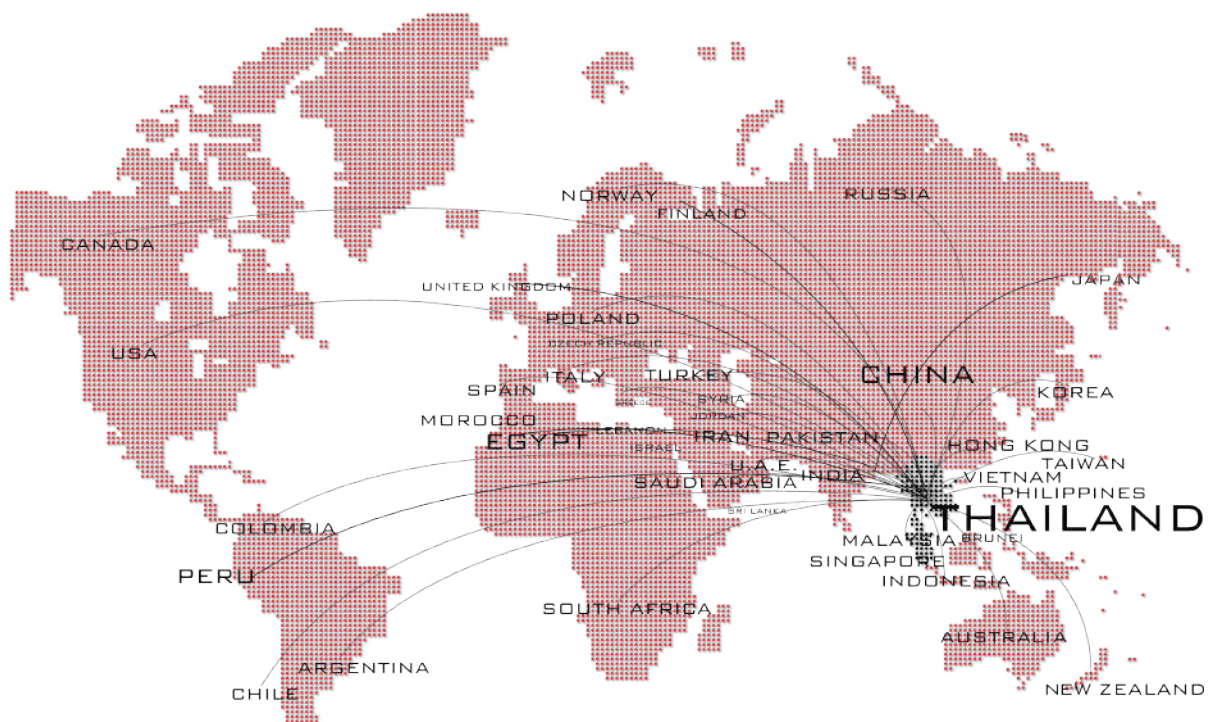


Hydraulic Thru Drive Pump HVT & HVQT Series

Catalogue 2025



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BUREAU
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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

UKAS Certificate Template Single Site Rev.4.1

28 Aug 2023





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บริษัท โฟล-เทคเอ็นจิเนียริง จำกัด

47 ซอยสุขสวัสดิ์ 14/18 แขวงจอมทอง เขตจอมทอง, กรุงเทพมหานคร 10150 ประเทศไทย

บูโร เวอร์ิตัส เซอทิฟิเคชัน (ประเทศไทย) รับรองว่าระบบบริหารงานขององค์กรนี้ได้รับการตรวจประเมิน
และพบว่าสอดคล้องกับข้อกำหนดของมาตรฐานระบบบริหารตามรายละเอียดต่อไปนี้

ISO 9001:2015

ขอบข่ายการรับรอง

การออกแบบพัฒนา, การผลิต, จัดหาและจัดจำหน่าย บั้มไฮดรอลิก, มอเตอร์ไฮดรอลิก,
วาล์วไฮดรอลิก, วาล์วนิวเมติกส์, ชุดต้นกำลังไฮดรอลิกและอุปกรณ์เสริมในระบบไฮดรอลิก

ได้รับการอนุมัติครั้งแรกเมื่อ	17 มีนาคม 2552
วันที่ใบรับรองหมดอายุของรอบการรับรองที่ผ่านมา	NA
วันที่ตรวจเพื่อให้การรับรอง	NA
รอบการให้การรับรองมีผลจากวันที่ / รอบการให้การรับรองเพื่อต่ออายุมีผลจากวันที่	16 มีนาคม 2567
ภายใต้เงื่อนไขการดำเนินการของระบบบริหารงานที่เป็นที่น่าพอใจอย่างต่อเนื่องของ องค์กรดังกล่าวใบรับรองนี้หมดอายุวันที่	16 มีนาคม 2570

เลขที่ใบรับรอง TH022196

แก้ไขครั้งที่ 1

วันที่มีผลบังคับใช้ 16 มีนาคม 2567

ผู้อนุมัติการรับรอง



สำนักงาน: บริษัท บูโร เวอร์ิตัส เซอทิฟิเคชัน (ประเทศไทย) จำกัด ชั้น 16 อาคารกรุงเทพทาวเวอร์ 2170 ถ.เพชรบุรีตัดใหม่
บางกะปิ ห้วยขวาง กรุงเทพฯ 10310 ประเทศไทย

หากต้องการตรวจสอบถึงผลบังคับใช้ของใบรับรองนี้โปรดติดต่อ (+662 670 4800)

คำอธิบายเพิ่มเติมเกี่ยวกับขอบข่ายของใบรับรองนี้และการประยุกต์ใช้ข้อกำหนดของ ระบบบริหารงาน
สามารถติดต่อขอรับได้จากองค์กรดังกล่าวตามที่ระบุไว้ด้านบน



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



นอกจากบริษัทจะมีผลิตภัณฑ์ที่มีคุณภาพแล้ว ด้านงานบริการหลังการขายก็เป็นอีกปัจจัยหนึ่งที่บริษัทให้ความสำคัญเป็นอย่างยิ่ง ทุกผลิตภัณฑ์ของบริษัทมีการรับประกันคุณภาพตามระยะเวลา และอายุการใช้งาน

1. เงื่อนไขการรับประกัน

การเริ่มต้นการรับประกัน

บริษัท ไอพี คออินดัส จำกัด จะรับประกันสินค้าใหม่ที่ขายให้ผู้แทนจำหน่าย หรือ ลูกค้าทั่วไปโดยตรงจากบริษัท ไอพี คออินดัส จำกัด โดยเริ่มนับตั้งแต่วันที่ลูกค้า (รายแรก) ซื้อสินค้า

ระยะเวลาประกัน

สินค้าทุกตัวที่จัดจำหน่ายโดย บริษัท ไอพี คออินดัส จำกัด จะมีอายุการรับประกัน เป็นระยะเวลา 1 ปี โดยเริ่มนับจาก เดือน/ปี ที่ลูกค้าซื้อสินค้า **ยกเว้น** ไส้กรอง , Suction filter (HF series) ทางบริษัท จะรับประกัน ในระยะเวลา 6 เดือน หรือ 500 ชั่วโมง โดยเริ่มนับจาก เดือน/ปี ที่ลูกค้าซื้อไปใช้งาน

หมายเหตุ ในกรณีที่ไม่มีหลักฐานการซื้อขาย ระยะเวลาการรับประกันจะเริ่มนับจาก เดือน/ปี ที่ผลิตเป็นหลัก

ขอบเขตการรับประกัน

การรับประกันเป็นไปตามระยะเวลาประกันดังกล่าวและภายใต้เงื่อนไขของการรับประกัน ถ้าหากมีความเสียหายอันเนื่องมาจากความบกพร่องของวัสดุชิ้นส่วนหรือกระบวนการผลิตจากโรงงานผู้ผลิตภายใต้การใช้งาน และการบำรุงรักษาตามปกติ บริษัทฯ ยินดีซ่อมหรือเปลี่ยนวัสดุชิ้นส่วนที่บกพร่องให้โดยไม่คิดมูลค่า

การซ่อม หรือเปลี่ยนชิ้นส่วน

ข้อตกลงในการรับประกันจำกัดเฉพาะการซ่อมหรือเปลี่ยนวัสดุชิ้นส่วน ซึ่งต้องดำเนินการโดย บริษัทไอพี คออินดัส จำกัด หรือผู้แทนจำหน่ายที่ได้รับการแต่งตั้งเท่านั้น

2. ข้อยกเว้นในการรับประกัน

การรับประกันไม่ครอบคลุมถึงกรณีต่อไปนี้

- ความเสียหาย ซึ่งเกิดจากการใช้สินค้าที่ไม่ถูกต้อง และการละเลย ไม่เอาใจใส่บำรุงรักษา
- ความเสียหาย ซึ่งเกิดกับชิ้นส่วนภายนอกที่เสื่อมสภาพได้จากการสัมผัส การสึกหรอ การฉีกขาด รวมทั้งการเกิดสนิม
- ความเสียหาย ซึ่งเกิดจากการดัดแปลงสภาพ แก๊ว ต่อเติม การแยกออกจากกัน การซ่อมที่ไม่ถูกต้อง

- ความเสียหาย ซึ่งเกิดจากการใช้เชื้อเพลิง น้ำมันเชื้อเพลิง สารหล่อลื่นต่าง ๆ ที่ผิดประเภท มีคุณภาพต่ำ
- ความเสียหาย ที่เกิดจากภัยธรรมชาติ และอุบัติเหตุ
- ความเสียหาย ที่เกิดจากการซ่อม หรือปรับแต่งโดยบุคคลซึ่งไม่ใช่จากบริษัท ฯ หรือผู้แทนจำหน่าย ที่บริษัท โฮฟ คออินดัส จำกัด แต่งตั้ง (ต้องมีการแต่งตั้งอย่างจริงจัง มีเอกสาร, มีการอบรมสอนวิธีการใช้อุปกรณ์-เครื่องมือในการเปลี่ยนที่ถูกต้อง)
- ความเสียหายที่เกิดจากการขนส่งสินค้า เช่น การขนส่งสาธารณะ
- ค่าใช้จ่ายต่าง ๆ ค่าน้ำมัน ค่ารถบรรทุก ค่าลากจูง ค่าที่พักรถ ค่าเสียเวลา รวมทั้งค่าเสียหาย เนื่องจากความไม่สะดวกหรือทำให้ธุรกิจเสียหาย
- ปรากฏการณ์ปกติ เช่น เสียงดัง การสั่นสะเทือน ซึ่งไม่มีผลกระทบต่อคุณภาพและสมรรถนะของสินค้า
- สินค้าที่ถูกทำให้มีเตอร์วัดชั่วโมงการใช้งานไม่ตรงกับความเป็นจริง

* บริษัท ฯ สงวนสิทธิ์ในการที่จะเปลี่ยนแปลงข้อกำหนดในเงื่อนไขการรับประกันนี้ได้โดยไม่ต้องแจ้งล่วงหน้า

SAMPLE TEST REPORT

Product Details

Report No. ATA10-0222/151085

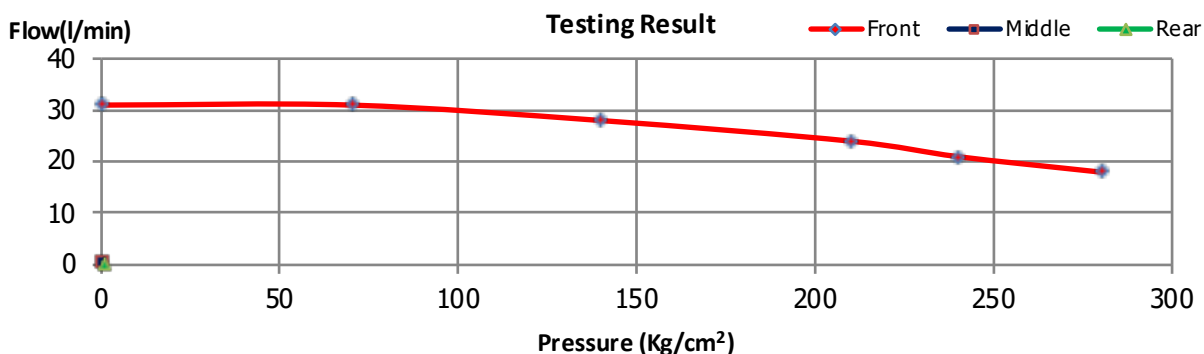
Product	PUMP		
Model	HT6CRM-006-1R00-A10-A-00	Serial Number	GS211XXXX

Testing Conditions

Test Date	01-01-2022	Test By	Wasan
Oil Type	ISO VG32	Temperature	50 ° C
Viscosity	21.33 cSt	Second/Cycle	3 Seconds

Testing Result

Part	Pressure (Kg/cm ²)	600 RPM			1500 RPM			1800 RPM		
		Flow l/min	Efficiency %	Sound db(A)	Flow l/min	Efficiency %	Sound db(A)	Flow l/min	Efficiency %	Sound db(A)
Front	0				31.0	100	62			
	70				31.0	100	62			
	140				28.0	90	62			
	210				24.0	77	66			
	240				21.0	68	62			
	280				18.0	58	62			
Middle										
Rear										



Observations:

Does the product pass the standard

Yes ☒ No ☐

Approve by

Date

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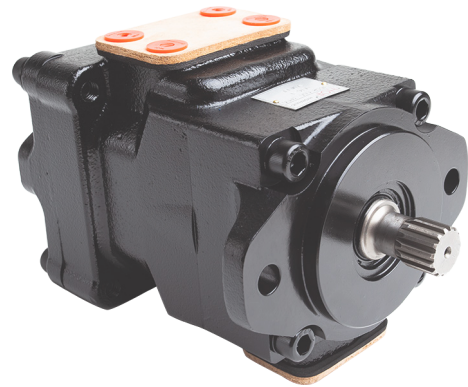
I. Thru-Drive Single Vane Pump HT6*R Series

Thru-drive Single Vane Pump

HT6*R Series

Features and Handling

- HT6*R series Thru Drive or Drive Train models are extremely useful for flexibility in circuit design by having the vane pump coupled with other types of pumps, both fixed and variable displacement on a single input drive.
- HT6*R series allow the use of vane pump technology with a huge combination of other pumps, supported by SAE A, SAE B or SAE C rear drive.



