



PRODUCT CATALOGUE



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Authorized Distributor Brands



Authorized Reseller Brands



MWSC Brands





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SHOWROOM

ING HOURS

Thursday

03:30 PM





ABOUT MWSC SHOWROOM

Established in 1st April 1995, Male' Water and Sewerage Company Pvt. Ltd. is the pioneer organization in the Maldives to administrate a water production and waste water management system to counter the issue of water shortages and a lack of an appropriate sewer system in the capital island Male'. Since then, the Company has worked diligently to provide the people of Male' with potable fresh water and managing waste water sustainably.

As part of expanding the trading operations of the company MWSC's Showroom was launched in 2016 to showcase all trading products and services in the field of water and wastewater, providing ease and convenience to customers.

Among the products and services that will be on display and available at the Showroom will include Water Quality Assurance services, RO plant, membranes and spares, PVC and PE pipes and fittings, water meters, valves and other water and wastewater related products and accessories.

MWSC works diligently to serve the nation through the provision of basic utility services of water and wastewater to the citizens of the country.

01

SEWER FITTINGS

- 1.1. Sewer Inspection Chamber 315mm
- 1.2. Sewer Inspection Chamber 425mm
- 1.3. Sewer Inspection Chamber 600mm
- 1.4. Sewer Inspection Chamber 1000mm
- 1.5. Repair Sewer socket
- 1.6. Repair Double Socket
- 1.7. Sewer Branch
- 1.8. Sewer Bend
- 1.9. Sewer End Cap
- 1.10. Sewer In-Situ
- 1.11. Sewer Reducer
- 1.12. Sewer Detectable Tape

1.1 SEWER INSPECTION CHAMBER 315MM

The Tegra315 WAJ is the compact solution for 110mm OD underground sewerage and drainage pipe systems for houses. The access junction facilitates easy installation and is versatile with an adjustable cover and frame. It offers wide array of low profiles for all 110mm drainage application for households. The Wavin access junction also uses Wavin's innovative Wafix seal ring which ensures water tightness and durability.



MODEL: PP Inspection chamber 315/110mm straight

ACCESSORIES FOR SETUP:

PVC Sewer pipe	110X4.0MM, SN4, L=5M
Sealing Ring for corrugated Pipe	315mm
Corrugated Pipe	315mm, L=3000mm
Concrete cone	315mm
Concrete cone	315mm

1.2 SEWER INSPECTION CHAMBER 425MM

The Tegra 425 inspection chamber is the compact solution for 160mm, 200mm OD underground sewerage networks. Wavin Tegra range of inspection chambers and manholes provides a more sophisticated solution for access, optimal flow performance and flexible inlets, allowing adjustable connections with $\pm 7.5^\circ$ in each plane, providing ideal installation flexibility.



MODEL: TEGRA 425

TYPES OF TEGRA 425 INSPECTION CHAMBERS:

160mm	Straight
	Tee
	Collecting
	90 Degree bend
200mm	Tee
	90 Degree bend
	Collecting

ACCESSORIES FOR SETUP:

Cast Iron Cover	W/PVC Skirt – OD 425mm
Telescopic Pipe	425X375mm W/seal ring
Corrugated Pipe	OD 425mm, L=3000mm soc
Sealing Ring for corrugated Pipe	OD 425mm
Concrete cone	315mm
PVC Sewer pipe	160X4.0MM, SN4, L=5M
	DN200, SN4, L=5m

1.3 SEWER INSPECTION CHAMBER 600MM

The Wavin Tegra 600 is a 600mm polypropylene (PP) inspection chamber for use in public sewers as access for inspection, cleaning and maintenance. The Tegra 600 Inspection chamber is the compact solution for 160mm, 200mm, 250mm, 300mm OD underground networks. This revolutionary chamber offers advantages such as tight fitting, easy handling, shorter installation time, less maintenance resulting in cost effectiveness that plastic provides in contrast to traditional materials. The flexible connections at the base allow a 15° variance in angle of the connected pipe. Wavin Tegra 600 can be installed in narrow situations, a big advantage compared to large concrete inspection chambers. Because of its high quality raw material, the Tegra 600 can be installed in the street, also in direct contact with asphalt. The Wavin Tegra 600 chamber can with stand up to 25 metric tons wheel load. The Wavin Tegra 600 can also be used as a sand trap in rainwater discharge systems and as a chamber for metering.



