

# DUCTILE IRON CLOSE COUPLED ROTARY GEAR PUMPS

## MODEL C990X2B1 - 1" NPT PORTS



### FEATURES

- Ductile Iron construction with hardened steel shafts
- Fatigue Proof® steel helical gears for quiet operation
- Mechanical seal
- Self lubricating carbon radial and thrust bearings
- O-ring seal for maximum leak protection
- Durable temperature-resistant paint finish
- Easy field assembly to C-face motors
- Compact dimensions

### GENERAL DESCRIPTION

Tailored specifically for wear resistance and long life in pressurized heat transfer oil circulation service for plastic injection molding and other industries. They are industrial units designed to handle fluctuating temperature cycles pumping Therminol®, Dowtherm®, Paratherm® and others at elevated temperatures to 450 °F, at pressures up to 100 psi, and at shaft speeds to 1750 RPM. Shafts are hardened steel. Gears are high-strength durable Fatigue Proof® steel. Rugged ductile iron housings. High grade carbon-graphite bushing style bearings and thrust plates are used. The shaft seal is a bellows style mechanical seal with Viton® elastomer bellows and o-ring and with carbon and ceramic wear faces. No stuffing box cooling necessary. Contact Factory for 550°F option.

### DRIVE ARRANGEMENT

These close-coupled pumps mount directly to a full range of NEMA and IEC C-face motors by means of a suitable adapter bracket. The pump drive shaft is connected to the motor shaft by a flexible coupling. Complete pump and motor units are available.

### SUCTION LIFT

Whenever possible, place the pump at an elevation below the liquid source. However since these positive displacement external gear pumps will generate 23" HG lift, this is not a requirement. As a general rule, place the pump as close to the liquid source as possible.

## PERFORMANCE

PERFORMANCE  
Water 70° F

1725 RPM					Pump, Adapter & TEFC Motor No.	
PSI	GPM	HP Req'd	HP Motor	Motor Frame	Single Phase	Three Phase
0	33.1	.94	1	56C	C990X2B1H-N47	C990X2B1H-N97
20	32.8	1.25	1 1/2	56C	C990X2B1H-T47	
				145TC		C990X2B1J-T52
40	32.5	1.86	2	145TC	C990X2B1J-W47	C990X2B1J-W97
60	32.2	2.50	3	182TC		C990X2B1K-Y97
				184TC	C990X2B1K-Y44	
80	31.9	3.07	3	182TC		C990X2B1K-Y97
				184TC	C990X2B1K-Y44	
100	31.5	3.89	5	184TC	C990X2B1K-X48	C990X2B1K-X97

1150 RPM					Pump, Adapter & TEFC Motor No.	
PSI	GPM	HP Req'd	HP Motor	Motor Frame	Single Phase	Three Phase
0	21.8	.61	3/4	56C	C990X2B1H-M48	C990X2B1H-M98
20	21.4	.82	1	145TC	C990X2B1J-N48	C990X2B1J-N98
				145TC		C990X2B1J-T98
40	20.9	1.17	1 1/2	184TC	C990X2B1K-T48	
60	20.6	1.57	1 1/2	145TC		C990X2B1J-T98
				184TC	C990X2B1K-T48	
80	20.2	2.05	2	184TC	C990X2B1K-W48	C990X2B1K-W71
100	19.9	2.54	3	213TC	C990X2B1L-Y47	C990X2B1L-Y98

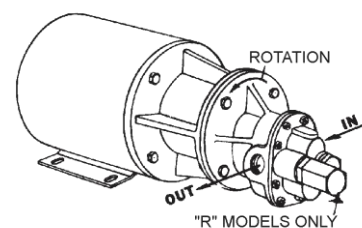
ODP motors available

ble. For a first start-up, the pump should be primed to avoid dry running. Minimum size of the suction pipe is the size of the pump inlet port. For longer suction lines (over 3 feet), the pipe size should be at least one size or two sizes larger than the pump inlet port.

### ROTATION AND RELIEF VALVE

These pumps are bidirectional. The standard pump motor unit is set up for normal rotation (clockwise when viewing the pump from the shaft end). Reversing the motor rotation will reverse the "in" and "out" ports and also requires changing the relief valve location.

C990RX2B1 is equipped with an integrated relief valve set up for internal bypassing. The relief valve must always be located on the discharge side of the pump. This relief valve is not intended to be a metering or flow control device. Its purpose is to function as a discharge pressure relief to guard against intermittent down stream system restrictions. Overheating can occur within 5 to 10 minutes if the discharge line is completely shut off. The relief valve is located on the discharge side of the pump. The pressure relief setting is not set at the factory. To increase pressure, turn the relief valve adjusting screw in a clockwise direction.

