

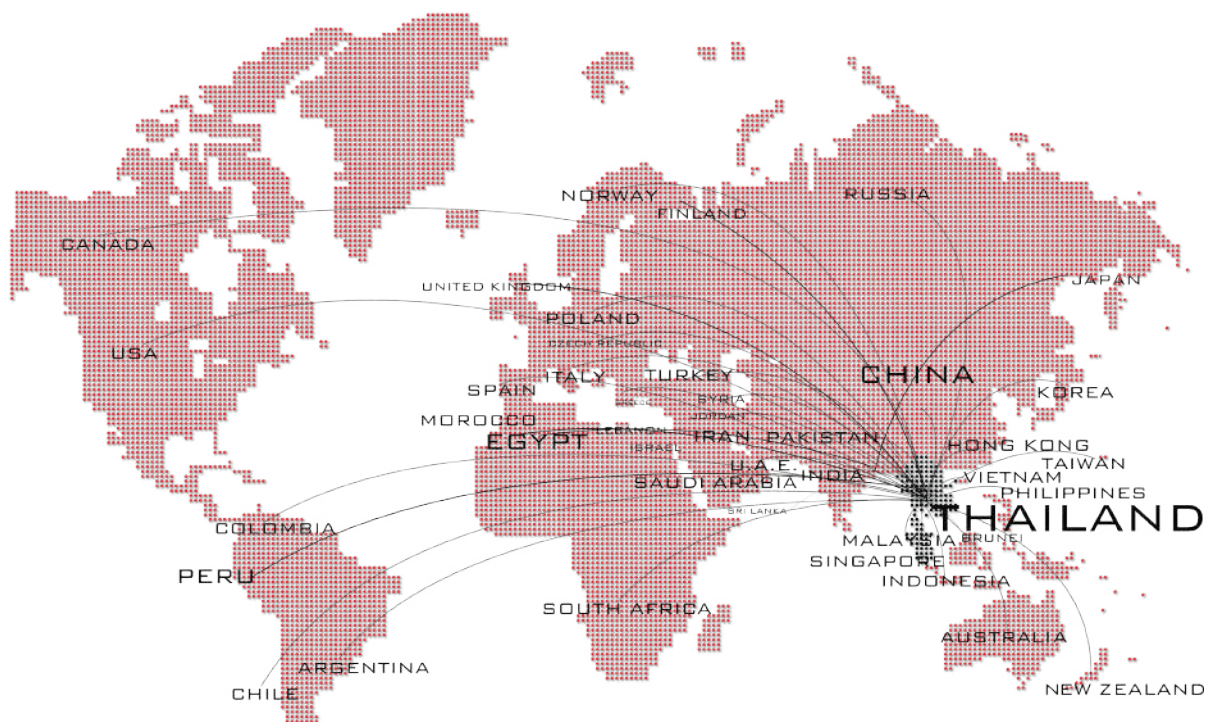


Cartridge Kits for Pump and Motor

catalogue 2025



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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 โพล-เทคเอ็นจิเนียริง จำกัด

47 ซอยสุขสวัสดิ์ 14/18 แขวงจอมทอง เขตจอมทอง, กรุงเทพมหานคร 10150 ประเทศไทย

บูโร เวอร์ิตัส เซอทิฟิเคชัน (ประเทศไทย) รับรองว่าระบบบริหารงานขององค์กรนี้ได้รับการตรวจประเมิน
และพบว่าสอดคล้องกับข้อกำหนดของมาตรฐานระบบบริหารตามรายละเอียดต่อไปนี้

ISO 9001:2015

ขอบข่ายการรับรอง

การออกแบบพัฒนา, การผลิต, จัดหาและจัดจำหน่าย บั๊มไฮดรอลิก, 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 การเสียดสี การฉีกขาด รวมทั้งการเกิดสนิม
- ความเสียหาย ซึ่งเกิดจากการดัดแปลงสภาพ แก๊ว ต่อเติม การแยกออกจากกัน การซ่อมที่ไม่ถูกต้อง

การรับประกัน (Warranty)

2/2

- ความเสียหาย ซึ่งเกิดจากการใช้เชื้อเพลิง น้ำมันเชื้อเพลิง สารหล่อลื่นต่าง ๆ ที่ผิดประเภท มีคุณภาพต่ำ
- ความเสียหาย ที่เกิดจากภัยธรรมชาติ และอุบัติเหตุ
- ความเสียหาย ที่เกิดจากการซ่อม หรือปรับแต่งโดยบุคคลซึ่งไม่ใช่จากบริษัท ฯ หรือผู้แทนจำหน่าย ที่บริษัท โอฟ/ 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 Cartridge Kits

Model HT6CM-006-P1

Serial Number

GS21120001

Testing Conditions

Test Date 03-03-2022

Test By

Wasan

Oil Type ISO VG32

Temperature

50

°C

Viscosity 21.33 cSt

Second/Cycle

3

Seconds

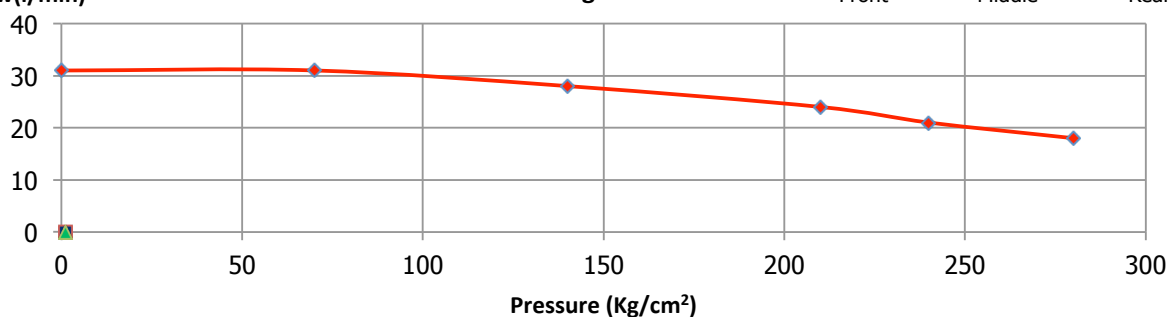
Testing Result

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										

Flow(l/min)

Testing Result

Front Middle Rear



Observations:

Does the product pass the standard

Yes ☒

No ☐

Approve by

Date

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I. Cartridge kit for Vane Pump

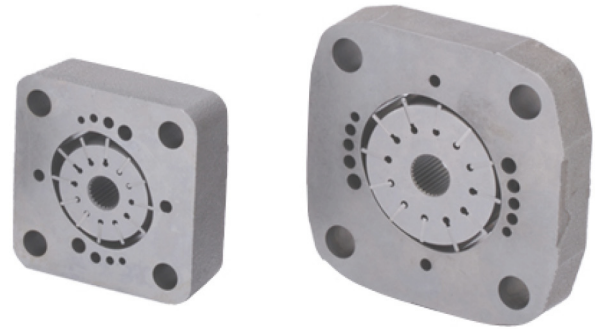
Cartridge Kit for Vane Pump HV10 and HV20 Series

Features and Handling

- Replacement for single and double HV10, HV10F, HV10P, HV20, HV20F, HV20P, HV2010, HV2010F, HV2010P, HV2020, HV2020F, HV2020P, HV210, HV230

It is the cartridge consists of a cam ring, a rotor, and 12 vanes

- To change rotation, flip the cam ring so that the arrow point to the other direction. No need to do anything with the vanes.



Specifications : HV10

Model	Ring Size Delivery at 1200 r/min & 7 bar (100 psi) USgpm	Geometric Displacement cm ³ /r (in ³ /r)	Delivery at 1500 r/min & 7 bar (100 psi) L/min (USgpm)	Maximum Pressure bar (psi)	Maximum Speed rpm	Minimum Speed rpm	Weight kg (lb)
HV 10	1	3.3 (0.20)	4.70 (1.25)	172 (2500)	4800	650	0.6 (1.3)
	2	6.6 (0.40)	9.40 (2.50)		4500		
	3	9.8 (0.60)	14.20 (3.75)		4000		
	4	13.1 (0.80)	18.90 (5.00)		3400		0.8 (1.7)
	5	16.4 (1.00)	23.60 (6.25)	152 (2200)	3200		
	6	19.5 (1.19)	28.40 (7.50)		3000		1.0 (2.2)
	7	22.8 (1.39)	33.10 (8.75)	138 (2000)	2800		

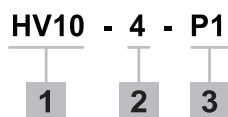
Cartridge Kit for Vane Pump HV10 and HV20 Series

