

SUBMERSIBLE SOLIDS HANDLING PUMPS

MNG SERIES

GENERAL

Furnish Myers® MNG series solids handling submersible sewage pump(s) as specified herein.

Pump shall be equipped with stainless steel nameplate, stating the unit is accepted for use in Standard Location or NEC® class 1, Division 1, Groups C, D hazardous locations with third party, Factory Mutual, approval.

The pump shall be non-overloading throughout operation without employing service factor. The performance curve submitted for approval shall state in addition to head and capacity performance, the pump efficiency, and reflect motor service factor.

Job Name: _____

Pump: Myers MNG _____

Number of Pumps: _____

Impeller: _____

Discharge: Shall be _____" ANSI flange.

Motor: Shall be _____ HP _____ V _____ Hz _____ Phase, Oil Filled Design.

Power Cord: Shall be epoxy potted and equipped with a minimum of 35' of power cord.

Pump Operating Characteristics: Each pump shall be verified for performance. Pump shall operate at following conditions:

- 0 ___ GPM at ___ TDH
- ___ GPM at ___ TDH
- ___ GPM at ___ TDH
- ___ GPM at ___ TDH

CONSTRUCTION

Castings – Cord Cap / Motor Housing / Bearing Housing / Seal Plate shall be ASTM A48 Class 30 Cast Iron.

Shaft shall be 416 Stainless Steel.

Impeller - ASTM B-584-836 440SST.

Chopper Liner - ASTM B-584-836 440SST

ELECTRICAL POWER CORD

The power cord will be SOOW or W, oil and water resistant 600v, 90C, UL® and CSA® approved and applied per NEC ampacities ratings at the cables rated temperature for intermittent / continuous duty. The pump shall be double protected with a compression fitting and an epoxy potted area that seals each conductor at the power cord entry to the pump. The power cable entry into the cord cap assembly shall first be made with a compression fitting. The leads shall be terminated within the epoxy and mechanically crimped to Teflon leads. This area of the cord cap shall then be filled with an epoxy compound potting. This assembly will prevent water contamination from gaining entry even in the event of wicking or capillary action. The power cord leads shall be connected to the motor leads with a terminal block or extra heavy connectors. The cord cap assembly where bolted to the motor housing shall be sealed with a Nitrile O-ring on a beveled edge to assure proper sealing. Wiring connection shall be done through a terminal block eliminating wire nuts or use of heavy duty crimp connectors.

MOTOR

With exception of 208V models, motors shall meet premium efficiency in accordance with IEC 60034-30, level IE3, and NEMA MG1 [NEMA 12.60 Enclosed motor]. The motors are submerged in non-toxic, oil filled, cool running design providing significantly reduced operating temperatures. Pump designs requiring a secondary cooling apparatus shall be deemed unapproved and not equal. Air filled pump designs shall not be considered equal or approved.

Motor will be of the squirrel-cage induction design, NEMA type A or B for 3 Phase [Per NEMA MG1 1.19].

Motor shall be NEMA MG1 1.66].

The service factor shall be 1.15 for all models excluding the highest HP per frame size, which will be at 1.0. The motor shall have a voltage tolerance of +/- 10% from nominal, and a phase to phase voltage imbalance tolerance of 1%.

The rotor bars and short circuit rings shall be made of cast aluminum.

Motor shall be NEMA MG1 1.66]. The winding operating temperature at rated horsepower and service factor will be a maximum of 130°C.

The motor shall be capable of handling up to 15 evenly spaced starts per hour without overheating [Per NEMA].

The rotors will have high efficiency laminated steel with die cast bars and shorting rings. The stators will have high efficiency

SHAFT

The pump shaft shall be an integral, one piece unit adequately designed to meet the maximum torque required at any normal start up condition or operating point in the system. Shafts of carbon steel, chrome plated or spin welded shafts shall not be considered adequate or equal. Material of shaft shall be 416 stainless steel conforming to ASTM 8582.

FLUID END

The impeller and chopper liner shall be ASTM B-584-836 440 stainless steel. Optional impeller coatings are available for improved corrosion resistance. The impeller mounting is to be a slip fit onto a tapered shaft and a drive key. The impeller shall be attached to the shaft by a SST fastener. The impeller is to be balanced to ISO1940-1 Grade G6.3 standard. Impeller designs that rely on fins or pins protruding into the suction path to assist in the handling of fibrous material shall not be considered equal. Impellers shall be of the semi-open type having the ability to pass a wide range of solids. Any impeller design requiring mechanical bypass mechanism located in the volute in order to handle solids shall not be considered equal or acceptable.

The volute shall be ASTM Class 30. It will consist of a centerline discharge one piece design with the ability to install a mix flush. The discharge flange shall be ANSI Class 125 and be integrated into the volute case.

SEALS

Each pump will be equipped with a tandem mechanical seal design. The configuration of the lower seal shall be of the type 2 design and constructed of Carbon/ Silicon Carbide and be replaceable without disassembly of the seal chamber. The upper seal shall be of the type 2100 design and constructed of Carbon/Silicon Carbide. Each seal will not require routine maintenance or adjustment.

EQUIPMENT MONITORING (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130) (131) (132) (133) (134) (135) (136) (137) (138) (139) (140) (141) (142) (143) (144) (145) (146) (147) (148) (149) (150) (151) (152) (153) (154) (155) (156) (157) (158) (159) (160) (161) (162) (163) (164) (165) (166) (167) (168) (169) (170) (171) (172) (173) (174) (175) (176) (177) (178) (179) (180) (181) (182) (183) (184) (185) (186) (187) (188) (189) (190) (191) (192) (193) (194) (195) (196) (197) (198) (199) (200)

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