BRISTOL



FIRE PUMPS

HORIZONTAL SPLIT CASE, END SUCTION, VERTICAL TURBINE,

CONTAINERIZED PUMP, PACKEGED FIRE PUMP, FUEL TANK & ANTI-VORTEX PLATE



Issue 6.0 Version1

CONTENTS



HORIZONTAL SPLIT CASE

Bristol Split Case Pump is a single stage, non-self-priming, centrifugal volute pump with radial suction and discharge port

Page 3



END SUCTION

An end suction pump is a centrifugal pump typically designed with a casing feature that suction is present on one end and the discharge is placed at the top.

Page 7



VERTICAL TURBINE

This pump is used for any underground water source where the water level is below the pump suction and it's Impeller remains submerged with the water tank at all times.

Page 11



CONTAINERIZED FIRE FIGHTING PUMPS

Firefighting pump sets assembled inside modified container in accordance with customer specifications and an NFPA requirements

Page 16



PACKAGED FIRE FIGHTING SYSTEM

Set of firefighting pumps assembled on engineered skid in accordance with customer specifications and an NFPA requirements

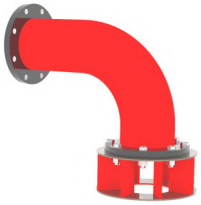
Page 19



FUEL TANKS

Aboveground are primarily designed for safe storage of flammable and combustible liquids

Page 20



ANTI-VORTEX PLATES

Designed for smooth Laminar flow & diminishing speed of fast moving turbulent flow and employed in suction tank

Page22



HORIZONTAL SPLITCASE TYPE

FM APPROVED

UL LISTED



Description

Bristol Split Case Pump is a single stage, non-self-priming, centrifugal volute pump with radial suction and discharge port. This pump has a horizontal pump shaft with the impeller placed in the middle of the shaft and with self contained combination bearing housing and seal chamber on both sides of the impeller. Without disturbing the motor or pipe-work, the split case construction enables the pump casing to be dismantled in the horizontal plane along the drive shaft. Removal and dismantling of the internal pump parts e.g. bearings, wear rings, impeller and shaft seal can then take place.

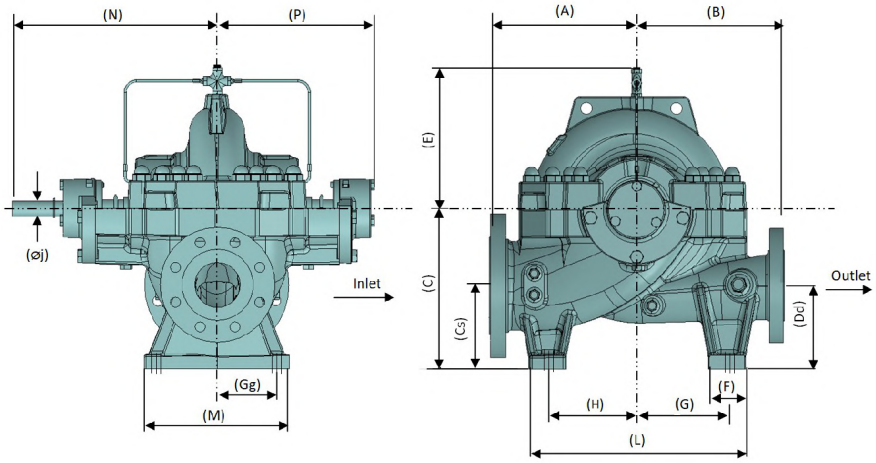
Features

- In line Pump
- Double Suction
- Low NPSH
- Low axial load on the shaft
- Improved efficiency (Overall higher efficiency
- Low radial load on the shaft
- Low axial and radial loads extends wear ring, seal and - bearing life, minimize vibration and provides quit operation
- Easy service bearing and packing gland can be changed without removing the top casing half
- UL File No. EX16089

Performance Range

- Capacity : From 300 GPM up to 3000 GPM
- Head : From 50 MTR up to 209 MTR

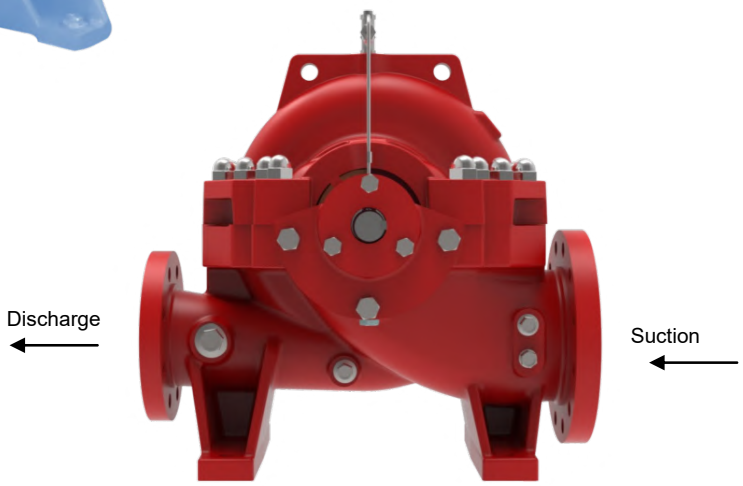
Pump Dimensions

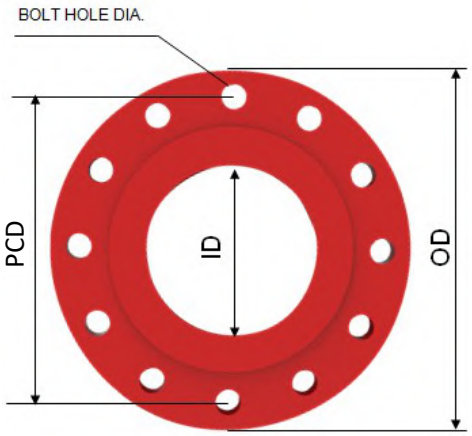


Model	A	B	C	Cs	Dd	E	F	G	H	L	M	Gg	N	P	Ø j	Shaft keyway
BSP-125-270	300	300	315	175	175	270	70	170	170	410	320	135	336	443	35	10x08x78
BSP-150-310	330	330	355	185	185	345	80	200	200	470	320	135	456	345	35	10x08x85
BSP-150-370	370	370	355	185	185	345	70	200	200	470	320	135	443	344	35	10x08x78
BSP-200-290	370	370	400	200	200	310	80	225	225	530	390	170	515	365	45	14x09x108
BSP-200-365	370	370	400	200	200	350	80	225	225	530	390	170	517	366	45	14x09x108
BSP 6X4X10HF	330	330	355	185	185	270	70	200	200	470	320	135	415	300	35	10x08x85
BSP 10X8X21HF	600	500	560	260	260	472	70	350	350	770	480	215	655	375	65	18x11x149
BSP 10X8X29MF	682	609	600	260	205	555	100	440	440	980	600	250	710	520	65	18x11x138
BSP 10X8X26MF	510	435	600	230	230	505	140	255	305	700	550	235	634	418	60	18x11x138
BSP 8X6X18MF	475	405	480	201.5	201.5	385	120	180	180	480	470	190	537	414	45	14x09x108



Horizontal Split Case Pump Flange Dimension

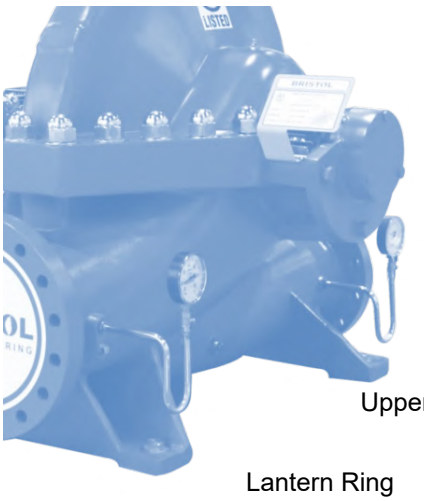




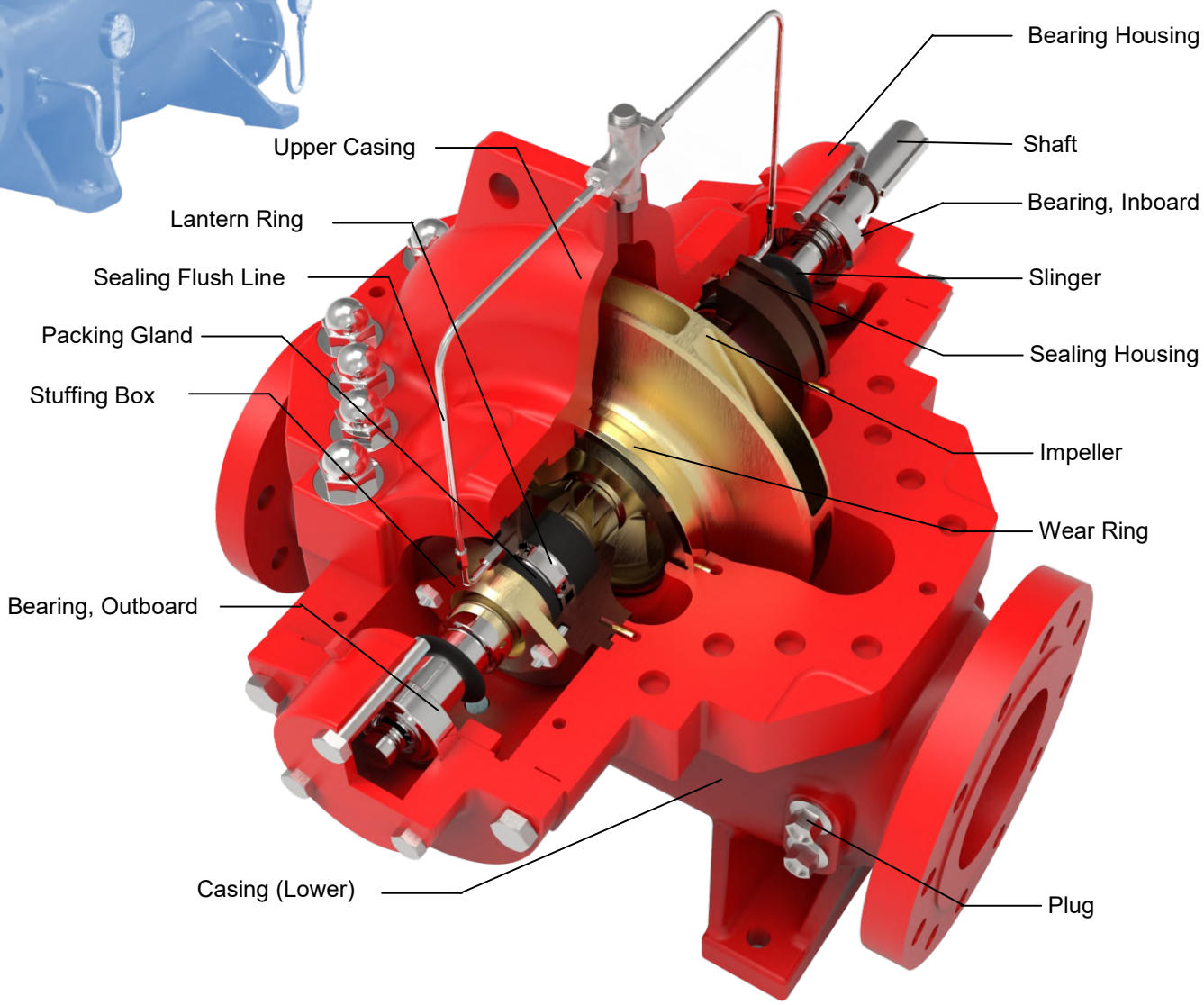
FLANGE DETAILS FOR SUCTION AND DISCHARGE