HV20

Model	Ring Size Delivery at 1200 r/min & 7 bar (100 psi) USgpm	Geometric Displacement cm ³ /r (in ³ /r)	Delivery at 1500 r/min & 7 bar (100 psi) L/min (USgpm)	Maximum Pressure bar (psi)	Maximum Speed rpm	Minimum Speed rpm	Weight kg (lb)
HV 20	5	16.4 (1.00)	23.60 (6.25)	172 (2500)	3400	650	1.2 (2.6)
	6	19.5 (1.19)	28.39 (7.50)		3400		1.1 (2.4)
	7	22.8 (1.39)	33.11 (8.75)		3000		1.6 (3.5)
	8	26.5 (1.62)	37.85 (10.00)		2800		
	9	29.7 (1.81)	42.57 (11.25)		2800		2.1 (4.6)
	10	34.1 (2.08)	47.30 (12.51)		2500		
	11	36.4 (2.22)	52.04 (13.75)		2500		2.3 (5.0)
	12	39.0 (2.38)	56.77 (15.00)	152 (2200)	2400		
	13	42.4 (2.59)	61.50 (16.25)		2400		

Cartridge Kit for Vane Pump HV10 and HV20 Series

Ordering Code



1. Model :

HV10, HV10F, HV10P
HV20, HV20F, HV20P
HV2010, HV2010F, HV2010P
HV2020, HV2020F, HV2020P
HV210, HV230

2. Ring Size (USgpm at 1200 rpm & 7 bar)

HV10, HV10F, HV10P - 1, 2, 3, 4, 5, 6, 7
HV2010, HV2010F, HV2010P

HV20, HV20F, HV20P - 5, 6, 7, 8, 9, 10, 11, 12,
HV2010, HV2010F, HV2010P 13
HV2010, HV2010F, HV2010P
HV2020, HV2020F, HV2020P
HV210, HV230

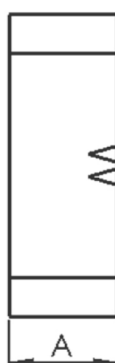
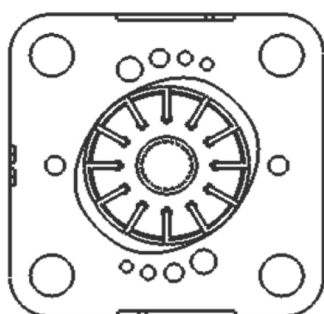
3. Cartridge Position

P1 - For single pump or shaft end in double pump
P2 - For cover end in double pump

Cartridge Kit for Vane Pump HV10 and HV20 Series

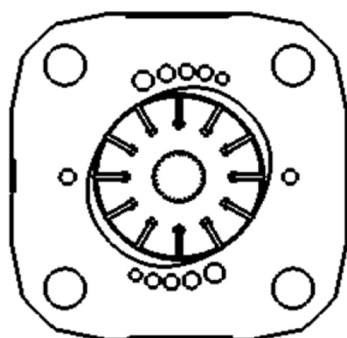
Installation Dimension mm (inch)

Cartridge Kit HV10



Delivery	A
1,2,3	15.6(0.61)
4,5	21.9(0.86)
6,7	26.9(1.06)

Cartridge Kit HV20



Delivery	A
5,6	15.5(0.61)
7,8,9	21.9(0.86)
10,11	26.9(1.06)
12,13	30.4(1.19)

Cartridge Kit for Vane Pump HV and HVQ Series

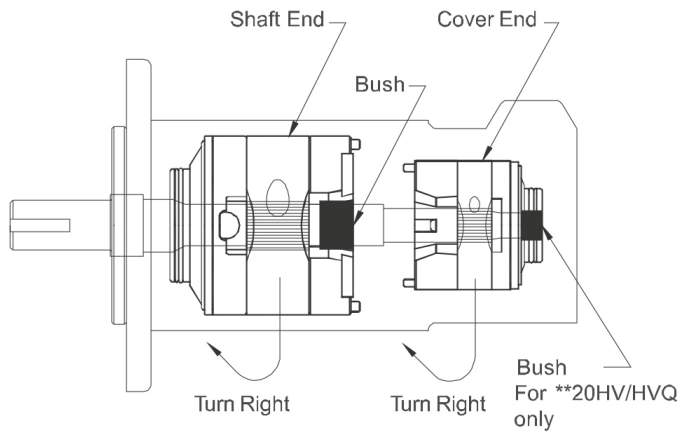
Features and Handling

- Replacement parts for fixed displacement vane pumps (single and double vane pump HV/HVQ series)
- Available in both 12 vanes design for industrial application with quiet operating and 10 vanes design for mobile application with higher pressure and wider range of speed.
- With the cartridge independent of the shaft, allowing for easy change of flow capacity and field servicing without removing the pump from its mounting.
- When ordering, if left hand rotation, special seal, or a specific position of cartridge (shaft end or cover end) is required, it should be specified by ordering code.
- To reverse rotation of cartridge, remove the two screws and reverse the location of the inlet support plate and outlet support plate (for cartridge kit with flex side plates, Bronze faces must be installed toward the rotor. DO NOT allow the flex plate to slide across the ring and rotor. Rough edges on the ring and rotor may cause scratches in the soft brass surface.) Make sure that the sharp edge of Vane leads direction of rotation. Re-install the two screws hand tight. Use pump cover to align all sections of the cartridge. Carefully remove and tighten the screws.
- When install the cartridge into the body, carefully move back and forth until the cartridge pins drop into the cover holes and one of the chamfers on the cam ring aligns with the cover inlet port.

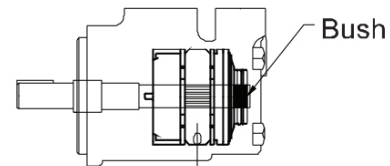


Cartridge Kit for Vane Pump HV and HVQ Series

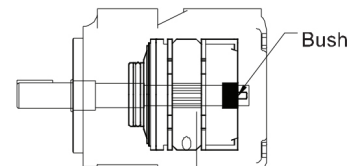
Cartridge Kit Position and Rotation



Double Pump

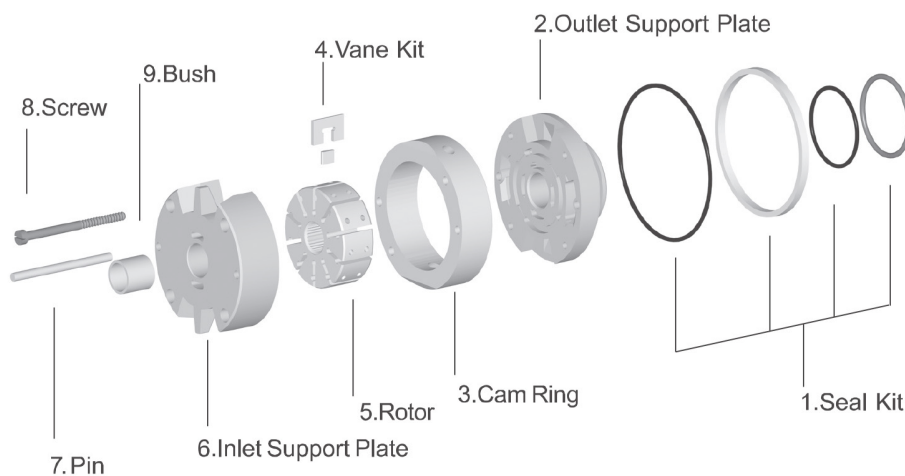


Single Pump 20HV/HVQ

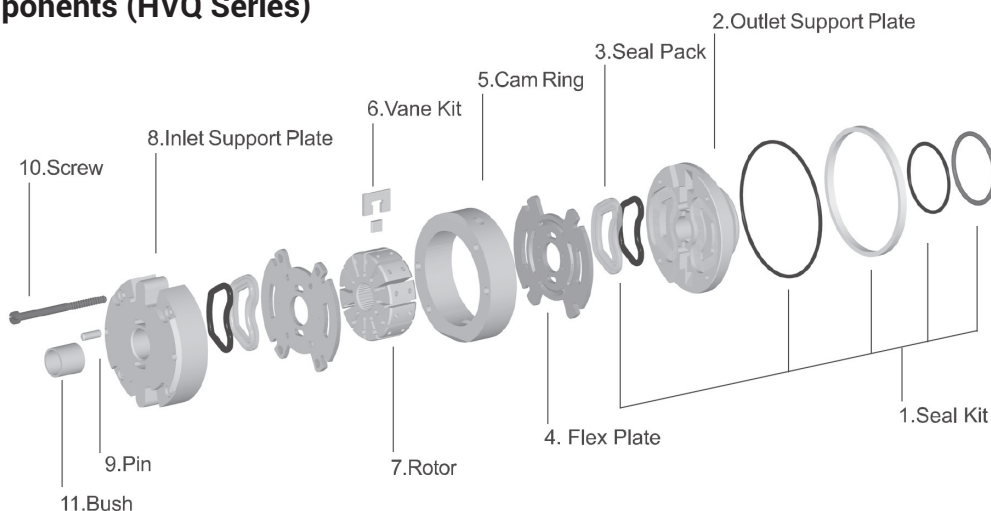


Single Pump 25HV/HVQ, 35HV/HVQ, 45HV/HVQ

Cartridge Kit Components (HV Series)



Cartridge Kit Components (HVQ Series)



Cartridge Kit for Vane Pump HV and HVQ Series

Instruction for Cartridge Replacement

in Single Pump

1. Remove the four cover screws and lift the outlet cover. Pull out the old Cartridge. Discard the old large square cut seal and large O ring of the cartridge.

