

**GENUINE** **MEIARIS**



**YOUR SOURCE FOR HIGH QUALITY  
PISTON PUMPS AND COMPONENTS**

**PISTON PRODUCT LISTING**  
**EFFECTIVE: JANUARY 2010**

# PISTON PRODUCT LISTING

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# PISTON PRODUCT LISTING

## MPVH/MPVE - BUILDING CODES

MPV\* - \*\* (QI) \*\* - (L/R) ( \* ) \* - \*\* S - 11 - \*\* \*\*\* (V) - \*\*\*  
 1      2   3   4      5      6   7   8   9                  10      11

### 1 SERIES

MPVH

MPVE (Metaris Conversion)

### 2 PUMP SIZE

57 or PVE27

74 or PVE35

98 or PVE47

131

### 3 APPLICATION

Blank - Mobile

QI - Quiet Industrial

(1500-1800rpm @ 250/280 bar)

### 4 MOUNTING FLANGE

C - SAE "C" 4-bolt type

C2 - Optional 2/4 bolt mount 5

C3 - Optional 4-bolt SAE-C pilot for vertical mounting.

### 5 ROTATION

R - Right Hand

L - Left Hand

### 6 CONFIGURATION

Blank - Non-thru-drive (single unit)

A - SAE-A thru-drive-pump, standard (SAE J744-82-2)

B - SAE-B thru-drive-pump, optional (SAE J44-101-2/4)

C - SAE-C thru-drive-pump, optional (SAE J744-127-2/4)

--- Thru-Drive not available in PVH57/PVE27 size

### 7 MAIN PORTS

F - SAE 4-Bolt flange ports (standard)

M - SAE 4-bolt pads with Metric threads

### 8 SHAFT TYPE

1 - SAE-C straight key

2 - SAE-C 14-tooth spline

3 - SAE-CC 17-tooth spline

5 - Tapered-Keyed

8 - SAE-BB 15-tooth spline (57 only)

10 - 14-tooth spline (57/ 74 only)

24 - 19-tooth spline (57 only)

### Thru - Drive Shafts

2 - 14-tooth thru-drive (98 only)

3 - 17-tooth thru-drive (74 / 98 only)

5 - Tapered thru-drive (98 only)

10 - 14-tooth spline thru-drive (74 / 98 only)

### 9 SHAFT SEAL

S - Single

D - Double

### 10 PRESSURE CONTROL TYPE

C - Compensator, 140-280 bar (2080-4000psi)

CM - Compensator, 35-140 bar (50-2000psi)

CV - Load Sense Controller

### 11 PRESSURE SETTING

25 - 250 bar (3625 psi) Standard setting

\*\* - Special settings available



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# PISTON PRODUCT LISTING

## VICKERS® MPVE19

DESCRIPTION	QTY	REFERENCE #
Rotating Group Assembly	1	M923948
Barrel	1	M426454
Piston (EACH)	9 REQ.	M923939
Shoe Cage {Retainer Plate}	1	M402650
Ball Guide (Spherical Washer)	1	M402580
Valve Plate - LH	1	M425415
Valve Plate - RH	1	M425412
Pin Retainer	1	M410050
Pin (EACH)	3 REQ.	M248810
Spring	1	M402579
Spring Washer a	1	M404932
Spring Washer b	1	M423368
Snap Ring	1	M99907
Seal Kit	1	M923989
Gasket	1	
Yoke	1	M923989

## VICKERS® MPVE21

DESCRIPTION	QTY	REFERENCE #
Rotating Group Assembly	1	M923947
Barrel	1	M418215
Piston (EACH)	9 REQ.	M923946
Shoe Cage {Retainer Plate}	1	M402650
Ball Guide (Spherical Washer)	1	M402580
Valve Plate - LH	1	M425416
Valve Plate - RH	1	M425413
Pin Retainer	1	M410050
Pin (EACH)	3 REQ.	M248810
Spring	1	M402579
Spring Washer a	1	M404932
Spring Washer b	1	M423368
Snap Ring	1	M99907
Seal Kit	1	M923989
Yoke	1	M409997



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# PISTON PRODUCT LISTING

## VICKERS® MPVH 57/27

DESCRIPTION	QTY	METARIS #	REFERENCE #
<b>PUMP - MPVH57</b>			
<b>PUMP - MPVE27 Replacement* MPVE Adapter Kit** Thru Drive Option</b>	1	See Model Code for Configurations	
Rotating Group Assembly MPVE27	1	MPN098556	M938102
Rotating Group Assembly MPVH57	1	MPN098418	M877420
Barrel	1	MPN093108	M937023 / M680625
Piston (EACH)	9 REQ.	MPN093109	M306362
Piston Kit (SET)	1	MPN098552	M926257
Shoe Cage {Retainer Plate}	1	MPN093110	M584512
Valve Plate - LH	1	MPN093115	M680631
Valve Plate - RH	1	MPN093116	M680630
Yoke MPVH57	1	MPN093118	M690832
Shaft (Keyed) - #1	1		M527166
Shaft (Splined) - #2	1		M513839
Shaft (Splined) - #8	1	MPN101595	M913978
Shaft (Splined) - #10	1	MPN101418	M857787
Shaft (Splined) - #24	1	MPN101419	M997024
Shaft - Thru-Drive (Splined) - #2	1	MPN101680	M526684
Saddle Bearing (W) MPVH57 (each)	1	MPN092338	M513885
Saddle Bearing (N) MPVH57 (each)	1	MPN092339	M513886
Spacer Pair (2pc Included)	2 REQ.	MPN093119	M690801
Spring Guide	1	MPN093111	M680624
Shaft Bearing	1	X03-33-13565	M513433
Spring	1	MPN093112	M627524
Spring Guide	1	MPN093113	M584524
Retaining Ring	1	MPN093114	M85560
Spacer MPVE27	1	MPN098072	M632587
Swash Plate MPVE27	1	MPN098075	M584515
Limiter Pair (2pc Included)	2 REQ.	MPN093120	M690218
Gasket - MPVH	1	MPN093624	M513846
Seal Kit - MPVH	1	MPN400125	M102244



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# PISTON PRODUCT LISTING

## VICKERS® MPVH74 / MPVE35

DESCRIPTION	QTY	METARIS #	REFERENCE #
<b>PUMP - MPVH74</b>			
<b>PUMP - MPVE35 Replacement*</b>			
<b>MPVE Adapter Kit**</b>	1	See Model Code for Configurations	
<b>Thru Drive Option</b>			
Rotating Group Assembly MPVH74	1	MPN098417	M877421
Rotating Group Assembly MPVE35	1	MPN098451	M938101
Barrel	1	MPN092725	M937025 / M680626
Piston (EACH)	9 REQ.	MPN092724	M305857
Piston Kit (SET)	1	MPN093626	M941424
Shoe Cage {Retainer Plate}	1	MPN093631	M584774
Valve Plate - LH	1	MPN093632	M627437
Valve Plate - RH	1	MPN400060	M627438
Valve Plate (QI) - LH - MPVH	1	MPN095586	M513890
Valve Plate (QI) - RH -M PVH	1	MPN107583	M513889
Yoke - MPVH	1	MPN093105	M526651
Shaft (Keyed) - #1	1		M692567
Shaft (Splined) - #2	1		M513865
Shaft (Threaded-Keyed) - #5	1	MPN107166	M883252
Shaft (Splined) - #10 - MPVH	1	MPN107167	M883326
Shaft Thru-Drive (Splined) - #2	1	MPN107119	M883229
Shaft Thru-Drive (Threaded-Keyed) - #5	1	MPN101774	M9T1634
Shaft Thru-Drive (Splined) - #10	1	MPN109000	M875792
Shaft Thru-Drive (Splined) - #17			
Spacer (2pc Included)	2 REQ.	MPN093106	M526639
Spring Guide	1	MPN400061	M631568
Spring	1	MPN400062	M584454
Spring Guide	1	MPN400063	M584483
Retaining Ring	1	MPN400064	M91365
Spacer MPVE35	1	MPN098074	M584473
Yoke MPVE35	1	MPN098076	M631567
Limitter (2pc Included)	2 REQ.	MPN093107	M690796
Gasket	1	MPN400065	M526631
Seal Kit	1	MPN400066	M102262
Saddle Bearing (N) MPVH74 (each)	1	MPN098399	M513927
Saddle Bearing (W) MPVH74 (each)	1	MPN098400	M513926



