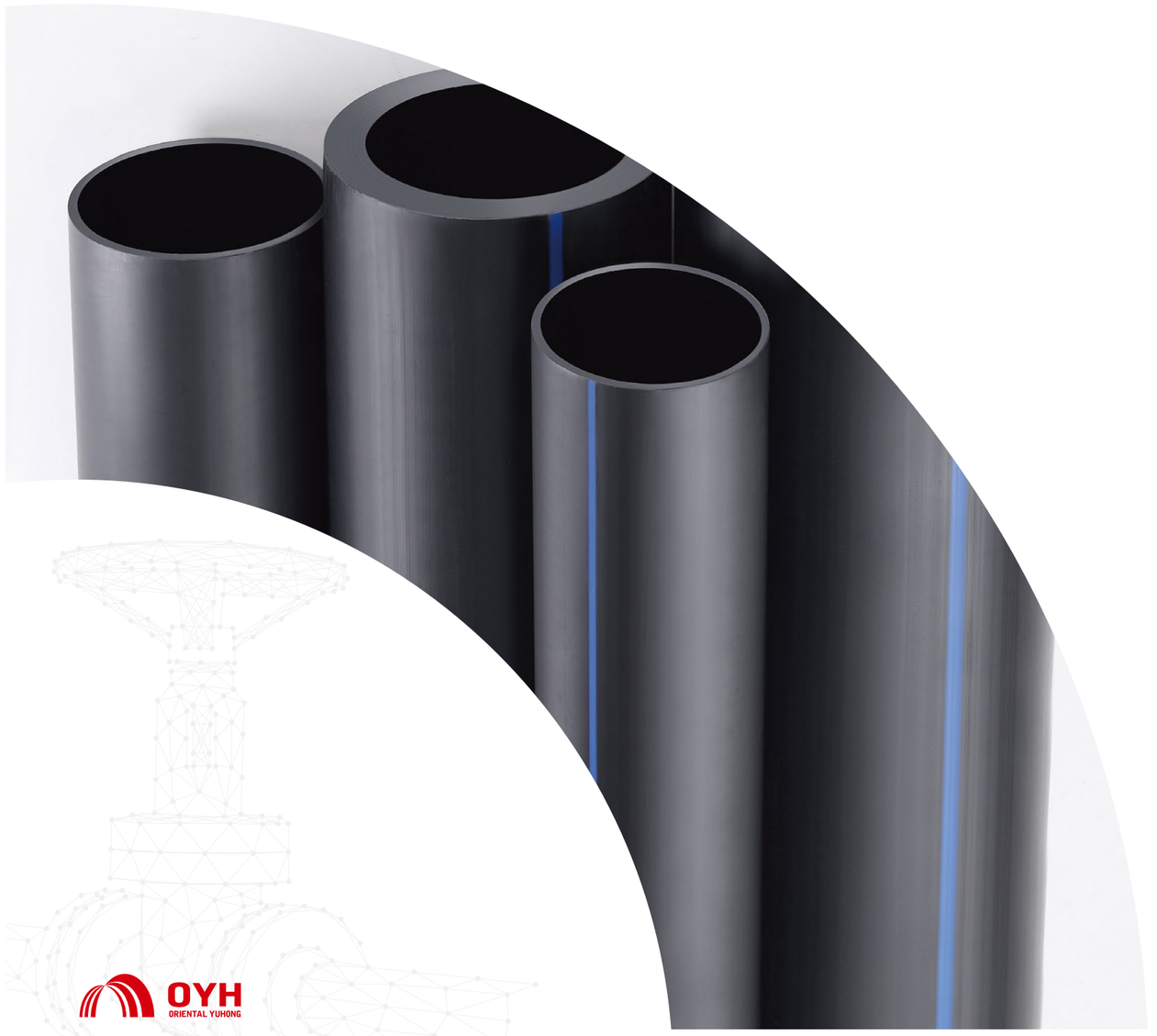
YuGuard™

YuGuard Flow

HDPE water supply system



OYH | YuGuard™

OYH Supply Chain (Guangzhou) Co., Ltd.

