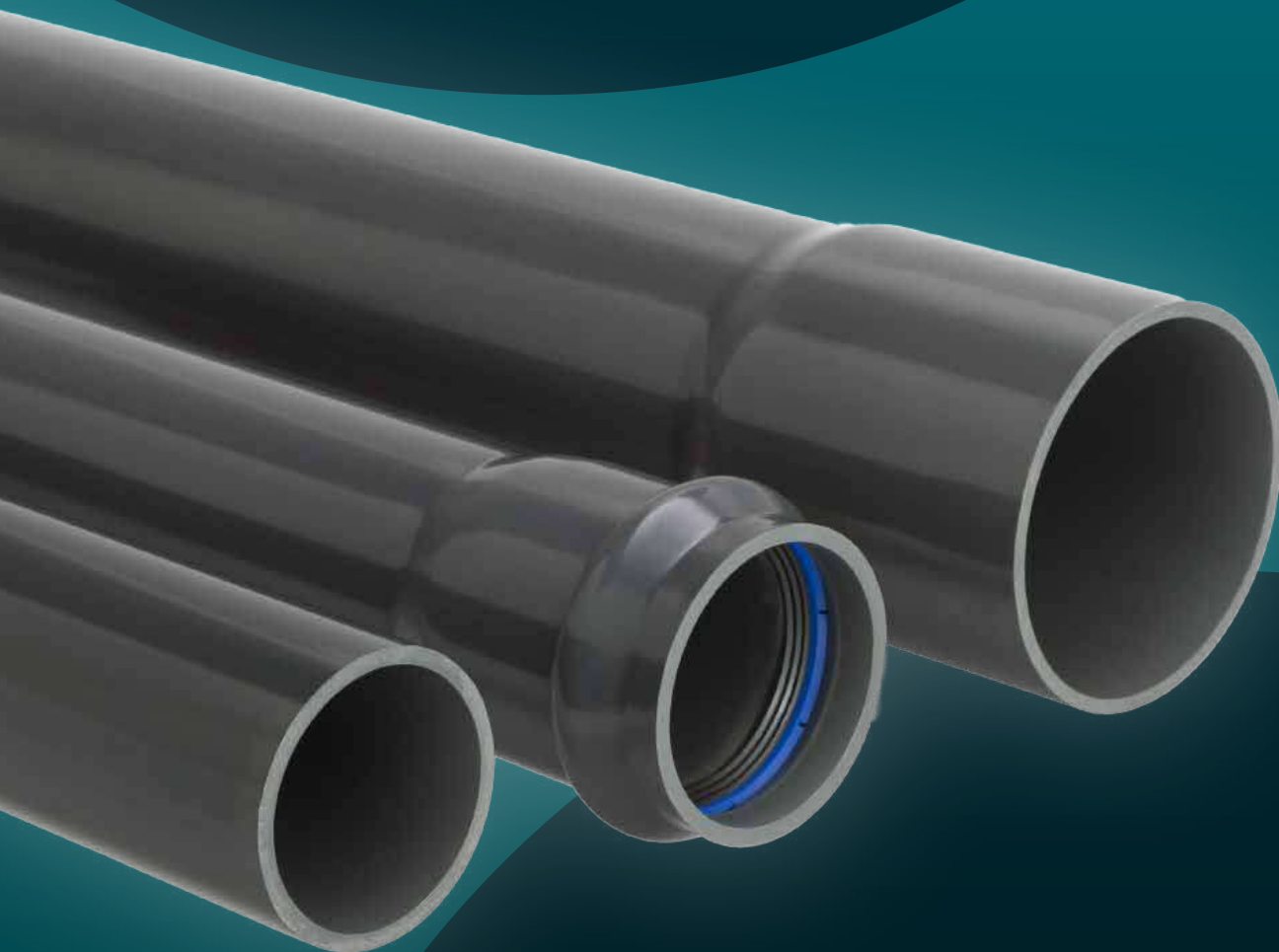


martoni
piping the future



PRESSURE
PVC-U



ACQUAPRESS^{PVC-U}



PVC-U pressure pipes for water mains, irrigation systems and industrial applications.

