

Portacel[®] Disinfection Systems

Ejector - Vacuum Drawing System

Introduction

The Portacel[®] ejector, manufactured by Siemens Water Technologies, is used to create the vacuum conditions under which the range of Portacel[®] chemical dosing units operate. The safe, simple operation of the ejector eliminates the need for dosing pumps and allows a range of dosing chemicals and capacities to be catered for. Installed directly into a dedicated motive water line with the option of a booster pump, the ejector draws a chemical into the water. In conjunction with Portacel[®] dosing and analysing equipment it forms part of a complete dosing system.

Design and Operation

Water is supplied to the ejector at site pressure or via a booster pump.

The water is passed through an internal orifice and into the nozzle of the ejector.

A pressure differential is established across the nozzle to generate a vacuum and draw in the chemical from the dosing unit. The chemical is mixed with the operating water in the mixing tube of the ejector body to form a concentrated solution. The solution is then injected at the point of application.

If the water flow is stopped, two positive non-return valves (a ball valve and a spring loaded valve) prevent water from flowing back into the vacuum system.

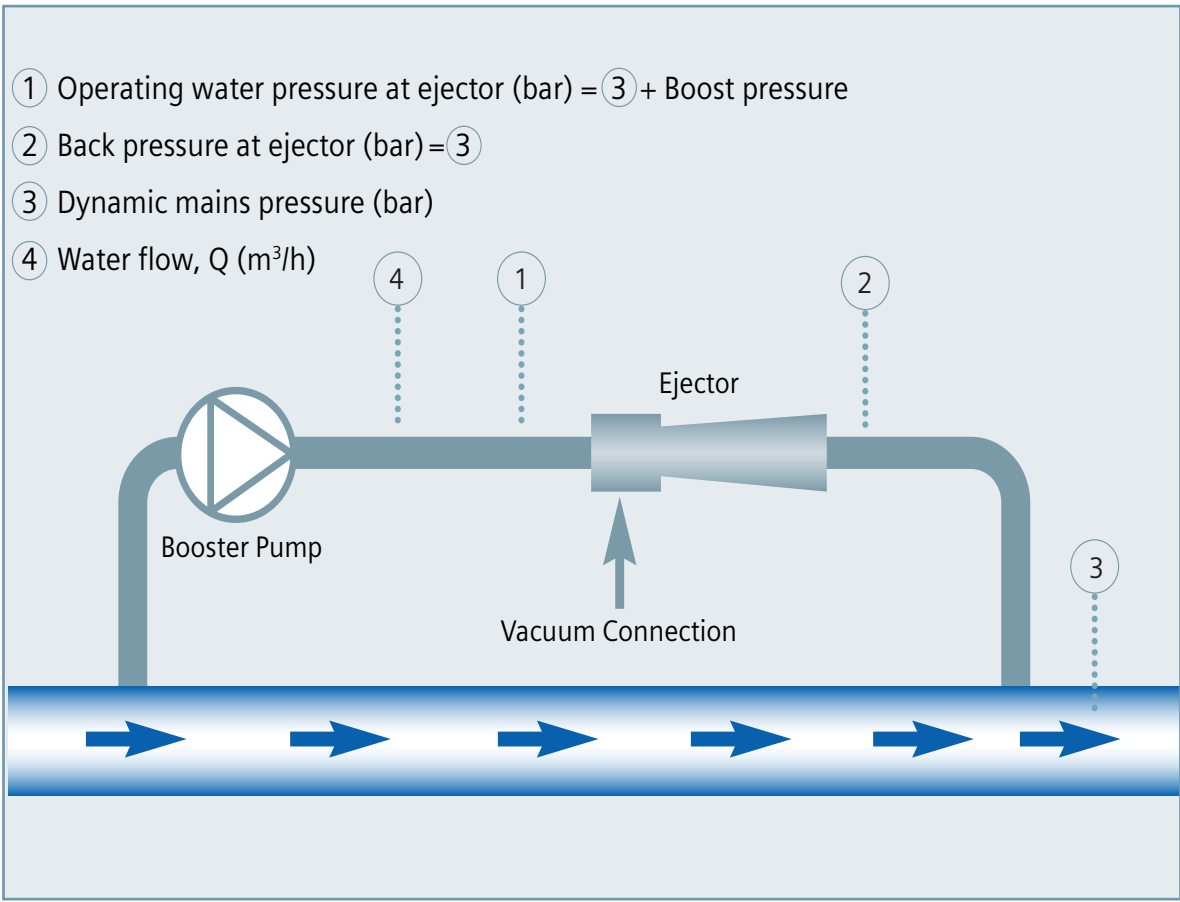
Key Benefits

- Wide operating capacity - 0.25 kg/hr (13ppd) - 250 kg/hr (13,200 ppd)
- Suitable for a range of chemicals - Cl₂, SO₂, NH₃, CO₂, NaOCl
- Safe operation - chemicals dosed under vacuum
- Double non-return valve for added security
- Minimal maintenance - low part count
- Eliminates the need for dosing pumps
- Corrosion resistant materials ensure durability and reliability
- Operates with the complete range of Portacel[®] gas and liquid dosing units

