



TECHNICAL DATA



Technical data

0,8317
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5
5,749

Normalized Heat Flow Endo Down (W/g)

PE fittings

Welding units and equipment

Time Zero = 12.013 min

Onset Y = 1.3071 W/g
Onset X = 49.140 min

1) Heat from 30.00°C to 210.00°C at 20.00°C/min
2) Hold for 2.00 min at 210.00°C

3) Hold for 120.0 min at 210.00°C

05/08/2013 8.59



This publication, referring to the UNI, EN and ISO standards, uses the following geometrical definitions:

d_n	nominal outside diameter	specified outside diameter, in millimeters, of a PE pipe or fitting
e_n	nominal wall thickness	numerical designation of the wall thickness, in millimeters, of a PE pipe or fitting
d_e	outside diameter	external diameter, in millimeters, measured at any point of the circumference of a PE pipe or fitting
d_{em}	mean outside diameter	dimension value of the external circumference of a PE pipe/fitting divided by π , in millimeters
SDR	standard dimension ratio	relationship between the outside nominal pipe diameter d_n and the nominal wall thickness e_n
D	nominal outside diameter steel pipe	nominal outside diameter, in inches, of a steel pipe
G	gas thread diameter	dimension, in inches, of the thread part

polyethylene classification

The polyethylene classification, defined by the ISO and the EN standards is issued depending on the parameter MRS = MINIMUM REQUIRED STRENGTH, that is the minimum resistance that the polyethylene must guarantee after 50 working years at the reference temperature of 20°C.

Each MRS has a design stress value σ_s , derived by MRS dividing it with the design coefficient (C).

DESIGNATION	MPa	
	MRS	σ_s (C=1,25)
PE 80	8,0	6,3
PE 100	10,0	8,0

The choice of the polyethylene type determines the nominal pressure PN of the pipe/fitting. For water distribution corresponds to the maximum allowable operating pressure (PFA) in bar which can be borne at the temperature of 20°C with a design basis of 50 years, based on the design coefficient.



materials

All fittings in the EUROSTANDARD range are injection moulded using polyethylene compounds type PE 100 suitable for pipelines for the distribution of gas, water and other fluids under pressure.

The characteristics are in conformity with the standards EN 1555, EN 12201 and EN ISO 15494.

The compounds used, normally added at the origin with carbon black for the UV stabilization, are suitable for drinking water and foodstuffs as provided in the DM 21 March 1973 and the DM n. 174 dated 6 April 2004.

EUROSTANDARD fittings are weldable with PE 80 and 100 pipes and fittings having melt mass-flow rate 0,2 - 1,4 g/10 min (ISO 1133 5 kg - 190°C).

PE 100 fittings are weldable with PE 80 pipes/fittings and viceversa, either using buttfusion (if only of the same thickness and diameter) or using electrofusion (also with different thicknesses).

CHARACTERISTICS	TYPICAL VALUES	UNITS	TEST METHODS
Density	959	$\frac{\text{kg}}{\text{m}^3}$	ISO 1183
Melt mass-flow rate (MFR) 5 kg/190°	0,30 - 0,45	g/10 min	ISO 1133
Tensile strength at break	35	MPa	ISO 527
Tensile strength at yield	25 - 26	MPa	ISO 527
Tensile elongation at break	700	%	ISO 527
Carbon black content	2,0 - 2,5	%	ISO 6964
Linear thermal expansion coefficient	$2,0 \cdot 10^{-4}$	$\frac{\text{m}}{\text{m} \cdot \text{°C}}$	--
Brittleness temperature	-80	°C	ASTM D746

reference standards

production requirements

**CEN
UNIPLAST**

Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE)

UNI EN 1555

**CEN
UNIPLAST**

Plastics piping systems for water supply, and for drainage and sewerage under pressure - Polyethylene (PE)

UNI EN 12201



CEN UNIPLAST	Plastics piping systems for industrial applications. Polybutene (PB), polyethylene (PE) and polypropylene (PP) - Specifications for components and the system - Metric Series.	UNI EN ISO 15494
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UNIPLAST	Polyethylene-metal mixed joints for piping systems for the supply of gaseous fuels, conveyance of water and of liquid and gaseous fluids and/or polypropylene-metal mixed joints for piping systems for the conveyance of water and of liquid and gaseous fluids. Types, requirements and tests.	UNI 9736
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Ministero della Salute	Rules regarding the materials and the objects which can be used in the fix plants for treatment and distribution of water for human consumption.	D.M. n. 174 6 aprile 2004
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welder qualification and welding processes

SALDATURE UNIPLAST	Classification and qualification of welders for plastic materials. Welders by the heated tool procedure, with mechanical equipment and by electrofusion for pipes and fittings of polyethylene for the supply of gaseous fuels, water and others fluids under pressure.	UNI 9737
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UNIPLAST	Plastics welding personnel - Qualification testing of welders - Thermoplastics welded assemblies.	UNI EN 13067
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SALDATURE UNIPLAST	Welding of plastic materials - Heated tool butt welding. Welding of polyethylene pipes and/or fittings for gas, water and others pressure fluids pipelines.	UNI 10520
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SALDATURE UNIPLAST	Welding of plastic materials - Electrofusion welding. Welding of polyethylene pipes and/or fittings for gas, water and others pressure fluids pipelines.	UNI 10521
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SALDATURE UNIPLAST	Coordination of the welding activities for construction, testing and maintenance of polyethylene pipeline systems for distribution of gaseous fuels, water and other fluids under pressure - Tasks and responsibilities of appointed personnel. Requirements for training and qualification.	UNI 10761
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Ministero dello Sviluppo Economico	Technical rules for design, construction, testing, operating and surveillance of the works and distribution systems and direct lines of natural gas with density not higher than 0,8.	D.M. 16 aprile 2008
CIG	Gas distribution pipelines with maximum operating pressure not exceeding 0,5 MPa (5 bar) Materials and joining systems.	UNI 9034
CIG	Gas distribution networks. Pipeworks with maximum operating pressure up to 5 bar. Design, construction, testing, operation, maintenance and rehabilitation.	UNI 9165
CIG	Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional requirements.	UNI EN 12007-1
CIG	Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar)	UNI EN 12007-2
CIG	Gas service pipes. Design, construction, testing, operation, maintenance and rehabilitation.	UNI 9860
Ministero dello Sviluppo Economico	Direction of article 11-quaterdecies, comma 13 letter a) Law n. 248 dd 2 nd December 2005 relative to the plant installation activities inside the buildings.	D.M. n. 37 22 gennaio 2008
CIG	Gas plants for domestic and similar uses supplied by network. Design and installation.	UNI 7129
Ministero dei Lavori Pubblici	Technical standards regarding pipelines.	D.M. 12 dicembre 1985



UNIPLAST	Laying and general test and inspection of polyethylene piping systems for the transport of pressure liquids.	UNI 11149
CEN	Water supply - Requirements for systems and components outside buildings.	UNI EN 805
UNIPLAST	Plastics piping and ducting systems - Systems outside building structures for the conveyance of water or sewage - Practices for installation above and below ground.	UNI ENV 1046
Politecnico Milano	Polyethylene pipelines for water supply.	Ed. Marzo 2005
UNI	Fire fighting equipment - Hydrant systems. Design, installation and operation.	UNI 10779
welding units		
SALDATURE	Field welding machines by the heated tool for polyethylene pipes and/or fittings butt joints for gas, water and others pressure fluids pipelines. Construction, test and maintenance requirements, documentation.	UNI 10565
SALDATURE UNIPLAST	Electrofusion welding machines and auxiliary equipment for polyethylene pipes and/or fitting joints by electroweldable connections for gas, water and others pressure fluids pipelines. Construction, test and maintenance requirements, documentation.	UNI 10566
safety		
G.U. Rep. Italiana	Direction of article 1 Law n. 123 dd 3 rd August 2007 regarding the health and safety protection in the working sites.	D. Lgs. n. 81 9 aprile 2008



product testings

EUROSTANDARD fittings are continuously monitored throughout the entire production process in accordance with the internal testing programs in compliance with the standards EN 1555, EN 12201 and EN ISO 15494. The testing activities are continuously carried out following up the complete observance of the reference standards and foresee tests of mechanical and physical type, either on the fittings and on the raw material.

Particularly, the production is subjected to the following tests:

- melt mass-flow rate (MFR)
rif. UNI EN ISO 1133-1

- dimensional control – appearance test – marking control
rif. UNI EN 1555
UNI EN 12201
UNI EN ISO 15494
UNI EN ISO 3126

- hydrostatic strength at 20°C and 80°C
rif. UNI EN ISO 1167

- tensile strength on buttfusion fittings
rif. ISO 13953

- impact resistance on electrofusion saddles
rif. UNI EN 1716

- decohesive resistance (peel and crushing test)
rif. ISO 13954
ISO 13955
ISO 13956

- pull-out resistance on transition fittings
rif. UNI 9736

- oxidation induction time (OIT)
rif. UNI EN 728
ISO 11357-6





The EUROLAB Laboratory, belonging to Eurostandard, operates in accordance to the standard EN ISO/IEC 17025:2005 and is accredited from ACCREDIA - Italian Accreditation Body with accreditation number LAB N° 0740.

The accreditation certifies the technical qualification of the Laboratory relatively to the testings detailed in the enclosed sheets to the certificate - download on the website www.accredia.it. The in-force status of the accreditation can be checked on the same website.



quality marking

Eurostandard is authorized to use the RINA Quality Marking with reference to the standards UNI EN 12201-3, EN 12201-3, UNI EN 1555-3, EN 1555-3, UNI 9736, UNI EN ISO 15494 for the fittings as detailed in the enclosed papers to the Conformity Certificates.



Informations concerning validity of Certificates of Conformity and certified fittings are available on website www.rina.org.

Download of Certificates of Conformity and relevant enclosures on website www.eurostandard.it.



quality system certification

QUALITÀ ED AFFIDABILITÀ

Quality management systems - Requirements

UNI EN ISO 9001:2008

The **EUROSTANDARD QUALITY MANAGEMENT SYSTEM** involves and manages all activities within the Company in order to achieve the optimum level of the quality standards. That is on the basis of the directions imposed in the ISO 9001:2008 standard, which points out the requirements for the supplier to show its capability in checking the processes which determine the conformity of the finished product. The codified and controlled management of the company activities are described in the documents which form the **SYSTEM MANUAL** and the relative managing and technical procedures.

The **QUALITY ASSURANCE** guarantees the integration of the various activities which determine the quality of the system itself.

The correct management of all documents allows the tracing of the product through the batch reference number or other codes assigned during the production.

The Eurostandard policy is published on the website: www.eurostandard.it



environmental certification



Technical data

AMBIENTE

Environmental management systems. Requirements with guidance for use.

UNI EN ISO 14001: 2004

The **EUROSTANDARD ENVIRONMENTAL MANAGEMENT SYSTEM** involves and manages all activities within the Company in order to render to the minimum the environmental impacts deriving from themselves and avoid pollution. This happens in conformity to the prescriptions of the standard ISO 14001, which specifies the requisites which allow to the organization to actuate a policy and establish the aims, taking also into consideration legislative prescriptions and informations relating to the affecting environmental impacts.

The management and control methodologies of the firm activities are described in details in the System Manual and in the environmental procedures.

The Eurostandard policy is published on the website: www.eurostandard.it



inspection documents

UNSIDER

Metallic products - Types of inspection documents

UNI EN
10204

Inspection documents based on non-specific inspection, carried out by the manufacturer in accordance with his own procedures to assess whether products defined by the same product specification and made by the same manufacturing process, are in compliance with the requirements of the order or not. The products inspected are not necessarily the products actually supplied.

- **Declaration of compliance with the order “type 2.1”**

Document in which the manufacturer declares that the products supplied are in compliance with the requirements of the order, without inclusion of test results.

- **Test report “type 2.2”**

Document in which the manufacturer declares that the products supplied are in compliance with the requirements of the order and in which he supplies test results based on non-specific inspection.

Inspection documents based on specific inspection carried out, before delivery, according to the product specification, on the products to be supplied or on test units of which the products supplied are part, in order to verify that these products are in compliance with the requirements of the order.

- **Inspection certificate “type 3.1”**

Document issued by the manufacturer in which he declares that the products supplied are in compliance with the requirements of the order and in which he supplies test results.

The test unit and tests to be carried out are defined by the product specification, the official regulation and corresponding rules and/or the order.

The document is validated by the manufacturer’s authorized inspection representative, independent of the manufacturing department.

It shall be permissible for the manufacturer to transfer on to the inspection certificate 3.1 relevant test results obtained by specific inspection on primary or incoming products he uses, provided that the manufacturer operates traceability procedures and can provide the corresponding inspection documents required.

The inspection documents are issued only if requested at order and indicated between the contract requirements.

UNI – CEI

Conformity assessment - Supplier’s declaration of conformity.
Part 1 - general requirements
Part 2 - supporting documentation

UNI CEI EN
ISO/IEC 17050

Declaration of conformity

Declaration of a supplier, under its responsibility, that a product, process or service is in compliance with a specific standard or another regulation.

This declaration must contain those information that allow the individualisation of the referring products. This must contain at least the following information:


- a) unique identification of the declaration of conformity;
- b) the name and contact address of the issuer of the declaration of conformity;



- c) the identification of the object of the declaration of conformity (e.g. name, type, date of production or model number of a product, description of a process, management system, person or body, and/or other relevant supplementary information);
- d) the statement of conformity;
- e) a complete and clear list of standards or other specified requirements, as well as the selected options, if any;
- f) the date and place of issue of the declaration of conformity;
- g) the signature (or equivalent sign of validation), name and function of the authorized person(s) acting on behalf of the issuer;
- h) any limitation on the validity of the declaration of conformity.

marking

EUROSTANDARD fittings have the following information stated on the fitting and/or on a label.

	producer identification
W14001 01/14	batch reference and/or month and year of manufacture
PN...	nominal pressure rating at 20°C for water
S...	gas series of pipe
SDR...	standard dimension ratio
d...	nominal size of the fitting (mm)
PE 100	raw material type used
UNI ... - EN ... - ISO ...	product standard
RINA	conformity marking
grado B	dimensional tolerance

The bar-code label is applied on the electrofusion fittings containing the welding parameters according to standard ISO 13950 and the traceability data of the fitting according to standard ISO 12176-4.

tables

relationship between SDR, Series (S) and Nominal Pressure (PN)

SDR	17	11	7,4
PE 80	PN 8	PN 12,5	PN 20
PE100	PN 10	PN 16	PN 25

$$SDR = \frac{d_n}{e_n}$$

d_n = nominal diameter
 e_n = nominal thickness



pipe/fittings dimensions

	SDR 17		SDR 11		SDR 7,4
PE 100	PN 10		PN 16		PN 25
d_n	wall thickness e_n mm		wall thickness e_n mm		wall thickness e_n mm
20	--	3,0 ★	2,0	3,0 ★	3,0
25	--	3,0 ★	2,3	3,0 ★	3,5
32	2,0	3,0 ★		3,0	4,4
40	2,4	3,0 ★		3,7	5,5
50		3,0		4,6	6,9
63		3,8		5,8	8,6
75		4,5		6,8	10,3
90		5,4		8,2	12,3
110		6,6		10,0	15,1
125		7,4		11,4	17,1
140		8,3		12,7	19,2
160		9,5		14,6	21,9
180		10,7		16,4	24,6
200		11,9		18,2	27,4
225		13,4		20,5	30,8
250		14,8		22,7	34,2
280		16,6		25,4	38,3
315		18,7		28,6	43,1
355		21,1		32,2	48,5
400		23,7		36,3	54,7
450		26,7		40,9	61,5
500		29,7		45,4	--
560		33,2		50,8	--
630		37,4		57,2	--
710		42,1		64,5	--

according to the standards UNI EN 12201
UNI EN 1555
UNI EN ISO 15494

★ minimum thickness outlined by UNI 9034 for gas distribution



operating pressures of PE pipelines for water supply

UNI EN 12201

°C	MAX. OPERATING PRESSURE ACCORDING TO THE WORKING TEMPERATURE PRESSURE (bar)					
	8,0	10,0	12,5	16,0	20,0	25,0
20	8,0	10,0	12,5	16,0	20,0	25,0
30	7,0	8,7	10,9	13,9	17,4	21,8
40	5,9	7,4	9,3	11,8	14,8	18,5

operating pressures of PE pipelines for the supply of gaseous fuels

DM 16.04.2008

SDR ★	dimensions allowed mm	PE 80 pressure bar	PE 100 pressure bar
17	≥ 63	3	3,8
11	≥ 16 ★	5	5

★ minimum thickness outlined by UNI 9034

dimensions

All dimensions are in millimeters and are intended as nominal and standard sizes; weights are in grams. EUROSTANDARD reserves the right to change geometries and dimensions of any product.

technical assistance

EUROSTANDARD CUSTOMER SERVICE (e-mail: support@eurostandard.it) is available to you for any technical request and for information regarding the use of products and particularly:

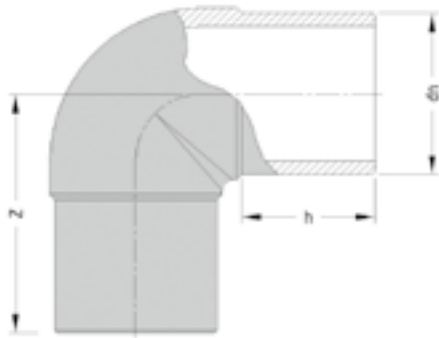
- choice of materials
- welding systems
- pipeline laying
- testings
- Operators training and qualification
- up-to-date standards
- certifications.