**Foot Mounting is available for each pump. For more details, see Foot Mounts.*

Thru-Drive Single Vane Pump

HT6CR/HT6CRM Series

Specification

HT6CR for Single pump

Size	Displacement cm ³ /r 1(in ³ /r)	Max. Intermittent Pressure bar (psi)	Max. Continuous Pressure bar (psi)	Min. Speed rpm	Max. Speed rpm	Weight
003	10.8 (0.66)	275 (4000)	240 (3500)	600	2800	20.4 (44.9)
005	17.2 (1.05)					
006	21.3 (1.30)					
008	26.4 (1.61)					
010	34.1 (2.08)					
012	37.1 (2.26)					
014	46.0 (2.81)					
017	58.3 (3.56)					
020	63.8 (3.89)					
022	70.3 (4.29)					
025	79.3 (4.84)	206 (3000)	160 (2300)		2500	
028	88.8 (5.42)					
031	100.0 (6.10)					

HT6CRM for Single pump

Size	Displacement cm ³ /r 1(in ³ /r)	Max. Intermittent Pressure bar (psi)	Max. Continuous Pressure bar (psi)	Min. Speed rpm	Max. Speed rpm	Weight
003	10.8 (0.66)	275 (4000)	240 (3500)	400	2800	20.4 (44.9)
005	17.2 (1.05)					
006	21.3 (1.30)					
008	26.4 (1.61)					
010	34.1 (2.08)					
012	37.1 (2.26)					
014	46.0 (2.81)					
017	58.3 (3.56)					
020	63.8 (3.89)					
022	70.3 (4.29)					
025	79.3 (4.84)	206 (3000)	160 (2300)		2500	
028	88.8 (5.42)					
031	100.0 (6.10)					

Thru-Drive Single Vane Pump

HT6CR/HT6CRM Series

Ordering Code : Single Pump

HT6CRM - 022 - 1 R 00 - A 1 0 - A - 00 - .. - ..

1 2 3 4 5 6 7 8 9 10 11 12

1. Model :

Industrial - HT6CR SAE B 2 bolts mounting flange J744

Mobile 1 Shaft seals (M) - HT6CRM SAE B 2 bolts mounting flange J744

2. Displacement

Volumetric displacement cm³/rec (in³/rev)

003 - 10.8 (0.66)
 005 - 17.2 (1.05)
 006 - 21.3 (1.30)
 008 - 26.4 (1.61)
 010 - 34.1 (2.08)
 012 - 37.1 (2.26)
 014 - 46.0 (2.81)
 017 - 58.3 (3.56)
 020 - 63.8 (3.89)
 022 - 70.3 (4.29)
 025 - 79.3 (4.84)
 028 - 88.8 (5.42)
 031 - 100.0 (6.10)

3. Type of shaft

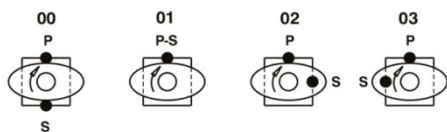
1 - SAE BB Keyed Shaft
 2 - non SAE Keyed Shaft
 3 - SAE B Splined Shaft
 4 - SAE BB Splined Shaft
 5 - non SAE Keyed Shaft

4. Direction of rotation (Viewed from shaft end)

R - Turn right
 L - Turn left

5. Porting combination

00 - standard



S - Suction port P - Pressure port

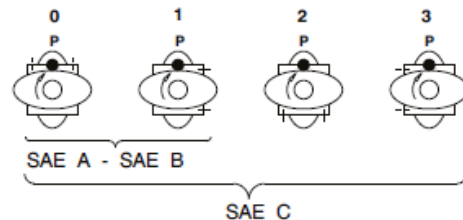
6. Adaptor

0 - None
 A - SAE A
 B - SAE B
 C - SAE C

7. Coupling

1 - SAE A
 2 - SAE B
 3 - SAE BB
 4 - SAE C
 5 - SAE J498b 16/32 - 11 teeth

8. Porting Adapter



9. Design letter

10. Port Connection (4 bolts SAE flange J518C)

00 - UNC Port Connection
 M0 - Metric Port Connection

11. Modifications

12. Assembly Rear pump Diagrams (see page Assembly Porting Diagrams)

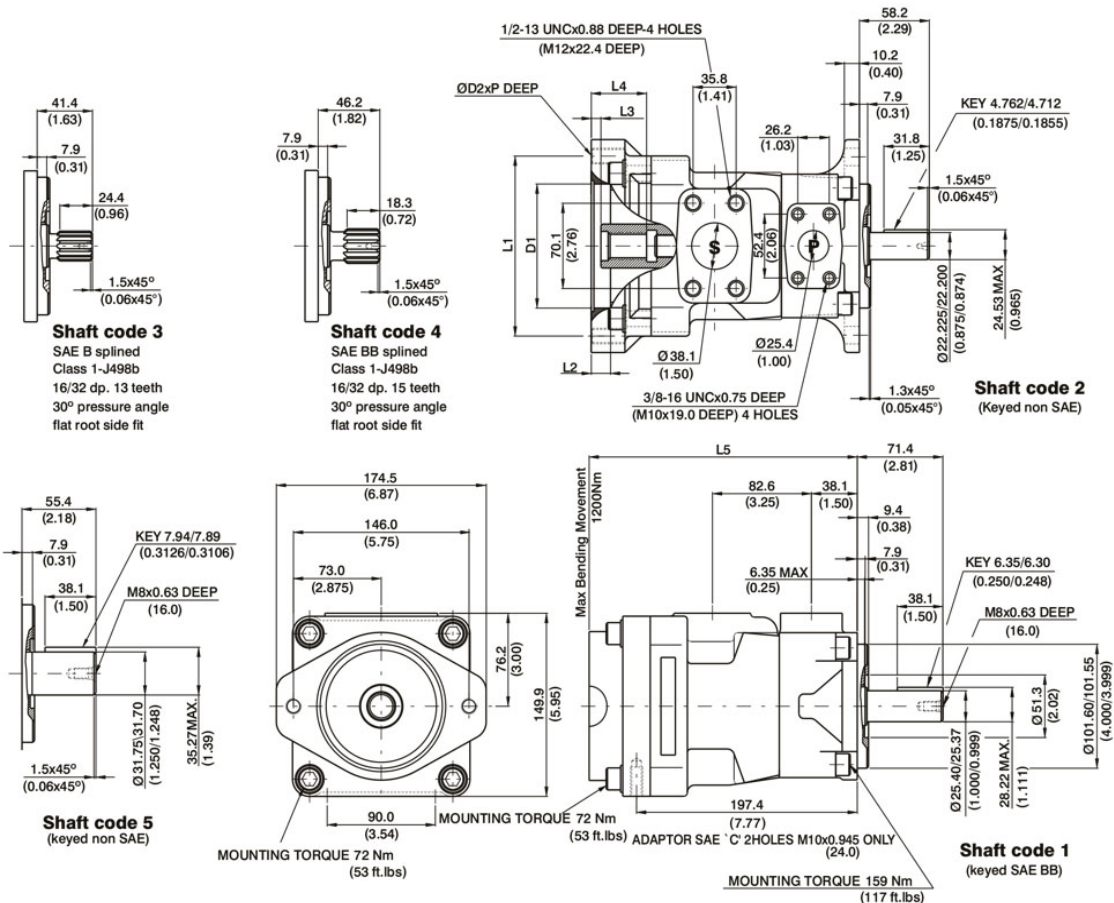
VV00 - Assembly Rearpump
 Omit - Not Assembly Rearpump

Thru-Drive Single Vane Pump

HT6CR/HT6CRM Series

Installation Dimension mm (inch)

HT6CR, HT6CRM



Adapter	D1	D2	P	L1	L2	L3	L4	L5
SAE A	82.60 (3.25)	M10	24 (0.94)	106.4 (4.19)	11 (0.43)	7.9 (0.31)	32 (1.26)	209 (8.23)
SAE B	101.65 (4.00)	M12	28 (1.10)	146.0 (5.75)	16 (0.63)	7.9 (0.31)	46 (1.81)	223 (8.78)
SAE C	127.10 (5.00)	M16	-	181.0 (7.12)	16 (0.63)	7.9 (0.31)	56 (2.20)	233 (9.17)

Adapter	SAE A			SAE B		SAE C
Coupling drive	SAE A	SAE 11 teeth	SAE B	SAE B	SAE BB	SAE C
Number of teeth	9	11	13	13	15	14
Pitch	16/32	16/32	16/32	16/32	16/32	12/24
Pressure angle	30°	30°	30°	30°	30°	30°
Major dia. (min)	15.875 (0.625)	19.05 (0.750)	22.225 (0.875)	22.225 (0.875)	25.40 (1.00)	31.75 (1.250)
Minor dia. (min)	12.70 (0.500)	16.00 (0.630)	19.125 (0.753)	19.125 (0.753)	22.275 (0.877)	27.585 (1.086)

Shaft torque limits ml/rev x bar (in ³ /rev x psi)			
Shaft	V x P max.	Coupling drive	V x P max.
1	21420 (18972)	SAE "A"	11000 (9743)
2	14300 (12666)	SAE "B"	20600 (18246)
3	20600 (18246)	SAE "BB"	22050 (19530)
4	32670 (28937)	SAE "C"	22050 (19530)
5	34180 (30274)	SAE "11teeth"	15850 (14039)

Thru-Drive Single Vane Pump

HT6CR/HT6CRM Series

Performance Characteristics

HT6CR, HT6CRM

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Series	Volumetric Displacement	Speed n [R.P.M]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
003	0.66 in ³ /rev	1200	3.42	-	-	1.43	-	-
		1800	5.14	3.61	-	2.11	8.45	-
005	1.05 in ³ /rev	1200	5.45	3.99	-	1.55	8.17	-
		1800	8.18	6.65	5.56	2.29	12.00	19.59
006	1.30 in ³ /rev	1200	6.75	5.22	4.13	1.62	9.69	16.13
		1800	10.13	8.60	7.51	2.40	14.28	23.57
008	1.61 in ³ /rev	1200	8.37	6.84	5.75	1.72	11.58	19.43
		1800	12.55	11.02	9.93	2.54	17.11	28.53
010	2.08 in ³ /rev	1200	10.81	9.28	8.19	1.86	14.43	24.42
		1800	16.22	14.69	13.60	2.76	21.38	36.00
012	2.26 in ³ /rev	1200	11.76	10.23	9.14	1.92	15.53	26.36
		1800	17.64	16.11	15.02	2.84	23.05	38.92
014	2.81 in ³ /rev	1200	14.58	13.05	11.96	2.08	18.83	32.12
		1800	21.88	20.35	19.26	3.09	27.99	47.56
017	3.56 in ³ /rev	1200	18.48	16.95	15.86	2.31	23.38	40.08
		1800	27.73	26.20	25.11	3.43	34.81	59.51
020	3.89 in ³ /rev	1200	20.23	18.70	17.61	2.41	25.41	43.64
		1800	30.34	28.81	27.42	3.58	37.86	64.85
022	4.29 in ³ /rev	1200	22.29	20.76	19.67	2.53	27.82	47.85
		1800	33.43	31.90	30.81	3.76	41.47	71.16
025 ¹⁾	4.84 in ³ /rev	1200	25.14	23.61	22.52	2.70	31.15	53.68
		1800	37.71	36.18	35.09	4.01	46.46	79.90
028 ¹⁾	5.42 in ³ /rev	1200	28.15	26.62	25.86 ²⁾	2.87	34.66	51.37 ²⁾
		1800	42.23	40.70	39.94 ²⁾	4.27	51.74	76.73 ²⁾
031 ¹⁾	6.10 in ³ /rev	1200	31.70	30.17	29.41 ²⁾	3.08	38.80	57.58 ²⁾
		1800	47.56	46.03	45.27 ²⁾	4.58	57.95	86.06 ²⁾

1) 025 - 028 - 031 = 2500 R.P.M. max. 2) 028 - 031 = 3000 PSI max. int.
 - Not to use because internal leakage greater than 50% theoretical flow.
 - Port connection can be furnished with metric threads.