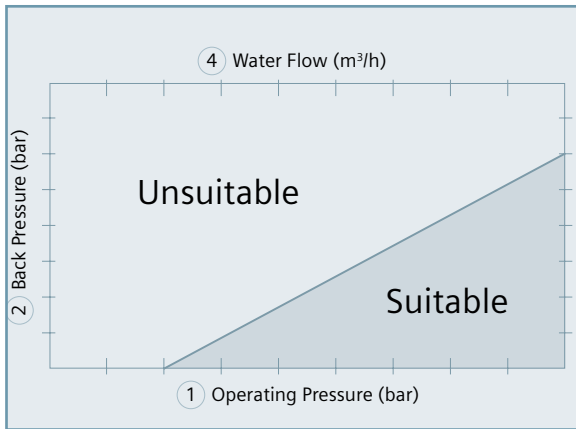


3" Fixed Orifice Ejector

Product Sheet



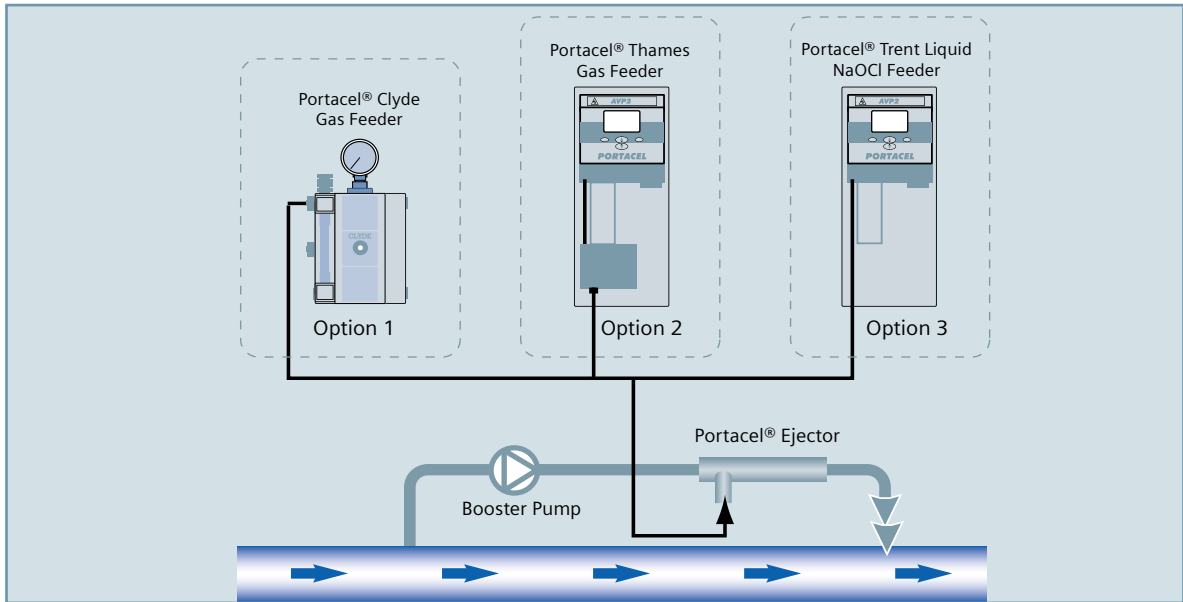
Typical ejector installation



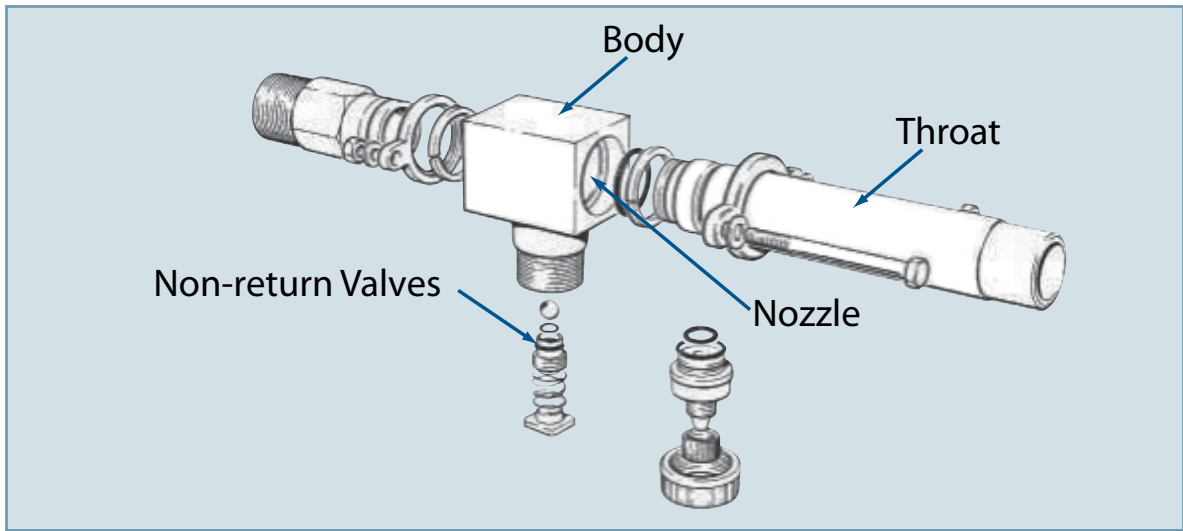
Typical performance chart for ejectors



Standard ejectors

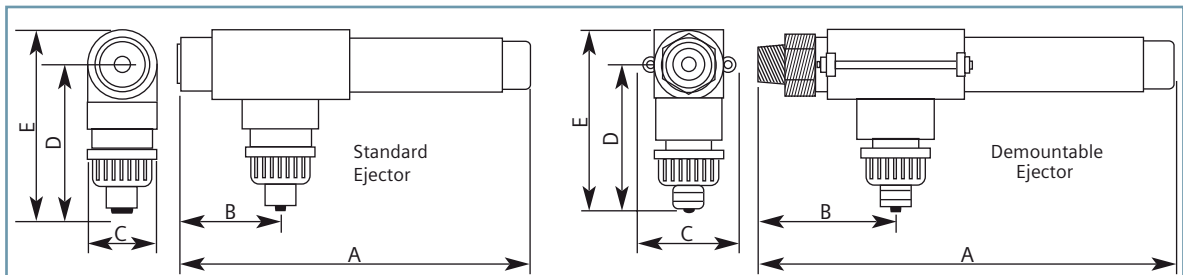


Typical ejector installation with gas feeders



Exploded view of 25mm (1") demountable ejector

Product Weights and Dimensions



Ejector Size	Dimensions				
	A	B	C	D	E
25mm (1") Standard (mm)	246	69	43	105	125
(in)	9¾	2¾	1½	4¼	5
37mm (1½") Standard (mm)	337	76	48	110	134
(in)	13¼	3	1¾	4¼	5¼

Technical Data

Size		25mm (1") Standard	25mm (1") Demountable	38mm (1.5") Standard
Capacity	Cl ₂	5 kg (11lbs)	5 kg (11lbs)	12 kg (26½lbs)
	SO ₂	5 kg (11lbs)	5 kg (11lbs)	12 kg (26½lbs)
	NH ₃	2.5 kg (5 ½lbs)	2.5 kg (5 ½lbs)	6 kg (13¼lbs)
Connections	Inlet	25mm (1") uPVC Spigot	25mm (1") BSP Taper BS21	38mm (1.5") uPVC Spigot
	Outlet	25mm (1") uPVC Spigot	25mm (1") uPVC Spigot	38mm (1.5") uPVC Spigot
Max operating pressure		15 bar (217 psi)	25 bar (362 psi)	15 bar (217 psi)
Max solution pressure		9 bar (130 psi)	15 bar (217 psi)	9 bar (130 psi)
Operating temperature		20°C (68°F)	20°C (68°F)	20°C (68°F)
Vacuum connection		6mm I/D hose or 10mm (3/8") BSP Par BS2779	6mm I/D hose or 10mm (3/8") BSP Par BS2779	8mm I/D hose or 10mm (3/8") BSP Par BS2779
Weight		0.45 kg (1lb)	1.0 kg (2 ¼lbs)	0.65 kg (1½lbs)

Size		38mm (1.5") Demountable	50mm (2") Demountable	75mm (3") Demountable
