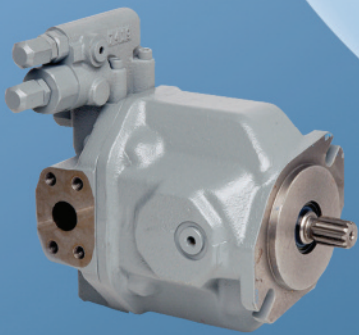


GENUINE **METARIS**

**YOUR SOURCE FOR
HIGH QUALITY
PISTON, GEAR, VANE
& P.T.O. PRODUCTS**

www.metaris.com

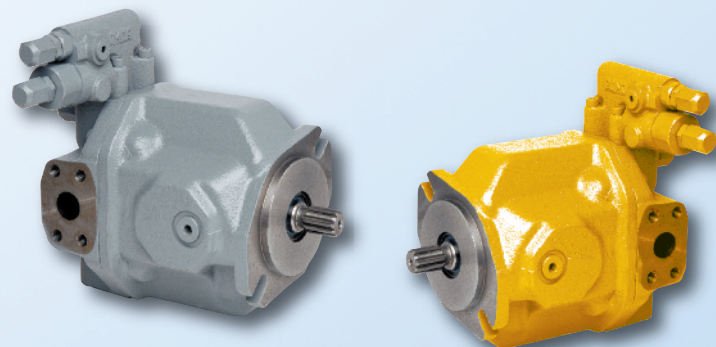
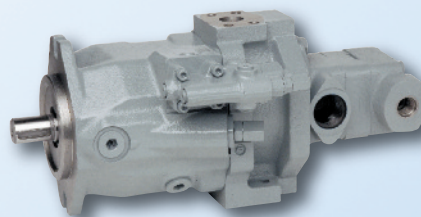


PISTON PUMPS



MA10VO/VSO PUMPS

The **Metaris MA10VO** open loop **Piston Pump** has proven to be the pump of choice. Rear and side ported, thru drive auxiliary pump mounting flanges and a large selection of flow and pressure controls makes this pump a strong, versatile alternative in both industrial and mobile applications. Low noise levels, excellent control repeatability, short response times and pressure ratings up to 4000 psi are just a few of the performance characteristics this pump has to offer. Controllers available: Pressure, Pressure/Flow, Load Sensing/ Pressure/ Flow/Power.



OPEN LOOP PISTON PUMP

Pump Series	Displ Range cu. in./cc	MAX RPM	Flow @ 1800 rpm GPM/LPM
MA10VO-18	1.10/18	3000	8.5/32
MA10VO-28	1.71/28	3000	13.3/59
MA10VO-45	2.75/45	2600	21.4/81
MA10VO 60/52	3.66/60	2700	28.5/107
MA10VO-71	4.33/71	2200	33.8/128
MA10VO-100	6.10/100	2000	47.6/180
MA10VO-140	8.54/140	1800	67/252

The **MA10VSO** and **MPVH** Pumps are both available in multiple Caterpillar® applications.

Metaris offers the **MPVH Open Loop Piston Pump**. Heavy duty construction and the durability of the cradle bearing design makes the pump ideally suited for the Mobile market. Available in four displacements to meet your customer demands.

