

Hydraulic Thru Drive Pump HVT & HVQT Series

Catalog 2021

Thru-drive Single Vane Pump

25HVT/25HVQT Series

Specifications :

25 HVT Series

Model	Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Speed	Typical Delivery at max. speed & pressure	Typical Input Power at max. speed & pres- sure	Weight
	USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
25HVT	12	39.0 (2.47)	1800	172 (2500)	62.1 (16.4)	22.9 (30.8)	19.5 (43)
	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)			96.1 (25.4)	32.5 (43.5)	
	21	67.0 (4.13)			106.0 (28.0)	34.0 (45.6)	

25 HVQT Series

Model	Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Speed	Typical Delivery at max. speed & pressure	Typical Input Power at max. speed & pres- sure	Weight
	USgpm	cm³/r 1(in³/r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
25HVQT	12	40.0 (2.45)	2700	206 (3000)	87.1 (23.0)	41.0 (55.0)	19.5 (43)
	14	45.0 (2.77)			102.2 (27.0)	46.6 (62.5)	
	17	55.0 (3.37)	2500		117.3 (31.0)	51.8 (69.5)	
	19	60.8 (3.72)			133.5 (34.5)	53.0 (71.0)	
	21	67.0 (4.12)			143.8 (38.0)	61.9 (83.0)	

Thru-drive Single Vane Pump

25HVT/25HVQT Series

Ordering Code : Single

25	HVQT	A	-	S	17	A	S	-	2	203	C	A	20	L
1	2	3		4	5	6	7		8	9	10	11	12	13

1. Model :
25 - Standard Bearing SAE B 2 bolts mounting flange J744
2. Series
HVT - Industrial
HVQT - Mobile
3. Thru-drive connection
Mounting adapter (2-bolt)
A - SAE 2-bolt J744C A
B - SAE 2-bolt J744C B
4. Front Mounting flange
S - SAE J744C B Oct'83 101-2
5. Displacement
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. Port Connection (4 bolts SAE flange J518C)
A - UNC Port Connection
AM - Metric Port Connection
7. Mounting & Shaft seal assembly
Omit - Single Shaft Seal
S - Double Shaft Seal
8. Thru-drive coupling
2 - SAE Splined coupling included with pump
9. Type of shaft
203 - Heavy Duty Straight Keyed Shaft
10. Outlet Port Position
(Viewed from adapter end of pump)
A - Opposite inlet
B - 90° CCW from inlet
C - Inline with inlet
D - 90° CW from inlet
11. Adapter Mounting orientation
(Viewed from adapter end of pump)

"A" adapter
A - Rotated 45° CW with respect to pump mounting flange
B - Rotated 45° CCW with respect to pump mounting flange

"B" adapter
A - Inline with pump mounting flange
B - Rotated 90° with respect to pump mounting flange
12. Design
Subject to change. Installation dimension remain the same for designs - 20 through -29
13. Shaft Rotation (viewed from shaft end)
R - Turn right
L - Turn left

Thru-drive Single Vane Pump

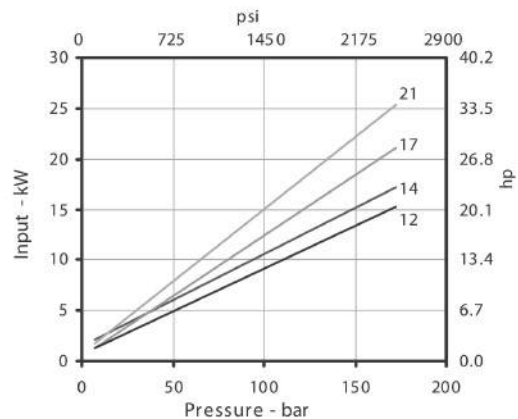
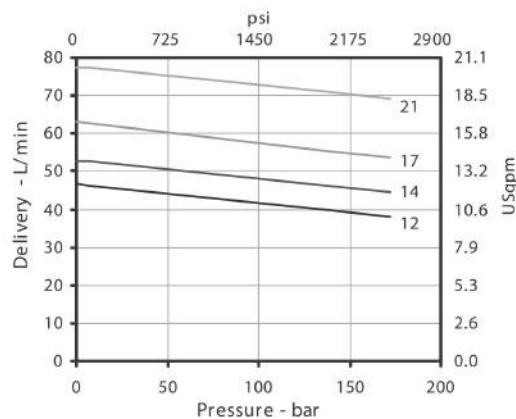
25HVT/25HVQT Series

Performance Characteristics

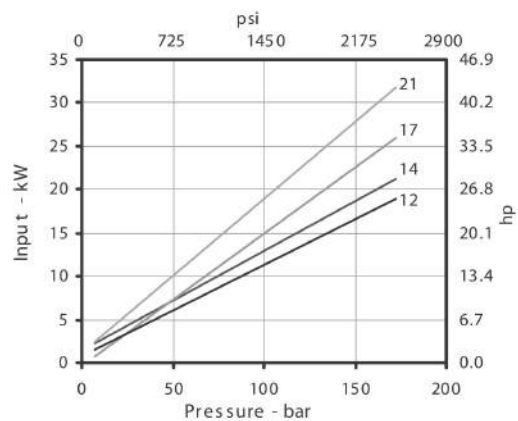
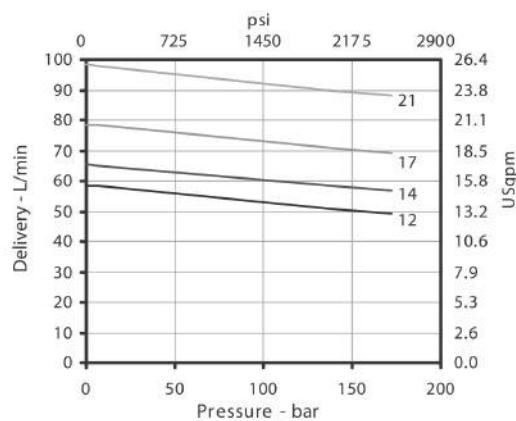
25HV, Shaft End of 25thHV, Cover End of th25HV

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

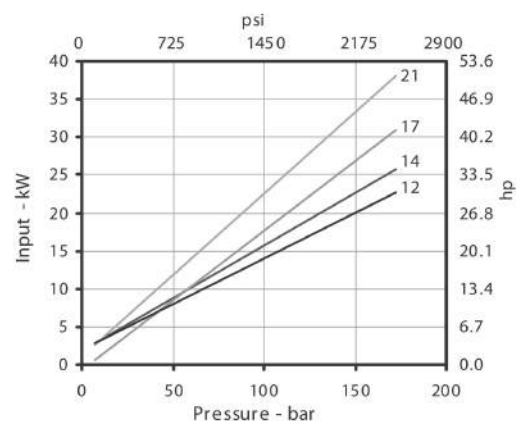
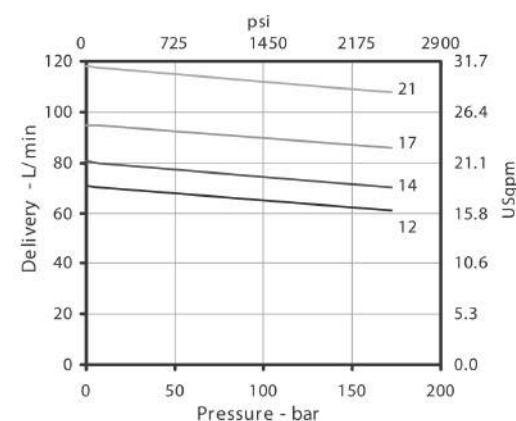
At 1200 rpm



