



Grooved End Piping System

Flexible Pipe Couplings, Fittings & Valves



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ISO 9001:2015 Certified



Grooved End Piping System

Alfa Rapid™ grooved end piping system has mechanical connections using flexible pipe couplings. Grooved dimensions are the same as "Victaulic". This unique new product line is an excellent alternative to conventional pipe flanges and pipe unions saving time, money and space. The line includes flexible pipe couplings 1-1/2" to 6" made of high strength glass reinforced polyamide and stainless steel bolts. A complete range of grooved end pipe fittings in polypropylene are available 1-1/2" to 4". Ball valves with pipe coupling ends complete the system.

Features

Designed for Rolled or Cut Grooved Pipes

Long Service Life

Quick Installation

- You only need to position the special seat between the grooves of the pipe or fittings, place the clamps over the gasket and screw on the bolts. Installation time is a fraction compared to welding, flanging or threading.

High Pressure Rating

- All sizes of fittings and clamps are at least 230 psi rated (PPR adaptor fittings are 190 psi rated at 20C (68°F))

Perfect Seal under Pressure or Vacuum ①

- The gasket encircles and contains the joint. *Positive internal fluid pressure* makes the gasket's internal surfaces seal. *Negative internal fluid pressure* works the same way by increasing seal contact pressure.

Vibration & Noise Attenuation ②

- The specially designed EPDM seal acts as a damper to attenuate propagation of noise and vibration.

Seismic Stress Absorption ②

- Positive clamping into the pipe grooves effectively resists axial loads due to internal fluid or external mechanical forces.

Easy Piping Alignment ③

- Fittings and piping may be adjusted for correct alignment without disassembly.

Piping Flexibility ④

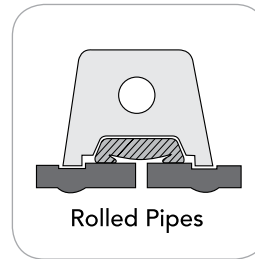
- The system is able to compensate for expansion, shrinkage and bending. Piping accessories for vibration or expansion are not necessary.

Easy Maintenance

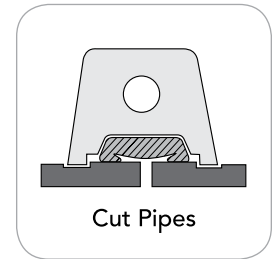
- System may be unbolted to clean, maintain and operate the system.
- Pipes may be rotated to extend service life.

Recycleable

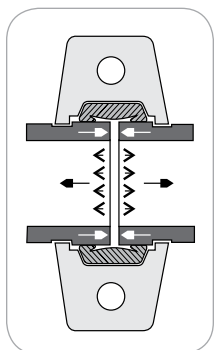
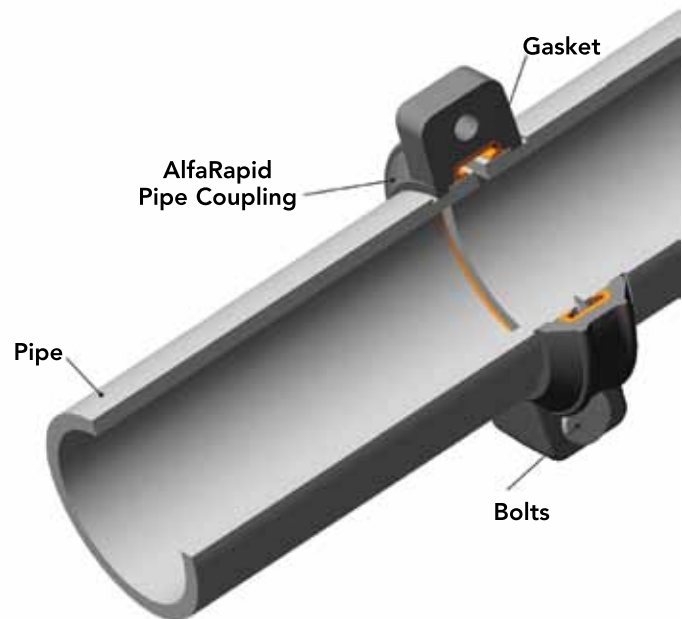
- Fittings are made of recycleable polypropylene