2. Check the wear surfaces of old cartridge. If the wear is normal, just change oil in tank circuit and change or clean filters. If there is seizure or heavy wear in rotor, support plates (for HV Series), and flex plates (for HVQ Series), disassemble the pump completely. Check the shaft alignment and make sure that it is not twisted or crooked. The shaft may need to be changed and also check shaft seal and shaft bearing (remove the large lock ring to remove shaft seal and remove snap ring to remove bearing). Change them if necessary. If these parts are defective or the oil is dirty, the new cartridges' service life will be shorter than normal.

3. Install square cut seal into the body. Install small O ring and back-up ring on the cartridge outlet support plate hub. Carefully install the cartridge into the body. Install the cover to the body with large O ring in the groove of the body. Install the cover in position ; move back and forth until the cartridge pins drop into alignment holes located within the cover. Install four screws and torque tighten to the values indicated.

Model	Torque Specification	
	N.m	lb.ft
20HV/HVQ	48-55	65-75
25HV/HVQ	48-55	65-75
35HV/HVQ	102-118	140-160
45HV/HVQ	188-203	255-275

4. Turn the pump shaft to verify freedom of the cartridge.

Cartridge Kit for Vane Pump HV and HVQ Series

in Double Pump

1. Remove the four cover screws and lift the outlet cover. Pull out the old Cover End Cartridge (Pry with screwdriver if necessary). Remove four screws from the inlet housing. Lift inlet housing from the outlet body. Rotate shaft to loosen Shaft End Cartridge and remove the cartridge from outlet body. Discard the old large square cut seals and large O rings of both cartridges.

2. Check the wear surfaces of old cartridge. If the wear is normal, just change oil in tank circuit and change or clean filters. If there is seizure or heavy wear in rotor, support plates (for HV Series), and flex plates (for HVQ Series), disassemble the pump completely. Check the shaft alignment and make sure that it is not twisted or crooked. The shaft may need to be changed and also check shaft seal and shaft bearing (remove the large lock ring to remove shaft seal and remove snap ring to remove bearing). Change them if necessary. If these parts are defective or the oil is dirty, the new cartridges' service life will be shorter than normal.

3. For new Shaft End Cartridge, install square cut seal into the body. Install small O ring and back-up ring on the cartridge outlet support plate hub. Carefully install the cartridge into the body. Install the inlet housing to the body with large O ring in the groove of the body. Install inlet housing in position ; move back and forth until the cartridge pins drop into the alignment holes located within the housing. Install four screws and torque tighten to the values indicated.

Model	Torque Specification	
	N.m	lb.ft
2520HV/HVQ	48-55	65-75
3520HV/HVQ	102-118	140-160
3525HV/HVQ	102-118	140-160
4520HV/HVQ	188-203	255-275
4525HV/HVQ	188-203	255-275

4. For new Cover End Cartridge, Install a square cut seal into the cover. Install O ring and back-up ring on the cartridge outlet support plate hub. Carefully install the cartridge over shaft and into the inlet housing. Turn cartridge slightly to bring into alignment the pin holes and cartridge

alignment pins. Install the cover to inlet housing with O ring seal over the cartridge and up against the inlet housing. Make sure square cut seal is in place within the cover. Orient the cover to agree with the alignment. Install the cover with four screws and torque the screws to the value indicated.

Model	Torque Specification	
	N.m	lb.ft
2520HV/HVQ	54-68	40-50
3520HV/HVQ	54-68	40-50
3525HV/HVQ	88-102	65-75
4520HV/HVQ	54-68	40-50
4525HV/HVQ	88-102	65-75
4535HV/HVQ	188-203	255-275

5. Turn the pump shaft to verify freedom of both cartridges.

Cartridge Kit for Vane Pump

HV and HVQ Series

Specification HV

Cartridge Kit 20HV

Delivery at 1200 rpm & 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 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
2	7.0 (0.42)	1800	206 (3000)	11.3 (3.0)	5.2 (7.0)	2.4 (5.3)
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)	23.5 (31.5)	2.3 (5.1)
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)	

Cartridge Kit 25HV

Delivery at 1200 rpm & 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 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
12	39.0 (2.47)	1800	172 (2500)	62.1 (16.4)	22.9 (30.8)	3.6 (7.9)
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)	

Cartridge Kit 35HV

Delivery at 1200 rpm & 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 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
21	68.3 (4.18)	1800	172 (2500)	106.3 (28.1)	34.0 (45.5)	6.5 (14.3)
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)	

Cartridge Kit for Vane Pump

HV and HVQ Series

Cartridge Kit 45HV

Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	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)
35	110.4 (6.73)	1800	172 (2500)	179.0 (47.2)	60.0 (80.4)	10.1 (22.3)
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)	

Cartridge Kit for Vane Pump

HV and HVQ Series

Specification HVQ

Cartridge Kit 20HVQ

Delivery at 1200 rpm & 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 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
2	7.0 (0.42)	2700	206 (3000)	15.9 (4.2)	7.3 (9.8)	2.4 (5.3)
5	18.0 (1.10)			41.6 (11.0)	17.9 (24.0)	
8	27.0 (1.67)			64.3 (17.0)	26.1 (35.0)	
9	30.2 (1.84)			71.5 (18.9)	32.9 (44.1)	
11	36.0 (2.22)			87.1 (23.0)	35.4 (47.5)	
12	39.0 (2.41)		158 (2300)	96.5 (25.5)	28.3 (38.0)	2.3 (5.1)
14	45.0 (2.80)		138 (2000)	113.6 (30.0)	29.1 (39.0)	2.5 (5.5)

Cartridge Kit 25HVQ

Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	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)
12	40.0 (2.45)	2700	206 (3000)	87.1 (23.0)	41.0 (55.0)	3.6 (7.9)
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)			130.5 (34.5)	55.0 (71.0)	
21	67.0 (4.12)			143.8 (38.0)	61.9 (83.0)	

Cartridge Kit 35HVQ

Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	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)
21	68.3 (4.18)	2500	206 (3000)	143.8 (38.0)	55.0 (73.9)	6.5 (14.3)
25	81.0 (4.94)			170.3 (45.0)	75.3 (101.0)	
30	97.0 (5.91)			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 (6.83)			227.1 (60.0)	98.5 (132.0)	
38	121.0 (7.37)			246.0 (65.0)	104.4 (140.0)	

Cartridge Kit for Vane Pump

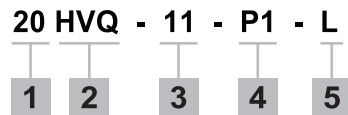
HV and HVQ Series

Cartridge Kit 45HVQ

Delivery at 1200 rpm & 7 bar (100 psi)	Displacement	Maximum Speed	Maximum Pressure	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)
35	110.4 (6.73)	2200	172 (2500)	219.0 (57.7)	73.3 (98.3)	10.1 (22.3)
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)	

Cartridge Kit for Vane Pump HV and HVQ Series

Ordering Code



1. Model :

20, 25, 35, 45
2520, 3520, 3525, 4520, 4525, 4535

2. Series :

HV - Industrial
HVQ - Mobile

3. Ring Size (USgpm)

20, 2520, 3520, - 2, 5, 8, 9, 11, 12, 14
4520HV/HVQ

25, 2520, 3525, - 12, 14, 17, 19, 21
4525HV/HVQ

35, 3520, 3525, - 21, 25, 30, 32, 35, 38
4535HV/HVQ

45, 4520, 4525, - 35, 38, 42, 47, 50, 52, 57,
4535HV/HVQ 60, 62, 64, 66

*30 also available upon request

4. Cartridge Position

P1 - For single pump or shaft end in double pump
P2 - For cover end in double pump

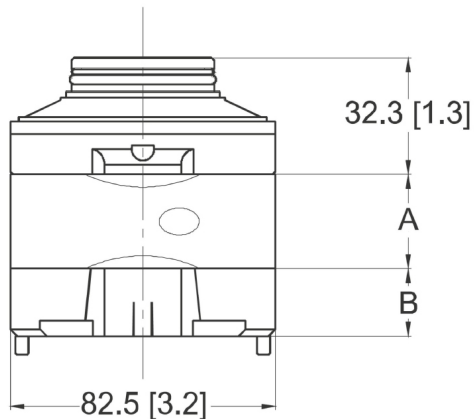
5. Shaft Rotation (Viewed from shaft end)

