ISOJOINT®

Monolithic Isolating Joints



Isojoint® Design
-see page 2

Isojoint® Benefits & Advantages
-see pages 3-4

APS ADVANCE PRODUCTS & SYSTEMS, LLC

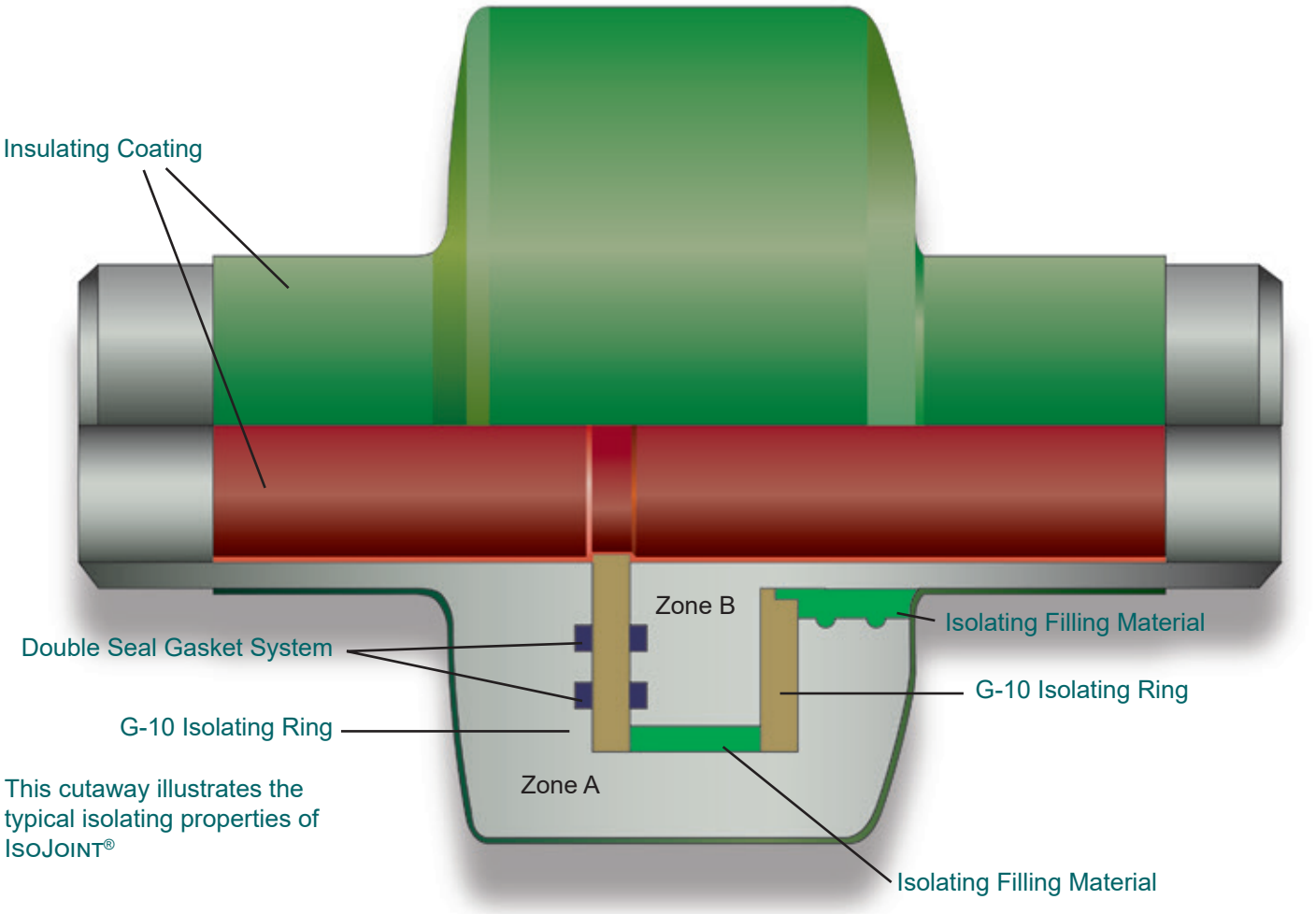
ISO-9001:2015 Certified Company - FM537405



