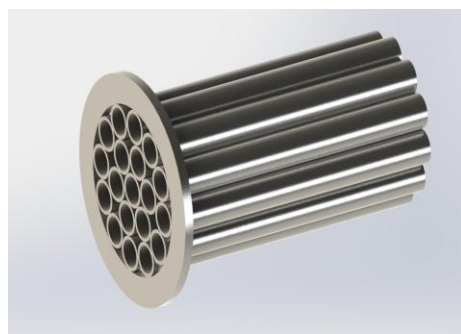
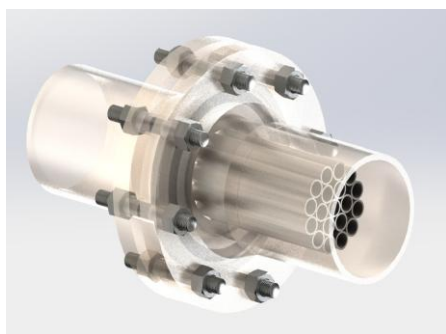


Flow Conditioner

KC-7700



Flow Conditioner(KC-7700)

Introduction

The KC-7700 is typically installed in meter runs and piping systems to minimize flow disturbances in meters, pump suctions, and other applications. Flow vortices, rotating swirls, and other undesirable flow patterns are attenuated and minimized as the flow passes through the vane's relatively small tubes.

In addition to providing the correct inlet velocity profile, flow regulation minimizes upstream piping length, saving space and reducing costs.

The KC-7700 is available in flanged or welded configurations in carbon steel, stainless steel, or other materials, depending on your needs. It complies with the requirements of AGA, ASME, and other trade group standards.

Product Features and 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

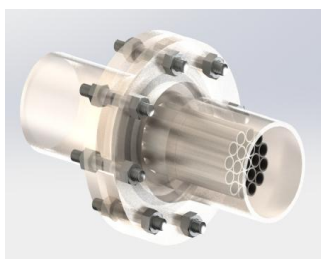
- 15mm ~ 3200 mm(1/2"~128")

☐ MATERIAL

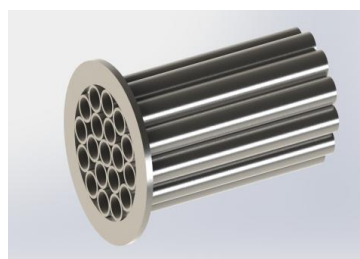
- Carbon steel
- Stainless Steel (304SS,316SS,321SS,321H)
- Low Alloy (A335-P5,P9,P11,P12,P22,P91)