At 1500 rpm



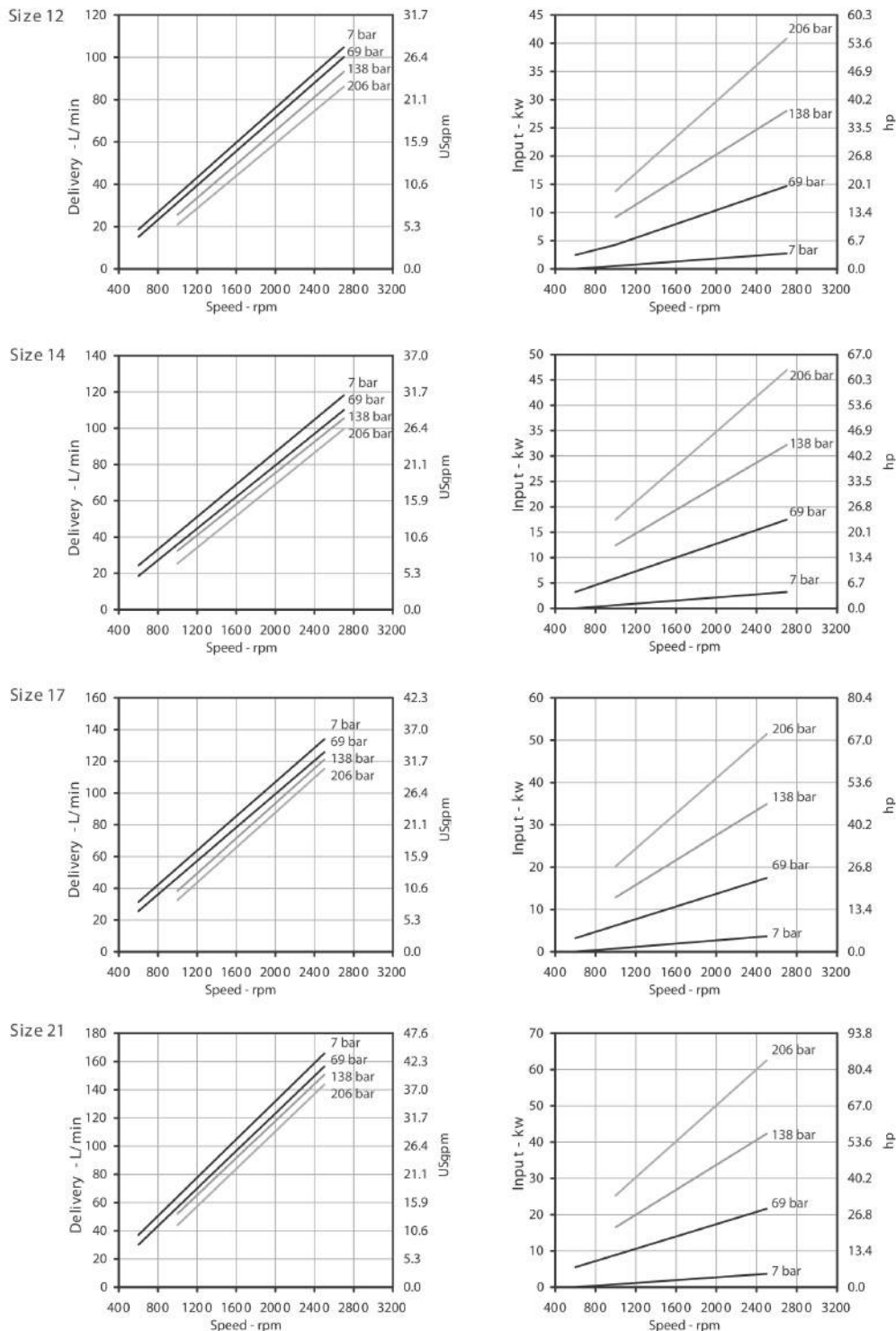
At 1800 rpm



Thru-drive Single Vane Pump 25HVT/25HVQT Series

25HVQ, Shaft End of 25thHVQ, Cover End of 25thHVQ

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

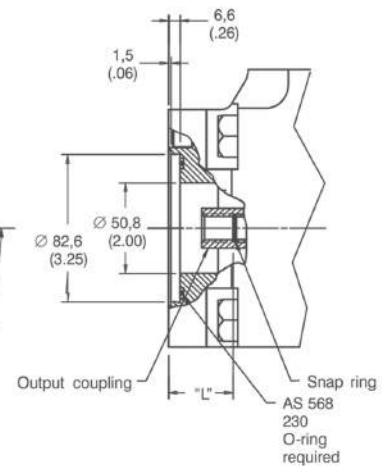
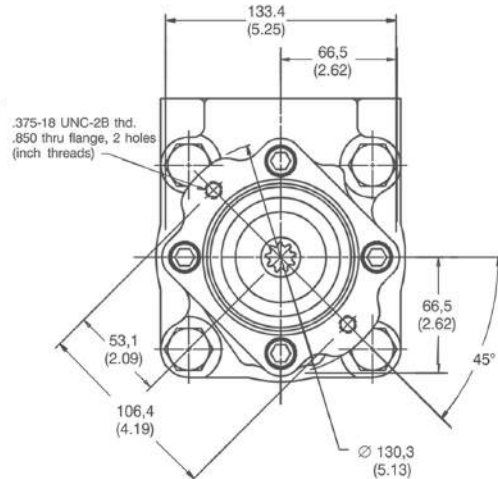
Thru-drive Single Vane Pump 25HVT/25HVQT Series

Thru-drive Rear Mountings

"A" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 82-2 (A) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "A" size with a 30° involute spline (per SAE std J-744 Oct '83), 9T and 16/32 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

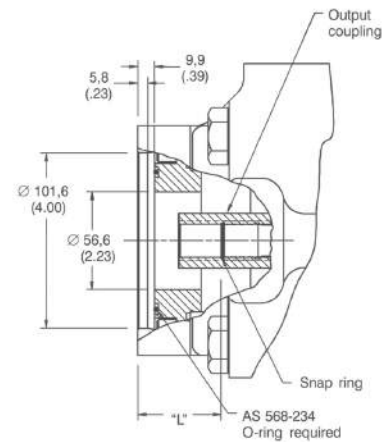
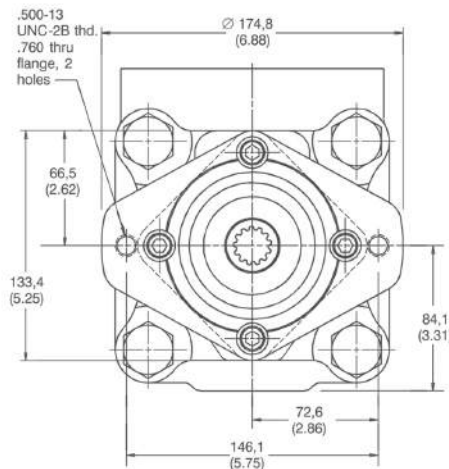
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"B" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 101-2 (B) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "B" size with a 30° involute spline (per SAE std J-744 Oct '83), 13T and 16/32 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

