



Economical,
safe and
efficient



Check valves
Type 561 and Type 562

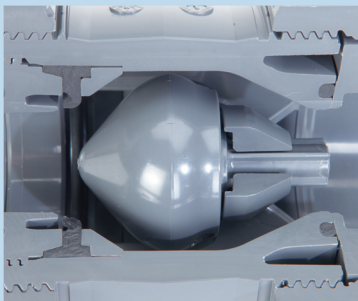
Benefits

Reliability and improved performance thanks to the optimized flow geometry—for your benefit and your profit.



Safety

The new check valve Type 562 (horizontal) closes absolutely leak-tight with the built-in spring, even in the de-energized state—without water column as well as in a horizontal position. The spring in standard versions is made of stainless steel (SS304). A higher quality steel or plastic-coated steel spring is also available. The risk of corrosion is minimal. If no spring is desired, we recommend using the check valve Type 561 (vertical), which is 100 percent leak-proof, at a water column of six feet.



Simplicity

The self-closing mechanism operates autonomously, without any other energy source, i.e. water column or flow (Type 562) or with a minimal line pressure (Type 561). The wide range of connecting possibilities in all conventional standards and versions from GF Piping Systems guarantees easy integration of the valves in all piping systems.



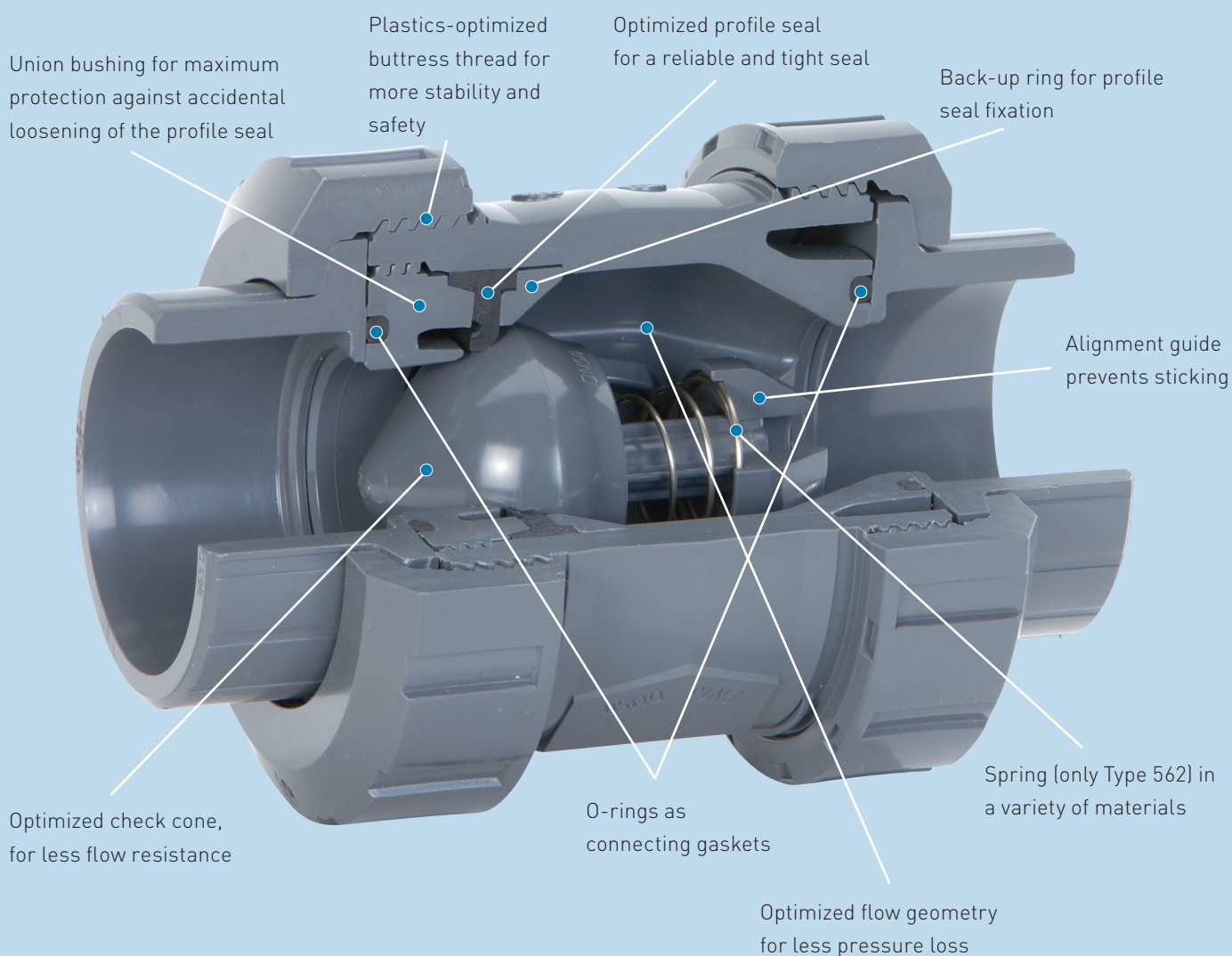
Efficiency

The new streamlined check cone and the refined geometry in every detail provide for a significantly improved flow compared to valves with a check ball, without compromising functionality or leak-tightness. The effort involved in cleaning and servicing the valve has been reduced to a minimum thanks to the cone design, which offers the least possible contamination surface.

