



ACCESSORIES
(CONTROL PANEL)



Powering Business Worldwide

<http://www.chfire.com>



TORNATECH

<https://www.tornatech.com/en/products/fire-pump-controllers/>

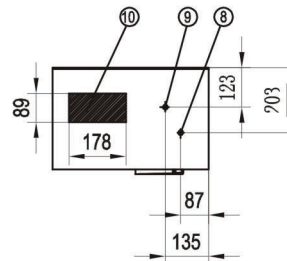
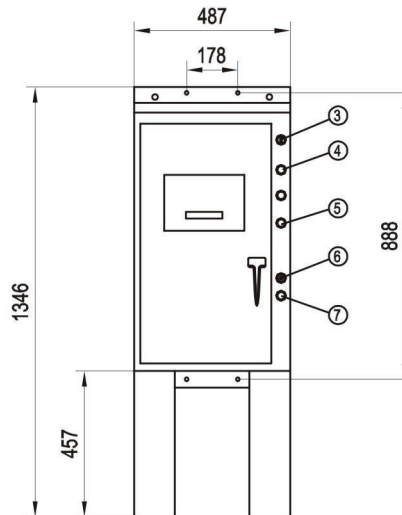
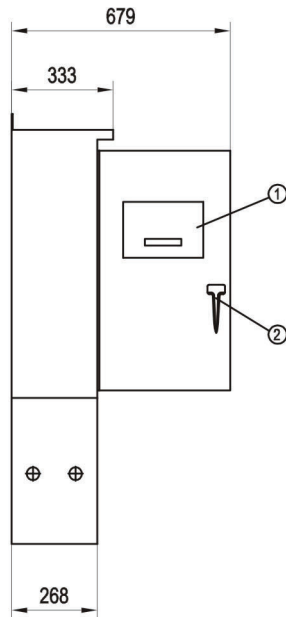




ACCESSORIES

(DIESEL ENGINE CONTROL PANEL)

THE UL/FM MAIN CONTROLLER FOR THE DIESEL ENGINE FIRE PUMP SET (EATON)



- 1- DIESEL PLUS MEMBRANE
- 2- LOCKABLE HANDLE
- 3- HAND OFF AUTO SELECTOR SWITCH
- 4- STOP BUTTON
- 5- CRANK BUTTONS
- 6- AUDIBLE ALARM
- 7- DC FAIL LIGHT
- 8- DISCHARGE 1/4" NPT - FEMAL
- 9- SENSING LINE 1/2" NPT - FEMAL
- 10- ALLOWABLE CABLE ENTRY/EXIT AREA

NOTES:

- 1. All enclosures finished in Fire Pump red.
- 2. Cable Entrance bottom only.
- 3. Standard Enclosure type NEMA2.
- 4. Enclosure made from #14 Gauge (0.74) HR Steel.
- 5. Feet are removable.

*NEMA4, 4X enclosures are supplied:
With 1/4 Turn latches of a standard handle.

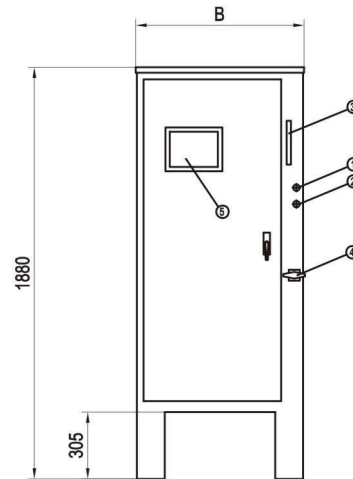
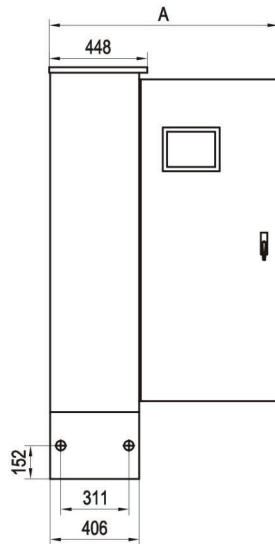
Approximate Weight:48Kg





ACCESSORIES (MOTOR CONTROL PANEL)

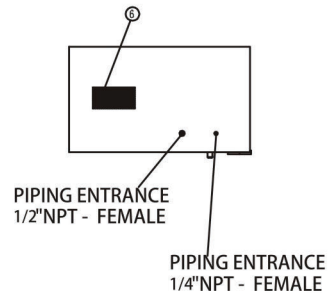
THE UL/FM MAIN CONTROLLER FOR THE MOTOR FIRE PUMP SET (EATON)



- 1- START PUSHBUTTON
- 2- STOP PUSHBUTTON
- 3- MAIN POWER SWITCH
- 4- MSH (EMERGENCY START HANDLE)
- 5- MAIN LMR PLUS DISPLAY
- 6- RECOMMENDED CABLE ACCESS (BOTTOM ONLY)

NOTES:

- 1. All enclosures finished in Fire Pump red.
- 2. Cable Entrance bottom only.
- 3. Standard Enclosure type NEMA 2.



