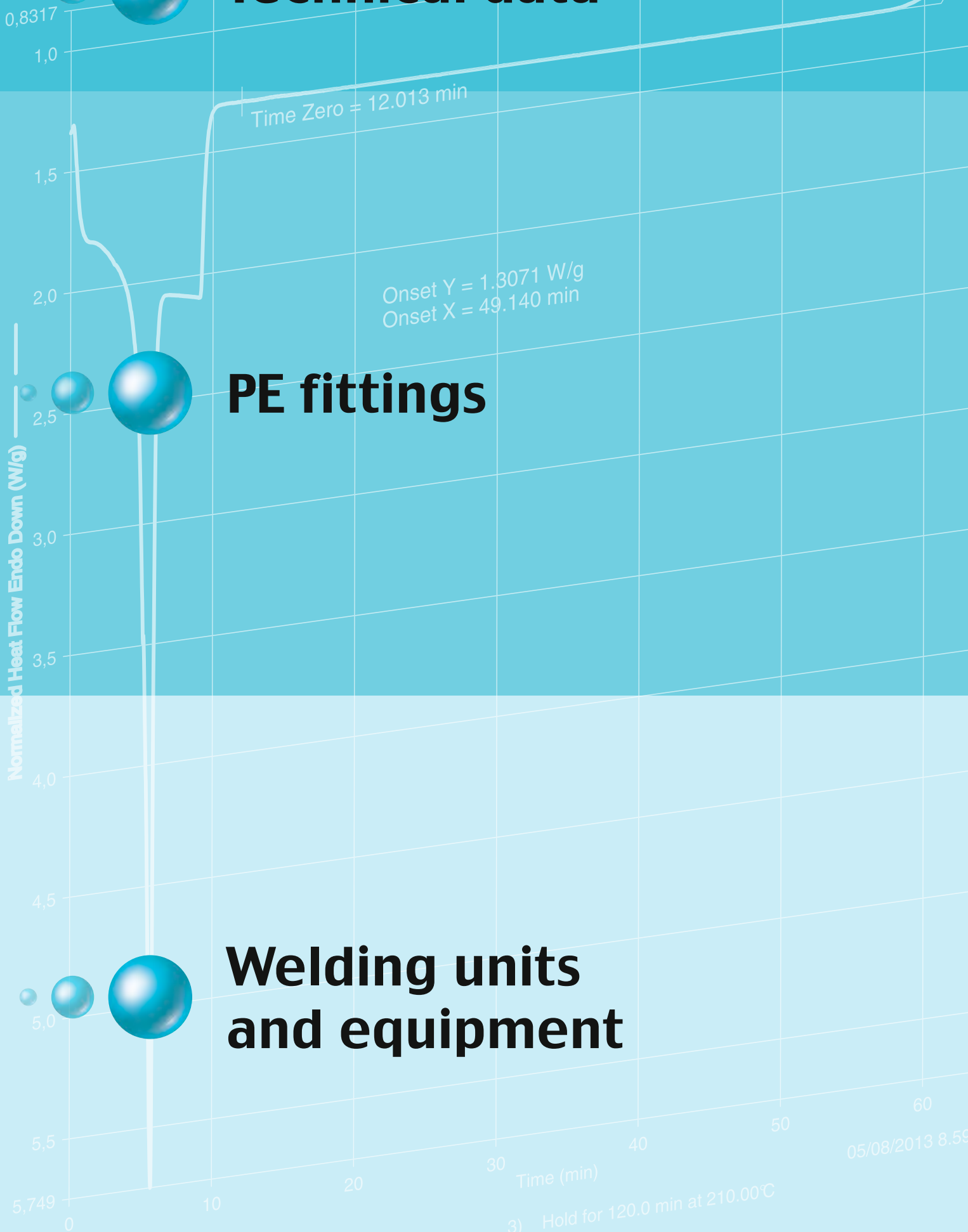




TECHNICAL DATA



Technical data



PE fittings

Welding units and equipment



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). In case of water distribution the UNI EN 12201 standard defines equal to 1,25.

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° C	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	$2,0 \cdot 10^{-4}$	$\frac{\text{m}}{\text{m}^\circ\text{C}}$	--
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), polyethylene of raised temperature resistance (PE-RT), crosslinked polyethylene (PE-X), polypropylene (PP) – Metric series for specifications for components and the system

**UNI EN
ISO 15494**

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

**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**

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

UNIPLAST

Plastics welding personnel - Qualification testing of welders - Thermoplastics welded assemblies

UNI EN 13067

**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

**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

**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



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 2nd 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
UNIPLAST**

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

**SALDATURE
UNIPLAST**

Pipes and fittings of plastic material – Equipment for the welding of polyethylene systems – Part 1: buttfusion welding

UNI ISO 12176-1

safety

**G.U.
Rep. Italiana**

Direction of article 1 Law n. 123 dd 3rd 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 on electrofusion fittings (peel and crushing test)
rif. ISO 13954
ISO 13955
ISO 13956

- 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.



ACCREDITATION CERTIFICATE
CERTIFICATO DI ACCREDITAMENTO

Accreditamento n° **0740** Rev. **3**
Accreditation n°

Si dichiara che
We declare that **EUROLAB**
Appartenente all'ente:
EUROSTANDARD S.p.A.
Sede:
Zona Industriale Lago - 38038 Tesero TN

è conforme ai requisiti
della norma **UNI CEI EN ISO/IEC 17025:2005 "Requisiti generali per la competenza dei
Laboratori di prova e taratura"**
meets the requirements
of the standard **EN ISO/IEC 17025:2005 "General Requirements for the Competence of Testing
and Calibration Laboratories" standard**

quali **Laboratorio di Prova**
as **Testing Laboratory**

L'accertamento attesta la competenza tecnica del Laboratorio relativamente allo scopo riportato nelle
schede allegare al presente certificato. Le schede possono variare nel tempo. I requisiti gestionali della
ISO/IEC 17025:2005 (sezione 4) sono scritti in un linguaggio idoneo all'attività dei Laboratori di Prova, sono
conformi ai principi della ISO 9001:2008 ed allineati con i suoi requisiti applicabili.
Il presente certificato non è da ritenersi valido se non accompagnato dalle schede allegare e può essere
sospeso o revocato in qualsiasi momento nel caso di inadempienza accertata da parte di ACCREDIA.
La validità dell'accertamento può essere verificata sul sito WEB (www.accredia.it) o richiesta direttamente
ai singoli Dipartimenti.

The accreditation certifies the technical competence of the laboratory limited to the scope detailed in the
attached Enclosure. The scope may vary in the time. The management system requirements in ISO/IEC
17025:2005 (Section 4) are written in a language relevant to Testing Laboratories operations and meet the
principles of ISO 9001:2008 and are aligned with its pertinent requirements.
The present certificate is valid only if associated to the annexed schedule, and can be suspended or
withdrawn at any time in the event of non fulfillment as ascertained by ACCREDIA.
The in force status of the accreditation may be checked in the WEB site (www.accredia.it) or on direct
request to appointed Department.

Data di 1° emissione
1st issue date
2007-06-27

Data di modifica
Modification date
2015-05-22

Data di scadenza
Expiring date
2019-06-07

Il Direttore Generale
The General Director
(Dr. Filippo Trifiletti)

Il Direttore di Dipartimento
Department Director
(Dr.ssa Silvia Tramontin)

Il Presidente
The President
(Ing. Giuseppe Rossi)

ACCREDIA

Sede operativa e Argolo: Via Coglietta, 5/a, 20131 Milano - Italy | Tel: +39 02 8440991 | Fax: +39 02 8841199
info@accredia.it | www.accredia.it | ISO 9001:2008 | Cofree France 10566361001

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 EN ISO 15494 for the fittings as detailed in the enclosed papers to the Conformity Certificates. For information on the validity of the Conformity Certificates, visit the 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**

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 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



CERTIFICATO N. 21071/10/S
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF

EUROSTANDARD S.P.A.

Z.I. LAGO 38038 TESERO (TN) ITALIA

NELLE SEGUENTI UNITÀ OPERATIVE / IN THE FOLLOWING OPERATIONAL UNITS

Z.I. LAGO 38038 TESERO (TN) ITALIA
MAGAZZINO LOCALITÀ PIANA RUJIA 38030 CASTELLO MOLINA DI FEMME ITALIA

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD
ISO 9001:2008

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELD(S) OF ACTIVITIES

EA14
EA29

PROGETTAZIONE, PRODUZIONE E COMMERCIALIZZAZIONE DI RACCORDI IN PEPP ELETTROSALDABILI TESTA A TESTA E DI TRANSIZIONE PER IL CONVOGLIAMENTO DI GAS COMBUSTIBILI E FLUIDI IN PRESSIONE.

DESIGN, PRODUCTION AND MARKETING OF PEPP ELECTROFUSION, BUTT FUSION AND TRANSITION FITTINGS FOR THE SUPPLY OF GASEOUS FUELS AND FLUIDS UNDER PRESSURE.

La validità del presente certificato è subordinata a sorveglianza periodica annuale / semestrale ed al riesame completo del sistema di gestione con periodicità triennale.
The validity of this certificate is dependent on an annual / six monthly audit and on a complete review, every three years, of the management system.
L'uso e la validità del presente certificato sono soggetti al rispetto del documento RINA. Regolamento per la Certificazione di Sistemi di Gestione della Qualità.
The use and validity of this certificate are subject to compliance with the RINA document: Rules for the certification of Quality Management Systems.

Prima emissione 31.03.2010
Emissione corrente 06.09.2015
Data scadenza 01.09.2017

Ing. Michele Francioni
(Chief Executive Officer)

RINA Services S.p.A.
Via Corsica 12 - 10128 Genova Italy







THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and
CISQ/RINA

hereby certify that the organisation

EUROSTANDARD S.P.A.

Z.I. LAGO 38038 TESERO (TN) ITALIA

has implemented and maintains a

Quality Management System

which fulfills the requirements of the following standard
ISO 9001:2008

in the following operative units

Z.I. LAGO 38038 TESERO (TN) ITALIA
MAGAZZINO LOCALITÀ PIANA RUJIA 38030 CASTELLO MOLINA DI FEMME ITALIA

for the following field of activities

DESIGN, PRODUCTION AND MARKETING OF PEPP ELECTROFUSION, BUTT FUSION AND TRANSITION FITTINGS FOR THE SUPPLY OF GASEOUS FUELS AND FLUIDS UNDER PRESSURE.

Registration Number: **IT-69328**

First Issue : 2010-03-31 Current Issue : 2015-09-08 Expiry Date : 2017-09-01

The status of validity of the certificate can be verified at <http://www.cisq.com> or by e-mail to fedcsq@cisq.com




Michael Drechsel
President of IQNET

Ing. Claudio Provetti
President of CISQ

IQNet Partners*

AENOR Spain AFNOR Certification France AIB-Vinçotte International Belgium ANCE Mexico APCER Portugal CCC Cyprus
CISQ Italy CQC China COM China CQS Czech Republic Cro Cert Croatia DQS Holding GmbH Germany DS Denmark
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Inspecta Certification Finland IRAM Argentina IQA Japan KTO Korea MSZT Hungary Nemko AS Norway NSAI Ireland
PCBC Poland Quality Austria RRR Russia SH Israel SIQ Slovenia SIRIM QAS International Malaysia SGS Switzerland
SRAC Romania TEST SI Petersburg Russia TSE Turkey YUQS Serbia

IQNet is represented in the USA by: AFNOR Certification, CISQ, DQS Holding GmbH and NSAI Inc.

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

environmental certification



AMBIENTE

Environmental management systems. Requirements with guidance for use.

UNI EN ISO
14001

Technical
data

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 for environment is published on the website: **www.eurostandard.it**





inspection documents

CEN 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**

Conformity declaration

Declaration of the supplier, under its responsibility, that the conformity of an object to the specified requirements is certified, independently from the involved field. The object of the conformity declaration can be a product (a service comprised), process, management system, person or body. The specified requirements can contain documents such as standards, guides, technical specifications, laws and rules.

marking



Technical
data

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

	producer identification
W16001 01/16	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)					
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	≥ 50	3,1	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.

assistenza tecnica

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.

