

Modular Valve Design offers Countless Configurations



CONTENTS

Introduction	02
Norgren's Proven Classics	03
The Modular System	04
The Features – Labyrinth Technology	05
The Features – Water Hammer Prevention	06
The Features – Click-on® Solenoid System	07

Breakthrough Engineering for a Better World

Norgren is part of global engineering organisation IMI plc. IMI is at the forefront of delivering the solutions we need in a changing world and is focused on **creating tremendous value by solving key industry problems** in attractive markets and employing the best.

Norgren has a proud history of creating innovative engineering solutions in precise motion control and fluid technology, and we collaborate with our customers across more than 50 countries in critical areas such as Factory Automation, Material Handling, Rail, Energy, Process Control, Life Science and Commercial Vehicles.

From improving speed, productivity, reliability and efficiency of equipment, to generating significant energy and cost savings, or lowering total cost of ownership across many industries, Norgren's high-quality solutions are designed to help customers pursue progress, achieve new goals and overcome problems.

With market-leading industry expertise, we offer the capability, resources, engineering intelligence and global support infrastructure to tackle the largest project demands.

Our world-class portfolio of fluid and motion control products include Norgren, Bimba, Buschjost, FAS, Herion, Kloehn and Maxseal. Supplied either individually or combined into powerful customised solutions to meet customer needs.

Breakthrough engineering you can count on.

Norgren's Proven Classics

Versatile and flexible thanks to modular system

Buschjost process and all-media valves are synonyms for the highest quality and innovation coupled with a tremendous service and application spectrum. For more than 80 years, they have been developed and produced in the North Rhine-Westphalian town of Bad Oeynhausen, one of Norgren's four German sites. The portfolio is wide and diverse, comprising solenoid valves with or without differential pressure as well as remote controlled, filter and proportional valves. The range is rounded off by bespoke special solutions for individual customer applications.

This brochure presents a small but essential selection of proven standard valves. Suitable for numerous sectors and applications, they have proven their merit a thousand-fold in practise over the years to become genuine and indispensable classics in the market.

The modular system enables a versatile and flexible use of the valves. Do you require an especially high or low temperature version, a specific material or a special approval? Our modular system includes these and many more options. If needed, you can also supplement your valve with the appropriate accessories. Our experts will be pleased to advise you.

All series also available
with NPT thread



Options:

- » Normally open (NO)
- » Sealed core tube/media separated
- » NBR, FPM, EPDM or PTFE seat seals
- » Plastic body (valves)
- » Manual override
- » Oxygen version
- » Position indicator
- » Catching version
- » Low temperature version
- » DVGW
- » SIL
- » Free of paint-wetting impairment substances
- » Drinking water version
- » High temperature version
 - Diaphragm valves up to +150°C
 - Piston valves up to +200°C

Accessories:

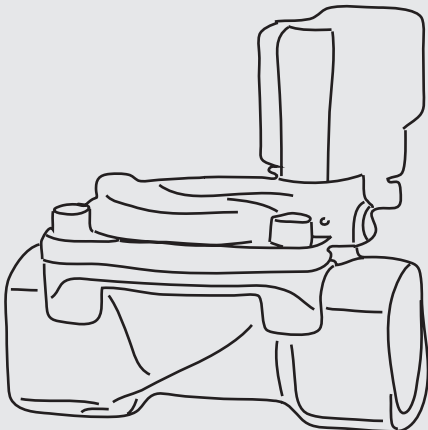
- » Mounting angle
- » PWM plug connectors
- » Conduit coil 6852 c 
- » Solenoids according to ATEX
- » Dirt traps

Note: Not every option is available for each series.

The Modular System

All series available
with NPT thread

Series Brass	Series Stainless steel	Design	Actuation	Connection	Fluid temperature	Pressure range bar (psi)	Material housing
82400 	82730 	Diaphragm valves	Solenoid operated, internally piloted	G1/4 ... 2	max. +90°C (+194°F)	0,1 ... 16 bar (0,1 ... 10 bar) (1,45 ... 232 psi) (1,45 ... 145 psi))	Brass (CW617N) or stainless steel (1.4408)
82530 	82560 	Diaphragm valves	Solenoid operated, with forced lift	G1/4 ... 1/2	max. +90°C (+194°F)	0 ... 10 bar (0 ... 145 psi)	Brass (CW617N), PA 66 or stainless steel (1.4408), PA 66
82540 	82590 	Diaphragm valves	Solenoid operated, with forced lift	G1/4 ... 1/2	max. +90°C (+194°F)	0 ... 10 bar (0 ... 16 bar) (0 ... 145 psi) ((0 ... 232 psi))	Brass (CW617N) or stainless steel (1.4408)
85360 	-	Piston valves	Solenoid operated, internally piloted	G1/4 ... 2	max. +90°C (+194°F)	0,5 ... 40 bar (7,25 ... 580 psi)	Brass (CW617N)
85600 	85840 	Piston valves	Solenoid operated, with forced lift	85600: G1/2 ... 2 85840: G1/4 ... 2	85600: max. +90°C (+194°F) 85840: max. +60°C (+140°F)	0 ... 25 bar (0 ... 363 psi)	Brass (CW617N) or stainless steel (1.4408)
86700 	86740 	Piston valves	Solenoid operated, with forced lift	G1/4 ... 2	max. +90°C (+194°F)	0 ... 25 bar (0 ... 363 psi)	Brass (CW617N) or stainless steel (1.4408)