Buttfusion fittings

90° elbow

cod. 20.10 PE 100



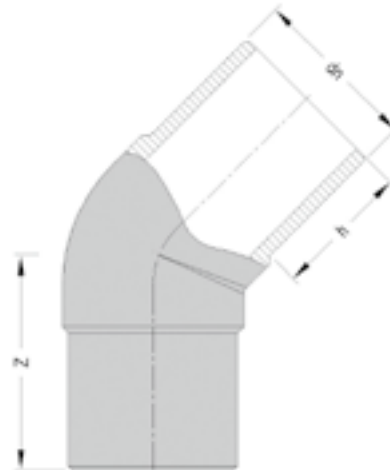
dn	dimensions		weights		
			SDR 17	SDR 11	SDR 7,4
	h	Z	PN 10	PN 16	PN 25
20	49	75		28	
25	53	80		37	
32	59	89		53	65
40	59	85		75	100
50	60	89		120	175
63	68	103		225	295
75	75	130		390	540
90	84	147	450	640	880
110	86	160	750	1040	1440
125	89	159	915	1310	1800
140	94	172	1250	1795	2500
160	115	225	2155	3000	4100
180	121	235	2675	3985	
200	127	252	3335	5050	
225	138	274	5600	7620	
250	143	300	7400	10350	
280			●	●	
315	180	392	14550	20300	
355			●	●	
400			●	●	
500			●	●	

● on request moulded elbow

- ✓ Moulded with long collar
- ✓ Buttfusion compatibility: guaranteed between different PE but with the same wall thickness
- ✓ Electrofusion compatibility: guaranteed between different PE and wall thickness
- ✓ Buttfusion unadvised for dia. <63 mm

45° elbow

cod. 20.15 PE 100

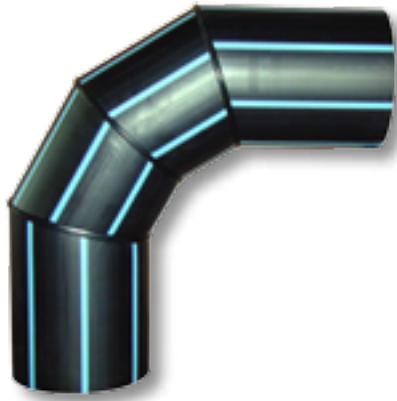


Buttfusion fittings

d _n	dimensions		weights		
			SDR 17	SDR 11	SDR 7,4
	h	Z	PN 10	PN 16	PN 25
32	50	64		40	50
40	59	71		62	100
50	60	74		102	150
63	68	85		185	255
75	73	92		280	400
90	83	106	340	465	640
110	84	112	495	705	1000
125	89	125	740	1040	1500
140	95	128	870	1375	1950
160	100	142	1365	1990	2800
180	125	183	2300	3355	
200	131	197	3070	4385	
225	134	213	4360	6110	
250	142	232	5750	8140	
280			●	●	
315	210	318	11980	17000	
355			●	●	
400			●	●	
500			●	●	

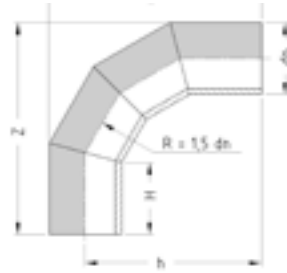
● on request moulded elbow

- ✓ Moulded with long collar
- ✓ Buttfusion compatibility: guaranteed between different PE but with the same wall thickness
- ✓ Electrofusion compatibility: guaranteed between different PE and wall thickness
- ✓ Buttfusion unadvised for dia. <63 mm



90° segmented bend

cod. 20.12 PE 100

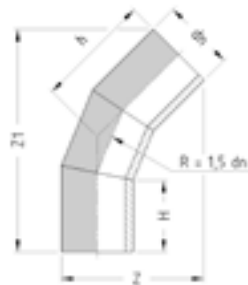


dn	dimensions				weights	
					SDR 17	SDR 11
	h	Z	h	R	PN 10	PN 16
280	200	637	497	420	12100	18600
355	300	913	737	533	31200	45900
400	300	992	792	600	45100	66600
450	300	1079	854	675	60700	89600
500	300	1166	916	750	75000	110600
560	350	1319	1039	840	110500	163000
630	350	1441	1126	945	147000	217000



45° segmented bend

cod. 20.17 PE 100

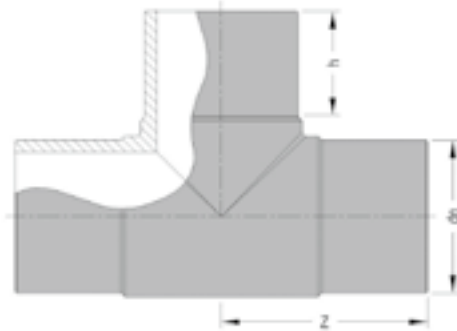


dn	dimensions					weights	
						SDR 17	SDR 11
	h	Z	Z ₁	h	R	PN 10	PN 16
280	220	487	697	350	420	8200	12600
355	300	621	893	449	533	21640	31820
400	300	674	944	470	600	28470	42060
450	300	731	996	490	675	37860	55890
500	300	788	1048	510	750	48540	71570
560	350	892	1197	585	840	70770	104320
630	350	973	1273	615	945	92430	136320

- ✓ On request 90° and 45° segmented bends SDR 7,4
- ✓ A derating factor of 0,8 shall be applied to the indicated PN (of the pipe).
Allowable operating pressure = PN x 0,8

90° tee

cod. 20.20 PE 100



Buttfusion fittings

d _n	dimensions		weights		
			SDR 17	SDR 11	SDR 7,4
	h	Z	PN 10	PN 16	PN 25
20	59	80		45	
25	60	76		50	
32	60	82		85	100
40	59	84		105	150
50	60	89		165	245
63	67	103		310	455
75	74	126		540	750
90	80	135	580	850	1170
110	95	162	965	1480	2115
125	90	160	1315	1895	2650
140	95	174	1790	2555	3500
160	106	200	2630	3765	5150
180	124	243	4140	5840	
200	130	259	5150	7485	
225	136	282	7250	9700	
250	142	307	10080	13870	
280			●	●	
315	178	388	19800	27650	
355			●	●	
400			●	●	
500			●	●	

● on request moulded tee or segmented tee

- ✓ Moulded with long collar
- ✓ Buttfusion compatibility: guaranteed between different PE but with the same wall thickness
- ✓ Electrofusion compatibility: guaranteed between different PE and wall thickness
- ✓ Buttfusion unadvised for dia. <63 mm

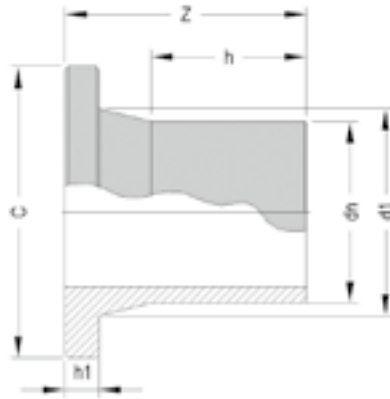
90° reduced tee moulded

cod. 20.21 PE 100



d _n	d _{n1}	dimensions			weights	
					SDR 17	SDR 11
		h	h ₁	Z	PN 10	PN 16
90	63	90	74	147		830
110	63	88	62	158		1330
110	90	95	89	162		1375
125	90	100	85	179		1790
125	110	100	95	179		1920
160	90	111	84	212	2850	3540
160	110	111	93	212	2960	3680

- ✓ Moulded with long collar
- ✓ Other diameters assembled by buttfusion system with a reducer on the central exit
- ✓ Alternative electrofusion solution: spigot saddle (code 21.20)
- ✓ For 90° reduced tee: delivery times to be agreed according to quantity



stub end

cod. 20.30 PE 100

Buttfusion fittings

d _n	dimensions										weights			
	h			h ₁			Z			d ₁	C	SDR 17	SDR 11	SDR 7,4
	SDR17	SDR11	SDR7,4	SDR17	SDR11	SDR7,4	SDR17	SDR11	SDR7,4			PN 10	PN 16	PN 25
20	--	--	45	--	--	7	--	--	67	27	45			25
25	--	48	50	--	9	10	--	75	75	33	58		40	35
32	--	68	69	--	10	11	--	96	95	40	68		60	50
40	63	62	69	11	11	12	87	87	94	50	78	70	80	100
50	62	61	66	12	12	13	88	95	94	61	88	95	90	150
63	66	86	65	14	14	16	98	120	96	75	102	145	200	245★
75	74	94	68	16	16	18	116	130	109	89	122	250	300	365★
90	98	97	81	17	17	20	140	140	121	105	138	360	460	570★
110	112	112	87	18	18	21	155	153	128	125	158	550	670	875★
125	93	122	107	18	25	28	131	167	161	132	158	505	860	1225★
140	104	108	105	18	25	29	154	156	159	155	187	750	1140	1650★
160	109	106	104	18	30	29	156	159	160	175	212	1035	1520	2060★
180	118	145	114	20	30	36	169	196	175	180	212	1140	1920	2400★
200	116	112	112	24	32	36	181	182	188	232	268	2120	3000	3830★
225	125	152	143	24	32	36	190	219	209	235	268	2130	3625	4500
250	134	133	123	25	35	40	205	205	203	285	320	3370	4695	6200
280	155	166	164	26	36	40	221	235	234	291	320	3680	5650	7300
315	202	205	143	25	35	45	267	275	228	335	370	5300★	9200★	9800
355												●	●	
400	230	230	--	38	48	--	308	310	--	427	482	10200★	15150★	
450	220	220		46	60		326	340				18200	25700	
500	234	234		46	60		330	344				18800	27800	
560	260	260		50	60		370	380				●	●	
630	270	270		50	65		360	375				28700	43600	

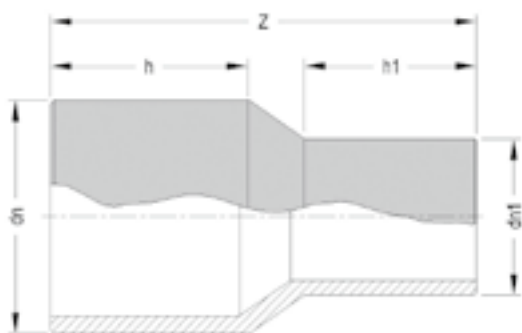


- on request
- ★ stub end complete with NBR gasket

- ✓ Moulded with long collar
- ✓ Buttfusion compatibility: guaranteed between different PE but with the same wall thickness
- ✓ Electrofusion compatibility: guaranteed between different PE and wall thickness
- ✓ Buttfusion unadvised for dia. <63 mm

reducer

cod. 20.50 PE 100



dn dn1		dimensions			weights		
					SDR 17	SDR 11	SDR 7,4
		h	h1	Z	PN 10	PN 16	PN 25
25x	20	49	50	113		25	25
32x	20	55	52	124		30	
x	25	61	59	130		35	35
40x	20	59	52	130		40	
x	25	59	54	128		45	
x	32	61	48	125	40	45	70
50x	25	60	50	135		60	80
x	32	60	47	134		65	90
x	40	60	62	134	50	75	110
63x	25	64	57	140		90	
x	32	64	63	143	70	100	130
x	40	68	52	139	80	105	150
x	50	63	57	132	80	115	150
75x	40	72	60	147	100	160	230
x	50	72	59	153	110	165	240
x	63	73	67	154	150	195	280
90x	50	82	61	162	180	260	345
x	63	80	68	169	190	280	400
x	75	83	71	164	205	305	445
110x	50	88	57	177	270	390	
x	63	87	69	188	285	410	555
x	75	85	72	173	285	425	620
x	90	86	81	181	330	485	690
125x	63	96	68	199		580	
x	75	95	78	191	400	610	790
x	90	96	81	191	430	625	855
x	110	96	84	192	460	720	985



Buttfusion fittings

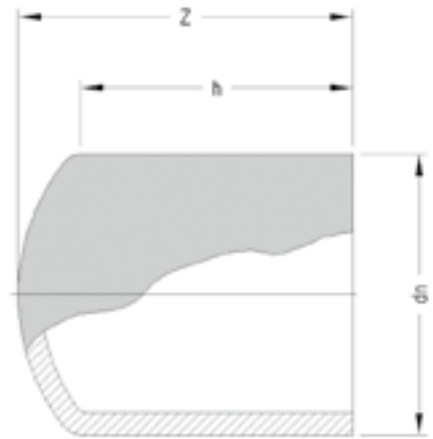
dimensions		weights					
		SDR 17		SDR 11		SDR 7,4	
		d _n	d _{n1}	h	h ₁	Z	PN 10
140x	90	95	80	205	555	815	1145
x	110	94	83	193	560	820	1215
x	125	95	89	198	590	970	1380
160x	90	101	82	221	705	1105	--
x	110	101	103	270	950	--	--
x	110	101	86	218	--	1160	1565
x	125	101	91	208	735	1155	1645
x	140	101	92	206	835	1235	1780
180x	125	107	88	220	1040	1515	
x	140	105	96	221	1050	1610	
x	140	130	100	245			2300
x	160	107	101	224	1165	1725	
x	160	130	103	245			2700
200x	140	115	95	231	1330	1950	
x	140	123	100	251			3100
x	160	116	101	252	1430	2200	
x	160	131	99	250			3100
x	180	117	109	236	1200	2300	
x	180	126	113	251			3100
225x	90	121	89	298	1800		
x	125	131	100	288	1900		
x	160	133	120	292	2040	3085	
x	160	159	98	290			4100
x	180	132	125	285	2100	3010	
x	200	132	130	277	2380	3465	
250x	160	161	88	294	2900	4000	
x	180	138	124	304	2700	3950	
x	200	140	130	301	2750	4420	
x	225	137	134	296	2855	4150	
280x	200	172	123	340	3800	5500	
x	225	168	138	334	4200	6000	
x	250	158	148	322	4300	6200	
315x	200	174	124	357	5400	8200	
x	225	173	138	389	5450	8070	
x	250	173	150	381	5500	7600	
x	280	164	164	346	5400	8500	
355x	225				●	●	
x	250				●	●	
x	280				●	●	
x	315				●	●	
400x	280				●	●	
x	315				●	●	
x	355				●	●	

● on request

- ✓ Moulded with long collar
- ✓ Buttfusion compatibility: guaranteed between different PE but with the same wall thickness
- ✓ Electrofusion compatibility: guaranteed between different PE and wall thickness
- ✓ Buttfusion unadvised for dia. <63 mm

cap

cod. 20.35 PE 100



d _n	dimensions		weights		
			SDR 17	SDR 11	SDR 7,4
	h	Z	PN 10	PN 16	PN 25
20	54	59			10
25	60	68		15	17
32	53	59		20	25
40	57	68	25	30	40
50	61	74	50	50	70
63	64	80	65	85	115
75	74	89	90	150	200
90	82	100	165	230	340
110	91	118	265	395	600
125	102	122	350	570	790
140	103	125	450	780	1150
160	101	134	665	950	1420
180	114	150	970	1450	
200	119	163	1310	1890	
225	124	180	1740	2660	
250	132	179	2275	3355	
280			●	●	
315	175	298	5060	7540	

● on request

- ✓ Moulded with long collar
- ✓ Buttfusion compatibility: guaranteed between different PE but with the same wall thickness
- ✓ Electrofusion compatibility: guaranteed between different PE and wall thickness
- ✓ Buttfusion unadvised for dia. <63 mm



Transition fittings

steel/PE coupling

cod. 20.60 PE 100



d _n	D	steel external diameter	steel thickness	dimensions			weights	
				h	h ₁	Z	SDR 11 - PN 16	
							GALVANIZED	GALVANIZED COATED
25	3/4"	26,9	2,6	300	97	495	635	640
32	1"	33,7	3,2	300	103	499	945	1005
40	1" 1/4	42,4	3,2	300	106	508	1220	1290
50	1" 1/2	48,3	3,2	300	117	516	1430	1545
63	2"	60,3	3,6	300	135	545	2120	2270
75	2" 1/2	76,1	3,6	300	165	580	2900	3080
90	3"	88,9	4,0	305	162	590	3450	3860
110	4"	114,3	4,5	300	203	635	5650	5980
125	4"	114,3	4,5	300	205	630	5950	6180

**CLEARLY specify
the requested version**

20.60A

steel/PE coupling galvanized

20.60F

steel/PE coupling galvanized with thread

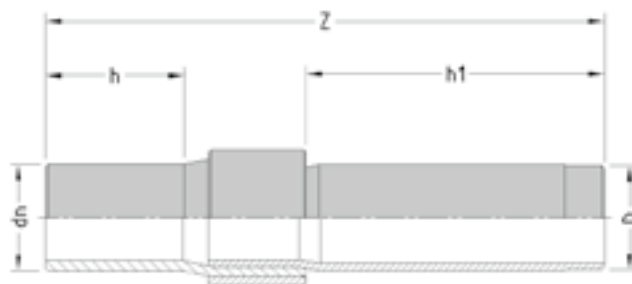
20.60H

steel/PE coupling galvanized coated with thread

- ✓ Do not cut the steel part as it could origin deformations on PE collar due to overheating
- 🔥 Suitable for gas and water pipelines
- ✓ Steel pipe according to UNI EN 10208-1 and galvanized according to UNI EN 10240 A.1 ("lead free galvanized pipe")
- ✓ Coupling certified according to UNI 9736
- ✓ With thread and buried → inspection shaft!
- ✓ On request type galvanized coated pipe for welding
- ✓ Buttfusion unadvised for dia. <63 mm

steel/PE coupling

cod. 20.65 PE 100



Transition fittings

d _n	D	steel external diameter	steel thickness	dimensions			weights	
				h	h ₁	Z	SDR 11	PN 16
140	5"	139,7	4,8	160	310	580	7200	
160	5"	139,7	4,8	250	310	690		●
160	6"	168,3	4,8	160	310	600	10500	
180	6"	168,3	4,8	160	310	600	10700	
200	6"	168,3	4,8	310	310	785		●
200	8"	219,1	6,4	150	310	620	16500	
225	8"	219,1	6,4	130	310	600	18500	
250	8"	219,1	6,4	310	310	790		●
250	10"	279,0	5,6	140	310	630	24100	
280	10"	273,0	5,6	310	310	800		●
315	10"	273,0	5,6	310	310	820		●
315	12"	323,9	5,9	310	310	920		●

● on request

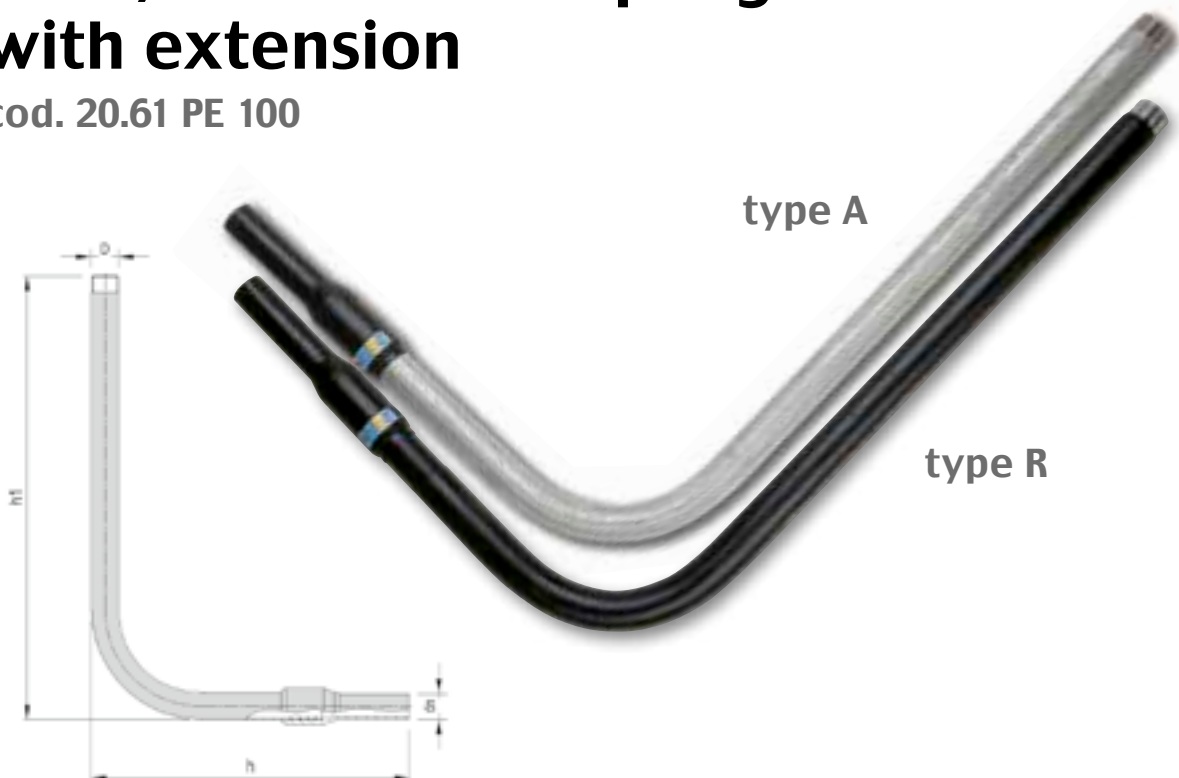
☑ Suitable for gas and water connections, industrial plants