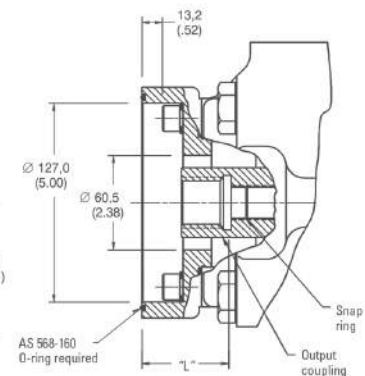
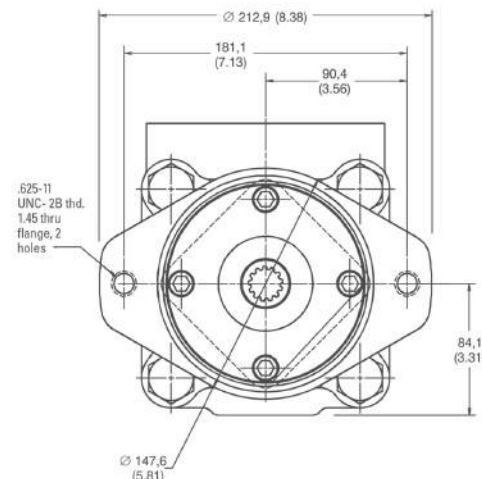
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"C" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 127-2 (C) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "C" size with a 30° involute spline (per SAE std J-744 Oct '83), 14T and 12/24 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

Pump Model	Dimensions "L"
35HVT/HVQT	56,6/54,1 (2.23/2.13) 61,2 (2.41) maximum
45HVT/HVQT	56,6/54,1 (2.23/2.13) 61,5 (2.42) maximum



Thru-drive Single Vane Pump

35HVT/35HVQT Series

Specifications :

35 HVT Series

Model	Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Speed	Typical Delivery at max. speed & pressure	Typical Input Power at max. speed & pres- sure	Weight
	USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
35HVT	21	68.3 (4.18)	1800	172 (2500)	106.3 (28.1)	34.0 (45.5)	28.6 (63)
	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)	
	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)	

35 HVQT Series

Model	Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Speed	Typical Delivery at max. speed & pressure	Typical Input Power at max. speed & pres- sure	Weight
	USgpm	cm³/r 1(in³/r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
35HVQT	21	68.3 (4.18)	2500	206 (3000)	143.8 (38.0)	55.0 (73.9)	28.6 (63)
	25	81.0 (4.98)			170.3 (45.0)	75.3 (101.0)	
	30	97.0 (5.96)			208.2 (55.0)	87.7 (117.5)	
	35	112.0 (6.88)	2400		227.1 (60.0)	98.5 (132.0)	
	38	121.0 (7.42)			246.0 (65.0)	104.4 (140.0)	

Thru-drive Single Vane Pump

35HVT/35HVQT Series

Ordering Code : Single

35	HVQT	A	-	S	30	A	S	-	2	203	C	A	20	L
1	2	3		4	5	6	7		8	9	10	11	12	13

1. Model :

35 - Standard Bearing SAE C 2 bolts mounting flange J744

2. Series

HVT - Industrial
HVQT - Mobile

3. Thru-drive connection

Mounting adapter (2-bolt)
A - SAE 2-bolt J744C A
B - SAE 2-bolt J744C B
C - SAE 2-bolt J744C C

4. Front Mounting flange

S - SAE J744C C Oct'83 127-2

5. Displacement

Volumetric displacement cm³/rev (in³/rev)

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

6. Port Connection (4 bolts SAE flange J518C)

A - UNC Port Connection
AM - Metric Port Connection

7. Mounting & Shaft seal assembly

Omit - Single Shaft Seal
S - Double Shaft Seal

8. Thru-drive coupling

2 - SAE Splined coupling included with pump

9. Type of shaft

203 - Heavy Duty Straight Keyed Shaft

10. Outlet Port Position

(Viewed from adapter end of pump)

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

11. Adapter Mounting orientation

(Viewed from adapter end of pump)

"A" adapter

A - Rotated 45° CW with respect to pump mounting flange
B - Rotated 45° CCW with respect to pump mounting flange

"B,C" adapter

A - Inline with pump mounting flange
B - Rotated 90° with respect to pump mounting flange

12. Design

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

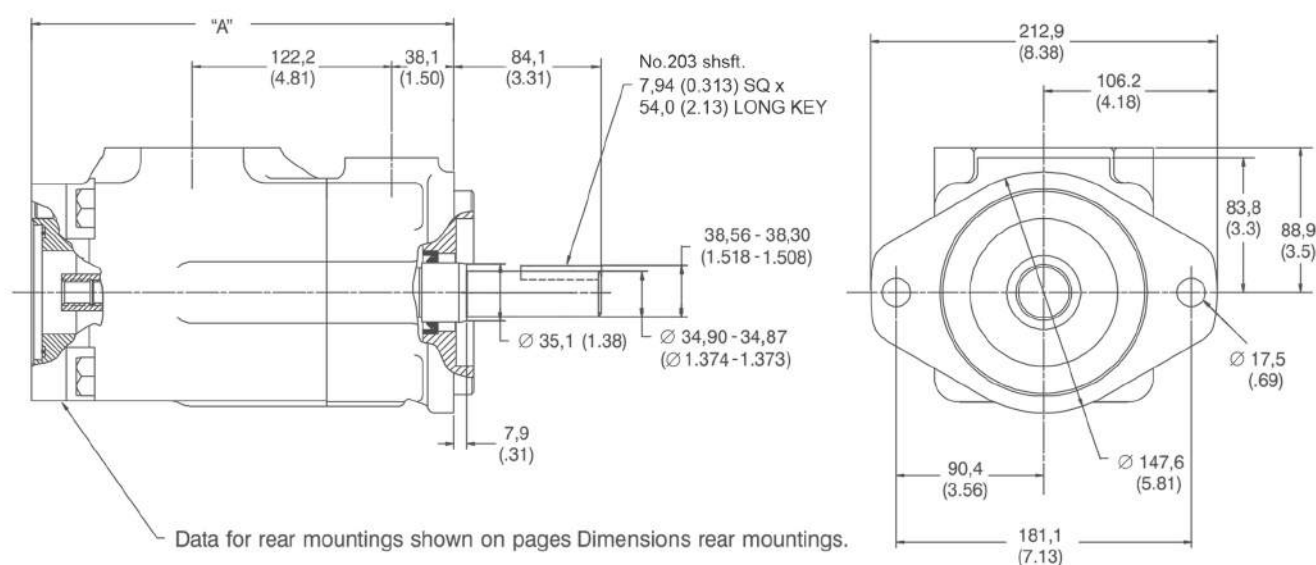
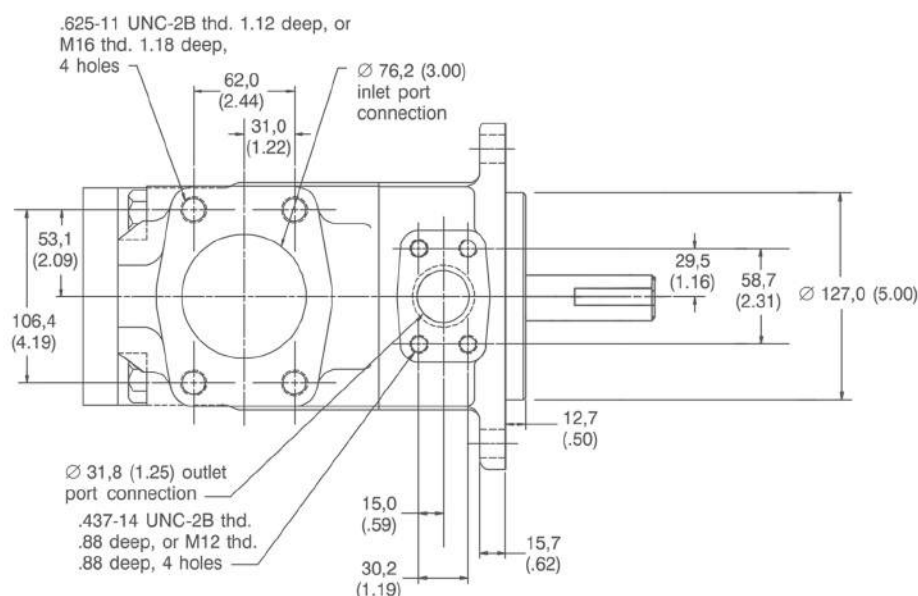
13. Shaft Rotation (viewed from shaft end)