Thread
+ Valve options
+ Solenoid options
+ Voltage / FrequenCY
+ Accessories

=

Your individual
valve

The Features Labyrinth Technology

In using innovative labyrinth technology, Norgren has revolutionised its Buschjost piston valves.

The valve pistons are equipped with low-wear, labyrinth seal made from graphitised PTFE guide rings replacing the traditional groove ring. The labyrinth seal can withstand temperatures up to +200°C and is insensitive to pressure spikes against the direction of flow. It is also distinguished by a long service life, simple and compact installation plus a high flow rate.

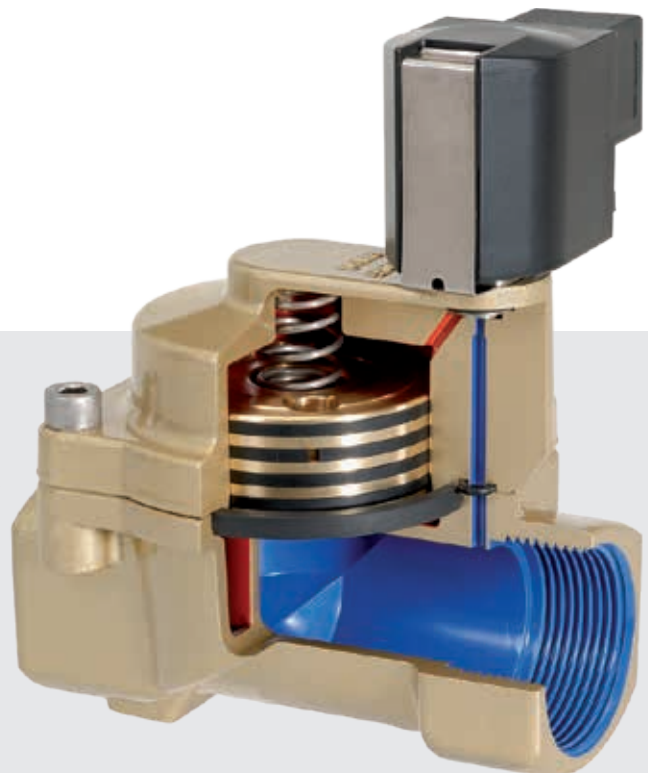
Force lifted operated valves with labyrinth pistons score with a crucial advantage: The special nature of the seal reduces the piston's motion resistance, thereby increasing the effective actuation force. The valve thus functions especially reliably, even under the toughest conditions.

Valves equipped with labyrinth technology are utilised in numerous applications, for instance in the energy sector, where they are used as shut-off valves for liquid fuels. In industrial automation, they are installed in injection moulding and tunnel drilling machines, while in the food and beverage industry they are used for blowing PET bottles.

Product highlights:

- » Compact design
- » Durable and robust
- » High flow rate
- » High-quality graphitised PTFE seals
- » Brass and stainless steel
- » Maximum pressure ratings up to 40 bar (580 psi)
- » 1/4 ... 2 (ISO G/NPT) port size options