🔥 Suitable for gas and water pipelines

☑ Steel pipe according to UNI EN 10208-1 or API 5L gr. B and galvanized according to UNI EN 10240 A.1 ("lead free galvanized pipe")

steel/PE thread coupling with extension

cod. 20.61 PE 100



		steel external diameter	steel thickness	dimensions		weights	
						SDR 11 - PN 16	
						GALVANIZED	GALVANIZED COATED
dn	D			h	h ₁		
25	3/4"	26,9	2,6	640	700	1720	2020
32	1"	33,7	3,2	650	700	2750	2900
40	1" 1/4	42,4	3,2	680	700	3120	3500
50	1" 1/2	48,3	3,2	700	700	3850	4450
63	2"	60,3	3,6	780	700	5800	6150

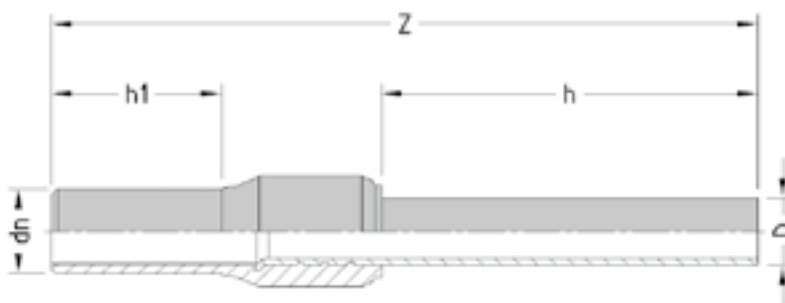
CLEARLY specify the requested version

20.61A	galvanized extension
20.61R	galvanized coated extension

- Steel pipe according to UNI EN 10208-1 and galvanized according to UNI EN 10240 A.1 ("lead free galvanized pipe")
- Suitable for gas and water pipelines
- Buttfusion welding unadvised
- For gas networks according to standard UNI 7129-1
- On request type for welding
- Coupling certified according to UNI 9736

copper/PE coupling

cod. 20.62 PE 100



d _n	D	copper thickness	dimensions			weights
						SDR 11
			h	h ₁	Z	PN 16
25	18	1,5	300	97	495	335
25	22	1,5	300	97	495	375
32	22	1,5	300	103	500	425
32	28	1,5	300	103	500	490

- ✓ Copper pipe according to standard UNI EN 1057
- 🔥 Suitable for gas and water pipelines
- ✓ Buttfusion welding unadvised
- ✓ For gas networks according to standard UNI 7129-1

Transition fittings

e-fusion transition socket

with brass nickel insert



cod. 21.61 PE 100

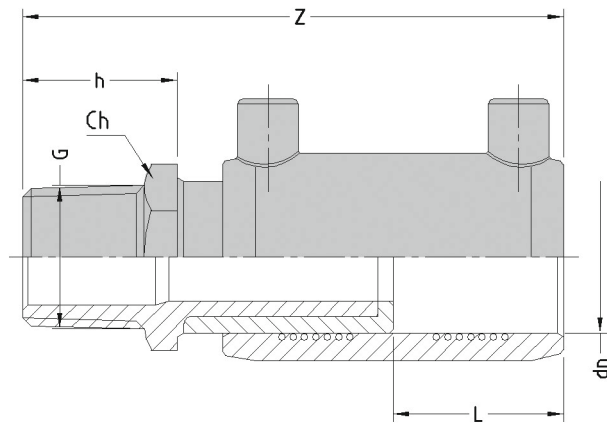


cod. 21.62 PE 100

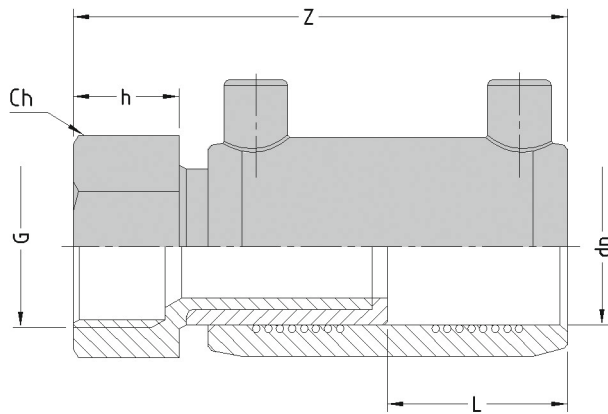
diam. d _n	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
20			● ▲	● ▲	● ▲	● ▲	●	●
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●
75	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●
110	●	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units
▲ minimum weldable thickness 3 mm

- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ✓ Do not remove the insert
- ✓ Inspection required for gas application



dn	G	dimensions				weights
		L	h	Z	Ch	cod. 21.61 MALE
						SDR 7,4 - PN 25
20	1/2"	33	20	96	22	125
25	3/4"	33	21	97	27	160
32	1"	38	26	111	34	230
40	1" 1/4	44	29	124	42	410
50	1" 1/2	49	33	139	52	600
63	2"	54	37	158	65	950
75	2" 1/2	60	43	173	86	1400
90	3"	65	46	190	97	2000
110	4"	70	52	204	125	2980



dn	G	dimensions				weights
		L	h	Z	Ch	cod. 21.62 FEMALE
						SDR 7,4 - PN 25
20	1/2"	33	18	94	27	120
25	3/4"	33	20	96	34	160
32	1"	38	22	107	40	275
40	1" 1/4	44	27	122	50	550
50	1" 1/2	49	27	133	55	790
63	2"	54	33	154	67	950
75	2" 1/2	60	39	169	86	1440
90	3"	65	42	186	97	1940
110	4"	70	48	200	125	3050



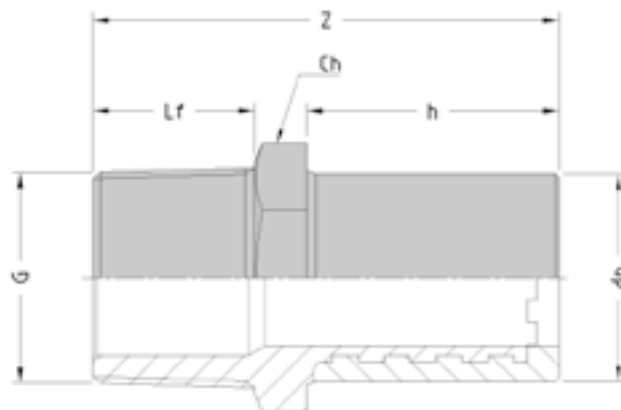
Transition fittings

transition brass/PE insert





in brass nickel



cod. 21.77 PE 100

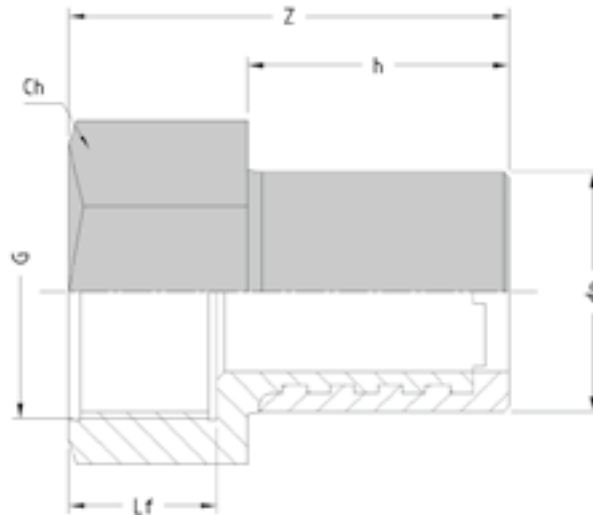


dn	G	dimensions				weights	
		Lf	h	Z	Ch	cod. 21.77 MALE	
						SDR 7,4 - PN 25	
20	1/2"	15	41	61	22	75	
25	3/4"	16	41	62	27	90	
32	1"	19	44	70	34	150	
40	1" 1/4	21	49	78	42	260	
50	1" 1/2	23	55	88	52	390	
63	2"	26	63	100	65	660	
75	2" 1/2	31	70	113	86	1060	
90	3"	34	79	125	97	1520	
110	4"	40	82	134	125	2250	

- 
Weldable with electrofusion EURO fittings, in case of use with other brand fittings, please contact Eurostandard in advance
- 
Extension of the metallic overmoulded part on the whole length
- 
Suitable for gas and water pipelines
- 
Measure and respect the insertion depth inside the electrofusion fitting



cod. 21.78 PE 100



Transition fittings

dn	G	dimensions				weights
		Lf	h	Z	Ch	cod. 21.78 FEMALE
						SDR 7,4 - PN 25
20	1/2"	15	41	59	27	90
25	3/4"	17	41	61	34	130
32	1"	19	44	66	40	180
40	1" 1/4	21	49	76	50	320
50	1" 1/2	21	55	82	55	420
63	2"	28	63	96	67	635
75	2" 1/2	34	70	109	86	1100
90	3"	37	79	121	97	1440
110	4"	43	82	130	125	2240

- ✓ Weld only using electrofusion fittings
- ✓ Scraping of the PE end is compulsory
- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- ✓ Inspection required for gas application

e-fusion transition 90° elbow

with brass nickel insert



cod. 21.65 PE 100

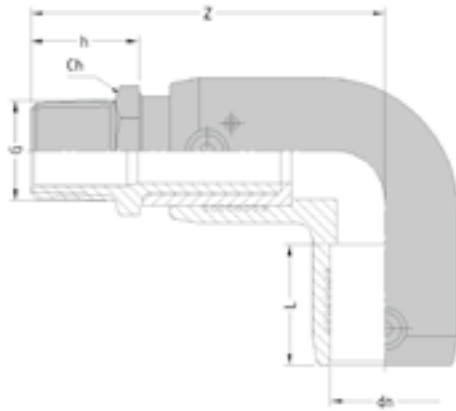


cod. 21.66 PE 100

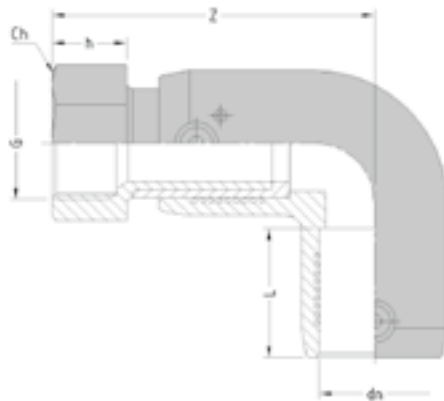
diam. d _n	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
20			● ▲	● ▲	● ▲	● ▲	●	●
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●
75	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●
110	●	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units
▲ minimum weldable thickness 3 mm

- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ✓ Do not remove the insert
- ✓ Inspection required for gas application



dn	G	dimensions				weights	
		L	h	Z	Ch	cod. 21.65 MALE	
						SDR 7,4 - PN 25	
20	1/2"	33	20	81	22	120	
25	3/4"	33	21	83	27	160	
32	1"	39	26	106	34	310	
40	1" 1/4	48	29	114	42	500	
50	1" 1/2	54	33	129	52	725	
63	2"	52	37	151	65	1180	
75	2" 1/2	64	43	169	86	1750	
90	3"	70	46	190	97	2560	
110	4"	76	52	210	125	3900	



dn	G	dimensions				weights	
		L	h	Z	Ch	cod. 21.66 FEMALE	
						SDR 7,4 - PN 25	
20	1/2"	33	18	79	27	160	
25	3/4"	33	20	82	34	200	
32	1"	39	22	102	40	360	
40	1" 1/4	48	27	111	50	705	
50	1" 1/2	54	27	121	55	1045	
63	2"	52	33	147	67	1140	
75	2" 1/2	64	39	165	86	1785	
90	3"	70	42	186	97	2500	
110	4"	76	48	206	125	3920	



Transition fittings

e-fusion transition 45° elbow

with brass nickel insert



cod. 21.67 PE 100

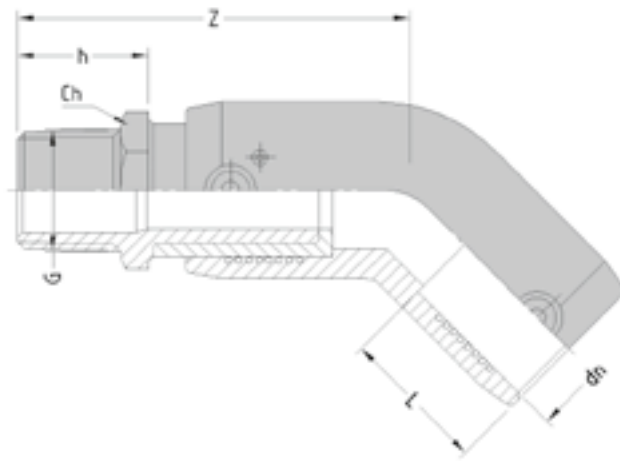


cod. 21.68 PE 100

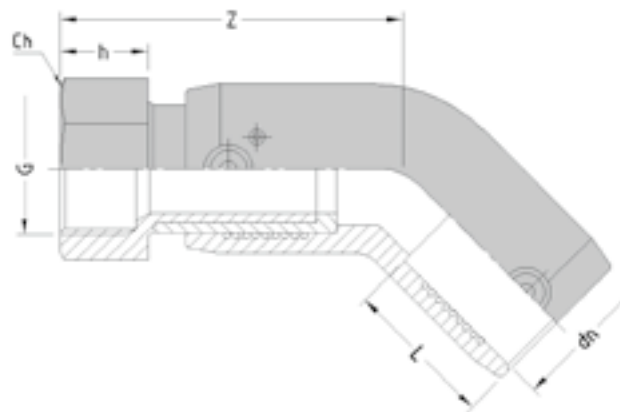
diam. d _n	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●
75	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●
110	●	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units
▲ minimum weldable thickness 3 mm

- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ✓ Do not remove the insert
- ✓ Inspection required for gas application



d _n	G	dimensions				weights	
		L	h	Z	C _h	cod. 21.67 MALE	
						SDR 7,4 - PN 25	
25	3/4"	33	21	76	27	240	
32	1"	39	26	88	34	290	
40	1" 1/4	48	29	104	42	430	
50	1" 1/2	54	33	114	52	635	
63	2"	52	37	133	65	1060	
75	2" 1/2	64	43	151	86	1680	
90	3"	70	46	170	97	2420	
110	4"	76	52	178	125	3630	



d _n	G	dimensions				weights	
		L	h	Z	C _h	cod. 21.68 FEMALE	
						SDR 7,4 - PN 25	
25	3/4"	33	20	75	34	295	
32	1"	39	22	84	40	330	
40	1" 1/4	48	27	101	50	510	
50	1" 1/2	54	27	108	55	720	
63	2"	52	33	129	67	1060	
75	2" 1/2	64	39	147	86	1725	
90	3"	70	42	166	97	2350	
110	4"	76	48	174	125	3690	



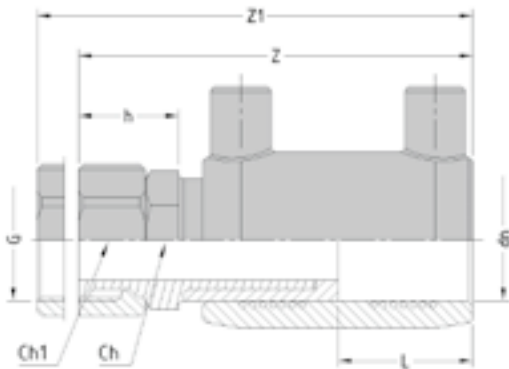
Transition fittings

e-fusion transition socket

with free nut

with brass insert

cod. 21.70 PE 100



diam. dn	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
20			● ▲	● ▲	● ▲	● ▲	●	●
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●

- weldable only with Euro electrofusion monovalent units
- ▲ minimum weldable thickness 3 mm

dn	G	dimensions						weights	
		L	h	Z	Z1	Ch	Ch1	cod. 21.70 FEMALE	
								SDR 7,4 - PN 25	
20	1/2"	33	22	98	108	22	27	145	
25	3/4"	33	22	98	108	27	30	170	
32	1"	38	27	112	120	32	36	250	
40	1" 1/4	44	30	125	141	42	50	460	
50	1" 1/2	49	32	137	152	52	58	695	
63	2"	54	39	160	183	65	67	1060	

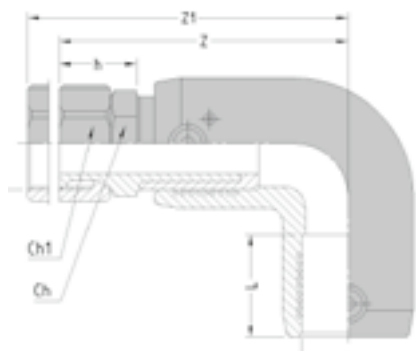
- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ✓ Do not remove the insert
- ✓ Inspection required for gas application

e-fusion transition 90° elbow

with free nut

with brass insert

cod. 21.71 PE 100



Transition fittings

diam. dn	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units
▲ minimum weldable thickness 3 mm

dn	G	dimensions						weights	
		L	h	Z	Z1	Ch	Ch1	cod. 21.71 FEMALE	
								SDR 7,4 - PN 25	
25	3/4"	33	22	84	94	27	30	195	
32	1"	39	27	106	114	32	36	310	
40	1" 1/4	48	30	114	130	42	50	540	
50	1" 1/2	54	32	126	141	52	58	840	
63	2"	52	39	153	176	65	67	1285	

☑ During the screwing, lock the metallic hexagon to avoid any stress on the PE part

🔥 Suitable for gas and water pipelines

☑ Do not remove the insert

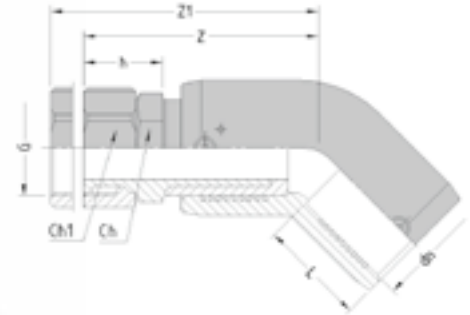
☑ Inspection required for gas application

e-fusion transition 45° elbow

with free nut

with brass insert

cod. 21.72 PE 100



diam. d _n	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●

- weldable only with Euro electrofusion monovalent units
- ▲ minimum weldable thickness 3 mm

d _n	G	dimensions						weights	
		L	h	Z	Z1	C _h	C _{h1}	cod. 21.72 FEMALE	
								SDR 7,4 - PN 25	
32	1"	39	27	89	97	32	36	290	
40	1" 1/4	48	30	104	120	42	50	525	
50	1" 1/2	54	32	112	127	52	58	800	
63	2"	52	39	135	158	65	67	1225	