IsoJoint® For Superior Cathodic Protection

IsoJoint® is a true monolithic isolating joint which effectively and efficiently stops short circuits and stray currents from damaging pipelines and equipment. IsoJoint® employs one or more, preassembled pressure seals and isolating ring. Unlike isolating gasket kits, IsoJoint® does not depend on an installer fitting gasket, sleeves and washers into a flange on location. Any one of these parts could be damaged causing a complete breakdown of the isolated flange, thus loosing cathodic isolation. Because IsoJoints® are welded into place as one piece units, field problems are virtually non-existent and the integrity of the isolation is kept intact.

Furthermore, once installed, IsoJoint® can be buried and forgotten ending your maintenance worries. In contrast, inspection pits and vaults must be used to monitor below ground isolation gaskets. And constant visual inspections of above ground isolation gaskets are necessary to check for shorts in the gaskets. This requires a continuing maintenance program during the entire life of the pipeline.



This cutaway illustrates the typical isolating properties of IsoJoint®

IsoJoint® provides for current control by separating pipe work into distinct zones and effectively eliminating long-line currents. This assures increased plant and equipment life by reducing or eliminating corrosion damage. Effective control can be attained where a branch is connected to the mainline, where two pipelines of different material connect or where well-coated pipe meets a poorly coated system.

Advance Products and Systems, LLC, is the exclusive provider of the IsoJoint® monolithic weld end isolating joints. The IsoJoint® is manufactured in sizes ranging from 1/2" diameter to 150" diameter with an ANSI rating of 150# to 2500# and up to API 10,000#. All types of carbon and stainless steel are used in their manufacturing.

For truly superior cathodic isolation, Advance Products and Systems offers an IsoJoint® manufactured according to ASME VIII Division 1 standards and certified by ISO 9001 Quality Assurance making it the supreme monolithic joint on the market today.

IsoJoint® Monolithic Isolation Joints



Advance Products and Systems has IsoJoints® ranging in sizes from 1/2” to 150” diameter.

Benefits & Advantages

• No loss of integrity due to thermal expansion or ground stress as is common with flange isolation gasket kits

• In-factory tested hydrostatically and electrically, to 1 1/2 times their working pressure. Non-destructive testing is also available.

• Maintenance-free, reliable cathodic isolation of equipment in required isolation applications such as compressor stations

• No labor intensive, complicated installation procedure required as with isolation gasket kits