Durable, robust
and low-wearing



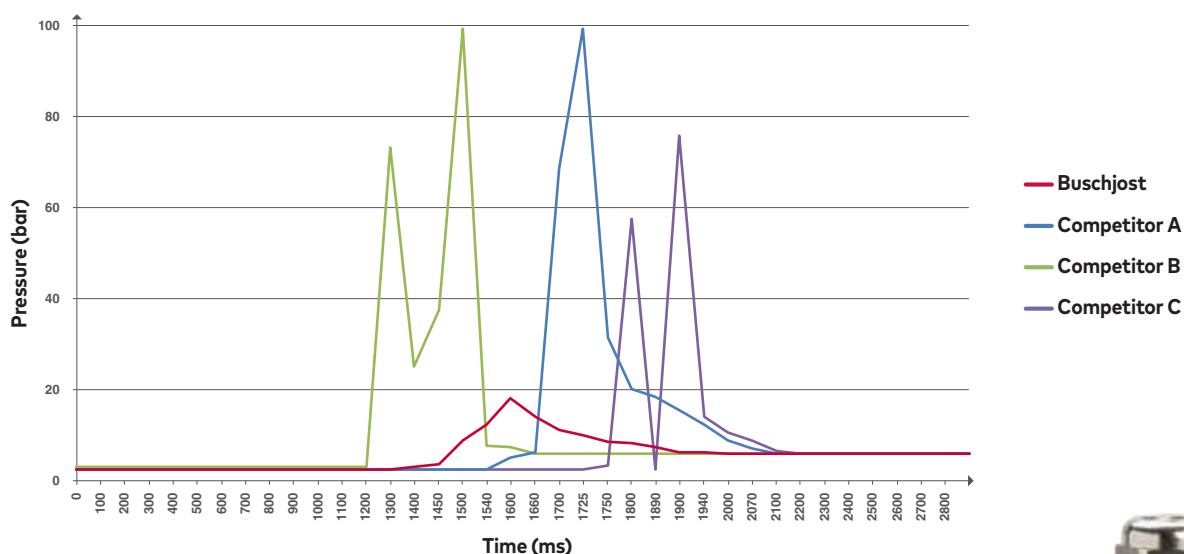
The Features Water Hammer Prevention

Water hammer, also called fluid hammer or hydraulic shock, creates a pressure spike in a pipe system that can damage seals, gauges, pipes and fittings – virtually anything upstream.

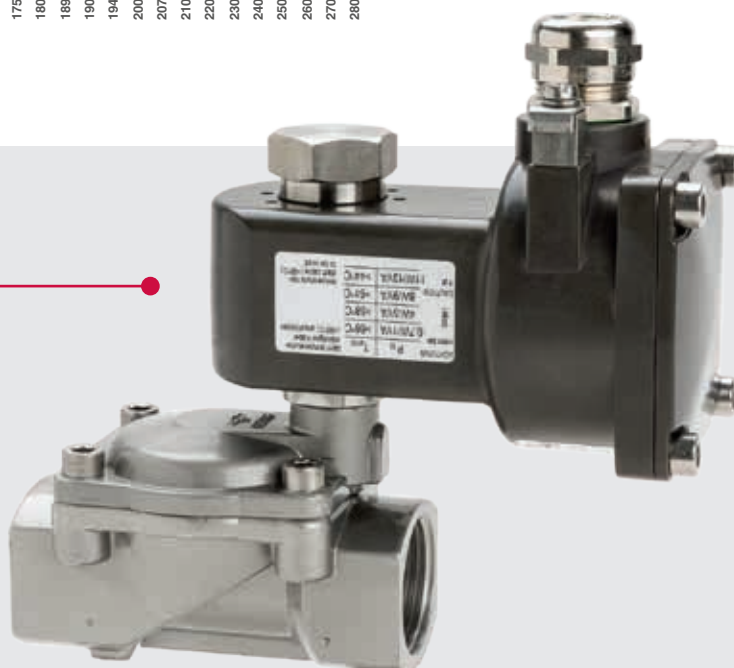
Norgren addresses the problem of water hammer at the source – the valve. Our superior solenoid valves are proven to reduce pressure spikes by more than 80 %, compared to the competition.

Product highlights:

- » 2/2-Way valves – Normally closed and open
- » Brass and stainless steel
- » International approvals available
- » Compact design
- » Maximum pressure ratings up to 16 bar (232 psi)
- » 1/4 ... 2 (ISO G/NPT) port size options
- » Options:
 - NBR, FKM, EPDM seat seals
 - Manual override
 - Latching coil options
 - Customized solutions



Protects your system against pressure surges



The Features Click-on® Solenoid System

What was once actually the name of a simple yet effective fastening technology for solenoids has developed over the course of time into a complete valve range: the Click-on® dry solenoid system. A clip made from stainless steel, which is joined captively to the valve housing, holds the solenoid securely in place, irrespective to the mounting position. A manual intervention is sufficient to fasten or replace the solenoids, with no need for tools. The Click-on® solenoid system is available for all standard voltages as well as for numerous special voltages and also with EEx or CSA approval.

When developing the Click-on® system, the valves equipped with this were also optimised further: Modern materials such as PVDF or Sandvik were used, new diaphragm and piston designs resulted, flow rates and wall thicknesses were optimised.

Product highlights:

- » Various solenoid valves, replaceable without tools
- » Captive retention clip made from stainless steel
- » Long service life
- » Low maintenance requirement
- » Simple and compact installation
- » Housing made from brass or stainless steel
- » 1/4 ... 2 (ISO G/NPT) port size options

Solenoids easy to change without tools