☐ Pressure loss equation

► TUBE BUNDLE Flange TYPE



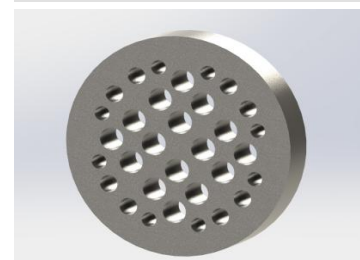
► TUBE BUNDLE Weld TYPE



► ETOILE TYPE



► ZANKER PLATE TYPE

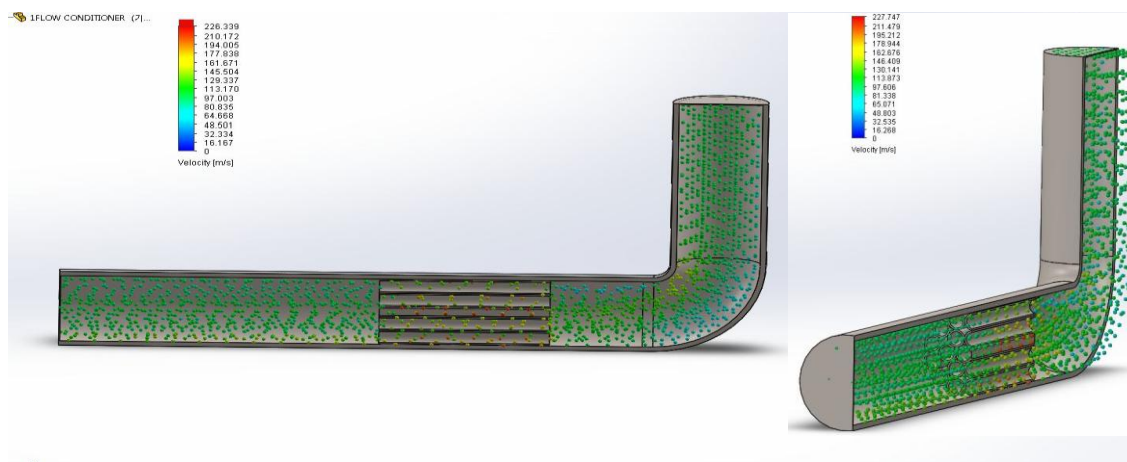


Applications

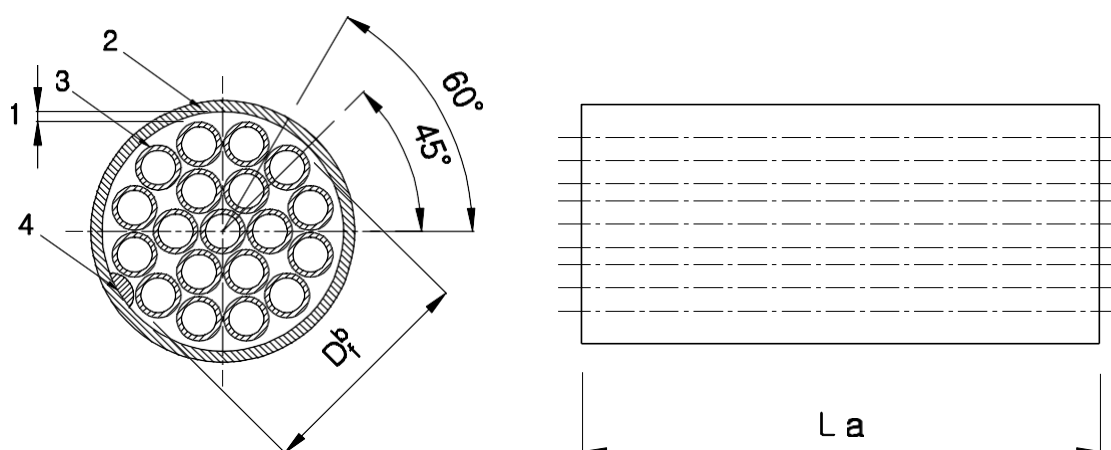
Semiconductor industry, steel industry, chemical industry, environmental engineering, food, pharmaceuticals, sewage treatment, power plants, and R&D testing.

Flow Conditioner(KC-7700)

Tube bundle simulation



Tube Bundle Dimensions (KC-7700-FC)



Key

1. Minimized gap
2. pipe wall
3. tube wall thickness (which is less than 0.025D)
4. centring spacer options-typically 4 places

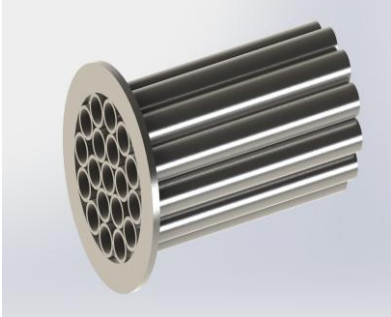
a The length, L, of the tubes shall be between 2D and 3D, preferably as close to 2D as possible.

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

Flow Conditioner(KC-7700)

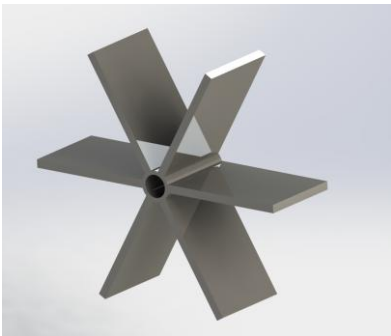
Flow regulator type

► TUBE BUNDLE TYPE



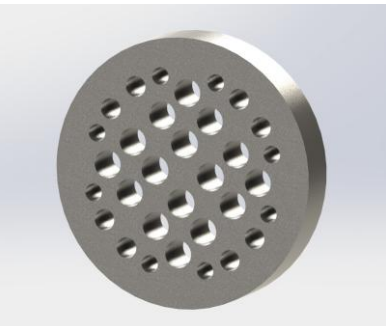
A tube bundle flow straightener consists of a bundle of parallel and tangential tubes that are rigidly fixed to the pipe. The various tubes must be parallel to each other and to the pipe axis. Failure to meet this requirement could result in the straightener itself creating vortices in the flow. There must be at least 19 tubes. The length must be at least $10dt$, where the tube diameter dt is shown in the figure.

► ETOILE TYPE



The étoile straightener consists of eight radial vanes spaced at equal angular intervals, each with a length equal to twice the pipe diameter (see diagram). The vanes should be as thin as possible, yet still provide adequate strength. The pressure loss coefficient K of the étoile straightener is approximately 0.25.

