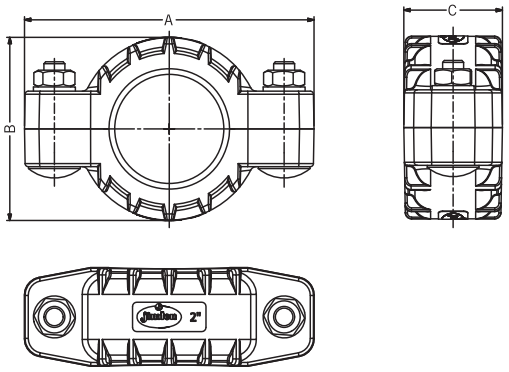
FITMASTER

Fitmaster couplings for PVC and HDPE grooved pipes

jimten®

Fitmaster is suitable for the connection of PVC and HDPE pipes. It guarantees the absorption of mechanical stress, the control of expansion and contraction of the system, the load capacity in pipe ends, the mitigation of vibrations and an easy alignment.

2", 2 ½", 3", 4", 6" and 8" Fitmaster couplings



Model (inches)	Code	Dimensions			Bolt/nuts x2	Weight (kg)	units/		PN Bar / PSI
		A	B	C					
2"	**97352**	138	87	47	M10x50	0,36	10	A-2	**16 / 232**
2 ½"	**97208**	153	102	47	M10x60	0,49	10	A-2	**16 / 232**
3"	**97353**	162	117	47	M10x80	0,51	10	A-2	**16 / 232**
4"	**98657**	211,5	150	52	M12x80	0,88	4	A-2	**16 / 232**
6"	**97209**	269	205	50	M12x80	1,67	4	A-11	**10 / 115**
8"	**97210**	333	265	60	M12x80	2,39	4	A-8	**10 / 115**

Standard Fitmaster couplings with zinc-plated bolts/nuts.

Model (inches)	Code	Dimensions			Bolt/nuts x2	Weight (kg)	units/		PN Bar / PSI
		A	B	C					
2"	**98402**	138	87	47	M10x50	0,36	10	A-2	**16 / 232**
2 ½"	**98403**	153	102	47	M10x60	0,49	10	A-2	**16 / 232**
3"	**98404**	162	117	47	M10x80	0,51	10	A-2	**16 / 232**
4"	**98405**	211,5	150	52	M12x80	0,88	4	A-2	**16 / 232**
6"	**98406**	269	205	50	M12x80	1,67	4	A-11	**10 / 115**
8"	**98407**	333	265	60	M12x80	2,39	4	A-8	**10 / 115**

Fitmaster coupling with AISI 316 stainless steel bolts/nuts (available on demand).

1. Intelligent solution
Fast and easy installation system.

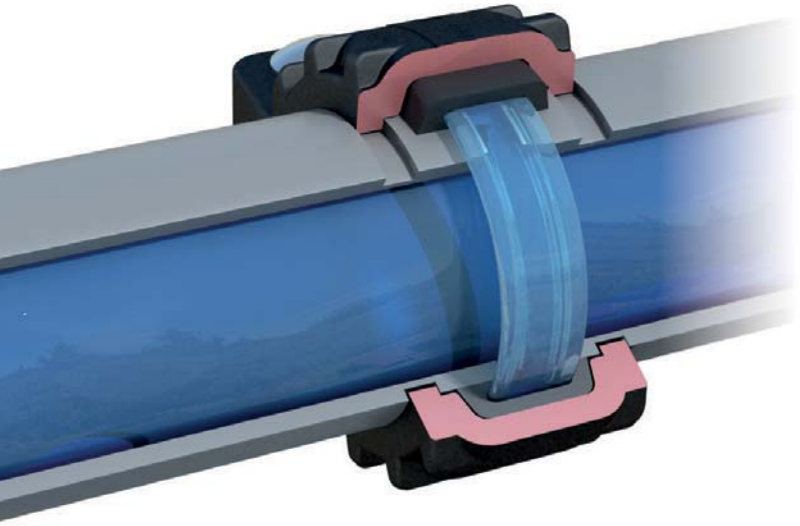
2. Total security
Long-lasting, resistant and flexible system.

