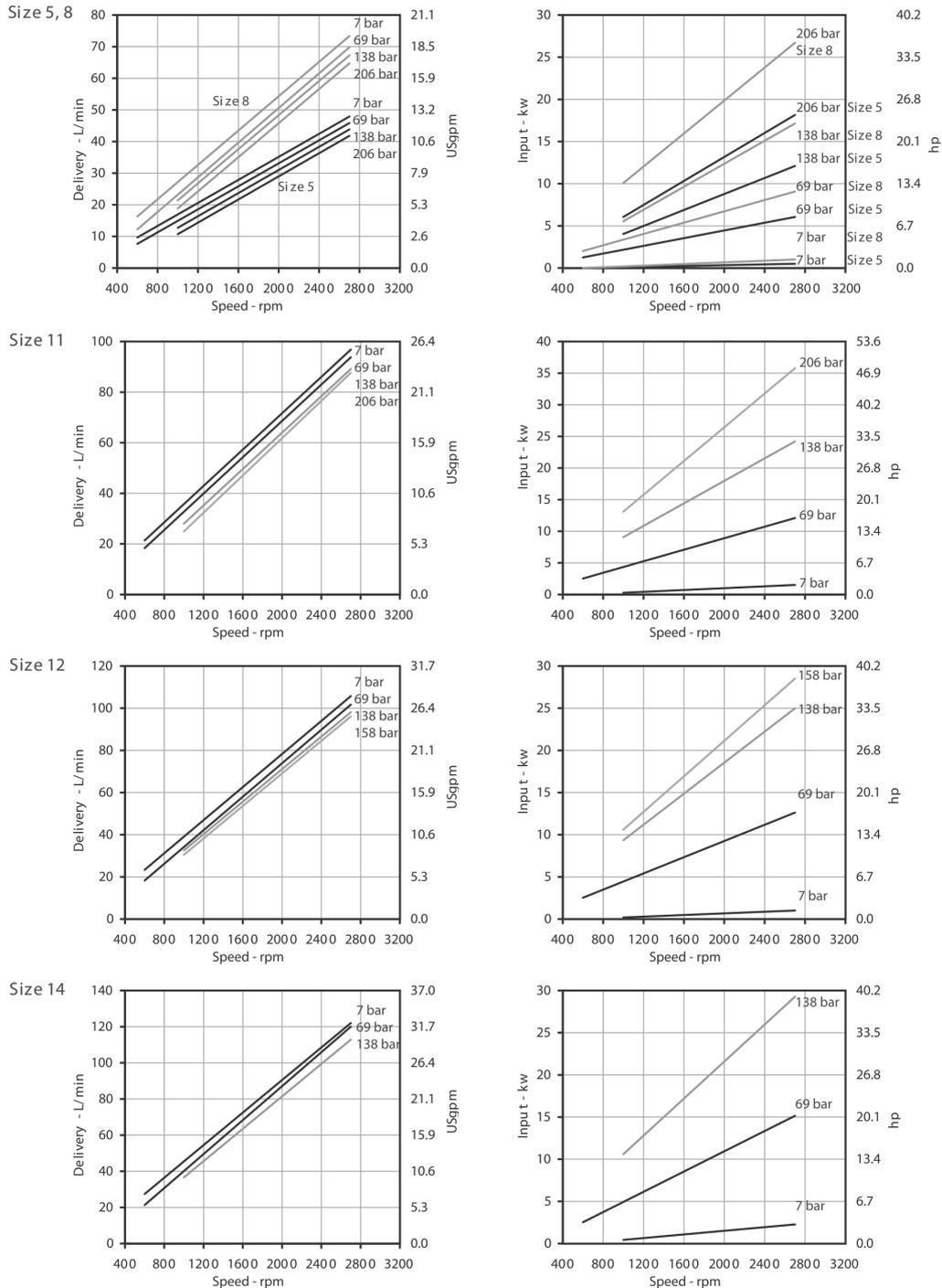
At 1800 rpm



High Performance Double Vane Pump 3520 HV/HVQ Series

20HVQ, Cover End of 20HVQ

Based on SAE 10W Fluid at 82°C (180°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

High Performance Double Vane Pump 3525 HV/HVQ Series

Specifications :

3525 HV Series

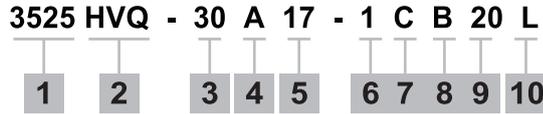
Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
3525HV	Shaft End	21	68.3 (4.18)	1800	172 (2500)	106.3 (28.1)	33.9 (45.5)	34.5 (75.9)
		25	81.0 (4.94)			124.9 (33.0)	45.5 (61.0)	
		30	97.0 (5.91)			154.4 (40.8)	54.5 (73.0)	
		32	100.9 (6.15)			167.0 (44.0)	56.7 (76.0)	
		35	112.0 (6.83)			181.7 (48.0)	61.5 (82.4)	
		38	121.0 (7.37)			193.8 (51.2)	65.9 (88.3)	
	Cover End	12	39.0 (2.47)			62.1 (16.4)	22.9 (30.8)	
		14	45.0 (2.78)			69.6 (18.4)	25.7 (34.5)	
		17	55.0 (3.39)			86.3 (22.8)	29.8 (40.0)	
		19	60.8 (3.72)			91.6 (25.4)	32.5 (43.5)	
		21	67.0 (4.13)			106.0 (28.0)	34.0 (45.6)	

3525 HVQ Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
3525HVQ & 3625HVQ	Shaft End	21	68.3 (4.18)	2500	206 (3000)	143.8 (38.0)	55.0 (73.9)	34.5 (75.9)
		25	81.0 (4.94)			145.7 (38.5)	66.4 (89.0)	
		30	97.0 (5.91)			177.9 (47.0)	77.6 (104.0)	
		32	100.9 (6.15)			199.0 (52.6)	80.5 (109.5)	
		35	112.0 (6.83)			208.2 (55.0)	89.5 (120.0)	
		38	121.0 (7.37)			223.3 (59.0)	97.0 (130.0)	
	Cover End	12	40.0 (2.45)			84.0 (22.18)	34.0 (46.4)	
		14	45.0 (2.77)			98.7 (26.08)	39.1 (52.47)	
		17	55.0 (3.37)			117.3 (31.0)	51.5 (69.0)	
		19	60.8 (3.72)			130.5 (34.50)	53.0 (71.0)	
		21	67.0 (4.12)			143.8 (38.0)	61.9 (83.0)	

High Performance Double Vane Pump 3525 HV/HVQ Series

Ordering Code : Double Pump



1. Model :

- 3525 - Standard Bearing
- 3625 - Heavy Duty Bearing
- SAE C 2 bolts mounting flange J744

2. Series

- HV - Industrial
- HVQ - Mobile

3. Displacement P1

Volumetric displacement cm³/rev (in³/rev)

- 21 - 68.3 (4.18)
- 25 - 81.0 (4.94)
- 30 - 97.0 (5.91)
- 32 - 100.9 (6.15)
- 35 - 112.0 (6.83)
- 38 - 121.0 (7.37)

4. Port Connection (4 bolts SAE flange J518C)

- A - UNC Port Connection
- AM - Metric Port Connection

5. Displacement P2

Volumetric displacement cm³/rev (in³/rev)

- 12 - 39.0 (2.47)
- 14 - 45.0 (2.78)
- 17 - 55.3 (3.39)
- 19 - 60.8 (3.72)
- 21 - 67.0 (4.13)

6. Type of shaft

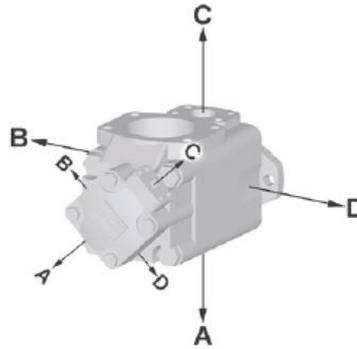
- 1 - Straight Keyed Shaft
- 11 - Splined Shaft
- 86 - Heavy Duty Straight Keyed Shaft

7. Shaft End Outlet Port Position (Viewed from cover end)

- A - Opposite inlet
- B - 90° CCW from inlet
- C - Inline with inlet
- D - 90° CW from inlet

8. Cover End Outlet Port Position (Viewed from cover end)

- A - 135° CCW from inlet
- B - 45° CCW from inlet
- C - 45° CW from inlet
- D - 135° CW from inlet



9. Design

Subject to change. Installation dimension remain the same for designs - 20 through -29

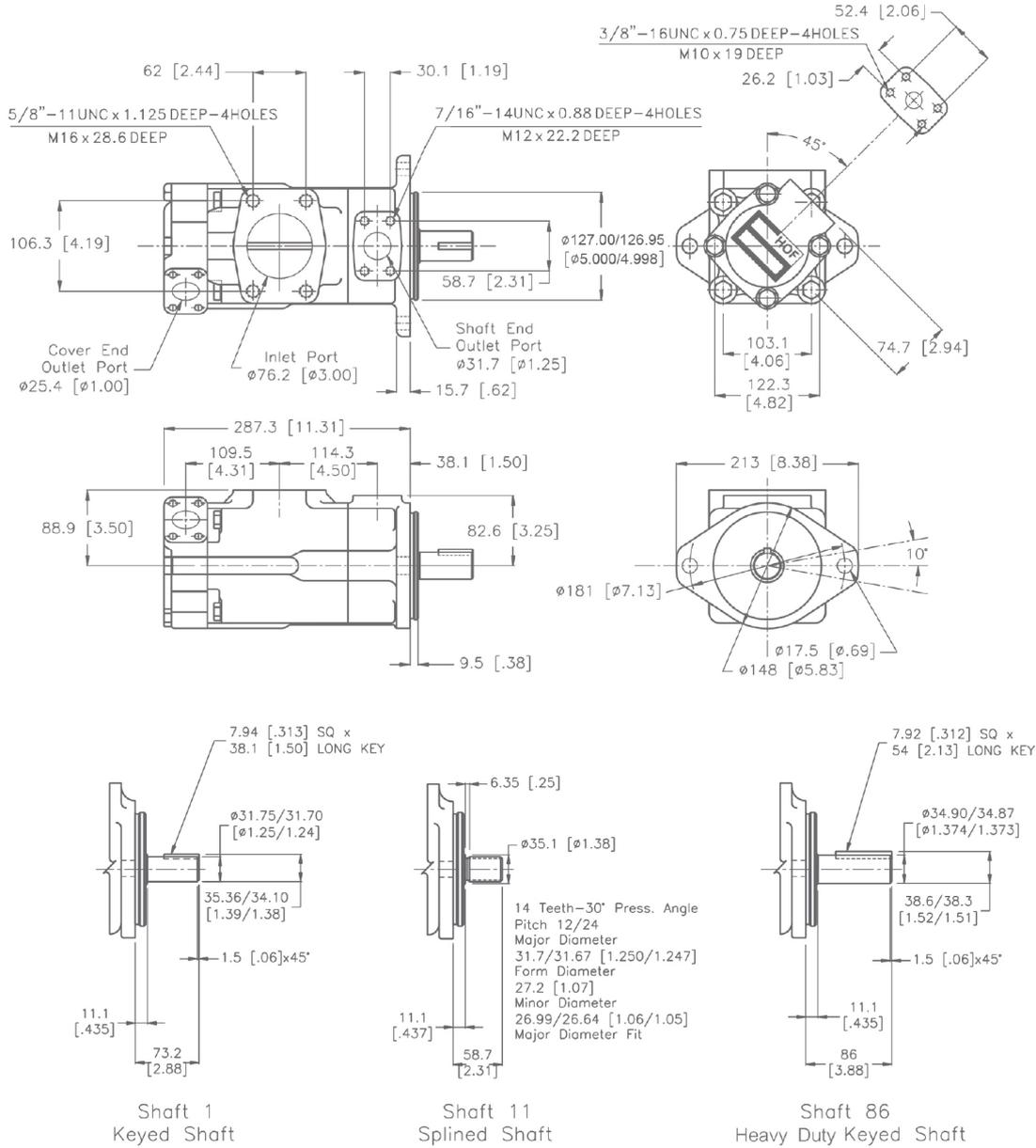
10. Shaft Rotation (viewed from shaft end)

- R - Turn right
- L - Turn left

High Performance Double Vane Pump 3525 HV/HVQ Series

Installation Dimension mm (inch)

Double Pump 3525HV/HVQ



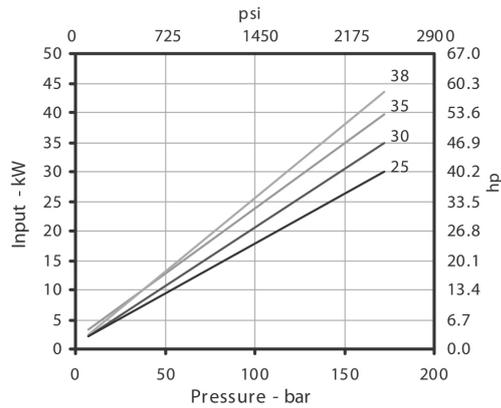
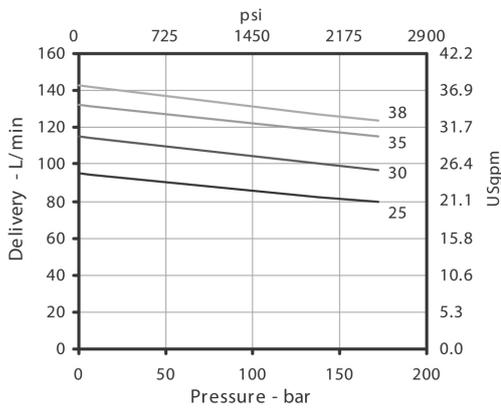
High Performance Double Vane Pump 3525 HV/HVQ Series

