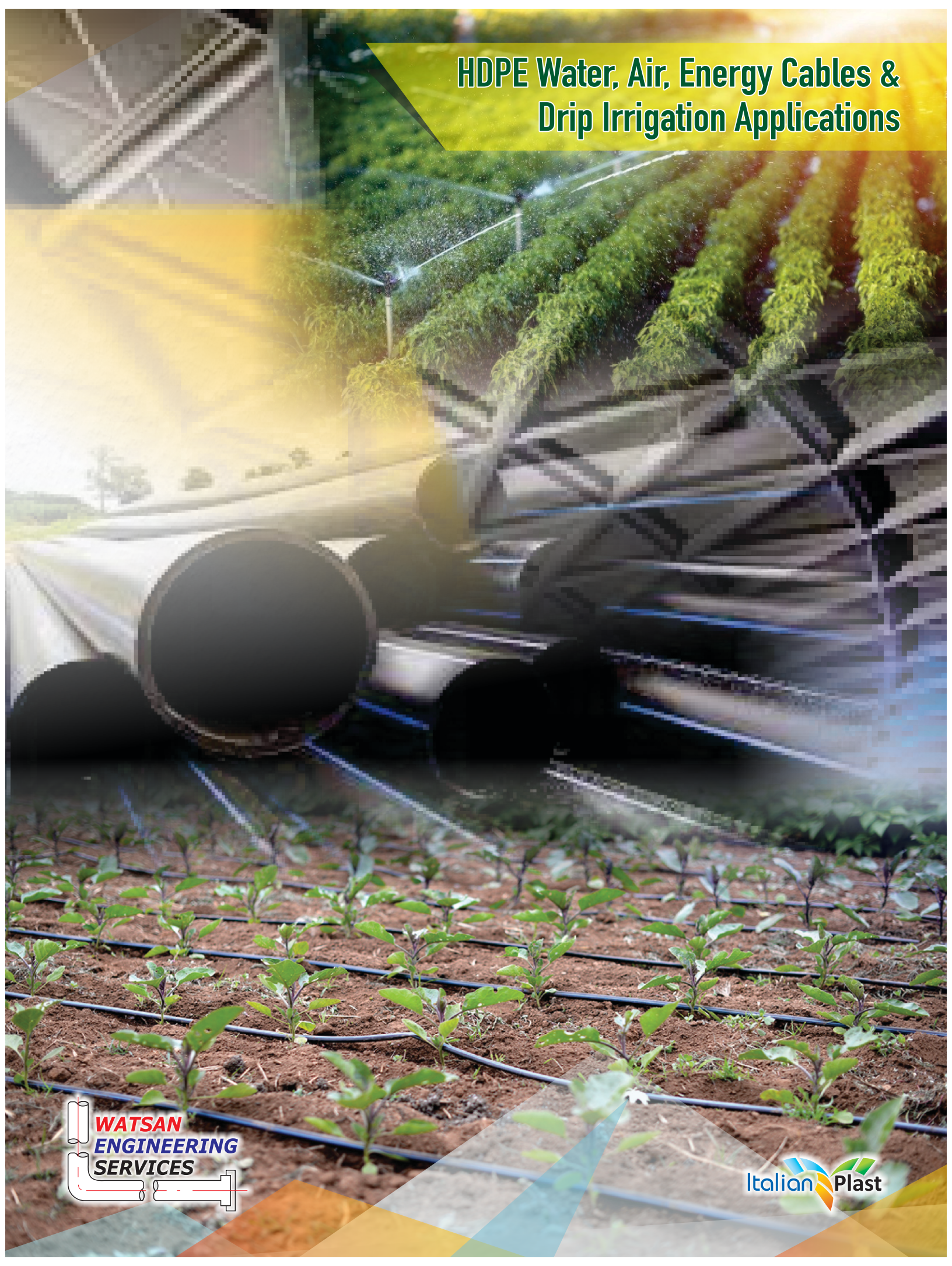


Compression Fittings HDPE / LDPE & PPR-C Pipes



HDPE Water, Air, Energy Cables & Drip Irrigation Applications



CORE BUSINESS ACTIVITIES:

Watsan Engineering Services established in 2010 (Owned by Mr. Imran Latif having vast Experience with leading pipe industry in Pakistan and having work experience in gulf countries). We have started our business as trading company to sell and import of HDPE Pipe and Fittings from Pakistan China Turkey Italy and USA and we have start manufacturing facility in 2015 for fittings and pipes and we are supplying HDPE fittings to leading HDPE Pipe manufacturing companies of Pakistan.