3. Advanced technology
Complete range manufactured with technical thermoplastics.

Fitmaster couplings for grooved pipes

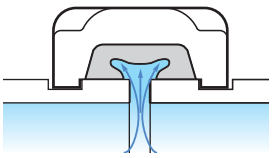
Jimten **Fitmaster** couplings are manufactured in polyamide reinforced with fiberglass for a high working pressure performance up to PN16 or PN10, depending on the model.

The hydraulic sealing is done at low and high pressure thanks to the internal gasket made in flexible and high resistant EPDM 70.

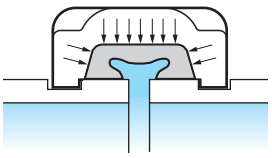


Working principle

The innovative design of **Fitmaster** couplings for grooved pipes guarantees initial sealing at low pressure.
In a second stage, when the system is pressurized, the **Fitmaster** special gasket expands proportionately to pressure increase providing the system with unique reliability and tightness.



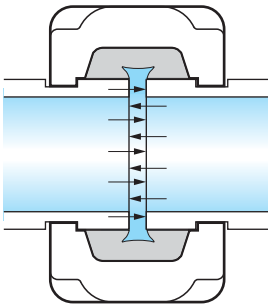
Reaction of the gasket to pressure



Reaction of the gasket to vacuum

Pipe grooves fit the coupling providing a self-shrinking mechanical connection preventing the separation of pipes thanks to internal pressure in the system.

⚠ Groove dimensions have to be accurate to get the maximum performance of Fitmaster couplings.

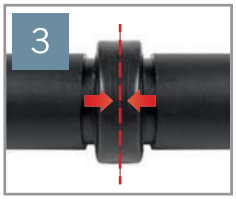


Reaction in pipe ends

Installation guide

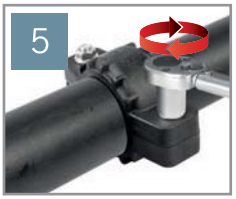
Add a thin coat of certified lubricant to the sealing gasket.

Place the gasket at pipe end of grooved pipe. Gasket should not exceed the pipe end.



Align the second grooved pipe end or grooved accessory to make the connection. Slide and center the gasket on both pipe grooves.

Place the coupling housing on the gasket making sure that nuts are in the upper half.



Tighten the nuts evenly by alternating sides to prevent gasket pinching. Notice that the housing coupling halves must touch each other completely.

Accessories

Grooved connector flange

Model	Code	u./	
3"	**98660**	10	A-2
4"	**98661**	5	A-11
6"	**98662**	5	-

Made in cast iron

Grooved/PVC socket connector

Model	Code	u./	
75-63x2"	**98666**	5	A-10
110-90x3"	**98667**	3	A-1
125-110x4"	**98668**	3	A-2
180-160x6"	**98669**	2	A-2

Made in PVC (for UNE EN ISO 1452 pipes)

Grooved/threaded connector

Model	Code	u./	
2"	**98902**	3	4112

Made in polypropylene. BSP thread

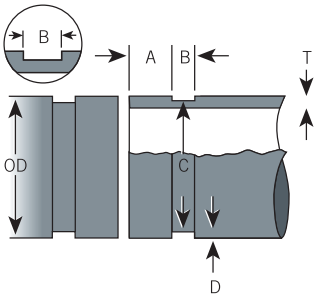
Gasket for Fitmaster coupling

Model	Code	u./	
2"	**97839**	10	A-2
2 ½"	**97877**	10	A-2
3"	**97840**	10	A-2
4"	**97841**	4	A-2
6"	**97878**	8	A-11
8"	**97879**	8	A-8