Thru-Drive Single Vane Pump

HT6DR/HT6DRM Series

Specification

HT6DR for Single pump

Size	Displacement cm ³ /r 1(in ³ /r)	Max. Intermittent Pressure bar (psi)	Max. Continuous Pressure bar (psi)	Min. Speed rpm	Max. Speed rpm	Weight
014	47.6 (2.90)	240 (3500)	206 (3000)	600	2500	32.3 (71.2)
017	58.2 (3.55)					
020	66.0 (4.03)					
024	79.5 (4.85)					
028	89.7 (5.47)					
031	98.3 (6.00)					
035	111.0 (6.77)					
038	120.3 (7.34)					
042	136.0 (8.30)					
045	145.7 (8.89)	206 (3000)	160 (2300)		2200	
050	158.0 (9.64)					

HT6DRM for Single pump

Size	Displacement cm ³ /r 1(in ³ /r)	Max. Intermittent Pressure bar (psi)	Max. Continuous Pressure bar (psi)	Min. Speed rpm	Max. Speed rpm	Weight
014	47.6 (2.90)	240 (3500)	206 (3000)	400	2500	32.3 (71.2)
017	58.2 (3.55)					
020	66.0 (4.03)					
024	79.5 (4.85)					
028	89.7 (5.47)					
031	98.3 (6.00)					
035	111.0 (6.77)					
038	120.3 (7.34)					
042	136.0 (8.30)					
045	145.7 (8.89)	206 (3000)	160 (2300)		2200	
050	158.0 (9.64)					

Thru-Drive Single Vane Pump

HT6DR/HT6DRM Series

Ordering Code : Single Pump

HT6DRM - 045 - 1 R 00 - A 1 0 - A - 00 - .. - ..

1 2 3 4 5 6 7 8 9 10 11 12

1. Model :

Industrial - HT6DR SAE C 2 bolts mounting flange J744

Mobile 1 Shaft seals (M) - HT6DRM SAE C 2 bolts mounting flange J744

2. Displacement

Volumetric displacement cm³/rec (in³/rev)

014 - 47.6 (2.90)
017 - 58.2 (3.55)
020 - 66.0 (4.03)
024 - 79.5 (4.85)
028 - 89.7 (5.47)
031 - 98.3 (6.00)
035 - 111.0 (6.77)
038 - 120.3 (7.34)
042 - 136.0 (8.30)
045 - 145.7 (8.89)
050 - 158.0 (9.64)

3. Type of shaft

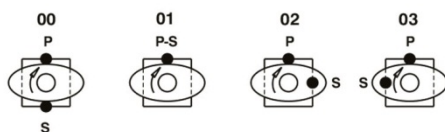
1 - SAE C Keyed Shaft
2 - SAE CC Keyed Shaft
3 - SAE C Splined Shaft
5 - non SAE Keyed Shaft

4. Direction of rotation (Viewed from shaft end)

R - Turn right
L - Turn left

5. Porting combination

00 - standard



S - Suction port P - Pressure port

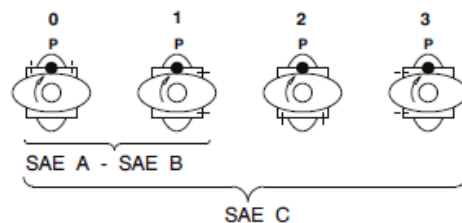
6. Adaptor

0 - None
A - SAE A
B - SAE B
C - SAE C

7. Coupling

1 - SAE A
2 - SAE B
3 - SAE BB
4 - SAE C
5 - SAE J498b 16/32 - 11 teeth

8. Porting Adapter



9. Design letter

10. Port Connection (4 bolts SAE flange J518C)

00 - UNC Port Connection
M0 - Metric Port Connection

11. Modifications

12. Assembly Rear pump Diagrams (see page Assembly Porting Diagrams)

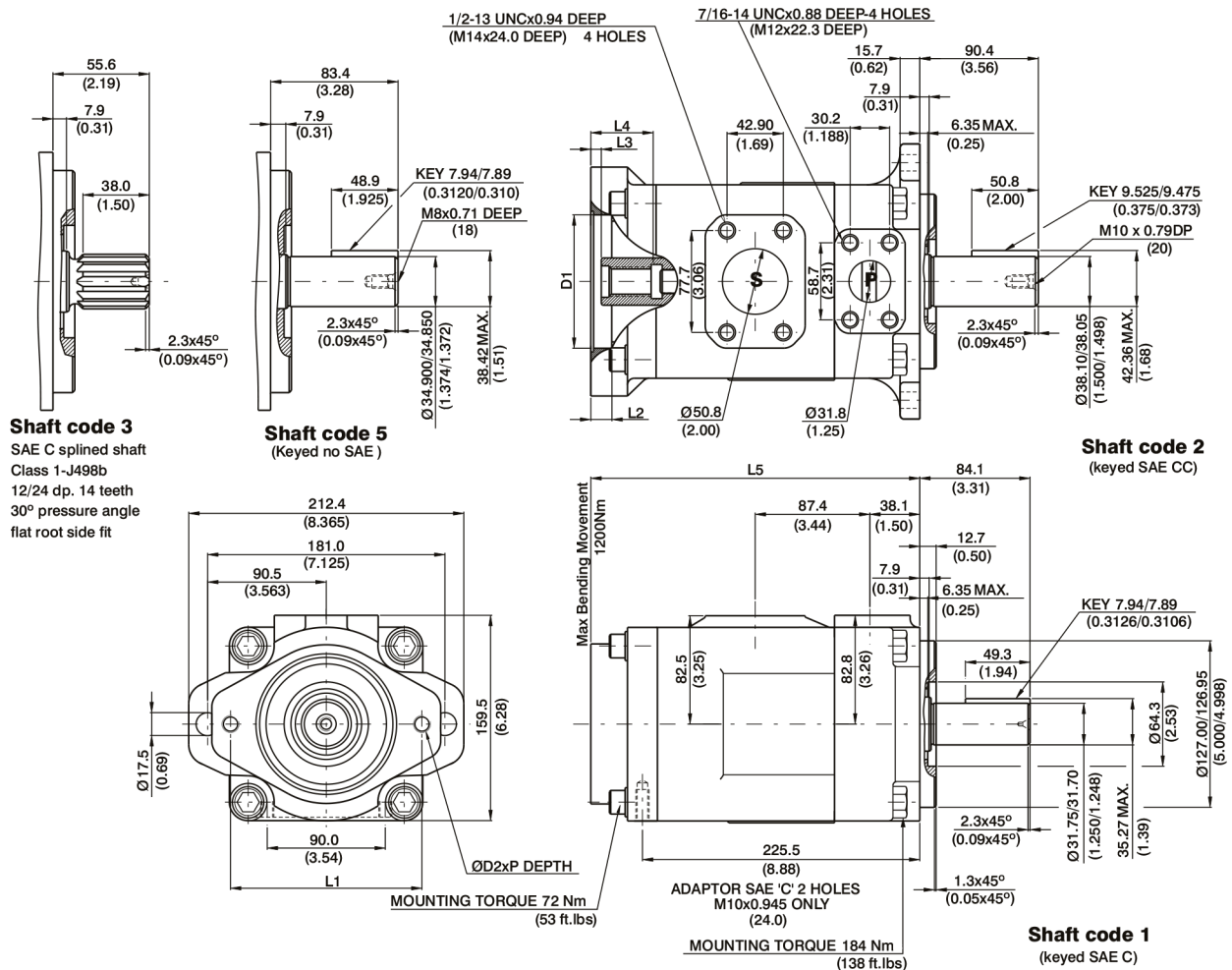
VV00 - Assembly Rearpump
Omit - Not Assembly Rearpump

Thru-Drive Single Vane Pump

HT6DR/HT6DRM Series

Installation Dimension mm (inch)

HT6DR, HT6DRM



Adapter	D1	D2	P	L1	L2	L3	L4	L5
SAE A	82.60 (3.25)	M10	24 (0.94)	106.4 (4.19)	11 (0.43)	7.9 (0.31)	32 (1.26)	237 (9.33)
SAE B	101.65 (4.00)	M12	28 (1.10)	146.0 (5.75)	16 (0.63)	7.9 (0.31)	46 (1.81)	251 (9.88)
SAE C	127.10 (5.00)	M16	-	181.0 (7.12)	16 (0.63)	7.9 (0.31)	56 (2.20)	261 (10.27)

Adapter	SAE A			SAE B		SAE C
Coupling drive	SAE A	SAE 11 teeth	SAE B	SAE B	SAE BB	SAE C
Number of teeth	9	11	13	13	15	14
Pitch	16/32	16/32	16/32	16/32	16/32	12/24
Pressure angle	30°	30°	30°	30°	30°	30°
Major dia. (min)	15.875 (0.625)	19.05 (0.750)	22.225 (0.875)	22.225 (0.875)	25.40 (1.00)	31.75 (1.250)
Minor dia. (min)	12.70 (0.500)	16.00 (0.630)	19.125 (0.753)	19.125 (0.753)	22.275 (0.877)	27.585 (1.086)

Shaft torque limits ml/rev x bar (in ³ /rev x psi)			
Shaft	V x P max.	Coupling drive	V x P max.
1	43240 (38300)	SAE "A"	11000 (9743)
2	66036 (58491)	SAE "B"	20600 (18246)
3	61200 (54207)	SAE "BB"	32670 (28937)
5	55600 (49247)	SAE "C"	37390 (33118)
		SAE "11teeth"	15850 (14039)

Thru-Drive Single Vane Pump

HT6DR/HT6DRM Series

Performance Characteristics

HT6DR, HT6DRM

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

Series	Volumetric Displacement	Speed n [R.P.M]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
014	2.90 in ³ /rev	1200	15.09	12.91	11.27	2.44	19.60	33.20
		1800	22.64	20.46	18.82	4.02	29.31	49.34
017	3.55 in ³ /rev	1200	18.45	16.27	14.63	2.64	23.52	40.06
		1800	27.68	25.50	23.86	4.31	35.20	59.64
020	4.00 in ³ /rev	1200	20.92	18.74	17.10	2.78	26.41	45.11
		1800	31.39	29.21	25.57	4.53	39.52	67.21
024	4.80 in ³ /rev	1200	25.20	23.02	21.38	3.03	31.40	53.85
		1800	37.81	35.63	33.99	4.91	47.02	80.32
028	5.50 in ³ /rev	1200	28.44	26.26	24.62	3.22	35.17	60.45
		1800	42.66	40.48	38.84	5.19	52.68	90.23
031	6.00 in ³ /rev	1200	31.17	28.99	27.35	3.38	38.36	66.02
		1800	46.75	44.57	42.93	5.43	57.45	98.58
035	6.80 in ³ /rev	1200	35.19	33.01	31.37	3.61	43.05	74.24
		1800	52.79	50.61	48.97	5.78	64.50	110.91
038	7.30 in ³ /rev	1200	38.14	35.96	34.32	3.79	46.49	80.26
		1800	57.21	55.03	53.39	6.04	69.66	119.94
042 ¹⁾	8.30 in ³ /rev	1200	43.12	40.94	39.30	4.08	52.30	90.43
		1800	64.68	62.50	60.86	6.47	78.37	135.19
045 ¹⁾	8.90 in ³ /rev	1200	46.19	44.01	42.37	4.26	55.89	96.71
		1800	69.29	67.11	65.47	6.74	83.75	144.61
050 ¹⁾	9.64 in ³ /rev	1200	50.09	47.91	46.73 ²⁾	4.48	60.44	89.93 ²⁾
		1800	75.14	72.96	71.78 ²⁾	7.08	90.58	134.54 ²⁾

1) 042 - 045 - 050 = 2200 R.P.M. max. 2) 050 = 3000 PSI max. int.
 - Port connection can be furnished with metric threads.