Model	Suction					Discharge				
	ID	(Pump Casing Range) OD	No. of Holes	Bolt Hole DIA	PCD	ID	(Pump Casing Range) OD	No. of Holes	Bolt Hole DIA	PCD
BSP 125-270	125	280	8	22	235	80	210	8	22	168
BSP 150-310	150	320	12	22	270	100	255	8	22	200
BSP 150-370	150	320	12	22	270	100	255	8	22	200
BSP 200-290	200	380	12	26	330	125	280	8	22	235
BSP 200-365	200	380	12	26	330	125	280	8	22	235
BSP 6X4X10 HF	150	320	12	22	270	100	250	8	22	200
BSP 10X8X21HF	250	445	16	28	387	200	380	12	25	330
BSP 10X8X29MF	250	445	16	28	387	200	380	12	25	330
BSP 10X8X26MF	250	445	16	28	387	200	380	12	28	330
BSP 8X6X18MF	200	381	12	26	330	150	317.5	12	25	270

- *Standard for Cast Iron Flanged Fittings : ANSI / ASME B16.1*
- *Standard for Ductile Iron Flanged Fittings : ANSI/ASME B16.42*



Horizontal Split Case Pump Components



Casing - (Ductile Iron/Cast Iron) - Upper and Lower half bolted and dowelled to provide perfect alignment. Upper half casing can be removed for inspection, without disturbing bearings or alignment.

Shaft Sleeve - (Stainless Steel) - Protect the shaft against corrosion and wear, extends through gland for maximum shaft protection. Impeller - (Bronze) - Enclosed, double suction, Cast in one-piece and balance to minimize the thrust and to ensure longer bearing life. Locked in position by shaft sleeve.

Sealing Housing - (Ductile Iron/Cast Iron) - Designed to accept packing with lantern ring. Internally drilled liquid passage in upper-half casing provides lubrication to the packing area.

Impeller - Bronze / Stainless Steel

Shaft - (Stainless Steel/Alloy Steel/Duplex Steel) - Large - diameter, precision-machined, high strength steel shaft for maximum strength with minimum shaft deflection

Wear Ring - (Bronze) - A sacrificial component installed to inhibit fluid from re-circulating back to suction from the discharge.

Lantern Ring - (Stainless Steel) - A perforated hollow ring that receives relatively cool, clean liquid. Distribute uniformly around the shaft to provide lubrication and cooling.

Packing Gland - (Immersion Graphite) - flexibility allows the shaft to run freely as well as leak proof

Stuffing Box (Gland) - (Bronze) - to press the packing gland into the seal area through bolts.

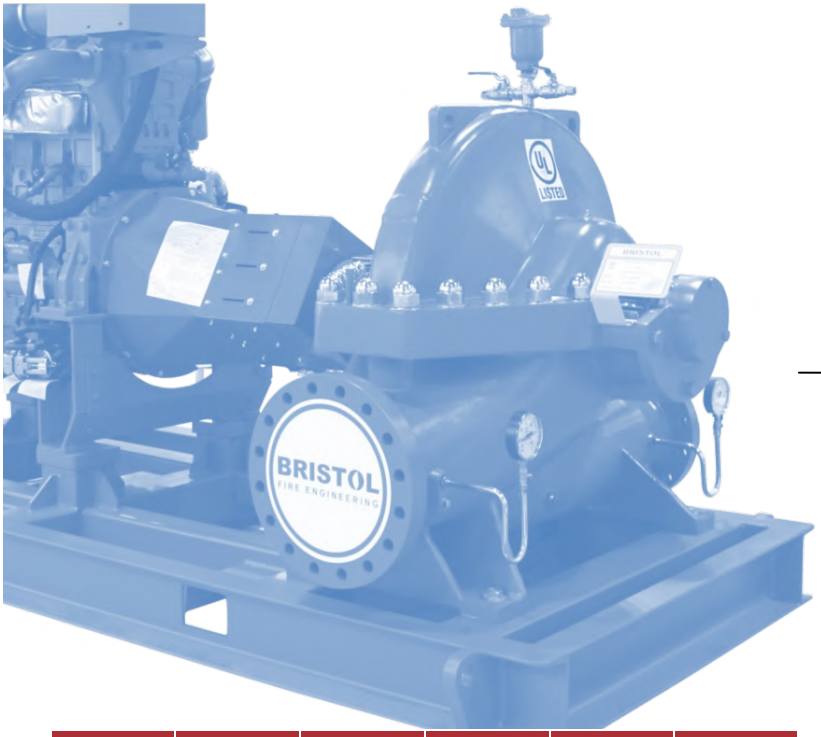
Plug - (Stainless Steel).

Bearing - (SKF) - High speed capability and low friction bearing.

Bearing Housing - (Cast Iron)-Bearing housings are modular assemblies designed to make it easy to install bearings and shafts , while protecting bearings, extending their operating life and simplifying maintenance.

Sealing Flush Line - (Stainless Steel) - Line from discharge of the pump and recirculated through an pressure regulating valve into the gland.

Water Slinger - (Oil Resistant Rubber).



Split Case Pump Selection Chart

FM APPROVED

UL LISTED

Model	Rated Capacity (GPM)	Size (In)	UL Listed Pressure (PSI)	FM Approved Pressure(PSI)	Approx Speed (RPM)
BSP 125-270	300	5x3	117 - 159		2950
BSP 125-270	300	5x3	121 - 165		3000
BSP 125-270	400	5x3	115 - 157		2950
BSP 125-270	400	5x3	120 - 163		3000
BSP 150-310	400	6x4		138 - 226	2950
BSP 150-310	400	6x4		143 - 234	3000
BSP 125-270	450	5x3	114 - 155		2950
BSP 125-270	500	5x3	112 - 154		2950
BSP 125-270	500	5x3	117 - 160		3000
BSP 200-290	500	8x5	165 - 228		3550
BSP 150-310	500	6x4	129 - 222	137 - 225	2950
BSP 150-310	500	6x4	139 - 230	141 - 234	3000
BSP 150-370	500	6x4	238 - 293	231 - 288	2950
BSP 150-370	500	6x4	235 - 264		2800
BSP 150-370	500	6x4	202 - 226		2600
BSP 6x4x10HF	500	6x4	91 - 126	96 - 128	2950
BSP 6x4x10HF	500	6x4	100 - 130	100 - 133	3000
BSP 6x4x10HF	500	6x4	130 - 178	140 - 183	3500
BSP 6x4x10HF	750	6x4	93 - 125	94 - 127	3000
BSP 200-290	750	8x5	161 - 229		3550
BSP 150-310	750	6x4	125 - 223	132 - 225	2950
BSP 150-310	750	6x4	133 - 231	137 - 234	3000
BSP 150-370	750	6x4	228 - 256		2800
BSP 150-370	750	6x4	233 - 285	225 - 282	2950
BSP 150-370	750	6x4	195 - 219		2600
BSP 200-365	750	8x5	193 - 236		2800
BSP 200-365	750	8x5	214 - 262		2950
BSP 200-365	750	8x5	222 - 271		3000
BSP 200-365	750	8x5	165 - 203		2600
BSP 6x4x10HF	750	6x4	85 - 121	90 - 122	2950
BSP 6x4x10HF	750	6x4	123 - 174	132 - 177	3500
BSP 6x4x10HF	1000	6x4	84 - 117	83 - 118	3000
BSP 200-290	1000	8x5	155 - 222		3550
BSP 150-310	1000	6x4	117 - 218	128 - 222	2950
BSP 150-310	1000	6x4	123 - 226	133 - 231	3000
BSP 200-290	1000	8x5	131 - 194	140 - 172	2950
BSP 200-290	1000	8x5	161 - 201	146 - 180	3000
BSP 150-370	1000	6x4	224 - 277	215 - 272	2950
BSP 150-370	1000	6x4	219 - 248		2800
BSP 150-370	1000	6x4	186 - 212		2600
BSP 200-365	1000	8x5	210 - 259		2950
BSP 200-365	1000	8x5	188 - 233		2800
BSP 200-365	1000	8x5	218 - 268		3000
BSP 8x6x18MF	1000	8x6	152 - 238	153 - 238	3000
BSP 8x6x18MF	1000	8x6	153 - 182	159 - 184	2100
BSP 8x6x18MF	1000	8x6	147 - 230	148 - 230	2950
BSP 200-365	1000	8x5	161 - 199		2600
BSP 6x4x10HF	1000	6x4	76 - 112	79 - 113	2950