R - Turn right
L - Turn left

Thru-drive Single Vane Pump 35HVT/35HVQT Series

Installation Dimension mm (inch)

Thru-drive Single pump 35HVT/HVQT



Rear Mountings	Dimension "A"
A	259,1 (10.2)
B	269,2 (10,6)
C	276,9 (10.9)

Thru-drive Single Vane Pump

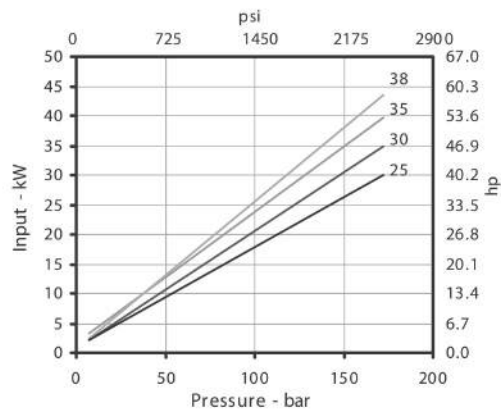
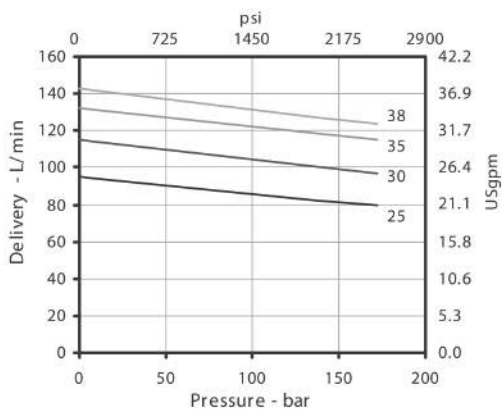
35HVT/35HVQT Series

Performance Characteristics

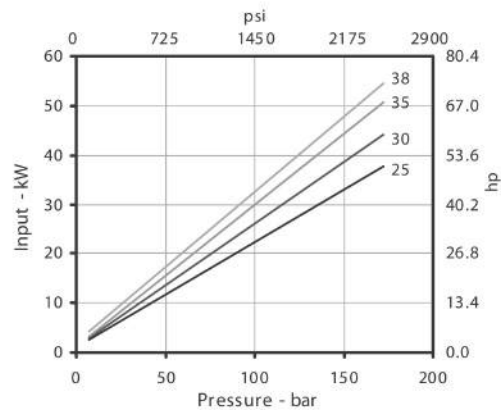
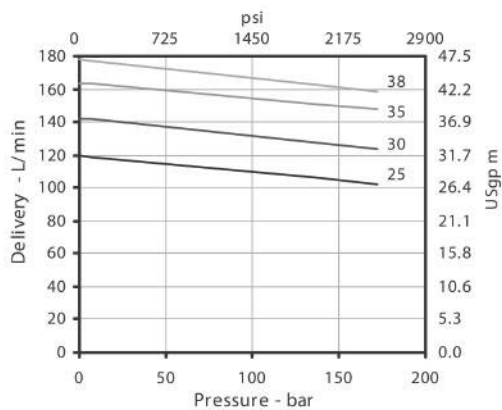
35HV, Shaft End of 35[°]HV, Cover End of [°]35HV

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

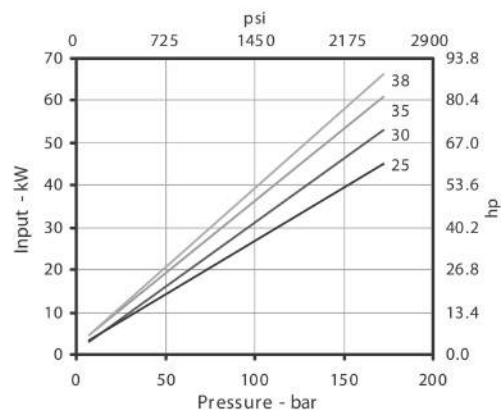
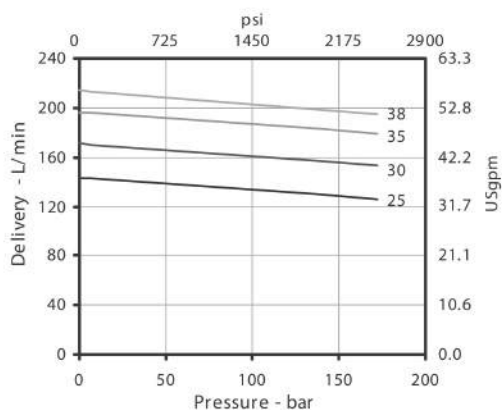
At 1200 rpm



