



MULTI/JOINT®

System

One size fits and grips all
restraint - non restraint
DN50 - DN600

Georg Fischer Waga N.V.

MULTI/JOINT® FITTINGS

Overcoming any pipe connection problem in water and gas systems. Saving precious installation time and costs for thrust blocks. Reducing stocks. And last but not least, increasing the quality of the connection and the reliability of your system. That is what we offer you with our MULTI/JOINT® system.

Our MULTI/JOINT® system consists of large tolerance fittings for pipe sizes varying from DN50 to DN600. For the sizes up to DN300, we offer our MULTI/JOINT® 3000 fittings; for bigger sizes up to DN600, our MULTI/JOINT® XL fittings. All MULTI/JOINT® fittings basically cover every pipe outside diameter within a certain DN-size.

MULTI/JOINT® 3000

For all pipe materials and pipe sizes from DN50 up to and including DN300, we not only offer a very wide range of up to 43mm, but also a stepless range all the way up to DN250. This, combined with a large variety of different types and a working pressure of 25 bar, makes our MULTI/JOINT® 3000 fittings the most versatile couplings in the market.

But what is even more interesting about MULTI/JOINT® 3000, is the end-load resistance. Our MULTI/JOINT® 3000 system can take end-loads of up to 16 bar! Imagine how much time and costs you can save with such a restraint system, when thrust blocks are no longer needed.

MULTI/JOINT® XL

For bigger pipes from DN300 up to and including DN600, our MULTI/JOINT® XL fittings offer a large tolerance solution with ranges of up to 32mm. This, combined with a huge insertion depth and the fact that the MULTI/JOINT® fittings are completely made of ductile cast iron, makes MULTI/JOINT® XL fittings the obvious choice when you are looking for long-lasting reliability and quality.



Your profit

- Reduce stock
- Increase reliability
- Save time in ordering and warehouse handling
- Environment-friendly
- Reduce installation time
- Complete program

Fields of application in the Water & Gas Utility

- Water transport lines
- Water & gas distribution lines
- Service lines
- Maintenance & Repair
- Hydrants
- Pumping stations

» Large tolerance fittings » complete range » DN50-DN600 »



Coupling

Reduced coupling

Flange adaptor

Reduced flange adaptor

T-piece

Bend

Duckfoot

Reduced duckfoot

End-cap blind

Threaded end-cap

Spigot-end

Nominal size DN	Range outside pipe diameter			
	MULTI/JOINT® 3000 restraint/non-restraint		MULTI/JOINT® XL non-restraint	
50	46	- 71		
65	69	- 90		
80	84	- 105		
100	104	- 132		
125	132	- 155		
150	154	- 192		
200	192	- 232		
225	232	- 257		
250	267	- 310		
300	315	- 356	315	- 337
350			356	- 380
400			400	- 429
450			450	- 482
500			500	- 532
550			548	- 580
600			605	- 637



MULTI/JOINT®

» Technical specifications »

Body	: Ductile cast iron GGG45, according to EN-GJS-450-10.
Clamp ring	: Ductile cast iron GGG45, according to EN-GJS-450-10.
Coating	: Resicoat® epoxy powder coating, type "RT 9000 R4", meets requirements of e.g. ACS, Belgaqua, KTW, NSF Standard 61, WRAS, KIWA and many more for use in drinking water pipe lines. Colour red (RAL 3003). Minimum layer thickness 250 micron, according to GSK-register.
Varioseal®	: For water and gas: NBR according to EN 682. : For water: EPDM according to EN 681-1.
Temperature	: -5°C up to +50°C.
Flekscores	: Nakan GPM.
Fiksers®	: Stainless steel A4 (AISI 316) (only for restraint versions).
Bolts**	: Stainless steel A2 (AISI 304) teflon coated to prevent galling.
Nuts**	: Stainless steel A2 (AISI 304) galvanised and passivated to prevent galling.
Washers	: Stainless steel A2 (AISI 304).
Flanges	: DN50 to DN150 drilling pattern PN16 (EN 1092-2) DN200 to DN300 drilling pattern PN10 or PN16 (EN 1092-2) DN350 to DN600 drilling pattern PN10 (EN 1092-2)
Working pressures*	: MULTI/JOINT® 3000 Family (non-restraint) PFA* 25 bar. MULTI/JOINT® 3007 Family (restraint) up to PFA* 16 bar. MULTI/JOINT® XL Family (non-restraint) PFA* 10 bar.
Patent nr.	: Patented under number EP0794378 and other patents.
Certificates	: ACS (France), Belgaqua (Belgium), WRc (United Kingdom), ÖVGW (Austria), SVGW (Switzerland) and others.