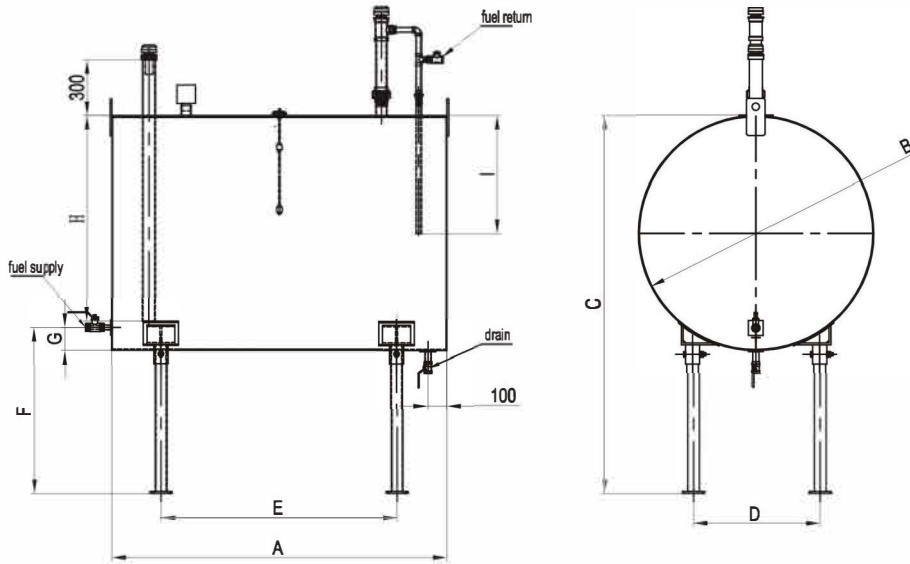
Motor (HP)	Line Voltage (V)	Withstand Rating			Approximate Weight (Kg)	A (mm)	B (mm)	C (mm)
		Standard	Intermediate	High				
50-100	220-208	100,000	Consult Factory	Consult Factory	143	1062	768	541
60-125	220-240							
100-200	*380-415							
125-250	440-480							
125-300	550-600	25,000	35,000	190	1393	1099	871	
125-150	200-208	100,000	Consult Factory					
150-200	220-240							
250-300	*380-415							
300-400	440-480							
350-500	550-600	25,000	35,000					

*Coils Available: 380V-50HZ, 380V-60HZ, 415V-50HZ, 415V-60HZ.



ACCESSORIES
(FUEL TANK)