R - Turn right
L - Turn left

Cartridge Kit for Vane Pump HV and HVQ Series

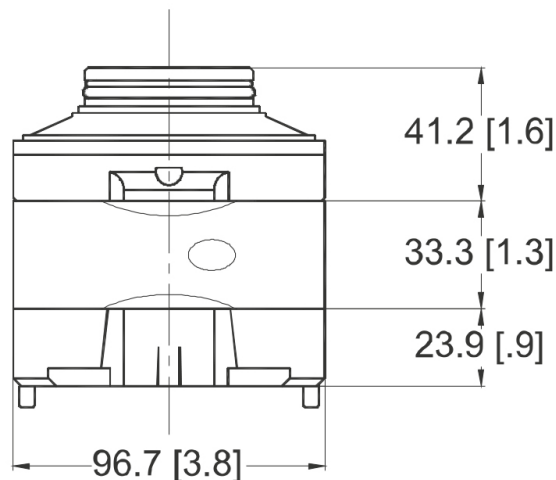
Installation Dimension mm (inch) HV

Cartridge Kit 20HV

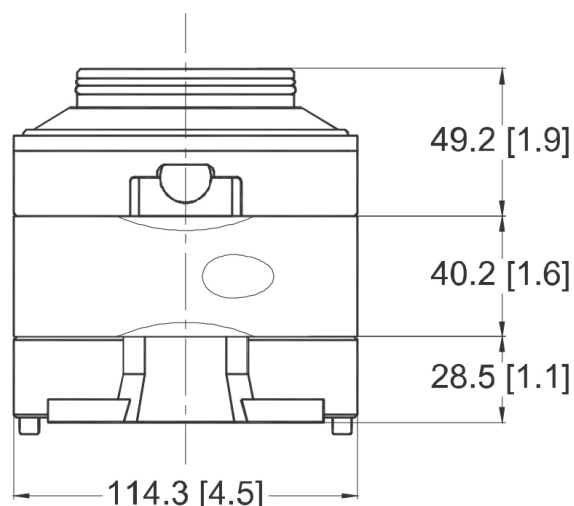


Delivery	A	B
2,5,8,9	21.95 [.86]	27.70 [1.09]
11,12,14	30.47 [1.20]	19.10 [0.75]

Cartridge Kit 25HV

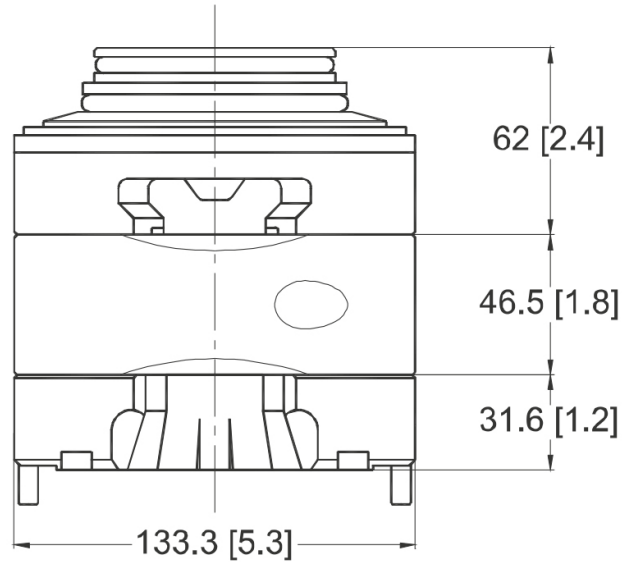


Cartridge Kit 35HV



Cartridge Kit for Vane Pump HV and HVQ Series

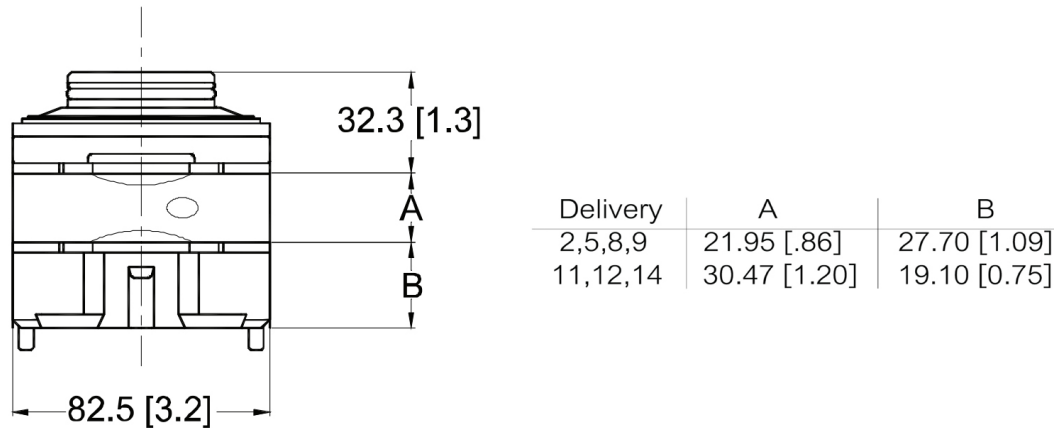
Cartridge Kit 45HV



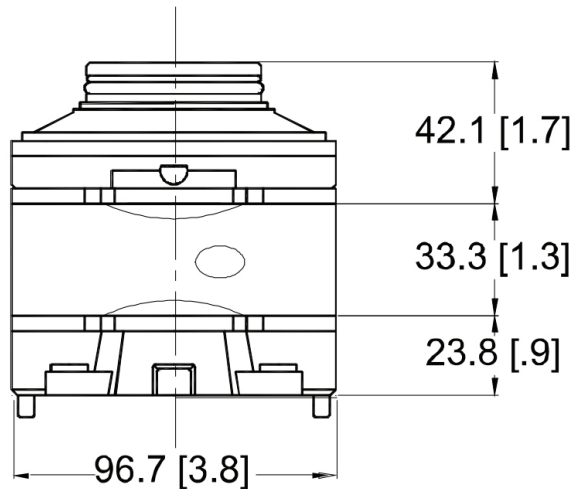
Cartridge Kit for Vane Pump HV and HVQ Series

Installation Dimension mm (inch) HVQ

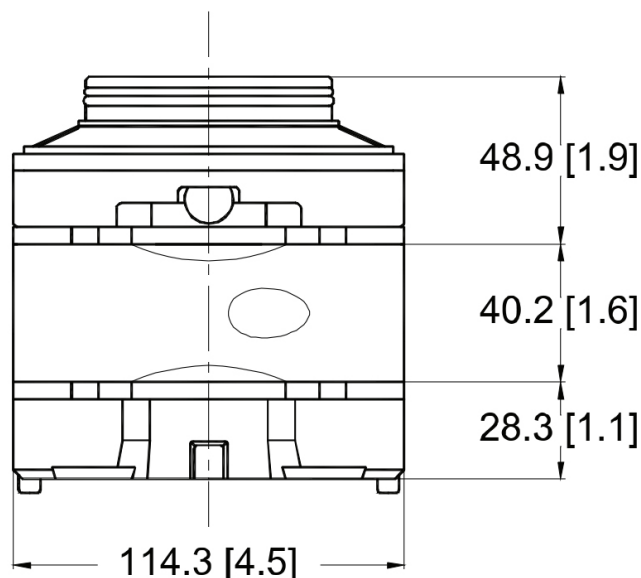
Cartridge Kit 20HVQ



Cartridge Kit 25HVQ

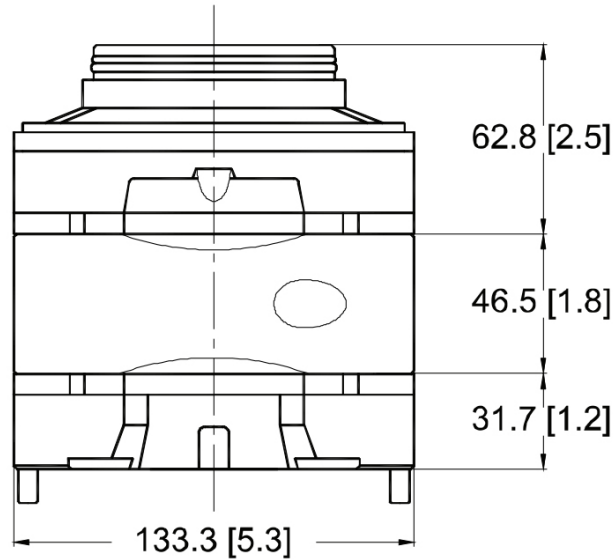


Cartridge Kit 35HVQ



Cartridge Kit for Vane Pump HV and HVQ Series

Cartridge Kit 45HVQ



Cartridge Kit for Vane Pump HT6 and HT7 Series

Features and Handling

• The HT Series cartridge kit is interchangeable with DENISON. The balanced design and double lip vane technology are key features in providing a contamination resistant and reliable cartridge kit. High pressure and variable speed capabilities, extremely low noise make this fluid power source ideal for all kind of applications.

