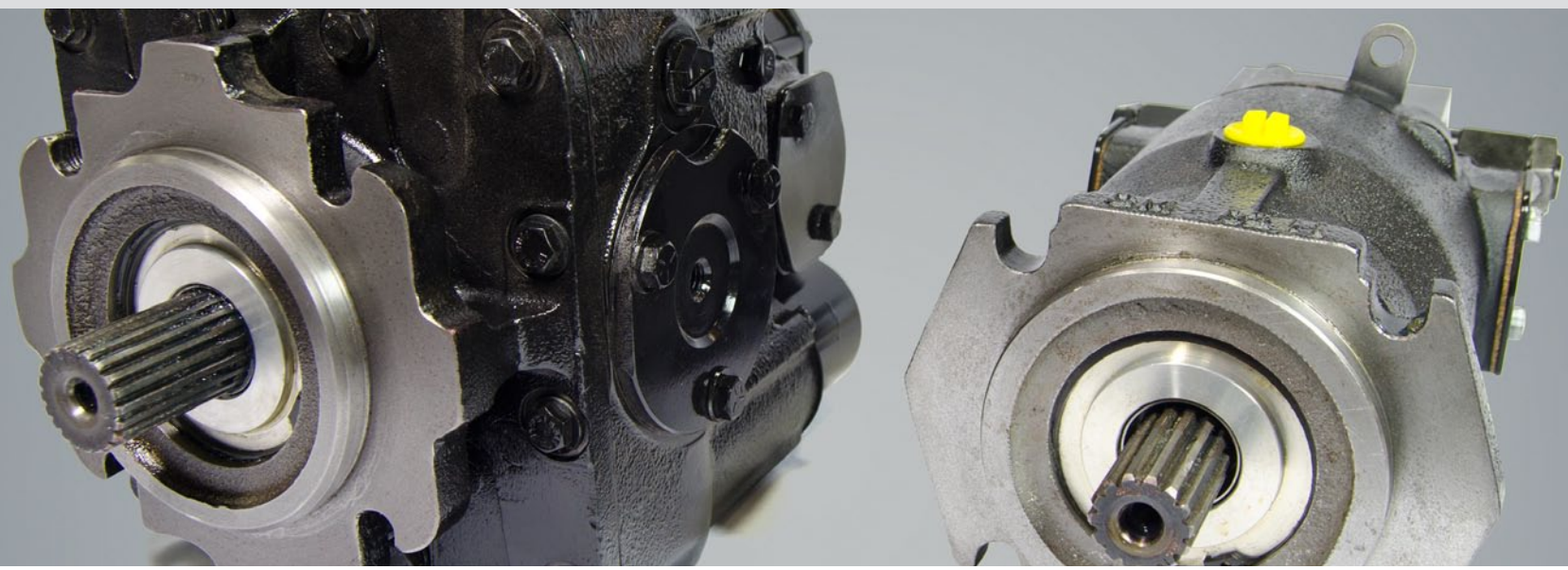
GENUINE METARIS
A Hydraulex Brand

Genuine Metaris PV & MF Series Pumps and Motors

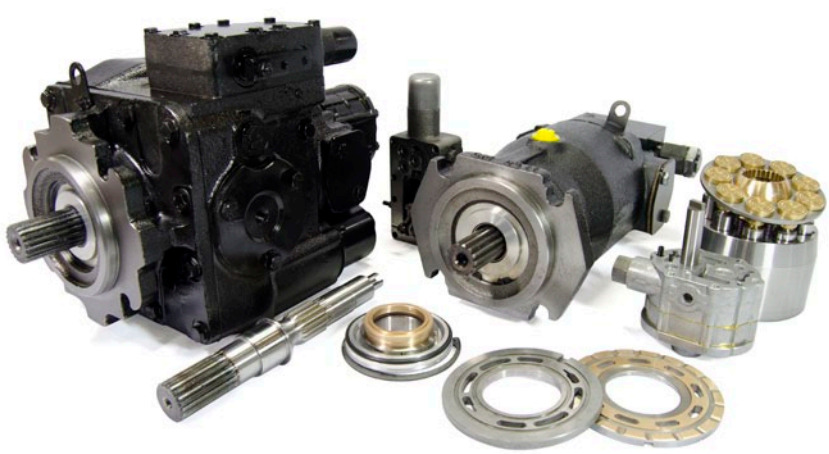
Engineered for Quality, Durability and Versatility



Designed for High Efficiency Output

Our 20 series aftermarket replacement pumps and motors are engineered for quality, durability and versatility. Components used are designed for high efficiency. For example, components such as tapered roller bearings are utilized, which offer a high loading capacity for external radial forces. Our lineup of aftermarket 20 series consists of variable displacement pumps and fixed displacement motors in multiple displacements, and replacement parts. Our units are easily serviceable and most all components are replaceable and stocked by Hydraulex Global. These units and parts are fit, form and function replacements for Sauer-Sundstrand® 20 series components.

