

BRISTOL



FIRE PUMPS

HORIZONTAL SPLIT CASE, END SUCTION, VERTICAL TURBINE,
CONTAINERIZED PUMP, PACKAGED FIRE PUMP, FUEL TANK & ANTI-VORTEX PLATE



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HORIZONTAL SPLIT CASE

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

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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.

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VERTICAL TURBINE

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

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CONTAINERIZED FIRE FIGHTING PUMPS

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

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PACKAGED FIRE FIGHTING SYSTEM

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

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FUEL TANKS

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

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ANTI-VORTEX PLATES

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

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HORIZONTAL SPLITCASE TYPE



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

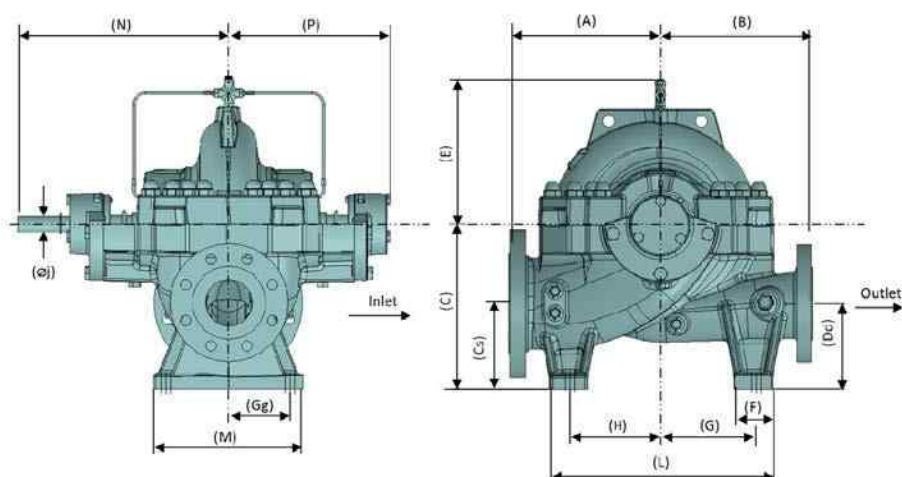
- In line Pump
- Double Suction
- Low NPSH
- Low axial load on the shaft
- Improved efficiency (Overall higher efficiency)
- Low radial load on the shaft
- Low axial and radial loads extends wear ring, seal and - bearing life, minimize vibration and provides quiet operation
- Easy service bearing and 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