With these exceeding high qualities, our HT Series cartridges have satisfied many OEM clients around the world for more than 40 years.



Specifications :

Cartridge Kit HT7B for single pump, double pump and triple pump

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
002	5.8 (0.35)	600	3600	320 (4640)	10.5 (2.77)	11.0 (14.77)	4.1 (9.0)
003	9.8 (0.59)				26.5 (7.00)	18.6 (24.89)	
004	12.8 (0.78)				37.2 (9.83)	24.5 (32.91)	
005	15.9 (0.97)				48.4 (12.78)	30.5 (40.92)	
006	19.8 (1.20)				64.3 (17.00)	37.8 (50.63)	
007	22.5 (1.37)				73.0 (19.28)	43.1 (57.80)	
008	24.9 (1.51)				78.8 (20.83)	47.5 (63.71)	
009	28.0 (1.70)				89.7 (23.71)	53.5 (71.72)	
010	31.8 (1.94)				105.9 (27.99)	61.1 (81.85)	
011	35.0 (2.13)		3000	300 (4350)	98.4 (25.99)	52.4 (70.20)	
012	41.0 (2.50)				125.3 (33.11)	61.5 (82.40)	
014	45.0 (2.74)				129.9 (34.33)	67.4 (90.31)	
015	50.0 (3.05)			280 (4060)	151.3 (39.96)	70.0 (93.83)	

Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT6C for single pump, double pump and triple pump

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
003	10.8 (0.66)	600	2800	275 (4000)	21.3 (5.64)	13.9 (18.67)	4.0 (8.8)
005	17.2 (1.05)				29.3 (7.73)	22.2 (29.7)	
006	21.3 (1.30)				43.3 (11.45)	27.4 (36.77)	
008	26.4 (1.61)				55.1 (14.57)	34.0 (45.54)	
010	34.1 (2.08)				80.2 (21.18)	43.9 (54.84)	
012	37.1 (2.26)				80.8 (21.35)	47.7 (63.93)	
014	46.0 (2.81)				112.2 (29.63)	59.3 (79.49)	
017	58.3 (3.56)				154.6 (40.84)	75.1 (100.70)	
020	63.8 (3.89)				159.1 (42.04)	82.1 (110.04)	
022	70.3 (4.29)				158.9 (41.98)	80.8 (108.35)	
025	79.3 (4.84)		2500	206 (3000)	180.4 (47.66)	91.2 (122.24)	
028	88.8 (5.42)				207.6 (54.85)	76.6 (102.67)	
031	100.0 (6.10)				239.6 (63.30)	86.2 (115.55)	

Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT7D for single pump, double pump and triple pump

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
014	47.6 (2.90)	600	3000	300 (4350)	104.7 (27.65)	65.9 (88.33)	7.8 (17.1)
017	58.2 (3.55)				155.9 (41.18)	82.4 (110.42)	
020	66.0 (4.03)				168.0 (44.39)	99.1 (132.83)	
022	70.0 (4.27)				189.8 (50.15)	105.0 (140.74)	
024	79.5 (4.85)				215.4 (56.90)	121.7 (163.15)	
028	89.7 (5.47)				235.8 (62.30)	135.0 (180.95)	
031	98.3 (6.00)				261.1 (68.97)	148.8 (199.41)	
035	111.0 (6.77)		2800	280 (4060)	283.3 (74.84)	148.2 (198.69)	
038	120.3 (7.34)				303.8 (80.26)	157.6 (211.32)	
042	136.0 (8.30)		2500	260 (3770)	320.4 (84.65)	149.0 (199.72)	
045	145.7 (8.89)		2200	240 (3500)	300.7 (79.43)	129.0 (172.89)	
050	158.0 (9.64)			206 (3000)	324.3 (85.67)	119.9 (160.69)	

Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT7E for single pump, double pump and triple pump

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
042	132.3 (8.07)	600	2200	240 (3500)	259.5 (68.56)	117.1 (156.94)	11.8 (26.0)
045	142.4 (8.70)				283.4 (74.87)	126.2 (169.19)	
050	158.5 (9.67)				319.0 (84.28)	140.3 (188.06)	
052	164.8 (10.00)				331.1 (87.49)	145.1 (194.48)	
054	173.8 (10.60)				352.8 (93.21)	153.8 (206.15)	
057	180.7 (11.02)				370.1 (97.77)	159.9 (214.31)	
062	196.7 (12.00)				403.7 (106.65)	174.1 (233.37)	
066	213.3 (13.00)				448.3 (118.45)	188.6 (252.82)	
072	227.1 (13.86)				468.4 (123.76)	201.1 (269.54)	
085	269.8 (16.40)		2000	90 (1300)	495.6 (130.93)	80.3 (107.69)	

Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT6CM, P, R for single pump, double pump and triple pump

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
003	10.8 (0.66)	400	2800	275 (4000)	21.3 (5.64)	13.9 (18.67)	4.0 (8.8)
005	17.2 (1.05)				29.3 (7.73)	22.2 (29.7)	
006	21.3 (1.30)				43.3 (11.45)	27.4 (36.77)	
008	26.4 (1.61)				55.1 (14.57)	34.0 (45.54)	
010	34.1 (2.08)				80.2 (21.18)	43.9 (54.84)	
012	37.1 (2.26)				80.8 (21.35)	47.7 (63.93)	
014	46.0 (2.81)				112.2 (29.63)	59.3 (79.49)	
017	58.3 (3.56)				154.6 (40.84)	75.1 (100.70)	
020	63.8 (3.89)				159.1 (42.04)	82.1 (110.04)	
022	70.3 (4.29)				158.9 (41.98)	80.8 (108.35)	
025	79.3 (4.84)		2500	206 (3000)	180.4 (47.66)	91.2 (122.24)	
028	88.8 (5.42)				207.6 (54.85)	76.6 (102.67)	
031	100.0 (6.10)				239.6 (63.30)	86.2 (115.55)	

Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT6DM, P, R for single pump, double pump and triple pump

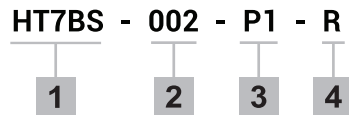
Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
014	47.6 (2.90)	400	2500	240 (3500)	94.4 (24.94)	47.8 (64.09)	7.8 (17.1)
017	58.2 (3.55)				137.6 (36.36)	58.5 (78.45)	
020	66.0 (4.03)				140.0 (36.99)	66.4 (89.06)	
024	79.5 (4.85)				175.8 (46.46)	80.0 (107.18)	
028	89.7 (5.47)				198.5 (51.73)	90.2 (120.89)	
031	98.3 (6.00)				215.8 (57.00)	98.9 (132.60)	
035	111.0 (6.77)				247.4 (65.37)	111.6 (149.61)	
038	120.3 (7.34)				270.5 (71.47)	121.0 (162.21)	
042	136.0 (8.30)		2200	206 (3000)	278.9 (73.69)	120.4 (161.42)	
045	145.7 (8.89)				300.7 (79.43)	129.0 (172.89)	
050	158.0 (9.64)				324.3 (85.67)	119.9 (160.69)	
061	193.3 (11.8)				404.0 (106.72)	146.7 (196.70)	

Cartridge Kit HT6EM, P, R for single pump, double pump and triple pump

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Min. Speed	Max. Speed	Max. Pressure	Typical Delivery at max speed & pressure	Typical Input Power at max speed & pres- sure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
042	132.3 (8.07)	600	2200	240 (3500)	259.5 (68.56)	117.1 (156.94)	12.1 (26.6)
045	142.4 (8.70)				283.4 (74.87)	126.2 (169.19)	
050	158.5 (9.67)				319.0 (84.28)	140.3 (188.06)	
052	164.8 (10.00)				331.1 (87.49)	145.1 (194.48)	
062	196.7 (12.00)				403.7 (106.65)	174.1 (233.37)	
066	213.3 (13.00)				448.3 (118.45)	188.6 (252.82)	
072	227.1 (13.86)				468.4 (123.76)	201.1 (269.54)	