- Suitable for a variety of applications
- Multiple displacements and options available
- 8 different frame sizes
- Engineered to provide a long service life and reliability
- Fixed displacement motor can be operated in either direction of rotation
- Multiple drive shaft options and control options
- Heavy duty bearings and shafts
- Easily serviceable
- Replacement parts also available
- Direct replacements for Sauer-Sundstrand® 20 series



Variable Displacement Pumps

Model Code Breakdown

PV - 20 - AAA - R - A - A - B - 13 - B1 - 000

Series
PV

Displacement
cm³/r (in³/r)

20 = 33.3 (2.03)
21 = 51.6 (3.15)
22 = 69.8 (4.26)
23 = 89.0 (5.43)
24 = 118.7 (7.24)
25 = 165.8 (10.12)
26 = 227.3 (13.87)
27 = 333.7 (20.36)

Type of Control
AAA = Without mechanical-hydraulic servo valve, with top cover only
BBB = Without mechanical-hydraulic servo valve, with joining piece and cover
MH = Mechanical hydraulic servo valve
MC = Mechanical-hydraulic servo valve with a pressure override valve (POR)
HDC = Hydraulic Dsiplacement Control
HDP = Hydraulic Displacement Control with pressure override valve (POR)

Rotation
R = Clockwise CW
L = Counter-Clockwise CCW
V = Reversible

Shaft
A = 14t, 12/24 Pitch, Ø31.20 (1.23")
B = 19t, 16/32 Pitch, Ø31.75 (1.25")
C = 21t, 16/32 Pitch, Ø34.50 (1.36")
D = 23t, 16/32 Pitch, Ø37.68 (1.48")
E = 27t, 16/32 Pitch, Ø44.03 (1.73")
F = 40t, 16/32 Pitch, Ø64.66 (2.55")
G = 13t, 8/16 Pitch, Ø43.71 (1.72")
I = 20t, 16/32 Pitch, Ø32.91 (1.30")
J = Cone 1:8, SAE J501, Ø41.27 (1.62")
K = Cone 1:8, SAE J501, Ø31.75 (1.25")
L = Parallel with Key, Ø34.925 (1.38")
M = Parallel with Key, Ø44.45 (1.75")
P = 15t, 16/32 Pitch, Ø25.40 (1.00")
R = 13t, 16/32 Pitch, Ø21.80 (0.86")

Ports
A = SAE J518c, Code 62, Size 1", 6000psi, 7/16"-14UNC-2A
B = SAE J518c, Code 61, Size 1", 5000psi, 3/8"-16UNC-2A
C = ISO 6162, DN25, Type II, 40 MPa, M12
D = SAE J518c, Code 62, Size 3/4", 6000psi, 3/8"-16UNC-2B
E = SAE J518c, Code 61, Size 3/4", 5000psi, 3/8"-16UNC-2B
F = ISO 6162, DN19, Type II, 40 MPa, M10

Charge Gear Pump cm³/r (in³/r)
B = 12.3 (0.75)
C = 18.0 (1.10)
D = 18.9 (1.15)
E = 32.8 (2.00)
F = 65.5 (4.00)
NN = Without Charge Pump

Pressure Setting of Gear Pump
13 = 1.3 MPa (1.3±0.05 MPa at 3.8 dm³ min⁻¹)
XX = Other
00 = Without Charge Pump
Other values according to mutual agreement, max 3.5 MPa

Orifice
A = Ø0.76 (0.030")
B = Ø0.91 (0.036")
C = Ø1.05 (0.041")
D = Ø1.36 (0.054")
E = Ø1.60 (0.063")
N = Without Orifice
1 = Orifice in channel "P"
2 = Orifice in channel "A", "B"
3 = Orifice in channel "P", "A", "B"
4 = Orifice in channel "A"
5 = Orifice in channel "B"
6 = Orifice in channel "P", "A"
7 = Orifice in channel "P", "B"
0 = Without Orifice

Design Code
000 = Standard
XXX = Special Production Number

PV Series Piston Pumps

Pump Series	Displacement (in³ / cm³)	RPM (Min. / Max.)	Max Torque* (KG·M²·10⁻³ / LBF·FT²·10⁻³)
PV-20	2.03 / 33.3	500 / 3800	4.34 / 103.0
PV-21	3.15 / 51.6	500 / 3500	8.14 / 193.2
PV-22	4.26 / 69.8	500 / 3200	12.34 / 292.8
PV-23	5.43 / 89.0	500 / 2900	17.77 / 421.7
PV-24	7.24 / 118.7	500 / 2700	29.11 / 690.8
PV-25	10.12 / 165.8	500 / 2400	50.19 / 1191.0
PV-26	13.87 / 227.3	500 / 2100	86.80 / 2059.8
PV-27	20.36 / 333.7	500 / 1900	161.40 / 3830.0