THE OUTLINE DIMENSIONS OF NM FIRE FUEL TANK

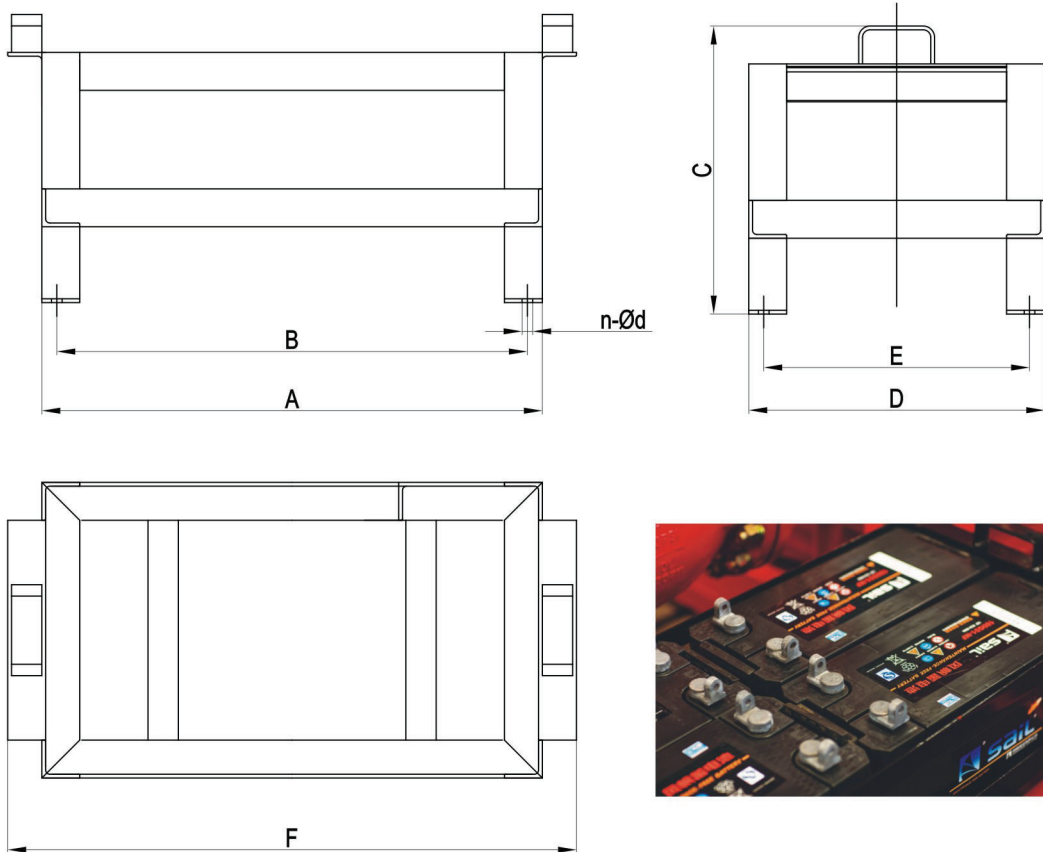


Fuel Tank Volumn	A	B	C	D	E	F	G	H	I	Fuel Supply		Fuel Return		Drain
	UNIT: mm										INCH			
200L	700	638	1426	390	400	851	65	570	315	Rc1 2"	NPT 1 2"	Rc1 2"	NPT 1 2"	1"
400L	1300	638	1426	390	770	851	65	570	315	Rc1 2"	NPT 1 2"	Rc1 2"	NPT 1 2"	
600L	1300	828	1580	580	770	842	90	726	415	Rc1 2"	NPT 1 2"	Rc1 2"	NPT 1 2"	
800L	1600	828	1580	580	1070	842	90	726	415	Rc1 2"	NPT 1 2"	Rc1 2"	NPT 1 2"	
1000L	1300	998	1774	580	770	874	100	846	515	Rc1 2"	NPT 1 2"	Rc1 2"	NPT 1 2"	
1200L	1600	998	1774	580	1070	874	100	846	515	Rc3 4"	NPT 3 4"	Rc1 2"	NPT 1 2"	
1500L	1300	1262	2035	680	770	891	122	1110	635	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
1800L	1500	1262	2035	680	970	891	122	1110	635	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
2100L	1800	1262	2035	680	1270	891	122	1110	635	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
2500L	1600	1432	2199	700	1070	903	140	1281	715	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
3100L	1600	1622	2363	920	1070	893	157	1470	810	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
3600L	1800	1622	2363	920	1270	893	157	1470	810	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
4100L	1800	1722	2474	920	1270	914	167	1560	860	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	
4500L	2000	1722	2474	920	1470	914	167	1560	860	Rc3 4"	NPT 3 4"	Rc3 4"	NPT 3 4"	



ACCESSORIES
(BATTERY)

THE OUTLINE DIMENSIONS OF NM FIRE BATTERY RACK



Battery Capacity	A	B	C	D	E	F	n-Ød
	UNIT:mm						
80AH	660	620	380	390	350	750	4-Ø14
100AH	860	820	380	390	350	950	4-Ø14
120AH	860	820	380	390	350	950	4-Ø14
150AH	1060	1020	380	460	420	1150	4-Ø14
180AH	1060	1020	380	480	440	1150	4-Ø14
200AH	1060	1020	380	590	550	1150	4-Ø14