MODEL: TEGRA 600

TYPES OF TEGRA 600 INSPECTION CHAMBERS:

160mm	Straight
	Junction
	Tee
	90 Degree bend
	150 Degree bend

200mm	Straight
	Junction
	Tee
	90 Degree bend
250mm	Straight
	Junction
	Tee
	90 Degree bend
300mm	Straight
	Junction
	90 Degree bend

ACCESSORIES FOR SETUP:

Manhole Cover for TEGRA	D=600mm, 40T
PE Corrugated Shaft	600mm, L=6m
TEGRA Telescopic Adaptor	600mm, L=400mm
Telescopic Pipe	425x375mm w/seal ring
Telescopic Pipe Sealing Ring	OD 425mm
PVC Sewer pipe	160X4.0MM, SN4, L=5M
	DN 200, SN4, L=5M
	DN 250, SN4, L=5M
	DN 300, SN4, L=5M

1.4 SEWER INSPECTION CHAMBER 1000MM

The Wavin Tegra 1000 provides easy access for inspection, cleaning and maintenance in sewer and drainage systems in non-traffic and traffic areas. The Tegra 1000 Inspection chamber is the compact solution for 160mm, 200mm, 250mm, 300mm OD underground networks. The load bearing capacity on an installed manhole is more than 40 tons truckload. The Wavin Tegra 1000 has a spacious 600mm entrance and a diameter of 1000mm. The manhole is supplied with an inside ladder and optional telescopic safety rod. Cutting indications are clearly indicated on the shaft every 12.5cm, so that it can easily be cut to the required depth. Extra "in-situ" pipe connections can easily be made.



MODEL: TEGRA 1000

TYPES OF TEGRA 1000 INSPECTION CHAMBERS:

160mm	Straight
	Junction
	Tee
	90 Degree bend
200mm	Straight
	Junction
	45 Degree bend
	90 Degree bend
	135 Degree bend

250mm	Straight
	Junction
300mm	Junction

ACCESSORIES FOR SETUP:

Manhole Cover for TEGRA	1000MM, 40T
PE Corrugated Shaft	1000mm, L=1m
Sealing ring for TEGRA 1000 shaft	-
PE Cone	1000mm, Type B with Ladder
PVC Sewer pipe	160X4.0MM, SN4, L=5M
	DN 200, SN4, L=5M
	DN 250, SN4, L=5M
	DN 300, SN4, L=5M

1.5 REPAIR SEWER SOCKET

The Wavin PVC Sewer Pipe Repair socket is used to repair a breakage in a sewer network line. It can be also used for inserting new fittings into existing pipe work.



AVAILABLE SIZES:

DN 100
DN 150
DN 200
DN 250
DN 300
DN 400
DN 500

1.6 REPAIR DOUBLE SOCKET

Repair double socket is used for connecting lengths of PVC pipe.



AVAILABLE SIZES:

DN 100
DN 150
DN 200
DN 250
DN 300

1.7 SEWER BRANCH

The Wavin sewer branch is used to reduce and connect sewer pipe to a different size line at a required angle.

AVAILABLE SIZES:

DN 100x100/45°	DN 200X200/87°
DN 100x100/87°	DN 250x100/45°
DN 150x100/45°	DN 250x250/45°
DN 150x150/45°	DN 250X250/87°
DN 150x150/87°	DN 300x100/45°
DN 200x100/45°	DN 300x100/87°
DN 200x150/45°	DN 300x300/45°
DN 200x200/45°	DN 300X300/87°



AVAILABLE SIZES:

DN 100/15°	DN 200/15°
DN 100/30°	DN 200/30°
DN 100/45°	DN 200/45°
DN 100/87°	DN 200/67°
DN 150/15°	DN 200/87°
DN 150/30°	DN 300/15°
DN 150/45°	DN 300/30°
DN 150/67°	DN 300/45°
DN 150/87°	DN 300/90°

1.8 SEWER BEND

This pipe fitting is used to change direction of the pipe in the network line by 15°, 30°, 45°, and 87°.



AVAILABLE SIZES:

DN 100
DN 150
DN 200
DN 250
DN 300

1.9 SEWER END CAP

DESCRIPTION:

This pipe fitting is used to block off any spigot end of a pipe or fitting



1.10 SEWER IN-SITU

In-situ" connector is used for the installation of the Wavin Tegra 1000 drainage chambers and it allows to connect the chamber to a corrugated pipe.

AVAILABLE SIZES:

DN 100
DN 150
DN 200
DN 250



1.12 SEWER DETECTABLE TAPE

Detectable Underground Warning Tape alert excavators of buried sewer lines.

AVAILABLE SIZES:

500 Meters



1.11 SEWER REDUCER

This pipe fitting is used to connect two pipes of unequal diameter and features a spigot on the larger end a socket on the smaller end.

AVAILABLE SIZES:

125/110mm
315/250mm
400/315mm



02 PIPES

2.1. HDPE Pipes

2.2. PVC Sewer Pipes – Non Pressure

2.1. HDPE PIPES

HDPE pipes can be used for Water, Drainage, Sea outfall and Sewer applications. HDPE blue, black with blue striped pipes are available.