* Without Charge Pump

Fixed Displacement Motors

Model Code Breakdown

MF - 20 - A - B - A - 11 - 35 - 35 - 000

Series
MF

Displacement
cm³/r (in³/r)

20 = 33.3 (2.03)
21 = 51.6 (3.15)
22 = 69.8 (4.26)
23 = 89.0 (5.43)
24 = 118.7 (7.24)
25 = 165.8 (10.12)
26 = 227.3 (13.87)
27 = 333.7 (20.36)

Shaft
A = 14t, 12/24 Pitch, Ø31.20 (1.23”)
B = 19t, 16/32 Pitch, Ø31.75 (1.25”)
C = 21t, 16/32 Pitch, Ø34.50 (1.36”)
D = 23t, 16/32 Pitch, Ø37.68 (1.48”)
E = 27t, 16/32 Pitch, Ø44.03 (1.73”)
F = 40t, 16/32 Pitch, Ø64.66 (2.55”)
G = 3t, 8/16 Pitch, Ø43.71 (1.72”)
I = 20t, 16/32 Pitch, Ø32.91 (1.30”)
J = Cone 1:8, SAE J501, Ø41.27 (1.62”)
K = Cone 1:8, SAE J501, Ø31.75 (1.25”)
L = Parallel with Key, Ø34.925 (1.38”)
M = Parallel with Key, Ø44.45 (1.75”)
P = 15t, 16/32 Pitch, Ø25.40 (1.00”)
R = 13t, 16/32 Pitch, Ø21.80 (0.86”)

Ports
A = SAE J518c, Code 62, Size 1”, 6000psi, 7/16”-14UNC-2A
B = SAE J518c, Code 61, Size 1”, 5000psi, 3/8”-16UNC-2A
C = ISO 6162, DN25, Type II, 40 MPa, M12
D = SAE J518c, Code 62, Size 3/4”, 6000psi, 3/8”-16UNC-2B
E = SAE J518c, Code 61, Size 3/4”, 5000psi, 3/8”-16UNC-2B
F = ISO 6162, DN19, Type II, 40 MPa, M10

Design Code
000 = Standard
XXX = Special Production Number

Pressure Setting in Port B
11 = 11 MPa (1600)
14 = 14 MPa (2050)
35 = 35 MPa (5000)
40 = 40 MPa (5500)
42 = 42 MPa (6000)
00 = Without Pressure Valve

Pressure Setting in Port A
11 = 11 MPa (1600)
14 = 14 MPa (2050)
35 = 35 MPa (5000)
40 = 40 MPa (5500)
42 = 42 MPa (6000)
00 = Without Pressure Valve

Pressure Setting of Valve in Manifold Assembly
11 = 1.1 MPa (1.1±0.05 MPa at 3.8 $dm^3\ min^{-1}$)
13 = 1.3 MPa (1.3±0.05 MPa at 3.8 $dm^3\ min^{-1}$)
16 = 1.6 MPa (1.6±0.05 MPa at 3.8 $dm^3\ min^{-1}$)
00 = WIthout Manifold Assembly

Manifold Assembly
A = Manifold Assembly with Bypass Valve
B = Manifold Assembly without Bypass Valve
C = Without Manifold Assembly with Cover Plate
N = Without Manifold Assembly

MF Series Piston Motors

Pump Series	Displacement (in^3 / cm^3)	RPM (Min. / Max.)	Max Torque ($KG{\cdot}M^2{\cdot}10^{-3}$ / $LBF{\cdot}FT^2{\cdot}10^{-3}$)
MF-20	2.03 / 33.3	500 / 3800	4.34 / 103.0
MF-21	3.15 / 51.6	500 / 3500	8.14 / 193.2
MF-22	4.26 / 69.8	500 / 3200	12.34 / 292.8
MF-23	5.43 / 89.0	500 / 2900	17.77 / 421.7
MF-24	7.24 / 118.7	500 / 2700	29.11 / 690.8
MF-25	10.12 / 165.8	500 / 2400	50.19 / 1191.0
MF-26	13.87 / 227.3	500 / 2100	86.80 / 2059.8
MF-27	20.36 / 333.7	500 / 1900	161.40 / 3830.0

Hydraulex - A Recognized Global Leading Provider of High Quality Hydraulic Components

Products We Offer

- Inline Piston Pumps
- Radial Piston Pumps & Motors
- Bent Axis Piston Pumps & Motors
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- Variable Volume Vane Pumps
- Gear Pumps
- Vane Motors
- Axial Piston Motors
- High Speed Motors
- Servo Motors
- Orbital Motors
- Directional Valves
- Flow Control Valves
- Pressure Control Valves
- Relief Valves
- Check Valves
- Stack Valves
- Servo Valves
- Proportional Valves
- PTOs (Power Take-offs)
- Cylinders

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