JOCKEY PUMP



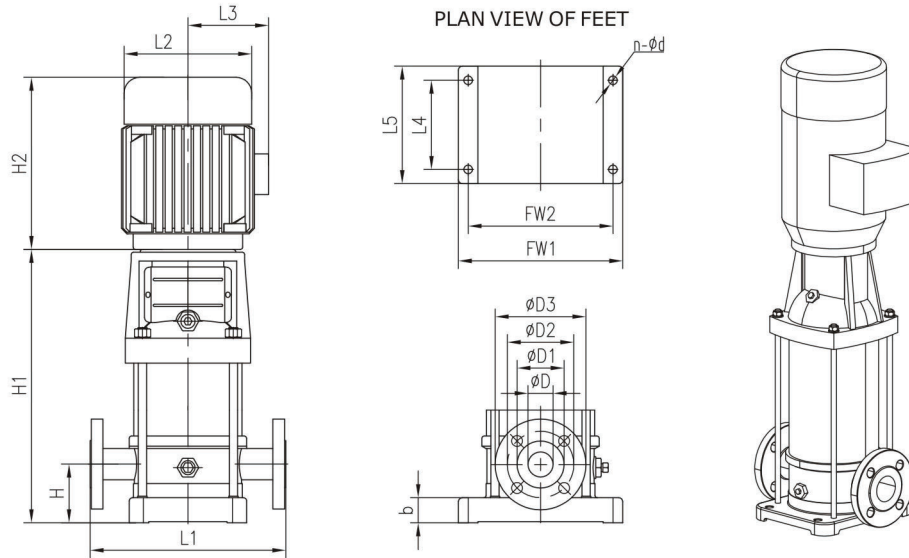
ACCESSORIES (JOCKEY PUMP)

THE PARAMETER TABLE OF THE STAINLESS-STEEL VERTICAL MULTISTAGE CENTRIFUGAL PUMP (CDL TYPE)

TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	1.2	1.6	2.0	2.4	2.8	3.0	3.2	3.6
CDL3-15	2900	1.1	H(m)	90	88	84	79	73	69	66	57
CDL3-17		1.5		103	100	96	90	83	79	75	64
CDL3-19		1.5		115	112	107	100	92	88	83	72
CDL3-21		2.2		128	124	119	112	102	98	91	79
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
CDL3-13	3500	2.2	H(m)	112	109	104	98	86	80	69	57
CDL3-15		2.2		129	126	120	112	99	93	81	65
CDL3-17		2.2		147	143	137	128	114	106	91	74
CDL3-19		3.0		165	160	153	142	126	118	102	82
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	1.5	2.0	3.0	4.0	5.0	6.0	7.0	
CDL4-10	2900	2.2	H(m)	96	90	87	81	71	62	48	
CDL4-12		2.2		114	108	104	95	85	75	58	
CDL4-14		3.0		136	126	122	112	101	89	68	
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	2.5	3.0	4.0	5.0	6.0	7.0	8.0	
CDL4-8	3500	3.0	H(m)	104	100	95	90	79	72	63	
CDL4-10		4.0		130	125	120	113	102	90	80	
CDL4-12		4.0		156	150	145	136	122	109	96	
CDL4-14		5.5		182	176	170	159	145	129	112	
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
CDL8-12	2900	4.0	H(m)	124	120	116	111	104	92	87	78
CDL8-14		5.5		145	141	136	130	122	113	102	92
CDL8-16		5.5		166	161	156	148	139	130	118	106
CDL8-18		7.5		187	182	175	167	157	146	134	120
CDL8-20		7.5		208	202	195	186	175	163	150	135
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
CDL8-8	3500	5.5	H(m)	115	110	105	101	97	91	84	75
CDL8-10		7.5		145	140	132	126	122	115	105	95
CDL8-12		7.5		173	167	160	152	147	132	125	115
CDL8-14		11.0		202	195	188	179	174	163	147	135
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0
CDL12-10	2900	7.5	H(m)	114.5	111	106	101	94.5	88	80	72
CDL12-12		7.5		137	133	127	121	113.5	106	96	86
CDL12-14		11.0		160	155	148	141	132.5	124	112	100
CDL12-16		11.0		183.5	178	170	162	152	142	128.5	115
CDL12-18		11.0		207.5	202	192.5	183	171.5	160	145	130
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	7.0	9.0	11.0	12.0	13.0	15.0	17.0	19.0
CDL12-7	3500	7.5	H(m)	124	121	116	112	107	97	88	71
CDL12-8		11.0		141	137	132	128	122	111	101	82
CDL12-10		11.0		178	173	166	161	153	140	128	104
CDL12-12		15.0		213	208	199	193	185	169	154	125
CDL12-14		15.0		249	242	233	225	216	198	180	145
TYPE	SPEED (rpm)	MOTOR OUTPUT (kW)	Q (m ³ /h)	10.0	12.0	14.0	15.0	16.0	18.0	20.0	22.0
CDL15-7	2900	7.5	H(m)	103	100	96	93	90	84	77	69
CDL15-9		7.5		117	114	109	106	103	95	87	79
CDL15-10		11.0		130	126	121	118	114	106	97	88
CDL15-12		11.0		157	152	146	142	138	128	117	106
CDL15-14		11.0		182	177	169	165	160	149	137	124