Model	Rated Capacity (GPM)	Size (In)	UL Listed Pressure (PSI)	FM Approved Pressure(PSI)	Approx Speed (RPM)
BSP 10x8x29MF	1000	10x8	174 - 222	173 - 222	1750
BSP 6x4x10HF	1000	6x4	114 - 166	122 - 168	3500
BSP 10x8x21HF	1000	10x8	87 - 149	86 - 148	1500
BSP 10x8x21HF	1000	10x8	113 - 203	118 - 202	1750
BSP 8x6x18MF	1250	8x6	149 - 231	150 - 229	3000
BSP 8x6x18MF	1250	8x6	150 - 179	154 - 181	2100
BSP 8x6x18MF	1250	8x6	144 - 222	144 - 221	2950
BSP 200-290	1250	8x5	148 - 217		3550
BSP 200-290	1250	8x5	153 - 199	142 - 175	3000
BSP 200-290	1250	8x5	125 - 191	136 - 169	2950
BSP 200-365	1250	8x5	205 - 254		2950
BSP 200-365	1250	8x5	183 - 227		2800
BSP 200-365	1250	8x5	156 - 194		2600
BSP 200-365	1250	8x5	213 - 263		3000
BSP 10x8x21HF	1250	10x8	86 - 149	84 - 146	1500
BSP 10x8x21HF	1250	10x8	111 - 202	118 - 202	1750
BSP 10x8x29MF	1250	10x8	171 - 218	166 - 213	1750
BSP 8x6x18MF	1500	8x6	145 - 221	146 - 220	3000
BSP 8x6x18MF	1500	8x6	147 - 176	149 - 177	2100
BSP 8x6x18MF	1500	8x6	140 - 212	140 - 212	2950
BSP 200-290	1500	8x5	118 - 184	132 - 165	2950
BSP 200-290	1500	8x5	144 - 193	138 - 171	3000
BSP 200-365	1500	8x5	198 - 248		2950
BSP 200-365	1500	8x5	177 - 221		2800
BSP 200-365	1500	8x5	150 - 188		2600
BSP 200-365	1500	8x5	206 - 257		3000
BSP 10x8x21HF	1500	10x8	84 - 148	83 - 145	1500
BSP 10x8x21HF	1500	10x8	110 - 202	115 - 200	1750
BSP 10x8x29MF	1500	10x8	167 - 214	165 - 211	1750
BSP 8x6x18MF	2000	8x6	140 - 168	140 - 170	2100
BSP 8x6x18MF	2000	8x6	129 - 188	130 - 189	2950
BSP 8x6x18MF	2000	8x6	135 - 197	135 - 197	3000
BSP 10x8x21HF	2000	10x8	78 - 144	76 - 142	1500
BSP 10x8x21HF	2000	10x8	105 - 200	108 - 197	1750
BSP 10x8x26MF	2000	10x8	138 - 199	137 - 197	1490
BSP 10x8x26MF	2000	10x8	125 - 198	124 - 198	1760
BSP 10x8x29MF	2000	10x8	122 - 209	123 - 207	1450
BSP 10x8x29MF	2000	10x8	160 - 207	157 - 202	1750
BSP 8x6x18MF	2500	8x6	128 - 158	129 - 159	2100
BSP 10x8x26MF	2500	10x8	130 - 187	129 - 187	1490
BSP 10x8x26MF	2500	10x8	118 - 189	118 - 188	1760
BSP 10x8x29MF	2500	10x8	151 - 196	149 - 193	1750
BSP 10x8x29MF	2500	10x8	114 - 198	114 - 192	1450
BSP 10x8x26MF	3000	10x8	120 - 176	118 - 174	1490
BSP 10x8x26MF	3000	10x8	110 - 181	110 - 179	1760
BSP 10x8x29MF	3000	10x8	140 - 185	137 - 182	1750
BSP 10x8x29MF	3000	10x8	136 - 188	135 - 183	1450



END SUCTION TYPE

FM APPROVED

UL LISTED



Description

Are designed according to NFPA 20 for firefighting applications. This pump is designed with latest technology and has premium components for easy maintenance and absolute efficiency .

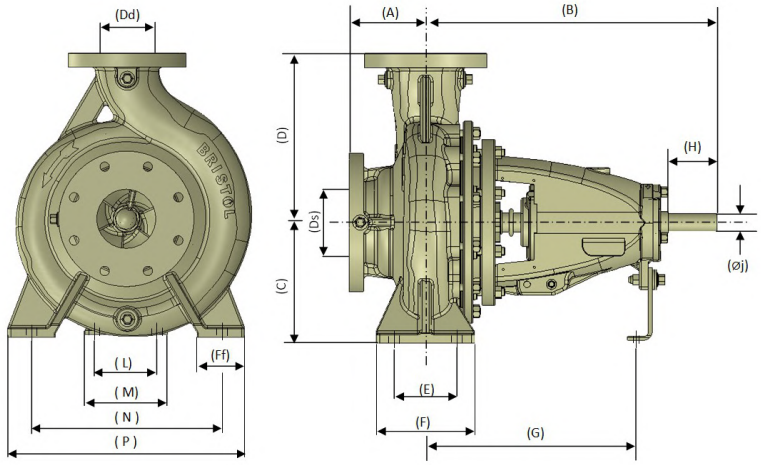
Features

- Available in electric motor driven or engine driven configuration
- UL File No. : EX16459
- Dynamically balanced impellers

Performance Range

- Capacity : From 50 GPM up to 1000 GPM
- Head : From 50 MTR up to 209 MTR

Pump Dimensions

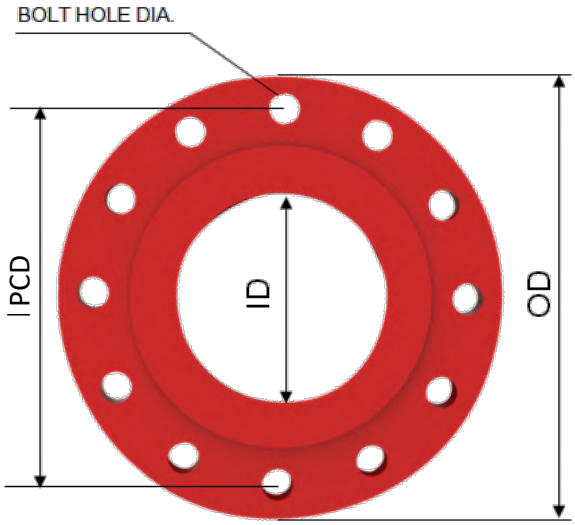


MODEL	A	B	C	D	E	F	Ff	G	H	L	M	N	P	Ø j	keyway
IS32 - 200	80	360	160	183.5	70	100	50	267	49	110	140	190	240	22.2	4.7X4.7X32 Form A
IS32 - 260	100	360	180	228	95	125	65	267	49	110	140	250	320	22.2	4.7X4.7X32 Form A
IS50 - 320H	125	470	225	285.6	95	125	65	342	79.4	110	140	280	345	28.5	6.35X6.35X44.5 Form A
IS65 - 320H	125	470	225	280	120	160	80	342	79.4	110	140	315	400	28.5	6.35X6.35X44.5 Form A
IS80 - 260	125	470	200	280	120	160	80	342	79.4	110	140	315	400	28.5	6.35X6.35X44.5 Form A
IS80 - 320H	125	470	250	317.4	120	160	80	342	79.4	110	140	315	400	28.5	6.35X6.35X44.5 Form A
IS100 - 260	140	470	225	280	120	160	80	342	79.4	110	140	315	400	28.5	6.35X6.35X44.5 Form A
IS100 - 320H	142	470	250	316	120	160	80	342	79.4	110	140	315	400	28.5	6.35X6.35X44.5 Form A
BEP 3X2.5LP	105	465	180	225	95	125	65	337	80	110	140	250	320	32	6X6X35 Form A
BEP 4X3LP	125	470	180	250	95	125	65	342	80	110	140	280	345	32	8X8X56 Form A
BEP 5X4 HH	140	529	250	315	120	160	80	369	97	110	160	315	400	42	12X8X80 Form C