Cartridge Kit for Vane Pump HT6 and HT7 Series

Ordering Code



1. Model :

- Industrial** - HT7B, HT7BS, HT6C, HT7D, HT7DS, HT7DSW, HT7E, HT7ES, HT6CR, HT6DR, HT6ER, HT7BB, HT7BBS, HT6CC, HT6CCW, HT6CCZ, HT67CB, HT67CBW, HT7DB, HT7DBS, HT7DBSW, HT67DC, HT67DCW, HT7DD, HT7DDS, HT7EB, HT7EBS, HT67EC, HT7ED, HT7EDS, HT7EE, HT7EES, HT7DBB, HT7DBBS, HT7DCB, HT7DCBS, HT7DCC, HT7DCCS, HT67DBB, HT67DCB, HT67DCC, HT7DDB, HT7DDBS, HT67DDCS, HT67EDCS, HT7EDB, HT7EDBS, HT67EDC, HT67EDCS, HT7EEC, HT7EECS
- Mobile** - HT6CM, HT6CP, HT6DM, HT6DP, HT6EM, HT6EP, HT6CRM, HT6DRM, HT6ERM, HT6CCM, HT6CCP, HT6CCMW, HT6DCM, HT6DCP, HT6DCMW, HT6ECM, HT6ECP, HT6EDM, HT6EDP, HT6DCCM, HT6EDCM

3. Cartridge Position

- P1 - For single pump or shaft end in double pump and triple pump
P2 - For cover end in double pump and middle in triple pump
P3 - For cover end in triple pump

4. Shaft Rotation (Viewed from shaft end)

- R - Turn right
L - Turn left

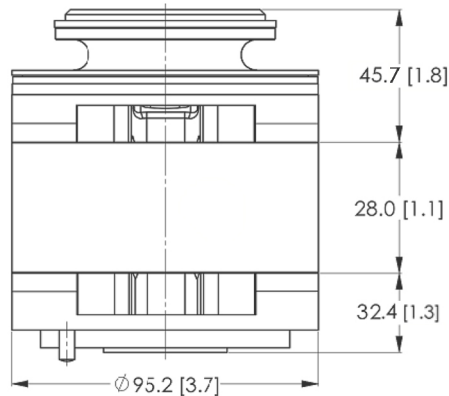
2. Ring size (USgpm)

- 7B** - 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 014, 015
- E03, E04, E05, E06, E07, E08, E09, E10, E11, E12, E14, E15 (Variable Speed)
- 6C** - 003, 005, 006, 008, 010, 012, 014, 017, 020, 022, 025, 028, 031
(Except HT6CP only use 014-031)
- 6D** - 014, 017, 020, 024, 028, 031, 035, 038, 042, 045, 050, 061
- 7D** - 014, 017, 020, 022, 024, 028, 031, 035, 038, 042, 045, 050
- E14, E17, E20, E22, E24, E28, E31, E35, E38, E42 (Variable Speed)
- 6E** - 042, 045, 050, 052, 062, 066, 072
- 7E** - 042, 045, 050, 052, 054, 057, 062, 066, 072, 085

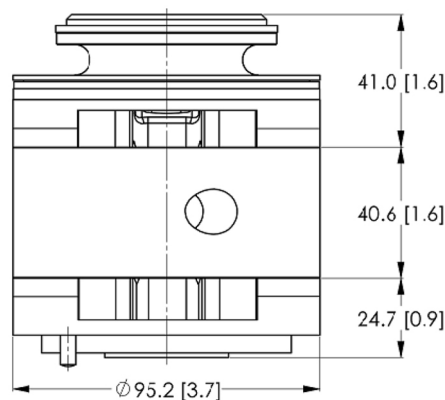
Cartridge Kit for Vane Pump HT6 and HT7 Series

Installation Dimension mm (inch)