ACCESSORIES (JOCKEY PUMP)

THE OUTLINE DIMENSIONS DRAWING OF VERTICAL MULTISTAGE CENTRIFUGAL PUMP (CDL TYPE)



TYPE	Speed (rpm)	DIMENSIONS(UNIT:mm)											FLANGE				Weight (Kg)		
		L1	L2	L3	L4	L5	FW1	FW2	H	H1	H2	b	n	φd	φD	φD1		φD2	φD3
CDL3-15	2900	250	170	142	100	150	210	180	75	502	245	32	4	13	32	60	85	115	32
CDL3-17		250	190	155	100	150	210	180	75	548	290	32	4	13	32	60	85	115	38
CDL3-19		250	190	155	100	150	210	180	75	584	290	32	4	13	32	60	85	115	39
CDL3-21		250	190	155	100	150	210	180	75	620	290	32	4	13	32	60	85	115	42
CDL3-10	3500	250	190	155	100	150	210	180	75	422	290	32	4	13	32	60	85	115	34
CDL3-11		250	190	155	100	150	210	180	75	440	290	32	4	13	32	60	85	115	34
CDL3-12		250	190	155	100	150	210	180	75	458	290	32	4	13	32	60	85	115	37
CDL3-13		250	190	155	100	150	210	180	75	476	290	32	4	13	32	60	85	115	38
CDL3-15	2900	250	190	155	100	150	210	180	75	512	290	32	4	13	32	60	85	115	39
CDL3-17		250	190	155	100	150	210	180	75	548	290	32	4	13	32	60	85	115	40
CDL3-19		250	197	165	100	150	210	180	75	594	345	32	4	13	32	60	85	115	48
CDL4-10		250	190	155	100	150	210	180	75	512	290	32	4	13	32	60	85	115	37
CDL4-12	2900/3500	250	190	155	100	150	210	180	75	566	290	32	4	13	32	60	85	115	38
CDL4-14		250	197	165	100	150	210	180	75	630	345	32	4	13	32	60	85	115	46
CDL8-8		280	197	165	215	247	199	130	80	547	345	25	4	18	50	80	110	150	53
CDL8-10		280	230	188	215	247	199	130	80	607	355	25	4	18	50	80	110	150	64
CDL8-12	2900/3500	280	230	188	215	247	199	130	80	667	355	25	4	18	50	80	110	150	66
CDL8-14		280	260	208	215	247	199	130	80	747	390	25	4	18	50	80	110	150	81
CDL8-16		280	260	208	215	247	199	130	80	807	390	25	4	18	50	80	110	150	84
CDL8-18		280	260	208	215	247	199	130	80	867	390	25	4	18	50	80	110	150	93
CDL8-20	2900/3500	280	260	208	215	247	199	130	80	927	390	25	4	18	50	80	110	150	94
CDL12-7		300	260	208	215	247	199	130	90	547	390	35	4	18	50	80	125	165	73
CDL12-8		300	260	208	215	247	199	130	90	577	390	35	4	18	50	80	125	165	74
CDL12-10		300	260	208	215	247	199	130	90	637	390	35	4	18	50	80	125	165	83
CDL12-12	2900/3500	300	260	208	215	247	199	130	90	697	390	35	4	18	50	80	125	165	87
CDL12-14		300	330	255	215	247	199	130	90	845	500	35	4	18	50	80	125	165	157
CDL12-16		300	330	255	215	247	199	130	90	905	500	35	4	18	50	80	125	165	161
CDL12-18		300	330	255	215	247	199	130	90	965	500	35	4	18	50	80	125	165	164
CDL15-7	3500	300	260	208	215	247	199	130	90	652	390	35	4	18	50	80	125	165	80
CDL15-9		300	260	208	215	247	199	130	90	742	390	35	4	18	50	80	125	165	88
CDL15-10		300	330	255	215	247	199	130	90	875	500	35	4	18	50	80	125	165	157
CDL15-12		300	330	255	215	247	199	130	90	965	500	35	4	18	50	80	125	165	161
CDL15-14	300	330	255	215	247	199	130	90	1055	500	35	4	18	50	80	125	165	165	



ACCESSORIES (JOCKEY PUMP CONTROLLER)

MYRIADPRO-BOLD;

- ⌘ All adjustments on door front
- ⌘ Visual indicators
 - ⌚ Automatic motor run
 - ⌚ Manual motor run
 - ⌚ Off mode
 - ⌚ Motor overload
 - ⌚ System pressure
 - ⌚ Three-phase power source monitoring
- ⌘ Operators
 - ⌚ Auto-OFF Manual Switching knob
 - ⌚ Start and stop push buttons



- ⌘ **ANI** jockey pump controllers are specifically designed to control jockey pumps in order to maintain the desired water pressure in fire pump serviced systems.
- ⌘ A jockey pump installation prevents unnecessary starting of the fire pump due to small leaks in the sprinkler system piping.