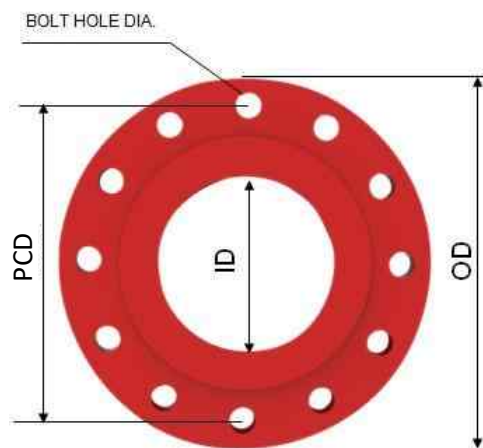
Pump Dimensions



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

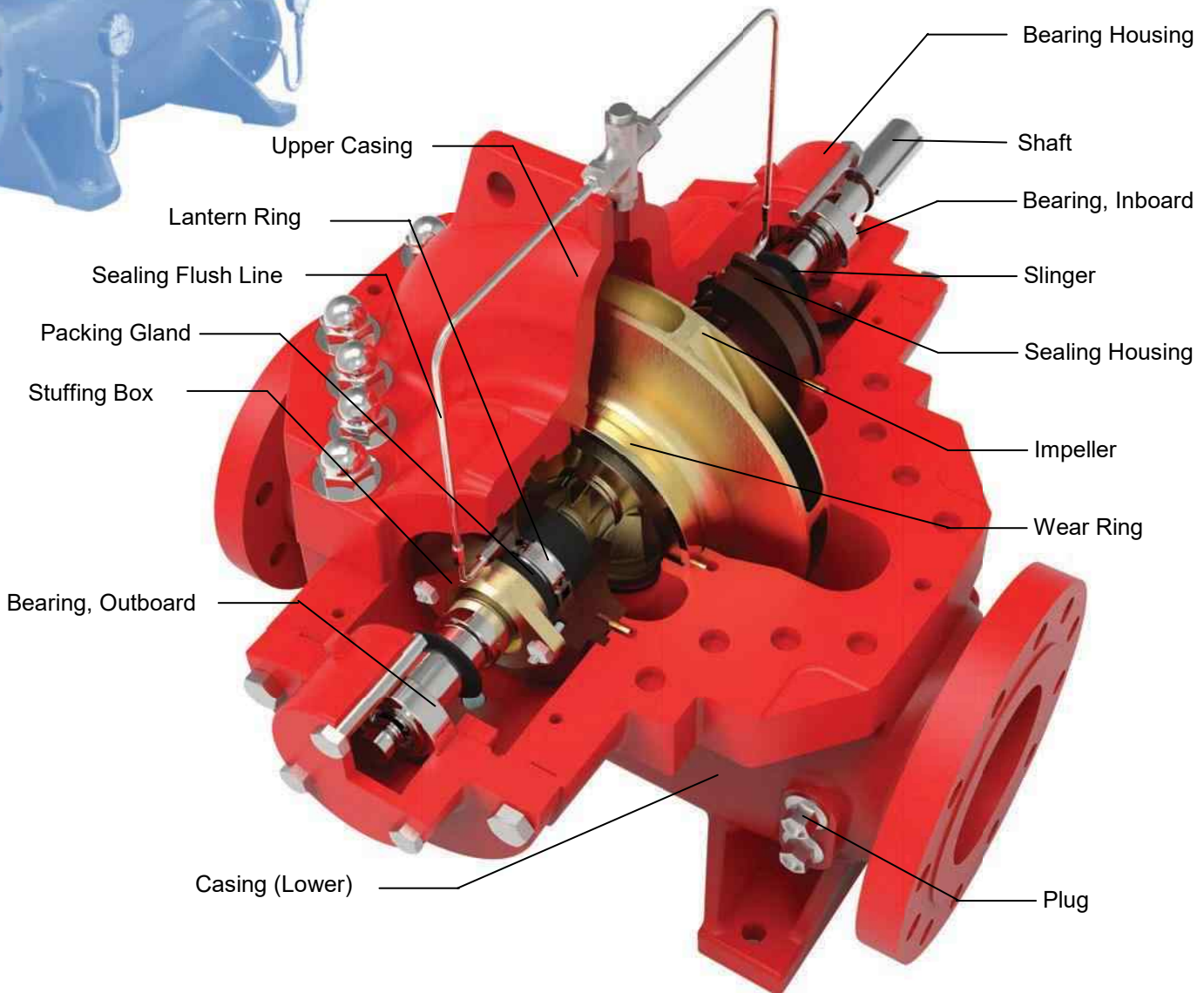


FLANGE DETAILS FOR SUCTION
AND DISCHARGE

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.

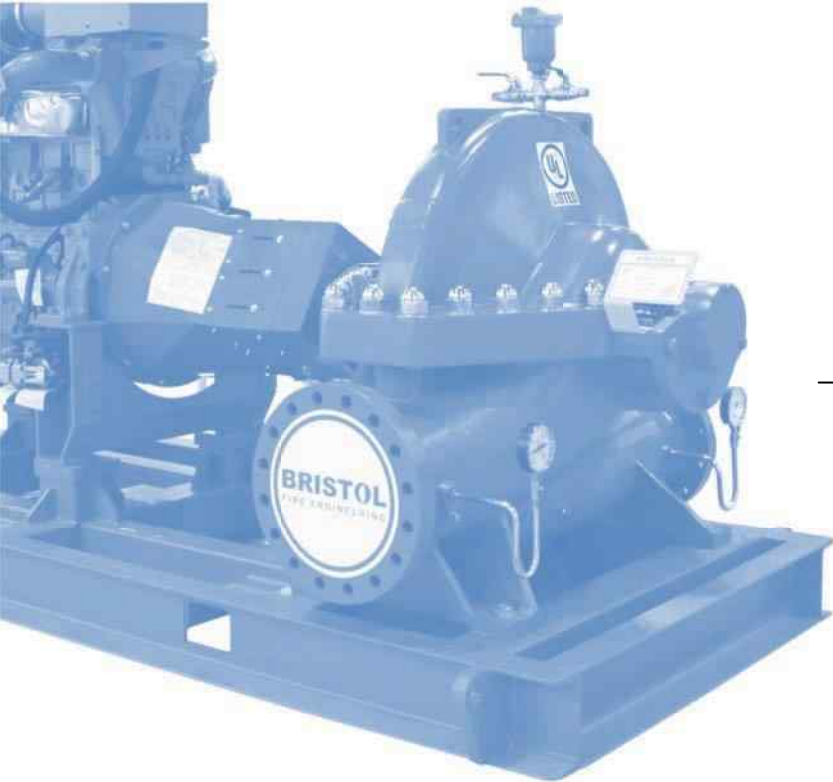
Plug - (Stainless Steel).

