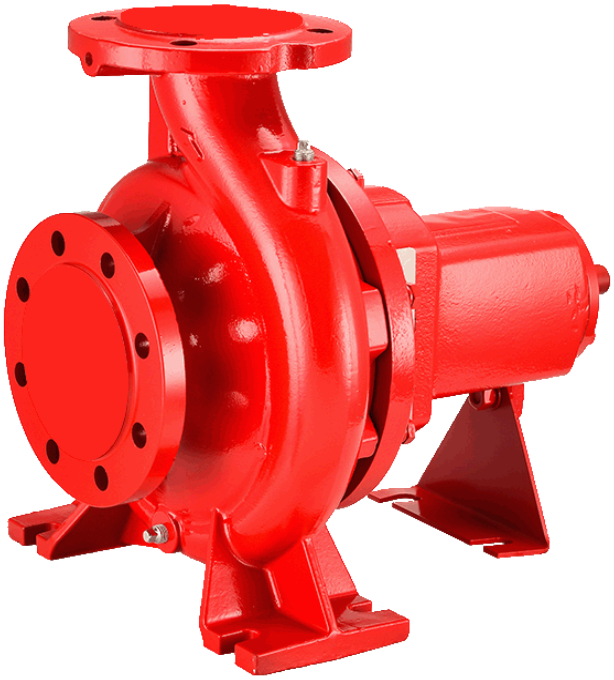
HSC / VTP Fire Pumps & Packaged Systems Catalog

SUPERSEDES: VC02-07

END SUCTION FIRE PUMP



Technical Specifcations	
Flow	50-1000GPM
Discharge pressure	84-230PSI
Speed Range	2900/3500 RPM
Suction/discharge fanges	1.5-6" / 2.5-4"

Material Specifcations	
Casing	Ductile Iron
Impeller	Bronze or stainless steel
Shaft	ATSM420
Sealing	Gland packing
Bearing Housing	Rolling bearing
Suction/discharge fanges	ANSI

Pump Naming

VES 80-250

- Nominal impeller diameter (mm)
- Discharge fange DN (mm)
- Pump type

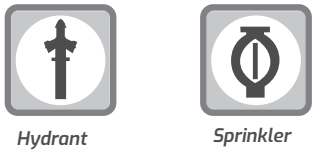
VESD150-80-250

- Nominal impeller diameter (mm)
- Discharge fange DN (mm)
- Pump Type

Driver Options

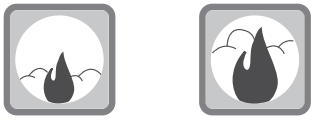
Electrical *Diesel*

Application Areas



Hydrant *Sprinkler*

Overflow *Foam*



Ordinary *High*

Product Standard

UL 448, NFPA

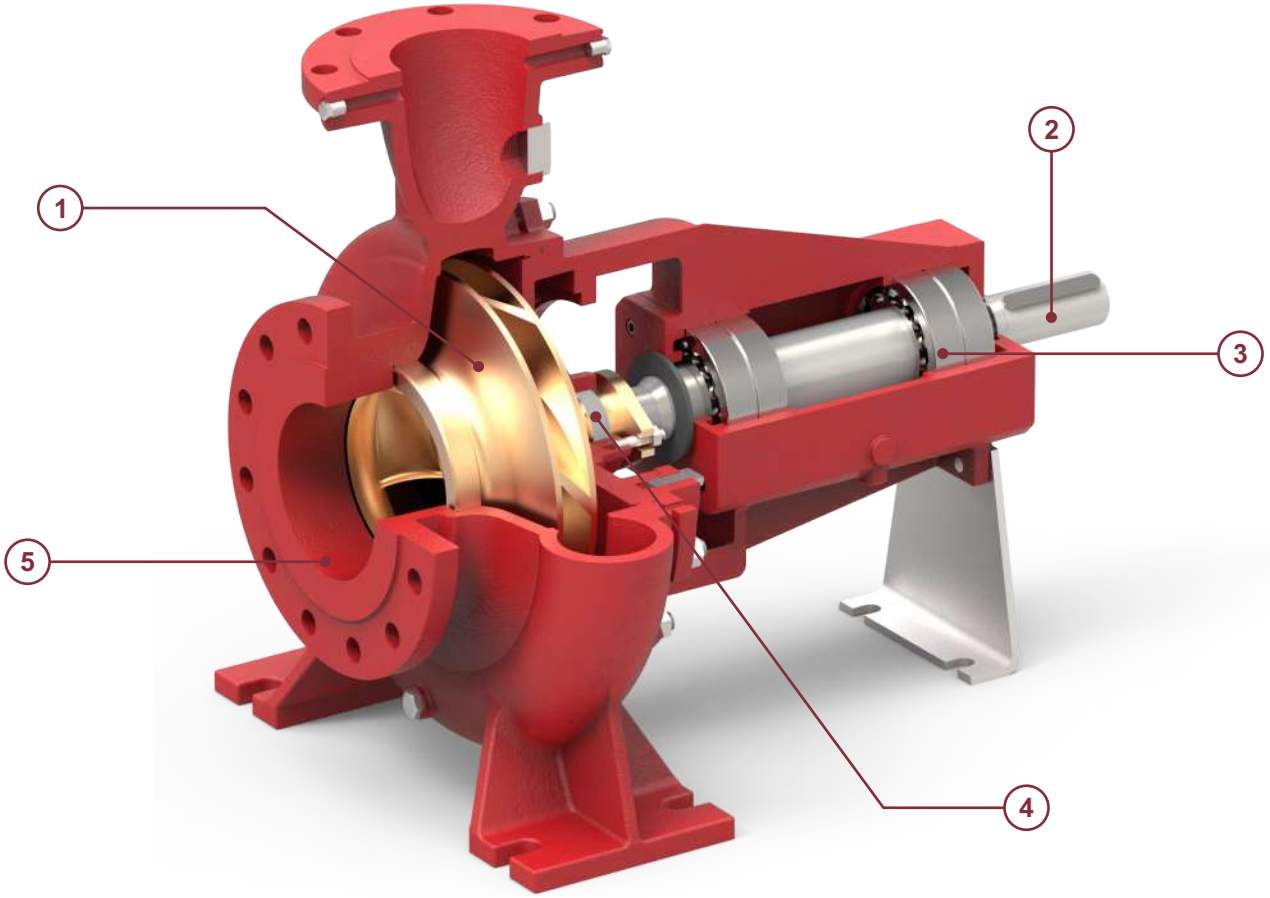
Product Approvals

UL LISTED

Flange Standards

Pump Installing Dimensions are confirming to ISO2858 Standard, and Tested according to with UL 448 -2013

General Pump Features



1 - Impeller & Casing

- Impeller is dynamically balanced to grade G6.3 balance quality in accordance to ISO 1940-1.
- Impeller & Casing are designed using state of art CFD tools to ensure optimal performance.

2 - Shaft

- Heavy duty stainless steel shaft completely sealed and dry for zero corrosion available upon request.
- Short and rigid with negligible vibrations.
- Replaceable shaft protecting sleeves.
- No threads exposed to pump medium, long operating life and no corrosion.
- Adjustment-free assembly.

3 - Bearing

- Heavy duty and permanently grease lubricated antifriction bearings for long service life.
- Open gland, enough space for service activities.

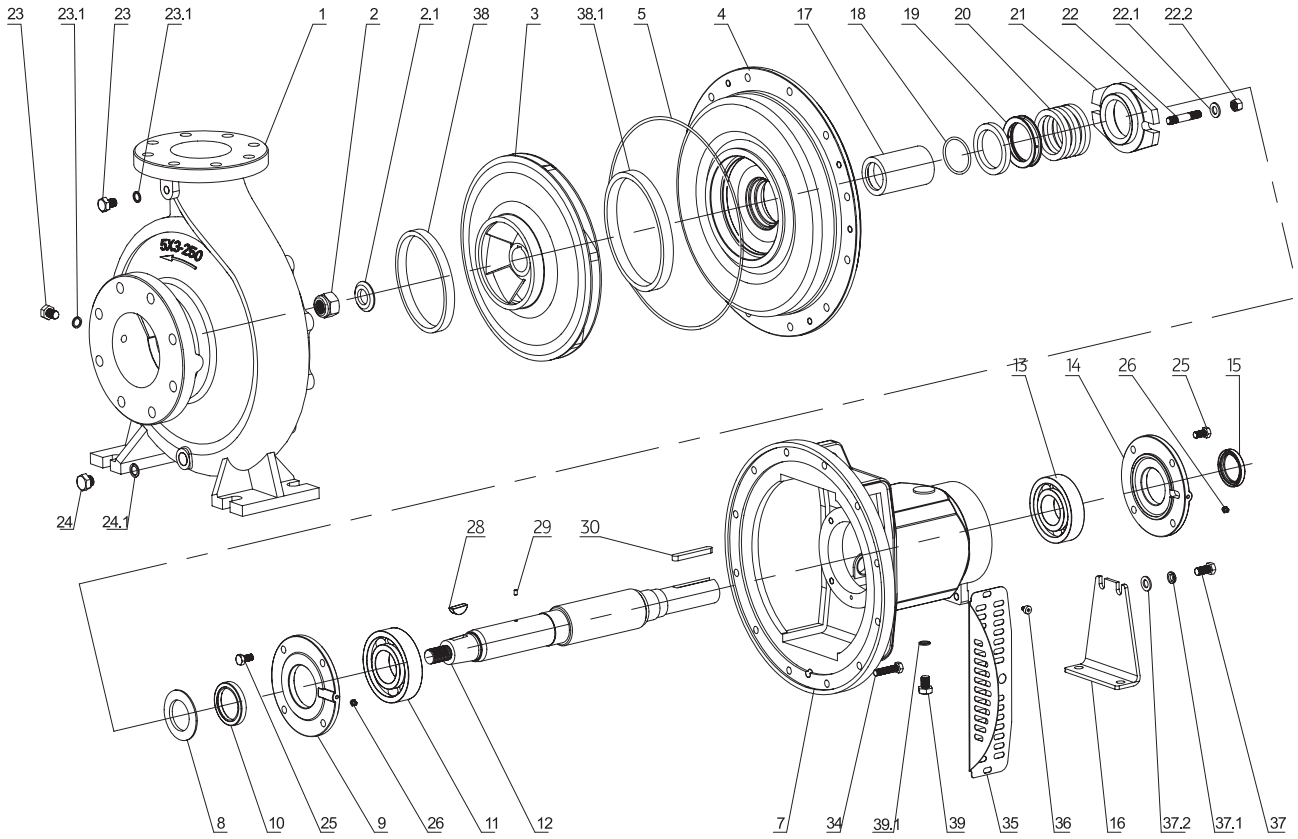
4 - Seal

- Asbestos - free, soft packed stuffing boxes.