MATERIAL

PVC-U

STANDARD

EN ISO 1452-2

COLOUR

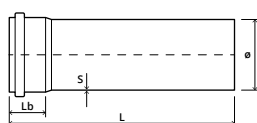
RAL 7011 (grey)

NOMINAL PRESSURE

PN 6 - 10 - 12,5* - 16 - 20*

PIPE LENGTH

6 m including socket



JOINTING SYSTEM

Socket joint with pre-inserted gasket

GASKET

EN 681-1 "Anger-Lock", PP-reinforced

Ø (mm)		63	75	90	110	125	140	160	180
S (mm)	PN6* (SDR 33 - S 16)	2,0	2,3	2,8	2,7	3,1	3,5	4,0	4,4
	PN10 (SDR 21 - S 10)	3,0	3,6	4,3	4,2	4,8	5,4	6,2	6,9
	PN12,5* (SDR 17 - S 8)	3,8	4,5	5,4	5,3	6,0	6,7	7,7	8,6
	PN16 (SDR 13,6 - S 6,3)	4,7	5,6	6,7	6,6	7,4	8,3	9,5	10,7
	PN20* (SDR 11 - S 5)	5,8	6,8	8,2	8,1	9,2	10,3	11,8	13,3
Ø (mm)		200	225	250	280	315	355*	400*	500*
S (mm)	PN6* (SDR 33 - S 16)	4,9	5,5	6,2	6,9	7,7	8,7	9,8	12,3
	PN10 (SDR 21 - S 10)	7,7	8,6	9,6	10,7	12,1	13,6	15,3	19,1
	PN12,5* (SDR 17 - S 8)	9,6	10,8	11,9	13,4	15,0	16,9	19,1	23,9
	PN16 (SDR 13,6 - S 6,3)	11,9	13,4	14,8	16,6	18,7	21,1	23,7	29,7
	PN20* (SDR 11 - S 5)	14,7	16,6	18,4	20,6	23,2	-	-	-

List of product CERTIFICATIONS available on request

* Products available on request

Socket length

Ø (mm)	63	75	90	110	125	140	160	180
Lb (mm)	100	115	118	125	130	135	140	140

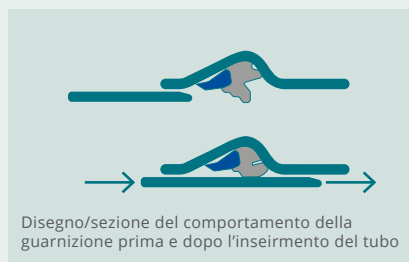
Ø (mm)	200	225	250	280	315	355	400	500
Lb (mm)	150	160	170	180	170	210	225	240

Packaging

Ø (mm)		63	75	90	110	125	140	160	180
Tubes/Pal (pcs)	PN6	123	87	60	86	68	45	40	28
	PN10	123	87	60	40	34	23	20	28
	PN16	123	87	60	40	34	23	20	28

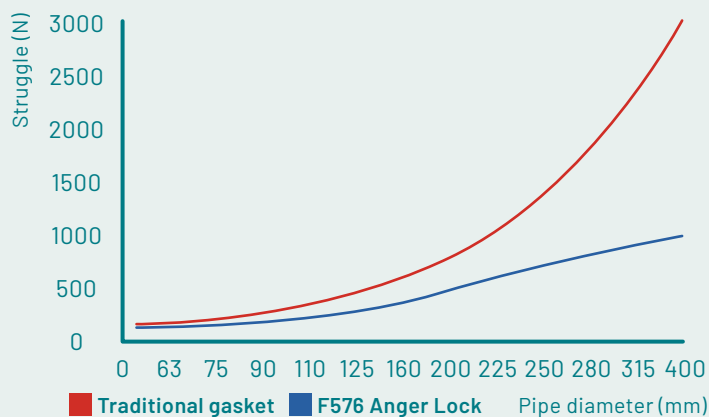
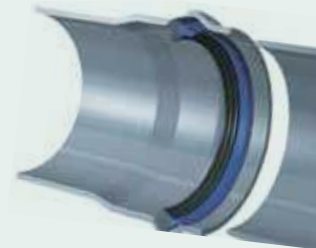
Ø (mm)		200	225	250	280	315	355	400	500
Tubes/Pal (pcs)	PN6	25	18	16	11	9	9	5	4
	PN10	25	18	16	11	9	9	5	2
	PN16	25	18	12	11	9	9	5	2

FORSHEDA 576 - Anger-Lock™



Advantages

- Ozone resistance
- Reduced installation time
- Factory automatic insertion
- Certified EN 681-1 – Italian Decree D.M. 174/2004
- Hydraulic tightness with high angular deflection (up to 3°)
- Two-component gasket: EPDM with PP reinforcement



Seal Design & Function

The patented Forsheda 576 Anger-Lock™ seal is a combined lip-and-compression seal installed inside the fitting after moulding.