- HDPE Pipes and Fittings Ranges from 20mm to 1200mm, Jointing Machines and complete Accessories.
- Manufacturing Facility PE Fittings 50mm to 315mm
- Compression Fittings 20mm to 110mm.
- Electro Fusion Fittings and Jointing Machines.
- HDPE Pipe Repairing Equipment's
- HDPE Butt Fusion and Electro Fusion Jointing Machines
- UPP Oil Pipe for Petrol and Deisel
- PE Telecom Duct Pipes & Fittings
- Drip Irrigation Pipe and Fittings
- PPRC Pipe and Fittings
- UPVC Pipe and Fittings
- Injection Mold Manufacturing Facility
- MS Flanges Gate Valves Fire Hydrants Nut Bolts



OUR SERVICES:

- Industrial Piping, compressed air piping, Cooling tower, Chilled water and Wastewater treatment plant.
- Agriculture drip Irrigation piping system.
- Infrastructure water and wastewater.
- Gas Pipe and Fittings.
- Injection Molding Machines for Pipe and Fittings.
- CNC Machines for Injection Mold Manufacturing.

OUR CORE PROJECTS:

- SPD, MDP, PAEC, NESCOM, NDC, UDECO.
- National Logistic Cell (NLC).
- CITI Housing (Pvt) Ltd. (Gujranwala, Sialkot, Multan, Faisalabad, Jhelum)
- DHA Islamabad.
- Mekotex (Pvt) Ltd.
- Meko Denim Mills Ltd.
- Zaman Textile Mills
- Gul Ahmed Textile
- Sargodha Textile Mills
- Siddiq Sons Textile Mills
- Sapphire Textile Mills Ltd.
- Fazal Cloth (Ahmed Fine Textile)
- Pakistan Telephone Cables Ltd.
- SAYA Weaving Mills
- Kamal Mills Ltd.
- Rajbi Textile Mills
- Gohar Textile Mills Ltd.
- LT Engineering
- Mobilink / Zong / PTCL Contractors (Telecome Duct)
- Bahria Town Islamabad / Rawalpindi
- Top City-1 Islamabad

WATSAN ENGINEERING MISSION FOR QUALITY:

- Best Quality Plastic Resins used for Manufacturing of Pipe and Fittings
- Quality Customer Satisfaction is always our First Priority
- State of the Art Manufacturing Facilities
- Qualified Professional Trained Staff for Production and Project Services
- Our Products Meeting with International Standards ISO/DIN Standards for Water and Gas applications as well customized Products
- IN House Testing as well Third-Party Testing
- Dealer Distribution Network
- Comprehensive after sales service all over in Paksitan
- Wide Range of Fittings



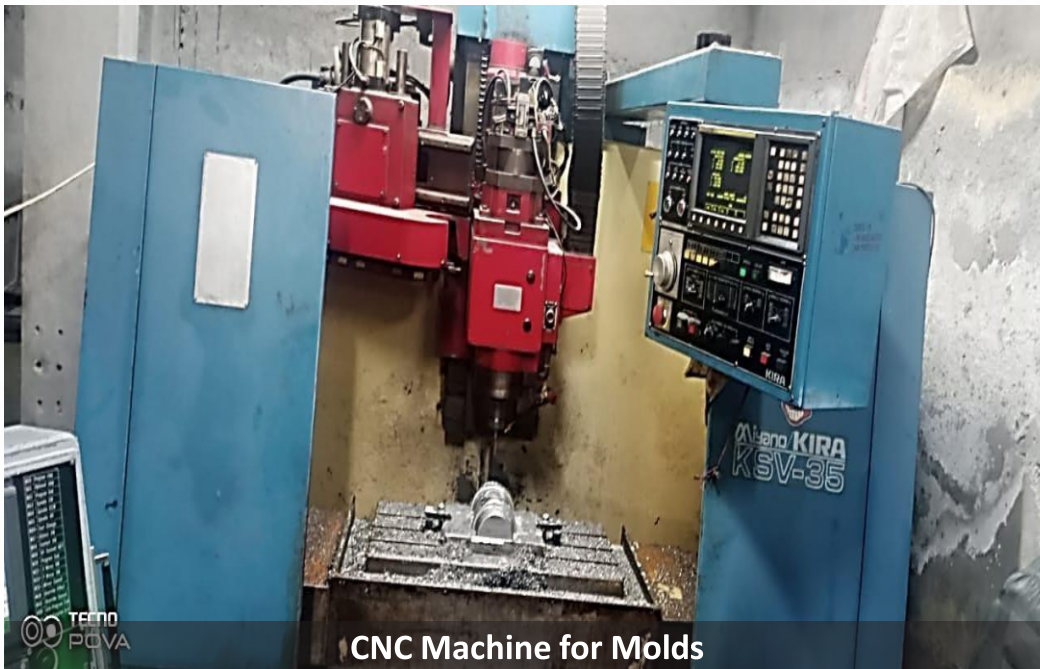
Injection Molding Machine for Fittings Manufacturing