BRAND: MWSC Pipes

PIPING STANDARD: EN 12202

AVAILABLE SIZES:

Black PE Pipe	25mm	1.8,SDR17,PN10,L=100m
	32mm	1.9,SDR17,PN10,L=100m
	63mm	3.8,SDR17,PN10,L=50m
	75mm	4.5,SDR17,PN10,L=5.8m
	90mm	5.4,SDR17,PN10,L=5.8m
	110mm	6.6,SDR17,PN10,L=5.8m
	160mm	9.5,SDR17,PN10,L=5.8m
	180mm	10.7,SDR17,PN10,L=5.8m
	225mm	13.4,SDR17,PN10,L=5.8m
Blue PE Pipe	25mm	2.3,SDR11,PN16,L=100M
	32mm	3,SDR11,PN16,L=100m
	63mm	3.8,SDR17,PN10,L=5.8m
		3.8,SDR17,PN10,L=50m
	75mm	4.5,SDR17,PN10,L=5.8m

Blue PE Pipe	90mm	5.4,SDR17,PN10,L=5.8m
	110mm	6.6,SDR17,PN10,L=5.8m
	160mm	SDR11,PN16,L=5.8m
	180mm	10.7,SDR17,PN10,L=5.8
	225mm	13.4,SDR17,PN10,L=5.8
Black/Blue stripe PE Pipe	63mm	PN10,L=50M
	75mm	PN10,L=5.8M
	90mm	PN10,L=5.8
	110mm	PN10,L=5.8
	160mm	PN10,L=5.8
	225mm	PN10,L=5.8

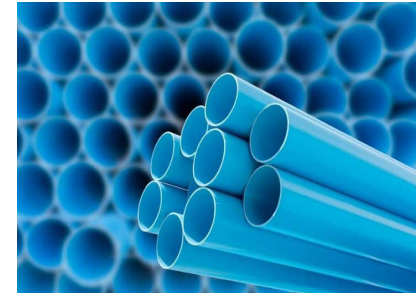
OTHER BRANDS:

Black PE Pipe	75mm	SDR11,PN16,L=5.8m
	90mm	SDR11, PN16, L=5.8m
	110mm	SDR11, PN16, L=5.8m
	125mm	SDR11,PN16,L=5.8m
	140mm	SDR17,PN10,L=5.8m
	160mm	SDR11,PN16,L=5.8m
	200mm	SDR11,PN16,L=5.8m
	225mm	SDR11,PN16,L=5.8m
	250mm	SDR11,PN16,L=5.8m

AVAILABLE SIZES:

Black PE Pipe	280mm	SDR11,PN16,L=5.8m
	315mm	SDR11,PN16,L=5.8M
		SDR17,PN10,L=5.8M
	345mm	L=6m
	355mm	SDR17,PN10,L=5.8m
		L=11.8m
		SDR17,PN10,L=5.8m
	400mm	SDR17,PN10,L=5.8m
500mm	SDR17,PN10,L=5.8m	
	SDR11, PN16, L=5.8m	
Blue PE Pipe	125mm	SDR17,PN10,L=5.8m
	140mm	SDR17,PN10, L=5.8m
		SDR11, PN16, L=5.8m
	160mm	SDR17,PN10, L=5.8m
	180mm	PN 6.3, L=6m
	250mm	10.7, PN 6.3, L=6m
	280mm	SDR11,PN16, L=5.8m
	315mm	SDR11,PN16, L=5.8m
		SDR17,PN10,L=5.8m
	355mm	SDR11,PN16, L=5.8m
400mm	SDR11,PN16, L=5.8m	
	SDR17,PN10, L=5.8m	

Black/Blue stripe PE Pipe	110mm	L=6M
	400mm	PN10,L=5m
	200mm	PN10,L=5.8
	225mm	PN10,L=5.8



2.2. PVC SEWER PIPES – NON PRESSURE

Plastics piping systems for storm water drainage, non- pressure underground drainage and sewerage and road cable ducting.