Thru-Drive Single Vane Pump

HT6ER/HT6ERM Series

Specification

HT6ER for Single pump

Size	Displacement cm ³ /r 1(in ³ /r)	Max. Intermittent Pressure bar (psi)	Max. Continuous Pressure bar (psi)	Min. Speed rpm	Max. Speed rpm	Weight
042	132.3 (8.07)	240 (3500)	206 (3000)	600	2200	42.5 (93.6)
045	142.4 (8.70)					
050	158.5 (9.67)					
052	164.8 (10.00)					
062	196.7 (12.00)					
066	213.3 (13.00)					
072	227.1 (13.86)					

HT6ERM for Single pump

Size	Displacement cm ³ /r 1(in ³ /r)	Max. Intermittent Pressure bar (psi)	Max. Continuous Pressure bar (psi)	Min. Speed rpm	Max. Speed rpm	Weight
042	132.3 (8.07)	240 (3500)	206 (3000)	400	2200	42.5 (93.6)
045	142.4 (8.70)					
050	158.5 (9.67)					
052	164.8 (10.00)					
062	196.7 (12.00)					
066	213.3 (13.00)					
072	227.1 (13.86)					

Thru-Drive Single Vane Pump

HT6ER/HT6ERM Series

Ordering Code : Single Pump

HT6ERM - 066 - 1 R 00 - A 1 0 - A - 00 - .. - ..

1 2 3 4 5 6 7 8 9 10 11 12

1. Model :

Industrial - HT6ER SAE C 2 bolts mounting flange J744

Mobile 1 Shaft seals (M) - HT6ERM SAE C 2 bolts mounting flange J744

2. Displacement

Volumetric displacement cm³/rec (in³/rev)

042 - 132.3 (8.07)
045 - 142.4 (8.70)
050 - 158.5 (9.67)
052 - 164.8 (10.00)
062 - 196.7 (12.00)
066 - 213.3 (13.00)
072 - 227.1 (13.86)

3. Type of shaft

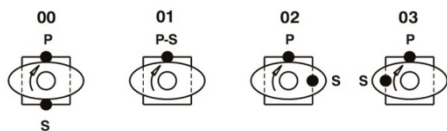
1 - SAE CC Keyed Shaft
3 - SAE C Splined Shaft
4 - SAE CC Splined Shaft

4. Direction of rotation (Viewed from shaft end)

R - Turn right
L - Turn left

5. Porting combination

00 - standard



S - Suction port P - Pressure port

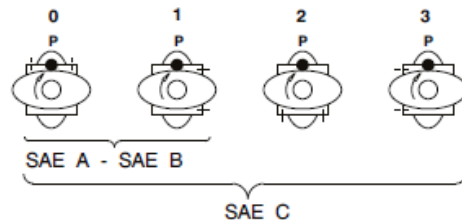
6. Adaptor

0 - None
A - SAE A
B - SAE B
C - SAE C

7. Coupling

1 - SAE A
2 - SAE B
3 - SAE BB
4 - SAE C
5 - SAE J498b 16/32 - 11 teeth

8. Porting Adapter



9. Design letter

10. Port Connection (4 bolts SAE flange J518C)

00 - UNC Port Connection

11. Modifications

12. Assembly Rear pump Diagrams (see page Assembly Porting Diagrams)

VV00 - Assembly Rearpump
Omit - Not Assembly Rearpump

Thru-Drive Single Vane Pump

HT6ER/HT6ERM Series

Performance Characteristics

HT6ER, HT6ERM

OPERATING CHARACTERISTICS - TYPICAL [115 SUS]

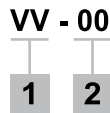
Series	Volumetric Displacement	Speed n [R.P.M]	Flow Q [GPM]			Input power P [HP]		
			p = 0 PSI	p = 2000 PSI	p = 3500 PSI	p = 100 PSI	p = 2000 PSI	p = 3500 PSI
042	8.07 in ³ /rev	1200	41.94	39.39	37.54	5.35	52.28	89.29
		1800	62.92	60.37	58.52	8.09	78.44	133.80
045	8.70 in ³ /rev	1200	45.15	42.60	40.75	4.33	54.72	94.43
		1800	67.72	65.17	63.32	6.87	82.09	141.51
050	9.67 in ³ /rev	1200	50.25	47.70	45.85	4.63	60.68	104.85
		1800	75.38	72.83	70.98	7.32	91.02	157.15
052	10.00 in ³ /rev	1200	52.25	49.70	47.85	4.75	63.01	108.93
		1800	78.37	75.82	73.97	7.49	94.52	163.27
062	12.00 in ³ /rev	1200	62.36	59.81	57.96	5.34	74.81	129.58
		1800	93.54	90.99	89.14	8.38	112.22	194.25
066	13.00 in ³ /rev	1200	67.62	65.07	63.22	5.65	80.95	140.33
		1800	101.44	98.89	97.04	8.84	121.43	210.37
072	13.86 in ³ /rev	1200	72.00	69.45	67.60	5.90	86.05	149.26
		1800	108.00	105.45	103.60	9.22	129.09	223.77

- Port connection can be furnished with metric threads.

Thru-Drive Single Vane Pump

HT6*R Series - Assembly Porting Diagrams

Ordering Code : Tandem Assembly



1. Assembly Tandem

- VV - Vane pump + Vane pump (Standard)
- VP - Vane pump + Piston pump
- VG - Vane pump + Gear pump
- VH - Vane pump + Hybrid pump

2. Assembly Porting combination

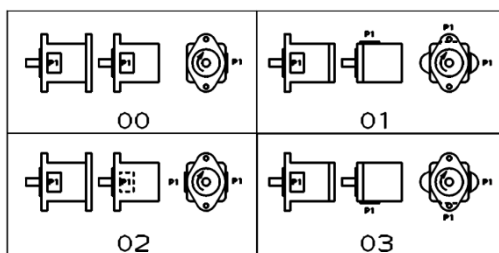
- 00 - Standard

Assembly screws

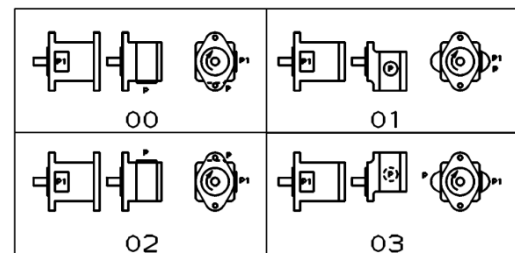
- SAE A rear mounting adaptor : 2 screws M10 x 30
(Mounting torque = 49 Nm.)
- SAE B rear mounting adaptor : 2 screws M12 x 35
(Mounting torque = 88 Nm.)
- SAE C rear mounting adaptor : 2 screws M16 x 40
(Mounting torque = 190 Nm.)

Assembly Porting Combination

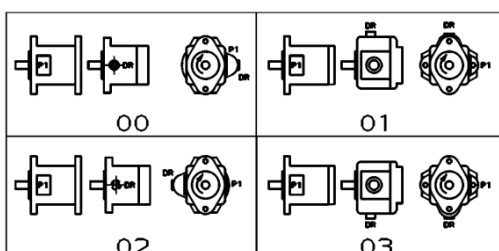
- VV type - For single vane pump (view from shaft end)



- VG type - For single vane pump (view from shaft end)



- VP & VH type - For the second pump the reference is the DR drain port on piston pump (view from shaft end)



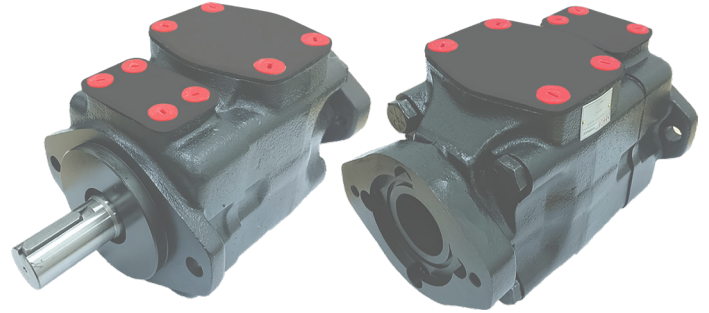
II. Thru-Drive Single Vane Pump HVT and HVQT Series

Thru-drive Single Vane Pump

HVT and HVQT Series

Features and Handling

- Thru-drive models provide valuable circuit design flexibility, such as having fixed and variable displacement models on a single input drive.
- 3 Adaptor plates are available.
 - Adaptor A (SAE A, Dia 82.5)
HV10, HV20, or other pumps
 - Adaptor B (SAE B, Dia 101.6)
HV2010, HV2020, 20HV/HVQ
25HV/HVQ, 2520HV/HVQ or other pumps
 - Adaptor C (SAE C, Dia 127)
35HV/HVQ, 3520HV/HVQ, 3525HV/HVQ
45HV/HVQ or other pumps
- Thru-drive pumps save installation space and cost by eliminating double shaft extension electric motors or by reducing the number of motors and drive couplings.



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

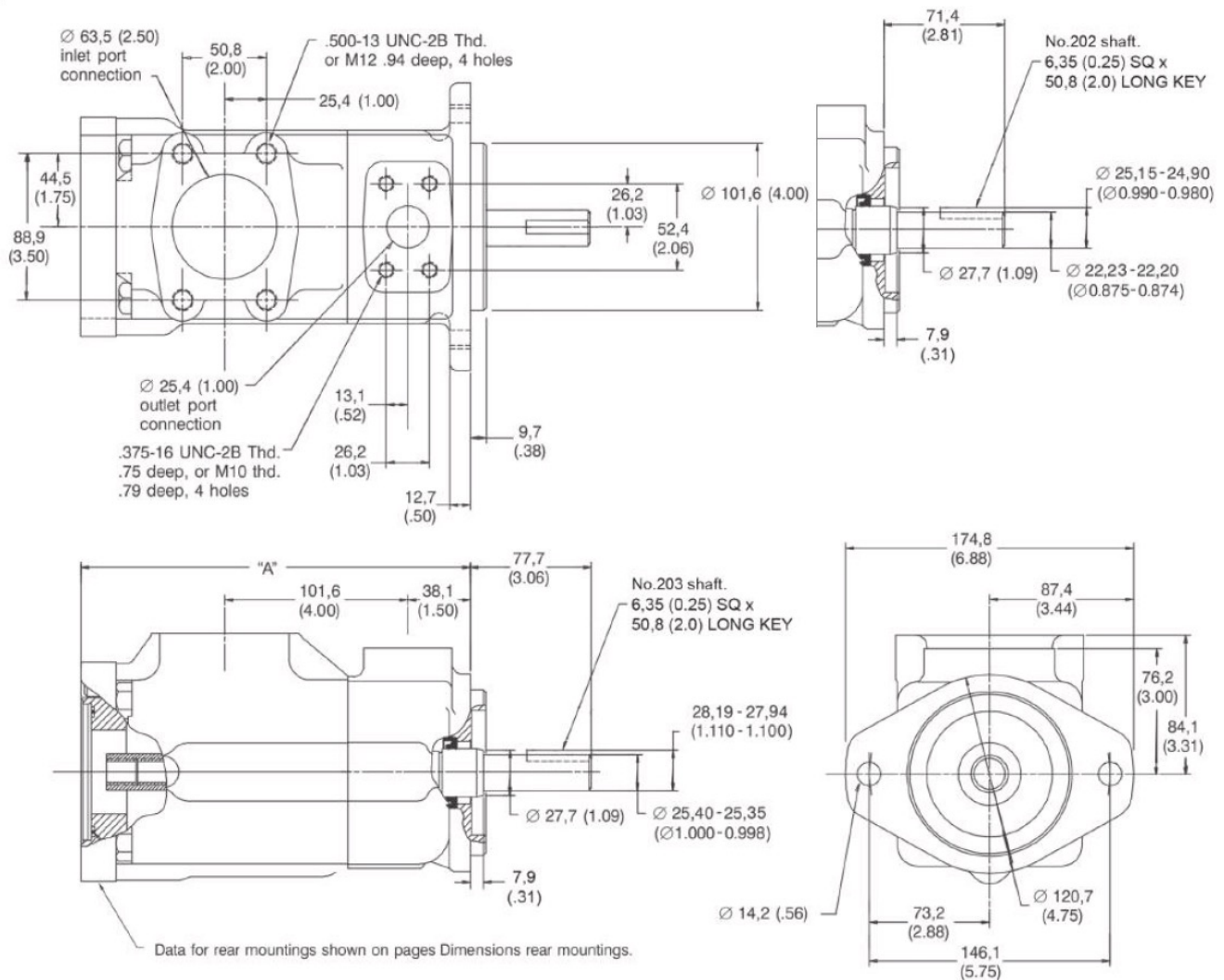
25	HVQT	A	-	S	17	A	-	2	203	C	A	20	L
1	2	3		4	5	6		7	8	9	10	11	12

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. Thru-drive coupling
2 - SAE Splined coupling included with pump
8. Type of shaft
203 - Heavy Duty Straight Keyed Shaft
202 - SAE Straight Keyed Shaft
9. 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
10. 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
11. Design
20
12. Shaft Rotation (viewed from shaft end)
R - Turn right
L - Turn left

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

Installation Dimension mm (inch)

Thru-drive Single pump 25HVT/HVQT



Rear Mountings	Dimension "A"
A	226, 2 (8.9)
B	236, 4 (9.3)