Website: oyhglobal.com

Email: flow@yuguard.co

OYH ORIENTAL YUHONG

CATALOGUE INDEX

OYH ORIENTAL YUHONG

To be the most valuale global enterprisein the construction materials industry

About Oriental Yuhong

Founded in 1995, Oriental Yuhong, over the past 30 plus years, has been devoted to providing high-quality waterproofing system solutions for tens of thousands of major infrastructures and industrial, civil and commercial buildings, having grown into a leading service provider in the construction and building materials industry.

The company went public in 2008 and its operating revenue exceeded USD 3.87 billion in 2024.

The products of company are exported to more than 100 countries and regions such as Germany, Brazil, Australia, America, Canada, Japan, Singapore, South Korea, Central Africa and South Africa.

YuGuard™

About YuGuard Flow

YuGuard Flow, a product line under YuGuard, the sub-brand of Oriental Yuhong, delivers advanced flow technology solutions to municipal, residential, commercial, and industrial sectors for their pipeline and valve systems. Our product portfolio spans water supply, drainage, mining, power transmission, electrical conduit, air conditioning, and gas systems. Guided by the philosophy of “product-led, service-obsessed, and customer-focused," we uphold Oriental Yuhong's mission to create safe and enduring environments. Our vision is to become the most valuable enterprise in the global flow industry.

- Research & Development
- Applied Technology
- Production Process and Equipment
- Engineering Technology

30
years in the building materials

100+
subsidiaries worldwide

1916
valid patents

300+
real estate developers, corporate groups in stable strategic cooperation

100+
countries and regions where our products and services exported to

68
production facilities, R&D institutes and logistics centers worldwide

HDPE water supply system

As a thermoplastic resin with high crystallinity and non-polarity, PE (Polyethylene) occupies a broad application market in the field of water supply pipelines by virtue of its excellent performance.

Oriental Yuhong adopts PE100-grade high-density polyethylene resin as raw material. Its products integrate outstanding advantages such as excellent hygienic performance, high strength, corrosion resistance, good flexibility and long service life, thus being widely used in the field of water supply engineering and becoming an ideal pipe material for scenarios like municipal water supply, rural drinking water safety improvement and industrial water transportation.

Advantages

Premium & Hygienic Materials

Premium PE100 new-gen Northern Star bimodal PE pipe material; compliant with ISO4427, GB/T 17219 & MOH hygiene/safety rules.

Corrosion-Resistant & Durable

Resists acids, alkalis, soil microbes; 50-year service life.

Flexible & Impact-Resistant

Fits complex terrains, strong earthquake resistance; lowers leakage risk.

Easy Construction, Stable Connection

Homogeneous joints (hot-fusion/electro-fusion/butt-fusion); simple, safe & reliable.

Solid QC & Stable Production

KraussMaffei/Battenfeld lines; ISO 14001 & international QC; full-process control.

Product Standards

ISO 4427

GB/T 13663.1-2017

GB/T 13663.2-2018

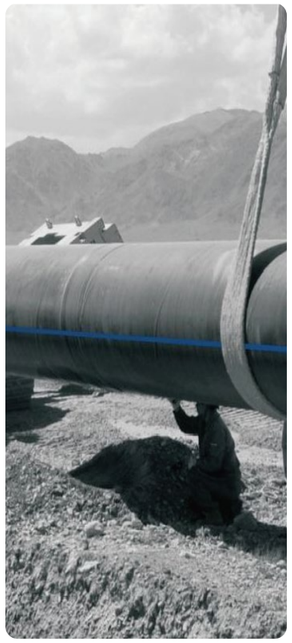
GB/T 13663.3-2018

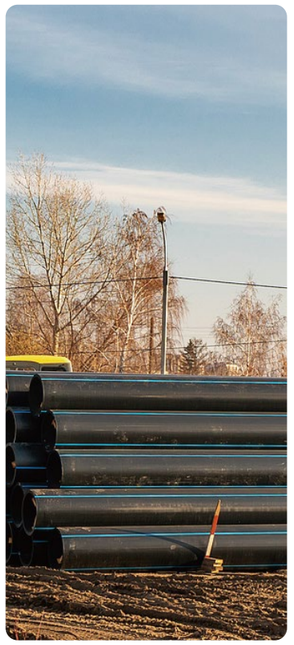
Applications

01

Municipal Water Supply

High pressure (PN0.6–1.6MPa), stable transmission; for urban main/community pipes.