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



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
BSP200-290	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
BSP150-370	500	6x4	261 - 293		2950
BSP150-370	500	6x4	235 - 264		2800
BSP150-370	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
BSP200-290	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
BSP150-370	750	6x4	228 - 256		2800
BSP150-370	750	6x4	254 - 285		2950
BSP150-370	750	6x4	195 - 219		2600
BSP200-365	750	8x5	193 - 236		2800
BSP200-365	750	8x5	214 - 262		2950
BSP-200-365	750	8x5	222 - 271		3000
BSP200-365	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
BSP200-290	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	155 - 194	140-172	2950
BSP-200-290	1000	8x5	161 - 201	146-180	3000
BSP150-370	1000	6x4	245 - 277		2950
BSP150-370	1000	6x4	219 - 248		2800
BSP150-370	1000	6x4	186 - 212		2600
BSP200-365	1000	8x5	210 - 259		2950
BSP200-365	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
BSP200-365	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
BSP200-290	1250	8x5	148 - 217		3550
BSP-200-290	1250	8x5	153 - 199	142-175	3000
BSP200-290	1250	8x5	147 - 191	136-169	2950
BSP200-365	1250	8x5	205 - 254		2950
BSP200-365	1250	8x5	183 - 227		2800
BSP200-365	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	138 - 184	132-165	2950
BSP-200-290	1500	8x5	144 - 193	138-171	3000
BSP200-365	1500	8x5	198 - 248		2950
BSP200-365	1500	8x5	177 - 221		2800
BSP200-365	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 8X6X18 MF	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	137-197	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



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 .

