

Design

The KVPL suction diffuser is designed as a compact multi-function unit that performs the role of a flow conditioner, debris strainer, and pipe fitting, all in one integrated assembly. It eliminates the need for long straight pipe lengths at the pump suction, thus optimizing space and reducing installation cost.

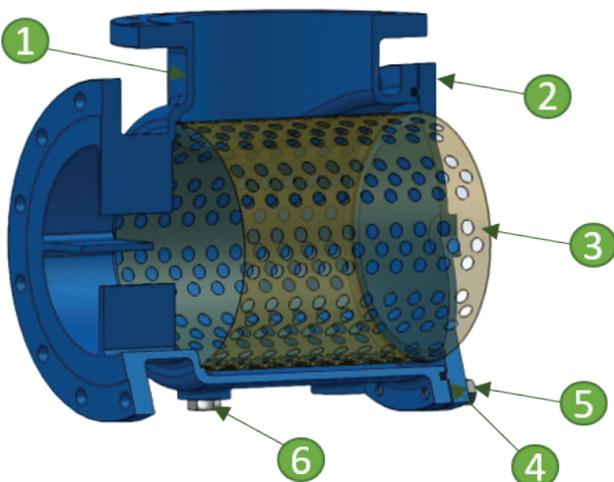
Internally cast vanes ensure smooth and uniform flow toward the pump inlet, enhancing hydraulic efficiency and protecting against flow-induced vibration. The body is oversized to minimize pressure drop, while a stainless-steel perforated strainer prevents harmful particles from entering the pump.

For ease of service, the diffuser features a rear pullout design that allows access to the strainer without disturbing the connected piping. A blowdown port at the bottom facilitates flushing out of sediment and debris during routine maintenance. Optional accessories like a magnetic insert or fine mesh startup screen can be included as per system requirements.

Available for standard pressure ratings of 150#, PN16, PN25, conforming to ASME/ANSI specifications for design, materials, and pressure-temperature performance.

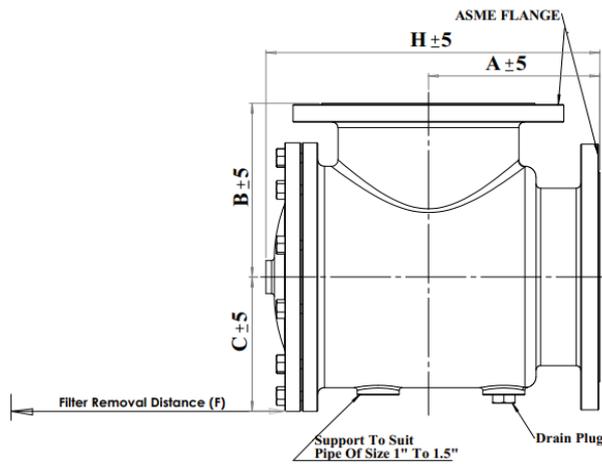
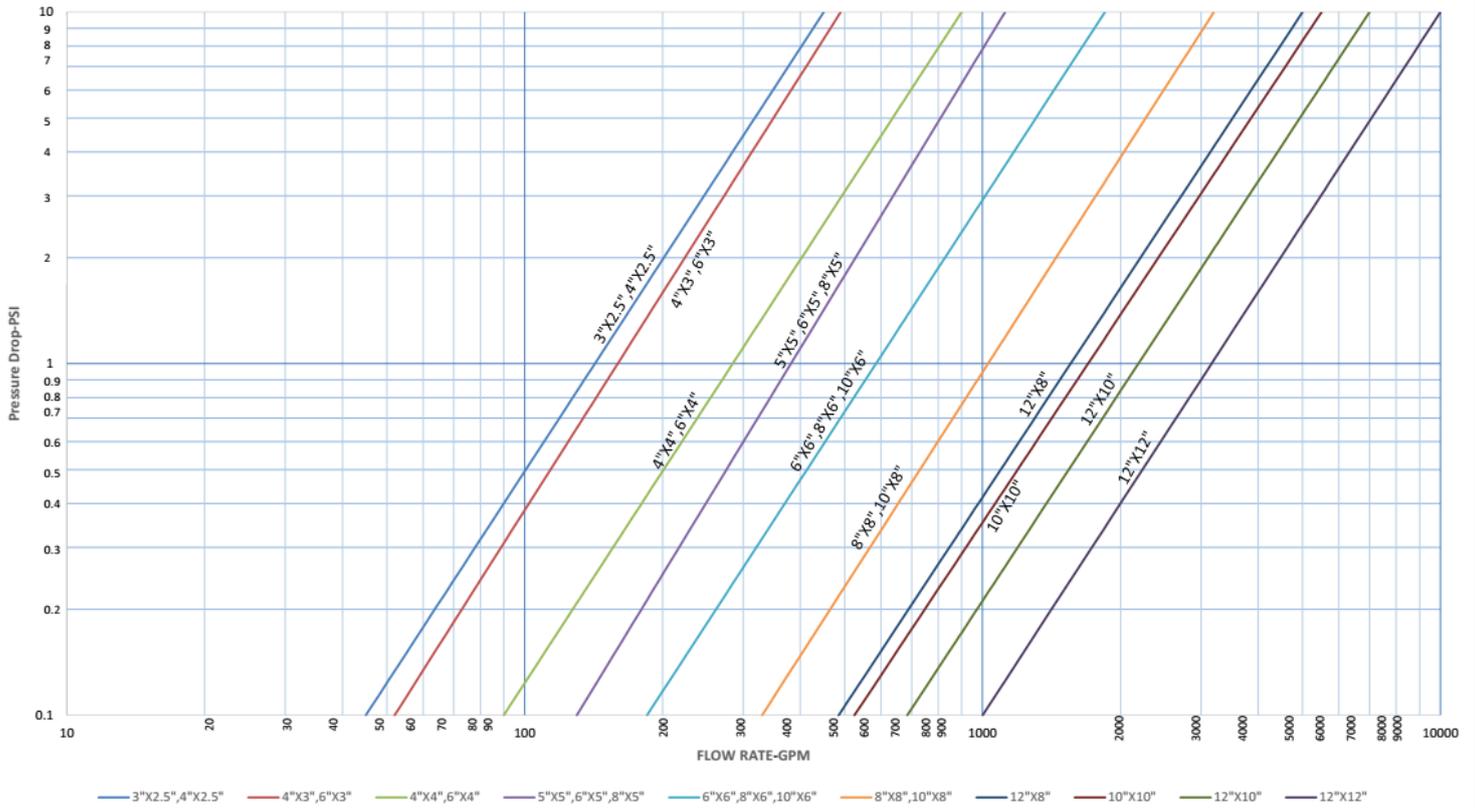
Benefits