02

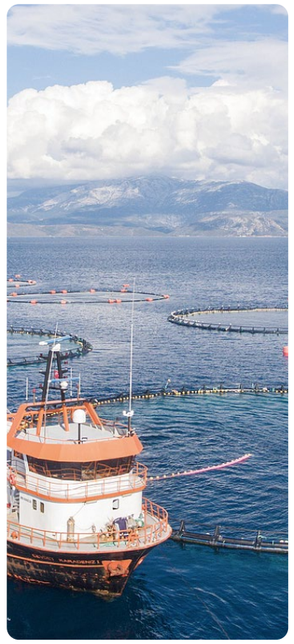
Industrial Water Supply

Chemical-resistant; fits harsh scenes (chemical industry, park circulating water).

03

Marine Aquaculture

Superior salt/chlorine resistance vs. other plastic pipes.



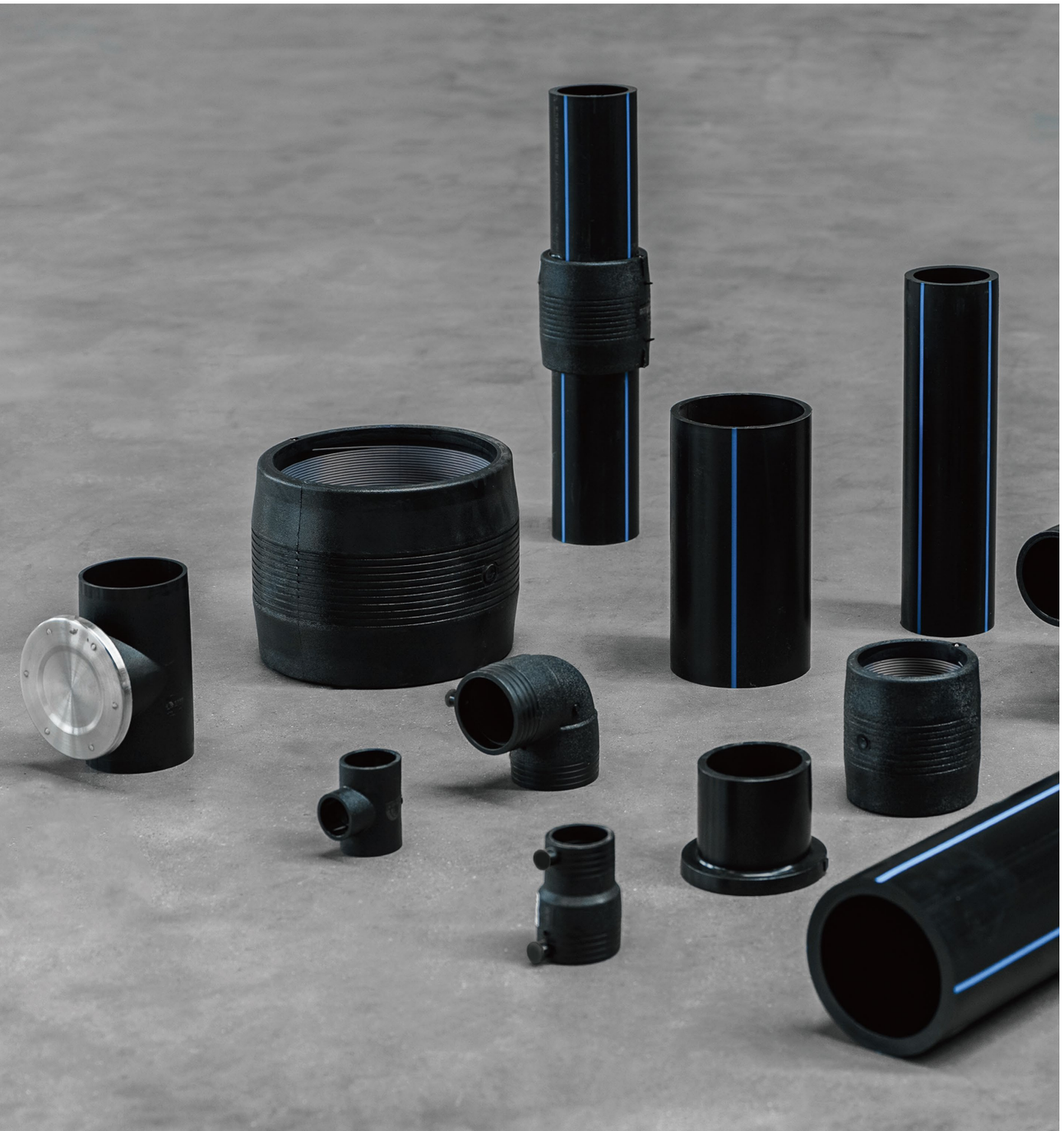
04

Agricultural Irrigation

Good impact resistance, easy installation (cross-road feasible).

YuGuard™

HDPE Pipes And Fittings



HDPE Pipes

***Length**

Straight pipes: Typically 6m

Coiled pipes: Typically 50/100m

Other lengths: Customizable

PE100 PIPE SDR11 PN1.6MPa	
Spec (mm)	
20*2.3	200*18.2
25*2.3	225*20.5
32*3.0	250*22.7
40*3.7	280*25.4
50*4.6	315*28.6
63*5.8	355*32.2
75*6.8	400*36.3
90*8.2	450*40.9
110*10.0	500*45.4
125*11.4	560*50.8
160*14.6	630*57.2
180*16.4	

***Length**

Straight pipes: Typically 6m

Coiled pipes: Typically 50/100m

Other lengths: Customizable

PE100 PIPE SDR13.6 PN1.25MPa	
Spec (mm)	
50*3.7	250*18.4
63*4.7	280*20.6
75*5.6	315*23.2
90*6.7	355*26.1
110*8.1	400*29.4
125*9.2	450*33.1
160*11.8	500*36.8
180*13.3	560*41.2
200*14.7	630*46.3
225*16.6	800*58.8

***Length**

Straight pipes: Typically 6m

Coiled pipes: Typically 50/100m

Other lengths: Customizable