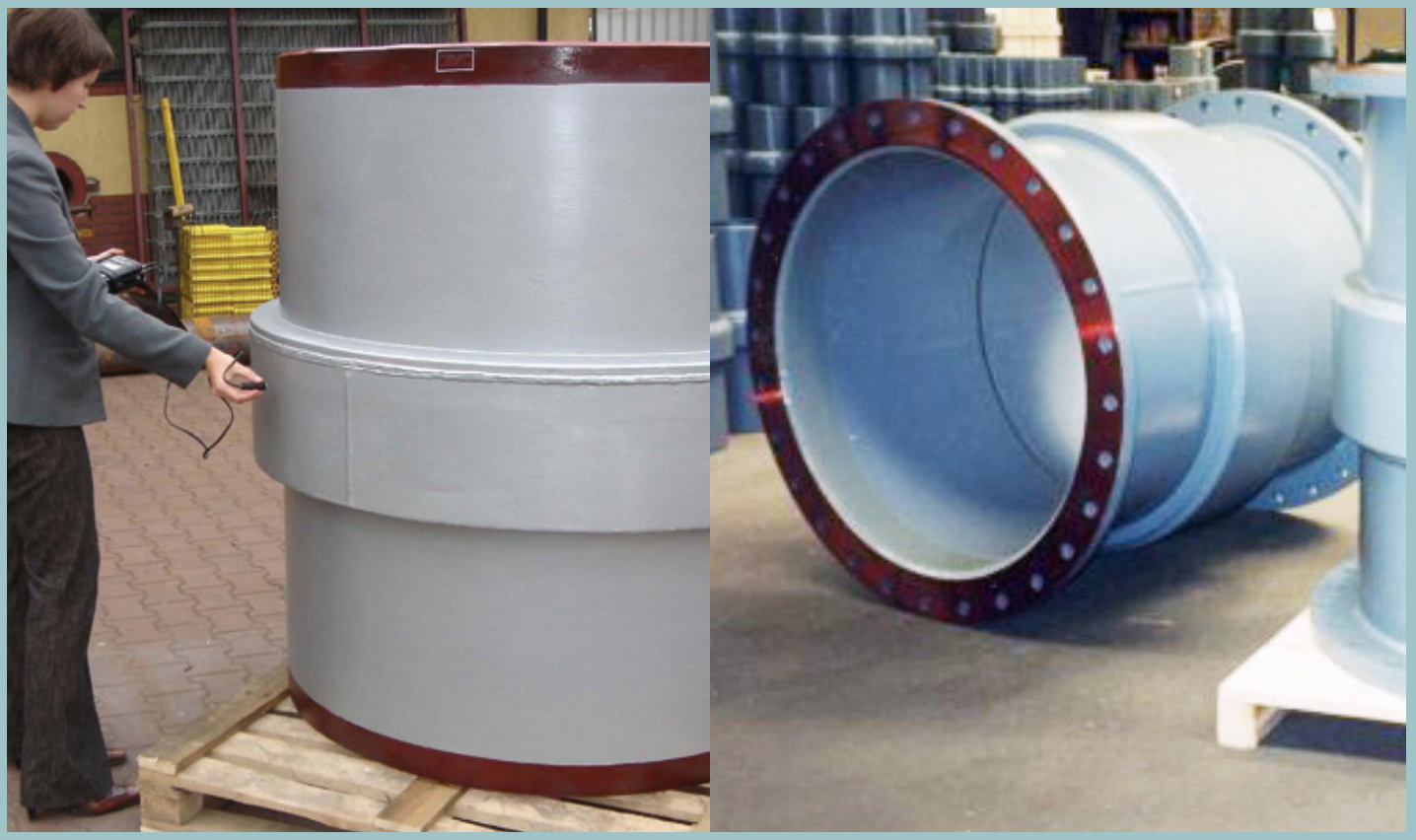
• No inspection pits, vaults or maintenance needed - weld into place and direct bury - reliable, worry-free cathodic isolation

• Non-conductive epoxy coatings help prevent shorts, both externally and internally

• Isolates stray currents impressed on the pipe from exterior forces such as electrical transmission systems, earth currents and currents flowing from point to point

• Excellent bending and torsional resistance

• Earthquake resistant - Acts as a thrust block or joint



Weld end or flanged end type IsoJoints® are available.

Advantage In Savings

The notion that flange isolating gasket kits are more cost efficient than monolithic joints is not well supported when figuring in all the variables.

Materials, labor intensive installation, pre-online inspection and continuous maintenance as well as possible and probable replacement of deteriorated gasket kits all add up, ultimately making the IsoJoint® a very effective and cost efficient method of cathodic isolation.