Injection Molding Machine for Fittings Manufacturing



Pipe Production Unit



CNC Machine for Molds



ITALIAN PLAST INTRODUCTION:

FAQSON INTERNATIONAL INDUSTRIES, established in 2018 as manufacturing company, with association of WATSAN ENGINEERING SERVICES having involved in trading and industrial business of Pipe and fittings in Pakistan market since 2010 and both companies having head office based in Rawalpindi, Pakistan. We are manufacturer and distributor of HDPE, LDPE, TELECOM & ELECTRIC Duct, UPVC and PPRC Pipes and Fittings for Water, Gas, Irrigation, and Telecommunication ducts and Electric conduits for infrastructure, Long haul, Building MEP products for domestic and international market.

As part of fittings business, we have state of the art injection molding machines and fully automatic injection molds for manufacturing of PP Compression Fittings in ranges from 16mm to 110mm along with clamp saddles up to 25mm to 250mm

INTRODUCTION COMPRESSION FITTINGS:

Compression Fittings for pressure piping applications are characterized by the Innovative Balance Sealing System, Thanks to the new technical design it is possible to balance the sealing action towards the pipe through the different tightening of the nut. This leads to the maximum safety in all the possible conditions of use and quality of the pipe, keeping the basic features of easy and fast assembly without any particular preparation of the pipe. Product range: d.16-110mm, all the common items for piping applications.

Product Range: DN-16 - DN110mm.

MAIN APPLICATIONS:

MAIN APPLICATIONS Water supply, house connection and water treatment plants, Air and Gas, sport plants irrigation and gardening, agriculture and horticulture irrigation.

TECHNICAL SPECIFICATIONS:

Materials: - Top quality raw materials are used, this makes the fittings highly resistant and reliable in time, suitable for drinking water and environment compatibility for Air, Gas, Irrigation and Cable Ducting Applications as specified and required.

Material Properties of Assembled Compression Fittings:

Mechanical / Physical Properties of Material	Test Method Standard	Unit	Value
Specific Gravity (Co PP Block)	ASTM D792	g/cm ³	0.9
Specific Gravity (Acetal)	ISO 1183	g/cm ³	1.41
Melt Index (190°C, 2.16kg) (Co PP Block)	D1238	g/10min	0.30
Melt Index (190°C, 2.16kg) (Acetal)	ISO 1133	g/10min	27.0
Tensile Strength (Co PP Block)	D638	Kg/cm ²	320
Tensile Strength (Acetal)	ISO527-1/2	Mpa	65
Rockwell Hardness (Co PP Block)	D785	M Scale	95
Rockwell Hardness (Acetal)	ISO 2039-2	M Scale	95
Country of Origin:	Pakistan		

PP COMPRESSION FITTINGS STANDARD AND COMPLIANCE	
Ref. Standard	ISO 17885 / DIN 8076
Complying Standard	ISO 4427, DIN 8074/8075, PS 3580: 1994
Type of Joint:	Compression Type
Body:	Polypropylene Copolymer (PP-B) - Black
Lock Nut:	Polypropylene Copolymer (PP-B) - Blue
Spacer Ring:	Polypropylene Copolymer (PP-B) - Black
Grip Ring:	Polyacetal (POM) - White
O-Ring:	Black Nitrile Rubber NBR, Shore Hardness 70
Pressure Rating:	Standard 20mm - 110mm PN16 & PN10
Brand:	ITALIAN PLAST CLASSIC BLUE SERIES (Made in UAE)
Country of Origin:	Pakistan

