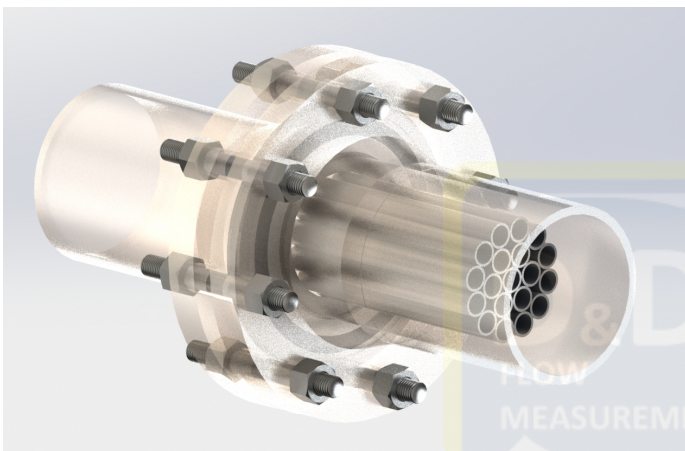
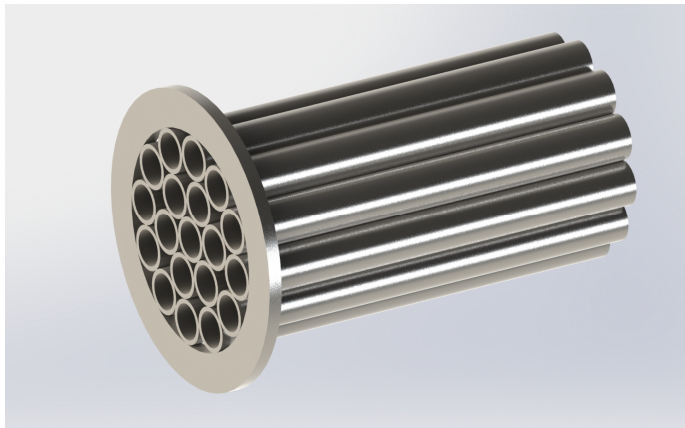


FLOW CONDITIONER



MODEL : DHIA-FC100 SERIES

DAEHAN & DS INSTRUMENT CO.,LTD



SPECIFICATIONS

Flow Conditioner Type

- TUBE BUNDLE TYPE
- ETOILE TYPE
- ZANKER PLATE TYPE
- HONEY COMB TYPE

Pressure loss coefficient K

- TUBE BUNDLE TYPE : 0.75
- ETOILE TYPE : 0.25
- ZANKER PLATE TYPE : 3
- HONEY COMB TYPE : 0.25

Nominal pipe sizes available

- 15mm ~ 3200 mm(1/2"~128")

MATERIAL

- Carbon steel
- Stainless Steel (304SS,316SS,321SS,321H)
- Low Alloy (A335-P5,P9,P11,P12,P22,P91)

Pressure loss equation

$$K = \frac{\Delta P_c}{\frac{1}{2} \rho v^2}$$

where

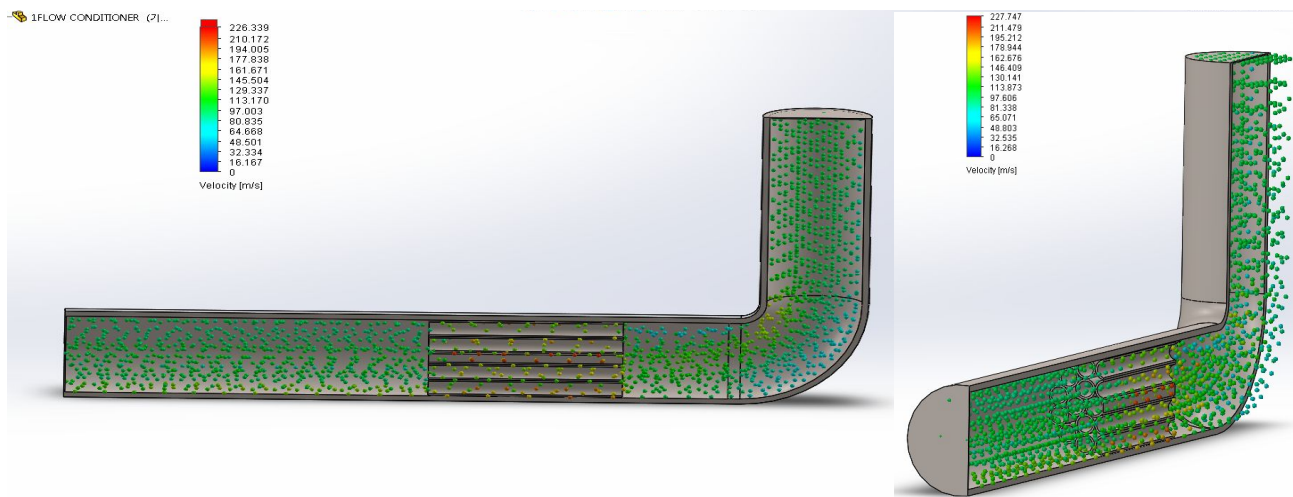
ΔP_c is the pressure loss across the flow conditioner
 v is the mean axial velocity of the fluid in the pipe.

DESCRIPTION

DHIA-FC100 SERIES are typically installed in piping in meter runs and piping systems to minimize flow disturbances in meters, pump suction and other applications. Flow eddies, rotation swirls and other undesirable flow patterns are attenuated and minimized as the flow passes through the relatively small tubes of the vane. In addition to providing the correct inlet velocity profile, flow conditioning allows upstream piping lengths to be minimized thus saving space and reducing costs.