PE100 PIPE SDR17 PN1.0MPa			
Spec (mm)			
50*3.0	160*9.5	315*18.7	630*37.4
63*3.8	180*10.7	355*21.1	710*42.1
75*4.5	200*11.9	400*23.7	800*47.4
90*5.4	225*13.4	450*26.7	900*53.3
110*6.6	250*14.8	500*29.7	1000*59.3
125*7.4	280*16.6	560*33.2	

***Length**

Straight pipes: Typically 6m

Coiled pipes: Typically 50/100m

Other lengths: Customizable

PE100 PIPE SDR21 PN0.8MPa			
Spec (mm)			
75*3.6	200*9.6	400*19.1	800*38.1
90*4.3	225*10.8	450*21.5	900*42.9
110*5.3	250*11.9	500*23.9	1000*47.7
125*6.0	280*13.4	560*26.7	1200*57.2
160*7.7	315*15.0	630*30.0	
180*8.6	355*16.9	710*33.9	

***Length**

Straight pipes: Typically 6m

Coiled pipes: Typically 50/100m

Other lengths: Customizable

PE100 PIPE SDR26 PN0.6MPa		
Spec (mm)		
110*4.2	225*8.6	400*15.3
125*4.8	250*9.6	450*17.2
160*6.2	280*10.7	500*19.1
180*6.9	315*12.1	560*21.4
200*7.7	355*13.6	630*24.1

Socket-welded fittings

Straight coupling	
Spec (mm)	
S25	S63
S32	S75
S40	S90
S50	S110

Reducing tee			
Spec (mm)			
T25×20	T50×25	T63×50	T90×50
T32×20	T50×32	T75×25	T90×63
T32×25	T50×40	T75×32	T90×75
T40×20	T63×20	T75×40	T110×50
T40×25	T63×25	T75×50	T110×63
T40×32	T63×32	T75×63	T110×75
T50×20	T63×40	T90×40	T110×90