Performance Characteristics

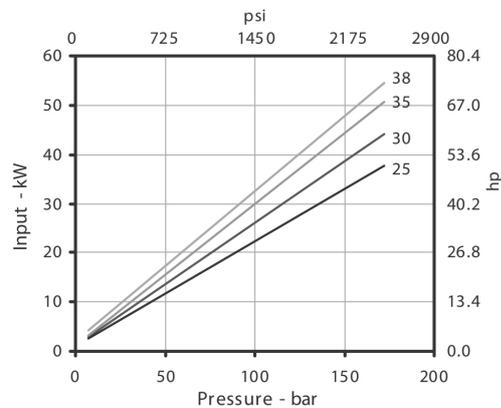
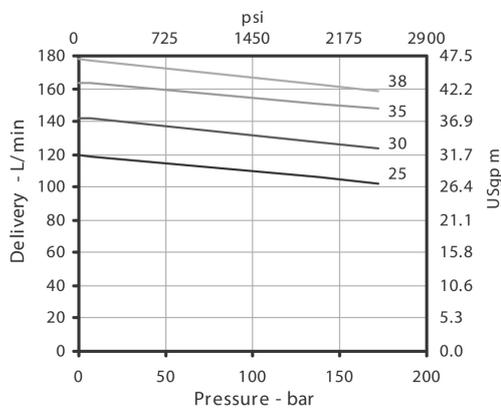
35HV, Shaft End of 35HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

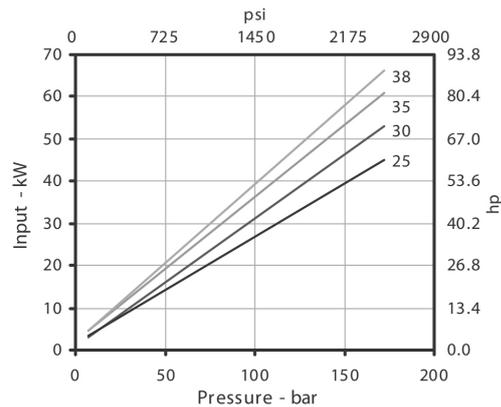
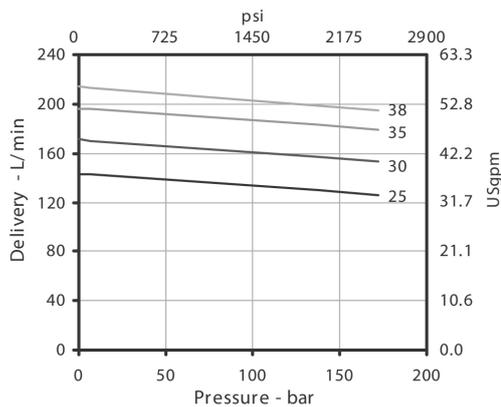
At 1200 rpm



At 1500 rpm



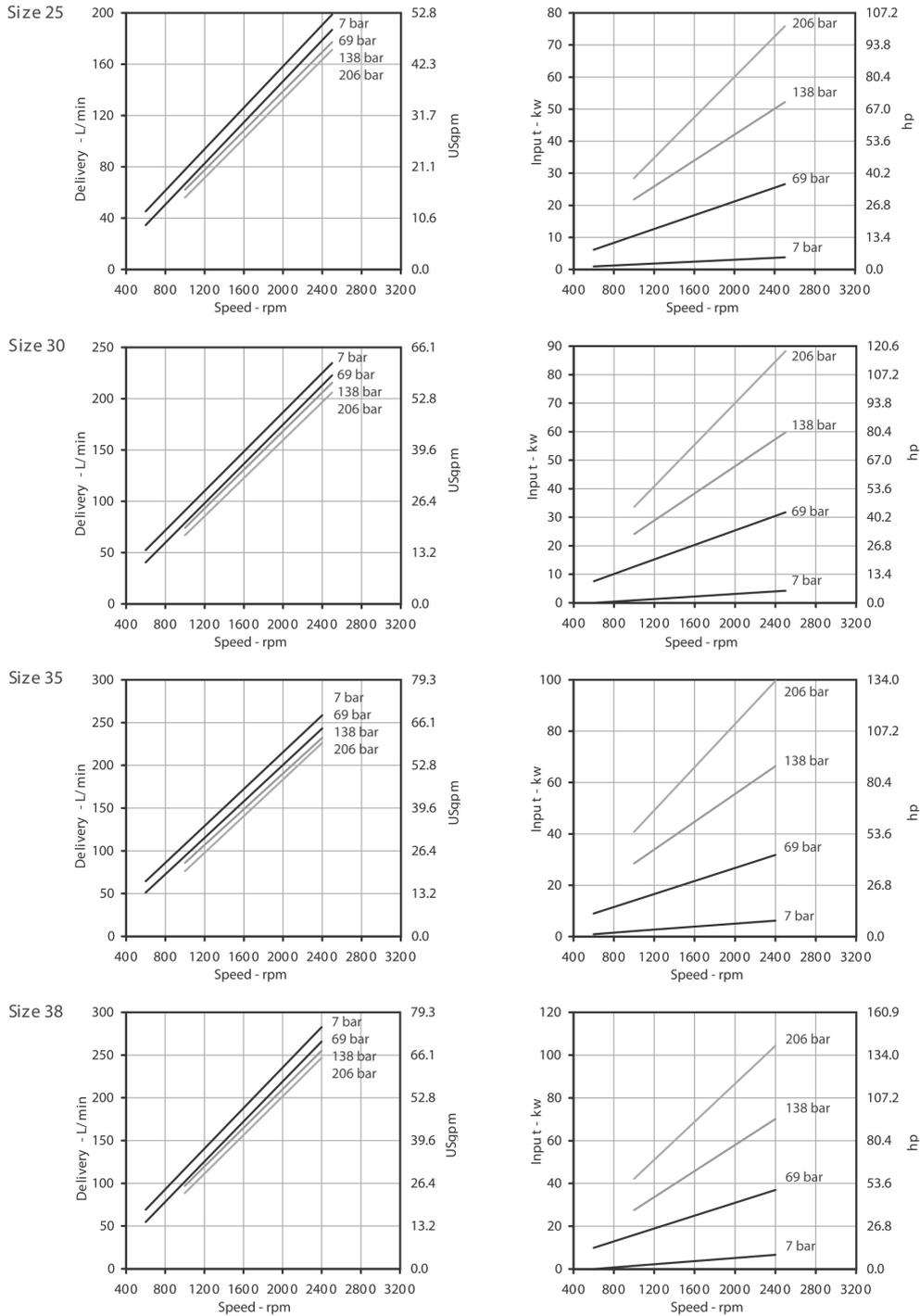
At 1800 rpm



High Performance Double Vane Pump 3525 HV/HVQ Series

35HVQ, Shaft End of 35HVQ

Based on SAE 10W Fluid at 82°C (180°F) and pump inlet at 0 PSIG (14.7 PSIA)



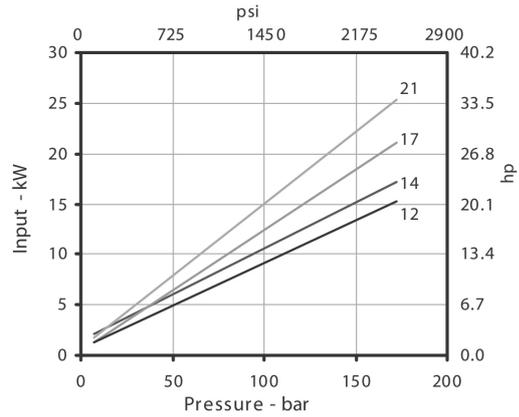
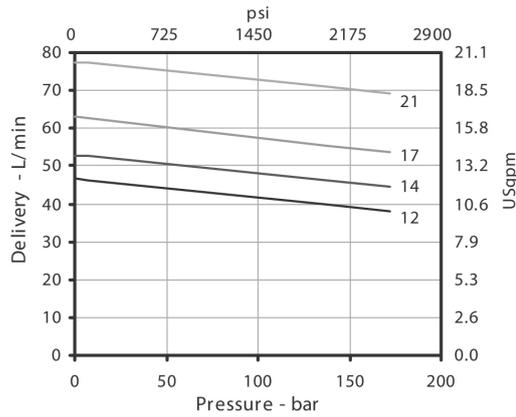
For the Cover End Cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge

High Performance Double Vane Pump 3525 HV/HVQ Series

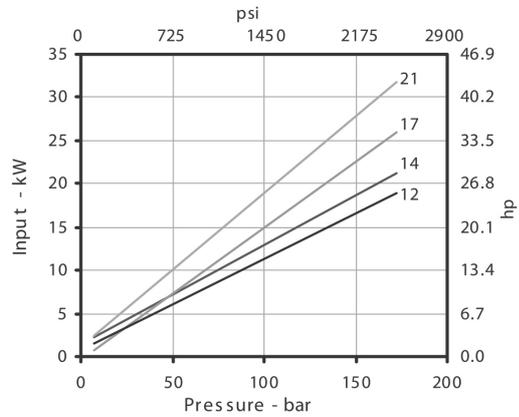
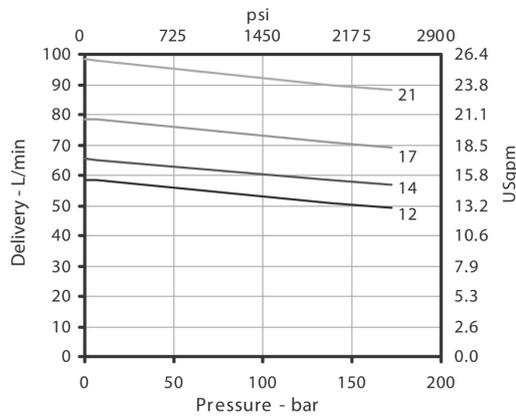
25HV, Cover End of 25HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

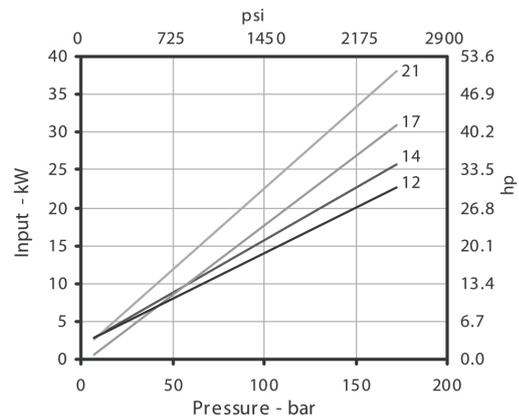
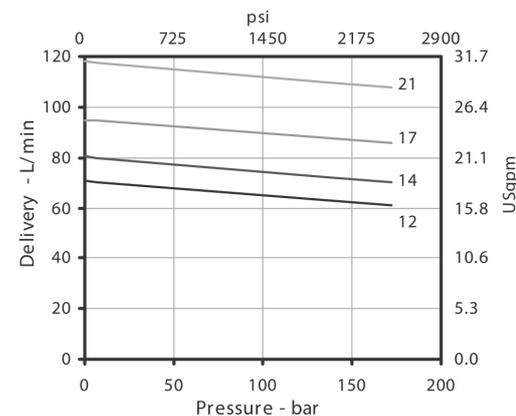
At 1200 rpm