Summary

Applications

- On existing and new construction
- On gas, oil, liquid petrochemical and water lines
- Before and from gas distribution stations
- On gas or liquid fuel tanks
- Under or overground usage

Mechanical Properties

- Bodies of monolithic joints are made as rolled and welded construction of steel sheet or forged bodies
- All test results are available

Electrical Properties

- Highest quality isolating materials
- Spark gaps available for extra isolation
- No sparking breakdown during 1 minute hydrostatic testing
- Isolating resistance above 10MΩ at voltage DC 1kV in dry conditions - standard, higher voltage resistance available
- No breakdown during pressured leak testing

Basic Parameters of Insulating Joints

(Additional sizes and ANSI ratings available)

ANSI 150 (PN 25)

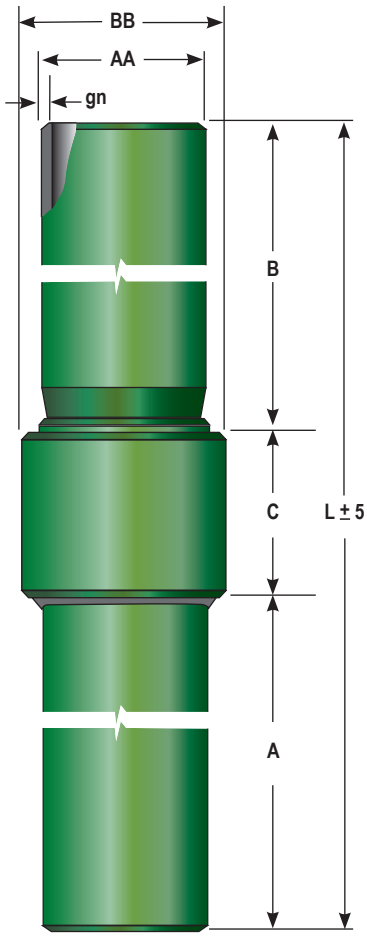
- Maximum Operating Pressure, bar - 25,0 (363 psi)
- Pressure of Strength Test, PT, bar - 37,5 (544 psi)
- Working Temperature Range TS, °F - -4° to 158°
- Electrical voltage AC 5kV(50Hz) in 1 min. time (in dry condition)
- Resistance at voltage DC 1kV (in dry condition) R,MΩ - 10,0

ANSI 300 (PN 65)

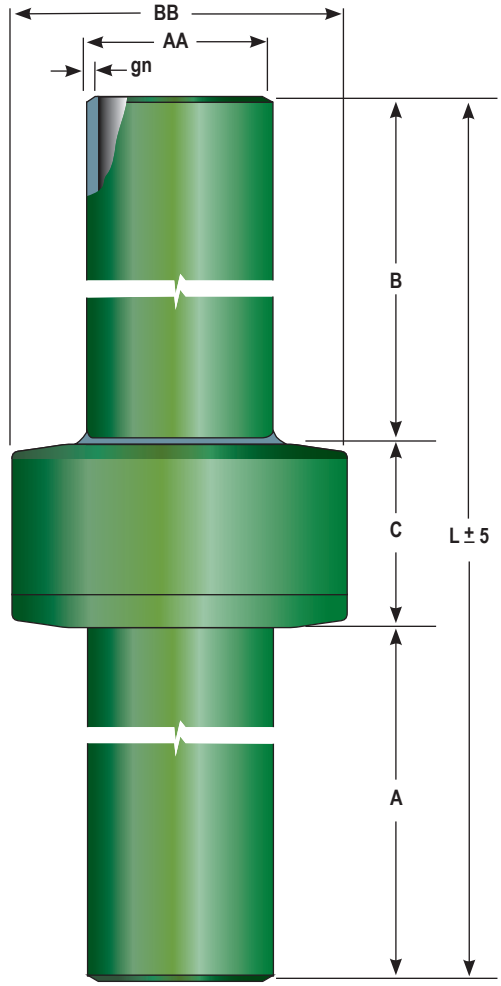
- Maximum Operating Pressure, bar - 63,0 (914 psi)
- Pressure of Strength Test, PT, bar - 94,5 (1370 psi)
- Working Temperature Range TS, °F - -4° to 212°
- Electrical voltage AC 5kV(50Hz) in 1 min. time (in dry condition)
- Resistance at voltage DC 1kV (in dry condition) R,MΩ - 10,0

ANSI 600 (PN 100)