Making the seal an integral part of the pipe eliminates many disadvantages of separate sealing rings.

GASKETED FITTINGS

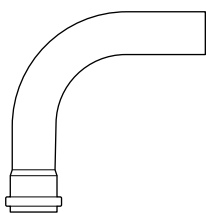
MATERIAL
PVC-U

COLOUR
RAL 7011 (grey)

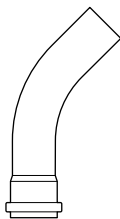
GASKET
EN 681-1 “Anger-Lock”, PP-reinforced

NOMINAL PRESSURE
PN10-16

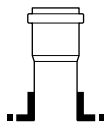
JOINTING SYSTEM
Socket joint with pre-inserted gasket



**90° BEND
F/M**



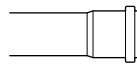
**11°15' – 22°30' – 45° BEND
F/M**



**SINGLE SOCKET
FLANGED
SPIGOT**



**MALE
FLANGED
ADAPTER**



**LONG REPAIR
COUPLER**

Ø (mm)	63	75	90	110	125	140	160	180	200	225	250	280	315
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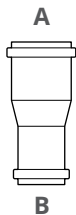


**SLIDING
COUPLER**



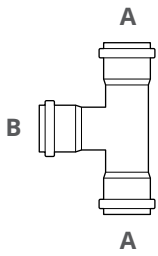
**SINGLE
SOCKET
COUPLER**

Ø (mm)	50	63	75	90	110	125	140	160	180
200	225	250	280	315	355	400			



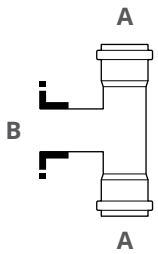
REDUCED COUPLING

Ø	A	75	90	110	125	140	160	180	200	225	250	280	315	400
	B	63	75	90	110	125	140	160	180	200	225	250	280	355



TEE 90° F/F/F

Ø	A	63	75	75	90	90	90	110	110	110	110	125	125	125
	B	63	63	75	63	75	90	63	75	90	110	63	75	90
125	125	140	140	140	140	140	140	160	160	160	160	160	160	160
110	125	63	75	90	110	125	140	63	75	90	110	125	140	160
200	200	200	200	200	200	200	200	225	225	225	225	225	250	250
63	75	90	110	125	140	160	200	125	140	160	200	225	140	160
250	250	250	280	280	280	315	315	315						
200	225	250	225	250	280	250	280	315						



REDUCED REINFORCED TEE 90° F/F/FLANGED BRANCH

Ø	A	63	75	75	90	90	90	110	110	110	110	125	125
	B	63	63	75	63	75	90	63	75	90	110	63	75
125	125	125	140	140	140	140	140	140	160	160	160	160	160
90	110	125	63	75	90	110	125	140	63	75	90	110	125
160	160	200	200	200	200	200	200	200	200	225	225	250	250
140	160	63	75	90	110	125	140	160	200	200	225	200	225
250	280	280	315	315									
250	250	280	250	315									



ACQUAPRESS^{PVC-U}



PVC-U pipes for pressure pipelines, pool filtration and circulation systems.

MATERIAL

PVC-U

NOMINAL PRESSURE

PN 6 - 10 - 12,5 - 16 - 20 - 25

JOINTING SYSTEM

Solvent socket or plain-end

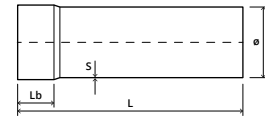
STANDARD

EN ISO 1452-2

PIPE LENGTH

3-5 m plain-end

6 m including solvent socket



COLOUR

RAL 7011 (grey)