At 1500 rpm



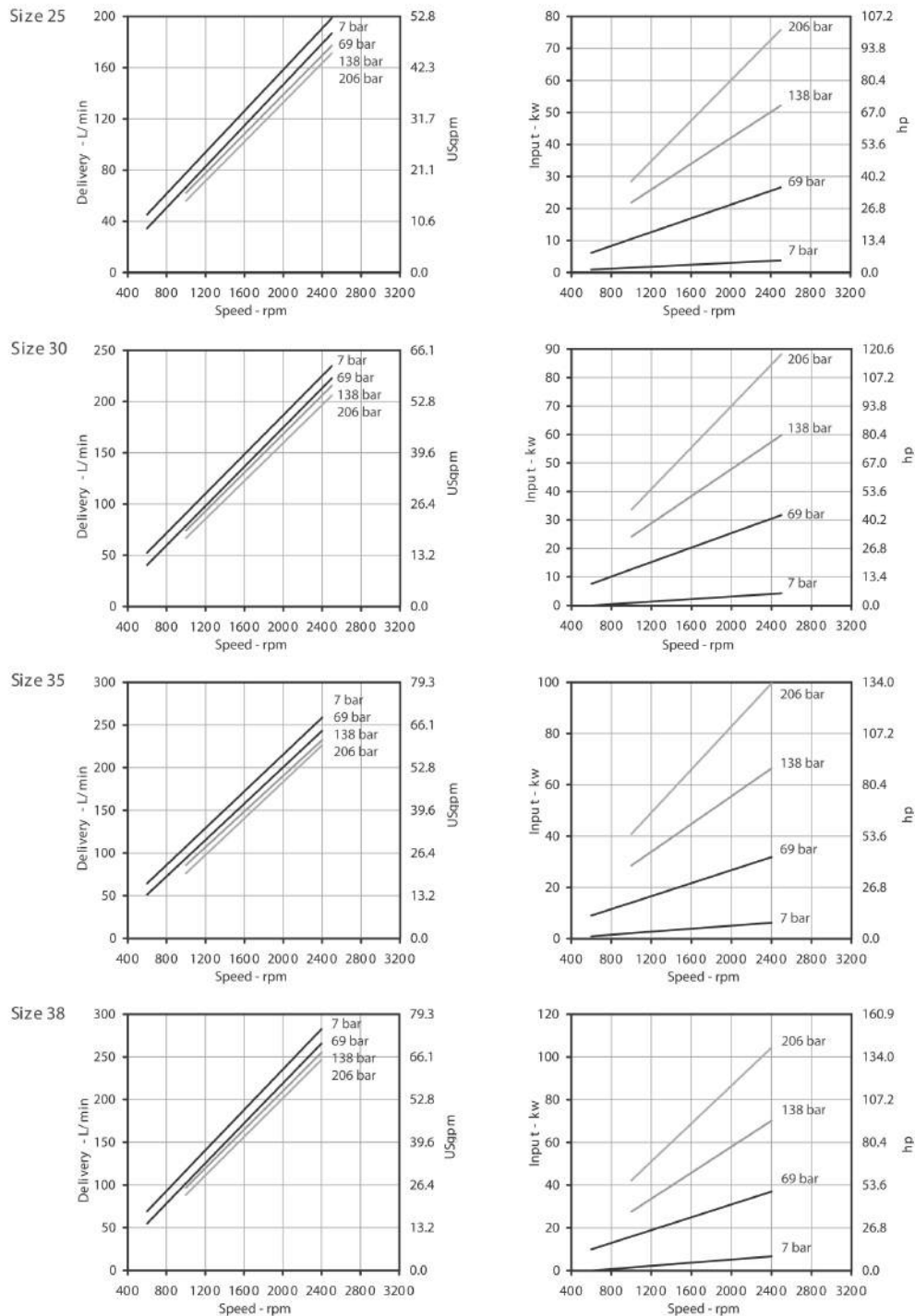
At 1800 rpm



Thru-drive Single Vane Pump 35HVT/35HVQT Series

35HVQ, Shaft End of 35^{SH}HVQ, Cover End of 35^{SH}HVQ

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

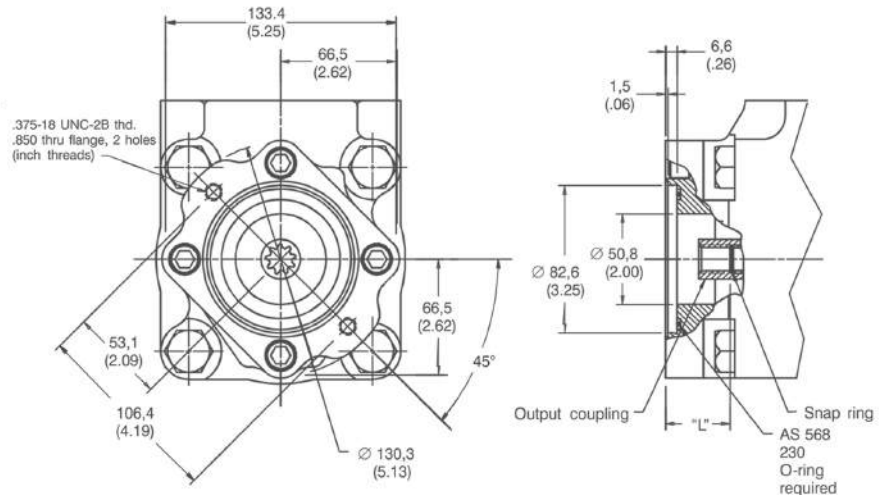
Thru-drive Single Vane Pump 35HVT/35HVQT Series

Thru-drive Rear Mountings

"A" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 82-2 (A) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "A" size with a 30° involute spline (per SAE std J-744 Oct '83), 9T and 16/32 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

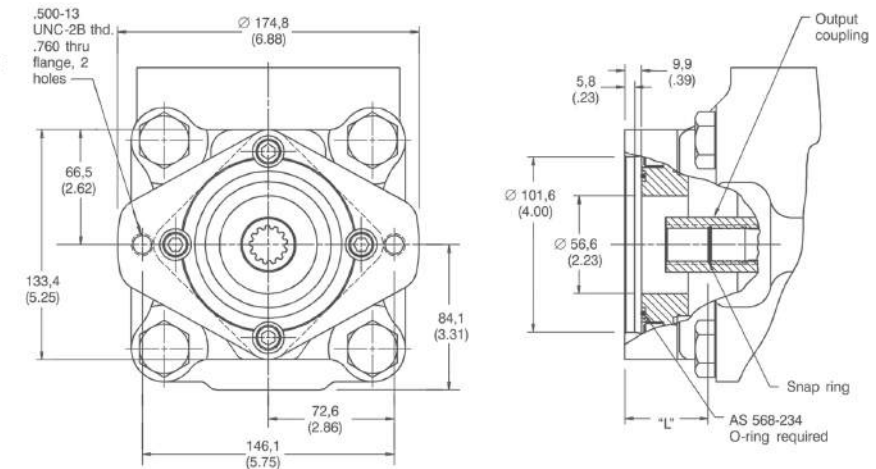
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"B" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 101-2 (B) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "B" size with a 30° involute spline (per SAE std J-744 Oct '83), 13T and 16/32 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