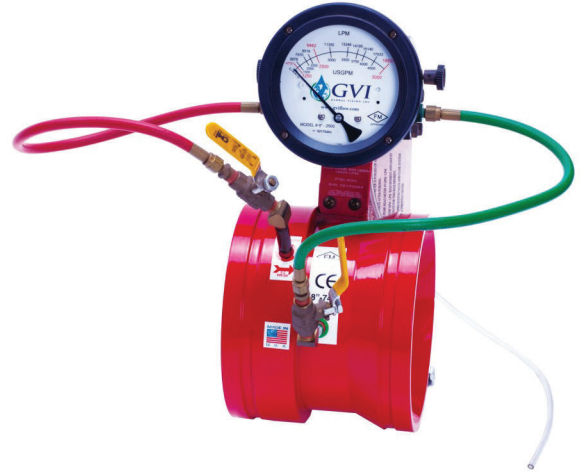
⌘ **ANI** jockey pump controller is equipped with intelligent digital display meter installed on the door front. The meter allows the user to set and adjust all required parameters, for example start and stop pressure, without having to open the controller door.

⌘ The standard power circuit consists of a horsepower rated disconnect switch, magnetic motor starter and a thermo-magnetic motor protector for short circuit and overload protection.



ACCESSORIES (FIRE PUMP FLOW METER)

- FM Approval flow meters
- Patented accuracy of 0.5%
- Friction loss less than 1 psi
- 612 warranty: 6yr gauge / 12yr venturi
- Digital gauge with 4-20ma transmitter
- Substantial inventory for quick shipping



Pump GPM	Meter Range Min. & Max.GPM	Model Number Grooved	Model Number Butt Weld	Model Number 150# Flanged	Model Number <Threaded> *300# FLANGED*
300	150 - 600	4" -300-G	4" -300-B	4" -300-F	*4" -300-F3
400	200 - 800	4" -400-G	4" -400-B	4" -400-F	*4" -400-F3
450	225 - 900	4" -450-G	4" -450-B	4" -450-F	*4" -450-F3
450	225 - 900	5" -450-G	5" -450-B	5" -450-F	*5" -450-F3
500	250 - 1000	5" -500-G	5" -500-B	5" -500-F	*5" -500-F3
750	375 - 1500	5" -750-G	5" -750-B	5" -750-F	*5" -750-F3
500	250 - 1000	6" -500-G	6" -500-B	6" -500-F	6" -500-F3
750	375 - 1500	6" -750-G	6" -750-B	6" -750-F	6" -750-F3
1000	500 - 2000	6" -1000-G	6" -1000-B	6" -1000-F	6" -1000-F3
1250	625- 2500	6" -1250-G	6" -1250-B	6" -1250-F	6" -1250-F3
1000	500 - 2000	8" -1000-G	8" -1000-B	8" -1000-F	8" -1000-F3
1250	625 - 2500	8" -1250-G	8" -1250-B	8" -1250-F	8" -1250-F3
1500	750 - 3000	8" -1500-G	8" -1500-B	8" -1500-F	8" -1500-F3
2000	1000 - 4000	8" -2000-G	8" -2000-B	8" -2000-F	8" -2000-F3
2500	1250 - 5000	8" -2500-G	8" -2500-B	8" -2500-F	8" -2500-F3
3000	1500 - 6000	8" -3000-G	8" -3000-B	8" -3000-F	8" -3000-F3
1500	750 - 3000	10" -1500-G	10" -1500-B	10" -1500-F	10" -1500-F3
2000	1000 - 4000	10" -2000-G	10" -2000-B	10" -2000-F	10" -2000-F3
2500	1250 - 5000	10" -2500-G	10" -2500-B	10" -2500-F	10" -2500-F3
3000	1500 - 6000	10" -3000-G	10" -3000-B	10" -3000-F	10" -3000-F3
3500	1750 - 7000	10" -3500-G	10" -3500-B	10" -3500-F	10" -3500-F3
4000	2000 - 8000	10" -4000-G	10" -4000-B	10" -4000-F	10" -4000-F3
4500	2250 - 9000	10" -4500-G	10" -4500-B	10" -4500-F	10" -4500-F3
2500	1250 - 5000	* 12" -2500-G	* 12" -2500-B	* 12" -2500-F	*12" -2500-F3
3000	1500 - 6000	* 12" -3000-G	* 12" -3000-B	* 12" -3000-F	*12" -3000-F3
3500	1750 - 7000	* 12" -3500-G	* 12" -3500-B	* 12" -3500-F	*12" -3500-F3
4000	2000 - 8000	* 12" -4000-G	* 12" -4000-B	* 12" -4000-F	*12" -4000-F3
4500	2250 - 9000	* 12" -4500-G	* 12" -4500-B	* 12" -4500-F	*12" -4500-F3
5000	2500 - 10000	12" -5000-G	12" -5000-B	12" -5000-F	12" -5000-F3