GENERAL DETAILS NBR - BLACK RUBBER			
DMR NBR is a black Nitrile Butadiene Rubber, commonly referred to as NBR, Nitrile or Buna. Good physical properties and chemical resistance to the most common hydraulic fluids makes NBR an excellent sealing material. NBR materials are one of the most commonly used elastomers in sealing applications.			
PHYSICAL PROPERTIES	STANDARD	UNIT	VALUE

Specific Gravity	DIN 53479	g/cm ³	1.32
Hardness at 20°C	DIN 53505	Shore A	70
Tensile Strength	DIN 53504	N/mm ²	>17
Elongation at break	DIN 53504	%	>155
Modulus 100%	DIN 53504	N/mm ²	10.2
Compression set 22h / 70°C	DIN 53517A	%	7
Compression set 22h / 100°C	DIN 53485	%	9
Min Service Temperature		°C	-25
Max Service Temperature		°C	100
Country of Origin:	Pakistan		

STANDARDS:

Dimensions, features and functional tests: ISO4427, DIN-8074, DIN-8075, DIN-8076.3, PS-3580:1994, ISO-3501, ISO-3503, ISO-3459 & ISO-3548. UNI 9561, EN712 - EN713 - EN715 & EN911, Pipe compatibility, PE-HD (PE63-80-100), PE-LD, PEX-a and PPR-C Pipes: Sealing threads (male and female): EN10226-1 (ex ISO7/1), DIN2999.1, BS21, AS/NZS1722.1 and Flange: ISO7005, DIN2501 – DIN8063.

WORKING TEMPERATURE (°C):

Minimum (-) 10 °C & Maximum (+) 50 °C, For Gas & Air Maximum 30°C

Working Pressure and Temperature:

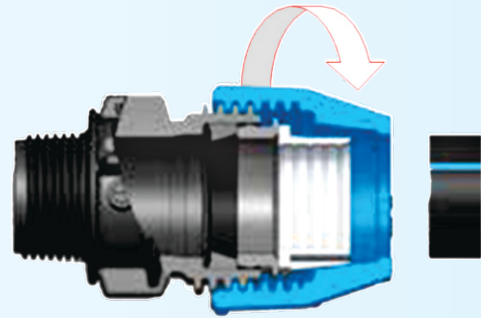
Temperature°C	-10 /+25°C	+26/+35°C	+36/+50°C
PN	16	12,5	10
PN	12,5	10	8
PN	10	8	6

Note: For Gas & Air Maximum Pressure Upto 6 Bars at 30 °C Temperature.

COMPRESSION FITTINGS ASSEMBLY INSTRUCTIONS

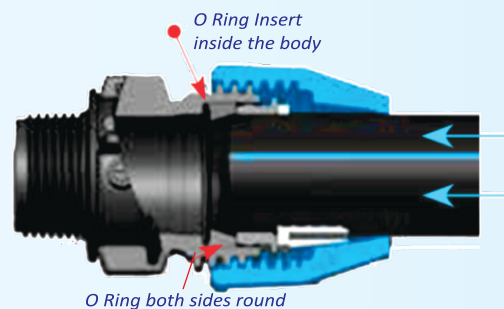
1. PIPE PREPARATION & CAP UNSCREW:

Cut the pipe round and square and remove the burrs; better to chamfer greater than 75mm. Unscrew the Cap to the last thread, leave it on the fitting while inserting the pipe.