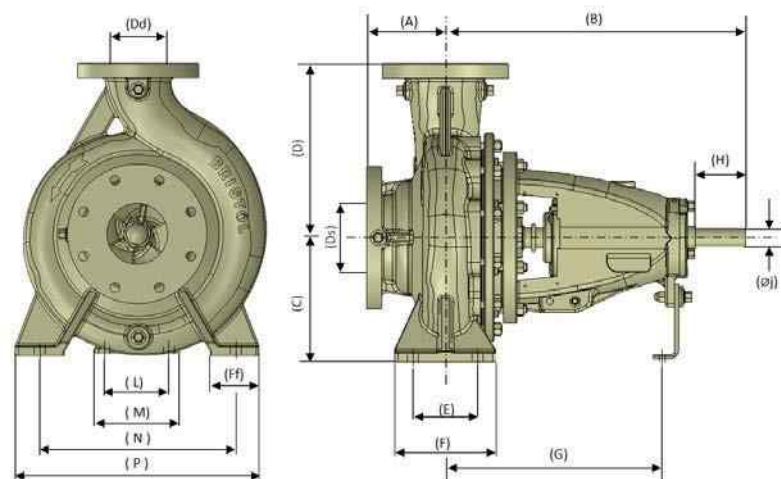
Features

- 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

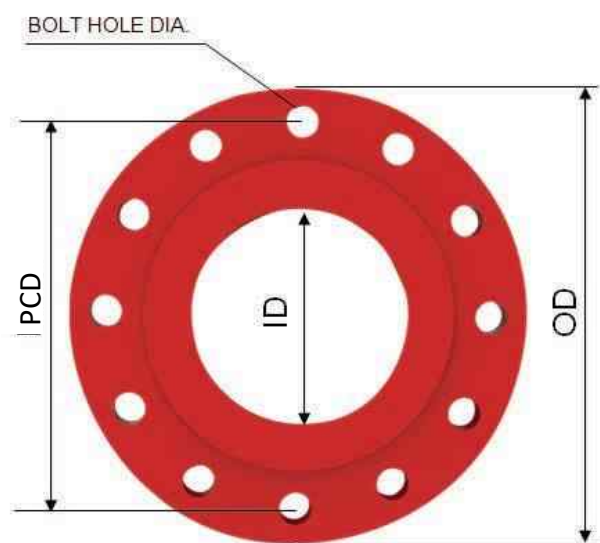
Pump Dimensions



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

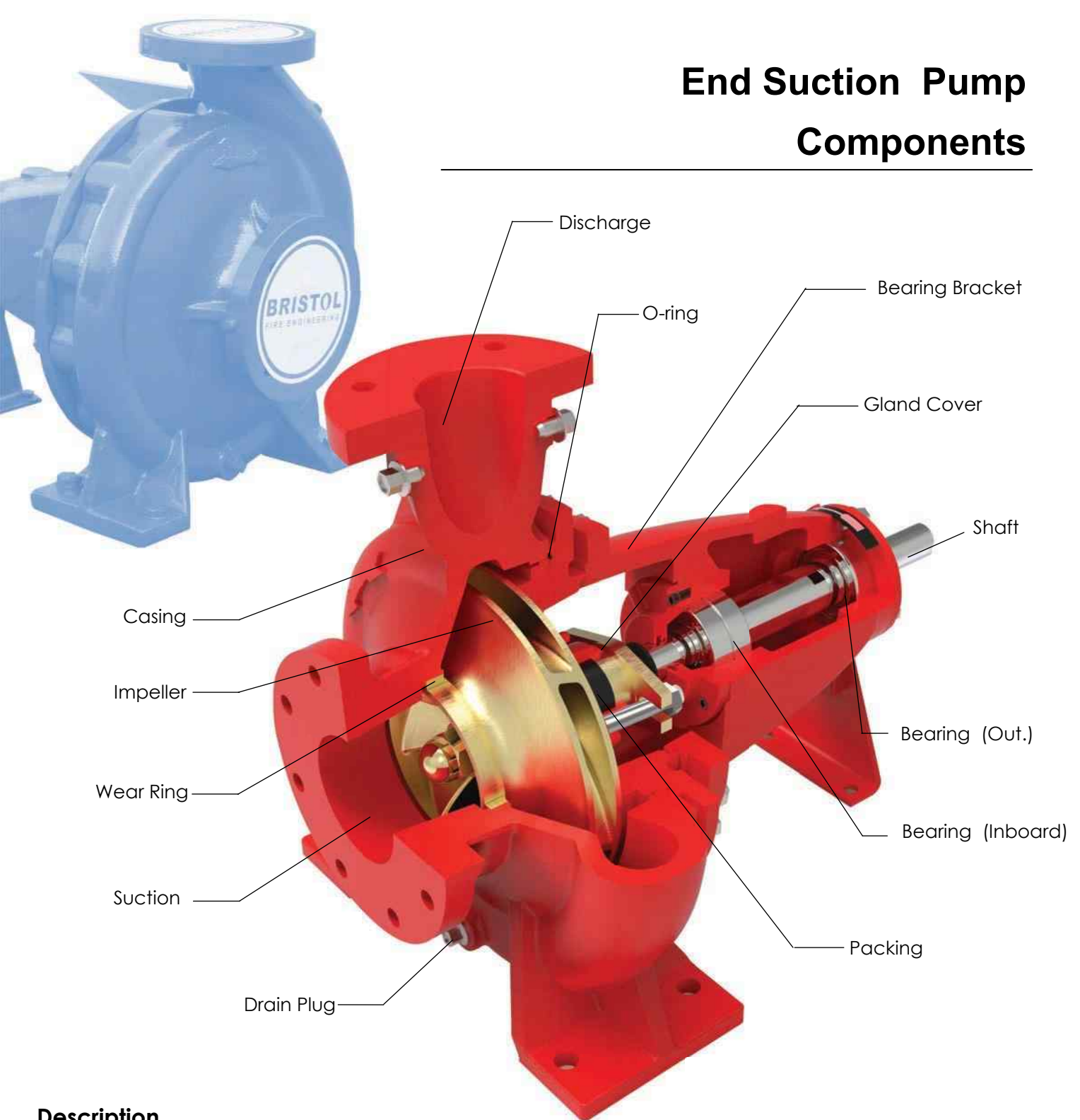


Model	Suction					Discharge				
	ID	(Pump Cas- ing Range) OD	No. of Holes	Bolt Hole DIA	PCD	ID	(Pump Cas- ing Range) OD	No. of Holes	Bolt Hole DIA	PCD
IS32-200	50	165	4	5/8"- 11UNC-2B	120.7	32	140	4	1/2"- 13UNC-2B	88.9
IS32-260	50	165	4	5/8"- 11UNC-2B	120.7	32	140	4	1/2"- 13UNC-2B	88.9
IS50-320H	65	185	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



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	60-95		3000
BEP 3x2.5 LP	100	3 x 2-1/2	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	150	3 x 2-1/2	61-94		3000
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
BEP 3x2.5 LP	200	3 x 2-1/2	60-93		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	250	3 x 2-1/2	57-91		3000
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		3550

Model	Rated Capacity (GPM)	Size (In)	UL Listed Pressure (PSI)	FM Approved Pressure (PSI)	Rated Speed (RPM)
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
BEP 3x2.5 LP	300	3 x 2-1/2	54-88		3000
BEP 4x3 LP	300	4 x 3	57-92		3000
IS80 – 260	400	4 x 3	165-222		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		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		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		3550
IS100-320H	750	5 x 4	119-232	123-241	3000
IS100-260	750	5 x 4	118-144		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		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