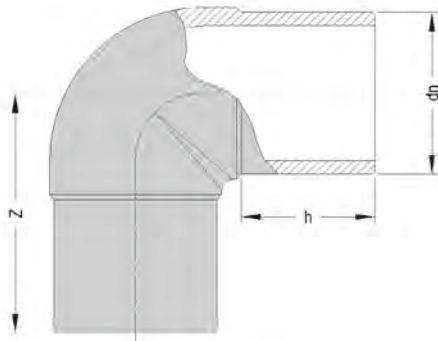


Buttfusion fittings



90° elbow

cod. 20.10 PE 100



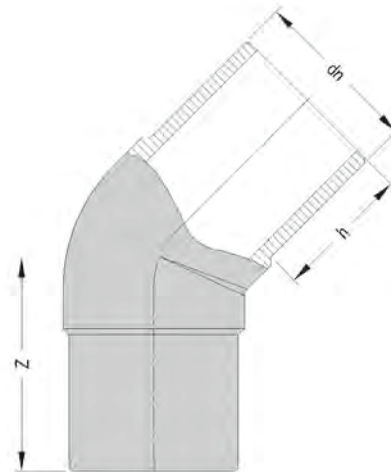
dn	dimensions		weights		
			SDR 17	SDR 11	SDR 7,4
	h	Z	PN 10	PN 16	PN 25
20	49	75		28	
25	53	80		37	
32	59	89		53	65
40	59	85		75	100
50	60	89		120	175
63	68	103		225	295
75	71	114		330	450
90	80	130	390	535	750
110	85	146	620	850	1250
125	89	159	915	1310	1800
140	94	172	1250	1795	2500
160	115	225	2155	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

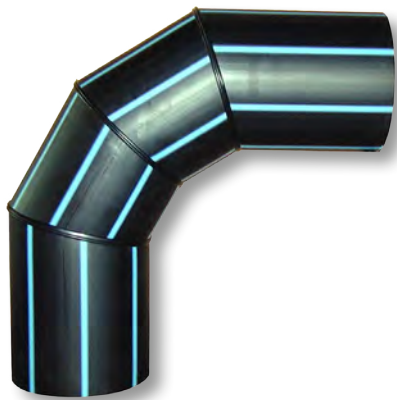


Buttfusion
fittings

d _n	dimensions h Z		weights		
			SDR 17	SDR 11	SDR 7,4
			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			●	●	

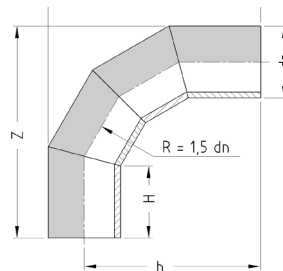
● on request moulded elbow

- ✓ 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

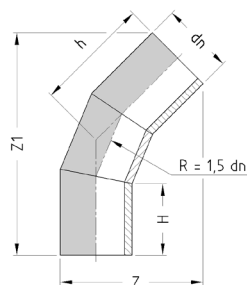


dn	dimensions				weights	
					SDR 17	SDR 11
	h	Z	h	R	PN 10	PN 16
280	200	637	497	420	12100	18600
355	300	913	737	533	31200	45900
400	300	992	792	600	45100	66600
450	300	1079	854	675	60700	89600
500	300	1166	916	750	75000	110600
560	350	1319	1039	840	110500	163000
630	350	1441	1126	945	147000	217000



45° segmented bend

cod. 20.17 PE 100

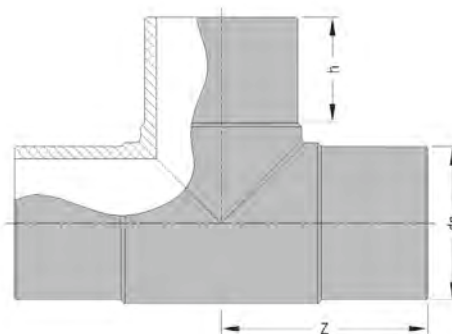


dn	dimensions					weights	
						SDR 17	SDR 11
	h	Z	Z ₁	h	R	PN 10	PN 16
280	220	487	697	350	420	8200	12600
355	300	621	893	449	533	21640	31820
400	300	674	944	470	600	28470	42060
450	300	731	996	490	675	37860	55890
500	300	788	1048	510	750	48540	71570
560	350	892	1197	585	840	70770	104320
630	350	973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

te 90°

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			●	●	

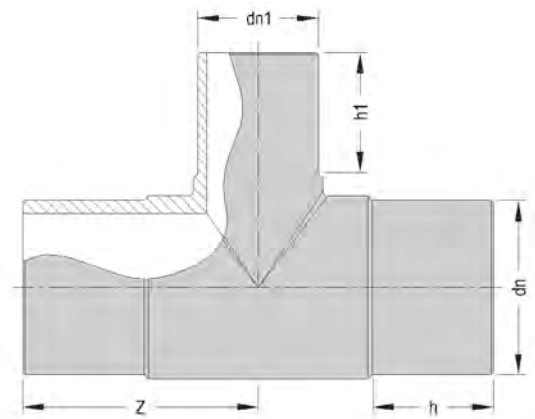
● on request moulded tee or segmented tee

- ✓ 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



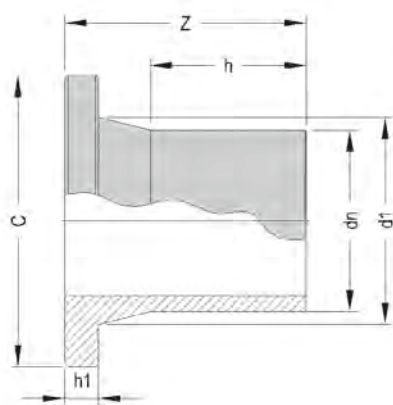
90° reduced tee moulded

cod. 20.21 PE 100



		dimensions			weights	
					SDR 17	SDR 11
					PN 10	PN 16
d _n	d _{n1}	h	h ₁	z		
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 / 21.20A)
- ✓ 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					
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	160	160	164	25	35	40	215	225	234	291	320	3330	5045	7300
315	202	205	143	25	35	45	267	275	228	335	370	5300★	9200★	9800
355	210	210		30	40		280	290		373	430	7245	10775	
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

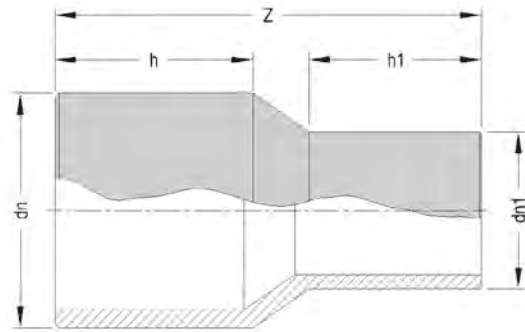
★ stub end complete with NBR gasket

- ✓ 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 h h1 Z			weights		
					SDR 17	SDR 11	SDR 7,4
					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
140x	90	95	80	205	555	815	1145
x	110	94	83	193	560	820	1215
x	125	95	89	198	590	970	1380



Buttfusion fittings

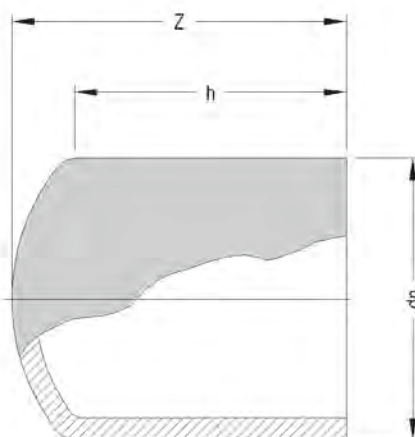
dimensions		weights					
		SDR 17		SDR 11		SDR 7,4	
		PN 10	PN 16	PN 16	PN 16	PN 25	PN 25
d _n	d _{n1}	h	h ₁	Z			
160x	90	101	82	221	705	1105	
	x 110	101	103	270	950		
	x 110	101	86	218		1160	1565
	x 125	101	91	208	735	1155	1645
	x 140	101	92	206	835	1235	1780
180x	90	110	90	260	980 ●	1405 ●	
	x 125	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	110	126	96	287	1300	1900	
	x 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 90	130	90	300		2520 ●	
	x 125	131	100	288	1900		
	x 125	130	100	310		2810 ●	
	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	135	115	315	2510		
	x 160	140	120	320		3760	
	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	160	100	110	375	4770 ●	6700 ●	
	x 200	175	130	363	5281	7337	
	x 225	173	138	389	5450	8070	
	x 250	173	150	381	5500	7600	
	x 280	175	155	360	5550	8050	
355x	225				●	●	
	x 250				●	●	
	x 280				●	●	
	x 315				●	●	
400x	280				●	●	
	x 315				●	●	
	x 355				●	●	

● on request ● in preparation

- ✓ 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

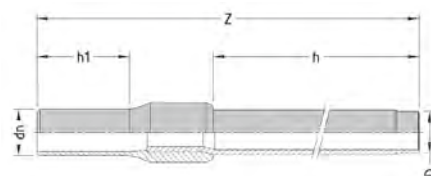


**Transition
fittings**

Transition fittings

steel/PE coupling

cod. 20.60 PE 100



 type A

 type F

 type H

dn	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

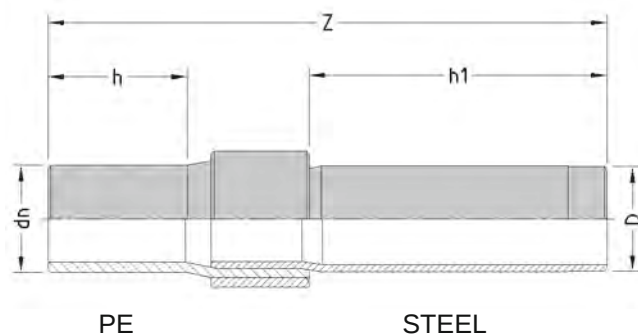
**CLEARLY specify
the requested version**

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 ISO 3183 and galvanized according to UNI EN 10240 A.1 ("lead free galvanized pipe")
-  On request type galvanized coated pipe for welding
-  Buttfusion unadvised for dia. <63 mm

steel/PE coupling

cod. 20.65 PE 100



Transition
fittings

dn	D	steel external diameter	steel thickness	dimensions			weights
				h	h ₁	Z	SDR 11
							PN 16
140	5"	139,7	4,8	310	240	690	7200
160	6"	168,3	4,8	310	270	720	10500
180	6"	168,3	4,8	310	270	720	10700
200	8"	219,1	6,4	310	310	785	16500
225	8"	219,1	6,4	310	310	785	18500
250	10"	273,0	6,3	310	310	800	24100
280	10"	273,0	5,6	310	310	800	●
315	10"	273,0	5,6	310	310	820	●
315	12"	323,9	6,3	370	400	970	●

● on request



Suitable for gas and water connections, industrial plants



Suitable for gas and water pipelines



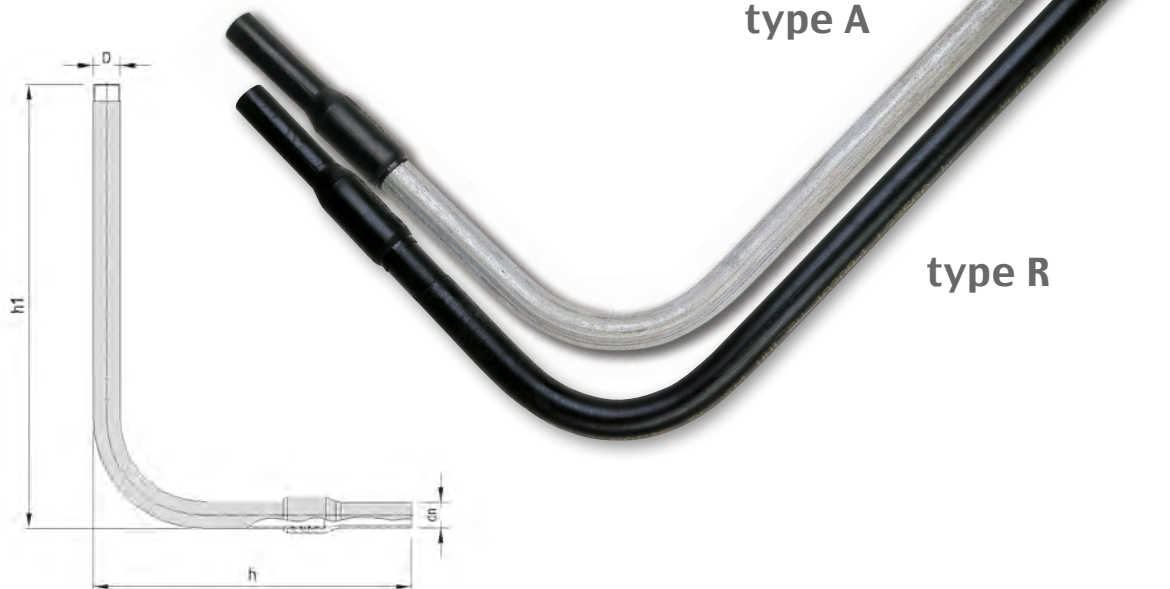
Steel pipe according to UNI EN 10208-1 or API 5L gr. B and galvanized according to UNI EN 10240 A.1 ("lead free galvanized pipe")



Galvanizing removed on the welding end

steel/PE thread coupling with extension

cod. 20.61 PE 100



		steel external diameter	steel thickness	dimensions		weights	
						SDR 11 - PN 16	
						GALVANIZED PIPE	GALVANIZED COATED PIPE
d _n	D			h	h ₁		
25	3/4"	26,9	2,6	640	700	1720	2020
32	1"	33,7	3,2	530	825	2750	2900
40	1" 1/4	42,4	3,2	555	830	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**

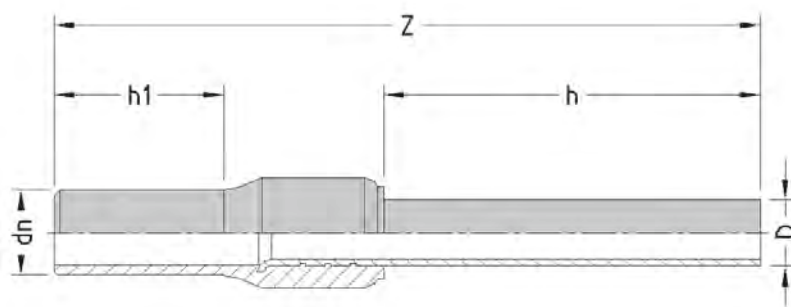
20.61A
20.61R

galvanized extension
galvanized coated extension

-  Steel pipe according to UNI EN ISO 3183 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

copper/PE coupling

cod. 20.62 PE 100



d _n	D	copper thickness	dimensions			weights
						SDR 11
						PN 16
			h	h ₁	Z	
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 insert



cod. 21.61 PE 100



cod. 21.62 PE 100

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

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



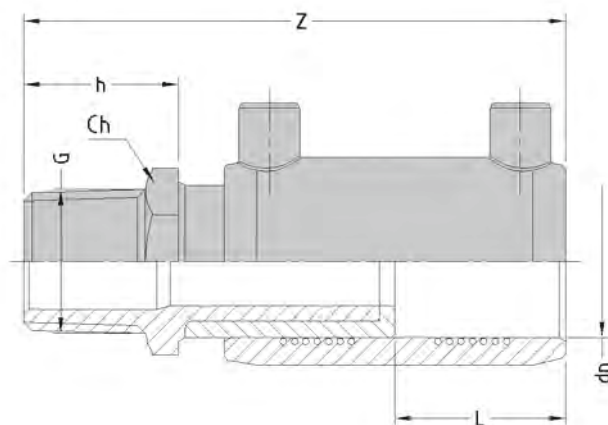
During the screwing, lock the metallic hexagon to avoid any stress on the PE part