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# PISTON PRODUCT LISTING

## VICKERS® MPVH98 / MPVE47

DESCRIPTION	QTY	METARIS #	REFERENCE #
<b>PUMP - MPVH98</b>			
<b>PUMP - MPVE47 Replacement* MPVE Adapter Kit** Thru Drive Option</b>	<b>1</b>	<b>See Model Code for Configurations</b>	
Rotating Group Assembly MPVH98	1	MPN098419	M877422
Rotating Group Assembly MPVE47	1	MPN098554	M938103
Barrel	1	MPN091101	M680627
Piston (EACH)	9 REQ.	MPN091100	M02-152400
Piston Kit (SET)	1	MPN098553	M926246
Shoe Cage {Retainer Plate}	1	MPN025013	M584539
Valve Block - RH	1	MPN098098	M928635
Valve Block - LH	1	MPN091104	M928684
Valve Block Metric -LH	1	MPN091105	M928685
Mobile Valve Plate - LH	1	MPN091106	M584540
Mobile Valve Plate - RH	1	MPN091107	M627371
Industrial Valve Plate - RH	1	MPN090489	M514122
Industrial Valve Plate - LH	1	MPN090503	M514120
Yoke 1		MPN090508	M513629
Saddle Bearing (W)	1	MPN095061	M513911
Saddle Bearing (N)	1	MPN095062	M513912
Front Shaft Bearing	1	MPN092123	M388154
Rear Shaft Bearing	1	MPN092126	M413603
Shaft (Keyed) - #1	1	MPN091568	M527167
Shaft (Splined) - #2	1	MPN090488	M513627
Shaft (Threaded-Keyed) - #5	1	MPN093431	M883254
Shaft Thru-Drive (Splined) - #2	1	MPN101374	M860679
Shaft Thru-Drive (Splined) - #3	1	MPN101416	M864453
Shaft Thru-Drive (Threaded-Keyed) - #5	1	MPN109001	M500613
Spacer MPVH98 (2pc Included)	2 REQ.	MPN092271	M513625
Spacer MPVE47	1	MPN098073	M584545
Spring Guide	1	MPN091596	M584546
Spring	1	MPN091597	M627192
Spring Guide	1	MPN091594	M584547
Retaining Ring	1	MPN091595	M102038
Yoke - MPVE27	1	MPN098077	M584531
Limiter (Pair)	2 REQ.	MPN091103	M513626
Load Sensing Control Valve	1	MPN090694	M02-125161



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# PISTON PRODUCT LISTING

## VICKERS® MPVH98 / MPVE47 - CONT'D

Standard 'C' Compensator	1	MPN090509	M02-125160
Shaft Seal	1	MPN091827	M589332
Gasket (Metal)	1	MPN091593	M513631
Seal Kit	1	MPN092717	M102264

## VICKERS® MPVH131

DESCRIPTION	QTY	METARIS #	REFERENCE #
<b>PUMP - MPVH131</b>	<b>1</b>	<b>See Model code for Configurations</b>	
Rotating Group Assembly	1	MPN098425	M877419
Barrel	1	MPN093699	M680628
Piston (EACH)	9 REQ.	MPN025003	M159749
Shoe Cage {Retainer Plate}	1	MPN025011	M683791
Valve Plate - LH	1	MPN095223	M527163
Valve Plate - RH	1	MPN095224	M527164
Yoke	1	MPN095225	M692941
Spacer Kit (2 pcs included)	2	MPN095226	M526757
Limitter (2 pcs included)	1	MPN095227	M526758
Saddle Bearing (W)	1	MPN098401	M692949
Saddle Bearing (N)	1	MPN098402	M692948
Gasket (Metal)	1	MPN107566	M526760
Seal Kit	1	MPN099711	M102266

## PUMP WEIGHTS - KG (LB)

SIZE	STANDARD UNIT	THRU-DRIVE UNIT
MPVH57	30-36 (66-79)	31-37 (68-82)
MPVH74	39-45 (86-99)	42-48 (93-106)
MPVH98	43-49 (95-108)	44-50 (97-110)
MPVH131	60-66 (132-145)	62-68 (137-150)
MPVE27	32-38 (69-83)	33-39 (71-85)
MPVE35	41-47 (89-103)	44-50 (96-109)
MPVE47	45-51 (98-111)	46-52 (100-113)
MPVE62	62-68 (135-148)	64-70 (140-153)



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O18 - BUILD CODES

**MA10V(S)O18-DFR-31R-PKC-62N00**

↑            ↑    ↑            ↑    ↑    ↑    ↑    ↑    ↑    ↑  
**A            B C            D            E F G H I            J            K**

<u>CODE</u>	<u>DESCRIPTION</u>
<b><u>A. TYPE</u></b>	
MA10V/31	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
18	Flow Vg max - 18cm (cu.in. 1.10)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
31	Series 31
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
P	18 series Metric keyed shaft (18mm)
K	18 series SAE keyed shaft (.750 dia)
U	18 series SAE splined shaft (9 tooth-.625)
S	18 series SAE splined shaft (11 tooth - .750)
<b><u>I. MOUNT</u></b>	
A	ISO 2-Bolt mount (31 design only)
C	SAE 2-Bolt mount
<b><u>J. PORTING</u></b>	
62	Side Port Flange (U.N.C mounting screws)
12	Side Port Flange (Metric mounting screws)
<b><u>K. COVER TYPE</u></b>	
N00	Standard Cover w/o Thru-Drive
K01	82-2 SAE A mount (16-4 SAE "A" coupling)



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O18 - SERIES 31

DESCRIPTION	PORTING		
<b>PUMP - MA10V(S)O18**62N00</b>	SAE - SIDE PORTS		
<b>PUMP - MA10V(S)O18**12N00</b>	METRIC - SIDE PORTS		
<b>THRU DRIVE OPTION</b>	THE THRU DRIVE (K** OPTION) INCLUDES COUPLING AND HARDWARE		
<b>K01 - SAE A Mount (9 Tooth)</b>			
DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B18-72-110	M925458
RETAINER PLATE	1	B18-75-100	M946784
BALL GUIDE	1	B18-75-200	M944741
BARREL	1	B18-73-000	M940734
SPRING - SEAT	1	B18-78-000	M934827
SPRING	1	B18-76-100	M933409
RETAINER	1	X05-02-25120	M934832
LENS PLATE - LEFT	1	B18-74-200	M940732
LENS PLATE - RIGHT	1	B18-74-100	M941477
PIN (EACH)	3 REQ.	B18-77-500	M934826
Shaft (Metric) - Code P	1	B18-50-291	M948585
Shaft (Splined) - Code S	1	B18-50-361	M948588
Shaft (Keyed) - Code K	1	B18-50-161	M948587
Shaft (Splined) - Code U		B18-50-311	M932607
ROTARY GROUP L.H.	1	B18-70-200	M944801
ROTARY GROUP R.H.	1	B18-70-100	M940435
YOKE L.H.	1	B18-43-210	M960983
YOKE R.H.	1	B18-43-110	M240-5221
CONTROLLER (DFR/DFR1)***	1	B00-30-100	M907094 / M907096
CONTROLLER (DRG)***	1	B00-30-400	M916069
CONTROLLER (DR)***	1	B00-30-100	M942581 / M907370
SHAFT BEARING - CUP/CONE	1	X03-33-12245	M70109-005
REAR BEARING - CUP/CONE	1	MPN101572	M772968
SADDLE BEARING (EACH)	2 REQ.	B18-03-602	M925255
CONTROL PISTON ASSY	1	B18-40-100	M940417
SEAL KIT	1	B18-80-100F	M937565
SEAL KIT - VITON	1	B18-80-200F	M941171



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# PISTON PRODUCT LISTING

## MA10V(S)O28 - BUILD CODES

### MA10V(S)O28-DFR-31R-PKC-62N00

↑                    ↑    ↑            ↑    ↑    ↑    ↑    ↑    ↑    ↑  
**A                    B C        D            E F G H I    J        K**

<u>CODE</u>	<u>DESCRIPTION</u>
<b><u>A. TYPE</u></b>	
MA10V/31	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
28	Flow Vg max - 28cm (cu.in. 1.71)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DFLR	Pressure, Flow and Torque Control
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
31	Series 31
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
P	28 series Metric keyed shaft (DIN 6885) 22mm
K	28 series SAE keyed shaft (.875 dia)
C	28 series Tapered w/ woodruff key
R	28 Series SAE Splined Reinforced for Thru-Drive
S	28 series SAE splined shaft (13 tooth - .875)
<b><u>I. MOUNT</u></b>	
A	ISO 2-Bolt mount (31 design only)
C	SAE 2-Bolt mount
<b><u>J. PORTING</u></b>	
62	Side Port Flange (U.N.C mounting screws)
61	Rear port Flange (U.N.C mounting screws)
11	Rear port Flange (metric mounting screws)
12	Side Port Flange (Metric mounting screws)



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O28 - BUILD CODES - CONT'D

### K. COVER TYPE

<b>N00</b>	Standard Cover w/o Thru-Drive
<b>K01</b>	82-2 SAE A mount (16-4 SAE "A" coupling)
<b>K02</b>	101-2 SAE B Mount (22-4 SAE "B" coupling)
<b>K03</b>	SAE B Mount - SAE B Keyed