* For detailed information about the PFA (working pressure) please check the user manual or contact your supplier.

** Optional: bolts and nuts in stainless steel A4 (AISI 316)



Advantages

- One size fits all, thanks to very wide range
- Life expectancy of 50 years
- Maintenance free, high quality connection
- Re-usability
- Best possible corrosion protection with resicoat coating
- Teflon coated, stainless steel bolts, preventing galling
- Flange drilling pattern PN16, others on request
- End-load resistant up to 16 bar on all pipe materials, both under and above ground
- Choice for a restraint or non restraint connection can be made on site
- Saving costs for additional thrust blocks / materials



Model		Type	Dimensions	
Coupling	restraint	type 3007	DN50	- DN300
	non-restraint	type 3000	DN50	- DN300
	non-restraint	type 2500	DN350	- DN600
Reduced coupling	restraint	type 3107	DN65/50	- DN300/250
	non-restraint	type 3100	DN80/65	- DN300/250
	non-restraint	type 2600	DN350/300	- DN550/500
T-piece	restraint	type 3757	DN100/100/80 Fl	- DN150/150/80 Fl
	non-restraint	type 3750	DN100/100/80 Fl	- DN150/150/80 Fl
Bend	restraint	type 3407	DN80	- DN150
	non-restraint	type 3400	DN80	- DN150
Flange Adaptor	restraint	type 3057	DN50/50 Fl	- DN300/300 Fl
	non-restraint	type 3050	DN50/50 Fl	- DN300/300 Fl
	non-restraint	type 2550	DN350/350 Fl	- DN600/600 Fl
Flange Adaptor reduced	restraint	type 3157	DN50/40 Fl	- DN225/250 Fl
	non-restraint	type 3150	DN50/40 Fl	- DN225/250 Fl
	non-restraint	type 2650	DN350/300 Fl	- DN550/500 Fl
Duckfoot	restraint	type 3457	DN80/80 Fl	- DN100/100 Fl
	non-restraint	type 3450	DN80/80 Fl	- DN100/100 Fl
Duckfoot reduced	restraint	type 3557	DN50/80 Fl	- DN150/100 Fl
	non-restraint	type 3550	DN50/80 Fl	- DN150/100 Fl
Spigot end	restraint	type 3087	DN50/63	- DN200/200
	non-restraint	type 3080	DN50/63	- DN200/200
Reduced spigot	restraint	type 3187	DN80/110	
	non-restraint	type 3180	DN80/110	
End-cap	restraint	type 3207 blind	DN50	- DN300
	non-restraint	type 3200 blind	DN50	- DN300
Threaded end-cap	restraint	type 3207 thread	DN50 (¾"-2")	- DN300 (¾"-2")
	non-restraint	type 3200 thread	DN50 (¾"-2")	- DN300 (¾"-2")

Angularity - nominal per socket end

Type	non-restraint	restraint
MULTI/JOINT® 3000	8°	
MULTI/JOINT® 3007		4°
MULTI/JOINT® XL	4°	



MULTI/JOINT® 3000 XL

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Sealing principle

» MULTI/JOINT® 3000 »



MULTI/JOINT® 3000:

The sealing system of MULTI/JOINT® 3000 is an innovative, patented system, consisting of a special segmented plastic ring combined with a thin rubber gasket. This combination is called the Variofleks® ring.

The segmented ring takes care of the tolerance, where the gasket takes care of the leak tightness. This separation of functions prevents gasket over-stressing and results in an expected leak and trouble free functioning of the coupling for 50 years, for every pipe outside diameter within the coupling range.



When inserting metal grippers (Fiksers®) inside the Variofleks® ring, the MULTI/JOINT® sealing system is upgraded to an end-load resistant sealing and gripping ring (Variofikser® ring). This combination of large-tolerance and end-load resistance makes the MULTI/JOINT® 3000 system unique in the world.