► ZANKER PLATE TYPE

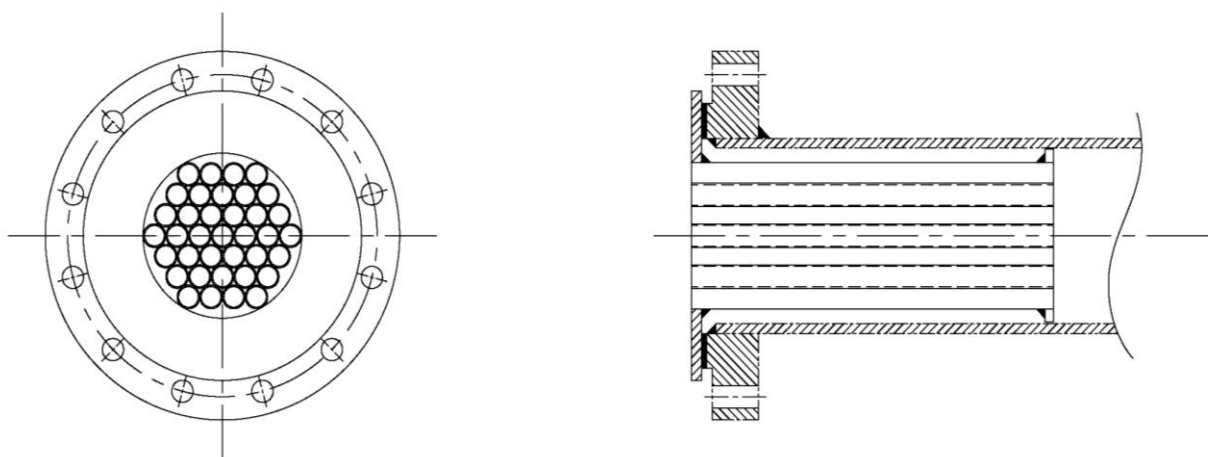


Zanker flow control plates feature evenly distributed holes, but do not have a honeycomb-shaped plate attached to the plate. Instead, the plate thickness is increased to $D/8$. The perforated plate thickness (t_c) is $0.12D \leq t_c \leq 0.15D$. Flange thickness varies depending on the application. The outer diameter and flange surface area vary depending on the flange type and application.

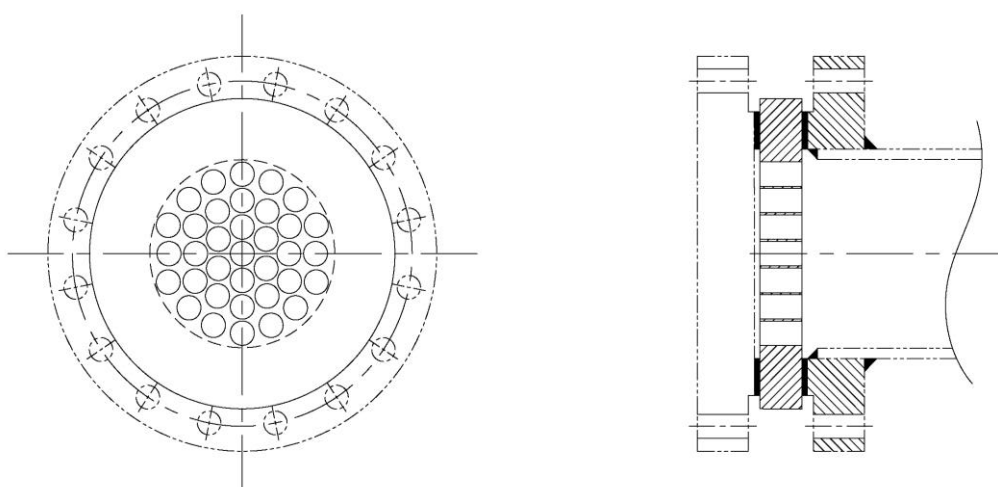
Flow Conditioner(KC-7700)

Structure and Type Examples

Straight multi-tube KC-7700-SV



Flow Conditioner Plate Type KC-7700-FC

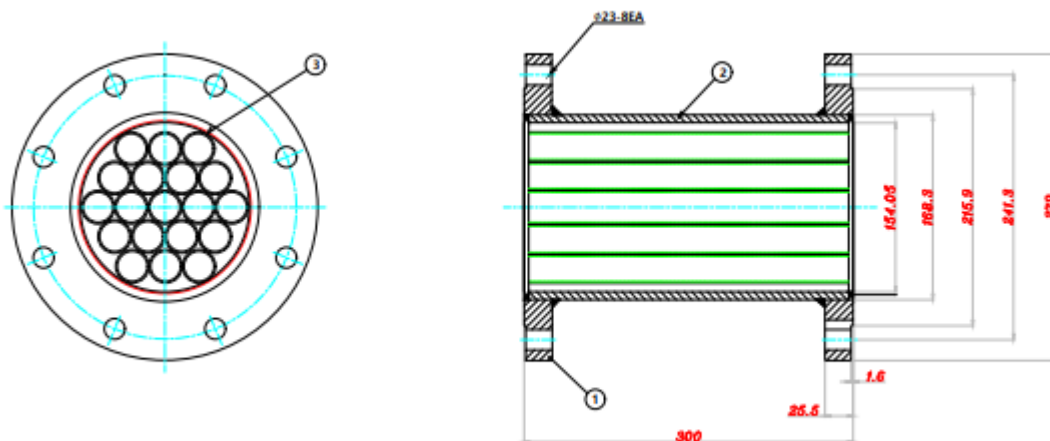


Flow Conditioner(KC-7700)