## REXROTH® MA10V(S)O28 - SERIES 31

DESCRIPTION	PORTING		
<b>PUMP - MA10V(S)O28**62N00</b>	SAE - SIDE PORTS		
<b>PUMP - MA10V(S)O28**12N00</b>	METRIC - SIDE PORTS		
<b>PUMP - MA10V(S)O28**61N00</b>	SAE - REAR PORTS		
<b>PUMP - MA10V(S)O28**11N00</b>	METRIC - REAR PORTS		
<b>DFLR CONTROL OPTION</b>			
<b>THRU DRIVE OPTION - K**</b>			
<b>K01</b> -- SAE A Mount (9 Tooth)	<b>THE THRU DRIVE (K** OPTION)</b> <b>INCLUDES COUPLING AND HARDWARE</b>		
<b>K02</b> -- SAE B Mount (13 Tooth)			
<b>K03</b> -- SAE B Mount -SAE B Keyed			
DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B28-72-110	M925459 / M967658
RETAINER PLATE	1	B28-75-100	M942514
BALL GUIDE	1	B28-75-200	M944743
BARREL	1	B28-73-000	M907125 / M2407325
SPRING - SEAT	1	X05-04-33150	M2400717 / M918933
SPRING	1	B28-76-100	M924891
RETAINER	1	B28-78-000	M939048 / M2400716
LENS PLATE - LEFT	1	B28-74-200	M936647
LENS PLATE - RIGHT	1	B28-74-100	M936648
PIN (EACH)	3 REQ.	B28-77-500	M785407
SHAFT METRIC (CODE P)	1	B28-50-291	M923797 / M2415569
SHAFT SPLINED (CODE S)	1	B28-50-321	M947780 / M923789
SHAFT SPLINED (THRU DRIVE CODE S)	1	B28-50-322	M926327 / M2417371
SHAFT KEYED (CODE K)	1	B28-50-121	M926330
SHAFT METRIC (THRU DRIVE CODE P)	1	B28-50-292	M925275 / M2415913
SHAFT KEYED (THRU DRIVE CODE K)	1	B28-50-122	M926328
SHAFT SPLINED (THRU DRIVE CODE R)	1	B28-50-822	M962290



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O28 - SERIES 31 - CONT'D

DESCRIPTION	QTY	METARIS #	REFERENCE #
ROTARY GROUP L.H.	1	B28-70-200	M947782 / M958654
ROTARY GROUP R.H.	1	B28-70-100	M947781
YOKE L.H.	1	B28-43-220	M960999 / M947785
YOKE R.H.	1	B28-43-120	M960813 / M947783
CONTROLLER (DFR/DFR1)***	1	B00-30-100	M907094 / M907096
CONTROLLER (DRG)***	1	B00-30-400	M916069
CONTROLLER (DR)***	1	B00-30-100	M942581 / M907370
SHAFT BEARING - CUP/CONE	1	X03-33-12556	M70109-001
REAR BEARING - CUP/CONE	1	X03-33-11740	M70109-002
SADDLE BEARING (EACH)	2 REQ	B28-03-602	M902778 / M942158
THRU DRIVE COVER K01 (RH)*	1	B28-23-124	M5120-542-005
THRU DRIVE COVER K02 / K03 (RH)*	1	B28-24-124	M5120-542-006
THRU DRIVE COVER K01 (LH)*	1	B28-23-224	M5120-542-002
THRU DRIVE COVER K02 / K03 (LH)*	1	B28-24-224	M5120-542-003
CONTROL PISTON ASSY	1	B28-40-502	MBH00911164
COUPLING K01	1	B28-50-512	MBH00943539
COUPLING K02	1	B28-50-522	MBH00943542
COUPLING K03	1	B28-50-622	M764981
SEAL KIT	1	B28-80-100	M915845 / M5120-635-005
SEAL KIT - VITON	1	B28-80-200	M915845V / M5120-635-012

\*\*\* Controller Included with Pump

\* Does not include Coupling/Hardware



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O45 - BUILD CODES

**MA10V(S)O45-DFR-\*\*R-PKC-62N00**

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**A                    B C            D            E F G H I            J            K**

<u>CODE</u>	<u>DESCRIPTION</u>
<b><u>A. TYPE</u></b>	
MA10V/31/52	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31/52	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
45	Flow Vg max - 45cm (cu.in. 2.75)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DFLR	Pressure, Flow and Torque Control (31 Design Only)
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
52	Series 52
31	Series 31
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
P	45 series Metric keyed shaft (DIN 6885) 25mm
K	45 series SAE keyed shaft (1" dia)
U	45 series splined shaft (13 tooth - .875)
R	45 series splined shaft reinforced for thru-frive
W	45 series SAE splined shaft for thru-drive (13 tooth 7/8")
S	45 series splined shaft (15 tooth - 1")
<b><u>I. MOUNT</u></b>	
A	ISO 2-Bolt mount (31 design only)
C	SAE 2-Bolt mount



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O45 - BUILD CODES - CONT'D

### J. PORTING

62	Side Port Flange (U.N.C mounting screws)
61	Rear Port flange (U.N.C mounting screws)
11	Rear Port flange (metric mounting screws)
12	Side Port Flange (Metric mounting screws)

### K. COVER TYPE - Thru-Drive on 31-Design only

N00	Standard Cover w/o Thru-Drive
K01	82-2 SAE A mount (16-4 SAE "A" coupling)
K02	101-2 SAE B Mount (22-4 SAE "B" coupling)
K03	SAE B Mount - SAE B Keyed
K04	101-2 SAE B Mount (25-4 SAE "BB" coupling)
K05	SAE B Mount - SAE BB Keyed

## REXROTH® MA10V(S)O45 - SERIES 31 & 52

DESCRIPTION	PORTING		
PUMP - MA10V(S)O45**62N00	SAE - SIDE PORTS		
PUMP - MA10V(S)O45**12N00	METRIC - SIDE PORTS		
PUMP - MA10V(S)O45**64N00	SAE - THREADED PORTS (O-RING)		
PUMP - MA10V(S)O45**61N00	SAE - REAR PORTS		
PUMP - MA10V(S)O45**11N00	METRIC - REAR PORTS		
PUMP - MA10VG45DA2/10*-NSC***	SAE - SIDE PORTS		
PUMP - MA10VG45EP2/10*-NSC***	SAE - SIDE PORTS		
<b>DFLR CONTROL OPTION - 31 DESIGN ONLY</b>			
<b>THRU DRIVE OPTION - K** -- Available on 52 and 31 design units</b>			
K01 - SAE A Mount (9 Tooth)	THE THRU DRIVE (K** OPTION)		
K02 - SAE B Mount (13 Tooth)	INCLUDES COUPLING AND HARDWARE		
K03 - SAE B Mount (SAE B Keyed)			
K04 - SAE B Mount (15 Tooth)			
K05 - SAE B Mount (SAE BB Keyed)			
<b>PUMPS INCLUDE STANDARD SPLINED OR KEYED SHAFTS -- MULTI-PUMPS AVAILABLE IN SERIES 31 ONLY.</b>			
DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B45-72-110	M925460 / M963893
RETAINER PLATE	1	B45-75-100	M943627 / M978872
BALL GUIDE	1	B45-75-200	M941318
BARREL	1	B45-73-000	M907001
SPRING - SEAT	1	B45-78-000	M2400727 / M939056
SPRING	1	B45-76-100	M2400724 / M071072
RETAINER	1	X05-04-38150	M2400726 / M912520



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O45 - SERIES 31 & 52 - CONT'D