	Ø (mm)	16	20	25	32	40	50	63	75	90	110	125
S (mm)	PN6*	-	-	-	-	1,5	1,6	2,0	2,3	2,8	2,7	3,1
	PN10	-	-	-	1,6	1,9	2,4	3,0	3,6	4,3	4,2	4,8
	PN12,5*	-	-	-	-	-	3,0	3,8	4,5	5,4	5,3	6,0
	PN16	-	1,5	1,9	2,4	3,0	3,7	4,7	5,6	6,7	6,6	7,4
	PN20*	1,5	1,9	2,3	2,9	3,7	4,6	5,8	6,8	8,2	8,1	9,2
	PN25*	1,8	2,3	2,8	3,6	4,5	5,6	-	-	-	-	-
	Ø (mm)	140	160	180	200	225	250	280*	315*	355*	400*	500*
S (mm)	PN6*	3,5	4,0	4,4	4,9	5,5	6,2	6,9	7,7	8,7	9,8	12,3
	PN10	5,4	6,2	6,9	7,7	8,6	9,6	10,7	12,1	13,6	15,3	19,1
	PN12,5*	6,7	7,7	8,6	9,6	10,8	11,9	13,4	15,0	16,9	19,1	23,9
	PN16	8,3	9,5	10,7	11,9	13,4	14,8	16,6	18,7	21,1	23,7	29,7
	PN20*	10,3	11,8	13,3	14,7	16,6	18,4	20,6	23,2	-	-	-

List of product CERTIFICATIONS available on request

* Products available on request

Socket length and packaging

Ø (mm)	16	20	25	32	40	50	63	75	90	110	125
Lb (mm)	30	40	40	45	55	65	85	90	105	120	140
Tubes/Pal (pcs)	250	250	360	272	200	151	123	87	60	40	34

Ø (mm)	140	160	180	200	225	250	280	315	355	400	500
Lb (mm)	155	170	-	210	-	-	-	-	-	-	-
Tubes/Pal (pcs)	23	20	28	25	18	16	11	9	9	5	2

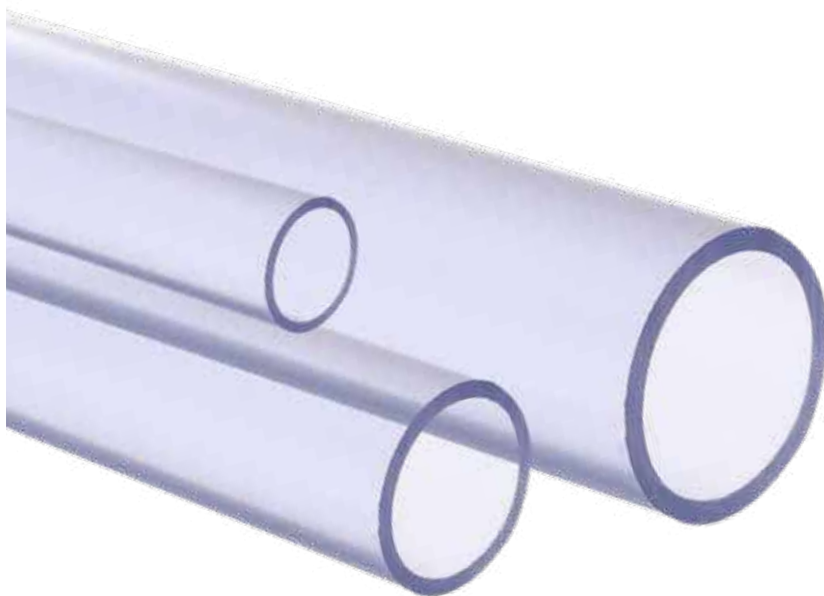
Inch Series

* Products available on request

STANDARD BS EN 1452 | BS 3505

Ø (mm)	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2
d _{em, min} (mm)	21,2	26,6	33,4	42,1	48,1	60,2	88,7
d _{em, max} (mm)	21,5	26,9	33,7	42,4	48,4	60,5	89,1
S (mm)	PN9 CLASS C	-	-	-	-	2,5	3,0
	PN12 CLASS D	-	-	2,2	2,5	3,1	-
	PN15 CLASS E	1,7	1,9	2,2	2,7	3,9	4,8
	CLASS 7	3,7	3,9	4,5	4,8	5,5	-
Tubes/Pal (pcs)	1103	664	436	292	207	252	87

Ø (mm)	3"	4"	6"	8"
d _{em, min} (mm)	88,7	114,1	168,0	218,8
d _{em, max} (mm)	89,1	114,5	168,5	219,4
S (mm)	PN9 CLASS C	3,5	4,5	6,6
	PN15 CLASS E	5,7	7,3	-
Tubes/Pal (pcs)	96	67	30	18



ACQUAPRESS^{PVC-U}

Transparent PVC-U pipes for pressure applications, pool filtration and circulation systems.