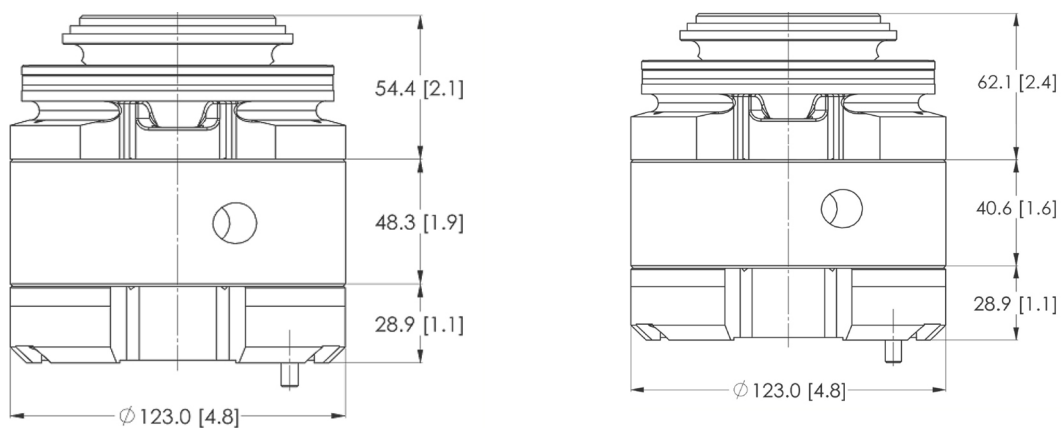
Cartridge Kit HT7B



Cartridge Kit HT6C, M, P, R



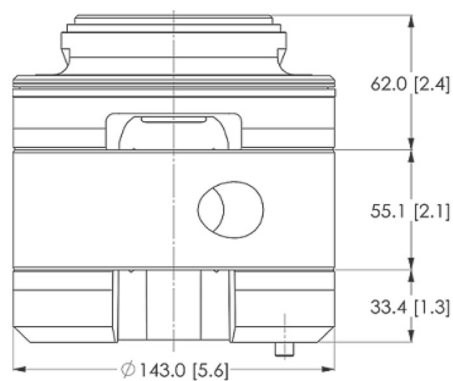
Cartridge Kit HT6D, M, P, R, HT7D



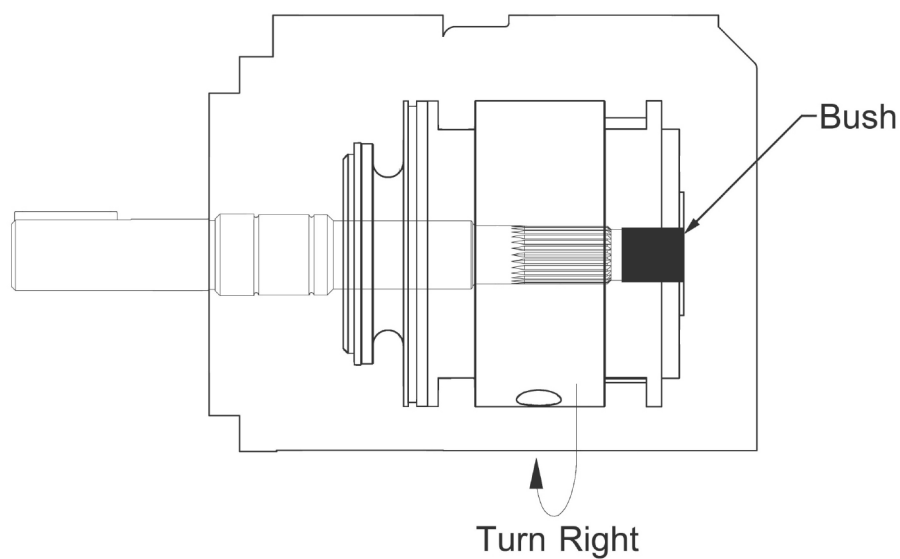
For HT7D, HT67D only

Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT6E, M, P, R, HT7E

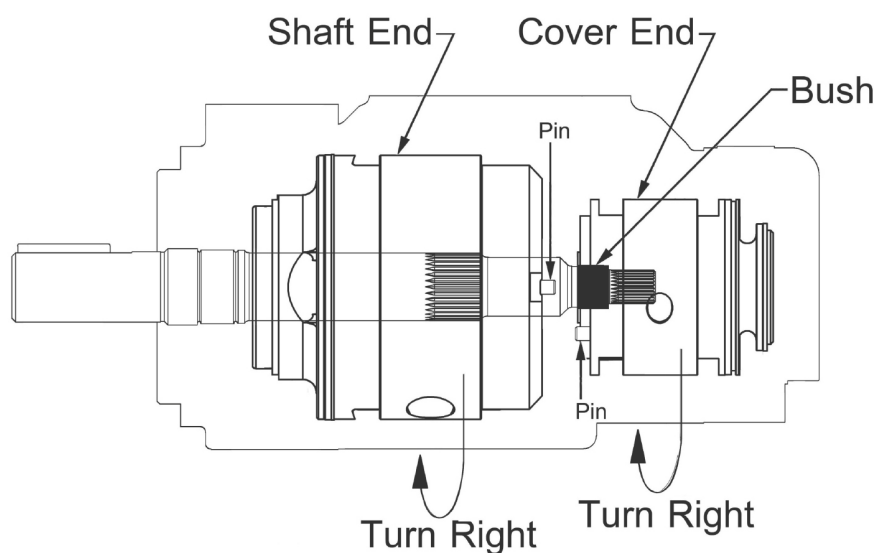


Cartridge Kit HT Series : Single pump

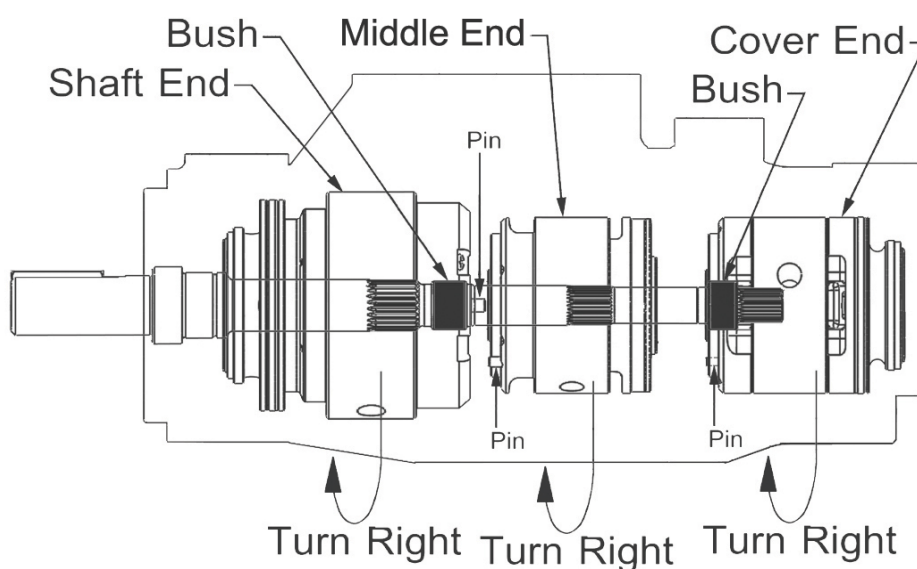


Cartridge Kit for Vane Pump HT6 and HT7 Series

Cartridge Kit HT Series : Double pump

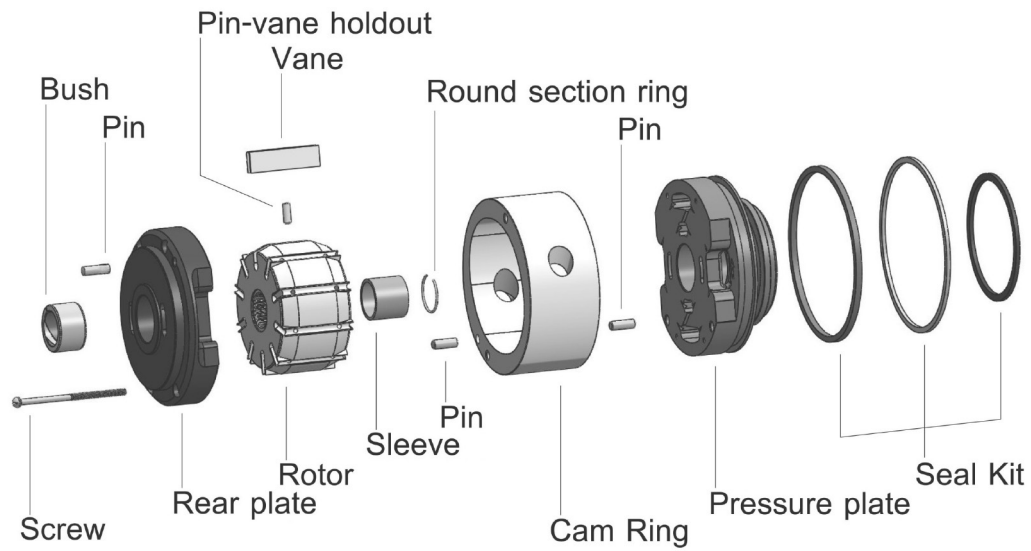


Cartridge Kit HT Series : Triple pump



Cartridge Kit for Vane Pump HT6 and HT7 Series

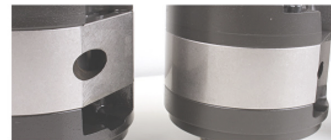
Cartridge Kit Components (HT Series)



Cartridge Kit for Vane Pump HSQP Series

Features and Handling

- Replacement for HSQP Cartridge kits of Tokimec pump. This low noise, high performance fixed vane pump series offers superior performance with high volumetric efficiency and very low noise characteristics.
- When ordering, if left hand rotation, special seal, or a specific position of cartridge (shaft end or cover end) is required, it should be specified by ordering code.
- When install the cartridge into the body, carefully move back and forth until the cartridge pins drop into the cover holes and one of the chamfers on the cam ring aligns with the cover inlet port.



Specifications

HSQP(S)1

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Max. Speed	Max. Pressure	Typical Delivery at max speed & pres- sure	Typical Input Power at max speed & pressure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
2	7.0 (0.42)	1800	206 (3000)	11.3 (3.0)	5.2 (7.0)	2.4 (5.3)
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)	23.5 (31.5)	2.3 (5.1)
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)	

Cartridge Kit for Vane Pump

HSQP Series

HSQP(S)2

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Max. Speed	Max. Pressure	Typical Delivery at max speed & pres- sure	Typical Input Power at max speed & pressure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
12	39.0 (2.47)	1800	172 (2500)	62.1 (16.4)	22.9 (30.8)	3.6 (7.9)
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)	

HSQP(S)3

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Max. Speed	Max. Pressure	Typical Delivery at max speed & pres- sure	Typical Input Power at max speed & pressure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
21	68.3 (4.18)	1800	172 (2500)	106.3 (28.1)	34.0 (45.5)	6.2 (13.6)
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)	

HSQP(S)4

Delivery at 1200 r/min & 7 bar (100 psi)	Displacement	Max. Speed	Max. Pressure	Typical Delivery at max speed & pres- sure	Typical Input Power at max speed & pressure	Weight
USgpm	cm ³ /r 1(in ³ /r)	rpm	bar (psi)	L/min (USgpm)	kW (hp)	kg (lb)
35	110.4 (6.73)	1800	172 (2500)	179.0 (47.2)	60.0 (80.4)	9.8 (21.5)
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)	

Cartridge Kit for Vane Pump HSQP Series

Ordering Code

HSQP(S)2 - 21 - P1 - L

1	2	3	4
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1. Model :

- Single Pump - HSQP1, HSQP(S)1, HSQP(S)2, HSQP(S)3, HSQP(S)4,
- Double Pump - HSQP(S)21, HSQP(S)31, HSQP(S)32, HSQP(S)41, HSQP(S)42, HSQP(S)43
- Triple Pump - HSQP(S)211, HSQP(S)311, HSQP(S)321, HSQP(S)421, HSQP(S)431, HSQP(S)432

2. Ring size (USgpm)

- HSQP(S)1 - 2, 5, 8, 9, 11, 12, 14
- HSQP(S)2 - 12, 14, 17, 19, 21
- HSQP(S)3 - 21, 25, 30, 32, 35, 38
- HSQP(S)4 - 35, 38, 42, 47, 50, 52, 57, 60, 62, 64, 66

3. Cartridge Position

- P1 - For single pump or shaft end in double pump and triple pump
- P2 - For cover end in double pump and middle in triple pump
- P3 - For cover end in triple pump

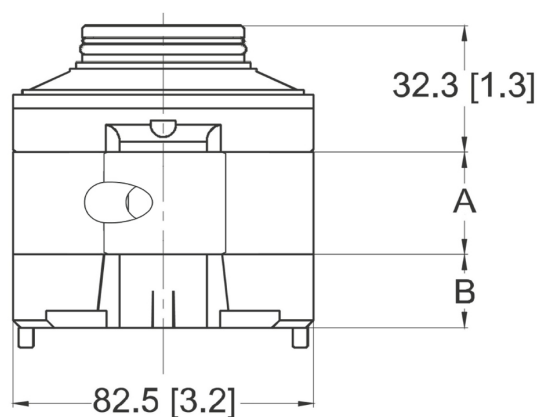
4. Shaft Rotation (Viewed from shaft end)

- R - Turn right
- L - Turn left

Cartridge Kit for Vane Pump HSQP Series

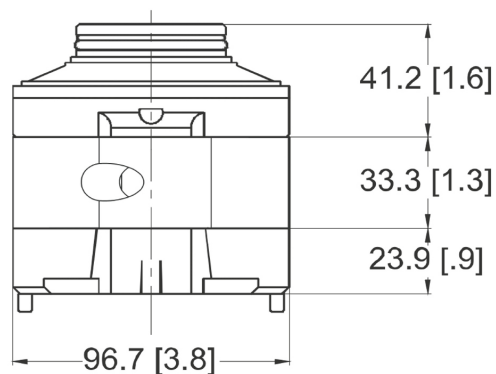
Installation Dimension mm (inch)