2. PIPE INSERTION UP TO THE FIRST PIPE STOP:

Twist the pipe into the fitting through the grip ring till the first stop: the pipe has reached the O Ring. Pipe insertion up to the first pipe stop Balance sealing system The O Ring has two opposite lips that allows easier pipe insertion. The right placing of the O Ring in the body round to avoid twisting. The better adaptability of the O Ring towards the body and the pipe wall (large contact pipe surface)

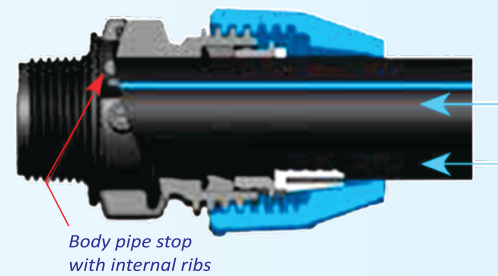


3. PIPE INSERTION UP TO THE BODY PIPE STOP:

Push the pipe through the gasket till the second stop, you have reached the pipe stop ribs of the fitting.

Balancing of O Ring

The radial body site and the conical gasket are designed to keep the gasket lightly up in the site: after the pipe insertion it doesn't reach directly the body pipe stop, it also remains a little raised from the pipe stop thanks to the internal ribs in the body.

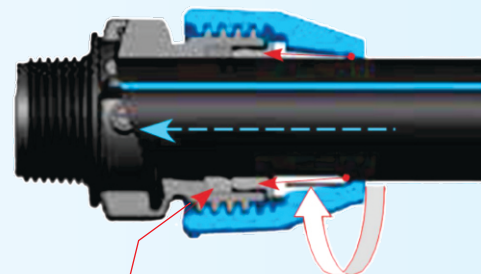


4. SCREWING THE CAP:

Tighten the Cap firmly by hand or standard tool up to 20-32mm, and by standard Pipe wrench for greater than 40mm; the pipe moves to the very final body stop

Balancing of O Ring:

By tightening the Cap it works on the thrust ring that push the O Ring, meanwhile the pipe is moving to the final stop in the body: the O Ring can deeply place in its site also moving radially and increasing its compression towards the pipe wall, as much as it's possible in relation to the dimensional. In this way, acting on the tightening level of the Cap, it is possible to realize a system able to balance pipe defects such as undersize and ovality in standard



PP Straight Coupler

مقرنة مستقيمة
Прямая муфта
Coupleur droit
Acoplador recto



SC001	20mm
SC002	25mm
SC003	32mm
SC004	40mm
SC005	50mm
SC006	57mm
SC007	63mm
SC008	75mm
SC009	90mm
SC010	110mm

PP Equal Elbow

كوع متساوي
Равный локоть
Coude égal
Codo igual



EE001	20mm
EE002	25mm
EE003	32mm
EE004	40mm
EE005	50mm
EE006	63mm
EE007	75mm
EE008	90mm
EE009	110mm

PP Equal Tee

بساوي نقطة الإنطلاق
Равная футболка
T-shirt égal
Camiseta igual



ET001	20mm
ET002	25mm
ET003	32mm
ET004	40mm
ET005	50mm
ET006	63mm
ET007	75mm
ET008	90mm
ET009	110mm

PP Equal Valve

صمام متساوي
Равный клапан
Valve égale
Válvula igual



EV001	20mm x 20mm
EV002	25mm x 25mm
EV003	32mm x 32mm
EV004	40mm x 40mm
EV005	50mm x 50mm
EV006	63mm x 63mm
EV007	75mm x 75mm
EV008	90mm x 90mm
EV009	110mm x 110mm

PP Flange Adaptor

محول شفة

Фланцевый адаптер
Adaptateur de bride
Adaptador de brida



FLA001	40mm x 1-½"
FLA002	50mm x 1-½"
FLA003	50mm x 2"
FLA004	63mm x 2"
FLA005	63mm x 2-½"
FLA006	75mm x 2-½"
FLA007	75mm x 3"
FLA008	90mm x 3"
FLA009	90mm x 4"
FLA010	110mm x 4"

PP End Cap

نهاية كاب

Торцевая крышка
Embout
Tapa final



EC001	20mm
EC002	25mm
EC003	32mm
EC004	40mm
EC005	50mm
EC006	63mm
EC007	75mm
EC008	90mm
EC009	110mm