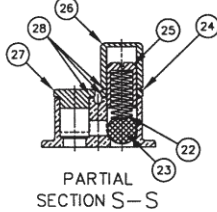
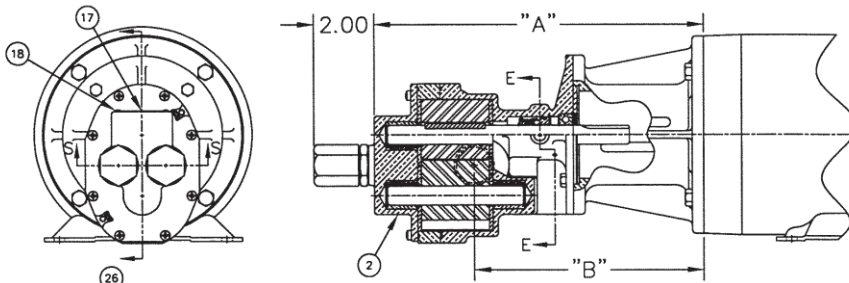
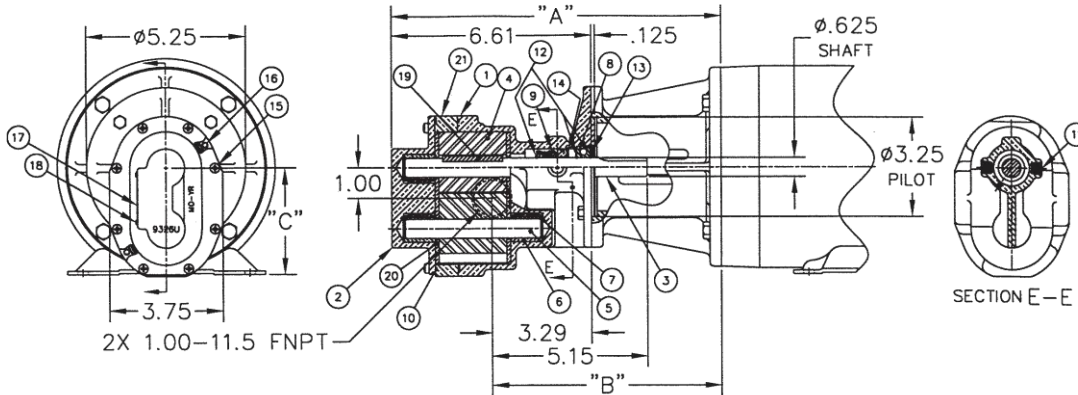


**MODEL**  
C990X2B1  
C990RX2B1

# DUCTILE IRON CLOSE COUPLED ROTARY GEAR PUMPS

## DIMENSIONS & PARTS LIST

DIMENSIONS AND PARTS LIST C990X2B1



Adapter Kit	Part Number	Description
H	11299C	56C
J	11300C	143TC/145TC
K	11301	182TC/184TC
L	11302	213TC/215TC
G	11380	IEC 71
T	11386	IEC 80
U	11875C	IEC 90S / 90L
V	11876C	IEC 100L / 112M


	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Body	Cover	Drive Shaft	Drive Gear	Idle Gear Assy	Carbon Bearing	Bearing Pin	Ball Bearing	Mech. Seal Assy	O-Ring	Pipe Plug	Ret. Ring	Ret. Ring	Ret. Ring
Pump No.	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 3	Qty. 3	Qty. 1	Qty. 1	Qty. 2	Qty. 2	Qty. 3	Qty. 1	Qty. 1
C990X2B1	9329UF4N-01	9326UN5N	2914	2892	33125	2688	2687	2461	33109	9797-045	2052	5382	5464	5374
C990RX2B1	9329UF4N-01	9327UN5B	2914	2892	33125	2688	2687	2461	33109	9797-045	2052	5382	5464	5374
	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Screw	Dowel Pin	Tag	Stick Screw	Key	Thrust Washer	Body Extension	Spring	Ball	Locknut	Adj. Screw	Bypass Nut	Plug Nut	Fiber Washer
Pump No.	Qty. 8	Qty. 2	Qty. 1	Qty. 2	Qty. 1	Qty. 4	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 3
C990X2B1	7733	2880	9344	9345	2879	2899	2900-P	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C990RX2B1	7733	2880	9344	9345	2879	2899	2900-P	5277	6217	1642	5275	5276	5278	6965

Repair Kit 12294 includes items 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 19 & 20

\*Viton® or equivalent FKM will be used. Viton® is a trademark of DuPont Dow Elastomers.  
Dowtherm® is a trademark of the Dow Chemical Corporation.

Paratherm® is a trademark of the Paratherm Corporation  
Therminol® is a trademark of Solutia Inc.  
Fatigue Proof® is a trademark of Niagara LaSalle Corporation

Specifications are subject to change without notice.