ElōFIT

Catalog 2015

Polyethylene Fittings
for Gas & Water under pressure

nupi
AMERICAS

CATALOG 2015
REVISION 1
VALID FORM MARCH 2015

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THE COMPANY

Registered Office & Headquarters - Busto Arsizio (VA) Italy

Production, Operations & Administration Centre- Castel Guelfo di Bologna (BO) Italy

Production Facility - Imola (BO) Italy

Nupi Americas' parent company, **Nupigeco S.p.A.**, was formed in Italy **more than 40 years** ago in the early 1970's. Relying on experience and constant growth, our company has proven to be a exible, cutting edge manufacturer, ready to meet the needs of the market while also protecting the environment. **In 2001, Nupigeco entered the North American market** by establishing Nupi Americas, Inc., a whollyowned subsidiary of Nupigeco, with operations based in Houston, TX.

NUPIGECO S.p.A. and Nupi Americas together develop and manufacture piping systems for use in industrial, sanitary (plumbing), HVAC, waterworks, gas, and irrigation markets. Nupigeco's Industrial division was established in 1995 to develop and produce thermoplastic piping systems specifically targeted to the oil and gas, chemical and petrochemical markets.

These products are **produced and marketed worldwide in more than 70 countries**.

NUPIGECO S.p.A. offers a complete range of pipe and fittings made in advanced thermoplastic materials with trademarks.

NIRON, MULTINUPI, ELOFIT, ELOTHERM, ELOPRESS, POLYSYSTEM, POLYETHYLENE PIPES, MULTIGECO, SMARTFLEX, OILTECH, SUPER OILTECH, ELOWEB, ECOWAVE, NRGEO and others.

These trademarked systems are real **"system solutions"**, covering a wide range of applications, reducing costs, avoiding waste and increasing productivity. Due to their quality, these products have passed many different tests and have **obtained the most prestigious certificates** and listings, in line with the regulations of the five continents for the construction of water and gas networks and systems for the transport of fuel.

THE COMPANY

Producing better quality and being cost effective is the goal, which is made easier everyday by new technology. **Nupigeco, S.p.A. is continuously investing in research and develoipment programs**, while strengthening our production systems, operated by a sophisticated technology that guarantees the highest quality of products. Our facilities use modern, state-of-the-art computer-controlled production equipment and methods, which together with **continuous quality control systems guarantees products of the highest quality**. On these solid foundations Nupigeco and Nupi Americas demonstrate leadership throughout the thermoplastic piping industry.

Our customers can rely on the best quality materials and precise manufacture, obtained through completely automated production systems and continuous on-time deliveries, resulting in timely deliveries which allow planning to be done in real time. **Customer satisfaction is pursued through high quality products and the constant attention to our customer's needs and requirements**, and by means of an effective team of people in post-sales service, effective and precise technical assistance, and intensive training of installers.

The world heaquarters and injection molding operations of NUPIGECO S.p.A. are located in Busto Arsizio near Milan, Italy.

Major extrusion facilities and support operations are located in Castel Guelfo (Bo) and Imola (Bo) situated in strategic industrial areas near Bologna. **NUPIGECO S.p.A. is present all over the world**, with manufacturing facilities, a liated companies and warehouses in TX and New England (Nupi Americas), Brazil, China, Australia, UAE, Germany, France, Spain, Belgium and the UK.

Production, Operations & Administration Centre- Castel Guelfo di Bologna (BO) Italy

Production & Operation Centre - Houston (TX) USA

ACTIVITY

Industrial avant-garde in the transport of liquid and gaseous fluids using systems made of plastic material

Sanitary systems
Heating systems
Aqueducts
Gas pipelines
Irrigation
Transport of food fluids
Conditioning
Cooling
Industrial installations
Petroleum industry
Chemical and
Petrochemical industry

Our numbers

- Presence in the market for more than 30 years
- 22 product lines
- 300 employees
- 3 production plants in Italy
- 3 production plants in the world (Texas, Brazil, China)
- 26 extrusion lines in Italy, 2 lines in the U.S., 3 lines in China and 2 lines in Brazil
- 40 injection molding machines for the production of fittings
- 9 warehouses in Europe and the rest of the world (Germany, France, Spain, Belgium, UK, Texas, Brazil, China, UAE)
- 10% of turnover invested in R & D
- 150,000 square meters of surface area occupied by NUPIGECO in the world

Our strengths

- Exports established in more than 70 countries in 5 continents
- Worldwide after-sales assistance
- R & D department dedicated to Internal Development, Technical Support, After-Sales Service
- Production of pipes and fittings from ø ½" to ø 42"
- Training center for each authorized distributor

GLOSSARY

PE	*Polyethylene*
PP	*Polypropylene*
ND, OD	*Nominal Diameter/Outside Diameter - Pipe or fitting external diameter in inches*
e	*Wall thickness at any point around the circumference of a component rounded to the next greater 0,1mm*
Pfa/PR	*Standard pressure rate. The design capacity*
PSI	*Operation pressure recommended for general durability in handling and for use in typical water service installations*
MRS	*Mirnimum required strength of a pipe or fitting*
DR	*Standard Nominal Ratio: ratio of pipe outside diameter to wall thickness*
HDS	*Hydrostatic design stress (HDS=HDB/DSF)*
DSF	*Design safety coefficient*
HDB	*Hydrostatic design basis*
FSF	*Fluid safety coefficient*
TSF	*Temperature safety coefficient*

LEGEND

Nupi Americas item code	**Code**
Nominal Diameter	**ND**
It indicates the maximum value of weldability of the fitting on the pipe with the same DR or lower value.	**Max DR**
Maximum drilling depth for tapping tees	**Pf Min SDR**
For tapping tees it indicates the dimension of the drilled hole. For branch saddles it indicates the usable hole size as declared by Nupi americas	**Max Hole (Ø)**
Quantity per box (*)	**Pack**
Quantity per pallet (*)	**Q.ty pallet**
Item weight (lb)	**Weight lb/p.**
Item volume (ft^3)	**Volume ft^3 / p.**
Suitable for gas	
Suitable for water	
Sewage (NOT suitable for the trasportation of human coonsuptio fluids)	
Industrial installations	
Factory Mutual (FM) Approval Products	

(*) Packaging can change without any notice due to company needs.
All dimensions have to be considered in inches if not otherwise mentioned

PE

POLYETHYLENE

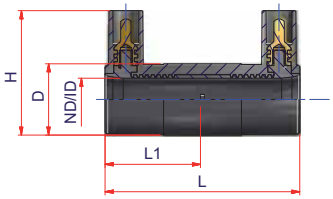
1

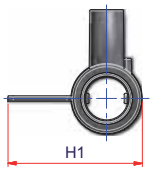
EloFIT

POLYETHYLENE FITTINGS FOR GAS & WATER UNDER PRESSURE

ELECTROFUSION FITTINGS

(A)





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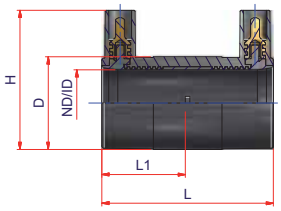


ELECTROFUSION COUPLER

[1] *Weldable on pipe DR 10 - 9 - 7*

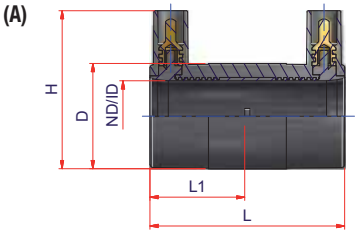
[2] *Weldable on pipe DR 12.5 - 11.5 - 11*

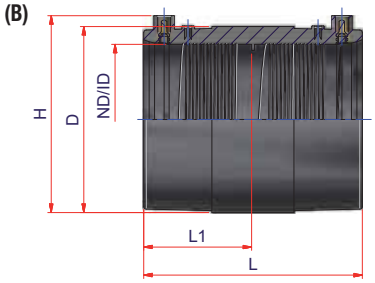
Electrofusion coupler with removable stoppers

PE4710 230PSI SDR11 • CTS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (CTS)	ID	L1	L	D	H	H1
12EIME012C	A	**1/2" CTS**	10 [1]	30	2640	0.110	0.0099	1/2"	0.62	1.42	2.91	1.06	1.89	2.01
12EIME01C	B	**1" CTS**	12.5 [2]	40	1920	0.151	0.0148	1"	1.12	1.42	2.91	1.59	2.40	-

ELECTROFUSION FITTINGS





ELECTROFUSION COUPLER

(1) *Weldable on pipe DR 11 - 10*

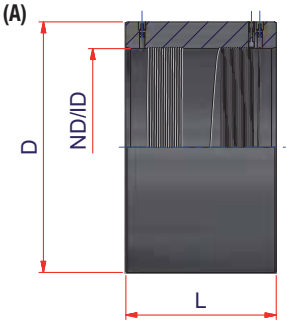
(2) *Weldable on pipe DR 17 - 15.5 - 13.5 - 11*

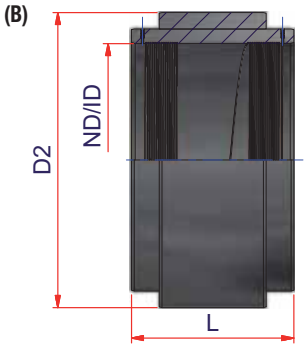
Electrofusion coupler with removable stoppers

PE4710 230PSI SDR11 • IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	L1	L	D	H	
12EIME034	A	**3/4" IPS**	11 (1)	40	1920	0.162	0.0148	3/4"	1.05	1.41	2.91	1.59	2.40	
12EIME01	A	**1" IPS**	11 (1)	40	1920	0.157	0.0148	1"	1.31	1.41	2.91	1.79	2.40	
12EIME114	A	**1" 1/4 IPS**	11 (1)	30	1440	0.257	0.0208	1" 1/4	1.66	1.57	3.26	2.16	2.91	
12EIME112	A	**1" 1/2 IPS**	11 (1)	20	960	0.369	0.0297	1" 1/2	1.90	1.69	3.47	2.64	3.40	
12EIME02	B	**2" IPS**	17 (2)	16	768	0.578	0.0371	2"	2.37	2.52	5.12	3.11	3.88	200 PSI
12EIME03	B	**3" IPS**	17 (2)	32	384	1.189	0.0883	3"	3.50	2.91	5.90	4.45	5.04	200 PSI
12EIME04	B	**4" IPS**	17 (2)	22	264	1.740	0.1285	4"	4.50	3.11	6.30	5.59	6.14	200 PSI
12EIME06	B	**6" IPS**	17 (2)	24	96	3.538	0.3178	6"	6.62	3.51	7.09	7.99	8.41	200 PSI
12EIME08	B	**8" IPS**	17 (2)	24	48	9.130	0.7487	8"	8.62	4.29	8.66	10.94	11.01	200 PSI

ELECTROFUSION FITTINGS





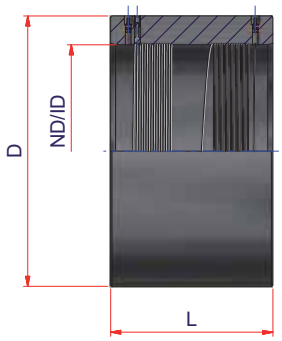
ELECTROFUSION COUPLER

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3
With pre-heating bar code

PE4710 230PSI SDR11 • IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	D	D2	L	FM
12EIME10	A	**10" IPS**	17	12	24	20.717	1.4974	10"	10.75	13.98	-	8.66	200 PSI
12EIME12	A	**12" IPS**	17	10	20	23.320	1.7968	12"	12.75	15.75	-	9.45	150 PSI
12EIME14	A	**14" IPS**	17	9	9	36.422	3.9553	14"	14.00	17.72	-	10.24	150 PSI
12EIME16	A	**16" IPS**	17	6	12	46.567	2.9947	16"	16.00	19.68	-	11.42	150 PSI
12EIME18	B	**18" IPS**	17	4	4	67.100	7.9671	18"	18.00	22.05	-	13.38	150 PSI
12EIME20	A	**20" IPS**	17	3	6	72.233	5.9894	20"	20.00	24.09	-	14.17	150 PSI
12EIME22	B	**22" IPS**	17	3	3	111.467	10.736	22"	22.00	-	27.95	15.75	150 PSI
12EIME24	A	**24" IPS**	17	3	6	105.600	5.9894	24"	24.00	27.95	-	17.32	150 PSI
12EIME28	B	**28" IPS**	17	1	1	201.08	-	28"	28.00	-	35.43	18.89	150 PSI
12EIME30	B	**30" IPS**	17	1	1	-	-	30"	30.00	-	35.43	18.89	

ELECTROFUSION FITTINGS



ELECTROFUSION COUPLER

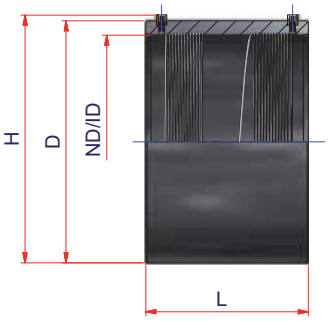
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3
With pre-heating bar code from ø10"

PE4710 230PSI SDR11 • DIPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (DIPS)	ID	D	L
12EIMED08	8" DIPS	17	22	44	8.480	0.8168	8"	9.05	11.02	7.09
12EIMED10	10" DIPS	17	12	24	-	1.4126	10"	11.10	13.98	8.66
12EIMED12	12" DIPS	17	10	20	-	1.7968	12"	13.20	15.75	8.66
12EIMED14	14" DIPS	17	9	9	-	3.9553	14"	15.30	-	10.24
12EIMED16	16" DIPS	17	6	12	-	2.9947	16"	17.40	-	11.42
12EIMED18	18" DIPS	17	4	4	-	7.9671	18"	19.50	-	13.38
12EIMED20	20" DIPS	17	3	6	-	5.9894	20"	21.60	-	14.17
12EIMED22	22" DIPS	17	3	3	-	10.736	22"	-	-	15.75
12EIMED24	24" DIPS	17	3	6	-	5.9894	24"	25.80	-	17.32

ELECTROFUSION FITTINGS

(A)



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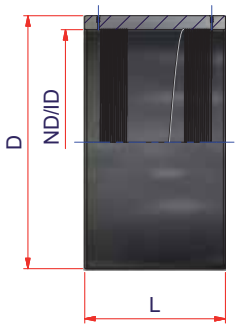


ELECTROFUSION COUPLER

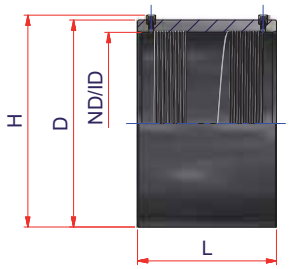
Weldable on pipe DR 21 - 17 - 15.5 - 13.5 - 11
With pre-heating bar code from ø10"

PE4710 160PSI SDR17 • IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	D	H	L
12DIME08	A	8" IPS	21	24	48	9.350	0.7487	8"	8.62	9.84	10.36	7.08
12DIME10	A	10" IPS	21	16	32	-	1.1230	10"	10.75	12.40	12.79	8.66
12DIME12	A	12" IPS	21	24	24	9.772	1.4832	12"	12.75	15.75	15.75	8.66
12DIME14	A	14" IPS	21	-	-	-	-	14"	14.00	15.74	15.94	10.23
12DIME16	A	16" IPS	21	6	12	23.467	0.4979	16"	16.00	17.72	17.91	11.42
12DIME18	A	18" IPS	21	-	-	-	-	18"	18.00	19.69	19.88	13.39
12DIME20	B	20" IPS	21	-	-	-	-	20"	20.00	22.05	-	14.17
12DIME22	B	22" IPS	21	3	3	71.133	10.7358	22"	22.00	24.80	-	15.75
12DIME24	B	24" IPS	21	-	-	88.185	-	24"	24.00	27.95	-	17.32
12DIME28	B	28" IPS	21	1	2	124.500	17.9683	28"	28.00	31.50	-	18.90
12DIME32	B	32" IPS	21	1	-	149.600	22.1776	32"	32.00	35.43	-	19.68
12DIME36	B	36" IPS	21	-	-	165.350	26.9450	36"	36.00	39.37	-	19.68
12DIME40	B	40" IPS	21	-	-	-	-	40"	40.00	-	-	20.48
12DIME42	B	42" IPS	21	-	-	-	-	42"	42.00	-	-	21.26

ELECTROFUSION FITTINGS

(A)



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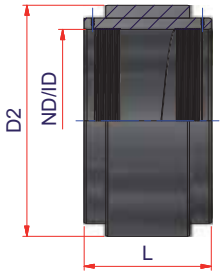


ELECTROFUSION COUPLER

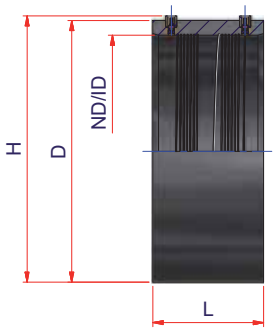
Weldable on pipe DR 17 - 15.5 - 13.5 - 11
With pre-heating bar code from ø10”

PE4710 160PSI SDR17 • DIPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (DIPS)	ID	D	H	D2	L
12DIMED08	A	8” DIPS	17	6	12	-	2.8251	8”	9.05	9.84	10.27	-	7.08
12DIMED10	A	10” DIPS	17	-	-	-	-	10”	11.10	13.98	13.98	-	8.66
12DIMED12	A	12” DIPS	17	-	-	-	-	12”	13.20	15.75	15.75	-	8.66
12DIMED14	A	14” DIPS	17	-	-	-	-	14”	15.30	17.72	17.72	-	10.24
12DIMED16	A	16” DIPS	17	6	12	-	2.9947	16”	17.40	19.69	19.69	-	13.38
12DIMED18	A	18” DIPS	17	-	-	-	-	18”	19.50	22.05	22.05	-	14.17
12DIMED20	A	20” DIPS	17	-	-	-	-	20”	21.60	24.80	24.80	-	15.75
12DIMED24	B	24” DIPS	17	2	4	-	-	24”	25.80	27.95	-	31.50	17.32

ELECTROFUSION FITTINGS

(A)



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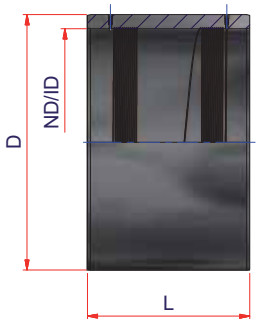


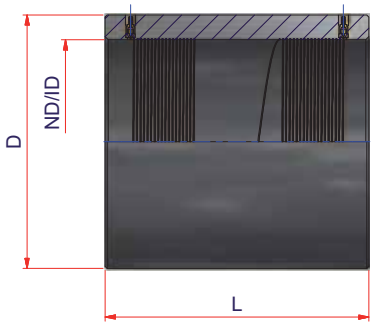
ELECTROFUSION SEWAGE COUPLER

Weldable on pipe DR 32.5 - 21 - 17 - 15.5 - 13.5 - 11
With pre-heating bar code

PE4710 45PSI SDR32.5 • IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	D	H	L
12FIME10	A	**10" IPS**	32.5	-	-	-	-	10"	10.750	12.40	12.79	6.30
12FIME12	A	**12" IPS**	32.5	-	-	-	-	12"	12.750	15.75	15.75	6.30
12FIME14	A	**14" IPS**	32.5	-	-	-	-	14"	14.000	15.74	15.94	8.27
12FIME16	A	**16" IPS**	32.5	-	-	-	-	16"	16.000	17.72	17.91	8.27
12FIME18	A	**18" IPS**	32.5	-	-	-	-	18"	18.000	19.69	19.88	8.27
12FIME20	B	**20" IPS**	32.5	-	-	-	-	20"	20.000	22.05	-	8.27
12FIME22	B	**22" IPS**	32.5	-	-	-	-	22"	22.000	24.80	-	9.84
12FIME24	B	**24" IPS**	32.5	-	-	-	-	24"	24.000	27.95	-	9.84

ELECTROFUSION FITTINGS



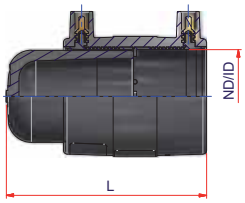
ELECTROFUSION COUPLER

Weldable on pipe DR 7.3 - 7
With pre-heating bar code from ø10”

PE4710 380PSI SDR7 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	D	L
12GIME06	6” IPS	7.3	30	60	9.900	0.5989	6”	6.625	8.86	9.45
12GIME08	8” IPS	7.3	33	33	15.867	0.9761	8”	8.625	11.02	10.63
12GIME10	10” IPS	7.3	12	12	29.700	2.6557	10”	10.750	13.98	12.60
12GIME12	12” IPS	7.3	10	10	32.670	3.1784	12”	12.750	15.75	12.60
12GIME14	14” IPS	7.3	6	6	55.506	5.3113	14”	14.000	17.72	13.78
12GIME16	16” IPS	7.3	2	4	73.700	8.9841	16”	16.000	19.69	16.54

ELECTROFUSION FITTINGS

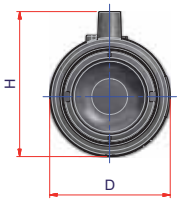


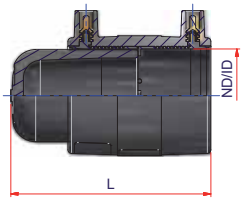
ELECTROFUSION END CAP

(1) *Weldable on pipe DR 10 - 9 - 7*
(2) *Weldable on pipe DR 12.5 - 11*
Item composed by long spigot end cap + electrofusion coupler

PE4710 230PSI SDR11 • CTS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (CTS)	ID	D	H	L
12EICALE012C	1/2" CTS	10 (1)	-	-	-	-	1/2"	0.625	1.06	1.89	3.66
12EICALE01C	1" CTS	12.5 (2)	-	-	-	-	1"	1.125	1.59	2.40	3.75





ELECTROFUSION END CAP

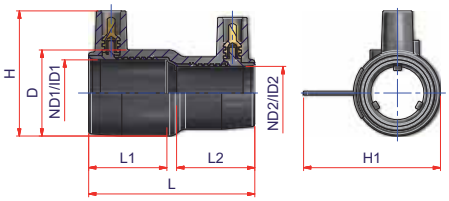
(1) *Weldable on pipe DR 11 - 10*
(2) *Weldable on pipe DR 17 - 15.5 - 13.5 - 11*
Item composed by long spigot end cap + electrofusion coupler

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	D	H	L
12EICALE34	3/4" IPS	11 (1)	-	-	-	-	3/4"	1.050	1.59	2.40	3.50
12EICALE01	1" IPS	11 (1)	-	-	-	-	1"	1.315	1.79	2.40	3.75
12EICALE114	1"1/4 IPS	11 (1)	-	-	-	-	1"1/4	1.660	2.16	2.91	4.23
12EICALE02	2" IPS	17 (2)	-	-	-	-	2"	2.375	3.11	3.88	5.90
12EICALE03	3" IPS	17 (2)	-	-	-	-	3"	3.500	4.45	5.04	7.04
12EICALE04	4" IPS	17 (2)	-	-	-	-	4"	4.500	5.59	6.14	7.71
12EICALE06	6" IPS	17 (2)	-	-	-	-	6"	6.625	8.03	8.42	9.29
12EICALE08	8" IPS	17 (2)	-	-	-	-	8"	8.625	11.02	11.02	9.25

ELECTROFUSION FITTINGS

(A)



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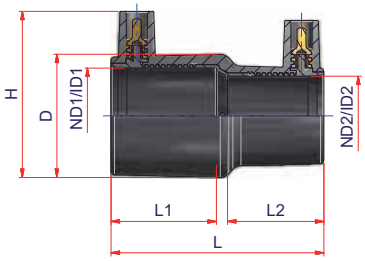

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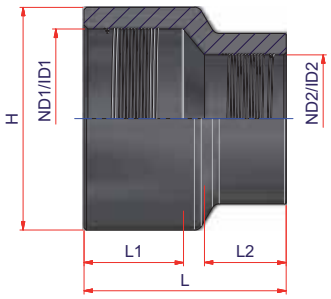


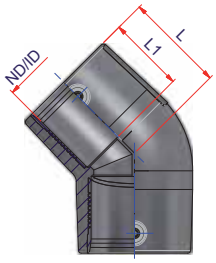
ELECTROFUSION REDUCER

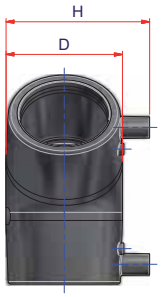
(1) *Weldable on pipe DR 13.5 - 11*
(2) *Weldable on pipe DR 12.5 - 11.5 - 11*
(3) *Weldable on pipe DR 11*

PE4710 230PSI SDR11 • IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND1	ID1	L1	ND2	ID2	L2	D	L	H	H1
12EIRDE034034C	A	3/4"IPS x 3/4"CTS	11 (3)	40	1,920	0.184	0.0120	3/4" IPS	1.050	1.57	3/4" CTS	0.875	1.45	1.73	3.34	2.51	2.75
12EIRDE034012C	A	3/4"IPS x 1/2"CTS	11 (3)	1	96	-	-	3/4" IPS	1.050	1.57	1/2" CTS	0.625	1.45	1.69	3.34	2.51	2.54
12EIRDE034012	A	3/4"IPS x 1/2"IPS	11 (3)	20	1,760	-	-	3/4" IPS	1.050	1.57	1/2" IPS	0.840	1.45	1.73	3.34	2.51	2.75
12EIRDE01C012C	A	1"CTS x 1/2"CTS	12.5 (2)	1	-	-	-	1" CTS	1.125	1.57	1/2" CTS	0.625	1.45	1.69	3.34	2.51	2.75
12EIRDE01C034	A	1"CTS x 3/4"IPS	12.5 (2)	1	-	-	-	1" CTS	1.125	1.57	3/4" IPS	1.050	1.57	1.73	3.34	2.51	2.75
12EIRDE01034	A	1"IPS x 3/4"IPS	11 (3)	20	1920	0.182	0.0150	1" IPS	1.315	1.57	3/4" IPS	1.050	1.57	1.73	3.34	2.51	2.75
12EIRDE114114C	B	1"1/4IPS x 1"1/4CTS	11 (3)	20	1760	0.215	0.0137	1"1/4 IPS	1.660	1.85	1"1/4 CTS	1.375	1.69	2.06	3.74	2.92	-
12EIRDE02112	B	2"IPS x 1"1/2IPS	11 (3)	70	840	0.217	0.0380	2" IPS	2.375	2.24	1 1/2" IPS	1.900	2.00	3.18	4.72	3.93	-
12EIRDE02114	B	2"IPS x 1"1/4IPS	11 (3)	12	576	0.550	0.0466	2" IPS	2.375	2.24	1 1/4" IPS	1.660	1.77	3.18	4.72	3.93	-
12EIRDE0302	B	3"IPS x 2"IPS	11 (3)	30	360	1.115	0.0890	3" IPS	3.500	2.89	2" IPS	2.375	2.55	4.56	6.00	5.07	-
12EIRDE0402	B	4"IPS x 2"IPS	11 (3)	24	288	1.366	0.1176	4" IPS	4.500	2.85	2" IPS	2.375	2.48	5.19	6.22	5.86	-
12EIRDE0403	B	4"IPS x 3"IPS	11 (3)	24	288	1.338	0.1176	4" IPS	4.500	2.89	3" IPS	3.500	2.67	5.19	6.22	5.86	-
12EIRDE0604	B	6"IPS x 4"IPS	13.5 (1)	10	120	3.256	0.2825	6" IPS	6.625	3.23	4" IPS	4.500	3.03	7.71	7.25	8.16	-
12EIRDE0806	C	8"IPS x 6"IPS	13.5 (1)	28	56	7.110	0.6392	8" IPS	8.625	4.88	6" IPS	6.625	4.06	-	10.04	10.94	-

ELECTROFUSION FITTINGS



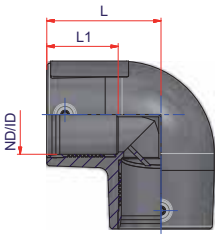


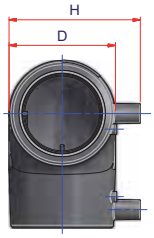
45° E/F ELBOW

Single wire
Weldable on pipe DR 17 - 15.5 - 13.5 - 11

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	L1	D	L	H
12EICEM02	2" IPS	17	10	480	0.726	0.0593	2"	2.375	2.12	3.30	2.77	3.39
12EICEM03	3" IPS	17	16	192	1.993	0.1765	3"	3.500	2.75	4.68	3.24	5.27
12EICEM04	4" IPS	17	8	96	4.083	0.3531	4"	4.500	3.26	5.51	4.48	6.06





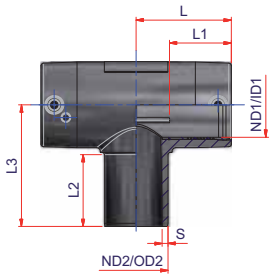
90° E/F ELBOW

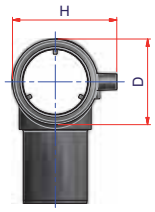
Single wire
Weldable on pipe DR 17 - 15.5 - 13.5 - 11

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	L1	D	L	H
12EIGEM02	2" IPS	17	20	540	0.814	0.0636	2"	2.375	2.16	3.23	3.46	3.94
12EIGEM03	3" IPS	17	14	168	2.451	0.2016	3"	3.500	2.75	2.34	4.80	4.68
12EIGEM04	4" IPS	17	8	96	4.384	0.3531	4"	4.500	3.26	5.51	5.66	6.06

ELECTROFUSION FITTINGS





ELECTROFUSION EQUAL TEE WITH SPIGOT END

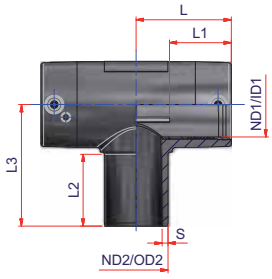
Single wire

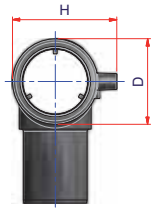
(1) *Weldable on pipe DR 10 - 9 - 7*

(2) *Weldable on pipe DR 12.5 - 11.5 - 11*

PE4710 230PSI SDR11 • CTS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND1 (CTS)	ID1	L1	ND2 (CTS)	OD2	S min	L2	L3	L	D	H
12EITCE012C	1/2" CTS	10 (1)	20	1920	0.176	0.0159	1/2"	0.625	1.55	1/2"	3.66	0.090	1.85	2.62	1.77	1.26	2.03
12EITCE01C	1" CTS	12.5 (2)	25	1200	-	-	1"	1.125	1.55	1"	3.75	0.101	1.97	2.95	2.16	1.73	2.52





ELECTROFUSION EQUAL TEE WITH SPIGOT END

Single wire

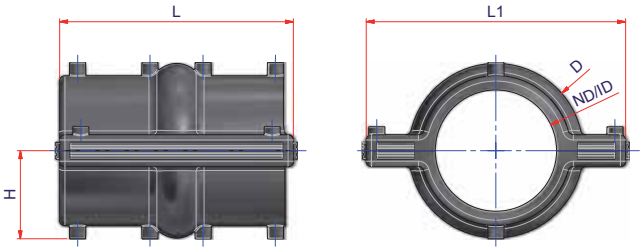
(1) *Weldable on pipe DR 11*

(2) *Weldable on pipe DR 17 - 15.5 - 13.5 - 11*

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND1 (IPS)	ID1	L1	ND2 (IPS)	OD2	S min	L2	L3	L	D	H
12EITCE114	1" 1/4 IPS	11 (1)	15	720	0.381	0.0396	1"1/4	1.660	1.77	1"1/4	1.660	0.151	2.17	3.35	2.66	2.12	2.92
12EITCE02	2" IPS	11 (1)	25	300	1.038	0.1130	2"	2.375	2.30	2"	2.375	0.216	2.76	4.53	3.54	3.19	3.88
12EITCE03	3" IPS	11 (2)	-	-	-	-	3"	3.500	-	3"	3.500	0.318	-	-	-	-	-
12EITCE04	4" IPS	11 (2)	-	-	-	-	4"	4.500	-	4"	4.500	0.409	-	-	-	-	-

ELECTROFUSION FITTINGS



BUTT FUSION REPAIR SLEEVE

ELOFIT INCHES BUTT FUSION REPAIR SLEEVE (EIBFRS) is a safety repair system to be used when, in service, butt-welding cannot be guaranteed, or to repair minor damages on pipe.

EIBFRS can be installed on pressurized pipe made out of PE4710, PE3408, PE2708 and PE2406.

EIBFRS must be installed on pipes without fluid leakage.

The maximum network pressure allowed to weld the EIBFRS on the pipe depends of the polyethylene grade and SDR of pipe (Table 1).

Table 1

POLYETHYLENE GRADE	PRESSURE (*)
PE4710 (PE100-SDR11)	124 psi
PE3408 (PE80-SDR11)	60 psi
PE2708/2406 (PE80-SDR13.5)	60 psi
PE2708/2406 (PE80-SDR15.5)	14.5 psi
PE80 (ALDYL)	60 psi
(*) maximum pressure operating during the welding	

For the installation use the clamping system device (00KITSALDERP) and jumper cables (00KITCAVIERP) supplied on request (page 30).

Installation on pipes with: max angle 1.5° and max misalignment 0.08"

PE4710 SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	D	L	L1	H
12EIBFRS04	4" IPS	see Table 1	1	65	5.500	0.4394	4"	4.500	6.45	8.66	9.60	3.26
12EIBFRS06	6" IPS	see Table 1	1	48	7.040	0.5590	6"	6.625	6.45	8.66	11.80	3.26

ELECTROFUSION FITTINGS

180° VARIABLE LENGTH REPAIR SLEEVE

The **ELOFIT INCHES 180° VARIABLE LENGTH REPAIR SLEEVE (EIVLRSxx180)** is a modular system of electrofusion shells that can be installed contiguously and welded on pipes that have notches, scrapes or damage along the axis.

The standard assembly has 2 modules (**12EIVLRSxx180**); between them it is possible to add the necessary number of additional middle modules (**12EIVLRSxx180M** - also separately available).

Suitable to repair minor damages on pipe without fluid leakage.

The maximum network pressure allowed to weld the fitting on the pipe depends of the polyehylene grade and SDR of the pipe (Table 2).

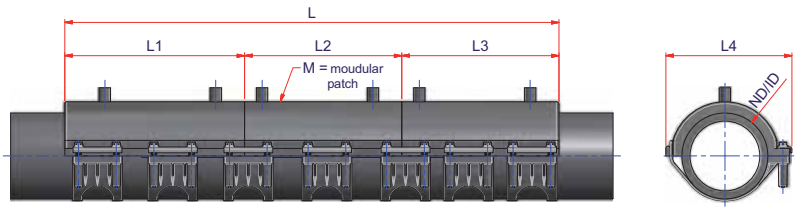


Table 2

POLYETHYLENE GRADE	PRESSURE (*)
PE4710 (PE100-SDR11)	124 psi
PE4710 (PE100 SDR9.0/9.33)	124 psi
PE3408 (PE80-SDR11)	60 psi
PE2708/2406 (PE80-SDR13.5)	60 psi
PE2708/2406 (PE80-SDR15.5)	14.5 psi
PE2708/2406 (PE80-SDR17/21)	7.5 psi
PE80 (ALDYL)	60 psi
(*) maximum pressure operating during the welding	

For the installation use a pair of triple cables (00KITCAVI3VIE) supplied on request (page 30).

PE4710 SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Weight lb/p.	Volume ft³/p.	ND (IPS)	ID	L1	L2	L3	L	L4	Notes
12EIVLRS04180	**4" IPS**	see Table 2	1+1	4.840	0.5590	4"	4.500	9.37	-	8.22	17.59 (•)	6.60	terminal fittings
12EIVLRS04180M	**4" IPS**	see Table 2	1	2.420	0.2758	4"	4.500	9.37	8.22	8.22	25.80 (◊)	6.60	modular patch
12EIVLRS06180	**6" IPS**	see Table 2	1+1	5.000	-	6"	6.625	9.37	-	8.22	17.59 (•)	6.60	terminal fittings
12EIVLRS06180M	**6" IPS**	see Table 2	1	3.000	-	6"	6.625	9.37	8.22	8.22	25.80 (◊)	6.60	modular patch

(•) Length for installation of terminal fittings (2 pieces).
(◊) Length for installation of terminal fittings + modular patch (3 pieces). Other modular patches can be added depending of damage.

ELECTROFUSION FITTINGS

A

B

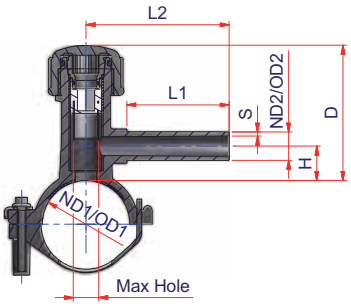
C

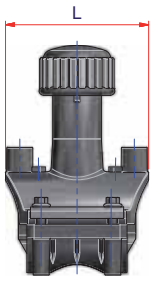
TOOLS FOR REPAIR SLEEVES INSTALLATION

(for articles: 12EIBFRS and 12EIVLRSxx180)

Code	Ref.	Description	Application
00KITSALDERP	A	CLAMPING SYSTEM DEVICE	for 12EIBFRSxx
00KITCAVIERP	B	NR.1 LONG CABLE + NR.2 SHORT CABLES	for 12EIBFRSxx
00KITCAVI3VIE	C	NR. 1 RED TRIPLE CABLE + NR.1 BLACK TRIPLE CABLE	for 12EIVLRSxx180

ELECTROFUSION FITTINGS





TAPPING TEE
WITH RIGID UNDERCLAMP

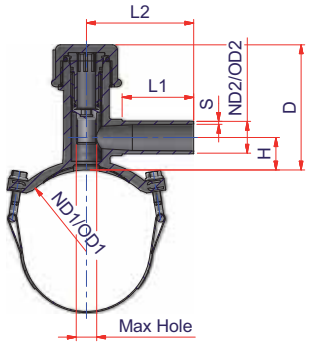
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
(*)PF (min DR) = *Maximum Drilling Depth*
The same fittings is available with metric outlet upon request.

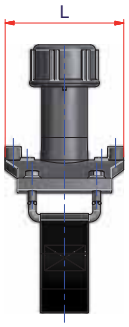
WATCH OUR VIDEO INSTRUCTIONS ON OUR YouTube CHANNEL

PE4710 230PSI SDR11 • IPSxIPS IPSxCTS

Code	Nominal Diameter ø (ND1 x ND2)	(*) PF (min DR)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	H	L1	L2	L	D	Max Hole
12EIPRES11412C	1”1/4 IPS x 1/2” CTS	7	40	480	0.875	0.0706	1.660	0.625	0.104	0.90	2.75	3.94	3.94	3.36	0.71
12EIPRES0212C	2” IPS x 1/2” CTS	7	40	480	0.930	0.0706	2.375	0.625	0.104	0.94	2.56	3.94	3.94	3.40	0.71
12EIPRES0312C	3” IPS x 1/2” CTS	7	30	360	0.917	0.0943	3.500	0.625	0.104	0.79	2.13	3.94	3.94	3.56	0.71
12EIPRES0412C	4” IPS x 1/2” CTS	7	25	300	1.170	0.1130	4.500	0.625	0.104	0.79	2.87	3.94	3.94	3.56	0.71
12EIPRES0612C	6” IPS x 1/2” CTS	7	20	240	1.408	0.1413	6.625	0.625	0.104	0.90	2.87	3.94	3.94	3.96	0.71
12EIPRES11434	1”1/4 IPS x 3/4” IPS	7	1	-	-	-	1.660	1.050	0.095	0.90	2.75	3.94	3.94	3.36	0.71
12EIPRES0234	2” IPS x 3/4” IPS	7	40	480	0.957	0.0706	2.375	1.050	0.095	0.94	2.75	3.94	3.94	3.40	0.71
12EIPRES0334	3” IPS x 3/4” IPS	7	-	-	-	-	3.500	1.050	0.095	0.79	2.56	3.94	3.94	3.56	0.71
12EIPRES0434	4” IPS x 3/4” IPS	7	30	360	1.239	0.0943	4.500	1.050	0.095	0.79	2.85	3.94	3.94	3.56	0.71
12EIPRES0634	6” IPS x 3/4” IPS	7	-	-	-	-	6.625	1.050	0.095	0.90	2.85	3.94	3.94	3.96	0.71
12EIPRES11401C	1”1/4 IPS x 1” CTS	7	50	-	0.840	0.0565	1.660	1.125	0.101	0.90	2.75	3.94	3.94	3.36	0.71
12EIPRES0201C	2” IPS x 1” CTS	7	40	480	0.952	0.0706	2.375	1.125	0.101	0.94	2.85	3.94	3.94	3.40	0.71
12EIPRES0301C	3” IPS x 1” CTS	7	25	300	0.867	0.1130	3.500	1.125	0.101	0.79	2.56	3.94	3.94	3.56	0.71
12EIPRES0401C	4” IPS x 1” CTS	7	20	240	1.023	0.1413	4.500	1.125	0.101	0.79	2.95	3.94	3.94	3.56	0.71
12EIPRES0601C	6” IPS x 1” CTS	7	20	240	1.485	0.1413	6.625	1.125	0.101	0.90	2.75	3.94	3.94	3.96	0.71
12EIPRES11401	1”1/4 IPS x 1” IPS	7	40	480	0.825	0.0706	1.660	1.315	0.119	0.90	2.75	3.94	3.94	3.36	0.71
12EIPRES0201	2” IPS x 1” IPS	7	30	360	0.851	0.0943	2.375	1.315	0.119	0.94	2.75	3.94	3.94	3.40	0.71
12EIPRES0301	3” IPS x 1” IPS	7	30	360	0.997	0.0943	3.500	1.315	0.119	0.79	2.75	3.94	3.94	3.56	0.71
12EIPRES0401	4” IPS x 1” IPS	7	20	240	0.990	0.1413	4.500	1.315	0.119	0.79	2.75	3.94	3.94	3.56	0.71
12EIPRES0601	6” IPS x 1” IPS	7	20	240	1.496	0.1413	6.625	1.315	0.119	0.90	2.75	3.94	3.94	3.96	0.71
12EIPRES02114	2” IPS x 1”1/4 IPS	7	25	300	1.223	0.0105	2.375	1.660	0.151	0.94	2.75	3.94	3.94	3.40	0.71
12EIPRES0202	2” IPS x 2” IPS	7	20	240	2.140	0.1413	2.375	2.375	0.216	1.18	2.46	3.94	5.19	5.21	1.22

ELECTROFUSION FITTINGS





WATCH OUR VIDEO INSTRUCTIONS ON OUR YouTube CHANNEL

TAPPING TEE WITH BELT

(1) *Weldable on pipe DR 17 - 1-5.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7*
(2) *Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9*
(3) *Weldable on pipe DR 17 - 15.5 - 13.5 - 11*

(*) PF (min DR) = *Maximum Drilling Depth*
The same fittings is available with metric outlet upon request.

PE4710 230PSI SDR11 • IPSxIPS IPSxCTS

Code	Nominal Diameter ø (ND1 x ND2)	(*) PF Min DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	H	L1	L2	L	D	Max Hole
12EIPRES0812C	8" IPS x 1/2" CTS	7 (1)	10	120	3.124	0.2825	8.625	0.625	0.104	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1012C	10" IPS x 1/2" CTS	9 (2)	10	120	3.080	0.2665	10.750	0.625	0.104	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1212C	12" IPS x 1/2" CTS	11(3)	8	96	3.149	0.3532	12.750	0.625	0.104	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1212	12" IPS x 1/2" IPS	11(3)	8	96	3.149	0.3532	12.750	0.840	0.076	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES0834	8" IPS x 3/4" IPS	7 (1)	10	120	3.080	0.2825	8.625	1.050	0.095	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1034	10" IPS x 3/4" IPS	9 (2)	10	120	3.091	0.2825	10.750	1.050	0.095	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1234	12" IPS x 3/4" IPS	11(3)	10	120	3.091	0.2825	12.750	1.050	0.095	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES0801C	8" IPS x 1" CTS	7 (1)	10	120	3.058	0.2825	8.625	1.125	0.101	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1001C	10" IPS x 1" CTS	9 (2)	10	120	3.091	0.2825	10.750	1.125	0.101	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1201C	12" IPS x 1" CTS	11(3)	10	120	3.014	0.2825	12.750	1.125	0.101	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES0801	8" IPS x 1" IPS	9 (1)	10	120	2.948	0.2825	8.625	1.315	0.119	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1001	10" IPS x 1" IPS	9 (1)	10	120	2.970	0.2825	10.750	1.315	0.119	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES1201	12" IPS x 1" IPS	11 (3)	10	120	3.014	0.2825	12.750	1.315	0.119	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES03114	3" IPS x 1"1/4 IPS	7 (1)	25	300	1.610	0.1130	3.500	1.660	0.151	1.18	2.75	4.13	4.56	4.88	0.67
12EIPRES04114	4" IPS x 1"1/4 IPS	7 (1)	25	300	1.641	0.1130	4.500	1.660	0.151	1.18	2.75	4.13	4.56	4.88	0.67
12EIPRES06114	6" IPS x 1"1/4 IPS	7 (1)	30	360	1.630	0.0918	6.625	1.660	0.151	1.18	2.75	4.13	4.56	4.88	0.67
12EIPRES08114	8" IPS x 1"1/4 IPS	7 (1)	10	120	3.080	0.2825	8.625	1.660	0.151	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES10114	10" IPS x 1"1/4 IPS	9 (2)	10	120	3.036	0.2825	10.750	1.660	0.151	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES12114	12" IPS x 1"1/4 IPS	11 (3)	10	120	3.058	0.2825	12.750	1.660	0.151	1.48	2.68	4.13	4.56	6.18	0.94
12EIPRES0302	3" IPS x 2" IPS	7 (1)	10	120	4.180	0.2825	3.500	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53
12EIPRES0402	4" IPS x 2" IPS	7 (1)	10	120	4.202	0.2825	4.500	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53
12EIPRES0602	6" IPS x 2" IPS	7 (1)	6	72	4.400	0.4707	6.625	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53
12EIPRES0802	8" IPS x 2" IPS	7 (1)	6	72	4.822	0.4707	8.625	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53
12EIPRES1002	10" IPS x 2" IPS	9 (2)	6	72	4.822	0.4707	10.750	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53
12EIPRES1202	12" IPS x 2" IPS	11 (3)	6	72	4.877	0.4707	12.750	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53

ELECTROFUSION FITTINGS

BELTS FOR TAPPING TEES CLAMPING ON DIPS PIPES

To transform the IPS tapping tees to DIPS tapping tees: replace the belt of the correspondent IPS tapping tee size.

The kit includes: Polyester belt + pins + flanged nuts.
Contact your supplier for full support.
Belts for others tapping tees sizes available on request.