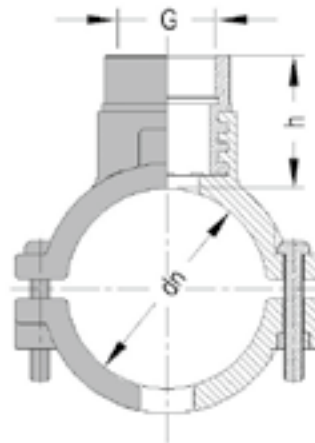
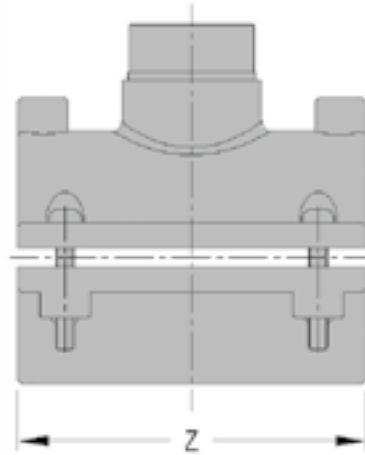
- ☑ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ☑ Do not remove the insert
- ☑ Inspection required for gas application

e-fusion transition spigot saddle

with brass insert



cod. 21.63 PE 100



diam. d _n	WELDABILITY on pipe/fitting						
	SDR 26		SDR 17		SDR 11		SDR 9
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80
110x			●	●	●	●	●
125x			●	●	●	●	●
140x			●	●	●	●	●
160x	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units

d _n	G	dimensions		weights
				FEMALE
				SDR 11 - PN 16
h	Z			
110x	1" 1/2	50	160	1300
110x	2"	71	160	1550
125x	1" 1/2	47	160	2150
125x	2"	68	160	1700
140x	1" 1/2	47	160	1565
140x	2"	68	160	1850
160x	1" 1/2	50	160	1750
160x	2"	72	160	2035

✔ During the screwing, avoid any stress on the PE part

🔥 Suitable for gas and water pipelines

✔ Inspection required for gas application



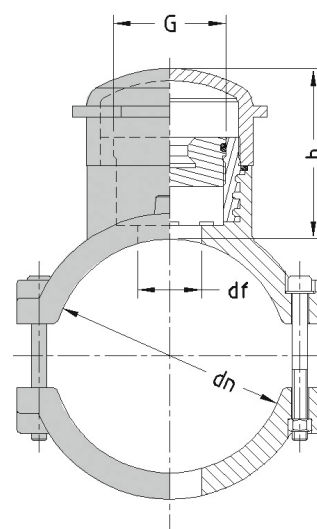
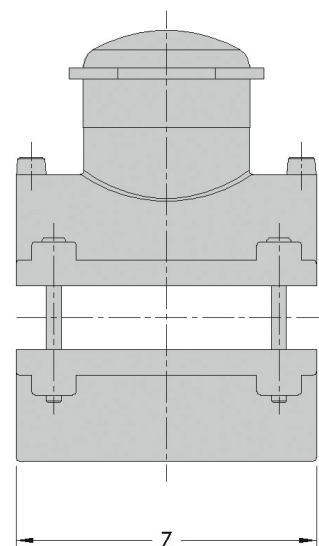
Transition fittings

e-fusion spigot saddle

for shut-off equipment

cod. 21.64 PE 100

with brass insert



diam. d _n	WELDABILITY on pipe/fitting			
	SDR 17		SDR 11	
	PE 80	PE 100	PE 80	PE 100
110x	●	●	●	●
125x	●	●	●	●
140x	●	●	●	●
160x	●	●	●	●

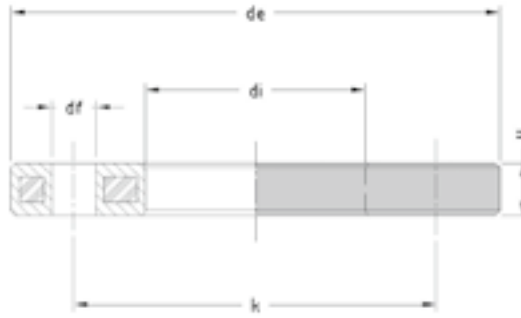
d _n	G	dimensions			weights
		h	df	Z	SDR 11
110	2"	90	54	160	2200
125	2"	91	54	160	2300
140	2"	92	54	160	2450
160	2"	93	54	160	2650

df = maximum thickness pipe boring

- ✓ Inspection required for gas application
- 🔥 Suitable for gas pipeline
- ✓ Brass closing cap with square key
- ✓ Suitable for all normal commercial shut-off equipment
- ✓ PVC external cap with O-ring seal

steel flange covered PP

cod. 20.49



d _n PE	D STEEL	dimensions						holes number	PN	weights
		de	k	h	di	df				
32	25	115	85	16	42	14	4	PN 10/16	555	
40	32	140	100	16	51	18	4	PN 10/16	835	
50	40	150	110	18	62	18	4	PN 10/16	1015	
63	50	165	125	18	78	18	4	PN 10/16	1174	
75	65	188	145	18	92	18	4	PN 10/16	1506	
90	80	204	160	20	108	18	8	PN 10/16	1673	
110	100	224	180	20	128	18	8	PN 10/16	1940	
125	100	224	180	20	135	18	8	PN 10/16	1785	
140	125	252	210	24	158	18	8	PN 10/16	2981	
160	150	285	240	24	178	22	8	PN 10/16	3898	
180	150	285	240	24	188	22	8	PN 10/16	3560	
200	200	340	295	27	235	22	8	PN 10	5713	
225	200	340	295	27	238	22	8	PN 10	5630	
250	250	395	350	30	288	22	12	PN 10	7727	
280	250	395	350	30	294	22	12	PN 10	7354	
315	300	445	400	34	338	22	12	PN 10	9826	
355	350	514	460	40	376	22	16	PN 10	19972 ●	
400	400	571	515	40	430	26	16	PN 10	21583	
450	450/500							PN 10	●	
500	500							PN 10	●	
560	600							PN 10	●	
630	600							PN 10	●	
200	200	340	295	27	235	22	12	PN 16	5401	
225	200	340	295	27	238	22	12	PN 16	5268	
250	250	419	355	32	288	26	12	PN 16	10530	
280	250	419	355	32	294	26	12	PN 16	9995	
315	300	478	410	34	338	26	12	PN 16	13650	
355	350	532	470	42	376	26	16	PN 16	22203 ●	
400	400	592	525	46	430	30	16	PN 16	28084	

● on request

- ✓ Flanges according to standard DIN 16963-4 and internal diameter according to standard ISO 9624
- ✓ The pipeline diameter identifies the choice of the backing flange
- ✓ Inspection required for gas application

Transition fittings

flange



cod. 20.40 aluminium



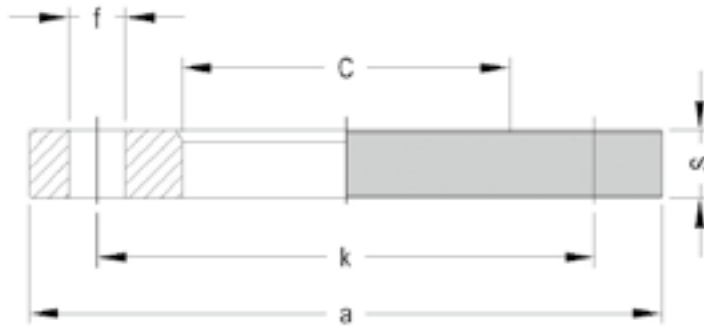
cod. 20.45 steel



cod. 20.46 blank steel

d _n	D	c	Steel			Aluminium		PN 10	PN 16	PN 25	PN 10	PN 16	PN 25
			PN 10	PN 16	PN 25	PN 10	PN 16						
PE	STEEL		s			s		a			k		
32	25	42	16	16	16	12	12	115	115	115	85	85	85
40	32	51	18	18	18	16	16	140	140	140	100	100	100
50	40	62	18	18	18	16	16	150	150	150	110	110	110
63	50	78	20	20	20	20	20	165	165	165	125	125	125
75	65	92	20	20	22	20	20	185	185	185	145	145	145
90	80	108	20	20	24	22	22	200	200	200	160	160	160
110	100	128	22	22	26	22	22	220	220	235	180	180	190
125	100	135	22	22	26	22	22	220	220	235	180	180	190
140	125	158	22	22	28	22	22	250	250	270	210	210	220
160	150	178	24	24	30	24	24	285	285	300	240	240	250
180	150	188	24	24	30	24	24	285	285	300	240	240	250
200	200	235	24	26	32	26	--	340	340	360	295	295	310
225	200	238	24	26	32	26	--	340	340	360	295	295	310
250	250	288	26	29	35	28	--	395	405	425	350	355	370
280	250	294	26	29	35	28	--	395	405	425	350	355	370
315	300	338	26	32	38	28	--	445	460	485	400	410	430
355	350	376	30	35	--	22	★	505	520	--	460	470	--
400	400	430	32	38	--	25	★	565	580	--	515	525	--
450	450/500												
500	500												
560	600												
630	600												

ALUMINIUM	standard	UNI EN 1092-4
STEEL	standard	UNI EN 1092-1
BLANK STEEL	standard	UNI EN 1092-1
INTERNAL DIAMETER	standard	ISO 9624



- ✓ Flanges suitable both PN 16 and PN 10 up to dia. 180, for larger diameters they are different (holes nr., wall thickness and distance between holes)
- ✓ The pipeline diameter identifies the choice of the backing flange
- ✓ Inspection required for gas application

			holes number			weights			
PN 10	PN 16	PN 25				cod. 20.40	cod. 20.45		
f			PN 10	PN 16	PN 25	PN 10/16	PN 10	PN 16	PN 25
14	14	14	4	4	4	250	1060	1060	1140
18	18	18	4	4	4	500	1760	1760	1870
18	18	18	4	4	4	550	1940	1940	2000
18	18	18	4	4	4	690	2340	2340	2400
18	18	18	4	4	8	880	3040	3040	3000
18	18	18	8	8	8	980	3190	3190	4000
18	18	22	8	8	8	1130	4010	4010	5300
18	18	22	8	8	8	1030	3760	3760	5300
18	18	26	8	8	8	1350	4770	4770	7400
22	22	26	8	8	8	1820	6790	6790	8900
22	22	26	8	8	8	1640	6240	6240	8900
22	22	26	8	12	12	2300	8410	8790	12000
22	22	26	8	12	12	2250	8200	8570	12000
22	26	30	12	12	12	3030	10840	13220	18000
22	26	30	12	12	12	2840	10280	12590	18000
22	26	30	12	12	16	3500	12560	17810	24000
22	26	--	16	16	--	5020	19530	25430	--
26	30	--	16	16	--	6500	24290	32000	--
						●	●	●	
						●	●	●	
						●	●	●	
						●	●	●	

★ not reinforced

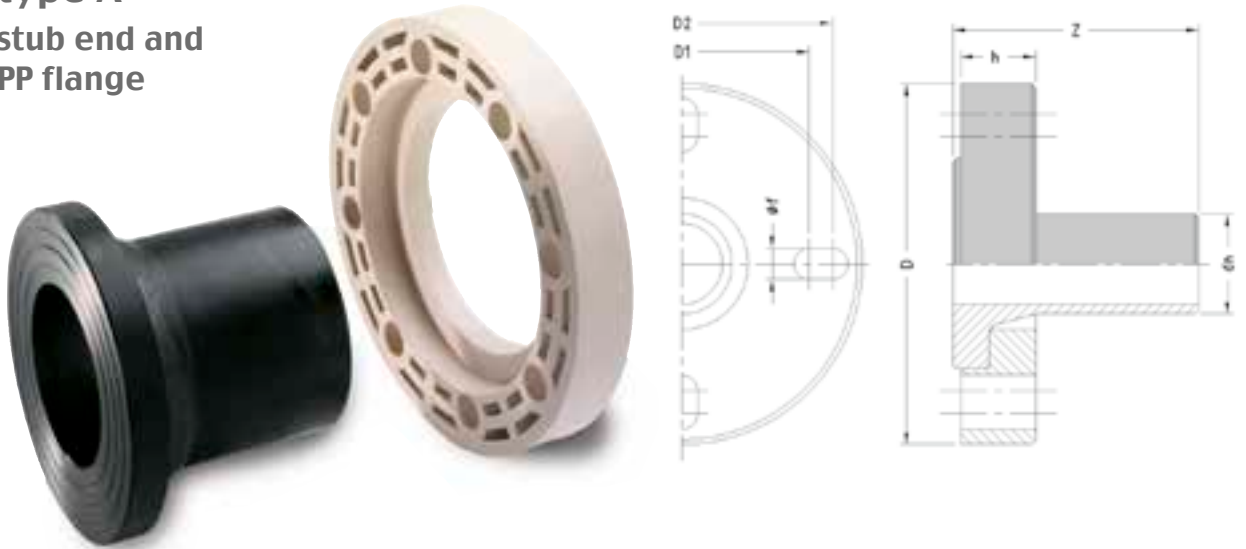
● on request

stub end • PP flange system

cod. 20.47 PE 100

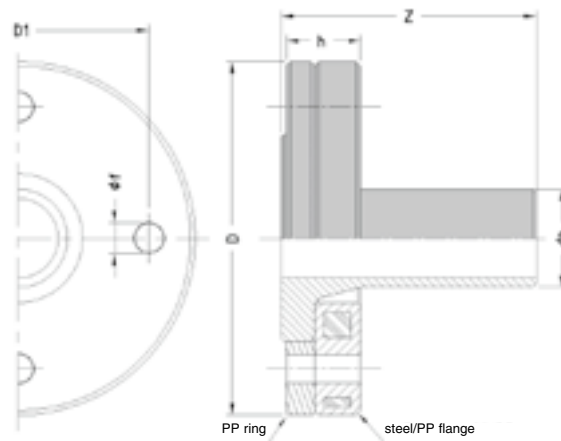
type A

stub end and
PP flange



type B

stub end, steel PP covered
flange and PP ring





Transition fittings

d _n PE	D STEEL	dimensions							weights	PN	type
		D	D1	D2	h	Z	Øf	nr. holes			
40	32/40	150	100	110	24	87	18	4	365	PN 16	A
50	40/50	165	110	125	28	95	18	4	510	PN 16	A
63	50/60/65	183	125	145	30	94	18	4	580	PN 16	A
75	60/65/80	198	135	160	33	107	18	8	750	PN 16	A
90	80	198	160		33	113	18	8	840	PN 16	A
110	100	219	180		35	128	18	8	1135	PN 16	A
125	100	220	180		35	153	18	8	1340	PN 16	A
140	125	252	210		48	156	18	8	4520	PN 16	B
160	150	285	240		53	159	22	8	5970	PN 16	B
180	150	285	240		53	196	22	8	6050	PN 16	B
200	200	340	295		58	182	22	12	8880	PN 16	B
225	200	340	295		58	219	22	12	8960	PN 16	B
250	250	419	355		66	205	26	12	16325	PN 16	B
280	250	419	355		66	235	26	12	16145	PN 16	B
315 ★	300	478	410		68	275	26	12	20760	PN 16	B
200	200	340	295		58	182	22	8	8450	PN 10	B
225	200	340	295		58	219	22	8	9350	PN 10	B
250	250	395	350		64	205	22	12	13210	PN 10	B
280	250	395	350		64	235	22	12	12835	PN 10	B
315 ★	300	445	400		68	275	22	12	19450	PN 10	B

★ stub end with NBR gasket

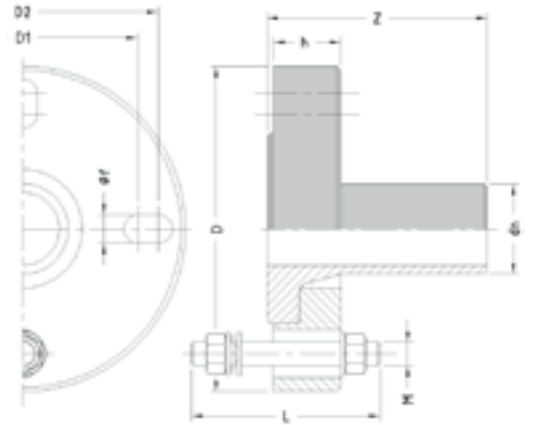
- ✔ For the correct assembling use NBR gaskets
- ✔ Maximum tightness guarantee
- ✔ No deformation
- ✔ Tightening of the thread bar/bolts according to cross sequence

kit antifuage

cod. 20.48 PE 100

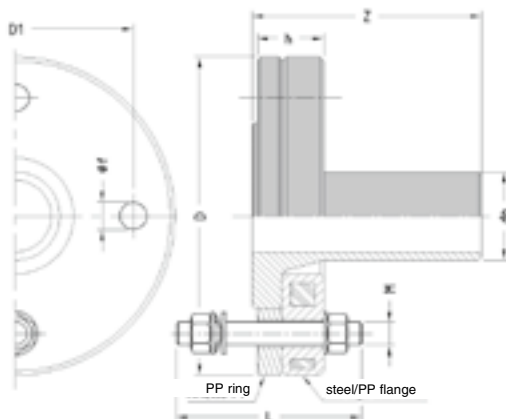
type A

stub end and PP flange



type B

stub end, steel PP covered flange,
PP ring and thread bar set



thread bar set with washers and nuts

galvanized steel



d _n PE	D STEEL	dimensions						nr. holes	thread bar dimensions		weights	PN	type
		D	D1	D2	h	Z	∅ f		thread diameter	shank length			
40	32/40	150	100	110	24	87	18	4	16	120	1400	PN 16	A
50	40/50	165	110	125	28	95	18	4	16	120	1520	PN 16	A
63	50/60/65	183	125	145	30	94	18	4	16	120	1610	PN 16	A
75	60/65/80	198	135	160	33	107	18	8	16	130	2970	PN 16	A
90	80	198	160		33	113	18	8	16	130	3060	PN 16	A
110	100	219	180		35	128	18	8	16	130	3355	PN 16	A
125	100	220	180		35	153	18	8	16	130	3550	PN 16	A
140	125	250	210		46	156	18	8	16	150	6900	PN 16	B
160	150	285	240		53	159	22	8	20	160	9870	PN 16	B
180	150	285	240		53	176	22	8	20	160	9950	PN 16	B
200	200	340	295		57	182	22	12	20	180	15270	PN 16	B
225	200	340	295		57	196	22	12	20	180	15350	PN 16	B
250	250	405	355		63	205	26	12	24	200	26975	PN 16	B
280	250	405	355		63	205	26	12	24	200	26795	PN 16	B
315 ★	300	460	410		66	275	26	12	24	200	31410	PN 16	B
200	200	340	295		58	182	22	8	20	180	12710	PN 10	B
225	200	340	295		58	219	22	8	20	180	13610	PN 10	B
250	250	395	350		64	205	22	12	24	200	20020	PN 10	B
280	250	395	350		64	235	22	12	24	200	19645	PN 10	B
315 ★	300	445	400		68	275	22	12	24	200	26260	PN 10	B