BRAND: MWSC Pipes

PIPING STANDARD: EN1329 & EN1401

AVAILABLE SIZES:

- MWSC Pipes**

PVC Sewer Pipe	90mm	3.0mm, L=5m, SN4, SN10
	110mm	3.2mm, L=5m, SN4, SN10
	125mm	3.2mm, L=5m, SN4, SN10
	160mm	4.0mm, L=5m, SN4, SN10

- Other Brands**

PVC Sewer Pipe	DN 200	L=5m, SN4, SN10
	DN 250	L=5m, SN4, SN10
	DN 300	L=5m, SN4, SN10
	DN 400	L=5m, SN4, SN10
	DN 500	L=5m, SN4, SN10

U3 Pipe GY KOMO	110,SN4, SN10	L=5 CH (Gray)
	160,SN4, SN10	L=5 CH (Gray)
	180,SN4, SN10	L=5 CH (Gray)
	200,SN4, SN10	L=5 CH (Gray)
	225,SN4, SN10	L=5 CH (Gray)
	250,SN4, SN10	L=5 CH (Gray)
	280,SN4, SN10	L=5 CH (Gray)
	315,SN4, SN10	L=5 CH (Gray)
400,SN4, SN10	L=5 CH (Gray)	

03

CHEMICALS

- 3.1. SWRO Antiscalant
- 3.2. Grease Trap & Drain Cleaner
- 3.3. Other Chemicals

3.1. SWRO ANTISCALANT

This product is a high performance, multi-functional reverse osmosis antiscalant and antifoulant scientifically formulated for the treatment and protection of reverse osmosis (RO) membranes, nano-filtration (NF) and EDR membrane systems.

This product can be used in the production of drinking water and in seawater desalination processes and is highly effective in preventing the build-up of calcium carbonate scale on RO membrane surfaces. Besides its excellent calcium carbonate scale inhibition properties, this product is also effective at controlling calcium sulphate, calcium fluoride and metal oxides scale. This product can be used in the production of drinking water according to NSF standard 60. The maximum allowed dose rate is 10 mg/l.

BRAND: Accepta

MODEL: ACCEPTA 2651

SPECIFICATIONS:

Appearance	Liquid
Color	Clear, pale yellow
Specific gravity	1.35 @20 oC
pH	10.5 @25 oC
Boiling point	> 100°C
Flash point	Non-flammable aqueous solution
Chemical reactivity	Not affected by chlorine or other oxidizing biocide



3.2 GREASE TRAP & DRAIN CLEANER

This product is an innovative, environmentally friendly dry microbial based formulation developed for the maintenance and on-going management of all types of grease trap installations. It eliminates the drainage problems caused by the accumulation of unwanted grease in commercial kitchens and septic tanks. This product is a powdered product based on micro-organisms, enzymes and nutrients formulated to liquefy and digest grease, cellulose, starch, surfactants, etc. It is particularly useful for use in hotels, restaurants, and canteens of hospitals, clinics, nursing homes, schools, colleges, universities and many other similar facilities



BRAND: Accepta

MODEL: ACCEPTA 7144

APPLICATIONS:

This product can be used to get rid of sink blockages in households and cafes and restaurants.

1. Drainage systems of commercial kitchens.
2. Grease traps in restaurants and canteens.

SPECIFICATIONS:

Appearance	A colorless to pale yellow slightly liquid
Odor	Negligible odor
pH	3.3- 3.7
	10.5 @25 oC
Boiling point	The water constituent will boil at approx.105 oC
Freezing point	<0 oC
Flash point	Not applicable
Auto ignition temperature	Not applicable
Flammability	Not applicable
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Vapor pressure	Negligible Specific gravity (20°C): 1.21
Water solubility	Completely miscible with water

3.3. OTHER CHEMICALS

Type of Chemical	Size	Main Purpose
BLEACHING POWDER	25 KG DRUM	Chlorine treatment of water (manual dosing)
CITRIC ACID, MONOHYDRATE	25 KG BAG	CIP (membrane) cleaning
HYDROCHLORIC ACID - (HCL)	40KG per drum	To mix with Sodium Chlorite in automatic dosing system at 9% w/w
SODIUM CHLORITE - (NACLO2)	50KG per drum	To mix with Hydrochloric Acid in automatic dosing system 7.5% w/w
SODIUM HYPOCHLORITE 7.5% w/v	50KG per drum	Liquid bleach, used in chlorine treatment of water (manual dosing)

04

AVK VALVES AND ACCESSORIES

- 4.1. Street Cover
- 4.2. AVK Non-Return Valve
- 4.3. AVK PE End Gate Valve
- 4.4. AVK Butterfly Valve
- 4.5. AVK Supa Flange Adaptor
- 4.6. AVK Long Gate Valve
- 4.7. AVK Supa-plus Flange Adaptor
- 4.8. AVK Flange Adaptor
- 4.9. AVK Air Valve
- 4.10. AVK Short Gate Valve
- 4.11. AVK Ball Check Valve
- 4.12. AVK Fire Hydrant
- 4.13. AVK Repair Clamp

4.1. STREET COVER

AVK offers a very wide range of surface boxes in fixed, floating and height adjustable designs. The surface boxes of cast iron are pre-mounted with a sealing for optimum tightness between lid and body. The large chamber provides easy access for mounting and demounting extension spindles and the closed design protects the extension spindle against sand and dirt. Furthermore, the surface boxes offer deflection ability and internal fixation of extension spindles.