DHIA-FC100 SERIES are available as Flange Type or Welding Type In Carbon steel, Stainless steel or other material as required. They comply with the requirements of AGA, ASME and other trade group standards.

TUBE BUNDLE TYPE SIMULATION



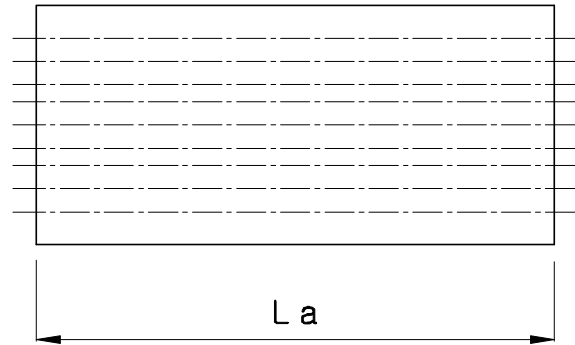
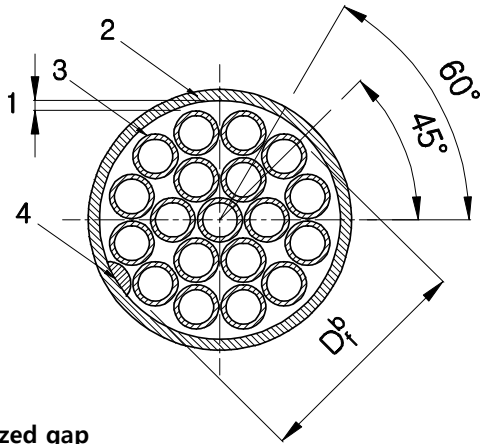
FLOW CONDITIONER



MODEL : DHIA-FC100 SERIES

DAEHAN & DS INSTRUMENT CO.,LTD

TUBE BUNDLE TYPE DIMENSION



Key

1. Minimized gap
2. pipe wall

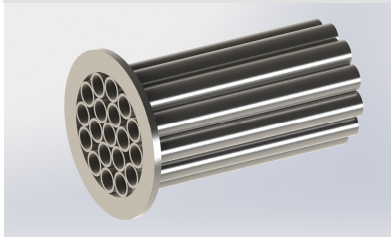
3. tube wall thickness (which is less than $0.025D$)
4. centring spacer options-typically 4 places

a The length, L, of the tubes shall be between $2D$ and $3D$, preferably as close to $2D$ as possible.

B. $D_f =$ flow straightener outside diameter, and $0.95D \leq D_f \leq D$

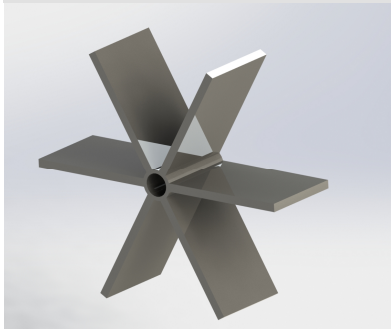
FLOW CONDITIONER TYPE

TUBE BUNDLE TYPE



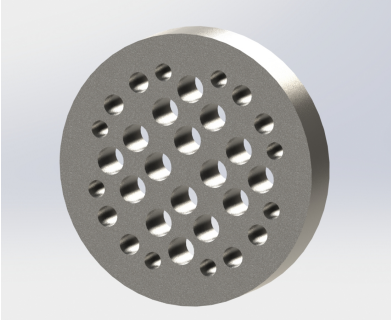
The tube bundle flow straightener consists of a bundle of parallel and tangential tubes fixed together and held rigidly in the pipe. It is important to ensure that the various tubes are parallel to each other and to the pipe axis since, if this requirement is not met, the straightener itself might introduce swirl to the flow. There should be at least 19 tubes. Their length should be greater than or equal to $10d_t$, where the diameter of the tube d_t is shown on Figure

ETOILE TYPE



The Etoile straightener consists of eight radial vanes at equal angular spacing with a length equal to twice the diameter of the pipe (see Figure). The vanes should be as thin as possible but should provide adequate strength. The pressure loss coefficient, K, for the Etoile straightener is approximately equal to 0,25.

ZANKER PLATE TYPE



The Zanker flow conditioner plate has the same distribution of holes in a plate but does not have the egg-box honeycomb attached to the plate; instead the plate thickness has been increased to $D/8$. The perforated plate thickness, t_c , is such that $0,12D \leq t_c \leq 0,15D$. The flange thickness depends on the application; the outer diameter and flange face surfaces depend on the flange type and application.

FLOW CONDITIONER



MODEL : DHIA-FC100 SERIES

DAEHAN & DS INSTRUMENT CO.,LTD

ORDERING INFORMATION

MAIN ORDER	CODE	DESCRIPTION
1.Base Model	DHIA-FC100 SERIES	Base Model
2.Type	FC110	TUBE BUNDLE TYPE
	FC120	ETOILE TYPE
	FC130	ZANKER PLATE TYPE
	FC140	HONEY COMB TYPE
3. Line Size	□□□	Pipe Size (In or mm)
4. Pipe Schedule	10(10S)	SCH.10(10S)
	40(40S)	SCH.40(40S)
	80(80S)	SCH.80(80S)
	160	SCH.160
	XX	SCH.XX
	000	Option
5. element(Conditioner) Material	A	316SS(316LSS)
	B	304SS(304LSS)
	C	Carbon steel
	O	Option
6. Meter run Material	A	316SS(316LSS)
	B	304SS(304LSS)
	C	Carbon steel
	O	Option
7. Flange Material	A	316SS(316LSS)
	B	304SS(304LSS)
	C	Carbon steel
	O	Option
8. Meter run pipe	I	Include.
	E	Exclude.
9. Connection Type	W	Weld in type
	F	Flange type
10. Option	O	Option
	N	Non