PP Reducing Tee

تخفيض نقطة الإنطلاق

Уменьшающий тройник
T-shirt de réduction
Reducir Tee



RT001	25mm x 20mm
RT002	32mm x 20mm
RT003	32mm x 25mm
RT004	40mm x 20mm
RT005	40mm x 25mm
RT006	40mm x 32mm
RT007	50mm x 25mm
RT008	50mm x 32mm
RT009	50mm x 40mm
RT010	63mm x 25mm
RT011	63mm x 32mm
RT012	63mm x 40mm
RT013	63mm x 50mm
RT014	75mm x 50mm
RT015	75mm x 63mm
RT016	90mm x 50mm
RT017	90mm x 63mm
RT018	90mm x 75mm
RT019	110mm x 63mm
RT020	110mm x 75mm
RT021	110mm x 90mm

PP Reducing Coupler

تخفيض مقرنة

Переходная муфта
Réducteur de coupleur
Acoplador reductor



RC001	25mm x 20mm
RC002	32mm x 20mm
RC003	32mm x 25mm
RC004	40mm x 20mm
RC005	40mm x 25mm
RC006	40mm x 32mm
RC007	50mm x 25mm
RC008	50mm x 32mm
RC009	50mm x 40mm
RC010	63mm x 25mm
RC011	63mm x 32mm
RC012	63mm x 40mm
RC013	63mm x 50mm
RC014	75mm x 50mm
RC015	75mm x 63mm
RC016	90mm x 50mm
RC017	90mm x 63mm
RC018	90mm x 75mm
RC019	110mm x 63mm
RC020	110mm x 75mm
RC021	110mm x 90mm

PP Male Elbow

ذکر الکوچ
Мужской локоть
Coude masculin
Codo macho



ML001	20mm x 1/2"
ML002	20mm x 3/4"
ML003	25mm x 1/2"
ML004	25mm x 3/4"
ML005	25mm x 1"
ML006	25mm x 1-1/4"
ML007	25mm x 1-1/2"
ML008	32mm x 3/4"
ML009	32mm x 1"
ML010	32mm x 1-1/4"
ML011	32mm x 1-1/2"
ML012	40mm x 1"
ML013	40mm x 1-1/4"
ML014	40mm x 1-1/2"
ML015	50mm x 1-1/4"
ML016	50mm x 1-1/2"
ML017	50mm x 2"
ML018	63mm x 1-1/2"
ML019	63mm x 2"
ML020	63mm x 2-1/2"
ML021	75mm x 2"
ML022	75mm x 2-1/2"
ML023	75mm x 3"
ML024	90mm x 2-1/2"
ML025	90mm x 3"
ML026	110mm x 2-1/2"
ML027	110mm x 3"
ML028	110mm x 4"

PP Female Elbow

کوچ انثی
Женский локоть
Coude femelle
Codo femenino



FL001	20mm x 1/2"
FL002	20mm x 3/4"
FL003	25mm x 1/2"
FL004	25mm x 3/4"
FL005	25mm x 1"
FL006	25mm x 1-1/4"
FL007	32mm x 1/2"
FL008	32mm x 3/4"
FL009	32mm x 1"
FL010	32mm x 1-1/4"
FL011	32mm x 1-1/2"
FL012	40mm x 1"
FL013	40mm x 1-1/4"
FL014	40mm x 1-1/2"
FL015	50mm x 1-1/4"
FL016	50mm x 1-1/2"
FL017	50mm x 2"
FL018	63mm x 1-1/2"
FL019	63mm x 2"
FL020	63mm x 2-1/2"
FL021	75mm x 2"
FL022	75mm x 2-1/2"
FL023	75mm x 3"
FL024	90mm x 2-1/2"
FL025	90mm x 3"
FL026	110mm x 2-1/2"
FL027	110mm x 3"
FL028	110mm x 4"

PP Male Adaptor

محول ذكر

Мужской адаптер
Adaptateur mâle
Adaptador macho



MA001	20mm x 1/2"
MA002	20mm x 3/4"
MA003	25mm x 1/2"
MA004	25mm x 3/4"
MA005	25mm x 1"
MA006	25mm x 1-1/4"
MA007	25mm x 1-1/2"
MA008	32mm x 3/4"
MA009	32mm x 1"
MA010	32mm x 1-1/4"
MA011	32mm x 1-1/2"
MA012	40mm x 1"
MA013	40mm x 1-1/4"
MA014	40mm x 1-1/2"
MA015	50mm x 1-1/4"
MA016	50mm x 1-1/2"
MA017	50mm x 2"
MA018	63mm x 1-1/2"
MA019	63mm x 2"
MA020	63mm x 2-1/2"
MA021	63mm x 3"
MA022	75mm x 2"
MA023	75mm x 2-1/2"
MA024	75mm x 3"
MA025	90mm x 2-1/2"
MA026	90mm x 3"
MA027	90mm x 4"
MA028	110mm x 2"
MA029	110mm x 2-1/2"
MA030	110mm x 3"
MA031	110mm x 4"

