

ROBOTARM[®] VALVE ACTUATORS

CATALOG No. 1218 M
DECEMBER, 1970

The Bettis Robotarm Model CRD-3515-1H is an extremely rugged, hydraulic or pneumatic, cylinder actuator for any type of 90° rotary operation.

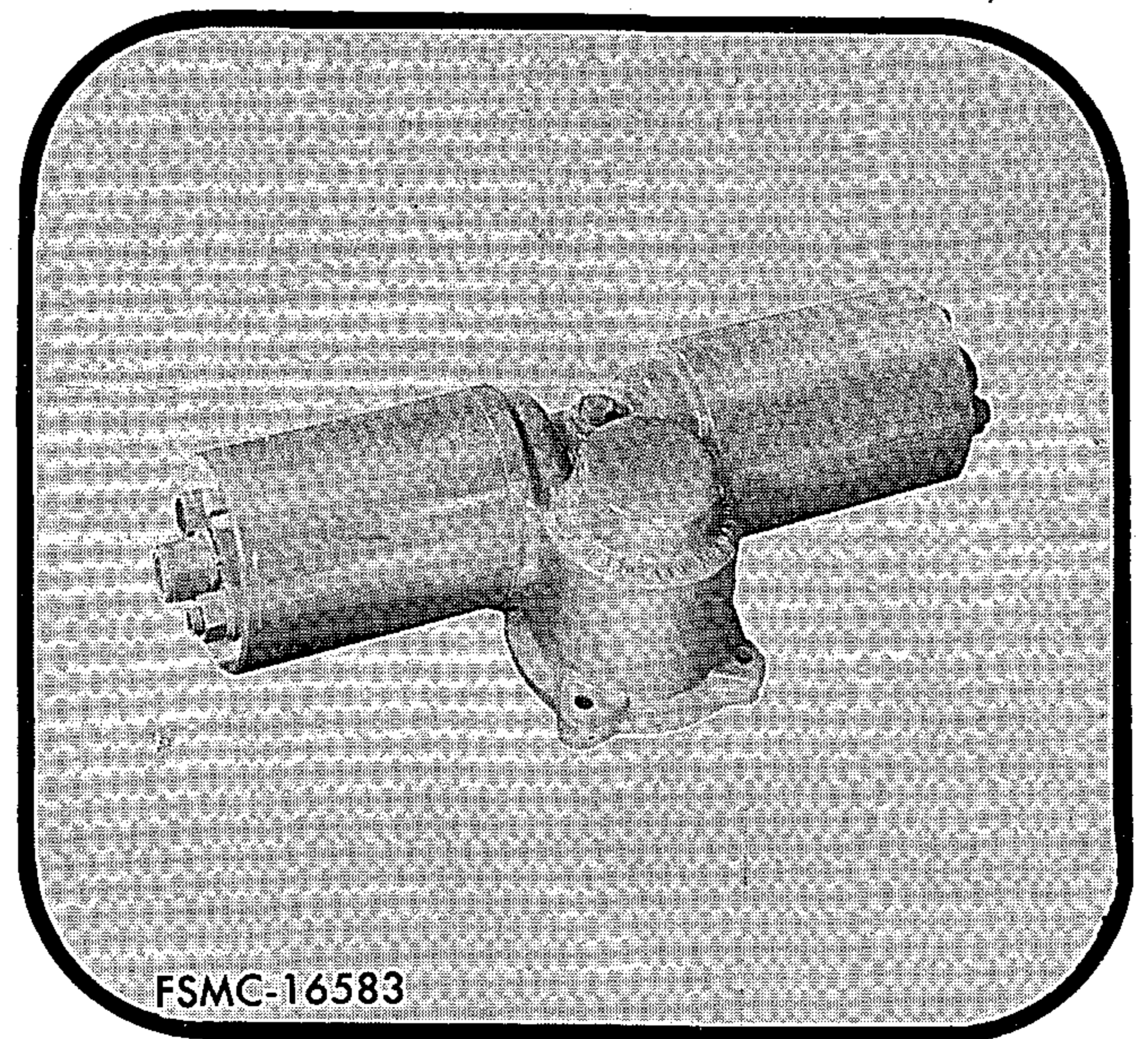
CRD-3515-1H actuators are designed for use with hydraulic or pneumatic supply pressures of 100 psi to 750 psi. Torque outputs range from 1170 to 8780 inch pounds, depending upon supply pressure.