End Cap	
Spec (mm)	
D20	D63
D25	D75
D32	D90
D40	D110
D50	

Female elbow
Spec (mm)
20×1/2
25×1/2
25×3/4
32×1
40×1 1/4
50×1 1/2
63×2

Elbow	
Spec (mm)	
L20	L63
L25	L75
L32	L90
L40	L110
L50	

Male elbow
Spec (mm)
20×1/2
25×1/2
25×3/4
32×1
40×1 1/4
50×1 1/2
63×2

Elbow(45°)	
Spec (mm)	
L20	L63
L25	L75
L32	L90
L40	L110
L50	

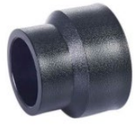
Male coupling
Spec (mm)
20×1/2
25×1/2
25×3/4
32×1
40×1 1/4
50×1 1/2
63×2

HDPE ball valve
Spec (mm)
20
25
32
40
50

Female coupling
Spec (mm)
20×1/2
25×1/2
25×3/4
32×1
40×1 1/4
50×1 1/2
63×2

HDPE stop valve
Spec (mm)
20
25
32
40
50

Flexible union
Spec (mm)
20
25
32



Reducer			
Spec (mm)			
S25×20	S50×20	S63×32	S90×75
S32×20	S50×25	S63×40	S110×50
S32×25	S50×32	S63×50	S110×63
S40×20	S50×40	S75×63	S110×75
S40×25	S63×20	S90×50	S110×90
S40×32	S63×25	S90×63	

Male tee
Spec (mm)
20×1/2
25×1/2
25×3/4
32×1
40×1 1/4
50×1 1/2
63×2

Cross
Spec (mm)
20
25
32
40
50
63

Male tee
Spec (mm)
20×1/2
25×1/2
25×3/4
32×1
40×1 1/4
50×1 1/2
63×2

Male coupling
Spec (mm)
20
25
32
40
50
63

Tee	
Spec (mm)	
T20	T63
T25	T75
T32	T90
T40	T110
T50	

Flange ring
Spec (mm)
32
40
50
63
75
90
110

Female coupling
Spec (mm)
20
25
32

Elbow(45°)
Spec (mm)
L90
L110
L160
L200
L250

Flange Adaptor
Spec (mm)
32
40
50
63
75
90
110

Elbow		
Spec (mm)		
L63	L200	
L75	L250	
L90	L315	
L110	L355	
L125	*L400	
L160		

Butt-fusion fittings

Reducing tee		
Spec (mm)		
T63×25	T90×50	T110×90
T63×32	T90×63	T125×110
T63×40	T90×75	T160×63
T63×50	T110×50	T160×75
T75×40	T110×63	T160×90
T75×63	T110×75	T160×110
T90×40		

Reducing tee		
Spec (mm)		
T200×63	T250×200	*T355×250
T200×90	T315×90	*T355×315
T200×110	T315×110	*T400×315
T200×160	T315×160	*T400×355
T250×90	T315×200	*T500×400
T250×110	T315×250	*T500×450
T250×160		

Reducer		
Spec (mm)		
S63×32	S90×50	S110×75
S63×40	S90×63	S110×90
S63×50	S90×75	S125×110
S75×50	S110×40	S160×63
S75×63	S110×50	S160×90
S90×32	S110×63	S160×110
S90×40		

Reducing cross
Spec (mm)
63×32
90×32
110×32

Reducer		
Spec (mm)		
S160×125	S250×200	*S400×200
S200×63	S315×200	*S400×315
S200×90	S315×250	*S400×355
S200×110	*S355×200	*S450×400
S200×160	*S355×250	*S500×450
S250×160	*S355×315	*S630×560

Tee		
Spec (mm)		
T63	T200	
T75	T250	
T90	T315	
T110	*T355	
T125	*T400	
T160	*T500	

Cross
Spec (mm)
63
90
110
160
200

Flange ring		
Spec (mm)		
63	200	*400
75	225	*450
90	250	*500
110	315	*560
125	355	*630
160		

Electro-fusion fittings

Flange Adaptor	
Spec (mm)	
F63	F250
F75	F280
F90	F315
F110	F355
F125	*F400
F140	*F450
F160	*F500
F180	*F560
F200	*F630
F225	

Straight coupling	
Spec (mm)	
S20	S200
S25	S225
S32	S250
S40	S280
S50	S315
S63	S355
S75	S400
S90	S450
S110	S500
S125	S560
S160	S630
S180	

End cap	
Spec (mm)	
D63	D315
D75	*D355
D90	*D400
D110	*D450
D125	*D500
D160	*D560
D200	*D630
D250	