End Suction Pump
Flange Details



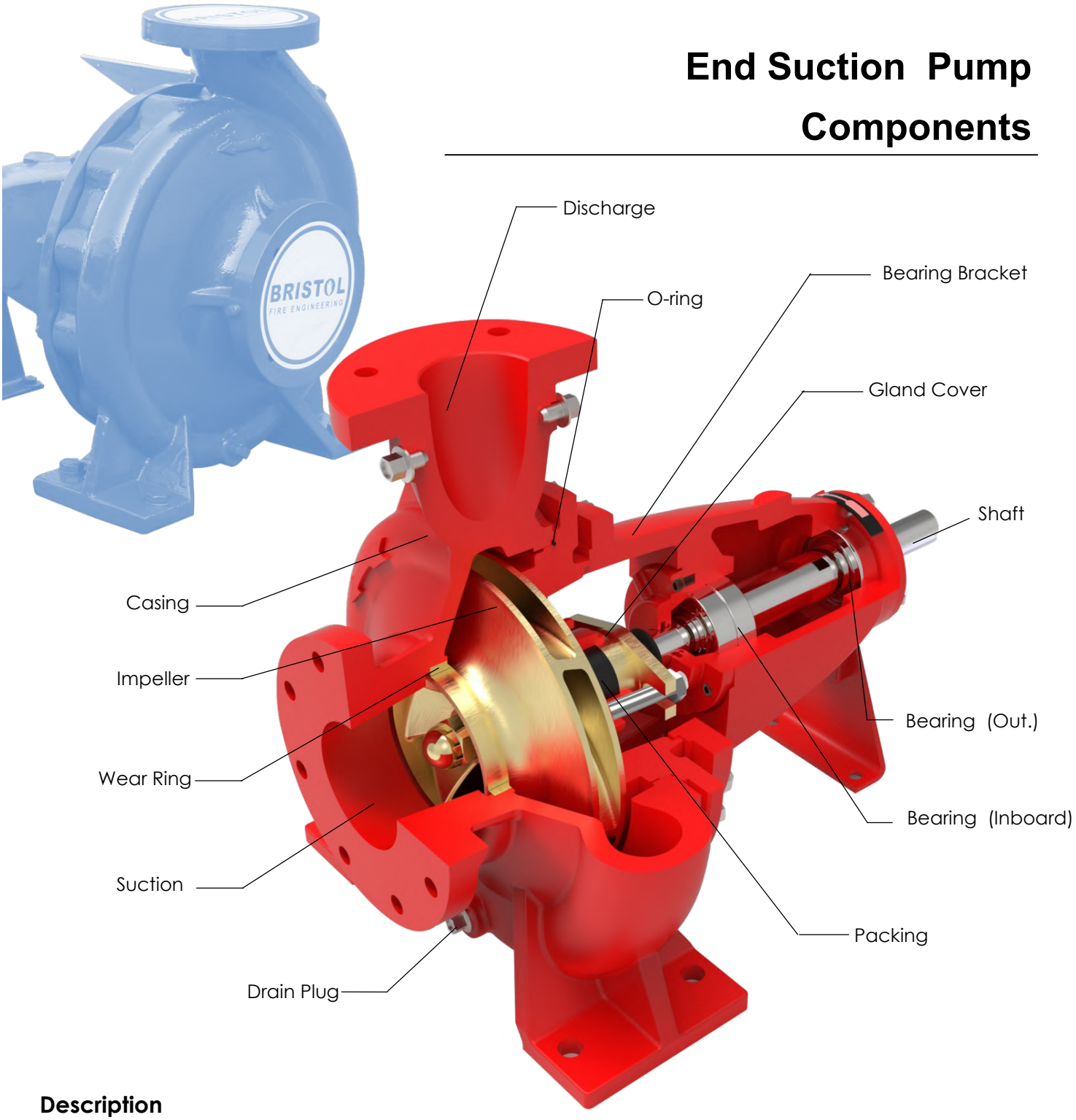


Model	Suction Flange					Discharge Flange				
	ID	OD	No. of Holes	Bolt Hole DIA	PCD	ID	OD	No. of Holes	Bolt Hole DIA	PCD
IS32-200	50	165	4	5/8"-11UNC-2B	120.7	32	140	4	1/2"-13UNC-2B	88.9
IS32-260	50	165	4	5/8"-11UNC-2B	120.7	32	140	4	1/2"-13UNC-2B	88.9
IS50-320H	65	185	4	5/8"-11UNC-2B	139.7	50	165	4	5/8"-11UNC-2B	120.7
IS65-320H	80	200	4	5/8"-11UNC-2B	152.4	65	185	4	5/8"-11UNC-2B	139.7
IS80-260	100	229	8	5/8"-11UNC-2B	190.5	80	200	4	5/8"-11UNC-2B	152.4
IS80-320H	100	229	8	5/8"-11UNC-2B	190.5	80	200	4	5/8"-11UNC-2B	152.4
IS100-260	125	254	8	3/4"-10UNC-2B	215.9	100	229	8	5/8"-11UNC-2B	190.5
IS100-320H	125	254	8	3/4"-10UNC-2B	215.9	100	229	8	5/8"-11UNC-2B	190.5
BEP 3X2.5LP	80	200	8	18	158.75	65	190.5	4	18	150
BEP 4X3LP	100	220	8	18	181	80	200	8	18	158.75
BEP 5X4 HH	125	255	8	22	216	100	230	8	19	190.5

* *Standard for Cast Iron Flanged Fittings : ANSI / ASME B16.1*

* *Standard for Ductile Iron Flanged Fittings : ANSI/ASME B16.42*

End Suction Pump Components



Description

Casing - Ductile Iron 65-45-12 - Heavy-duty power frame

Impeller - Bronze / Stainless Steel

Wear Ring - Bronze is standard for the certified ANSI pumps radially split casing with flange connection

Suction - Horizontal End Suction ANSI 150# or 300# flange drilling is available based on material selection

Discharge - Vertical Centreline Discharge

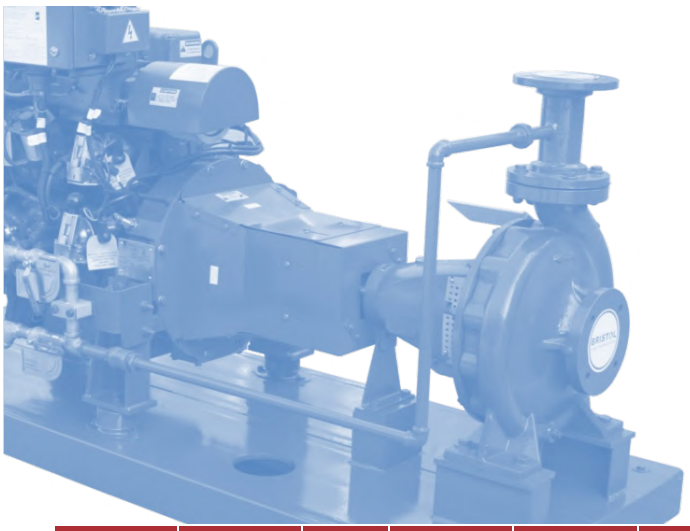
Bearing Bracket - Ductile Iron 65-45-12 - Heavy-duty power frame

Gland Cover - Bronze - to house a gland seal

Shaft - Stainless Steel - Sleeve shaft as standard for extended seal life

Bearing (Out.) - Deep Grooved Ball Bearing

Bearing (Inb.) - Deep Grooved Ball Bearing



End Suction Pump Selection Chart

FM APPROVED

UL LISTED

Model	Rated Capacity (GPM)	Size (In)	UL Listed Pressure (PSI)	FM Approved Pressure (PSI)	Rated Speed (RPM)
IS32 – 200	50	2 x 1 ¼	62-95		2950
IS32 – 200	50	2 x 1 ¼	55-85		2800
IS32 – 260	50	2 x 1 ¼	113 - 130		2950
IS50 – 320H	50	2½ x 2	103-167		2600
IS50 – 320H	50	2½ x 2	88-142		2400
IS32 – 260	100	2 x 1 ¼	103 - 125		2950
IS50 – 320H	100	2½ x 2	178-298		3500
IS50 – 320H	100	2½ x 2	132-210		2950
IS50 – 320H	100	2½ x 2	119-189		2800
IS50 – 320H	100	2½ x 2	102-166		2600
IS50 – 320H	100	2½ x 2	87-141		2400
BEP 3X2.5 LP	100	3 x 2½	60-92		2950
BEP 3X2.5 LP	100	3 x 2½	62-95		3000
BEP 3X2.5 LP	100	3 x 2½	87-134		3550
IS50 – 320H	150	2½ x 2	177-296		3500
IS50 – 320H	150	2½ x 2	132-209		2950
IS50 – 320H	150	2½ x 2	118-188		2800
IS50 – 320H	150	2½ x 2	99-165		2600
IS50 – 320H	150	2½ x 2	84-140		2400
BEP 3X2.5 LP	150	3 x 2½	59-91		2950
BEP 3X2.5 LP	150	3 x 2½	61-94		3000
BEP 3X2.5 LP	150	3 x 2½	86-132		3550
BEP 3X2.5 LP	200	3 x 2½	58-90		2950
BEP 3X2.5 LP	200	3 x 2½	60-93		3000
BEP 3X2.5 LP	200	3 x 2½	85-130		3550
IS50 – 320H	200	2½ x 2	173-296		3500
IS50 – 320H	200	2½ x 2	127-209		2950
IS50 – 320H	200	2½ x 2	113-188		2800
IS65 – 320H	200	3 x 2½	159-290		3500
IS65 – 320H	200	3 x 2½	108-201		2950
IS65 – 320H	200	3 x 2½	97-181		2800
IS65 – 320H	200	3 x 2½	104-158		2600
IS65 – 320H	200	3 x 2½	88-133		2400
IS80 – 260	200	4 x 3		111-151	2950
IS80 – 260	200	4 x 3		115-157	3000
IS65 – 320H	250	3 x 2½	157-290		3500
IS65 – 320H	250	3 x 2½	107-201		2950
IS65 – 320H	250	3 x 2½	97-181		2800
IS65 – 320H	250	3 x 2½	102-155		2600
IS65 – 320H	250	3 x 2½	85-131		2400
BEP 3X2.5 LP	250	3 x 2½	55-88		2950
BEP 3X2.5 LP	250	3 x 2½	57-91		3000
BEP 3X2.5 LP	250	3 x 2½	83-129		3550
BEP 3X2.5 LP	300	3 x 2½	52-85		2950
BEP 3X2.5 LP	300	3 x 2½	80-126		3550
IS65 – 320H	300	3 x 2½	155-289		3500
IS65 – 320H	300	3 x 2½	107-201		2950
IS65 – 320H	300	3 x 2½	97-181		2800
IS65 – 320H	300	3 x 2½	98-152		2600
IS65 – 320H	300	3 x 2½	82-128		2400
IS80 – 260	300	4 x 3		111-150	2950
IS80 – 260	300	4 x 3	167-222	153-206	3550
IS80 – 260	300	4 x 3		115-156	3000
IS80 – 320H	300	4 x 3	159-203		2950
IS80 – 320H	300	4 x 3	143-183		2800