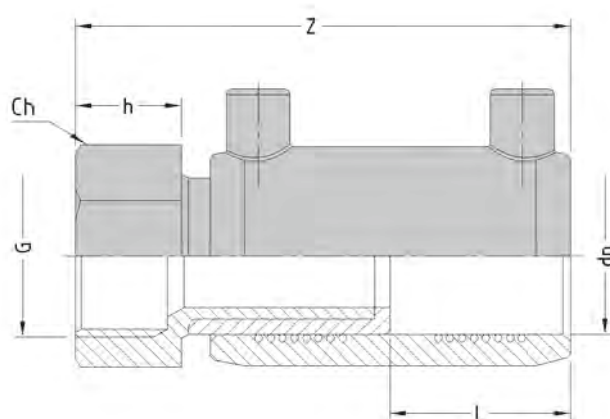
Suitable for gas and water pipelines



Do not remove the insert



		dimensions				weights
						cod. 21.61 MALE
dn	G	L	h	Z	Ch	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



		dimensions				weights
						cod. 21.62 FEMALE
dn	G	L	h	Z	Ch	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



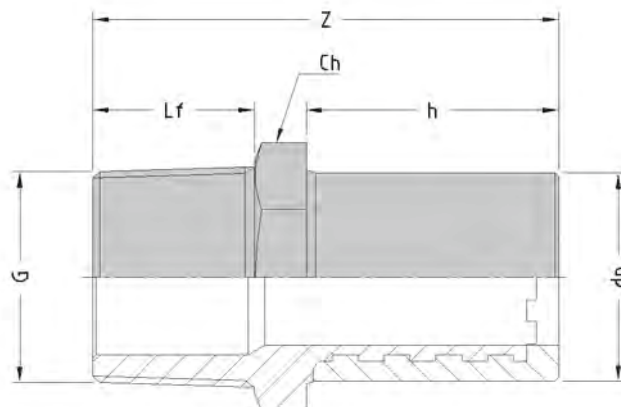
Transition
fittings

transition brass/PE insert

in brass

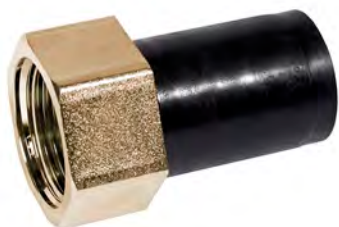


cod. 21.77 PE 100

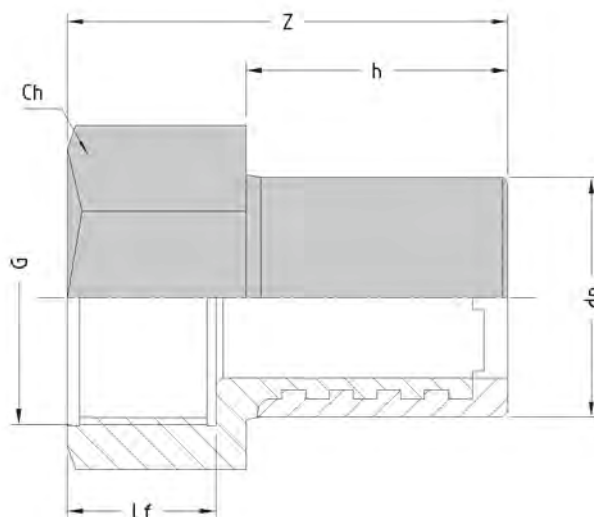


d _n	G	dimensions				weights
						cod. 21.77 MALE
						SDR 7,4 - PN 25
20	1/2"	15	41	61	22	75
25	3/4"	16	41	62	27	90
32	1"	19	44	70	34	150
40	1" 1/4	21	49	78	42	260
50	1" 1/2	23	55	88	52	390
63	2"	26	63	100	65	660
75	2" 1/2	31	70	113	86	1060
90	3"	34	79	125	97	1520
110	4"	40	82	134	125	2250

- ✓ 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**

		dimensions				pesi
						cod. 21.78 FEMALE
						SDR 7,4 - PN 25
dn	G	Lf	h	Z	Ch	
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

e-fusion transition 90° elbow

with brass insert



cod. 21.65 PE 100



cod. 21.66 PE 100

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

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



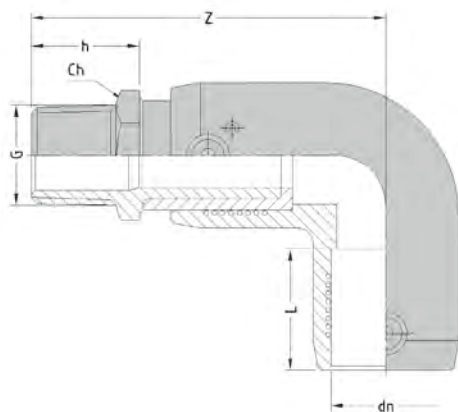
During the screwing, lock the metallic hexagon to avoid any stress on the PE part



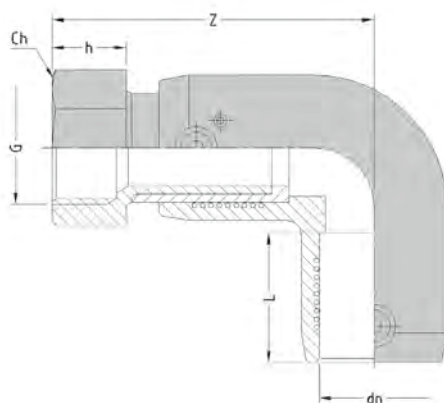
Suitable for gas and water pipelines



Do not remove the insert



		dimensions				weights
						cod. 21.65 MALE
						SDR 7,4 - PN 25
dn	G	L	h	Z	Ch	
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



		dimensions				weights
						cod. 21.66 FEMALE
						SDR 7,4 - PN 25
dn	G	L	h	Z	Ch	
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 insert



cod. 21.67 PE 100

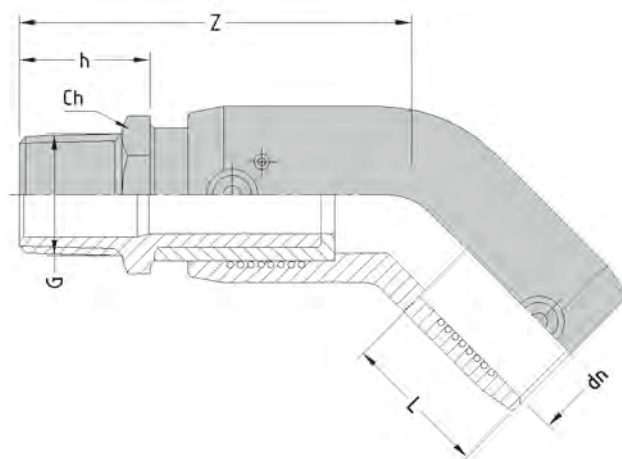


cod. 21.68 PE 100

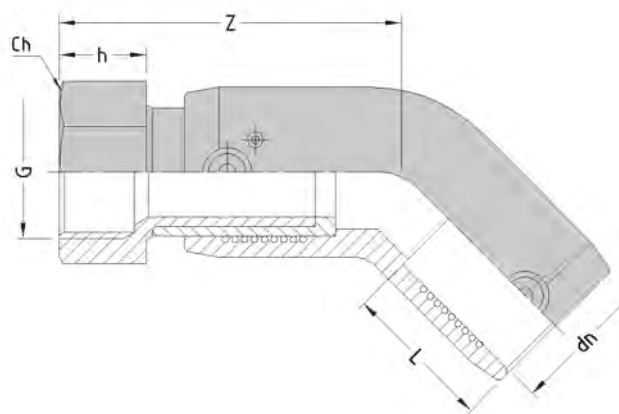
diam. d _n	WELDABILITY on pipe/fitting PE 100			
	SDR 17	SDR 11	SDR 9	SDR 7,4
25		● ▲	●	●
32	● ▲	●	●	●
40	● ▲	●	●	●
50	●	●	●	●
63	●	●	●	●
75	●	●	●	●
90	●	●	●	●
110	●	●	●	●

● weldable only with Euro electrofusion monovalent unit
 ▲ 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



dn	G	dimensions				weights
		L	h	Z	Ch	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



dn	G	dimensions				weights
		L	h	Z	Ch	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



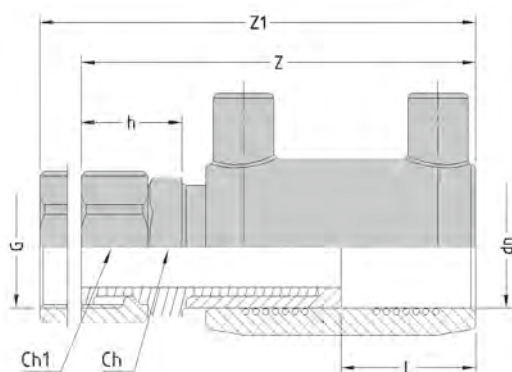
Transition
fittings

e-fusion transition socket

with free nut

with brass insert

cod. 21.70 PE 100



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

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

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

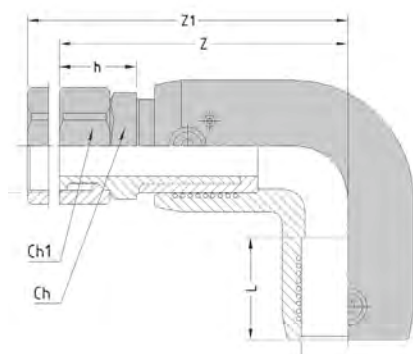
- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ✓ Do not remove the insert

e-fusion transition 90° elbow

with free nut

with brass insert

cod. 21.71 PE 100



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

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

		dimensions						weights
								cod. 21.71 FEMALE
d _n	G	L	h	Z	Z1	Ch	Ch1	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



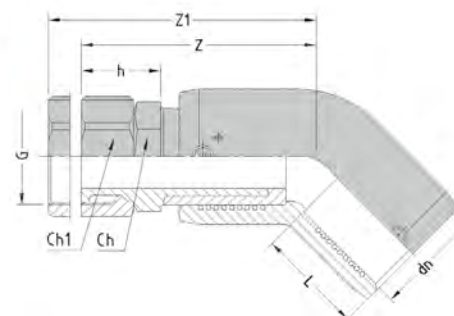
Transition
fittings

e-fusion transition 45° elbow

with free nut

with brass insert

cod. 21.72 PE 100



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

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

		dimensions						weights
								cod. 21.72 FEMALE
d _n	G	L	h	Z	Z1	Ch	Ch1	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

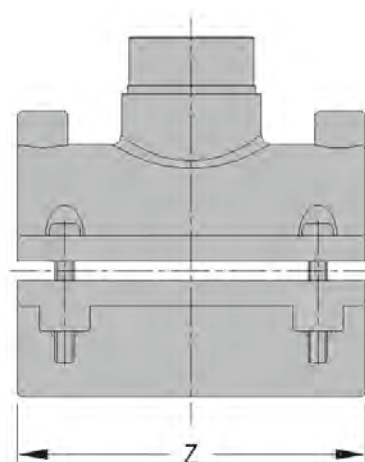
- ✓ During the screwing, lock the metallic hexagon to avoid any stress on the PE part
- 🔥 Suitable for gas and water pipelines
- ✓ Do not remove the insert

e-fusion transition spigot saddle

with brass insert

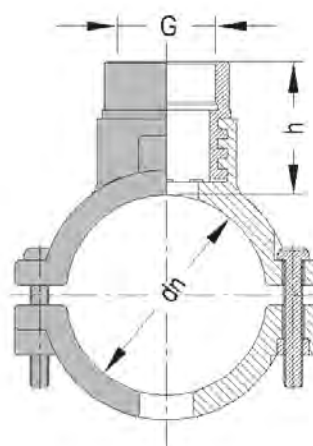


cod. 21.63 PE 100



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

● weldable only with Euro electrofusion monovalent unit



d _n	G	dimensions		weights
				FEMALE
		h	z	SDR 11 - PN 16
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