MATERIAL

PVC-U

PIPE LENGTH

5 m

JOINTING SYSTEM

Solvent-cement

COLOUR

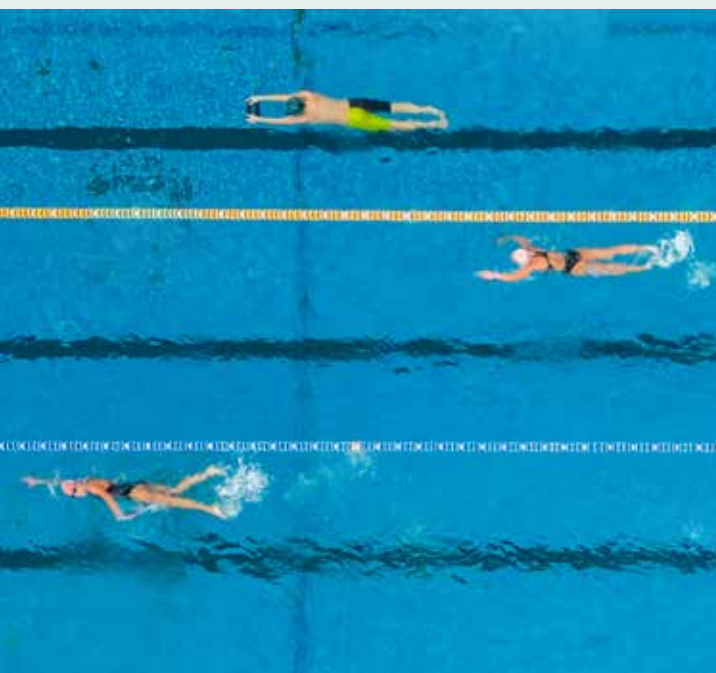
Transparent

DIAMETER RANGE

Ø 20 > 160 mm

PACKAGING

UV-protective bag



Transparent PVC Pipes for Inspection and Water Flow Monitoring

Transparent PVC pressure pipes are ideal for monitoring and maintaining swimming pool hydraulic systems. Their transparency allows operators to visually inspect the water flow and quickly identify obstructions, air pockets or deposits without dismantling the system.

Available in various diameters and lengths, the pipes can be easily connected to standard PVC fittings. They operate within a temperature range from 0°C to 60°C, making them suitable also for outdoor installations. Their resistance to pressure and chemical agents makes them ideal for swimming pools, aquariums and irrigation systems.

SOLVENT FITTINGS



ELBOW 45° - 90°

Ø (mm)	16	20	25	32	40	50	63	75
	90	110	125	140	160	200	225	250
	280	315	355	400				



TEE 90°

Ø (mm)	16	20	25	32	40	50	63	75	90	110
	125	140	160	200	225	250	280	315	355	400



SOCKET

Ø (mm)	16	20	25	32	40	50	63	75	90	110
	125	140	160	200	225	250	280	315	355	400



END CAP

Ø (mm)	16	20	25	32	40	50	63	75	90	110
	125	140	160	200	225	250	280	315		



UNION

Ø (mm)	16	20	25	32	40	50	63	75	90	110
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TRUE UNION BALL VALVE

Ø (mm)	16	20	25	32	40	50	63	75	90	110
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SINGLE UNION BALL VALVE

Ø (mm)	20	25	32	40	50	63	75	90	110
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BUTTERFLY VALVE

Ø (mm)	75	90	110	125	140	160	200	225
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TRUE UNION SPRING CHECK VALVE

Ø (mm)	20	25	32	40	50	63	75	90	110
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MALE ADAPTOR

Ø (mm)	50
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Tube series

		S 20 (SDR 41)	S 16 (SDR 33)	S 12,5 (SDR 26)	S 10 (SDR 21)	S 8 (SDR 17)	S 6,3 (SDR 13,6)	S 5 (SDR 11)
$\varnothing$ (mm)	≤ 90		PN6	PN8	PN10	PN12,5	PN16	PN20
	> 90	PN6	PN8	PN10	PN12,5	PN16	PN20	PN25