OPEN LOOP PISTON PUMP

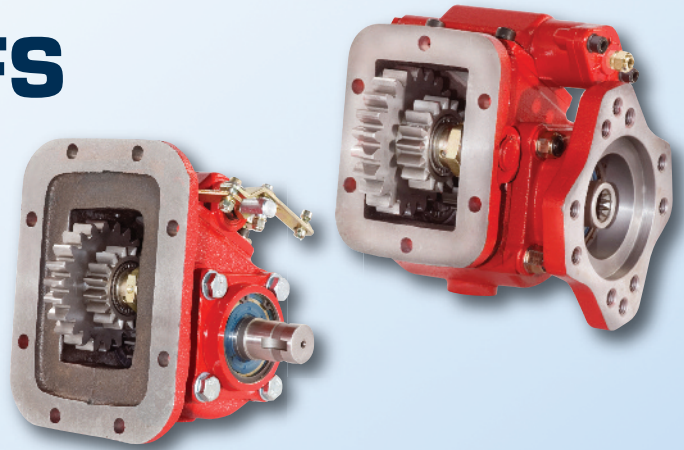
Pump Series	Displ Range/cc	MAX RPM	Flow @ 1800 rpm GPM/LPM	Operating Pressure (psi)
MPVH57	3.5/57.4	2400	26/98	3625
MPVH74	4.5/73.7	2200	33/125	3625
MPVH98	6.0/98.3	2100	45/170	3625
MPVH131	8.0/131.1	2000	59/223	3625



POWER TAKE-OFFS

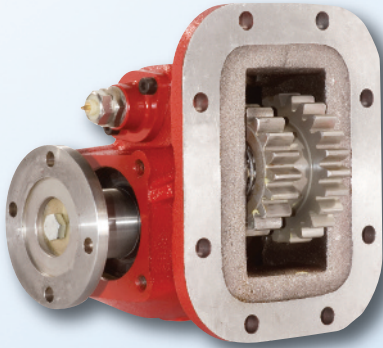
MH6/MH8 Standard Duty PTO

The **Metaris** 6 & 8 Bolt Standard Duty PTO is built to last. Cast iron construction, heavy duty output bearings & oversized assembly bolts provides durability and reliability. With several mounting flange and shifter options, **Metaris** offers versatility and ease of installation.



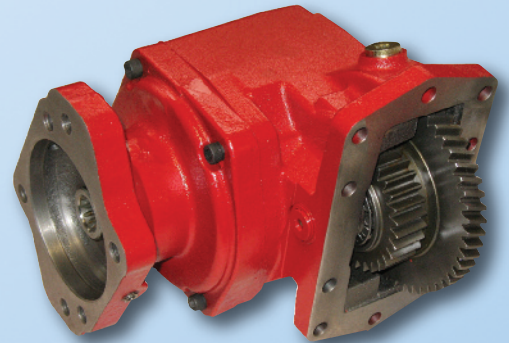
MHD8 Heavy Duty PTO

For extreme continuous duty applications, the **Metaris** 8 Bolt Heavy Duty PTO is the operator's choice. Heavy wall cast iron construction, high torque spur gears and extra heavy duty bearings, provide the torque and endurance needed for tough applications.

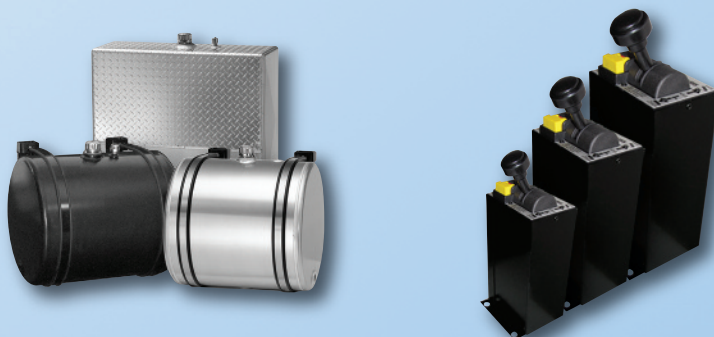


MHS6/MHS10 HOT-Shift PTO

The **Metaris** HOT-Shift PTO gives you "shift on the move" versatility for all high cycle applications. Designed for Allison® automatic transmissions, the lubrication system extends the life of the PTO and finger tip controls reduce operator fatigue.