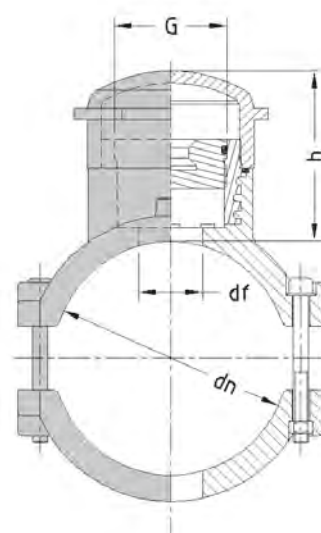
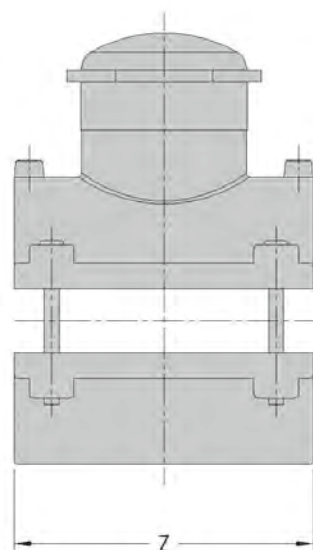
Transition
fittings

e-fusion spigot saddle

for shut-off equipment

cod. 21.64 PE 100

with brass insert



diam. dn	WELDABILITY on pipe/fitting PE 100	
	SDR 17	SDR 11
110x	•	•
125x	•	•
140x	•	•
160x	•	•

dn	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



Suitable for gas pipeline



Brass closing cap with square key



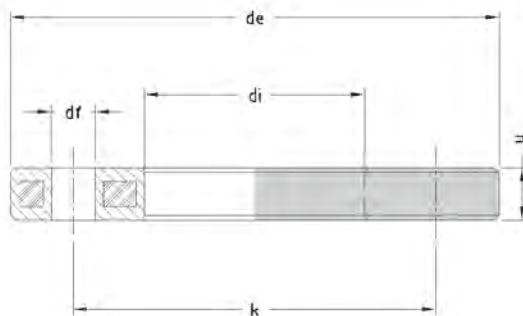
Suitable for all normal commercial shut-off equipment



PVC external cap with O-ring seal

steel flange covered PP

cod. 20.49



		dimensions						PN	weights
d _n PE	D STEEL	de	k	h	di	df	holes number		
32	25	115	85	16	42	14	4	PN 10/16	500
40	32	140	100	18	51	18	4	PN 10/16	700
50	40	150	110	18	62	18	4	PN 10/16	810
63	50	165	125	18	78	18	4	PN 10/16	1090
75	65	188	145	18	92	18	4	PN 10/16	1380
90	80	204	160	20	108	18	8	PN 10/16	1310
110	100	224	180	20	128	18	8	PN 10/16	1370
125	100	224	180	20	135	18	8	PN 10/16	1370
140	125	252	210	24	158	18	8	PN 10/16	2060
160	150	285	240	24	178	22	8	PN 10/16	2840
180	150	285	240	24	188	22	8	PN 10/16	2800
200	200	340	295	26	235	22	8	PN 10	3470
225	200	340	295	26	238	22	8	PN 10	3520
250	250	395	350	29	288	22	12	PN 10	5100
280	250	395	350	29	294	22	12	PN 10	4170
315	300	445	400	33	338	22	12	PN 10	7360
355	350	514	460	50	376	22	16	PN 10	15600 ●
400	400	571	515	54	430	26	16	PN 10	19800
450	450/500							PN 10	●
500	500							PN 10	●
560	600							PN 10	●
630	600							PN 10	●
200	200	340	295	26	235	22	12	PN 16	3350
225	200	340	295	26	238	22	12	PN 16	3200
250	250	419	355	32	288	26	12	PN 16	4780
280	250	419	355	32	294	26	12	PN 16	4700
315	300	478	410	33	338	26	12	PN 16	8150
355	350	532	470	50	376	26	16	PN 16	16300 ●
400	400	592	525	54	430	30	16	PN 16	20600

● 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

Transition
fittings

flange



cod. 20.40 aluminium



cod. 20.45 steel



cod. 20.46 blank steel

			Steel			Aluminium								
			PN 10	PN 16	PN 25	PN 10	PN 16							
d _n	D	c	s			s		a			k			
PE	STEEL													
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 ISO 9624

STEEL

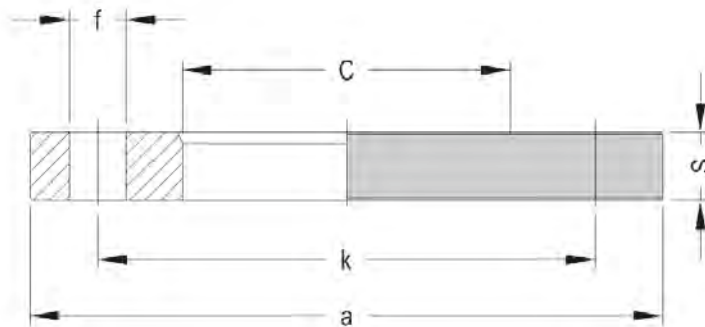
standard UNI EN 1092-1

BLANK STEEL

standard UNI EN 1092-1

INTERNAL DIAMETER

standard ISO 9624

Transition
fittings

- ✓ 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

				holes number			weights			
	PN 10	PN 16	PN 25	PN 10	PN 16	PN 25	cod. 20.40	cod. 20.45		
	f						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

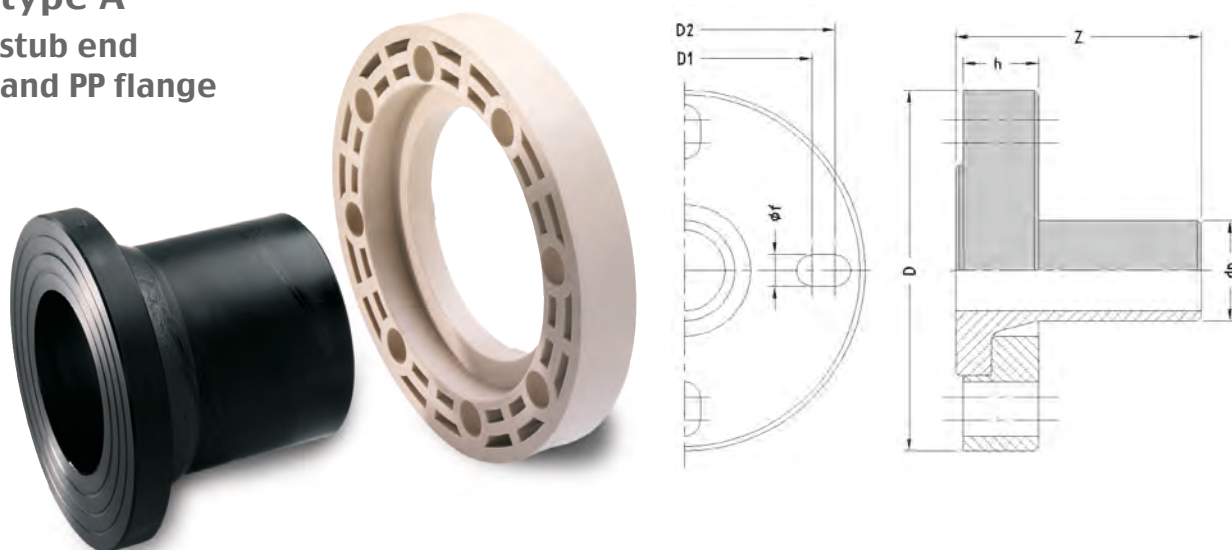
● on request

stub end • PP flange system

cod. 20.47 PE 100

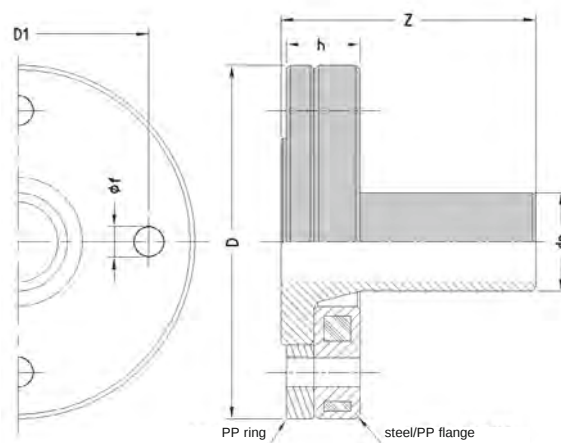
type A

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	holes number			
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



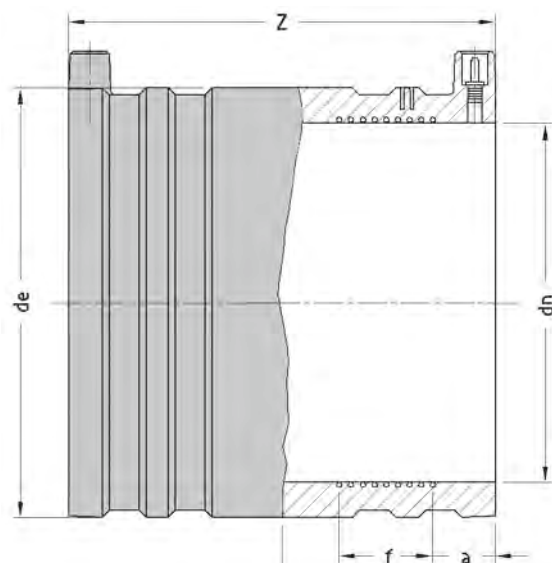
Electrofusion fittings



**Electro-
fusion
fittings**

e-fusion socket PN 10 – SDR 17

cod. 21.00.10 PE 100



diam. d_n	WELDABILITY on pipe/fitting PE 100		
	SDR 33	SDR 26	SDR 17
32			●
40			●
50			●
63			●
160		●	●
180		●	●
200	●	●	●
225	●	●	●
250	●	●	●
280	●	●	●
315	●	●	●
355	●	●	●
400	●	●	●

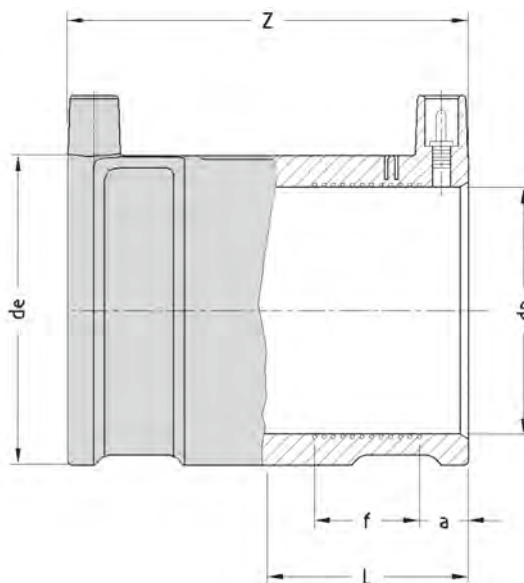
- weldable only with:
- universal ef units
 - monovalent ef units serie Euro S1 PLUS or Euro S1 starting from serial number M10-001 after updating (please contact Eurostandard)

d_n	dimensions					weights
	d_e	L	f	a	Z	
32	46	38	19	12	80	75
40	56	44	22	13	90	110
50	68	49	23	14	100	155
63	82	54	26	18	111	225
160	198	86	39	22	172	1550
180	223	100	41	25	199	2150
200	233	106	42	30	212	1930
225	262	114	41	35	227	2600
250	292	122	45	42	244	3600
280	341	133	42	44	265	7100
315	369	138	47	44	275	6630
355	430	156	40	47	312	11750
400	461	170	60	41	340	14150

- ✓ **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 PN 16 – SDR11

cod. 21.00.16 PE 100



diam. dn	WELDABILITY on pipe/fitting PE 100		
	SDR 26	SDR 17	SDR 11
20			● ▲
25			● ▲
32		● ▲	●
40		● ▲	●
50		●	●
63		●	●
75		●	●
90	●	●	●
110	●	●	●
125	●	●	●
140	●	●	●
160	●	●	●
180	●	●	●
200	●	●	●
225	●	●	●
250	●	●	●
280	●	●	●
315	●	●	●
355	●	●	●
400	●	●	●

- weldable only with:
 - universal ef units
 - monovalent ef units serie Euro S1 PLUS or Euro S1 starting from serial number M10-001 after updating (please contact Eurostandard)

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

dn	dimensions					weights
	de	L	f	a	Z	
20	33	33	15	13	70	45
25	38	33	15	12	70	55
32	46	38	19	12	80	75
40	56	44	22	13	90	110
50	68	49	23	14	100	155
63	82	54	26	18	111	225
75	93	61	36	15	121	270
90	114	66	37	15	132	430
110	137	70	36	18	140	645
125	153	76	39	18	152	840
140	171	82	48	19	163	1090
160	198	86	45	22	172	1550
180	223	100	51	25	198	2150
200	247	105	42	32	211	3070
225	278	113	48	36	226	3950
250	308	122	53	33	244	5300
280 ★	341	133	55	38	265	7100
315	391	138	70	33	275	9650
355 ★	430	156	60	45	312	11750
400 ★	497	171	53	64	343	19300