- EXPANDED BODY CHAMBER DESIGN PROMOTES SMOOTHER FLOW AND REDUCES DIFFERENTIAL PRESSURE LOSSES.
- BUILT-IN FLOW-STRAIGHTENING VANES ENHANCE FLUID ALIGNMENT, ENSURING OPTIMAL INLET CONDITIONS FOR PUMP OPERATION.
- TEMPORARY START-UP MESH SCREEN CAPTURES INSTALLATION DEBRIS, HELPING MAINTAIN CLEANER COMMISSIONING AND START-UP CYCLES.
- TOP-MOUNTED SERVICE COVER WITH REUSABLE GASKET ALLOWS CONVENIENT ACCESS TO THE INTERNAL STRAINER ELEMENT FOR ROUTINE MAINTENANCE.
- BOTTOM DRAIN/BLOW-OFF PORT ENABLES REMOVAL OF ACCUMULATED SOLIDS AND SLUDGE WITHOUT DISMANTLING THE UNIT.
- OPTIONAL MAGNETIC TRAP INSERT AVAILABLE FOR ENHANCED PROTECTION AGAINST FINE FERROUS PARTICLES.
- AVAILABLE FOR STANDARD PRESSURE RATINGS OF 150#, PN16, PN25, CONFORMING TO ASME/ANSI SPECIFICATIONS.
- UTILIZING HIGH-GRADE FERROUS MATERIALS SUCH AS DUCTILE IRON OR WCB, EACH COMPONENT IS DESIGNED FOR MAXIMUM DURABILITY, MECHANICAL INTEGRITY, AND LONG SERVICE LIFE.
- GROOVED-END ADAPTERS CAN BE PROVIDED TO SUIT SYSTEM-SPECIFIC CONNECTION REQUIREMENTS.



Sr. No.	Description	Material Of Construction
1	Body	ASTM A216 Gr. WCB Or As Per Customer Request
2	Cover	ASTM A216 Gr. WCB Or As Per Customer Request
3	Filter	SS 304/SS 316 Perforated Sheet (with 20 mesh removable)
4	Gasket	EPDM "O" Ring
5	Bolt	B7 Blind Bolted
6	Drain Plug	A105 3/4" NPT F Or As Per Customer Request

PERFORMANCE CURVE



Inlet		Outlet		A		B		C		H		Filter Removal (F)		Drain Plug	Gross Weight
Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	(NPT F)	[kg]
3	75	2.5	63	4.4	11	5.12	130	3.15	80	8.27	210	13.78	350	3/4"	15
4	100	2.5	63	5.11	130	5.51	140	3.74	95	9.45	240	15.75	400	3/4"	18
4	100	3	75	5.11	130	6.50	165	4.53	115	9.96	253	19.69	500	3/4"	28
4	100	4	100	5.11	130	7.48	190	4.53	115	10.63	270	16.73	425	3/4"	40
5	125	5	125	6.7	170	7.09	180	4.53	115	11.81	300	17.72	450	3/4"	50
6	150	3	75	6.3	160	6.89	175	4.53	115	12.87	327	17.72	450	3/4"	35
6	150	4	100	6.3	160	7.09	180	4.53	115	11.42	290	23.62	600	3/4"	45
6	150	5	125	6.7	170	7.09	180	4.53	115	11.81	300	27.56	700	3/4"	50
6	150	6	150	6.7	170	7.87	200	4.53	115	14.06	357	17.72	450	3/4"	60
8	200	5	125	7.7	195	8.66	220	5.79	147	13.98	355	29.53	750	3/4"	50
8	200	6	150	7.7	195	8.66	220	5.71	145	13.98	355	29.53	750	3/4"	60
8	200	8	200	9.5	240	10.24	260	5.71	145	13.98	475	23.62	600	3/4"	90
10	250	6	150	10	255	10.43	265	5.71	190	18.70	533	27.56	700	3/4"	110
10	250	8	200	9.85	250	11.26	286	7.48	195	20.98	473	31.50	800	3/4"	130
10	250	10	250	10.23	260	11.42	290	7.68	210	18.62	536	27.56	700	3/4"	140
12	300	8	200	11.02	280	11.02	280	8.27	212	21.10	570	31.50	800	3/4"	140
12	300	10	250	15.75	400	12.20	310	8.35	210	22.44	675	39.37	1000	3/4"	170
12	300	12	300	12	305	12.40	315	8.27	250	26.57	531	33.46	850	3/4"	200