DESCRIPTION	QTY	METARIS #	REFERENCE #
LENS PLATE - LEFT	1	B45-74-200	M936644
LENS PLATE - RIGHT	1	B45-74-100	M936645
PIN (EACH)	3 REQ.	B45-77-500	M941277
SHAFT SPLINED (CODE U)	1	B45-50-321	M987649 / M926325
SHAFT SPLINED (CODE S)	1	B45-50-331	M923309 / M947729 / M992268
SHAFT KEYED (CODE K)	1	B45-50-131	M923308 / M947788 / M2417380
SHAFT METRIC (CODE P)	1	B45-50-291	M923742 / M947820 / M2417378
SHAFT SPLINED (THRU DRIVE CODE R)	1	B45-50-832	M962291/ M2417400
SHAFT SPLINED (THRU DRIVE CODE U)	1	B45-50-322	M926326 / M2417398
SHAFT KEYED (THRU DRIVE CODE K)	1	B45-50-132	M926335
SHAFT SPLINED (THRU DRIVE CODE S)	1	B45-50-332	M923743
SHAFT KEYED (THRU DRIVE METRIC CODE P)	1	B45-50-292	M923310
ROTARY GROUP L.H.	1	B45-70-200	M947789 / M914154
ROTARY GROUP R.H.	1	B45-70-100	M947730 / M900510
YOKE L.H. (52 Design)	1	B46-43-210	M929316
YOKE R.H. (52 Design)	1	B46-43-110	M928665
YOKE L.H. (31 Design)	1	B45-43-220	M961026 / M947791
YOKE R.H. (31 Design)	1	B45-43-120	M961024 / M947790
CONTROLLER (DFR/DFR1)***	1	B00-30-100	M907094 / M907096
CONTROLLER (DRG)***	1	B00-30-400	M916069
CONTROLLER (DR)***	1	B00-30-100	M942581 / M907370
SHAFT BEARING - CUP/CONE	1	X03-33-12957	M70109-004
REAR BEARING - CUP/CONE	1	X03-33-12245	M70109-005
SADDLE BEARING - 52 design (EACH)	2 REQ	B46-03-602	M933793
SADDLE BEARING - 31 design (EACH)	2 REQ	B45-03-602	M900198
THRU DRIVE COVER K01 (RH)*	1	B45-23-135	M5130-542-006
THRU DRIVE COVER K02 / K04 (RH)*	1	B45-24-135	M5130-542-007
THRU DRIVE COVER K01 (LH)*	1	B45-23-235	M5130-542-002
THRU DRIVE COVER K02 / K04 (LH)*	1	B45-24-235	M5130-542-003
CONTROL PISTON ASSY - 31 design	1	B45-40-501	MBH00910852
COUPLING K01	1	B45-50-512	MBH00943529
COUPLING K02	1	B45-50-522	MBH00943531
COUPLING K03	1	B45-50-622	M763764
COUPLING K04	1	B45-50-532	MBH00738476
COUPLING K05	1	B45-50-632	M766933
SEAL KIT - 31 Design	1	B45-80-100	M925885 / M5130-635-011
SEAL KIT - VITON - 31 Design	1	B45-80-200	M925885V / M5130-635-013
SEAL KIT - 52 Design	1	B46-80-100	M963478
SEAL KIT - VITON - 52 Design	1	B46-80-200	M963478V



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O60 - BUILD CODES

**MA10V(S)O60-DFR-31R-PKC-62N00**

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**A                    B C            D            E F G H I            J            K**

CODE	DESCRIPTION
<b><u>A. TYPE</u></b>	
MA10V/31	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
60	Flow Vg max - 60cm (cu.in. 3.66)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
52	Series 52
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
K	60 series Keyed shaft (1.250 dia)
U	60 series SAE splined shaft (15 tooth - 1")
S	60 series SAE splined shaft (14 tooth 1.250")
<b><u>I. MOUNT</u></b>	
D	SAE 4-bolt mount (5" pilot)
C	SAE 2-Bolt mount
<b><u>J. PORTING</u></b>	
62	Side Port Flange (U.N.C mounting screws)
61	Rear Port Flange (U.N.C mounting screws)
12	Side Port Flange (Metric mounting screws)
<b><u>K. COVER TYPE</u></b>	
N00	Standard Cover w/o Thru-Drive



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O60 - SERIES 52

DESCRIPTION	PORTING
PUMP - MA10V(S)O60**62N00	SAE - SIDE PORTS
PUMP - MA10V(S)O60**12N00	METRIC - SIDE PORTS
PUMP - MA10V(S)O60**61N00	SAE - REAR PORTS
PUMP - MA10V(S)O60**11N00	METRIC - REAR PORTS
PUMP - MA10V(S)O63**12/62/11/61N00	REPLACEMENT FOR A10V(S)O63

  

DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B60-72-110	M2418043
RETAINER PLATE	1	B60-75-300	M2413087
BALL GUIDE	1		M973533
BARREL	1	B60-73-000	M973540
SPRING - SEAT	1	B60-78-000	M2400742
SPRING	1	B60-76-100	M975251
RETAINER	1	MPN107182	M9156218
LENS PLATE - LEFT	1	B60-74-200	M2451807
LENS PLATE - RIGHT	1	B60-74-100	M978570
PIN (EACH)	3 REQ.	B60-77-500	M2400741
SHAFT METRIC (CODE P)	1		
SHAFT SPLINED (CODE S)	1	B60-50-341	M2413417
SHAFT SPLINED (CODE U)		B60-50-331	
SHAFT KEYED (CODE K)	1	B60-50-141	M2413414
ROTARY GROUP L.H.	1	B60-70-200	M926276
ROTARY GROUP R.H.	1	B60-70-100	M973744
YOKE L.H.	1	B60-43-210	M2437116
YOKE R.H.	1	B60-43-110	M973545
CONTROLLER (DFR/DFR1)***	1	B00-30-100	M907094 / M907096
CONTROLLER (DRG)***	1	B00-30-400	M916069
CONTROLLER (DR)***	1	B00-30-100	M942581 / M907370
SHAFT BEARING - CUP/CONE	1	X03-33-13573	M70109-007
REAR BEARING - CUP/CONE	1		
SADDLE BEARING -R	1	B60-03-612	M2413837
SADDLE BEARING - L	1	B60-03-622	M2413836
CONTROL PISTON ASSY	1		M993694
SEAL KIT	1	B60-80-100	M408523
SEAL KIT - VITON	1	B60-80-200	M408523V



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O71 - BUILD CODES

### MA10V(S)O71-DFR-31R-PKC-62N00

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**A                    B C        D            E F G H I        J        K**

CODE	DESCRIPTION
<b><u>A. TYPE</u></b>	
MA10V/31	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
71	Flow Vg max - 71cm (cu.in. 4.33)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DFLR	Pressure, Flow and Torque Control
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
31	Series 31
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
P	71 series Metric Keyed shaft (DIN 6885) 32mm
K	71 series SAE keyed shaft (1.250 dia)
S	71 series splined shaft (14 tooth - 1.250)
R	71 series SAE splined shaft reinforced for thru-drive
<b><u>I. MOUNT</u></b>	
A	ISO 2-Bolt mount (31 design only)
C	SAE 2-Bolt mount
<b><u>J. PORTING</u></b>	
11	Rear port flange (1" & 1 1/4" comb. Pressure port) metric mounting screws
12	Side port flange (1" & 1 1/4" comb. Pressure port) metric mounting screws
41	Rear port flange (1" pressure) metric mounting screws
42	Side port flange (1" pressure) metric mounting screws



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O71 - BUILD CODES - CONT'D

43	Rear port f ange (1 1/4" pressure port) metric mounting screws
44	Side port f ange (1 1/4" pressure port) metric mounting screws
61	Rear port f ange (1" & 1 1/4" comb. Pressure port) U.N.C mounting screws
62	Side port f ange (1" & 1 1/4" comb. Pressure port) U.N.C mounting screws
91	Rear port f ange (1" pressure) U.N.C mounting screws
92	Side port f ange (1" pressure) U.N.C mounting screws
93	Rear port f ange (1 1/4" pressure port) U.N.C mounting screws
94	Side port f ange (1 1/4" pressure port) U.N.C mounting screws

### K. COVER TYPE

N00	Standard Cover w/o Thru-Drive
K01	82-2 SAE A mount (16-4 SAE "A" coupling)
K02	101-2 SAE B mount (22-4 SAE "B" coupling)
K03	SAE B mount - SAE B Keyed
K04	101-2 SAE B mount (25-4 SAE "BB" coupling)
K05	SAE B mount - SAE BB Keyed
K07	127-2 SAE C mount (32-4 SAE "C" coupling)
K08	SAE C mount (SAE C Keyed)



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O71 - SERIES 31

DESCRIPTION	PORTING
<b>PUMP - MA10V(S)O71**62/92N00</b>	SAE - SIDE PORTS
<b>PUMP - MA10V(S)O71**12/42N00</b>	METRIC - SIDE PORTS
<b>PUMP - MA10V(S)O71**61/91N00</b>	SAE - REAR PORTS
<b>PUMP - MA10V(S)O71**11/41N00</b>	METRIC - REAR PORTS
<b>PUMP - MA10V(S)O74**62/92/12/42/11/41N00</b>	ALL TYPES AVAILABLE
<b>DFLR CONTROL OPTION</b>	
<b>THRU DRIVE OPTION - K**</b>	
<b>K01</b> - SAE A Mount (9 Tooth)	<i>THE THRU DRIVE (K** OPTION) INCLUDES COUPLING AND HARDWARE</i>
<b>K02</b> - SAE B Mount (13 Tooth)	
<b>K03</b> - SAE B Mount (SAE B Keyed)	
<b>K04</b> - SAE B Mount (15 Tooth)	
<b>K05</b> - SAE B Mount (SAE BB Keyed)	
<b>K07</b> - SAE C Mount (14 Tooth)	
<b>K08</b> - SAE C Mount (SAE C Keyed)	

DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B71-72-110	M720011 / M924554
RETAINER PLATE	1	B71-75-100	M919813
BALL GUIDE	1	B71-75-200	M749745
BARREL	1	B71-73-000	M907126
SPRING - SEAT	1	B71-78-000	M720186
SPRING	1	B71-76-100	M720178
RETAINER	1	X05-04-45180	M919038
LENS PLATE - LEFT	1	B71-74-200	M936640
LENS PLATE - RIGHT	1	B71-74-100	M936641
PIN (EACH)	3 REQ.	B71-77-500	M785423
SHAFT METRIC (CODE P)	1	B71-50-291	M923751 / M947821 / M995064
SHAFT SPLINED (CODE S)	1	B71-50-341	M923553 / M947796 / M987676
SHAFT SPLINED CAT	1	B71-50-343	M6E6163
SHAFT KEYED (CODE K)	1	B71-50-141	M926333 / M2412021
SHAFT SPLINED (THRU DRIVE CODE S)	1	B71-50-342	M923471
SHAFT KEYED (THRU DRIVE CODE K)	1	B71-50-142	M926344 / M2412030
SHAFT METRIC (THRU DRIVE CODE P)	1	B71-50-292	M925556 / M987680
SHAFT SPLINED CAT (SPECIAL X-LONG)	1	B71-50-344	M1970674
ROTARY GROUP L.H.	1	B71-70-200	M947802 / M911929
ROTARY GROUP R.H.	1	B71-70-100	M947801 / M956007
YOKE L.H.	1	B71-43-220	M904689 / M947805
YOKE R.H.	1	B71-43-120	M903881 / M947803
CONTROLLER (DFR/DFR1)***	1	B00-30-100	M907094 / M907096
CONTROLLER (DRG)***	1	B00-30-400	M916069



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O71 - SERIES 31 - CONT'D

DESCRIPTION	QTY	METARIS	# REFERENCE #	R
CONTROLLER (DR)***	1	B00-30-100	M942581 / M907370	
SHAFT BEARING - CUP/CONE	1	X03-33-13573	M70109-007	
REAR BEARING - CUP/CONE	1	X03-33-12557	M70109-008	
SADDLE BEARING (EACH)	2 REQ	B71-03-602	M902777	
BEARING KIT	1	B71-03-800	M5140-635-014	
THRU DRIVE COVER K01 (RH)*	1	B71-23-196	M5140-542-017	
THRU DRIVE COVER K02 / K04 (RH)*	1	B71-24-196	M5140-542-019	
THRU DRIVE COVER K07 / K08 (RH)*	1	B71-25-196	M5140-542-021	
THRU DRIVE COVER K01 (LH)*	1	B71-23-296	M5140-542-018	
THRU DRIVE COVER K02 / K04 (LH)*	1	B71-24-296	M5140-542-020	
THRU DRIVE COVER K07 / K08 (LH)*	1	B71-25-296	M5140-542-022	
CONTROL PISTON ASSY	1	B71-40-501	M910873 / 910870	
COUPLING K01	1	B71-50-512	MBH00943545	
COUPLING K02	1	B71-50-522	MBH00943547	
COUPLING K03	1	B71-50-622	M795682	
COUPLING K04	1	B71-50-532	MBH00943548	
COUPLING K05	1	B71-50-632	M764906	
COUPLING K07	1	B71-50-542	MBH00943549	
COUPLING K08	1	B71-50-642	M766895	
SEAL KIT	1	B71-80-100	M915846 / M5140-635-005	
SEAL KIT - VITON	1	B71-80-200	M915846V / M5140-635-007	



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O100 - BUILD CODES

**MA10V(S)O100-DFR-31R-PKC-62N00**

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**A                    B C            D            E F            G H I            J            K**

<b>CODE</b>	<b>DESCRIPTION</b>
<b><u>A. TYPE</u></b>	
MA10V/31	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
18	Flow Vg max - 18cm (cu.in. 1.10)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DFLR	Pressure, Flow and Torque Control
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
31	Series 31
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
P	18 series Metric keyed shaft (18mm)
K	18 series SAE keyed shaft (.750 dia)
U	18 series SAE splined shaft (9 tooth-.625)
S	18 series SAE splined shaft (11 tooth - .750)
<b><u>I. MOUNT</u></b>	
A	ISO 2-Bolt mount (31 design only)
C	SAE 2-Bolt mount
<b><u>J. PORTING</u></b>	
62	Side Port Flange (U.N.C mounting screws)
12	Side Port Flange (Metric mounting screws)
<b><u>K. COVER TYPE</u></b>	
N00	Standard Cover w/o Thru-Drive
K01	82-2 SAE A mount (16-4 SAE "A" coupling)



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O100 - SERIES 31

DESCRIPTION	PORTING		
PUMP - MA10V(S)O100**62N00	SAE - SIDE PORTS		
PUMP - MA10V(S)O100**12N00	METRIC - SIDE PORTS		
PUMP - MA10V(S)O100**61N00	SAE - REAR PORTS		
PUMP - MA10V(S)O100**11N00	METRIC - REAR PORTS		
<b>DFLR CONTROL OPTION</b>			
<b>THRU DRIVE OPTION - K**</b>			
K01 - SAE A Mount (9 Tooth)	<i>THE THRU DRIVE (K** OPTION) INCLUDES COUPLING AND HARDWARE</i>		
K02 - SAE B Mount (13 Tooth)			
K04 - SAE B Mount (15 Tooth)			
K07 - SAE C Mount (14 Tooth)			
K08 - SAE C Mount (SAE C Keyed)			
K24 - SAE C Mount (17 Tooth)			
K52 - SAE A Mount - (11 Tooth)			
DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B10-72-110	M925463 / M2418003
RETAINER PLATE	1	B10-75-100	M967136 / M996526
BALL GUIDE	1	B10-75-200	M906813 / M944744
BARREL	1	B10-73-000	M906882 / M2407207
SPRING - SEAT	1	B10-78-000	M906880
SPRING	1	MPN400031	M906894
RETAINER	1	X05-02-62200	M791555
LENS PLATE - LEFT	1	B10-74-200	M936639
LENS PLATE - RIGHT	1	B10-74-100	M936661
PIN (EACH)	3 REQ.	B10-77-500	M906879
SHAFT SPLINED (CODE U)	1	B10-50-341	M2410600 / M923312
SHAFT SPLINED (CODE S)	1	B10-50-381	M924553 / M987698
SHAFT KEYED (CODE K)	1	B10-50-181	M923317 / M2410595
SHAFT METRIC (CODE P)	1	B10-50-291	M925162 / M987699
SHAFT SPLINED (THRU DRIVE CODE R)	1	B10-50-882	M993523
SHAFT SPLINED (THRU DRIVE CODE W)	1	B10-50-842	M987686
SHAFT METRIC (THRU DRIVE CODE P)	1	B10-50-292	M923709 / M987697
SHAFT KEYED (THRU DRIVE CODE K)	1	B10-50-182	M924552 / M2410605
SHAFT SPLINED (THRU DRIVE CODE S)	1	B10-50-382	M923316
ROTARY GROUP L.H.	1	B10-70-200	M907681 / M948604
ROTARY GROUP R.H.	1	B10-70-100	M948603 / M906871
YOKE L.H.	1	B10-43-220	M948606 / M906886
YOKE R.H.	1	B10-43-120	M961050 / M948605
CONTROLLER (DFR/DFR1)*	1	B00-30-100	M907094
CONTROLLER (DRG)*	1	B00-30-400	M916069
CONTROLLER (DR)*	1	B00-30-100	M942581 / M907370



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O100 - SERIES 31 - CONT'D

DESCRIPTION	QTY	METARIS #	REFERENCE #
SHAFT BEARING - CUP/CONE	1	X03-33-14587	M906908
REAR BEARING - CUP/CONE	1	X03-333-13062	M906909
SADDLE BEARING (EACH)	2 REQ	B10-03-602	M906881
CONTROL PISTON ASSY	1	B10-40-501	M913784
COUPLING K01	1	B10-50-512	
COUPLING K02	1	B10-50-522	
COUPLING K04	1	B10-50-532	
COUPLING K07	1	B10-50-542	
COUPLING K08	1	B10-50-642	
COUPLING K24	1	B10-50-582	
COUPLING K52	1	B10-50-592	
SEAL KIT	1	B10-80-100	M915847
SEAL KIT - VITON	1	B10-80-200	M915847V



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O140 - BUILD CODES

**MA10V(S)O140-DFR-31R-PKC-62N00**

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**A                    B C            D            E F    G H I    J    K**