5 - Casing

- End Suction backpullout design permits maintenance of the pump without removing the pipes.
- Rugged Ball Bearings on Drive as well as Non Drive end.
- Flange drilled as per ANSI B16.1 class 250.
- Smooth surface inside & CED coated for superior corrosion protection.
- Replaceable wear ring protect the casing and the impeller running clearances.
- Heavy duty casing design for high working pressure.

VES Series - Exploded View & Part list

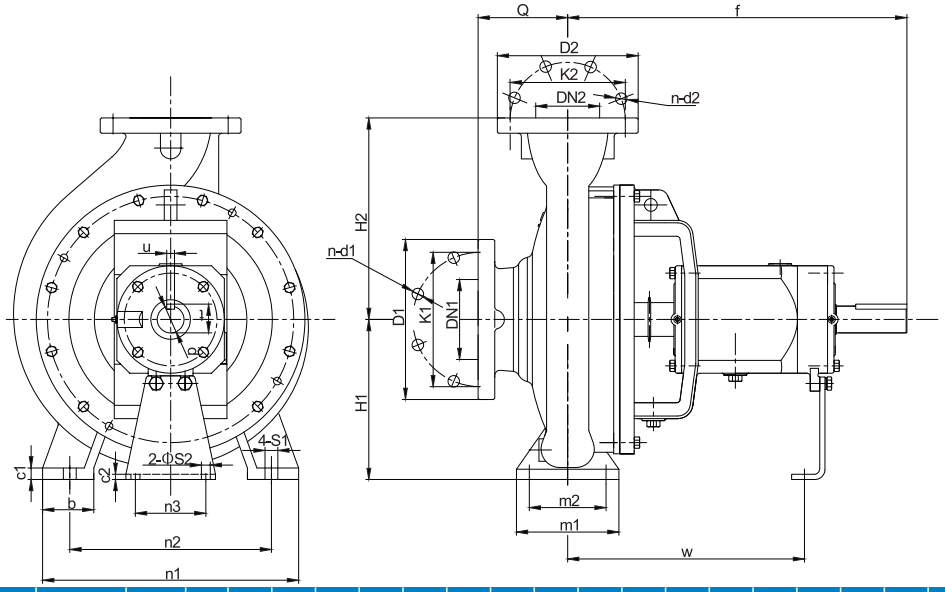


Code	Part Name
1	Casing
2	Impeller Nut
2.1	Lock washer for impeller
3	Impeller
4	Gland Cover
5	O-ring
7	Bearing Housing
8	Rubber Slinger
9	NDE Bearing Cover
10	NDE Oil Seal
11	NDE Bearing
12	Shaft
13	DE Bearing
14	DE Bearing Cover
15	DE Oil Seal

Code	Part Name
16	Support Foot
17	Packing Sleeve
18	O-ring
19	Gland Packing
20	Packing Seal Cage
21	Gland Cover
22	Stud Bolt
22.1	Flat Washer
22.2	Screw Nut
23	Plug
23.1	Plug Spacer
24	Plug
24.1	Plug Spacer
25	Screw Bolt

Code	Part Name
26	Oil Cup M6
28	key
29	pin
30	key
34	Screw Bolt
35	Protective cover
36	Bolt
37	Screw Bolt
37.1	Elastic Washer
37.2	Flat Washer
38	Front-Wearring
38.1	Back-Wearring
39	Plug
39.1	Plug Spacer

VES SERIES INSTALLATION DIMENSION



Model	DN1		DN2		Impeller Dia.	Shaft No.	a	f	h1	h2	b	m1	m2	n1	n2	n3	c1	c2	w	S1	S2	d	t	u	l	Weight (kg)
	inch	mm	inch	mm																						
40-250	2.5"	65	1.5"	40	250	2	100	500	180	225	65	125	95	320	250	110	14	6	370	M12	M12	32	35	10	80	71
50-250	3"	80	2"	50	250	2	125	500	180	225	65	125	95	320	250	110	15	6	370	M12	M12	32	35	10	80	76
65-250	4"	100	2.5"	65	250	2	125	500	200	250	80	160	120	360	280	110	16	6	370	M16	M12	32	35	10	80	84
80-250	5"	125	3"	80	250	2	125	500	225	280	80	160	120	400	315	110	18	6	370	M16	M12	32	35	10	80	88
80-315	5"	125	3"	80	315	3	125	530	250	315	80	160	120	400	315	110	20	8	370	M16	M12	42	45	12	110	130
100-315	5"	125	4"	100	315	3	140	530	250	315	80	160	120	400	315	110	19	8	370	M16	M12	42	45	12	110	138
100-250	5"	125	4"	100	315	3	140	530	250	315	80	160	120	400	315	110	19	8	370	M16	M12	42	45	12	110	138
100-200	5"	125	4"	100	315	3	140	530	250	315	80	160	120	400	315	110	19	8	370	M16	M12	42	45	12	110	138
80-200	5"	125	3"	80	315	3	125	530	250	315	80	160	120	400	315	110	20	8	370	M16	M12	42	45	12	110	130
150-100-200	6"	150	4"	100	200	3	125	530	250	315	80	160	120	400	315	110	20	8	370	M16	M12	42	45	12	110	130
150-100-315	6"	150	4"	100	315	3	125	530	250	315	80	160	120	400	315	110	20	8	370	M16	M12	42	45	12	110	130

Flange standard：ASTM B16.42-1998 Class150						Flange standard：ASTM B16.42-1998 Class300			
DN1/DN2	1.5"	2"	2.5"	3"	4"	5"	3"	4"	5"
D1/D2	127	152.4	177.8	190.5	228.6	254	209.6	254	279.4
K1/K2	98.6	120.7	139.7	152.4	190.5	215.9	168.1	200.2	234.9
n-d1/ n-d2	4-φ15.7	4-φ19.1	4-φ19.1	4-φ19.1	8-φ19.1	8-φ22.4	8-φ22.4	8-φ22.4	8-φ22.4

UL PUMP SELECTION:-

The most important aspect to be taken into consideration is how quickly a fire could spread within specific regions of the building. This is done by calculating the flammable materials within each region. Flammable materials stored to higher vertical levels are most likely to increase the energy of the fire, increasing the chances of the fire spreading.

This information would be gathered by the appointed main fire assessor on the site. Once this has been completed, a duty parameter can be produced. NFPA20 pumps are approved at specific flows only. This means that the site required flow needs to be within a 100%-140% bracket of the NFPA20 approved flowrate. For example, a 1500gpm approved pump can be used for duty parameters between 1500gpm and 2100gpm only.

The performance curve must also encompass some further requirements to ensure it meets the approval standard. The closed valve pressure must not exceed 140% of the pressure at the approved flow. The pump curve must also be able to withstand a flow of 150% of the approved flow and achieve no less than 65% of the rated pressure at this point. For example, if the pump is Approved to 1500gpm at 100PSI, at 0gpm the pressure Must not exceed 140PSI. Also at 2250gpm, the pump must achieve a minimum of 65PSI.

Any closed valve pressures which exceeds 20% of the pressure at the approved flow, or pressures over 175PSI will require a main relief valve to be fitted. This prevents over pressurizing of the system.

Suction lift installations are not permitted on NFPA20 installations. This means all water supplies must be above the pump level creating a flooded suction via gravity. In the event of water levels being below the plant room level, a vertical turbine pump will be required (the pump impeller is immersed within the tank, and connected via a vertical tube to the driver / motor above ground).

Standards Compliant

- NFPA – National Fire Protection Association and Annexes
- NFPA20 – Standard for the Installation of Stationary Pumps for Fire Protection
- UL – Underwriting Laboratories

Volute End Suction Underwriting Laboratories (UL) Listed pumps are used within sprinkler installations to protect a wide range of properties from the effects of fire. There is a vast range of products available for individual property installation requirements. Units are compliant to the latest National Fire Protection Association (NFPA20) requirements and annexes, with further approvals to listed in the Underwriting Laboratories (UL).