Thru-drive Single Vane Pump

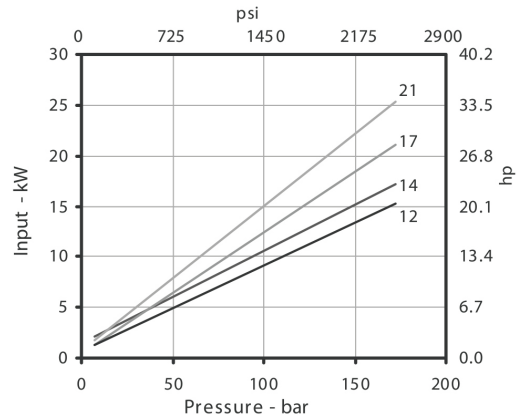
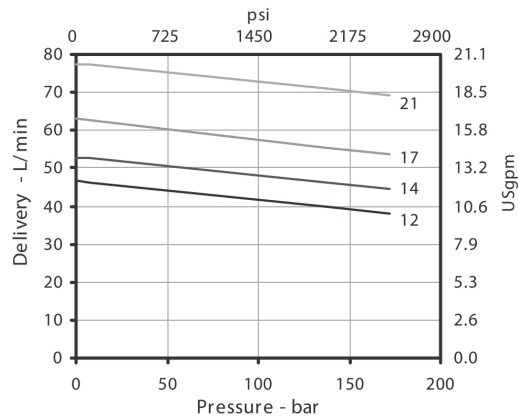
25HVT/25HVQT Series

Performance Characteristics

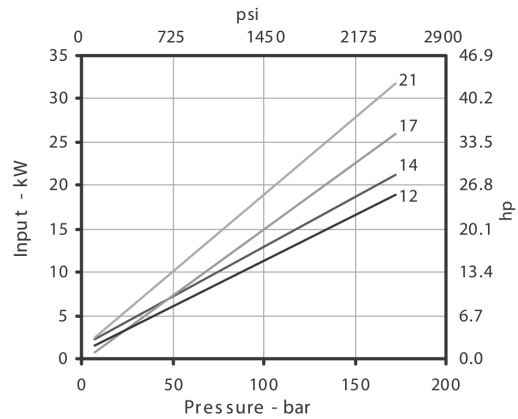
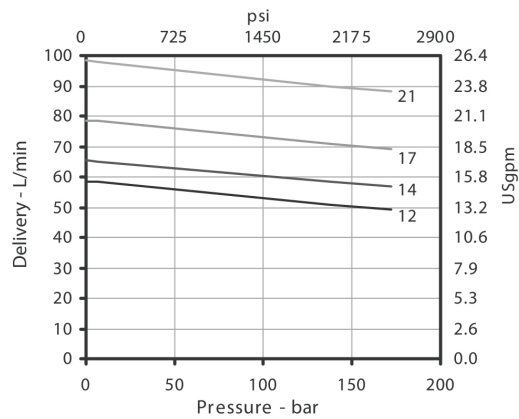
25HV, Shaft End of 25thHV, Cover End of th25HV

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

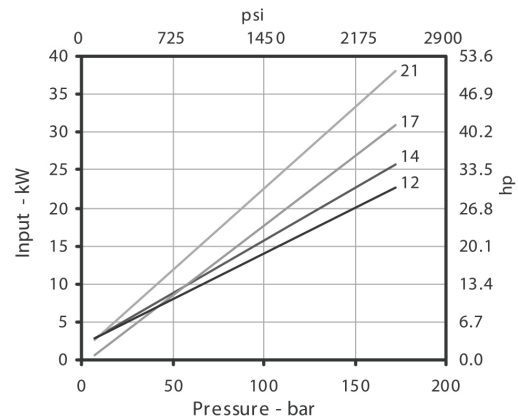
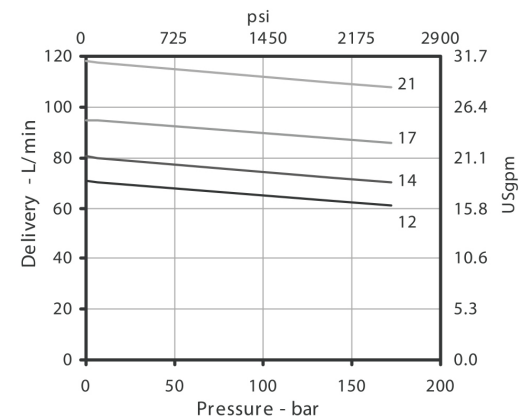
At 1200 rpm



At 1500 rpm



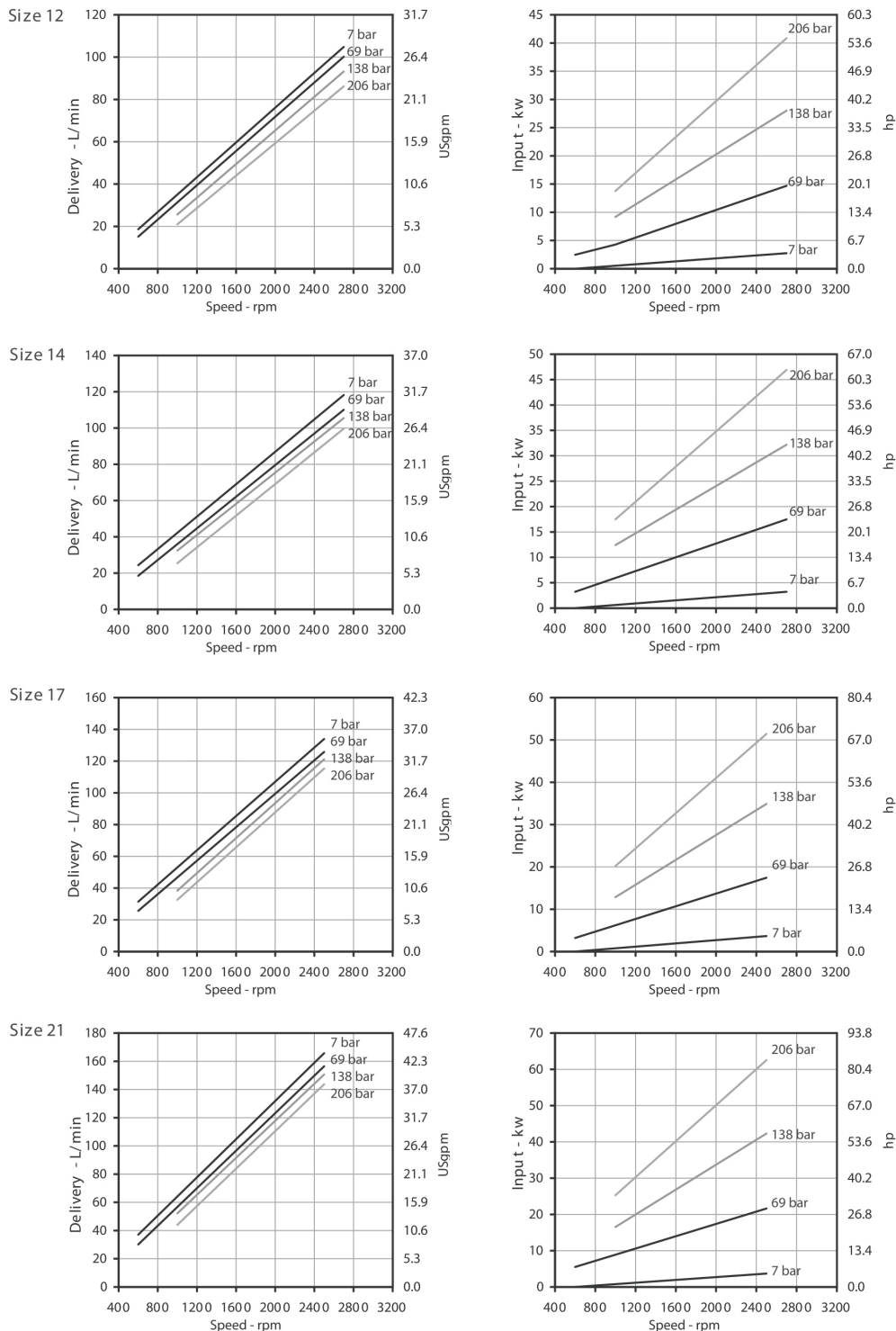
At 1800 rpm



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

25HVQ, Shaft End of 25**HVQ, Cover End of 25**HVQ

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

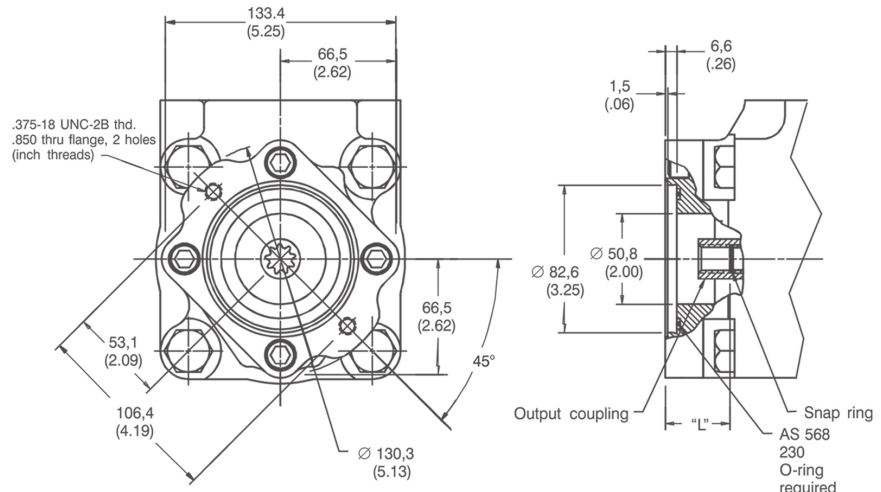
Thru-drive Single Vane Pump 25HVT/25HVQT Series

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.

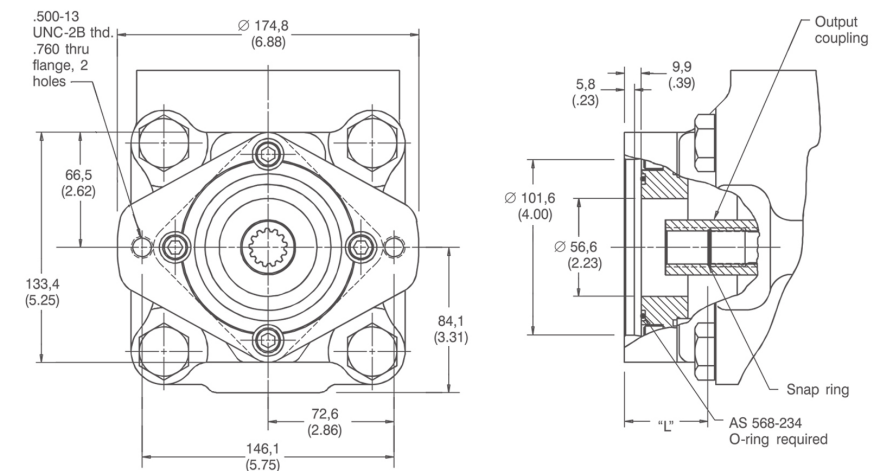
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"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.