PTO Type	PTO Series	Intermittent Torque (lbs. ft.)	HP @ 500 rpm output speed	HP @ 1000 rpm output speed
Medium Duty	MH6	250	24	49
	MH8	250	24	49
Heavy Duty	MHD8	420	40	80
Hot Shift	MHS6	300	32	64
	MHS10	335	32	64



ADDITIONAL OPTIONS

Shifters	Air
	Electric over Hydraulic
	Mechanical
Control Towers	8", 10" & 12" height
Tanks	Contact customer service
Hose Kits	2 & 3 line
Air Control Kits	Single Controller
	Dual Controller w/Kickout
	Dual Controller w/o Kickout

GEAR PUMPS AND MOTORS



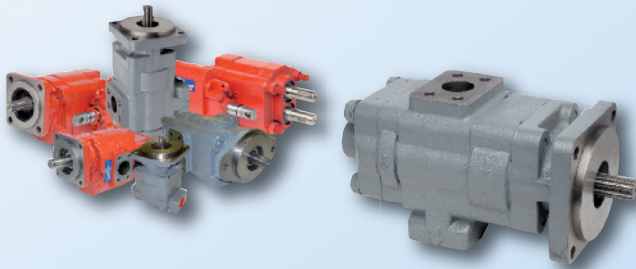
Metaris MHP/M GEAR PUMPS & MOTORS have the durability and reliability of this time tested design. **Metaris** has combined this technology with modern manufacturing processes making the **Metaris** gear unit high quality and dependable products.

Pumps & Motors are available in 10 series with a variety of mounting flanges, shaft configurations & porting options. Multi-section units, piggyback designs, dowelled assemblies & flow dividers are all available.

BEARING GEAR PUMP

Pump Series	in./rev min.	cm./rev max.]	MAX RPM	Flow @ 1800 rpm GPM & LPM	
				min.	max.
MH15	0.69/2.7	11.2/44	2400	5.3/21	19/75
MH20/30/31	.99/3.94	16.1/64.6	2400	7.7/30.7	27/110
MH25/51	1.28/6.38	20.9/104.5	2400	9.9/49.7	35/178
MH37	2.25/9	36/146	2400	17.5/70	63/252
MH75/76	3.07/12.3	50.28/201	2400	23.9/95.8	86/345

Metaris Bushing Pumps & Motors are available in 4 series with many of the same available options as **Metaris Bearing Pumps**. With ductile iron housings, the pump offers pressure ratings as high as 3500 psi for the most demanding of applications.



BUSHING GEAR PUMP

Pump Series	in./rev min.	cm./rev max.	MAX RPM	Flow @ 1800 rpm GPM & LPM	
				min.	max.
MH315	0.62/2.48	10.2/40.6	3000	4.8/19.3	17/69
MH330	.99/3.94	16.1/64.6	3000	7.7/30	27/110
MH350	1.28/6.38	20.9/104.5	2400	9.9/49.7	36/178
MH365	2.7/9	44.3/146	2400	21/70	75/252

SPECIALTY GEAR PUMPS/MOTORS

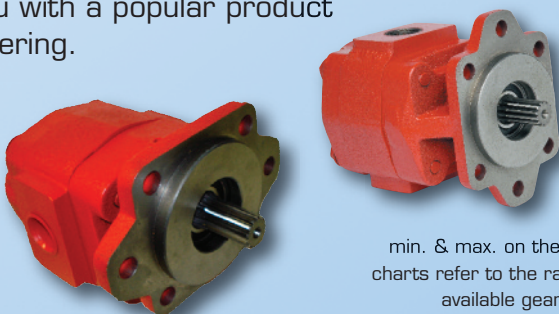
Metaris MK20 & ML51 Pump/Motors. The combination 2/4 bolt mounting flange & bi-rotational construction gives you the option of installing as a pump or motor, making these units the most flexible in today's cost minded market.

The **ML51's** large diameter dual porting (side & rear) and the **MK20's** wide range of output flows/pressure ratings of up to 3000 psi will lower your inventory requirements and provide you with a popular product offering.