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

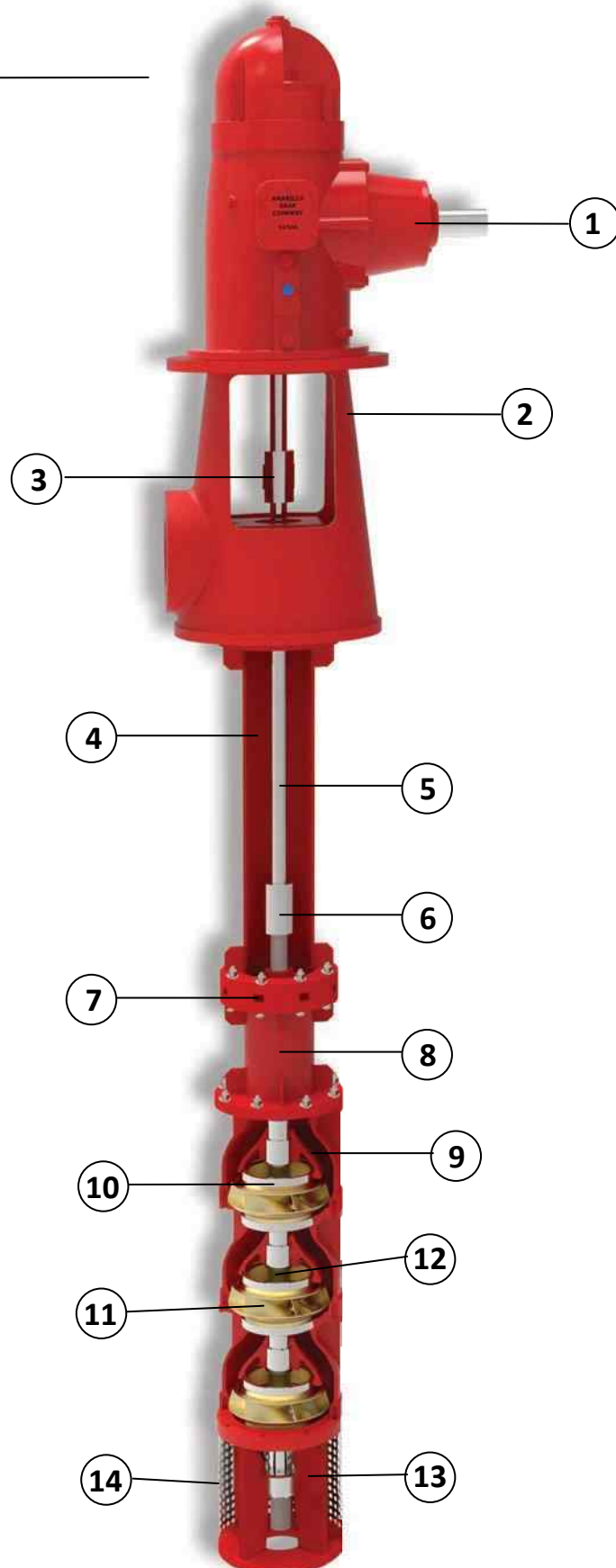


Vertical Turbine Components

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

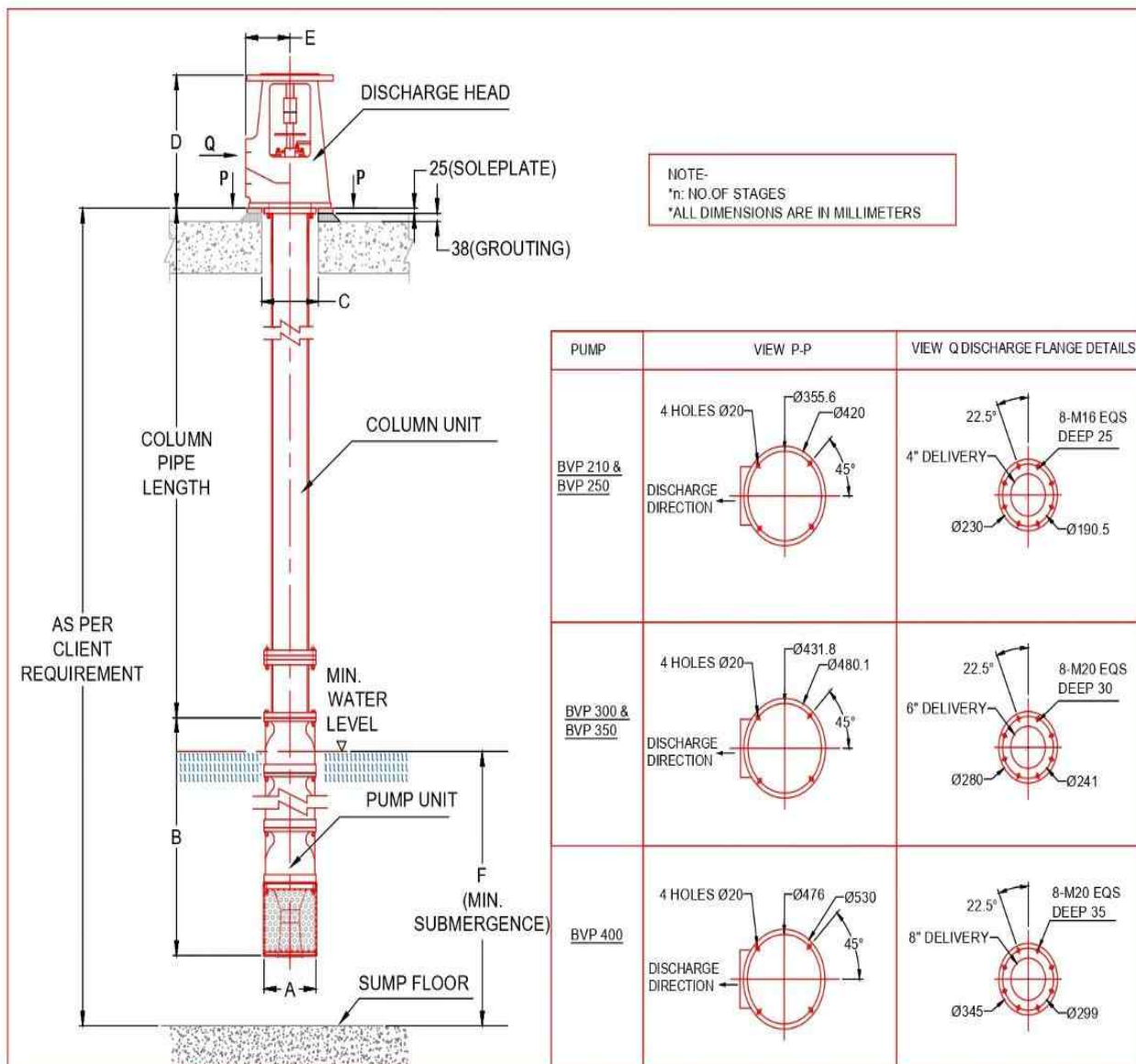
Description

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	430
BVP 250	208	280+(135Xn)	290	490	254	400
BVP 300	240	300+(200Xn)	340	640	260	950
BVP 350	305	350+(265Xn)	340	640	260	1000
BVP 400	350	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	1630	1770	1960	2950
		UL LISTED PRESSURE(PSI)				
BVP-210	50					103-239
	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	88-94	103-111	127-136	
		120-127	117-125	138-148	169-181	
		144-152	146-157	172-185	211-226	
		168-178	175-188	207-222	253-272	
		192-203	204-220	241-259		
		216-254				
BVP-250	250					113-239
BVP-350	300	95-101	87-94	103-110	127-136	
		119-126	116-125	138-147	169-181	
		142-151	145-156	172-184	211-226	
		166-177	174-187	206-221	253-271	
		190-252	203-218	241-258		
BVP-250	300					109-230
BVP-300	300					111-283
	350					108-279
	400					106-277
BVP-350	400	92-99	85-93	102-110	125-135	
		115-124	114-124	135-147	167-180	
		138-149	142-155	169-184	209-225	