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

- ✓ **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**



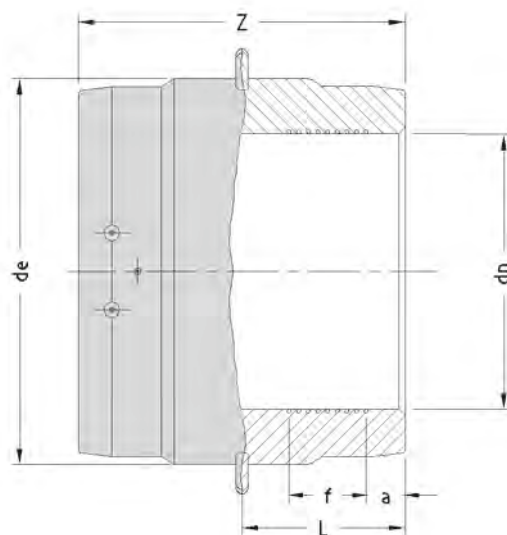
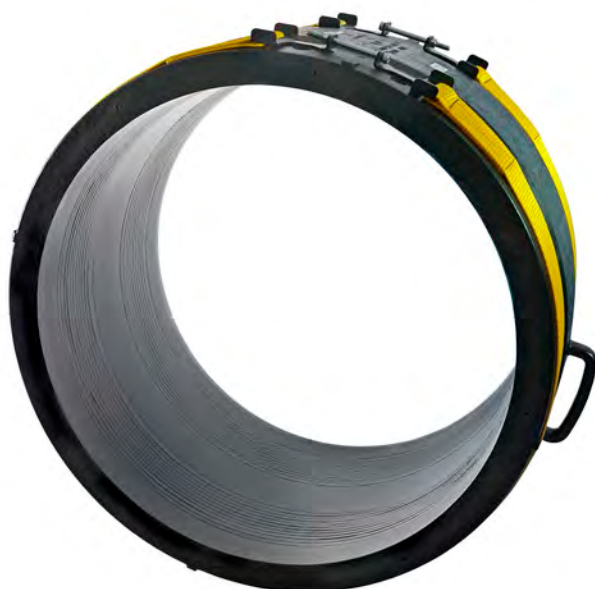
Electro-
fusion
fittings

e-fusion socket

PN 12,5 – SDR 13,6

cod. 21.10.10 PE 100

pressure class guaranteed by Eurostandard **16 bar**



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

d _n	dimensions					weights
	d _e	L	f	a	Z	
450	527	175	59	45	350	16500
500	585	179	76	47	359	22000
560	656	195	90	50	390	33200
630	736	210	99	50	420	46850

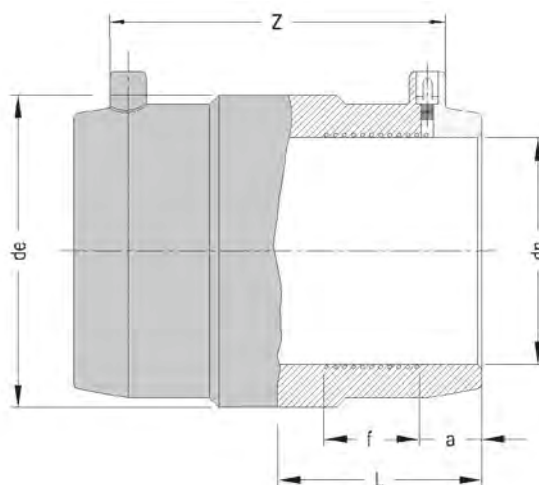
- weldable only with:
 - universal ef units
 - monovalent ef units serie Euro S1 PLUS or Euro S1 starting from serial number M10-001 after updating (please contact Eurostandard)

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 socket PN 25 – SDR 7,4

cod. 21.00.25 PE 100



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

● weldable only with monovalent
ef units Serie Euro

▲ minimum weldable thickness 3 mm

d _n	dimensions					weights
	d _e	L	f	a	Z	
20	33	33	15	13	70	45
25	38	33	15	12	70	55
32	46	38	19	12	80	75
40	56	44	22	13	90	110
50	68	49	23	14	100	155
63	82	54	26	18	111	225
75	99	60	36	14	120	330
90	116	65	37	14	130	490
110	145	70	36	18	140	800
125	163	76	39	18	151	1060
140	183	81	48	18	161	1440
160	207	86	53	20	172	1950
180	233	97	56	23	193	2550 ●
200	260	101	65	22	203	3440 ●
225	292	112	67	22	223	4190 ●
250	324	122	60	32	244	5900 ●
315	408	142	70	37	284	10750 ●

● in preparation

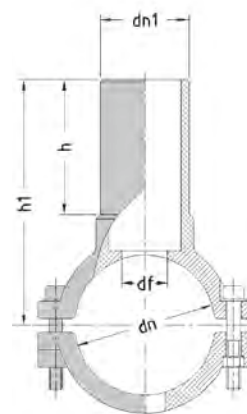
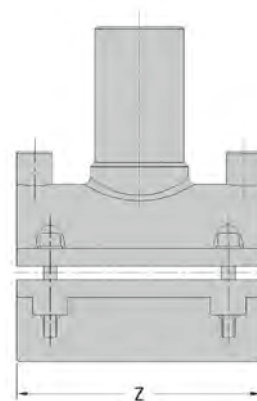
- ✓ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✓ **ABSOLUTELY compulsory the pipes/ittings scraping**
- ✓ **Weldability guaranteed both on different wall thickness (SDR) and PE**



Electro-
fusion
fittings

e-fusion spigot saddle

cod. 21.20 PE 100



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

● weldable only with Euro electrofusion monovalent unit

- ✓ 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 60-61				
50x 20					
x 25					
x 32	52	159	101	13	300
x 25	59	165	101	17	300
x 32	110	170	101	25	300
63x 20 x 25 x 32 x 40 x 50 x 63	monobloc version page 60-61				
x 25					
x 32					
x 40					
x 50					
x 63	65	140	122	48	300 ●
75x 25	65	123	125	17	400
x 32	65	123	125	25	405
x 40	70	128	125	32	415
x 50	80	144	125	38	445
x 63	90	159	125	48	500
90x 20	55	121	125	13	450
x 25	55	121	125	17	460
x 32	55	121	125	25	470
x 40	60	126	125	32	460
x 50	65	137	125	38	500
x 63	73	150	125	48	610
110x 25 x 32 x 40 x 50 x 63	monobloc version page 60-61				
x 32					
x 40					
x 50					
x 63					
125x 25	56	143	160	17	1100
x 32	57	143	160	25	1140
x 40	62	147	160	32	1145
x 50	67	158	160	38	1150
x 63	75	173	160	48	1000
x 90	93	191	190	72	1260
140x 25	65	159	160	17	920
x 32	65	159	160	25	925
x 40	70	163	160	32	935
x 50	80	179	160	38	965
x 63	90	194	160	48	1025

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

● with reinforce steel clip

● in preparation



Electro-
fusion
fittings

e-fusion tapping saddle

cod. 21.30 PE 100



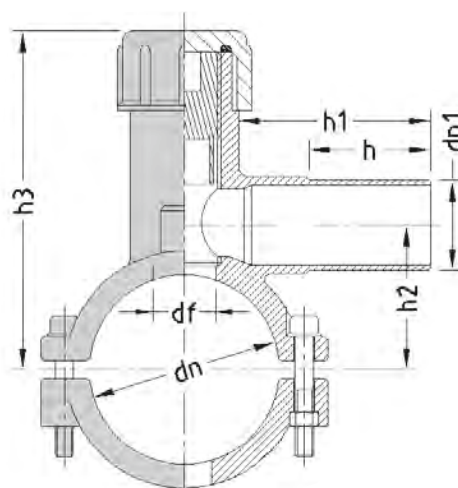
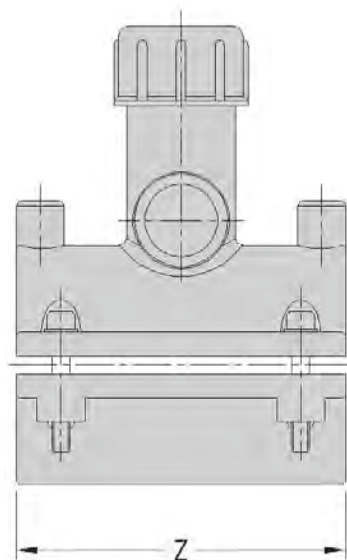
			dimensions					weights
d _n	d _{n1}	d _f	h	h ₁	h ₂	h ₃	Z	PN 16 SDR 11
40x 20 x 25 x 32	monobloc version page 62-63							
50x 20 x 25 x 32	16 16 18	50 54 60	54 54 78	71 71 40	131 131 102	101 101 102		290 290 290
63x 20 x 25 x 32 x 40	25 25 25 25	70 70 70 70	90 90 105 120	55 55 55 55	136 136 136 136	110 110 110 110		430 460 470 510
75x 20 x 25 x 32 x 40 x 50 x 63	25 25 25 25 30 30	70 70 70 72 72 93	90 90 107 120 120 120	63 63 74 63 63 63	133 133 133 133 160 160	125 125 125 125 125 125		610 585 600 610 770 610
90x 20 x 25 x 32 x 40 x 50 x 63	25 25 25 25 30 30	70 70 70 72 72 93	90 90 105 120 120 120	70 70 70 70 73 73	146 146 146 146 171 171	125 125 125 125 125 125		660 660 660 660 660 880
110x 20 x 25 x 32 x 40 x 50 x 63	monobloc version page 62-63							
125x 20 x 25 x 32 x 40 x 50 x 63	25 25 25 25 30 30	70 70 70 72 72 83	90 90 108 120 120 120	87 87 84 87 87 87	165 165 165 165 187 187	160 160 160 160 160 160		1230 1110 1125 1155 1295 1330

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

d_f = cutter diameter

● weldable only with Euro
electrofusion monovalent unit

			dimensions					weights
dn	dn1	df	h	h1	h2	h3	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**

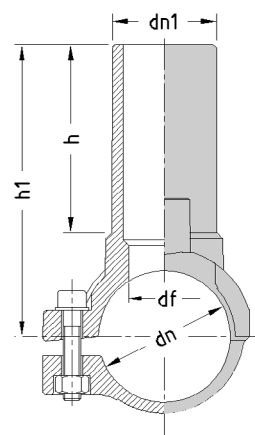
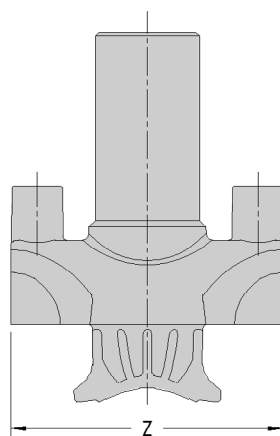
- ✓ Boring after cooling is completed
- ✓ Weldability guaranteed both on PE 80 and PE 100 pipelines
- ✓ Suitable for application on pipelines under pressure gas and water
- ✓ ABSOLUTELY compulsory the pipe scraping in the welding area
- ✓ Do not remove the cutter after boring

e-fusion spigot saddle

monobloc version

cod. 21.20A PE 100

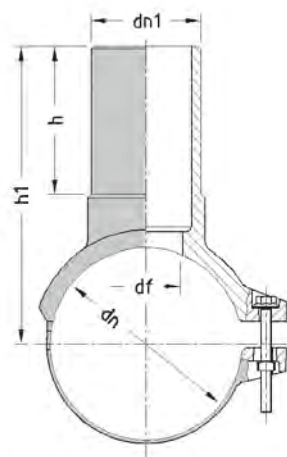
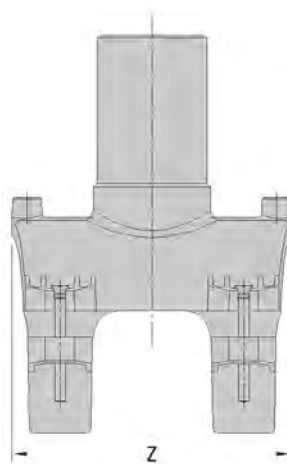
diam. 40x



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

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

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	150
x	25	60	110	110	17	160
x	32	65	112	110	25	170
x	40	65	115	110	32	180
x	50	80	135	110	38	210
90x	20	60	122	125	13	230 ●
x	25	60	127	125	19	235 ●
x	32	65	131	125	25	240 ●
x	40	65	131	125	32	245 ●
x	50	80	151	125	35	270 ●
x	63	85	160	125	41	320 ●
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

- ✓ 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

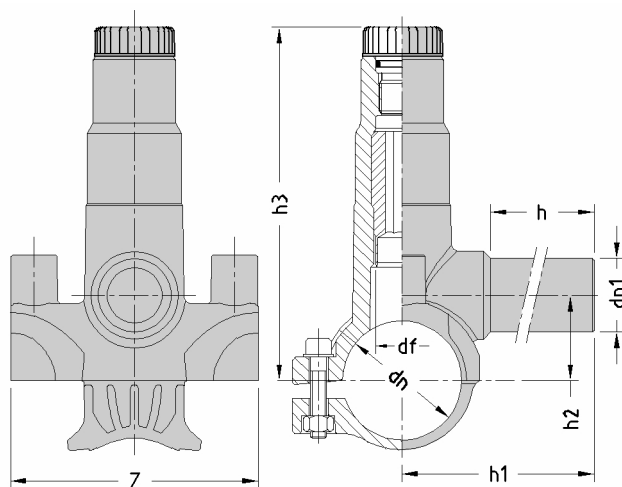
e-fusion tapping saddle

monobloc version

cod. 21.30A PE 100



diam. 40x

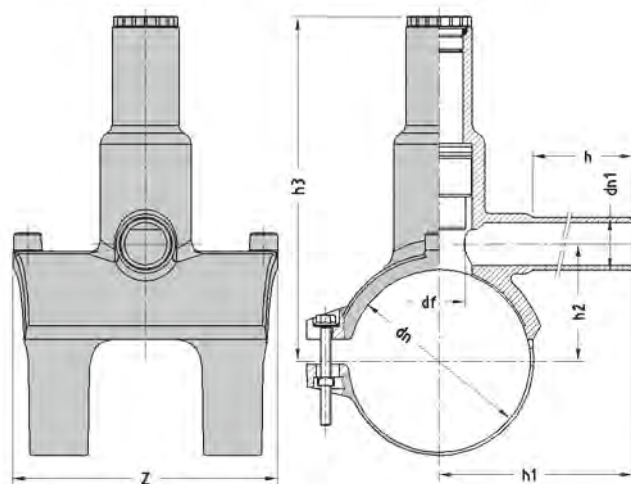


diam. dn	WELDABILITY on pipe/fitting PE 100	
	SDR 17	SDR 11
40x		●
63x	●	●
90x	●	●
110x	●	●

