

ENGINEERING
TOMORROW



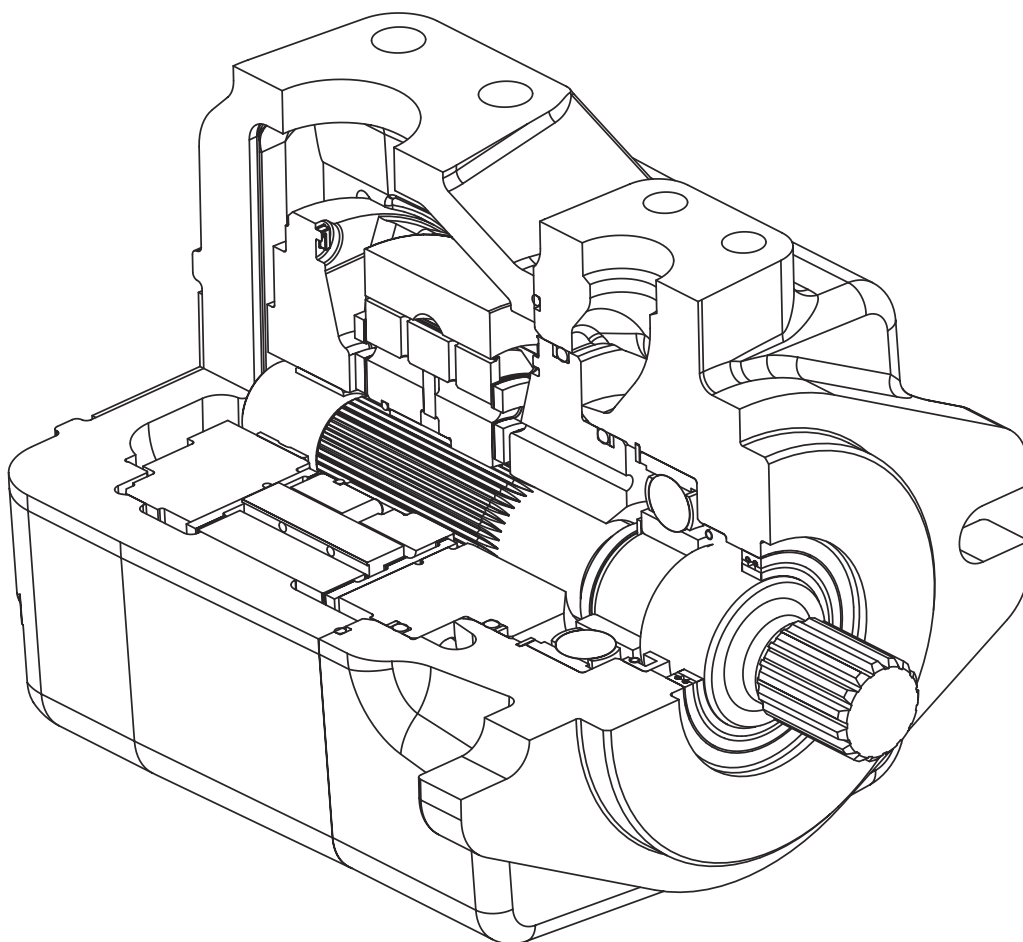
Vickers® by Danfoss

High Pressure, High Performance Vane Pumps

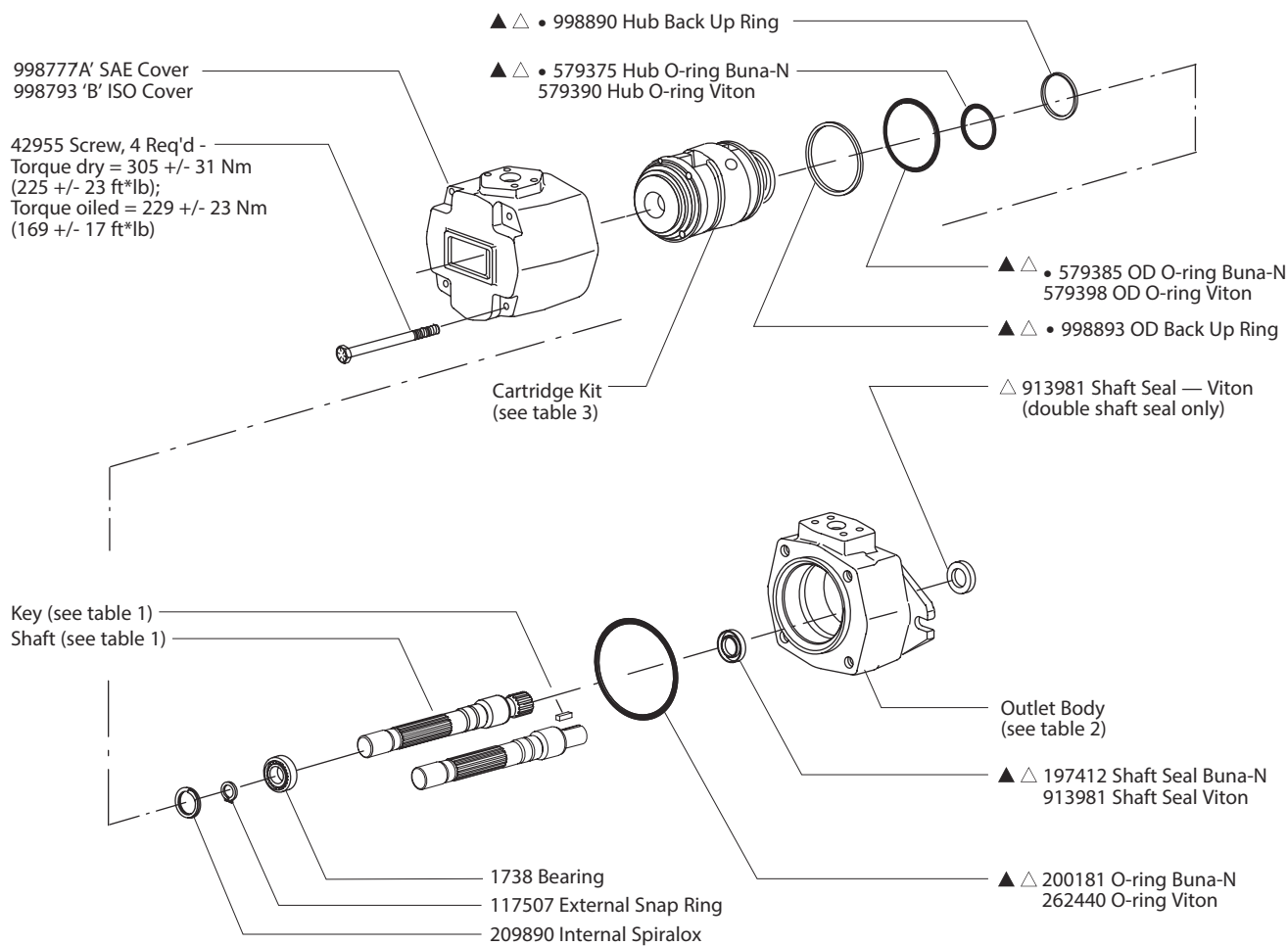
Parts and Service Manual

AX438767479859en-000101

VMQ145S Series
– 32 Design



VICKERS®



Note Lubricate all parts and seals with a thin coat of oil at assembly.

- Included in Cartridge Kit (see table)
- ▲ Included in 02-334558 Buna-N Seal Kit, Single Shaft Seal or 02-334559 Viton® Seal Kit, Single Shaft Seal.
- △ Included in 02-334641 Buna-N Seal Kit, Double Shaft Seal or 02-334642 Viton® Seal Kit, Double Shaft Seal.
- * See Table X1 and X2 for Kit Rotation Information

TABLE X1

Cartridge Kit Rotation for Right Hand Rotation Pump

R= Right Hand Rotation		L=Left Hand Rotation	
PUMP ROTATION	SHAFT END KIT ROTATION	CENTER KIT ROTATION	COVER END KIT ROTATION
Single & Thru (R)	(R)	-	-

- *Notes:
- A right hand rotation pump has the shaft turning clockwise when viewed from the input shaft end
 - When ordering a right hand rotation kit, the part number will not have a suffix

TABLE X2

Cartridge Kit Rotation for Left Hand Rotation Pump

R= Right Hand Rotation		L=Left Hand Rotation	
PUMP ROTATION	SHAFT END KIT ROTATION	CENTER KIT ROTATION	COVER END KIT ROTATION
Single & Thru (L)	(L)	-	-

- *Notes:
- A left hand rotation pump has the shaft turning counterclockwise when viewed from the input shaft end
 - When ordering a left hand rotation kit, the part number will have a suffix of 'L'