At 1500 rpm



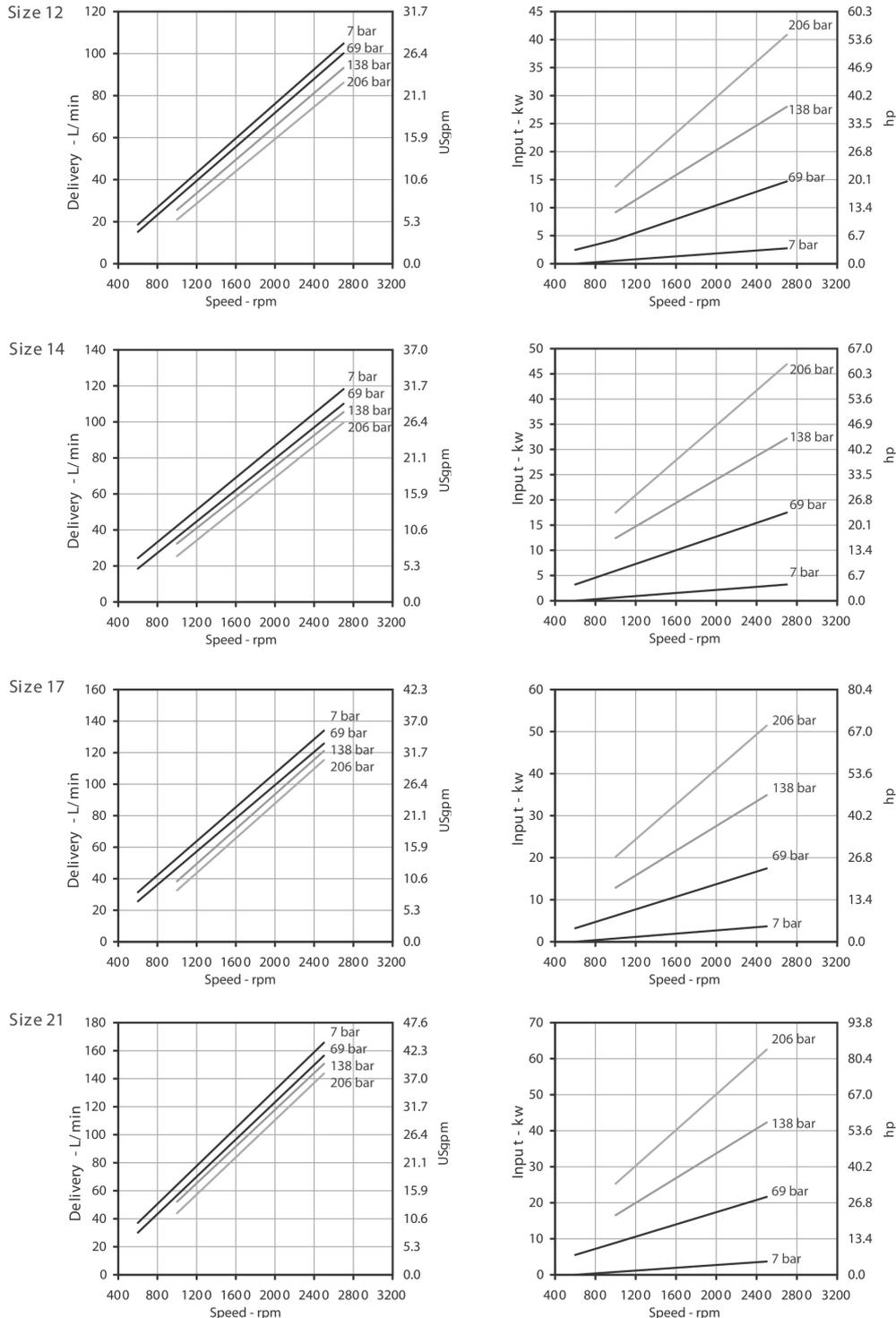
At 1800 rpm



High Performance Double Vane Pump 3525 HV/HVQ Series

25HVQ, Cover End of 25HVQ

Based on SAE 10W Fluid at 50°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

High Performance Double Vane Pump 4520 HV/HVQ Series

Specifications :

4520 HV Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
4520HV	Shaft End	35	110.4 (6.73)	1800	172 (2500)	179.0 (47.2)	60.0 (80.4)	43.0 (94.6)
		38	119.8 (7.32)			194.0 (51.3)	65.1 (87.3)	
		42	138.0 (8.41)			208.2 (55.0)	75.3 (101.0)	
		47	151.4 (9.26)			244.1 (64.5)	82.5 (110.6)	
		50	162.0 (9.85)			253.6 (67.0)	87.3 (117.0)	
		52	164.0 (10.0)			266.0 (70.0)	89.1 (119.5)	
		57	183.6 (11.23)			295.0 (77.8)	94.0 (126.0)	
		60	193.0 (11.75)			310.4 (82.0)	103.7 (139.0)	
		62	196.0 (11.94)			317.0 (83.7)	106.5 (142.8)	
		64	202.0 (12.33)			327.0 (86.4)	109.7 (147.1)	
	66	208.0 (12.7)	337.0 (89.0)		113.0 (151.5)			
	Cover End	2	7.0 (0.42)		206 (3000)	11.3 (3.0)	5.2 (7.0)	
		5	18.0 (1.10)			28.4 (7.5)	11.2 (15.0)	
		8	27.0 (1.67)			45.4 (12.0)	17.0 (22.8)	
9		30.2 (1.84)	51.0 (13.5)	18.7 (25.1)				
	11	36.0 (2.22)		56.8 (15.0)	22.6 (30.3)			
	12	40.0 (2.47)	158 (2300)	62.1 (16.4)	25.1 (33.7)			
	14	45.0 (2.78)	138 (2000)	69.6 (18.4)	28.3 (37.9)			

High Performance Double Vane Pump 4520 HV/HVQ Series

4520 HVQ Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
4520HVQ	Shaft End	35	110.4 (6.73)	2200	172 (2500)	219.0 (57.7)	73.3 (98.3)	43.0 (94.6)
		38	119.8 (7.32)			237.0 (62.7)	79.5 (106.7)	
		42	138.0 (8.46)			251.7 (66.5)	91.4 (122.5)	
		47	151.4 (9.26)			280.8 (74.2)	95.0 (127.3)	
		50	162.0 (9.90)			299.0 (79.0)	105.2 (141.0)	
		52	164.0 (10.0)			325.0 (85.7)	106.6 (143.0)	
		57	183.6 (11.23)			342.5 (90.5)	109.3 (146.6)	
		60	193 (11.80)			363.4 (96.0)	126.8 (170.0)	
		62	196.0 (11.94)			387.0 (102.3)	128.8 (172.7)	
		64	202.0 (12.33)			400.0 (105.7)	132.7 (178.0)	
	66	208.0 (12.7)	412.0 (109.0)	136.6 (183.2)				
	Cover End	2	7.0 (0.42)	206 (3000)	13.6 (3.6)	5.6 (7.5)		
		5	18.0 (1.10)		32.2 (8.5)	14.5 (19.5)		
		8	27.0 (1.67)		51.1 (13.5)	21.3 (28.5)		
9		30.2 (1.84)	59.7 (15.7)		24.2 (32.5)			
	11	36.0 (2.22)	61.1 (16.15)	27.6 (37.01)				
	12	40.0 (2.47)	158 (2300)	77.6 (20.5)	23.1 (31.0)			
	14	45.0 (2.78)	138 (2000)	90.8 (24.0)	23.9 (32.0)			

High Performance Double Vane Pump 4520 HV/HVQ Series

Ordering Code : Double Pump



1. Model :
4520 - Standard Bearing SAE C 2 bolts mounting flange J744

2. Series
HV - Industrial
HVQ - Mobile

3. Displacement P1
Volumetric displacement cm³/rev (in³/rev)

35 - 110.4 (6.73)
38 - 119.8 (7.32)
42 - 138.0 (8.41)
47 - 151.4 (9.26)
50 - 162.0 (9.85)
52 - 164.0 (10.0)
57 - 183.6 (11.23)
60 - 193.0 (11.75)
62 - 196.0 (11.94)
64 - 202.0 (12.33)
66 - 208.0 (12.7)

4. Port Connection (4 bolts SAE flange J518C)
A - UNC Port Connection
AM - Metric Port Connection

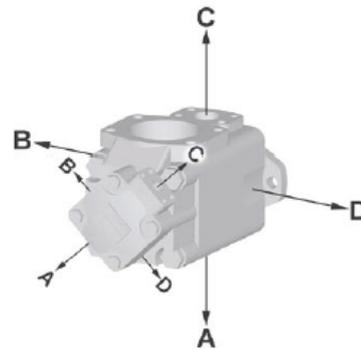
5. Displacement P2
Volumetric displacement cm³/rev (in³/rev)

02 - 7.0 (0.43)
05 - 18.0 (1.10)
08 - 27.3 (1.67)
09 - 30.3 (1.85)
11 - 36.3 (2.22)
12 - 40.4 (2.47)
14 - 45.5 (2.78)

6. Type of shaft
1 - Straight Keyed Shaft
11 - Splined Shaft
86 - Heavy Duty Straight Keyed Shaft

7. Shaft End Outlet Port Position (Viewed from cover end)
A - Opposite inlet
B - 90° CCW from inlet
C - Inline with inlet
D - 90° CW from inlet

8. Cover End Outlet Port Position (Viewed from cover end)
A - 135° CCW from inlet
B - 45° CCW from inlet
C - 45° CW from inlet
D - 135° CW from inlet



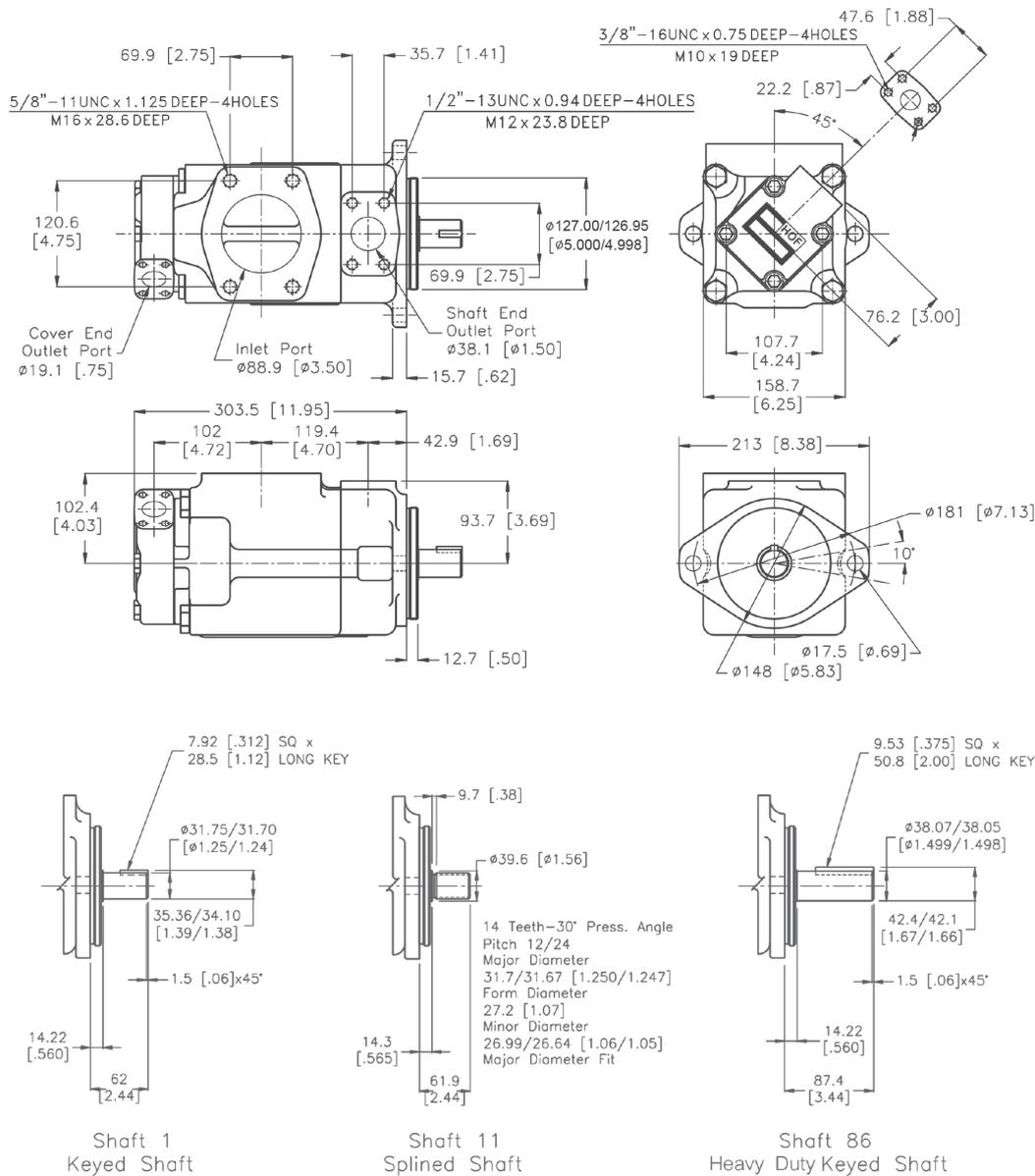
9. Design
Subject to change. Installation dimension remain the same for designs - 20 through -29

10. Shaft Rotation (viewed from shaft end)
R - Turn right
L - Turn left

High Performance Double Vane Pump 4520 HV/HVQ Series

Installation Dimension mm (inch)

Double Pump 4520HV/HVQ



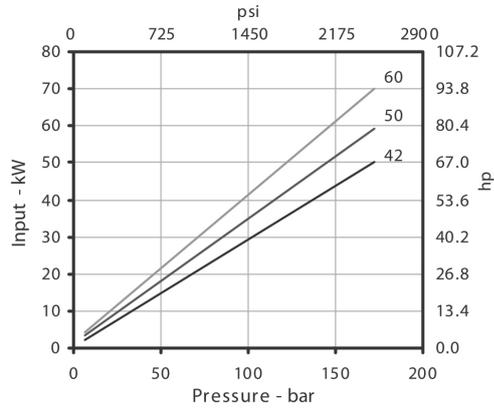
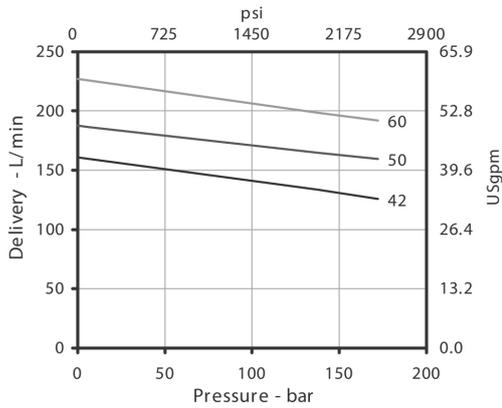
High Performance Double Vane Pump 4520 HV/HVQ Series

