

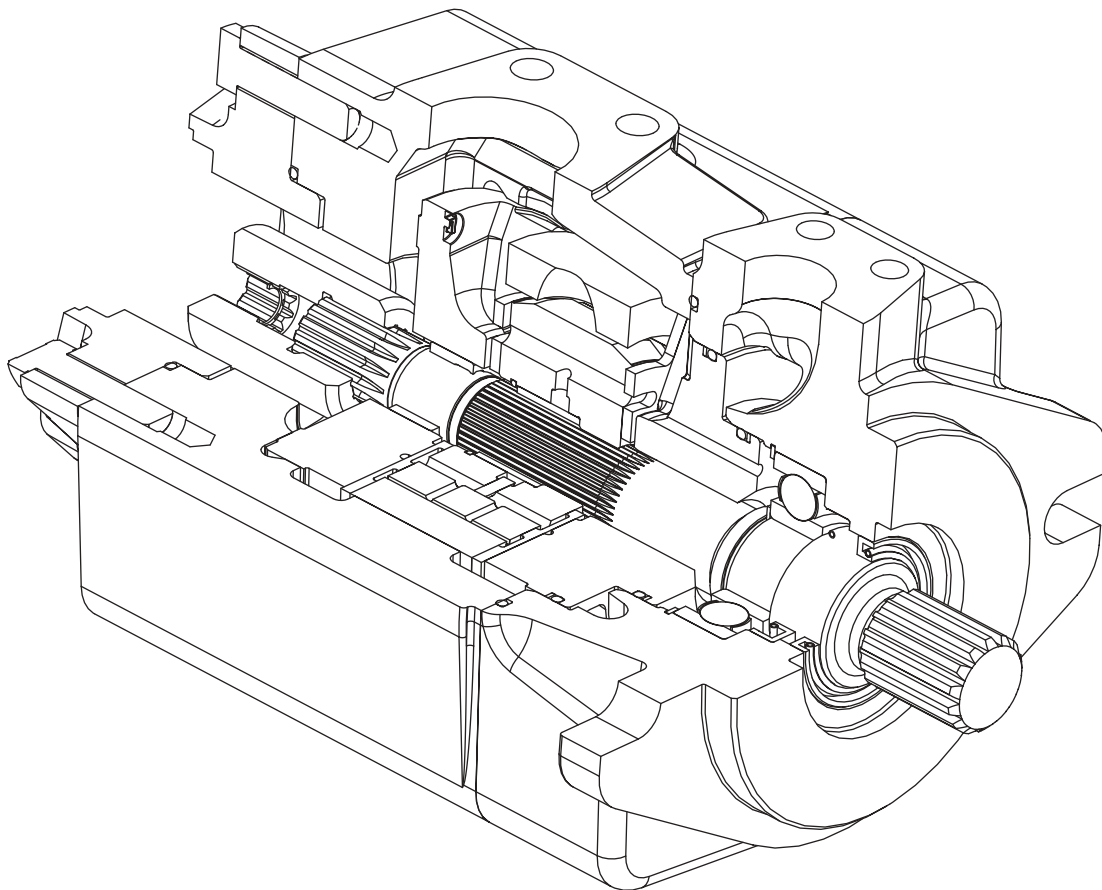
**EAT•N**

**Vickers**

**High Pressure, High Performance  
Vane Pumps**

Parts Data

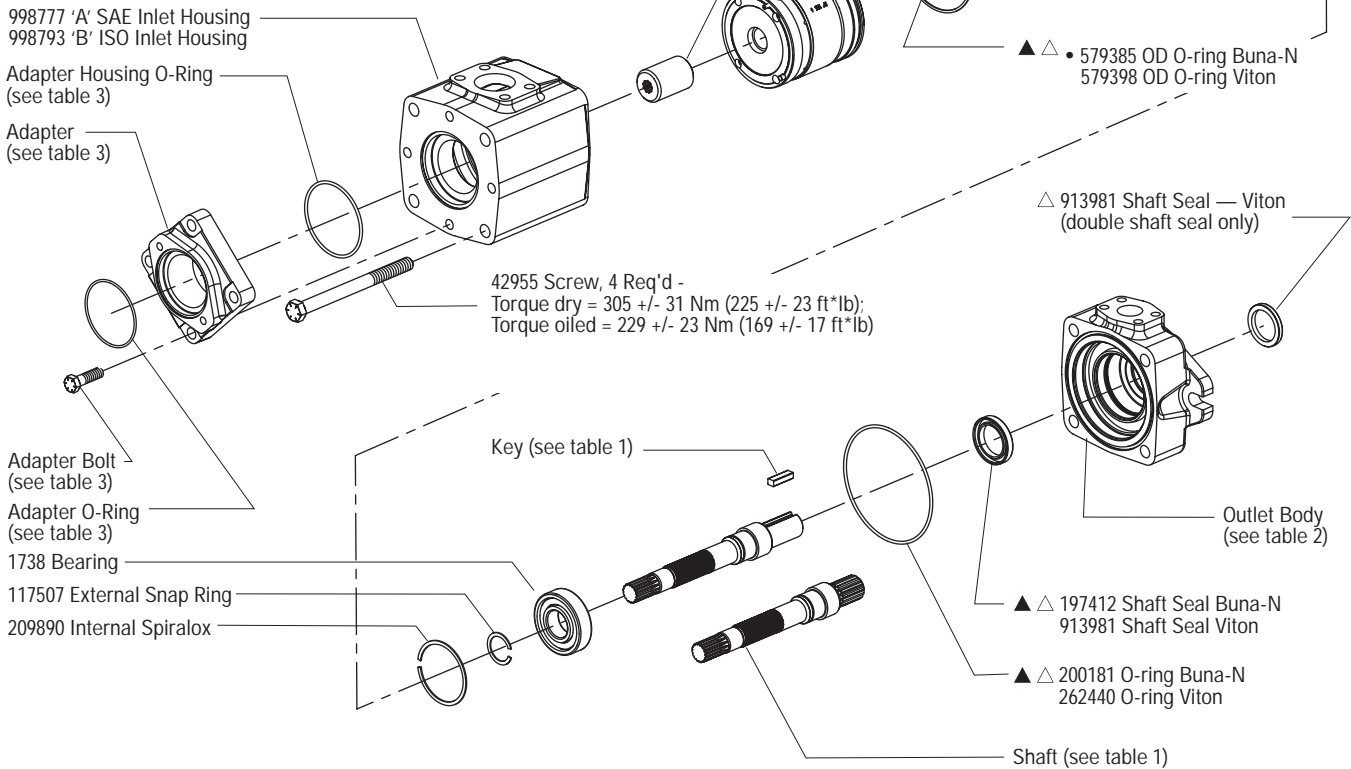
VMQ145T Series  
- 32 Design



**VICKERS**<sup>®</sup>

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

- Included in Cartridge Kit (see table 4)
- ▲ Included in 02-334700 Buna-N Seal Kit, Single Shaft Seal or 02-334701 Viton® Seal Kit, Single Shaft Seal.
- △ Included in 02-334702 Buna-N Seal Kit, Double Shaft Seal or 02-334703 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 3**

MODEL CODE THRU DRIVE COMPONENTS	OUTLET SPLINE SIZE	ADAPTER MOUNTING PAD SIZE	ADAPTER MOUNTING ADAPTER	ADAPTER/ HOUSING O-RING		MOUNTING PAD O-RING		COUPLING ASSEMBLY	ADAPTER BOLT	ADAPTER TORQUE NM (FT-LB)	
				BUNA N	VITON	BUNA N	VITON			DRY	OILED
VMQ145T-***-***-16	SAE A	SAE A	937081	200159	262418	353409	576601	02-315059	1315	153±16 (113±11)	115±12 (85±9)
VMQ145T-***-***-22	SAE B	SAE B	998588	200159	262418	375422	401525	02-315058	1315	153±16 (113±11)	115±12 (85±9)
VMQ145T-***-***-25	SAE B-B	SAE B	998588	200159	262418	375422	401525	02-315057	1315	153±16 (113±11)	115±12 (85±9)
VMQ145T-***-***-32	SAE C	SAE C	998589	200159	262418	312092	353264	02-315056	298168	305±31(225±23)	229±23 (169±1)