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



diam. 110x



		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	112	43	160	110	315 ●
x	25	72	112	43	160	110	330 ●
x	32	76	112	43	160	110	335 ●
x	40	76	114	48	160	110	370 ●
x	50	80	120	48	160	110	390 ●
x	63	82	125	48	160	110	430 ●
90x	20	76	130	60	200	125	415 ●
x	25	76	130	60	200	125	435 ●
x	32	76	135	60	200	125	445 ●
x	40	76	140	60	200	125	470 ●
x	50	80	145	60	200	125	490 ●
x	63	85	145	60	200	125	530 ●
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)



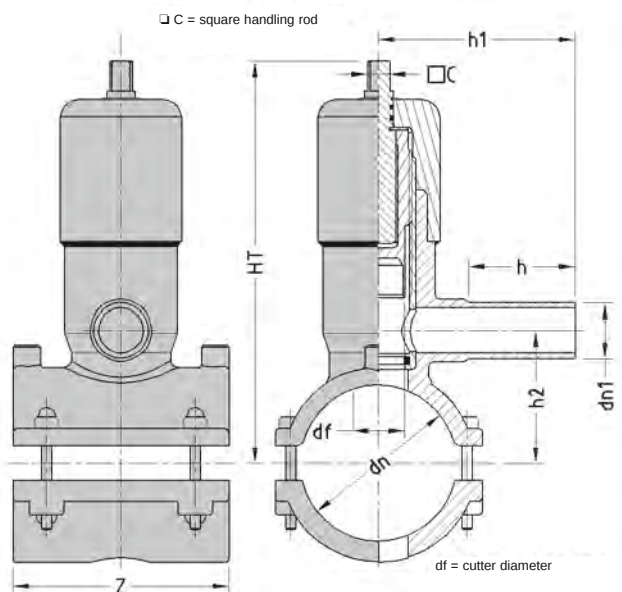
Electro-
fusion
fittings

e-fusion tapping saddle with valve

cod. 21.73 PE 100



diam. d_n	WELDABILITY on pipe/fitting PE 100	
	SDR 17	SDR 11
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	df	PN 16 SDR 11
75x	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



with 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

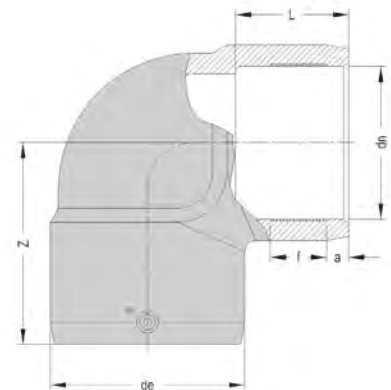
90° electrofusion elbow

cod. 21.11 PE 100



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

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



d _n	dimensions					PN - SDR	weights
	d _e	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
225	280	120	60	25	251	PN 16 - SDR 11	8950 ●
250	310	127	64	30	272	PN 16 - SDR 11	11550 ●
315	397	145	70	35	321	PN 16 - SDR 11	23040 ●

● in preparation

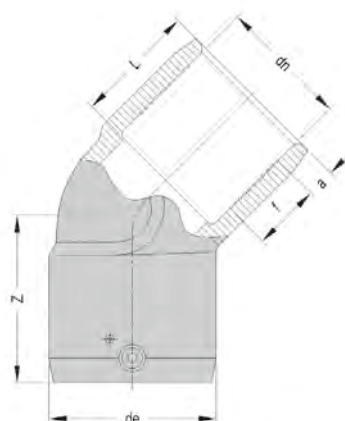
- ✓ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✓ **ABSOLUTELY compulsory the pipes scraping**
- ✓ **Weldability guaranteed both on PE 80 and PE 100 pipelines**

45° electrofusion elbow

cod. 21.16 PE 100



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



- weldable only with Euro electrofusion monovalent unit
- ▲ 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

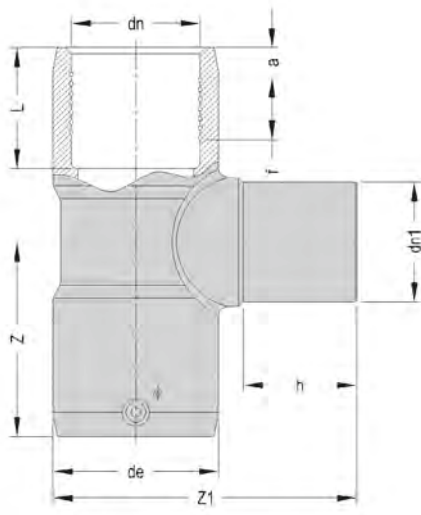
- ✓ **ABSOLUTELY compulsory the use of aligning clamp for all diameters**
- ✓ **ABSOLUTELY compulsory the pipes scraping**
- ✓ **Weldability guaranteed both on PE 80 and PE 100 pipelines**



Electro-
fusion
fittings

90° electrofusion tee

cod. 21.21 PE 100



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

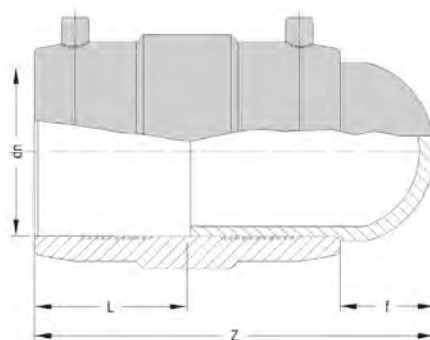
diam. dn	WELDABILITY on pipe/fitting PE 100	
	SDR 17	SDR 11
25		● ▲
32	● ▲	●
40	● ▲	●
50	●	●
63	●	●
75	●	●
90	●	●
110	●	●
125	●	●
140	●	●
160	●	●
180	●	●
200	●	●

dn	dn1	dimensions							weights
		de	L	f	a	h	Z	Z1	PN 16 - SDR 11
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 PE 100				
	SDR 26	SDR 17	SDR 11	SDR 9	SDR 7,4
20			● ▲	● ▲	●
25			● ▲	●	●
32		● ▲	●	●	●
40		● ▲	●	●	●
50		●	●	●	●
63		●	●	●	●
75		●	●	●	●
90		●	●	●	●
110		●	●	●	●
125		●	●	●	●
140		●	●	●	●
160	●	●	●	●	●
180		●	●	●	●

● weldable only with Euro electrofusion monovalent unit

▲ minimum weldable thickness 3 mm

VALID only for PN 25 SDR 7,4 version

d _n	dimensúns PN 16 - SDR 11			dimensúns PN 25 - SDR 7,4			weights	
	f	L	Z	f	L	Z	SDR 11 PN 16	SDR 7,4 PN 25
20				30	33	100		60
25				27	33	104		75
32	31	38	98	31	38	98	95	100
40	29	44	114	29	44	114	140	155
50	32	49	127	32	49	127	205	250
63	49	55	136	49	55	136	310	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 pipes scraping**

✓ **Weldability guaranteed both on PE 80 and PE 100 pipelines**

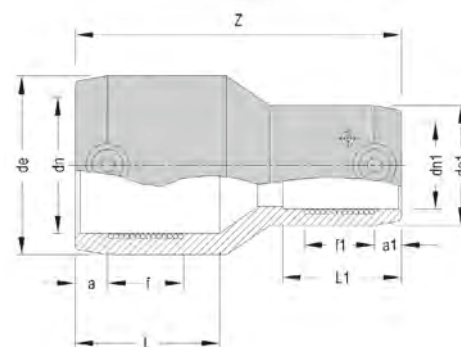


Electro-
fusion
fittings

electrofusion reducer

cod. 21.51 PE 100

diam. d _n	WELDABILITY on pipe/fitting PE 100	
	SDR 17	SDR 11
32x 20		●▲
32x 25		●▲
40x 20		●▲
40x 25		●▲
40x 32	●▲	●
50x 25	●▲	●▲
50x 32	●▲	●
50x 40	●▲	●
63x 32	●▲	●
63x 40	●▲	●
63x 50	●	●
75x 50	●	●
75x 63	●	●
90x 50	●	●
90x 63	●	●
90x 75	●	●
110x 63	●	●
110x 90	●	●
125x 90	●	●
125x 110	●	●
160x 90	●	●
160x 110	●	●
160x 125	●	●
180x 125	●	●
200x 160	●	●



- weldable only with Euro electrofusion monovalent unit
- ▲ 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 50	97	66	70	54	34	30	13	11	154	345
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
125x110	162	144	79	73	33	36	22	20	164	1225
160x 90	209	119	90	79	50	50	23	17	233	2130
160x110	208	144	95	82	48	37	25	20	218	2400
160x125	208	162	98	87	47	30	26	21	208	2505
180x125	228	165	103	79	50	38	23	18	254	3015 ●
200x160	254	210	110	96	55	45	23	20	265	4250 ●

● in preparation

- ✓ 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

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 PLUS** 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 PLUS** 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 PLUS** 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 PLUS** and **EURO S1 LIGHT** are supplied with USB connection port and serial port. Using the USB drive supplied with each control unit, it is possible to transfer the welding data which can be used with **DBManager Cloud** for the management of the printing and storing operations.

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



Euro S1 Plus
cod. 12.12 S1M



Euro S1 Light
cod. 12.12 S1L

CHARACTERISTICS	EURO S1 PLUS
supply voltage	230V -20% / +15%
frequency	50 Hz $\pm$ 15%
output voltage	< 50 V
max output current	110 Amp
80% output current	80 Amp
max power consumption	4500 W
operating temperature	-10°C + 45°C
port connections	USB/host - serial RS-232
protection	IP 54
working modes	Manual with selection: fitting type – diameter – SDR fitting to be welded and SDR pipe to be welded
welding cycle memory capacity	n. 1600
connectors	4.0 mm
dimensions L x P x H	32x26x38 cm
weight	14 Kg
ancillary equipment on request	GPS

CHARACTERISTICS	EURO S1 LIGHT
supply voltage	230V $\pm$ 15%
frequency	50 Hz $\pm$ 15%
output voltage	< 50V
max power consumption	3000 W
operating temperature	-10°C + 45°C
port connections	USB/host - serial RS-232
protection	IP 54
welding cycle memory capacity	n. 800
dimensions L x P x H	35x19x30 cm
weight	8 Kg



**Electro-
fusion units**

polyvalent electrofusion unit

The ef unit **EURO SP1 PLUS** 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 PLUS** 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.

Using the USB drive supplied with each control unit, it is possible to transfer the welding data which can be used with **DBManager Cloud** for the management of the printing and storing operations.

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



Euro SP1 Plus
cod. 12.19 SPP

CHARACTERISTICS	EURO SP1 PLUS
supply voltage	230 V -20% / +15%
frequency	50/60 Hz +/-15%
output voltage	8 ÷ 48V
max output current 80%	110 Amp
output current	80 Amp
max power consumption	4500 W
operating temperature	-10° C + 45° C
port connections	USB/host - 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 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 38 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.



**Electro-
fusion units**

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.

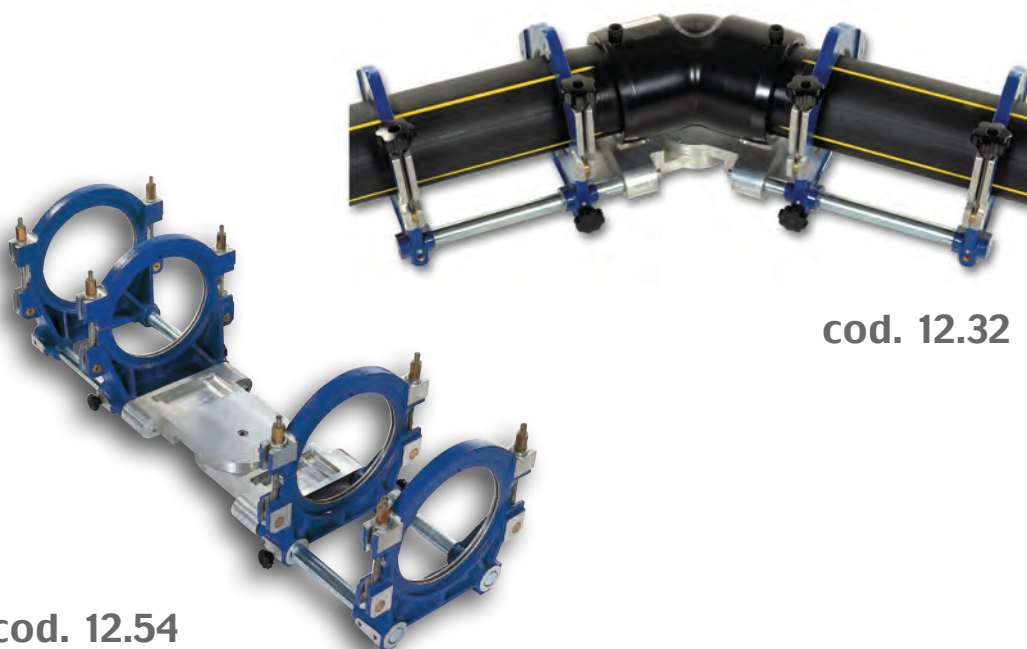
The aligning clamp is auxiliary to the control unit, its use is essential for the successful electrofusion jointing.