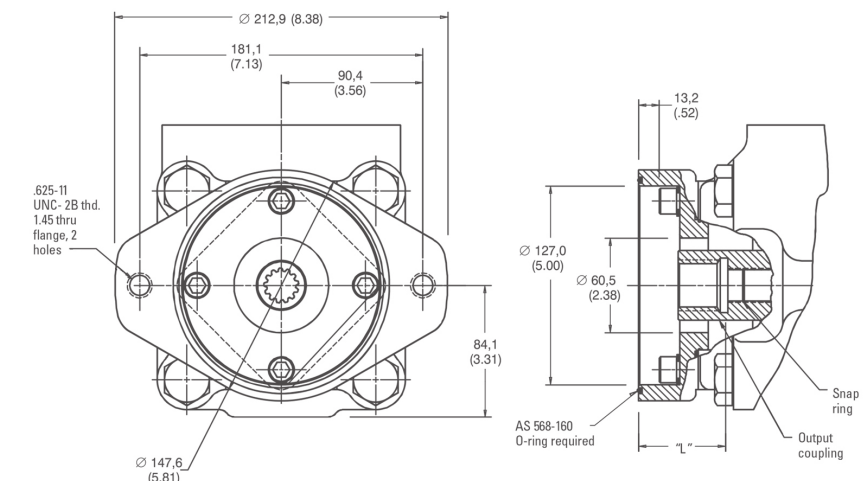
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"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)	24.0 (52.8)
	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)	

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)	24.0 (52.8)
	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)	
	32	100.9 (6.15)	2400		218.0 (57.6)	91.2 (122.3)	
	35	112.0 (6.88)			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	-	2	203	C	A	20	L
1	2	3		4	5	6		7	8	9	10	11	12

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)
32 - 100.9 (6.15)
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. Thru-drive coupling
2 - SAE Splined coupling included with pump
8. Type of shaft
203 - Heavy Duty Straight Keyed Shaft
9. 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
10. Adapter Mounting orientation
(Viewed from adapter end of pump)

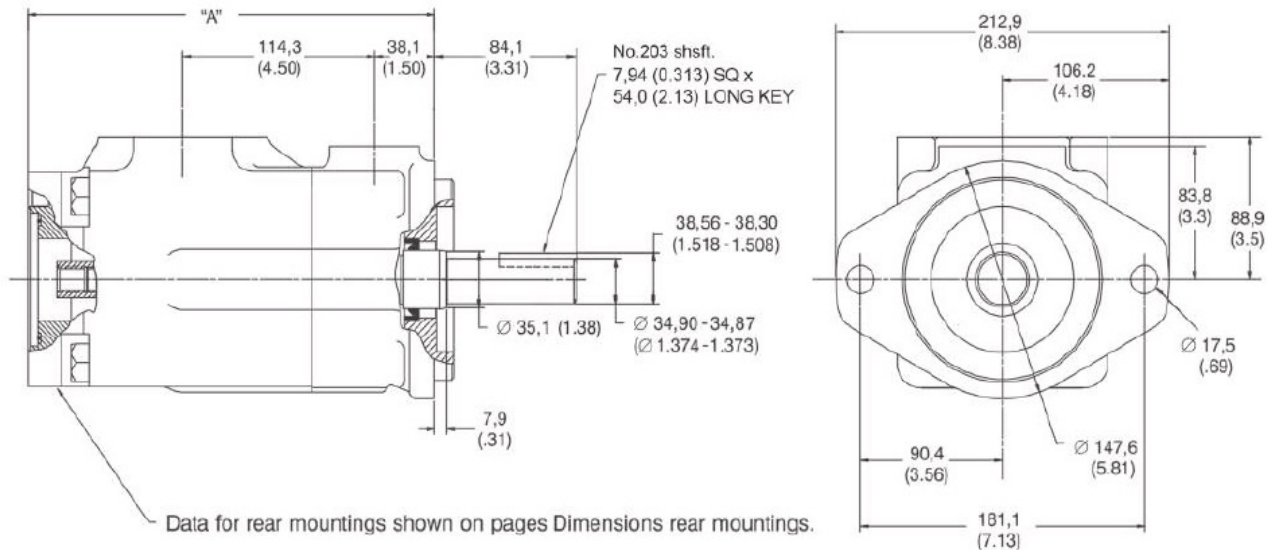
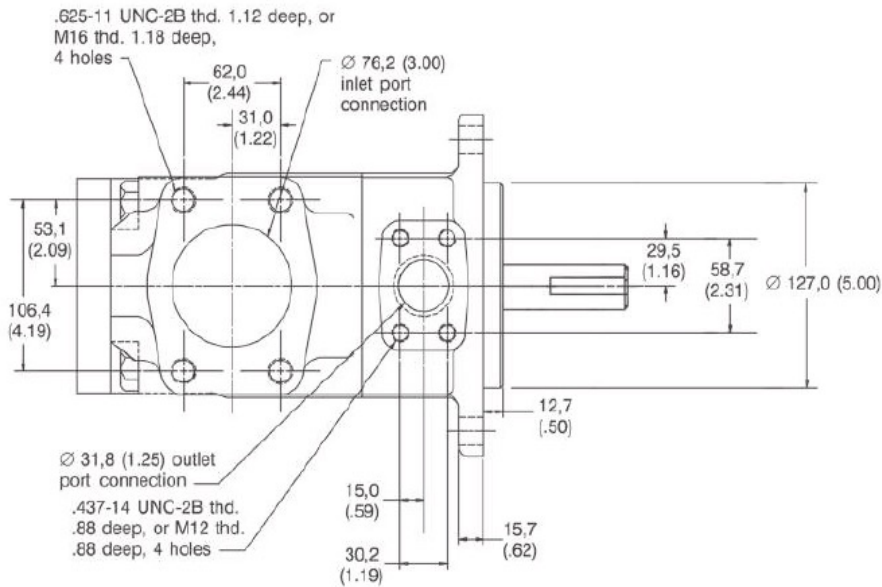
"A" adapter
A - Rotated 45° CW with respect to pump mounting flange
B - Rotated 45° CCW with respect to pump mounting flange

"B,C" adapter
A - Inline with pump mounting flange
B - Rotated 90° with respect to pump mounting flange
11. Design
20
12. 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	252, 0 (9.9)
B	262, 2 (10.3)
C	266, 0 (10.4)

Thru-drive Single Vane Pump

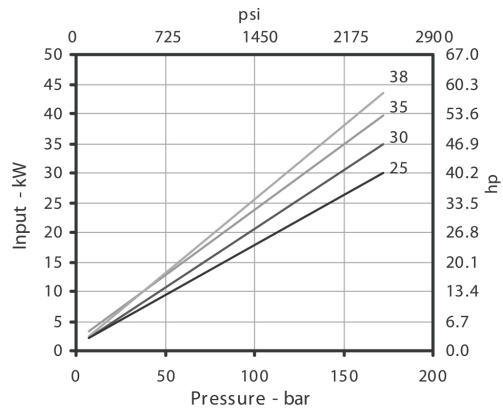
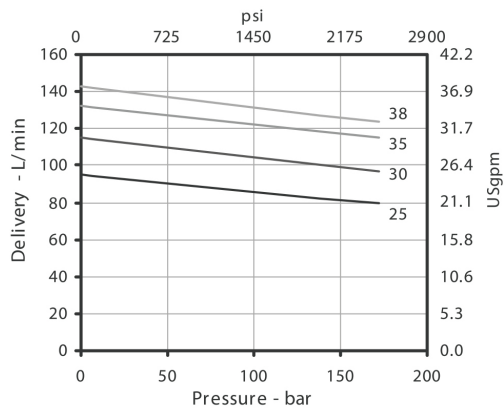
35HVT/35HVQT Series

Performance Characteristics

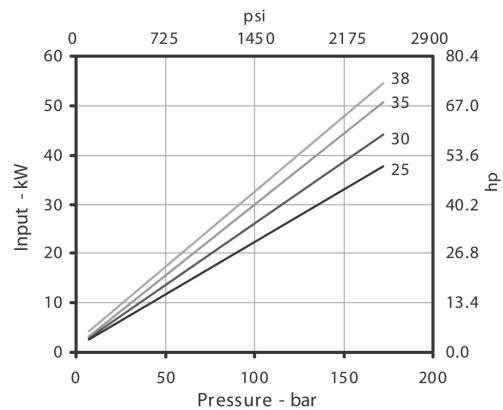
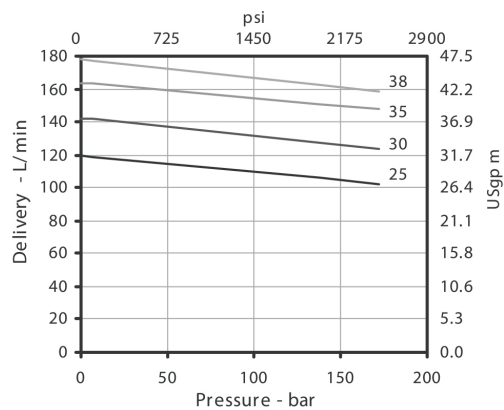
35HV, Shaft End of 35**HV, Cover End of **35HV

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

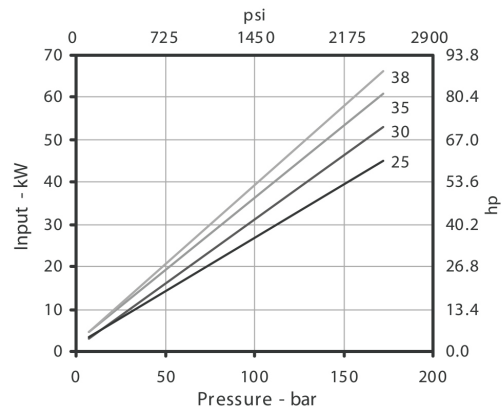
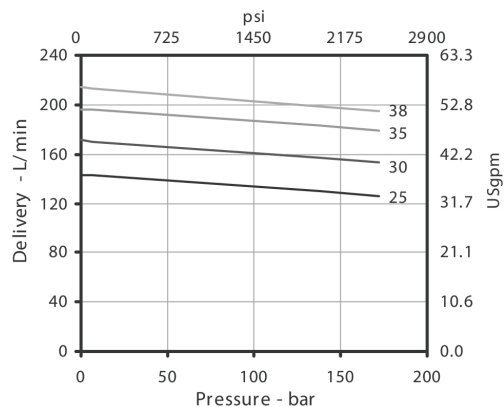
At 1200 rpm



At 1500 rpm



At 1800 rpm

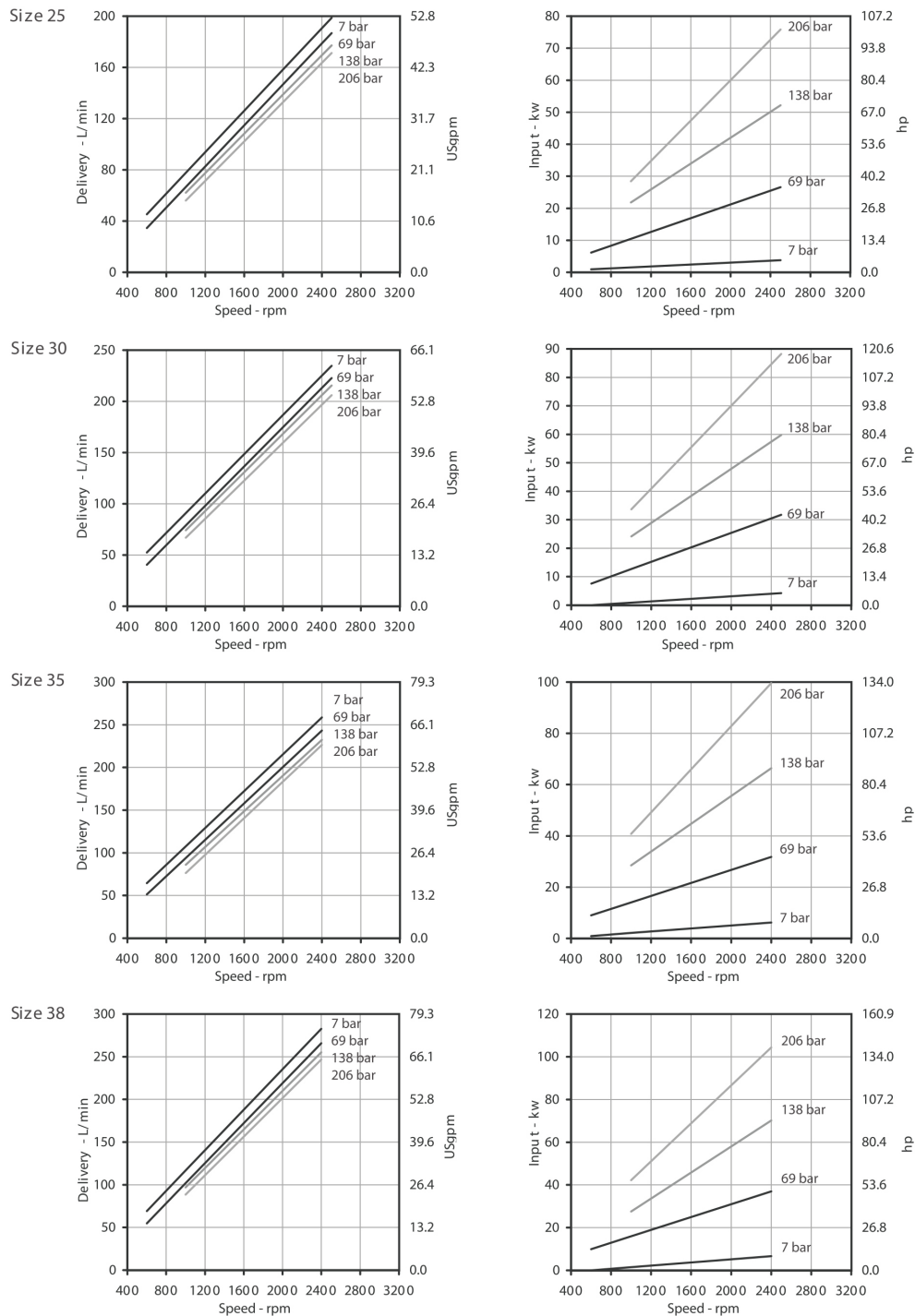


Thru-drive Single Vane Pump

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

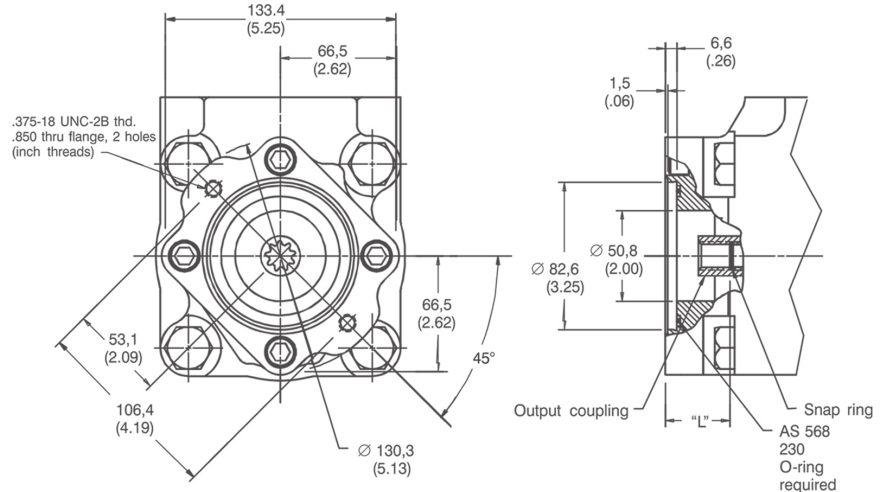
35HVT/35HVQT Series

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.