Model	Rated Capacity (GPM)	Size (In)	UL Listed Pressure (PSI)	FM Approved Pressure (PSI)	Rated Speed (RPM)
BEP 3x2.5 LP	300	3 x 2½	54-88		3000
BEP 4x3 LP	300	4 x 3	55-89		2950
BEP 4x3 LP	300	4 x 3	57-92		3000
BEP 4x3 LP	300	4 x 3	82-130		3550
IS80 – 260	400	4 x 3	165-222	152-206	3550
IS80 – 260	400	4 x 3	105-139	110-149	2950
IS80 – 320H	400	4 x 3	158-203		2950
IS80 – 320H	400	4 x 3	142-183		2800
IS100 – 320H	400	5 x 4	123-158	122-236	2950
IS100 – 320H	400	5 x 4	110-142		2800
IS100 – 320H	400	5 x 4	98-172	118-168	2600
IS100 – 320H	400	5 x 4	83-147		2400
BEP 4X3 LP	400	4 x 3	54-87		2950
BEP 4X3 LP	400	4 x 3	56-90		3000
BEP 4X3 LP	400	4 x 3	79-127		3550
IS80 – 260	400	4 x 3	109-144	114-154	3000
IS100 – 320H	400	5 x 4	133-163	126-244	3000
BEP 4X3 LP	450	4 x 3	53-85		2950
BEP 4X3 LP	450	4 x 3	55-88		3000
BEP 4X3 LP	450	4 x 3	78-126		3550
IS80 – 320H	450	4 x 3	157-203		2950
IS80 – 320H	450	4 x 3	140-182		2800
IS100 – 320H	450	5 x 4	122-158		2950
IS100 – 320H	450	5 x 4	110-142		2800
IS100 – 320H	450	5 x 4	98-172		2600
IS100 – 320H	450	5 x 4	83-147		2400
IS100 – 320H	450	5 x 4	133-164		3000
IS80 – 260	500	4 x 3	101-137	108-146	2950
IS80 – 260	500	4 x 3	163-220	150-204	3550
IS80 – 320H	500	4 x 3	155-202		2950
IS80 – 320H	500	4 x 3	136-182		2800
IS100 – 260	500	5 x 4	144-212	134-197	3550
IS100 – 320H	500	5 x 4	122-226	121-235	2950
IS100 – 320H	500	5 x 4	110-142		2800
IS100 – 320H	500	5 x 4	97-172	116-168	2600
IS100 – 320H	500	5 x 4	82-147		2400
BEP 4X3 LP	500	4 x 3	51-84		2950
BEP 4X3 LP	500	4 x 3	53-87		3000
BEP 4X3 LP	500	4 x 3	78-125		3550
IS80 – 260	500	4 x 3	106-142	112-152	3000
IS100 – 320H	500	5 x 4	124-234	125-244	3000
BEP 5X4 HH	500	5 x 4	155-244		2950
IS100 – 320H	750	5 x 4	119-224	119-233	2950
IS100 – 320H	750	5 x 4	104-131		2800
IS100 – 320H	750	5 x 4	89-166	111-166	2600
IS100 – 260	750	5 x 4	113-139	111-143	2950
IS100 – 260	750	5 x 4	140-212	134-195	3550
IS100 – 320H	750	5 x 4	119-232	123-241	3000
IS100 – 260	750	5 x 4	118-144	115-149	3000
BEP 5X4 HH	750	5 x 4	149-239		2950
IS100 – 260	1000	5 x 4	104-131	109-141	2950
IS100 – 260	1000	5 x 4	132 - 208	130-194	3550
IS100 – 260	1000	5 x 4	109-137	113-146	3000
BEP 5X4 HH	1000	5 x 4	140-231		2950



VERTICAL TURBINE TYPE

UL LISTED



Bristol Vertical Turbine centrifugal pump is developed and fabricated by our company, according to NFPA20. This pump is used for any underground water source where the water level is below the ground level, it's Impeller remains submerged with the water tank at all times and supported by column pipe.

Where the fire protection water source is located below ground or deck level, the best technical pumping solution is the vertical suspended multi stage turbine pump. With this type of unit the impellers are fully immersed in the water maintaining prime at all times. The pumps are driven by vertical electric motors or by diesel engines through a right angle gearbox .

Features

- Performance and hydrostatic tests
- In compliance with NFPA 20, UL 448 requirements
- Materials of construction: cast iron, bronze fitted
- Sealing arrangement: packing with flushing
- Modular construction: assures complete flexibility in selecting a pump
- Pre-engineered standard components
- Space-saver design: requires minimum floor space
- Static suction lift: permissible by NFPA 20 where water source is located below ground
- Open line shaft: water-lubricated bowl and line-shaft bearings
- Stuffing Box (Gland) - (Bronze) - to press the packing gland into the seal area through bolt
- Bolted bowl: bowls and suction bell are bolted together, allowing easier disassembly
- Dynamic balanced impellers: secured to the shaft with steel locking collets
- Discharge gauge connection
- UL File No. EX26745

Performance Range:

Capacity	: From 200 GPM up to 1500 GPM
Head	: From 50 meter up to 210 meters

Materials of Construction:

Shaft	: Stainless Steel
Head	: Cast Iron
Impeller	: Bronze /Stainless Steel

Gearbox & Motor



Angle Gear Box

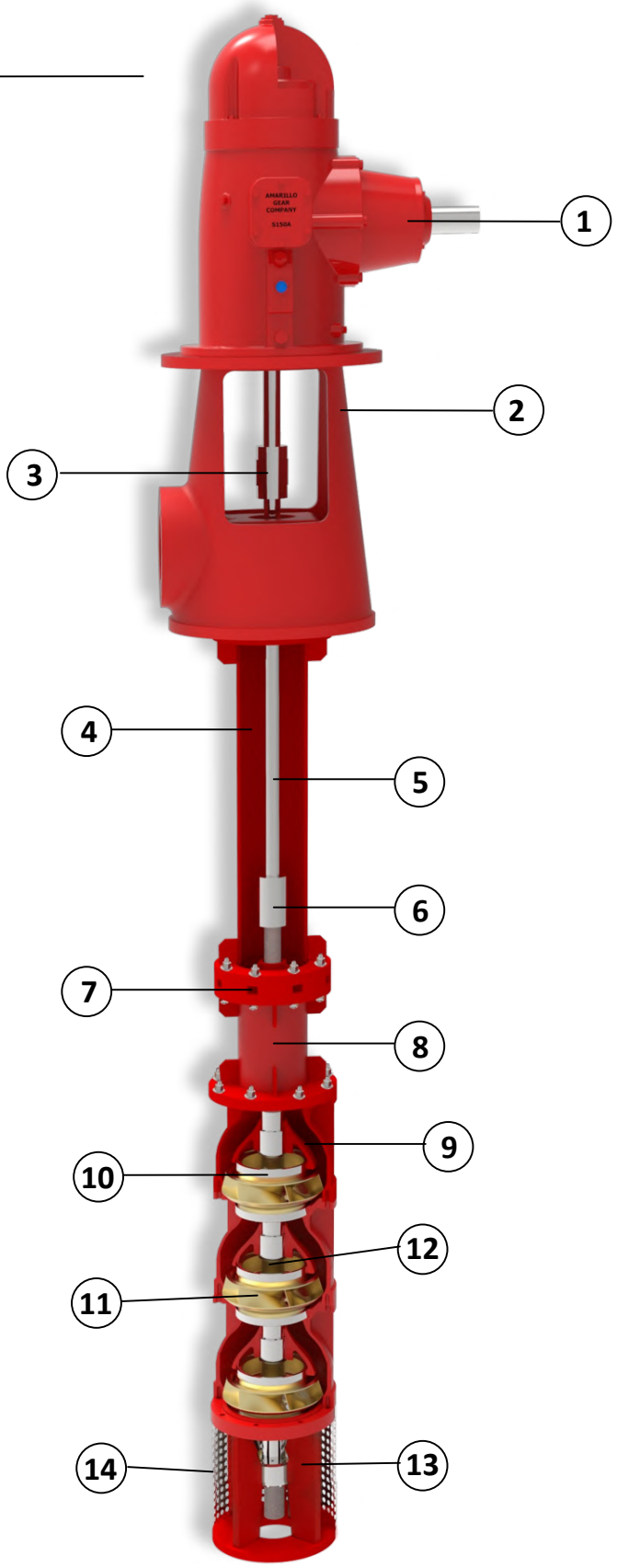


VHS Motor



Vertical Turbine Components

To request the spare parts, contact us with item description and material

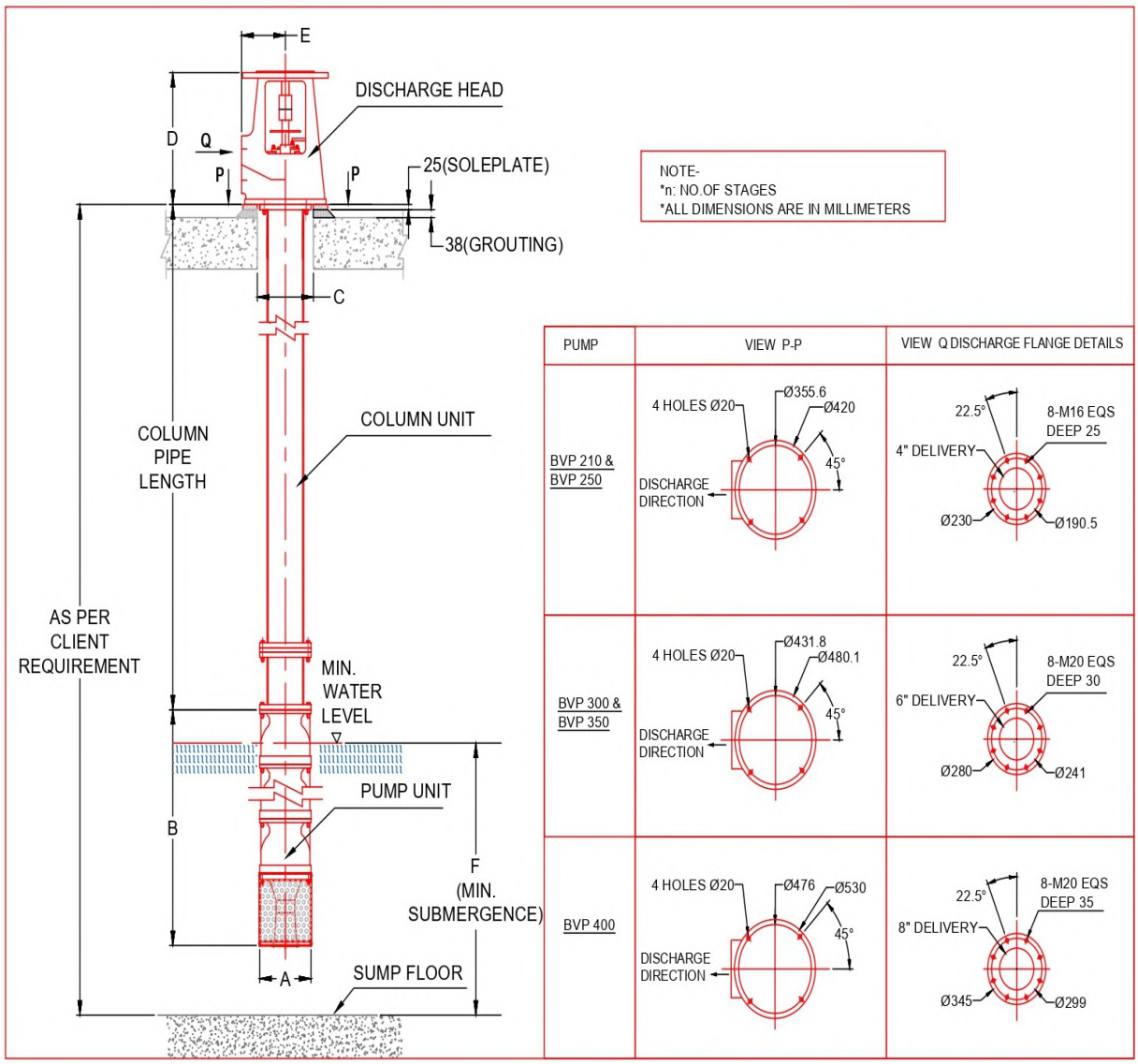


Description

1. **Right Angle Gear Drive**
2. **Discharge Head** - Ductile Iron
3. **Head Shaft Coupling -** Stainless Steel
4. **Column Pipe Assembly -** AISI 1020/ASTM A106 Gr. B
5. **Line Shaft** - Stainless Steel/Duplex Steel
6. **Line Shaft Coupling** - Stainless Steel
7. **Bearing Spider w/ Bushing** - ASTM A48
8. **Interconnection Pipe** - AISI 1020 / ASTM A106 Gr.B
9. **Upper Casing / Top Bowl** - ASTM A48
10. **Wear Ring** - Stainless Steel
11. **Impeller** - Bronze/SS304
12. **Shaft Sleeve** - Stainless Steel
13. **Suction Assembly** - ASTM A48
14. **Strainer** - Stainless Steel



Vertical Turbine Dimensional Details



Model	A	B	C	D	E	F
BVP 210	170	280+(150Xn)	250	490	254	500
BVP 250	208	280+(135Xn)	290	490	254	600
BVP 300	240	300+(200Xn)	340	640	260	950
BVP 350	310	350+(265Xn)	340	640	260	1000
BVP 400	352	350+(340Xn)	390	660	292	1200

- *Sole plate is optional, supplied on special request*



Vertical Turbine Selection Chart

MODEL	CAPACITY (US GPM)	SPEED(RPM)						
		1470		1770		1630	1960	2950
		UL LISTED PRESSURE (PSI)	FM Approved Pressure (PSI)	UL LISTED PRESSURE (PSI)	FM Approved Pressure (PSI)	UL LISTED PRESSURE (PSI)		
BVP-210	50							103-239
BVP-210	100							102-236
BVP-210	150							97-226
BVP-250	150							123-257
BVP-210	200							91-210
BVP-250	200							118-250
BVP-350	200	96-102	91-242	103-111	101-245	88-94	127-136	
BVP-350	200	120-127		138-148		117-125	169-181	
BVP-350	200	144-152		172-185		146-157	211-226	
BVP-350	200	168-178		207-222		175-188	253-272	
BVP-350	200	192-203		241-259		204-220		
BVP-350	200	216-254						
BVP-250	250							113-239
BVP-350	300	95-101	91-239	103-110	101-244	87-94	127-136	
BVP-350	300	119-126		138-147		116-125	169-181	
BVP-350	300	142-151		172-184		145-156	211-226	
BVP-350	300	166-177		206-221		174-187	253-271	
BVP-350	300	190-252		241-258		203-218		
BVP-250	300							109-230
BVP-300	300							111-283
BVP-300	400							106-277
BVP-350	400	92-99	89-238	102-110	101-241	85-93	125-135	
BVP-350	400	115-124		135-147		114-124	167-180	
BVP-350	400	138-149		169-184		142-155	209-225	
BVP-350	400	161-174		203-220		171-186	251-270	
BVP-350	400	184-248		237-257		199-217		
BVP-300	450							104-275
BVP-300	500							101-270
BVP-350	500	88-96	88-230	99-109	98-239	82-91	123-134	
BVP-350	500	111-120		132-145		110-121	164-179	
BVP-350	500	133-143		165-181		137-152	205-223	
BVP-350	500	155-239		198-217		165-212	246-268	
BVP-350	500			231-254				



Vertical Turbine Selection Chart

MODEL	CAPACITY (US GPM)	SPEED(RPM)						
		1470		1770		1630	1960	2950
		UL LISTED PRESSURE (PSI)	FM Approved Pressure (PSI)	UL LISTED PRESSURE (PSI)	FM Approved Pressure (PSI)	UL LISTED PRESSURE (PSI)		
BVP-400	500	54-62	50-248	83-91	80-276			
BVP-400	500	82-94		124-137				
BVP-400	500	109-125		165-183				
BVP-400	500	136-250		207-228				
BVP-400	500			248-274				
BVP-300	750							92-240
BVP-350	750	80-87	79-210	89-100	91-225	74-83	114-126	
BVP-350	750	100-109		119-133		99-111	151-168	
BVP-350	750	119-131		149-167		123-139	189-209	
BVP-350	750	139-219		179-233		148-194	227-252	
BVP-400	750	53-60	50-241	79-88	77-266			
BVP-400	750	79-91		119-132				
BVP-400	750	106-121		159-177				
BVP-400	750	132-241		199-221				
BVP-400	750			238-265				
BVP-350	1000	70-79	71-191	81-93	83-209	66-77	103-117	
BVP-350	1000	88-99		108-124		88-103	138-156	
BVP-350	1000	105-198		135-217		110-180	172-235	
BVP-400	1000	49-57	48-229	76-86	73-256			
BVP-400	1000	74-85		114-129				
BVP-400	1000	99-113		152-172				
BVP-400	1000	123-227		190-215				
BVP-400	1000			228-258				
BVP-400	1250	45-53	43-214	71-81	68-246			
BVP-400	1250	67-79		107-122				
BVP-400	1250	89-211		143-163				
BVP-400	1250			179-244				
BVP-400	1500	41-49	40-200	65-76	64-232			
BVP-400	1500	61-73		98-114				
BVP-400	1500	81-196		131-152				
BVP-400	1500			163-228				



CONTAINERIZED FIREFIGHTING PUMP SET

In accordance with NFPA requirements

Bristol offers simplest Single pump system to the most complex Multi-pump system with Containerised enclosures or Custom Built Pump House.

Our complete solution to your Fire Fighting requirements thru Fully Packaged pumping system.



Description:

In the Containerised packages, Main Fire pumps, Jockey pumps, its controllers and all accessories are mounted inside the Container. These sets are highly Engineering with all piping's are in accordance with customer requirements & following to NFPA norms.

All large equipment are accessible by doors around the container. Material handling arrangements are provided for easy unit movement based on requirement

Operating Range:

Flow : up to 5500 GPM

Pressure: 40Mtr to 200Mtr

UL/FM Listed Range

Flow : up to 3000 GPM

Pressure: 40Mtr to 200Mtr

Container/ Pump House Sizes:

20ft Standard & High Cube

40ft Standard & High Cube

Custom Built Pump House

Features:

- Bristol packaged pump house supplied with Fire-Rated or Fire Retardant enclosures. Fully weather-proof based on specific customer requirement.
- Highly Engineered and constructed in accordance with NFPA-20.
- Our Dedicated Engineering team design packages to your project specifications & requirements following to International standards.
- Bristol cost competitive Containerised fire systems save your space and time as they Engineered accurately to fit the specified area. Only Power & Pipe connection to be made at site & system is ready for use.
- Bristol Containerised fire systems are Factory tested as per stringent International standard's.
- Single responsibility for complete pump house.
- All parts are designed based on Ergonomic consideration so that ease of accessing all instrument, valves, fittings etc.
- Floors are coated with Glass Reinforced Plastic (GRP) lining to make it durable, waterproof so it will be long lasting.
- Inside walls & Roofs are provided with Sandwich panels (PIR/PU/ Rockwool/ Honeycomb) based on customer specification.
- These sets are supplied with complete Electrical connections & piping's which includes Suction line, Discharge line, Test line, PRV line, Sensing line, Fuel In & outlet, pump Drain, Sensing line drain, Engine drain, CRV drain etc.