TABLE 1

MODEL CODE	30TH DESIGN SHAFT	31ST & 32ND DESIGN SHAFT	KEY
VMQ145S-*.***.*-01	934203	4993353-001	928542
VMQ145S-*.***.*-02	934204	4993354-001	—
VMQ145S-*.***.*-03	934205	4993355-001	928547
VMQ145S-*.***.*-04	—	—	928565
VMQ145S-*.***.*-05	934206	4993356-001	928543
VMQ145S-*.***.*-06	934207	4993357-001	—
VMQ145S-*.***.*-09	937224	4993373-001	—

TABLE 2

OUTLET BODY				
Flange Mounting Style	Single Shaft Seal Inch Port Threads	Metric Port Threads	Double Shaft Seal Inch Port Threads	Metric Port Threads
SAE C	4993341-001	4993342-001	4993343-001	4993344-001
ISO 125	—	4993346-001	—	4993345-001

TABLE 3

MODEL CODE	* • CARTRIDGE KIT (BUNA-N)	* • CARTRIDGE KIT (VITON)
VMQ145*140	02-346970	02-346971
VMQ145*160	02-346968	02-346969
VMQ145*180	02-346966	02-346967
VMQ145*195	02-346964	02-346965
VMQ145*215	02-346962	02-346963

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Model Code

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VMQ1  ** * **** * * ** ** * * * * * 00 * 0 32
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1 2 3 4 Series designation
VMQ1 – Vane pump single series

5 6	Frame size
45 -	140-215 cm/r (8.54-13.12 in/r)

7	Pump type
S	Single

8	9	10	Displacement
Frame size 45			
140	–	140	cm ³ /r (8.54 in ³ /r)
160	–	160	cm ³ /r (9.76 in ³ /r)
180	–	180	cm ³ /r (10.98 in ³ /r)
195	–	195	cm ³ /r (11.89 in ³ /r)
215	–	215	cm ³ /r (13.12 in ³ /r)

11 Front flange mounting style	
B	– SAE C 2-bolt 127,00 (5.000) x 12,4 (0.49) pilot 17,6 (0.69) slots on 181,0 (7.13) bolt circle
D	– ISO 3019/2 125A2HW 2-bolt 125,00 (4.921) x 9,2 (0.36) pilot 18,1 (0.71) slots on 180,0 (7.09) bolt circle

12		Rear mounting flange and orientation
0	-	None (non thru-drive)

13	14	Input shaft type*
01	–	SAE J744 keyed Frame size 45: 38,10 (1.500)
02	–	SAE J744 splined Frame size 45: C-C
03	–	ISO 3019/2 keyed Frame size 45: 40,00 (1.575)
05	–	SAE J744 keyed Frame size 45: 44,45 (1.750)
06	–	SAE J744 splined Frame size 45: D
09	–	SAE J744 splined Frame size 45: C

15 16	Output shaft coupling
00 -	None (non thru-drive)

17	Inlet port type
A	– SAE J518 4-bolt split flange
B	– ISO 6162 4-bolt split flange

18	Outlet port type
A	– SAE J518 4-bolt flange
B	– ISO 6162 4-bolt flange

19	Outlet port position
	Viewed from cover end of pump
A	– Opposite inlet port
B	– 90° CCW to inlet port
C	– In-line with inlet port
D	– 90° CW to inlet port

20	Shaft seal
A	Single, primary
B	Double, secondary (spring side out) Recommended for wet mount applications

21	Seal type
N	– Buna N
V	– Viton
W	– Buna N with Viton shaft seal(s)

22 **Shaft rotation**
 Viewed from shaft end
 of pump
 L – Left hand (CCW)
 R – Right hand (CW)

23 24 Special features
00 – None

25		Paint
0	–	None
A	–	Blue

26	Customer identification
0	– None

27 28	Design code
32 –	32 design Installation dimensions remain unchanged for design numbers 30 to 39 inclusive.

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- Cartridge valves
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- Electric converters
- Electric machines
- Electric motors
- Gear motors
- Gear pumps
- Hydraulic integrated circuits (HICs)
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- Hydrostatic pumps
- Orbital motors
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- PLUS+1® software
- PLUS+1® software services, support and training
- Position controls and sensors
- PVG proportional valves
- Steering components and systems
- Telematics

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