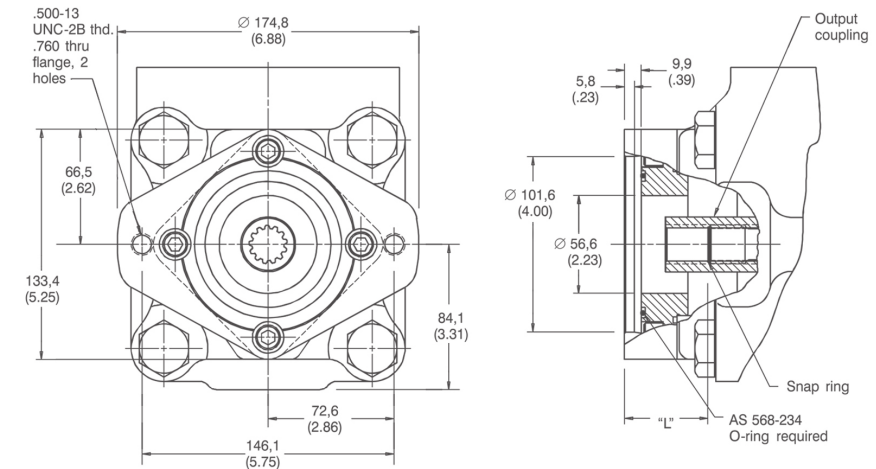
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"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.

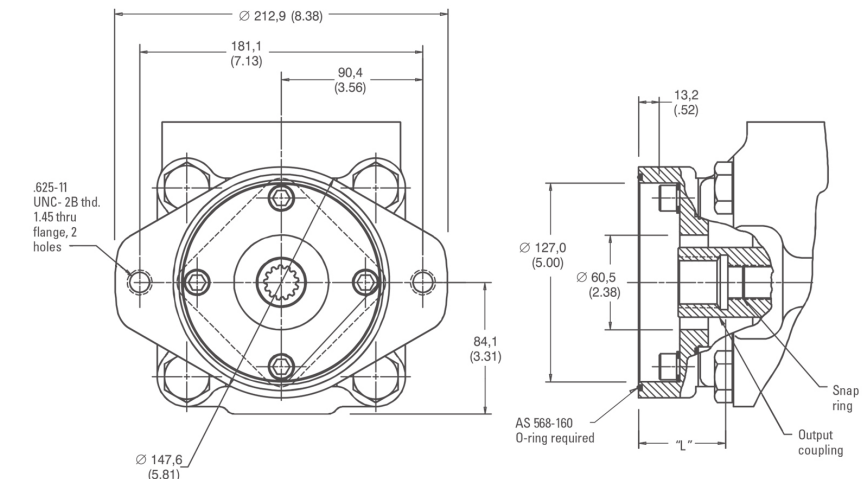
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"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	35	110.4 (6.73)	1800	172 (2500)	179.0 (47.2)	60.0 (80.4)	35.2 (77.4)
	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)	

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	35	110.4 (6.73)	2200	172 (2500)	219.0 (57.7)	73.3 (98.3)	35.2 (77.4)
	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)	

Thru-drive Single Vane Pump

45HVT/45HVQT Series

Ordering Code : Single

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

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)
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)
6. Port Connection (4 bolts SAE flange J518C)
A - UNC Port Connection
AM - Metric Port Connection
7. Thru-drive coupling
2 - SAE Splined coupling included with pump
8. Type of shaft
203 - Heavy Duty Straight Keyed Shaft
9. 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
10. Adapter Mounting orientation (Viewed from adapter end of pump)

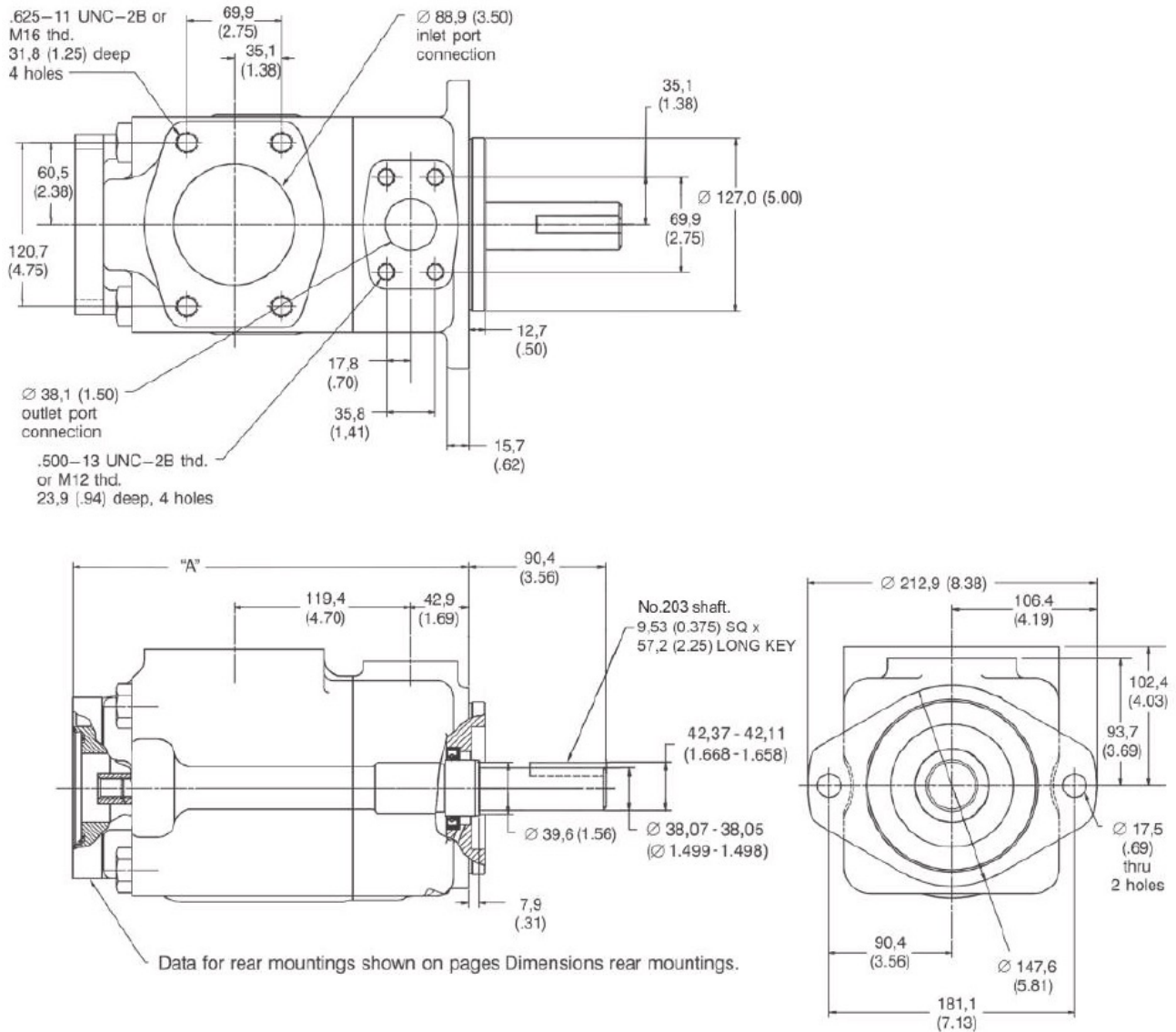
"A" adapter
A - Rotated 45° CW with respect to pump mounting flange
B - Rotated 45° CCW with respect to pump mounting flange

"B,C" adapter
A - Inline with pump mounting flange
B - Rotated 90° with respect to pump mounting flange
11. Design
20
12. 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	281, 1 (11.1)
B	291, 4 (11.5)
C	295, 1 (11.6)

Thru-drive Single Vane Pump

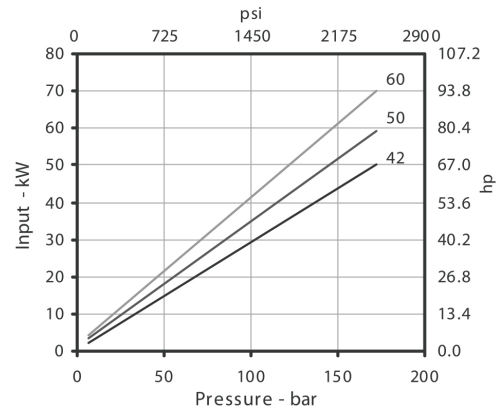
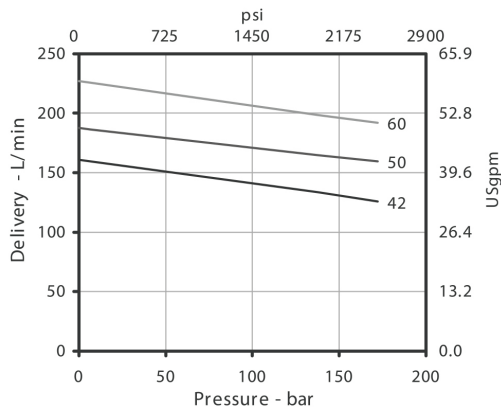
45HVT/45HVQT Series

Performance Characteristics

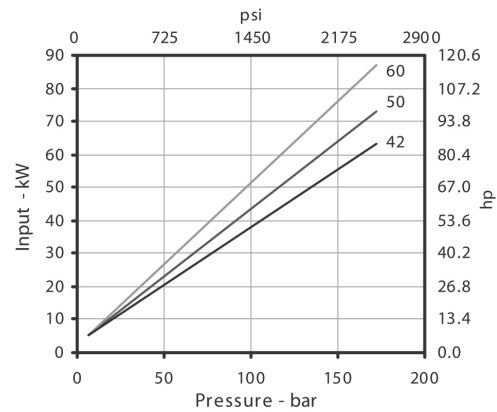
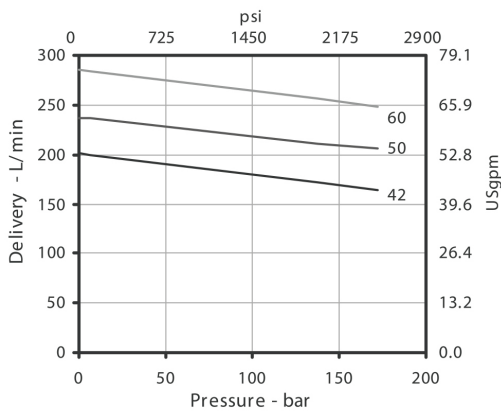
45HV, Shaft End of 45**HV,

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

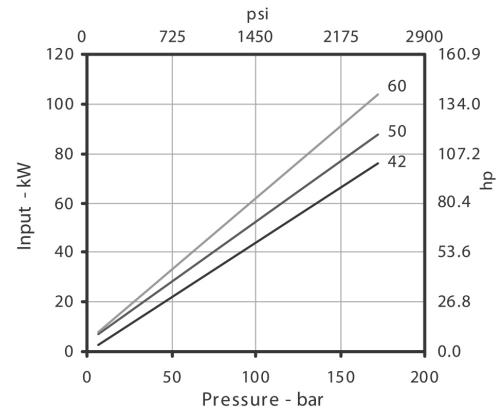
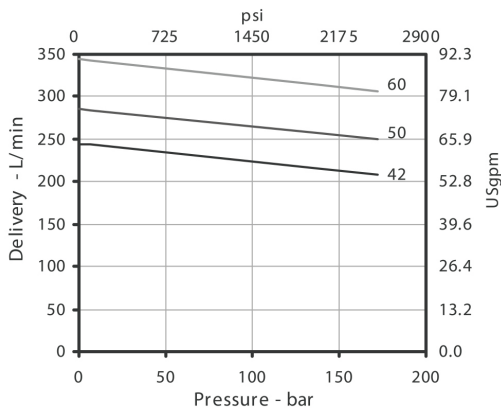
At 1200 rpm