Pipe preparation

Groove dimensions

NOTES RELATED TO STANDARD CUTTING OF GROOVES



GROOVE SPECIFICATIONS (STANDARD CUTTING) – STEEL, OTHER METALS, HDPE AND PVC PIPES

Nominal diameter mm/ inches	Dimensiones – mm/Pulgadas								
	Pipe outside diameter			A Gasket seat ± 0,76 ± 0.03	B Groove width ± 0,76 ± 0.03	C Groove diameter		D Groove depth	T Min. allow. wall thickness
	Basic	Maximum	Minimum			Maximum	Minimum		
50	60,3	60,9	59,7	15,88	7,95	57,2	56,8	1,60	3,91
2	2.375	2.399	2.351	0.625	0.313	2.250	2.235	0.063	0.154
65	73,0	73,8	72,3	15,88	7,95	69,1	68,6	1,98	4,78
2 ½	2.875	2.904	2.846	0.625	0.313	2.720	2.702	0.078	0.188
80	88,9	89,8	88,1	15,88	7,95	84,9	84,5	1,98	4,78
3	3.500	3.535	3.469	0.625	0.313	3.344	3.326	0.078	0.188
100	114,3	115,4	113,5	15,88	9,53	110,1	109,6	2,11	5,17
4	4.500	4.545	4.469	0.625	0.375	4.334	4.314	0.083	0.203
150	168,3	169,9	167,5	15,88	9,53	164,0	163,4	2,16	5,56
6	6.625	6.688	6.594	0.625	0.375	6.455	6.433	0.085	0.219
200	219,1	220,7	218,3	19,05	11,13	214,4	213,8	2,34	6,05
8	8.625	8.688	8.594	0.750	0.438	8.441	8.416	0.092	0.238

NOTES:
Outside diameter: The outside diameter of grooved pipe shall not vary more than the tolerance listed.
Gasket seat: The pipe surface shall be free from indentations, roll marks and projections from the end of the pipe to the groove.
Groove width: The bottom of the groove shall be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly.
The maximum allowed radius at the bottom of the groove is 3,8 mm/0,015"
Groove diameter: The groove must be of uniform depth for the entire pipe circumference. The groove must be maintained within the "C" diameter tolerance listed.
Nominal allowable pipe wall thickness: This is the nominal allowable pipe wall thickness which may be grooved.

Material specifications

Housing in black polyamide (medium viscosity) reinforced with 30% fiberglass

Properties		Unit	Test method	Value
General Properties				
Density		g/cm³	ISO 1183/A	1,36
Mechanical properties (Dry as Molded) Tensile modulus of elasticity (v = 1mm/min) Tensile yield stress (v = 5 mm/min)		%	ISO R 62	1,7
Tensile yield strain (v = 5 mm/min) Tensile stress at break (v = 5 mm/min) Tensile strain at break (v = 5 mm/min) Flexural modulus (v = 5 mm/min)		%	ISO 2577	0,1
Flexural strength (v = 5 mm/min)		%	ISO 2577	0,5
Charpy impact strength notched	+ 23°C - 30°C	MPa	ISO 527-1A	9500
Charpy impact strength unnotched	+ 23°C - 30°C	MPa	ISO 527-1A	-
Heat deflection temperature:		MPa	ISO 527-1A	175
- HDT/A (1.8 MPa)		%	ISO 527-1A	3,1
- HDT/B (0.45 MPa)		MPa	ISO 178	7200
Vicat softening temperature:		MPa	ISO 178	260
- VST/A/50 (10N) - VST/B/50 (50N)		kJ/m²	ISO 179/1eA	11

Gasket in EPDM-70 – Food use

Elastomer		EPDM	EN 681-1 WA/WC	ISO 1629
Colour		Black		
Hardness	Shore A	71	70 ± 5	ISO 868 / DIN 53 505
Tensile Strength	N/mm²	12,4	>9	ISO 37 / DIN 53 504
Elongation at Break	%	622	>200	ISO 37 / DIN 53 504
Ozone Resistance 50 pphm / 40 °C / 48 h / 20%	Visual	Fulfilled*	No cracks	ISO 1431 / DIN 53 509
Drinking Water Approval	D	Elastomer Guideline, Gaskets for pipes DN < 80mm		
	D	DVGW W-270, small sized and large sized sealings		
	A	Ö-Norm, B5014		
	FR	ACS, AFNOR XP P 41-250		
	GB	WRc, BS-6920, 65°C		