Features

The new check valves combine innovation and customer requirements—see for yourself.

Our engineers focused primarily on two areas in the development of the new check valve: How can we make an established product type even more reliable? And how can we reduce the wear and tear on moving parts and consequently keep maintenance to a minimum? The solution was to completely redesign the inner workings of the valve. GF Piping Systems examined every function and optimized every detail to achieve a dramatically improved valve performance.



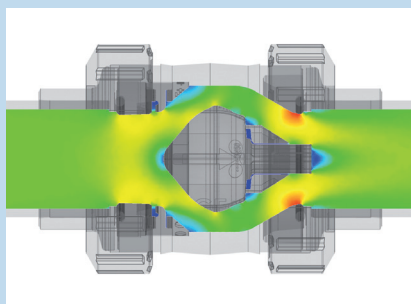
System Details

The flow-optimized check cone provides for improved maintenance and reliability.

The unique check cone element design is at the heart of the new valve generation. A further benefit: The optimized flow geometry minimizes flow resistance and pressure loss. This allows saving valuable energy. Thanks to the new sealing zone and the specially developed profile seal, the valve is absolutely leak-proof, even with very fast closing and improved maintenance and reliability.



Product range



Flow geometry



Foot valve

100 percent leak-proof

Two special design factors make sure the valve closes tightly. The check cone has the contour of a spherical surface in the sealing zone. Also, the double bearing of the cone prevents it from tilting, even with rapid closing.

Malfunctions are therefore eliminated.

Optimized flow contour

An optimal flow contour with smooth transitions and radii enables a higher flow rate than conventional check valves. The benefits are obvious: less wear and tear, less pressure loss and better maintenance cycles.

Any installation position is possible thanks to the spring

The 562 check valve is equipped with a spring mechanism and closes tightly even without a water column. Thanks to this new design feature, the valve can be built in either vertically or horizontally.

Dimensioning and materials

The dimension range of the valves from $\frac{3}{8}$ "–4" takes the continually increasing volumes conveyed in industrial piping systems into account. Similarly, the diversity of materials covers all industrial applications: PVC, CPVC, ABS, PP-H and PVDF.

Easy maintenance

The valve can be easily dismantled and removed in just a few steps. This saves time and effort during maintenance work or when retrofitting the valve with a spring. A special disassembly tool is available as an accessory.

Use as foot valve

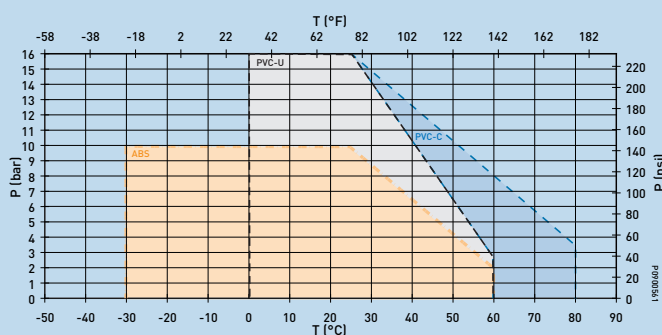
Together with the strainer, available as an accessory (see list of accessories), the check valve can be used as a foot valve. The combination of check valve Type 561 or Type 562 and strainer is an effective way of protecting a pump from contamination and consequently from damage, while at the same time, preventing the pump from unwanted emptying.

Technical Data

The most important data at a glance: pressure rating up to 240 psi and significantly reduced pressure loss.

The following pressure-temperature diagrams are based on a service life of 25 years and apply to water or water-like media.