At 1500 rpm



At 1800 rpm

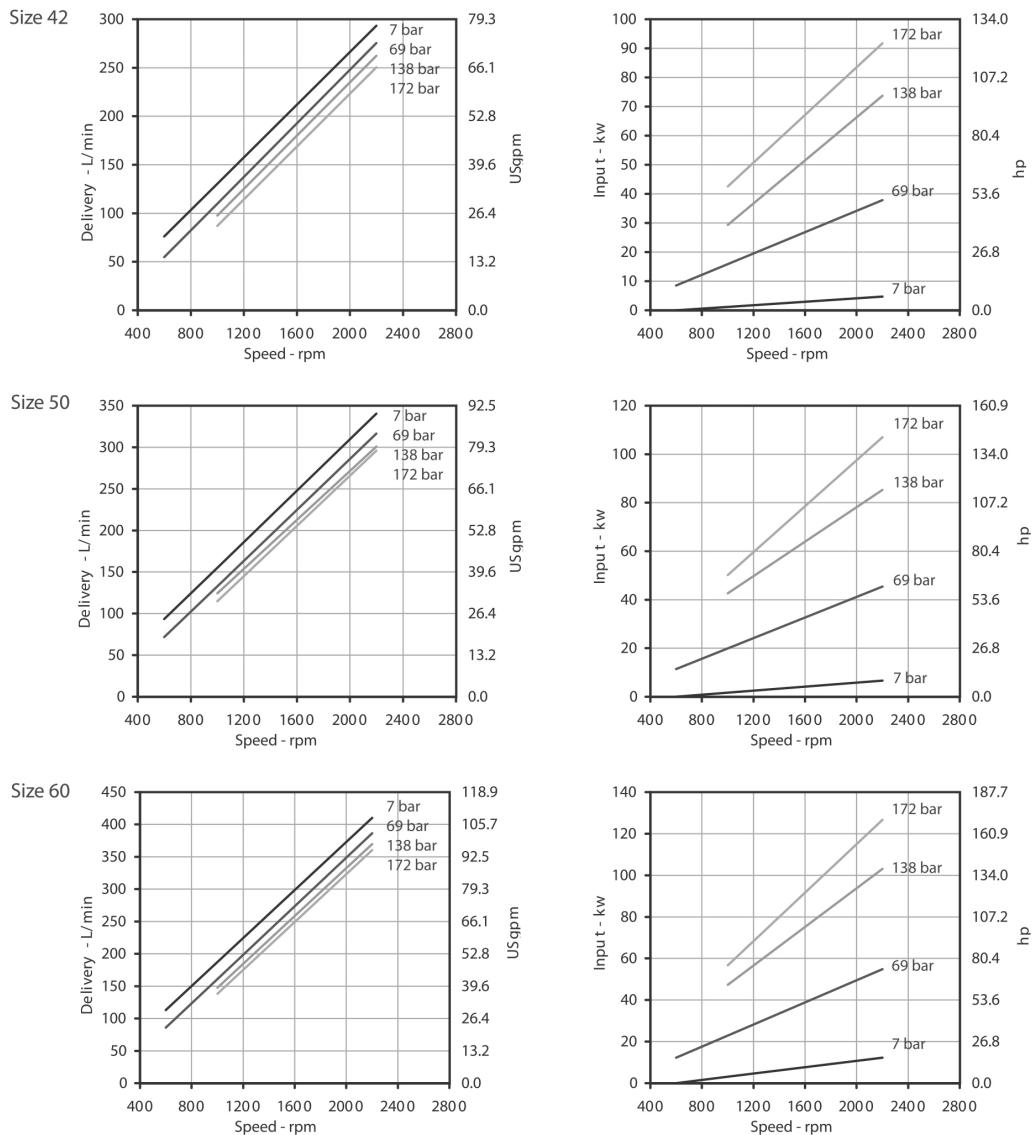


Thru-drive Single Vane Pump

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

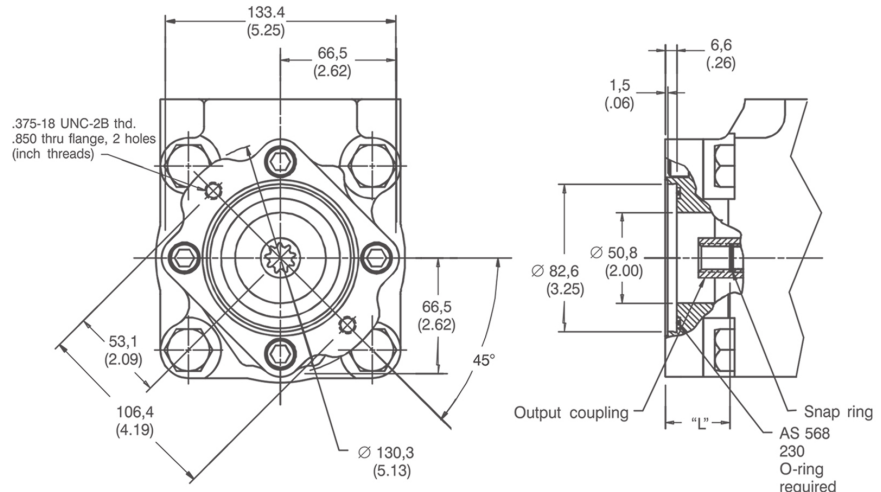
Thru-drive Single Vane Pump 45HVT/45HVQT Series

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.

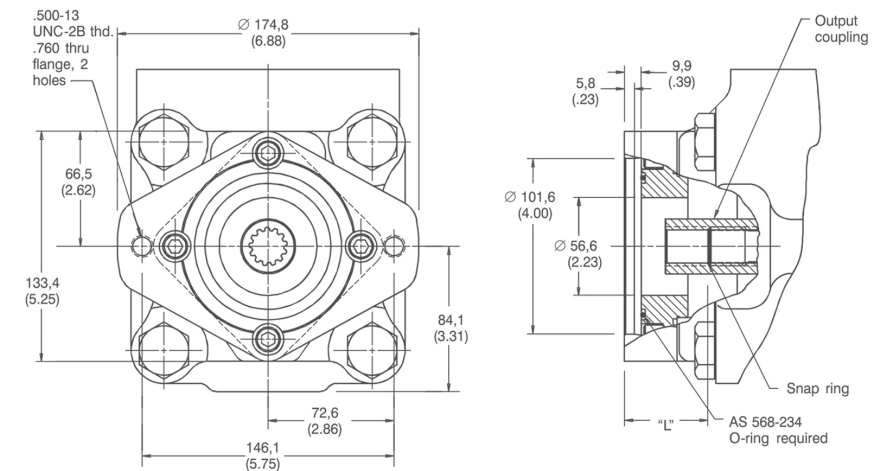
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"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.

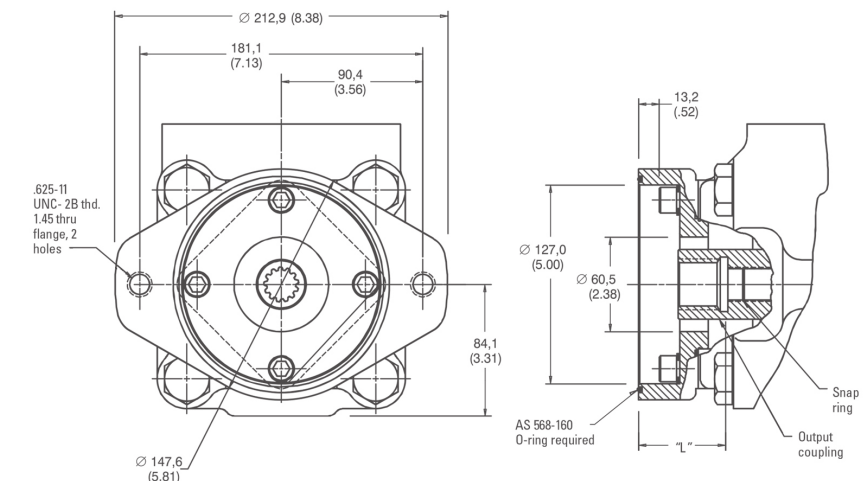
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"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



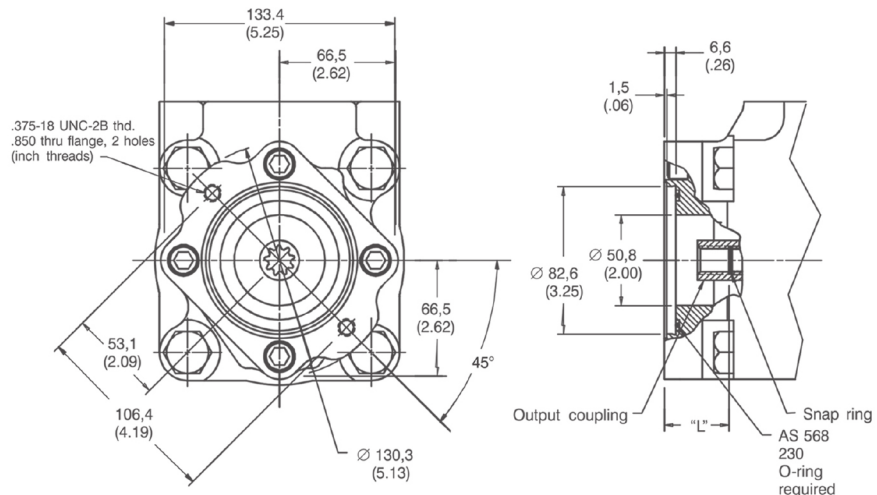
Thru-drive Single Vane Pump HVT/HVQT Series - Rear Mountings

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.

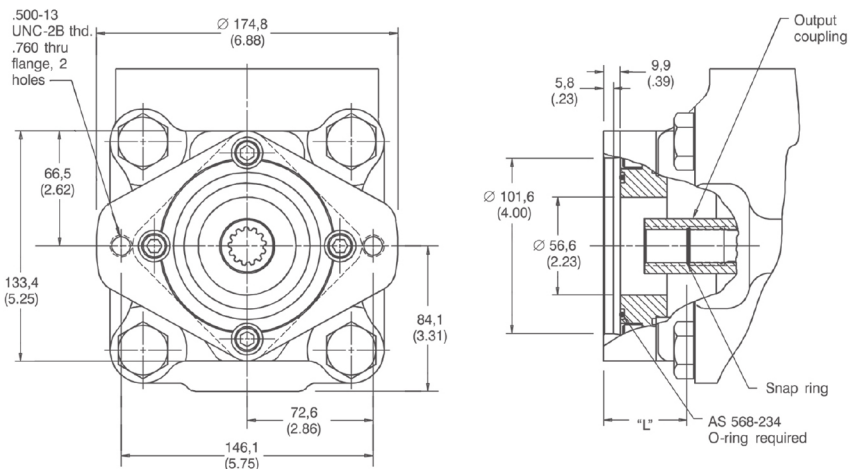
Pump Model	Dimensions "L"
25HVT/HVQT	32,5/31,0 (1.28/1.22) 33,0 (1.30) maximum
35HVT/HVQT	32,5/31,0 (1.28/1.22) 35,6 (1.40) maximum
45HVT/HVQT	32,5/31,0 (1.28/1.22) 35,3 (1.39) maximum



"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.

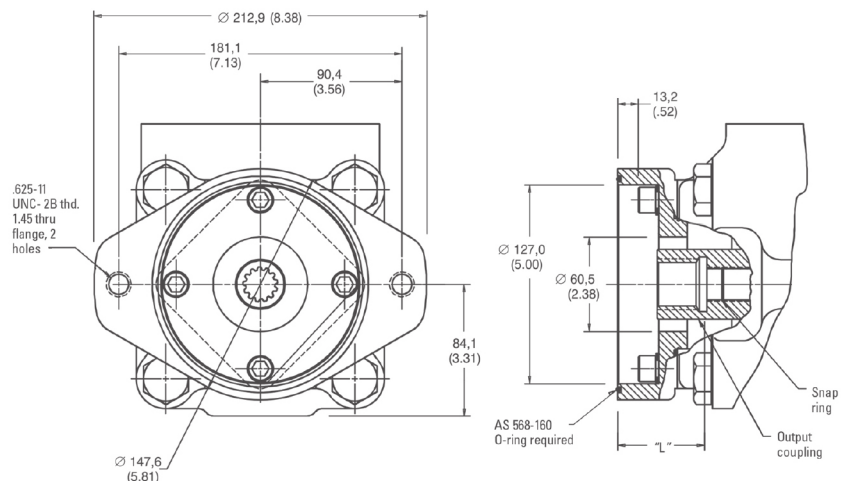
Pump Model	Dimensions "L"
25HVT/HVQT	42,4/39,9 (1.67/1.57) 45,2 (1.78) maximum
35HVT/HVQT	42,4/39,9 (1.67/1.57) 46,7 (1.84) maximum
45HVT/HVQT	42,4/39,9 (1.67/1.57) 46,2 (1.82) maximum



"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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