		161-174	171-186	203-220	251-270	
		184-248	199-217	237-257		
BVP-300	450					104-275
BVP-300	500					101-270
BVP-350	500	88-96	82-91	99-109	123-134	
		111-120	110-121	132-145	164-179	
		133-143	137-152	165-181	205-223	
		155-239	165-212	198-217	246-268	
				231-254		



Vertical Turbine Selection Chart

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

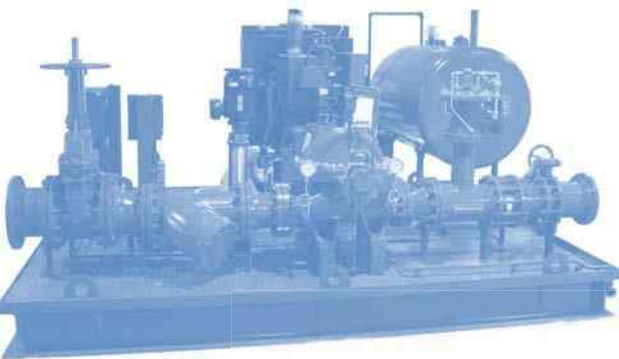
Head: up to 20 BAR

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 trustworthy 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.



Capacity (UL Listed) Single Wall

- 25 GALLON
- 70 GALLON
- 120 GALLON
- 180 GALLON
- 280 GALLON
- 360 GALLON

Capacity (non-Listed) Single And Double Wall

- 25 GALLON
- 70 GALLON
- 120 GALLON
- 180 GALLON
- 280 GALLON
- 360 GALLON
- 400 GALLON
- 460 GALLON
- 545 GALLON
- 770 GALLON
- 1000 GALLON

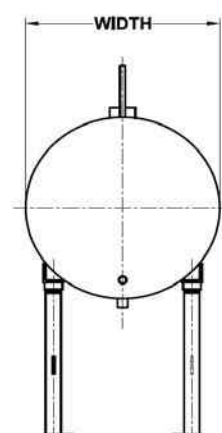
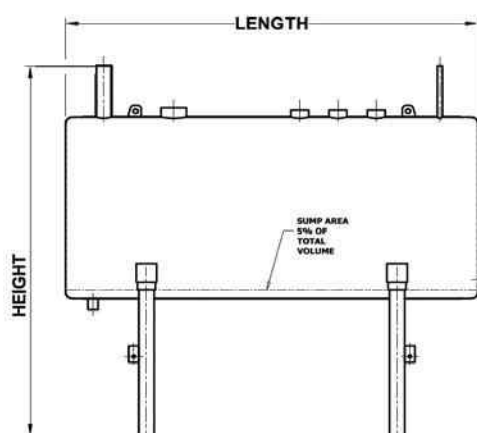


We have experienced team that offers quality engineering and support to help you customize your tank to your specific application. Our tanks are produced according to the highest standards for the commercial, industrial, public and private sectors.