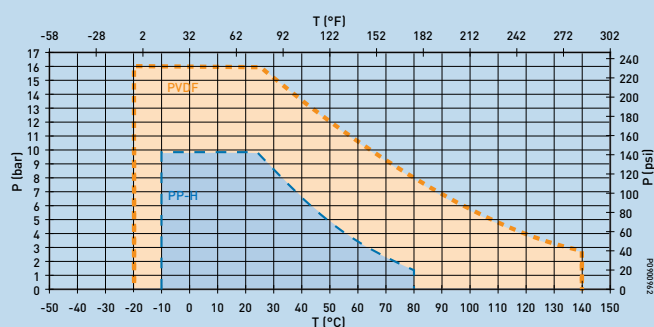
Pressure-Temperature Diagram
ABS, PVC, CPVC (water, 25 years)



Cv-100 value

DN (mm)	inch	d (mm)	Cv values
10	3/8	16	13.26
15	1/2	20	13.26
20	3/4	25	26.51
25	1	32	32.09
32	1 1/4	40	59.30
40	1 1/2	50	75.35
50	2	63	116.51
65	2 1/2	75	205.81
80	3	90	251.16
100	4	110	289.53

Pressure-Temperature Diagram
PVDF, PP-H (water, 25 years)



Opening and closing conditions, Type 561, 562

Open (vertical installation, Type 561)					Close*	
Inch	Differential pressure to lift the cone	Difference for full-lift of cone	Flow for full-lift of cone	Min. flow velocity for full-lift	Pressure tight from (psi)	
inch	psi	psi	gpm	ft/s	561	562
3/8"	0.04	0.15	2.11	2.30	2.9	1.45
1/2"	0.04	0.15	2.38	2.30	2.9	1.45
3/4"	0.04	0.15	3.43	2.30	2.9	1.45
1"	0.07	0.15	4.76	2.62	2.9	1.45
1 1/4"	0.07	0.15	9.25	2.62	2.9	1.45
1 1/2"	0.15	0.15	18.49	2.62	2.9	1.45
2"	0.29	0.15	26.42	2.62	2.9	1.45
2 1/2"	0.36	0.15	31.70	2.95	2.9	1.45
3"	0.44	0.15	44.91	2.95	2.9	1.45
4"	0.44	1.16	66.05	3.28	2.9	1.45

* vertical and horizontal installation

Product Range

The right valve for all requirements and applications.

As the number of application possibilities grows, so does the demand for more versatile valves.

This is why GF Piping Systems carries different types of check valves for pipelines in its product line. Besides the cone check valves Type 561 and Type 562, the swing check valve Type 369 and the angle-seat check valve Type 304 stand out with their individual strengths.



Type		Cone check valve		Angle-seat check valve	Swing check valve
		561	562	304	369
General	Description	union nut mounted	union nut mounted	spigot cemented	wafer-type valve
	Dimension range	¾"–4" (d15–63)		½"–2", 3"	1½"–12"
	Pressure rating	240/150 psi		150 psi	90 psi
	Spring-assisted (V2A/V4A)**		x		x
Materials	PVC	x	x	x	x
	CPVC	x	x		
	ABS	x	x		
	PP-H	x	x		x
	PVDF	x	x		x
Seal material***	EPDM	x	x	x	x
	FPM	x	x	x	x
Connection type	Socket	x	x	x	
	Spigot	x	x	x	
	Flange	x	x	x	x
	Threaded socket	x	x		
Standards	ISO	x	x	x	x
	ANSI	x	x		x
	BS	x	x		
	JIS	x	x	x	
Options	Spring Nimonic 90/Hastelloy-C		x		x
	Spring Halar/ECTFE coated		x		

* see pressure-temperature diagram

** other spring materials available

*** other seal materials on request

Product Selection

The right valve for your application.

Choosing the right valve for your application depends largely on the medium conveyed and the functional requirements. Pressure and temperature are key criteria for material selection. Which valve is suitable in relation to these two parameters can be seen in the technical data of the respective valve.

Check valve selection guide

Which valve is suitable for which application? An all-encompassing answer is not possible.

The following table summarizes the basic selection principles. Contact us for support at (800) 854-4090.

Type		Cone check valve		Angle-seat check valve	Swing check valve
		561	562	303	369
Medium conveyed	Free of foreign bodies	+	+	+	+
	Containing solids / crystallizing	o / -	o / -	o	+ / o
	Viscous	+	+	+ / o	+ / o
	Gaseous	+	+	o	+
Functional properties	Controllable	x	x	x	x
	Position indicator	x	x	x	x
	Tight under vacuum	+ / o	+ / o	o	+ / o
	Can cause pressure surge	o	o	o	o
	Horizontal installation	o	+	+	+
	Spring-assisted	-	+	x	+
	Water hammer resistant	+	+	o / -	o / -
	Dimension range (DN)	3/8"–4"	3/8"–4"	3/8"–2", 3"	1 1/2"–12"

Applications

Whether in water treatment, in the chemical process industry, or in cooling applications, check valves from GF Piping Systems are found wherever reliable performance is required. Due to the wide range of available materials and the high pressure rating of 240 psi (150 psi for PP, ABS), the check valves Type 561 and Type 562 fulfill the diverse specifications of numerous applications. The valve's self-closing function and quiet operation contribute to your safety and comfort on a daily basis.



+ = recommended
o = conditional use
- = not recommended
x = not possible