This series of actuators is totally enclosed and designed for continuous submerged service. Present applications include submerged service in fuel oil, aviation gasoline and sea water tanks for ship-board use.

Design features incorporate adjustable stops, positive single-acting pistons, highly efficient rack and pinion drive, and of course the patented Bettis center-bar construction. All bearing surfaces are provided with a baked-on coat of molybdenum disulfide for permanent lubrication.

The above features assure long life, low maintenance and dependable operation.

Although designed specifically for ship-board marine service, the Robotarm CRD-3515-1H actuators are the answer to applications requiring a compact, dependable 90° turn valve control.



The Bettis Robotarm Model CRD-3515-1H actuator has been shock-tested to, and is manufactured in accordance with, MIL-SPEC MIL-V-901-C. Copies of shock-test report LE-821 are available upon request.

SPECIFICATIONS

DISPLACEMENT	21.6 CU. IN/STROKE 43.32 CU. IN/CYCLE
STROKE	2.36 INCHES
DESIGN PRESSURE	750 PSI MAX. *
TEST PRESSURE	1500 PSI MAX.
WEIGHT	45 POUNDS

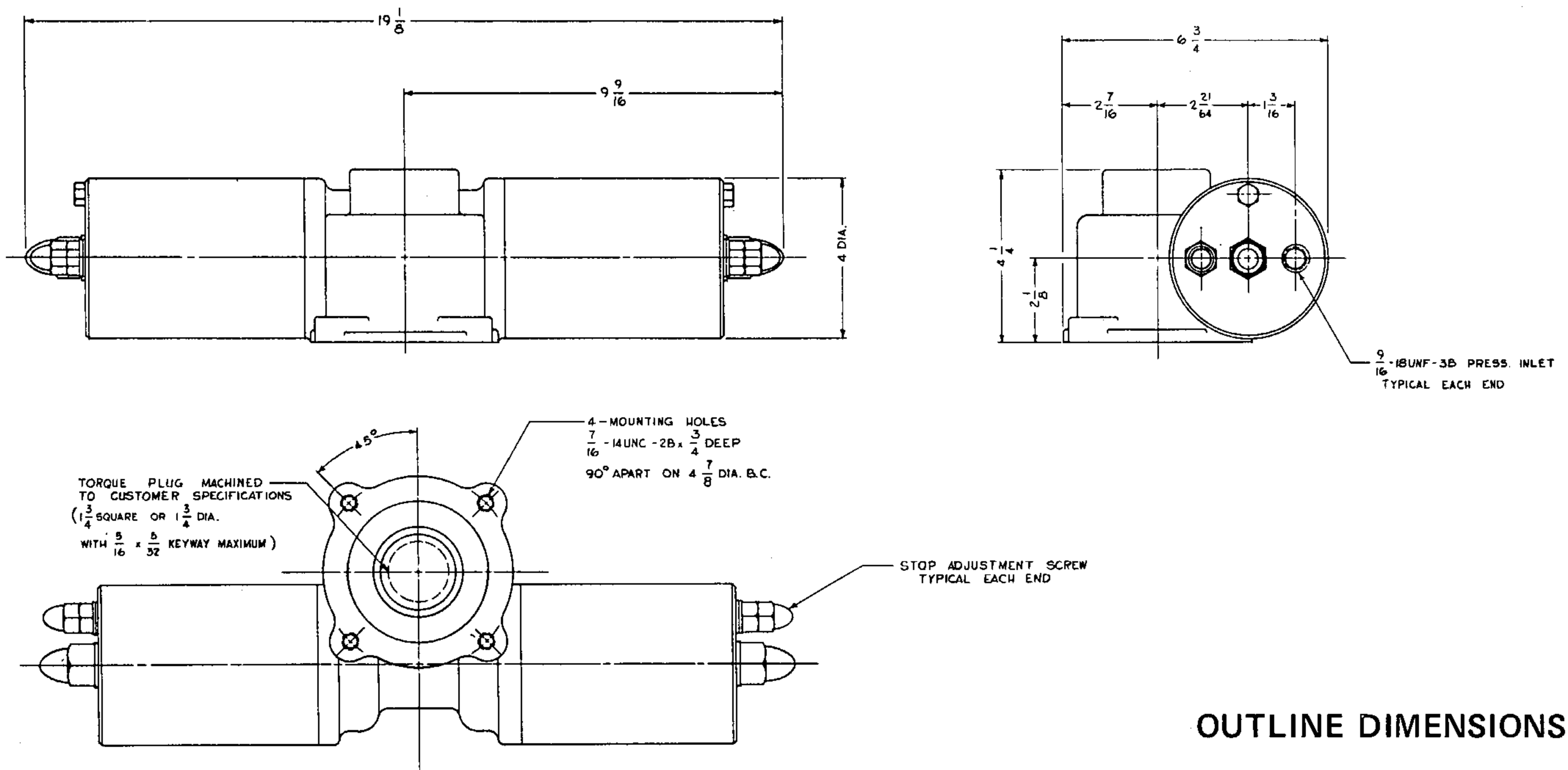
* *Rated working pressure of 1000 PSI
May be used as long as 8780 in. lbs. torque output is not exceeded.

