

Model 1051CM.CO2 Shown
(Shaft protector and mounting rails sold separately)

FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Durable dual V-Packings are lubricated and cooled by pumped liquid.
- Pre-set Lo-Pressure seals provide secondary protection against external leaks and require no packing adjustment.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Special formulated seals and V-Packings offer unmatched performance and extended life.
- Wet-end easily serviced without entering crankcase.
- Flush ports are used to evacuate CO2 vapor from behind seals. (1051CM.CO2 Only)

⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/cautions-warnings or can be requested directly from CAT PUMPS.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.

15 Frame Plunger Pumps

Stainless Steel Flushed Model

1051CM.CO2

Brass Model

1050M.CO2

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow	4.0 gpm*	(15 l/m)
Pressure Range	100 to 2200 psi	(7 to 152 bar)
RPM	450 RPM	(450 RPM)
Inlet Pressure Range	300 to 800 psi	(21 to 55 bar)
Note: Temperature and pressure must be maintained to keep incoming CO2 in liquid state.		
Minimum Liquid Temperature	-20°F	(-29°C)
Bore	0.945"	(24 mm)
Stroke	1.180"	(30 mm)
Crankcase Capacity	42 oz.	(1.26 l)
Inlet Ports (2)	3/4" NPTF	(3/4" NPTF)
Flushing Ports (2) (1051CM.CO2)	1/8" NPTF	(1/8" NPTF)
Discharge Ports (2)	1/2" NPTF	(1/2" NPTF)
Pulley Mounting	Either Side	(Either Side)
Shaft Diameter	1.181"	(30 mm)
Weight	44 lbs.	(20 kg)
Dimensions	16.28 x 12.99 x 6.44"	(414 x 330 x 164 mm)

*Flow and pressure may vary based on inlet temperature and pressure conditions. Custom flows and pressures available upon request.

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE			RPM
		psi 1500	psi 1800	psi 2000	
U.S. gpm	l/m	bar 105	bar 125	bar 140	
4.0	15	4.1	4.9	5.8	450

**DETERMINING
THE PUMP R.P.M.**

$\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}} = \frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$

**DETERMINING
THE REQUIRED H.P.**

$\frac{\text{GPM} \times \text{psi}}{1460} = \text{Electric Brake H. P. Required}$

**DETERMINING
MOTOR PULLEY SIZE**

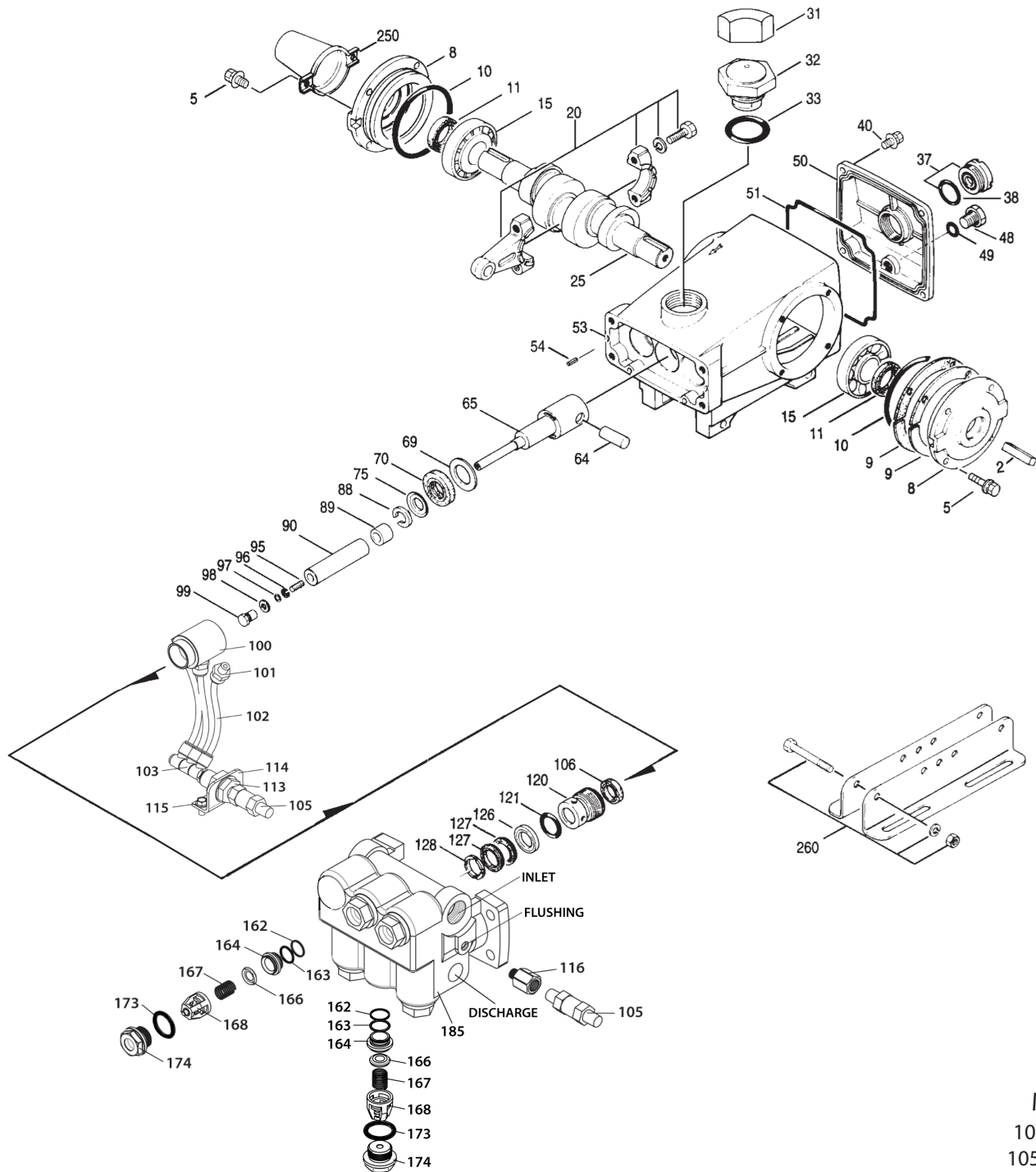
$\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