**TABLE 1**

MODEL CODE	30TH DESIGN SHAFT	31ST & 32ND DESIGN SHAFT	KEY
VMQ145T-***-***-01	937122	4993368-001	928542
VMQ145T-***-***-02	937123	4993369-001	—
VMQ145T-***-***-03	937124	4993370-001	928547
VMQ145T-***-***-04	—	—	928565
VMQ145T-***-***-05	937125	4993371-001	928543
VMQ145T-***-***-06	937126	4993372-001	—

**TABLE 2**

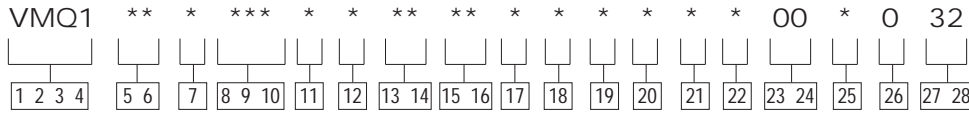
Flange Mounting Style	SINGLE SHAFT SEAL		DOUBLE SHAFT SEAL	
	Inch Port Threads	Metric Port Threads	Inch Port Threads	Metric Port Threads
SAE C	4993341-001	4993342-001	4993343-001	4993344-001
ISO 125	—	4993346-001	—	4993345-001

**TABLE 4**

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



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

**5 6 Frame size**  
45 – 140-215 cm<sup>3</sup>/r (8.54-13.12 in<sup>3</sup>/r)

**7 Pump type**  
T – Thru-drive  
(Options at model codes **12** and **15 16** must be specified for thru-drive units)

**8 9 10 Displacement**  
Frame size 45  
140 – 140 cm<sup>3</sup>/r (8.54 in<sup>3</sup>/r)  
160 – 160 cm<sup>3</sup>/r (9.76 in<sup>3</sup>/r)  
180 – 180 cm<sup>3</sup>/r (10.98 in<sup>3</sup>/r)  
195 – 195 cm<sup>3</sup>/r (11.89 in<sup>3</sup>/r)  
215 – 215 cm<sup>3</sup>/r (13.12 in<sup>3</sup>/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**  
Viewed from adapter end of pump  
SAE A  
A – In-line with mounting flange  
B – 90° to mounting flange  
SAE B  
E – In-line with mounting flange  
F – 90° to mounting flange  
SAE C  
L – 45° CCW to mounting flange  
M – 45° CW to mounting flange

**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  
(Not available on thru-drive units)

**15 16 Output shaft coupling**  
Thru-drive units, model code  
**7** = T  
16 – SAE J744 16-4 A-spline shaft  
22 – SAE J744 22-4 B-spline shaft  
25 – SAE J744 25-4 B-B-spline shaft  
32 – SAE J744 32-4 C-spline shaft (frame sizes 35 & 45 only)

**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 adapter 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

Eaton  
14615 Lone Oak Road  
Eden Prairie, MN 55344  
USA  
Tel: 952 937-9800  
Fax: 952 974-7722  
[www.hydraulics.eaton.com](http://www.hydraulics.eaton.com)

Eaton  
20 Rosamond Road  
Footscray  
Victoria 3011  
Australia  
Tel: (61) 3 9319 8222  
Fax: (61) 3 9318 5714

Eaton  
Dr.-Reckeweg-Str. 1  
D-76532 Baden-Baden  
Germany  
Tel: (49) 7221 682-0  
Fax: (49) 7221 682-788

**VICKERS**<sup>®</sup>

**EATON**

**Vickers**

© 2003 Eaton Corporation  
All rights reserved  
Printed in USA  
Document No. V-PUVN-TP007-E  
June 2003 1M