IPS *to* DIPS

Code	Nominal Diameter ø	Outlet
00BELTTT03ADIPS	3" DIPS	1"1/4
00BELTTT04ADIPS	4" DIPS	1"1/4
00BELTTT06ADIPS	6" DIPS	1"1/4
00BELTTT06BDIPS	6" DIPS	1"
00BELTTT08ADIPS	8"DIPS	1/2"CTS - 3/4" - 1" - 1"CTS - 1"1/4 - 2"
00BELTTT10ADIPS	10" DIPS	1/2" - 3/4" - 1" - 1"1/4 - 2"
00BELTTT12ADIPS	12" DIPS	1/2" - 3/4" - 1" - 1"1/4 - 2"

TORQUE WRENCH FOR TAPPING TEE CAP TIGHTENING

Code	Pack.	Weight lb/p.	EPRES Type
00CHIAVE025	1	0.099	Small tapping tee cap
00CHIAVE032	1	0.088	Medium tapping tee cap
00CHIAVE040	1	0.118	2"X2" Tapping tee cap
00CHIAVE050	1	0.132	HVSPT wrench for big tapping tee cap

ELECTROFUSION FITTINGS

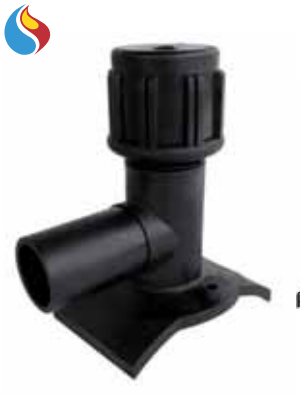
HEXAGONAL KEY
FOR TAPPING TEE DRILLING

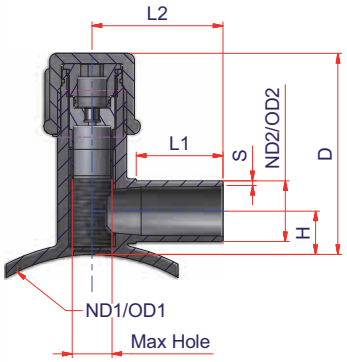
Code		ø TAPPING TEE	ø OUTLET	Q.ty pallet	Weight lb/p.
00CPRES10	Hexagon 0.39" (10 mm)	2"- 8"- 12"	1/2 "- 3/4" - 1" - 1"1/4 - 2"	1	0.880
00CPRES14	Hexagon 0.55" (14 mm)	3"- 12"	2"	1	2.640

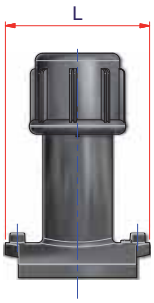
SPT & HVSPT TOOLS
AND ACCESSORIES

Code	Nominal Size
SPT/HVSPT Tapping tools	
00SPTHEXT (1)	SPT Hex Tool
00HVSPTHEXT (2)	HVSPT Hex Tool
SPT/HVSPT Pressure Test Equipment	
00SPTTESTCAP	SPT Test Cap
00114TESTCAP	1-1/4" Outlet Test Cap
0002TESTCAP	2" Outlet Test Cap
000202TESTCAP	2"x2" Test Cap
00CON114NPTFF	Quick Connect 1/4" NPT Female/female Quick Connector
00H3824NPT114M	Hose 3/8" ID Hose x 24" with 1/4" NPT Male Outlets
00HOSEASS	Hose Assembly

ELECTROFUSION FITTINGS







TOP LOAD TAPPING TEE

Important: use the positioner model 00IPOS01 for the installation!

PE4710 230PSI SDR11 • IPS x IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	H	L1	L2	L	D	Max Hole
12EIPRESTL14242	14"÷24" IPS x 2" IPS	10	120	3.410	0.2825	14.000 ÷ 24.000	2.375	0.216	1.81	3.54	5.35	4.56	8.13	1.53

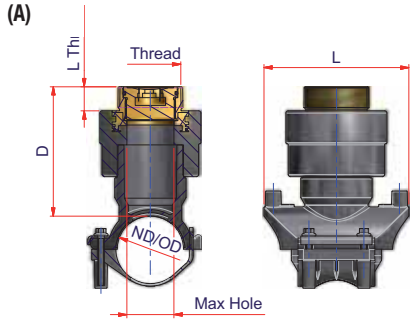
TECHNICAL NOTE:	
Pipe OD	Max wall thickness to be pierced (DR min)
14"	11
16"	11
18"	17
20"	17
22"	21
24"	21

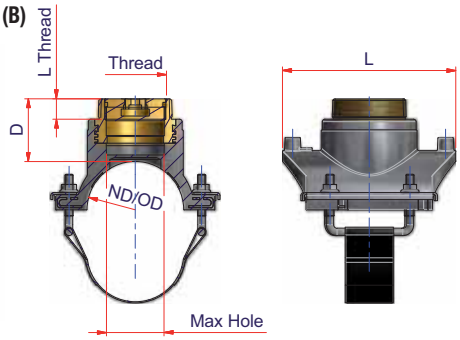
POSITIONER FOR TOP LOAD SADDLES

Positioner for saddles without belt with ø2" outlet

Code	Outlet	Imb. Pack.	Weight lb/p.	Volume ft³/p.
00IPOS01	2"	1	7.040	0.2965

ELECTROFUSION FITTINGS





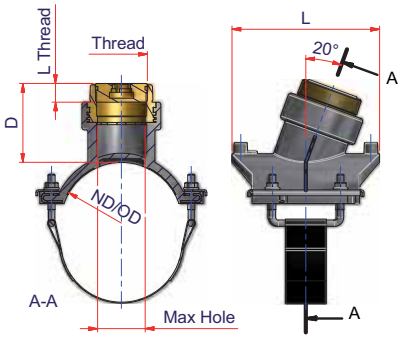
90° BALLOON SADDLE
WITH BRASS THREADED OUTLET

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
With brass female threaded outlet.

PE4710 230PSI SDR11 • IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	OD	Thread	L Thread	D	L	Max Hole
12EIPAL02	A	2" IPS	11	-	-	-	-	2"	2.375	2" NPT	0.87	4.64	5.20	1.69
12EIPAL03	B	3" IPS	17	-	-	-	-	3"	3.500	2"1/2 NPT	0.79	2.40	6.69	2.12
12EIPAL04	B	4" IPS	17	-	-	-	-	4"	4.500	2"1/2 NPT	0.79	3.31	6.69	2.12
12EIPAL06	B	6" IPS	17	-	-	-	-	6"	6.625	2"1/2 NPT	0.79	3.31	6.69	2.12
12EIPAL08	B	8" IPS	17	-	-	-	-	8"	8.625	2"1/2 NPT	0.79	3.31	7.87	2.12
12EIPAL10	B	10" IPS	17	-	-	-	-	10"	10.750	2"1/2 NPT	0.79	3.31	7.87	2.12
12EIPAL12	B	12" IPS	17	-	-	-	-	12"	12.750	2"1/2 NPT	0.79	3.31	7.87	2.12

ELECTROFUSION FITTINGS



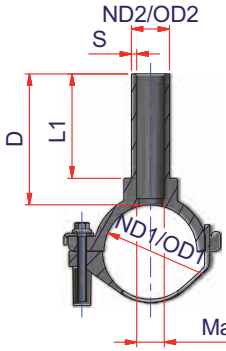
20° BALLOON SADDLE
WITH BRASS THREADED OUTLET

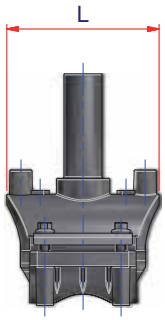
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
With brass female threaded outlet.

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	OD	Thread	L Thread	D	L	Max Hole
12EIPAL2004	4" IPS	17	-	-	-	-	4"	4.500	2"1/2 NPT	0.79	3.31	6.69	2.12
12EIPAL2006	6" IPS	17	-	-	-	-	6"	6.625	2"1/2 NPT	0.79	3.31	6.69	2.12
12EIPAL2008	8" IPS	17	-	-	-	-	8"	8.625	2"1/2 NPT	0.79	3.31	7.87	2.12
12EIPAL2010	10" IPS	17	-	-	-	-	10"	10.750	2"1/2 NPT	0.79	3.31	7.87	2.12
12EIPAL2012	12" IPS	17	-	-	-	-	12"	12.750	2"1/2 NPT	0.79	3.31	7.87	2.12

ELECTROFUSION FITTINGS





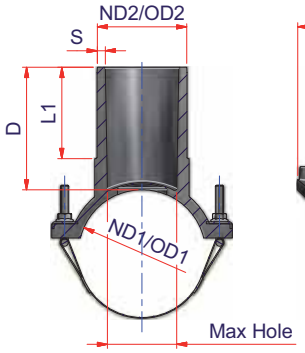
BRANCH SADDLE
WITH RIDIG UNDERCLAMP

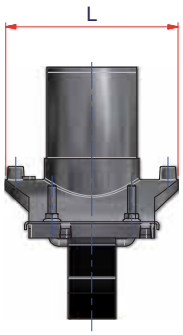
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
The same fittings is available with metric outlet upon request .

PE4710 230PSI SDR11 • IPSxCTS IPSxIPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	L1	L	D	Max Hole	FM
12EICOL11412C	1" 1/4 IPS x 1/2" CTS	17	60	720	0.581	0.0470	1.660	0.625	0.104	2.56	3.94	3.27	0.36	
12EICOL0212C	2" IPS x 1/2" CTS	17	50	600	0.647	0.0533	2.375	0.625	0.104	2.56	3.94	3.27	0.36	150 PSI
12EICOL11434	1" 1/4 IPS x 3/4" IPS	17	60	720	0.586	0.0470	1.660	1.050	0.095	2.56	3.94	3.27	0.77	
12EICOL0234	2" IPS x 3/4" IPS	17	50	600	0.651	0.0533	2.375	1.050	0.095	2.56	3.94	3.27	0.77	150 PSI
12EICOL11401C	1" 1/4 IPS x 1" CTS	17	60	720	0.595	0.0470	1.660	1.125	0.101	2.56	3.94	3.27	0.86	
12EICOL0201C	2" IPS x 1" CTS	17	50	360	0.658	0.0533	2.375	1.125	0.101	2.56	3.94	3.27	0.86	150 PSI
12EICOL11401	1" 1/4 IPS x 1" IPS	17	60	720	0.599	0.0470	1.660	1.315	0.119	2.56	3.94	3.27	1.02	
12EICOL0201	2" IPS x 1" IPS	17	50	600	0.662	0.0533	2.375	1.315	0.119	2.56	3.94	3.27	1.02	150 PSI
12EICOL0202	2" IPS x 2" IPS	17	30	360	0.733	0.0890	2.375	2.375	0.216	3.54	5.20	4.72	1.55	150 PSI

ELECTROFUSION FITTINGS





BRANCH SADDLE WITH BELT

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
The same fittings is available with metric outlet upon request .

PE4710 230PSI SDR11 • IPSxCTS IPSxIPS

Code	Nominal Diameter ø ((ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	L1	L	D	Max Hole	FM
12EIC0L0312C	3" IPS x 1/2" CTS	17	30	360	0.986	0.0890	3.500	0.625	0.104	3.35	5.59	4.03	0.36	150 PSI
12EIC0L0412C	4" IPS x 1/2" CTS	17	40	480	0.974	0.0666	4.500	0.625	0.104	3.35	5.59	4.03	0.36	150 PSI
12EIC0L0612C	6" IPS x 1/2" CTS	17	30	360	1.027	0.0890	6.625	0.625	0.104	3.35	5.59	4.03	0.36	150 PSI
12EIC0L0812C	8" IPS x 1/2" CTS	17	30	360	1.056	0.0890	8.625	0.625	0.104	3.35	5.59	4.03	0.36	150 PSI
12EIC0L1012C	10" IPS x 1/2" CTS	17	30	360	1.030	0.0890	10.750	0.625	0.104	3.35	5.59	4.03	0.36	150 PSI
12EIC0L1212C	12" IPS x 1/2" CTS	17	30	360	1.063	0.0890	12.750	0.625	0.104	3.35	5.59	4.03	0.36	150 PSI
12EIC0L0334	3" IPS x 3/4" IPS	17	30	360	0.986	0.0890	3.500	1.050	0.095	3.35	5.59	4.03	0.77	150 PSI
12EIC0L0434	4" IPS x 3/4" IPS	17	40	480	0.974	0.0666	4.500	1.050	0.095	3.35	5.59	4.03	0.77	150 PSI
12EIC0L0634	6" IPS x 3/4" IPS	17	30	360	1.027	0.0890	6.625	1.050	0.095	3.35	5.59	4.03	0.77	150 PSI
12EIC0L0834	8" IPS x 3/4" IPS	17	30	360	1.056	0.0890	8.625	1.050	0.095	3.35	5.59	4.03	0.77	150 PSI
12EIC0L1034	10" IPS x 3/4" IPS	17	30	360	1.030	0.0890	10.750	1.050	0.095	3.35	5.59	4.03	0.77	150 PSI
12EIC0L1234	12" IPS x 3/4" IPS	17	30	360	1.063	0.0890	12.750	1.050	0.095	3.35	5.59	4.03	0.77	150 PSI
12EIC0L0301C	3" IPS x 1" CTS	17	30	360	1.001	0.0890	3.500	1.125	0.101	3.35	5.59	4.03	0.86	150 PSI
12EIC0L0401C	4" IPS x 1" CTS	17	30	360	1.019	0.0890	4.500	1.125	0.101	3.35	5.59	4.03	0.86	150 PSI
12EIC0L0601C	6" IPS x 1" CTS	17	30	360	1.038	0.0890	6.625	1.125	0.101	3.35	5.59	4.03	0.86	150 PSI
12EIC0L0801C	8" IPS x 1" CTS	17	30	360	1.052	0.0890	8.625	1.125	0.101	3.35	5.59	4.03	0.86	150 PSI
12EIC0L1001C	10" IPS x 1" CTS	17	30	360	1.063	0.0890	10.750	1.125	0.101	3.35	5.59	4.03	0.86	150 PSI
12EIC0L1201C	12" IPS x 1" CTS	17	-	-	-	-	12.750	1.125	0.101	3.35	5.59	4.03	0.86	150 PSI
12EIC0L0301	3" IPS x 1" IPS	17	30	360	1.001	0.0890	3.500	1.315	0.119	3.35	5.59	4.03	1.02	150 PSI
12EIC0L0401	4" IPS x 1" IPS	17	30	360	1.019	0.0890	4.500	1.315	0.119	3.35	5.59	4.03	1.02	150 PSI
12EIC0L0601	6" IPS x 1" IPS	17	30	360	1.038	0.0890	6.625	1.315	0.119	3.35	5.59	4.03	1.02	150 PSI
12EIC0L0801	8" IPS x 1" IPS	17	30	360	1.052	0.0890	8.625	1.315	0.119	3.35	5.59	4.03	1.02	150 PSI
12EIC0L1001	10" IPS x 1" IPS	17	30	360	1.063	0.0890	10.750	1.315	0.119	3.35	5.59	4.03	1.02	150 PSI

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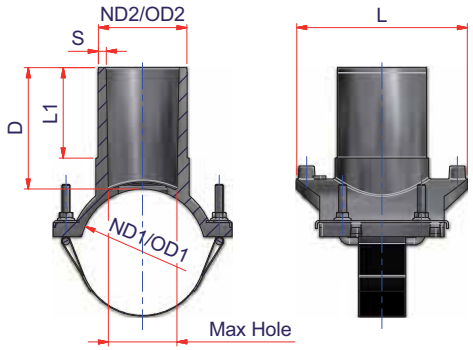
ELECTROFUSION FITTINGS



BRANCH SADDLE WITH BELT

Weldable on pipe DR DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
(*) PF (min DR) = *Maximum Drilling Depth*
Available on request the same fitting with metric outlet!

PE4710 230PSI SDR11 • IPSxCTS IPSxIPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	L1	L	D	Max Hole	FM
12EICOL03114	3" IPS x 1"1/4 IPS	17	30	360	1.019	0.0890	3.500	1.660	0.151	3.35	5.59	4.03	1.29	150 PSI
12EICOL04114	4" IPS x 1"1/4 IPS	17	30	360	-	0.0890	4.500	1.660	0.151	3.35	5.59	4.03	1.29	150 PSI
12EICOL06114	6" IPS x 1"1/4 IPS	17	30	360	1.049	0.0890	6.625	1.660	0.151	3.35	5.59	4.03	1.29	150 PSI
12EICOL08114	8" IPS x 1"1/4 IPS	17	30	360	-	0.0890	8.625	1.660	0.151	3.35	5.59	4.03	1.29	150 PSI
12EICOL10114	10" IPS x 1"1/4 IPS	17	30	360	-	0.0890	10.750	1.660	0.151	3.35	5.59	4.03	1.29	150 PSI
12EICOL12114	12" IPS x 1"1/4 IPS	17	30	360	-	0.0890	12.750	1.660	0.151	3.35	5.59	4.03	1.29	150 PSI
12EICOL0302	3" IPS x 2" IPS	17	30	360	1.001	0.0890	3.500	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI
12EICOL0402	4" IPS x 2" IPS	17	30	360	1.019	0.0890	4.500	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI
12EICOL0602	6" IPS x 2" IPS	17	30	360	1.038	0.0890	6.625	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI
12EICOL0802	8" IPS x 2" IPS	17	30	360	1.052	0.0890	8.625	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI
12EICOL1002	10" IPS x 2" IPS	17	30	360	1.063	0.0890	10.750	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI
12EICOL1202	12" IPS x 2" IPS	17	30	360	1.063	0.0890	12.750	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI
12EICOL0303	3" IPS x 3" IPS	17	30	360	1.126	0.0890	3.500	3.500	0.318	3.96	6.69	5.16	2.70	150 PSI
12EICOL0403	4" IPS x 3" IPS	17	15	180	2.259	0.1776	4.500	3.500	0.318	3.54	6.69	4.64	2.70	150 PSI
12EICOL0603	6" IPS x 3" IPS	17	15	180	2.259	0.1776	6.625	3.500	0.318	3.54	6.69	4.64	2.70	150 PSI
12EICOL0803	8" IPS x 3" IPS	17	6	72	3.300	0.4441	8.625	3.500	0.318	3.94	7.87	4.92	2.70	150 PSI
12EICOL1003	10" IPS x 3" IPS	17	6	72	3.300	0.4441	10.750	3.500	0.318	3.94	7.87	4.92	2.70	150 PSI
12EICOL1203	12" IPS x 3" IPS	17	6	72	3.300	0.4441	12.750	3.500	0.318	3.94	7.87	4.92	2.70	150 PSI
12EICOL0404	4" IPS x 4" IPS	17	10	120	2.728	0.2825	4.500	4.500	0.409	3.74	6.85	5.63	2.76	150 PSI
12EICOL0604	6" IPS x 4" IPS	17	8	96	3.355	0.3332	6.625	4.500	0.409	3.94	7.87	5.12	3.46	150 PSI
12EICOL0804	8" IPS x 4" IPS	17	5	60	3.960	0.5330	8.625	4.500	0.409	3.84	7.87	5.05	3.46	150 PSI
12EICOL1004	10" IPS x 4" IPS	17	6	72	3.850	0.4441	10.750	4.500	0.409	3.84	7.87	5.05	3.46	150 PSI
12EICOL1204	12" IPS x 4" IPS	17	5	60	3.916	0.5330	12.750	4.500	0.409	3.84	7.87	5.05	3.46	150 PSI

ELECTROFUSION FITTINGS

BELTS FOR BRANCH SADDLES CLAMPING ON DIPS PIPES

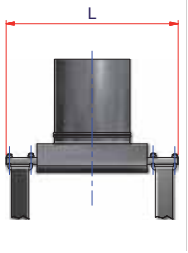
To transform the IPS branch saddles to DIPS branch saddles: replace the belt of the correspondent IPS saddles size.

The kit includes: Polyester belt + pins + flanged nuts.
Contact your supplier for full support.
Belts for others clamp saddles sizes available on request.

IPS *to* DIPS

Code	Nominal Diameter ø	Outlet
00BELTBS04ADIPS	4” DIPS	3/4" - 1" - 1"1/4 - 1"1/2 - 2” IPS
00BELTBS04BDIPS	4” DIPS	3" IPS
00BELTBS04CDIPS	4” DIPS	4" IPS
00BELTBS06ADIPS	6” DIPS	3/4" - 1" - 1"1/4 - 1"1/2 - 2” IPS
00BELTBS06BDIPS	6” DIPS	3" IPS
00BELTBS06CDIPS	6” DIPS	4" IPS
00BELTBS08ADIPS	8”DIPS	3/4" - 1" - 1"1/4 - 1"1/2 - 2” IPS
00BELTBS08BDIPS	8”DIPS	3" IPS
00BELTBS08CDIPS	8”DIPS	4" IPS
00BELTBS10ADIPS	10” DIPS	3/4" - 1" - 1"1/4 - 1"1/2 - 2” IPS
00BELTBS10BDIPS	10” DIPS	3" IPS
00BELTBS10CDIPS	10” DIPS	4" IPS
00BELTBS12ADIPS	12” DIPS	3/4" - 1" - 1"1/4 - 1"1/2 - 2” IPS
00BELTBS12BDIPS	12” DIPS	3" IPS
00BELTBS12CDIPS	12” DIPS	4" IPS

ELECTROFUSION FITTINGS



HIGH VOLUME BRANCH SADDLE WITH BELTS

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7

WATCH OUR VIDEO INSTRUCTIONS ON OUR YouTube CHANNEL

PE4710 230PSI SDR11• IPS x IPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	L1	L	D	Max Hole	FM
12EICOLTL0806	8" IPS x 6" IPS	17	2	24	14.850	1.4126	8.625	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL1006	10" IPS x 6" IPS	17	2	24	13.200	1.4126	10.750	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL1206	12" IPS x 6" IPS	17	2	24	14.300	1.4126	12.750	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL1406	14" IPS x 6" IPS	17	2	24	14.300	1.4126	14.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL1606	16" IPS x 6" IPS	17	2	24	13.750	1.4126	16.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL1806	18" IPS x 6" IPS	17	2	24	14.850	1.4126	18.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL2006	20" IPS x 6" IPS	17	2	24	13.750	1.4126	20.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL2206	22" IPS x 6" IPS	17	2	24	13.750	1.4126	22.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL2406	24" IPS x 6" IPS	17	2	24	14.080	1.4126	24.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL2806	28" IPS x 6" IPS	17	2	24	14.300	1.4126	28.000	6.625	0.603	6.30	12.60	7.87	5.20	150 PSI
12EICOLTL3006	30" IPS x 6" IPS	17	2	24	13.750	1.4126	30.000	6.625	0.603	6.30	12.60	7.87	5.20	
12EICOLTL3206	32" IPS x 6" IPS	17	-	-	-	-	32.000	6.625	0.603	6.30	12.60	7.87	5.20	
12EICOLTL3606	36" IPS x 6" IPS	17	-	-	-	-	36.000	6.625	0.603	6.30	12.60	7.87	5.20	
12EICOLTL4006	40" IPS x 6" IPS	17	2	24	17.600	1.4126	40.000	6.625	0.603	6.30	12.60	7.87	5.20	
12EICOLTL1208	12" IPS x 8" IPS	17	1	12	28.512	2.6652	12.750	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL1408	14" IPS x 8" IPS	17	-	-	-	-	14.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL1608	16" IPS x 8" IPS	17	-	-	-	-	16.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL1808	18" IPS x 8" IPS	17	-	-	-	-	18.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL2008	20" IPS x 8" IPS	17	-	-	-	-	20.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL2208	22" IPS x 8" IPS	17	-	-	-	-	22.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL2408	24" IPS x 8" IPS	17	-	-	-	-	24.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL2808	28" IPS x 8" IPS	17	-	-	-	-	28.000	8.625	0.785	8.66	19.68	10.63	6.90	150 PSI
12EICOLTL3008	30" IPS x 8" IPS	17	-	-	-	-	30.000	8.625	0.785	8.66	19.68	10.63	6.90	
12EICOLTL3208	32" IPS x 8" IPS	17	-	-	-	-	32.000	8.625	0.785	8.66	19.68	10.63	6.90	
12EICOLTL3608	36" IPS x 8" IPS	17	-	-	-	-	36.000	8.625	0.785	8.66	19.68	10.63	6.90	
12EICOLTL4008	40" IPS x 8" IPS	17	-	-	-	-	40.000	8.625	0.785	8.66	19.68	10.63	6.90	

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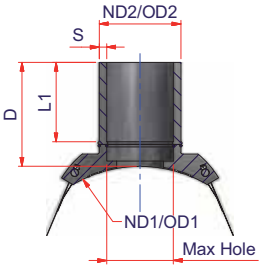
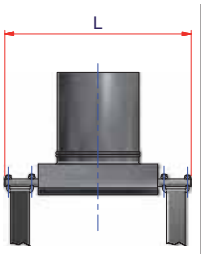
ELECTROFUSION FITTINGS





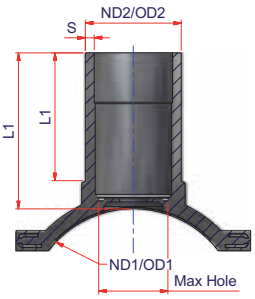
HIGH VOLUME BRANCH SADDLE WITH BELTS

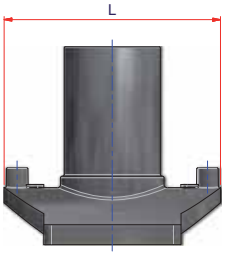
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7

WATCH OUR VIDEO INSTRUCTIONS ON OUR YouTube CHANNEL

PE4710 230PSI SDR11• IPS x IPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	L1	L	D	Max Hole	FM
12EICOLTL2010	20" IPS x 10" IPS	17	-	-	-	-	20.000	10.750	0.978	6.70	26.80	11.00	8.60	150 PSI
12EICOLTL2210	22" IPS x 10" IPS	17	-	-	-	-	22.000	10.750	0.978	6.70	26.80	11.00	8.60	150 PSI
12EICOLTL2410	24" IPS x 10" IPS	17	-	-	-	-	24.000	10.750	0.978	6.70	26.80	11.00	8.60	150 PSI
12EICOLTL2012	20" IPS x 12" IPS	17	-	-	-	-	20.000	12.750	1.160	7.00	26.80	11.30	10.00	150 PSI
12EICOLTL2212	22" IPS x 12" IPS	17	-	-	-	-	22.000	12.750	1.160	7.00	26.80	11.30	10.00	150 PSI
12EICOLTL2412	24" IPS x 12" IPS	17	-	-	-	-	24.000	12.750	1.160	7.00	26.80	11.30	10.00	150 PSI





HIGH VOLUME TOP LOAD BRANCH SADDLE

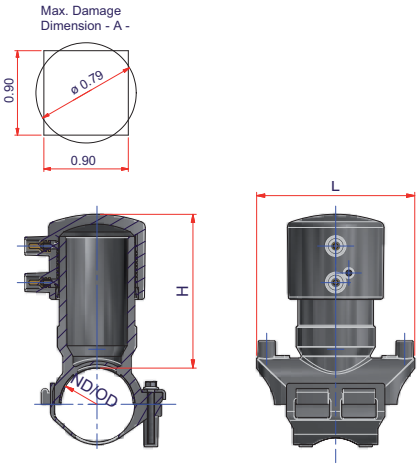
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
Important: use the positioner model 00PIOS01 for the installation of TOP LOAD saddles.

PE4710 230PSI SDR11• IPS x IPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	S min	L1	L	D	Max Hole	FM
12EICOLTL14242	14"÷24" IPS x 2" IPS	17	30	360	0.735	0.0890	14.000 ÷ 24.000	2.375	0.216	3.35	5.59	4.03	1.73	150 PSI

ELECTROFUSION FITTINGS

(A)



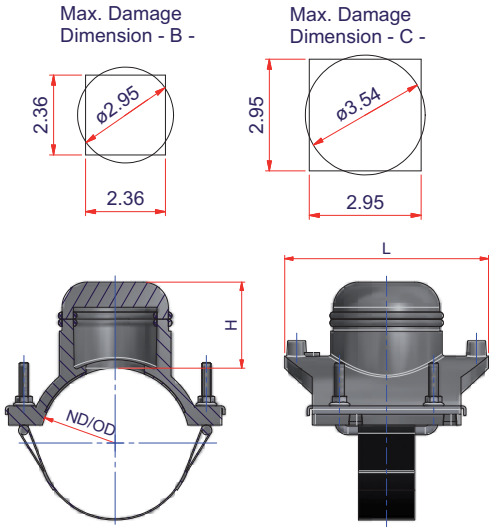
REPAIR SADDLE WITH BELTS FOR MEDIUM SURFACES

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7

Suitable to repair minor damages on pipes with or without fluid leakage.
Type A: Item made up of branch saddle code 12EICOL + electrofusion end cap code 12EICALE02.
Type B: Item made up of branch saddle code 12ECOL + butt fusion closing cap.

Available upon request.

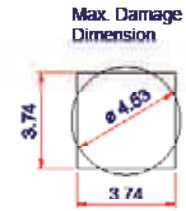
(B)

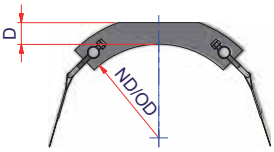


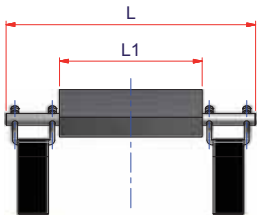
PE4710 230PSI SDR11• IPS

Code	Type	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	OD	L	H	Max Damage Dimension
12EIRIP02	A	2" IPS	17	10	240	-	-	2"	2.375	5.20	5.08	A
12EIRIP03	B	3" IPS	17	10	240	-	-	3"	3.500	6.69	3.15	B
12EIRIP04	B	4" IPS	17	10	240	-	-	4"	4.500	6.69	3.15	B
12EIRIP06	B	6" IPS	17	10	240	-	-	6"	6.625	6.69	3.15	B
12EIRIP08	B	8" IPS	17	10	240	-	-	8"	8.625	7.87	3.54	C
12EIRIP10	B	10" IPS	17	10	240	-	-	10"	10.750	7.87	3.54	C

ELECTROFUSION FITTINGS







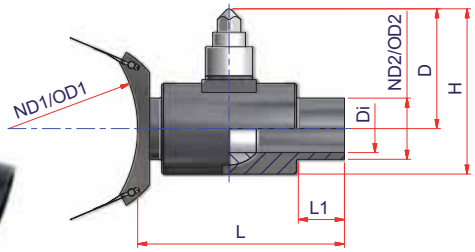
REPAIR SADDLE WITH BELTS FOR BIG SURFACES

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
Suitable to repair damages on pipes.
Supplied with metal bars and belts for the installation.
Upon request.

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	OD	D	L	L1
12EIRIP12	12" IPS	17	5	60	-	-	12"	12.750	1.46	12.60	9.45
12EIRIP14	14" IPS	17	5	60	13.200	0.5330	14"	14.000	1.46	12.60	9.45
12EIRIP16	16" IPS	17	5	60	-	-	16"	16.000	1.46	12.60	9.45
12EIRIP18	18" IPS	17	5	60	-	-	18"	18.000	1.46	12.60	9.45
12EIRIP20	20" IPS	17	5	60	-	-	20"	20.000	1.46	12.60	9.45
12EIRIP22	22" IPS	17	5	60	-	-	22"	22.000	1.46	12.60	9.45
12EIRIP24	24" IPS	17	5	60	13.420	0.5330	24"	24.000	1.46	12.60	9.45
12EIRIP28	28" IPS	17	5	60	12.760	0.5330	28"	28.000	1.46	12.60	9.45
12EIRIP30	30" IPS	17	5	60	-	-	30"	30.000	1.46	12.60	9.45
12EIRIP32	32" IPS	17	5	60	-	-	32"	32.000	1.46	12.60	9.45
12EIRIP36	36" IPS	17	5	60	15.400	0.5330	36"	36.000	1.46	12.60	9.45
12EIRIP40	40" IPS	17	5	60	-	-	40"	40.000	1.46	12.60	9.45

ELECTROFUSION FITTINGS



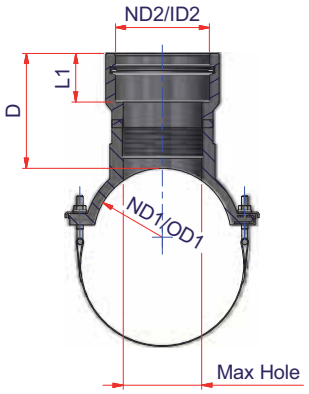
TOP LOAD BRANCH SADDLE WITH VALVE FULL BORE

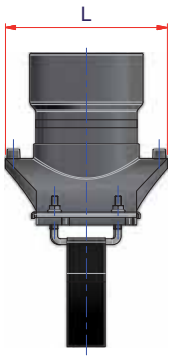
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7
Supplied with metal bars and belts for the installation.

PE4710 230PSI SDR11• IPS x IPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	OD2	Di	D	H	L	L1
12EICOLV0402	4" IPS x 2" IPS	17	-	-	-	-	4.500	2.375	1.85	6.40	9.10	25	3.60
12EICOLV0602	6" IPS x 2" IPS	17	-	-	-	-	6.625	2.375	1.85	6.40	9.10	24	3.60
12EICOLV0802	8" IPS x 2" IPS	17	-	-	-	-	8.625	2.375	1.85	6.40	9.10	24	3.60
12EICOLV1002	10" IPS x 2" IPS	17	-	-	-	-	10.750	2.375	1.85	6.40	9.10	24	3.60
12EICOLV1202	12" IPS x 2" IPS	17	-	-	-	-	12.750	2.375	1.85	6.40	9.10	24	3.60
12EICOLV0403	4" IPS x 3" IPS	17	-	-	-	-	4.500	3.500	2.50	8.00	11.40	25	4.00
12EICOLV0603	6" IPS x 3" IPS	17	-	-	-	-	6.625	3.500	2.50	8.00	11.40	24	4.00
12EICOLV0803	8" IPS x 3" IPS	17	-	-	-	-	8.625	3.500	2.50	8.00	11.40	24	4.00
12EICOLV1003	10" IPS x 3" IPS	17	-	-	-	-	10.750	3.500	2.50	8.00	11.40	24	4.00
12EICOLV1203	12" IPS x 3" IPS	17	-	-	-	-	12.750	3.500	2.50	8.00	11.40	24	4.00
12EICOLV0604	6" IPS x 4" IPS	17	-	-	-	-	6.625	4.500	3.62	10.40	15.00	24	4.50
12EICOLV0804	8" IPS x 4" IPS	17	-	-	-	-	8.625	4.500	3.62	10.40	15.00	24	4.50
12EICOLV1004	10" IPS x 4" IPS	17	-	-	-	-	10.750	4.500	3.62	10.40	15.00	24	4.50
12EICOLV1204	12" IPS x 4" IPS	17	-	-	-	-	12.750	4.500	3.62	10.40	15.00	24	4.50
12EICOLV0806	8" IPS x 6" IPS	17	-	-	-	-	6.625	6.625	5.20	12.60	18.60	24	5.00
12EICOLV1006	10" IPS x 6" IPS	17	-	-	-	-	10.750	6.625	5.20	12.60	18.60	24	5.00
12EICOLV1206	12" IPS x 6" IPS	17	-	-	-	-	12.750	6.625	5.20	12.60	18.60	24	5.00
12EICOLV1406	14" IPS x 6" IPS	17	-	-	-	-	14.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV1606	16" IPS x 6" IPS	17	-	-	-	-	16.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV1806	18" IPS x 6" IPS	17	-	-	-	-	18.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV2006	20" IPS x 6" IPS	17	-	-	-	-	20.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV2206	22" IPS x 6" IPS	17	-	-	-	-	22.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV2406	24" IPS x 6" IPS	17	-	-	-	-	24.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV2806	28" IPS x 6" IPS	17	-	-	-	-	28.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV3006	30" IPS x 6" IPS	17	-	-	-	-	30.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV3206	32" IPS x 6" IPS	17	-	-	-	-	32.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV3606	36" IPS x 6" IPS	17	-	-	-	-	36.000	6.625	5.20	12.60	18.60	24	5.00
12EICOLV4006	40" IPS x 6" IPS	17	-	-	-	-	40.000	6.625	5.20	12.60	18.60	24	5.00

ELECTROFUSION FITTINGS





SEWAGE

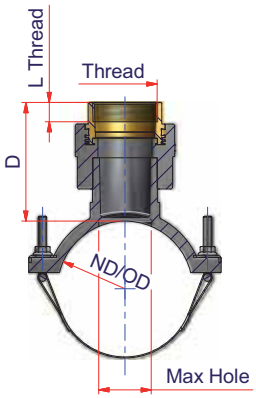
E/F BRANCH SADDLE WITH GASKET

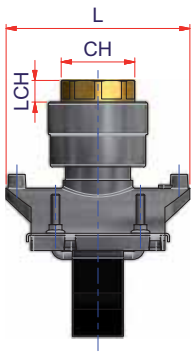
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7

PE4710 230PSI SDR11 • IPS x IPS

Code	Nominal Diameter ø (ND1 x ND2)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	ID2	L1	L	D	Max Hole
12EICOLS0604	6" IPS x 4" IPS	17	6	72	3.740	0.4441	6.625	4.500	2.36	7.87	5.59	3.54
12EICOLS0804	8" IPS x 4" IPS	17	-	-	-	-	8.625	4.500	2.36	7.87	5.59	3.54
12EICOLS1004	10" IPS x 4" IPS	17	-	-	-	-	10.750	4.500	2.36	7.87	5.59	3.54
12EICOLS1204	12" IPS x 4" IPS	17	-	-	-	-	12.750	4.500	2.36	7.87	5.59	3.54

ELECTROFUSION FITTINGS





PE/BRASS ELECTROFUSION TRANSITION SADDLE

Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7

***NOT** SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS*

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	Thread	L Thread	CH	LCH	L	D	Max Hole
12EICOLF02034	2" IPS x 3/4" NPT	17	-	-	-	-	2.375	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF03034	3" IPS x 3/4" NPT	17	-	-	-	-	3.500	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF04034	4" IPS x 3/4" NPT	17	-	-	-	-	4.500	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF06034	6" IPS x 3/4" NPT	17	-	-	-	-	6.625	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF08034	8" IPS x 3/4" NPT	17	-	-	-	-	8.625	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF10034	10" IPS x 3/4" NPT	17	-	-	-	-	10.750	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF12034	12" IPS x 3/4" NPT	17	-	-	-	-	12.750	3/4" NPT	0.53	1.18	0.43	5.59	2.35	0.70
12EICOLF0201	2" IPS x 1" NPT	17	-	-	-	-	2.375	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF0301	3" IPS x 1" NPT	17	-	-	-	-	3.500	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF0401	4" IPS x 1" NPT	17	-	-	-	-	4.500	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF0601	6" IPS x 1" NPT	17	-	-	-	-	6.625	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF0801	8" IPS x 1" NPT	17	-	-	-	-	8.625	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF1001	10" IPS x 1" NPT	17	-	-	-	-	10.750	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF1201	12" IPS x 1" NPT	17	-	-	-	-	12.750	1" NPT	0.66	1.49	0.43	5.59	2.83	0.90
12EICOLF02114	2" IPS x 1"¼ NPT	17	-	-	-	-	2.375	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25
12EICOLF03114	3" IPS x 1"¼ NPT	17	-	-	-	-	3.500	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25
12EICOLF04114	4" IPS x 1"¼ NPT	17	-	-	-	-	4.500	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25
12EICOLF06114	6" IPS x 1"¼ NPT	17	-	-	-	-	6.625	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25
12EICOLF08114	8" IPS x 1"¼ NPT	17	-	-	-	-	8.625	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25
12EICOLF10114	10" IPS x 1"¼ NPT	17	-	-	-	-	10.750	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25
12EICOLF12114	12" IPS x 1"¼ NPT	17	-	-	-	-	12.750	1" 1/4 NPT	0.68	1.81	0.47	5.59	3.26	1.25

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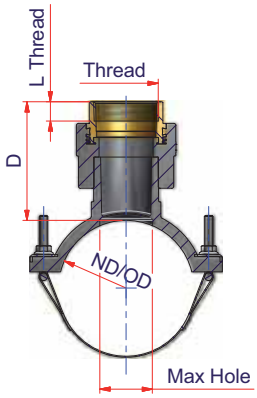
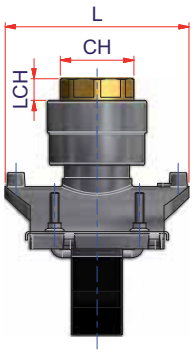
ELECTROFUSION FITTINGS





PE/BRASS ELECTROFUSION TRANSITION SADDLE

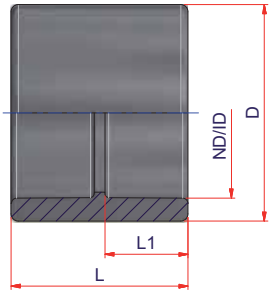
Weldable on pipe DR 17 - 15.5 - 13.5 - 11 - 9.3 - 9 - 7.3 - 7

***NOT** SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS*

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Fusion range Max DR	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	Thread	L Thread	CH	LCH	L	D	Max Hole
12EICOLF02112	2" IPS x 1"½ NPT	17	-	-	-	-	2.375	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF03112	3" IPS x 1"½ NPT	17	-	-	-	-	3.500	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF04112	4" IPS x 1"½ NPT	17	-	-	-	-	4.500	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF06112	6" IPS x 1"½ NPT	17	-	-	-	-	6.625	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF08112	8" IPS x 1"½ NPT	17	-	-	-	-	8.625	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF10112	10" IPS x 1"½ NPT	17	-	-	-	-	10.750	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF12112	12" IPS x 1"½ NPT	17	-	-	-	-	12.750	1" 1/2 NPT	0.68	2.16	0.47	5.59	3.65	1.50
12EICOLF0202	2" IPS x 2" NPT	17	-	-	-	-	2.375	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90
12EICOLF0302	3" IPS x 2" NPT	17	-	-	-	-	3.500	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90
12EICOLF0402	4" IPS x 2" NPT	17	-	-	-	-	4.500	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90
12EICOLF0602	6" IPS x 2" NPT	17	-	-	-	-	6.625	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90
12EICOLF0802	8" IPS x 2" NPT	17	-	-	-	-	8.625	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90
12EICOLF1002	10" IPS x 2" NPT	17	-	-	-	-	10.750	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90
12EICOLF1202	12" IPS x 2" NPT	17	-	-	-	-	12.750	2" NPT	0.70	2.56	0.67	5.59	4.32	1.90

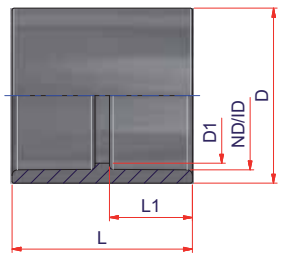
SOCKET FUSION FITTINGS



SOCKET FUSION COUPLER

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	L1	D	L
12EISC034	3/4" IPS	450	12.150	0.045	0.0020	1.050	0.83	1.38	1.81
12EISC01	1" IPS	350	9.450	0.070	0.0033	1.315	0.79	1.77	1.69
12EISC114	1"1/4 IPS	400	4.800	0.111	0.0067	1.660	0.91	2.21	1.89
12EISC112	1"1/2 IPS	160	4.320	0.107	0.0077	1.900	0.91	2.36	1.93
12EISC02	2" IPS	130	3.120	0.124	0.0107	2.375	0.89	2.97	1.85



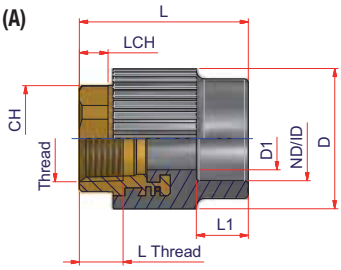
GEOTHERMAL
SOCKET FUSION COUPLER

PE4710 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	D1	L1	L	D
12EISCG114	1"1/4 IPS	260	6.240	0.068	0.0053	1.660	1.48	0.91	1.97	1.91

SOCKET FUSION FITTINGS

(A)



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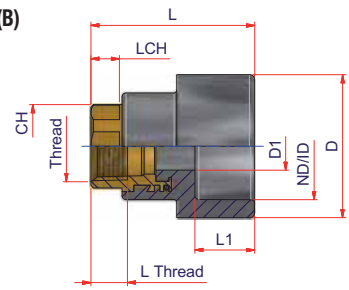

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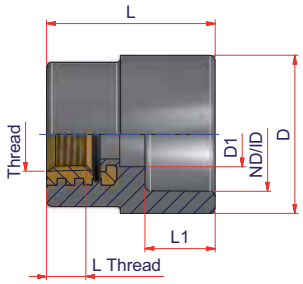

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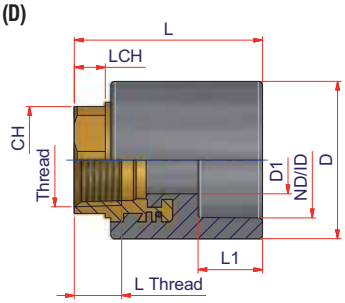

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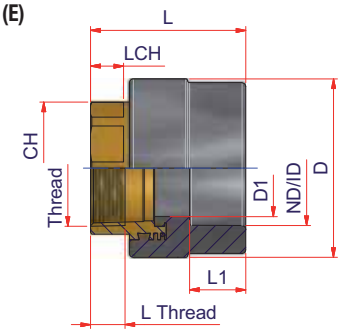


PE/NPT BRASS FEMALE SOCKET FUSION

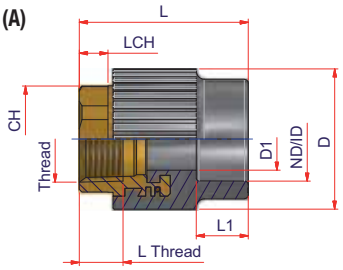
***NOT** SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS*

PE4710 230PSI SDR11 • IPS

Code	Type	Nominal Diameter ø (NDxThread)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	Thread	L Thread	L	L1	D	D1	CH	LCH
12EIRFFS03434	A	3/4" IPS x 3/4" NPT	60	5.280	0.275	0.0047	1.050	3/4" NPT	0.53	2.28	0.67	1.65	0.73	1.18	0.43
12EIRFFS01034	B	1" IPS x 3/4" NPT	50	4.400	0.295	0.0057	1.315	3/4" NPT	0.53	2.36	0.79	1.77	0.73	1.18	0.43
12EIRFFS0101	A	1" IPS x 1" NPT	32	2.816	0.481	0.0087	1.315	1" NPT	0.66	2.56	0.79	2.13	0.95	1.50	0.43
12EIRFFS114034	B	1"1/4 IPS x 3/4" NPT	35	3.080	0.327	0.0080	1.660	3/4" NPT	0.53	2.48	0.91	2.17	0.73	1.18	0.43
12EIRFFS01012	C	1" IPS x 1/2" NPT	75	6.600	0.177	0.0037	1.315	1/2" NPT	0.51	1.89	0.79	1.77	0.73	-	-
12EIRFFS11401	D	1"1/4 IPS x 1" NPT	32	2.816	0.526	0.0087	1.660	1" NPT	0.66	2.64	0.91	2.21	0.95	1.50	0.43
12EIRFFS114114	E	1"1/4 IPS x 1"1/4 NPT	20	1.920	0.677	0.0160	1.660	1"1/4 NPT	0.68	2.72	0.91	2.56	1.30	1.81	0.47
12EIRFFS112112	E	1"1/2 IPS x 1"1/2 NPT	18	1.584	0.953	0.0153	1.900	1"1/2 NPT	0.68	2.79	0.98	2.95	1.55	2.16	0.47
12EIRFFS02112	D	2" IPS x 1"1/2 NPT	10	880	1.144	0.0277	2.375	1"1/2 NPT	0.68	2.96	1.14	3.46	1.56	2.16	0.47
12EIRFFS0202	E	2" IPS x 2" NPT	9	792	1.344	0.0306	2.375	2" NPT	0.70	3.15	1.14	3.62	1.97	2.56	0.67
12EIRFFS0303	E	3" IPS x 3" NPT	4	352	2.776	0.0706	3.500	3" NPT	1.02	3.90	1.46	5.08	2.95	3.74	0.91
12EIRFFS0404	E	4" IPS x 4" NPT	2	176	4.785	0.1447	4.500	4" NPT	1.09	4.37	1.69	6.30	3.92	4.72	1.18