- Maximum Operating Pressure, bar - 100,0 (1450 psi)
- Pressure of Strength Test, PT, bar - 150,5 (2183 psi)
- Working Temperature Range TS, °F - -4° to 212°
- Electrical voltage AC 5kV(50Hz) in 1 min. time (in dry condition)
- Resistance at voltage DC 1kV (in dry condition) R,MΩ - 10,0



ANSI 150 (PN 25)



ANSI 300 (PN 65) & ANSI 600 (PN 100)

DN		ANSI 150 (PN 25)													
		AA		gn min		BB		A		B		C		L		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
1/2"	15	.917	21,3	.125	3,2	1.326	33,7	7.874	200	8.070	205	1.771	45	9.02	229	1	0,5
3/4"	20	1.059	26,9	.125	3,2	1.326	33,7	7.874	200	8.070	205	1.771	45	9.65	245	2	1,0
1"	25	1.326	33,7	.125	3,2	1.669	42,4	7.874	200	8.070	205	1.771	45	9.84	250	3	1,3
1 1/4"	32	1.669	42,4	.125	3,2	2.007	51,0	7.874	200	8.070	205	1.771	45	11.81	300	4	1,8
1 1/2"	40	1.901	48,3	.141	3,6	2.374	60,3	7.874	200	8.070	205	1.771	45	11.81	300	4.5	2,1
2"	50	2.374	60,3	.141	3,6	2.996	76,1	7.874	200	8.267	210	2.362	60	13.78	350	6.5	3,0
2 1/2"	65	2.996	76,1	.157	4,0	4.000	101,6	8.661	220	8.464	215	4.527	115	21.653	550	10	4,5
3"	80	3.500	88,9	.177	4,5	4.250	108,0	8.661	220	8.464	215	4.527	115	15.75	400	13	6,0
4"	100	4.250/4.500	108,0/114,3	.196	5,0	5.236	133,0	9.448	240	9.251	235	4.921	125	19.69	500	22	10,0
5"	125	5.236	133,0	.196	5,0	6.259	159,0	9.842	250	9.448	240	6.299	160	25.590	650	55	25,0
6"	150	6.259/6.625	159,0/168,3	.220	5,6	7.625	193,7	9.842	250	9.448	240	6.299	160	19.69	500	62	28,0
8"	200	8.625	219,1	.248	6,3	9.625	244,5	11.811	300	11.811	300	7.874	200	19.69	500	132	60,0
10"	250	10.748	273,0	.248	6,3	11.751	298,5	12.598	320	12.598	320	10.236	260	27.56	700	143	65,0
12"	300	12.751	323,9	.279	7,1	14.000	355,6	11.811	300	11.811	300	11.811	300	27.56	700	243	110,0
14"	350	14.011	355,9	.279	7,1	16.000	406,4	11.811	300	11.811	300	11.811	300	35.433	900	265	120,0
16"	400	16	406,4	.314	8,0	17.519	445,0	11.811	300	11.811	300	11.811	300	35.433	900	441	200,0
18"	450	17.992	457,0	.314	8,0	20.000	508,0	11.811	300	11.811	300	11.811	300	35.433	900	463	210,0
20"	500	20	508,0	.314	8,0	21.456	545,0	13.779	350	13.779	350	11.811	300	39.370	1000	474	215,0
24"	600	24.015	610,0	.346	8,8	25.787	655,0	13.779	350	13.779	350	11.811	300	39.370	1000	496	225,0
28"	700	27.992	711,0	.346	8,8	29.842	758,0	13.779	350	13.779	350	11.811	300	47.24	1100	670	304,0
32"	800	32	813,0	.393	10,0	33.858	860,0	15.748	400	15.748	400	11.811	300	43.307	1100	853	387,0
36"	900	35.984	914,0	.393	10,0	37.392	965,0	15.748	400	15.748	400	11.811	300	43.307	1100	963	437,0
40"	1000	40	1016,0	.433	11,0	42.125	1070,0	17.716	450	17.716	450	15.748	400	51.181	1300	1554	705,0
42"	1050	42	1067,0	.433	11,0	44.291	1125,0	17.716	450	17.716	450	15.748	400	51.181	1300	1609	730,0
44"	1100	44	1118,0	.492	12,5	46.259	1175,0	21.653	550	21.653	550	15.748	400	59.055	1500	1817	824,0
48"	1200	47.992	1219,0	.492	12,5	50.196	1275,0	19.685	500	19.685	500	19.685	500	59.055	1500	2425	1100,0
56"	1400	55.984	1422,0	.559	14,2	58.267	1480,0	27.559	700	27.559	700	19.685	500	74.803	1900	3435	1558,0