Elbow	
Spec (mm)	
L20	L200
L25	L225
L32	L250
L40	L280
L50	L315
L63	L355
L75	L400
L90	L450
L110	L500
L125	L560
L160	L630
L180	

Tee			
Spec (mm)			
T20	T75	T200	T400
T25	T90	T225	T450
T32	T110	T250	T500
T40	T125	T280	T560
T50	T160	T315	T630
T63	T180	T355	

Reducer			
Spec (mm)			
S75×50	S110×90	S160×75	S200×125
S90×50	S125×50	S160×110	S200×160
S90×75	S125×63	S200×50	S225×110
S110×50	S125×75	S200×63	S225×200
S110×63	S125×110	S200×75	S250×160
S110×75	S160×63	S200×110	

Elbow(45°)		
Spec (mm)		
T32	T110	T315
T40	T160	T400
T50	T200	T450
T63	T225	T500
T75	T250	T560
T90		

Reducer	
Spec (mm)	
S250×200	S500×200
S315×200	S500×250
S315×250	S500×315
S355×200	S500×400
S400×200	S630×315
S400×250	S630×400
S400×315	S630×500

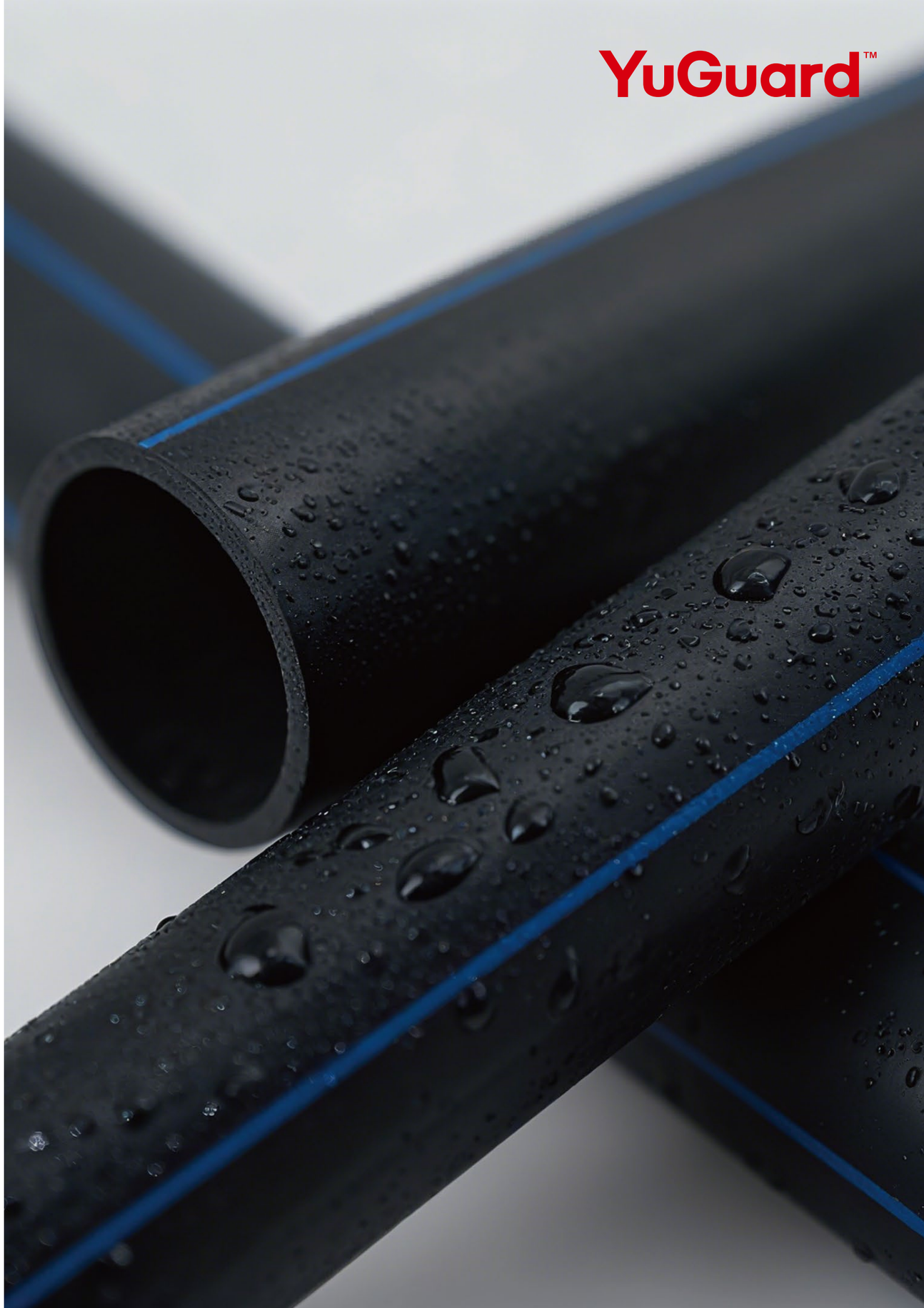
Flange Adaptor	
Spec (mm)	
T75	T250
T90	T315
T110	T400
T160	T500
T200	T630

