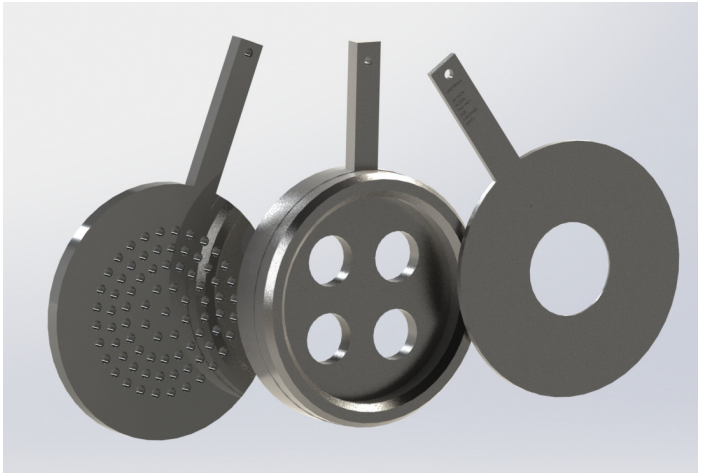
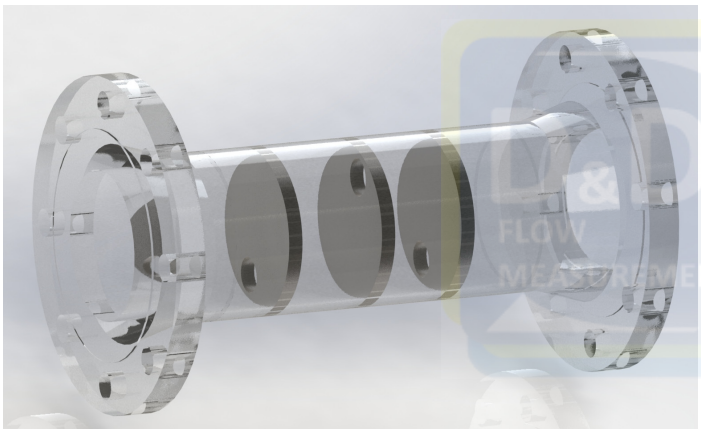
RESTRICTION ORIFICE

■ MODEL : DHIF-R200 SERIES

DAEHAN & DS INSTRUMENT CO.,LTD





■ SPECIFICATIONS

☐ APPLICATIONS
- Hydrocarbon Gas & Liquids
- Controlled Pressure Reduction
- Blow-Down Servicee
- Noise Reduction

☐ RESTRICTION TYPE
- Single Type
- Multi Hole Type
- Multi Stage Type

☐ FLOW CALCULATION STANDARDS
- R.W. Miller
- ASME B31.3
- ISA Standard Design

☐ FLANGE RATING
- JIS 10, 16, 20, 30, 40 and 63K
- ANSI class 150, 300, 600,900,1500,2500#

☐ NOMINAL PIPE SIZES AVAILABLE
- 15mm ~ 2,400 mm(1/2"~96")

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

☐ MARKINGS
- Upstream side of tab handle stamped"Upstream" and with bore type and size, line size, tag number and flange rating.

■ DESCRIPTION

Restriction orifice plate have traditionally been used to reduce pressures in Gas and Liquid flows by forcing the flow through a restricted bore.

The Precise pressure drop is produced by accurately calculation the orifice bore, having taken into account all the relevant process and flow conditions.

Where very high pressure drops in liquid flows are required multistage restriction orifice assemblies may be required to achieve the desired pressure drop while preventing problem such as cavitation. flashing and high noise and vibration levels.

CAVITATION is a potentially damaging, erosive condition which occurs when the internal pressure of the liquid passing through the orifice falls velow its vapour pressure and vapour bubbles form. further downstream from the orifice the pressure recovers sufficiently to collapse the bubbles with extreme violence. cavitation calculation are performed during the design stage of a multistage restriction orifice plate calculate cavitation factors at each stage in the orifice assembly.

FLASHING is a similar phenomenon to cavitation except that the process pressure never recovers sufficiently to collapse the gas bubbles resulting in two phase flow-liquid and gas-downstream of the orifice , Erosion of pipe work and valves and other instrumentation can occur due to the impact of liquid droplets carried at high speed in the vapour flow.

■ BENEFITS

- Products designed in accordance with R.W.Miller - Flow engineering handbook
- Proven design technology
- Prevent critical flow or cavitation issues
- Designs available to accommodate site restrictions and noise limitations