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

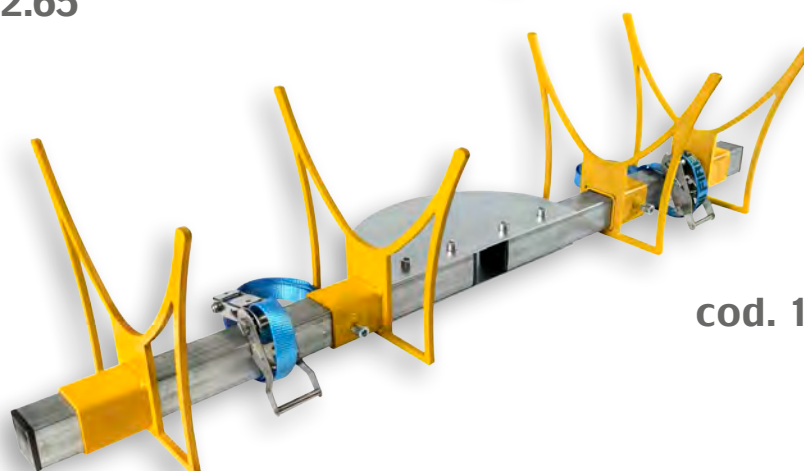
cod. 12.32	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT with n. 4 jaws dia. 63 mm, complete with reducing inserts for dia. 20-25-32-40-50 mm
cod. 12.45	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT with n. 4 jaws dia. 125 mm, complete with reducing inserts for dia. 20-25-32-40-50-63-75-90-110 mm
cod. 12.54	ALIGNING CLAMP WITH CENTRAL MOVABLE JOINT with n. 4 jaws dia. 225 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



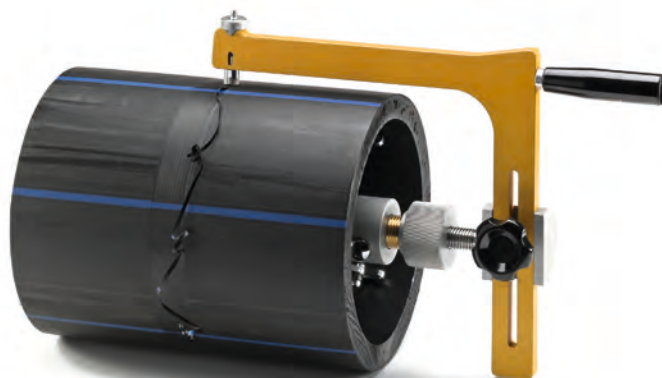
cod. 15.49



cod. 15.47



cod. 15.54



cod. 15.48

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



cod. 15.51



cod. 15.52



detergent

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 the cleaning in the welding process of PE pipes and fittings

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.

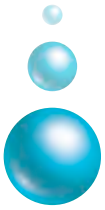
The temperature control is carried out with an adjustable thermostat which guarantees a maximal variation of $\pm 2^{\circ}\text{C}$ of the stated temperature.

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

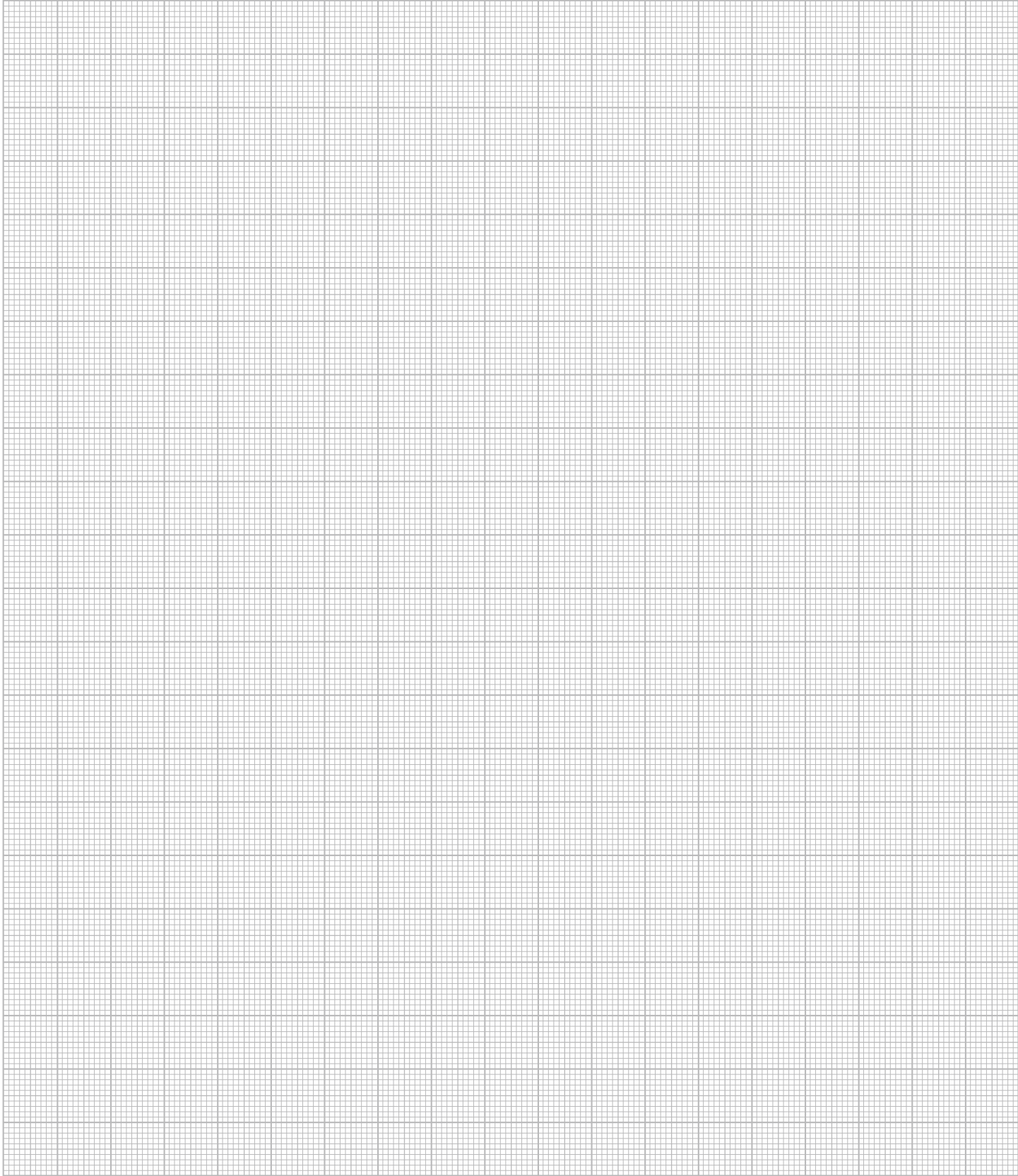
CHARACTERISTICS	EUROSTANDARD			
	TE 160	TE 200	TE 250	TE 315
maximal power				
- hydraulic unit	370 W	370 W	370 W	750 W
- facer tool	800 W	800 W	1000 W	1150 W
- heating plate	1000 W	1420 W	2300 W	3000 W
weight in kg				
- base mounting	35,0	46,0	45,0	78,0
- hydraulic unit	26,0	26,0	26,0	28,0
- facer 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			

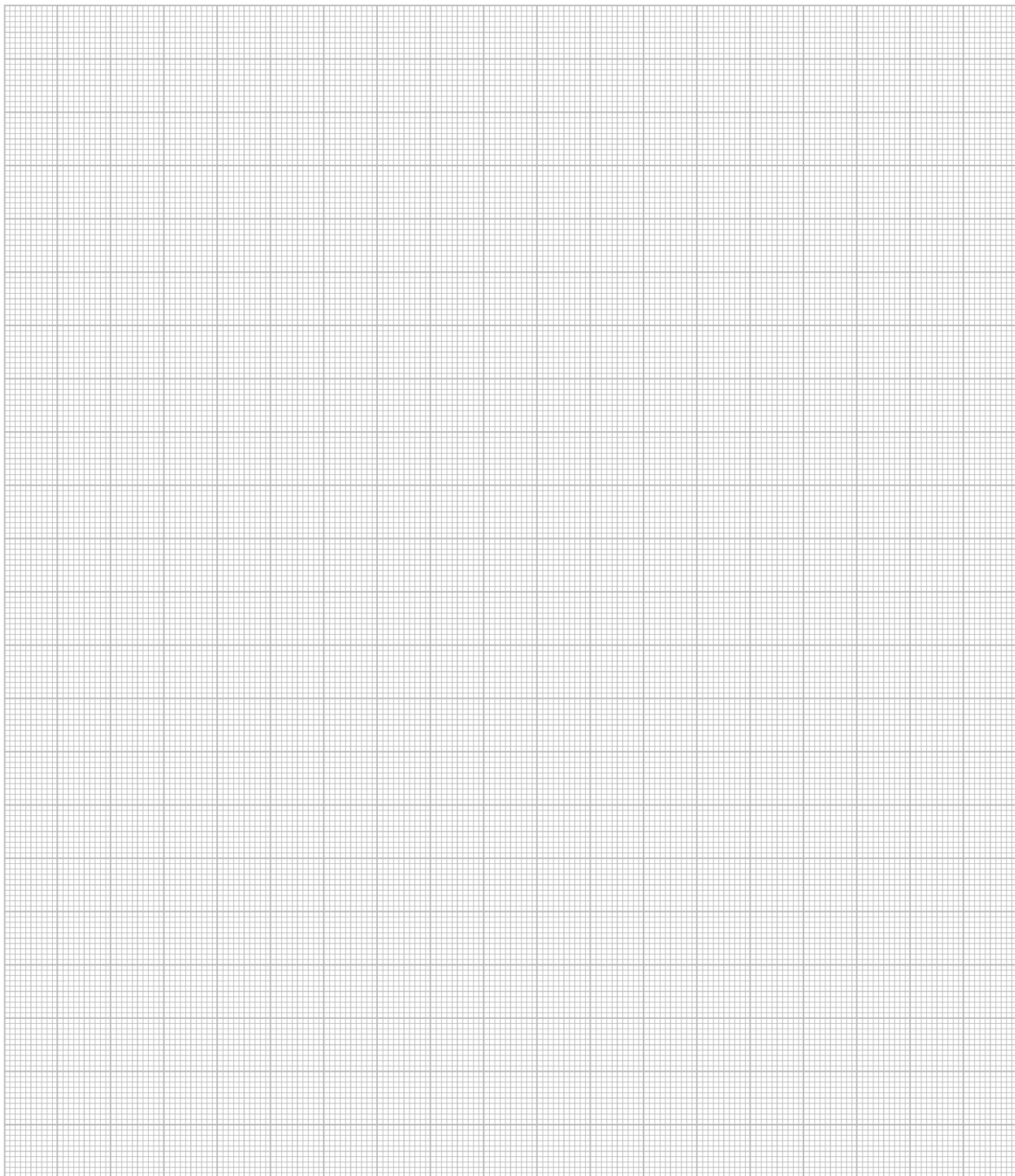
The buttfusion units are provided with industrial plug, IEC standards protective measures, 2 poles + earth 16A - 220V