SOCKET FUSION FITTINGS

(A)



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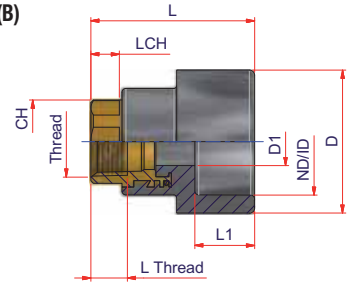

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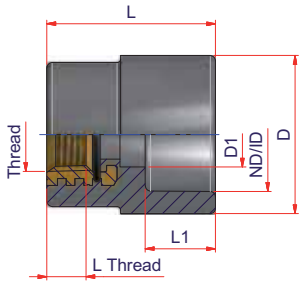

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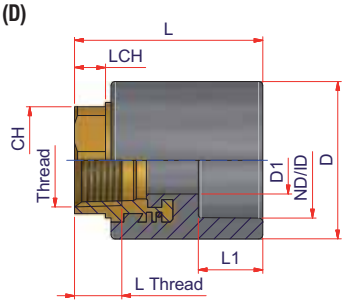
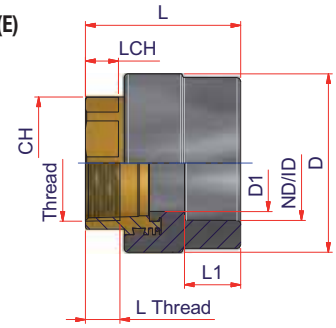


(E)



LEAD FREE (*)

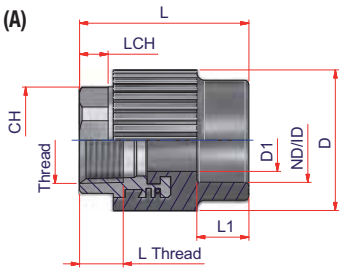
PE/NPT BRASS
FEMALE SOCKET FUSION

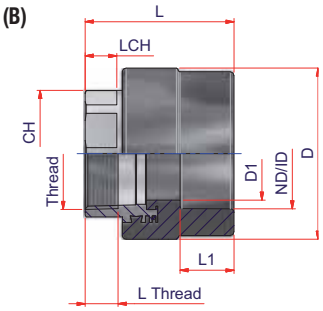
(*) ***SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS***

PE4710 230PSI SDR11 • IPS

Code	Type	Nominal Diameter ø (NDxThread)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	Thread	L Thread	L	L1	D	D1	CH	LCH
12EIRFFS03434LF	A	3/4" IPS x 3/4" NPT	60	5.280	0.275	0.0047	1.050	3/4" NPT	0.53	2.28	0.67	1.65	0.73	1.18	0.43
12EIRFFS01034LF	B	1" IPS x 3/4" NPT	50	4.400	0.295	0.0057	1.315	3/4" NPT	0.53	2.36	0.79	1.77	0.73	1.18	0.43
12EIRFFS0101LF	A	1" IPS x 1" NPT	32	2.816	0.481	0.0087	1.315	1" NPT	0.66	2.56	0.79	2.13	0.95	1.50	0.43
12EIRFFS114034LF	B	1"1/4 IPS x 3/4" NPT	35	3.080	0.327	0.0080	1.660	3/4" NPT	0.53	2.48	0.91	2.17	0.73	1.18	0.43
12EIRFFS01012LF	C	1" IPS x 1/2" NPT	75	6.600	0.177	0.0037	1.315	1/2" NPT	0.51	1.89	0.79	1.77	0.73	-	-
12EIRFFS11401LF	D	1"1/4 IPS x 1" NPT	32	2.816	0.526	0.0087	1.660	1" NPT	0.66	2.64	0.91	2.21	0.95	1.50	0.43
12EIRFFS114114LF	E	1"1/4 IPS x 1"1/4 NPT	20	1.920	0.677	0.0160	1.660	1"1/4 NPT	0.68	2.72	0.91	2.56	1.30	1.81	0.47
12EIRFFS112112LF	E	1"1/2 IPS x 1"1/2 NPT	18	1.584	0.953	0.0153	1.900	1"1/2 NPT	0.68	2.79	0.98	2.95	1.55	2.16	0.47
12EIRFFS02112LF	D	2" IPS x 1"1/2 NPT	10	880	1.144	0.0277	2.375	1"1/2 NPT	0.68	2.96	1.14	3.46	1.56	2.16	0.47
12EIRFFS0202LF	E	2" IPS x 2" NPT	9	792	1.344	0.0306	2.375	2" NPT	0.70	3.15	1.14	3.62	1.97	2.56	0.67
12EIRFFS0303LF	E	3" IPS x 3" NPT	4	352	2.776	0.0706	3.500	3" NPT	1.02	3.90	1.46	5.08	2.95	3.74	0.91
12EIRFFS0404LF	E	4" IPS x 4" NPT	2	176	4.785	0.1447	4.500	4" NPT	1.09	4.37	1.69	6.30	3.92	4.72	1.18

SOCKET FUSION FITTINGS





PE/NPT STAINLESS STEEL FEMALE SOCKET FUSION

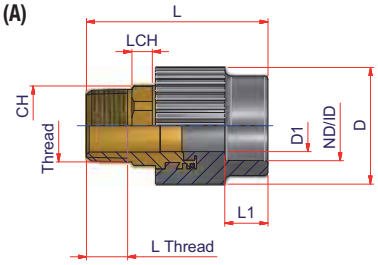
SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS

PE4710 230PSI SDR11• IPS

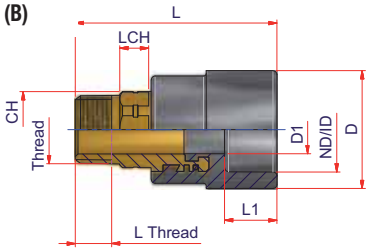
Code	Type	Nominal Diameter ø (NDxThread)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	Thread	L Thread	L	L1	D	D1	CH	LCH
12EIRFFS0101SS	A	1" IPS x 1" NPT	32	2.816	0.481	0.0087	1.315	1" NPT	0.66	2.56	0.79	2.13	0.95	1.50	0.43
12EIRFFS114114SS	B	1"1/4 IPS x 1"1/4 NPT	20	1.920	0.677	0.0160	1.660	1"1/4 NPT	0.68	2.72	0.91	2.56	1.30	1.81	0.47
12EIRFFS112112SS	B	1"1/2 IPS x 1"1/2 NPT	18	1.584	0.953	0.0153	1.900	1"1/2 NPT	0.68	2.79	0.98	2.95	1.55	2.16	0.47
12EIRFFS0202SS	B	2" IPS x 2" NPT	9	792	1.344	0.0306	2.375	2" NPT	0.70	3.15	1.14	3.62	1.97	2.56	0.67
12EIRFFS0303SS	B	3" IPS x 3" NPT	4	352	2.776	0.0706	3.500	3" NPT	1.02	3.90	1.46	5.08	2.95	3.74	0.91
12EIRFFS0404SS	B	4" IPS x 4" NPT	2	176	4.785	0.1447	4.500	4" NPT	1.09	4.37	1.69	6.30	3.92	4.72	1.18

SOCKET FUSION FITTINGS

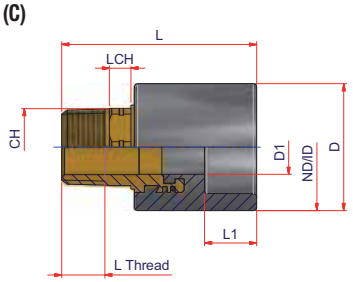
(A)



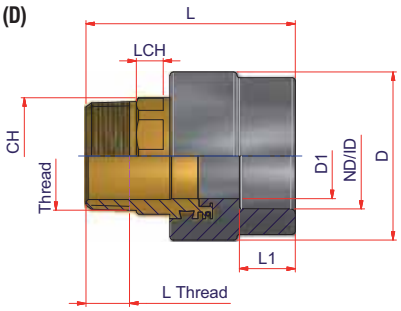
(B)



(C)



(D)



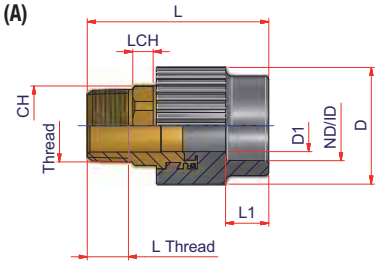
PE/NPT BRASS MALE SOCKET FUSION

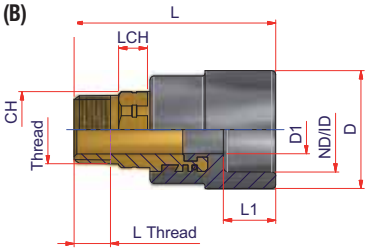
***NOT** SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS*

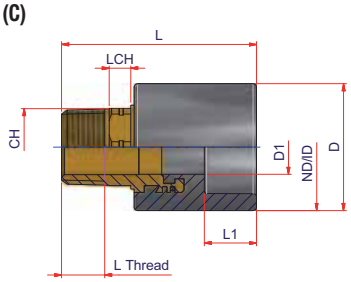
PE4710 230PSI SDR11 • IPS

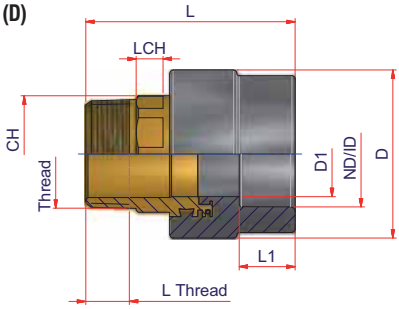
Code	Type	Nominal Diameter ø (NDxThread)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	Thread	L Thread	L	L1	D	D1	CH	LCH
12EIRFMS034034	A	3/4" IPS x 3/4" NPT	60	5.280	0.275	0.0047	1.050	3/4" NPT	0.54	2.95	0.67	1.65	0.73	1.06	0.43
12EIRFMS01034	B	1" IPS x 3/4" NPT	50	4.400	0.295	0.0057	1.315	3/4" NPT	0.54	3.03	0.79	1.77	0.73	1.06	0.43
12EIRFMS0101	A	1" IPS x 1" NPT	26	2.288	0.601	0.0107	1.315	1" NPT	0.68	3.31	0.79	2.12	0.94	1.34	0.37
12EIRFMS114034	B	1"1/4 IPS x 3/4" NPT	30	2.880	0.414	0.0100	1.660	3/4" NPT	0.54	3.15	0.91	2.16	0.73	1.06	0.43
12EIRFMS11401	C	1"1/4 IPS x 1" NPT	30	2.640	0.620	0.0093	1.660	1" NPT	0.68	3.39	0.91	2.21	0.94	1.34	0.37
12EIRFMS114114	D	1"1/4 IPS x 1" 1/4 NPT	15	1.320	0.386	0.0183	1.660	1"1/4 NPT	0.71	3.58	0.91	2.56	1.30	1.65	0.47
12EIRFMS112112	D	1"1/2 IPS x 1"1/2 NPT	12	1.128	0.295	0.0230	1.900	1"1/2 NPT	0.72	3.68	0.98	2.95	1.49	1.97	0.47
12EIRFMS0202	D	2" IPS x 2" NPT	6	528	1.815	0.0460	2.375	2" NPT	0.76	4.13	1.14	3.62	1.97	2.36	0.59
12EIRFMS0303	D	3" IPS x 3" NPT	2	176	3.960	0.1447	3.500	3" NPT	1.20	5.08	1.46	5.08	2.95	3.54	0.91
12EIRFMS0404	D	4" IPS x 4" NPT	2	96	6.875	0.2962	4.500	4" NPT	1.30	5.83	1.69	6.30	3.92	4.53	1.18

SOCKET FUSION FITTINGS









LEAD FREE (*)

PE/NPT BRASS MALE SOCKET FUSION

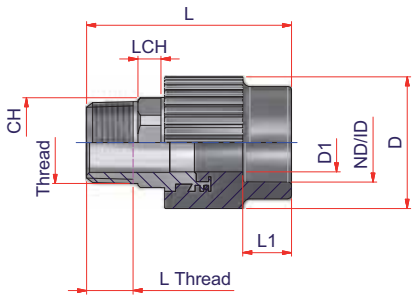
(*) *SUITABLE FOR THE TRANSPORTATION OF HUMAN CONSUMPTION FLUIDS*

PE4710 230PSI SDR11• IPS

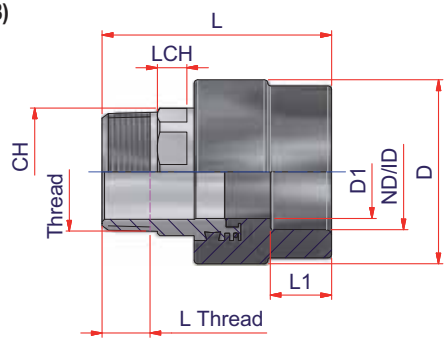
Code	Type	Nominal Diameter ø (NDxThread)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	Thread	L Thread	L	L1	D	D1	CH	LCH
12EIRFMS034034LF	A	3/4" IPS x 3/4" NPT	60	5.280	0.275	0.0047	1.050	3/4" NPT	0.54	2.95	0.67	1.65	0.73	1.06	0.43
12EIRFMS01034LF	B	1" IPS x 3/4" NPT	50	4.400	0.295	0.0057	1.315	3/4" NPT	0.54	3.03	0.79	1.77	0.73	1.06	0.43
12EIRFMS0101LF	A	1" IPS x 1" NPT	26	2.288	0.601	0.0107	1.315	1" NPT	0.68	3.31	0.79	2.12	0.94	1.34	0.37
12EIRFMS114034LF	B	1"1/4 IPS x 3/4" NPT	30	2.880	0.414	0.0100	1.660	3/4" NPT	0.54	3.15	0.91	2.16	0.73	1.06	0.43
12EIRFMS11401LF	C	1"1/4 IPS x 1" NPT	30	2.640	0.620	0.0093	1.660	1" NPT	0.68	3.39	0.91	2.21	0.94	1.34	0.37
12EIRFMS114114LF	D	1"1/4 IPS x 1" 1/4 NPT	15	1.320	0.386	0.0183	1.660	1"1/4 NPT	0.71	3.58	0.91	2.56	1.30	1.65	0.47
12EIRFMS112112LF	D	1"1/2 IPS x 1"1/2 NPT	12	1.128	0.295	0.0230	1.900	1"1/2 NPT	0.72	3.68	0.98	2.95	1.49	1.97	0.47
12EIRFMS0202LF	D	2" IPS x 2" NPT	6	528	1.815	0.0460	2.375	2" NPT	0.76	4.13	1.14	3.62	1.97	2.36	0.59
12EIRFMS0303LF	D	3" IPS x 3" NPT	2	176	3.960	0.1447	3.500	3" NPT	1.20	5.08	1.46	5.08	2.95	3.54	0.91
12EIRFMS0404LF	D	4" IPS x 4" NPT	2	96	6.875	0.2962	4.500	4" NPT	1.30	5.83	1.69	6.30	3.92	4.53	1.18

SOCKET FUSION FITTINGS

(A)



(B)

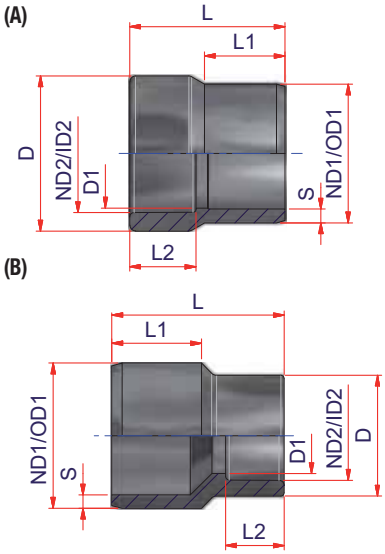


PE/NPT STAINLESS STEEL MALE SOCKET FUSION

PE4710 230PSI SDR11• IPS

Code	Type	Nominal Diameter ø (NDxThread)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	Thread	L Thread	L	L1	D	D1	CH	LCH
12EIRFMS0101SS	A	1" IPS x 1" NPT	26	2.288	0.601	0.0107	1.315	1" NPT	0.68	3.31	0.79	2.12	0.94	1.34	0.37
12EIRFMS114114SS	B	1"1/4 IPS x 1" 1/4 NPT	15	1.320	0.386	0.0183	1.660	1"1/4 NPT	0.71	3.58	0.91	2.56	1.30	1.65	0.47
12EIRFMS112112SS	B	1"1/2 IPS x 1"1/2 NPT	12	1.128	0.295	0.0230	1.900	1"1/2 NPT	0.72	3.68	0.98	2.95	1.49	1.97	0.47
12EIRFMS0202SS	B	2" IPS x 2" NPT	6	528	1.815	0.0460	2.375	2" NPT	0.76	4.13	1.14	3.62	1.97	2.36	0.59
12EIRFMS0303SS	B	3" IPS x 3" NPT	2	176	3.960	0.1447	3.500	3" NPT	1.20	5.08	1.46	5.08	2.95	3.54	0.91
12EIRFMS0404SS	B	4" IPS x 4" NPT	2	96	6.875	0.2962	4.500	4" NPT	1.30	5.83	1.69	6.30	3.92	4.53	1.18

SOCKET FUSION FITTINGS

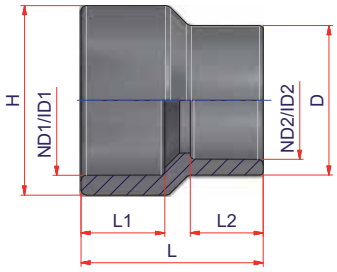


SOCKET FUSION REDUCER

PE4710 230PSI SDR11• IPS

Code	Type	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S min	L1	ID2	L2	D1	L	D
12EIRS114034	B	1”1/4 IPS x 3/4” IPS	150	7.200	0.057	0.0037	1.660	0.151	1.02	1.050	0.67	0.87	1.97	1.38
12EIRS11401	A	1”1/4 IPS x 1” IPS	100	4.800	0.074	0.0057	1.660	0.151	1.02	1.315	0.79	1.10	1.97	1.78
12EIRS112034	B	1”1/2 IPS x 3/4” IPS	144	6.912	0.067	0.0040	1.900	0.173	1.10	1.050	0.67	0.91	2.05	1.34
12EIRS11201	B	1”1/2 IPS x 1” IPS	108	5.184	0.075	0.0053	1.900	0.173	1.10	1.315	0.79	1.22	2.05	1.73
12EIRS112114	A	1”1/2 IPS x 1”1/4 IPS	90	4.320	0.094	0.0063	1.900	0.173	1.10	1.660	0.91	1.50	2.13	2.13
12EIRS02034	B	2” IPS x 3/4” IPS	80	3.840	0.121	0.0070	2.375	0.216	1.26	1.050	0.67	0.91	2.32	1.34
12EIRS0201	B	2” IPS x 1” IPS	90	3.840	0.127	0.0070	2.375	0.216	1.26	1.315	0.79	1.22	2.32	1.73
12EIRS02114	B	2” IPS x 1”1/4 IPS	60	2.880	0.139	0.0093	2.375	0.216	1.26	1.660	0.91	1.50	2.32	2.13
12EIRS02112	A	2” IPS x 1”1/2 IPS	50	2.400	0.163	0.0113	2.375	0.216	1.26	1.900	0.98	1.69	2.36	2.48

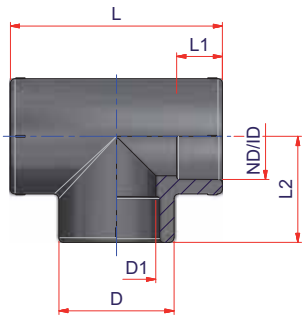
SOCKET FUSION FITTINGS



SOCKET FUSION
FEMALE REDUCER

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID1	ID2	L1	L2	L	D	H
12EIRSC11401	1”1/4 IPS x 1” IPS	250	6.750	0.075	0.0047	1.660	1.315	0.91	0.79	1.97	1.61	2.05
12EIRSC02114	2” IPS x 1”1/4 IPS	110	2.970	0.174	0.0110	2.375	1.660	1.02	0.91	2.36	2.05	2.95

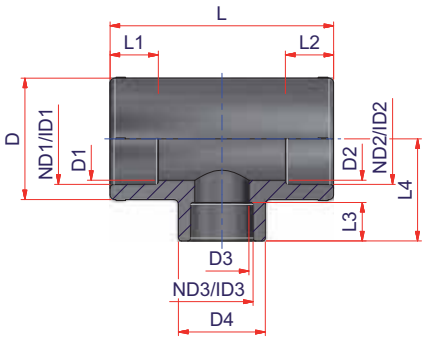


SOCKET FUSION TEE

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	L1	D1	L	D	L2
12EIST034	3/4” IPS	220	5.940	0.097	0.0053	1.050	0.67	0.87	2.91	1.38	1.45
12EIST01	1” IPS	100	2.700	0.194	0.0120	1.315	0.79	1.10	3.39	1.77	1.69
12EIST114	1”1/4 IPS	130	1.560	0.311	0.0207	1.660	0.91	1.42	3.86	2.16	1.93
12EIST112	1”1/2 IPS	40	1.080	0.446	0.0300	1.900	0.98	1.69	4.57	2.48	2.28
12EIST02	2” IPS	50	6.000	0.748	0.0533	2.375	1.02	2.13	5.20	3.07	2.60

SOCKET FUSION FITTINGS

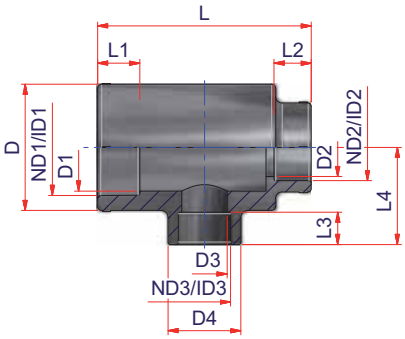


SOCKET FUSION REDUCED TEE

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND1 x ND2 x ND3)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID1	L1	D1	ID2	L2	D2	ID3	L3	D3	L5	L	L4	D
12EISTR0101034	1" IPS x 1" IPS x 3/4" IPS	130	3.510	0.167	0.0098	1.315	0.79	1.10	1.315	0.79	1.10	1.050	0.67	0.87	1.39	3.39	1.58	1.77
12EISTR114114034	1"1/4 IPS x 1"1/4 IPS x 3/4" IPS	150	1.800	0.260	0.0177	1.660	0.91	1.42	1.660	0.91	1.42	1.050	0.67	0.87	1.38	3.86	1.69	2.16
12EISTR11411401	1"1/4 IPS x 1"1/4 IPS x 1" IPS	150	1.800	0.285	0.0177	1.660	0.91	1.42	1.660	0.91	1.42	1.315	0.79	1.10	1.77	3.86	1.81	2.16
12EISTR112112034	1"1/2 IPS x 1"1/2 IPS x 3/4" IPS	20	960	0.402	0.0280	1.900	0.98	1.69	1.900	0.98	1.69	1.050	0.67	0.87	1.38	4.57	1.97	2.48
12EISTR11211201	1"1/2 IPS x 1"1/2 IPS x 1" IPS	50	1.350	0.397	0.0240	1.900	0.98	1.69	1.900	0.98	1.69	1.315	0.79	1.10	1.77	4.57	2.09	2.48
12EISTR112112114	1"1/2 IPS x 1"1/2 IPS x 1"1/4 IPS	50	1.200	0.418	0.0280	1.900	0.98	1.69	1.900	0.98	1.69	1.660	0.91	1.41	2.16	4.57	2.20	2.48
12EISTR0202034	2" IPS x 2" IPS x 3/4" IPS	65	780	0.616	0.0410	2.375	1.02	2.13	2.375	1.02	2.13	1.050	0.67	0.87	1.38	5.20	2.24	3.07
12EISTR020201	2" IPS x 2" IPS x 1" IPS	60	720	0.664	0.0443	2.375	1.02	2.13	2.375	1.02	2.13	1.315	0.79	1.10	1.77	5.20	2.36	3.07
12EISTR0202114	2" IPS x 2" IPS x 1"1/4 IPS	50	600	0.695	0.0533	2.375	1.02	2.13	2.375	1.02	2.13	1.660	0.91	1.42	2.16	5.20	2.48	3.07

SOCKET FUSION FITTINGS

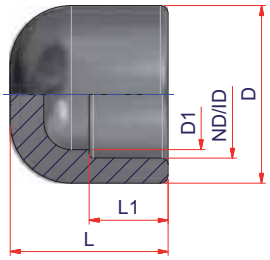


SOCKET FUSION REDUCED TEE

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND1 x ND2 x ND3)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID1	L1	D1	ID2	L2	D2	ID3	L3	D3	D4	L	L4	D
12EISTR114034034	1”1/4 IPS x 3/4” IPS x 3/4” IPS	180	2.160	0.265	0.0147	1.660	0.91	1.42	1.050	0.67	0.87	1.050	0.67	0.87	1.38	3.86	1.69	2.16
12EISTR1140101	1”1/4 IPS x 1” IPS x 1” IPS	150	1.800	0.280	0.0177	1.660	0.91	1.42	1.315	0.79	1.10	1.315	0.79	1.10	1.77	3.86	1.81	2.16
12EISTR112114034	1”1/2 IPS x 1”1/4 IPS x 3/4” IPS	20	-	0.389	0.0280	1.900	0.98	1.69	1.660	0.91	1.42	1.050	0.67	0.87	1.38	4.57	1.97	2.48
12EISTR11211401	1”1/2 IPS x 1”1/4 IPS x 1” IPS	50	1.350	0.392	0.0240	1.900	0.98	1.69	1.660	0.91	1.42	1.315	0.79	1.10	1.77	4.57	2.09	2.48
12EISTR112114114	1”1/2 IPS x 1”1/4 IPS x 1”1/4 IPS	45	1.215	0.416	0.0267	2.375	0.98	1.69	1.660	0.91	1.42	1.660	0.91	1.42	2.16	4.57	2.20	2.48
12EISTR02114034	2” IPS x 1”1/4 IPS x 3/4” IPS	60	720	0.629	0.0443	2.375	1.02	2.13	1.660	0.91	1.42	1.050	0.67	0.87	1.38	5.20	2.24	3.07
12EISTR0211401	2” IPS x 1”1/4 IPS x 1” IPS	60	720	0.640	0.0443	2.375	1.02	2.13	1.660	0.91	1.42	1.315	0.79	1.10	1.77	5.20	2.36	3.07
12EISTR02114114	2” IPS x 1”1/4 IPS x 1”1/4 IPS	60	720	0.664	0.0443	2.375	1.02	2.13	1.660	0.91	1.42	1.660	0.91	1.42	2.17	5.20	2.48	3.07
12EISTR02112034	2” IPS x 1”1/2 IPS x 3/4” IPS	12	576	0.651	0.0466	2.375	1.02	2.13	1.900	0.98	1.69	1.050	0.67	0.87	1.38	5.20	2.24	3.07
12EISTR0211201	2” IPS x 1”1/2 IPS x 1” IPS	10	480	0.682	0.0560	2.375	1.02	2.13	1.900	0.98	1.69	1.315	0.79	1.10	1.77	5.20	2.36	3.07
12EISTR02112114	2” IPS x 1”1/2 IPS x 1”1/4 IPS	60	720	0.680	0.0443	2.375	1.02	2.13	1.900	0.98	1.69	1.660	0.91	1.42	2.17	5.20	2.48	3.07

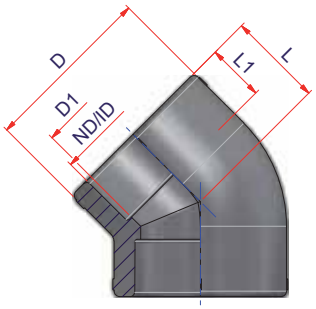
SOCKET FUSION FITTINGS



SOCKET FUSION END CAP

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	D1	L1	L	D
12EISCAP034	3/4" IPS	860	23.220	0.033	0.0013	1.050	0.87	0.67	1.34	1.38
12EISCAP01	1" IPS	430	11.610	0.0710	0.0027	1.315	1.10	0.79	1.58	1.77
12EISCAP114	1"1/4 IPS	280	7.560	0.096	0.0043	1.660	1.42	0.91	1.69	2.13
12EISCAP02	2" IPS	130	3.510	0.200	0.0093	2.375	2.19	0.91	1.77	2.97

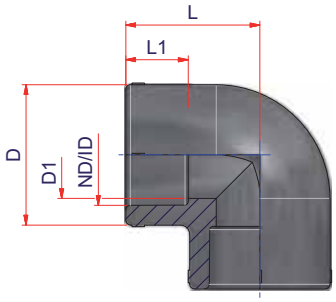


SOCKET FUSION 45° ELBOW

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	L	L1	D	D1
12EISC4501	1" IPS	-	-	0.129	-	1.315	1.18	0.79	1.77	1.10
12EISC45114	1"1/4 IPS	60	2.880	0.143	0.0093	1.660	1.38	0.91	2.09	1.42
12EISC4502	2" IPS	55	1.485	0.384	0.0217	2.375	1.69	1.02	3.07	2.12

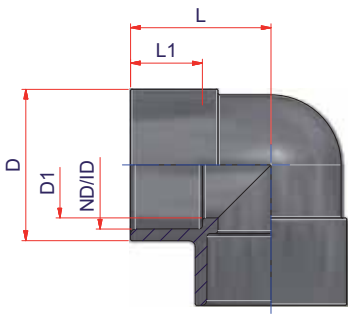
SOCKET FUSION FITTINGS



SOCKET FUSION 90° ELBOW

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	L	L1	D	D1
12EISG034	3/4" IPS	140	6.720	0.079	0.0040	1.050	1.46	0.67	1.38	0.86
12EISG01	1" IPS	180	4.320	0.136	0.0077	1.315	1.69	0.79	1.77	1.10
12EISG114	1"1/4 IPS	200	2.400	0.227	0.0133	1.315	1.93	0.91	2.16	1.41
12EISG112	1"1/2 IPS	20	960	0.363	0.0280	1.660	2.28	0.98	2.48	1.69
12EISG02	2" IPS	80	960	0.509	0.0333	2.375	2.60	1.02	2.99	2.12

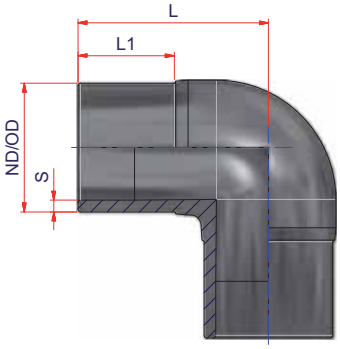


SOCKET FUSION
90° GEOTHERMAL ELBOW

PE4710 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ID	L	L1	D	D1
12EISGG114	1"1/4 IPS	250	3.000	0.125	0.0107	1.660	1.77	0.90	1.91	1.34

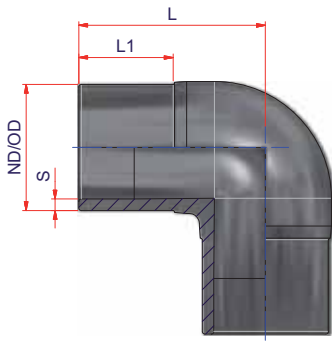
BUTT FUSION FITTINGS



LONG SPIGOT 90° ELBOW

PE4710 160PSI SDR17 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	Smin	L1	L
12DIG02	2" IPS	50	600	0.704	0.0565	2.375	0.140	2.76	4.72
12DIG03	3" IPS	24	288	1.283	0.1176	3.500	0.206	3.54	5.85
12DIG04	4" IPS	66	132	1.925	0.2235	4.500	0.265	3.43	6.30
12DIG06	6" IPS	55	55	4.980	0.5795	6.625	0.390	4.72	8.94
12DIG08	8" IPS	-	-	-	-	8.625	0.507	5.51	11.02

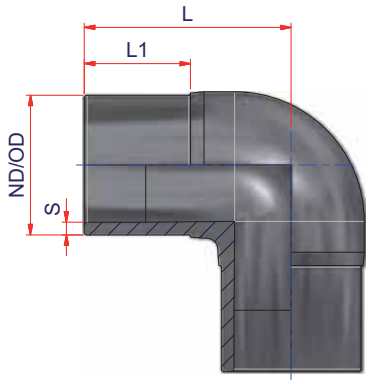


LONG SPIGOT 90° ELBOW

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L	FM
12EIG02	2" IPS	50	600	0.660	0.0565	2.375	0.216	2.76	4.72	150 PSI
12EIG03	3" IPS	24	288	1.503	0.1176	3.500	0.318	3.54	5.85	150 PSI
12EIG04	4" IPS	12	144	2.783	0.2235	4.500	0.409	3.43	6.30	150 PSI
12EIG06	6" IPS	55	55	6.980	0.5795	6.625	0.603	4.72	8.94	150 PSI
12EIG08	8" IPS	-	-		-	8.625	0.785	5.51	11.02	150 PSI

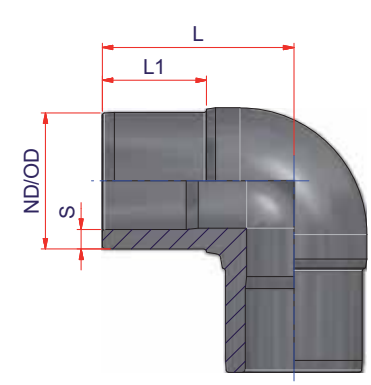
BUTT FUSION FITTINGS



LONG SPIGOT 90° ELBOW

PE4710 300PSI SDR9 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L
12HIG03	3" IPS	24	288	-	-	3.500	0.389	3.54	5.85
12HIG04	4" IPS	12	144	-	-	4.500	0.500	3.43	6.30
12HIG06	6" IPS	55	55	9.240	0.5650	6.625	0.736	4.72	8.94
12HIG08	8" IPS	-	-	-	-	8.625	0.958	5.51	11.02

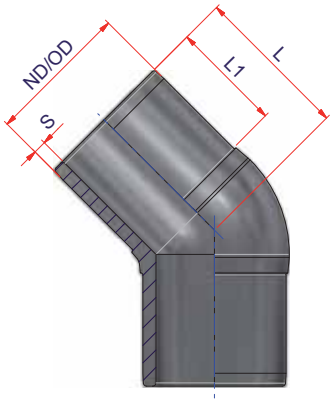


LONG SPIGOT 90° ELBOW

PE4710 340PSI SDR7 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L
12GIG03	3" IPS	24	288	2.209	0.1176	3.500	0.500	3.54	5.85
12GIG04	4" IPS	66	132	3.795	0.3708	4.500	0.643	3.43	6.30
12GIG06	6" IPS	55	55	9.680	0.5650	6.625	0.946	4.72	8.94
12GIG08	8" IPS	-	-	-	-	8.625	1.232	5.51	11.02

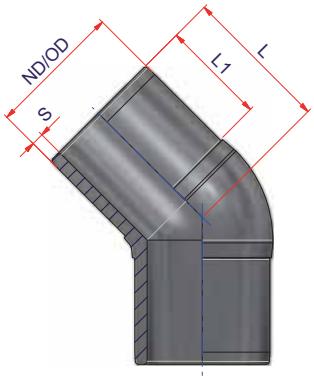
BUTT FUSION FITTINGS



LONG SPIGOT 45° ELBOW

PE4710 160PSI SDR17 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L
12DIC02	2" IPS	70	840	0.572	0.0403	2.375	0.140	2.76	3.54
12DIC03	3" IPS	25	300	1.025	0.1130	3.500	0.206	3.54	4.72
12DIC04	4" IPS	40	160	1.458	0.1907	4.500	0.265	3.42	4.72
12DIC06	6" IPS	39	78	3.758	0.4609	6.625	0.390	4.13	6.30
12DIC08	8" IPS	-	-	-	-	8.625	0.507	5.51	8.47

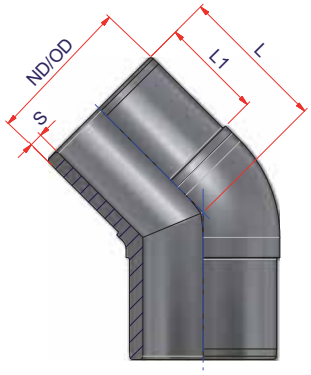


LONG SPIGOT 45° ELBOW

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L	FM
12EIC02	2" IPS	70	840	0.460	0.0403	2.375	0.216	2.76	3.54	150 PSI
12EIC03	3" IPS	25	300	1.302	0.1130	3.500	0.318	3.54	4.72	150 PSI
12EIC04	4" IPS	40	160	2.343	0.1907	4.500	0.409	3.42	4.72	150 PSI
12EIC06	6" IPS	39	78	6.171	0.4609	6.625	0.603	4.13	6.30	150 PSI
12EIC08	8" IPS	-	-	-	-	8.625	0.787	5.51	8.47	150 PSI

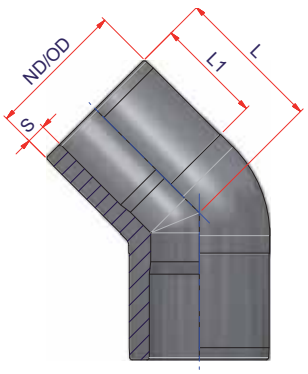
BUTT FUSION FITTINGS



LONG SPIGOT 45° ELBOW

PE4710 300PSI SDR9 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L
12HIC03	3" IPS	25	300	-	-	3.500	0.389	3.54	4.72
12HIC04	4" IPS	40	160	-	-	4.500	0.500	3.42	4.72
12HIC06	6" IPS	39	78	-	-	6.625	0.736	4.13	6.30
12HIC08	8" IPS	-	-	-	-	8.625	0.958	5.51	8.47

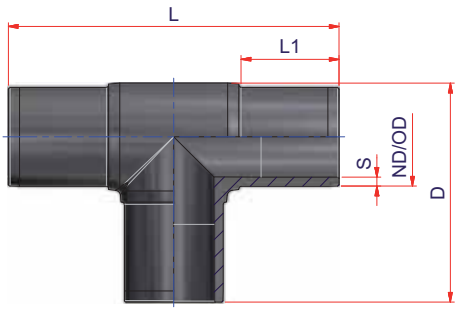


LONG SPIGOT 45° ELBOW

PE4710 340PSI SDR7• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L
12GIC03	3" IPS	25	300	0.634	0.1130	3.500	0.500	3.54	4.72
12GIC04	4" IPS	40	160	1.608	0.1907	4.500	0.643	3.43	4.72
12GIC06	6" IPS	39	78	-	0.4609	6.625	0.946	4.13	6.30
12GIC08	8" IPS	-	-	-	-	8.625	1.232	5.51	8.47

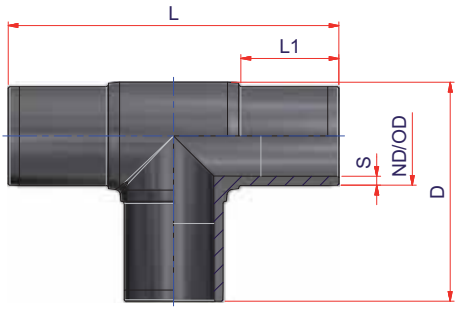
BUTT FUSION FITTINGS



LONG SPIGOT 90° TEE

PE4710 160PSI SDR17• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L	D
12DIT02	2" IPS	30	360	0.939	0.0943	2.375	0.140	2.76	9.45	6.01
12DIT03	3" IPS	15	180	1.694	0.1882	3.500	0.206	3.54	11.69	7.75
12DIT04	4" IPS	48	96	2.933	0.3072	4.500	0.265	3.43	12.60	8.70
12DIT06	6" IPS	40	40	7.260	0.7967	6.625	0.390	4.72	17.87	12.32
12DIT08	8" IPS	-	-	-	-	8.625	0.507	5.51	22.05	15.61

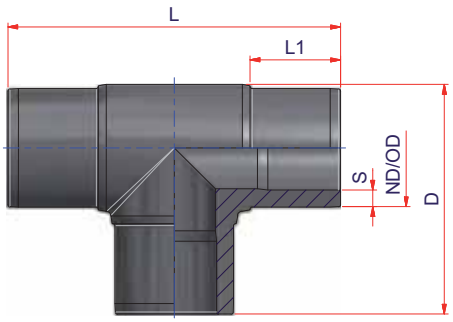


LONG SPIGOT 90° TEE

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L	D	FM
12EIT02	2" IPS	30	360	0.895	0.0943	2.375	0.216	2.76	9.45	6.01	150 PSI
12EIT03	3" IPS	15	180	2.053	0.1882	3.500	0.318	3.54	11.69	7.75	150 PSI
12EIT04	4" IPS	48	96	3.850	0.3072	4.500	0.409	3.43	12.60	8.70	150 PSI
12EIT06	6" IPS	40	40	9.185	0.7967	6.625	0.603	4.72	17.87	12.32	150 PSI
12EIT08	8" IPS	-	-	-	-	8.625	0.787	5.51	22.05	15.61	150 PSI

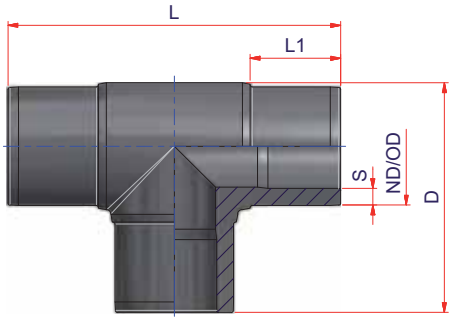
BUTT FUSION FITTINGS



LONG SPIGOT 90° TEE

PE4710 300PSI SDR9 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L	D
12HIT03	3" IPS	15	180	-	-	3.500	0.500	3.54	11.69	7.75
12HIT04	4" IPS	48	96	-	-	4.500	0.643	3.43	12.60	8.70
12HIT06	6" IPS	40	40	-	-	6.625	0.946	4.72	17.87	12.32
12HIT08	8" IPS	-	-	-	-	8.625	1.232	5.51	22.05	15.61

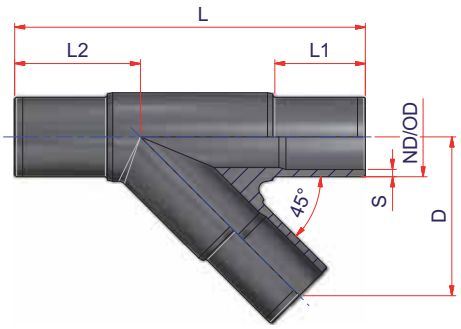


LONG SPIGOT 90° TEE

PE4710 340PSI SDR7 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L	D
12GIT03	3" IPS	15	180	1.225	0.1882	3.500	0.500	3.54	11.69	7.75
12GIT04	4" IPS	48	96	3.080	0.3072	4.500	0.643	3.43	12.60	8.70
12GIT06	6" IPS	40	40	13.393	0.7967	6.625	0.946	4.72	17.87	12.32
12GIT08	8" IPS	-	-	-	-	8.625	1.232	5.51	22.05	15.61

BUTT FUSION FITTINGS

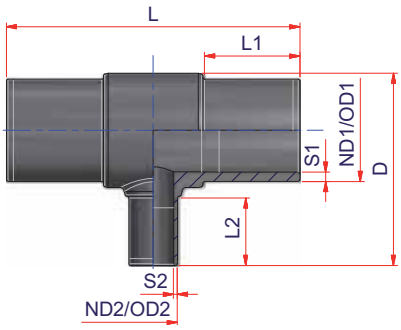


LONG SPIGOT WYE FITTING

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L1	L2	L	D
12EIT4502	2" IPS	-	-	1.120	-	2.375	0.216	2.70	3.74	10.43	4.72
12EIT4504	4" IPS	-	-	5.031	-	4.500	0.409	3.39	4.86	15.24	7.32

BUTT FUSION FITTINGS

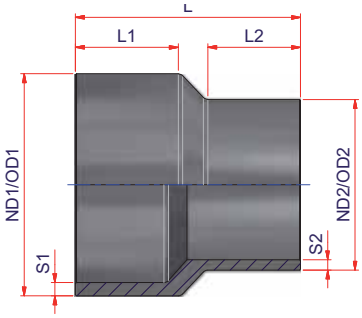


LONG SPIGOT 90° REDUCING TEE

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S1 min	L1	OD2	S2 min	L2	D	L
12EITRS02034	2" IPS x 3/4" IPS	40	480	0.729	0.0666	2.375	0.216	2.76	1.050	0.095	1.97	5.08	9.45
12EITRS0201	2" IPS x 1" IPS	40	480	0.737	0.0666	2.375	0.216	2.76	1.315	0.119	1.97	5.08	9.45
12EITRS02114	2" IPS x 1"1/4 IPS	45	540	0.733	0.0593	2.375	0.216	2.76	1.660	0.151	2.17	5.08	9.45
12EITRS0301	3" IPS x 1" IPS	23	276	1.535	0.1159	3.500	0.318	3.31	1.315	0.119	2.36	6.56	10.00
12EITRS03114	3" IPS x 1"1/4 IPS	20	240	1.562	0.1333	3.500	0.318	3.31	1.660	0.151	2.36	6.56	10.00
12EITRS0302	3" IPS x 2" IPS	20	240	1.650	0.1333	3.500	0.318	3.31	2.375	0.216	2.76	6.95	10.00
12EITRS04114	4" IPS x 1"1/4 IPS	12	144	3.108	0.2222	4.500	0.409	3.43	1.660	0.151	2.17	7.32	12.60
12EITRS0402	4" IPS x 2" IPS	10	120	3.212	0.2665	4.500	0.409	3.43	2.375	0.216	2.76	7.84	12.60
12EITRS0403	4" IPS x 3" IPS	15	180	4.620	0.5085	4.500	0.409	3.43	3.500	0.318	3.31	8.32	12.20
12EITRS0602	6" IPS x 2" IPS	48	48	8.021	0.6263	6.625	0.603	4.72	2.375	0.216	2.76	9.80	17.87
12EITRS0603	6" IPS x 3" IPS	46	46	7.915	0.6536	6.625	0.603	4.72	3.500	0.318	3.31	10.47	17.87
12EITRS0604	6" IPS x 4" IPS	40	40	8.690	0.7516	6.625	0.603	4.72	4.500	0.409	3.43	10.87	17.87
12EITRS0804	8" IPS x 4" IPS	-	-	-	-	8.625	0.785	5.51	4.500	0.409	3.43	13.13	22.05
12EITRS0806	8" IPS x 6" IPS	-	-	-	-	8.625	0.785	5.51	6.625	0.603	4.72	14.43	22.05

