Standard Injectors

Proven technology

Injectors work according to the principle of a fluid jet gas compressor. For this type of pump, the pumping action is created by a fluid jet ("propellant"), which sucks-in another medium ("suction medium") by means of pulse exchange and then accelerates and compresses or pumps it. The basic design of an injector consists of a propelling nozzle, a mixing chamber and a diffuser.

Low-maintenance and robust

Injectors have been used successfully in chlorine gas dosing technology for many decades because they don't have any moving parts, which are prone to wear. Also, apart from generating the vacuum, they create the mixture of chlorine gas and water. The water, which is needed for operating the injector, is combined with the chlorine gas to form the chlorine solution, which is then added to the drinking water or bathing water that is to be treated.

Functions

- Capacity range of up to 60 kg Cl_2/h, up to a back pressure of 10.5 bar
- Material: PVC-U
- Easy to install in pipes
- No wear parts

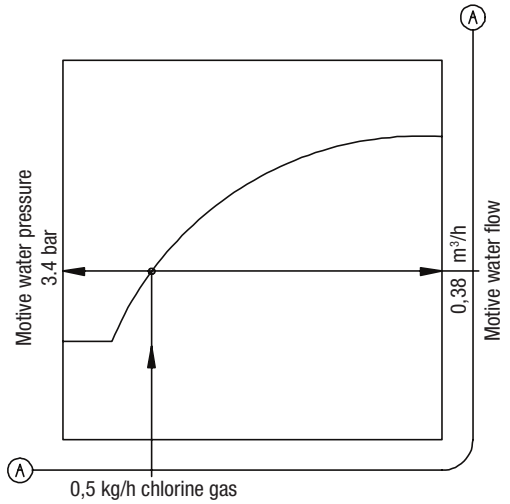
Technical data

Ejector Type		A	B	E	C	D	F	AH	BH	CH	DH
Capacity range for minimum back pressure	kg Cl2/h	1.6	3.2	6.4	20	60	24	2	4	8	16
Capacity range for maximum back pressure	kg Cl2/h	1.2	2.4	3.2			14	1.3	2.7	5.5	11
Back pressure range	bar	0 – 8		0 – 6	0 – 5		1 – 10	1 – 10.5			
Maximum motive water pressure for minimum / maximum motive water temperature		16 bar at 20°C / 10 bar at 40°C									
Materials		PVC-U									

Design of injectors

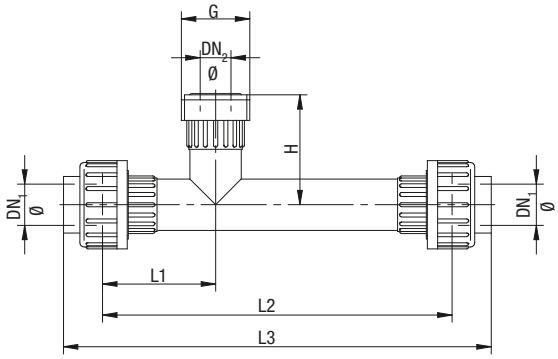
The selection of an injector begins with the determination of the required chlorine gas quantity and the back pressure for the specific application. The latter includes the system pressure as well as the total pressure loss between the injector outlet and the injection point. It includes the total pipeline pressure loss (friction loss, pressure loss due to fittings, etc.). Based on this data, an injector is selected using the injector performance graphs. The necessary motive water quantity and motive water pressure are also determined.

This example shows that the selected injector - depending on the back pressure - requires a motive water quantity of 0.38 m³/h and a motive water pressure of 3.4 bar for a chlorine gas rate of 0.5 kg/h. If the system pressure is below the determined motive water pressure, a booster pump is required. For example, if the system pressure is 0.7 bar, this pump must deliver a pressure increase of 2.7 bar (3.4 – 0.7 bar) for a delivery rate of 0.38 m³/h.

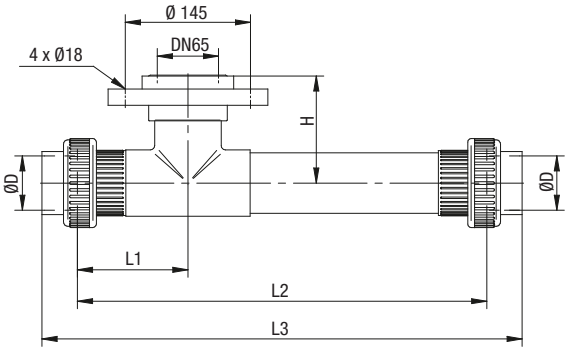


Dimensions

Ejector Type A, AH, B, BH, C, CH, E, F
All dimensions in mm



Ejector Type D, DH
All dimensions in mm



Ejector Type				A	AH	B	E	BH	C	CH	F	DH	D
Length	L1		mm	55				65	93.5			114	128
	L2			173				210	276			413	474
	L3			214				254	335			483	556
Height	H			54				59.5	87.5			104.5	125
Connection	Water	Type		PVC threaded conn.									
		Size		DN15				DN20	DN32			DN40	DN50
	Gas	Type		PVC screw-in part									PVC flange
		Size		DN15					DN32			DN40	DN65
		thread		G1					G2			G2 1/4	-

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