

PrimeNozzle | CSL

Nozzle Check Valve



The streamlined PrimeNozzle | CSL Nozzle Check Valve improves energy efficiency, minimises pressure loss and reduces operating costs



ECO

Features



Optimised Flow

- The streamlined design reduces pressure drop in the system and the energy usage required for plant operation
- Operational cost savings of up to 50% and increased throughput of up to 100% compared to conventional check valves
- The sensitive closing mechanism proactively prevents water hammer



Versatile Flange Connection

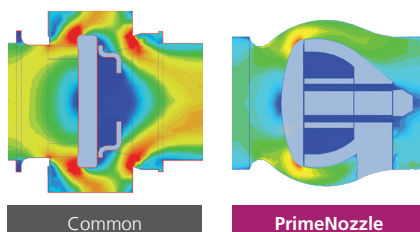
- Easy installation on all common international flange types
- The integrated flange incorporates pressure classes PN 10–40, ANSI Class 150/300 & JIS 10k
- Centering of the valve is direct and intuitive
- Installers are assisted for professional and accurate installation



Increased Service Life

- The guided disc protects against jamming and increases the operating life of the valve
- Wear is significantly reduced thanks to the predefined movement of the disc
- Jamming or seizing of the valve is prevented, long after installation
- The guided and controlled movement reduces operational noise
- The streamlined form of the valve supports optimised flow behaviour

Flowrate Comparison



1. Flowrate & Pressure Loss

	Common	PrimeNozzle
Kv [m³/h] / Zeta	41,3 / 5,9	48,3 / 4,3

2. Working Conditions

Diameter	DN 50
Medium	Water
Flow Velocity	4 m/s
Energy Costs	0,15 € / kWh
Operating Time	16 Hours/Day 220 Days/Year

3. Results

	Common	PrimeNozzle
Energy Use [kWh / Year]	1313	937
Energy Costs	197 €	141 €
Savings per Year	-	56 €

4. Summary

The **PrimeNozzle | CSL** **ECO** Nozzle Check Valve substantially reduces energy consumption and lowers running costs accordingly.

Technical Specifications



Nominal Diameters
DN 15–300 / ½"–12"



Flange Connections

- EN 1092-1, PN 10–40
- ASME B16.5, Class 150/300
- JIS 10K



Max. Operating Pressure

- 52 bar
- Up to 160 bar possible



Temperature Range

- -200°C to 300°C



Face-to-Face Length

- EN 558-2, Series 52/14



Materials

- Stainless Steel



Conformity

- PED 2014/68/EU



Pressure Test - EN 12266-1

- Leakage Rate A Soft Sealings
- Leakage Rate C Metal Sealings
- Leakage Rate D PTFE Sealing

Flowrate & Pressure Loss			
DN [mm/inch]	Kv¹ [m³/h]	Zeta	
15	½"	5.5	2.7
20	¾"	9.2	3.0
25	1"	12.6	3.9
32	1¼"	21.2	3.7
40	1½"	31.0	4.2
50	2"	48.3	4.3
65	2½"	69.8	5.9
80	3"	110.9	5.3
100	4"	164.6	5.9
125	5"	347.0	3.2
150	6"	474.6	3.6
200	8"	814.0	3.9
250	10"	1 149.9	4.7
300	12"	1 733.5	4.3

¹acc. to DIN EN 60534-2-3