SPECIALTY GEAR PUMPS

Pump Series	in./rev min.	cm./rev max.	MAX RPM	Flow @ 1800 rpm GPM & LPM		Pressure
MK20 4	0.98	16	2400	4	14	3000
MK20 6	1.47	24	2400	6	21	3000
MK20 8	1.97	32	2400	8	28	3000
MK20 11	2.46	40	2400	11	39	3000
MK20 13	2.96	48	2400	13	46	3000
MK20 15	3.45	57	2400	15	54	2500
MK20 17	3.94	65	2400	17	61	2500
ML51 19	4.46	73	2400	19	69	3000
ML51 23	5.2	85	2400	23	81	2500
ML51 25	5.73	93	2400	25	89	2500
ML51 27	6.37	104	2400	27	99	2500

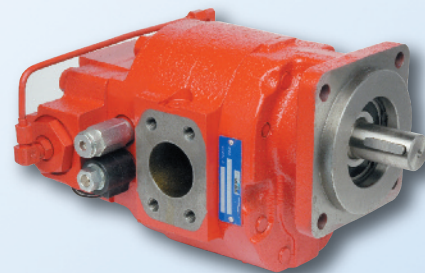
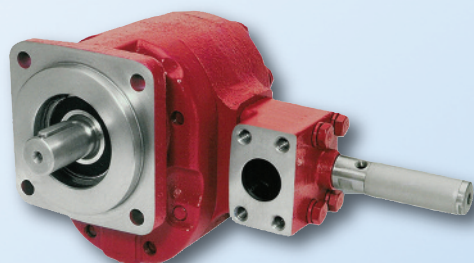


min. & max. on the above
charts refer to the range of
available gear sizes.

REFUSE PUMPS

MHUP Unloader Pump is ideally suited for the refuse market. The MHUP can be retrofitted on existing packers without major system changes. The integral 12 VDC solenoid can be operated from the cab allowing the operator to shift the pump from the work mode to standby mode. The rugged 4 bolt mounting can be installed at the PTO or front mounting off the crankshaft.

A practical solution to stopping the vehicle & shifting to engage the PTO, **Metaris** offers the **MDV Dry Valve Pump**. Ideal for refuse packers, snow and ice equipment and many other mobile applications, the **MDV** can reduce fuel costs and system fatigue. Available in **MH51** & **MH76** Series with pressure ratings to 2500 psi.



UNLOADER PUMPS

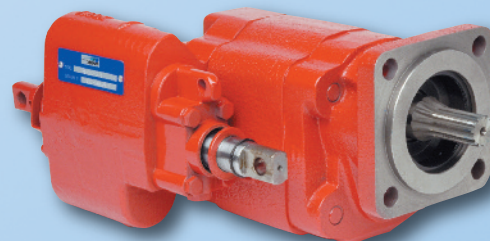
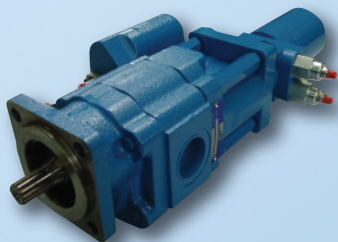
Series	in./rev min.	cm./rev max.	MAX RPM	Flow @ 1000 rpm GPM & LPM		Pressure
MHUP 27	6.1	102	2500	27	102	3000
MHUP 31	7.11	117	2500	31	117	3000
MHUP 35	8.2	132	2400	35	132	2750
MHUP 40	9.27	151	2300	40	151	2750

DRY VALVE PUMPS

Series	in./rev min.	cm./rev max.	MAX	Flow @ 1000 rpm GPM & LPM		Pressure
MDVL 19	4.46	73	3000	19	72	3000
MDVL 23	5.2	85	2500	23	87	2500
MDVL 25	5.73	93	2500	25	84	2500
MDV 27	6.1	102	3000	27	102	3000
MDV 31	7.11	117	3000	31	117	3000
MDV 35	8.2	132	3000	35	132	3000
MDV 40	9.27	151	2500	40	151	2500

DUMP PUMPS

Metaris MHC & MHG Dump Pumps are known for their ruggedness, reliability and interchangeability. Available in both the **101** Remote Mount and the **102** Direct Mount configurations and **C** or **G** frames, these pumps offer cast iron construction, a variety of displacements and "Air Shift" capabilities.