★ stub end with NBR gasket

- ✔ For the correct assembling use NBR gaskets
- ✔ Maximum tightness guarantee
- ✔ No deformation
- ✔ Tightening of the thread bar/bolts according to cross sequence



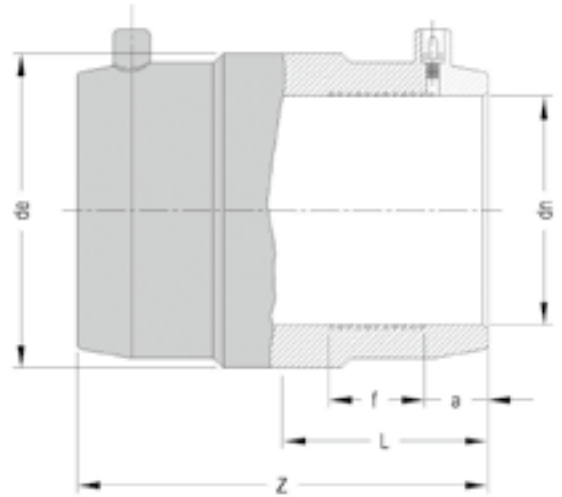
Electrofusion fittings



**Electro-
fusion
fittings**

e-fusion socket

cod. 21.10 PE 100



diam. d _n	WELDABILITY on pipe/fitting											
	SDR 33		SDR 26		SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
20							● ▲	● ▲	● ▲	● ▲	●	●
25							● ▲	● ▲	●	●	●	●
32					● ▲	● ▲	●	●	●	●	●	●
40					● ▲	● ▲	●	●	●	●	●	●
50					●	●	●	●	●	●	●	●
63					●	●	●	●	●	●	●	●
75					●	●	●	●	●	●	●	●
90			●	●	●	●	●	●	●	●	●	●
110			●	●	●	●	●	●	●	●	●	●
125			●	●	●	●	●	●	●	●	●	●
140			●	●	●	●	●	●	●	●	●	●
160			●	●	●	●	●	●	●	●	●	●
180			●	●	●	●	●	●	●	●	●	●
200			●	●	●	●	●	●	●	●	●	●
225			●	●	●	●	●	●	●	●	●	●
250	●	●	●	●	●	●	●	●	●	●	●	●
280	●	●	●	●	●	●	●	●	●	●	●	●
315	●	●	●	●	●	●	●	●	●	●	●	●
355	●	●	●	●	●	●	●	●	●	●	●	●
400	●	●	●	●	●	●	●	●	●	●	●	●

- weldable only with Euro electrofusion monovalent units
- weldable only with monovalent unit Euro S1 or electrofusion universal units with power ≥ 4kW
- ▲ minimum weldable thickness 3 mm

d _n	dimensions					PN - SDR	weights
	d _e	L	f	a	Z		
20	33	33	15	13	70	PN 25 – SDR 7,4	45
25	38	33	15	12	70	PN 25 – SDR 7,4	55
32	46	38	19	12	80	PN 25 – SDR 7,4	75
40	56	44	22	13	90	PN 25 – SDR 7,4	110
50	68	49	23	14	100	PN 25 – SDR 7,4	155
63	82	54	26	18	111	PN 25 – SDR 7,4	225
75	99	60	36	14	120	PN 25 – SDR 7,4	330
90	116	65	37	14	130	PN 25 – SDR 7,4	490
110	145	70	36	18	140	PN 25 – SDR 7,4	800
125	163	76	39	18	151	PN 25 – SDR 7,4	1060
140	183	81	48	18	161	PN 25 – SDR 7,4	1440
160	207	86	53	20	172	PN 25 – SDR 7,4	1950
180	228	97	56	23	193	PN 20 ★ – SDR 9	2550
200	252	101	65	22	203	PN 20 ★ – SDR 9	3440
225	276	112	67	22	223	PN 20 ★ – SDR 9	4190
250	312	122	60	32	244	PN 20 ★ – SDR 9	5900
280	341	133	55	38	265	PN 16 ★ – SDR 11	7100
315	392	142	70	37	284	PN 20 ★ – SDR 9	10750
355	430	156	60	45	312	PN 16 ★ – SDR 11	11750
400	461	170	60	41	340	PN 10 ★ – SDR 17	14150

★ pressure class guaranteed by Eurostandard **25 bar**

★ pressure class guaranteed by Eurostandard **20 bar**

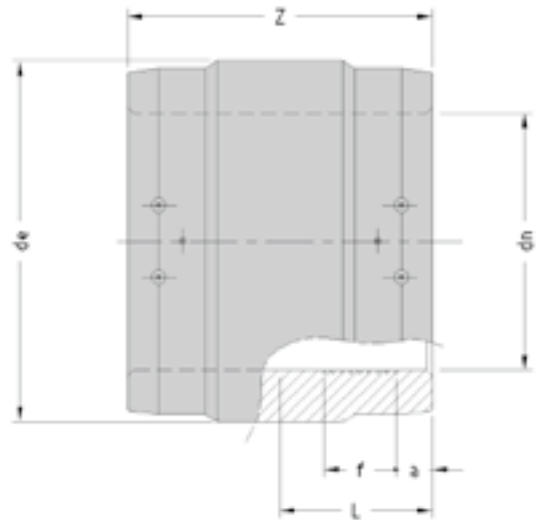


Electro-
fusion
fittings

- ✓ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✓ **ABSOLUTELY compulsory the pipes/fittings scraping**
- ✓ **Weldability guaranteed both on different wall thickness (SDR) and PE**

e-fusion socket

cod. 21.10 PE 100



diam. d _n	WELDABILITY on pipe/fitting						
	SDR 26		SDR 17		SDR 11		SDR 9
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80
450	●	●	●	●	●	●	●
500	●	●	●	●	●	●	●
560	●	●	●	●	●	●	●
630	●	●	●	●	●	●	●

● weldable only with universal electrofusion units with power ≥ 4kW

d _n	dimensions					PN - SDR	weights
	d _e	L	f	a	Z		
450	527	175	59	45	350	PN 12,5 ★ – SDR 13,6	16500
500	585	179	87	36	359	PN 12,5 ★ – SDR 13,6	22000
560	656	195	90	50	390	PN 12,5 ★ – SDR 13,6	33200
630	736	210	99	50	420	PN 12,5 ★ – SDR 13,6	46850

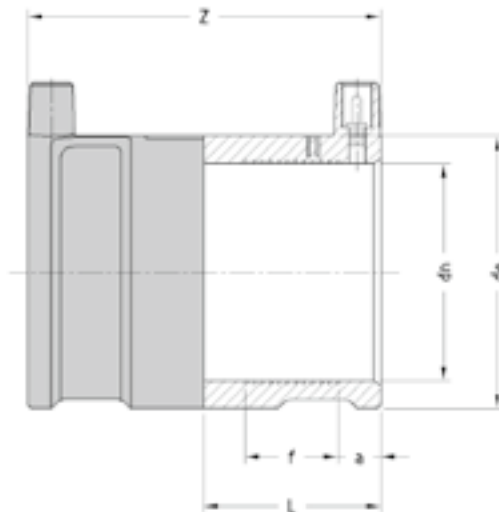
★ pressure class guaranteed by Eurostandard **16 bar**

Socket dia. 500 - 560 - 630

- ✔ Two separate fusion zones and electrically independent
- ✔ Supplied with pre-pulled belts (no need of regulation) to avoid any expansion

e-fusion socke PN 16 - SDR11

cod. 21.80 PE 100



diam. d _n	WELDABILITY on pipe/fitting						
	SDR 26		SDR 17		SDR 11		SDR 9
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80
75			●	●	●	●	●
90	●	●	●	●	●	●	●
110	●	●	●	●	●	●	●
125	●	●	●	●	●	●	●
140	●	●	●	●	●	●	●
160	●	●	●	●	●	●	●
180	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units

d _n	dimensions					PN - SDR	weights
	d _e	L	f	a	Z		
75	93	61	36	15	121	PN 16 - SDR 11	270
90	114	66	37	15	132	PN 16 - SDR 11	430
110	137	70	36	18	140	PN 16 - SDR 11	645
125	153	76	39	18	152	PN 16 - SDR 11	840
140	171	82	48	19	163	PN 16 - SDR 11	1090
160	198	86	45	22	172	PN 16 - SDR 11	1550
180	223	100	51	25	199	PN 16 - SDR 11	2150

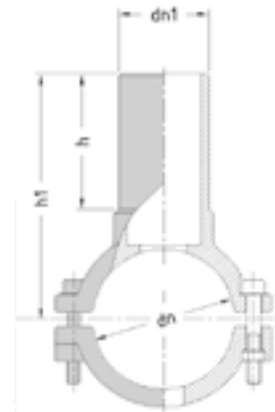
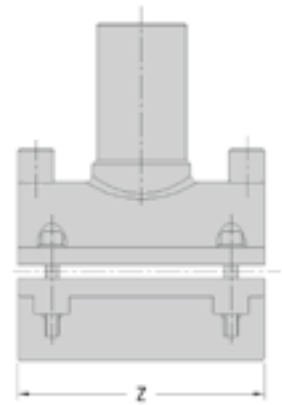
- ✓ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✓ **ABSOLUTELY compulsory the pipes/fitings scraping**
- ✓ **Weldability guaranteed both on different wall thickness (SDR) and PE**



Electro-
fusion
fitings

e-fusion spigot saddle

cod. 21.20 PE 100



diam. d_n	WELDABILITY on pipe/fitting						
	SDR 26		SDR 17		SDR 11		SDR 9
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80
40x					●	●	●
50x					●	●	●
63x			●	●	●	●	●
75x			●	●	●	●	●
90x			●	●	●	●	●
110x			●	●	●	●	●
125x			●	●	●	●	●
140x			●	●	●	●	●
160x	●	●	●	●	●	●	●
180x	●	●	●	●	●	●	●
200x	●	●	●	●	●	●	●
225x	●	●	●	●	●	●	●
250x	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units

- ✓ Boring after cooling is completed
- ✓ Weldability guaranteed both on PE 80 and PE 100 pipelines
- ✓ Use steel cutter suitable for the largest inside branch diameter
- ✓ ABSOLUTELY compulsory the pipe scraping in the welding area

d _n d _{n1}	dimensions				weights
	h	h ₁	Z	d _f	PN 16 SDR 11
40x 20 x 25 x 32	monobloc version page 62-63				
50x 20 x 25 x 32	52 59 110	159 165 170	101 101 101	13 17 25	300 300 300
63x 20 x 25 x 32 x 40 x 50	56 56 56 61 65	106 106 106 111 122	110 110 110 110 110	13 17 25 32 38	280 280 280 290 280
75x 25 x 32 x 40 x 50 x 63	65 65 70 80 90	123 123 128 144 159	125 125 125 125 125	17 25 32 38 48	400 405 415 445 500
90x 20 x 25 x 32 x 40 x 50 x 63	55 55 55 60 65 73	121 121 121 126 137 150	125 125 125 125 125 125	13 17 25 32 38 48	450 460 470 460 500 610
110x 25 x 32 x 40 x 50 x 63	monobloc version page 62-63				
125x 25 x 32 x 40 x 50 x 63 x 90	56 57 62 67 75 93	143 143 147 158 173 191	160 160 160 160 160 190	17 25 32 38 48 72	1100 1140 1145 1150 1000 1260
140x 25 x 32 x 40 x 50 x 63	65 65 70 80 90	159 159 163 179 194	160 160 160 160 160	17 25 32 38 48	920 925 935 965 1025

d _n d _{n1}	dimensions				weights
	h	h ₁	Z	d _f	PN 16 SDR 11
160x 25 x 32 x 40 x 50 x 63 x 90 x 110	65 65 73 80 90 90 96	169 169 173 189 204 208 216	160 160 160 160 160 190 190	17 25 32 38 48 72 88	680 700 710 740 800 1700 1890
180x 25 x 32 x 40 x 50 x 63 x 90 x 110	56 65 70 80 90 93 94	221 179 183 199 214 218 226	160 160 160 160 160 190 190	17 25 32 38 48 72 88	1800 1235 1245 1275 1325 2110 2250
200x 25 x 32 x 40 x 50 x 63 x 90 ● x 110 ●	65 65 70 80 90 93 93	189 189 193 210 225 229 237	160 160 160 160 160 190 190	17 25 32 38 48 72 88	1680 1690 1700 1730 1780 2000 2160
225x 25 x 32 x 40 x 50 x 63 x 90 ● x 110 ●	65 65 70 80 90 93 98	201 201 206 222 237 241 249	160 160 160 160 190 190 190	17 25 32 38 48 72 88	1880 1890 1900 1930 1980 2200 2360
250x 32 x 40 x 50 x 63 x 90 ● x 110 ●	58 63 68 77 93 98	205 210 221 234 254 262	190 190 190 190 190 190	25 32 38 48 72 88	2200 2200 2200 2200 2750 2900

● with reinforce steel clip



Electro-
fusion
fittings

e-fusion tapping saddle

cod. 21.30 PE 100



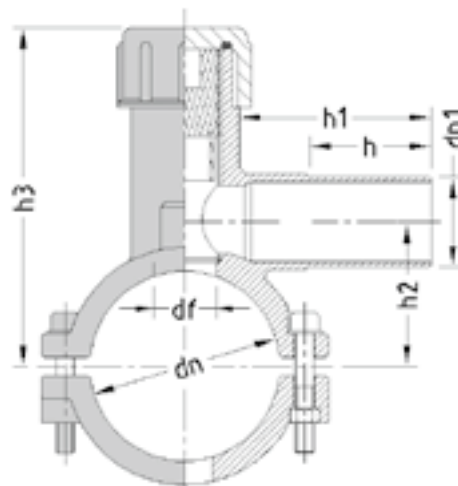
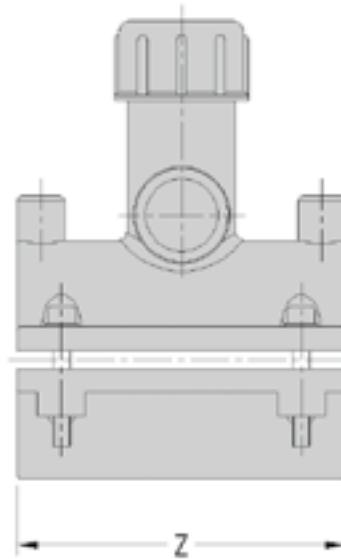
			dimensions					weights		
d _n	d _{n1}	d _f	h	h ₁	h ₂	h ₃	Z	PN 16 SDR 11		
40x	20		monobloc version page 64-65							
x	25									
x	32									
50x	20	16	50	54	71	131	101	290		
x	25	16	54	54	71	131	101	290		
x	32	18	60	78	40	102	102	290		
63x	20	25	70	90	55	136	110	430		
x	25	25	70	90	55	136	110	460		
x	32	25	70	105	55	136	110	470		
x	40	25	70	120	55	136	110	510		
75x	20	25	70	90	63	133	125	610		
x	25	25	70	90	63	133	125	585		
x	32	25	70	107	74	133	125	600		
x	40	25	72	120	63	133	125	610		
x	50	30	72	120	63	160	125	770		
x	63	30	93	120	63	160	125	610		
90x	20	25	70	90	70	146	125	660		
x	25	25	70	90	70	146	125	660		
x	32	25	70	105	70	146	125	660		
x	40	25	72	120	70	146	125	660		
x	50	30	72	120	73	171	125	660		
x	63	30	93	120	73	171	125	880		
110x	20		monobloc version page 64-65							
x	25									
x	32									
x	40									
x	50									
x	63									
125x	20	25	70	90	87	165	160	1230		
x	25	25	70	90	87	165	160	1110		
x	32	25	70	108	84	165	160	1125		
x	40	25	72	120	87	165	160	1155		
x	50	30	72	120	87	187	160	1295		
x	63	30	83	120	87	187	160	1330		

d_f = cutter diameter

diam. d _n	WELDABILITY on pipe/fitting					
	SDR 26		SDR 17		SDR 11	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
40x					●	●
50x					●	●
63x			●	●	●	●
75x			●	●	●	●
90x			●	●	●	●
110x			●	●	●	●
125x			●	●	●	●
140x			●	●	●	●
160x	●	●	●	●	●	●
180x	●	●	●	●	●	●
200x	●	●	●	●	●	●
225x	●	●	●	●	●	●
250x	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units

			dimensions					weights
d_n	d_{n1}	d_f	h	h_1	h_2	h_3	Z	PN 16 SDR 11
140x	20	25	70	90	96	165	160	1350
x 25	25	25	70	90	96	165	160	1350
x 32	25	25	70	105	96	165	160	1335
x 40	25	25	72	120	96	165	160	1350
x 50	30	25	72	120	96	167	160	1350
x 63	30	25	73	120	96	167	160	1585
160x	20	25	70	90	108	184	160	1375
x 25	25	25	70	90	104	184	160	1395
x 32	25	25	70	106	105	185	160	1400
x 40	25	25	72	120	104	185	160	1400
x 50	30	25	72	120	104	208	160	1400
x 63	30	25	72	120	104	208	160	1600
180x	20	25	70	90	110	192	160	1750
x 25	25	25	70	90	110	192	160	1765
x 32	25	25	70	105	110	192	160	1775
x 40	25	25	72	120	110	192	160	1775
x 50	30	25	72	120	110	194	160	1775
x 63	30	25	72	120	110	194	160	2118
200x	20	25	70	90	126	204	160	1850
x 25	25	25	70	90	126	204	160	1910
x 32	25	25	70	105	126	204	160	2040
x 40	25	25	72	120	126	204	160	1910
x 50	30	25	72	120	126	194	160	1910
x 63	30	25	64	120	126	194	160	2095
225x	20	25	70	90	140	216	160	2055
x 25	25	25	70	90	140	216	160	2080
x 32	25	25	70	105	140	216	160	2070
x 40	25	25	72	120	140	216	160	2080
x 50	30	25	72	120	140	218	160	2080
x 63	30	25	64	120	140	218	160	2290
250x	20	25	70	90	151	264	160	2475
x 25	25	25	70	90	151	264	160	2400
x 32	30	25	70	105	151	266	160	2595
x 40	30	25	72	120	151	266	160	2400
x 50	30	25	72	120	151	266	160	2400
x 63	30	25	64	120	151	266	160	2935