A standard FM/UL set could consist of the following

- Diesel pump set (including pump-end, FM/UL approved diesel engine, 8 hour double-walled fuel tank*, 12v lead acid batteries, LCD colour display controller, suction and discharge pressure gauges and air release valve all on a single skid)
- Jockey pump (pump achieving a minimum of 1 bar over the closed valve pressure of the proposed duty pump)
- NFPA20 Jockey pump starter (direct on-line starter)
- Remote Alarm Panel (for monitoring of signals remote from the pumphouse)
- Electric pumpset (including pump end long-coupled electric motor, suction and discharge pressure gauges and air release valve on a single skid)

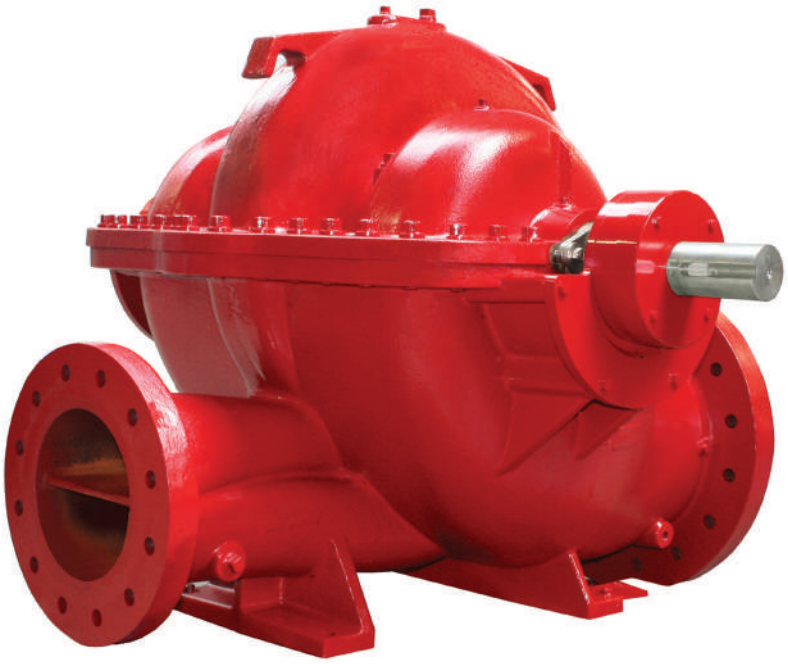
Applications:-

- Offices
- Hospitals
- Warehouses
- High rise buildings
- Museums
- Shopping centers
- Supermarkets
- Large commercial units
- Industrial premises
- Industrial processes
- Oil rigs

Other ancilliary equipment available as follows:

- NFPA20 electric pump controller (wye-delta open transition starter with LCD colour electronic display)
- Main relief valve
- Flow meters
- Louvres and fans
- Vertical turbine pumping equipment including column shafts, right-angled gear boxes and pump heads.

SPLIT CASE FIRE PUMP



Technical Specifcations	
Suction fange	150-200 MM
Discharge fange	100-150MM
Flow	1000-2000 GPM
Discharge pressure	82-304PSI

Material Specifcations	
Casing	Ductile Iron
Impeller	Bronze or stainless steel
Shaft	40Cr / Stainless Steel
Sealing	Gland packing
Bearing Housing	Rolling bearing
Suction/discharge fanges	ANSI

Pump Naming

VSP 100-250

- Nominal impeller diameter (mm)
- Discharge fange DN (mm)
- Pump type

Product Standard

UL 448, NFPA

Product Approvals

UL LISTED

Flange Standards

Pump Installing Dimensions are confirming to ISO2858 Standard, and Tested according to with UL 448 -2013

Driver Options

Electrical

Diesel

Application Areas

Hydrant

Sprinkler

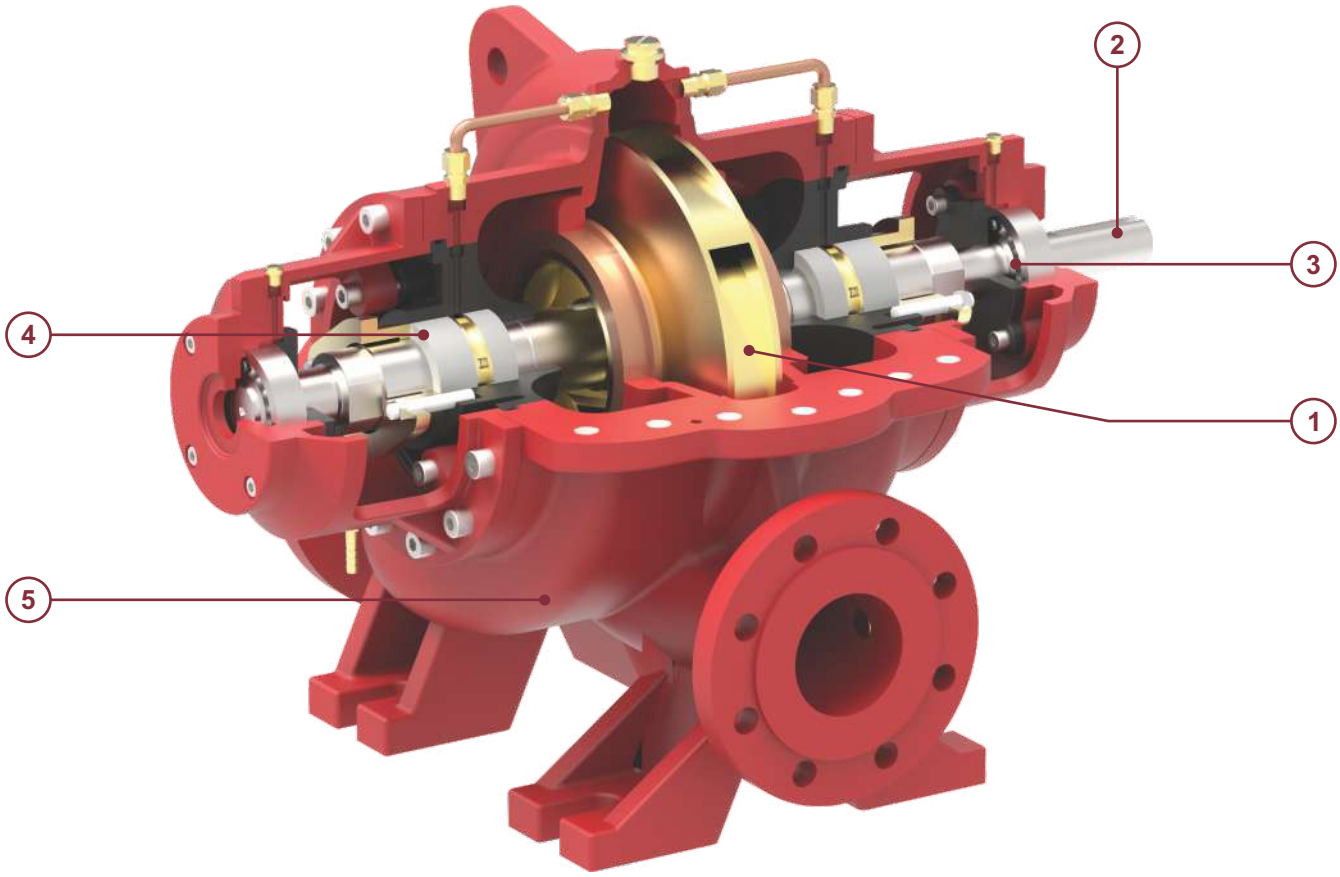
Overflow

Foam

Ordinary

High

SPLIT CASE FIRE PUMP



1 - Impeller & Casing

- Minimal axial thrust due to double-entry impeller.
- Impeller is dynamically balanced to G6.3 balance quality Grade in accordance to ISO 1940-1.
- Impeller & Casing are designed using state of are CFD tools to ensure optional performance.

2 - Shaft

- Heavy duty shaft completely sealed and dry of zero corrosion.
- Short and rigid with negligible vibrations.
- Replaceable shaft protecting sleeves.
- No threads exposed to pump medium, long operating life and no corrosion.
- Adjustment-free assembly.

3 - Bearing

- Heavy duty and grease lubricated antifriction boxes. Bearings for long service life.
- Open gland, enough space for service activities.

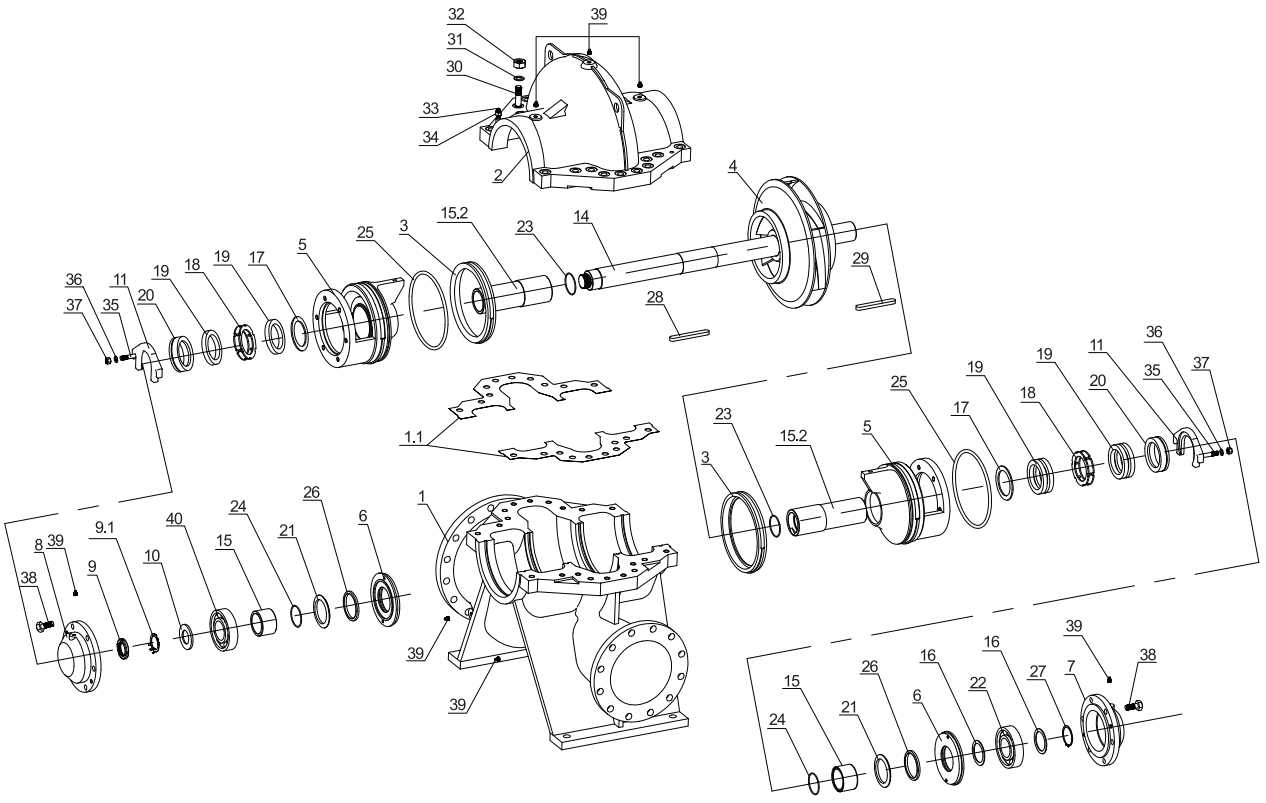
4 - Seal

- Asbestos - free, potable water quality soft packed stuffing

5 - Casing

- In-line axially split design which permits removal of the complete rotor without removing the pipe & motor.
- Short distance between bearings.
- Leak-tight due to compact joint flange with long Pre-stessed bolts.
- Counter-rotation possible with similar parts.
- Easy mounting self-aligning upper casing.
- Flange drilled as per ANSI B16.1 class 250.
- Smooth surface inside CED coated for superior corrosion protection.
- Replaceable ware ring protect the casing and the impeller running clearances.
- Heavy duty casing design for high working pressure.