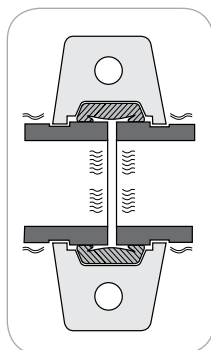
Rolled Pipes



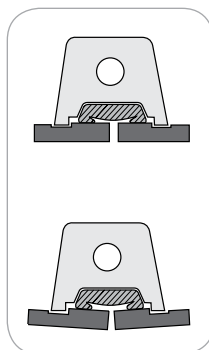
Cut Pipes



① Perfect fluid seal



② Vibration, noise attenuation and seismic adsorption



③ Easy alignment of piping



④ Flexibility



Grooved End Piping System

Advantages of Alfa Rapid™ vs. Flanged Connections

- Faster, cheaper installation
- Faster disassembly with only two bolts
- Easier adjustment of piping after assembly
- Lighter, less metal, two bolt sets versus four or eight
- A more compact mechanical connection – space saving

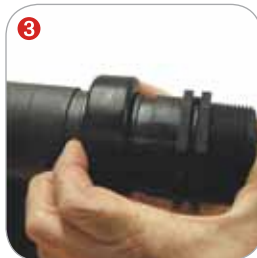


Working Pressures + Temperatures

Product	Sizes	Materials	Maximum Working Pressure @ 20C (68°F)		Working Temperature	
			PN (Bar)	PSI	C	°F
Pipe Clamps	1-1/2" to 2-1/2"	PAG/EPDM	40	580	-10 to 95C	14 to 203°F
	3" to 6"	PAG/EPDM	35	510	-10 to 95C	14 to 203°F
Fittings	All	PP	16	230	-10 to 95C	14 to 203°F
	All	PE100	16	230	-10 to 95C	14 to 203°F
	All	PVC	16	230	-10 to 60C	14 to 140°F
	All	PPR	12.5	190	-10 to 95C	14 to 203°F
Valves	All	PP/Nitrile	16	230	-10 to 95C	14 to 203°F
	All	PPR/Nitrile	16	230	-10 to 95C	14 to 203°F

* NOTE: 2-1/2" is available along with other fittings but in non-ANSI dimensions. OD = 2.99". Consult JJD

Pipe Coupling Assembly



- 1 & 2 Push the gasket completely onto one side the grooved connection.
- 3 & 4 Hold the grooved ends of the two fittings together and slide the gasket over, centering it between the two grooves.
- 5 & 6 Assemble the two clamp pieces over the gasket and assemble the bolts and nuts with washers.
- 7 & 8 Tighten the nuts. Do not apply excessive torque.



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Grooved End Piping System



Clamp Pieces
High impact black
PAG, UV stabilized



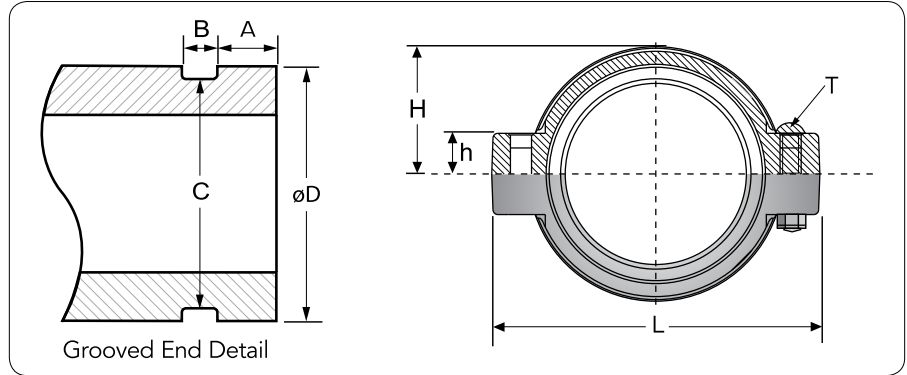
Gasket
EPDM standard,
FPM (Viton®),
optional



Fasteners
(Bolts/Nuts/Washers)
304SS standard,
316SS optional



**Flexible Pipe
Coupling**



PAG Flexible Pipe Couplings with 304 SS Fasteners

Supplied standard with EPDM gaskets. FPM (Viton®) gaskets are available special order.