Performance Characteristics

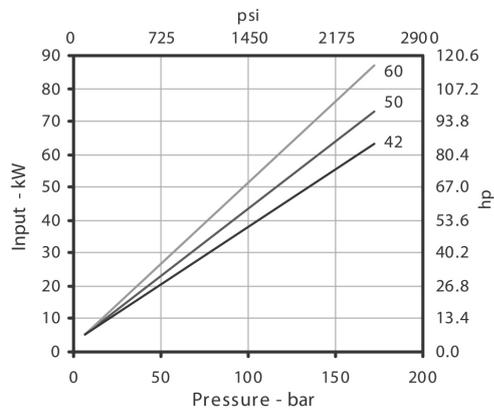
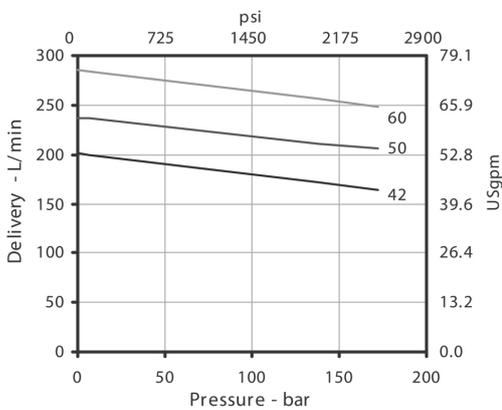
45HV, Shaft End of 45HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

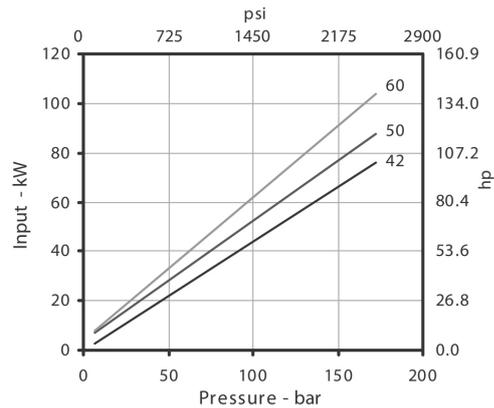
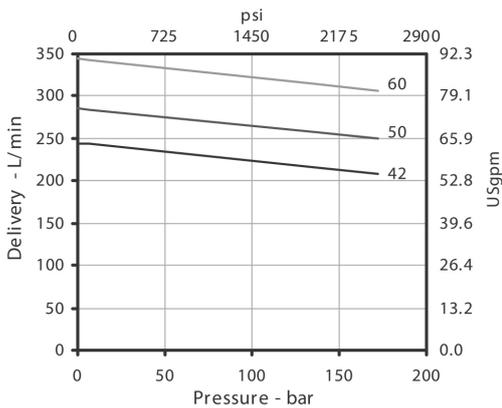
At 1200 rpm



At 1500 rpm



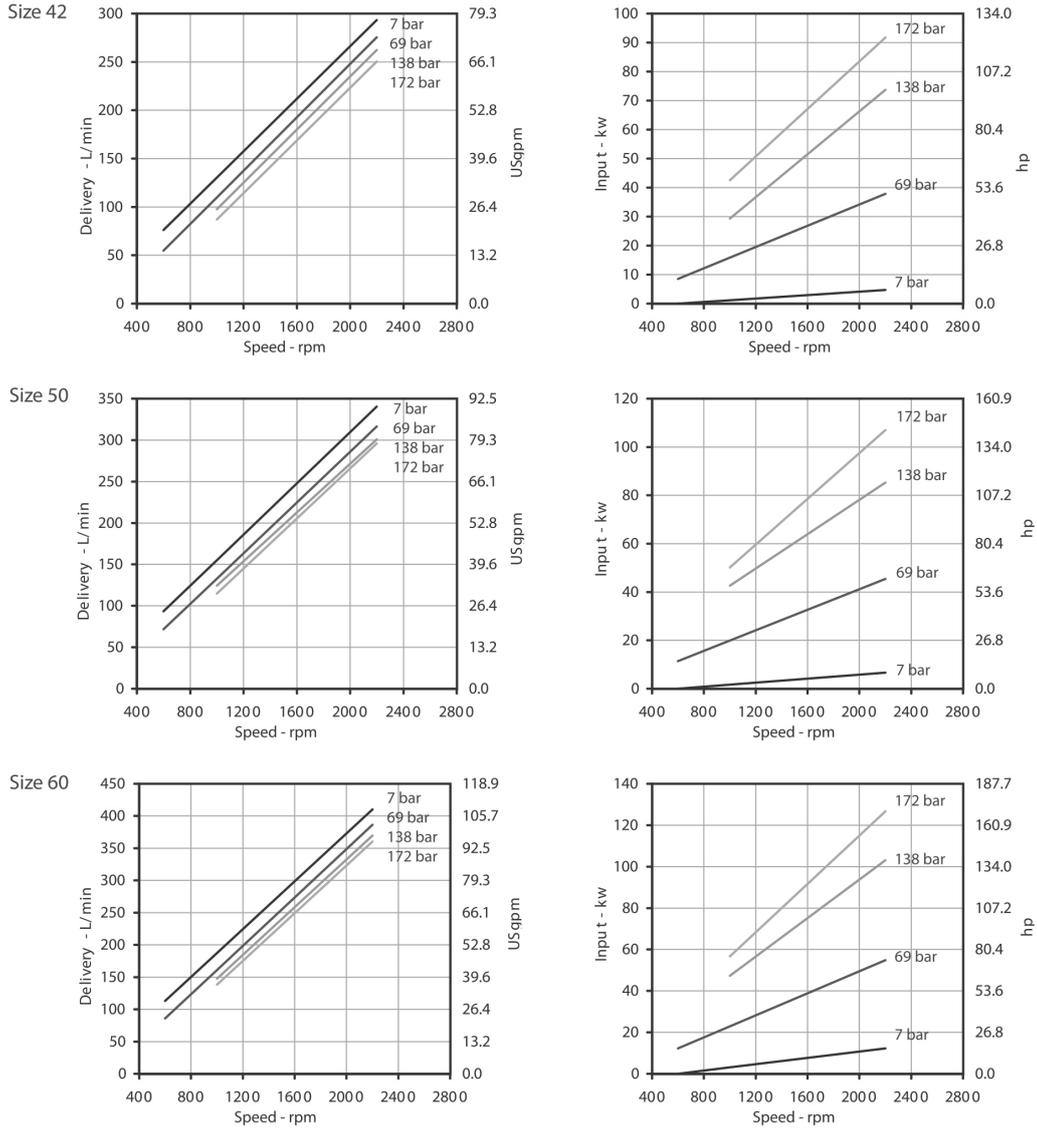
At 1800 rpm



High Performance Double Vane Pump 4520 HV/HVQ Series

45HVQ, Shaft End of 45HVQ

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)



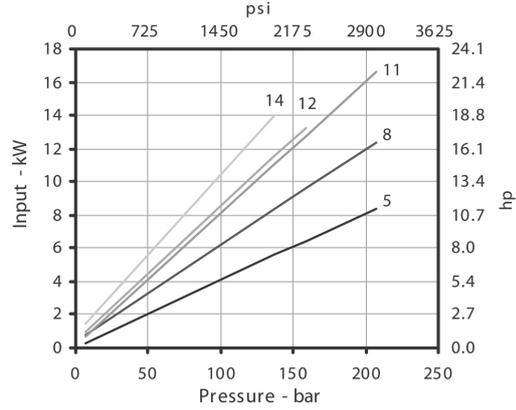
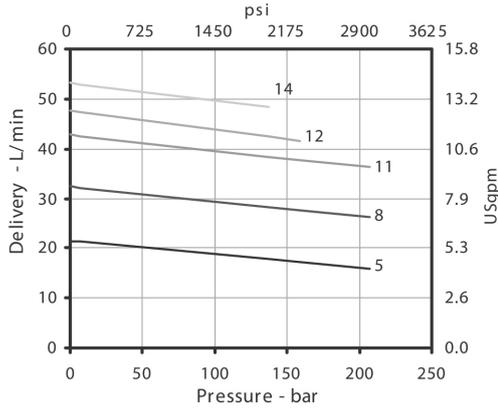
For the Cover End Cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge

High Performance Double Vane Pump 4520 HV/HVQ Series

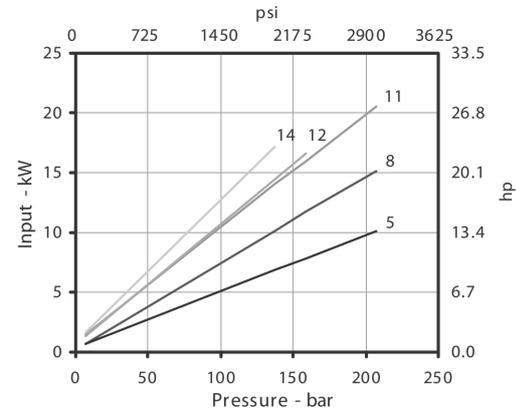
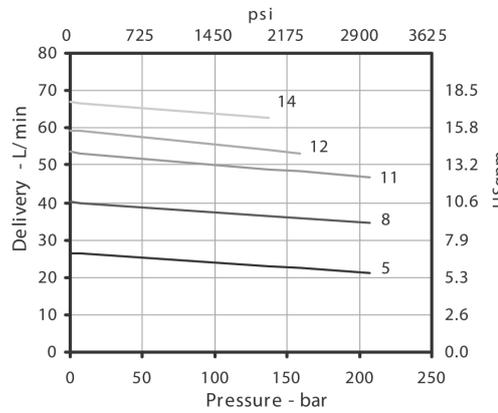
20HV, Cover End of 20HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

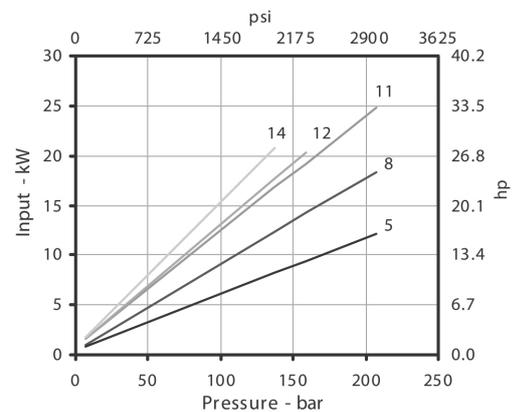
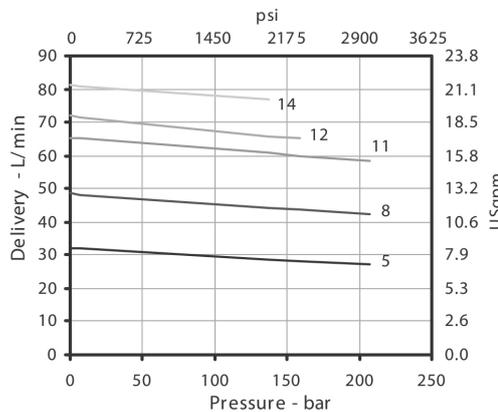
At 1200 rpm



At 1500 rpm



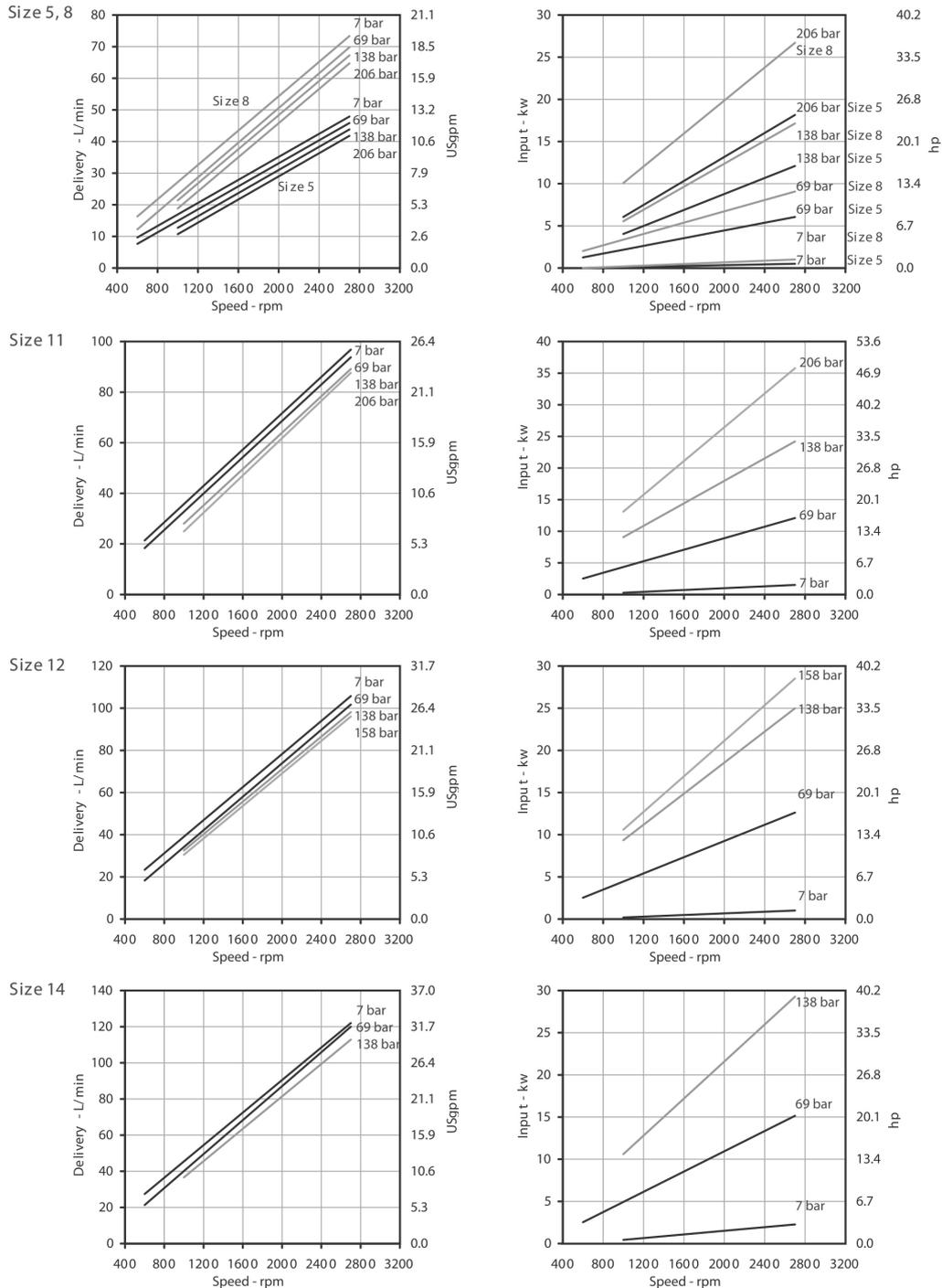
At 1800 rpm



High Performance Double Vane Pump 4520 HV/HVQ Series

20HVQ, Cover End of 20HVQ

Based on SAE 10W Fluid at 82°C (180°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