DUMP PUMPS

Pump Series	Displ Range cu. in.	RPM	Flow @ 1200 rpm GPM	pressure
MHC-101/102	5.1 - 6.38	1800	26.5 - 33.1	2000 - 2500
MHG-101/102	1.48 - 3.94	1800	7.6 - 20.4	2000 - 2500

Dual Pressure Dump Pumps

Two relief pressures on this pump: High pressure (3000 psi) for Walking Floor® application and low pressure (2000 psi) for dump applications, each is selectable by a **Metaris** supplied Air switch.

Walking Floor® is a registered trademark not owned by or affiliated with Metaris.

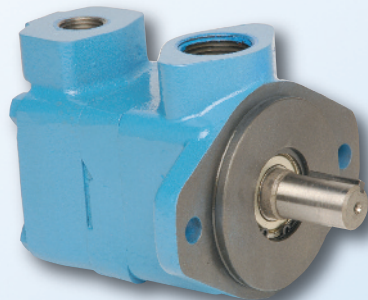
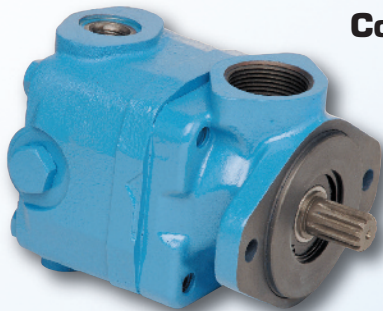
DUAL PRESSURE DUMP PUMP

Pump Series	Displ Range cu. in./rev.	MAX RPM	Flow @ 1200 rpm GPM	pressure
MHWF2.0	5.1	1800	26.5	2000 - 3000

VANE PUMPS

MV10/20 Vane Pumps with Optional Flow Control Covers (F & NF) & Priority Flow Cover (P)

Metaris offers a large selection of balanced rotor vane pumps. With a variety of displacements, mounting flanges and input shafts, this pump has grown to be a mainstay in both mobile and industrial applications. Optional flow control and priority flow end covers are also available. The **MVTM42** completes this range and is available with optional built-in 70 cu. in. & 115 Cu. in. reservoirs.



VANE PUMPS				
Pump Series	Displ Range cu. in.	MAX RPM	MAX Flow @ 1200 rpm GPM	MAX pressure (up to)
MV10	.2 to 1.39	4800	1 to 7	2500
MV20	1.10 to 2.60	3400	6 to 13	2500
MVTM42	.2 to 1.18	2200	1 to 6	2000

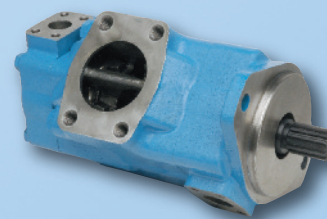
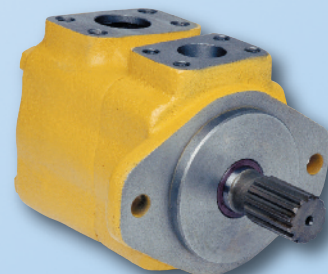
INDUSTRIAL AND MOBILE VANE PUMPS

INDUSTRIAL AND MOBILE VANE PUMPS				
Pump Series	Displ Range cu. in.	MAX RPM	MAX Flow @ 1200 rpm GPM	MAX pressure (up to)
20V/VQ	1.10 to 2.80	2400	5.71 to 14.55	3000
25V/VQ	2.47 to 4.12	2400	12.83 to 21.40	3000
35V/VQ	4.12 to 7.42	2400	21.40 to 38.55	3000
45V/VQ	8.46 to 11.80	2400	43.95 to 61.30	2500

MV Series intra-vane design pumps are the workhorse in industrial applications. The 12 vane design, with noise ratings as low as 62 dB(A) make this the ideal pump for the confined spaces of the industrial workplace. The **Metaris MV** pumps offer high volumetric efficiencies, pressures to 3000 psi and time proven reliability.