Tightening torque

Model	Max. torque
2" 2 ½" 3"	10-12 N·m
4" 6" 8"	15-17 N·m

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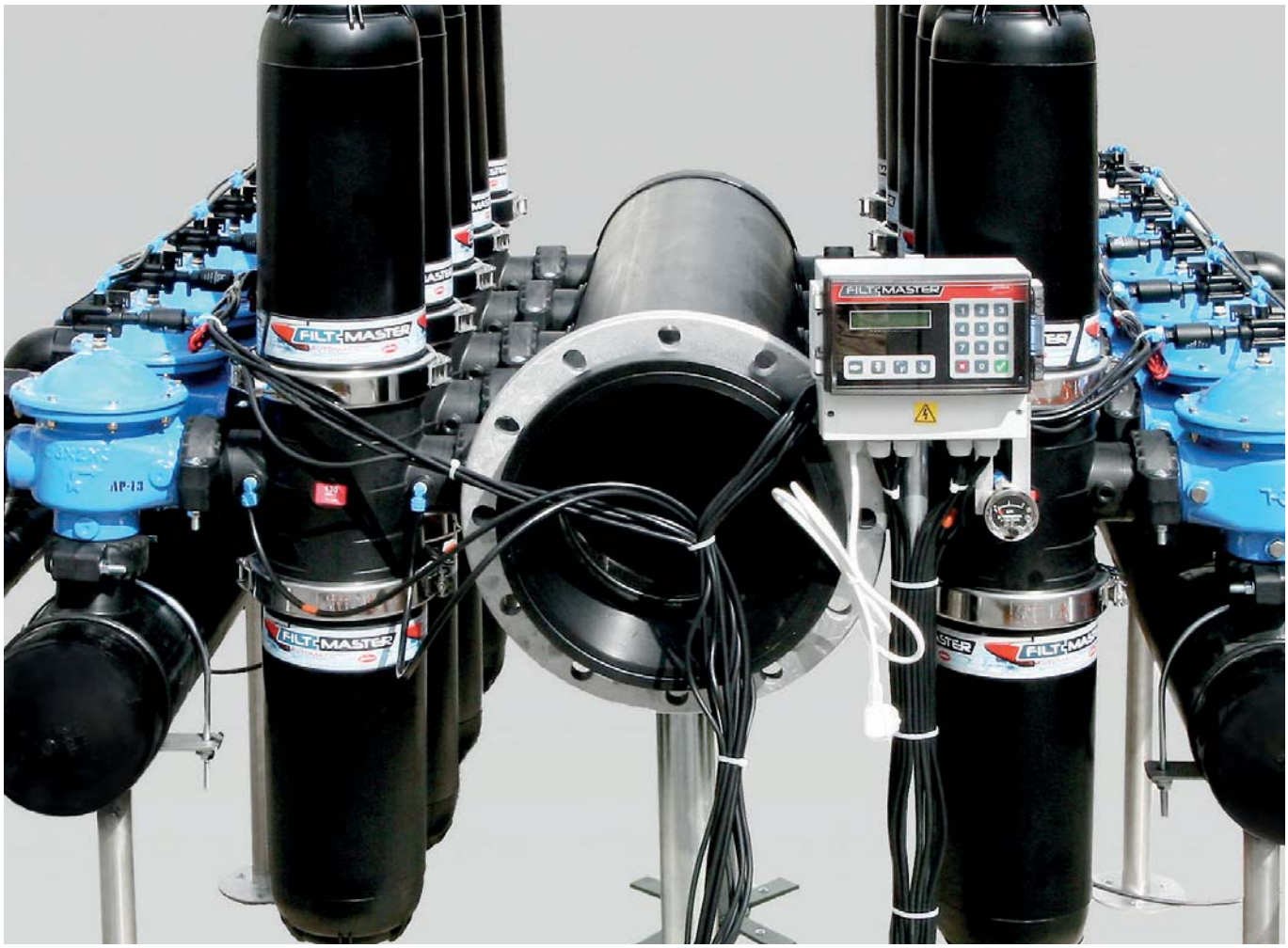

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