BRAND: AVK

SPECIFICATIONS:

Floating Street Cover

Fix Street Cover

Universal Street Cover



4.2. NON-RETURN VALVE

AVK series 41 swing check valves come with both metal and resilient seats. Installed in pumping applications to prevent back flow they can be used for drinking water as well as waste water. The disc is connected to the shaft via a flexible bush that allows disc and valve seat to adjust exactly. All interior parts are stainless steel or coated with drinking water approved epoxy or EPDM. The series 41 valves are available with either closed bushings or protruding shaft end where a lever with a weight or a spring can be fitted to mitigate pressure surges.

BRAND: AVK

AVAILABLE SIZES:

DN65, 4H, PN10/16
DN80, 8H, PN10/16
DN 100, 8H, SDR17
DN125, PN16, 8H
DN150, PN16, 8H
DN 200, PN10, 8H
DN 200, PN10, 12H
DN 250, PN16, 12H
DN 300, PN16, 12H



4.3. PE END GATE VALVE

Gate valve with PE100 PN16 SDR11 pipes. For water and neutral liquids to max. 20° C. Note: The maximum working temperature is set according to the ISO9080 lifetime requirements for PE pipes, and is therefore not the max temperature for the valve.

BRAND: AVK

AVAILABLE SIZES:

OD75mm pipe
OD90mm Pipe
OD110mm Pipe
OD140mm pipe
OD160mm Pipe
OD180mm Pipe
OD200mm Pipe
OD225mm Pipe
OD250mm Pipe
OD280mm Pipe
OD315mm Pipe



4.4. BUTTERFLY VALVE

AVK double eccentric butterfly valves are designed with tilted and fixated disc for extended service life and easy operation. The disc seal is made of AVK's drinking water approved EPDM rubber featuring an excellent compression set and thus ability to regain its original shape. The GSK approved epoxy coating and the corrosion protected shaft end zones ensure high durability. The valves are suitable for bi-directional application.

BRAND: AVK

AVAILABLE SIZES:

Centric butterfly valve with fixed liner	DN150-600
Centric butterfly valve with loose liner	
Centric butterfly valve with rubber lined disc	
Double eccentric butterfly valve	
Triple-offset butterfly valve	



4.5. SUPA FLANGE ADAPTER

Supa® adaptor - Bolts of mild steel for drinking water and neutral liquids to max. 70°C AVK Supa® is a range of universal straight couplings, step couplings and flange adaptors for cast iron, ductile iron, steel, uPVC and asbestos cement pipes. Supa® couplings are easy to mount due to the anti-friction coated bolts and nuts and the possibility of up to $\pm 4^\circ$ angular deflection. The stainless steel bolts and nuts and the high quality coating offer a durable corrosion protection.



BRAND: AVK

AVAILABLE SIZES:

99-119mm, PN16
218-242mm
193-215mm
266-292mm

4.6. LONG GATE VALVE

AVK gate valves are designed with built-in safety in every detail. The wedge is fully vulcanized with AVK's own drinking water approved EPDM rubber compound. It features an outstanding durability due to the ability of the rubber to regain its original shape, the double bonding vulcanization process and the sturdy wedge design. The triple safety stem sealing system, the high strength stem and the thorough corrosion protection safeguard the unmatched reliability.



BRAND: AVK

AVAILABLE SIZES:

DN100, PN10/16, 8H
DN80, PN10/16, 8H
DN150, PN10/16, 8H
DN200, PN10, 8Hole
DN250, PN16, 12H
DN300, PN16, 12H
DN125, PN10/16, 8H
DN 80, PN16, 8Holes

4.7. SUPA PLUS FLANGE ADAPTOR

Supa Plus™ adaptor with tensile res. sealing ring for PE/uPVC-pipes - Bolt A2/Nut A4 Min. GGG-40 for drinking water and neutral liquids to max. 70°C

AVK Supa Plus™ is a range of tensile couplings, flange adaptors and end caps dedicated for PE and uPVC pipes. Supa Plus™ couplings offer a great flexibility and are very easy to mount due to the combined compression gasket which enables $\pm 3.5^\circ$ angular deflection and makes it easy to insert the pipe ends even in the large dimensions. The external M16 bolts of anti-friction coated stainless steel and the high quality coating offer a durable corrosion protection.



BRAND: AVK

AVAILABLE SIZES:

63mm
75mm
90mm
110mm
125mm
140mm
160mm
180mm

200mm
225mm
250mm
280mm

4.8. AIR VALVE

AVK double orifice sewage air valves are designed for automatic rapid pipe filling and pipe draining as well as for automatic discharge of accumulated air during normal working conditions for sewage, raw water, brine and sludge applications.