BUTT FUSION FITTINGS

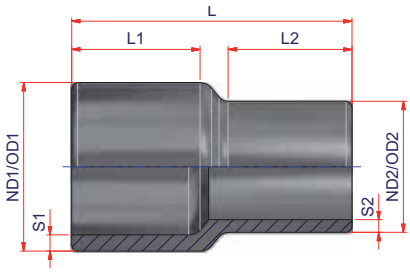


LONG SPIGOT REDUCER

PE4710 230PSI SDR17 • IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S1 min	OD2	S2 min	L	L1	L2
12DIR0302	3" IPS x 2" IPS	-	-	0.398	-	3.500	0.206	2.375	0.140	6.06	2.84	2.60
12DIR0402	4" IPS x 2" IPS	-	-	0.819	-	4.500	0.265	2.375	0.140	7.87	3.96	3.01
12DIR0403	4" IPS x 3" IPS	-	-	0.882	-	4.500	0.265	3.500	0.206	7.87	4.09	3.01
12DIR0603	6" IPS x 3" IPS	-	-	-	-	6.625	0.390	3.500	0.206	8.07	4.02	2.83
12DIR0604	6" IPS x 4" IPS	-	-	1.969	-	6.625	0.390	4.500	0.265	8.46	4.00	3.53
12DIR0804	8" IPS x 4" IPS	-	-	-	-	8.625	0.507	4.500	0.265	-	-	-
12DIR0806	8" IPS x 6" IPS	-	-	4.903	-	8.625	0.507	6.625	0.390	11.42	5.98	4.45
12DIR1006	10" IPS x 6" IPS	-	-	-	-	10.750	0.632	6.625	0.390	11.81	5.98	4.45
12DIR1008	10" IPS x 8" IPS	-	-	7.818	-	10.750	0.632	8.625	0.507	12.01	5.98	4.50
12DIR1206	12" IPS x 6" IPS	-	-	-	-	12.750	0.750	6.625	0.390	13.62	6.54	4.72
12DIR1208	12" IPS x 8" IPS	-	-	11.828	-	12.750	0.750	8.625	0.507	13.46	6.52	5.51
12DIR1210	12" IPS x 10" IPS	-	-	12.220	-	12.750	0.750	10.750	0.632	13.46	6.50	5.98

BUTT FUSION FITTINGS

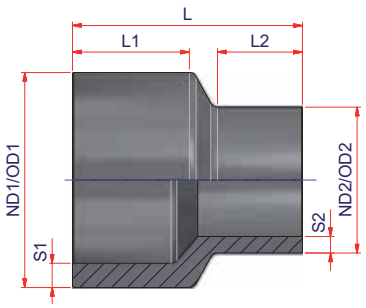


LONG SPIGOT REDUCER

PE4710 230PSI SDR11 • IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S1 min	OD2	S2 min	L	L1	L2
12EIR112114	1”1/2 IPS x 1”1/4 IPS	48	2.304	0.183	0.0124	1.900	0.173	1.660	0.151	4.92	2.36	2.17
12EIR02112	2” IPS x 1”1/2 IPS	30	1.440	0.293	0.0198	2.375	0.216	1.900	0.173	5.71	2.76	2.36
12EIR0302	3” IPS x 2” IPS	80	960	0.646	0.0353	3.500	0.318	2.375	0.216	6.06	2.84	2.60
12EIR0402	4” IPS x 2” IPS	-	-	1.126	-	4.500	0.409	2.375	0.216	7.87	3.96	3.01
12EIR0403	4” IPS x 3” IPS	36	432	1.375	0.0784	4.500	0.409	3.500	0.318	7.87	4.09	3.01
12EIR0603	6” IPS x 3” IPS	-	-	2.512	-	4.500	0.603	3.500	0.318	8.07	4.02	2.83
12EIR0604	6” IPS x 4” IPS	-	-	2.747	-	6.625	0.603	4.500	0.409	8.46	4.00	3.53
12EIR0804	8” IPS x 4” IPS	-	-	-	-	8.625	0.785	4.500	0.409	-	-	-
12EIR0806	8” IPS x 6” IPS	72	144	7.394	0.2497	8.625	0.785	6.625	0.603	11.42	5.98	4.45
12EIR1006	10” IPS x 6” IPS	-	-	10.183	-	10.750	0.977	6.625	0.603	11.81	5.98	4.45
12EIR1008	10” IPS x 8” IPS	-	-	11.321	-	10.750	0.977	8.625	0.785	12.01	5.98	4.50
12EIR1206	12” IPS x 6” IPS	-	-	15.147	-	12.750	0.159	6.625	0.603	13.62	6.54	4.72
12EIR1208	12” IPS x 8” IPS	-	-	17.062	-	12.750	0.159	8.625	0.785	13.46	6.52	5.51

BUTT FUSION FITTINGS

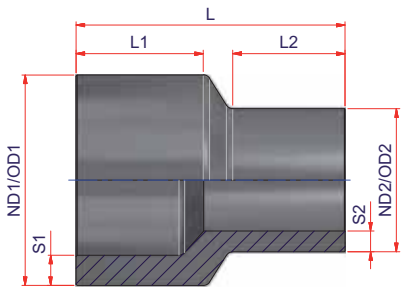


LONG SPIGOT REDUCER

PE4710 300PSI SDR9 • IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S1 min	OD2	S2 min	L	L1	L2
12HIR0302	3" IPS x 2" IPS	-	-	0.646	-	3.500	0.389	2.375	0.264	6.06	2.84	2.60
12HIR0402	4" IPS x 2" IPS	-	-	1.332	-	4.500	0.500	2.375	0.264	7.87	3.96	3.01
12HIR0403	4" IPS x 3" IPS	-	-	1.501	-	4.500	0.500	3.500	0.389	7.87	4.09	3.01
12HIR0604	6" IPS x 4" IPS	-	-	3.224	-	6.625	0.736	4.500	0.500	8.46	4.00	3.53
12HIR0804	8" IPS x 4" IPS	-	-	-	-	8.625	0.958	4.500	0.500	-	-	-
12HIR0806	8" IPS x 6" IPS	-	-	8.124	-	8.625	0.958	6.625	0.736	11.42	5.98	4.45
12HIR1006	10" IPS x 6" IPS	-	-	-	-	10.750	1.194	6.625	0.736	11.81	5.98	4.45
12HIR1008	10" IPS x 8" IPS	-	-	10.267	-	10.750	1.194	8.625	0.958	12.01	5.98	4.50
12HIR1206	12" IPS x 6" IPS	-	-	-	-	12.750	1.417	6.625	0.736	13.62	6.54	4.72
12HIR1208	12" IPS x 8" IPS	-	-	-	-	12.750	1.417	8.625	0.958	13.46	6.52	5.51

BUTT FUSION FITTINGS

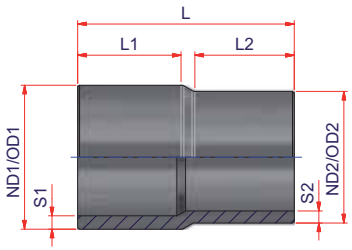


LONG SPIGOT REDUCER

PE4710 300PSI SDR7 • IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S1 min	OD2	S2 min	L	L1	L2
12GIR0302	3" IPS x 2" IPS	-	-	0.783	-	3.500	0.500	2.375	0.339	6.06	2.84	2.60
12GIR0402	4" IPS x 2" IPS	-	-	1.596	-	4.500	0.643	2.375	0.339	7.87	3.96	3.01
12GIR0403	4" IPS x 3" IPS	-	-	1.849	-	4.500	0.643	3.500	0.500	7.87	4.09	3.01
12GIR0604	6" IPS x 4" IPS	-	-	3.968	-	6.625	0.946	4.500	0.643	8.46	4.00	3.53
12GIR0806	8" IPS x 6" IPS	-	-	9.983	-	8.625	1.232	6.625	0.946	11.42	5.98	4.45
12GIR1006	10" IPS x 6" IPS	-	-	-	-	10.750	1.536	6.625	0.946	11.81	5.98	4.45
12GIR1008	10" IPS x 8" IPS	-	-	-	-	10.750	1.536	8.625	1.232	12.01	5.98	4.50
12GIR1208	12" IPS x 8" IPS	-	-	-	-	12.750	1.821	8.625	1.232	13.46	6.52	5.51

BUTT FUSION FITTINGS



LONG SPIGOT METRIC REDUCER

(IPS to mm*)

PE4710 230PSI SDR11 • IPS to mm

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD1	S1 min	OD2	S2 min	L	L1	L2
12EIRDME3420	3/4" IPS x 20 mm	10	880	0.330	0.0277	1.050	0.095	-	0.118	3.47	1.63	1.61
12EIRDME4034	40 mm x 3/4" IPS	10	480	0.550	0.0560	-	0.146	1.050	0.095	4.06	2.13	1.67
12EIRDME4001	40 mm x 1" IPS	30	2.880	0.114	0.0100	-	0.146	1.315	0.119	4.25	2.12	1.90
12EIRDME11440	1"1/4 IPS x 40 mm	10	480	0.660	0.0560	1.660	0.151	-	0.146	4.53	2.17	2.13
12EIRDME11240	1"1/2 IPS x 40 mm	10	270	0.880	0.1199	1.990	0.173	-	0.146	4.80	2.39	2.12
12EIRDME6302	63 mm x 2" IPS	10	270	1.320	0.1199	-	0.228	2.375	0.216	5.31	2.60	2.62
12EIRDME0363	3" IPS x 63 mm	11	528	0.700	0.0510	3.500	0.318	-	0.228	6.42	3.29	2.62
12EIRDME11003	110 mm x 3" IPS	8	96	3.988	0.3332	-	0.394	3.500	0.318	7.09	3.43	3.31
12EIRDME12504	125 mm x 4" IPS	9	216	1.772	0.1556	-	0.449	4.500	0.409	7.40	3.58	3.45
12EIRDME0616	6" IPS x 160 mm	4	96	3.933	0.3498	6.625	0.603	-	0.575	8.85	4.33	4.27
12EIRDME0820	8" IPS x 200 mm	-	-	5.930	-	8.625	0.785	-	0.717	9.45	4.53	4.41

* millimeter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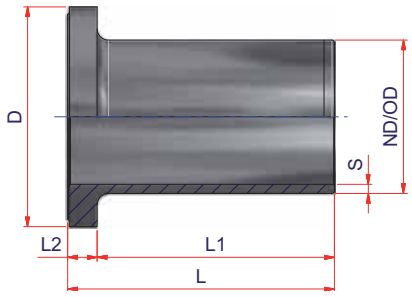
BUTT FUSION FITTINGS

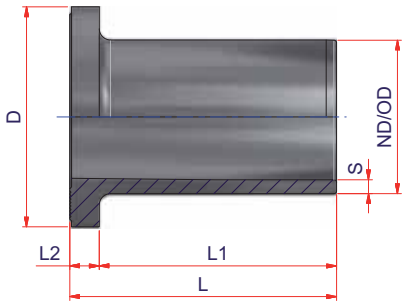


LONG SPIGOT STUB END

PE4710 160PSI SDR17• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12DICRT02	2" IPS	-	-	0.332	-	2.375	0.140	0.39	3.94	5.63	6.06
12DICRT03	3" IPS	70	280	0.684	0.1029	3.500	0.206	0.63	5.00	5.39	6.06
12DICRT04	4" IPS	-	-	1.090	-	4.500	0.265	0.75	6.02	5.28	6.06
12DICRT06	6" IPS	-	-	3.156	-	6.625	0.390	0.98	8.58	6.97	7.99
12DICRT08	8" IPS	-	-	5.359	-	8.625	0.507	1.02	10.63	8.27	9.33
12DICRT10	10" IPS	-	-	8.053	-	10.750	0.632	1.38	12.52	7.64	9.06
12DICRT12	12" IPS	-	-	14.757	-	12.750	0.750	1.61	14.36	10.35	12.01
12DICRT14	14" IPS	-	-	18.609	-	14.000	0.824	1.67	16.93	10.28	12.01
12DICRT16	16" IPS	-	-	25.520	-	16.000	0.941	1.89	19.25	10.06	12.01
12DICRT18	18" IPS	-	-	27.717	-	18.000	1.059	2.03	21.26	9.92	12.01
12DICRT20	20" IPS	-	-	37.500	-	20.000	1.176	2.30	22.91	9.65	12.01
12DICRT24	24" IPS	-	-	54.527	-	24.000	1.412	2.76	27.26	9.19	12.01
12DICRT28	28" IPS	-	-	76.512	-	28.000	1.647	2.66	31.30	10.28	12.99
12DICRT30	30" IPS	-	-	91.402	-	30.000	1.765	2.76	33.90	10.31	13.15
12DICRT36	36" IPS	-	-	133.840	-	36.000	2.118	3.03	39.13	11.38	13.47

BUTT FUSION FITTINGS

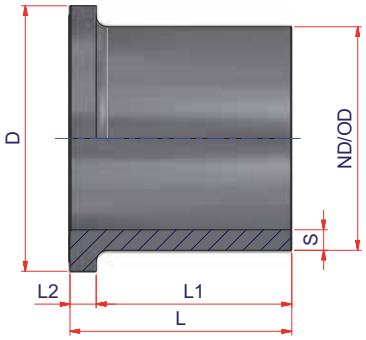


LONG SPIGOT STUB END

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L	FM
12EICRT02	2" IPS	75	900	0.475	0.0378	2.375	0.216	0.39	3.94	5.47	5.91	150 PSI
12EICRT03	3" IPS	70	280	1.006	0.1029	3.500	0.318	0.63	5.00	5.39	6.06	150 PSI
12EICRT04	4" IPS	-	-	1.445	-	4.500	0.409	0.75	6.02	5.28	6.06	150 PSI
12EICRT06	6" IPS	-	-	4.287	-	6.625	0.603	0.98	8.58	6.97	7.99	150 PSI
12EICRT08	8" IPS	-	-	7.665	-	8.625	0.785	1.02	10.63	8.27	9.33	150 PSI
12EICRT10	10" IPS	-	-	11.046	-	10.750	0.977	1.38	12.52	7.64	9.06	150 PSI
12EICRT12	12" IPS	-	-	21.055	-	12.750	1.159	1.61	15.04	10.35	12.01	150 PSI
12EICRT14	14" IPS	-	-	25.749	-	14.000	1.273	1.67	16.93	10.28	12.01	150 PSI
12EICRT16	16" IPS	-	-	34.493	-	16.000	1.455	1.89	19.25	10.06	12.01	150 PSI
12EICRT18	18" IPS	-	-	39.387	-	18.000	1.636	2.03	21.26	9.92	12.01	150 PSI
12EICRT20	20" IPS	-	-	51.117	-	20.000	1.818	2.30	22.91	9.65	12.01	150 PSI
12EICRT24	24" IPS	-	-	74.752	-	24.000	2.182	2.76	27.26	9.19	12.01	150 PSI
12EICRT28	28" IPS	-	-	113.770	-	28.000	2.545	3.27	31.30	10.28	13.60	150 PSI
12EICRT30	30" IPS	-	-	130.341	-	30.000	2.727	3.52	33.94	10.31	13.90	
12EICRT36	36" IPS	-	-	209.956	-	36.000	3.273	4.15	39.13	11.38	15.59	

BUTT FUSION FITTINGS

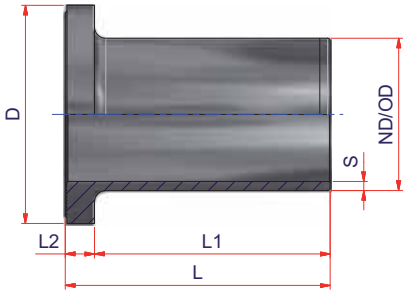


LONG SPIGOT STUB END

PE4710 230PSI SDR11 • DIPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12EICRT04D	4" DIPS	-	-	1.445	-	4.800	0.437	0.55	6.63	5.43	6.02
12EICRT06D	6" DIPS	-	-	4.287	-	6.900	0.628	0.79	8.63	7.17	8.00
12EICRT08D	8" DIPS	-	-	7.665	-	9.050	0.823	1.06	10.75	7.91	9.02
12EICRT10D	10" DIPS	-	-	11.046	-	11.100	1.009	1.30	12.75	7.68	9.02
12EICRT12D	12" DIPS	-	-	21.055	-	13.200	1.200	1.54	15.00	9.45	11.02
12EICRT14D	14" DIPS	-	-	25.749	-	15.300	1.391	1.77	17.32	9.19	11.02
12EICRT16D	16" DIPS	-	-	34.493	-	17.400	1.582	2.01	20.00	9.94	12.01

BUTT FUSION FITTINGS

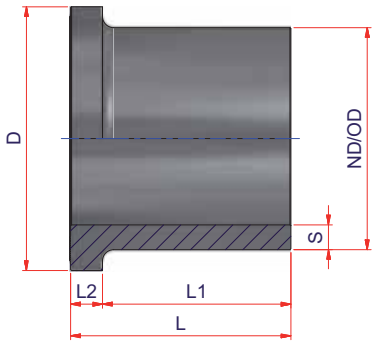


LONG SPIGOT STUB END

PE4710 300PSI SDR9 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12HICRT02	2" IPS	-	-	0.508	-	2.375	0.264	0.39	3.94	5.63	6.06
12HICRT03	3" IPS	-	-	0.973	-	3.500	0.389	0.63	4.65	5.39	6.06
12HICRT04	4" IPS	-	-	1.780	-	4.500	0.500	0.71	6.02	5.63	6.38
12HICRT06	6" IPS	-	-	4.864	-	6.625	0.736	1.04	8.58	6.91	7.99
12HICRT08	8" IPS	-	-	8.984	-	8.625	0.958	1.26	10.63	8.03	9.33
12HICRT10	10" IPS	-	-	13.205	-	10.750	1.194	1.54	12.52	7.48	9.06
12HICRT12	12" IPS	-	-	24.996	-	12.750	1.417	1.89	16.93	10.08	12.01
12HICRT14	14" IPS	-	-	30.588	-	14.000	1.556	2.01	17.13	9.94	12.01
12HICRT16	16" IPS	-	-	41.049	-	16.000	1.778	2.28	19.25	9.67	12.01
12HICRT18	18" IPS	-	-	47.350	-	18.000	2.000	2.52	21.26	9.43	12.01
12HICRT20	20" IPS	-	-	62.024	-	20.000	2.222	2.91	22.91	9.04	12.01
12HICRT24	24" IPS	-	-	89.844	-	24.000	2.670	3.39	27.26	8.76	12.01

BUTT FUSION FITTINGS

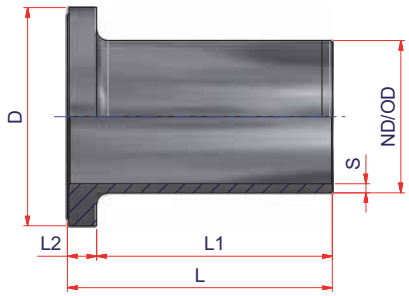


LONG SPIGOT STUB END

PE4710 300PSI SDR9 • DIPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12HICRT04D	4" DIPS	-	-	1.780	-	4.800	0.534	0.71	6.63	5.28	6.02
12HICRT06D	6" DIPS	-	-	4.864	-	6.900	0.767	0.94	8.63	7.01	7.99
12HICRT08D	8" DIPS	-	-	8.984	-	9.050	1.006	1.30	10.75	7.68	9.02
12HICRT10D	10" DIPS	-	-	13.205	-	11.100	1.234	1.57	12.75	7.40	9.02
12HICRT12D	12" DIPS	-	-	24.996	-	13.200	1.467	1.85	15.00	9.13	11.02
12HICRT14D	14" DIPS	-	-	30.588	-	15.300	1.700	2.17	17.32	8.80	11.02
12HICRT16D	16" DIPS	-	-	41.049	-	17.400	1.934	2.44	20.00	9.51	12.01

BUTT FUSION FITTINGS

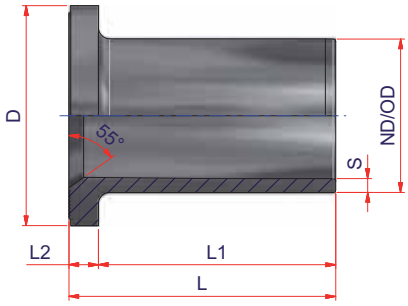


LONG SPIGOT STUB END

PE4710 340PSI SDR7• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12GICRT02	2" IPS	-	-	0.627	-	2.375	0.339	0.51	3.94	5.51	6.06
12GICRT03	3" IPS	-	-	1.171	-	3.500	0.500	0.67	4.65	5.35	6.06
12GICRT04	4" IPS	-	-	2.197	-	4.500	0.643	0.91	6.02	5.43	6.38
12GICRT06	6" IPS	-	-	6.076	-	6.625	0.946	1.26	8.58	6.97	8.27
12GICRT08	8" IPS	-	-	11.177	-	8.625	1.232	1.65	10.63	7.64	9.33
12GICRT10	10" IPS	-	-	16.429	-	10.750	1.536	2.05	12.52	6.97	9.06
12GICRT12	12" IPS	-	-	30.264	-	12.750	1.821	2.32	14.96	9.67	12.01
12GICRT14	14" IPS	-	-	37.770	-	14.000	2.000	2.56	16.93	9.41	12.01
12GICRT16	16" IPS	-	-	50.026	-	16.000	2.286	2.91	19.25	9.04	12.01
12GICRT18	18" IPS	-	-	58.814	-	18.000	2.571	3.29	21.26	8.66	12.01
12GICRT20	20" IPS	-	-	81.374	-	20.000	2.857	3.66	22.91	9.07	12.80
12GICRT24	24" IPS	-	-	125.957	-	24.000	3.429	4.31	27.26	9.61	13.98

BUTT FUSION FITTINGS

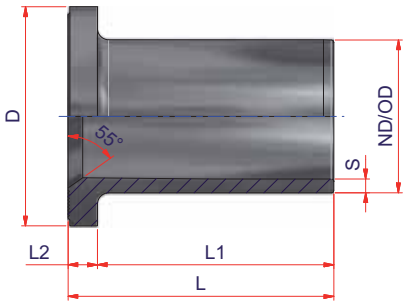


LONG SPIGOT
55° BEVELED STUB END

PE4710 160PSI SDR17• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12DICRTB02	2" IPS	-	-	-	-	2.375	0.140	0.39	3.94	5.63	6.06
12DICRTB03	3" IPS	-	-	-	-	3.500	0.206	0.63	5.00	5.39	6.06
12DICRTB04	4" IPS	-	-	-	-	4.500	0.265	0.75	6.02	5.28	6.06
12DICRTB06	6" IPS	-	-	2.967	-	6.625	0.390	0.98	8.58	6.97	7.99
12DICRTB08	8" IPS	-	-	5.346	-	8.625	0.507	1.02	10.63	8.27	9.33
12DICRTB10	10" IPS	-	-	8.028	-	10.750	0.632	1.38	12.52	7.64	9.06
12DICRTB12	12" IPS	-	-	14.790	-	12.750	0.750	1.61	14.36	10.35	12.01
12DICRTB14	14" IPS	-	-	-	-	14.000	0.824	1.67	16.93	10.28	12.01
12DICRTB16	16" IPS	-	-	25.396	-	16.000	0.941	1.89	19.25	10.06	12.01
12DICRTB18	18" IPS	-	-	-	-	18.000	1.059	2.03	21.26	9.92	12.01
12DICRTB20	20" IPS	-	-	37.171	-	20.000	1.176	2.30	22.91	9.65	12.01
12DICRTB24	24" IPS	-	-	54.285	-	24.000	1.412	2.76	27.26	9.19	12.01
12DICRTB28	28" IPS	-	-	-	-	28.000	1.647	2.66	31.30	10.28	12.99
12DICRTB30	30" IPS	-	-	-	-	30.000	1.765	2.76	33.90	10.31	13.15
12DICRTB36	36" IPS	-	-	-	-	36.000	2.118	3.03	39.13	11.38	13.47

BUTT FUSION FITTINGS

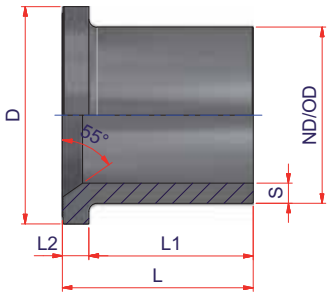


LONG SPIGOT
55° BEVELED STUB END

PE4710 230PSI SDR11• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12EICRTB02	2" IPS	30	810	0.477	0.0400	2.375	0.216	0.39	3.94	5.47	5.91
12EICRTB03	3" IPS	70	280	1.006	0.1029	3.500	0.318	0.63	5.00	5.39	6.06
12EICRTB04	4" IPS	48	192	1.604	0.1499	4.500	0.409	0.75	6.02	5.28	6.06
12EICRTB06	6" IPS	48	96	4.263	0.3531	6.625	0.603	0.98	8.58	6.97	7.99
12EICRTB08	8" IPS	-	-	7.274	-	8.625	0.785	1.02	10.63	8.27	9.33
12EICRTB10	10" IPS	18	36	11.611	0.9418	10.750	0.977	1.38	12.52	7.64	9.06
12EICRTB12	12" IPS	18	36	21.267	0.9771	12.750	1.159	1.61	15.04	10.35	12.01
12EICRTB14	14" IPS	-	-	25.213	-	14.000	1.273	1.67	16.93	10.28	12.01
12EICRTB16	16" IPS	-	-	33.738	-	16.000	1.455	1.89	19.25	10.06	12.01
12EICRTB18	18" IPS	-	-	41.097	-	18.000	1.636	2.03	21.26	9.92	12.01
12EICRTB20	20" IPS	-	-	49.146	-	20.000	1.818	2.30	22.91	9.65	12.01
12EICRTB24	24" IPS	-	-	72.456	-	24.000	2.182	2.76	27.26	9.19	12.01
12EICRTB28	28" IPS	-	-	-	-	28.000	2.545	3.27	31.30	10.28	13.60
12EICRTB30	30" IPS	-	-	-	-	30.000	2.727	3.52	33.94	10.31	13.90
12EICRTB36	36" IPS	-	-	-	-	36.000	3.273	4.15	39.13	11.38	15.59

BUTT FUSION FITTINGS

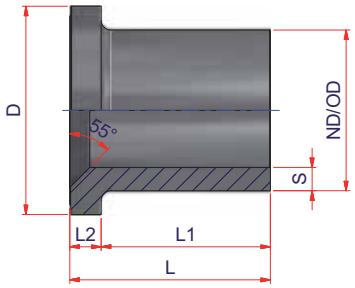


LONG SPIGOT
55° BEVELED STUB END

PE4710 300PSI SDR9 • IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12HICRTB02	2" IPS	-	-	-	-	2.375	0.264	0.39	3.94	5.63	6.06
12HICRTB03	3" IPS	-	-	-	-	3.500	0.389	0.63	4.65	5.39	6.06
12HICRTB04	4" IPS	-	-	-	-	4.500	0.500	0.71	6.02	5.63	6.38
12HICRTB06	6" IPS	-	-	-	-	6.625	0.736	1.04	8.58	6.91	7.99
12HICRTB08	8" IPS	-	-	8.741	-	8.625	0.958	1.26	10.63	8.03	9.33
12HICRTB10	10" IPS	-	-	-	-	10.750	1.194	1.54	12.52	7.48	9.06
12HICRTB12	12" IPS	-	-	23.485	-	12.750	1.417	1.89	16.93	10.08	12.01
12HICRTB14	14" IPS	-	-	-	-	14.000	1.556	2.01	17.13	9.94	12.01
12HICRTB16	16" IPS	-	-	39.684	-	16.000	1.778	2.28	19.25	9.67	12.01
12HICRTB18	18" IPS	-	-	-	-	18.000	2.000	2.52	21.26	9.43	12.01
12HICRTB20	20" IPS	-	-	-	-	20.000	2.222	2.91	22.91	9.04	12.01
12HICRTB24	24" IPS	-	-	-	-	24.000	2.670	3.39	27.26	8.76	12.01

BUTT FUSION FITTINGS

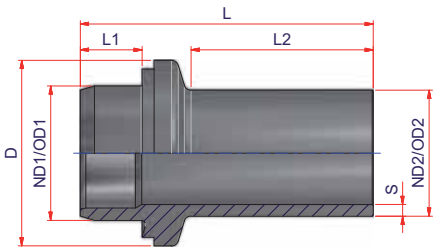


LONG SPIGOT
55° BEVELED STUB END

PE4710 340PSI SDR7• IPS

Code	Nominal Diameter ø (ND)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	OD	S min	L2	D	L1	L
12GICRTB02	2" IPS	-	-	0.588	-	2.375	0.339	0.51	3.94	5.51	6.06
12GICRTB03	3" IPS	-	-	-	-	3.500	0.500	0.67	4.65	5.35	6.06
12GICRTB04	4" IPS	-	-	2.068	-	4.500	0.643	0.91	6.02	5.43	6.38
12GICRTB06	6" IPS	-	-	5.776	-	6.625	0.946	1.26	8.58	6.97	8.27
12GICRTB08	8" IPS	-	-	10.064	-	8.625	1.232	1.65	10.63	7.64	9.33
12GICRTB10	10" IPS	-	-	-	-	10.750	1.536	2.05	12.52	6.97	9.06
12GICRTB12	12" IPS	-	-	28.682	-	12.750	1.821	2.32	14.96	9.67	12.01
12GICRTB14	14" IPS	-	-	-	-	14.000	2.000	2.56	16.93	9.41	12.01
12GICRTB16	16" IPS	-	-	-	-	16.000	2.286	2.91	19.25	9.04	12.01
12GICRTB18	18" IPS	-	-	-	-	18.000	2.571	3.29	21.26	8.66	12.01
12GICRTB20	20" IPS	-	-	-	-	20.000	2.857	3.66	22.91	9.07	12.80
12GICRTB24	24" IPS	-	-	-	-	24.000	3.429	4.31	27.26	9.61	13.98

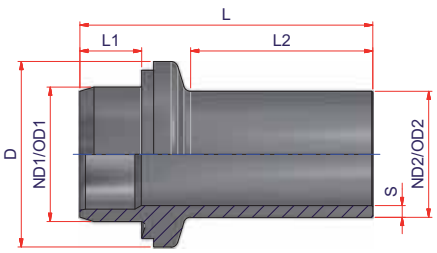
BUTT FUSION FITTINGS



'MJ' FLANGE ADAPTER WITH STIFFENER SLEEVE

PE4710 230PSI SDR11• DIPS - IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	L1	OD1 (DIPS)	OD2 (IPS)	S min	L2	D	L
12EIMJ04SS	4" DIPS x 4" IPS	-	-	-	-	2.20	4.800	4.500	0.409	6.51	6.63	10.46
12EIMJ06SS	6" DIPS x 6" IPS	-	-	-	-	2.38	6.900	6.625	0.603	7.23	8.63	11.30
12EIMJ08SS	8" DIPS x 8" IPS	-	-	-	-	2.38	9.050	8.625	0.785	7.66	10.75	12.07
12EIMJ10SS	10" DIPS x 10" IPS	-	-	-	-	2.25	11.100	10.750	0.977	9.03	12.90	13.55
12EIMJ12SS	12" DIPS x 12" IPS	-	-	-	-	2.38	13.200	12.750	1.159	8.52	13.20	13.57
12EIMJ14SS	14" DIPS x 14" IPS	-	-	-	-	3.25	15.300	14.000	1.273	7.28	16.98	13.01
12EIMJ16SS	16" DIPS x 16" IPS	-	-	-	-	3.25	17.400	16.000	1.455	7.32	19.98	13.06

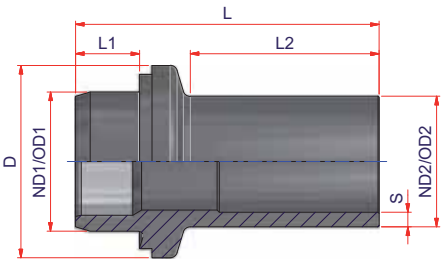


'MJ' FLANGE ADAPTER WITH STIFFENER SLEEVE

PE4710 230PSI SDR11• DIPS - DIPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	L1	OD1 (DIPS)	OD2 (DIPS)	S min	L2	D	L
12EIMJ04DSS	4" DIPS x 4" DIPS	-	-	-	-	2.20	4.800	4.800	0.437	6.51	6.63	10.41
12EIMJ06DSS	6" DIPS x 6" DIPS	-	-	-	-	2.38	6.900	6.900	0.628	7.23	8.63	11.26
12EIMJ08DSS	8" DIPS x 8" DIPS	-	-	-	-	2.38	9.050	9.050	0.823	7.66	10.75	12.01
12EIMJ10DSS	10" DIPS x 10" DIPS	-	-	-	-	2.25	11.100	11.100	1.009	9.03	12.90	13.50
12EIMJ12DSS	12" DIPS x 12" DIPS	-	-	-	-	2.38	13.200	13.200	1.200	8.52	13.20	13.50
12EIMJ14DSS	14" DIPS x 14" DIPS	-	-	-	-	3.25	15.300	15.300	1.391	7.28	16.98	13.01
12EIMJ16DSS	16" DIPS x 16" DIPS	-	-	-	-	3.25	17.400	17.400	1.582	7.32	19.98	13.06

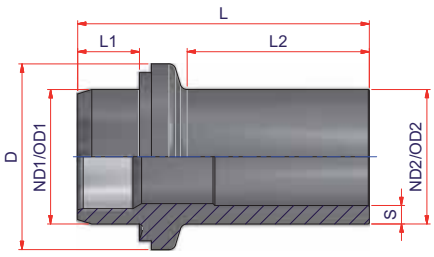
BUTT FUSION FITTINGS



'MJ' FLANGE ADAPTER WITH STIFFENER SLEEVE

PE4710 300PSI SDR9 • DIPS - IPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	L1	OD1 (DIPS)	OD2 (IPS)	S min	L2	D	L
12HIMJ04SS	4" DIPS x 4" IPS	-	-	-	-	2.20	4.800	4.500	0.500	6.51	6.63	10.46
12HIMJ06SS	6" DIPS x 6" IPS	-	-	-	-	2.38	6.900	6.625	0.736	7.23	8.63	11.30
12HIMJ08SS	8" DIPS x 8" IPS	-	-	-	-	2.38	9.050	8.625	0.958	7.66	10.75	12.07
12HIMJ10SS	10" DIPS x 10" IPS	-	-	-	-	2.25	11.100	10.750	1.194	9.03	12.90	13.55
12HIMJ12SS	12" DIPS x 12" IPS	-	-	-	-	2.38	13.200	12.750	1.417	8.52	13.20	13.57
12HIMJ14SS	14" DIPS x 14" IPS	-	-	-	-	3.25	15.300	14.000	1.556	7.28	16.98	13.01
12HIMJ16SS	16" DIPS x 16" IPS	-	-	-	-	3.25	17.400	16.000	1.778	7.32	19.98	13.06



'MJ' FLANGE ADAPTER WITH STIFFENER SLEEVE

PE4710 300PSI SDR9 • DIPS - DIPS

Code	Nominal Diameter ø (ND1 x ND2)	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	L1	OD1 (DIPS)	OD2 (DIPS)	S min	L2	D	L
12HIMJ04DSS	4" DIPS x 4" DIPS	-	-	-	-	2.20	4.800	4.800	0.534	6.51	6.63	10.41
12HIMJ06DSS	6" DIPS x 6" DIPS	-	-	-	-	2.38	6.900	6.900	0.767	7.23	8.63	11.26
12HIMJ08DSS	8" DIPS x 8" DIPS	-	-	-	-	2.38	9.050	9.050	1.006	7.66	10.75	12.01
12HIMJ10DSS	10" DIPS x 10" DIPS	-	-	-	-	2.25	11.100	11.100	1.234	9.03	12.90	13.50
12HIMJ12DSS	12" DIPS x 12" DIPS	-	-	-	-	2.38	13.200	13.200	1.467	8.52	13.20	13.50
12HIMJ14DSS	14" DIPS x 14" DIPS	-	-	-	-	3.25	15.300	15.300	1.700	7.28	16.98	13.01
12HIMJ16DSS	16" DIPS x 16" DIPS	-	-	-	-	3.25	17.400	17.400	1.934	7.32	19.98	13.06

EQUIPMENT

SCRAPERS

The scraper is the most important tool for the operator in charge of the welding procedure. Scraping the oxidized PE layer away from the external surface of the pipe is extremely important. The scraper can be positioned on pipes or on male butt welding fittings.
The scraping depth is about 0,2 mm and the width is larger than the welding area of the maximum diameter.

HAND SCRAPER

The hand scraper is the most popular tool for the operator in charge of the welding procedure.
Very easy to use also inside the trench.

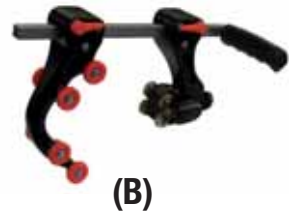
Code	Pack.	Weight lb./p.	Volume ft³/p.
00RAM1	10	0.308	0.1619

REVOLVING SCRAPER

Code	Nominal Size IPS	Pack.	Weight lb./p.	Volume ft³/p.
00RAT1A	2" 1/2 - 6"	1	10.560	0.8095
00RAT2A	8" - 16"	1	18.480	0.8728
00RAT3A	18" - 32"	1	72.160	6.9661
SPARE BLADE				
00RATKITRIC	for RAT1A/RAT2A/RAT3A	1	0.066	0.0033

EQUIPMENT

(A)



(B)

REVOLVING SCRAPER

Code	Nominal Size IPS	Pack.	Weight lb./p.	Volume ft³/p.
00RATOR25125 (A)	3/4" - 4"	1	2.640	0.1932
00RATOR63200 (B)	2"- 8"	1	6.160	0.4064

SERVICE TUBING ALIGNMENT CLAMPS

Code	Nominal Size IPS	Pack.
Tubing Clamps		
00PIPECLM12C	1/2" CTS	1
00PIPECLM12I	1/2" IPS	1
00PIPECLM34I*	3/4" IPS	1
00PIPECLM1C	1" CTS	1
00PIPECLM1I	1" IPS	1
Combination Clamps		
00CLM34I12C12C	3/4" IPS x 1/2" CTS x 1/2" CTS	1
00CLM34I12C12I	3/4" IPS x 1/2" CTS x 1/2" IPS	1
Reducer Clamps		
00RDCLM34I12C	3/4" IPS x 1/2" CTS	1
00RDCLM34I12I	3/4" IPS x 1/2" IPS	1
00RDCLM1C34I	1" CTS x 3/4" IPS	1
00RDCLM1I34I	1" IPS x 3/4" IPS	1

EQUIPMENT

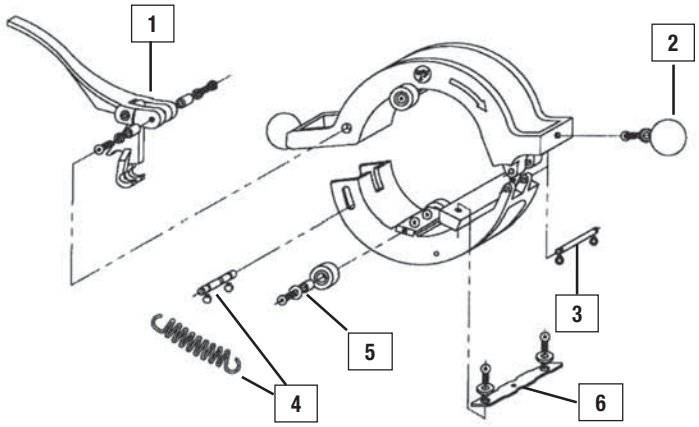
MAIN SIZE ALIGNMENT CLAMPS

Code	Nominal Size IPS	Pack.	Weight lb./p.
00CLAMP02	2” IPS Clamp	1	2.992
00SHELLS114	1”1/4 Shells	1	2.992
00SHORTCLAMPK	Short Clamp Repair Kit	1	2.992
00HANDLE	Hex Handle Assembly	1	2.992
00KNOBKIT	2” Adjustable Knob Repair Kit	1	2.992
00CLAMPREPK	2” Clamp Repair Kit	1	
00CLAMPSH04	4” IPS CLAMP	1	
00CLAMPSH03	3” Shells		
00CLAMPSH02	2” Shells	1	
00CLAMPSH114	1”1/4 Shells	1	
00CLAMPSH08	8” IPS CLAMP	1	
00CLAMPSH0608	6” Shells for 8” IPS	1	

EQUIPMENT

ROTARY SCRAPER

Code	Nominal Size IPS	Pack.	Weight lb./p.	Volume ft³/p.
00EMS0114	1-1/4”	1	2.420	-
00EMS02	2”	1	2.120	-
00EMS03	3”	1	3.000	-
00EMS04	4”	1	3.400	-
00EMS06	6”	1	5.160	-
00EMS08	8”	1	6.180	-
00EMS01140	1-1/4” - 2” Insert Stiffener	1	-	-



SCRAPER REPLACEMENT PARTS

Code	Spare Parts Nr.	Nominal Size IPS	Code	Spare Parts Nr.	Nominal Size IPS
Latch Assembly Kit	1		Spring Kits	4	
00LATCHK11402		1”1/4 - 2”	00SPRING11402		1”1/4 - 2”
00LATCHK0304		3” - 4”	00SPRING0308		3” - 8”
00LATCHK0608		6” - 8”			
Knob Assembly Kit	2		Wheel Kit	5	
00KNOBK11402		1”1/4 - 2”	00WHEELK11402		1”1/4 - 2”
00KNOBK0308		3” - 8”	00WHEELK0304		3” - 4”
			00WHEELK06		6”
			00WHEELK08		8”
Main Hinge Kit	3		Spare Blades	6	
00MHINGE11404		1”1/4 - 4”	00BLADE1140203		1”1/4 - 2” - 3”
00MINGHE0608		6” - 8”	00BLADE04		4”
			00BLADE0608		6” - 8”

EQUIPMENT

ALIGNERS

The aligners with belts are essential for the correct weld of electrofusion fittings.
They are manufactured in compliance with UNI 10566 Standard that regulates the tools to be used in the electrofusion process.
Their function is to centre the pipe axis to avoid mechanical pressure inside the elecrofusion fittings, correct the weight caused by the pipe moving and keep the pipes locked during the welding procedure.
The aligners are compact but strong and can be used with couplers, 45° and 90° elbows, tees and reduced tees.

ALIGNER WITH BELTS

Available in three different dimensional ranges up to diameters 2", 8" and 16".
Every tool has four locking points and a swivel joining part to perform all angles.

Code	Nominal Size IPS	Pack.	Weight lb./p.	Volume ft^3/p.
00ALL063/4	1/2" - 2"	1	10.560	0.5596
00ALL225/4	1"1/2 - 8"	1	45.760	2.1408
00ALL315/4	8" - 16"	1	191.400	11.2438

PIPE SUPPORT

The pipe support locks the pipes and the fittings during the welding procedure and the cooling time.
It reduces the piping movement during joining operations.
It is also suitable for pipes and fittings with medium or big diameter.

Code	Nominal Size IPS	Pack.	Weight lb./p.	Volume ft^3/p.
00TR250	**3" - 10"**	1	35.200	4.2643

EQUIPMENT

CLEANER FOR PE, PP, PVDF, PB

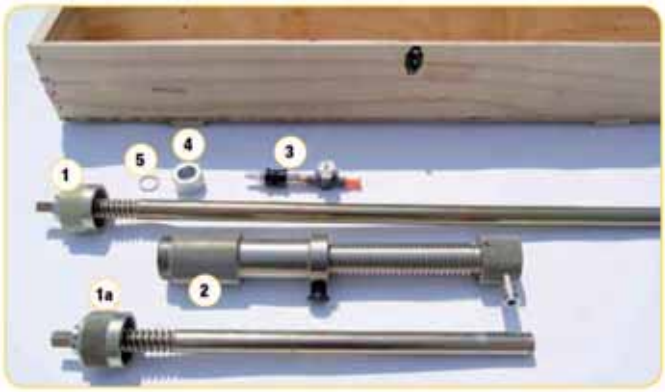
Code	Description	Pack.	Weight lb./p.	Volume ft³/p.
00LID1	*1000 ml bottle*	12	2.200	0.6862

(A) (B)

CLEANING NAPKINS FOR PE

Code	Description	Pack.	Weight lb./p.	Volume ft³/p.
00SAL100 (A)	*100 piece pack.*	12	0.495	0.6563
00SAL150 (B)	*150 piece pack.*	4	3.960	1.1693

EQUIPMENT



WATCH OUR VIDEO INSTRUCTIONS ON OUR YouTube CHANNEL

PIPE DRILLING MACHINE FOR NETWORKS UNDER PRESSURE

The drilling machine for high volume branch saddles has special sealed chambers to easily drill both pipes conveying gas or water under pressure and sewage pipes.
Thanks to interchangeable cutters (code 00FFxxx) and adapters (code 00FAxxx) it is possible to drill main pipelines from 3" to 40" with service lines from 2" to 6" .

ATTENTION: the image shows the drilling machine mounted and complete with every component.

The basic machine is composed of:
1. *Long shaft to drill under pressure and non-pressured lines*
1a. *Short shaft for non-pressured drilling*
2. *Body with threaded shaft, vent valve and safety lock*
3. *Pressure gauge with valve for pressure measuring and depressurizing*
4. *Ring nut for cutter holding*
5. *Seeger ring*

Ratchet wrench, milling cutters and adapter are available separately.

Code	Nominal Size (Pipelines) IPS	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft³/p.
00FP	3"÷ 40"	2"÷ 6"	1	30.800	0.4863

WATCH OUR VIDEO INSTRUCTIONS ON OUR YouTube CHANNEL

Part 1 Part 2

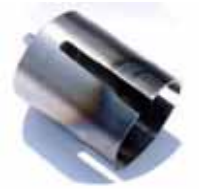
SAFETY KIT FOR DRILLING MACHINE

Code	Application	Pack.
00KPS	for article 00FP	1

EQUIPMENT

ADAPTER FOR DRILLING MACHINE

Code	Nominal Size (Service line) IPS	Pack.	Weight lb./p.
00IFA02	2”	1	3.960
00IFA0212	2” 1/2	1	5.500
00IFA03	3”	1	7.920
00IFA04	4”	1	9.240
00IFA06	6”	1	10.120
00IFA08	8”	1	-



DRILLING CUTTER FOR DRILLING MACHINE

Code	Nominal Size (Service line) IPS	Drilling hole ø	Pack.	Weight lb./p.
00FF20	for EIPAL 2”	-	1	-
00FF214	for EIPAL 2” 1/4	-	1	-
00FF0632	2”	1.75”	1	-
00FF0903	3”	2.75”	1	-
00FF1104	4”	2.75”	1	-
00FF1606	6"	4.72”	1	-
00FF08	8”	-	1	-


nupigeco

WELDING UNITS

PELICAN CASE
LIGHT VERSION

MULTIFUNCTION WELDING UNIT INCORPORATED IN SUITCASE WITH BARCODE HAND SCANNER

Incorporated in the most innovative waterproof case (PELI). The case is watertight, waterproof, sand-proof, dust proof and able to with stand harsh environments and shocks. It is certified to withstand termperature rating from -28 to +194 °F and is in fact the ideal mean of trasportation for sensitive devices.