SUPPLY PRESSURE PSI	100	200	300	350	400	450
TORQUE IN. LBS.	1170	2340	3520	4100	4680	5260
SUPPLY PRESSURE PSI	500	550	600	650	700	750
TORQUE IN. LBS.	5850	6450	7025	7610	8200	8780

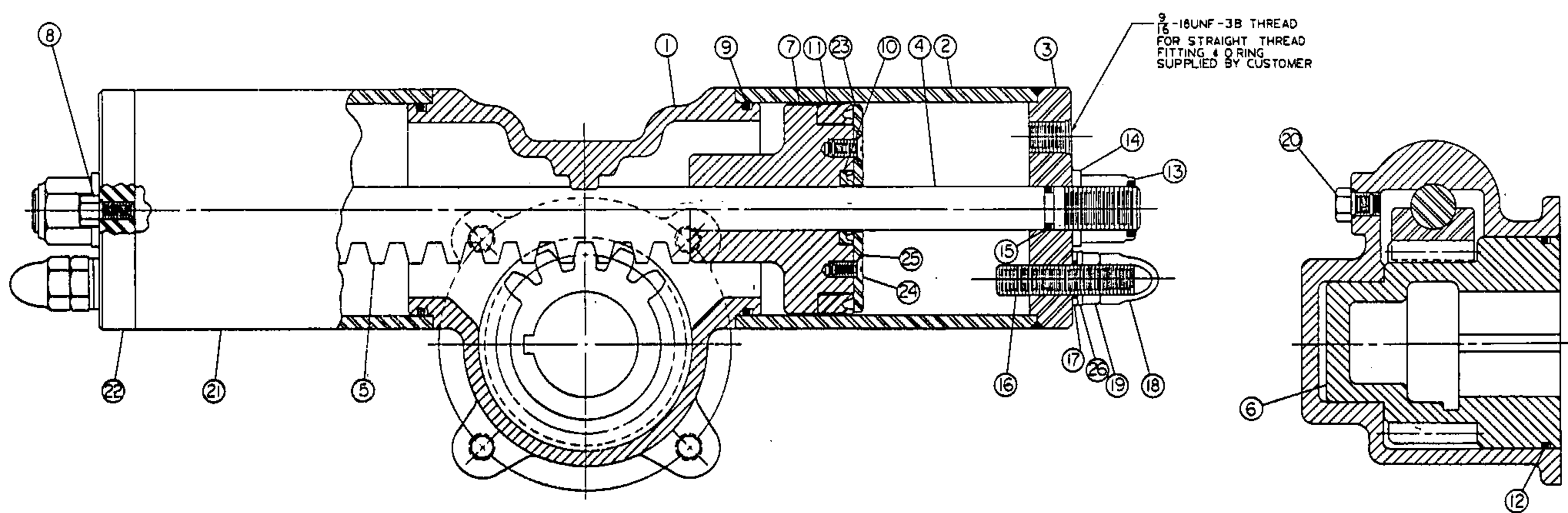
CRD-3515-1H
FOR MARINE APPLICATIONS



3100 FALL AT GRAND • P. O. BOX 14689
PHONE: (713) RI 8-1143 • HOUSTON, TEXAS 77021



OUTLINE DIMENSIONS



PARTS LIST AND MATERIALS

PART NO.	ITEM NO.	DESCRIPTION	QUAN.	MATERIAL	MATERIAL SPEC.	REMARKS
201412	1	BODY	1	DUCTILE	GRADE 60-45-10	MOLYBDENUM DISULPHIDE COATED
208293	2	CYLINDER (RIGHT HAND)	1	STEEL -SMLS. TUBING	MT-1015	MOLYBDENUM DISULPHIDE COATED
208305	3	CYLINDER END CAP (RIGHT HAND)	1	STEEL	ASTM A-285 GR. C	
208292	4	CENTER BAR	1	STEEL	STRESSPROOF STEEL	ELECTROLESS NICKEL PLATED
208295	5	RACK	1	STEEL	C-1018 CARB. & HARD	MOLYBDENUM DISULPHIDE COATED
201433	6	TORQUE PLUG	1	DUCTILE IRON	GRADE 60-45-10	MOLYBDENUM DISULPHIDE COATED
208296	7	PISTON	2	DUCTILE IRON	GRADE 60-45-10	MOLYBDENUM DISULPHIDE COATED
211127	8	BLEED PLUG (A.N. FITTING)	2	STEEL	COMMERCIAL	PARKER #2P50NS-5/16-24UNF-2A
205236	9	BODY CYLINDER SEAL	2	HYCAR	70 DURO HOMOGENEOUS	PARKER O-RING 3 1/2 O.D. x 1/8" 2-236
210912	10	PISTON ROD SEAL	2	URETHANE	90 DURO HOMOGENEOUS	DISOGRIN INDUSTRIES - 1 1/4 x 3/4 x 5/16