MVQ Series intra-vane pumps for the mobile market are unmatched in reliability and service. The 10 vane design offers the capability of speeds and pressures required for the mobile environment.

The V & VQ Series are available with the Thru-drive capability.



Tandem Pumps available in Series:

V2010, V2020
2520V/VQ
3520V/VQ, 3525V/VQ
4520V/VQ, 4525V/VQ, 4535V/VQ

Triple Pumps available in Series:

2520VQ/ V10, 3525VQ/V10 &
4535VQ/V10

GENUINE METARIS REPLACEMENT PARTS



Metaris offers a full line of gear, vane and piston replacement parts that meet or exceed the specifications of competitive products. Our extensive inventories assures you prompt shipping to any place in the world.

VANE PUMP CARTRIDGE KITS & COMPONENTS



Metaris has a full-line of industrial, mobile & high pressure vane cartridge kits. Compatible with our **MV** and **MVQ** series pumps and other similar designed pumps in the market, **Metaris Cartridge Kits** are high in performance, durability and reliability. We also offer a wide range of components including shafts, rotors, vanes, seals & bearings.

Metaris also offers the **MVQH/32 High Pressure Cartridge Kit**. Our two piece rotor design and hardened cam rings, improve efficiency and pressure capabilities.

Cartridge Kits available for:
Series 20V/VQ, 25V/VQ,
30VQ, 35V/VQ, 45V/VQ



Metaris carries many interchangeable replacement parts for a wide range of Caterpillar® Vane and piston pumps.

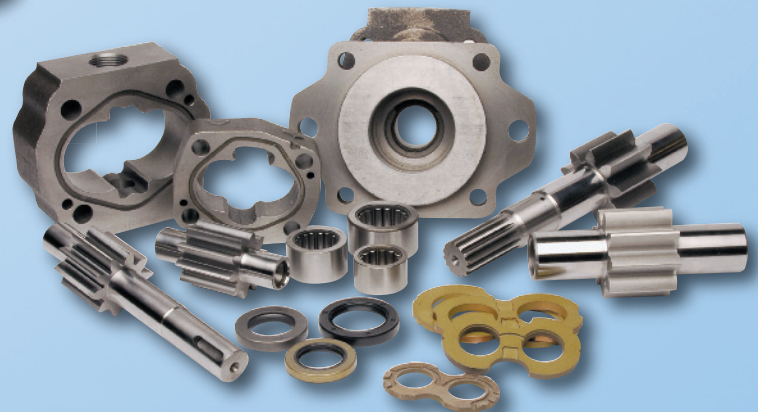


GEAR PUMP REPLACEMENT PARTS

Totally interchangeable with OEM, **Metaris** offers a full line of quality engineered components including bearings, precision heat treated gear sets, thrust plates, seals and bearings.

PISTON COMPONENTS

Metaris offers an extensive range of replacement parts for **OEM Piston Pumps** including Caterpillar®, Sundstrand®, Rexroth®, Komatsu®, Kawasaki®, Linde® and Hitachi®.



Whatever the application, **Genuine Metaris Replacement Parts** will allow you to reduce your costs, increase your ability to carry more inventory and meet customer demands while increasing profits.

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Sundstrand® registered trademark of Sauer-Danfoss Inc.



Metaris is a recognized global leading provider of high quality hydraulic and power transmission components servicing the mobile and industrial markets.

Our commitment to quality, delivery and customer satisfaction makes **Metaris** the supplier of choice for hydraulic pumps (piston, vane, gear) & Power Take Off products.

MANUFACTURING FACILITIES



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