TECHNICAL CHARACTERISTICS:

Conforms with CE requirements. Conforms with UNI 10566 – MULTIFUNCTION type
Barcode reader conforming with ISO 13950 and manual setting of time and voltage.
Illuminated display with 4 lines, 20 characters each
Memory for 10.000 welding cycles
8 Memories with 500 parameters each for pressure tests
Fitting working range up to 40 Amp. maximum peak
Ambient temperature sensor
Power supply: 115V E 50Hz/60Hz
Maximum power: 1500 VA
Minimum power suplly: 3 Kw
Output voltage: from 5 to 42 V
Power cable: L= 12.5 ft
Welding cable: L= 10 ft
Connectors - ø4 mm (art. 00S8305) with adapters for ø4.7 mm (00S8203)
Dimensions: 20" x 16" x H 8"
Weight: 35 lb
Degree of protection: IP 54
Working temperature: from 0° to + 131°F

BASIC EQUIPMENT SUPPLIED WITH THE WELDING UNIT:

- *User's handbook on hardware support and quick guide on paper*
- *USB key (2GB) to download data (welding report and pressure test)*
- *Shipping box integrated*
- *Barcode scanner*
- *Adapters with ø4,7 mm pins*

ADDITIONAL EQUIPMENT AND SPARES:

- ***00SENS:*** *Pressure test unit*

Code	Voltage	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft³/p.
00E9001LP/110	110V	COUPLERS 1/2" ÷ 6" - SADDLES ALL	1	35.000	1.4814

WELDING UNITS

MULTIFUNCTION WELDING UNIT INCORPORATED IN SUITCASE WITH BARCODE HAND SCANNER

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- *USB key (2GB) to download data (welding report and pressure test)*
- *Shipping box integrated*
- *Barcode scanner*
- *Adapters with ø4,7 mm pins*

ADDITIONAL EQUIPMENT AND SPARES:

- ***00SENS:*** *Pressure test unit*

TECHNICAL CHARACTERISTICS:

Conforms with CE requirements. Conforms with UNI 10566 – MULTIFUNCTION type
Barcode reader conforming with ISO 13950 and manual setting of time and voltage.
Illuminated display with 4 lines, 20 characters each
Memory for 10.000 welding cycles
8 Memories with 500 parameters each for pressure tests
Fitting working range up to 70 Amp. maximum peak
Ambient temperature sensor
Power supply: 115V E 50Hz/60Hz
Maximum power: 2000 VA
Minimum power suplly: 4 Kw
Output voltage: from 5 to 42 V
Power cable: L= 12.5 ft
Welding cable: L= 10 ft
Connectors - ø4 mm (art. 00S8305) with adapters for ø4.7 mm (00S8203)
Dimensions: 23.78" x 18.33" x 12.08"
Weight: 44 lb
Degree of protection: IP 54
Working temperature: from 0° to + 31°F

Code	Voltage	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft³/p.
00E9001P/110	110V	1/2" ÷ 16"	1	44.000	3.0471

WELDING UNITS

Download on the App Store

Nupi Welding Cloud

MULTIFUNCTION - *SMART* - WELDING UNIT INCORPORATED IN PELICAN CASE

The new welding unit as the SMARTWELD associated with the APP 'Nupi Welding Cloud' allows a 360° management of all information related to the construction site, the weld itself, the traceability of the products installed, the mapping using GPS tracking as well all testing activities later.

Incorporated in the most innovative waterproof case (PELI). The case is watertight, waterproof, sand-proof, dust proof and able to with stand harsh environments and shocks. It is certified to withstand termperature rating from -28 to +194 °F and is in fact the ideal mean of trasportation for sensitive devices.

BASIC EQUIPMENT SUPPLIED WITH THE WELDING UNIT:

- *User's handbook on hardware support and quick guide on paper*
- *USB key (2GB) to download data (welding report and pressure test)*
- *Shipping box integrated*
- *Adapters with ø4,7 mm pins*

ADDITIONAL EQUIPMENT AND SPARES:

- ***00SENS:*** *Pressure test unit*
- ***00BCSCAN:*** *Barcode scanner*

TECHNICAL CHARACTERISTICS:

Conforms with CE requirements. Conforms with UNI 10566 – MULTIFUNCTION type
Illuminated display with 4 lines, 20 characters each
Memory for 10.000 welding cycles
8 Memories with 500 parameters each for pressure tests
Fitting working range up to 40 Amp. maximum peak
Ambient temperature sensor
Power supply: 115V E 50Hz/60Hz
Maximum power: 1500 VA
Minimum power suplly: 3 Kw
Output voltage: from 5 to 42 V
Power cable: L= 12.5 ft
Welding cable: L= 10 ft
Connectors - ø4 mm (art. 00S8305) with adapters for ø4.7 mm (00S8203)
Dimensions: 20" x 16" x H 8"
Weight: 35 lb
Degree of protection: IP 54
Working temperature: from 0° to + 131°F

Code	Voltage	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft³/p.
00SMARTWELDL/110	110V	COUPLERS 1/2" ÷ 6" - SADDLES ALL	1	35.000	1.4814

WELDING UNITS

Download on the App Store

Nupi Welding Cloud

BASIC EQUIPMENT SUPPLIED WITH THE WELDING UNIT:

- *User's handbook on hardware support and quick guide on paper*
- *USB key (2GB) to download data (welding report and pressure test)*
- *Shipping box integrated*
- *Adapters with ø4,7 mm pins*

ADDITIONAL EQUIPMENT AND SPARES:

- ***00SENS:*** *Pressure test unit*
- ***00BCSCAN:*** *Barcode scanner*

MULTIFUNCTION - *SMART* - WELDING UNIT INCORPORATED IN PELICAN CASE

The new welding unit as the SMARTWELD associated with the APP 'Nupi Welding Cloud' allows a 360° management of all information related to the construction site, the weld itself, the traceability of the products installed, the mapping using GPS tracking as well all testing activities later.

Incorporated in the most innovative waterproof case (PELI). The case is watertight, waterproof, sand-proof, dust proof and able to with stand harsh environments and shocks. It is certified to withstand termperature rating from -28 to +194 °F and is in fact the ideal mean of trasportation for sensitive devices.

TECHNICAL CHARACTERISTICS:

Conforms with CE requirements. Conforms with UNI 10566 – MULTIFUNCTION type
Illuminated display with 4 lines, 20 characters each
Memory for 10.000 welding cycles
8 Memories with 500 parameters each for pressure tests
Fitting working range up to 70 Amp. maximum peak
Ambient temperature sensor
Power supply: 115V E 50Hz/60Hz
Maximum power: 2000 VA
Minimum power suplly: 4 Kw
Output voltage: from 5 to 42 V
Power cable: L= 12.5 ft
Welding cable: L= 10 ft
Connectors - ø4 mm (art. 00S8305) with adapters for ø4.7 mm (00S8203)
Dimensions: 23.78" x 18.33" x 12.08"
Weight: 44 lb
Degree of protection: IP 54
Working temperature: from 0° to + 131°F

Code	Voltage	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft³/p.
00SMARTWELD/110	110V	1/2" ÷ 16"	1	44.000	3.0471

WELDING UNITS

AUTOMATIC MULTIFUNCTION WELDING UNIT WITH BARCODE SCANNER

BASIC EQUIPMENT SUPPLIED WITH THE WELDING UNIT

- *User's handbook on hardware support and quick guide on paper*
- *USB key (2GB) to download data (welding report and pressure test)*
- *Shipping box*
- *Scanner for barcode input*
- *Adapters with ø4,7 mm pins*

ADDITIONAL EQUIPMENT

- ***00GPS:*** *Global Positioning System*
- ***00SENS:*** *Pressure test unit*

TECHNICAL CHARACTERISTICS:

Conforms with CE requirements
Conforms with UNI 10566 – MULTIFUNCTION type
Barcode reader conforming with ISO 13950 and manual setting of time and voltage.
Illuminated display with 4 lines, 20 characters each
Memory for 10.000 welding cycles
8 Memories with 500 parameters each for pressure tests
Fitting working range up to 100 Amp. maximum peak
Ambient temperature sensor
Power supply: 115V /48V E 50Hz/60Hz
Maximum power: 2500 VA
Output voltage: from 5 to 42 V
Power cable: L= 12.50 ft
Welding cable: L= 10.00 ft
Connectors - ø 4mm (art. 00S8305) with adapters for ø4.7 mm (00S8203)
Dimensions: 13" x 18" x 8" H
Weight: 55.44 lb
Degree of protection: IP 54
Working temperature: from 0°F to + 131°F

Code	Voltage	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft^3/p.
00E9001/110	110V	1/2"- 42"	1	55.440	0.1872

WELDING UNITS

AUTOMATIC MULTIFUNCTION WELDING UNIT WITH BARCODE SCANNER

TECHNICAL CHARACTERISTICS:

Conforms with CE requirements. Conforms with UNI 10566 – MULTIFUNCTION type
Barcode reader conforming with ISO 13950 and manual setting of time and voltage
Illuminated display with 4 lines, 20 characters each
Memory for 10.000 welding cycles
8 Memories with 500 parameters each for pressure tests
Fitting working range up to 40 Amp. maximum peak
Ambient temperature sensor
Power supply: 115V E 50Hz/60Hz
Maximum power: 1000 VA
Output voltage: from 5 to 42 V
Power cable: L= 12.5 ft
Welding cable: L= 10 ft
Connectors - ø4 mm (art. 00S8305) with adapters for ø4.7 mm (00S8203)
Dimensions: 11" x 12" x H 6"
Weight: 29 lb
Degree of protection: IP 54
Working temperature: from 0°F to + 131°F

BASIC EQUIPMENT SUPPLIED WITH THE WELDING UNIT:

- *User's handbook on hardware support and quick guide on paper*
- *USB key (2GB) to download data (welding report and pressure test)*
- *Shipping box*
- *Barcode scanner*
- *Adapters with ø4,7 mm pins*

ADDITIONAL EQUIPMENT AND SPARES:

- ***00SENS:*** *Pressure test unit*

Code	Voltage	Nominal Size (Service line) IPS	Pack.	Weight lb./p.	Volume ft³/p.
00E9001L/110	110V	1/2" - 6"	1	29.000	0.4583

WELDING UNITS - ADDITIONAL EQUIPMENT AND SPARE PARTS

PAIR OF PINS

Code	Nominal Size	Pack.
00S8305	*4 mm Female*	1

PAIR OF ADAPTERS

Code	Nominal Size	Pack.
00S8203	*4.0 mm M x 4.7 mm F*	1
00S8202	*4.7 mm M x 4.0 mm F*	1

BARCODE SCANNER

Barcode reading system

Code	Pack.
00BCSCAN	1

WELDING UNITS - ADDITIONAL EQUIPMENT AND SPARE PARTS

USB MEMORY DEVICE

Code	Description	Pack.
00USBKEY	*for 00E9001 - 00E9001L*	1

SOFTWARE CD AND BLUETOOTH USB PEN DRIVE FOR DATA DOWNLOAD

Code	Description	Pack.
00EDP900	*Software CD and Bluetooth USB pen drive for 00E9001/110 without USB port*	1

GLOBAL POSITIONING SYSTEM (GPS)

The global positioning system (00GPS) allows the welding unit to record the geographical coordinates of the welded fittings, making them traceable years after their installation.

Code	Pack.
00GPS	1

WELDING UNITS - ADDITIONAL EQUIPMENT AND SPARE PARTS

PRESSURE TEST UNIT

The pressure test unit allows to carry out the pressure test of the distribution network (water and gas connections before and after the meter, fire-prevention networks made of any kind of plastic or metal material).
Test results are shown on the PC with the help of the software (00EDP900).
The welding unit has 8 memories for the record of pressure test data.
Equipped with: shipping box, hydraulic pipe, electric cable for welding unit connection, adapter nipple and instruction manual.

Code	Bar	Pack.	Weight lb./p.	Volume ft³/p.
00SENS200	from 1 to 200 mbar	1	6.160	0.0006
00SENS010	from 1 to 10 bars	1	6.160	0.0006
00SENS050	from 1 to 50 bars	1	6.160	0.0006

PE

POLYETHYLENE

2

EloPRESS

COMPRESSION FITTINGS

TECHNICAL INFORMATION

THE MATERIAL:

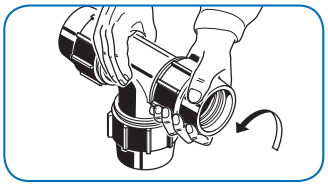
- ◊ BODY IN BLACK PP
- ◊ NUT IN LIGHT BLUE ACETAL COPOLYMER POM
- ◊ GASKET IN NBR 70 SHORE
- ◊ SPLIT RING IN WHITE POLYACETAL

FIELD OF USE: PE100, PE80, PE63, PE40, PE32 PIPES

INTERNATIONAL STANDARD: ACCORDING TO ISO 14236-2000

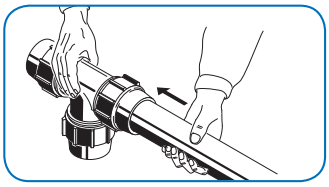
ASSEMBLY INSTRUCTIONS

Cut the pipe with the pipe cutter, chamfer and clean the pipe before installation!

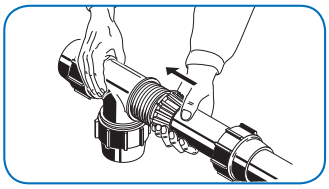


Unscrew the nut and the split ring. Put the pipe through the nut and the split ring- with the conic part facing the nut.

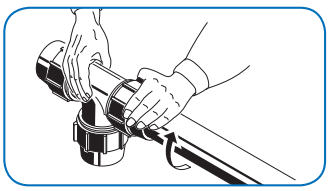
Insert the pipe into the body until bottons out.



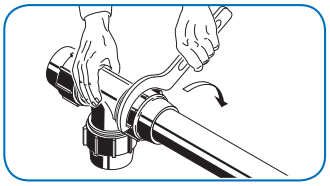
Slide the split ring until it reaches the body of the fitting.



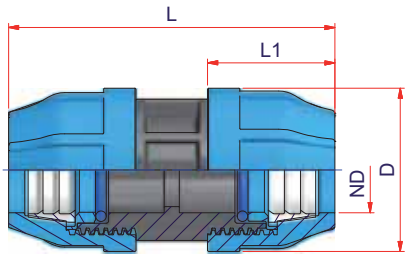
Tighten the nut on the body of the fitting.



Use a wrench to completely tighten the nut.

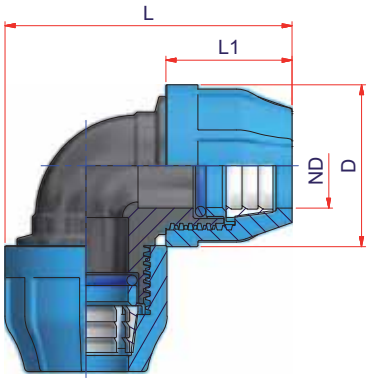


COMPRESSION FITTINGS



COUPLER

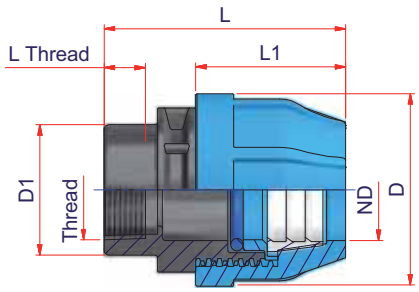
Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	D	L1	L
10KIMAN34	3/4"	35	1.680	0.314	0.0160	3/4"	2.09	4.59	1.77
10KIMAN01	1"	20	960	0.495	0.0280	1"	2.57	5.35	2.09
10KIMAN114	1"1/4	12	576	0.880	0.0466	1"1/4	3.19	6.37	2.48
10KIMAN02	2"	23	276	1.970	0.1159	2"	4.41	8.42	3.29



90° ELBOW

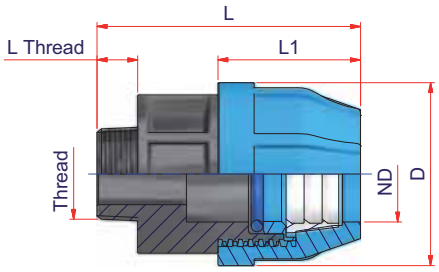
Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	D	L	L1
10KIG34	3/4"	30	1.440	0.301	0.0187	3/4"	2.09	1.77	3.93
10KIG1	1"	18	864	0.550	0.0310	1"	2.57	2.09	4.67
10KIG114	1"1/4	8	384	0.963	0.0700	1"1/4	3.19	2.48	5.66
10KIG2	2"	-	-	-	-	2"	4.41	3.29	

COMPRESSION FITTINGS



FEMALE STRAIGHT ADAPTER

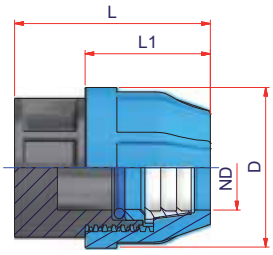
Code	Nominal Size IPS x NPT	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	Thread	L Thread	D1	D	L1	L
10KIRFF3434NPT	3/4" x 3/4" NPT	30	2.640	0.161	0.0100	3/4"	3/4" NPT	0.62	1.48	2.09	1.77	3.14
10KIRFF0101NPT	1" x 1" NPT	35	1.680	0.277	0.0160	1"	1" NPT	0.68	1.77	2.58	2.09	3.46
10KIRFF114114NPT	1"1/4 x 1"1/4 NPT	18	864	0.495	0.0310	1"1/4	1"1/4 NPT	0.88	2.16	3.19	2.48	4.01
10KIRFF0202NPT	2" x 2" NPT	32	384	1.258	0.0833	2"	2" NPT	0.72	3.08	4.41	3.29	6.18



MALE STRAIGHT ADAPTER

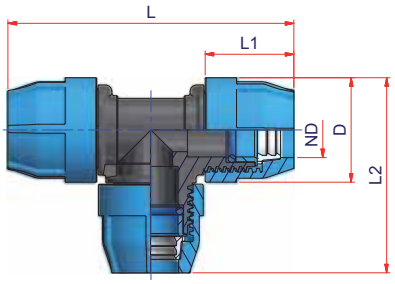
Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	Thread	L Thread	D	L1	L
10KIRFM3434NPT	3/4" x 3/4" NPT	30	2.640	0.183	0.0093	3/4"	3/4" NPT	0.55	2.09	1.77	3.18
10KIRFM0101NPT	1" x 1" NPT	35	1.680	0.280	0.0160	1"	1" NPT	0.75	2.57	2.09	4.02
10KIRFM114114NPT	1"1/4 x 1"1/4 NPT	18	864	0.495	0.0310	1"1/4	1"1/4 NPT	0.71	3.19	2.48	4.01
10KIRFM0202NPT	2" x 2" NPT	32	384	1.213	0.0833	2"	2" NPT	1.01	4.41	3.29	6.47

COMPRESSION FITTINGS



END FITTING

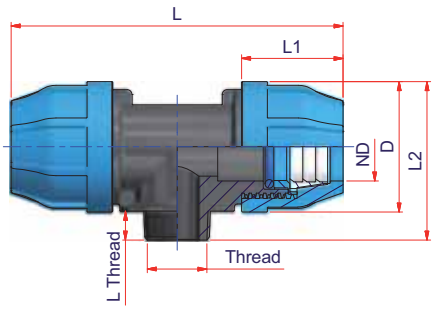
Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	D	L1	L
10KITAPP034	3/4”	30	2.880	0.205	0.0100	3/4”	2.09	1.77	2.63
10KITAPP01	1”	-	-	-	-	1”	2.57	2.09	3.27
10KITAPP0114	1”1/4	12	1.056	0.477	0.0230	1”1/4	3.19	2.48	3.88
10KITAPP02	2”	-	-	-	-	2”	4.41	3.29	5.47



EQUAL TEE

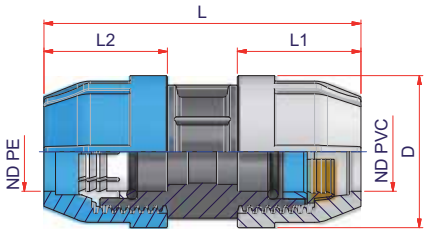
Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	D	L1	L2	L
10KIT34	3/4”	20	960	0.429	0.0280	3/4”	2.09	1.77	3.90	5.70
10KIT1	1”	-	-	-	-	1”	2.57	2.09	4.67	6.77
10KIT114	1”1/4	-	-	-	-	1”1/4	3.19	2.48	5.66	8.11
10KIT2	2”	-	-	-	-	2”	4.41	3.29	8.07	11.73

COMPRESSION FITTINGS



MALE TEE THREADED

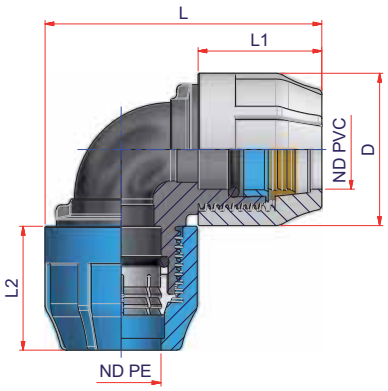
Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND (IPS)	Thread	L Thread	D	L1	L2	L
10KITM3434NPT	3/4"	-	-	-	-	3/4"	3/4" NPT	0.55	2.58	1.77	2.63	5.70
10KITM11NPT	1"	-	-	-	-	1"	1" NPT	0.75	2.57	2.09	3.27	6.77
10KITM114114NPT	1"1/4	-	-	-	-	1"1/4	1"1/4 NPT	0.70	3.19	2.48	3.89	8.11
10KITM0202NPT	2"	-	-	-	-	2"	2" NPT	1.01	4.41	3.29	5.42	11.73



TRANSITION COUPLER PE-PVC

Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND PE (IPS)	D	L1	ND PVC (IPS)	L2	L
10KIMAN3434PVC	3/4" - 3/4"	25	1.200	0.440	0.0223	3/4"	2.09	1.77	3/4"	2.08	5.15
10KIMAN0101PVC	1" - 1"					1"	2.57	2.09	1"	2.08	5.15
10KIMAN114114PVC	1"1/4 - 1"1/4					1"1/4	3.19	3.19	1"1/4	2.08	5.15
10KIMAN0202PVC	2" - 2"					2"					

COMPRESSION FITTINGS



TRANSITION ELBOW 90° PE-PVC

Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.	ND PE (IPS)	D1	L1	L11	ND PVC (IPS)	D2	L2	L22
10KIG3434PVC	3/4" - 3/4"	20	960	0.479	0.0280	3/4"	2.08	1.77	4.37	3/4"	2.55	2.08	4.60
10KIG0101PVC	1" - 1"												
10KIG114114PVC	1"1/4 - 1"1/4												

TRANSITION KIT

CONVERSION KIT PE-PVC 3/4"

Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.
10KITPVC34	3/4"				

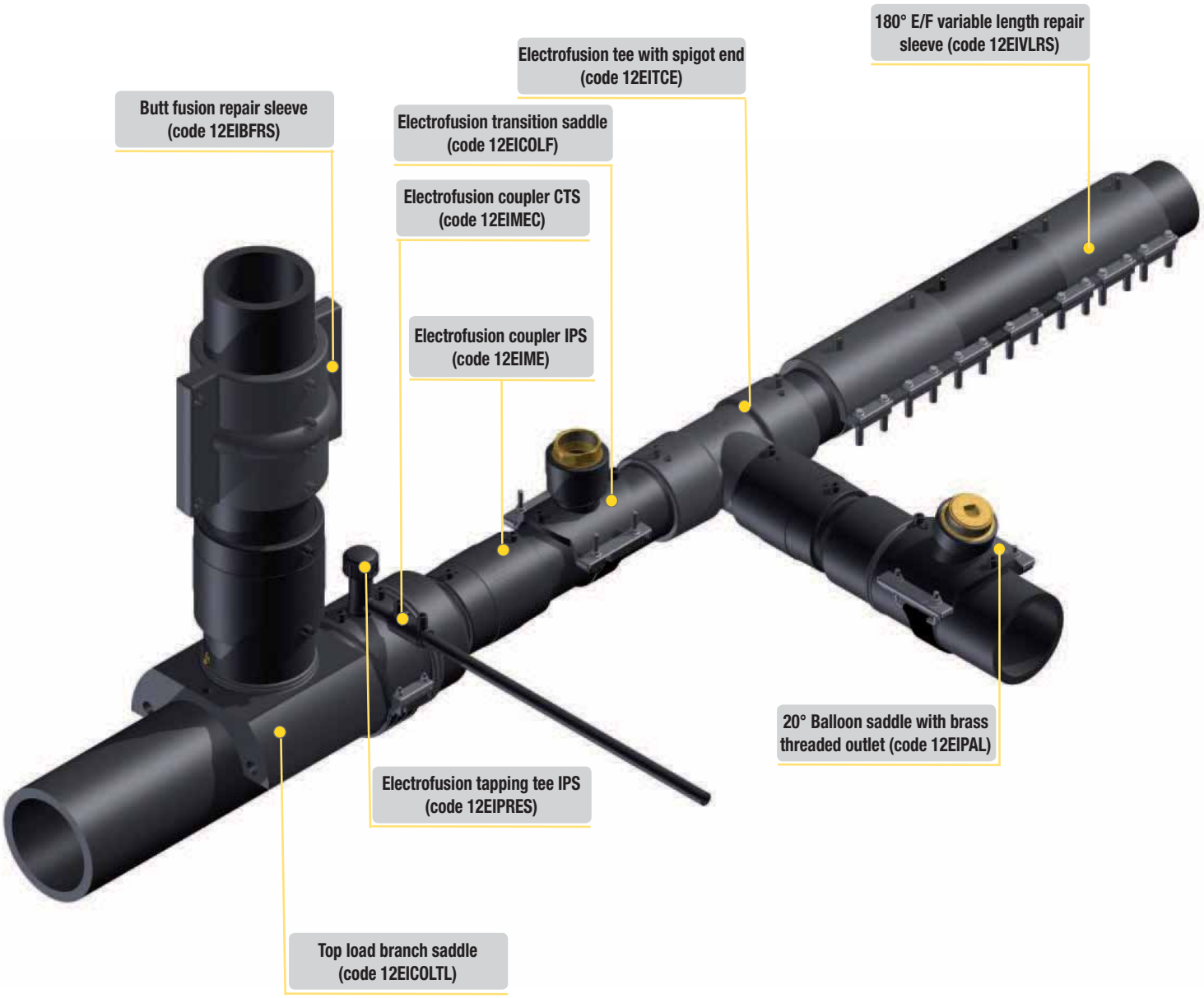
CONVERSION KIT PE-PVC 1"

Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.
10KITPVC1	1"				

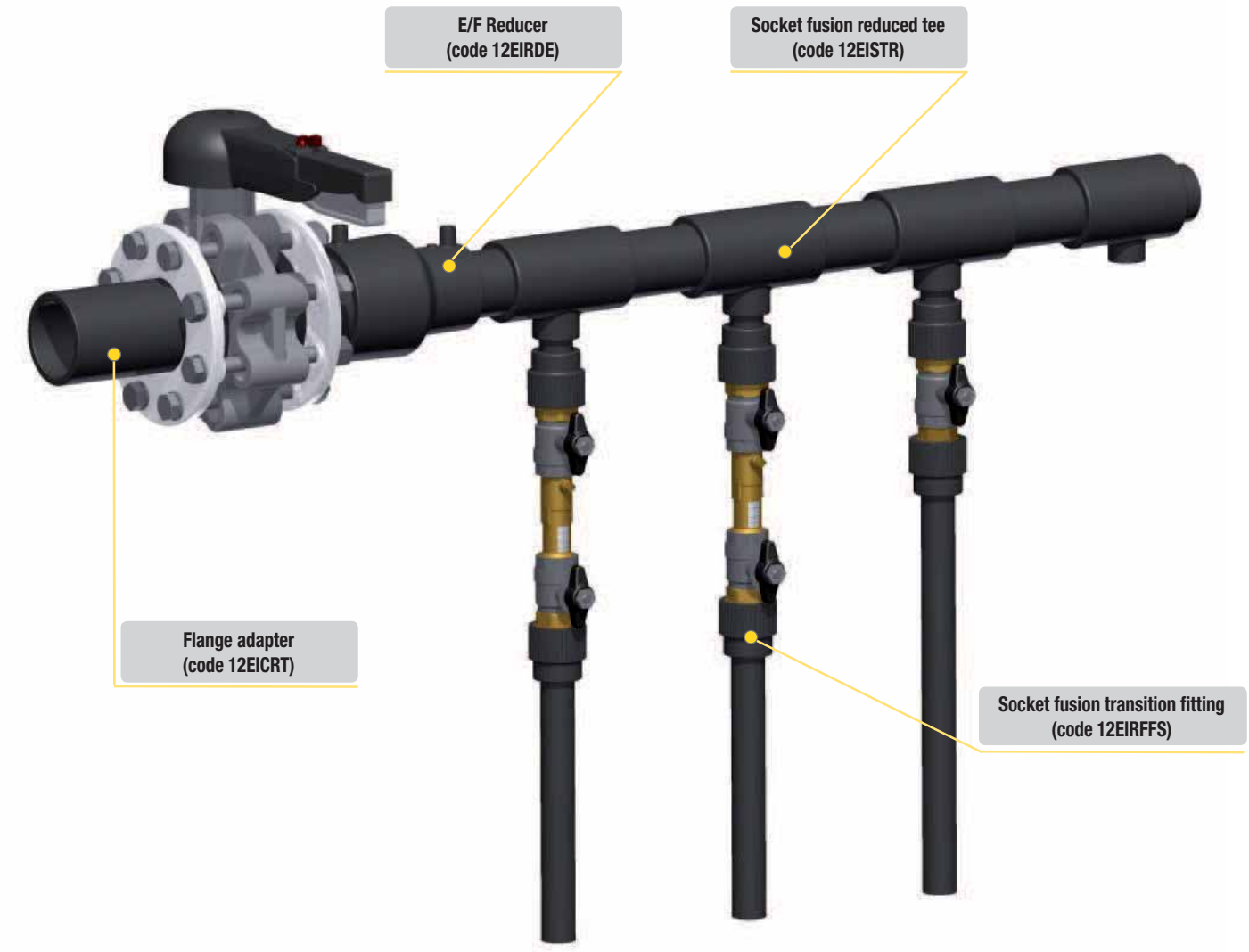
CONVERSION KIT PE-PVC 1"1/4

Code	Nominal Size IPS	Pack.	Q.ty pallet	Weight lb/p.	Volume ft³/p.
10KITPVC114	1"1/4				

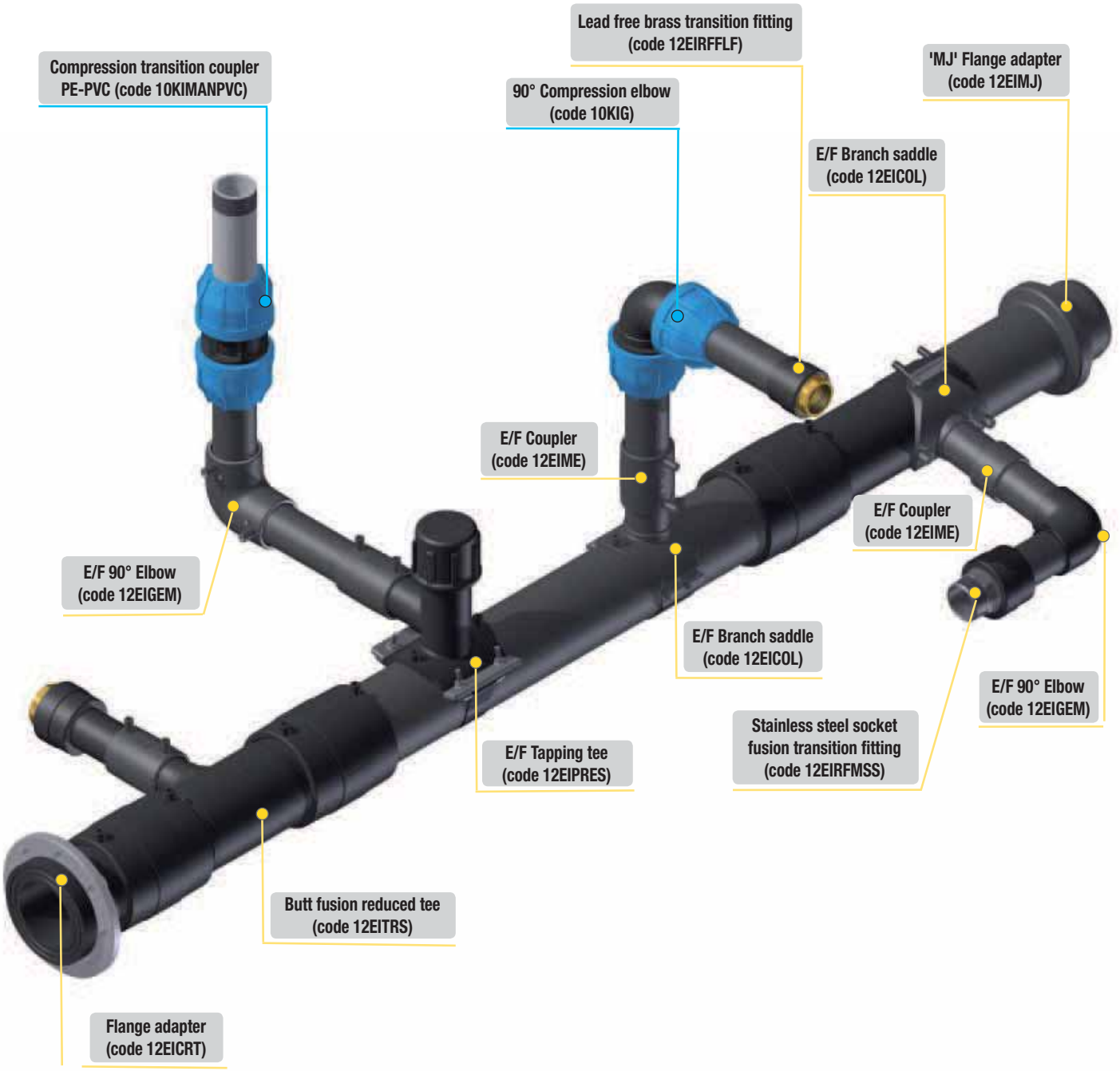
EXAMPLE OF INSTALLATIONS



EXAMPLE OF INSTALLATIONS



EXAMPLE OF INSTALLATIONS



PE

POLYETHYLENE

3

EloFIT

ASSEMBLY INSTRUCTIONS

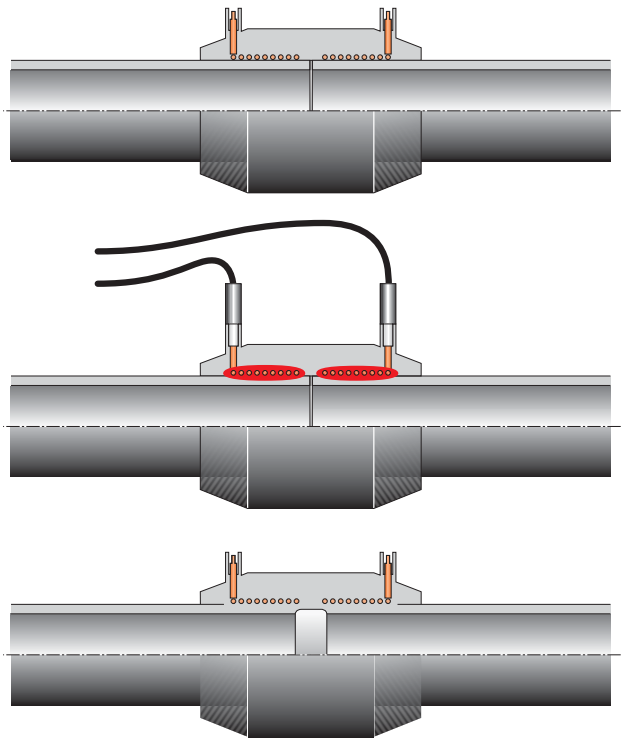
1. THE ELECTROFUSION PROCESS

The ELOFIT system is based on **ELECTROFUSION-WELDING.**

The fittings have a resistive wire inside which is connected to the outside cable terminals.

When voltage is applied, this resistance generates the heat needed to melt polyethylene. Energy is directly transmitted at the interface between the fitting and the pipe causing heat welding of the parts. When it cools down, the joint is even, strong, safe and reliable.

The main features of ELOFIT are the high quality and the reliability of the joints.



2. HOW TO READ THE BARCODES

WELDING BARCODE

According with ISO13956.
Scan the barcode with the barcode scanner or manually enter the welding parameters of time and voltage reported on the barcode.

WELDING BARCODE

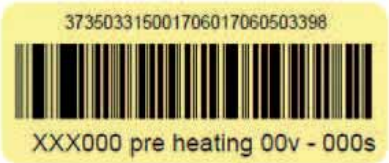
PRE HEATING BARCODE

FOR FITTING DIAMETERS ≥ 8" IPS (225mm).

First scan this barcode when the gap between the coupler and the pipe or spigot end is greater than 0.08" (2 mm) at any point of the circumference.

Repeat the preheating process a maximum of THREE TIMES to reduce the gap between the pipe and the fitting.

First scan this barcode also when the temperature is less than 32°F (0°C) and the gap is lower than 0.08" (2 mm). THE PROCESS MUST BE PERFORMED ONLY ONCE.



PRE HEATING BARCODE

DOUBLE BARCODE

In case of double barcode (FIRST WELDING and SECOND WELDING), the welding process must always be performed scanning the first welding parameters and the second welding parameters immediately after the completion of the first welding (with no cooling time between them).

DOUBLE BARCODE

YOU CAN WELD WITH MULTIFUNCTION WELDING UNIT IN AUTOMATIC MODE (WITH BARCODE SCANNER) OR IN MANUAL MODE.

IN CASE OF AUTOMATIC WELDING, ALWAYS CHECK TIME AND VOLTAGE PARAMETERS ON THE DISPLAY AFTER BARCODE SCAN.

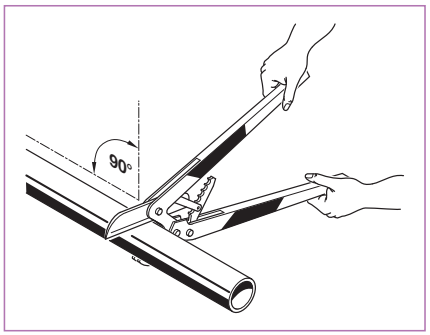
IN CASE OF MANUAL WELDING, USE TIME AND VOLTAGE PARAMETERS INDICATED ON THE BARCODE.

IF THE WELDING UNIT DOES NOT PERFORM WELDING TIME COMPENSATION ACCORDING TO AMBIENT TEMPERATURE, USE THE PARAMETERS ON THE LABEL AFFIXED ON THE BAG.

KEEP AT A SAFE DISTANCE DURING WELDING.

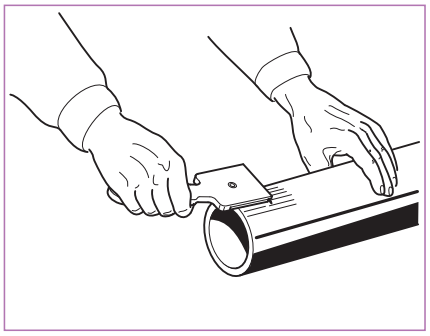
3. PREPARATION OF THE PIPE

1. Cut the pipe at right angles with a pipe cutter.

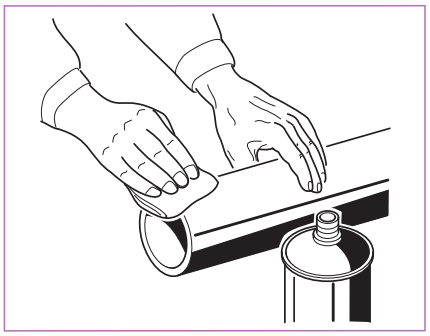


2. Scrape the pipe or spigot surface up to 0.4" (1 cm) beyond the insertion length of the fitting, to remove the oxydized PE layer.

3. Mechanical scrapers are recommended. Hand scrapers can be used (refer to your Company procedures).



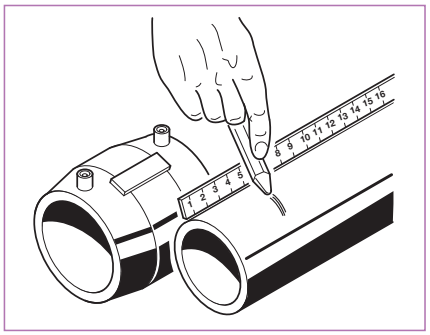
4. Remove any mud, dust, grease or other traces of dirt from the pipe or spigot ends and the welding area of the fitting. Use only isopropanol and a soft wiping cotton cloth without any printing.



5. Wait until the cleaned parts are completely dry, then mark the welding length on the pipes or spigot ends with a marker pen.

6. Insert the pipe or spigot ends straight into the fitting up to the marked insertion length.

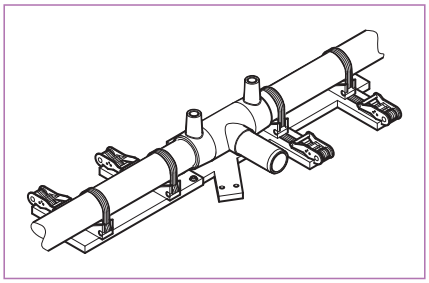
7. Install the aligners in order to keep straight position and avoid stresses during the welding.



AVOID ANY STRESS ON THE WELDING AREA DURING THE WELDING CYCLE AND THE COOLING PHASE.

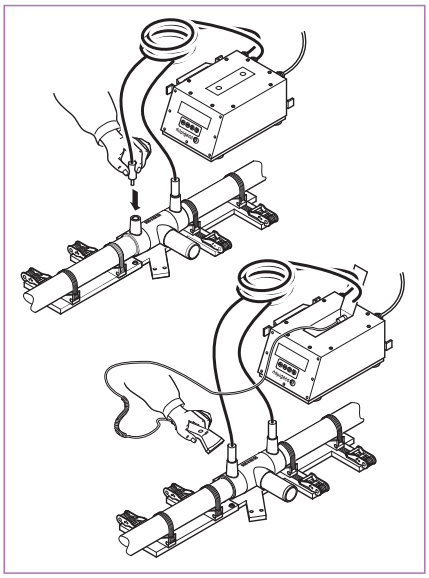
4. WELDING INSTRUCTIONS FOR ELECTROFUSION FITTINGS

1. Prepare the pipe and fitting to weld following the directions in Chapter 3. Make sure that the pipes or spigots to be welded are lined up and straight without any possibility of movement.



2. Connect the welding cables to the fitting connectors, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).

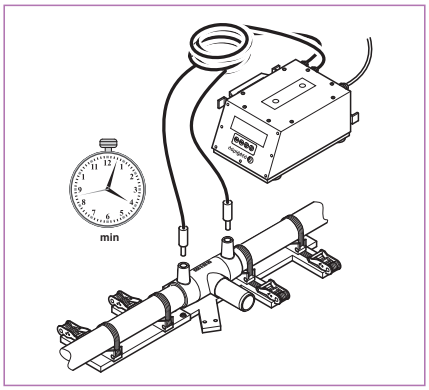
ALWAYS CHECK THE WELDING PARAMETERS BEFORE STARTING THE WELDING CYCLE.



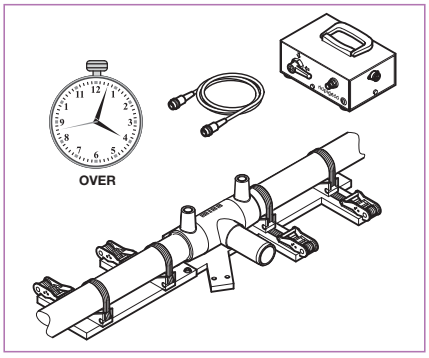
3. At the end of the welding cycle, disconnect the cables and wait for the cooling time indicated on the barcode.

4. The welding data can be downloaded by a USB drive pen or instantly printed throught a printer.

5. The exact position of the installation can be recorded with the bluetooth GPS.



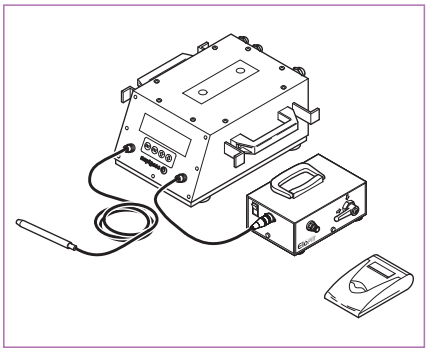
6. When the cooling time is over, remove the aligners and start the pressure test on the system by the pressure test unit (follow your company procedures).



5. PRESSURE TEST UNIT

After completing the welding process, wait for the cooling time (check the label on the fitting), then remove the alignment tool.

It is now possible to carry out the pressure test.

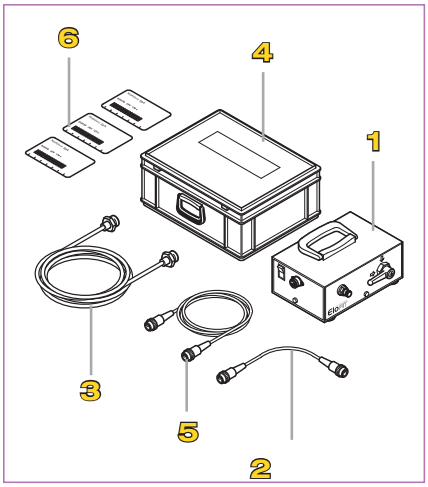


NECESSARY EQUIPMENT:

- ELOFIT MULTIPURPOSE WELDING CONTROL UNIT FOR PRESSURE INSPECTIONS
- ELOFIT PRESSURE TEST UNIT FOR NETWORK INSPECTIONS UNDER PRESSURE
- COMPRESSOR OR NITROGEN TANK WITH SUITABLE PRESSURE ADJUSTMENT

If necessary:

- PRINTER OR EXTERNAL UNIT FOR DOWNLOAD DATA

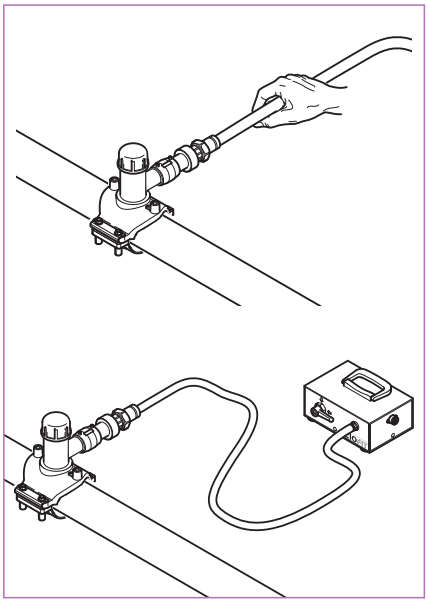


LEGEND

1. Elofit pressure test unit
2. Unit connection cable
3. Pipe with two adapters for ø6mm Rilsan connection.
4. Carrying case
5. Unit adapter cable
6. Test cards for pressure tests

5.1 CONNECTIONS

Before beginning the test, equip any point on the line with a ø 6 mm RILSAN adapter.

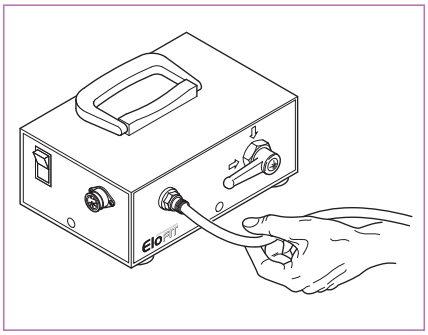


1. SYSTEM > PRESSURE GAUGE

Insert one end of the Rilsan tube into the quick connector in the pipe to be tested; the other end must be connected to the pressure testing device under the label “TO ELOFIT PIPEWORK”.

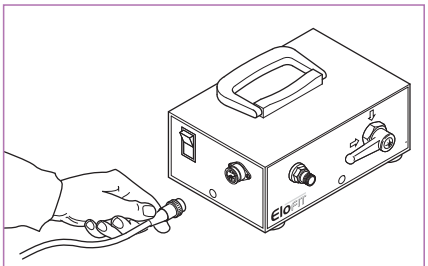
2. PRESSURE SOURCE > PRESSURE GAUGE

Connect the source of pressure fluid (air compressor or nitrogen tank) to the pressure gauge under the label “TEST FLUID INLET”.