CONTAINERIZED FIREFIGHTING PUMP SET













CONTAINERIZED FIREFIGHTING PUMP SET

UL/FM Listed Pumps Range

CAPACITY: up to 3000GPM

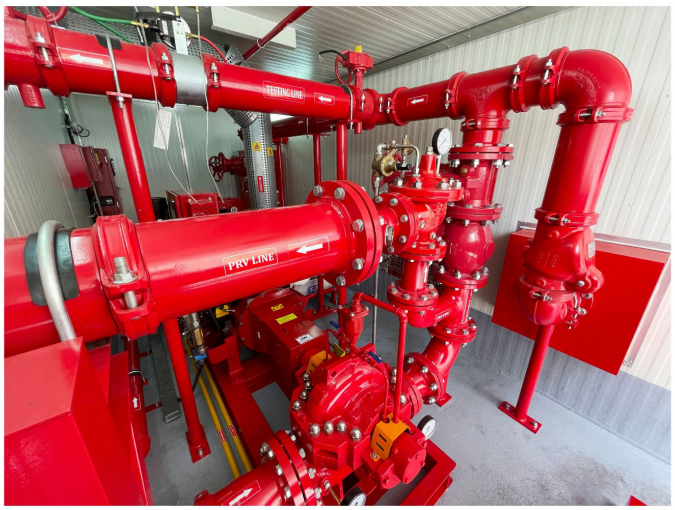
Head: up to 20 BAR

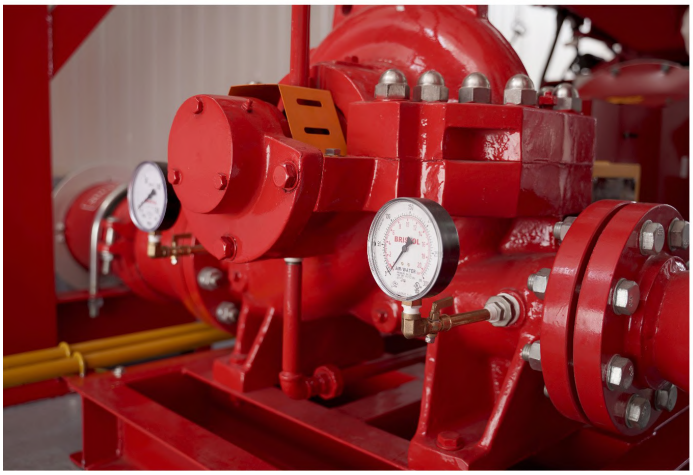
Scope of Supply:

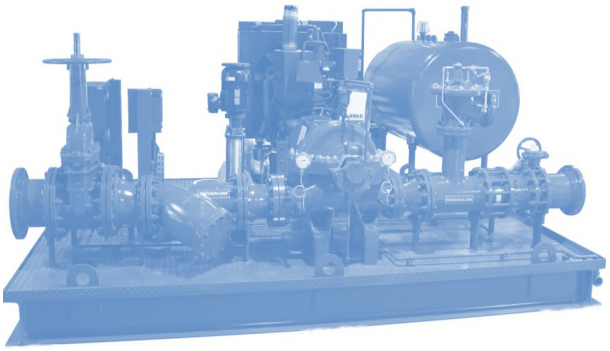
- Bristol FM/UL Horizontal Split case or End suction pump with Electric & Diesel Drive
- Jockey pump
- Automatic Electric pump controller, Diesel Controller & Jockey Controller
- Suction and discharge gauge, Air release valve & Casing relief valve
- Piping's with valves & fittings for Suction, Discharge, Test line & PRV
- Check valves
- Butterfly valves
- OS&Y Gate valves
- Exhaust pipe line with Insulated wrap & Guard
- Complete internal wiring with conduit pipes
- SS 304 piping for pressure sensing line
- Drain piping's, Fuel Inlet & Outlet Piping
- Smoke Detector / Heat Detector
- Interior weather proof lights/Emergency light
- Sandwich panels on wall & roof
- Ventilations fans with louvers
- SMDB & Switches
- Sprinkler system
- Water resistant GRP flooring
- 3 Coat interior & exterior painting system
- Main pressure relief valve
- Flow meter GERAND venture type
- Batteries
- Waste Cone
- Breeching inlet with Cabinet (As an additional scope)
- Fire Hose Cabinet with landing valve (As an additional scope)
- Manual pull station (As an additional scope)
- Sound & Strobe (As an additional scope)
- Addressable FACP(As an additional scope)
- CO2 & DCP Extinguisher (As an additional scope)
- Air conditioner (As an additional scope)

The scope shall be confirmed for project.









PACKAGED FIRE FIGHTING SYSTEMS

In accordance with NFPA requirements



Description

Bristol supplies Fully Engineered Fire Fighting Packaged systems from simplest Single pump system to the most complex Multi-pump system mounted on single skid. In this, Main fire pumps, Jockey pumps, controllers and all accessories are mounted on Single skid.

All piping's are in accordance with customer requirements & following to NFPA requirement supported within Skid.

These are meticulously manufactured fire pump Packages provide reliable and trust-worthy service in Fire Fighting Application.

Operating Range:

Flow : up to 5500 GPM

Pressure: 40Mtr to 200Mtr

UL/FM Listed Range:

Flow : up to 3000 GPM

Pressure: 40Mtr to 200Mtr

Features:

- Bristol packaged pump set supplied with single Skid Fully designed based on Load calculations along Lifting points based on Centre of gravity.
- Highly Engineered and constructed in accordance with NFPA-20.
- Our Dedicated Engineering team design packages to your project specifications & requirements following to International standards.
- Bristol cost competitive Packaged pump set save your space and time as they Engineered accurately to fit the specified area. Only Power & Pipe connection to be made at site & system is ready for use.
- Bristol packaged pump sets are Factory tested as per stringent International standard's.
- All parts are designed based on Ergonomic consideration so that ease of accessing all instrument, valves, fittings etc.
- These sets are supplied with complete Electrical connections & piping's which includes Suction line, Discharge line, Test line, PRV line, Sensing line, Fuel In & outlet, pump Drain, Sensing line drain, Engine drain, CRV drain etc.



FUEL TANK

Bristol Aboveground tanks are primarily designed for safe storage of flammable and combustible liquids. These tanks are designed, fabricated, tested and labelled in accordance with underwriters laboratories, Inc. UL-142 (Steel Aboveground Tanks for Flammable and Combustible Liquids) standard. Tanks are designed and engineered to meet the demanding needs of many industries.

Type	Tank Capacity (US Gal)		Type	Tank Capacity (US Gal)	
	Listed	Non–Listed		Listed	Non–Listed
Single wall (SW)	25	25	Double wall (DW)	-	25
	70	70		70	70
	120	120		120	120
	180	180		180	180
	280	280		280	280
	360	360		360	360
		400		545	400
		460		770	460
		545		1000	545
		770			770
		1000			1000

UL LISTED

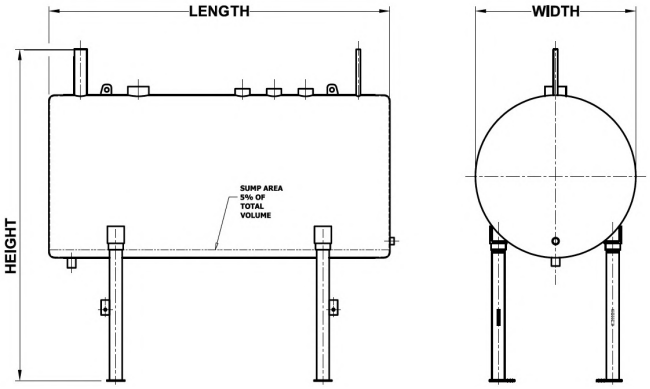


We have experienced team that offers quality engineering and support to help you customize your tank to your specific application. Our tanks are produced according to the highest standards for the commercial, industrial, public and private sectors.

Features

- UL-142 Label
- Standard Capacity: 25 - 1000 US gal.
- MS steel Thickness of 3mm and more.
- connections for normal and emergency venting, gauging, filling and product piping
- Lifting lugs for listed
- Structural legs for easy installation
- Primer paint, Red spray paint finished
- UL File No. MH60409

Tank Dimension

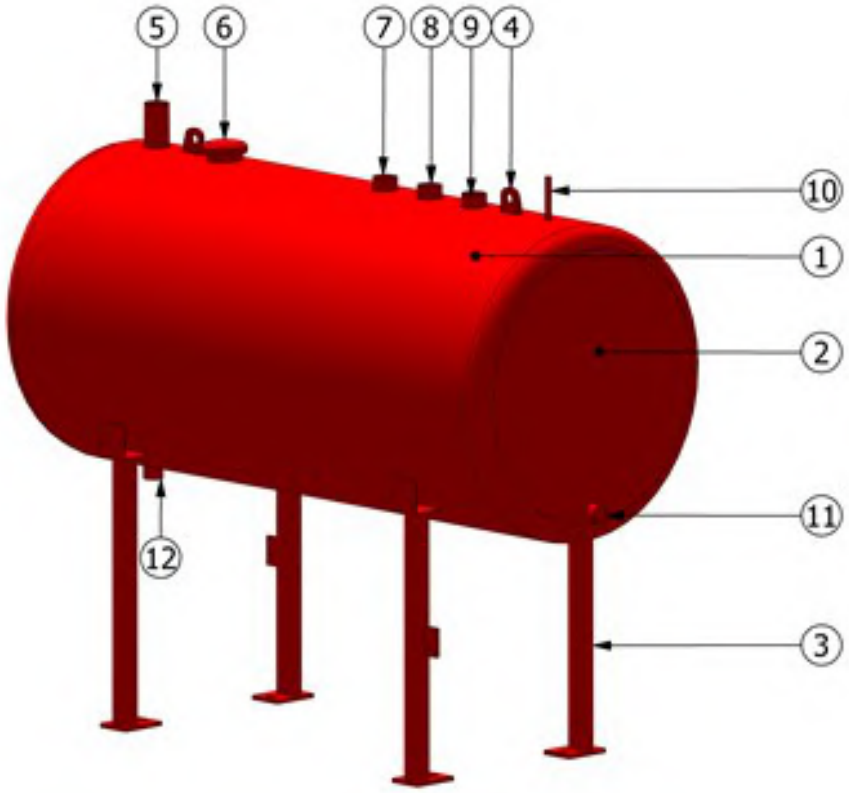


Tank Capacity	Type	Approx. Dimension (Inches)		
		Length	Width	Height
25	SW	33	16	51
70	SW	47	22	49
	DW	49	26	52
120	SW	44	30	57
	DW	47	34	60
180	SW	63	30	57
	DW	67	34	60
280	SW	52	42	66
	DW	55	46	69
360	SW	63	42	66
	DW	67	46	69

** For higher capacities contact Bristol*



FUEL TANK COMPONENTS



Description (Typically)

1. Tank Shell
2. End Cap (Dish Head)
3. Leg Assembly
4. Lifting Lug (Listed)
5. Fill Cap w/ Provision for pad-lock w/ removable Strainer (1/16" mesh) (Optional)
6. Emergency Vent (Primary/ Secondary)
7. Normal Vent (2")
8. Fuel Indicator Gauge Connection 2"
9. Fuel Switch Connection 2"
10. Return Connection 1"
11. Discharge Connection 1-1/4"
12. Drain Connection

ANTI-VOTEX PLATES

In accordance with NFPA 20 & 22

About Anti-Vortex Plates:

A vortex is a "Turbulent Flow" that must be controlled to prevent damage to rotating parts. A vortex is a region formed in a fluid when the fluid's flow rotates around an axis line and the fluid flows in a swirling motion at a high velocity towards pump intake.