BRAND: AVK

AVAILABLE SIZES:

DN 80, Double Orifice



4.9. SHORT GATE VALVE

Flanged gate valve EN 558-2 S.14/DIN F4. For drinking water and neutral liquids to max. 70°C AVK gate valves are designed with built-in safety in every detail. The wedge is fully vulcanized with AVK's own drinking water approved EPDM rubber compound. It features an outstanding durability due to the ability of the rubber to regain its original shape, the double bonding vulcanization process and the sturdy wedge design. The triple safety stem sealing system, the high strength stem and the thorough corrosion protection safeguard the unmatched reliability.



BRAND: AVK

AVAILABLE SIZES:

DN250, PN16, 12H
DN150, PN10/16, 8H
DN65, PN10/16, 4H
DN 200, PN10, 8H
DN 400, PN16, 16H
DN 300, PN16, 12H
DN80, PN10/16, 8H
DN 350, PN16

DN500, PN16
DN250, 12Holes
DN 80, 8 Holes

4.10. BALL CHECK VALVE

Ball check valve with flanges for wastewater treatment and neutral liquids to max. 70° C AVK ball check valves are self-cleaning and with full bore. The ball rotates during operation eliminating the risk of impurities getting stuck on the ball. The full and smooth bore ensures full flow with low pressure loss and eliminates the risk of deposits at the bottom. AVK ball check valves are available with flanges and internal threads. They are delivered with NBR lined ball as standard and optionally with ball of polyurethane available in different weights.



BRAND: AVK

AVAILABLE SIZES:

BALL CHECK VALVE	DN 65, PN10/16, 4H
	DN 80, 8Holes
	DN 50, 8Holes
SS BALL CHECK VALVE	THREADED, DN50MM
	THREADED, DN65MM
	FLANGED, DN80MM
	FLANGED, DN100MM

4.11. FIRE HYDRANT

Above-ground hydrant model P7 with 2 x hose storz B for drinking water and neutral liquids to max. 60° C AVK series 84 above-ground hydrants have many safety features and meet or exceed the requirements of DIN EN 14384. The hydrant is designed with double shut-off system for a continued sealing of the hydrant during maintenance and in the case of an accidental traffic knock down. The flanges connecting the upper and the lower barrel are assembled with special titanium bushes designed to break if something is hitting the hydrant. These bushes are the only spare parts to be replaced in case of a breakdown.

BRAND: AVK

AVAILABLE SIZES:

DN 80, PN 16



4.12. REPAIR CLAMP

AVK repair clamps ensure a cost effective and reliable solution for quick repairs on steel, copper, asbestos cement, cast iron and plastic pipes. A pipe with a hole or crack will be repaired permanently. The stainless steel repair clamps are passivated in order to ensure an optimum corrosion resistance. The repair clamps are provided with a waffle structured rubber gasket and rounded tops to create a fully circumferential seal.

BRAND: AVK

AVAILABLE SIZES:

140-160 MM	L=400mm,DB
	L=300mm,DB
180-191MM	L=300MM, SB
193-203MM	L=250MM, SB
219-229MM	L=250MM, SB
	L=300MM, SB
269-289MM	L=400mm, DB
270-280MM	L=250MM, SB
	L=400MM, SB
310-330MM	L=400mm, DB
337-358MM	L=400mm, DB
396-420MM	L=400mm, DB



05

EF FITTINGS AND SPARE

- 5.1. Black EF Coupler
- 5.2. Black EF End Cap
- 5.3. Black EF Reducer
- 5.4. Black EF Equal Tee
- 5.5. Black EF Reducing Tee
- 5.6. Black EF Bend
- 5.7. Black EF Tapping Tee

5.1. BLACK EF COUPLER

For connecting lengths of HDPE pipes and fittings

Fixing method: EF Welding a breakdown.



AVAILABLE SIZES:

25mm	SDR7.5,39.5V
32mm	PE100,SDR11,39.5V
40mm	PE100,SDR11,39.5V
50mm	PE100,SDR11,39.5V
63mm	PE100,SDR11,39.5V
75mm	PE100,SDR11,39.5V
90mm	PE100,SDR11,39.5V
110mm	PE100,SDR11,39.5V
125mm	PE100,SDR11,39.5V
140mm	PE100,SDR11,39.5V
160mm	PE100,SDR11,39.5V
180mm	PE100,SDR11,39.5V
200mm	PE100,SDR11,39.5V
225mm	PE100,SDR11,39.5V

250mm	PE100,SDR11,39.5V
280mm	PE100,SDR11,39.5V
315mm	PE100,SDR11,39.5V
355mm	PE100,SDR11,39.5V
400mm	PE100,SDR11,39.5V
500mm,	PE100,SDR11,39.5V