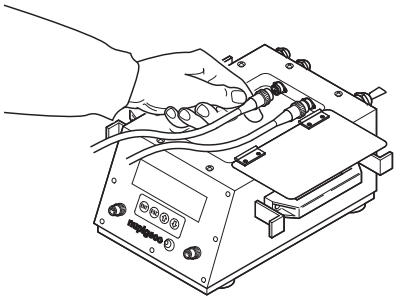
3. PRESSURE GAUGE > UNIT

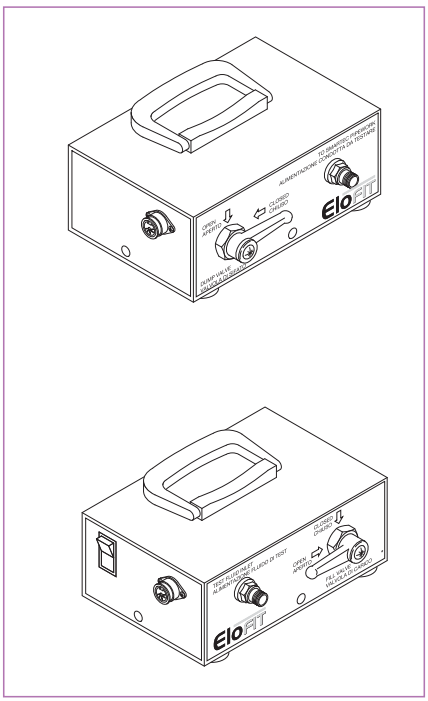
Connect the connection cable from the pressure gauge to the “DATA PORT” connection.



4. PRESSURE GAUGE > UNIT

Connect the connection cable from the pressure gauge to the “DATA PORT” connection.





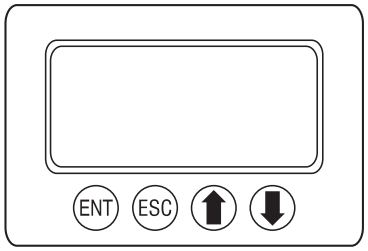
5.2 STARTING UP THE PRESSURE TEST

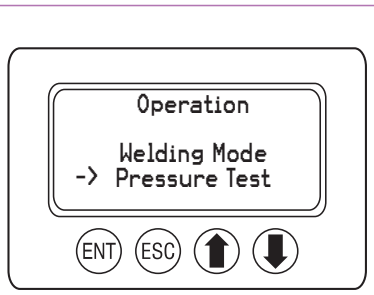
BEFORE BEGINNING THE PRESSURE TEST, VERIFY THAT:

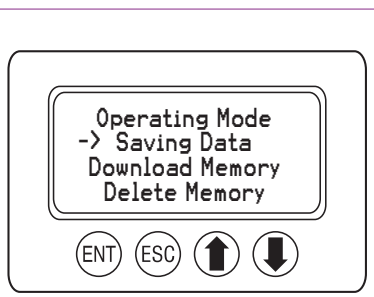
- **THE HANDLE OF THE DUMP VALVE IS IN "CLOSE" POSITION.**
- **THE HANDLE OF THE FILL VALVE IS IN "OPEN" POSITION.**

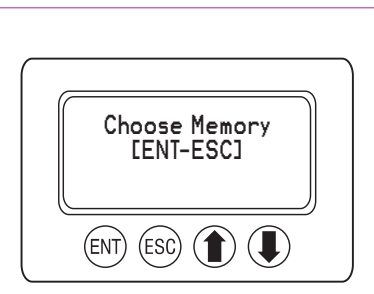
Data taken during pressure tests are saved in eight different memory slots; use the cursor up/down keys to select the memory slot and then press **ENTER** to confirm or **ESCAPE** to return to the previous menu.

The system will propose the first free memory slot available.









Choose the suitable Test Card (pressure test data cards) among those provided with the pressure gauge.

The Test Card contains the following data:

IP: Initial test pressure

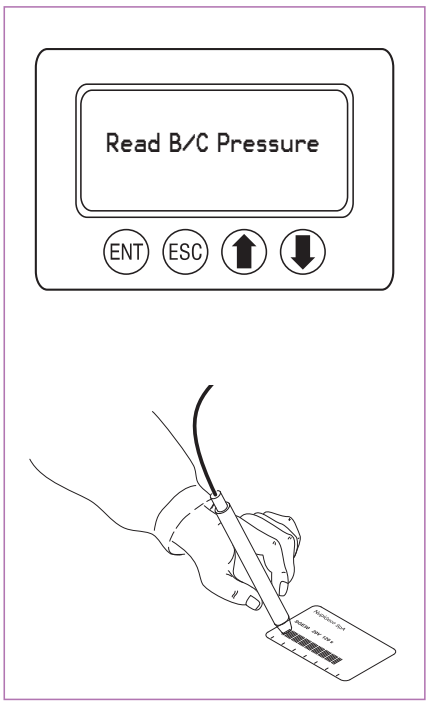
FP: Final test pressure

Dur: Total duration of test expressed in minutes or hours.

Rate: time lapse between two consecutive pressure and temperature data readings.

Ex: Dur 5 min / Rate 30 sec = 10 readings

The Barcode on the test card contains all the data for automatic scan by optical pen.



The Unit will summarize all test data on the following screen.

MID: Identification

TID: Test protocol

NP: Nominal test pressure.

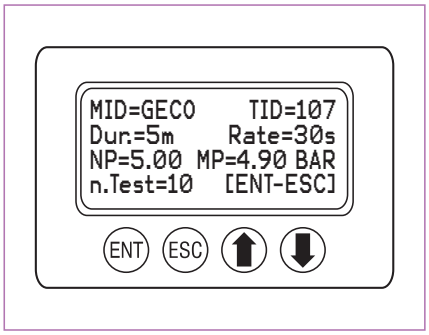
Values reported by the Unit may have a tolerance of ±2.5% compared to the IP.

MP: Minimum test pressure allowed.

Below this value, the test is failed.

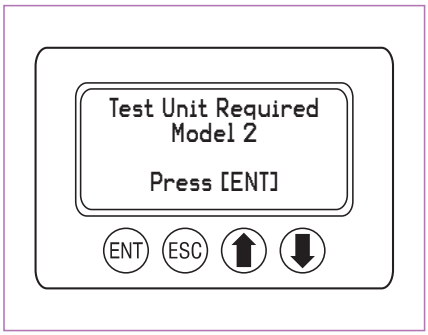
n.Test: Number of tests to be carried out

After having checked that the data is correct, press **ENTER** to continue or **ESCAPE** to cancel the operation.



The unit asks the operator to confirm that the pressure test unit connected to the welding machine is the right model. Check that the **ID number** printed on the box of the unit is the same as the one requested by the multipurpose welding machine and then press **ENTER**.

If the pressure test unit model is different from the one requested by the welding machine, contact the nearest ELOFIT Distributor or Nupi Americas Technical Assistance Service.



At this point the pipe system can be put under pressure.

The following screen appears:

↑↑↑: Graphic signal that suggests pressure INCREASING

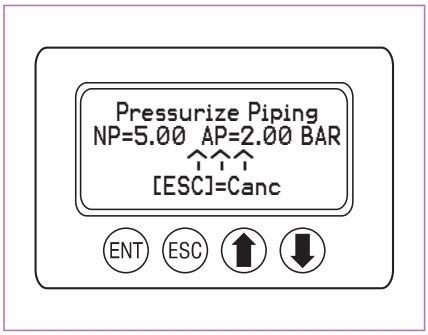
↓↓↓: Graphic signal that suggests pressure DECREASING

===: Pressure STABILIZED

To increase pressure, proceed as follows:

Close the dump valve on the pressure test unit.

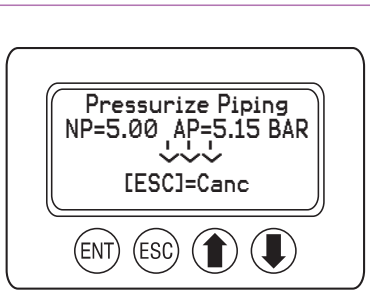
Slowly open the fill valve on the pressure test unit, keeping it open until the pressure, that can be read on the screen, reaches the required test pressure (IP).



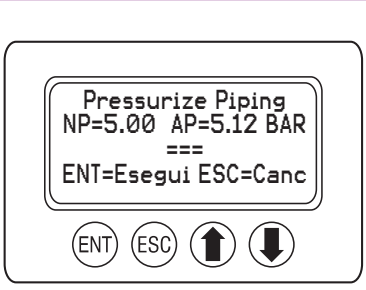
ONCE THE SYSTEM IS FILLED, LET THE PRESSURE STABILIZE FOR 30-40 MINUTES.

THE INITIAL PRESSURE MAY HAVE A TOLERANCE OF ±2.5%.

If the actual pressure (**AP**) is higher than the nominal test pressure required (**NP**), open the dump valve slowly.



Wait a few more minutes for the pressure to stabilize in the entire line.



The Unit is ready to begin the pressure test.

Press **ENTER**.

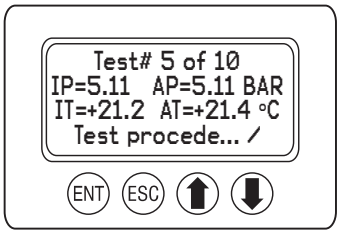
The progression of tests carried out is visualized in the first line.

IP: Initial pressure

AP: Actual pressure

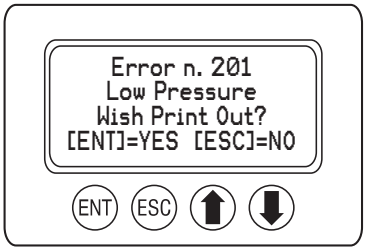
IT: Initial temperature

AT: Actual temperature



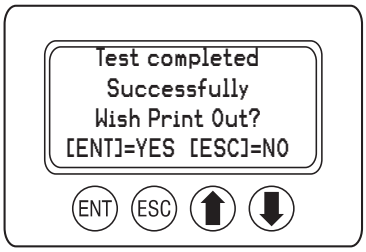
If during the test the pressure drops below the minimum allowed (**MP**), an error message will appear and will indicate “Test Failed”.

The test may be stopped at any time by pressing **ESCAPE**. In this case, an error message will appear on the screen.



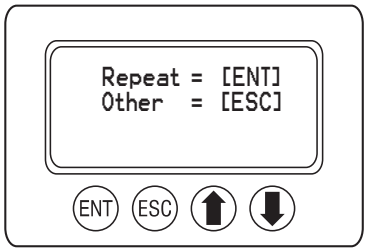
If the test is completed with positive result, this message will appear on the screen.

If you do not wish to print the test report, press **ESCAPE**.



The screen will appear as follows.

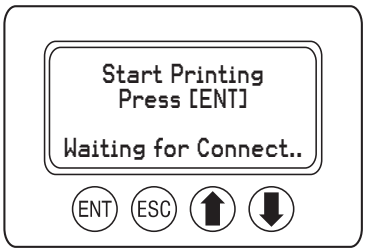
Press **ENTER** to go back to read the barcode for the test or press **ESCAPE** to return to data insertion.



If you wish to print the test report, turn on Nupi Americas bluetooth printer linked to the Unit.

Press **ENTER** to start printing.

At the end of the pressure test, discharge the line by slowly opening the dump valve.



The reports for both welding and pressure test can be transferred by the external data download unit provided by Nupi Americas and managed on the PC by the Data Downloading Software contained in CD-ROM Elofit Download Program.

Dowload data on a PC will be carried out by following the instructions provided with the relative equipment.

- **Cancelling the test reports**

Select “Cancel Memory” option to cancel the contents of a specific memory slot.

Press **ENTER** to continue or ESCAPE to return to the main menu.

Select the memory slot to be cancelled by using the up/down keys and then confirm the selection with **ENTER**.

Press **ENTER** to confirm the cancellation or **ESCAPE** to return to the previous screen.

All the data will in any case be saved in the Unit in order to be downloaded to a PC later.

GLOSSARY

ENT	Enter (confirm).
ESC	Escape (return to previous screen).
B/C	BarCode
Is printed ON	The barcode for the pressure test is printed on the TEST CARDS and contains all the parameters for automatic transfer by the optical pen.
IP	Initial test pressure required (data contained on test card).
PF	Final test pressure required (data contained on test card).
NP	Nominal test pressure. Values reported by the Unit. May have a tolerance of ±2.5% compared to the IP.
MP	Minimum test pressure allowed. Below this value, the test is failed.
AP	Actual pressure. Values reported by the Unit during the test.
Dur	Total duration of test expressed in minutes or hours (data contained on test card).
Rate	Interval between one reading and the next during the pressure test (data contained on test card).
MID	Identification of the memory
TID	Test protocol
n.Test	Number of tests carried out
↑↑↑	Pressure INCREASING
↓↓↓	Pressure DECREASING
===	Pressure STABILIZED
IT	Initial test temperature
AT	Actual temperature

6. COOLING TIMES AND PRESSURE TEST RECOMMENDATIONS

WHEN COMPANY PROCEDURES ARE NOT SPECIFIED, REFER TO THE FOLLOWING TABLES FOR THE RECOMMENDED WAITING TIMES BEFORE STARTING THE PRESSURE TEST.

ELECTROFUSION FITTINGS

Table 1

COOLING TIME		
ø		MINUTES
inch.	mm	
½" to 1 ½"	20 ÷ 50	10
2" to 2 ½"	63 ÷ 75	15
3" to 6"	90 ÷ 200	20

Table 2

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
½" to 1 ½"	20 ÷ 50	20+cooling time	60+cooling time
2" to 2 ½"	63 ÷ 75	30+cooling time	90+cooling time
3" to 6"	90 ÷ 200	40+cooling time	120+cooling time

COUPLERS ≥ 8" - 225 mm

Table 3

COOLING TIME		
ø		MINUTES
inch.	mm	
8" to 18"	225 ÷ 450	40
20" to 24"	500 ÷ 630	60
30" to 32"	710 ÷ 800	90

Table 4

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
8" to 18"	225 ÷ 450	60+cooling time	180+cooling time
20" to 32"	500 ÷ 800	80+cooling time	200+cooling time

TOP LOAD TAPPING TEES

TAPPING TEES AND TAPPING VALVES

Table 5

COOLING TIME		
ø		MINUTES
inch.	mm	
1 ¼" to 12"	40 ÷ 315	20

Table 6

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
1 ¼" to 2"	40 ÷ 63	20+cooling time	30+cooling time
2 ½" to 12"	75 ÷ 315	20+cooling time	60+cooling time

ZERO LEAKAGE TAPPING TEES

Table 7

COOLING TIME		
ø main / service		MINUTES
inch.	mm	
1 ¼" x ½" - 12" x 1 ¼"	40/20 ÷ 315/40	20
3" x 2" - 12" x 2"	90/63 ÷ 315/63	30

Table 8

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
1 ¼" to 2"	40 ÷ 63	cooling+20	cooling+30
2 ½" to 12"	75 ÷ 315	cooling+20	cooling+60

ø 14” – 24” x 2” – (ø 355÷630 / 63 mm)

Table 9

COOLING TIME		
ø		MINUTES
inch.	mm	
14” to 24”	355 ÷ 630	40

Table 10

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
14” - 24” x 2”	355 ÷ 630 / 63	cooling+30	cooling+90

TOP LOAD TAPPING VALVES

Table 11

COOLING TIME		
ø		MINUTES
inch.	mm	
14” to 24”	355 ÷ 630	40

Table 12

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
14” - 24”	355 ÷ 630	cooling+30	cooling+90

BRANCH SADDLES

ø 1/1¼" x ½" – 12" x 4" (ø 40/20 ÷ 315/125 mm)

BAGGING SADDLES

ø 3" – 12" (ø 90 ÷ 315 mm)

Table 13

COOLING TIME		
ø		MINUTES
inch.	mm	
1 ¼" - 12"	40 ÷ 315	20

Table 14

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
1 ¼" to 2"	40 ÷ 63	cooling+20	cooling+30
2 ½" to 12"	75 ÷ 315	cooling+20	cooling+60

BRANCH SADDLES FOR INSTALLATION WITH BELTS

ø 8" x 6" – 32" x 8" (ø 200/160 ÷ 1000/225 mm) –

REPAIR SADDLES ø ≥ 14" (ø ≥ 355 mm)

Table 15

COOLING TIME		
ø		MINUTES
inch.	mm	
8" to 32"	200 ÷ 1000	40

Table 16

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
8" to 16"	200 ÷ 400	cooling+30	cooling+90
18" to 32"	450 ÷ 800	cooling+60	cooling+120

TOP LOAD BRANCH SADDLES
ø 14” – 24” x 2” – (ø 355÷630 / 63 mm)

Table 17

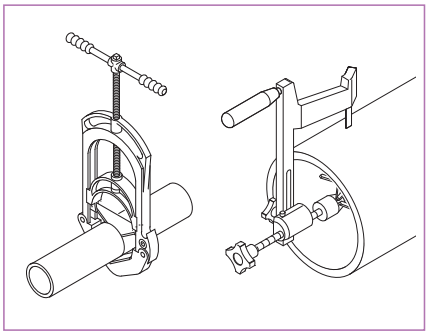
COOLING TIME		
ø		MINUTES
inch.	mm	
14” to 24”	355 ÷ 630	40

Table 18

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
14” to 24” x 22”	355 ÷ 630/63	cooling+30	cooling+90

7. E/F COUPLERS Ø ≤ 6”, LONG COUPLERS, REDUCERS

1. Make sure that the pipe or spigot ends to be welded are lined up and straight.

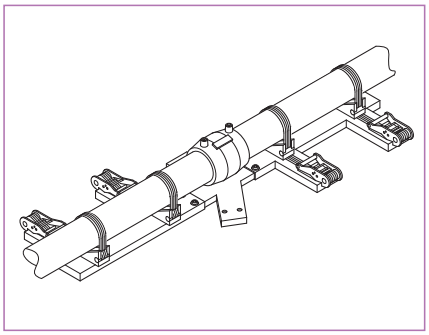


2. Scrape the surface of the pipe or the spigot ends to remove the oxidized PE layer. Scrape the length equal to the depth of the electrofusion fitting +0.4” (1 cm).

3. Clean the external surface of the pipe or spigot ends and the internalsurface of the fitting with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry and mark the insertion depth on both segments of pipe.

4. Insert the pipe or spigot ends in to the electrofusion sockets until they reach the stop.

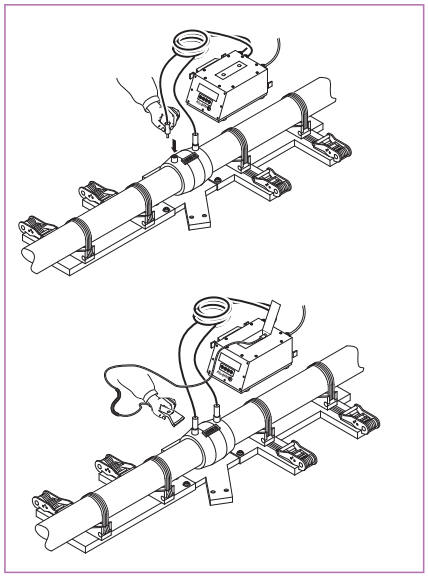
IT IS ALSO POSSIBLE TO REMOVE THE STOPS INSIDE THE FITTING AND INSERT THE FIRST PIPE COMPLETELY, THEN ALIGN THE TWO PIPE SECTIONS LEAVING ONLY A SMALL GAP BETWEEN THE PIPE ENDS AND SLIDE THE FITTING UNTIL IT IS CENTERED BETWEEN THE TWO LINES MARKED ON THE PIPE.



Check the achievement of the marked insertion depth.

5. NUPI RECOMMENDS THE USE OF ALIGNERS

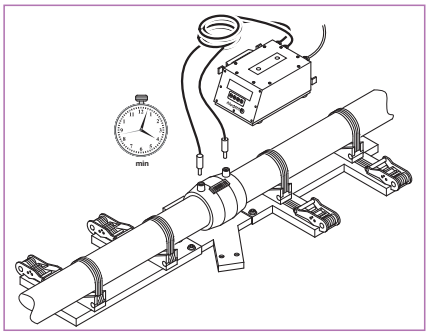
Avoid any stress in the welding area during the welding operation and the cooling time.



6. Connect the welding cables to the fitting connectors, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).

ALWAYS DOUBLE CHECK THE WELDING PARAMETERS

7. At the end of the welding process, wait for the cooling time (see Table 1) indicated on the barcode.



8. When the cooling time is over, remove the aligners and start the pressure test of the system (see Table 2 or refer to your Company procedures).

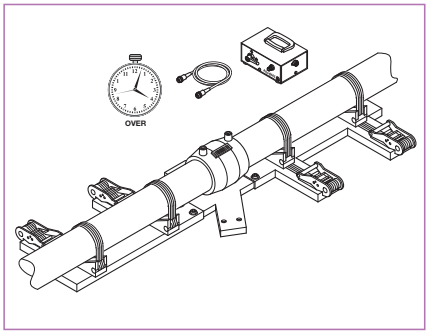


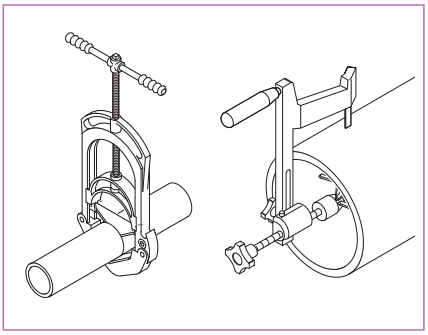
Table 1

COOLING TIME		
ø		MINUTES
inch.	mm	
½" to 1 ½"	20 ÷ 50	10
2" to 2 ½"	63 ÷ 75	15
3" to 6"	90 ÷ 200	20

Table 2

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
½" to 1 ½"	20 ÷ 50	20+cooling time	60+cooling time
2" to 2 ½"	63 ÷ 75	30+cooling time	90+cooling time
3" to 6"	90 ÷ 200	40+cooling time	120+cooling time

8. E/F COUPLERS Ø ≥ 8”

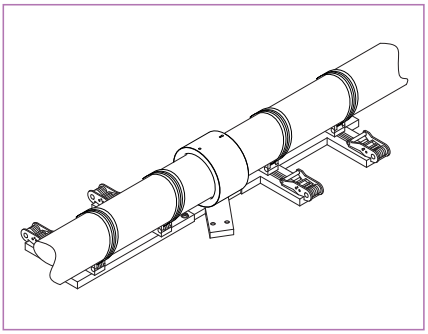


1. Make sure that the pipe or spigot ends to be welded are lined up and straight.

2. Scrape the surface of the pipe or the spigot ends to remove the oxidized PE layer. Scrape the length equal to the depth of the electrofusion fitting + 0.4” (1 cm).

3. Clean the external surface of the pipe or spigot ends and the internal surface of the fitting with isopropanol and a soft wiping cotton cloth without any printing.

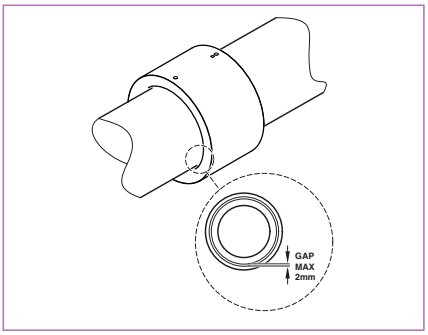
Wait until the clean parts are completely dry and mark the insertion depth on both segments of pipe.



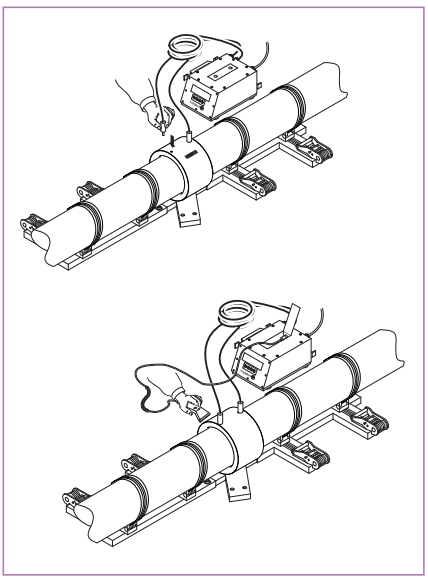
4. Insert the pipe or spigot ends into the coupler.
Make sure that they are perfectly lined up and positioned at the center of the fitting. Check the achievement of the marked insertion depth.

5. **NUPI RECOMMENDS THE USE OF ALIGNERS**

Avoid any stress on the welding area during the welding operations and the cooling time.



6. Connect the welding cables to the connectors of the fittings. If pre-heating is needed (check the following points), scan the yellow **PRE-HEATING BARCODE** with the barcode scanner or enter the welding parameters manually (refer to Chapter 2); otherwise skip directly to the following Step 7.



a. Temperature more than 32°F (0°C) and gap greater than 0.08” (2 mm): you must perform preheating to reduce the gap, you may try to reduce the gap by preheating a max of 3 times.

If you succeed and the gap is reduced to less than 0.08” (2 mm), then you can perform the welding operation. Otherwise, stop and call the supplier for technical support.

b. No gap but temperature less than 32°F (0°C): you must perform preheating only 1 time, then weld immediately after.

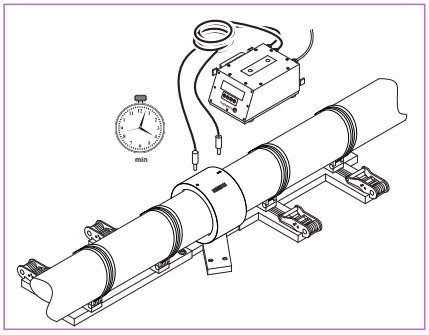
c. Gap > 0.08” (2 mm) and temperature less than 32°F (0°C): do exactly as in case a).

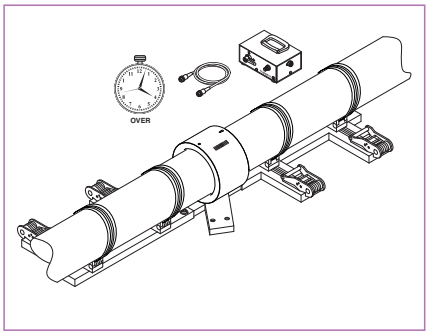
7. Scan the welding barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). Always check the welding parameters on the display.

In case of **DOUBLE BARCODE,** the welding process must be performed using the first welding parameters and the second welding parameters immediately after the completion of the first welding (with no cooling time between them).

8. At the end of the welding process, wait for the cooling time indicated on the barcode (see Table 3).

9. When the cooling time is over, remove the aligners and start the pressure test of the system (see Table 4 or refer to your Company procedures).





FUSION INDICATORS

There are two different types of fusion indicators:

- **MECHANICAL FUSION INDICATOR:** it can be white or grey and comes out permanently from the outer diameter of the coupler when the welding cycle is performed.
- **THERMAL INDICATOR:** the small white square on the blue sticker attached next to the fusion connectors turns permanently grey when the welding cycle is performed.

THE FUNCTION OF THE FUSION INDICATORS IS TO SHOW THAT THE OPERATOR HAS PERFORMED THE WELDING CYCLE, IT DOES NOT GUARANTEE THE QUALITY OF THE JOINT.

FOR Ø ≥ 28" (710 mm) YOU MUST USE TWO WELDING UNITS: ONE FOR EACH WELDING PROCESS.

Table 3

COOLING TIME		
Ø		MINUTES
inch.	mm	
8" to 18"	225 ÷ 450	40
20" to 24"	500 ÷ 630	60
30" to 32"	710 ÷ 800	90

Table 4

WAITING TIME BEFORE PRESSURE TEST START			
Ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
8" to 18"	225 ÷ 450	60+cooling time	180+cooling time
20" to 32"	500 ÷ 800	80+cooling time	200+cooling time

9. E/F TEES, REDUCED TEES, CAPS, 30°BENDS, 45°BENDS, 90°BENDS

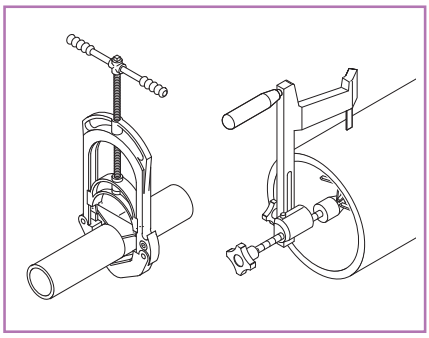
1. Make sure that the pipe or spigot ends to be welded are lined up and cut straight.

   Scrape the surface of the pipe or the spigot ends to remove the oxidized PE layer.

2. Scrape the length equal to the depth of the electrofusion fitting + 0.4" (1 cm)

3. Clean the external surface of the pipe or spigot ends and the internal surface of the fitting with isopropanol and a soft wiping cotton cloth without any printing.

   Wait until the clean parts are completely dry and mark the insertion depth on both segments of pipe.

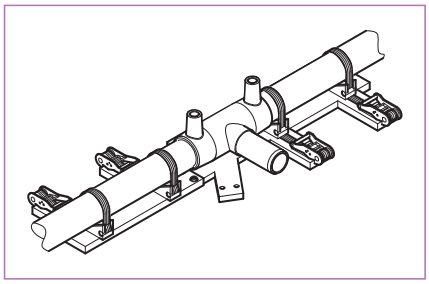


4. Insert the pipe or spigot ends into the electrofusion sockets until they reach a complete stop.

   Check the achievement of the marked insertion depth.

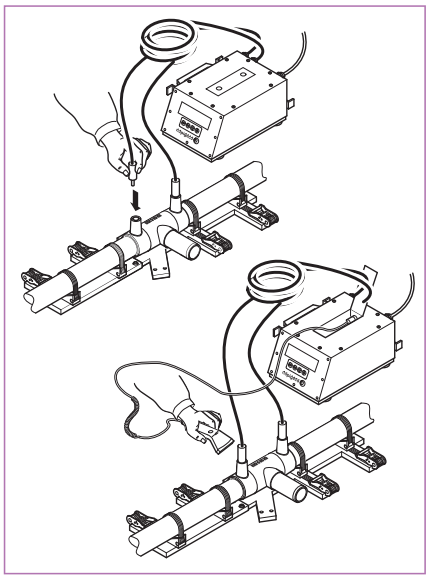
5. Avoid any stress in the welding area during the welding operations and the cooling time.

   NUPI RECOMMENDS THE USE OF ALIGNERS

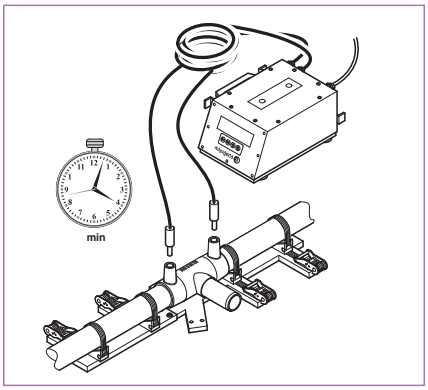


6. Connect the welding cables of the electrofusion machine to the fitting connectors, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).

ALWAYS DOUBLE CHECK THE WELDING PARAMETERS



7. At the end of the welding process, wait for the cooling time (see Table 1) indicated on the barcode.



8. When the cooling time is over, remove the aligners and start the pressure test of the system (see Chapter 5 and Table 2 or refer to your Company procedures).

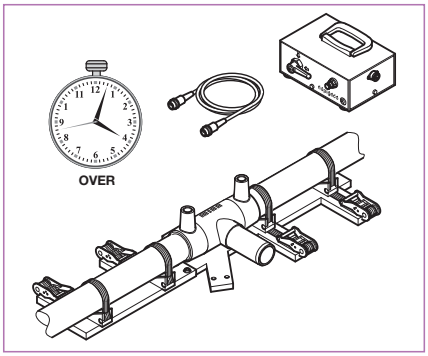


Table 1

COOLING TIME		
ø		MINUTES
inch.	mm	
½" to 1 ½"	20 ÷ 50	10
2" to 2 ½"	63 ÷ 75	15
3" to 6"	90 ÷ 200	20

Table 2

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
½" to 1 ½"	20 ÷ 50	20+cooling time	60+cooling time
2" to 2 ½"	63 ÷ 75	30+cooling time	90+cooling time
3" to 6"	90 ÷ 200	40+cooling time	120+cooling time

10. TAPPING TEES

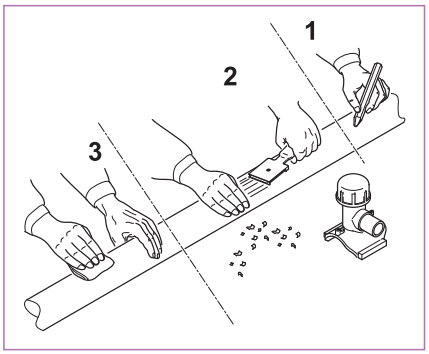
1. Mark the welding area on the main pipe with a wax crayon or marker.

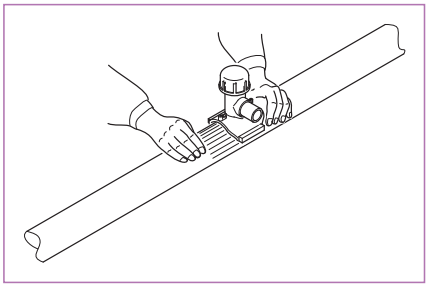
2. Scrape carefully the surface of the pipe and the spigot of the outlet with a hand scraper to remove the oxidized PE layer.

3. Clean the external surface of the pipe, the spigot of the outlet and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing.

Wait until the clean parts are completely dry; mark the insertion depth on the spigot of the outlet.

4. Apply the tapping tee on to the pipe watching out not to contaminate the previously cleaned surfaces.

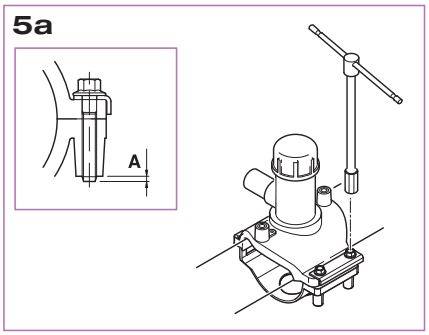


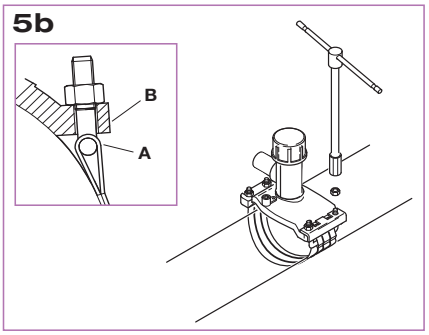


5. Fasten the tapping tee on the pipe using the integrated underclamp.
Depending on models, there are two types of underclamp:

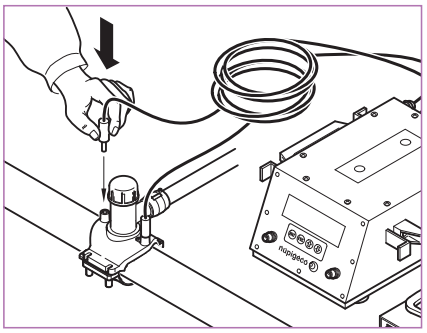
a. QUICK-COUPLING RIGID UNDERCLAMP: hook the square holes of the underclamp to the teeth on the upper part; line up the metal spacer and use a wrench to tighten the two screws until they are in position **A** in the lower part (feel the screws sticking out of the bottom).

b. FLEXIBLE BELT: use a wrench to tighten the four screw nuts until the u-bolt **A** and the top part of tapping tee **B** come into contact.





6. Connect the service line at the spigot of the outlet, following the installation instructions for that specific fitting.

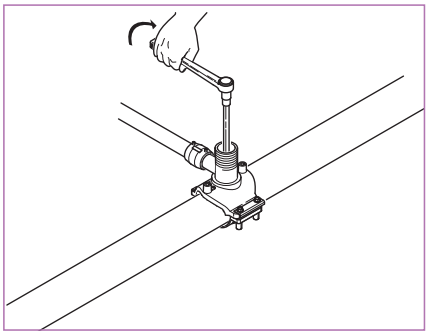


7. Connect the two cables to the welding connectors of the tapping tee, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).
After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 5).

8. At the end of the cooling time, start the pressure test (see Chapter 5 and Table 6 or refer to your Company procedures).

9. When the pressure test is over, remove the top cap and start the perforation of the pipe using the cutter installed in the tapping tee; The CUTTER is designed to keep the coupon inside. Use an appropriate tool (*) to screw down manually the cutter (turn clockwise) until the pipe has been drilled through, then move back the cutter to the upper position (turn counter clockwise).

(*) A T-KEY WITH A HEXAGONAL MALE END OR A HEXAGONAL BAR WITH A RATCHET WRENCH.



KEEP THE BODY CLEAR OF THE FITTING DURING THIS OPERATION. DO NOT USE AUTOMATIC DRILLS. DO NOT REMOVE THE UPPER STOPPER.

10. After the perforation is complete, replace the top cap and tighten down to the stopper (use the proper tool). The underclamp may be removed or left on permanently.

Table 5

COOLING TIME		
ø		MINUTES
inch.	mm	
1 ¼" to 12"	40 ÷ 315	20

Table 6

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi 6 BAR	P < 348 psi 24 BAR
1 ¼" to 2"	40 ÷ 63	20+cooling time	30+cooling time
2 ½" to 12"	75 ÷ 315	20+cooling time	60+cooling time

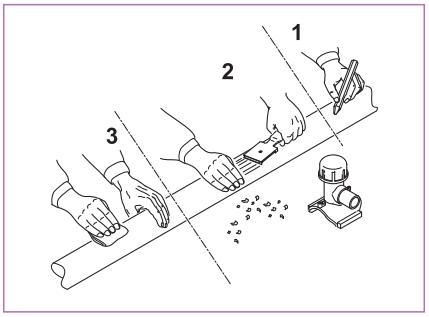
11. ZERO LEAKAGE TAPPING TEES

1. Mark the welding area on the main pipe with a wax crayon or marker.

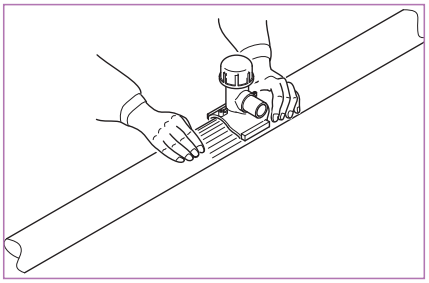
2. Scrape carefully the surface of the pipe and the spigot of the outlet with a hand scraper to remove the oxidized PE layer.

3. Clean the external surface of the pipe, the spigot of the outlet and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing.

Wait until the clean parts are completely dry; mark the insertion depth on the spigot of the outlet.

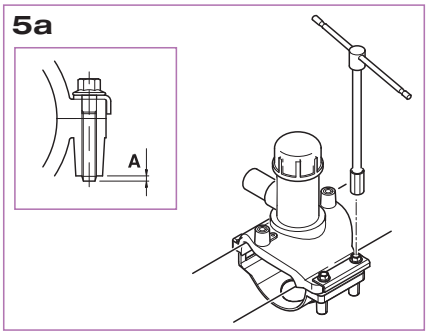


4. Apply the tapping tee on to the pipe watching out not to contaminate the previously cleaned surfaces.

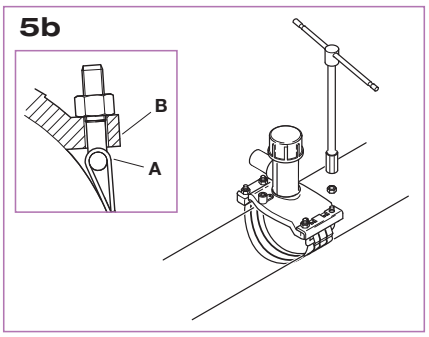


5. Fasten the tapping tee on the pipe using the integrated underclamp. Depending on models, there are two types of underclamp:

a. QUICK-COUPLING RIGID UNDERCLAMP: hook the square holes of the underclamp to the teeth on the upper part; line up the metal spacer and use a wrench to tighten the two screws until they are in position **A** in the lower part (feel the screws sticking out the bottom).



a. FLEXIBLE BELT: use a wrench to tighten the four screw nuts until the U-bolt **A** and the top part of tapping tee **B** come into tight contact.

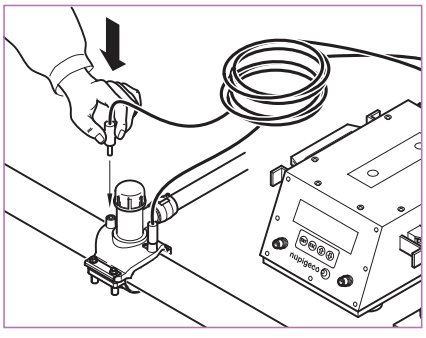


6. Connect the service line with the spigot of the outlet, following the installation instructions for that specific fitting.

7. Connect the two cables of the electrofusion machine to the connectors of the tapping tee, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 7).

8. At the end of the cooling time, start the pressure test of the service line (see Chapter 5 and Table 8 or refer to your Company procedures).

9. When the pressure test is over, remove the top cap and start the perforation of the pipe using the cutter installed in the tapping tee; the cutter is designed to keep the coupon inside.

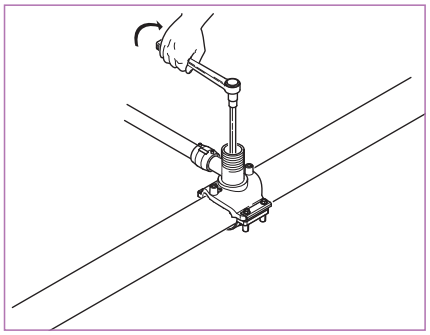


10. PERFORATION PROCEDURE:

- Before starting the perforation, remove the label on the upper part of the collar; for a correct perforation, you have to make the number of turns reported on the label.
- Once the label is removed, insert the drilling tool completely: mark the level on the tool at the top of the collar; from this point, mark the tool (*) upon the vertical at the distance reported on the label.

(*) A T-KEY WITH A HEXAGONAL MALE END; OR A HEXAGONAL BAR (WITH RATCHET WRENCH).

- Turn clockwise the drilling tool for the number of turns from label: when the second mark of the tool is reached, the perforation is completed.

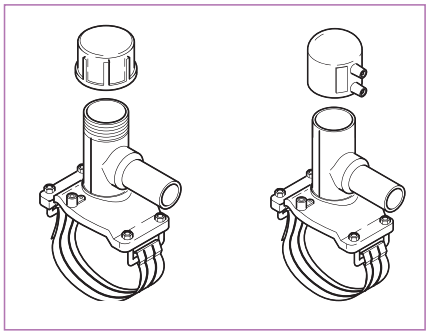


11. Turn counterclockwise the drilling tool to back the cutter to the upper position.

KEEP THE BODY CLEAR OF THE FITTING DURING THIS OPERATION. DO NOT USE AUTOMATIC DRILLS. DO NOT REMOVE THE UPPER STOPPER.

There are two versions:

- VERSION WITH THREADED CAP: Replace the top cap and tighten down to the stop (use the proper tool).
- VERSION WITH ELECTROFUSION CAP: weld an electrofusion end cap on the top of the collar (included in the packaging).



12. The underclamp may be removed or left permanently.

VERSION	MAXIMUM OPERATING PRESSURE
W/ THREADED CAP	72.5 psi / 5 bar
W/ ELECTROFUSION CAP	145 psi / 10 bar*
**Only on PE80/PE100 (PE4710/PE3408) SDR11 pipes*	

Fusion Range	1¼" - 12" / Ø 40 ÷ 315 mm SDR11 - SDR17.6
Working temperature	(14 - 113)°F / (-10 ÷ +45)°C
Max pipe ovalization according to:	EN1555-2 / EN12201-2 ASTM D2513

Table 7

COOLING TIME		
ø main / service		MINUTES
inch.	mm	
1 ¼" x ½" - 12" x 1 ¼"	40/20 ÷ 315/40	20
3" x 2" - 12" x 2"	90/63 ÷ 315/63	30

Table 8

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi 6 BAR	P < 348 psi 24 BAR
1 ¼" to 2"	40 ÷ 63	cooling+20	cooling+30
2 ½" to 12"	75 ÷ 315	cooling+20	cooling+60

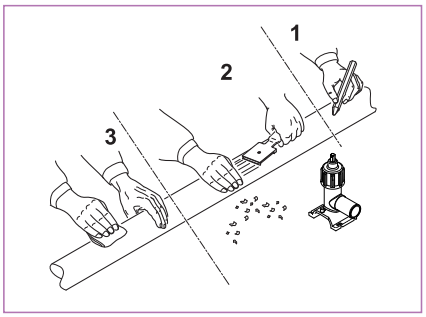
12. TAPPING VALVES

1. Mark the welding area on the main pipe with a wax crayon or marker.

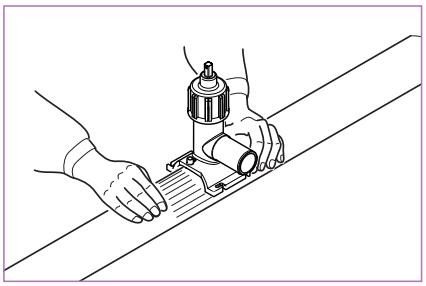
2. Scrape carefully the surface of the pipe and the spigot of the outlet with a hand scraper to remove the oxidized PE layer.

3. Clean the external surface of the pipe, the spigot of the outlet and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing.

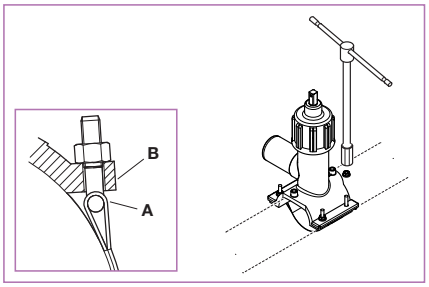
Wait until the clean parts are completely dry; mark the insertion depth on the spigot of the outlet.



4. Apply the tapping tee on to the pipe watching out not to contaminate the previously cleaned surfaces.

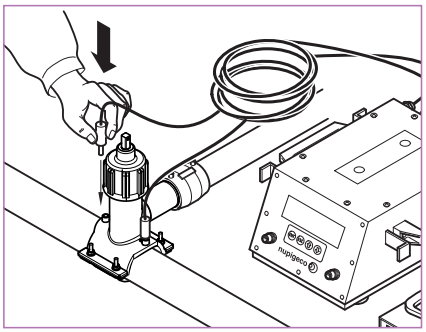


5. Fasten the tapping tee on the pipe using the integrated flexible belt: use a wrench to tighten the four screw nuts until the U-bolt **A** and the top part of tapping tee **B** come into tight contact.



6. Connect the service line with the spigot of the outlet, following the installation instructions for that specific fitting.

7. Connect the two cables of the electrofusion machine to the connectors of the tapping valve, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 5).



8. At the end of the cooling time, start the pressure test of the service line (see Chapter 5 and Table 6 or refer to your Company procedures).

9. When the pressure test is over, start the perforation of the pipe using the cutter already installed in the tapping valve; the cutter is designed to keep the coupon inside. Use the appropriate tool (*) to screw down manually the cutter (turn clockwise) to the lower stopper **(DOWN POSITION)**, then move back (turn counterclockwise) the cutter up to the upper stopper **(UP POSITION)**.