PP Female Adaptor

محول أنثى

Женский адаптер
Adaptateur femelle
Adaptador hembra



FA001	20mm x 1/2"
FA002	20mm x 3/4"
FA003	25mm x 1/2"
FA004	25mm x 3/4"
FA005	25mm x 1"
FA006	25mm x 1-1/4"
FA007	25mm x 1-1/2"
FA008	32mm x 1/2"
FA009	32mm x 3/4"
FA010	32mm x 1"
FA011	32mm x 1-1/4"
FA012	32mm x 1-1/2"
FA013	40mm x 1"
FA014	40mm x 1-1/4"
FA015	40mm x 1-1/2"
FA016	50mm x 1-1/4"
FA017	50mm x 1-1/2"
FA018	50mm x 2"
FA019	63mm x 1-1/2"
FA020	63mm x 2"
FA021	63mm x 2-1/2"
FA022	75mm x 2"
FA023	75mm x 2-1/2"
FA024	75mm x 3"
FA025	90mm x 2-1/2"
FA026	90mm x 3"
FA027	90mm x 4"
FA028	110mm x 2"
FA029	110mm x 2-1/2"
FA030	110 mm x 3"
FA031	110mm x 4"

PP Clamp Saddle

سرج المشبك
Седло зажима
Selle de serrage
Sillín de abrazadera

PP Clamp Saddle Specifications:

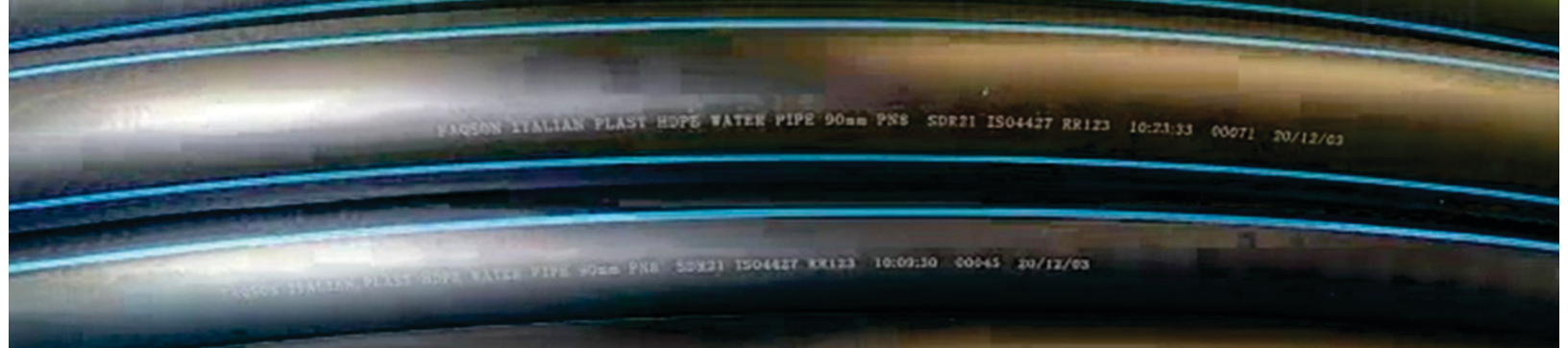
Product Name	PP Clamp Saddles
Available Sizes	DN 25mm - 250mm (DN - Nominal Diameter HDPE Pipe)
Pressure Rating	25mm to 160mm PN16 & 180 to 315mm PN6 (PN-Nominal Pressure in Bars)
Material	Clamp Saddle material in Co PP Block, Bolts & Nuts Hot Dipped zinc galvanized steel, o-ring/gasket in NBR,
Color	Black/Grey (Or any OEM Specified Color)
Standard	EN 712/713/715/911; ISO 3501/3503/3458/3459.
Marking	Manufacturer (FAQSON) Standard Marking

