

ENGINEERING
TOMORROW



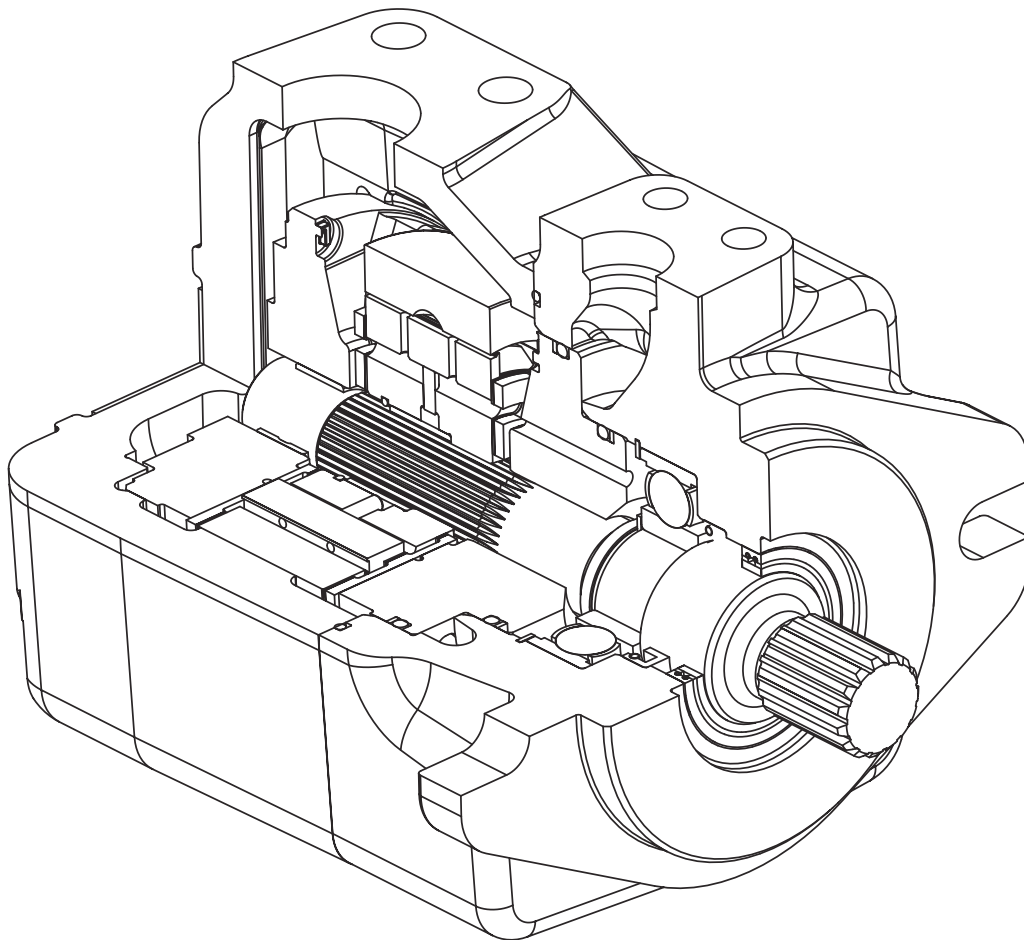
Vickers[®] by Danfoss

**High Pressure, High Performance
Vane Pumps**

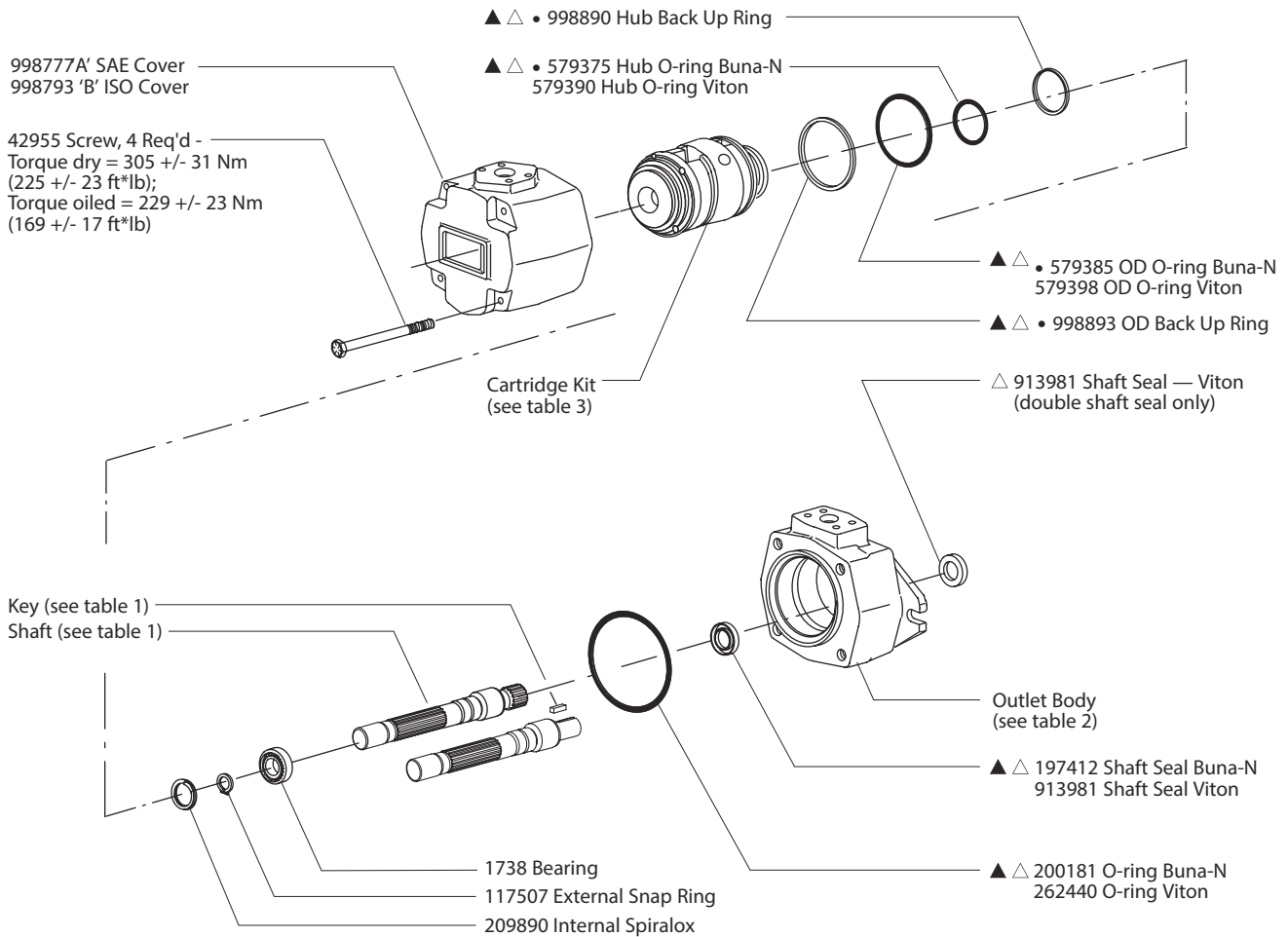
Parts and Service Manual

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

PUMP ROTATION	R= Right Hand Rotation		L=Left Hand 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

PUMP ROTATION	R= Right Hand Rotation		L=Left Hand 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		Double Shaft Seal	
	Inch Port Threads	Metric Port Threads	Inch Port Threads	Metric Port Threads
SAE C	4993341-001	4993342-001	4993343-001	4993344-001
ISO 125	—	4993346-001	—	4993345-001

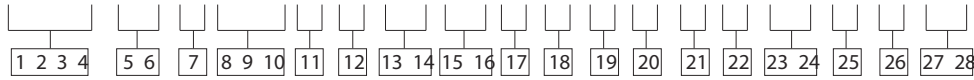
TABLE 3

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

Viton is a registered trademark of E.I. DuPont Co.

Model Code

VMQ1 ** * *** * * ** ** * * * * * * 00 * 0 32



1 2 3 4 Series designation
VMQ1 – Vane pump single series

5 6 Frame size
45 – 140-215 cm³/r
(8.54-13.12 in³/r)

7 Pump type
S – Single

8 9 10 Displacement
Frame size 45
140 – 140 cm³/r (8.54 in³/r)
160 – 160 cm³/r (9.76 in³/r)
180 – 180 cm³/r (10.98 in³/r)
195 – 195 cm³/r (11.89 in³/r)
215 – 215 cm³/r (13.12 in³/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.

* Verify shaft torque ratings meet or exceed input torque requirements

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

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