See complete Drive Packages [Inclds: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.
Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	1050M.CO2		1051CM.CO2			
2	30067	STL	30067	STL	Key (M8x7.5x25))	1
5	125824	STCP R	92538	S	Screw, HHC Sems (M6x16)	8
8	43496	AL	43496	AL	Cover, Bearing	2
9	815281	FBR	815281	FBR	Shim, Split, Bearing Cover 2-Pc	2/4
	814800	S	814800	S	Shim, Split, Bearing Cover 2-Pc	0/4
10	11340	NBR	11340	NBR	O-Ring, Bearing Cover - 70D	2
11	43495	NBR	43495	NBR	Seal, Oil, Crankshaft - 70D	2
15	39060	STL	39060	STL	Bearing, Roller	2
20	768600	TNM	768600	TNM	Rod, Connecting Assembly (w/PLM Bushing)	3
25	43494	FCM	43494	FCM	Crankshaft, Dual End	1
31	828710	PE	828710	PE	Protector, Oil Cap w/Foam Gasket	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Filler Cap - 70D	1
37	92241	—	92241	—	Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
40	126541	STCP R	92542	S	Screw, HHC Sems (M6x20)	4
48	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	43491	AL	43491	AL	Cover, Rear	1
51	44834	NBR	44834	NBR	O-Ring, Rear Cover - 70D	1
53	115471	AL	115471	AL	Crankcase w/Guide Pins	1
54	27488	S	27488	S	Pin, Guide	2
56	44664	POP	—	—	Pan, Oil (Not Shown)	1
64	763507	CM	763507	CM	Pin, Crosshead (w/Flats)	3
65	765258	SHS	765258	SHS	Rod, Plunger (w/Set Screws)	3
69	126592	STCP R	126592	STCP R	Washer, Oil Seal	3
70	43500	NBR	43500	NBR	Seal, Oil, Crankcase - 80D	3
75	43506	S	43506	S	Slinger, Barrier	3
88	45675	S	45675	S	Washer, Keyhole	3
89	43553	BB	45879	SS	Collar, Spacer	3
90	43552	CC	43552	CC	Plunger (M24x77)	3
95	—	—	89651	SS	Stud, Plunger Retainer (M6x70)	3
96	43235	PTFE	43235	PTFE	Back-up-Ring, Plunger Retainer	3
97	17399	NBR	17399	NBR	O-Ring, Plunger Retainer - 80D	3
98	44041	SS	44041	SS	Gasket, Plunger Retainer	3
99	104360	S	44031	SS	Retainer, Plunger (M6)	3
100	765001	AL	765001	AL	Retainer, Seal	3
101	—	—	999490	D	Adapter (Model 1051CM.C02 Only)	3
102	—	—	999492	NY	Tubing (Model 1051CM.C02 Only)	3
103	—	—	999491	PLM	Manifold (Model 1051CM.C02 Only)	1
104	—	—	34507	BB	Plug (1/8" NPTM) (Model 1051CM.C02 Only)	1
105	—	—	33937	SS	Valve, Check (1/4" NPTM) (Model 1051CM.C02 Only)	2
106	701437	SFTA	701437	SFTB	Seal, LPS w/SS-Spg	3
113	—	—	34338	BB	Union (1/4" NPTM) (Model 1051CM.C02 Only)	1
114	—	—	34347	STZP	Bracket (Model 1051CM.C02 Only)	1
115	—	—	990776	STZP R	Screw, HHC (1/4" - 20 x 1/2") (Model 1051CM.C02 Only)	2
116	—	—	999105	SS	Adapter (1/8" NPTM x 1/4" NPF) (Model 1051CM.C02 Only)	1
120	76890	BB	49286	SSNP	Case, Seal	3
121	14762	NBR	14762	NBR	O-Ring, Seal Case - 70D	3
126	43558	BB	48389	D	Adapter, Female	3
127	103692	STG*	103692	STG*	V-Packing	6
128	43560	BB	45074	SS	Adapter, Male	3
162	43248	PTFE	43248	PTFE	Back-up-Ring, Valve Seat	6
163	43249	NBR	43249	NBR	O-Ring, Seat - 80D	6
164	44718	S	44037	SS	Seat	6
166	43721	S	48793	SS	Valve	6
167	43751	S	44039	SS	Spring, Valve	6
168	44564	PVDF	44564	PVDF	Retainer, Spring	6
172	17617	NBR	17617	NBR	O-Ring, Valve Plug - 90D	6
174	43851	BBCP	49293	SS	Plug, Valve	6
185	46704	BBCP	49188	SS	Head, Manifold, Flushed (1/8" Flushed Port)	1
187	126545	STCP R	44005	S	Stud, Manifold (M10x45)	4
192	126231	STCP	15847	S	Lockwasher (M10)	4
194	126522	STCP R	81258	S	Nut, Hex (M10)	4
250	30764	NY	30764S	NY	Protector, Shaft w/Two SS Screws	1