High Performance Double Vane Pump 4525 HV/HVQ Series

Specifications :

4525 HV Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
4525HV	Shaft End	35	110.4 (6.73)	1800	172 (2500)	179.0 (47.2)	60.0 (80.4)	44.0 (96.8)
		38	119.8 (7.32)			194.0 (51.3)	65.1 (87.3)	
		42	138.0 (8.41)			208.2 (55.0)	75.3 (101.0)	
		47	151.4 (9.26)			244.1 (64.5)	82.5 (110.6)	
		50	162.0 (9.85)			253.6 (67.0)	87.3 (117.0)	
		52	164.0 (10.0)			266.0 (70.0)	89.1 (119.5)	
		57	183.6 (11.23)			295.0 (77.8)	94.0 (126.0)	
		60	193.0 (11.75)			310.4 (82.0)	103.7 (139.0)	
		62	196.0 (11.94)			317.0 (83.7)	106.5 (142.8)	
		64	202.0 (12.33)			327.0 (86.4)	109.7 (147.1)	
	66	208.0 (12.7)	337.0 (89.0)			113.0 (151.5)		
	Cover End	12	39.0 (2.47)			62.1 (16.4)	22.9 (30.8)	
		14	45.0 (2.78)			69.6 (18.4)	25.7 (34.5)	
		17	55.0 (3.39)			86.3 (22.8)	29.8 (40.0)	
		19	60.8 (3.72)			91.6 (25.4)	32.5 (43.5)	
		21	67.0 (4.13)			106.0 (28.0)	34.0 (45.6)	

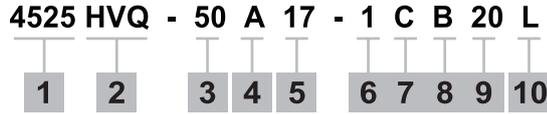
High Performance Double Vane Pump 4525 HV/HVQ Series

4525 HVQ Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
4525HVQ	Shaft End	35	110.4 (6.73)	2200	172 (2500)	219.0 (57.7)	73.3 (98.3)	44.0 (96.8)
		38	119.8 (7.32)			237.0 (62.7)	79.5 (106.7)	
		42	138.0 (8.41)			251.7 (66.5)	91.4 (122.5)	
		47	151.4 (9.26)			280.8 (74.2)	95.0 (127.3)	
		50	162.0 (9.85)			299.0 (79.0)	105.2 (141.0)	
		52	164.0 (10.0)			325.0 (85.7)	106.6 (143.0)	
		57	183.6 (11.23)			342.5 (90.5)	109.3 (146.6)	
		60	193.0 (11.75)			363.4 (96.0)	126.8 (170.0)	
		62	196.0 (11.94)			387.0 (102.3)	128.8 (172.7)	
		64	202.0 (12.33)			400.0 (105.7)	132.7 (178.0)	
	66	208.0 (12.7)	412.0 (109.0)	136.6 (183.2)				
	Cover End	12	40.0 (2.45)	206 (3000)	73.9 (19.52)	30.5 (40.8)		
		14	45.0 (2.77)		86.9 (22.95)	34.4 (46.17)		
		17	55.0 (3.37)		100.3 (26.5)	45.5 (61.0)		
		19	60.8 (3.72)		120.6 (31.8)	48.8 (69.5)		
		21	67.0 (4.12)		124.9 (33.0)	54.5 (73.0)		

High Performance Double Vane Pump 4525 HV/HVQ Series

Ordering Code : Double Pump



1. Model :

4525 - Standard Bearing SAE C 2 bolts mounting flange J744

2. Series

HV - Industrial
HVQ - Mobile

3. Displacement P1

Volumetric displacement cm³/rev (in³/rev)

- 35 - 110.4 (6.73)
- 38 - 119.8 (7.32)
- 42 - 138.0 (8.41)
- 47 - 151.4 (9.26)
- 50 - 162.0 (9.85)
- 52 - 164.0 (10.0)
- 57 - 183.6 (11.23)
- 60 - 193.0 (11.75)
- 62 - 196.0 (11.94)
- 64 - 202.0 (12.33)
- 66 - 208.0 (12.7)

4. Port Connection (4 bolts SAE flange J518C)

A - UNC Port Connection
AM - Metric Port Connection

5. Displacement P2

Volumetric displacement cm³/rev (in³/rev)

- 12 - 39.0 (2.47)
- 14 - 45.0 (2.78)
- 17 - 55.3 (3.39)
- 19 - 60.8 (3.72)
- 21 - 67.0 (4.13)

6. Type of shaft

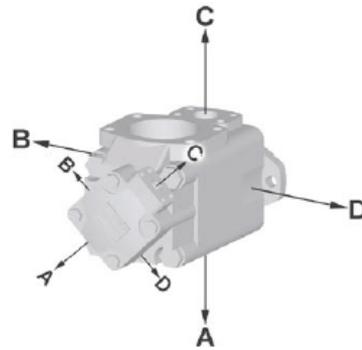
1 - Straight Keyed Shaft
11 - Splined Shaft
86 - Heavy Duty Straight Keyed Shaft

7. Shaft End Outlet Port Position (Viewed from cover end)

A - Opposite inlet
B - 90° CCW from inlet
C - Inline with inlet
D - 90° CW from inlet

8. Cover End Outlet Port Position (Viewed from cover end)

A - 135° CCW from inlet
B - 45° CCW from inlet
C - 45° CW from inlet
D - 135° CW from inlet



9. Design

Subject to change. Installation dimension remain the same for designs - 20 through -29

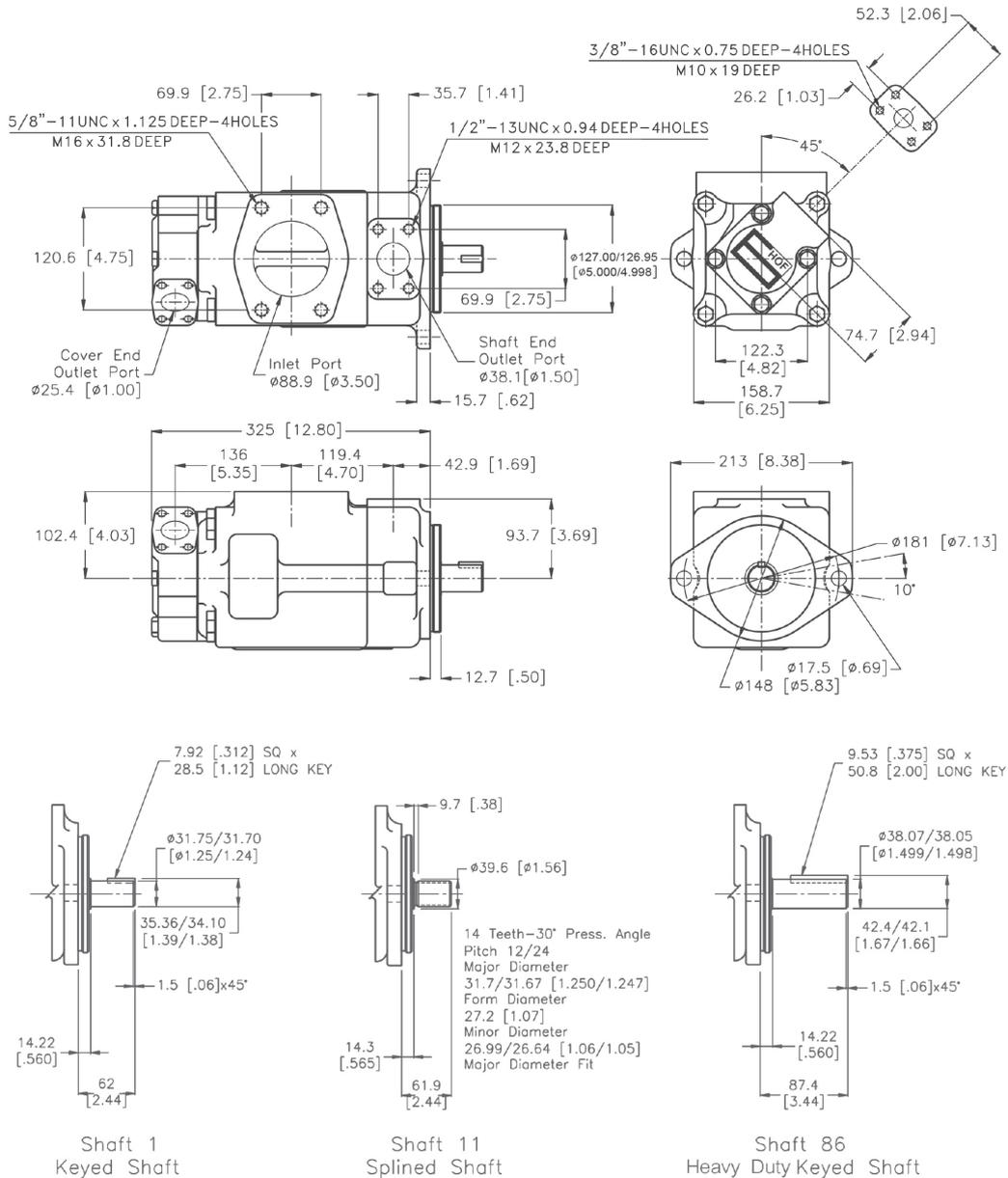
10. Shaft Rotation (viewed from shaft end)

R - Turn right
L - Turn left

High Performance Double Vane Pump 4525 HV/HVQ Series

Installation Dimension mm (inch)

Double Pump 4525HV/HVQ



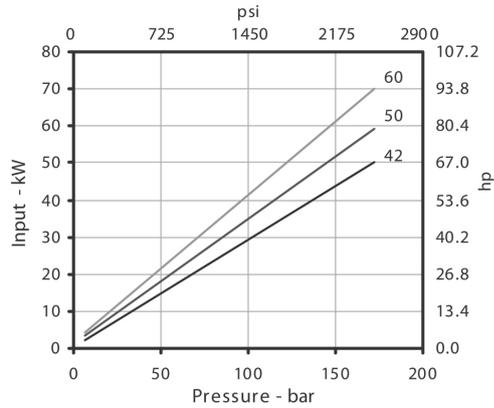
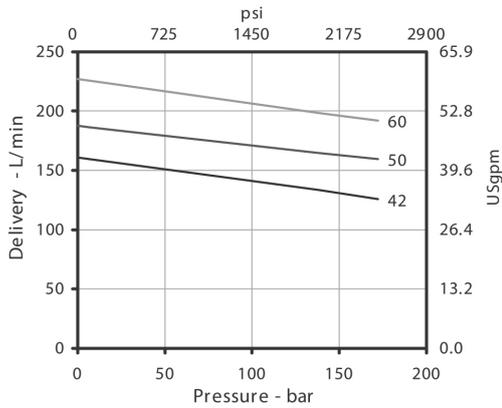
High Performance Double Vane Pump 4525 HV/HVQ Series

Performance Characteristics

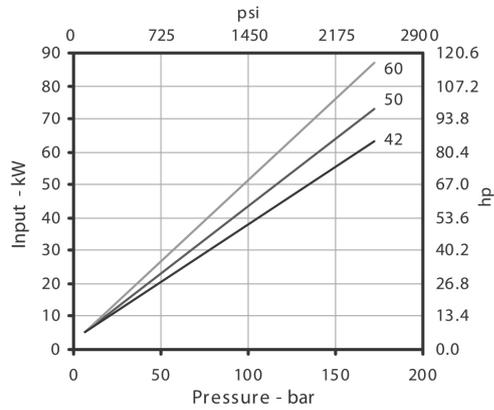
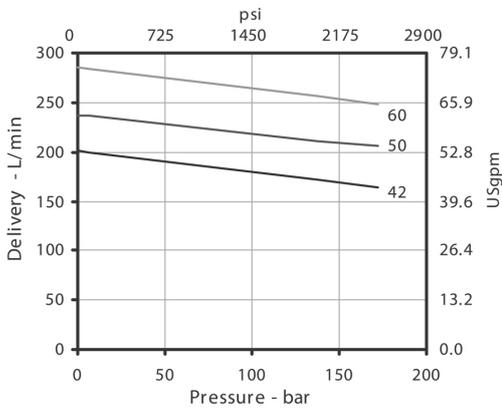
45HV, Shaft End of 45HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