211180	11	PISTON SEAL	2	URETHANE	90 DURO HOMOGENEOUS	DISOGRIN INDUSTRIES - 3 1/2 x 2 3/4 x 5/8
205236	12	TORQUE PLUG SEAL	1	HYCAR	70 DURO HOMOGENEOUS	PARKER O-RING 3 1/2 O.D. x 1/8" 2-236
203322	13	CENTER BAR NUT	2	STEEL	COMMERCIAL	ESNA - 3/4 - 16UNF - 2B THD.
210919	14	LOCK WASHER	2	STEEL	COMMERCIAL	3/4 MEDIUM
205113	15	CENTER BAR SEAL	2	HYCAR	70 DURO HOMOGENEOUS	PARKER O-RING - 3/4 O.D. x 3/32" 2-113
203282	16	STOP ADJUSTING SCREW	2	STEEL	COMMERCIAL	1/2-13UNC-2B. SOC. SET SCREW
203038	17	STOP SCREW SEAL	2	STEEL & HYCAR	COMMERCIAL	PARKER THD. SEAL #7500-1/2
211125	18	STOP SCREW NUT	2	STEEL	COMMERCIAL	1/2-13UNC-2B DEEP CROWN ACORN NUT
211126	19	STOP SCREW JAM NUT	2	STEEL	COMMERCIAL	1/2-13UNC-2B JAM NUT
211128	20	BODY BLEED PLUG (A.N. FITTING)	1	STEEL	COMMERCIAL	PARKER #4P50NS-7/16NF20
208307	21	CYLINDER (LEFT HAND)	1	STEEL -SMLS. TUBING	MT-1015	MOLYBDENUM DISULPHIDE COATED
208306	22	CYLINDER END CAP (LEFT HAND)	1	STEEL	ASTM A-285 GR. C	
208138	23	PISTON WASHER	2	STEEL	SAE 1018	MOLYBDENUM DISULPHIDE COATED
210905	24	PISTON WASHER SCREW	6	STEEL	COMMERCIAL	1/4-20UNC-2A FLAT. HD. SOC. SCREW
211130	25	PISTON SCREW LOCK WASHER	6	STEEL	COMMERCIAL	1/4 CONICAL LOCK WASHER
205869	26	STOP SCREW WASHER	2	STEEL	COMMERCIAL	