<u>CODE</u>	<u>DESCRIPTION</u>
<b><u>A. TYPE</u></b>	
MA10V/31	Swashplate design variable, normal pressure 280 bar (4000psi), peak pressure 350bar (5100psi)
MA10VS/31	Swashplate design variable, c/w max flow adj. 280 bar (4000psi), peak pressure 350bar (5100psi)
<b><u>B. MODE OF OPERATION</u></b>	
O	Mode of Operation (Pump Open Circuit)
<b><u>C. SIZE</u></b>	
18	Flow Vg max - 18cm (cu.in. 1.10)
<b><u>D. CONTROLLER TYPE</u></b>	
DFR	Pressure and Flow Control
DFR1	Pressure and Flow Control - Bleed Down Orifice Plugged
DR	Pressure Control
DFLR	Pressure, Flow and Torque Control
DRG	Remote Pressure Control
<b><u>E. SERIES</u></b>	
31	Series 31
<b><u>F. ROTATION</u></b>	
R	Right (clockwise rotation)
L	Left (counter-clockwise rotation)
<b><u>G. SEALS</u></b>	
P	Buna Seals
V	Viton Seals (fluorocarbon)
<b><u>H. SHAFT TYPE</u></b>	
P	18 series Metric keyed shaft (18mm)
K	18 series SAE keyed shaft (.750 dia)
U	18 series SAE splined shaft (9 tooth-.625)
S	18 series SAE splined shaft (11 tooth - .750)
<b><u>I. MOUNT</u></b>	
A	ISO 2-Bolt mount (31 design only)
C	SAE 2-Bolt mount
<b><u>J. PORTING</u></b>	
62	Side Port Flange (U.N.C mounting screws)
12	Side Port Flange (Metric mounting screws)
<b><u>K. COVER TYPE</u></b>	
N00	Standard Cover w/o Thru-Drive
K01	82-2 SAE A mount (16-4 SAE "A" coupling)



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# PISTON PRODUCT LISTING

## REXROTH® MA10V(S)O140 - SERIES 31

DESCRIPTION	PORTING		
PUMP - MA10V(S)O140**62N00	SAE - SIDE PORTS		
PUMP - MA10V(S)O140**12N00	METRIC - SIDE PORTS		
<b>DFLR CONTROL OPTION</b>			
<b>THRU DRIVE OPTION - K**</b>			
K07 -SAE C Mount (14 Tooth)	<b>THE THRU DRIVE (K** OPTION) INCLUDES COUPLING AND HARDWARE</b>		
K17 - SAE D Mount (13 Tooth)			
DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	9 REQ.	B14-72-110	M925464
RETAINER PLATE	1	B14-75-100	M996527
BALL GUIDE	1	B14-75-200	M944745
BARREL	1	B14-73-000	M945341
SPRING - SEAT	1	B14-78-000	M917727
SPRING	1	B14-76-100	M918171
RETAINER	1	*****	918189
LENS PLATE - LEFT	1	B14-74-200	M975126
LENS PLATE - RIGHT	1	B14-74-100	M973907 / M975125
PIN (EACH)	3 REQ.	B14-77-500	M917728
SHAFT SPLINED (CODE S)	1	B14-50-351	M923593 / M948614
SHAFT KEYED (CODE K)	1	B14-50-151	M923315 / M948513
SHAFT METRIC (CODE P)	1	B14-50-291	M923594 / M948612
SHAFT KEYED (THRU-DRIVE CODE K)	1		M923314
SHAFT SPLINED (THRU-DRIVE CODE S)	1	B14-50-352	M923595
SHAFT METRIC (THRU-DRIVE CODE P)	1	B14-50-292	M923313
ROTARY GROUP L.H.	1	B14-70-200	M948618
ROTARY GROUP R.H.	1	B14-70-100	M948617
YOKE L.H.	1	B14-43-210	M948620
YOKE R.H.	1	B14-43-110	M948619
CONTROLLER	1		M920180
CONTROLLER	1		M920184
ADAPTER ASSY.			M984002
SHAFT BEARING - CUP/CONE	1	*****	910918203
REAR BEARING - CUP/CONE	1	*****	910918201
SADDLE BEARING (EACH)	2	B14-03-602	M918174
COUPLING K07	1	B14-50-542	M921508
COUPLING K17	1	B14-50-552	M932172
SEAL KIT	1	B14-80-100	M941169
SEAL KIT - VITON	1	B14-80-200	M941169V



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# PISTON PRODUCT LISTING

## REXROTH® MA8VO107

DESCRIPTION	QTY	METARIS #	REFERENCE #
ROTATING GROUP (DRIVE)	1	B87-70-112	M428522 / M441183
ROTATING GROUP (DRIVE) 215/225 Exc.	1		M9T3714
ROTATING GROUP (IDLER)	1	B87-70-211	M428185 / M441184
ROTATING GROUP (w/o SHAFT)	1	B87-70-000	M434586
VALVE PLATE - LEFT	1	B87-74-200	M650454
VALVE PLATE - RIGHT	1	B87-74-100	M650453
CYLINDER BARREL	1	B87-73-000	M430886
SCREW (EACH)	14 REQ.	X41-21-05016	M449235
PISTON RING (EACH)	7 REQ.	B87-72-300	M156248
RETAINER PLATE	1	B87-75-100	M444764
PISTON (EACH)	7 REQ.	B87-72-110	M443469
PISTON WITH RING (EACH)	7 REQ.	B87-72-120	M2021910
SPACER	1	AS REQUIRED	AS REQUIRED
SHIM	1	AS REQUIRED	AS REQUIRED
DISC SPRING (EACH)	4 REQ.	B87-76-200	M409134
CENTER PIN	1	B87-77-400	M410289
DRIVE SHAFT (Main)	1	B87-50-399	M430673
DRIVE SHAFT (Hub)	1	B87-50-999	M411723 / M425724
DRIVE SHAFT (24 Tooth) 215/225 Exc.	1	KH22-4T-22	M9T3384
SHAFT BEARING (ASSEMBLY)	1	MPN098921	M154486
SEAL KIT	1	B87-80-200	M270941
CUP COLLAR	1	B87-92-051	M412570



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# PISTON PRODUCT LISTING

## REXROTH® MA8VO160

DESCRIPTION	QTY	METARIS #	REFERENCE #
ROTARY GROUP - DRIVE	1		M514405
ROTARY GROUP - IDLER	1		M514413
ROTARY GROUP w/o SHAFT (LH/RH)	1	B86-70-1(2)00	M514406
DRIVE SHAFT - DRIVE	1	MPN400055	M436475
DRIVE SHAFT - IDLER	1	MPN400056	M436474
VALVE PLATE - LEFT	1	B86-74-200	M650456
VALVE PLATE - RIGHT	1	B86-74-100	M650455
CYLINDER BARREL	1	B86-73-000	M430794
SCREW (EACH)	14 REQ.	X41-21-06020	M831108
PISTON RING (EACH)	7 REQ.	B86-72-300	M9831897
RETAINER PLATE	1	B86-75-100	M6269
PISTON (EACH)	7 REQ.	B86-72-110	M440274
PISTON WITH RING (EACH)	7 REQ.	B86-72-120	M2021911
SPACER	1	AS REQUIRED	AS REQUIRED
DISC SPRING (EACH)	4 REQ.	MPN025016	M410551
CENTER PIN	1	B86-77-400	M410552
BEARING (Main)*	1	MPN400057	M156512
BEARING - SHAFT	1	MPN400058	M23232
CUP COLLAR	1	MPN025018	M414031

## REXROTH® MA2F107/MA8V107

DESCRIPTION	QTY	METARIS #	REFERENCE #
PISTON (EACH)	7 REQ.	B27-72-110	M426823 / M410321
RETAINER PLATE	1	B87-75-100	M444764
BARREL	1	B27-73-010	M421288 / M421309
SPRING 1		B27-76-200	M400105
CENTER PIN	1	B27-77-400	M409486
VALVE CONTROL PLATE -RH	1	B27-74-100	M650851



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# PISTON PRODUCT LISTING

## CATERPILLAR® 215 EXCAVATORS

Used in Pump #'s : M8J6853, M4T7025, M9T1062, M1U4748

DESCRIPTION	ALTERNATIVE #	REPLACES #
RETAINER PLATE	M4T7022	M9J7858, M8J6328
THRUST PLATE	M1U0406	M9J7857, M8J6346
VALVE PLATE	M1U3444	
PISTON (EACH)	M8J2037	
SEAL KIT	M3G1707	

## CATERPILLAR® 225 EXCAVATORS

Used in Pump #'s : M3G3287, M9J9362, M4T7028, M8J7823, M4T7426, M8J2344, M8J4379

DESCRIPTION	ALTERNATIVE #	REPLACES #
VALVE PLATE	M3G2859	M9J2484, M8J2024, M9J1283
CYLINDER BARREL	M9J2417	M9J8266, M8J5038, M9J3969
RETAINER PLATE	M4T7024	M8J9966
PISTON (EACH)	M1U2738	M9J4936, M9J4935, M8J1913, M8J1912
THRUST PLATE	M3G9671	M8J0488, M9J0560
FRONT - CONE	M7K8877	
FRONT - CUP	M7K8876	
REAR - CONE	M8J0423	
REAR - CUP	M8J0422	
SHAFT	M8J8654	
SEAL KIT	M3G1688	