Electro-
fusion
fittings

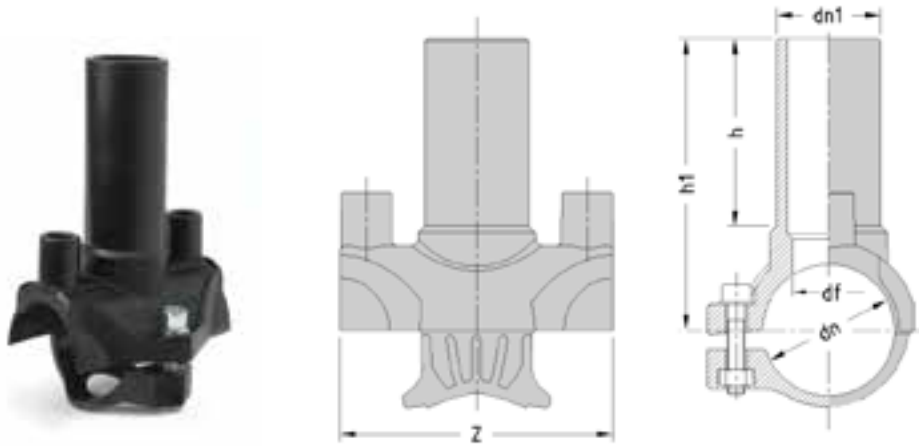
- ✔ Boring after cooling phase is completed
- ✔ Weldability guaranteed both on PE 80 and PE 100 pipelines
- ✔ Suitable for application on pipelines under pressure gas and water
- ✔ ABSOLUTELY compulsory the pipe scraping in the welding area
- ✔ Do not remove the cutter after boring

e-fusion spigot saddle

monobloc version

cod. 21.20A PE 100

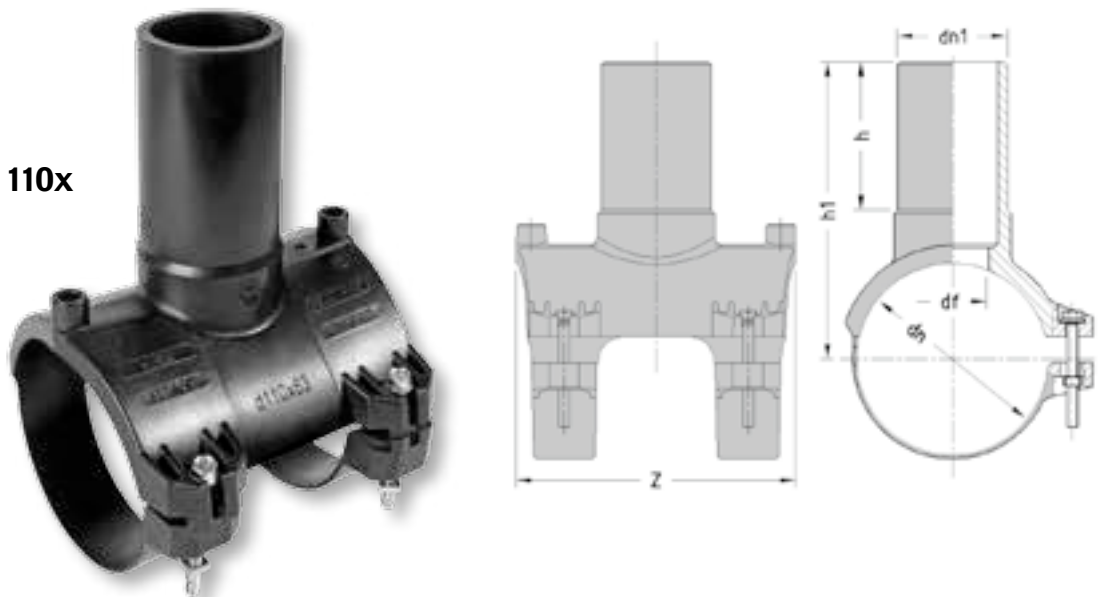
diam. 40x



diam. dn	WELDABILITY on pipe/fitting				
	SDR 17		SDR 11		SDR 9
	PE 80	PE 100	PE 80	PE 100	PE 80
40x	●	●	●	●	●
63x	●	●	●	●	●
90x	●	●	●	●	●
110x	●	●	●	●	●

- weldable only with electrofusion universal units
- weldable only with Euro electrofusion monovalent units

diam. 110x



		dimensions				weights
d _n	d _{n1}	h	h ₁	Z	df	PN 16 SDR 11
40x	20	65	99	84	13	75
x	25	65	100	84	17	80
x	32	65	101	84	25	85
63x	20	60	110	110	13	●
x	25	60	110	110	17	●
x	32	65	112	110	25	●
x	40	65	115	110	32	●
x	50	80	135	110	38	●
90x	20	60	122	125	13	●
x	25	60	127	125	17	●
x	32	65	131	125	25	●
x	40	65	131	125	32	●
x	50	80	151	125	38	●
x	63	85	160	125	48	●
110x	25	60	137	162	17	360
x	32	65	141	162	25	365
x	40	65	141	162	32	375
x	50	80	161	162	38	405
x	63	85	170	162	48	450

● in preparation



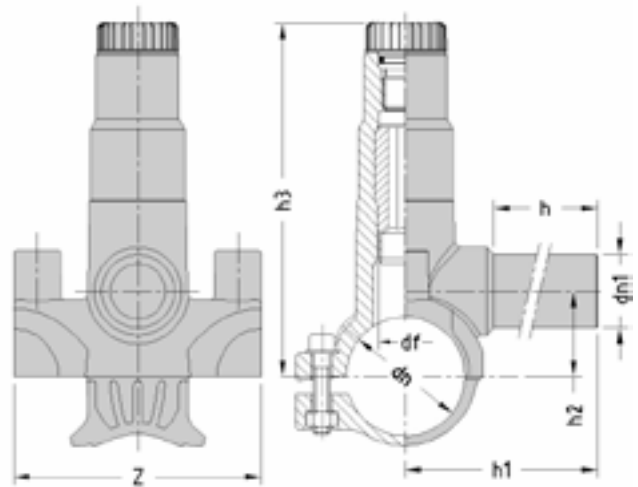
Electro-
fusion
fittings

- ✓ Boring after cooling is completed
- ✓ Weldability guaranteed both on PE 80 and PE 100 pipelines
- ✓ ABSOLUTELY compulsory the pipe scraping in the welding area
- ✓ Use steel cutter suitable for the largest inside branch diameter

e-fusion tapping saddle

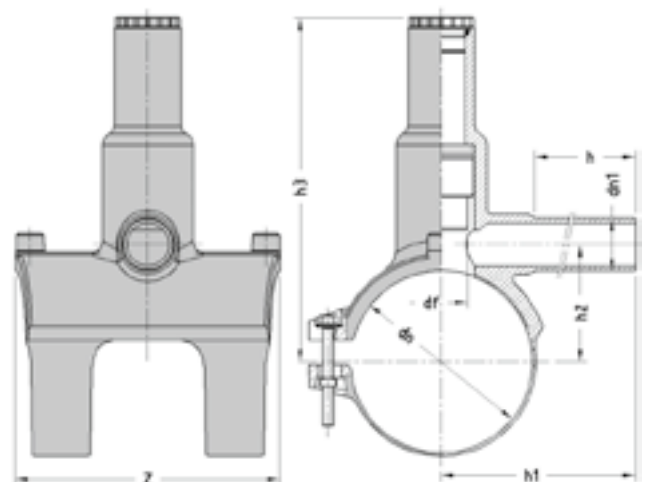
monobloc version

cod. 21.30A PE 100



diam. d _n	WELDABILITY on pipe/fitting			
	SDR 17		SDR 11	
	PE 80	PE 100	PE 80	PE 100
40x			●	●
63x	●	●	●	●
90x	●	●	●	●
110x	●	●	●	●

- weldable only with electrofusion universal units
- weldable only with Euro electrofusion monovalent units



		dimensions					weights	
d _n	d _{n1}	h	h ₁	h ₂	h ₃	Z	PN 16 SDR 11	
40x	20	66	96	29	110	84	190	
x	25	66	96	29	110	84	200	
x	32	66	96	29	110	84	205	
63x	20	72	110	43	150	110	●	
x	25	72	110	43	150	110	●	
x	32	76	114	43	185	110	●	
x	40	76	114	43	185	110	●	
x	50	80	118	48	185	110	●	
x	63	82	120	48	185	110	●	
90x	20	76	120	60	195	125	●	
x	25	76	120	60	195	125	●	
x	32	76	125	60	195	125	●	
x	40	76	129	60	195	125	●	
x	50	80	134	60	195	125	●	
x	63	85	138	60	195	125	●	
110x	20	76	130	71	208	162	570	
x	25	76	130	71	208	162	595	
x	32	76	135	71	208	162	605	
x	40	76	139	71	208	162	615	
x	50	80	144	71	208	162	640	
x	63	85	148	71	208	162	675	

● in preparation

- ✔ Boring after cooling is completed
- ✔ Weldability guaranteed both on PE 80 and PE 100 pipelines
- ✔ Suitable for application on pipelines under pressure gas and water
- ✔ **ABSOLUTELY** compulsory the pipe scraping in the welding zone
- ✔ No leakage from the cutter during the boring phase (except dia. 40x)
- ✔ Cutter supplied with upper stroke end
- ✔ Seal closing possible with electrofusion cap (except dia. 40x)



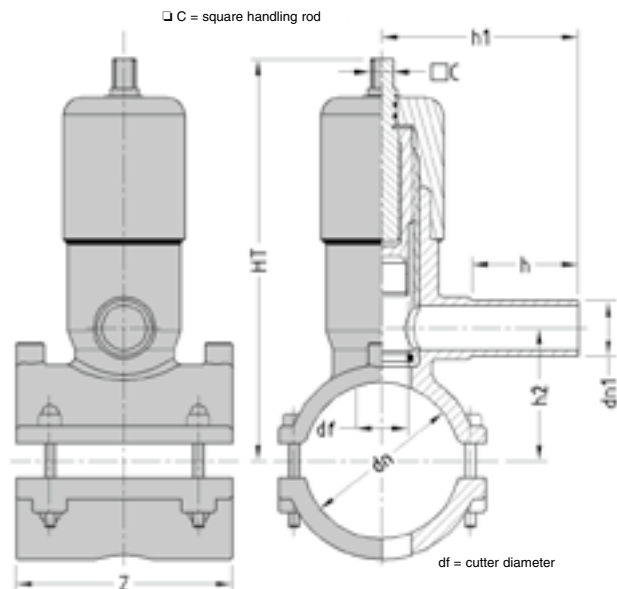
Electro-
fusion
fittings

e-fusion tapping saddle with valve

cod. 21.73 PE 100



diam. d_n	WELDABILITY on pipe/fitting			
	SDR 17		SDR 11	
	PE 80	PE 100	PE 80	PE 100
75x	●	●	●	●
90x	●	●	●	●
110x	●	●	●	●
125x	●	●	●	●
140x	●	●	●	●
160x	●	●	●	●
180x	●	●	●	●
200x	●	●	●	●
225x	●	●	●	●
250x	●	●	●	●



- ✓ Boring after cooling is completed
- ✓ Weldability guaranteed both on PE 80 and PE 100 pipelines
- ✓ Suitable for application on pipelines under pressure gas and water
- ✓ ABSOLUTELY compulsory the pipe scraping in the welding zone
- ✓ Integrated closing valve
- ✓ Handling rod with square conical connection of 13/15 mm

		dimensions						weights
		d _n	d _{n1}	h	h ₁	h ₂	HT	Z
75	32	80	128	69	260	125	30	1615
	x 63	93	147	69	260	125	30	1705
90x	32	80	128	69	267	125	30	1690
	x 63	93	147	69	267	125	30	1770
110x	32	80	128	69	278	160	30	1990
	x 63	83	147	69	278	160	30	1990
125x	32	80	128	69	285	160	30	2115
	x 63	83	147	69	285	160	30	2185
140x	32	83	128	69	293	160	30	2225
	x 63	73	147	69	293	160	30	2305
160x	32	80	128	69	303	160	30	2395
	x 63	72	147	69	303	160	30	2465
180x	32	80	128	69	313	160	30	2750
	x 63	72	147	69	313	160	30	2820
200x	32	80	128	69	216	160	30	2860
	x 63	64	147	69	216	160	30	2950
225x	32	80	128	69	243	160	30	3050
	x 63	64	147	69	243	160	30	3120
250x	32	80	128	69	265	160	30	3445
	x 63	64	147	69	265	160	30	3525

handling rod for ef tapping saddle with valve

cod. 21.73.50

fixed length



protection pipe

length mt.
0,75
1,25
1,50

cod. 21.73.60

telescopic length



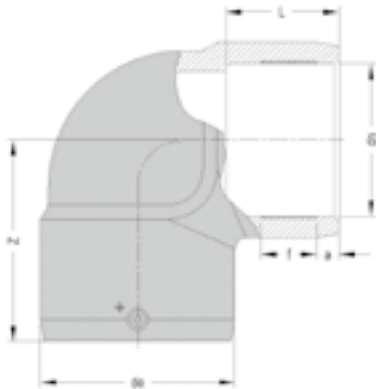
length mt.
0,80-1,20
0,90-1,50
1,10-1,90
1,40-2,50



Electro-
fusion
fittings

90° electrofusion elbow

cod. 21.11 PE 100



diam. dn	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
20			● ▲	● ▲	● ▲	● ▲	●	●
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●
75	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●
110	●	●	●	●	●	●	●	●
125	●	●	●	●	●	●	●	●
140	●	●	●	●	●	●	●	●
160	●	●	●	●	●	●	●	●
180	●	●	●	●	●	●	●	●
200	●	●	●	●	●	●	●	●

- weldable only with Euro electrofusion monovalent units
- ▲ minimum weldable thickness 3 mm

dn	dimensions					PN - SDR	weights
	de	L	f	a	Z		
20	34	33	15	10	55	PN 25 - SDR 7,4	70
25	38	33	15	9	57	PN 25 - SDR 7,4	80
32	46	39	18	10	75	PN 25 - SDR 7,4	130
40	56	48	25	11	80	PN 25 - SDR 7,4	190
50	68	54	27	12	89	PN 25 - SDR 7,4	300
63	83	52	27	13	104	PN 25 - SDR 7,4	450
75	97	64	29	18	116	PN 25 - SDR 7,4	665
90	116	70	37	18	130	PN 25 - SDR 7,4	1040
110	142	76	39	20	146	PN 25 - SDR 7,4	1615
125	162	79	42	19	152	PN 16 - SDR 11	2130
140	174	85	38	20	166	PN 16 - SDR 11	2520
160	206	89	45	20	180	PN 16 - SDR 11	4050
180	226	116	50	23	215	PN 16 - SDR 11	4900
200	251	118	55	23	229	PN 16 - SDR 11	6450

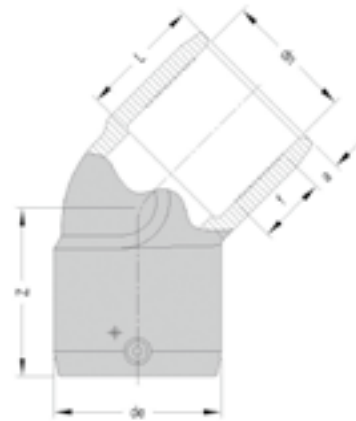
- ✓ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✓ **ABSOLUTELY compulsory the pipes scraping**
- ✓ **Weldability guaranteed both on PE 80 and PE 100 pipelines**

45° electrofusion elbow

cod. 21.16 PE 100



diam. d _n	WELDABILITY on pipe/fitting							
	SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
25			● ▲	● ▲	●	●	●	●
32	● ▲	● ▲	●	●	●	●	●	●
40	● ▲	● ▲	●	●	●	●	●	●
50	●	●	●	●	●	●	●	●
63	●	●	●	●	●	●	●	●
75	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●
110	●	●	●	●	●	●	●	●
125	●	●	●	●	●	●	●	●
140	●	●	●	●	●	●	●	●
160	●	●	●	●	●	●	●	●
180	●	●	●	●	●	●	●	●
200	●	●	●	●	●	●	●	●



- weldable only with Euro electrofusion monovalent units
- ▲ minimum weldable thickness 3 mm

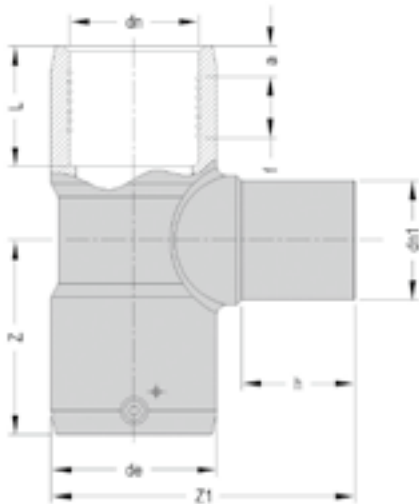
d _n	dimensions					PN - SDR	weights
	d _e	L	f	a	Z		
25	39	33	15	10	55	PN 25 - SDR 7,4	80
32	46	39	18	10	57	PN 25 - SDR 7,4	110
40	56	48	25	11	70	PN 25 - SDR 7,4	175
50	68	54	27	12	75	PN 25 - SDR 7,4	260
63	82	52	27	13	86	PN 25 - SDR 7,4	390
75	97	64	29	18	98	PN 25 - SDR 7,4	610
90	116	70	37	18	110	PN 25 - SDR 7,4	905
110	142	76	39	20	114	PN 25 - SDR 7,4	1415
125	162	79	42	19	119	PN 16 - SDR 11	1830
140	177	86	39	20	134	PN 16 - SDR 11	2200
160	206	89	45	20	134	PN 16 - SDR 11	3400
180	223	105	50	28	165	PN 16 - SDR 11	4050
200	250	112	55	29	171	PN 16 - SDR 11	5560

- ✔ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✔ **ABSOLUTELY compulsory the pipes scraping**
- ✔ **Weldability guaranteed both on PE 80 and PE 100 pipelines**

Electro-
fusion
fittings

te 90° electrofusion tee

cod. 21.21 PE 100



- weldable only with Euro electrofusion monovalent units
- ▲ minimum weldable thickness 3 mm

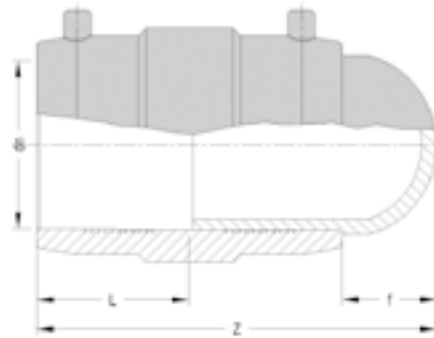
diam. dn	WELDABILITY on pipe/fitting				
	SDR 17		SDR 11		SDR 9
	PE 80	PE 100	PE 80	PE 100	PE 80
25			● ▲	● ▲	●
32	● ▲	● ▲	●	●	●
40	● ▲	● ▲	●	●	●
50	●	●	●	●	●
63	●	●	●	●	●
75	●	●	●	●	●
90	●	●	●	●	●
110	●	●	●	●	●
125	●	●	●	●	●
140	●	●	●	●	●
160	●	●	●	●	●
180	●	●	●	●	●
200	●	●	●	●	●

dn	dn1	de	dimensions						Z1	weights PN 16 - SDR 11
			L	f	a	h	Z			
25	25	39	33	15	11	60	53	111	95	
32	32	44	44	28	10	48	64	94	105	
40	40	54	49	37	11	57	73	112	175	
50	50	66	55	36	12	62	81	128	300	
63	63	81	61	32	13	72	94	153	420	
75	75	96	64	29	18	75	113	176	700	
90	90	116	70	37	18	85	125	202	1170	
110	110	141	76	39	20	84	141	233	1725	
125	125	161	79	42	19	100	156	269	2800	
140	140	174	85	38	20	121	150	308	3050	
160	160	206	89	51	20	127	184	350	5570	
180	180	227	105	48	23	130	188	368	6340	
200	200	252	112	55	23	135	205	400	8230	