Capacity	Cl ₂	12 kg (26½lbs)	40 kg (88lbs)	80 kg (176 lbs)
	SO ₂	12 kg (26½lbs)	40 kg (88 lbs)	80 kg (176 lbs)
	NH ₃	6 kg (13¼lbs)	20 kg (44 lbs)	40 kg (88 lbs)
Connections	Inlet	38mm (1.5") uPVC Spigot	2" (50mm) uPVC Spigot	75mm (3") Stub Flanges
	Outlet	38mm (1.5") uPVC Spigot	2" (50mm) uPVC Spigot	75mm(3") Stub Flanges
Max operating pressure		15 bar (217 psi)	15 bar (217 psi)	15 bar (217 psi)
Max solution pressure		9 bar (130 psi)	9 bar (130 psi)	9 bar (130 psi)
Operating temperature		20°C (68°F)	20°C (68°F)	20°C (68°F)
Vacuum connection		8mm (¼") I/D hose or 10mm (3/8") BSP Par BS2779	19mm (3/4") BSP Par BS2779	8mm (¼") (I/D hose or 25mm (1") BSP Par BS2779
Weight		0.45 kg (1 lb)	2.95 kg (6½ lbs)	6.9 kg (15 lbs)

100mm (4") Ejector also available

For information on dosing up to 250 kg/hr (13,200 ppd) please contact Siemens Water Technologies

The ejector is a 25, 38, 50, 75, 100 mm (1", 1½", 2", 3" or 4") model manufactured by Siemens Water Technologies and shall be a standard or demountable type. The ejector is designed to be operated by a specific water pressure and flow rate and generate a vacuum to ensure full capacity operation of the associated dosing unit at a specific kg/hr (ppd)

Connection shall be via a purpose made injection fitting. The ejector will incorporate double, positive non-return valves preventing back flow of any water into the vacuum system.

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