EXPLODED VIEW

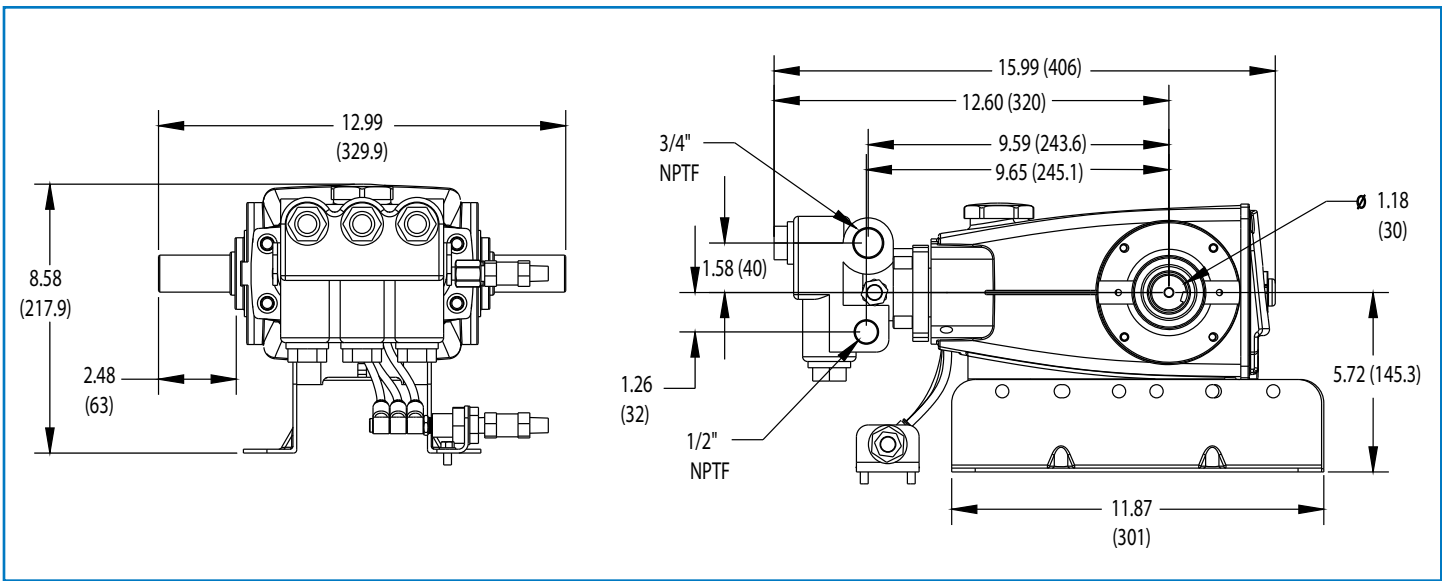


Model
 1050M.CO2
 1051CM.CO2
 November 2013

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	1050M.CO2		1051CM.CO2			
260	30613	STZP	30613	STZP	Mount, Rail, Assy	1
300	703135	NBR*	703135	NBR*	Kit, Seal (Incls: 97, 106, 121, 127)	1
310	34387	NBR	34387	NBR	Kit, Valve Preamsembled (Incls: 162, 163, 164, 166, 167, 168, 172)	2
—	6107	—	6107	—	Oil, Bottle (21 oz) ISO 68 Hydraulic	2

Bold print part numbers are unique to a particular pump model. Italics are optional items.

[] Date of latest production change. R components comply with RoHS Directive. *Review individual parts in each kit for material code identification. View Tech Bulletins 002, 003, 024, 027, 035, 036, 043, 045, 046, 048, 049, 052, 053, 072, 074, 077, 083, 087, 089 and 098 for additional information. MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-moly D=Acetal FBR=Fiber FCM=Forged Chrome-moly NBR=Medium Nitrile (Buna-N) NY=Nylon PE=Polyethylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SFTA=Special Blend PTFE Tan SFTB=Special Blend PTFE Black STG=Special Blend PTFE White SS=316SS STCP=Steel/Chrome Plated SSNP=316SS/Nickel Plated STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength



Model 1051CM.CO2



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