VSP Series - Exploded View & Part list

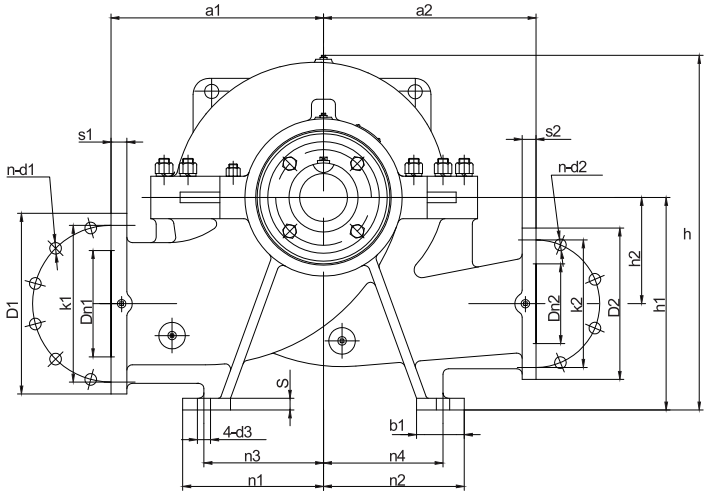


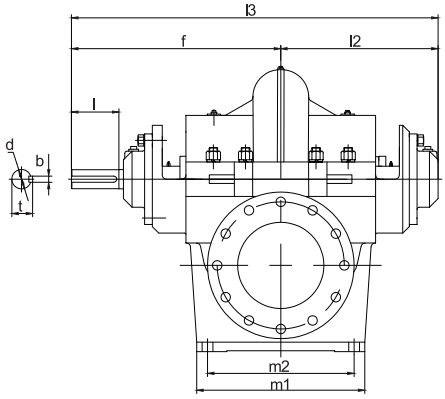
Code	Part Name
01	Casing-Bottom
01.1	Casing Gasket
02	Casing-Top
03	Wear Ring
04	Impeller
05	Seal Housing
06	Bearing Cover
07	Bearing Housing-Driver End
08	Bearing Housing-Non-Driver End
09	Screw Nut
09.1	Lock Washer for Nut
10	Bearing Slinger
11	Seal Plate
14	Shaft

Code	Part Name
15	Shaft Sleeve-Short
15.2	Packing Shaft Sleeve
16	Bearing Seal Plate
17	Packing Seal Plate
18	Lantern Ring
19	Gland
20	Packing Cover
21	Slinger
22	Bearing
23	O-ring
24	O-ring
25	O-ring
26	Felting
27	External Circlips

Code	Part Name
28	Key
29	Key
30	Screw Bolt
31	Spring Washer
32	Screw Nut
33	Pin
34	Screw Nut
35	Screw Bolt
36	Flat Gasket
37	Screw Nut
38	Screw Bolt
39	Plug
40	Bearing

VSP SERIES INSTALLATION DIMENSION





ASME16.42-1998 CLASS300,ASME16.42-1998 CLASS250					
DN	80	100	125	150	200
D	209.6	254	279.4	317.5	381
K	168.1	200.2	235	269.7	330.2
n	8	8	8	12	12
d	22.4	22.4	22.4	22.4	25.4

Model	DN1	DN2	a1	a2	f	l2	l3	h	h1	h2	m1	m2	n1	n2	n3	n4	b1	d3	s	d	b	l	t	Weight (kg)
VSP 100-250	150	100	342	339	385	300	685	570	355	170	320	270	235	235	200	200	80	φ25	22	φ34	10	80	37.3	230
VSP 100-310						320	705	605																283
VSP 100-375								620									75			φ39	12		42.3	270
VSP 125-290	200	125	382	380	485	365	850	635	400	200	390	340	265	265	225	225	90			φ44		110	47.3	322
VSP 125-365						390	875	665																342
VSP 150-290		150	412	412				660		210														355
VSP 150-360								670		200										φ49	14		52.8	385

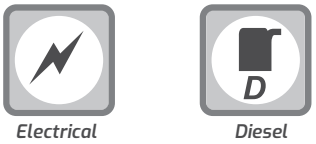
SPLIT CASE FIRE PUMP

VSC SERIES SECOND GENERATION SPLIT CASE FIRE PUMPS

Technical Specifcations	
Suction fange	125-200 MM
Discharge fange	125-150MM
Flow	500-2500 GPM
Discharge pressure	82-269PSI

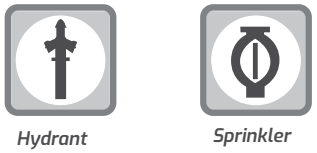
Material Specifcations	
Casing	Ductile Iron
Impeller	Bronze or stainless steel
Shaft	40Cr / Stainless Steel
Sealing	Gland packing
Bearing Housing	Rolling bearing
Suction/discharge fanges	ANSI

Driver Options



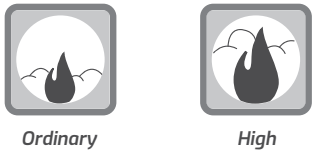
Electrical *Diesel*

Application Areas



Hydrant *Sprinkler*

Overflow *Foam*



Ordinary *High*

Pump Naming

VSCX xxx-xxx

Product Standard

UL 448, NFPA

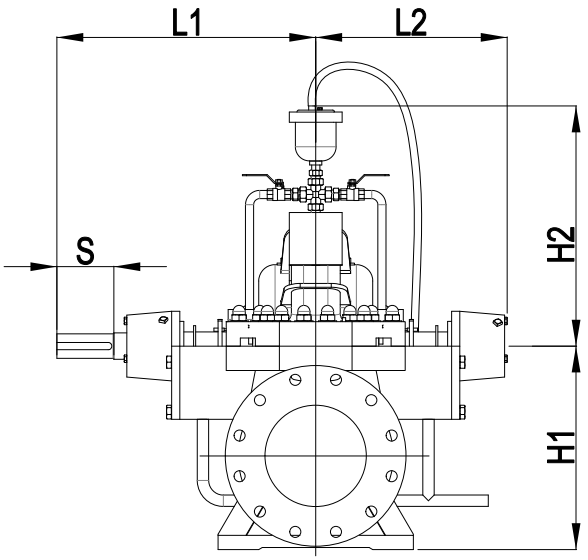
Product Approvals

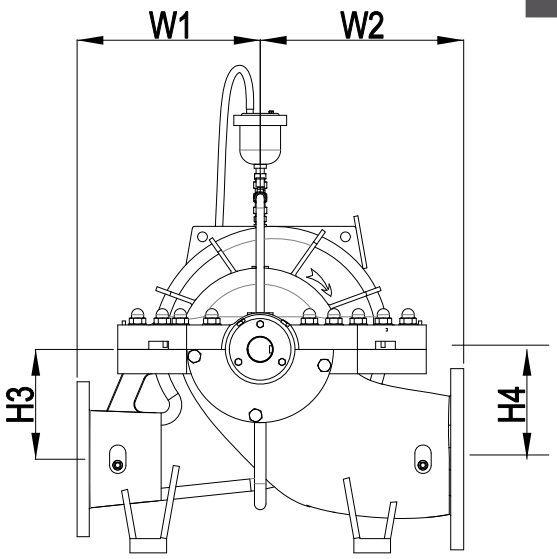
UL LISTED

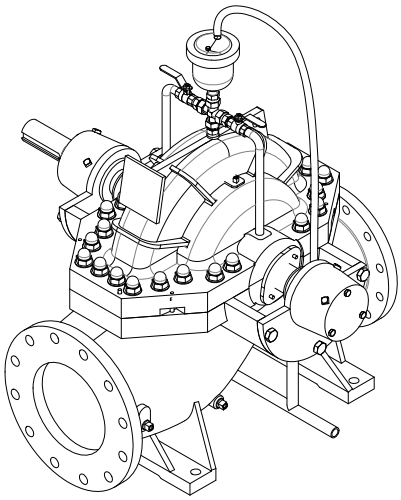
Flange Standards

Pump Installing Dimensions are confirming to ISO2858 Standard, and Tested according to with UL 448 -2013