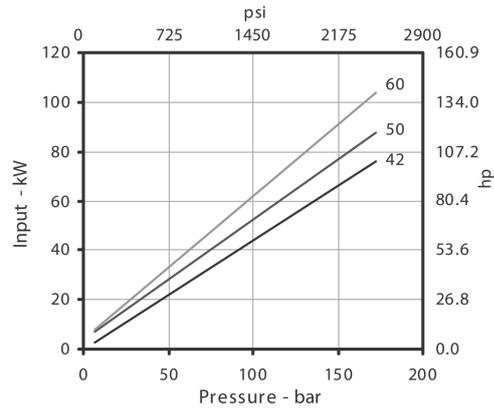
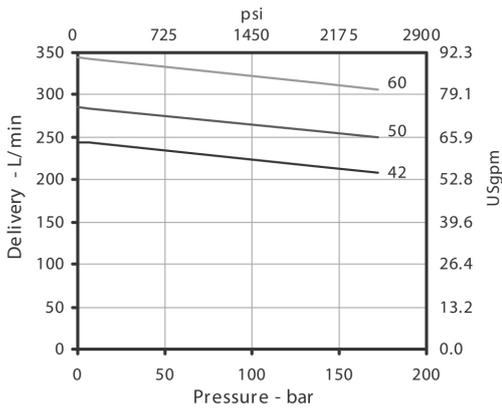
At 1200 rpm



At 1500 rpm



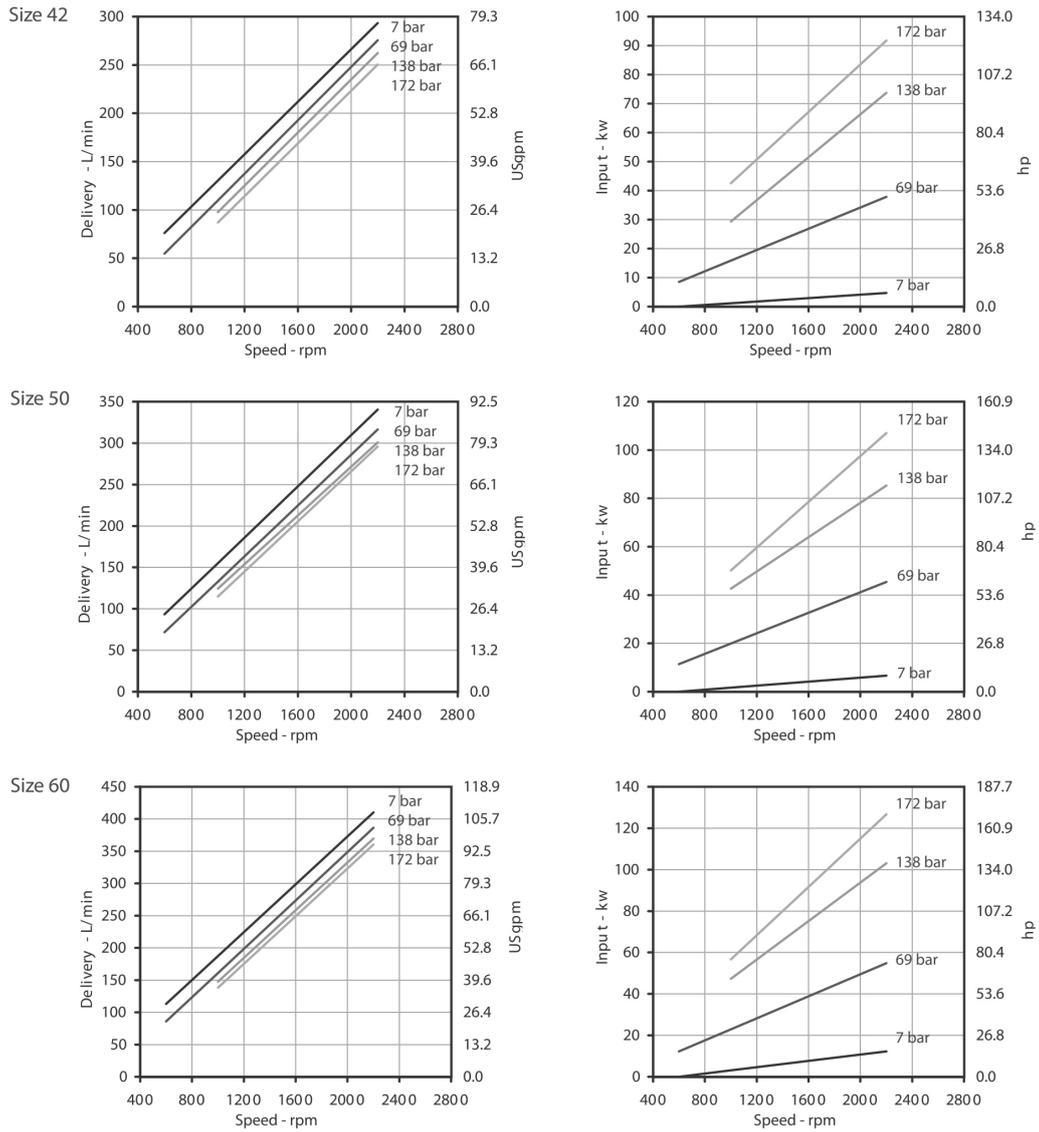
At 1800 rpm



High Performance Double Vane Pump 4525 HV/HVQ Series

45HVQ, Shaft End of 45HVQ

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)



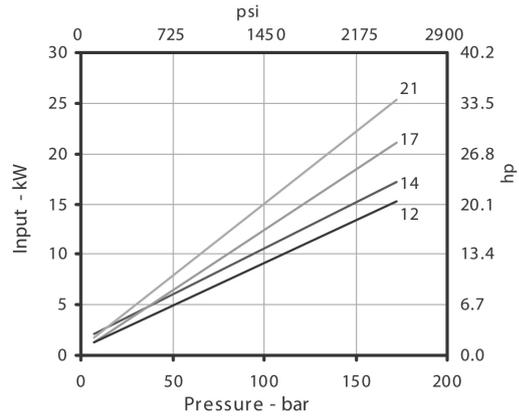
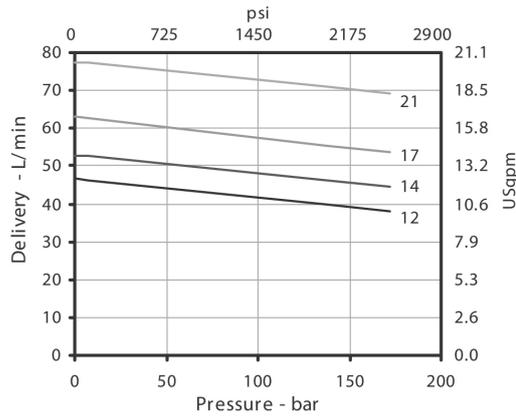
For the Cover End Cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge

High Performance Double Vane Pump 4525 HV/HVQ Series

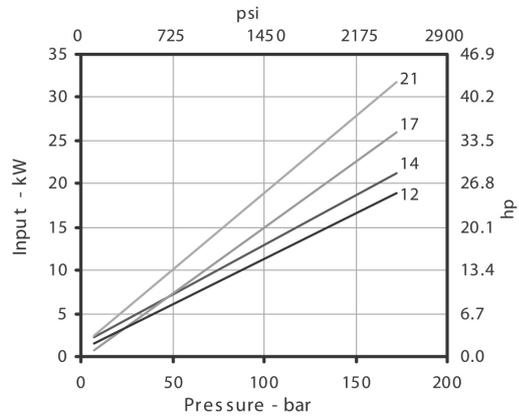
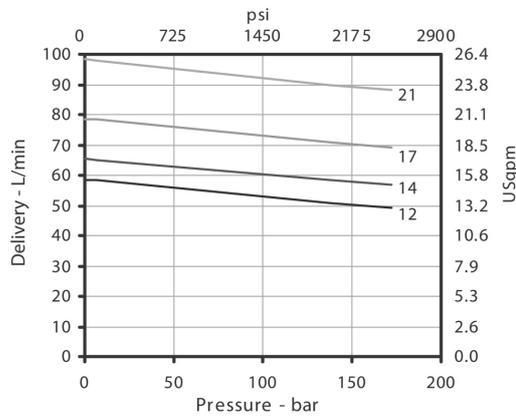
25HV, Cover End of 25HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

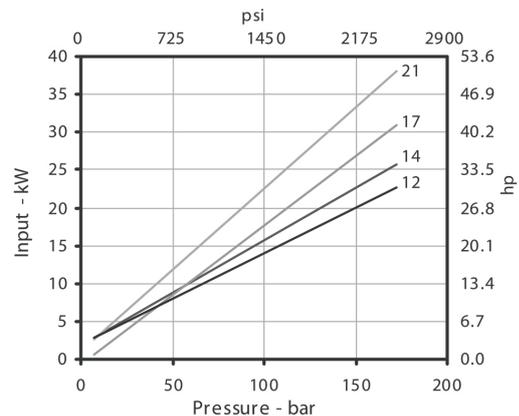
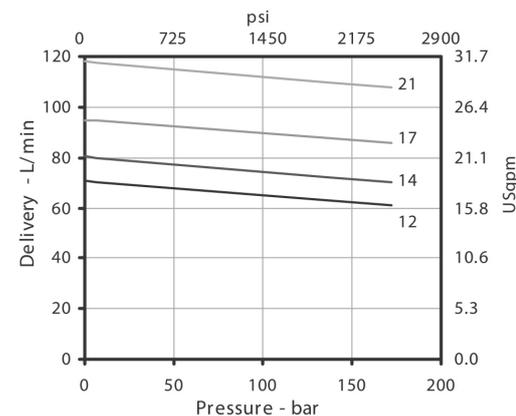
At 1200 rpm



At 1500 rpm



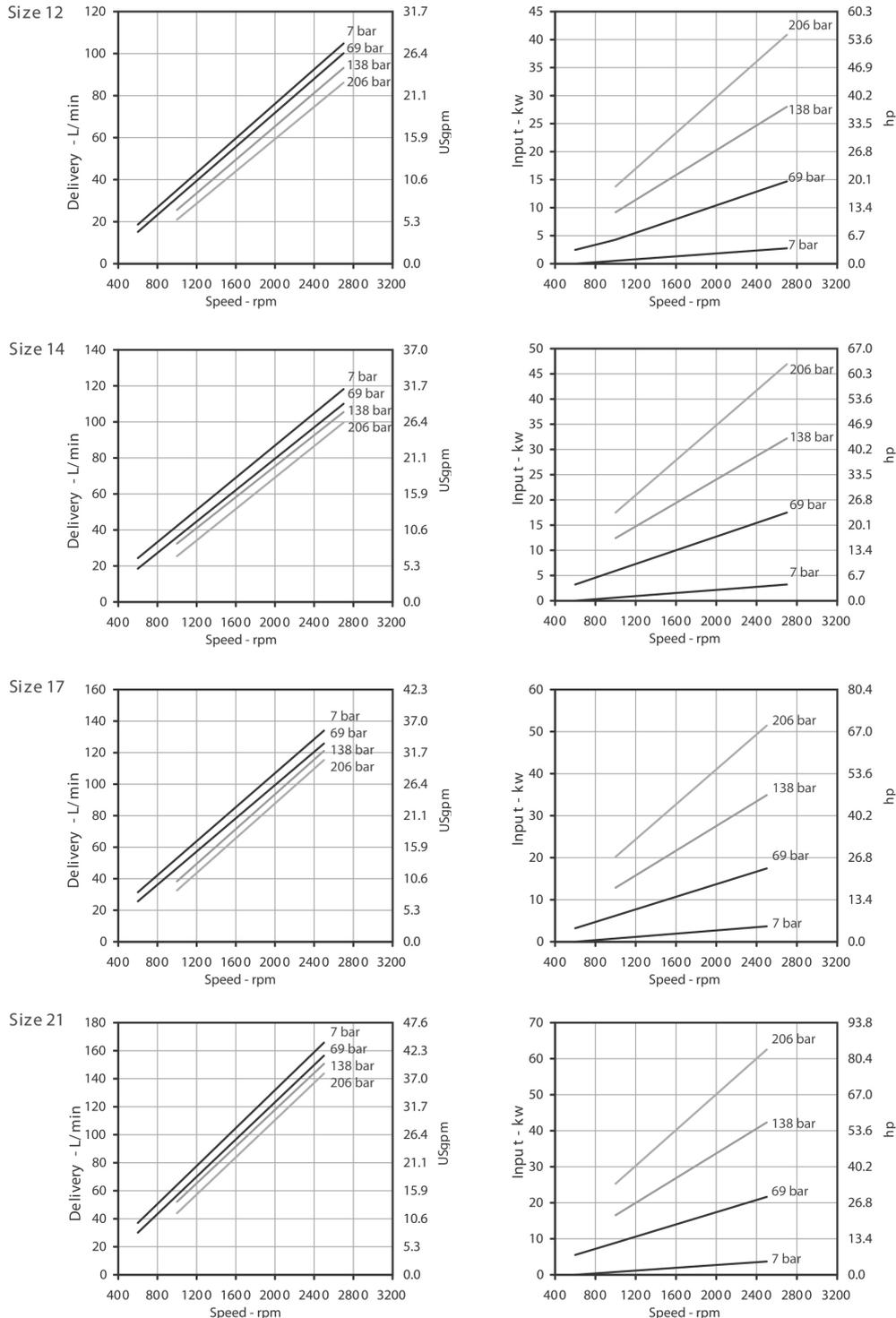
At 1800 rpm



High Performance Double Vane Pump 4525 HV/HVQ Series

25HVQ, Cover End of 25HVQ

Based on SAE 10W Fluid at 50°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