(*) T KEY OR RATCHET WRENCH WITH FEMALE SQUARE END, □14.7mm TYPE E – DIN 3223.

KEEP THE BODY CLEAR OF THE FITTING DURING THIS OPERATION.

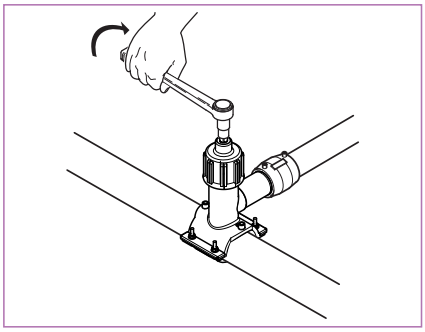
DO NOT USE AUTOMATIC DRILLS FOR PERFORATION OR ACTUATION OF THE VALVE.

DO NOT REMOVE THE THREADED CAP.

DO NOT EXCEED 150 NM TORQUE ON THE STOPPERS IN UP AND DOWN POSITION.

10. The flexible belt may be removed or left permanently.

11. Install the operating shaft (female square end, □114.7mm Type E – DIN 3223) for remote valve actuation.



12. EPREV is ready to be used as a valve for the service line during normal duty:

- DOWN POSITION: service line CLOSED (TURN CLOCKWISE).
- UP POSITION: service line OPEN (TURN COUNTERCLOCKWISE).

Table 5

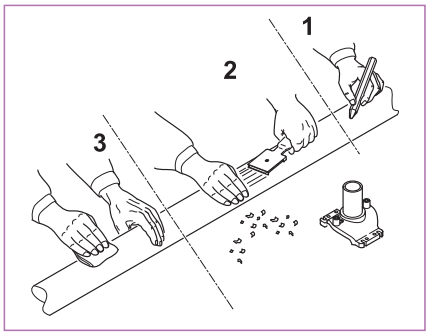
COOLING TIME		
ø		MINUTES
inch.	mm	
1 ¼" to 12"	40 ÷ 315	20

Table 6

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
1 ¼" to 2"	40 ÷ 63	20+cooling time	30+cooling time
2 ½" to 12"	75 ÷ 315	20+cooling time	60+cooling time

13. BRANCH SADDLES

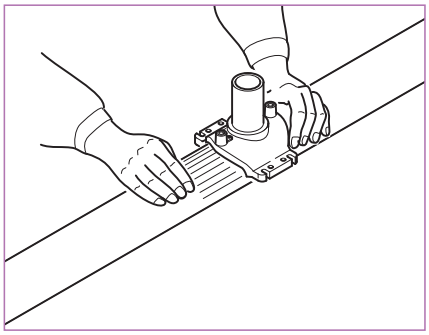
FOR INSTALLATION OF TOP LOAD BRANCH SADDLES ON PRESSURE PIPE, REFER TO CHAPTER 20 "DRILLING MACHINE FOR USE ON BRANCH SADDLES"



1. Mark the welding area on the main pipe with a wax crayon or marker.

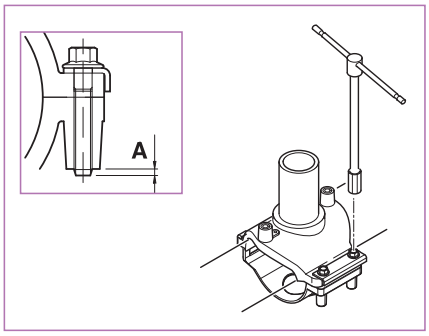
2. Scrape carefully the surface of the pipe and the spigot of the outlet with a hand scraper to remove the oxidized PE layer.

3. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.



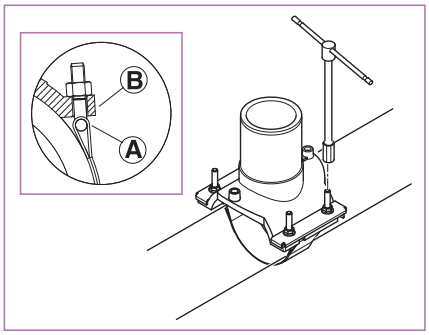
4. Apply the branch saddle on to the pipe watching out not to contaminate the previously cleaned surfaces.

5. Fasten the branch saddle on the pipe using the integrated underclamp. Depending on models, there are two types of underclamp:



a. QUICK-COUPLING RIGID UNDERCLAMP: hook the square holes of the underclamp to the teeth of the upper part; line up the metal spacer and use a wrench to tighten the two screws until they are in position A in the lower part (feel the screws sticking out the bottom).

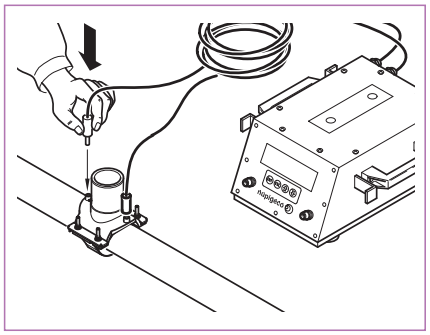
b. FLEXIBLE BELT: use a wrench to tighten the four screw nuts until the U-bolt A and the top part of tapping tee B come into tight contact.



6. Connect the two cables of the electrofusion machine to the connectors of the branch saddle, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 13).

NEVER PERFORATE THE PIPE BEFORE COMPLETING THE WELDING PROCESS

7. At the end of the cooling time, start the pressure test (see Chapter 5 and Table 14 or refer to your Company procedures).



8. When the pressure test is over, start the perforation of the pipe.

9. The underclamp may be removed or left permanently.

10. Connect the service line to the spigot of the outlet, following the installation instructions for that specific fitting.

VERIFY THAT THE DIAMETER OF THE CUTTER IS COMPATIBLE WITH THE INSIDE DIAMETER OF THE SPIGOT.

AVOID ANY DAMAGE TO THE SPIGOT DURING THE PERFORATION

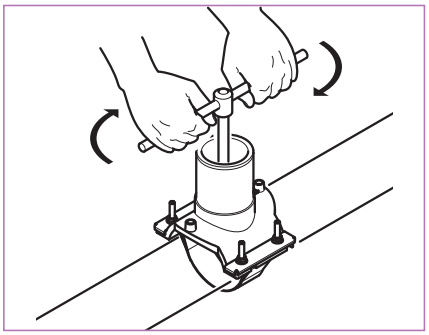


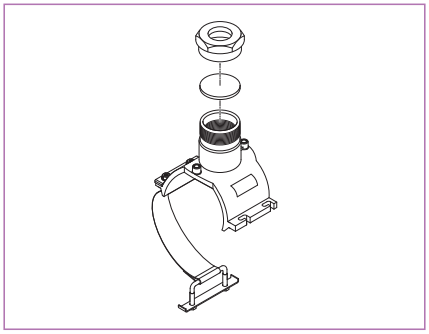
Table 13

COOLING TIME		
ø		MINUTES
inch.	mm	
1 ¼" - 12"	40 ÷ 315	20

Table 14

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
1 ¼" to 2"	40 ÷ 63	cooling+20	cooling+30
2 ½" to 12"	75 ÷ 315	cooling+20	cooling+60

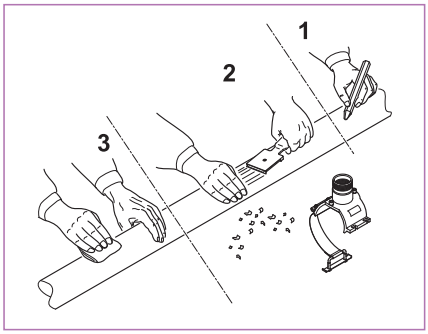
14. BAGGING SADDLES



1. Mark the welding area on the main pipe with a wax crayon or marker.

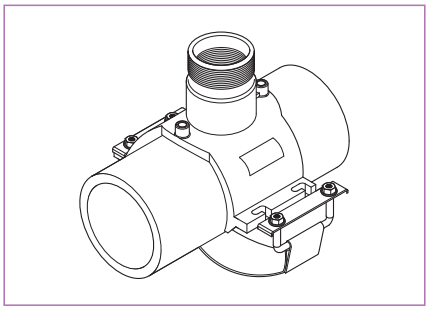
2. Scrape carefully the surface of the pipe with a hand scraper to remove the oxidized PE layer.

3. Remove the internal and external protection caps from the fitting just before the installation.



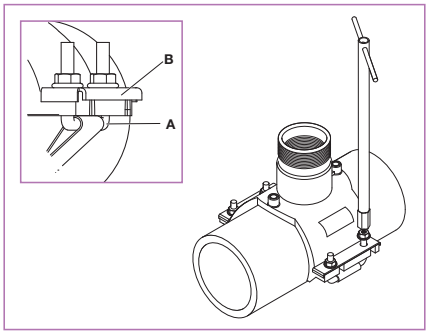
4. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.

5. Apply the bagging saddle on to the pipe watching out not to contaminate the previously cleaned surfaces.

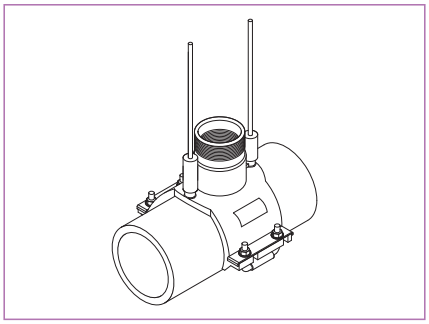


6. Fasten the bagging saddle on the pipe using the integrated Flexible belt: use a wrench to tighten the four screw nuts until the U-bolt A and the top part of tapping tee B come into tight contact.

7. Connect the two cables of the electrofusion machine to the connectors of the bagging saddle, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).
After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 13 in the previous pages).



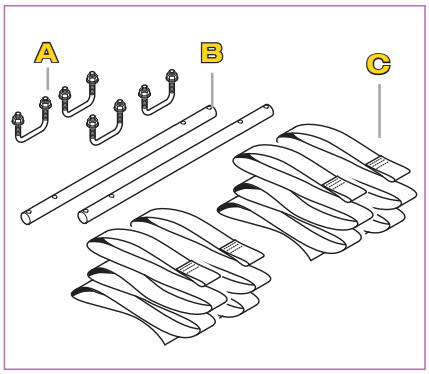
8. At the end of the cooling time, start the pressure test (see Chapter 5 and Table 14 in the previous pages or refer to your Company procedures).



9. When the pressure test is over, it is possible to connect the balloon kit and proceed with the pipe shut-off; refer to the instructions of the balloon manufacturer.

15. HIGH VOLUME BRANCH SADDLES FOR INSTALLATION WITH BELTS

FOR THE INSTALLATION OF TOP LOAD BRANCH SADDLES ON PRESSURE PIPE, REFER TO CHAPTER 20 "DRILLING MACHINE FOR USE ON BRANCH SADDLES"

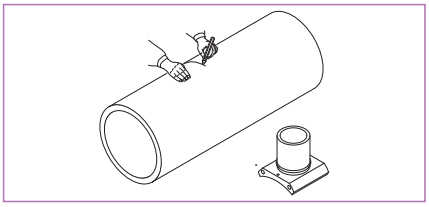


High Volume Branch Saddles ø ≥ 8"x6" (200/160) mm are supplied with the necessary equipment for a complete installation.

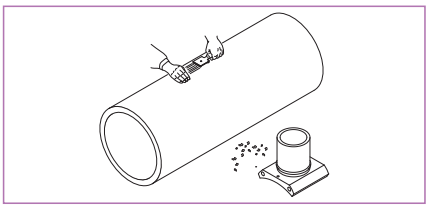
THE KIT INCLUDES:

- **A.** nr. 4 threaded fork pivots with nuts
- **B.** nr. 2 metal bars
- **C.** A pair of adjustable belts

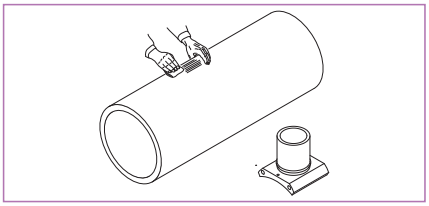
1. Mark the welding area on the main pipe with a wax crayon or marker.



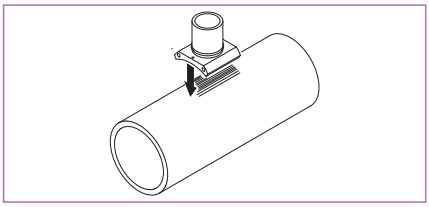
2. Scrape carefully the surface of the pipe with a hand scraper to remove the oxidized PE layer.



3. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.

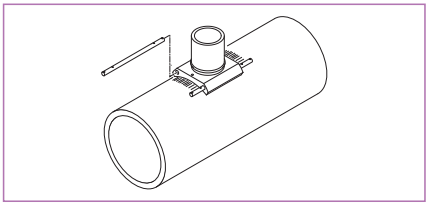


4. Immediately after scraping and cleaning the areas to be welded, install the branch onto the pipe. Be careful not to contaminate the previously cleaned surfaces.



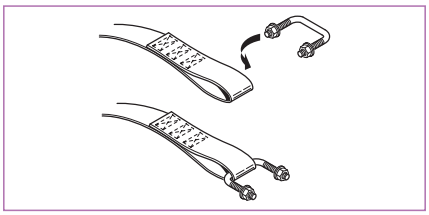
5. Insert the two metal bars supplied in the package in to the side holes.

6. Insert the four fork pivots into the four slots at the belt ends.

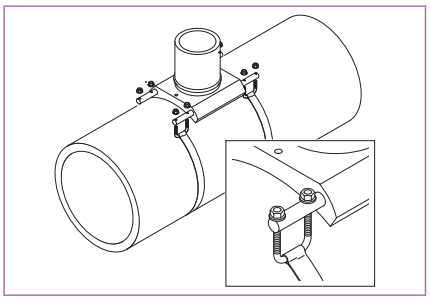


7. Insert a pair of fork pivots into the two parallel ends of the metal bars. Join the four nuts and keep them at the end of the threads (do not tighten them). Repeat this operation using the second pair of fork pivots.

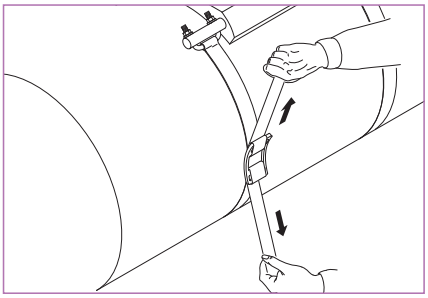
8. Pull the free belts outwards (across the pipe axis) until the band perfectly fits to the pipe.



9. Tighten the nuts completely using a wrench until the metal bar (B) and the belt (C) are touching. Check that the belts are properly tight. Important: tighten the nuts of the first bar (1) and then those of the second bar (2). The saddles must fit the pipe.

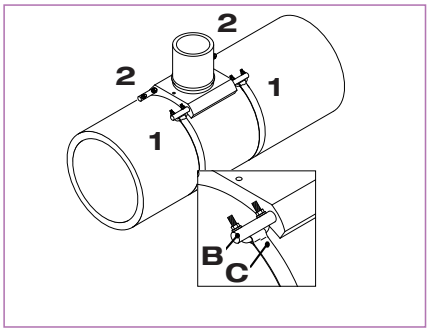


10. Connect the two cables of the electrofusion machine to the connectors of the branch saddle, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 15).



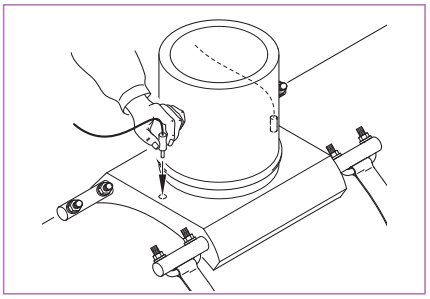
11. Start the pressure test (see Chapter 5 and Table 16 or refer to your Company procedures).

12. When the pressure test is over, start the perforation of the pipe with Elofit Drilling Machine (check cod. 00FP in Nupi Americas Equipment List) or other equivalent.



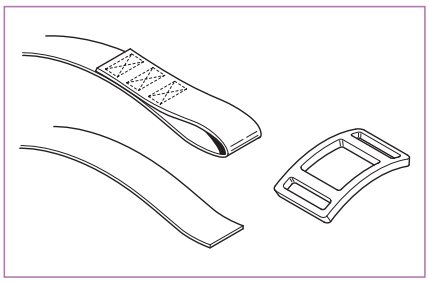
VERIFY THAT THE DIAMETER OF THE CUTTER IS COMPATIBLE WITH THE INSIDE DIAMETER OF THE SPIGOT. AVOID ANY DAMAGE OF THE SPIGOT DURING THE PERFORATION.

13. Connect the service line to the spigot of the outlet, following the installation instructions for that specific fitting.



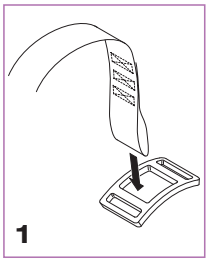
NEVER PERFORATE THE PIPE BEFORE COMPLETING THE WELDING PROCESS

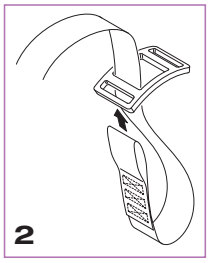
ASSEMBLY OF THE FIXING BELT



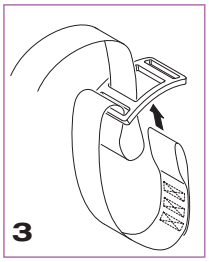
1. One end of the belt is smooth whereas the other end has triple stitching forming a ring. The metal buckle has a slight bend, a big central hole and two smaller lateral holes.

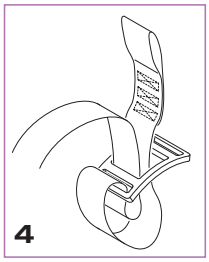
2. Insert the part of the belt with the ring inside the central hole from top to bottom **(1)** and then from bottom to top by inserting it in the smaller lateral hole **(2)** and then again from bottom to top inside the big central hole **(3).**





3. Repeat the operation with the second band and then again with the second pair of belts.





4. Check if the two belts have been inserted correctly by pulling the ends with the rings towards the outside. If the operation has been carried out properly, the bands will not slip and the two smooth ends will be free to move to allow their length to be adjusted.

5. If the belts have not been inserted correctly inside the buckle, during the assembly the belts will not be tight enough to complete the welding process correctly.

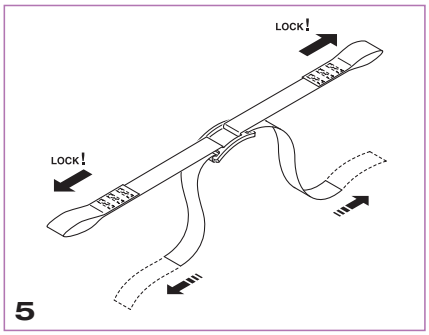


Table 15

COOLING TIME		
ø		MINUTES
inch.	mm	
8” to 32”	200 ÷ 1000	40

Table 16

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
8” to 16”	200 ÷ 400	cooling+30	cooling+90
18” to 32”	450 ÷ 800	cooling+60	cooling+120

16. POSITIONING TOOL FOR 'TOP LOAD' BRANCH SADDLES, TAPPING TEES AND TAPPING VALVES

TECHNICAL CHARACTERISTICS:

Material: steel and aluminium
Dimensions: 1.57x1.18x0.96 inch
Weight: 15 lb

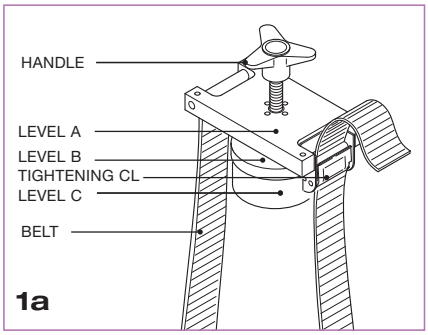
RANGE OF APPLICATION:

12EICOLTL142402 - branch saddles 2"IPS for mains from 14"IPS to 24"IPS
12EIPRESTL142402 - tapping tees with outlet 2"IPS for mains from 14"IPS to 24"IPS

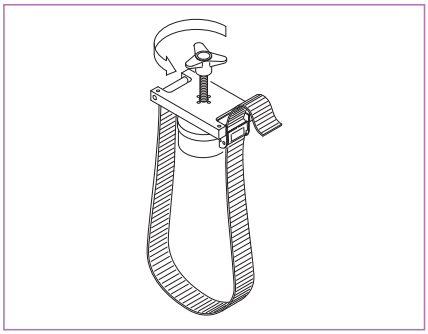
NOTE: Top load branching saddles can be welded on pipes with ovalization max 1%.

COMPONENTS

See fig.1a

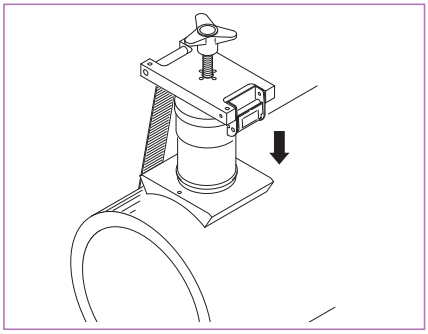


1a



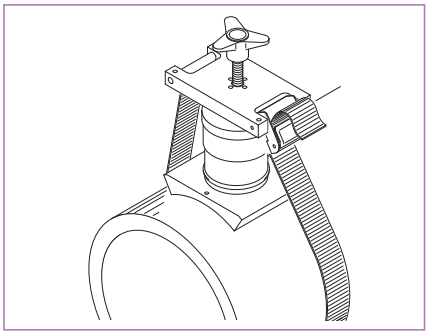
INSTALLATION

1. Prepare the tool for use by turning counterclockwise the handle until level **(A)** will reach level **(B).**

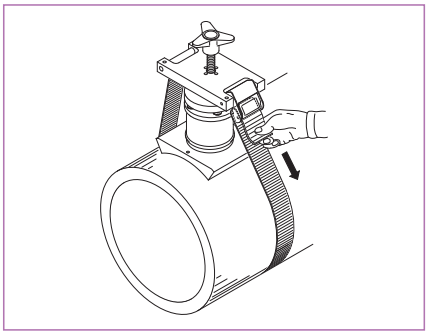


2. Insert the positioning tool into the "top load" saddle and place them on the pipe, after completing scraping and cleaning operations (check installation instructions of the fitting).

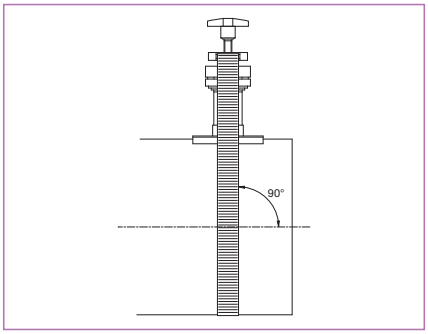
3. Pass the belt under the pipe and insert it into the tightening clamp from the bottom to the top, as showed on the figure. Care not to move the fitting in order not to compromise the cleaning operation.



4. Insert the belt up in the buttonhole and then pull down to tighten the 'top load' saddle on the pipe.

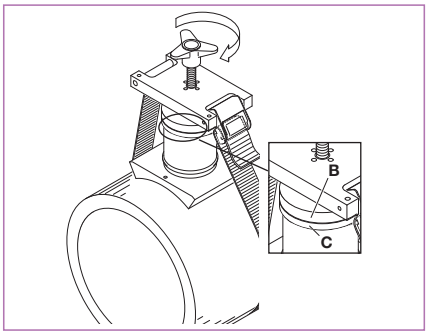


5. Make sure that the belt is perpendicular to the pipe axis.



6. Turn the handle clockwise until level **(B)** and level **(C)** touch each other.

ATTENTION CHECK THAT THE GAP BETWEEN THE SADDLE AND THE PIPE IS LOWER THAN 0.039" (1mm) ONLY IN THIS CASE PROCEED WITH THE WELDING ON THE PIPE. WAIT FOR THE COOLING TIME INDICATED ON THE BARCODE ON THE FITTING.



7. Remove the positioner by turning the handle counterclockwise and extract the belt from the tightening clamp.

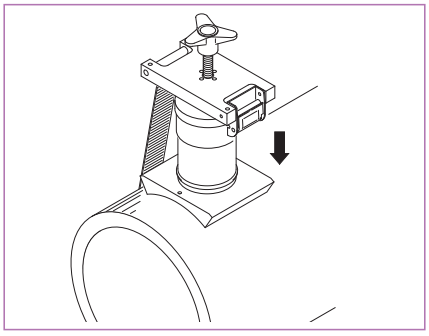
17. 'TOP LOAD' BRANCH SADDLES

(CODE 12EICOLTL142402)

FOR INSTALLATION OF TOP LOAD BRANCH SADDLES ON PRESSURE PIPE, REFER TO CHAPTER 20 "DRILLING MACHINE FOR USE ON BRANCH SADDLES"

Top Load Branch Saddles ø14"-24"x2" (ø355÷630/63 mm) require Elofit Positioning Tool for the installation (page 158).

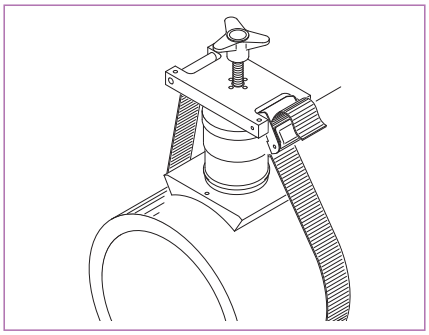
1. Mark the welding area on the main pipe with a wax crayon or marker.



2. Scrape carefully the surface of the pipe to remove the oxidized PE layer.

3. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.

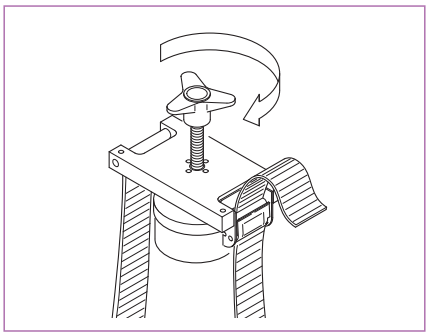
4. Apply the branch saddle on to the pipe watching out not to contaminate the previously cleaned surfaces.



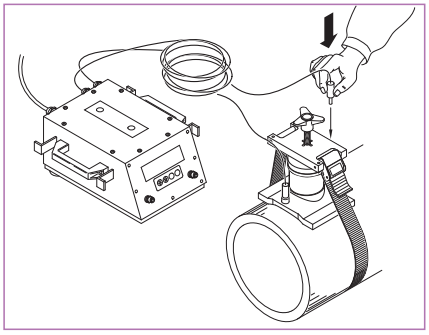
5. Fasten the branch saddle on the pipe using the positioning tool for Top Load branch saddles (refer to Chapter 16).

USE ONLY THE POSITIONING TOOL SUPPLIED BY NUPI AMERICAS.

CHECK IF THE GAP BETWEEN THE SADDLE AND THE PIPE IS SMALLER THAN 0,039" (1 mm) : ONLY IN THIS CASE PROCEED WITH THE WELDING ON THE PIPE, OTHERWISE CONTACT YOUR SALES REPRESENTATIVE OR THE MANUFACTURER FOR FULL SUPPORT.



6. Connect the two cables of the electrofusion machine to the connectors of the branch saddle, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).



7. After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 17).

8. After the cooling time, it is possible to remove the positioning tool.

9. Start the pressure test (see Chapter 5 and Table 18 or refer to your Company procedures).

10. When the pressure test is over, start the perforation of the pipe with Elofit Drilling Machine (check cod. 00FP in Nupi Americas Equipment List) or other equivalent.

VERIFY THAT THE DIAMETER OF THE CUTTER IS COMPATIBLE WITH THE INSIDE DIAMETER OF THE SPIGOT.

AVOID ANY DAMAGE OF THE SPIGOT DURING THE PERFORATION.

11. Connect the service line to the spigot of the outlet, following the installation instructions for that specific fitting.

Table 17

COOLING TIME		
ø		MINUTES
inch.	mm	
14” to 24”	355 ÷ 630	40

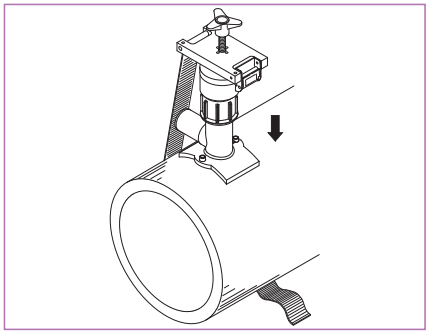
Table 18

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
14” to 24” x 22”	355 ÷ 630/63	cooling+30	cooling+90

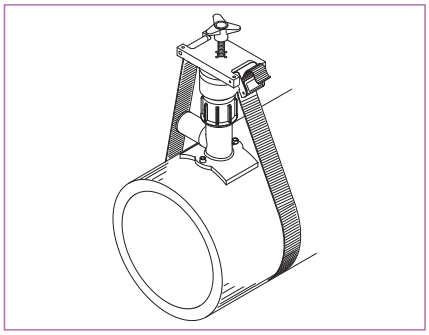
18. 'TOP LOAD' TAPPING TEES

(CODE 12EIPRESTL142402)

Top Load Tapping Tees ø14"-24"x2" (ø355÷630/63 mm) require Elofit Positioning Tool (00POS01) for the installation (page 158).



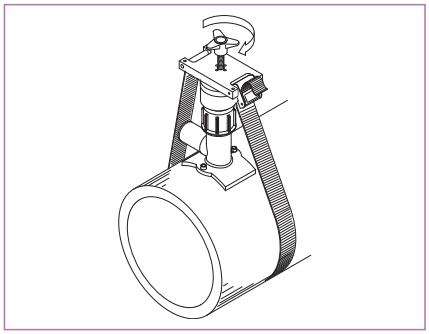
1. Mark the welding area on the main pipe with a wax crayon or marker.
2. Scrape carefully the surface of the pipe to remove the oxidized PE layer.
3. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.



4. Apply the tapping tee on to the pipe watching out not to contaminate the previously cleaned surface.

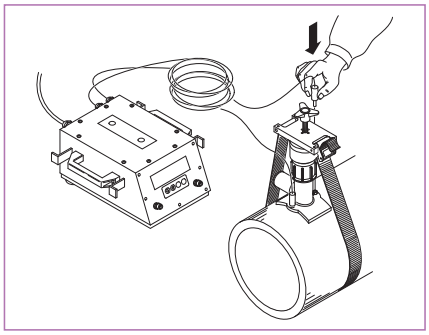
MAKE SURE THAT THE CAP IS COMPLETELY TIGHTENED.

5. Fasten the tapping tee on the pipe using the positioning tool for Top Load branch saddles (refer to Chapter 16).

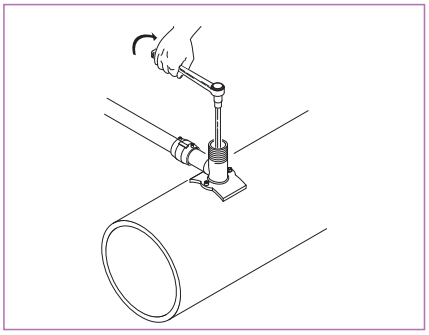


USE ONLY THE POSITIONING TOOL SUPPLIED BY NUPI AMERICAS.

CHECK IF THE GAP BETWEEN THE SADDLE AND THE PIPE IS SMALLER THAN 0,039" (1 mm) : ONLY IN THIS CASE PROCEED WITH THE WELDING ON THE PIPE, OTHERWISE CONTACT YOUR SALES REPRESENTATIVE OR THE MANUFACTURER FOR FULL SUPPORT.



6. Connect the two cables of the electrofusion machine to the connectors of the tapping tee, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 9). After the cooling time, remove the positioning tool.



7. Connect the service line with the spigot of the outlet, following the installation instructions for that specific fitting.

8. Start the pressure test (see Chapter 5 and Table 10 or refer to your Company procedures).

9. When the pressure test is over, remove the top cap and start the perforation of the pipe using the cutter installed in the tapping tee; the cutter is designed to keep the coupon inside. Use an appropriate tool to screw down manually the cutter (turn clockwise) until the pipe has been drilled through, then move back the cutter to the upper position (turn counterclockwise).

10. After the perforation is complete, replace the top cap and tighten down to the stopper (use the proper tool).

12EIPRESTL142402 must be installed on pipes with the following SDR:

ND Pipe IPS	Max wall thickness (SDR)
14”	11
16”	11
18”	17
20”	17
22”	21
24”	21

Do not install 12EIPRESTL142402 on pipes with thickness greater than 1,55”.

Top Load Tapping Valves ø14”-24”x2” (ø355÷630/63 mm) require Elofit Positioning Tool (00POS01) for the installation (page 158).

Table 9

COOLING TIME		
ø		MINUTES
inch.	mm	
14” to 24”	355 ÷ 630	40

Table 10

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
14” - 24” x 2”	355 ÷ 630 / 63	cooling+30	cooling+90

19. 'TOP LOAD' TAPPING VALVES

(CODE 12EIPREVTL142402)

1. Mark the welding area on the main pipe with a wax crayon or marker.
2. Scrape carefully the surface of the pipe and the spigot of the outlet to remove the oxidized PE layer.
3. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.
4. Apply the tapping valve on to the pipe watching out not to contaminate the previously cleaned surfaces. Use the appropriate tool to check that the top cap is tightened.
5. Fasten the tapping valve on the pipe using the positioning tool for Top Load branch saddles (refer to Chapter 16).

USE ONLY THE POSITIONING TOOL SUPPLIED BY NUPI AMERICAS .

CHECK IF THE GAP BETWEEN THE SADDLE AND THE PIPE IS SMALLER THAN 0,039" (1 mm): ONLY IN THIS CASE PROCEED WITH THE WELDING ON THE PIPE, OTHERWISE CONTACT YOUR SALES REPRESENTATIVE OR THE MANUFACTURER FOR FULL SUPPORT.

6. Connect the two cables of the electrofusion machine to the connectors of the tapping valve, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2).
7. Connect the service line with the spigot of the outlet, following the installation instructions for that specific fitting.
8. After completing the welding process, verify that no material has leaked out of the joint between the pipe and the fitting and wait for the completion of the cooling time (see Table 11)
9. After the cooling time, remove the positioning tool.
10. Start the pressure test (see Chapter 5 and Table 12 or refer to your Company procedures).
11. When the pressure test is over, start the perforation of the pipe using the cutter already installed in the tapping valve; the cutter is designed to keep the coupon inside. Use the appropriate tool **(*)** to screw down manually the cutter (turn clockwise) to the lower stopper **(DOWN POSITION)**, then move back (turn counterclockwise) the cutter up to the upper stopper **(UP POSITION)**.

(*) T key or ratchet wrench with female square end, □14.7 mm Type E – DIN 3223.

KEEP CLEAR OF THE FITTING DURING THIS OPERATION.

DO NOT USE AUTOMATIC DRILLS FOR PERFORATION OR ACTUATION OF THE VALVE.

DO NOT REMOVE THE THREADED CAP.

DO NOT EXCEED 150 NM TORQUE ON THE STOPPERS IN UP AND DOWN POSITION.

12. Install the operating shaft (female square end, □14.7 mm Type E – DIN 3223) for remote valve actuation.

13. EPREV is ready to be used as a valve for the service line during normal duty:

- **DOWN POSITION: service line CLOSED (TURN CLOCKWISE)**
- **UP POSITION: service line OPEN (TURN COUNTERCLOCKWISE)**

PIPE RANGE OF INSTALLATION	
ø 14'-18' (355÷450 mm)	SDR 33, 26, 21, 17.6, 17
ø 20'-24' (500÷630 mm)	SDR 33, 26, 21

Table 11

COOLING TIME		
ø		MINUTES
inch.	mm	
14" to 24"	355 ÷ 630	40

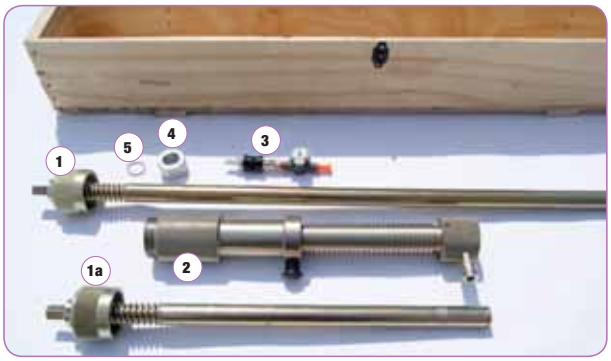
Table 12

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
14" - 24"	355 ÷ 630	cooling+30	cooling+90

20. DRILLING MACHINE FOR USE ON BRANCH SADDLES

DRILLING EQUIPMENT (code 00FP) FOR USE ON BRANCH SADDLES FUSED ON POLYETHYLENE PIPELINES FOR PRESSURE AND NON-PRESSURE USE Ø 3”÷40” (90÷1000 mm)

1. MOUNTING KIT



The package includes:

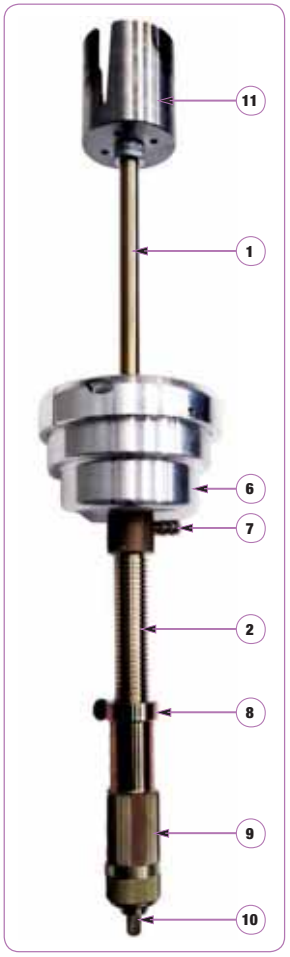
- ***1.*** Long shaft for drilling under pressure and non-pressured lines.
- ***1a.*** Short shaft for non-pressured drilling.
- ***2.*** Body with threaded shaft, vent valve and safety lock.
- ***3.*** Pressure gauge with valve for measuring and depressurizing.
- ***4.*** Ring nut for holding the cutter.
- ***5.*** Seeger ring.

The sets of adapters and cutters for each pipe size are available individually or in a complete kit with the drilling machine.

Adapter - Code 00FAxxx
Ø 2”÷6” (63 ÷ 160 mm)

Cutter - Code 00FFxxx
Ø 2”÷6” (63 ÷ 160 mm)

2. DRILLING MACHINE ASSEMBLY



- ***1.*** SHAFT
- ***2.*** BODY
- ***6.*** ADAPTER
- ***7.*** VENT VALVE
- ***8.*** SAFETY LOCK
- ***9.*** LOAD CELL FOR AXIAL LOADING
- ***10.*** SQUARE END FOR CUTTER ROTATION
- ***11.*** CUTTER

3. DRILLING MACHINE SET-UP

The drilling machine must be assembled in an area clear of dirt, soil, sharp objects.

Keep particular care for cleanliness and integrity of the shaft and the threaded part of the body.

THE SHORT SHAFT IS ONLY TO BE USED FOR THE DRILLING OF NON-PRESSURIZED PIPELINES.

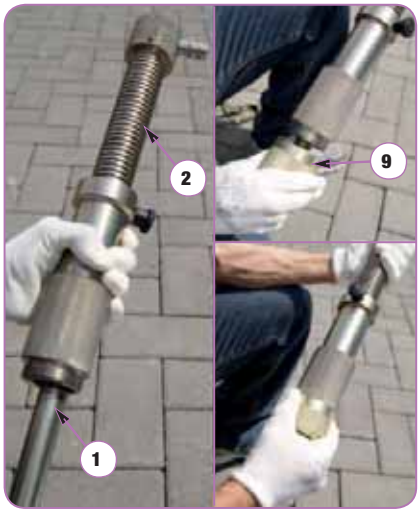
ASSEMBLY STEPS

1. Ensure that the seeger ring **(5)** is removed from the end of the shaft.

IN CASE OF DRILLING OF PRESSURIZED PIPE, FIT THE SAFETY KIT ON THE DRILLING MACHINE.

INSERT THE BODY OF THE DRILLING MACHINE (2) IN THE RING SUPPORT CONNECTED WITH THE CHAIN.

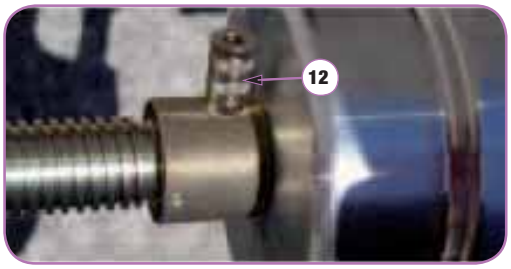
(Use only the SAFETY KIT supplied by Nupi Americas)



2. Insert the shaft **(1)** in the body of the drilling machine **(2)** and screw-in tightly the upper ring nut **(9)**.

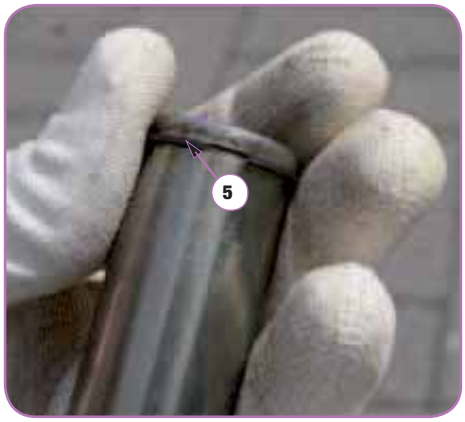
NOTE: If the shaft is already fitted into the body, skip directly to point 3.

3. Put the adapter **(6)** - code 00FAxxx - on the shaft and screw it in until it bottoms out **(12)**. Make sure the adapter is clean before use.

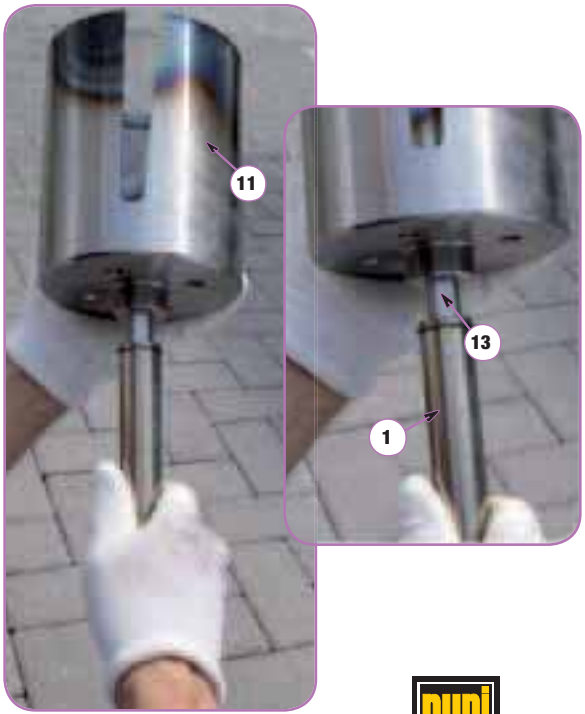


4. Slide the ring nut for holding the cutter **(4)** on the shaft.

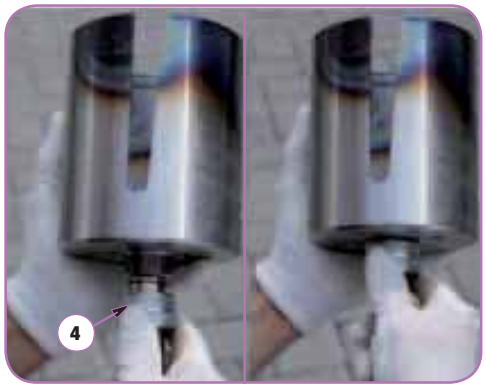
5. Set the seeger ring **(5)** in the groove on the end of the shaft.



6. Insert the hexagonal key **(13)** of the cutter **(11)** - code 00FFxx - into the corresponding seat in the end of the shaft **(1)**.



7. Screw the ring nut that holds **(4)** the cutter hand and tighten.
Do not use a wrench.



8. The drilling machine is now ready for use.

4. INSTALLATION OF THE SYSTEM FOR DRILLING

4.1 DRILLING UNDER PRESSURE

1. Install the appropriate branch saddle **(14)** - code ECOLxxx or ECOLTLxxx - on the main pipe. Follow the instructions of the product and wait for the completion of the cooling time before attaching the tool.

2. Weld a PE ball valve **(15)**, of the appropriate diameter, on the outlet of the branch saddle, with an electrofusion coupler.

We recommend that you install a branch saddle with the PE ball valve pre-installed, if available (as in the picture).

Before performing the welding, check that the distance from the end of the spigot **(16)** of the ball valve and the upper surface **(17)** of themain pipeline is:

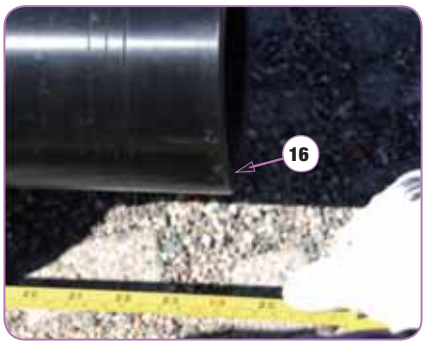
24”÷25” (610÷635 mm), for main pipeline ø > 6” (160 mm)

25”÷26” (640÷650 mm), for main pipeline ø ≤ 6” (160 mm)

NOTE: Adapt the system by shortening the spigots of the saddle and the valve, or by welding a piece of pipe of the needed length (with an electrofusion coupler) on the end of the spigot of the valve.

Follow the instructions of the product and wait for the completion of the cooling time.

3. Chamfer the end of the spigot/pipe **(16)**, in order not to damage the O-ring of the adapter.



4. Check that ball valve is in OPEN position **(15)**.

5. Insert the drilling machine into the outlet and place the adapter **(6)** on the end of the spigot/pipe **(16)**. Make sure the outlet is chamfered and any dirt is removed.

Mark the depth of insertion on the spigot/pipe to verify that the adapter is fully inserted.

Take care not to damage the inner surface of the valve with the cutter during insertion.

6. Install and tighten the clamping system of the adapter **(6)**. The jaws must be as close as possible and the positioning pins of the adapter must be inserted into the opposite seats of the jaws. Do not over tighten the jaws.

7. Fit the chain around the pipe, insert the 'U' bolt in the closest link of the chain and fix it to the free end of the ring support connected to the drilling machine.

Make sure that the bolts are tightened.

4.2 DRILLING OF NON PRESSURIZED PIPE

1. Install the appropriate branch saddle - code ECOLxxx or ECOLTLxxx - on the main pipe: follow the instructions of the product; wait for the completion of the cooling time before attaching the tool.

2. Weld a piece of pipe on the spigot of the branching saddle, by an electrofusion coupler, so that the distance from the top of the branch pipe and the upper surface of the main pipeline is:

24”÷25” (610÷635 mm), for main pipeline ø > 6” (160 mm)
25”÷26” (640÷650 mm), for main pipeline ø ≤ 6” (160 mm)

Follow the instructions of the product and wait for the completion of the cooling time.

NOTE: When using the drilling machine with the short shaft: insert the drilling machine and fit the adapter directly on the spigot of the branching saddle. Chamfer and clean the top side of the spigot and mark the depth of insertion on it making sure that you have inserted the adapter until it reaches a complete stop.