- ✔ ABSOLUTELY compulsory the use of aligning clamp for all diameters
- ✔ ABSOLUTELY compulsory the pipes scraping
- ✔ Weldability guaranteed both on PE 80 and PE 100 pipelines

electrofusion cap

cod. 21.36 PE 100



diam. d _n	WELDABILITY on pipe/fitting									
	SDR 26		SDR 17		SDR 11		SDR 9		SDR 7,4	
	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100	PE 80	PE 100
20					● ▲	● ▲	● ▲	● ▲	●	●
25					● ▲	● ▲	●	●	●	●
32			● ▲	● ▲	●	●	●	●	●	●
40			● ▲	● ▲	●	●	●	●	●	●
50			●	●	●	●	●	●	●	●
63			●	●	●	●	●	●	●	●
75			●	●	●	●	●	●	●	●
90			●	●	●	●	●	●	●	●
110			●	●	●	●	●	●	●	●
125			●	●	●	●	●	●	●	●
140			●	●	●	●	●	●	●	●
160	●	●	●	●	●	●	●	●	●	●
180			●	●	●	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units
▲ minimum weldable thickness 3 mm

d _n	dimensions PN 16 - SDR 11			dimensions PN 25 - SDR 7,4			weights	
	f	L	Z	f	L	Z	PN 16 - SDR 11	PN 25 - SDR 7,4
20				30	33	100		60
25				27	33	104		75
32				31	38	98		100
40				29	44	114		155
50				32	49	127		250
63				49	55	136		360
75	41	61	162	41	60	164	430	550
90	42	66	174	52	65	164	680	850
110	49	70	189	61	70	187	1075	1400
125	42	76	194	42	76	198	1440	1800
140	51	82	214	51	81	207	1900	2400
160	48	86	220	45	86	211	2535	3300
180	50	100	249				3635	●
200								●

● on request

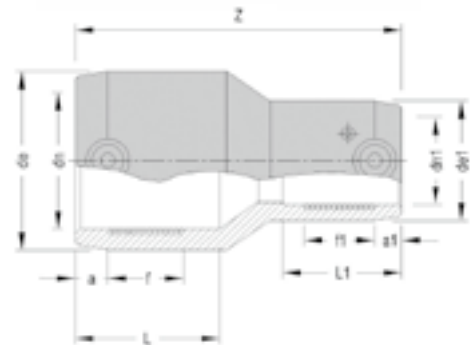
- ✓ **ABSOLUTELY compulsory the pipe scraping**
- ✓ **Weldability guaranteed both on PE 80 and PE 100 pipelines**



Electro-
fusion
fittings

electrofusion reducer

cod. 21.51 PE 100



diam.		WELDABILITY on pipe/fitting				
d _n		SDR 17		SDR 11		SDR 9
		PE 80	PE 100	PE 80	PE 100	PE 80
32x	20			● ▲	● ▲	● ▲
32x	25			● ▲	● ▲	●
40x	20			● ▲	● ▲	● ▲
40x	25			● ▲	● ▲	●
40x	32	● ▲	● ▲	●	●	●
50x	25	● ▲	● ▲	● ▲	● ▲	●
50x	32	● ▲	● ▲	●	●	●
50x	40	● ▲	● ▲	●	●	●
63x	32	● ▲	● ▲	●	●	●
63x	40	● ▲	● ▲	●	●	●
63x	50	●	●	●	●	●
75x	63			●	●	●
90x	50	●	●	●	●	●
90x	63	●	●	●	●	●
90x	75	●	●	●	●	●
110x	63			●	●	●
110x	90	●	●	●	●	●
125x	90	●	●	●	●	●
125x	110	●	●	●	●	●
160x	90	●	●	●	●	●
160x	110	●	●	●	●	●
160x	125	●	●	●	●	●

● weldable only with Euro electrofusion monovalent units
▲ minimum weldable thickness 3 mm

d _n	d _{n1}	dimensions								weights	
		d _e	d _{e1}	L	L ₁	f	f ₁	a	a ₁	Z	PN 16 - SDR 11
32x	20	44	32	46	38	34	22	10	10	105	75
32x	25	45	36	44	45	31	21	10	10	103	75
40x	20	55	33	49	39	27	22	11	10	120	105
40x	25	55	36	48	40	27	21	11	10	114	100
40x	32	55	44	54	50	30	29	11	10	109	100
50x	25	67	37	49	40	27	21	12	10	126	140
50x	32	66	44	53	49	30	29	12	10	121	170
50x	40	66	54	55	54	33	33	12	11	119	200
63x	32	81	46	62	44	31	24	15	12	156	245
63x	40	81	54	63	54	29	20	15	13	137	250
63x	50	81	66	62	54	26	23	16	16	131	250
75x	63	97	81	75	62	34	33	13	13	160	395
90x	50	117	66	79	55	45	25	18	16	185	555
90x	63	115	81	77	62	45	33	15	13	160	515
90x	75	115	97	81	60	39	30	18	18	159	550
110x	63	144	83	79	63	40	33	20	15	201	905
110x	90	141	115	87	77	41	39	19	18	181	860
125x	90	162	118	78	68	42	34	22	17	177	1100
125x	110	162	144	79	73	33	36	22	20	164	1225
160x	90	209	119	90	79	50	50	23	17	233	2130
160x	110	208	144	95	82	48	37	25	20	218	2400
160x	125	208	162	98	87	47	30	26	21	208	2505

- ✓ ABSOLUTELY compulsory the use of aligning clamp for all diameters
- ✓ ABSOLUTELY compulsory the pipes scraping
- ✓ Weldability guaranteed both on PE 80 and PE 100 pipelines

Welding units and equipment



Electro-
fusion units

monovalent electrofusion units

with USB port

The monovalent control unit can only be used to weld PE e-fusion fittings from a single manufacturer. No guaranteed results can be given for any use with other fittings.

The units **EURO S1** and **EURO S1 LIGHT** are monovalent control units suitable for welding of all electrofusion fittings series "EURO" and allow the Operator to work at a welding safety voltage lower than 50 V, are manufactured according to the UNI 10566 – ISO 12176-2 regulations, are furnished with CE mark.

The heating power is automatically fixed according to the type and diameter of the e-fitting, to the SDR of the pipe/fitting to be welded and to the ambient temperature.

The units **EURO S1** and **EURO S1 LIGHT** use a switching technology which permit to be light and compact.

The display guides the Operator when setting the parameters: type of fitting to be welded – nominal diameter – SDR and consequently shows: ambient temperature, welding voltage, welding time, a progressive number of welding operations, alarm or malfunctioning messages.

The control units **EURO S1** and **EURO S1 LIGHT** are designed to store the Operator code, the work site, the date and time of electrofusion and the welding parameters.

For data transfer the units **EURO S1** and **EURO S1 LIGHT** are supplied with USB connection port and serial port.

The **software DBManager** is stored on the USB drive, permits the data transfer from the USB drive to PE and the management of the printing operations and the storage of the transferred data.

The welding unit must be submitted to periodic overhaul (biennial) according to the UNI 10566 standard.



Euro S1
cod. 12.12 S1



Euro S1 Light
cod. 12.12 S1L

CHARACTERISTICS	EURO S1	EURO S1 LIGHT
supply voltage	230V ± 15%	
frequency	50 Hz ± 15%	
output voltage	< 50V	
max power consumption	4500 W	3000 W
operating temperature	-10°C + 45°C	
port connections	USB serial RS-232	
protection	IP 54	
welding cycle memory capacity	n. 1600	n. 800
dimensions LxPxH	36x21x31 cm	35x19x30 cm
weldable diameters	the complete electrofusion EUROSTANDARD range	electrofusion sockets and fitting d. 20-160 ef saddles d. 40x - 250x
weight	14 Kg	8 Kg

polyvalent electrofusion unit

with USB port

The ef unit **EURO SP1** is an universal machine for the welding of electrofusion fittings with welding safety voltage lower than 50 Volt, manufactured according to UNI 10566 and ISO 12176-2 and is furnished with CE mark. The ef unit can work in automatic through the welding bar code reading and traceability by means of a scanner, or in manual system by setting of welding voltage and relative time.

As for the ef units EURO S1 and S1 Light, the **EURO SP1** unit uses the switching technology which permits to be light and compact. The display and the four buttons guide the operator in all operative settings.

The scanner device for the bar code reading allows the maximum operative ease in all site conditions. The serial ports RS-232 and USB allow an easy and flexible management of the welding data stored in the internal memory of the ef unit.

The **software DBManager** is stored on the USB drive, permits the data transfer from the USB drive to PC and the management of the printing operations and the storage of the transferred data.

The welding unit must be submitted to periodic overhaul (biennial) according to the UNI 10566 standard.



Euro SP1
cod. 12.19 SP1

CHARACTERISTICS	EURO SP1
supply voltage	230 V +/-15%
frequency	50 Hz +/-15%
output voltage	8 ÷ 48V
max output current	110 Amp
60% output current	80 Amp
max power consumption	4500 W
operating temperature	-10° C + 45° C
port connections	USB - serial RS-232
protection	IP 54
working range	20 ÷ 710 mm
working modes	bar code reading and manual setting
bar codes for ef welding according to ISO 13950	ef welding Interleaved 2.5/24 digit
bar codes traceability ISO 12176/3/4	operator - Interleaved 2.5 / 30 digit Interleaved 2.5 / 30 digit traceability 128 /26/40 digit
bar code reading system	scanner
manual system	setting: time and voltage or 24 digit sequence of bar code
welding cycle memory capacity	n. 1600
connectors	4.0 mm
ancillary connectors	4.7 mm
dimensions L x P x H	32 x 26 x 31 cm
weight	kg 14,0
ancillary equipment on request	GPS

welding bar code

The bar code is an universally recognized system to store up information and to allow their reading by proper systems such as scanner or light pen.

For the electrofusion system of polyethylene, the **BAR CODE type INTERLEAVED “2-in-5”** with 24 digits with control character according to standard ISO 13950.

The information stored in the code, and carried on the label, allow the suitable control unit to understand automatically the characteristics of the fitting to be welded and to consequently work.

The code stores all information necessary for the electrofusion cycle: type of fitting, diameter, fusion time and cooling time, control character of a correct reading, identification key.

The main characteristic of this system is to avoid any possibility of errors in the fixing from the operator, who must only acquire the data from the bar code and confirm manually the correct reading.

The guarantee of correct code reading is determined from the control character carried on the label. Possible differences between the fitting connected to the control unit and the wrong reading of the code are shown on the display, which does not proceed in the memorized sequence.

traceability bar code

It is an universally recognized system for “tracing” the information relative to the fitting and pipes welded (manufacturer, type of fitting, batch, raw material, production site, etc). All these information are stored in the **BAR CODE LABEL type CODE 128** with 26 digits with control character according to standard ISO 12176-4.

The reading of the bar code with optical pen/scanner on universal units allow to store all traceability data inside the ef unit and the subsequent transfer to PC, obtaining a complete traceability of the welding operations of the fittings.



aligning clamp

- Protects the jointing, either during the electrofusion or the subsequent cooling, from external mechanical stresses
- Allows to revise possible off-centering between both ends to be welded and to recover the out-of-round of parts, if ovalized.

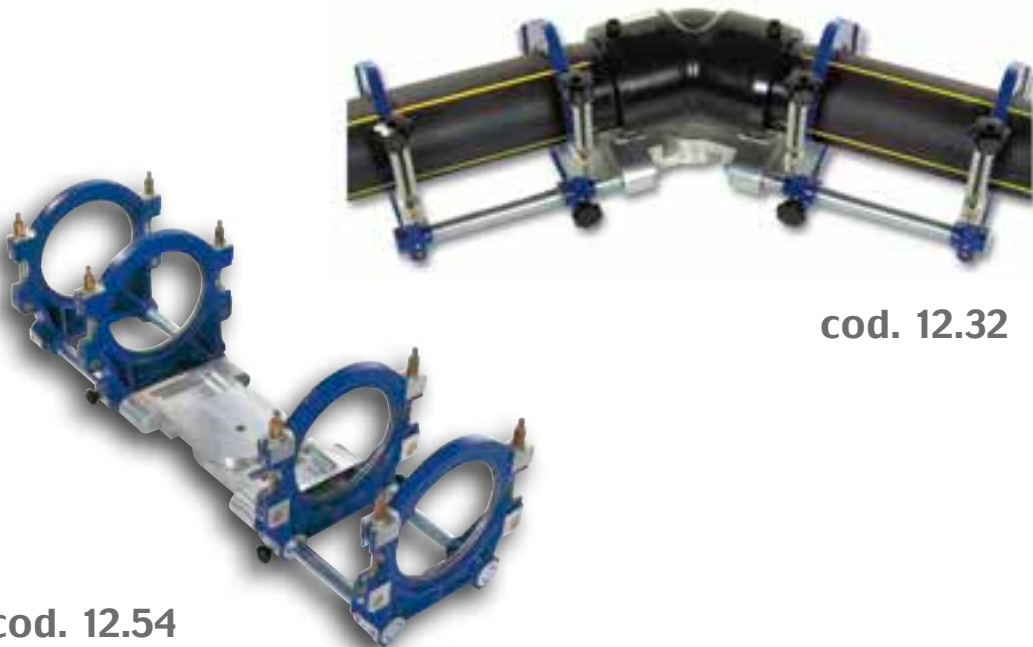
The aligning clamp is auxiliary to the control unit, its use is essential for the successful electrofusion jointing.

The clamp consists of a support frame with four jaws and reducing inserts to adapt the unit to the various diameters and fittings used.

Simultaneous use of multiple aligning clamps will positively affect the speed of installation.



cod. 12.45



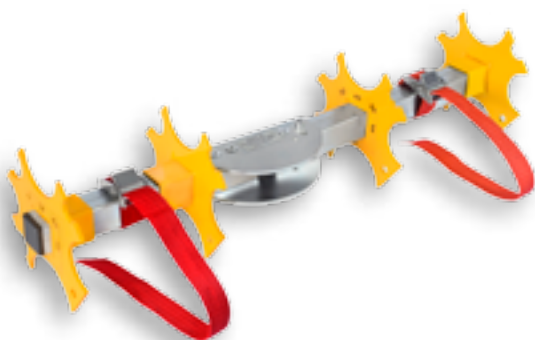
cod. 12.32

cod. 12.54



cod. 12.62

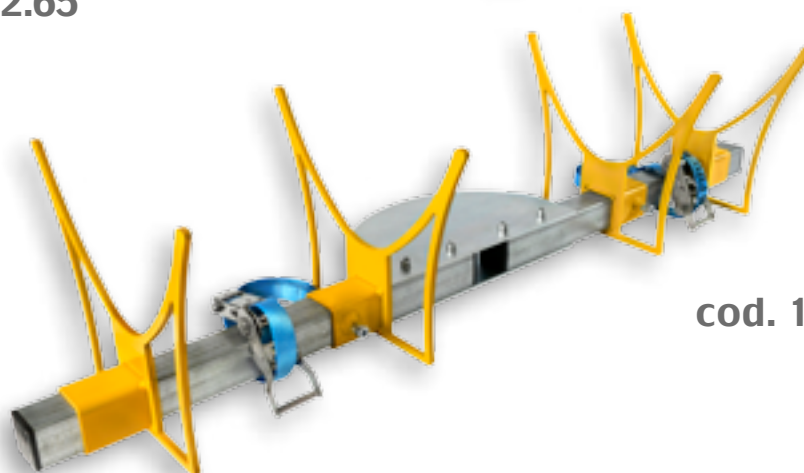
cod. 12.32	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT with n. 4 jaws dia. 63 mm, complete with reducing inserts for dia. 20-25-32-40-50 mm
cod. 12.45	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT with n. 4 jaws dia. 125 mm, complete with reducing inserts for dia. 20-25-32-40-50-63-75-90-110 mm
cod. 12.54	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT with n. 4 jaws dia. 255 mm
cod. 12.55	reducing inserts dia. 140 mm
cod. 12.56	reducing inserts dia. 160 mm
cod. 12.57	reducing inserts dia. 180 mm
cod. 12.58	reducing inserts dia. 200 mm
cod. 12.62	ALIGNING CLAMP WITH BELT dia. 140 – 630 mm
cod. 12.65	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT type EASY- 75 suitable for the welding from dia. 20 up to 75 mm
cod. 12.66	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT type EASY-125 suitable for the welding from dia. 32 up to 125 mm
cod. 12.67	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT type EASY-315 suitable for the welding from dia. 140 up to 315 mm



cod. 12.65



cod. 12.66



cod. 12.67



pipe cutter

A square cut of the pipe to be welded is carried by means of a pipe cutter, type with roller or with tool; choosing the type, it is important to verify the diameter according to the wall thickness of the pipe to be cut.



cod. 15.39/40/41

pipe scraper

For the removal of the oxide layer on pipes/fittings are used manual scrapers with straight interchangeable blade and pipe scrapers, type mechanical which are fastened on the pipe end.