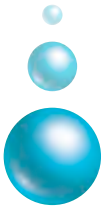




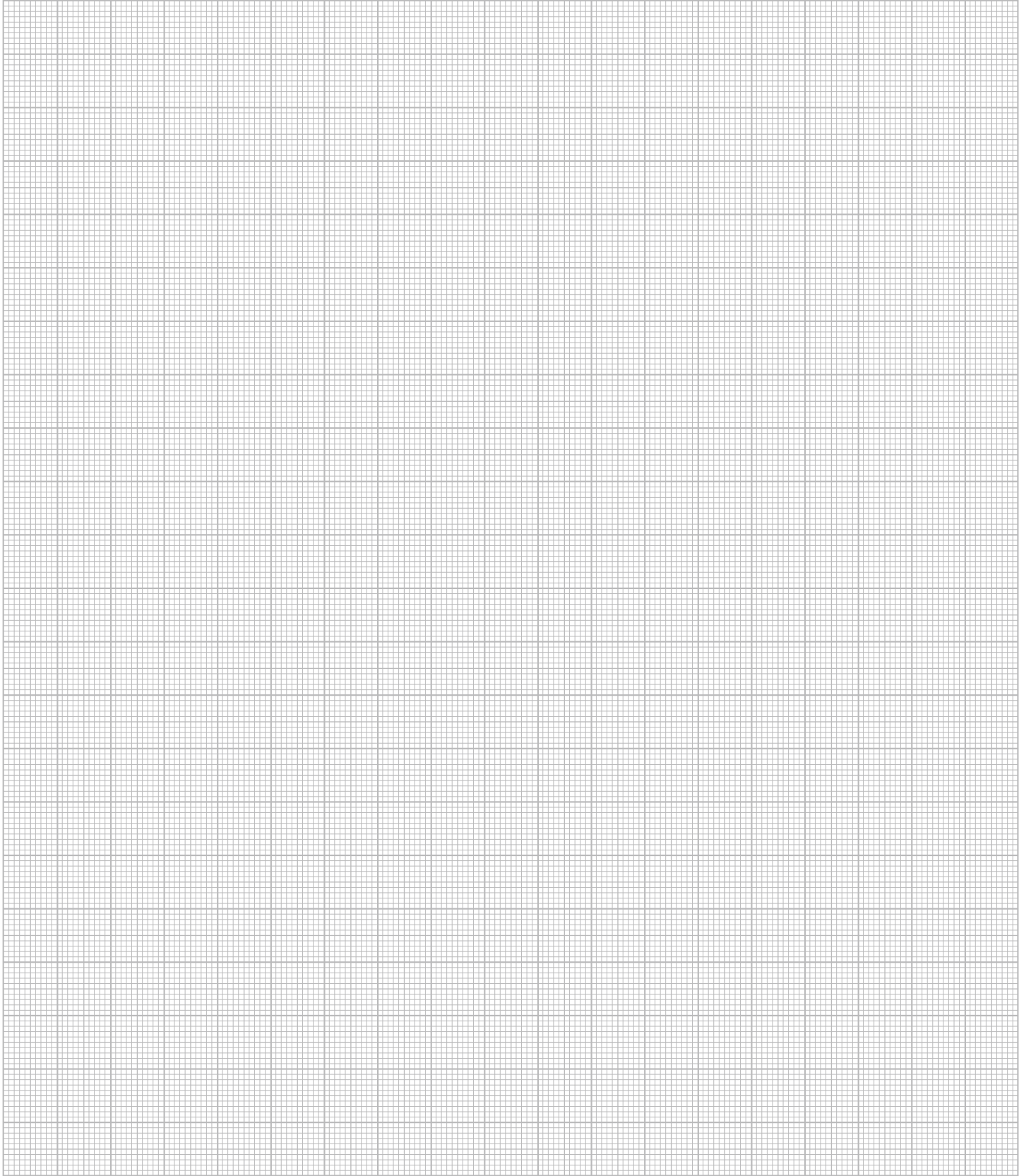
notes

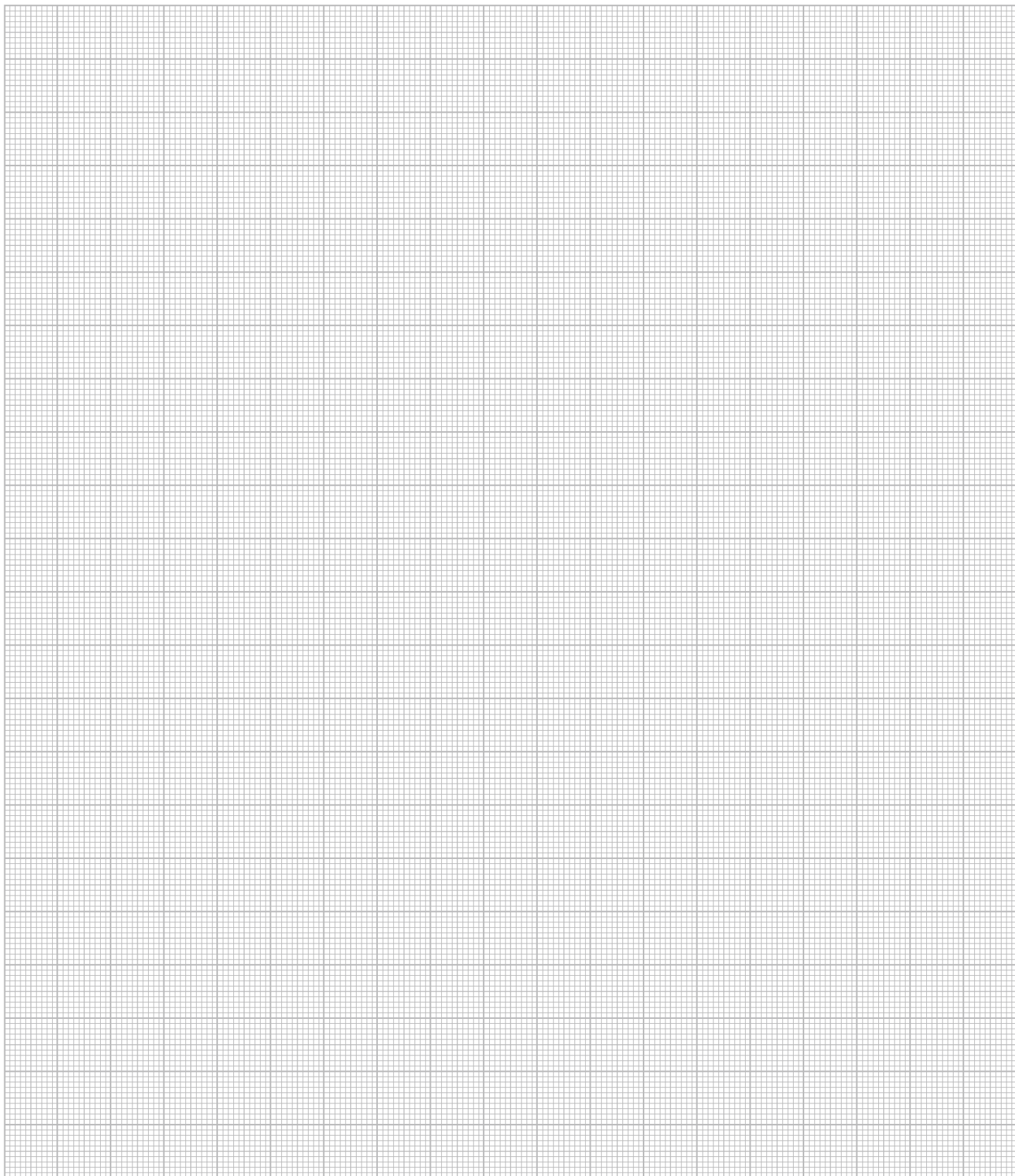


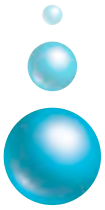




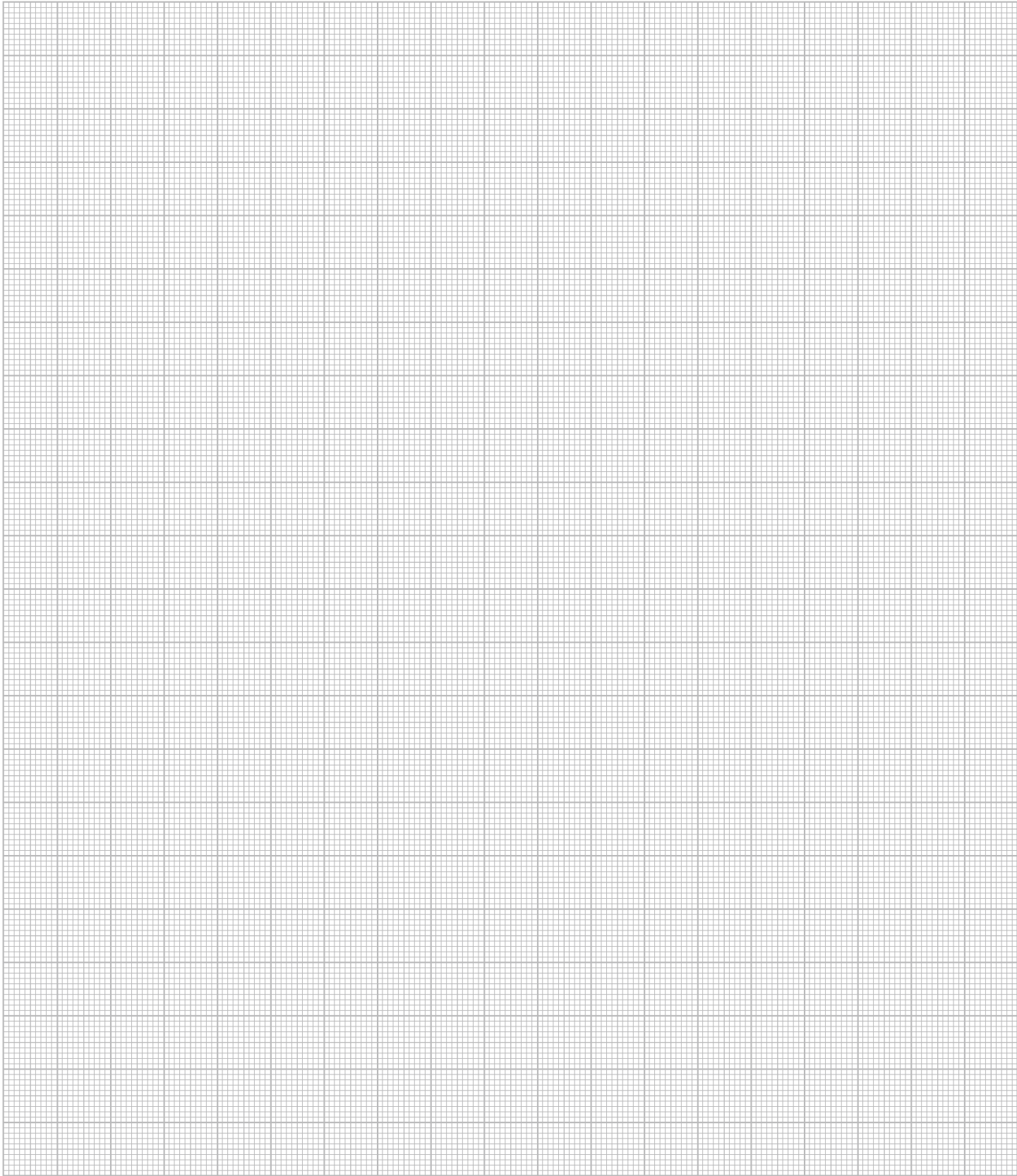
notes

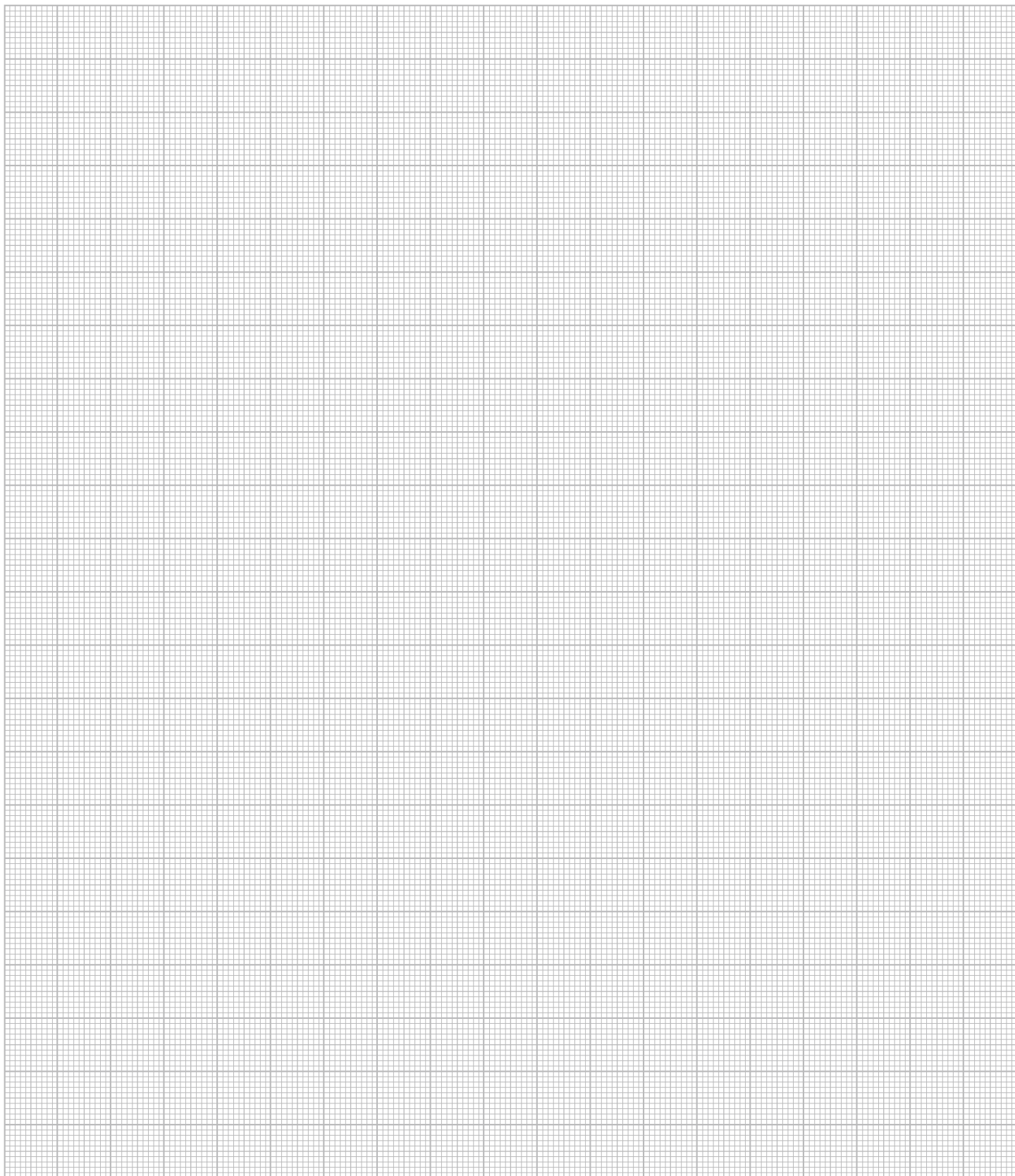






notes







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

Zona Industriale Lago - 38038 Tesero (Trento) Italy
Tel. ++39 0462 811 211 - Fax ++39 0462 811 200
E-mail: info@eurostandard.it - Website: www.eurostandard.it