Size	Item No.	A	B	C	D	L	H	h	Bolt Size T	Box Qty
1-1/2"	AR-PC015E-304	0.63	0.28	1.78	1.90	4.72	1.56	0.63	M10x50	65
2"	AR-PC020E-304	0.63	0.31	2.25	2.37	5.24	1.81	0.63	M10x50	60
3"	AR-PC030E-304	0.63	0.34	3.34	3.50	6.87	2.44	0.98	M12x70	35
4"	AR-PC040E-304	0.63	0.37	4.33	4.50	7.85	3.07	0.98	M12x70	18
6"	AR-PC060E-304	0.63	0.37	6.45	6.63	11.06	4.17	1.10	M12x70	10

NOTE: 2-1/2" is available along with other fittings but in non-ANSI dimensions. OD = 2.99". Consult Chemline.

PAG Flexible Pipe Couplings with 316 SS Fasteners

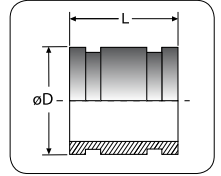
Supplied standard with EPDM gaskets. FPM (Viton®) gaskets are available special order.

Size	Item No.	A	B	C	D	L	H	h	Bolt Size T	Box Qty
1-1/2"	AR-PC015E-316	0.63	0.28	1.78	1.90	4.72	1.56	0.63	M10x50	65
2"	AR-PC020E-316	0.63	0.31	2.25	2.37	5.24	1.81	0.63	M10x50	60
3"	AR-PC030E-316	0.63	0.34	3.34	3.50	6.87	2.44	0.98	M12x70	35
4"	AR-PC040E-316	0.63	0.37	4.33	4.50	7.85	3.07	0.98	M12x70	18
6"	AR-PC060E-316	0.63	0.37	6.45	6.63	11.06	4.17	1.10	M12x70	10

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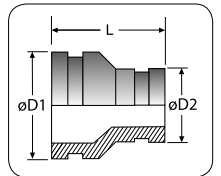
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Fittings



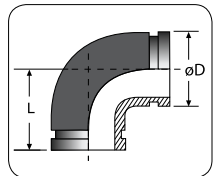
PP Nipples

Grooved Pipe x Grooved Pipe	Item No.	D	L	Box Qty
1-1/2"	AR-CP015	1.90	3.70	120
2"	AR-CP020	2.37	3.70	150
3"	AR-CP030	3.50	3.77	36
4"	AR-CP040	4.50	3.94	45



PP Reducers

Grooved End x Grooved End	Item No.	D1	D2	L	Box Qty
2" x 1-1/2"	AR-RC020-015	2.37	1.90	3.70	150
3" x 2"	AR-RC030-020	3.50	2.37	3.77	50
4" x 2"	AR-RC040-020	4.50	2.37	3.94	80
4" x 3"	AR-RC040-030	4.50	3.50	3.94	78



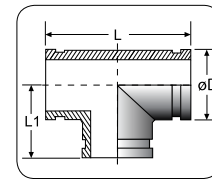
PP 90° Elbows

Size	Item No.	D	L	Box Qty
1-1/2"	AR-EL015	1.90	3.39	130
2"	AR-EL020	2.37	3.50	40
3"	AR-EL030	3.50	4.45	14
4"	AR-EL040	4.50	5.20	5

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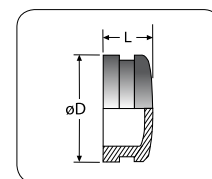
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Fittings



PP Tees

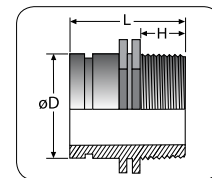
Size	Item No.	D	L	L1	Box Qty
1-1/2"	AR-TE015	1.90	3.39	6.77	80
2"	AR-TE020	2.37	3.50	7.01	30
3"	AR-TE030	3.50	4.45	8.90	9
4"	AR-TE040	4.50	5.20	10.39	11



PP Caps

Size	Item No.	D	L	Box Qty
1-1/2"	AR-CA015	1.90	1.77	200
2"	AR-CA020	2.37	1.85	150
3"	AR-CA030	3.50	2.01	70
4"	AR-CA040	4.50	2.05	80