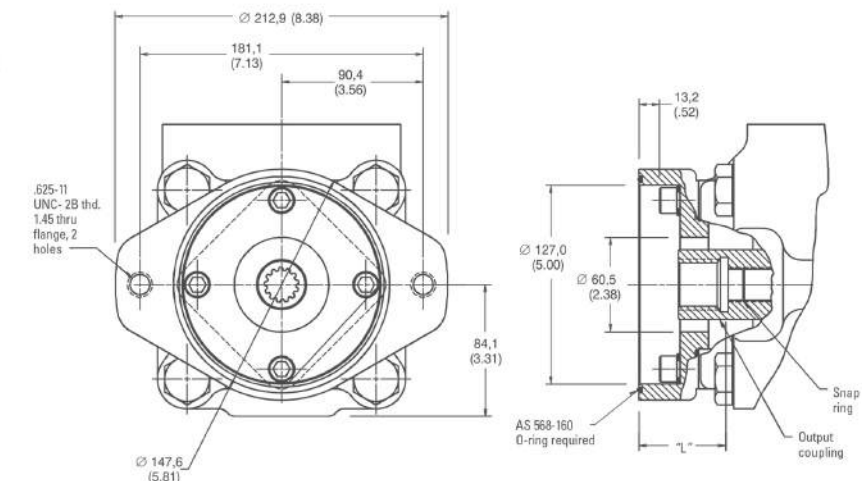
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"C" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 127-2 (C) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "C" size with a 30° involute spline (per SAE std J-744 Oct '83), 14T and 12/24 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

Pump Model	Dimensions "L"
35HVT/HVQT	56,6/54,1 (2.23/2.13) 61,2 (2.41) maximum
45HVT/HVQT	56,6/54,1 (2.23/2.13) 61,5 (2.42) maximum



Thru-drive Single Vane Pump

45HVT/45HVQT Series

Specifications :

45 HVT Series

Model	Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Speed	Typical Delivery at max. speed & pressure	Typical Input Power at max. speed & pres- sure	Weight
	USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
45HVT	42	138.0 (8.41)	1800	172 (2500)	208.2 (55.0)	75.3 (101.0)	38.2 (84)
	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)	
	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)	

45 HVQT Series

Model	Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Speed	Typical Delivery at max. speed & pressure	Typical Input Power at max. speed & pres- sure	Weight
	USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
45HVQT	42	138.0 (8.41)	2200	172 (2500)	251.7 (66.5)	91.4 (122.5)	38.2 (84)
	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)	
	57	183.6 (11.23)			342.5 (90.5)	109.3 (146.6)	
	60	193.0 (11.80)			363.4 (96.0)	126.8 (170.0)	

Thru-drive Single Vane Pump

45HVT/45HVQT Series

Ordering Code : Single

45	HVQT	A	-	S	50	A	S	-	2	203	C	A	20	L
1	2	3		4	5	6	7		8	9	10	11	12	13

1. Model :

45 - Standard Bearing SAE C 2 bolts mounting flange J744

2. Series

HVT - Industrial
HVQT - Mobile

3. Thru-drive connection

Mounting adapter (2-bolt)
A - SAE 2-bolt J744C A
B - SAE 2-bolt J744C B
C - SAE 2-bolt J744C C

4. Front Mounting flange

S - SAE J744C C Oct'83 127-2

5. Displacement

Volumetric displacement cm³/rev (in³/rev)

42 - 138.0 (8.41)
47 - 151.4 (9.26)
50 - 162.0 (9.85)
57 - 183.6 (11.23)
60 - 193.0 (11.75)

6. Port Connection (4 bolts SAE flange J518C)

A - UNC Port Connection
AM - Metric Port Connection

7. Mounting & Shaft seal assembly

Omit - Single Shaft Seal
S - Double Shaft Seal

8. Thru-drive coupling

2 - SAE Splined coupling included with pump

9. Type of shaft

203 - Heavy Duty Straight Keyed Shaft

10. Outlet Port Position

(Viewed from adapter end of pump)

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

11. Adapter Mounting orientation

(Viewed from adapter end of pump)

"A" adapter

A - Rotated 45° CW with respect to pump mounting flange
B - Rotated 45° CCW with respect to pump mounting flange

"B,C" adapter

A - Inline with pump mounting flange
B - Rotated 90° with respect to pump mounting flange

12. Design

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

13. Shaft Rotation (viewed from shaft end)

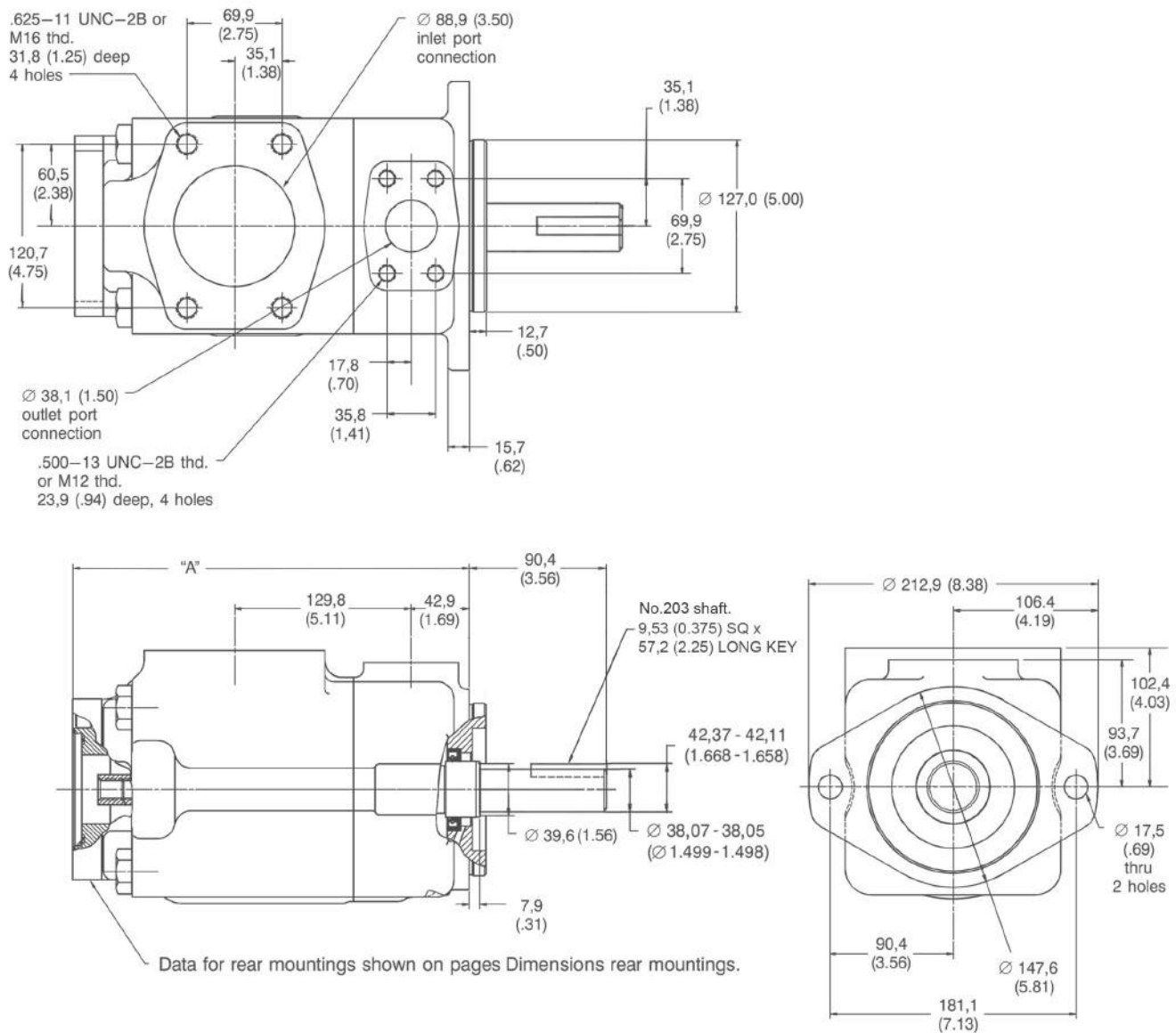
R - Turn right
L - Turn left

Thru-drive Single Vane Pump

45HVT/45HVQT Series

Installation Dimension mm (inch)