5.2. BLACK EF END CAP

An electrofusion end cap is used to cap off the end of a HDPE pipe

Fixing method: EF Welding



AVAILABLE SIZES:

40mm	39.5V
50mm	39.5V
63mm	39.5V
75mm	39.5V
90mm	39.5V
110mm	39.5V
160mm	39.5V
225mm	39.5V
250mm	39.5V

5.3. BLACK EF END REDUCER

An electrofusion reducer fitting is used to join two lengths of poly pipe that are of different diameters. Electrofusion reducer fittings are also used to join a long spigot fitting to a piece of pipe, where one of them is larger or smaller diameter than the other.

Fixing method: EF Welding



AVAILABLE SIZES:

32/25mm	39.5V
40/25mm	39.5V
40/32mm	39.5V
50/32mm	39.5V
63/32mm	39.5V
63/40mm	39.5V
63/50mm	39.5V
75/40mm	39.5V
75/50mm	39.5V
75/63mm	39.5V
90/50mm	39.5V
90/75mm	39.5V
90/63mm	39.5V

110/63mm	39.5V
110/75mm	39.5V
110/90mm	39.5V
160/63mm	39.5V
160/75mm	39.5V
160/90mm	39.5V
160/110mm	39.5V
200/160mm	39.5V
280/63mm	39.5V
315/110mm	39.5V
315/160mm	39.5V
315/225mm	39.5V

5.4. BLACK EF EQUAL TEE

An Electrofusion Equal Tee is used to split a HDPE same pipe size into two outlets at right angles to the end of the original pipe, or to add in an outlet to a PE.



AVAILABLE SIZES:

25mm	PE100, SDR11,39.5V
63mm	PE100, SDR11,39.5V
75mm	PE100, SDR11, 39.5V
90mm	PE100, SDR11, 39.5V
110mm	PE100, SDR11,39.5V
160mm	PE100, SDR11,39.5V
225mm	PE100, SDR11,39.5V

5.5. BLACK EF REDUCING TEE

An Electrofusion Equal Tee is used to split a HDPE same pipe size into two outlets at right angles to the end of the original pipe, or to add in an outlet to a PE.



AVAILABLE SIZES:

160/63/160mm	PE100,SDR11
160/75/160mm	PE100,SDR11
160/90/160mm	PE100,SDR11

5.6. BLACK EF ELBOW

This pipe fitting is used to change direction of a pipe by 45°,90°.



AVAILABLE SIZES:

25mm	90°, PE100, SDR11, 39.5V
32mm	90°, PE100, SDR11, 39.5V
50mm	90°, PE100, SDR11, 39.5V
63mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V
75mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V
90mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V
110mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V
160mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V
200mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V
250mm	90°, PE100, SDR11, 39.5V
280mm	45°, PE100, SDR11, 39.5V
	90°, PE100, SDR11, 39.5V

5.7 BLACK EF TAPPING TEE

Tapping Tee is used for making off take connections in larger size PE water mains in PN10 and PN16



AVAILABLE SIZES:

50/32mm	39.5V
63/32mm	39.5V
75/32mm	39.5V
75/63mm	39.5V
90/32mm	Blue
	39.5V
90/63mm	39.5V
110/32mm	39.5V
110/63mm	39.5V
125/32mm	39.5V
125/63mm	39.5V
140/32mm	39.5V
160/32mm	39.5V
160/63mm	39.5V
180/32mm	39.5V

180/63mm	39.5V
225/32mm	39.5V
225/63mm	39.5V
250/32mm	39.5V
250/63mm	39.5V
280/32mm	Blue
	39.5V
280/63mm	Blue
280/63mm	39.5V
315/32mm	39.5 V
315/63mm	39.5 V
400/32mm	39.5 V
400/63mm	39.5 V

06

PE Fittings

- 6.1. Black PE Bend
- 6.2. Black PE Elbow
- 6.3. Black PE FLANGE ADAPTOR
- 6.4. Black PE Long End Cap
- 6.5. Black PE Reducer
- 6.6. Black PE Equal Tee
- 6.7. Black PE Reducing Tee
- 6.8. Black PE 'Y' Tee
- 6.9. Black PE Cross Tee
- 6.10. MWSC Fabricated Fittings

6.1. BLACK PE BEND

AVAILABLE SIZES:

75mm	45°, SDR17, PN10
	90°, SDR17, PN10
90mm	45°, SDR17, PN10
110mm	11°, SDR17, PN10
	15°, SDR17, PN10
	30°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR11, PN16
90°, SDR17, PN10	
125mm	90°, SDR11, PN16
140mm	15°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10
125mm	90°, SDR11, PN16
140mm	15°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10