Threaded Adaptors



PP Male Adaptors

Grooved Pipe x MNPT	Item No.	D1	H	L	Box Qty
1-1/2" x 1-1/2"	AR-MA015-015	1.90	3.15	0.98	100
2" x 1-1/2"	AR-MA020-015	2.37	3.19	0.98	80
2" x 2"	AR-MA020-020	2.37	3.19	1.02	80
3" x 2"	AR-MA030-020	3.50	3.27	1.02	54
3" x 2-1/2"	AR-MA030-025	3.50	3.33	1.12	36
3" x 3"	AR-MA030-030	3.50	3.48	1.26	35
4" x 3"	AR-MA040-030	4.50	3.62	1.26	48
4" x 4"	AR-MA040-040	4.50	4.06	1.69	30

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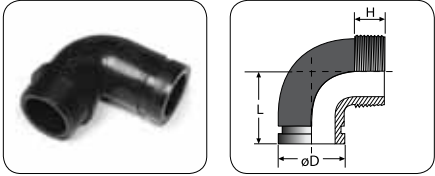
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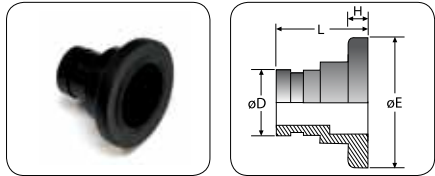
Threaded Adaptors



PP 90° Male Threaded Elbows

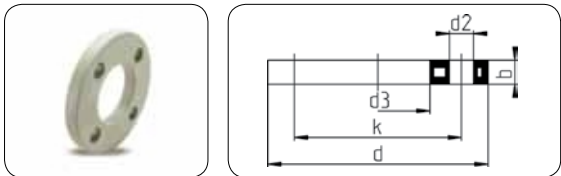
Size	Item No.	D	L	H	Box Qty
1-1/2"	AR-ME015	1.90	3.39	1.04	-
2"	AR-ME020	2.37	3.50	1.20	40
3"	AR-ME030	3.50	4.45	1.57	-
4"	AR-ME040	4.50	5.20	2.62	-

Flange Adaptors



PP Flange Adaptors

Size	Item No.	D	E	H	L	Box Qty
2"	AR-FLA020	2.37	2.00	0.71	3.78	36
3"	AR-FLA030	3.50	3.00	0.79	3.35	-
4"	AR-FLA040	4.50	4.00	0.95	3.66	-



PP ANSI Flange Rings

Size	Item No.	b	d	d2	d3	k	Box Qty
2"	AR-FLR020	0.71	6.38	0.75	3.07	4.75	-
3"	AR-FLR030	0.71	7.64	0.75	4.37	6.00	-
4"	AR-FLR040	0.71	9.02	0.75	5.24	7.50	-

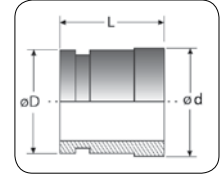




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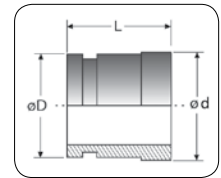
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Butt Weld Adaptors



PPR Green Butt Weld-On Adaptors

Grooved Pipe x Pipe Size	Item No.	D	d	L	Box Qty
1-1/2" x 50	AR-WAB-BRG-015-50M	1.90	1.97	3.00	140
2" x 50	AR-WAB-BRG-020-50M	2.37	1.97	3.21	86
2" x 63	AR-WAB-BRG-020-63M	2.37	2.48	3.37	86
2" x 75	AR-WAB-BRG-020-75M	2.37	2.95	3.48	80
3" x 75	AR-WAB-BRG-030-75M	3.50	2.95	3.54	36
3" x 90	AR-WAB-BRG-030-90M	3.50	3.54	3.82	36
3" x 110	AR-WAB-BRG-030-110M	3.50	4.33	4.86	32
4" x 90	AR-WAB-BRG-040-90M	4.50	3.54	3.94	18
4" x 110	AR-WAB-BRG-040-110M	4.50	4.33	4.98	18