***IsoJoint® Monolithic Isolating Joints can be designed to meet customer specifications with special dimensions, which includes special lengths. Contact APS for additional information.*

DN		ANSI 300 (PN 65)													
		AA		gn min		BB		A		B		C		L		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
1/2"	15	.917	21,3	.125	3,2	2.374	60,3	4.724	120	4.724	120	2.362	60	9.84	250	3	1,4
3/4"	20	1.059	26,9	.125	3,2	2.559	65,0	4.724	120	4.724	120	2.362	60	9.84	250	3.5	1,6
1"	25	1.326	33,7	.125	3,2	2.996	76,1	4.724	120	4.724	120	2.362	60	9.84	250	4.5	2,0
1 1/4"	32	1.669	42,4	.141	3,6	3.500	88,9	4.724	120	4.724	120	2.362	60	11.811	300	6	2,7
1 1/2"	40	1.901	48,3	.141	3,6	3.500	88,9	4.724	120	4.724	120	2.362	60	11.811	300	8	3,5
2"	50	2.374	60,3	.216	5,5	4.000	101,6	5.551	141	5.700	145	2.519	64	13.779	350	9	4,0
2 1/2"	65	2.996	76,1	.196	5,0	5.236	133,0	6.338	161	6.181	157	3.228	82	15.748	400	18	8,0
3"	80	3.500	88,9	.220	5,6	5.500	139,7	6.338	161	6.181	157	3.228	82	19.685	500	22	10,0
4"	100	4.250/4.500	108,0/114,3	.248	6,3	7.000	177,8	8.031	204	8.188	208	3.464	88	19.685	500	42	19,0
5"	125	5.236	133,0	.248	6,3	7.625	193,7	8.031	204	8.188	208	3.464	88	19.685	500	77	35,0
6"	150	6.259/6.625	159,0/168.3	.279	7,1	10.748	273,0	9.330	237	9.330	237	4.960	126	23.622	600	117	53,0
8"	200	8.625	219,1	.279	7,1	12.750	323,9	9.330	237	9.330	237	4.960	126	23.622	600	183	83,0
10"	250	10.748	273,0	.279	7,1	14.000	355,6	11.299	287	11.299	287	4.960	126	31.50	800	187	85,0
12"	300	12.751	323,9	.314	8,0	17.992	457,0	11.181	284	11.181	284	5.196	132	31.50	800	265	120,0
14"	350	14.011	355,9	.314	8,0	17.992	457,0	11.181	284	11.181	284	5.196	132	39.370	1000	309	140,0
16"	400	16	406,4	.314	8,0	20.000	508,0	11.102	282	10.078	256	6.377	162	39.370	1000	364	165,0
18"	450	17.992	457,0	.346	8,8	24.015	610,0	13.267	337	13.385	340	8.779	223	39.370	1000	661	300,0
20"	500	20	508,0	.346	8,8	25.984	660,0	15.236	387	15.354	390	8.779	223	47.24	1100	772	350,0
24"	600	24.015	610,0	.393	10,0	31.889	810,0	15.236	387	15.354	390	8.779	223	47.24	1100	1323	600,0
28"	700	27.992	711,0	.492	12,5	34.055	865,0	13.464	342	13.582	345	12.322	313	51.18	1100	1653	750,0
32"	800	32	813,0	.559	14,2	38.385	975,0	13.464	342	13.582	345	12.322	313	39.370	1000	2006	910,0
36"	900	35.984	914,0	.559	14,2	44.000	1118,0	19.685	500	19.685	500	15.748	400	55.118	1400	2066	937,0
40"	1000	40	1016,0	.629	16,0	48.228	1225,0	19.685	500	19.685	500	15.748	400	55.118	1400	3752	1702,0
42"	1050	42	1067,0	.629	16,0	52.000	1321,0	19.685	500	19.685	500	15.748	400	55.118	1400	3704	1680,0
44"	1100	44	1118,0	.708	18,0	52.000	1321,0	27.559	700	27.559	700	15.748	400	70.866	1800	4012	1820,0
48"	1200	47.992	1219,0	.787	20,0	55.984	1422,0	39.370	1000	39.370	1000	19.685	500	98.425	2500	4431	2010,0
56"	1400	55.984	1422,0	.787	20,0	67.322	1710,0	39.370	1000	39.370	1000	19.685	500	98.425	2500	6283	2850,0