Fiksers®

To get the best possible end-load resistance on different pipe materials without any compromise, two types of Fiksers® are available for MULTI/JOINT® 3000:

Multi/Fikser®: for the best restraint performance on hard pipe materials like steel, grey cast iron, ductile cast iron, stainless steel, PVC, etc.

Poly/Fikser®: for the best restraint performance on polyolefine pipes like PE, PB, etc.



Sealing rings

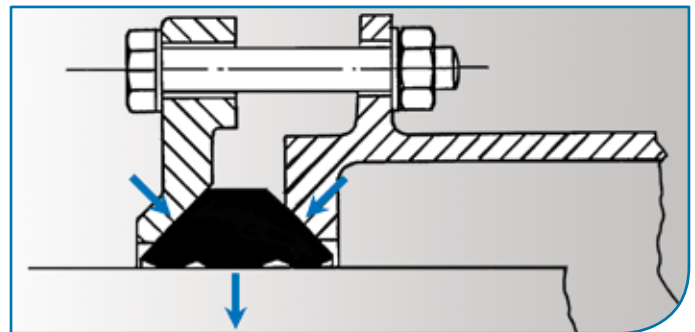
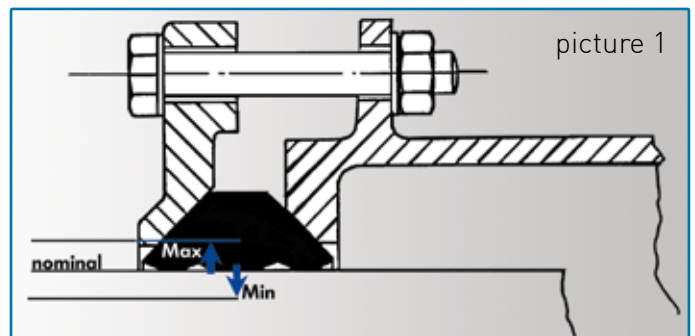
» MULTI/JOINT® XL »

MULTI/JOINT® XL

The rubber gasket for the MULTI/JOINT® XL fittings has a double conical shape with a triple radius feature, reducing the amount of stress on the gasket.

Next to that, the MULTI/JOINT® XL has a middle-range sealing system, meaning that when in resting position, the gasket dimension is exactly in the middle of the coupling range (picture 1). When the pipe to be connected has an outside diameter which is in the upper or lower part of the range, the gasket is slightly stretched, respectively slightly compressed.

These unique features assure a minimum of stress on the gasket, resulting in a leak and trouble free functioning for 50 years.



Insert stiffeners:

For best performance on PE pipes and thin walled PVC pipes (SDR-value higher than SDR21), it is required to use insert stiffeners in order to prevent residual stress in the pipe near the joint areas.



Molykote copper paste:

When re-using the MULTI/JOINT® fittings, the Teflon coating on the bolts might wear off. Therefore, we recommend greasing the bolts with our Molykote copper paste to ensure a smooth re-tightening.



Product range overview

Georg Fischer Waga N.V. is the jointing technology specialist, offering a complete range of products that have been used in the water & gas market for many years. No matter how complicated your connection problem is, we can offer you a solution when it comes to:

Connecting

- MULTI/JOINT®
- ST-System
- Draw-Lock®
- FGR, Stainless steel couplings
- Plast/Joint®

Repairing

- WAL/V, Bell joint leak clamps
- Multi/Clamp, Stainless steel repair clamps

Tapping

- Multi/Clamp, threaded / flanged saddles
- Multi/Saddle Plus
- Drilling device W400

Additional products and spare parts

- Street covers
- Insert stiffeners
- Hydrants
- Valves
- Ratchet spanners

Assuring a reliable and safe connection

- for dimensions DN25-2800 and all kinds of pipe materials
- for pressure ratings upto and including 48 bar
- connection to pumps, housings and more
- integration in existing pipelines

Temporary or long term maintenance of the pipe

- for all pipe materials in utility, industrial systems, shipbuilding, etc.
- under pressure or pressureless repair
- under pressure repair of bell-joints, AC pipes and more

Under pressure or pressureless tapping

- to install house connections
- no interruption of supply
- for installations of valves, hydrants and service lines

The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Please consult our General Conditions of Supply.

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