By-pass saddle	
Spec (mm)	
S63×32	S250×90
S90×63	S250×110
S110×63	S350×90
S160×63	S350×110
S200×90	

Reducing tee			
Spec (mm)			
L110×63	L200×90	L250×200	L315×250
L110×75	L200×110	L315×90	L355×90
L110×90	L200×160	L315×110	L355×160
L160×75	L225×90	L315×125	L355×200
L160×90	L250×110	L315×160	L355×225
L160×110	L250×160	L315×200	

Reducing tee	
Spec (mm)	
L400×110	L500×315
L400×200	L500×400
L400×250	L630×315
L400×315	L630×400
L500×200	L630×500

Flange ring	
Spec (mm)	
T75	T250
T90	T315
T110	T400
T160	T500
T200	T630



Installation Guide

Socket Welding

Cut Pipe

Cut the pipe vertically.

Prepare Ends

Remove burrs and clean rough edges. Use a pencil or marker to mark the corresponding fusion depth on the surface of the pipe ends.

Temperature Setting for Welding Machine

Power on the hot-melt welding machine and allow it to reach the operating temperature (typically 210 ± 10℃). Once the temperature is reached, the indicator light will turn green, indicating that the machine is ready for operation.

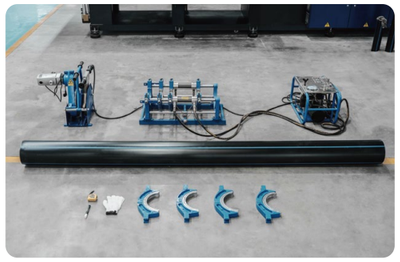
Insert for Heating

Simultaneously push and insert the pipe and fitting into the fusion heads of the device. Push the fitting in as far as possible, and push the pipe to the marked position.

Join After Heating

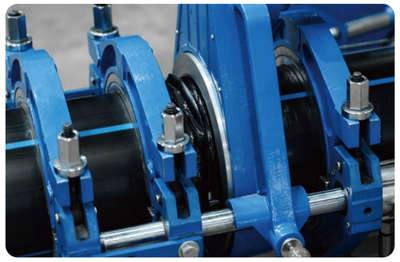
Once the heating time is complete, quickly pull the pipe and fitting out of the fusion machine, then join them together coaxially.

Butt-fusion Welding



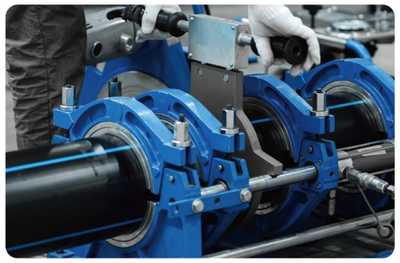
Equipment Commissioning

Prepare the pipes and all tools/equipment required for butt-fusion welding.Debug and inspect the equipment to be used, ensuring it is in normal working condition.



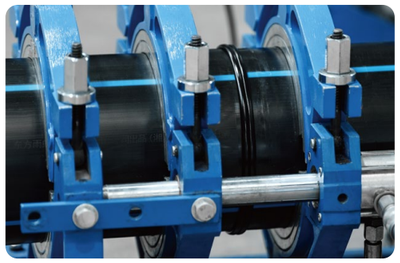
Pipe Clamping & Trimming

Secure the PE pipes (or fittings) to be joined in clamps using optimal positioning. Trim the ends flat with a cutter.