Geometric characteristics

$\varnothing$ (mm)	16	20	25	32	40	50	63	75	90	110	125
Average outside diameter tolerance (mm)	0,2	0,2	0,2	0,2	0,2	0,2	0,3	0,3	0,3	0,4	0,4
Ovality tolerance (x) (mm)	S6 - S16				1,4	1,4	1,5	1,6	1,8	2,2	2,5
	S12,5 - S5				0,5	0,6	0,8	0,9	1,1	1,4	1,5
Average wall thickness tolerance (X) (mm)	PN6					0,4	0,4	0,5	0,5	0,5	0,6
	PN10				0,4	0,5	0,5	0,6	0,7	0,7	0,7
	PN12,5								0,8	0,8	0,9
	PN16				0,4	0,5	0,6	0,7	0,8	0,9	1,0
	PN20				0,4	0,5	0,6	0,7	0,8	0,9	1,0
$\varnothing$ (mm)	140	160	180	200	225	250	280	315	355	400	500
Average outside diameter tolerance (mm)	0,5	0,5	0,6	0,6	0,7	0,8	0,9	1,0	1,1	1,2	1,5
Ovality tolerance (x) (mm)	S6 - S16				4,5	5,0	6,8	7,6	8,6	9,6	12,0
	S12,5 - S5				2,7	3,0	3,4	3,8	4,3	4,8	6,0
Average wall thickness tolerance (X) (mm)	PN6				0,8	0,9	0,9	1,0	1,1	1,2	1,5
	PN10				1,1	1,2	1,3	1,5	1,6	1,8	2,2
	PN12,5				1,4	1,6	1,7	1,9	2,2	2,6	
	PN16				1,6	1,7	1,9	2,1	2,4	2,6	3,2
	PN20				1,9	2,1	2,3	2,6			

Length variations for above-ground pipe installation

ΔL	Pipe length variations	$\Delta L = p \cdot L \cdot \Delta t$ (mm)
p	Linear expansion coefficient	0,06-0,08 mm/m °C
L	Initial length	(mt)
Δt	Temperature difference	(°C)

Definitions related to operating conditions

PN	Nominal pressure	$PN = \frac{10 \cdot \Omega_s}{S} \text{ (bar)}$ $PN = MOP (20^{\circ}C)$										
PFA	Allowable operating pressure	$PFA = f_t \cdot PN$										
f_t	Temperature derating coefficient	<table><tr><td>T (°C)</td><td>30</td><td>35</td><td>40</td><td>45</td></tr><tr><td>f_t</td><td>0,9</td><td>0,8</td><td>0,71</td><td>0,63</td></tr></table>	T (°C)	30	35	40	45	f _t	0,9	0,8	0,71	0,63
T (°C)	30	35	40	45								
f _t	0,9	0,8	0,71	0,63								
PEA	Maximum hydrostatic pressure	$PEA = 1,5 \cdot PFA$ (MAX PFA + 5bar)										
MOP	Maximum operating pressure	$MOP = \frac{20 \cdot MRS}{C \cdot (SDR-1)}$										

Definitions related to material characteristics

MRS	Minimum required strength (MRS)	$MRS = 25 \text{ (MPa)}$
Ω_{LPL}	Lower confidence limit	$25 \leq \Omega_{LPL} \leq 28 \text{ (MPa)}$
C	Design coefficient	2,0 - 2,5
Ω_s	Design stress	$\Omega_s = \frac{MRS \text{ (MPa)}}{C}$
Ω	Hydrostatic stress	$\Omega = \frac{p (\emptyset_{em} - e) \text{ (MPa)}}{20e}$
p	Applied internal pressure	(Bar) (1 bar = 01 MPa)
∂	Specific weight of the pipes at 23°C	$1350 \text{ kg/m}^3 \leq \partial \leq 1460 \text{ kg/m}^3$
E	Elastic modulus	> 3000 (Mpa)

Geometric definitions

SDR	Dimensional ratio	$SDR = \frac{\emptyset_n}{e_n} = 2S+1$
S	Pipe series	$S = \frac{\emptyset_n - e_n}{2 e_n} = \frac{SDR - 1}{2}$
e	Wall thickness (at any point)	(mm)
e_n	Nominal thickness	(mm)
e_m	Average thickness	(mm)
$\emptyset_e$	Outside diameter	(mm)
$\emptyset_{em}$	Average outside diameter	(mm)
x	Tolerance	$\emptyset_e \text{ max} - \emptyset_e \text{ min (mm)}$ $e \text{ max} - e \text{ min (mm)}$
$\emptyset_n$	Nominal outside diameter	(mm)

MARTONI GROUP

The leading company in the production of integrated piping systems in PP and PVC

1975

MARTONI ITALIA

Martoni S.p.A. was founded in San Vito al Tagliamento (PN), Italy — a company that has stood out since the very beginning for its quality and innovation. With a vision focused on growth and excellence, Martoni began its journey and quickly became a benchmark in the market.