***IsoJoint® Monolithic Isolating Joints can be designed to meet customer specifications with special dimensions, which includes special lengths. Contact APS for additional information.*

DN		ANSI 600 (PN 100)													
		AA		gn min		BB		A		B		C		L		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
1/2"	15	.917	21,3	.125	3,2	2.374	60,3	4.724	120	4.724	120	2.362	60	9.84	250	3	1,4
3/4"	20	1.059	26,9	.125	3,2	2.559	65,0	4.724	120	4.724	120	2.362	60	9.84	250	3.5	1,6
1"	25	1.326	33,7	.125	3,2	2.996	76,1	4.724	120	4.724	120	2.362	60	9.84	250	4.5	2,0
1 1/4"	32	1.669	42,4	.141	3,6	3.500	88,9	4.724	120	4.724	120	2.362	60	11.811	300	6	2,7
1 1/2"	40	1.901	48,3	.141	3,6	3.500	88,9	4.724	120	4.724	120	2.362	60	11.811	300	8	3,5
2"	50	2.374	60,3	.216	5,5	4.000	101,6	5.551	141	5.700	145	2.519	64	13.779	350	9	4,0
2 1/2"	65	2.996	76,1	.196	5,0	5.236	133,0	6.338	161	6.181	157	3.228	82	15.748	400	18	8,0
3"	80	3.500	88,9	.220	5,6	5.500	139,7	6.338	161	6.181	157	3.228	82	19.685	500	22	10,0
4"	100	4.250/4.500	108,0/114,3	.248	6,3	7.000	177,8	8.031	204	8.188	208	3.464	88	19.685	500	42	19,0
5"	125	5.236	133,0	.248	6,3	7.625	193,7	8.031	204	8.188	208	3.464	88	19.685	500	77	35,0
6"	150	6.259/6.625	159,0/168,3	.279	7,1	10.748	273,0	9.330	237	9.330	237	4.960	126	23.622	600	117	53,0
8"	200	8.625	219,1	.314	8,0	12.750	323,9	9.330	237	9.330	237	4.960	126	23.622	600	156	71,0
10"	250	10.748	273,0	.346	8,8	14.000	355,6	10.511	267	10.905	277	6.141	156	31.50	800	205	93,0
12"	300	12.751	323,9	.346	8,8	17.992	457,0	9.606	244	10.000	254	7.952	202	31.50	800	397	180,0
14"	350	14.011	355,9	.393	10,0	17.992	457,0	9.724	247	9.881	251	7.952	202	39.370	1000	397	180,0
16"	400	16	406,4	.433	11,0	20.000	508,0	13.464	342	13.228	336	8.740	222	39.370	1000	494	224,0
18"	450	17.992	457,0	.433	11,0	24.015	610,0	13.464	342	13.228	336	8.740	222	39.370	1000	749	340,0
20"	500	20	508,0	.472	12,0	25.984	660,0	13.070	332	12.332	313	13.976	355	47.24	1100	1058	480,0
24"	600	24.015	610.0	.492	12,5	31.889	810,0	13.070	332	12.332	313	13.976	355	47.24	1100	1565	710,0
28"	700	27.992	711,0	.559	14,2	34.055	865,0	11.811	300	11.811	300	15.748	400	51.18	1100	2094	950,0
32"	800	32	813.0	.559	14,2	38.385	975,0	11.811	300	11.811	300	15.748	400	39.370	1000	2756	1250,0
36"	900	35.984	914,0	.629	16,0	44.000	1118,0	19.685	500	19.685	500	15.748	400	55.118	1400	5004	2270,0
40"	1000	40	1016,0	.708	18,0	48.228	1225,0	19.685	500	19.685	500	15.748	400	55.118	1400	4938	2240,0
42"	1050	42	1067,0	.708	18,0	52.000	1321,0	19.685	500	19.685	500	15.748	400	55.118	1400	5353	2428,0
44"	1100	44	1118,0	.787	20,0	52.000	1321,0	27.559	700	27.559	700	15.748	400	70.866	1800	5908	2680,0
48"	1200	47.992	1219,0	.866	22,0	55.984	1422,0	39.370	1000	39.370	1000	19.685	500	98.425	2500	8377	3800,0
56"	1400	55.984	1422,0	.944	24,0	67.322	1710,0	39.370	1000	39.370	1000	19.685	500	98.425	2500	9921	4500,0