Thru-drive Single pump 45HVT/HVQT



Rear Mountings	Dimension "A"
A	292,1 (11.5)
B	299,7 (11.8)
C	307,3 (12.1)

Thru-drive Single Vane Pump

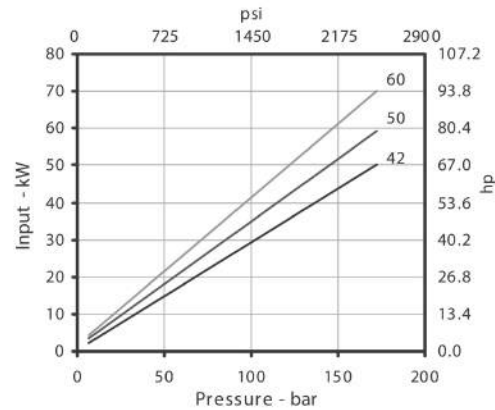
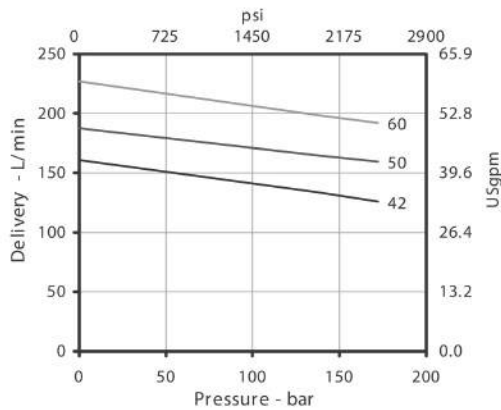
45HVT/45HVQT Series

Performance Characteristics

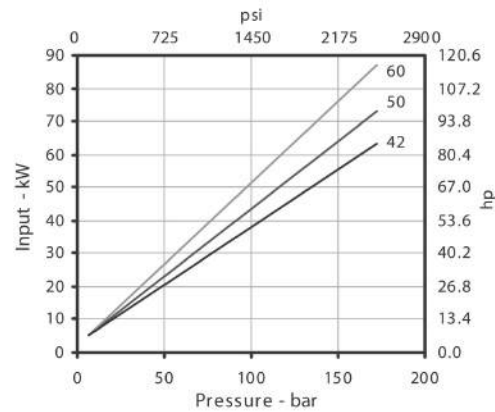
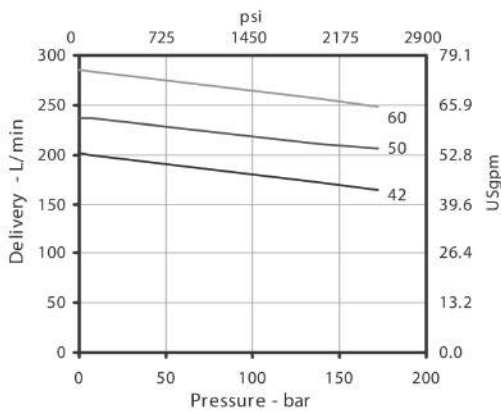
45HV, Shaft End of 45**HV,

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

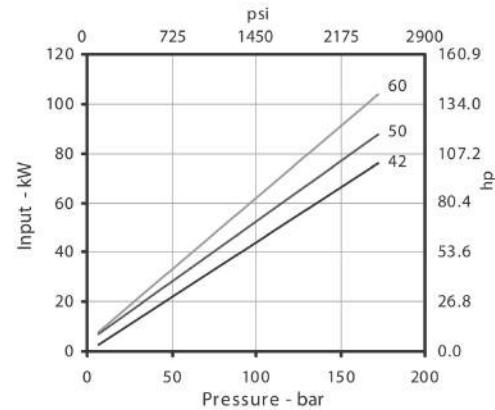
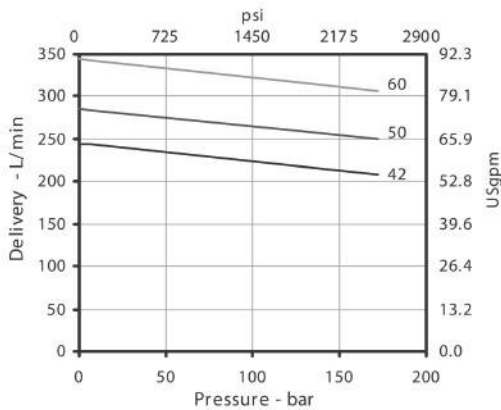
At 1200 rpm