Features

- UL-142 Label
- Standard Capacity: 25 - 360 gallons
- Thickness of 3mm MS steel
- connections for normal and emergency venting, gauging, filling and product piping
- Lifting lugs
- Structural legs for easy installation
- Primer paint, Red spray paint finished
- UL File No. MH60409

Tank Dimension

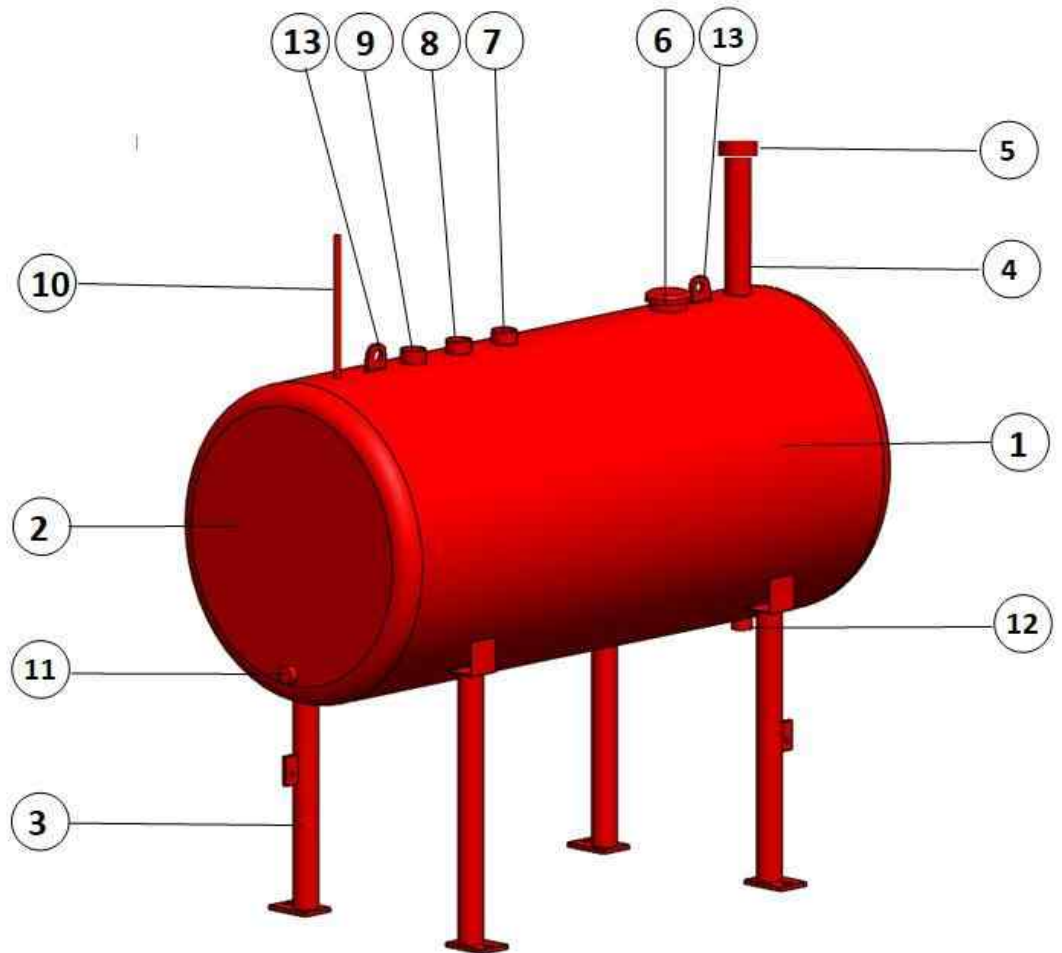


Tank Capacity	Dimension (Inches)			Approx. Weight
	Length	Width	Height	
25	32.72	16	51.31	57
70	46.96	22	56.69	87
120	43.27	30	64.76	108
180	63.78	30	64.76	137
280	50.87	42	76.62	168
360	64.76	42	73.62	195

* For higher capacities contact Bristol



FUEL TANK COMPONENTS



Description

- | | |
|---|---|
| 1. Tank Shell | 7. Normal Vent (2") |
| 2. End Cap (Dish Head) | 8. Fuel Indicator Gauge Connection (2") |
| 3. Leg Assembly | 9. 2" NPT Connection for Fuel Switch |
| 4. Filler Neck | 10. Return Connection (1") |
| 5. Fill Cap w/ Provision for pad-lock w/
removable Strainer (1/16" mesh)
(Optional) | 11. Discharge Connection (1 1/4") |
| 6. Emergency Vent | 12. Drain Connection |
| | 13. Lifting Lug |

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.