HSQP(S)1

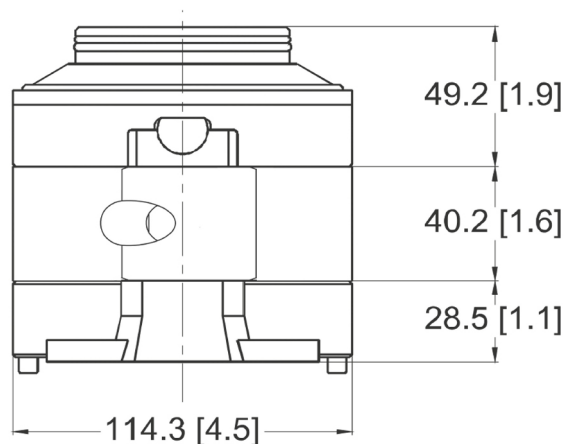


Delivery	A	B
2,5,8,9	21.95 [.86]	27.70 [1.09]
11,12,14	30.47 [1.20]	19.10 [0.75]

HSQP(S)2

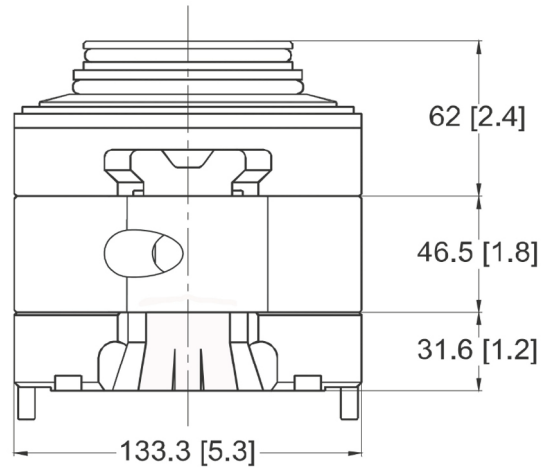


HSQP(S)3



Cartridge Kit for Vane Pump HSQP Series

HSQP(S)4



II. Cartridge kit for Vane Motor

Cartridge Kit for Vane Motor

HM Series

Features and Handling

The HM series cartridge kit is interchangeable with Vickers vane motor. It consists of a cam ring, rotor, 10 vanes, and 2 pressure plates. The cartridge is bolted together so parts can be serviced separately or as an assembly. A cartridge can be replaced without removing the unit from the machine, and usually without disconnecting the lines.

To change rotation, reverse the motor ports. No need to do anything with the cartridge.



Specification

Model	Torque Nm/6, 9 bar (lb in/ 100 psi)	Displacement cm ³ /r (in ³ /r)	Flow input / required @1200 r/min L/min (USgpm)	Maximum speeds & Pressure	Approx Weight kg (lb)
25HM & 26HM	3.3 (30)	29.0 (1.77)	34.8 (9.19)	3600 r/min @ 34 bar (500 psi) ¹⁾ 4000 r/min @ 34 bar (500 psi) ²⁾	4.8 (10.5)
	4.7 (42)	43.9 (2.68)	52.6 (13.9)		
	6.2 (55)	57.7 (3.52)	69.3 (18.3)		
	7.3 (65)	68.7 (4.19)	82.5 (21.8)		
35HM & 36HM	9.0 (80)	83.6 (5.10)	100.3 (26.5)	2400 r/min @ 155 bar (2250 psi) ¹⁾ 3000 r/min @ 155 bar (2250 psi) ²⁾	7.4 (16.3)
	10.7 (95)	100.3 (6.12)	120.4 (31.8)		
	13.0 (115)	121.9 (7.44)	146.1 (38.6)		
45HM & 46HM	14.7 (130)	138.0 (8.42)	165.4 (43.7)	2400 r/min @ 155 bar (2250 psi) ¹⁾ 3000 r/min @ 155 bar (2250 psi) ²⁾	11.8 (26.0)
	17.5 (155)	163.2 (9.96)	195.7 (51.7)		
	20.9 (185)	193.2 (11.79)	232.0 (61.3)		

1) Continuous Operation

2) Intermittent Operation

Cartridge Kit for Vane Motor HM Series

Ordering Code

25	HM	-	65
1	2		3

1. Model Series:

25HM, 26HM,
35HM, 36HM,
45HM, 46HM

2. Series

HM - Vane Type Motor (Externally drained)

3. Ring Size - Nominal torque Rating (lb.in./100 psi)

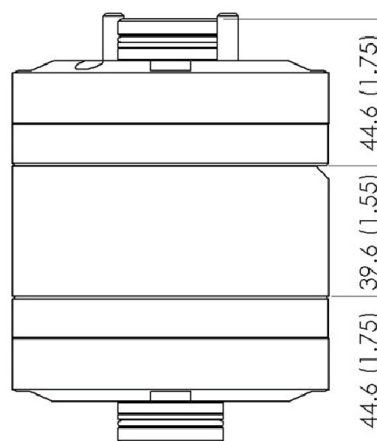
25HM/26HM - 30, 42, 55, 65

35HM/36HM - 80, 95, 115

45HM/46HM - 130, 155, 185

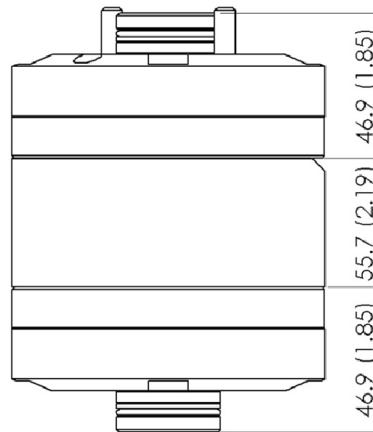
Installation Dimension mm (inch)

Cartridge Kit 25HM & 26HM

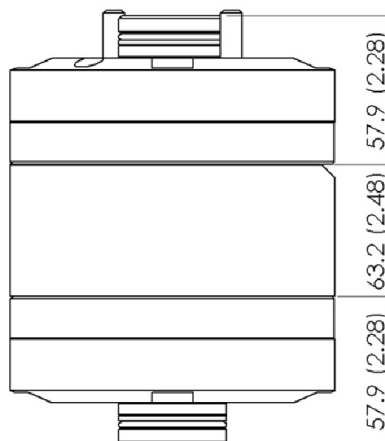


Cartridge Kit for Vane Motor HM Series

Cartridge Kit 35HM & 36HM



Cartridge Kit 45HM & 46HM



Cartridge Kit for Vane Motor HM2 Series

Features and Handling

- The HM series cartridge kit is interchangeable with Vickers vane motor. It consists of a cam ring, rotor, 12 vanes.
- To change rotation, reverse the motor ports. No need to do anything with the cartridge.



Specification

Model	Torque Nm/6, 9 bar (lb in/ 100 psi)	Displacement cm ³ /r (in ³ /r)	Maximum speeds & Pressure	Approx Weight kg (lb)
HM2-210	2.0 (25)	24.7 (1.51)	2200 r/min @ 138 bar (2000 psi)	1.37 (3.0)
	4.0 (35)	35.4 (2.16)	1800 r/min @ 121 bar (1750 psi)	

Cartridge Kit for Vane Motor HM2 Series

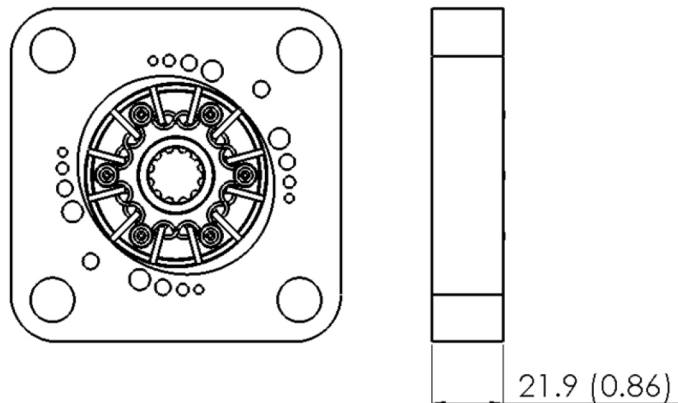
Ordering Code

HM 2 - 25

1	2	3
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1. Vane Type Motor
2. Series(bi-directional rotation)
3. Ring Size - Nominal torque Rating (lb.in./100 psi)
25-25 lb.in./100 psi
35-35 lb.in./100 psi

Installation Dimension mm (inch)



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