Install and tighten the clamping system of the adapter. The jaws must be as close as possible and the positioning pins of the adapter must be inserted into the opposite seats of the jaws. Do not over tighten the jaws.

3. Chamfer the end of the spigot/pipe, in order not to damage the O-ring of the adapter.

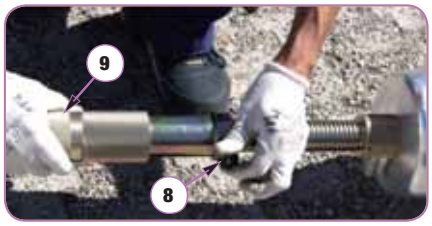
4. Insert the drilling machine and attach the adapter to the end of the pipe, chamfered and clear of dirty. Mark the depth of insertion on the pipe to verify that the adapter is fully inserted.

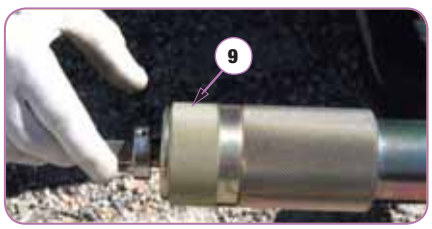
Take care not to damage the inner surface of the valve with the cutter during insertion.

Install and tighten the clamp system of the adapter: the jaws must be as close as possible and the positioning pins of the adapter must be inserted into the opposite seats of the jaws.

5. DRILLING

1. Remove the safety lock of the upper limit by pulling the plunge **(8)** and at the same time turning clockwise the load cell **(9)** for axial loading.





2. Drive-down the cutter by turning clockwise (screw) the load cell **(9)** with one hand, until the torque rises (the cutter comes in contact with the pipe) and there is a gap between the load cell and the bush for cutter rotation.

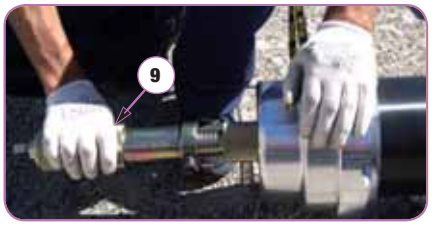
3. With the other hand, insert the ratchet wrench on the hexagonal key **(18)** of the bush and turn clockwise (screw), until the torque decreases and the gap is closed.

NOTE: Do not turn the cutter counter-clockwise (unscrew) with the ratchet wrench.

4. Repeat point 2 and then point 3: the mutual action of descent of the cutter (screw the load cell) and rotation of the cutter by the ratchet wrench, allows the operator to regulate the suitable stress for cutting with the lowest amount of time and energy.

5. Repeat points 2 and 3 until the pipe is completely perforate (the torque decreases and there is no longer any axial load).

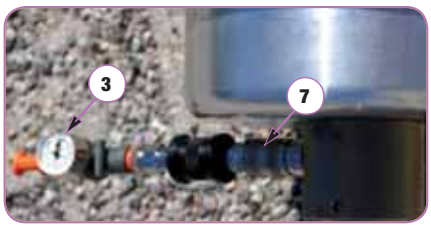
NOTE: For main pipeline ø > 6" (160 mm) it is recommended to complete the operation to the lower stopper (lock screw of the load cell



6. Back the cutter into the up position by turning counterclockwise (unscrew) the load cell **(9)**, to the upper stopper **(8)** (you will hear the 'click' of the plunger of the safety lock).

If excessive effort is required for unscrewing the load cell in the lower position, rotate the cutter clockwise by the ratchet wrench.

Do not completely back out the cutter counterclockwise (unscrew) with the ratchet wrench.



7. Insert the pressure gauge **(3)** in the vent valve **(7)** and check thepressure in the chamber.

IF YOU ARE DRILLING NON PRESSURIZED PIPE, SKIP DIRECTLY TO POINT 10.

8. Unscrew the upper load cell of the body **(19)** and back out the shaft **(1)** to the upper limit.

Keep clear of the back end of the drilling machine.

9. CLOSE the ball valve and discharge the pressure in the chamber through the purge valve **(20)**.

10. Remove the clamping system of the adapter **(6)** and extract the drilling machine. The cutter will hold inside the cut piece of pipe and the shavings **(21)**.

11. Complete the installation of the branch in accordance with normal company procedures.

6. STORAGE OF THE DRILLING MACHINE

1. Re-insert the shaft and screw-in tightly the upper load cell.
2. Check that the safety lock of the upper limit is inserted (otherwise, turn the load cell until you hear the 'click' of the plunger).
3. Clean the shaft and the threaded body from dirt and soil, then lubricate.
4. Remove the coupon of the pipe and all the shavings from the cutter.

NOTE: Store the drilling machine in an area clear from dirt, soil, sharp objects; take particular care for cleanness and integrity of the shaft and the threaded part of the body.

21. SAFETY FITTINGS (EXCESS FLOW VALVES)

BEFORE THE INSTALLATION

Check which type of ESF is suitable for the operating performances planned for the pipeline: read the Code and the Pressure Range on the label applied on the fitting, then refer to ESF Technical Catalogue.

Use the table below for quick reference.

ESF SERIES	PRESSURE RANGE	DIAMETER	NOMINAL FLOW (at min pressure)
RED	35 mbar ÷ 5 bar	32 mm (ND25)	17 m^3/h GAS (d=0.6; 15°C;1013 mbar)
		40 mm (ND32)	26 m^3/h GAS (d=0.6; 15°C;1013 mbar)
		50 mm (ND40)	40 m^3/h GAS (d=0.6; 15°C;1013 mbar)
		63 mm (ND50)	68.5 m^3/h GAS (d=0.6; 15°C;1013 mbar)
WHITE	100 mbar ÷ 5 bar	32 mm (ND25)	27.5 m^3/h GAS (d=0.6; 15°C;1013 mbar)
		40 mm (ND32)	39.5 m^3/h GAS (d=0.6; 15°C;1013 mbar)
		50 mm (ND40)	58 m^3/h GAS (d=0.6; 15°C;1013 mbar)
		63 mm (ND50)	93.5 m^3/h GAS (d=0.6; 15°C;1013 mbar)
YELLOW	1 bar ÷ 5 bar	20 mm (ND15)	25 m^3/h GAS (d=0.6; 0°C;1013 mbar)
		32 mm (ND25)	100 m^3/h GAS (d=0.6; 0°C;1013 mbar)

1. INSTALLATION

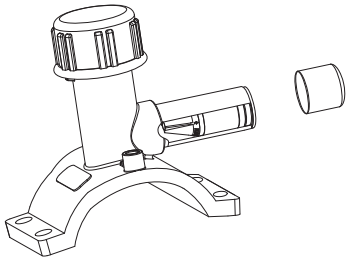
ESF is provided already inserted into the proper fitting

RED SERIES	WHITE SERIES	YELLOW SERIES
EPRESR	EPRESB	EPRESG
ESFAR	ESFAB	ESFAG
EMEY	EMEYB	EMEYG

VERIFY THAT THE ARROW ON THE LABEL/FITTING MATCHES THE DIRECTION OF GAS FLOW

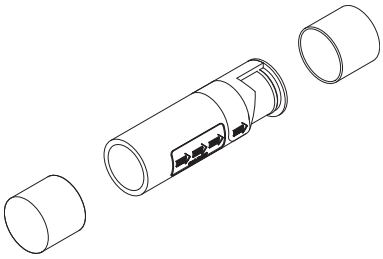
EPRESR - EPRESB - EPRESG

ESF is inserted into the outlet of the Tapping-tee



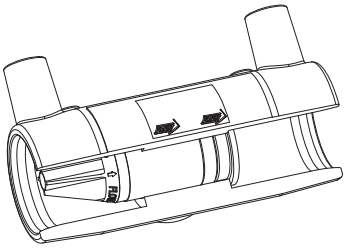
ESFAR - ESFAB - ESFAG

ESF is fitted into the pipe adapter



EMEY - EMEYB - EMEYG

ESF is inserted into the electrofusion coupler



INSTRUCTIONS FOR THE INSTALLATION OF EPRESR - EPRESB – EPRESG

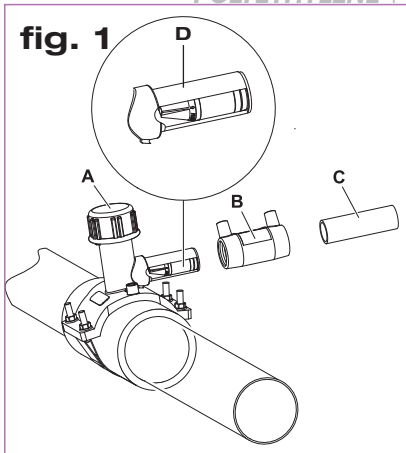
1. Install the Tapping-tee [A] on the main pipeline (follow product instructions).
2. Connect the service line to the outlet of the Tapping-tee [A] (Fig.1)

CHECK FLOW DIRECTION ON THE LABEL

- Scrape and clean with PE solvent the edge of the pipe [C] and the outlet of the tapping tee [D] (take care not to damage ESF).
- Insert them into EME electrofusion coupler [B] and proceed with welding (follow product instructions).

3. Wait for the cooling time indicated on the labels then proceed to STARTING OPERATION (Point 2).

fig. 1



[A] Tapping-tee saddle
[B] Electrofusion coupler
[C] PE service line
[D] Tapping-tee outlet

INSTRUCTION FOR THE INSTALLATION OF ESFAR - ESFAB – ESFAG

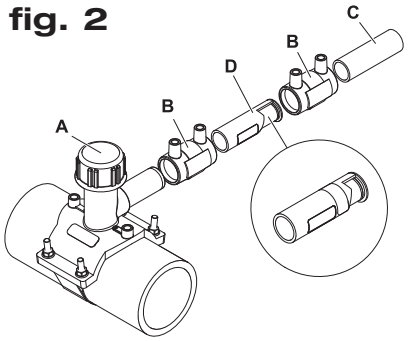
1. Connect the pipe adapter [D] to the service line (Fig.2)

CHECK FLOW DIRECTION ON THE LABEL

- Scrape and clean both the ends of the Pipe Adapter [D] (take care not to damage ESF).
- Insert them into EME electrofusion couplers [B] and proceed with welding (follow product instructions).

2. Wait for the cooling time indicated on the label then proceed to STARTING OPERATION (Point 2).

fig. 2



[A] Tapping-tee saddle
[B] Electrofusion couplers
[C] PE service line
[D] Pipe Adapter with ESF inside

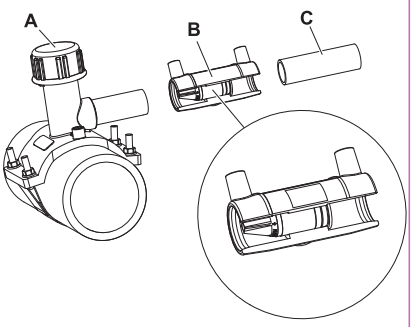
INSTRUCTION FOR THE INSTALLATION OF EMEY - EMEYB – EMEYG

1. Connect the Electrofusion Coupler [B] to the service line (Fig.3) (follow product instructions).
- Scrape and clean with PE solvent the edge of the pipe [C] and the outlet of the tapping tee [A] (take care not to damage ESF).
- Insert them into the Electrofusion Coupler [B] and proceed with welding (follow product instructions).

CHECK THE ARROW ON THE SIDE FOR FLOW DIRECTION

2. Wait for the cooling time indicated on the label then proceed to STARTING OPERATION (Point 2).

fig. 3



[A] Tapping-tee saddle
[B] Electrofusion Coupler with ESF assembled
[C] PE service line

2. STARTING OPERATION

1. Pressurize the line: open the valve downstream as slow as possible (at max 30%).
2. Wait for the complete pressurization of the line and then open the valve at 100%.

3. ESF TEST

Gradually open the service valve downstream until ESF shuts-off and cuts the flow.

*** TO BE DONE BOTH AFTER ESF TEST AND ESF SHUT-OFF FOLLOWING PIPE DAMAGE ***

1. After repairing the damaged pipeline, close the valve downstream ESF.
   ESF WITH AUTO-REARMING: ESF automatically re-opens after a short time.
   ESF WITHOUT AUTO-REARMING: Re-equilibrate the pressure manually: inlet inert gas downstream ESF.
2. Follow the instructions at Point 2. 'STARTING OPERATION'.

22. BUTT FUSION REPAIR PATCH

ELOFIT INCHES BUTT FUSION REPAIR SLEEVE (EIBFRS) is a safety/ repair system to be used when, in service, butt-welding cannot be guaranteed.

BFRS can be installed on pressurized pipe made out of PE4710, PE3408 and PE2708/ PE2406.

The maximum network pressure allowed to weld the BFRS on the pipe depends of the polyethylene grade and SDR of pipe.

POLYETHYLENE GRADE	PRESSURE*
PE4710 (PE 100-SDR11)	124 psi - 10 bar
PE3408 (PE 80-SDR11)	60 psi - 5 bar
PE2708/2406 (PE80-SDR13.5)	60 psi - 5 bar
PE2708/2406 (PE80-SDR15.5)	14.5 psi - 1 bar
PE80 SDR11 (ALDYL)	60 psi - 5 bar
* maximum pressure operating during the welding	

TOOLS (not included):

METAL CLAMPS

JUMPER CABLES
(nr.1 long cable + nr.2 short cables)

FOLLOW THESE POINTS CAREFULLY

1. Measure half length of the repair sleeve and mark the distance on each side of the pipe, starting from the bead; extend the marks all across the circumference of the pipe and identify the welding area with a marker **(1A, 1B, 1C)**.

DO NOT REMOVE THE BEAD.

2. Scrape the part of the pipe where the repair sleeve will be welded and clean it with with isopropanol and a soft wiping cotton cloth with no printing; wait until the clean parts are completely dry **(2A, 2B)**.

- Scrape 0.4” beyond the marked line.
- Scrape as close as possible to the bead.
- Take care not to damage the bead.

1A

1B

1C

2A

2B

3. Mark on each side of the pipe a distance from the bead equal to half the length of the sleeve, so that the bead is in the middle of the sleeve.

4. Clean the inner part of the two half shells of the fitting with isopropanol and a soft wiping cotton cloth with no printing; wait until the clean parts are completely dry.

5. Install the two half shells on the pipe so that the bead is centered in the groove in the middle of the sleeve.

FOR SOME ELECTROFUSION PROCESSORS THE TOP HALF OF THE SHELL MAY NEED TO BE ROTATED AT AN ANGLE TO MAKE CONNECTING THE PINS EASIER

6. Put the metal clamps onto the plane parts of the lateral wings of the half shells. Tighten the bolts until the 1.614" (40 mm) spacers "A" can no longer rotate. Use a wrench with hexagonal head screw 19mm (metric).

BEFORE TIGHTENING, CHECK THAT THE PINS BELOW THE SIDE FLAT AREAS PROPERLY FIT INTO THEIR GROOVES.

7 PERFORM WELDING

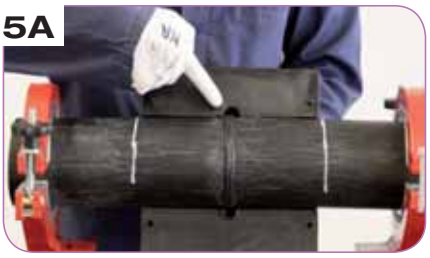
6"IPS EIBFRS can be alternatively "ONE SHOT" welded: please refer to instructions on page 178.

- **BEFORE BEGINNING THE WELDING SEQUENCE, ALWAYS CHECK THE RELIABILITY OF THE POWER SUPPLY SYSTEM, TO MAKE SURE THERE ARE NO INTERRUPTIONS DUE TO LACK OF POWER.**
- **THE FITTINGS REQUIRE 4.0MM CONNECTORS.**
- **DO NOT WELD IF WATER OR LEAKING GAS IS PRESENT.**
- **KEEP AT A SAFE DISTANCE DURING WELDING.**
- **PERFORM WELDING ONLY IN AUTOMATIC MODE THROUGH BARCODE SCAN: DO NOT PERFORM WELDING IN MANUAL MODE.**
- **ALWAYS CHECK THE WELDING PARAMETERS ON THE DISPLAY.**

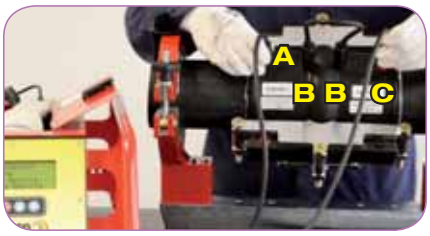
Needed:

short jumper cables (x1)

long jumper cables (x1)



7.1 FUSION OF THE CENTRAL PARTS



7.1.1 UPPER CENTRAL PART

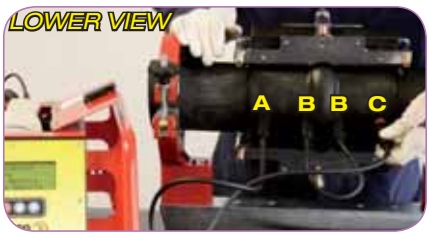
Connect the short jumper cable to the connector pins marked **"B"**; connect the two cables of the electrofusion machine to the connector pins marked **"A"** and **"C"**.

Scan the barcode marked **"EIBFRSC"** with the scanner to proceed with welding the upper central part of the repair sleeve on the pipe.

When the welding cycle is positively concluded, disconnect all the cables from the repair sleeve and proceed immediately to the following step.

- **AT THE END OF EACH WELDING CYCLE, MARK THE ACTUAL TIME (HOURS AND MINUTES) ON THE MODULES.**
- **DO NOT REMOVE METAL CLAMPS.**
- **PROCEED IMMEDIATELY TO THE FOLLOWING STEP (DO NOT WAIT FOR COOLING TIME).**

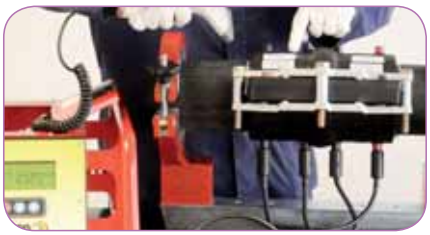
7.1.2 LOWER CENTRAL PART



Connect the short jumper cable to the connector pins marked **"B"**; connect the two cables of the electrofusion machine to the connector pins marked **"A"** and **"C"**.

Scan again the barcode marked **"EIBFRSC"** with the scanner to proceed with welding the lower central part of the repair sleeve on the pipe.

When the welding cycle is positively concluded, disconnect all the cables from the repair sleeve and proceed immediately to the following step.



- **AT THE END OF EACH WELDING CYCLE, MARK THE ACTUAL TIME (HOURS AND MINUTES) ON THE MODULES.**
- **DO NOT REMOVE METAL CLAMPS.**
- **PROCEED IMMEDIATELY TO THE FOLLOWING STEP (DO NOT WAIT FOR COOLING TIME).**

7.2 FUSION OF THE LATERAL WINGS

7.2.1 Connect the long jumper cable to the connector pins marked **"2"** on both lateral wings (upper and lower side).

7.2.2 Connect the two cables of the electrofusion machine to the connector pins marked **"1"** on both lateral wings (upper and lower side.

7.2.3 Scan the barcode marked **"EIBFRSL"** with the scanner and proceed with welding the lateral wings of the repair sleeve.

7.2.4 When the welding cycle is positively concluded, wait for the completion of the cooling time indicated on the BARCODE (not less than 30 min), then remove the metal clamps.

- **AT THE END OF EACH WELDING CYCLE, MARK THE ACTUAL TIME (HOURS AND MINUTES) ON THE MODULE.**
- **DO NOT STRESS OR BURY THE PIPELINE BEFORE THE COMPLETION OF THE COOLING TIME INDICATED ON THE BARCODE.**
- **DO NOT REMOVE METAL CLAMPS BEFORE THE COMPLETION OF THE COOLING TIME.**
- **IN CASE OF WELDING INTERRUPTION OF ONE OF THE CENTRAL PARTS DUE TO LACK OF POWER, WAIT FOR THE FITTING TO COOL DOWN FOR NOT LESS THAN 1 HOUR, THEN RE-START FROM THE BEGINNING THE WELDING CYCLE OF THE PART AND CONTINUE WITH WELDING THE OTHER PARTS FOLLOWING THE INSTRUCTIONS.**
- **IN CASE OF WELDING INTERRUPTION OF THE LATERAL WINGS DUE TO LACK OF POWER, WAIT FOR 10 MINUTES THAN RE-START THE WELDING CYCLE. IF IT IS IMPOSSIBLE TO RESTART THE WELDING CYCLE AFTER 10 MINUTES, PLEASE CONTACT THE SUPPLIER FOR WELDING SUPPORT.**

7.2.1

7.2.1

7.2.2

7.2.2

7.2.3

‘ONE-SHOT’ WELDING 6” IPS VERSION ONLY

TOOLS (not included):

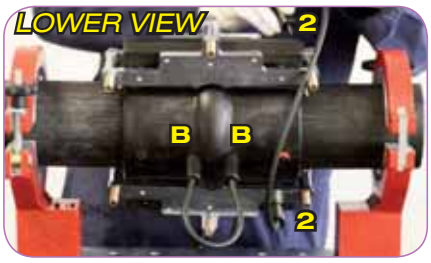
JUMPER CABLES
(nr.1 long cable + nr.2 short cables)

RED TRIPLE CABLE

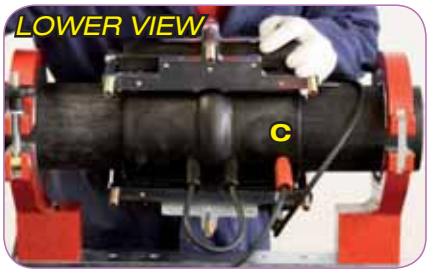
BLACK TRIPLE CABLE

- **BEFORE BEGINNING THE WELDING SEQUENCE, ALWAYS CHECK THE RELIABILITY OF THE POWER SUPPLY SYSTEM, TO MAKE SURE THERE ARE NO INTERRUPTIONS DUE TO LACK OF POWER.**
- **THE FITTINGS REQUIRE 4.0mm CONNECTORS.**
- **DO NOT WELD IF WATER OR LEAKING GAS IS PRESENT.**
- **KEEP AT A SAFE DISTANCE DURING WELDING.**
- **PERFORM “ONE-SHOT” WELDING ONLY IN AUTOMATIC MODE THROUGH BARCODE SCAN: DO NOT PERFORM ‘ONE-SHOT’ WELDING IN MANUAL MODE.**
- **ALWAYS CHECK THE WELDING PARAMETERS ON THE DISPLAY.**

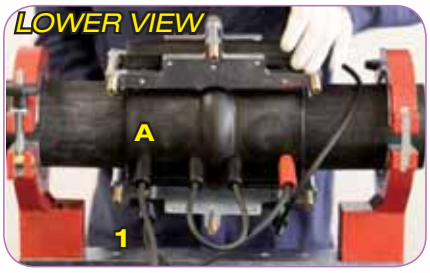
Needed:
short jumper cables (x2)
long jumper cables (x1)
red triple cable (x1)
black triple cable (x1)



1.1



1.2



1.3

1. CONNECT THE CABLES TO THE LOWER PART

1.1 Connect the short jumper cable to the black central pins marked **‘B’;** connect the long jumper cable to the black pins marked **‘2’** on the lateral wings (first pin: lower face; second pin: upper face).

1.2 Connect one connector of the red triple cable to the red pin marked **‘C’** on the lower central part.

1.3 Connect one connector of the black triple cable to the black pin marked **‘A’** on the lower central part; connect the second connector of the black triple cable to the black pin marked **‘1’** on the lower lateral wing.

2. CONNECT THE CABLES TO THE UPPER PART

2.1 Connect the short jumper cable to the black central pins marked ‘B’.

2.2 Connect the second connector of the red triple cable to the red pin marked ‘C’on the upper central part; connect the third connector of the red triple cable to the red pin marked ‘1’ on the upper lateral wing.

2.3 Connect the third connector of the black triple cable to the black pin marked ‘A’ on the upper central part.

Connect the 2 cables of the electrofusion machine to the connectors slots on both red and black triple cables.

BEFORE STARTING THE WELDING CYCLE, CHECK THAT THE CONNECTION OF THE MODULES CORRESPONDS WITH THE INSTRUCTIONS.

Perform welding: scan the special barcode below with the scanner and proceed with welding. After the welding cycle is positively completed, disconnect all the cables from the fitting.

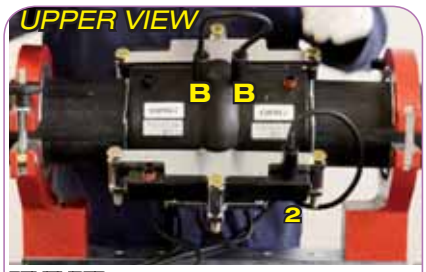
EIBFRS6" IPS - 44v - 265s - c.t. 60 min.

9507053686034406162655 29

Wait for the completion of the cooling time indicated on the barcode, then remove the metal clamps.

- **DO NOT REMOVE METAL CLAMPS BEFORE THE COMPLETION OF THE COOLING TIME.**
- **DO NOT STRESS OR BURY THE PIPELINE BEFORE THE COMPLETION OF THE COOLING TIME INDICATED ON THE BARCODE.**
- **IN CASE OF WELDING INTERRUPTION DUE TO LACK OF POWER, WAIT FOR THE FITTINGS TO COOL DOWN FOR NOT LESS THAN 1 HOUR, THEN RE-START THE WELDING CYCLE FROM THE BEGINNING.**

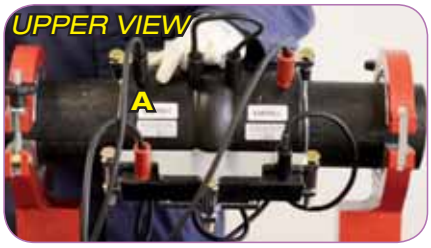
2.1



REMEMBER:
Pin 2 was connected on point 1.2 (Lower view)

2.2

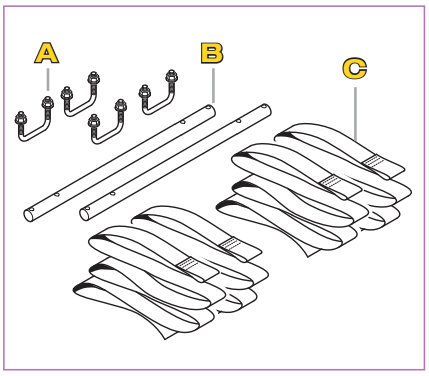
2.3



2.4

23. REPAIR SADDLES WITH BELTS

Repair saddles must only be used for localized damage on pipe surface; do not install in case of extended notches. Repair Saddles ø ≥ 12" (315 mm) are supplied with the necessary equipment for a complete installation.



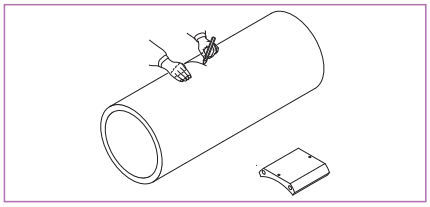
THE KIT INCLUDES:

A. nr. 4 threaded fork pivots with nuts

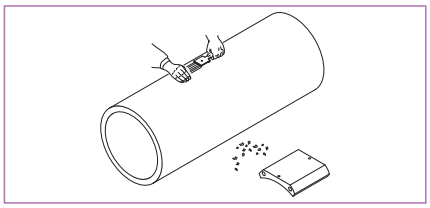
B. 2 metal bars

C. A pair of adjustable belts

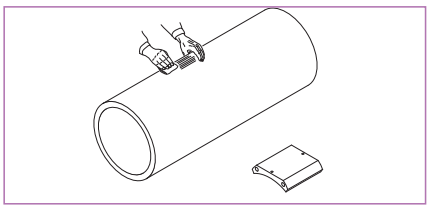
1. Mark the welding area on the main pipe with a wax crayon or marker, all around the damage to be repaired.



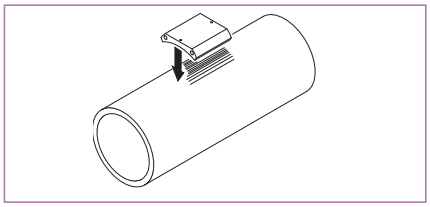
2. Scrape carefully the surface of the pipe with a hand scraper to remove the oxidized PE layer. Take care not to damage the pipe further.



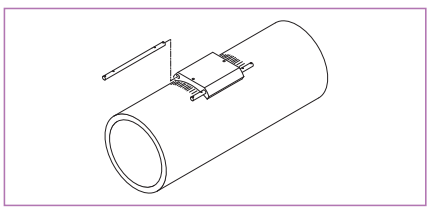
3. Clean the external surface of the pipe and the welding area of the saddle with isopropanol and a soft wiping cotton cloth without any printing. Wait until the clean parts are completely dry.



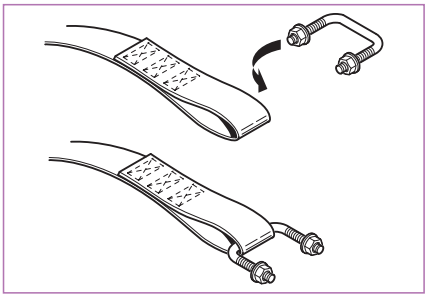
4. Immediately after scraping and cleaning the areas to be welded, install the saddle onto the pipe. Be careful not to contaminate the previously cleaned surfaces.



5. Insert the two metal bars supplied in the package in to the side holes.

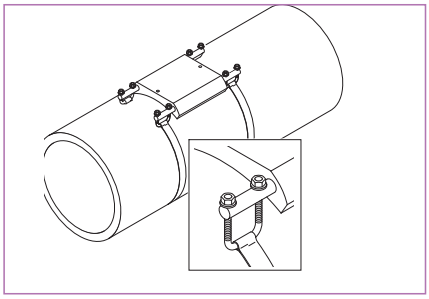


6. Insert each of the four fork pivots in to the respective belt ends.

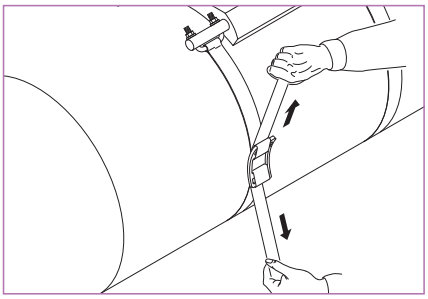


7. Insert one pair of fork pivots into the two parallel ends of the metal bars. Join the four nuts and keep them at the end of the bolt threads level (do not tighten them). Repeat this operation using the second pair of fork pivots.

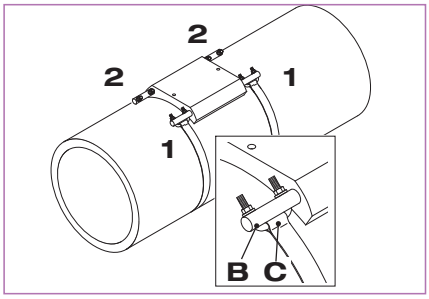
8. Pull both the free belts until the band perfectly fits to the pipe.



9. Tighten the bolts with a wrench until the metal bar (**B**) and the belt (**C**) are touching together. Check that the belts are firmly tightened. Important: tighten the nuts of the first bar (**1**) and then those of the second bar (**2**). The saddle must fit the pipe.



10. Connect the two cables of the electrofusion machine to the connectors of the saddle, scan the barcode with the barcode scanner or enter the welding parameters manually (refer to Chapter 2). After completing the welding process, verify that no material has leaked out of the fusion zone between the pipe and the fitting and wait for the completion of the cooling time indicated on the barcode (see Table 15).



REPAIR SADDLES ø ≥ 12” (ø ≥ 315 mm)

Table 15

COOLING TIME		
ø		MINUTES
inch.	mm	
8” to 32”	200 ÷ 1000	40

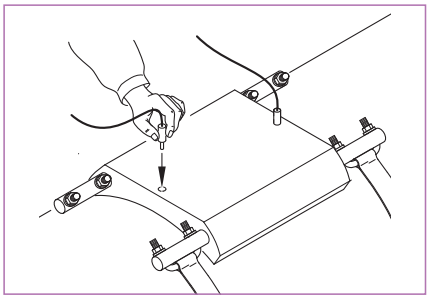
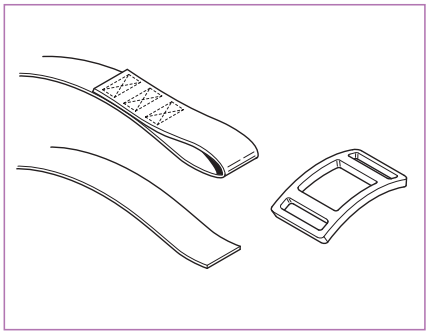


Table 16

WAITING TIME BEFORE PRESSURE TEST START			
ø		MINUTES	
inch.	mm	P < 87 psi	P < 348 psi
		6 BAR	24 BAR
8” to 16”	200 ÷ 400	cooling+30	cooling+90
18” to 32”	450 ÷ 800	cooling+60	cooling+120

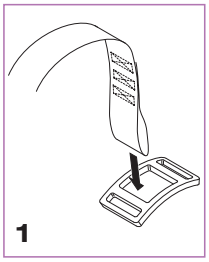
23.1 ASSEMBLY OF THE FIXING BELT

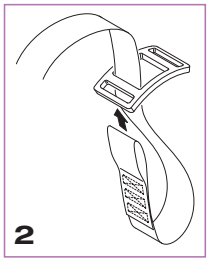


1. One end of the belt is smooth whereas the other end has a triple stitching forming a ring.

The metal buckle is slightly curved, has one large central and two smaller lateral square spaces.

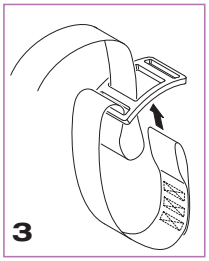
2. Insert one ring into the central space from top to bottom (**1**) and then from bottom to top by inserting it in the smaller lateral space (**2**) and then again from bottom to top inside the big central square space (**3**).

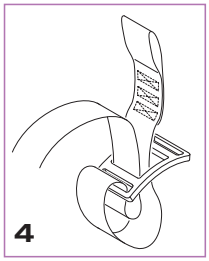




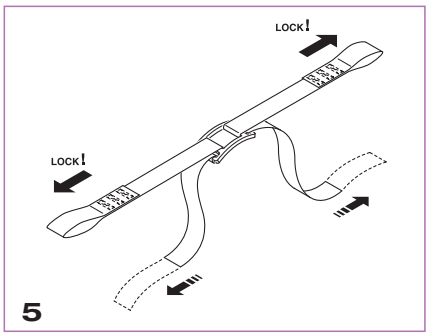
3. Repeat the operation with the second belt and then again with the second pair of belts.

4. Check if the two belts have been inserted correctly by pulling them apart with the rings towards the outside. If the operation has been carried out properly, the belts will not slip and the two smooth ends will be free to move to allow their length to be adjusted.





5. If the belts have not been inserted correctly inside the buckle, during the assembly the bels will not be tight enough to complete the welding process correctly.



24. ELOFIT 180° VARIABLE LENGTH REPAIR SLEEVE (EIVLRS)

The **VARIABLE LENGTH REPAIR SLEEVE** is a modular system of electrofusion shells that can be installed contiguously and welded on pipes that have notches, scrapes or damage along the axis.

The standard assembly has 2 modules (identified as **EIVLRS I** and **EIVLRS T):** between them it is possible to add the necessary number of additional middle modules (separately available, identified as **EIVLRS M)**.

The maximum network pressure allowed to weld the fitting on the pipe depends of the polyehylene grade and SDR of pipe.

POLYETHYLENE GRADE	PRESSURE*
PE4710 PE 100-SDR11	124 psi
PE3408 PE 80-SDR11	60 psi
PE2708/2406 PE80-SDR13.5	60 psi
PE2708/2406 PE80-SDR15.5	14.5 psi
PE80 (ALDYL)	60 psi
* maximum pressure operating during the welding	

1. Measure and mark the length of the damage of the pipe and calculate the appropriate number of sleeve modules to completely cover it.

2. Measure the total length of the sleeve modules and mark it on the pipe, near the damage. ***Minimum distance required for the fitting to extend beyond the damaged area: 2,36" (60mm).***

3. Scrape the part of the pipe where the variable length repair sleeve will be welded, over and all along the damage to be repaired.
Use a hand scraper: scrape the pipe at 180° across the damage. Scrape 0.4" beyond the marked line.

TAKE CARE NOT TO DAMAGE THE PIPE FURTHER.

4. Clean the scraped part of the pipe and the welding areas of the sleeve modules with isopropanol and a soft wiping cotton cloth with no printing; wait until the clean parts are completely dry.

5. Mark on the scraped pipe a distance equal to the whole length of the assembled sleeves, so that the damage is well centered and surrounded. Take care not to contaminate the previously cleaned surfaces.

6. Install each single module separately on the pipe, starting from one end of the scraped area: place the **EIVLRS I** module on the pipe and align it to the marked line.

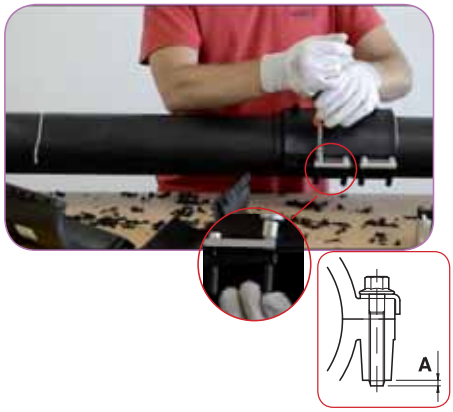
Place the first underclamp on the very end of the assembly: hook the square holes of the underclamp to the teeth on the side of the module; align the two screws to the corresponding holes, line up the metal spacer and use a wrench to tighten the two screws until they are in position **A** in the lower part (feel the screws sticking out of the bottom - see figure in the circles below).
Repeat the operation with the second underclamp in the consecutive position.

7. If the middle modules **EIVLRS M** aren't necessary, skip to Step 10, otherwise proceed to the following Step 8.

8. Place the middle module **EIVLRS M** on the scraped pipe, next to the one just installed: the lip at the end of the module must overlap the protruding edge of the next one (see figure in the circles below). Install the first underclamp across the two adjacent modules (follow the instructions on Step 6).

Then install the second underclamp in the consecutive position (follow the instructions on Step 6).

Then install the second underclamp in the consecutive position (follow the instructions on Step 6).



9. Repeat the instructions on Step 8 for all the necessary middle modules **EIVLRS M.**

IN CASE OF 4 OR MORE MODULES, PLEASE CONTACT THE SUPPLIER FOR WELDING ASSISTANCE.

10. Place the terminal module **EIVLRS T** on the scraped pipe, adjacent to the next just installed: the lip at the end of the module must overlap the protruding edge of the next one. Install the first underclamp across the two adjacent modules (follow the instructions on Step 6).

Then install the second and third underclamps in the consecutive positions (follow the instructions on Step 6).

The terminal module **EIVLRS T** must always be the final module installed.

- **BEFORE BEGINNING THE WELDING SEQUENCE, ALWAYS CHECK THE RELIABILITY OF THE POWER SUPPLY SYSTEM, TO MAKE SURE THERE ARE NO INTERRUPTIONS DUE TO LACK OF POWER.**
- **THE FITTINGS REQUIRE 4.0mm CONNECTORS.**
- **DO NOT WELD IN CASE OF GAS OR WATER LEAKAGE**
- **KEEP AT A SAFE DISTANCE DURING WELDING.**
- **PERFORM WELDING ONLY IN AUTOMATIC MODE THROUGH BARCODE SCAN: DO NOT PERFORM WELDING IN MANUAL MODE.**
- **ALWAYS CHECK THE WELDING PARAMETERS ON THE DISPLAY.**

TOOLS (not included):

RED TRIPLE CABLE **BLACK TRIPLE CABLE**

11. Connect one cable of the electrofusion machine to the connector slot on the black triple cable.

12. Connect each connector of the black triple cable to the first pin marked **"A"** of each module.

13. Connect the other cable of the electrofusion machine to the connector slot on the red triple cable.

14. Connect each connector of the red triple cable to the second pin marked **"B"** of each module.

15. Perform welding: scan with the optical pen the barcode marked **"ONE-SHOT 2 FITTINGS"** (on **EIVLRS I** module) in case of 2 modules, or the barcode marked **"ONE-SHOT 3 FITTINGS"** (on **EIVLRS M** module) in case of 3 modules, and proceed with welding.

IN CASE OF 4 OR MORE MODULES, PLEASE CONTACT THE SUPPLIER FOR WELDING ASSISTANCE.

16. After the welding cycle is positively completed, mark the actual time on the modules and disconnect all the cables.

IN CASE OF WELDING INTERRUPTION DUE TO LACK OF POWER, WAIT FOR THE FITTINGS TO COOL DOWN FOR NOT LESS THAN 1 HOUR, THEN RE-START THE WELDING CYCLE FROM THE BEGINNING.

17. Wait for the completion of the cooling time indicated on the barcode; then it is possible to move and bury the pipeline.

DO NOT STRESS OR BURY THE PIPELINE BEFORE THE COMPLETION OF THE COOLING TIME INDICATED ON THE BARCODE.

NOTES

GENERAL SALES CONDITIONS

art. 1 – Definitions
The following definitions will apply throughout this document.
"Buyer" shall mean any person, company, corporation, entity that at any time submits an order for the Products to the Seller.
"C.C." shall mean the Italian Civil Code.
"Products" shall mean any product manufactured and/or sold by the Seller.
"Seller" shall mean "NUPI AMERICAS Inc.", a company with offices in 1511 Superior Way - Houston TX 77039 (USA).

art. 2 – Applicability
These General Sales Conditions enter into force upon their signature by the Seller and the Buyer, and shall remain in full force and effect until they are expressly amended, terminated or substituted by a written document signed by the Seller's and the Buyer's duly appointed representatives.
These General Sales Conditions shall govern each and every order issued by the Buyer for the Products.

art. 3 – Orders
Each order for the Products issued by the Buyer constitutes an irrevocable offer, according to art. 1329 c.c., for a period of thirty (30) days from its receipt by the Seller, but the relative contract is formed only at the moment when the Seller expressly accepts in writing the Buyer's offer, according to arts. 1326 and 1352 c.c.. Once an order has been accepted by the Seller, any amendment and/or addition to the order shall be null and void, unless they result from a written document signed by the Seller's and the Buyer's duly appointed representatives.
Even after accepting an order, the Seller shall have the right to withdraw, in whole or in part, from the relative contract according to art. 1373 c.c. until the Products have been delivered to the Buyer: the foregoing without any liability towards the Buyer and with no consideration whatsoever due to the Buyer for such withdrawal right and/or for its possible exercise.

art. 4 – Prices
The Products' prices shall be as per the applicable price list at the moment when the
Buyer's order is accepted as per art. 3. Unless otherwise specifi ed, all prices are "ex
works" as well as net of VAT and of any other applicable Sales Tax.

art. 5 – Delivery of the Products
All delivery dates indicated in the orders are indicative and not mandatory. Unless otherwise agreed by the Seller and the Buyer in writing, the Products shall be delivered "ex works" (incoterms 2000).
In any case, according to art. 1510 c.c., the Seller discharges its duty to deliver the Products by handing them over to the carrier and/or to the forwarding agent: all transportation costs and risks, none excluded, shall be consequently borne in any case by the Buyer, regardless of the delivery conditions agreed by the Seller and the Buyer, and even if the "free port" clause were agreed.
If the Buyer does not claim the Products at the agreed place and time, after fifteen (15) days from the date on which delivery of the Products has been offered to the Buyer, or on which the Products have anyway become available to the Buyer, the Seller shall have the right to dispose of the same Products, without prejudice to any other right the Seller may have towards the Buyer, including without limitation the Seller's right to compensation for any damage. In any case, all costs and expenses due to the Buyer's failure to claim the Products shall be at the Buyer's exclusive charge.

art. 6 – Reservation of ownership
The Seller shall retain the ownership of any Product sold to the Buyer until the Buyer has paid in full the relevant price: the foregoing notwithstanding, any cost and risk relating to the Products shall pass onto the Buyer in accordance with the principles set out in art. 5.
On request of the Seller, the Buyer shall execute all documents / agreements / deeds necessary in order to enforce the Seller's reservation of ownership against any creditor of the Buyer's.

art. 7 – Claims and defects
In order not to forfeit its rights, the Buyer shall communicate any claim and/or complaint regarding the Products directly to the Seller, by registered letter with return receipt to be sent within eight (8) days from the date on which delivery of the Products has been offered to the Buyer, or on which the Products have anyway become available to the Buyer. in case a claim and/or a complaint of the Buyer were accepted by the Seller, the Seller shall only substitute the defective / damaged / non compliant Products with identical Products, and by doing so the Seller shall not have any other responsibility towards the Buyer: the Buyer expressly and irrevocably waives since now any and all claims and objections in this regard.

art. 8 – Limitations to the Buyer's right to raise claims and objections
According to art. 1462 c.c., until the Buyer has fully paid all amounts due to the Seller, the Buyer shall not have the right to raise any claim and/or objection in order to avoid or delay payment; in particular, but without limitation, the Buyer shall not have the right to raise the objections provided for in arts. 1460 and 1461 c.c., or any objection arising from whatever claims and/or counterclaims of the Buyer towards the Seller.

art. 9 – Payment
Unless otherwise agreed in writing, all payments shall be made at the Seller's business address. Any payment made to unauthorized persons and/or by unauthorized means shall be deemed as null and void and shall not discharge the Buyer of its payment obligations.
For any delay in the execution of any payment, the Buyer shall pay default interest from the date when payment is due to date of actual payment at a rate per annum equivalent to the 6-month Euribor at the relevant time plus two percent (2%), as well as all expenses borne by the Seller for the recovery of its credit: the foregoing without prejudice to the Seller's right to compensation for additional damages.
Moreover, in case the Buyer should not comply with even only one of the agreed payment deadlines, the Buyer shall incur in the loss of the benefit of the time limit; in this case, the Seller shall have the right (i) to suspend without notice all the deliveries of the Products and thus the execution of all the orders of Products, according to art. 1460 c.c., until the Buyer has fully paid all of the amounts due to the Seller in relation to the Products, and (ii) to terminate the contract by operation of the law according to art. 1456 c.c.: all the foregoing, in any case, without prejudice to any other right the Seller may have towards the Buyer, including without limitation the Seller's right to compensation for any damage.

art. 10 – Applicable law
Each order issued by the Buyer as well as the relative contracts between the Seller and the Buyer shall be governed by the Italian law, with the express exclusion of its provisions on the conflict of laws (norme sulla legge applicabile).

art. 11 – Exclusive jurisdiction
The courts of Milan shall be the only and exclusive courts having jurisdiction for any and all disputes that may howsoever arise out of these General Sales Conditions and/or out of the orders issued by the Buyer, with the express exclusion of any alternative venue.

for the Seller:

Houston, ...

for the Buyer:

---------- ----------
(place and date) *(stamp and signature)*

After careful examination, the following clauses are hereby specifi cally approved in writing, according to arts. 1341 and 1342 of the italian civil code: 2, 3, 4, 5, 6, 7, 8, 9, 11.

for the Seller:

Houston, ...

for the Buyer:

---------- ----------
(place and date) (stamp and signature)

NUPI AMERICAS
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Houston, TX 77039
Tel. 281-590-4471
Fax 281-590-5268
www.nupiamericas.com