1995

ISO 9001

Martoni obtains ISO 9001 certification, an international recognition that confirms the company's commitment to quality management. This milestone marks a key step in strengthening Martoni's reputation for the reliability and efficiency of its production processes.

AREA 120'000 m²

MARTONI ITALIA

SAN VITO AL TAGLIAMENTO





SORGUES ●

AREA 53'000 m²

MARTONI FRANCE

2018

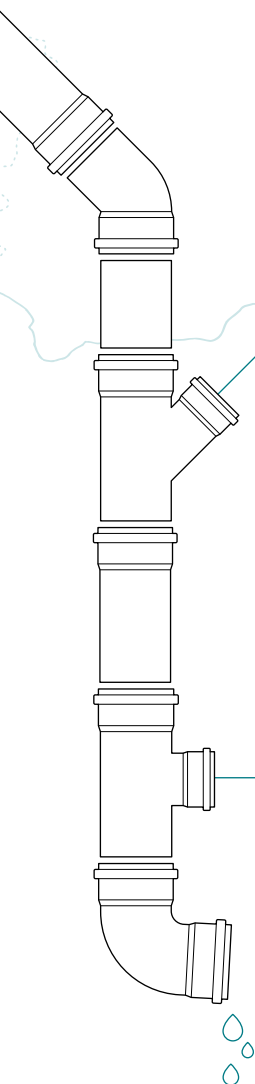
ISO 14001

Martoni obtains ISO 14001 certification, demonstrating a strong commitment to environmental sustainability. The company implements increasingly eco-friendly practices, reducing the environmental impact of its operations and continuously improving the environmental management of its processes.

2022

MARTONI FRANCE

In a historical period marked by the health emergency and its repercussions on the global economy, the company's management decided to move forward with its strategic plan by acquiring a new facility in Europe. The opening of a production site in France significantly reduces delivery times to Western European countries while also lowering the environmental impact associated with transporting goods from the Italian headquarters.





EcoVadis

Our commitment to sustainability
recognized at an international level

Martoni & EcoVadis

Martoni has been awarded the EcoVadis Bronze Medal, one of the most authoritative global certifications for assessing corporate sustainability performance.

EcoVadis evaluates more than 130,000 companies across over 180 industries and 175 countries, assessing them through ESG criteria (Environmental, Social & Governance).

Our Results

Martoni achieved the EcoVadis **Bronze Medal** with an overall score of **67/100** and a position at the **82nd percentile** (the percentile ranking indicates how far ahead we are compared to the average performance of other companies in our sector, not only the absolute score). This result places us among the most virtuous companies internationally within our industry.

Assessment Areas

EcoVadis evaluated our operations across four main areas:

- Environment: impact reduction, resource management and attention to product life cycle.
- Labour & Human Rights: working conditions and human capital development.
- Ethics: transparency, compliance and integrity in business practices.
- Sustainable Procurement: supplier relationships that follow social and environmental responsibility principles.

A Step Forward Towards the Future

This recognition highlights Martoni's ongoing journey toward increasingly sustainable production, with a concrete commitment to:

- reducing environmental impact,
- improving social and ethical practices,
- fostering responsible collaboration throughout our entire supply chain.

The EcoVadis certification is not a final goal, but a milestone in our sustainability path, a commitment we will continue to strengthen year after year.



We lead the market
towards technological
innovation and reduced
environmental impact.

ROAD TO ZERO IMPACT

OUR PRODUCTS ARE BORN FROM SUSTAINABILITY

We are at the forefront of preserving
materials within the production cycle and
minimizing waste and energy consumption.

We are aware of our responsibility towards the
environment. Therefore, we demand the highest
quality standards for our products.



Axpo Italia certifies the origin of
the electricity from solar energy.
This allows us to use energy
from renewable sources,
contributing to a significant
reduction in emissions
into the atmosphere.



MARTONI SPA

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