## CATERPILLAR® 235 EXCAVATORS

Used in Pump #'s : M8J1905, M1U4722, M4T2507, M7J8240, M4T4026

DESCRIPTION	ALTERNATIVE #	REPLACES #
VALVE PLATE	M6E1332	M9J3526, M8J6900
CYLINDER BARREL	M9J8667	M8J7332, M3G2736, M9T7356
RETAINER PLATE	M4T7023	M6C0415, M3G150, M8J0179
PISTON (EACH)	M4T3122	M8J6897, M4T3154
THRUST PLATE	M3G4779	M8J0171
FRONT - CONE	M7J8893	
FRONT - CUP	M7J8894	
REAR - CONE	M3P1210	
REAR - CUP	M8J0412	
SIDE - CUP	M2D9190	
SIDE - CONE	M2D9191	
SHAFT -245 only	M8J6802	
SEAL KIT	M8J8652	



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# PISTON PRODUCT LISTING

## CATERPILLAR® 245 EXCAVATORS & 992C WHEEL LOADERS

Used in Pump #'s : M4T2506, M8J4380, M4T7027, M3G7230, M1U3840, M3G2848, M1U477, M9J4834

DESCRIPTION	ALTERNATIVE #	REPLACES #
VALVE PLATE - 245 Only	M6E1332	M9J3526, M8J6900
VALVE PLATE - 992 Only	M6E1875	M3G1717
BARREL ASSEMBLY	M9J8667	M8J7332, M3G2736, M9T7356
RETAINER PLATE	M4T7023	M6C0415, M3G150, M8J0179
PISTON (EACH)	M4T3122	M8J6897, M4T3154
THRUST PLATE	M3G4779	M8J0171
FRONT - CONE	M7J8893	
FRONT - CUP	M7J8894	
REAR - CONE	M3P1210	
REAR - CUP	M8J0412	
SIDE - CUP	M2D9190	
SIDE - CONE	M2D9191	
SHAFT	M3G4604	
SEAL KIT	M8J8652	

## CATERPILLAR® 14G / 16G MOTOR GRADERS

Used in Pump #'s : M4T2768, M4T2767, M8J6168, M8J6855, M9T3547

DESCRIPTION	ALTERNATIVE #	REPLACES #
VALVE PLATE	M3G2859	M9J2484, M8J2024, M9J1283
BARREL ASSEMBLY	M9J2417	M9J8266, M8J5038, M9J3969
RETAINER PLATE	M4T7024	M8J9966
PISTON (EACH)	M1U2738	M9J4936, M9J4935, M8J1913, M8J1912
THRUST PLATE	M3G9671	M8J0488, M9J0560
FRONT - CONE	M7K8877	
FRONT - CUP	M7K8876	
REAR - CONE	M8J0423	
REAR - CUP	M8J0422	
SHAFT	M8J5592	
SEAL KIT	M3G1689	



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# PISTON PRODUCT LISTING

## CATERPILLAR® 12G / 120G / 130G / 140G MOTOR GRADERS

Used in Pump #'s : M8J0498, M8J6730, M8J6155, M8J6188, M8J6731, M8J6855, M4T2768, M9T3547

DESCRIPTION	ALTERNATIVE #	REPLACES #
VALVE PLATE	M9J5758	M9J2516
BARREL ASSEMBLY	M9J8660	M8J6348
RETAINER PLATE	M4T7022	M9J7858, M8J6328
PISTON (EACH)	M8J2022	
THRUST PLATE	M1U0406	M9J7584, M8J6346
FRONT - CONE	M8J6315	
FRONT - CUP	M8J6314	
REAR - CONE	M1B3953	
REAR - CUP	M8J6322	
SIDE	M3G3156	
SHAFT	M8J6296	
SEAL KIT	M3G1708	

## CATERPILLAR® 320 SWING MOTOR

Used in Motor #'s : M087-4715, M087-4824, M115-3737, M116-3550, M123-1998, M123-1999, M147-5789

DESCRIPTION	REFERENCE #
VALVE PLATE	M5I8628
BARREL ASSEMBLY	M5I8631
RETAINER PLATE	M5I8636
PISTON (EACH)	M5I8632
THRUST PLATE	M5I8637
BALL GUIDE	M5I8634
PIN	M5I8420
SEPARATION PLATE	M5I8629
FRICTION PLATE	M5I8630
BEARING - FRONT	M5I8419



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# PISTON PRODUCT LISTING

## VICKERS® MPVB 5/6

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP - MPVB 5	1	MPN090157	M875775
PISTON KIT (SET OF 9) - MPVB 5	1	MPN091856	M942229
ROTATING GROUP MPVB6	1	MPN091092	M875773
PISTON KIT (SET OF 9) -MPVB6	1	MPN091857	M942230
VALVE PLATE LH - MPVB5/6	1	MPN091861	M942224
VALVE PLATE RH - MPVB5/6	1	MPN090158	M942223
SHAFT - KEYED	1	MPN091098	M266162
SHAFT - SPLINED	1	MPN091846	M286848
SHAFT BEARING	1	MPN091647	M283233
PINTLE BEARING *	1	MPN091649	M317572
SEAL KIT (NITRILE)	1	MPN091653	M919191

## VICKERS® MPVB 10/15

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP - MPVB10	1	MPN090160	M938276
PISTON KIT (SET OF 9) - MPVB10	1	MPN091858	M942047
ROTATING GROUP - MPVB15	1	MPN090785	M938273
PISTON KIT (SET OF 9) - MPVB15	1	MPN091859	M941887
VALVE PLATE LH - MPVB15	1	MPN091863	M942162
VALVE PLATE RH - MPVB15	1	MPN091862	M942163
VALVE PLATE LH - MPVB10	1	MPN091864	M942161
VALVE PLATE RH - MPVB10	1	MPN091865	M942160
SHAFT - KEYED	1	MPN091099	M261478
SHAFT - SPLINED	1	MPN091846	M292077
SHAFT BEARING	1	MPN091648	M284397
PINTLE BEARING *	1	MPN091641	M012016
SEAL KIT (NITRILE)	1	MPN091654	M919682



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# PISTON PRODUCT LISTING

## VICKERS® MPVB 20/29

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP - MPVB20	1	MPN090163	M938274
PISTON KIT (SET OF 9) - MPVB20	1	MPN090819	M941883
ROTATING GROUP - MPVB29	1	MPN091094	M938275
PISTON KIT (SET OF 9) - MPVB29	1	MPN091860	M941888
VALVE PLATE LH - MPVB29	1	MPN091866	M942172
VALVE PLATE RH - MPVB29	1	MPN091867	M942171
VALVE PLATE LH - MPVB20	1	MPN090210	M942170
VALVE PLATE RH - MPVB20	1	MPN090164	M942169
SHAFT - KEYED	1	MPN091096	M362135
SHAFT - SPLINED	1	MPN091847	M282880
SHAFT BEARING	1	MPN091646	M283090
PINTLE BEARING *	1	MPN091651	M353230
SEAL KIT (NITRILE)	1	MPN091655	M919683



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# PISTON PRODUCT LISTING

## SUNSTRAND® SERIES 20 (MSPV20)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP	1	MPN091075	M510149
VALVE PLATE - RH	1	MPN090149	M9200428
VALVE PLATE - LH	1	MPN090148	M9200429
MOTOR PLATE	1	MPN090128	M9200430
THRUST PLATE	1	MPN090137	M9200159
BEARING PLATE	1	MPN090136	M9200216
BALL GUIDE	1	MPN090147	M9200124
SLIPPER RETAINER	1	MPN090146	M9200158
PISTON (EACH)	9 REQ.	MPN090145	M9200499 / M501528
CYLINDER BLOCK	1	MPN090144	M49155
PUMP GASKET KIT (Includes Shim Kit)	1	MPN090645	M9510224
MOTOR GASKET KIT FIXED (Includes Shim Kit)	1	MPN090942	M9510225
MOTOR GASKET KIT VARIABLE (Includes Shim Kit)	1	MPN090947	M9510226
SHAFT SEAL	1	MPN080160	M9510189

## SUNSTRAND® SERIES 21 (MSPV21)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP	1	MPN091076	M9210696
VALVE PLATE - RH	1	MPN090143	M9210478
VALVE PLATE - LH	1	MPN090142	M9210479
MOTOR PLATE	1	MPN090127	M9210480
THRUST PLATE	1	MPN090150	M9210293
BEARING PLATE	1	MPN090135	M9210658
BALL GUIDE	1	MPN080163	M9210219
SLIPPER RETAINER	1	MPN080162	M9210292
PISTON - WELDED (EACH)	9 REQ.	MPN093420	M9510408-0010
CYLINDER BLOCK	1	MPN090141	M9210576
PUMP GASKET KIT (Includes Shim Kit)	1	MPN090646	M9510227
MOTOR GASKET KIT FIXED (Includes Shim Kit)	1	MPN090943	M9510228
MOTOR GASKET KIT VARIABLE (Includes Shim Kit)	1	MPN090948	M9510229
SHAFT SEAL	1	MPN080160	M9510189