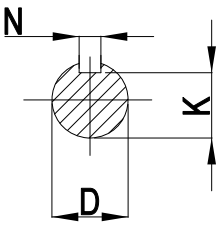
VSC SERIES INSTALLATION DIMENSION



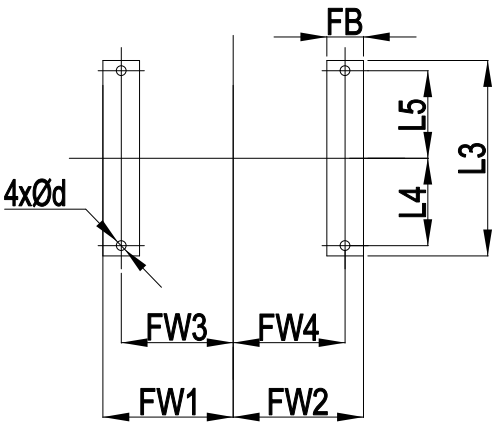




DETAIL SHAFT END



PLAN VIEW OF FEET



Model	Dimensions (Unit: mm)																				Flange(ANSI B16.1,Class250, RF)			Wieght
	L1	L2	L3	L4	L5	W1	W2	FW1	FW2	FW3	FW4	FB	d	H1	H2	H3	H4	S	D	N	K	Suction	Discharge	(Kg)
VSC5-80-350	434	345	290	120	120	330	360	220	220	180	180	80	20	330	550	180	180	80	35	10	30	5 INCH	3 INCH	252
VSC8-150-310	520	400	390	170	170	350	425	240	240	200	200	80	25	400	650	210	195	110	45	14	39.5	8 INCH	6 INCH	400
VSC8-150-330	520	400	390	170	170	350	415	240	240	200	200	80	25	455	660	230	230	110	45	14	39.5	8 INCH	6 INCH	397
VSC8-150-600	570	440	480	215	215	480	560	310	310	270	270	80	25	560	800	330	330	110	50	14	44.5	8 INCH	6 INCH	1015

APPROVED UL LISTING RANGE

Pump Model	Rated Capacity [USGPM]	Flanges [in]		Net Rated Pressure [PSIG]		Approx Speed [RPM]	Max. Working Pressure [PSIG]
		Inlet	Outlet	Min.	Max.		
VSC5-80-350	500	5	3	185	299	2950	388
VSC5-80-350	750	5	3	165	289	2950	388
VSC5-80-350	1000	5	3	219	269	2950	388
VSC8-150-310	1000	8	6	125	240	2980	370
VSC8-150-310	1250	8	6	119	236	2980	370
VSC8-150-310	1500	8	6	112	229	2980	370
VSC8-150-330	1500	8	6	117	202	2950	310
VSC8-150-330	2000	8	6	105	189	2950	310
VSC8-150-600	1250	8	6	113	187	1480	290
VSC8-150-600	1500	8	6	112	186	1480	290
VSC8-150-600	2000	8	6	103	180	1480	290
VSC8-150-600	2500	8	6	171	171	1480	290

APPROVED UL LISTING RANGE

Rated Capacity, US GPM	Size, In.	Model	Pressure Rating, psi	Approx Speed RPM	Maximum Working Pressure Psi
50	2.5×1.5	VES 40-250	101 - 142	2900	200
50	2.5×1.5	VES 40-250	144 - 207	3500	290
100	2.5×1.5	VES 40-250	97 - 140	2900	200
100	2.5×1.5	VES 40-250	140 - 203	3500	290
150	2.5×1.5	VES 40-250	87 - 131	2900	200
150	2.5×1.5	VES 40-250	133 - 196	3500	290
150	3×2	VES 50-250	104 - 147	2980	225
150	3×2	VES 50-250	144 - 202	3500	290
200	3×2	VES 50-250	101 - 145	2980	225
200	3×2	VES 50-250	140 - 200	3500	290
250	3×2	VES 50-250	97 - 140	2980	225
250	3×2	VES 50-250	136 - 196	3500	290
250	4×2.5	VES 65-250	91 - 143	2900	225
250	4×2.5	VES 65-250	131 - 207	3500	290
300	4×2.5	VES 65-250	89 - 142	2900	225
300	4×2.5	VES 65-250	130 - 206	3500	290
400	4×2.5	VES 65-250	82 - 137	2900	225
400	4×2.5	VES 65-250	125 - 203	3500	290
400	**5x3**	**VES 80-200**	**89 - 141**	**3500**	**225**
400	5×3	VES 80-250	88 - 140	2900	225
400	5×3	VES 80-250	128 - 207	3500	290
450	**5x3**	**VES 80-200**	**86 - 139**	**3500**	**225**
450	5×3	VES 80-250	86 - 140	2900	225
450	5×3	VES 80-250	127 - 206	3500	290
450	**5x3**	**VES 80-315**	**131 - 207**	**2900**	**290**
450	**5x4**	**VES 100-200**	**88 - 143**	**3500**	**225**
450	**5x4**	**VES 100-250**	**83 - 135**	**2900**	**290**
450	**5x4**	**VES 100-250**	**123 - 198**	**3500**	**290**
450	**5x4**	**VES 100-315**	**133 - 210**	**2900**	**290**
450	**5x4**	**VES 100-315**	**140 - 222**	**2980**	**290**

UL® LISTED

APPROVED UL LISTING END SUCTION RANGE

Rated Capacity, US GPM	Size, In.	Model	Pressure Rating, psi	Approx Speed RPM	Maximum Working Pressure Psi
500	**5x3**	**VES 80-200**	**83 - 136**	**3500**	**225**
500	**5x3**	**VES 80-250**	**84 - 139**	**2900**	**225**
500	**5x3**	**VES 80-250**	**125 - 205**	**3500**	**290**
500	**5x3**	**VES 80-315**	**127 - 204**	**2900**	**290**
500	**5x4**	**VES 100-200**	**88 - 141**	**3500**	**225**
500	**5x4**	**VES 100-250**	**83 - 134**	**2900**	**290**
500	**5x4**	**VES 100-250**	**122 - 198**	**3500**	**290**
500	**5x4**	**VES 100-315**	**132 - 209**	**2900**	**290**
500	**5x4**	**VES 100-315**	**139 - 221**	**2980**	**290**
500	**6x4**	**VESD 150-100-200**	**116 - 142**	**3500**	**225**
500	**6x4**	**VESD 150-100-315**	**119 - 192**	**2900**	**250**
750	**5x4**	**VES 100-200**	**82 - 138**	**3500**	**225**
750	**5x4**	**VES 100-250**	**74 - 128**	**2900**	**290**
750	**5x4**	**VES 100-250**	**115 - 191**	**3500**	**290**
750	**5x4**	**VES 100-315**	**125 - 202**	**2900**	**290**
750	**5x4**	**VES 100-315**	**133 - 214**	**2980**	**290**
750	**6x4**	**VESD 150-100-200**	**112 - 137**	**3500**	**225**
750	**6x4**	**VESD 150-100-315**	**113 - 186**	**2900**	**250**
1000	**6x4**	**VESD 150-100-200**	**99 - 128**	**3500**	**225**
1000	**6x4**	**VESD 150-100-315**	**101 - 173**	**2900**	**250**

APPROVED UL LISTING SPLIT CASE RANGE

Rated Capacity, US GPM	Size, In.	Model	Pressure Rating, psi	Approx Speed RPM	Maximum Working Pressure Psi
1000	8x5	VSP125-290	99 - 175	2900	232
1000	8x5	VSP125-290	105 - 185	2980	232
1250	8x5	VSP125-290	93 - 174	2900	232
1250	8x5	VSP125-290	99 - 184	2980	232
1500	8x6	VSP150-290	98 - 151	2900	232
1500	8x6	VSP150-290	103 - 160	2980	232
1500	8x6	VSP150-360	149 - 247	2900	320
1500	8x6	VSP150-360	153 - 254	2940	320
2000	8x6	VSP150-290	93 - 146	2900	232
2000	8x6	VSP150-290	99 - 155	2980	232
2000	8x6	VSP150-360	135 - 241	2900	320
2000	8x6	VSP150-360	139 - 248	2940	320

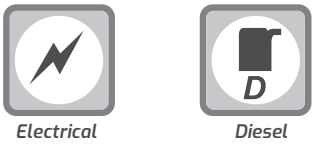
UL LISTED

VERTICAL TURBINE FIRE PUMP

Technical Specifcations	
Flow	50-5000GPM
Discharge pressure	84-230PSI
Speed Range	1450-2900 RPM
Suction/discharge fanges	1.5-6" / 2.5-4"

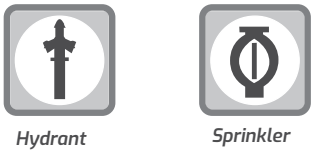
Material Specifcations	
Casing	Ductile Iron
Impeller	Bronze or stainless steel
Shaft	ATSM420
Sealing	Gland packing
Bearing Housing	Rolling bearing
Suction/discharge fanges	ANSI

Driver Options



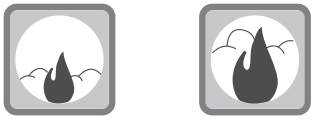
Electrical *Diesel*

Application Areas



Hydrant *Sprinkler*

Overflow *Foam*



Ordinary *High*

Product Standard

UL 448, NFPA

Product Approvals

UL LISTED

Flange Standards

Pump Installing Dimensions are confirming to ISO2858 Standard, and Tested according to with UL 448 -2013

VERTICAL TURBINE FIRE PUMP

VT Series are Vertical Turbine Fire Pump, as multistage centrifugal pumps. It has the characteristics of compact structure, smooth operation, simple operation, convenient maintenance, and small footprint.

It is suitable for fire protection in fields such as power plants, mines, towns, oil fields, and offshore platforms. For transporting normal temperature clean water without solid particles, using appropriate component materials, it can transport seawater, etc. It has advantage hydraulic model, excellent performance curve without hump and wide high efficiency range.