High Performance Double Vane Pump 4535 HV/HVQ Series

Specifications :

4535 HV Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
4535HV	Shaft End	35	110.4 (6.73)	1800	172 (2500)	179.0 (47.2)	60.0 (80.4)	56.4 (124.0)
		38	119.8 (7.32)			194.0 (51.3)	65.1 (87.3)	
		42	138.0 (8.41)			208.2 (55.0)	75.3 (101.0)	
		47	151.4 (9.26)			244.1 (64.5)	82.5 (110.6)	
		50	162.0 (9.85)			253.6 (67.0)	87.3 (117.0)	
		52	164.0 (10.0)			266.0 (70.0)	89.1 (119.5)	
		57	183.6 (11.23)			295.0 (77.8)	94.0 (126.0)	
		60	193.0 (11.75)			310.4 (82.0)	103.7 (139.0)	
		62	196.0 (11.94)			317.0 (83.7)	106.5 (142.8)	
		64	202.0 (12.33)			327.0 (86.4)	109.7 (147.1)	
	66	208.0 (12.7)	337.0 (89.0)			113.0 (151.5)		
	Cover End	21	68.3 (4.18)			106.3 (28.1)	33.9 (45.5)	
		25	81.0 (4.94)			124.9 (33.0)	45.5 (61.0)	
		30	97.0 (5.91)			154.4 (40.8)	54.5 (73.0)	
		32	100.9 (6.15)			167.0 (44.0)	56.7 (76.0)	
		35	112.0 (6.83)			181.7 (48.0)	61.5 (82.4)	
		38	121.0 (7.37)			193.8 (51.2)	65.9 (88.3)	

High Performance Double Vane Pump 4535 HV/HVQ Series

4535 HVQ Series

Model	Cartridge Position	Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pressure	Weight
		USgpm	cm ³ /r (in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
4535HVQ	Shaft End	35	110.4 (6.73)	2200	172 (2500)	219.0 (57.7)	73.3 (98.3)	56.4 (124.0)
		38	119.8 (7.32)			237.0 (62.7)	79.5 (106.7)	
		42	138.0 (8.41)			251.7 (66.5)	91.4 (122.5)	
		47	151.4 (9.26)			280.8 (74.2)	95.0 (127.3)	
		50	162.0 (9.85)			299.0 (79.0)	105.2 (141.0)	
		52	164.0 (10.0)			325.0 (85.7)	106.6 (143.0)	
		57	183.6 (11.23)			342.5 (90.5)	109.3 (146.6)	
		60	193.0 (11.75)			363.4 (96.0)	126.8 (170.0)	
		62	196.0 (11.94)			387.0 (102.3)	128.8 (172.7)	
		64	202.0 (12.33)			400.0 (105.7)	132.7 (178.0)	
	66	208.0 (12.7)	412.0 (109.0)	136.6 (183.2)				
	Cover End	21	68.3 (4.18)	206 (3000)	128 (33.8)	51.9 (69.5)		
		25	81.0 (4.94)		145.7 (38.5)	66.4 (89.0)		
		30	97.0 (5.91)		177.9 (47.0)	77.6 (104.0)		
		32	100.9 (6.15)		199.9 (52.8)	80.6 (108.2)		
		35	112.0 (6.83)		208.2 (55.0)	89.5 (120.0)		
		38	121.0 (7.37)		223.3 (59.0)	97.0 (130.0)		

High Performance Double Vane Pump 4535 HV/HVQ Series

Ordering Code : Double Pump



1. Model :
4535 - Standard Bearing SAE C 2 bolts mounting flange J744

2. Series
HV - Industrial
HVQ - Mobile

3. Displacement P1
Volumetric displacement cm³/rev (in³/rev)

35	-	110.4	(6.73)
38	-	119.8	(7.32)
42	-	138.0	(8.41)
47	-	151.4	(9.26)
50	-	162.0	(9.85)
52	-	164.0	(10.0)
57	-	183.6	(11.23)
60	-	193.0	(11.75)
62	-	196.0	(11.94)
64	-	202.0	(12.33)
66	-	208.0	(12.7)

4. Port Connection (4 bolts SAE flange J518C)
A - UNC Port Connection
AM - Metric Port Connection

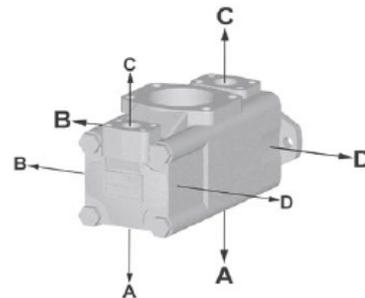
5. Displacement P2
Volumetric displacement cm³/rev (in³/rev)

21	-	68.3	(4.18)
25	-	81.0	(4.94)
30	-	97.0	(5.91)
32	-	100.9	(6.15)
35	-	112.0	(6.83)
38	-	121.0	(7.37)

6. Type of shaft
1 - Straight Keyed Shaft
11 - Splined Shaft
86 - Heavy Duty Straight Keyed Shaft

7. Shaft End Outlet Port Position (Viewed from cover end)
A - Opposite inlet
B - 90° CCW from inlet
C - Inline with inlet
D - 90° CW from inlet

8. Cover End Outlet Port Position (Viewed from cover end)
A - Opposite inlet
B - 90° CCW from inlet
C - Inline with inlet
D - 90° CW from inlet



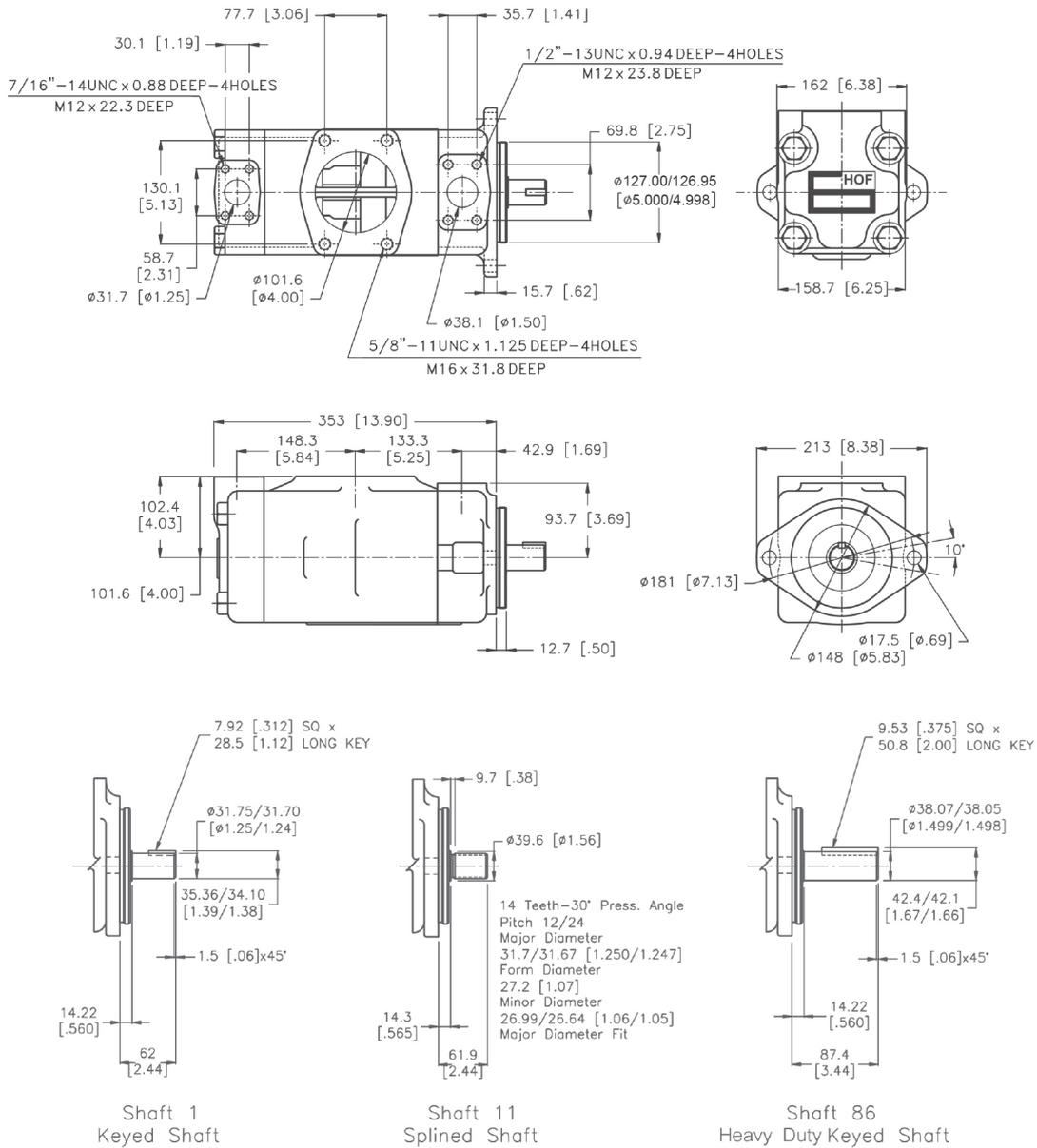
9. Design
Subject to change. Installation dimension remain the same for designs - 20 through -29

10. Shaft Rotation (viewed from shaft end)
R - Turn right
L - Turn left

High Performance Double Vane Pump 4535 HV/HVQ Series

Installation Dimension mm (inch)

Double Pump 4535HV/HVQ



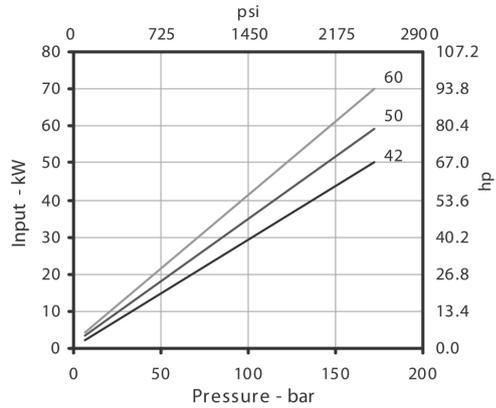
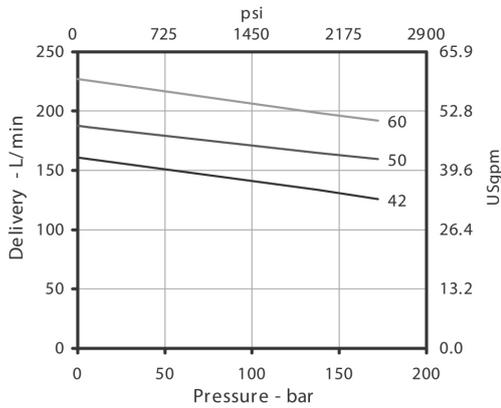
High Performance Double Vane Pump 4535 HV/HVQ Series

Performance Characteristics

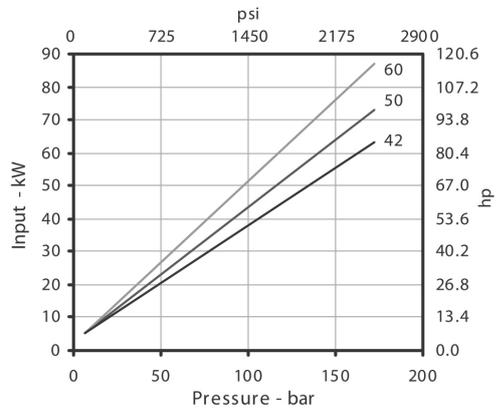
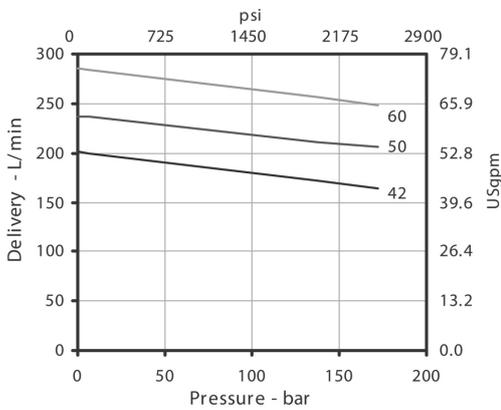
45HV, Shaft End of 45HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

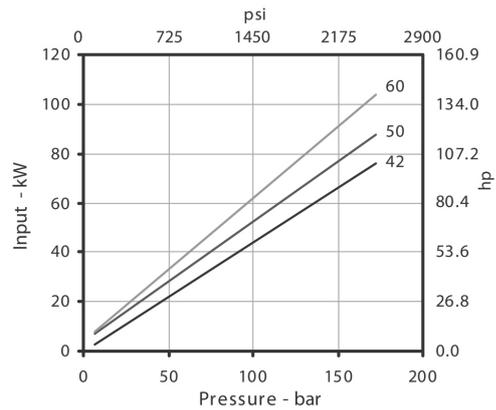
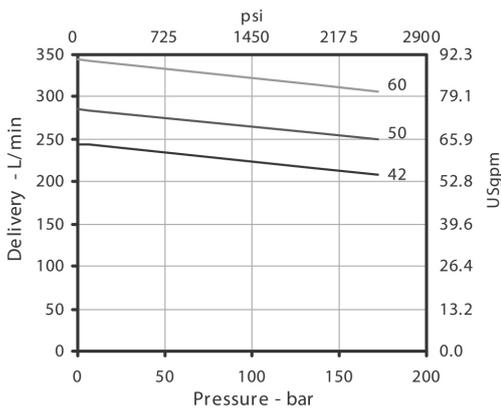
At 1200 rpm