Structure and Type 6" & 8" Size (Approval Example)

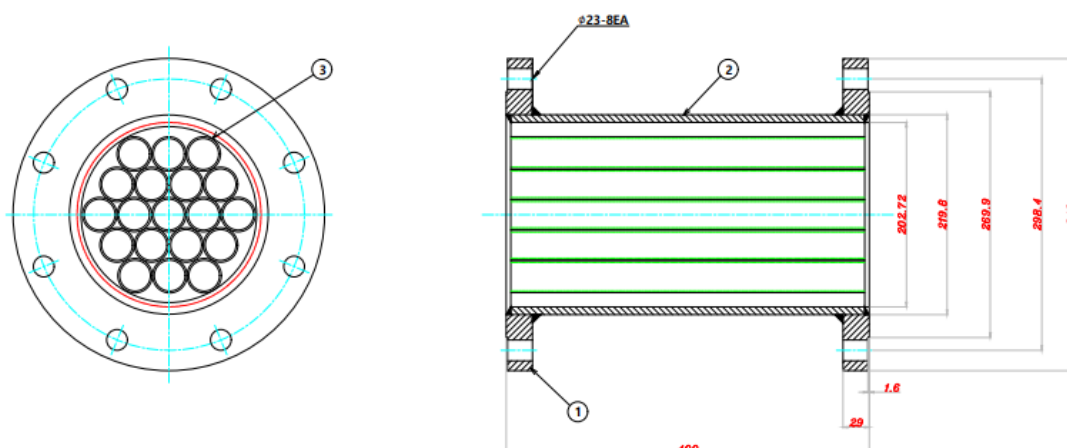
Straightener multi-tube type KC-7700-SV

6" ANSI 150# RF



Straightener multi-tube type KC-7700-SV

8" ANSI 150# RF



Flow Conditioner(KC-7700)

Oder Cord KC-7700

Type	size	F/R	B/L	F/M	B/P	C/T	Option
KC-7700 -		-	-	-	-	-	-
1	2	3	4	5	6	7	8

Construction type	Code 1
Tube Bundle	TB
Etoile	E
Zanker Plate	ZP
Honey Comb	HC
Agency approved specified	W

Line Size & Schedule	Code 2
1" ~ 20" & 10S (std.)	()"
Agency approved specified	W

Flange Rating	Code 3
JIS 10K	1
JIS 20K	2
JIS 30K	3
ANSI 150#	4
ANSI 300#	5
Agency approved specified	W

Bundle Length	Code 4
3" ~ 6" : 300 mm	1
8" or more : 400 mm	2
Others	3
Agency approved specified	W

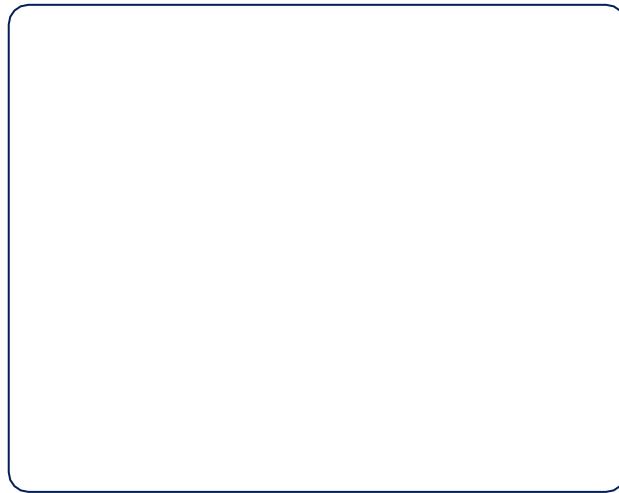
Flange & Pipe Material	Code 5
Carbon Steel (A105)	C
Stainless Steel 304	F1
Stainless Steel 316	F2
Agency approved specified	W

Bundle & Pipe & Plate Material	Code 6
Stainless Steel 304	P1
Stainless Steel 316	P2
Others	3
Agency approved specified	W

Connection type	Code 7
Flange	F
Weld in	W
Agency approved specified	W

Option	Code 8
19ea Tube Bundle Drawing	TD
High Temp', High Pressure	W
Agency approved specified	W

**Air & Gas & Steam & Liquid
Mass Flowmeter
Specialized Manufacturer**



Certified in accordance with
KC Q ISO 9001 : 2015
KC Q ISO 14001 : 2015

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