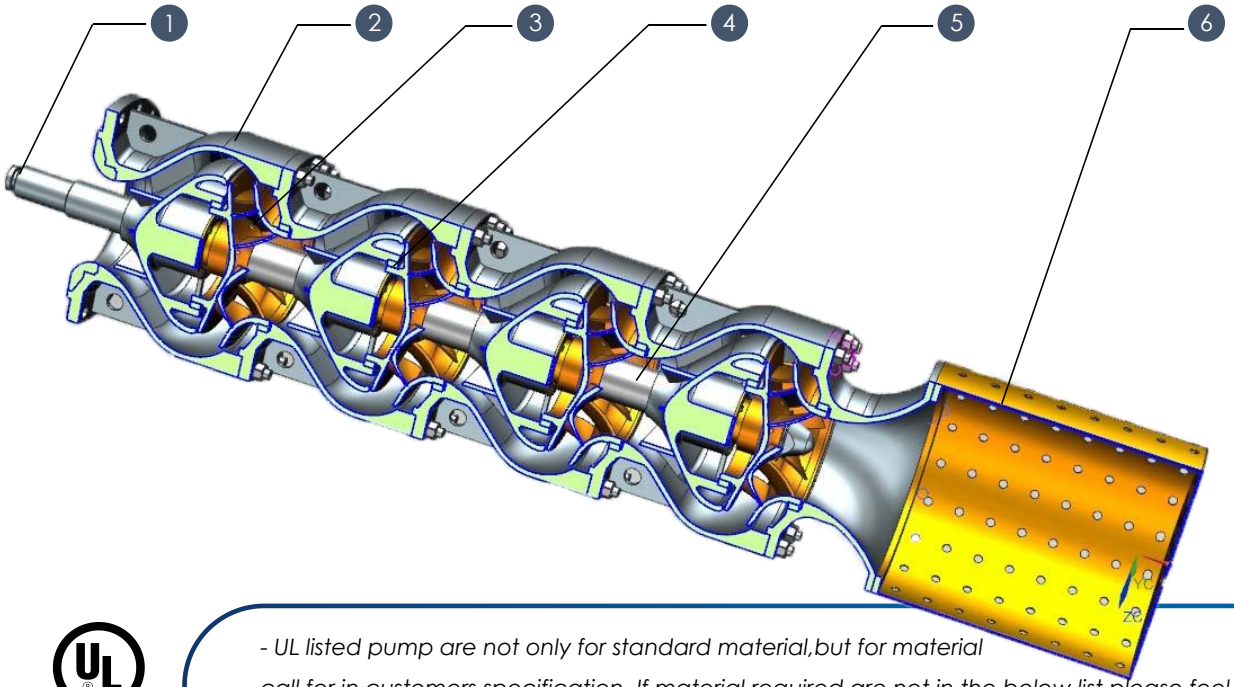
REFERENCE STANDARDS

- Underwriter Laboratories (UL) – 448
- NFPA 20

PUMP PERFORMANCE RANGE

- Flow ranges from 750 GPM up to 8000 GPM
- Pressure ratings from 64 psi up to 318 psi

PART & MATERIAL



UL LISTED

- UL listed pump are not only for standard material,but for material call for in customers specification. If material required are not in the below list,please feel free to contact us ,we will provide customized design and listing as per your requirement.

1.Shaft	Monel, Super duplex Stainless steel
2.Bowl	Ni-Al Bronze, Super Duplex Stainless Steel*, Stainless Steel
3.Impeller	Ni-Al Bronze, Super duplex Stainless Steel*, Stainless Steel
4.Wear Ring	Ni-Al Bronze
5.Wear Ring	Ni-Al Bronze
6.Strainer	Ni-Al Bronze, Stainless Steel

FIRE PUMP CONFIGURATIONS

ELECTRIC / SUBMERSIBLE MOTOR DRIVEN

Fire water pumps are available in electrical motor driven configurations, coupled to motors using a flexible coupling.

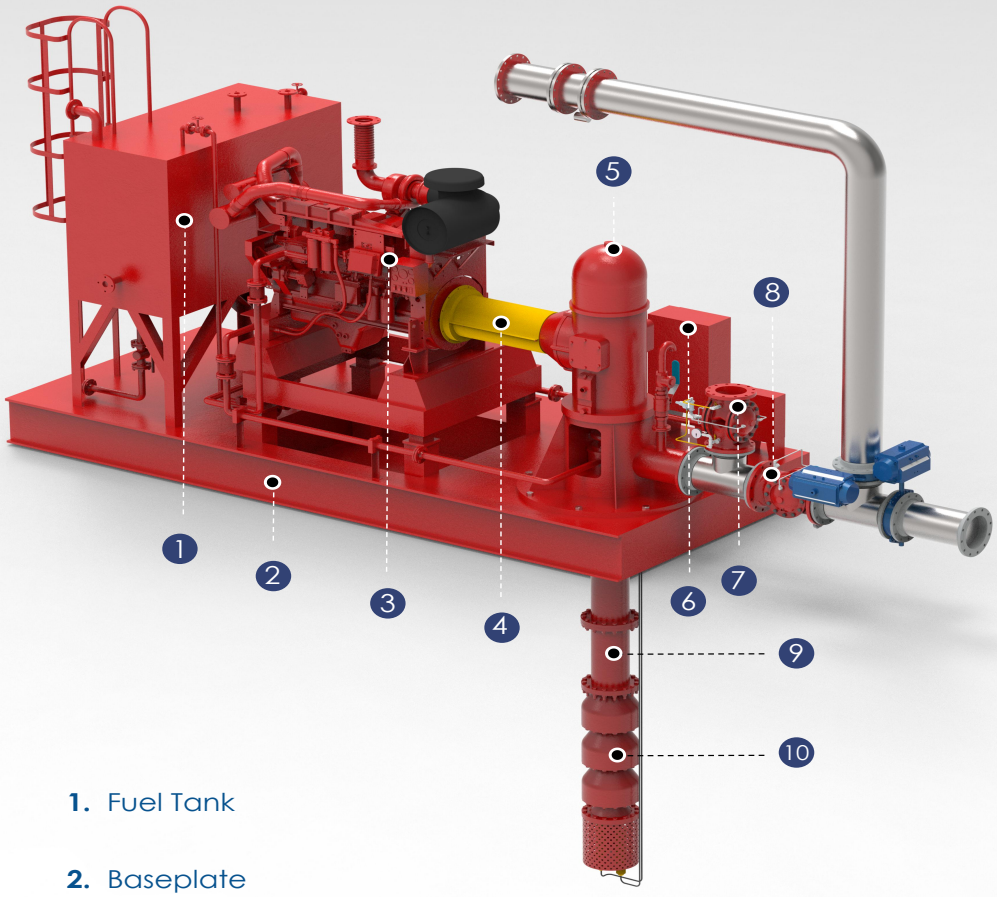
The unit is assembled on a compact steel skid, factory aligned and comes with all necessary accessories.

SUBMERSIBLE MOTOR DRIVEN

ELECTRIC MOTOR DRIVEN

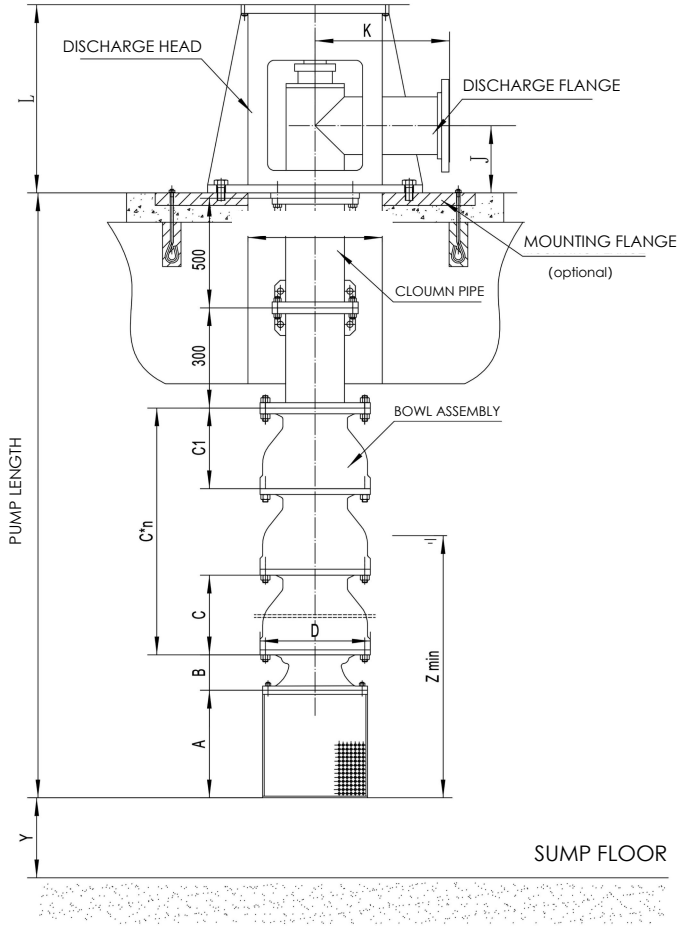
FIRE PUMP CONFIGURATIONS

DIESEL ENGINE DRIVEN VTP

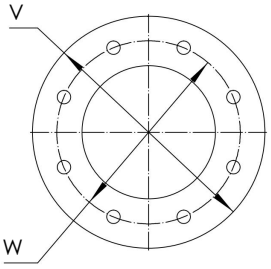


1. Fuel Tank
2. Baseplate
3. Diesel Engine
4. Coupling
5. Gear Box
6. Controller
7. PRV
8. Check Valve
9. Column Pipe
10. PumpBody