PE100 Butt Weld-On Adaptors

Grooved Pipe x Pipe Size	Item No.	D	d	L	Box Qty
1-1/2" x 50	AR-WAB-PE1-015-50M	1.90	1.97	3.00	140
2" x 50	AR-WAB-PE1-020-50M	2.37	1.97	3.21	86
2" x 63	AR-WAB-PE1-020-63M	2.37	2.48	3.37	86
2" x 75	AR-WAB-PE1-020-75M	2.37	2.95	3.48	80
3" x 75	AR-WAB-PE1-030-75M	3.50	2.95	3.54	36
3" x 90	AR-WAB-PE1-030-90M	3.50	3.54	3.82	36
3" x 110	AR-WAB-PE1-030-110M	3.50	4.33	4.86	32
4" x 90	AR-WAB-PE1-040-90M	4.50	3.54	3.94	18
4" x 110	AR-WAB-PE1-040-110M	4.50	4.33	4.98	18

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AlfaRapid PP Ball Valves

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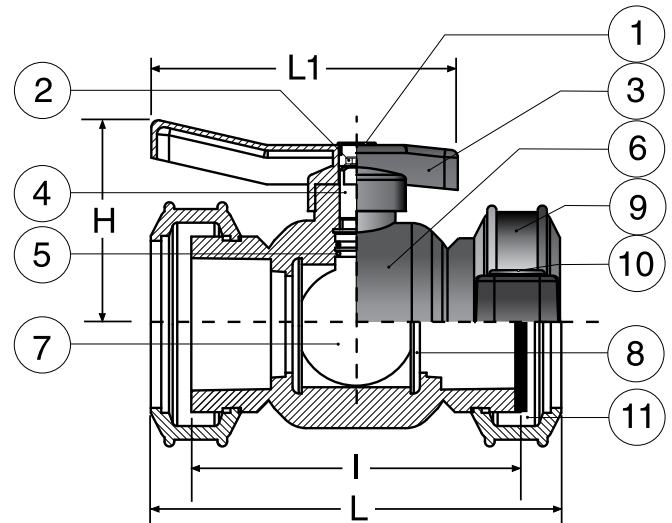


SERIES: ARV
 COUPLING SIZES: 1-1/2 – 4"
 VALVE SIZES: 1-1/4" – 3"
 BALL: Standard: Chromium plated brass
 Optional: PTFE coated brass
 TEA coated brass
 STEM: Standard: Brass
 Optional: PTFE coated brass
 TEA coated brass
 SEATS: PTFE
 STEM O-RINGS: Nitrile
 CLAMP PIECES: Black PAG
 CLAMP GASKET: Standard: EPDM
 Optional: FPM (Viton®)
 FASTENERS: Standard: 304 SS
 Optional: 316 SS

PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Handle Plug	1	PPG
2	Stem Nut	1	Steel
3	Handle	1	PAG
4	Stem	1	Brass (standard) PTFE coated Brass (optional) TEA coated Brass (optional)
5	Stem O-Rings	2	Nitrile
6	Body	1	PP
7	Ball	1	Chromium Plated Brass (standard) PTFE coated Brass (optional) TEA coated Brass (optional)
8	Seats	2	PTFE
9	Clamp Pieces	4	PAG
10	Fasteners	4 sets	304SS (standard) 316SS (optional)
11▲	Gasket	2	EPDM (standard) FPM (Viton®) (optional)



Supplied standard with EPDM gasket and 304 stainless steel fasteners*

Coupling Size	Valve Size	Item No.	I	L	H	L1	Box Qty
1-1/2"	1-1/4"	AR-VB012-015NE-304	130.0	180	96	150	12
2"	1-1/2"	AR-VB015-020NE-304	164.5	214	101	150	8
3"	2"	AR-VB020-030NE-304	168.5	218	113	150	2
3"	2-1/2"	AR-VB025-030NE-304	216.0	266	140	305	2
4"	3"	AR-VB030-040NE-304	240.0	300	150	305	2

*FPM (Viton®) gaskets and 316 stainless steel fasteners are also available



• Gela Oil & gas facilities. Photo courtesy of INGE Germany



• 2" capped spigots on thermoplastic manifolds for membrane water treatment



• Latest generation of ultra filtration systems featuring the AlfaRapid System
Photo courtesy of INGE Germany



• Assembly of water purification manifolds
Teblick Plastic Constructions & Installations
Photo courtesy of Euro Mec



• EURO MEC water treatment plants "Progetto H2Ohhh!"
Pomabamba, Peru. Chemline Hydro Cyclone shown on the left.
Photo courtesy of Euro Mec.