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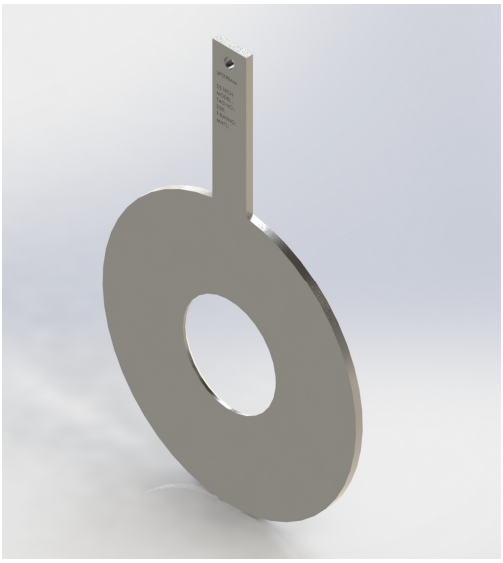
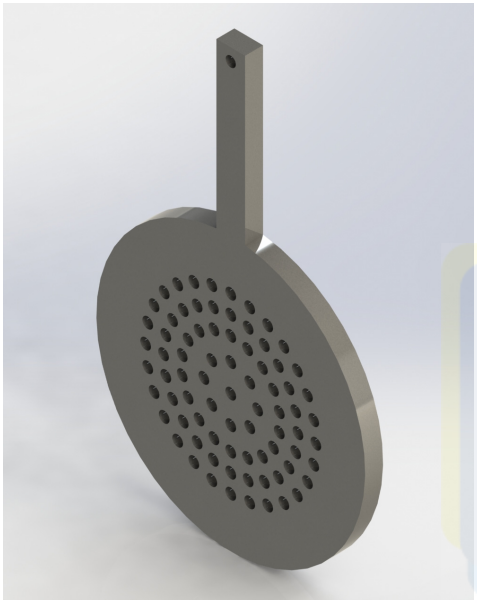
■ RESTRICTION ORIFICE TYPE

▶ SINGLE STAGE TYPE(DHIF-R210)

A single stage restriction orifice is usually a plate or a block with a bore (Orifice) sized to the intended permanent loss of pressure. It is installed between the pipe flanges. Usually it is not a thin orifice plate it is a thick orifice plate.



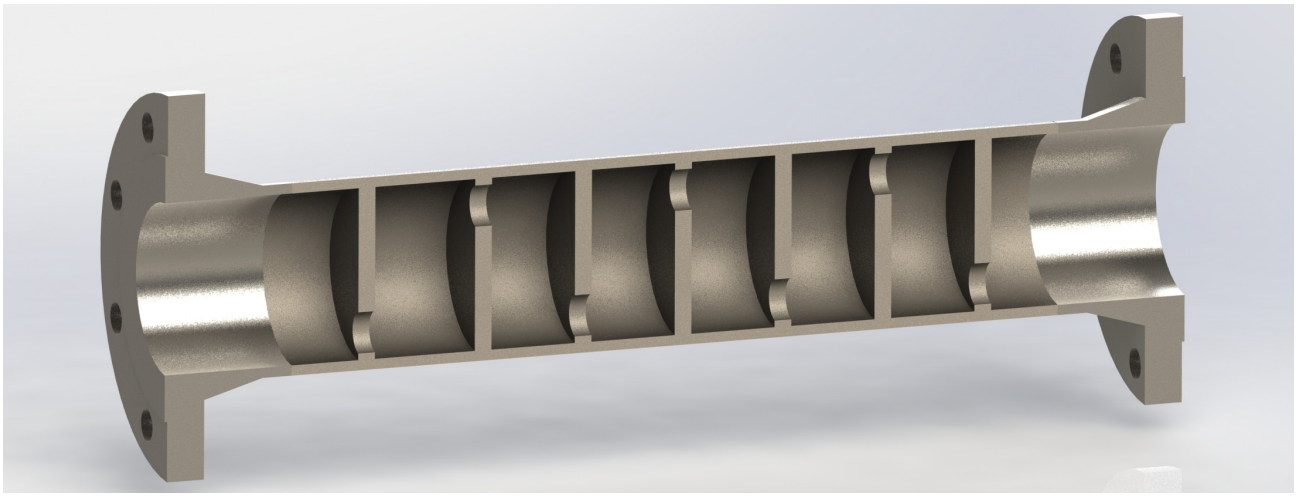


◀ SINGLE STAGE MULTI HOLE TYPE (DHIF-R220)

A single stage multi-hole restriction orifice plate is used to abate the noise generated by the device due tohigh velocity through the bore which offers restriction to the incoming fluid. The flow at the inlet is now channeled into several streams through the multiple holes and this reduces the noise which would be otherwise will be above the acceptable limit if a single hole device is used.

▼ MULTI STAGE TYPE (DHIF-R230)

These devices are used where the pressure reduction ratio is very high and cannot be achieved by a single stage orifice plate. Thus a multistage device essentially consists of a number of single stage device built in a single spool. Like a single stage device it can be of single hole multistage design or multihole multistage design or combination of both.



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■ ORDERING INFORMATION

Main order	CODE	DESCRIPTION
1. Base Model	DHIF - R200 SERIES	Base Model
2. Tap Type	R210	Single Stage
	R220	Single Stage Multi hole
	R230	Multi Stage
3. Line Size	□□□	Pipe Size (In or mm)
4. Plate/Flange Material	CS	Carbon steel
	4S	304SS
	4L	304L
	6S	316SS
	6L	316L
	11	A182-F11
	22	A182-F22
	51	A182-F51
	91	A182-F91
	OP	Option
5. Flange Rating	015	ANSI/ASME 150LB
	030	ANSI/ASME 300LB
	060	ANSI/ASME 600LB
	090	ANSI/ASME 900LB
	150	ANSI/ASME 150LB
	250	ANSI/ASME 250LB
	10K	JIS/KS 10K
	16K	JIS/KS 16K
	20K	JIS/KS 20K
	30K	JIS/KS 30K
	40K	JIS/KS 40K
	000	Option
6. Option	OP	Option