Bristol Anti-vortex Plates aid to diminishing the speed of a fast moving turbulent flow and smoothen it into a laminar flow, thus reducing wear and tear. **Bristol** Anti-vortex Plates also aid to prevent cavitation (small liquid-free zones such as bubbles or voids) in the fluid. Cavitation can create dents, shock waves and imbalance in the moving parts. Once cavitation affects a surface it tends to erode at an accelerating rate. This makes the surface prone to stress corrosion.

To avoid these issues **Bristol Anti-Vortex Plates** are recommended to installed in the suction line of fire pumps to control the turbulence in flowing water. They are simple in design and very effectively controlling the velocity of the fluid thus preventing cavitation and damage to the impellers. Also it supports off duty conditions when static pressure reduces at the suction along with elevation of the water side level in the tank.

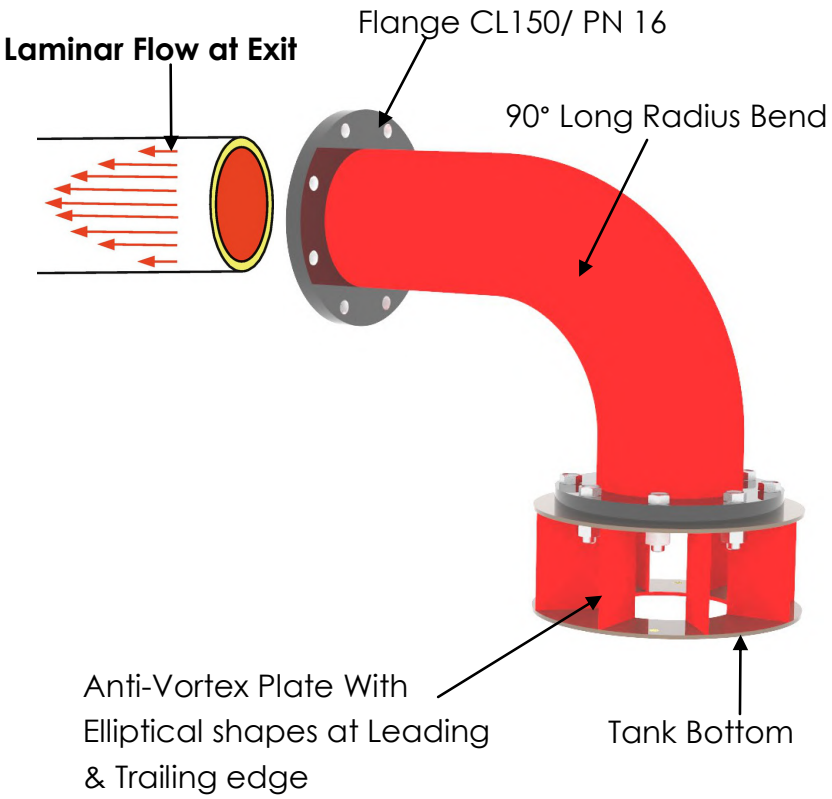
Features

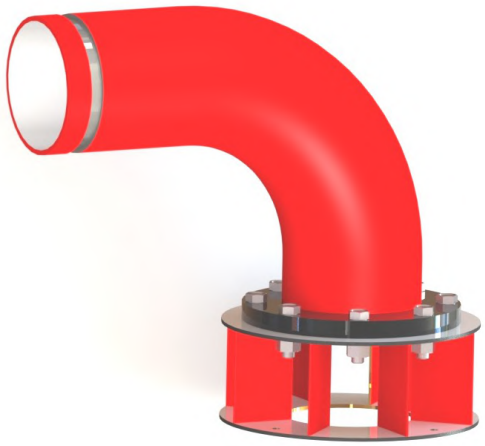
- Anti-Vortex Plate design is in accordance with NFPA 20/22
- Where a tank is used as the suction source for a fire pump, the discharge outlet of the tank shall be equipped with an assembly that controls vortex flow in accordance with NFPA 22. i.e. Recommended to use Anti-Vortex Plate.
- Anti-Vortex plates are provided with Elliptical shapes at leading & trailing edge for getting streamlined flow.
- The water velocity at the Anti-Vortex Plate is maintained below 1m/Sec limit for maximum flow condition
- The minimum distance above the bottom of the tank shall be 152 mm (6 Inch).

Material:

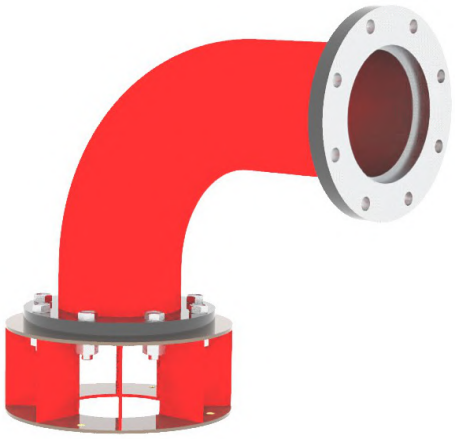
Mild Steel (Standard)

SS 304/SS316 (Optional)





Anti-Vortex Plate: Grooved Design



Anti-Vortex Plate: Flanged Design

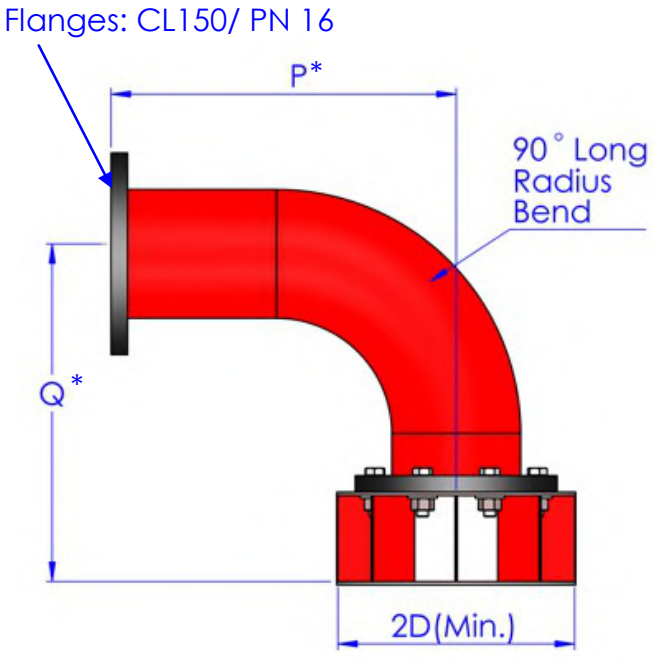
Bristol offers two types of Anti-Vortex plate design to suit Client requirements:

1. Fully assembled **Anti-Vortex Plates with Flanged design**
2. **Anti- Vortex Plates with Grooved Design** to suit site conditions

Selection of Anti–Vortex Plate:

- The sizes indicated in the table below shall be used as a minimum size of the suction pipe & Anti-Vortex Plate .
- Below table shows dimensions for standard Anti-Vortex Plate Design off the Shelf available with **Bristol.**

Pump Rating (GPM)	Min. Suction Size (Inch)	P* (mm)	Q* (mm)
300	4	406	252
400	4	406	252
450	5	406	290
500	5	406	290
750	6	457	331
1000	8	558	405
1250	8	558	405
1500	8	558	405
2000	10	660	481
2500	10	660	481
3000	12	762	557
3500	12	762	557



- Depending upon site requirements Bristol provides **Custom build Anti-Vortex plates** Assembly.
  (P* & Q* dimensions are as standard scope & can be varied to suit client requirement)
- *For higher capacities contact Bristol*

Over 100 Distributors Across the World

UAE Offices

Abu Dhabi

Concorde Trading Company
Tel: +971 2 6668770 Fax: +971 2 6667863

Concorde Trading Showroom
Tel: +971 2 4433317 Fax: +971 2 4434746

Concorde Technical Company
Tel: +971 2 5575551 Fax: +971 2 5575550

Bristol Vehicles Manufacturing Division
Tel: +971 2 5575551 Fax: +971 2 5575550

Al Ain

Concorde Trading Company
Tel: +971 3 7642267 Fax: +971 3 7642268

Sharjah

Corodex Agencies
Tel: +971 6 5430800 Fax: +971 6 5430801

Dubai

Corodex Trading Company
Tel: +971 4 3472900 Fax: +971 4 3472796

Corodex Agencies (Fire Protection & Automation
Tel: +971 4 3472530 Fax: +971 4 3472501

Bristol Fire Engineering
Tel: +971 4 3472426 Fax: +971 4 3472363

Corodex Agencies (Safety & Rescue)
Tel: +971 4 2668966 Fax: +971 4 2624617

International Offices

Qatar

International Gulf Trading Co.
Tel: +974 44694340 Fax: +974 44694467

Oman

Integrated Engineering Solutions (IES)
Tel: +968 24700349 Fax: +968 24700631

KSA

Concorde Advance Technical Solutions
Tel: +966 12 6984993 Fax: +966 12 6984991

Member of

Since 1974

Concorde - Corodex Group

BRISTOL
FIRE ENGINEERING

P.o.Box 74582 Dubai, UAE
Tel: +971 4 3472426 Fax: +971 4 3472363
Email: sales@bristol-fire.com, www.bristol-fire.com