***IsoJoint® Monolithic Isolating Joints can be designed to meet customer specifications with special dimensions, which includes special lengths. Contact APS for additional information.*

TO ORDER PLEASE SPECIFY THE FOLLOWING:

1. Diameter of pipe
2. ANSI rating
3. Grade of pipe material
4. Wall thickness
5. Product to be transported
6. Temperature of transported material (160°F is standard. Higher temperature materials available upon request.)
7. Additional X-ray, Non-destructive testing. Electrical and hydrostatic testing is standard. (Please state requirements)

OTHER PRODUCTS AVAILABLE

- Kleerband® Flange Protectors
- Radolid® Nut Protective Caps
- Casing Insulators and End Seals
- Innerlynx® - Modular Mechanical Seals
- Cathodic Isolating Gaskets
- Foreman Nite Caps
- Safety Spray Shields
- UBolt-Cote® and Atlas® Pipe Support

PO Box 60399 • Lafayette, Louisiana 70596-0399
800-315-6009 • 337-233-6116 • FAX 337-232-3860
E-Mail: sales@apsonline.com • Website: www.apsonline.com

Made in USA

Distribuido por:

FSS INTER S.A.S.
Cra 55 # 17 - 68
Puente Aranda - Bogotá D.C. - Colombia
Cel. 350 6894088 - 3011260413
asesor1@fssinter.com
www.fssinter.com
14 años de alianza - Distribuidores Exclusivos

Advance Products & Systems, LLC is not responsible for errors printed in this brochure.

Advance Products & Systems, LLC shall repair or replace (within the limitations of such applicable express written warranty as may be issued by it) any product or portions thereof, which prove to be defective in workmanship or material for a period of 12 months from shipment date. The foregoing in lieu of all warranties, express or implied, and all other obligations or liabilities on the part of APS, on account of the product which it may sell. In no event shall APS be liable for consequential or special damages: nor except as it may otherwise specifically agree in writing, installation, or other work which may be done upon or in connection with the product by APS/ the distribution / dealer or others. THE LIMITED WARRANTIES PROVIDED IN THIS AGREEMENT AND THE OBLIGATIONS AND LIABILITIES OF APS ARE THE ONLY WARRANTIES MADE BY APS AS TO THE PRODUCT. APS MAKES NO EXPRESS OR OTHER IMPLIED WARRANTIES, BY COURSE OF DEALING, USAGE OF TRADE, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE (WHETHER GENERAL OR SPECIFIC), OR OTHERWISE.

REV 063020