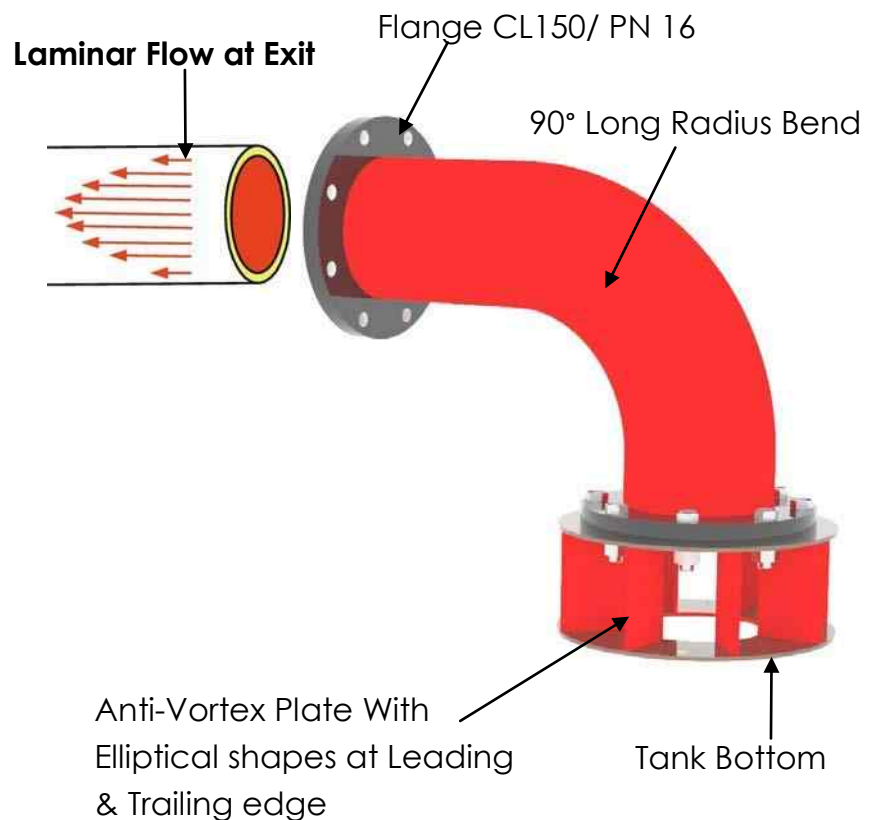
To avoid these issues **Bristol Anti-Vortex Plates** are recommended to installed in the suction line of fire pumps to control the turbulence in flowing water. They are simple in design and very effectively controlling the velocity of the fluid thus preventing cavitation and damage to the impellers. 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:

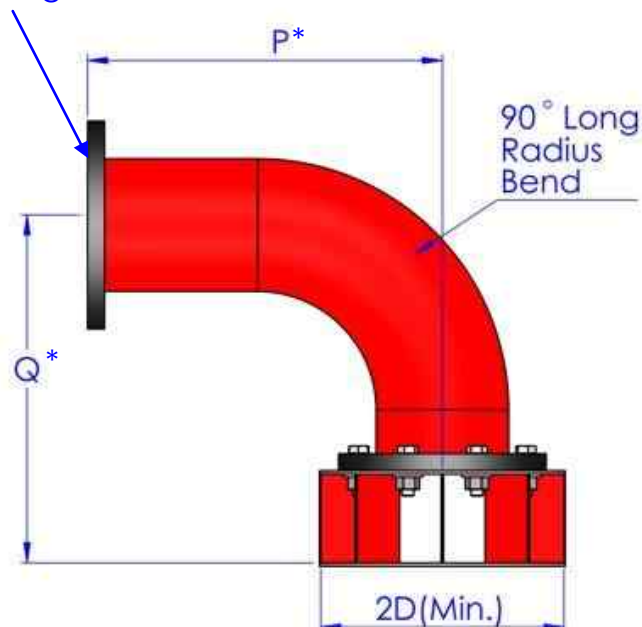
1. Fully assembled **Anti-Vortex Plates with Flanged design**
2. **Anti- Vortex Plates with Grooved Design** to suit site conditions

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

Flanges: CL150/ PN 16



- ◆ 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

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Concorde Trading Company

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Concorde Trading Showroom

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Concorde Technical Company

Tel: +971 2 5575551 Fax: +971 2 5575550

Bristol Vehicles Manufacturing Division

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Dubai

Corodex Trading Company

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Bristol Fire Engineering

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