CS001	25mm x ½"	CS028	90mm x 1-¼"	CS055	180mm x 2"
CS002	25mm x ¾"	CS029	90mm x 1-½"	CS056	180mm x 3"
CS003	32mm x ½"	CS030	90mm x 2"	CS057	200mm x ½"
CS004	32mm x ¾"	CS031	110mm x ½"	CS058	200mm x ¾"
CS005	32mm x 1"	CS032	110mm x ¾"	CS059	200mm x 1"
CS006	40mm x ½"	CS033	110mm x 1"	CS060	200mm x 1-¼"
CS007	40mm x ¾"	CS034	110mm x 1-¼"	CS061	200mm x 1-½"
CS008	40mm x 1"	CS035	110mm x 1-½"	CS062	200mm x 2"
CS009	50mm x ½"	CS036	110mm x 2"	CS063	200mm x 3"
CS010	50mm x ¾"	CS037	125mm x ½"	CS064	225mm x ½"
CS011	50mm x 1"	CS038	125mm x ¾"	CS065	225mm x ¾"
CS012	50mm x 1-¼"	CS039	125mm x 1"	CS066	225mm x 1"
CS013	63mm x ½"	CS040	125mm x 1-¼"	CS067	225mm x 1-¼"
CS014	63mm x ¾"	CS041	125mm x 1-½"	CS068	225mm x 1-½"
CS015	63mm x 1"	CS042	125mm x 2"	CS069	225mm x 2"
CS016	63mm x 1-¼"	CS043	160mm x ½"	CS070	225mm x 3"
CS017	63mm x 1-½"	CS044	160mm x ¾"	CS071	225mm x 4"
CS018	63mm x 2"	CS045	160mm x 1"	CS072	250mm x ½"
CS019	75mm x ½"	CS046	160mm x 1-¼"	CS073	250mm x ¾"
CS020	75mm x ¾"	CS047	160mm x 1-½"	CS074	250mm x 1"
CS021	75mm x 1"	CS048	160mm x 2"	CS075	250mm x 1-¼"
CS022	75mm x 1-¼"	CS049	160mm x 3"	CS076	250mm x 1-½"
CS023	75mm x 1-½"	CS050	180mm x ½"	CS077	250mm x 2"
CS024	75mm x 2"	CS051	180mm x ¾"	CS078	250mm x 3"
CS025	90mm x ½"	CS052	180mm x 1"	CS079	250mm x 4"
CS026	90mm x ¾"	CS053	180mm x 1-¼"	CS080	315mm x 1"
CS027	90mm x 1"	CS054	180mm x 1-½"	CS081	315mm x 2"





FAQSON ITALIAN PLAST HDPE WATER PIPE 90mm PNB SDR21 ISO4427 RR123 10:18:46 00062 20/12/03



FAQSON ITALIAN PLAST HDPE WATER PIPE 90mm PNB SDR21 ISO4427 RR123 10:21:33 00071 20/12/03

FAQSON ITALIAN PLAST HDPE WATER PIPE 90mm PNB SDR21 ISO4427 RR123 10:09:30 00045 20/12/03



FAQSON ITALIAN PLAST HDPE WATER PIPE 90mm PNB SDR21 ISO4427 RR123 16:04:52





COMPRESSION FITTINGS

HDPE / LDPE & PPR-C PIPES



WATSAN ENGINEERING SERVICES

HEAD OFFICE
Office No. A-323, Pirzada Market
City Saddar Road, Opposite
Habib Metro Bank, Rawalpindi.
Tel: +92 51 5537777

FACTORY
Plot No. 3, Street No-W3,
(RCCI) Rawat Industrial
Estate, Rawalpindi.
Tel: +92 51 6104060

FACTORY
Plot No. 28, Street No. S-2,
(RCCI) Rawat Industrial
Estate, Rawalpindi.
Tel: +92 51 6104089

FACTORY
Industrial Estate (BIE, Plot No.19
& 20, Main Boulevard, Bhalwal
Bhera Road, Bhalwal, Sargodha.
Tel: +92 300 8007686

✉ wes@watsanengg.com.pk www.watsanengg.com.pk