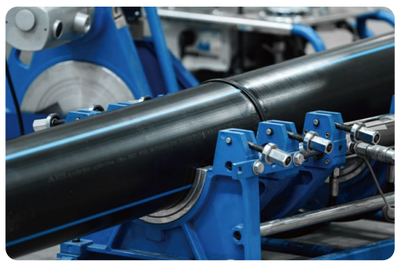
Heating

Turn on the heater plate. Once the target temperature is reached, heat the pipes. The heating time depends on the pipe diameter and ambient temperature, typically ranging from 2 to 5 minutes.



Butt Fusion

After proper molten beads are formed, remove the heater plate. Join the pipes by means of hydraulic equipment.



Pressure Holding & Cooling

Maintain pressure on the pipes after joining, and allow them to cool naturally until the fused section is fully solidified. Avoid applying external force or conducting other operations during the cooling process.

Quality Inspection

After cooling, inspect the joint for flatness, and check for defects such as bubbles and cracks. If the joint is unqualified, rework it promptly.

Electro Fusion Welding

Preparation

Ensure all required equipment—including electrofusion welder, dedicated cutting tools, cleaning tools and fixing clamps—is ready.

Measurement and Marking

Use a tape measure to determine the length of the pipes to be connected, then mark the insertion depth into fittings or the welding area on the pipes with a marker.

Preprocessing of Pipes and Fittings

Use a scraper to remove the oxide layer from the welding surfaces of pipes and fittings, ensuring the welding area is clean and free of impurities. Meanwhile, check that the welding surfaces of pipes and fittings are flat;

Electrofusion Welder Setup & Welding

Insert the pipe into the fitting, ensuring they are coaxial. Set the welder’s parameters (voltage, current, time, etc.) based on pipe and fitting specifications. Connect the welder plug to the fitting’s socket. Once ready, press confirm to start welding. Monitor the process closely to ensure quality.

Cooling and Inspection

After welding, allow the joint to cool naturally for the specified duration. Inspect the weld quality to ensure no bubbles, cracks, or other defects are present.

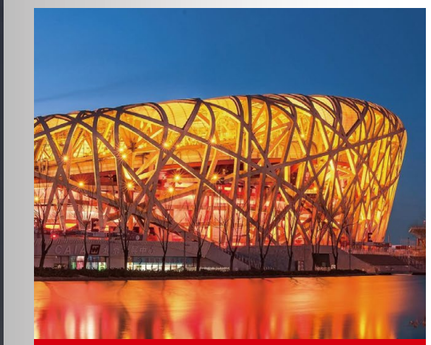
Applications & Our References

Applications

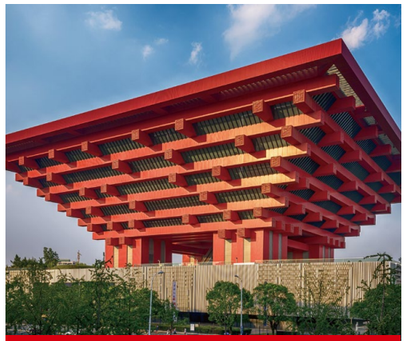
- Municipal
- Industrial
- Residential
- Commercial

YuGuard™

Applications& Our References



China National Stadium, China



China National Pavilion, China

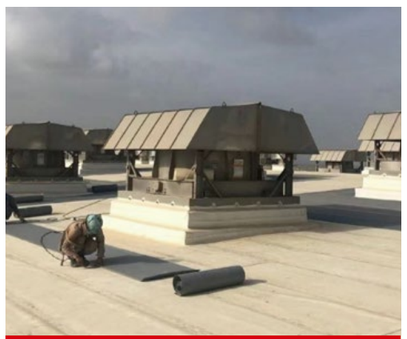
Shanghai Tower, China

Huawei Data Center, China

Hongkong-Zhuhai-Macau Bridge, China

Beijing Daxing Airport, China

Jakarta-Bandung
High-Speed Railway, Indonesia



Karachi Nuclear Power Plant

Mass Rapid Transport