At 1500 rpm



At 1800 rpm

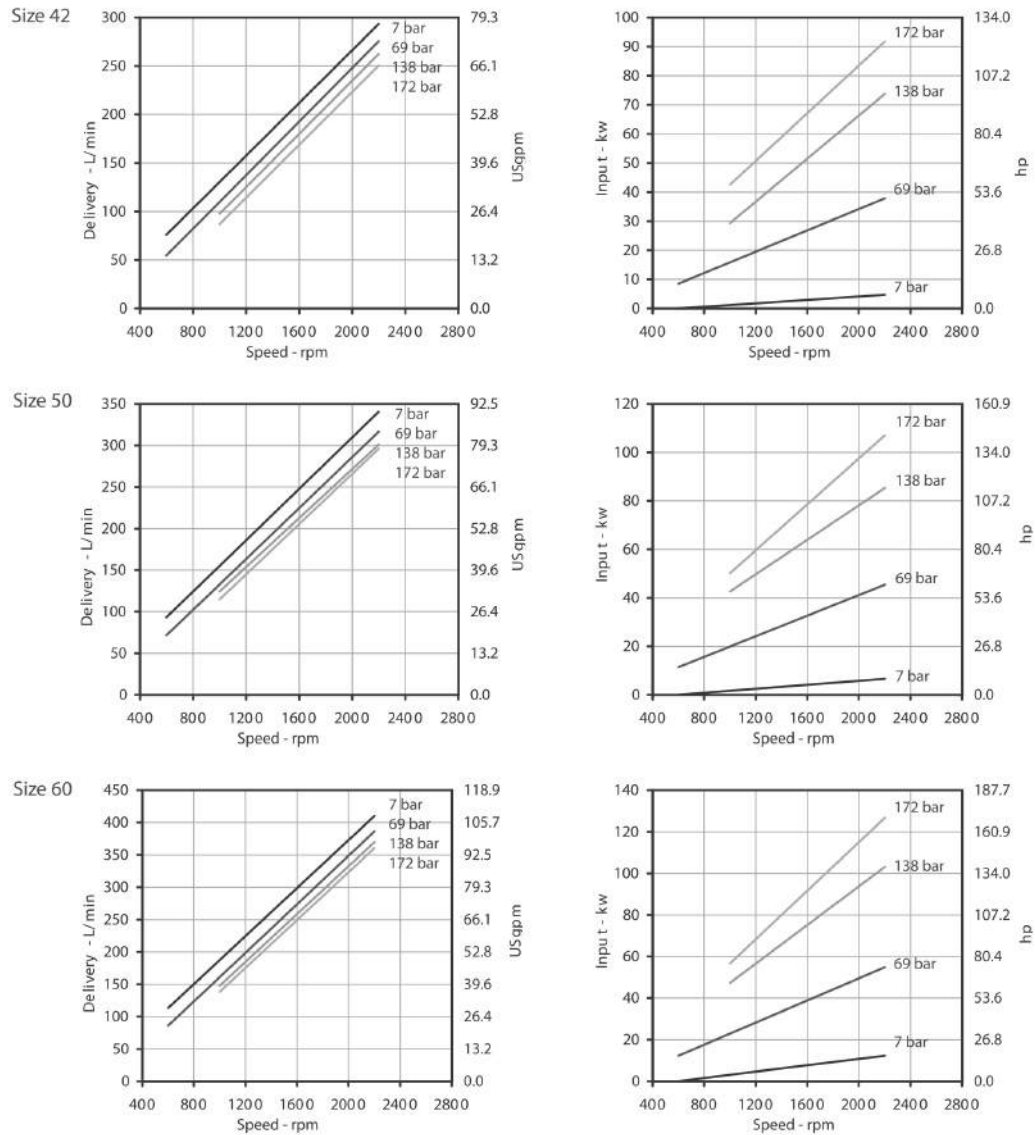


Thru-drive Single Vane Pump

45HVT/45HVQT Series

45HVQ, Shaft End of 45thHVQ

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

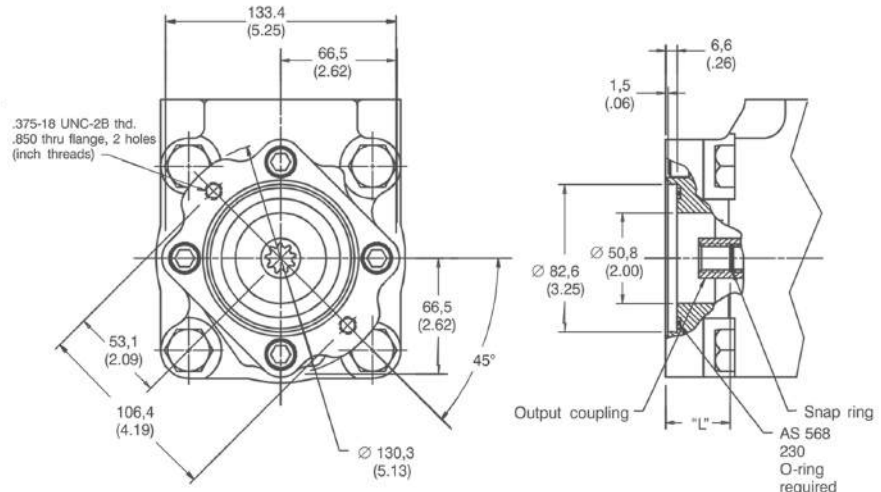
Thru-drive Single Vane Pump 45HVT/45HVQT Series

Thru-drive Rear Mountings

"A" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 82-2 (A) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "A" size with a 30° involute spline (per SAE std J-744 Oct '83), 9T and 16/32 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

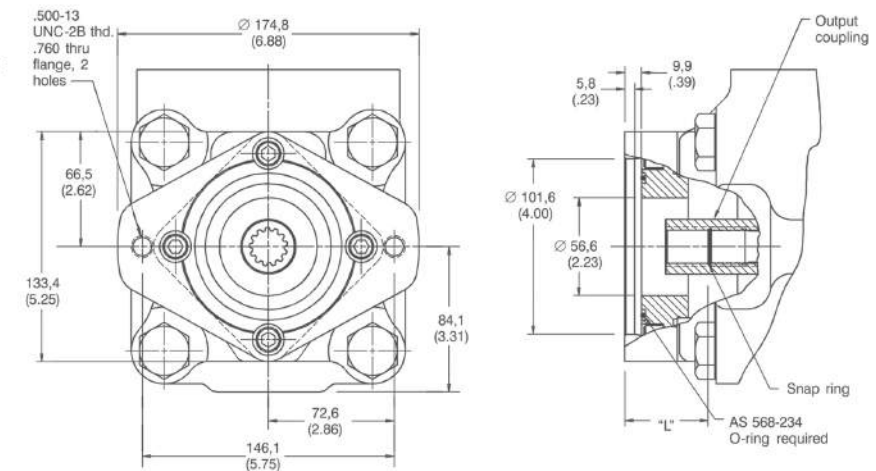
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"B" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 101-2 (B) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "B" size with a 30° involute spline (per SAE std J-744 Oct '83), 13T and 16/32 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

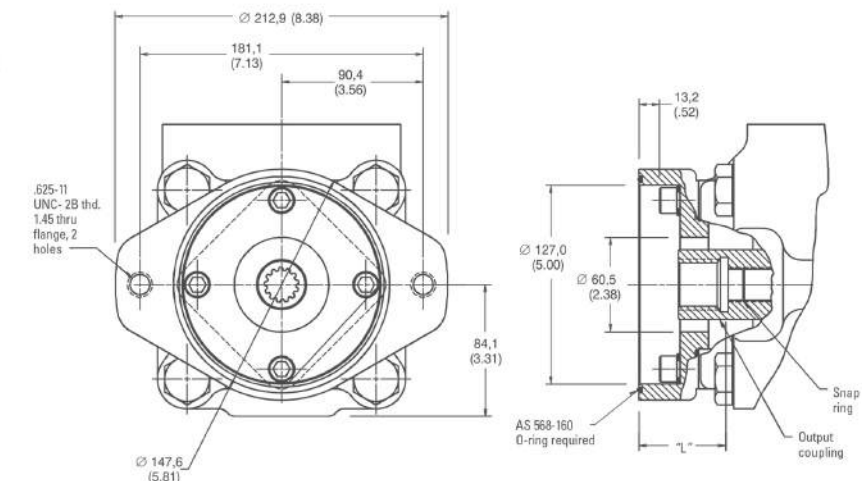
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"C" rear mounting

This unit accepts a hydraulic pump with a mounting configuration of the 127-2 (C) size per SAE std. J-744 Oct '83. The output coupling is for a pump shaft of SAE "C" size with a 30° involute spline (per SAE std J-744 Oct '83), 14T and 12/24 D.P. (Per ANSI B.92.1a1976). Concentricity of the shaft of the attached pump must meet or exceed requirements of SAE Std. J-744 Oct '83.

Pump Model	Dimensions "L"
35HVT/HVQT	56,6/54,1 (2.23/2.13) 61,2 (2.41) maximum
45HVT/HVQT	56,6/54,1 (2.23/2.13) 61,5 (2.42) maximum



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