DIMENSION DETAILS



DISCHARGE FLANGE



MOUNTING FLANGE

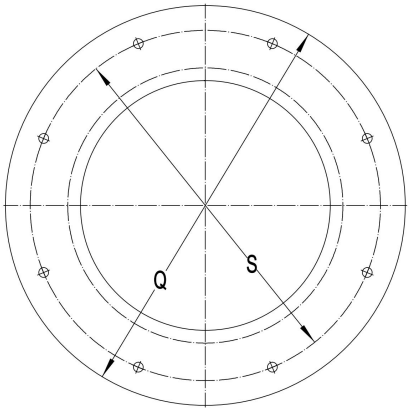


TABLE OF DIMESIONS

										MOUNTING FLANGE				DISCHARGE FLANGE				
MODEL	A	B	C	C1	C*n	D	J	K	L	Q	S	HOLE	U	V	W	HOLE	Y	Z
VT 80-145	150	100	135	155	135*(n-1)+155	210	200	350	550	800	700	4-φ24	450	280	241.3	8-φ22	≥300	400
VT100-155	150	120	175		175*n	215												550
VT 125-180	200	150	220		220*n	256												490
VT145-270	200	150	300		300*n	360												950
VT150-216	200	120	290		290*n	310												760
VT150-265	200	150	300		300*n	360												950
VT160-228	200	120	290		290*n	310	280	421	700	900	800	4-φ24	500	345	298.5	8-φ22		760
VT170-304	400	150	300		300*n	410	280	421	700	900	800	4-φ24	500	345	298.5	8-φ22		950
VT185-335	400	150	340		340*n	445	280	421	750	900	800	4-φ24	500	345	298.5	8-φ22		1070
VT200-350	600	180	360		360*n	455	300	500	750	950	850	4-φ22	500	405	362	12-φ26		1690
VT225-400	600	200	400		400*n	520	300	500	750	950	850	4-φ22	600	405	362	12-φ26		1300
VT250-400	600	250	420		420*n	535	317	448	820	1100	1000	8-φ30	600	485	431.8	12-φ26		1410
VT275-430	600	250	460		460*n	575	400	600	900	1100	1000	8-φ30	800	535	476.3	12-φ30		1500
VT340-460	600	250	500		500*n	650	450	600	950	1100	1000	8-φ30	800	595	539.8	16-φ30		910

PUMP PERFORMANCE CHAT

No	Model	Rated Capacity (GPM)	Approx Speed (RPM)	Max Pressure (PSI)	Stage
			1480RPM/50Hz		
1	VT145-270	300	1480	70-277	3-8
2	VT145-270	400	1480	67-270	3-8
3	VT145-270	500	1480	64-261	3-8
4	VT150-265	500	1480	68-274	3-8
5	VT150-265	750	1480	60-263	3-8
6	VT170-304	750	1480	75-255	2-6
7	VT170-304	1000	1480	52-248	2-6
8	VT170-304	1250	1480	69-241	2-6
9	VT185-335	1250	1480	55-234	2-5
10	VT185-335	1500	1480	76-224	2-5
11	VT200-350	1500	1480	90-238	2-4
12	VT200-350	2000	1480	84-230	2-4
13	VT225-400	2000	1480	117-306	2-4
14	VT225-400	2500	1480	89-298	2-4
15	VT225-400	3000	1480	110-291	2-4
16	VT250-400	3000	1480	73-275	2-4
17	VT250-400	3500	1480	108-270	2-4
18	VT250-400	4000	1480	118-260	2-4
19	VT275-430	4000	1480	49-234	1-3
20	VT275-430	4500	1480	47-229	1-3
21	VT275-430	5000	1480	62-221	1-3
22	VT340-460	5500	1480	73-262	1-3
23	VT340-460	6000	1480	71-258	1-3
24	VT340-460	6500	1480	69-253	1-3
25	VT340-460	7000	1480	67-247	1-3
26	VT340-460	7500	1480	64-238	1-3
27	VT340-460	8000	1480	69-233	1-3

PUMP PERFORMANCE CHAT

No	Model	Rated Capacity (GPM)	Approx Speed (RPM)	Max Pressure (PSI)	Stage
			2950RPM/50Hz		
28	VT80-145	250	2950	53-230	2-7
29	VT80-145	300	2950	50-221	2-7
30	VT100-155	400	2950	57-238	2-6
31	VT100-155	500	2950	54-228	2-6
32	VT125-180	750	2950	68-255	2-5
33	VT150-216	1000	2950	55-300	1-4
34	VT150-216	1250	2950	50-280	1-4
35	VT160-228	1500	2950	49-259	1-3
			1760RPM/60Hz		
36	VT145-270	300	1760	103-297	3-6
37	VT145-270	400	1760	97-292	3-6
38	VT145-270	500	1760	94-283	3-6
39	VT150-265	500	1760	96-296	3-6
40	VT150-265	750	1760	85-282	3-6
41	VT170-304	750	1760	109-246	2-4
42	VT170-304	1000	1760	78-238	2-4
43	VT170-304	1250	1760	102-232	2-4
44	VT185-335	1250	1760	81-203	2-3
45	VT185-335	1500	1760	113-197	2-3
46	VT200-350	1500	1760	131-171	2
47	VT200-350	2000	1760	111-229	2-3

UL LISTED

FIRE PUMP SKIDS

Volute Split Case Underwriting Laboratories (UL) Listed pumps are used within sprinkler installations to protect a wide range of properties from the effects of fire. There is a vast range of products available for individual property installation requirements. Units are compliant to the latest National Fire Protection Association (NFPA20) requirements and annexes, with further approvals to listed in the Underwriting Laboratories (UL).

Applications:-

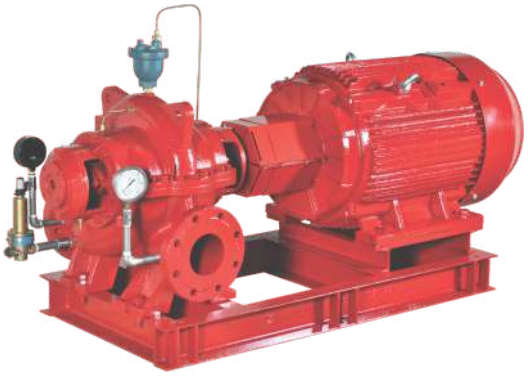
- Offices
- Hospitals
- Warehouses
- High rise buildings
- Museums
- Shopping centers
- Supermarkets
- Large commercial units
- Industrial premises
- Industrial processes
- Oil rigs

A standard FM/UL set could consist of the following

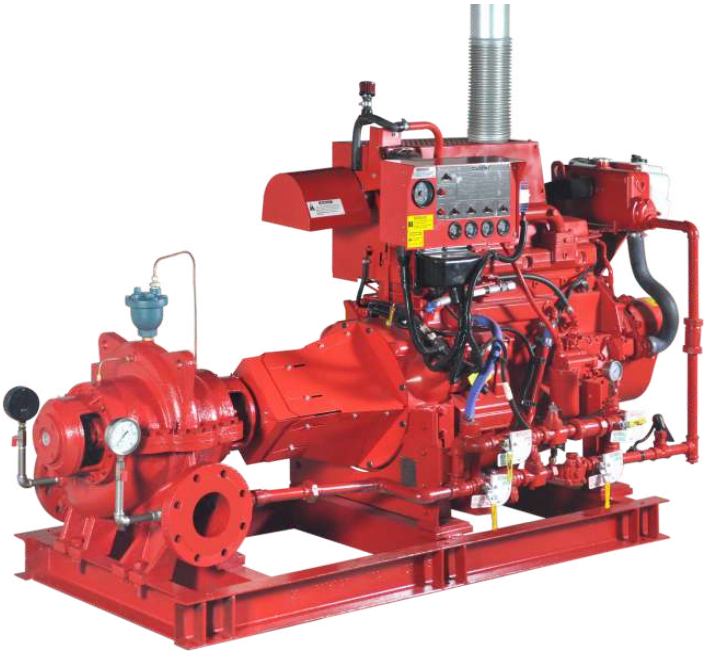
- Electric & Diesel pump set (including pump-end, FM/UL approved diesel engine, fuel tank*, 12v lead acid batteries, controller, suction and discharge pressure gauges and air release valve all on a single skid)
- Jockey pump (pump achieving a minimum of 1 bar over the closed valve pressure of the proposed duty pump)
- NFPA20 Jockey pump starter (direct on-line starter)
- Remote Alarm Panel (for monitoring of signals remote from the pump house)

Other ancilliary equipment available as follows:

- Electric & Diesel pumpset (including pump end long-coupled
- electric motor, suction and discharge pressure gauges
- and air release valve on a single skid)
- NFPA20 electric pump controller (wye-delta open transition tarter)
- Main relief valve
- Flow meters
- Louvres and fans
- Vertical turbine pumping equipment including
- column shafts, right-angled gear boxes and pump
- heads.



Volute Split Case fire pumps are available for duties ranging from 50 USgpm to 2000 USgpm and are suitable for electric or diesel drives.



Benefits

An extensive range of UL giving the peace of mind of a solution being available to a sites individual requirements.

Print-off and downloadable pump operation logs for easy monitoring of the system.

All components within the pumps are independently approved and tested ensuring the product meets the expected high quality.

Pumps can be produced in higher grade materials for specific pumped liquids ensuring reduction of corrosion damage and increasing longevity of the product.

A wide selection of options and accessories are available including pump housing to facilitate the selection of bespoke equipment.

Standards Compliant:-

- NFPA – National Fire Protection Association and Annexes
- NFPA20 – Standard for the Installation of Stationary Pumps for Fire Protection
- UL – Underwriting Laboratories

UL LISTED

JOCKEY PUMPS

Jockey pumps are small, motor driven pumps used in conjunction with main fire pumps to compensate for minor leaks in the fire protection system and automatically maintain stand-by pressure. This reduces wear on the main pump and controller caused by unnecessary, frequent operation. Jockey Pump controllers are available for across the-line starting.

CONTROLLERS

- **ELECTRIC PUMP CONTROL**
- **DIESEL PUMP CONTROL**
- **JOCKEY PUMP CONTROL**
- **AND ALARM PANEL**

All Fire Pump Controllers are factory assembled, wired, tested as a unit and confirmed to all requirements of the latest edition of NFPA-20 (Centrifugal Fire Pumps) and NFPA-70 (National Electrical Code). Controllers are listed by Underwriters Laboratories, Inc., in accordance with UL218, Standard for Fire Pump Controllers, CSA, and Standard for Industrial Control Equipment (CUL) and approved by Factory Mutual (FM). All controllers are Y2K compliant.