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# PISTON PRODUCT LISTING

## SUNSTRAND® SERIES 22 (MSPV22)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP	1	MPN091077	M9221448
VALVE PLATE - RH	1	MPN090140	M9220990
VALVE PLATE - LH	1	MPN090139	M9220991
MOTOR PLATE	1	MPN090126	M9220992
THRUST PLATE	1	MPN090138	M9220626
BEARING PLATE	1	MPN090076	M9221335
BALL GUIDE	1	MPN080173	M9220500
SLIPPER RETAINER	1	MPN080172	M9220628
PISTON - WELDED (EACH)	9 REQ.	MPN093421	M9510408-0001
CYLINDER BLOCK	1	MPN090134	M9221102
PUMP GASKET KIT (Includes Shim Kit)	1	MPN090647	M9510230
MOTOR GASKET KIT FIXED (Includes Shim Kit)	1	MPN090944	M9510231
MOTOR GASKET KIT VARIABLE (Includes Shim Kit)	1	MPN090949	M9510232
SHAFT SEAL	1	MPN080160	M9510189
SHAFT - 21 Tooth	1	MPN090660	M9220417

## SUNSTRAND® SERIES 23 (MSPV23)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP	1	MPN091078	M9230973
VALVE PLATE - RH	1	MPN090133	M9230560
VALVE PLATE - LH	1	MPN090132	M9230561
MOTOR PLATE	1	MPN090125	M9230562
THRUST PLATE	1	MPN080404	M9230235
BEARING PLATE	1	MPN090077	M9230881
BALL GUIDE	1	MPN080405	M9230158
SLIPPER RETAINER	1	MPN080403	M9230234
PISTON - WELDED (EACH)	9 REQ.	MPN093422	M9510408-0002
CYLINDER BLOCK	1	MPN080401	M9230651
PUMP GASKET KIT (Includes Shim Kit)	1	MPN090648	M9510233
MOTOR GASKET KIT FIXED (Includes Shim Kit)	1	MPN090945	M9510234
MOTOR GASKET KIT VARIABLE (Includes Shim Kit)	1	MPN090950	M9510235
SHAFT SEAL	1	MPN090075	M9510190
SHAFT - 14 Tooth	1	MPN090661	M9230476
SHAFT - 21 Tooth	1	MPN090659	M9230325



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# PISTON PRODUCT LISTING

## SUNSTRAND® SERIES 24 (MSPV24)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP	1	MPN091079	M9240641
VALVE PLATE - RH	1	MPN090131	M9240277
VALVE PLATE - LH	1	MPN090130	M9240278
MOTOR PLATE	1	MPN090124	M9240279
THRUST PLATE	1	MPN080409	M9240124
BEARING PLATE	1	MPN090129	M9240560
BALL GUIDE	1	MPN080410	M9240097
SLIPPER RETAINER	1	MPN080408	M9240125
PISTON (EACH)	9 REQ.	MPN093423	M9510408-0004
CYLINDER BLOCK	1	MPN080406	M9240394
PUMP GASKET KIT (Includes Shim Kit)	1	MPN090649	M9510236
MOTOR GASKET KIT FIXED (Includes Shim Kit)	1	MPN090946	M9510237
MOTOR GASKET KIT VARIABLE (Includes Shim Kit)	1	MPN090951	M9510238
SHAFT SEAL	1	MPN090075	M9510190

## SUNSTRAND® MPV90 SERIES (55CC)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP - PUMP	1	MPN093054	M80020S07
ROTATING GROUP - MOTOR	1	MPN093666	M80030S07
CYLINDER BLOCK Assy - W/O Speed Ring	1	MPN093667	M8000128
CYLINDER BLOCK Assy - W/ Speed Ring	1	MPN093668	M8000336
PISTON (EACH)	9 REQ.	MPN093064	M367672
VALVE PLATE, -2 DEGREE	1	MPN093056	M8000071
MOTOR PLATE	1	MPN093060	M8000132
THRUST PLATE (Motor)	1	MPN093669	M8000374
RETAINER SLIPPER GUIDE	1	MPN095313	M8000072
SHIM-SLIPPER GUIDE RETAINER	1	MPN095316	M8000073



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# PISTON PRODUCT LISTING

## SUNSTRAND® MPV90 SERIES (75cc)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP - PUMP	1	MPN093053	M81020S07
ROTATING GROUP - MOTOR	1	MPN093681	M81030S07
CYLINDER BLOCK Assy - W/O Speed Ring	1	MPN093682	M8100267
CYLINDER BLOCK Assy - W/ Speed Ring	1	MPN093683	M8100525
PISTON (EACH)	9 REQ.	MPN093063	M708230
VALVE PLATE, +0 DEGREE	1	MPN093057	M518805
MOTOR PLATE	1	MPN093059	M8100278
THRUST PLATE (Motor)	1	MPN093685	M8100156
RETAINER SLIPPER GUIDE	1	MPN095314	M8100271
SHIM-SLIPPER GUIDE RETAINER	1	MPN095317	M8100272

## SUNSTRAND® MPV90 SERIES (100cc)

DESCRIPTION	QTY	METARIS #	ALTERNATIVE #
ROTATING GROUP - PUMP	1	MPN093052	M82020S07
ROTATING GROUP - MOTOR	1	MPN093650	M82030S07
CYLINDER BLOCK Assy - W/O Speed Ring	1	MPN093651	M8200124
CYLINDER BLOCK Assy - W/ Speed Ring	1	MPN093652	M8200277
PISTON (EACH)	9 REQ.	MPN093062	M364000
VALVE PLATE, - 2 DEGREE	1	MPN093055	M518994
MOTOR PLATE	1	MPN093058	M8200134
THRUST PLATE (Motor)	1	MPN093654	M8200167
RETAINER SLIPPER GUIDE	1	MPN095315	M8200128
SHIM-SLIPPER GUIDE RETAINER	1	MPN095318	M8200129



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# PISTON PRODUCT LISTING

**LINDE® MHPR100**

DESCRIPTION	QTY	METARIS #	REFERENCE #
DRIVE SHAFT	1	MPN025000	2543230111
VALVE PLATE - LEFT	1	MPN093639	2543240205
VALVE PLATE - RIGHT	1	MPN025002	2543240201
CYLINDER BARREL	1	MPN025008	2343200805
BALL GUIDE & RETAINER PLATE	1	MPN025007	2343201400
PISTON (EACH)	9 REQ.	MPN025001	2343200401
SPRING	1	MPN093640	9215619
SPACER	1	MPN093641	9144004
SPACER	1	MPN093642	9143805
SHIM	1	MPN093643	92890366
PIN (NEEDLE BEARING)	3	MPN093644	9517000129
REATINER	1	MPN093645	9456622544
WASHER	1	MPN400080	9143515
BEARING - REAR CUP	1	MPN091749	9509000731
BEARING - REAR CONE	1		
BEARING - FRONT CONE	1	MPN091753	9247305
BEARING - FRONT CUP	1		
SWASH PLATE	1	MPN093646	2543232010
SUPPORT	1	MPN093647	9515121
RING (LARGE)	1	MPN091751	9841004
SERVER PISTON (LARGE)	1	MPN400081	2543400002
RING (SMALL)	1	MPN093648	9841005
SERVER PISTON (SMALL)	1	MPN400082	2543400017
SADDLE BEARING (EACH)	2 REQ	MPN400083	2543401800
SEAL KIT - SINGLE	1		2543209900
SEAL KIT - DOUBLE	1		2543209901



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# PISTON PRODUCT LISTING

## WARRANTY POLICY AND PROCEDURES

### WARRANTY

Metaris Inc. and Metaris Corp. hereinafter "Metaris", warrants all of its product 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. Buyers 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. Metaris 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 water or fire damage, loss of business income, down time costs and trade or other commercial loss arising out of failure of the product. Metaris 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 products shall be returned without prior authorization from Metaris. Buyers and their Agents shall prepay all transportation charges for the return of such products to a Metaris location or designated service center. There will be no acceptance of any charges for labor and/or parts incidental to the removal or remounting of products repaired or replaced under Warranty.

The above Warranty does not cover conditions over which Metaris has no control, including, without limitation, contamination, pressure 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 Metaris personnel, authorized Metaris factory personnel or persons so designated in writing by Metaris prior to commencement of said work.

A return goods authorization number must be obtained from Metaris or a Metaris authorized service center, or a Metaris authorized agent prior to any products being returned for Warranty.



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## METARIS BRAND REPLACEMENT PARTS

Our extensive inventory assures you of prompt shipping of pumps and parts anywhere in the world.

Our parts are 100% interchangeable with OEM products. We are committed to high quality, zero defects, and getting your orders out correctly and on time.

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**WE WANT TO BE THE SUPPLIER FOR ALL YOUR PISTON PRODUCT NEEDS.**



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