ACCESSORIES (PRESSURE RELIEF VALVE)

- UL Listed / ULC Listed
- Factory Mutual Approved
- Fast Opening to Maintain Steady Line Pressure
- Accommodates Wide Range of Flow Rates
- Closes Gradually for Surge-Free Operation
- Adjustable Pressure Settings, Not Affected by Pressure At Valve Discharge



Specifications

Globe: 2" - 10" flanged Angle: 2" - 10" flanged
150 and 300 ANSI B16.42

Class 150 - 250 psi Max. Class 300 - 300 psi Max
Water, to 180°F Max.

Main Valve Body & Cover

Ductile Iron ASTM A536 Grade 65-45-12

Standard Main Valve Trim: Bronze Seat, Teflon Coated Stainless Steel Stem, Dura-Kleen Stem

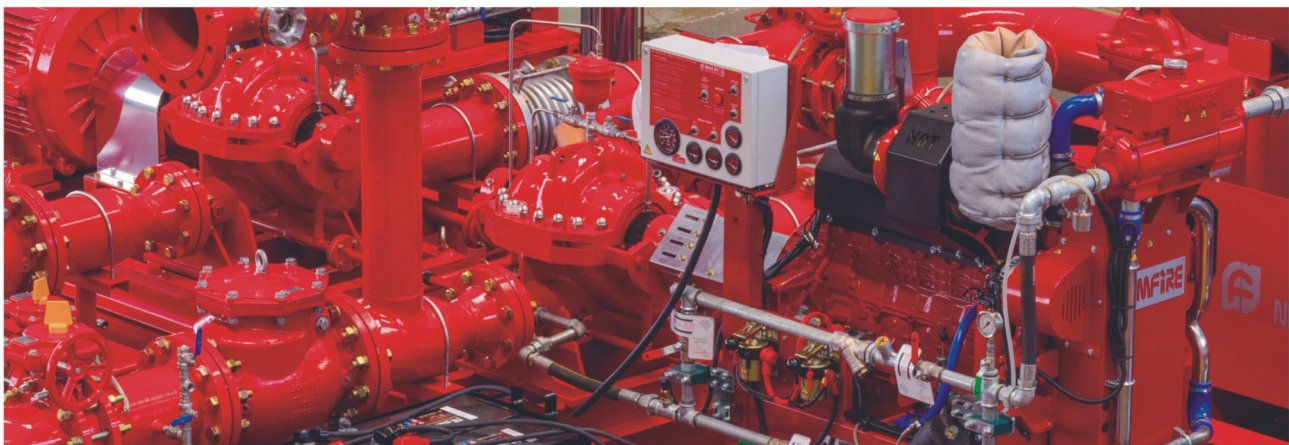
Standard Pilot Control System: Cast Bronze with Stainless Steel trim

Available in the following relief

Pressure ranges:

20-200 psi (150 Class) 100-300 psi (300 Class)

Protective epoxy resin coating of wetted surfaces of main valve cast iron components (UL listed HNF X EX2855)



ACCESSORIES (WASTE CONE)

- Manufactured in Accordance with NFPA 20 Requirements
- Available for Onshore and Offshore Applications
- Designed for use with UL/FM Approved Fire Pump

STANDARDS:

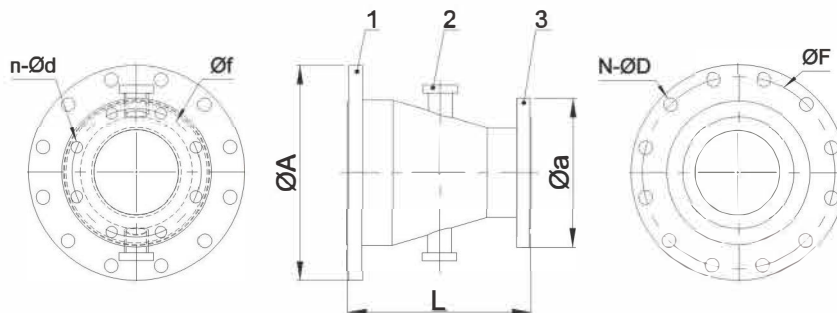
- Epoxycoating Red RAL3020
- Carbon steel - ASTM A570 Gr.D
- (2) 2" 304 SS Sight glass Welding



OPTIONAL MATERIALS FOR SEAWATER AND SEVERE SERVICE APPLICATIONS:

- Nickel Aluminum Bronze (NAB) - ASTM B148 Alloy C95800
- Monel - QQ-N-288 Comp B - ASTM A494 Grade M30H
- 316 Stainless Steel - ASTM A743 Grades CF3M and CFM8
- Super Austenitic Stainless Steel - ASTM A351 Grade CK3MCuN (SMO 254)
- Super Duplex Stainless Steel - ASTM A890 Grade 5A (CE3MN)

SIZE:



NO.	FLOW (us.gpm)	TYPE (inch)	Note 1				Note 3				Note 2	L mm
			AMSE B16.5 150# Class RF									
			ΦA	ΦF	N	ΦD	Φa	Φf	n	Φd		
1	300/400/500	3x5	254	216	8	22.4	191	152	4	19.1	Sight Glasses 2"	300
2	750	4x6	279	241	8	22.4	229	191	8	19.1		320
3	1000	4x8	343	299	8	22.4	229	191	8	19.1		320
4	1250/1500	6x8	343	299	8	22.4	279	241	8	22.4		340
5	2000/2500	6x10	406	362	12	25.4	279	241	8	22.4		340
6	3000/3500	8x12	483	432	12	25.4	343	299	8	22.4		360
7	4000/4500/5000	8x14	533	476	12	28.4	343	299	8	22.4		360



ACCESSORIES (CIRCULATION RELIEF VALVE)

- Available sizes 1/2", 3/4" and 1 "
- Temperature Range Water, Air: to 180°F Max.
- Pressure Ratings Cast Bronze 400 psi Max.
- Stainless Steel 400 psi Max.
- UL Listed/FM Approved for use as a Fire Pump Casing Relief Valve
- Direct Acting - Precise Pressure Control
- Drip Tight Closure
- No Packing Glands or Stuffing Boxes
- Globe or Angle configurations available
- Sensitive to Small Pressure Variations
- Meets low lead requirements
- Available in Cast Bronze, 316 Stainless Steel, Monel & Super Duplex Stainless Steel

Adjustment Ranges UL Listed

10 to 75 psi • 20 to 200 psi • 100 to 300 psi

Adjustment Ranges FM Approved

0 to 75 psi • 20 to 200 psi • 100 to 300 psi

Valve cast iron components

(UL listed HNFx EX2855)



ACCESSORIES (SUCTION PRESSURE GAUGE)

Axial installation, 1.6Grade, Connection: M20x1.5

The diameter of dial:100mm

Measurement range: -0.1bar~9bar



ACCESSORIES (DISCHARGE PRESSURE GAUGE)

Axial installation, 1.6 Grade, Connection:NPT1/4",

The diameter of dial:100mm,89mm

Measurement range: 0 psi ~300psi, 0 psi ~600psi (UL/FM) ,





**ACCESSORIES
(SILENCER)**

- Attenuation Level: 15 dB(A) , 25 dB(A) , 35 dB(A), 45 dB(A)
- Orientation: Horizontal; Vertical
- Standard Flange: ANSI
- Optional Flange: DIN, JIS, BS, GB and others
- Standard Material: Mild Steel
- Optional Material: Cor-ten; Aluminized Steel
- Stainless Steel 304, 316, 316L



No.	Silencer			
	Inlet Dimension	Industrial Grade	Household Grade	Non Spark
1	DN75	EL-75	EX25-75	EXA15-75
2	DN100	EL-100	EX25-100	EXA15-100
3	DN125	EL-125	EX25-125	EXA15-125
4	DN150	EL-150	EX25-150	EXA15-150
5	DN200	EL-200	EX25-200	EXA15-200
6	DN250	EL-250	EX25-250	EXA15-250
7	DN300	EL-300	EX25-300	EXA15-300
8	DN350	EL-350	EX25-350	EXA15-350

★ MORE BIGGER SIZE ARE AVAILABLE, PLS CONTACT WITH NMFIRE ★