The use of this equipment means the perfect flatness of the pipe end, which is only achieved with the pipe cutter.



cod. 15.44



cod. 15.42



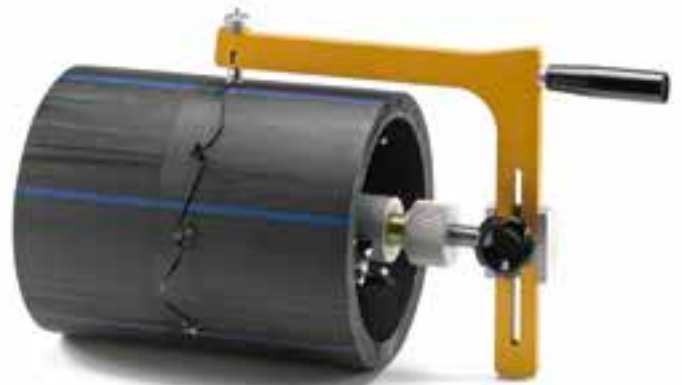
cod. 15.49



cod. 15.47



cod. 15.54



cod. 15.48

<p>cod. 15.39</p> <p>cod. 15.40</p> <p>cod. 15.41</p>	<p>PIPE CUTTER</p> <p>dia. 20 – 63 mm (max cut thickness 7 mm)</p> <p>dia. 50 – 125 mm (max cut thickness 13 mm)</p> <p>dia. 110 – 160 mm (max cut thickness 16 mm)</p>
<p>cod. 15.42</p>	<p>MANUAL SCRAPER</p> <p>cutter usable on 4 sides by overturning on the central screw</p>
<p>cod. 15.47</p> <p>cod. 15.48</p> <p>cod. 15.44</p> <p>cod. 15.46</p> <p>cod. 15.54</p>	<p>PIPE SCRAPER</p> <p>type PS-180 dia. 75 – 180 mm</p> <p>type PS-400 dia. 200 – 400 mm</p> <p>type RTC-315 dia. 75 – 315 mm</p> <p>type RTC-630 dia. 160 – 630 mm</p> <p>type ERT-500 dia. 110 – 500 mm suitable ONLY for pipes</p>
<p>cod. 15.49/20</p> <p>cod. 15.49/25</p> <p>cod. 15.49/32</p> <p>cod. 15.49/40</p> <p>cod. 15.49/50</p> <p>cod. 15.49/63</p>	<p>EURO-DRILL PIPE SCRAPER</p> <p>dia. 20 mm</p> <p>dia. 25 mm</p> <p>dia. 32 mm</p> <p>dia. 40 mm</p> <p>dia. 50 mm</p> <p>dia. 63 mm</p>
<p>cod. 15.51</p> <p>cod. 15.52</p>	<p>ORBITAL PIPE SCRAPER</p> <p>EURO 125 type suitable for the pipe scraping from dia. 25 up to 125 mm</p> <p>EURO 200 type suitable for the pipe scraping from dia. 63 up to 200 mm</p>



cod. 15.51



cod. 15.52

detergent PE cleaner

Special detergent for polyethylene (PE) and polypropylene (PP) weldings.



chemical feature	mixture of aliphatic solvents
packing	no. 8 plastic bottles of 1 liter each
specific weight	about 0,7 g/cm ³

Detergent suitable for electrofusion system according to UNI 10521

buttfusion welding units

The buttfusion welding unit is conform according to the UNI 10565 standard, has the CE marking and guarantees:

- a correct axial adjustment/movement of the pipes through the clamps;
- a proper and true facing of the pipes/fittings through the facer tool;
- an accurate control of the welding pressure and of the temperature of the heating plate;
- the conformity to the safety standard regulations.

Each machine can butt weld different diameters; according to the pipe diameter, the reducing insert are fitted into the standard clamps.

The buttfusion machine consists of a supporting mounting with fixed and movable clamps. Those movable, hydraulically driven with manual or electrical control, are rolling on two guides.

The machine is provided with an electrical facer tool, an electrically heating plate, an electro-hydraulic unit with distributor and pressure gauge with manometer.

The heating plate guarantees uniform temperature on its whole surface.

The temperature control is carried out with an adjustable thermostat which guarantees a maximal variation of $\pm 2^{\circ}\text{C}$ of the stated temperature.

The welding unit must be submitted to periodic overhaul (biennial) according to the UNI 10565 standard.

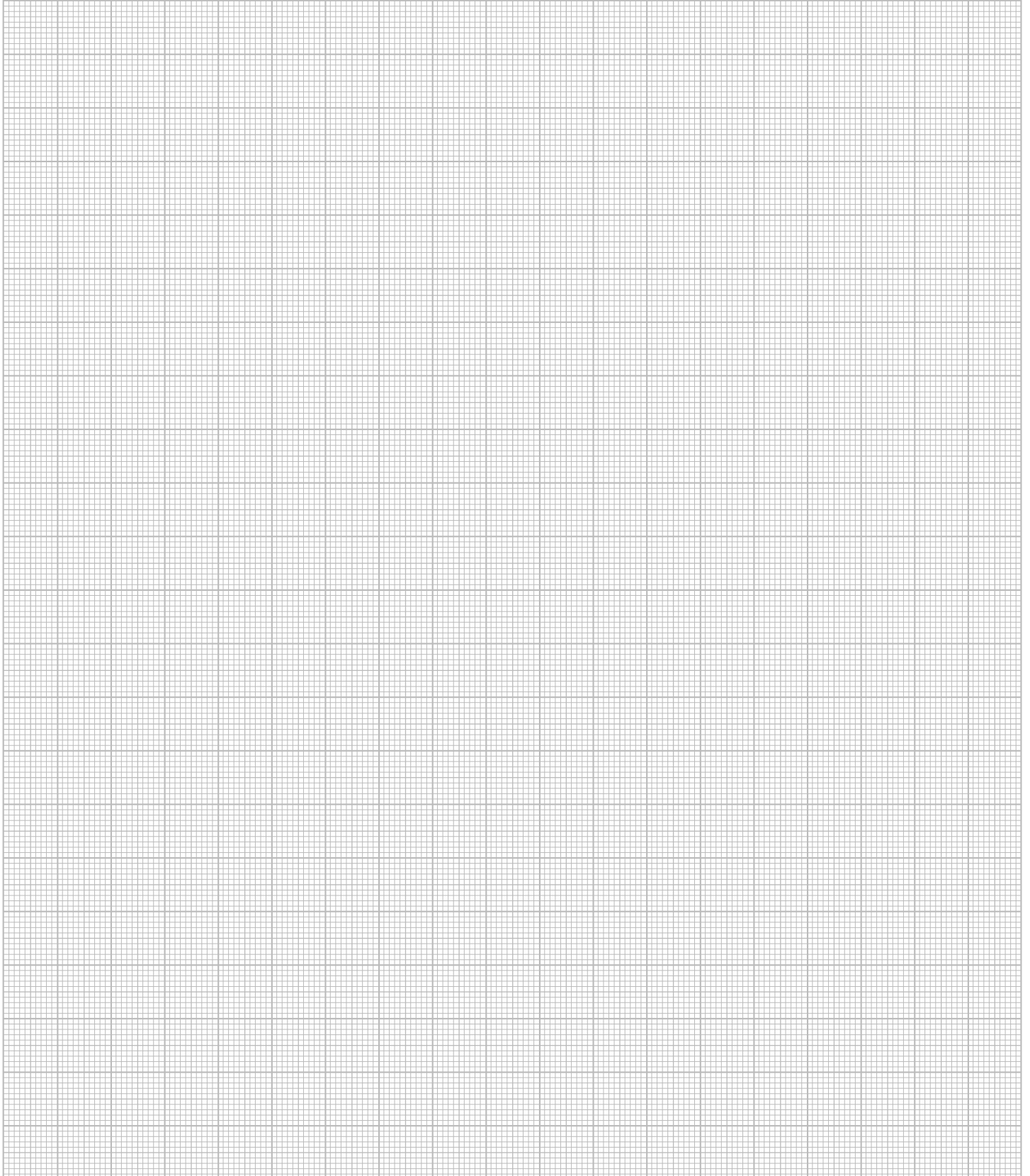
CHARACTERISTICS	EUROSTANDARD			
	TE 160	TE 200	TE 250	TE 315
maximal power				
- hydraulic unit	370 W	370 W	370 W	750 W
- facer tool	800 W	800 W	1000 W	1150 W
- heating plate	1000 W	1420 W	2300 W	3000 W
weight in kg				
- base mounting	35,0	46,0	45,0	78,0
- hydraulic unit	26,0	26,0	26,0	28,0
- facer tool	11,0	13,0	14,5	27,0
- heating plate	5,0	6,5	10,0	13,0
supply voltage	230V \pm 10% - 50 Hz			

The buttfusion units are provided with industrial plug, IEC standards protective measures, 2 poles + earth 16A - 220V

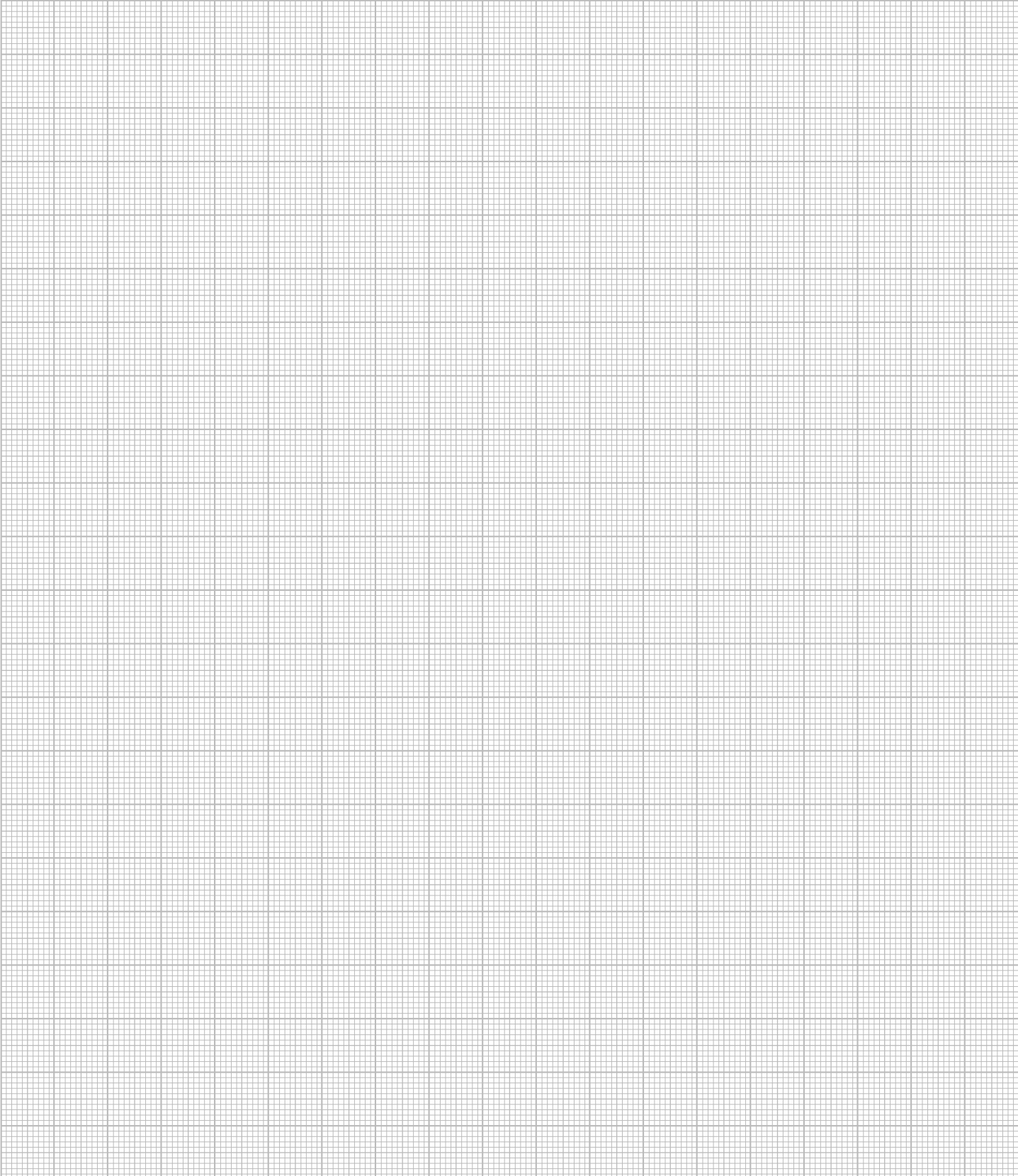




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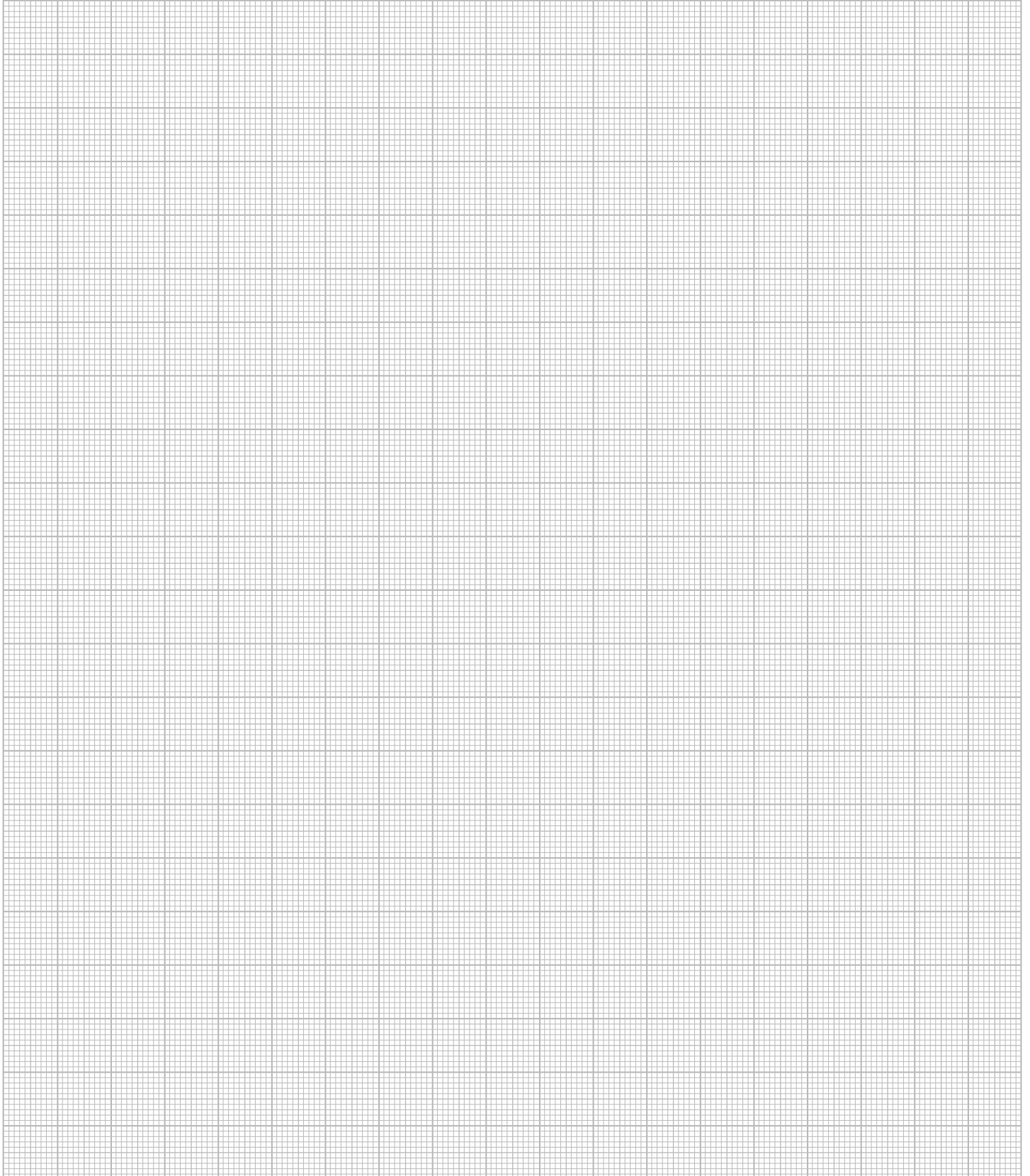




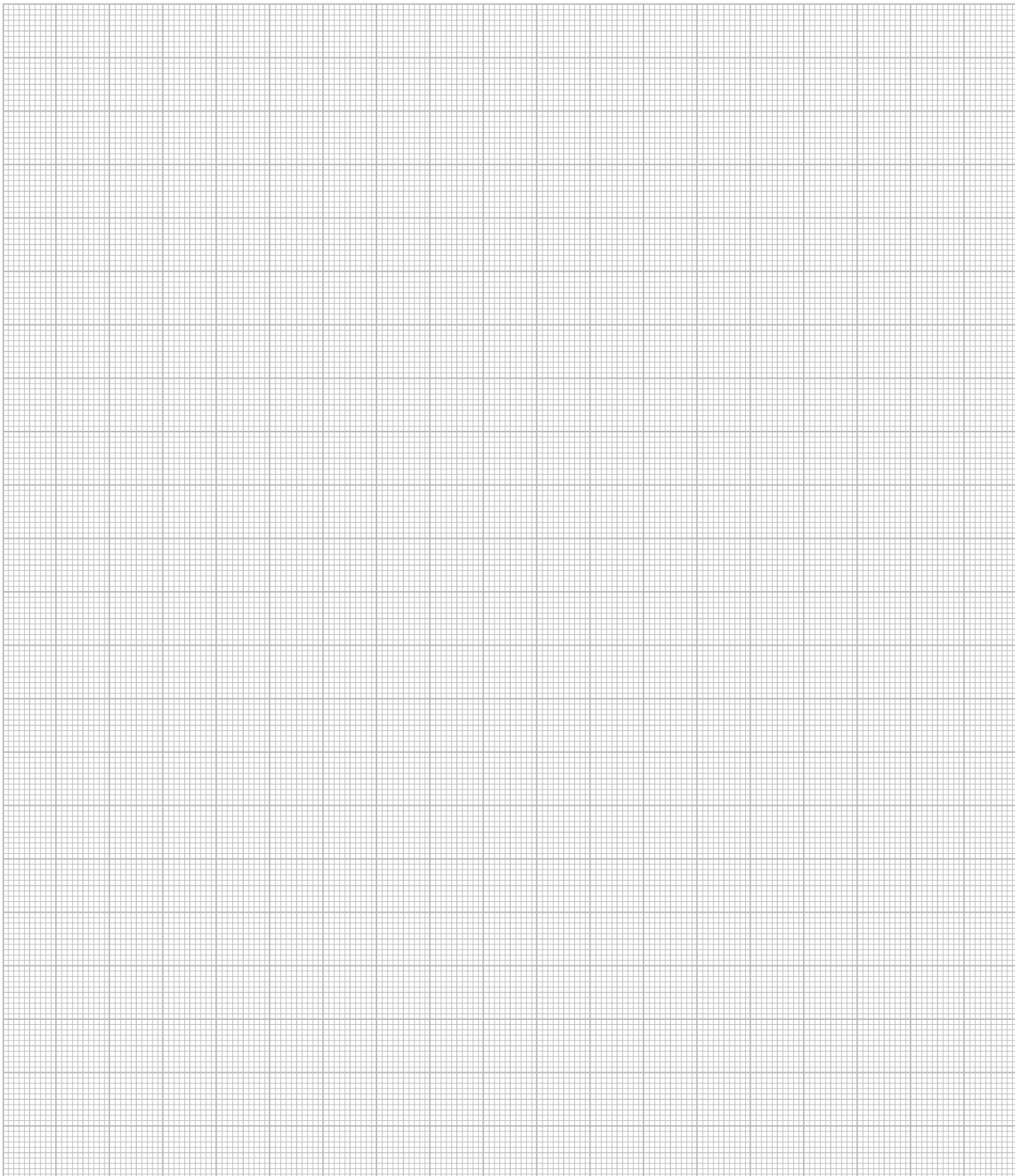




notes









Raccordi in PE/PP per tubi a pressione gas e acqua

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