At 1500 rpm



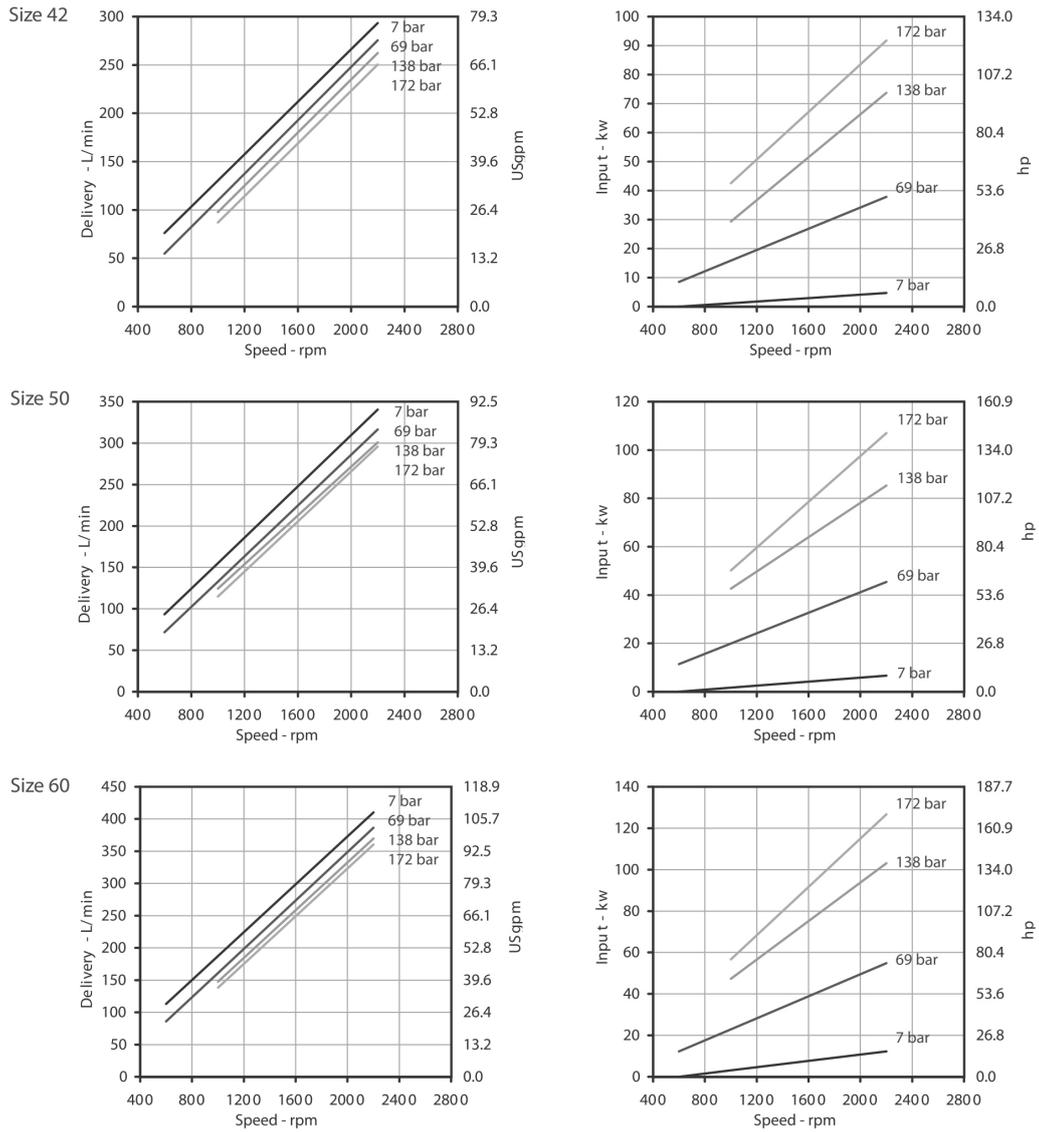
At 1800 rpm



High Performance Double Vane Pump 4535 HV/HVQ Series

45HVQ, Shaft End of 45HVQ

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)



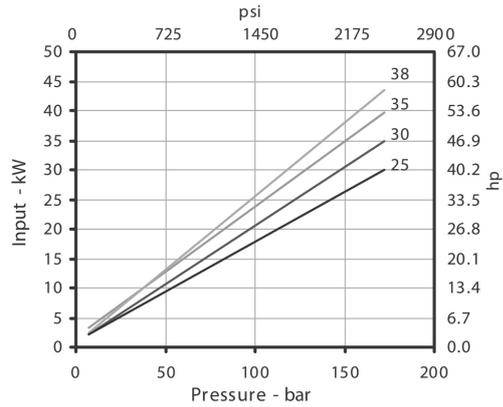
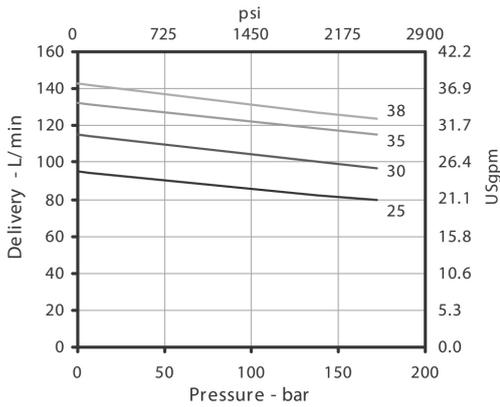
For the Cover End Cartridge, the speed could not exceed the maximum speed of the shaft End Cartridge

High Performance Double Vane Pump 4535 HV/HVQ Series

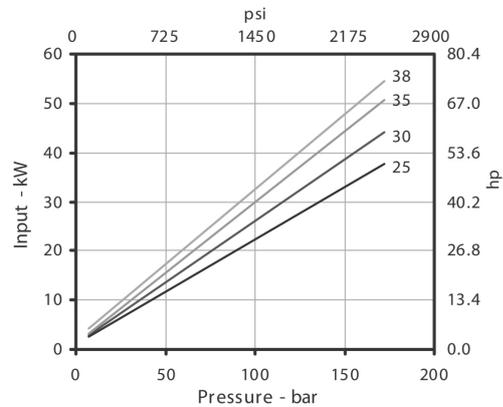
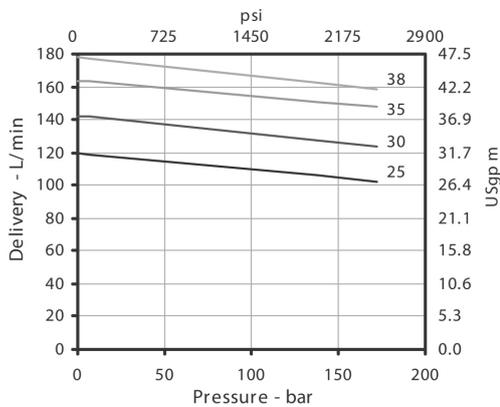
35HV, Cover End of 35HV

Based on SAE 10W Fluid at 50°C (120°F) and pump inlet at 0 PSIG (14.7 PSIA)

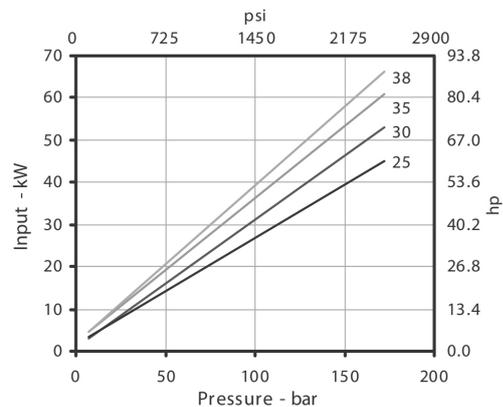
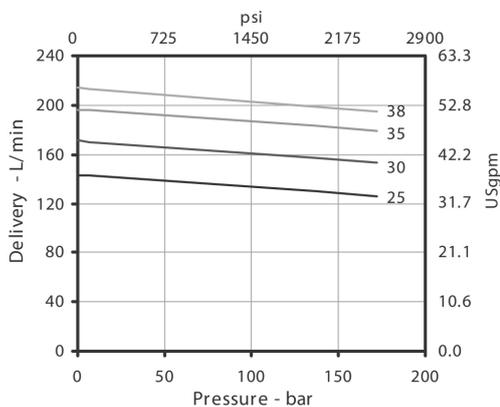
At 1200 rpm



At 1500 rpm



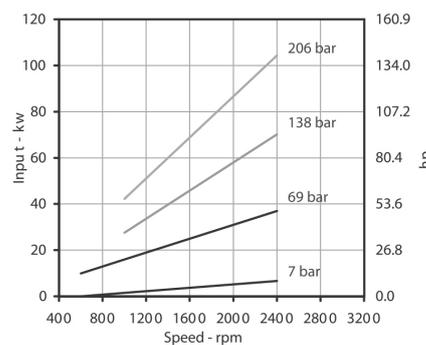
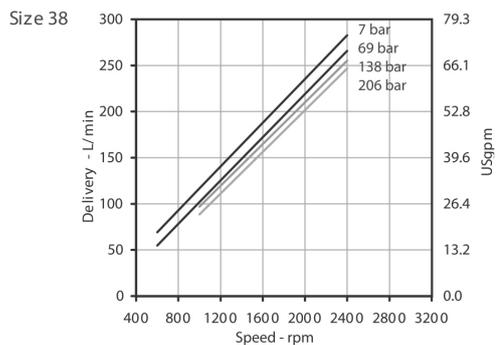
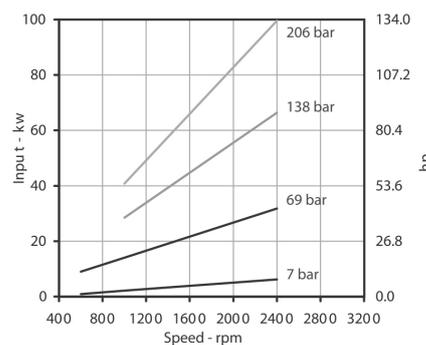
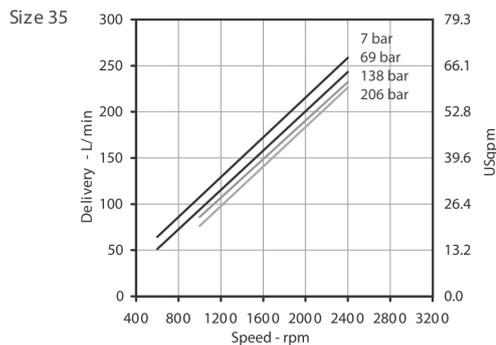
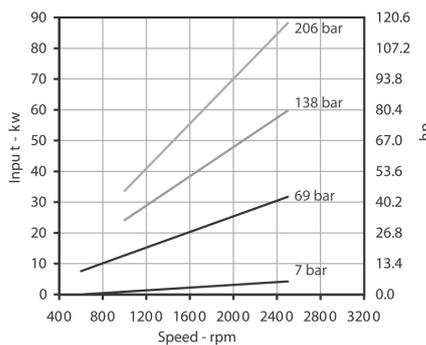
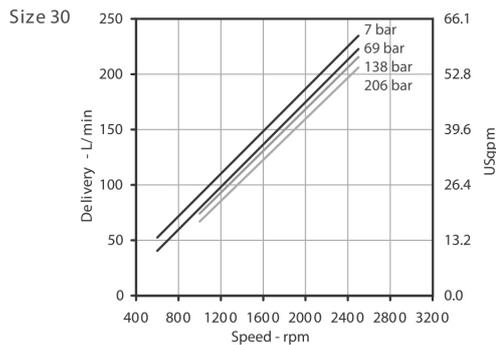
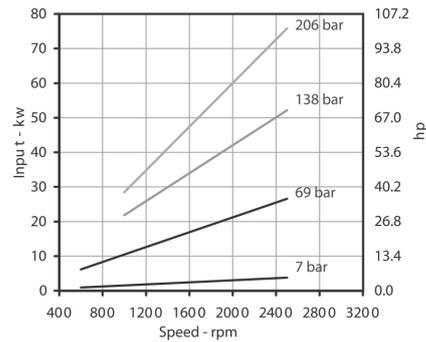
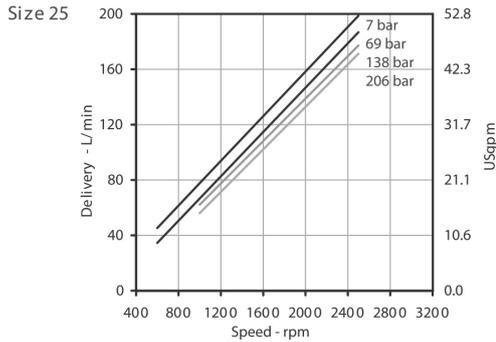
At 1800 rpm



High Performance Double Vane Pump 4535 HV/HVQ Series

35HVQ, Cover End of 35HVQ

Based on SAE 10W Fluid at 82°C (180°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

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