This component plays a vital role in fire pumps as it controls the entire system. It is selected as per customer choice if any, otherwise it can be either TORNATECH, FIRETROL, or HUBBLE.

Minimum Fittings

GERAND VENTURI TYPE FLOW METER

FM Approved

construction & specifications

Materials: Steel zinc plated astm a53b erw – ansi b36.10

Valves: Cast bronze astm b584

Flange option: astm a105 2½"-10" sch 40 bore
12" & above std. bore

Id tag: Aluminum- 3.21" thick #200 mill

meter data

Dial standard: 4"

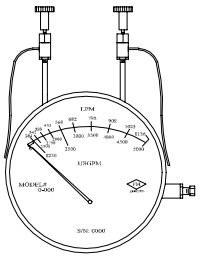
Construction: Case is anodized aluminum

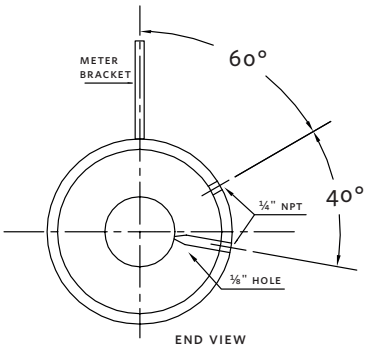
Operation: buna n diaphragm and 302 ss spring Accuracy: within ±2.0%

Temperature: 180°f (80°c)

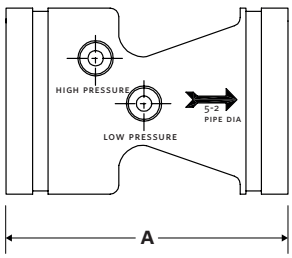
Pressure: 500 psig (3450 kpa)

Approx. Weight: 3.75 lbs (1.7 kg)



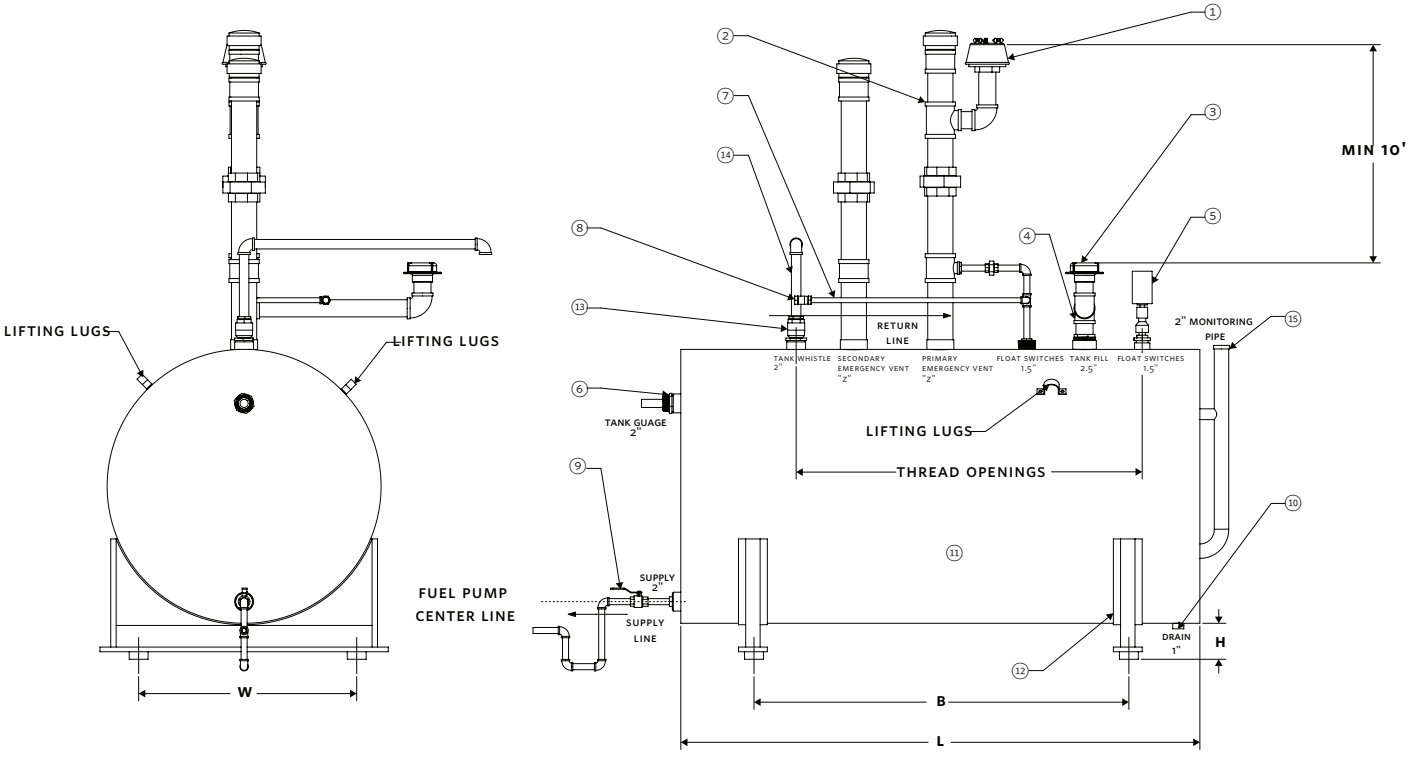


BUTT WELD/GROOVED



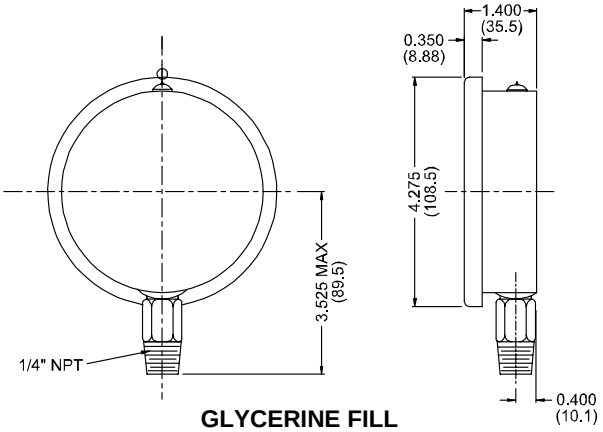
GROOVED

FUEL TANK

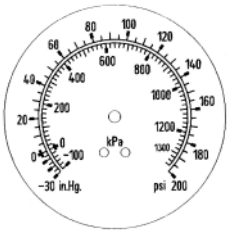


Minimum Fittings

4" Bottom Connection with optional Back Flange

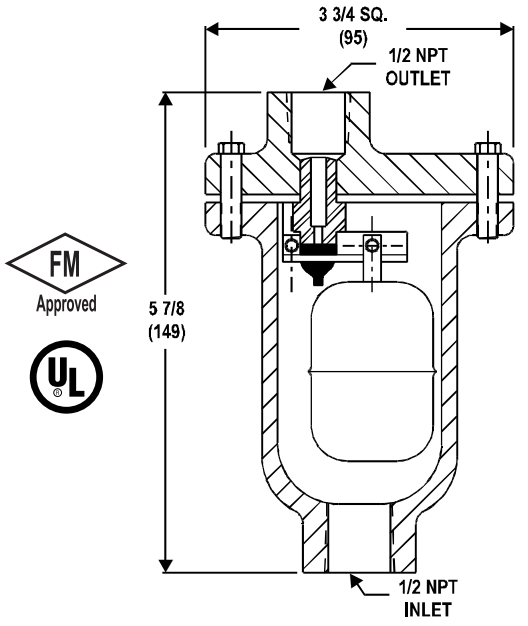


GLYCERINE FILL DISCHARGE GAUGE



GLYCERINE FILL SUCTION GAUGE

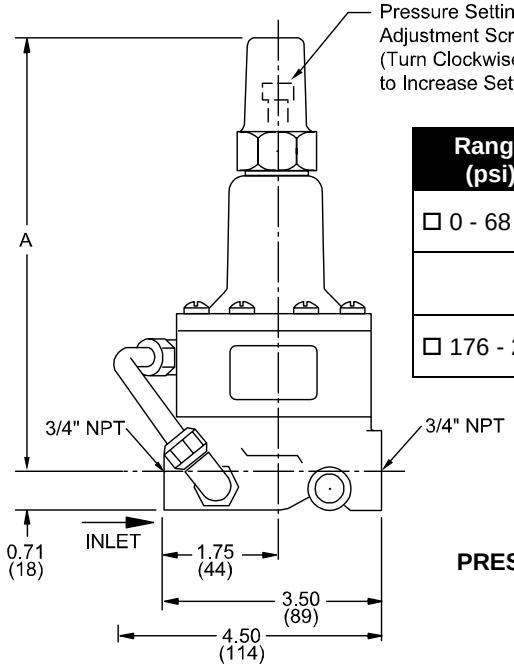
Pump		
HSC	☐ Includes: Gauges, ARV and Pressure Relief Valve	☐ Includes: Gauges and ARV
ES	☐ Optional: Gauges and Pressure Relief Valve	☐ Includes: Gauges
VIL	☐ Optional: Gauges and Pressure Relief Valve	N/A



FM Approved

UL

AIR RELEASE VALVE (ARV)



Range (psi)	Approval	
☐ 0 - 68		(189)
		7.44 (189)
☐ 176 - 280		(265)

PRESSURE RELIEF VALVE

NOTE:
AS PER NFPA-20 SECT. 5.11.

All dimensions are in inches (mm)

Note: Dimensions are not used for construction purposes unless certified. Data subject to change without notice.

No. 37, Muthiya Mudali Second Street
Royapettah Chennai – Tamil Nadu
INDIA
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