160mm	15°, SDR17, PN10
	30°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR11, PN16
180mm	15°, SDR17, PN10
	30°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10
200mm	15°, SDR17, PN10
	30°, SDR17, PN10
	45°, SDR17, PN10
225mm	15°, SDR11, PN16
	15°, SDR17, PN10
	45°, SDR11, PN16
250mm	90°, SDR11, PN16
	15°, SDR11, PN16

250mm	45°, SDR11, PN16
	45°, SDR17, PN10
	90°, SDR11, PN16
280mm	15°, SDR11, PN16
	15°, SDR17, PN10
	45°, SDR11, PN16
	45°, SDR17, PN10
	90°, SDR11, PN16
	90°, SDR17, PN10
315mm	15°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10
345mm	90°, SDR17, PN10
355mm	15°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10
	90°, SDR17, PN10

400mm	11°, SDR17, PN10
	15°, SDR17, PN10
	45°, SDR11, PN16
	45°, SDR17, PN10
	90°, SDR11, PN16
500mm	90°, SDR17, PN10
	11°, SDR11, PN16
	45°, SDR11, PN16
	90°, SDR11, PN16
	90°, SDR17, PN10



6.2. BLACK PE ELBOW

The PE elbow is used to bend/divert the network line to the required angles.



AVAILABLE SIZES:

63mm	90°, SDR11, PN16
75mm	45°, SDR11, PN1
90mm	15°, SDR17, PN10
	30°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10
110mm	15°, SDR17, PN10
	45°, SDR11, PN16
	45°, SDR17, PN10
	90°, SDR11, PN16
	90°, SDR17, PN10
125mm	45°, SDR11, PN16
	45°, SDR17, PN10
	90°, SDR17, PN10
140mm	90°, SDR17, PN10
160mm	15°, SDR17, PN10

160mm	15°, SDR17, PN10
	45°, SDR11, PN16
	45°, SDR17, PN10
	90°, SDR11, PN16
	90°, SDR17, PN10
180mm	45°, SDR17, PN10
	90°, SDR17, PN10
200mm	90°, SDR17, PN10
225mm	15°, SDR17, PN10
	90°, SDR17, PN1
250mm	45°, SDR17, PN1
280mm	15°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10
315mm	15°, SDR17, PN10
	45°, SDR17, PN10

315mm	90°, SDR17, PN10
400mm	30°, SDR17, PN10
	45°, SDR17, PN10
	90°, SDR17, PN10

6.3. BLACK PE FLANGE ADAPTOR

Black PE flange adaptor is required to interconnect 2 pipes of the same size to an additional item such as valves, pumps for the network



AVAILABLE SIZES:

40mm	SDR11, PN16
75mm	SDR11, PN16
090mm	SDR17, PN10
110mm	SDR11, PN16
	SDR17, PN10
140mm	SDR17, PN10
160mm	SDR11, PN16
	SDR17, PN10
180mm	SDR17, PN10
225mm	SDR17, PN10
	SDR11, PN16
280mm	SDR17, PN10
315mm	SDR11, PN16
	SDR17, PN10

345mm	SDR17, PN10
355mm	SDR11, PN16
	SDR17, PN10
400mm	SDR11, PN16
	SDR17, PN10
500mm	SDR11, PN16
	SDR17, PN10

6.4. BLACK PE LONG END CAP

Black PE long end cap is required to end the connection of the line temporarily or permanent



AVAILABLE SIZES:

50mm	SDR11,PN16
125mm	SDR17,PN10
	SDR11,PN16
140mm	SDR17,PN10
160mm	SDR11,PN16
180mm	SDR17,PN10
200mm	SDR17,PN10
315mm	SDR11,PN16
355mm	SDR11,PN16
400mm	SDR17,PN10
500mm	SDR17,PN10

6.5. BLACK PE REDUCER

Black PE Reducer is used to reduce the pipes from one size to another in an existing or a new line



AVAILABLE SIZES:

40/25mm	SDR11, PN16
75/63mm	SDR11, PN16
90/75mm	SDR17, PN10
110/63mm	SDR17, PN10
110/75mm	SDR11, PN16
110/90mm	SDR17, PN10
125/110mm	SDR17, PN10
125/90mm	SDR17, PN10
140/75mm	SDR17, PN10
140/90mm	SDR17, PN10
140/110mm	SDR17, PN10
140/125mm	SDR17, PN10
160/63mm	SDR17, PN10
160/90mm	SDR17, PN10
160/110mm	SDR11, PN16
	SDR17, PN10

160/125mm	SDR11, PN16
	SDR17, PN10
160/140mm	SDR17, PN10
180/90mm	SDR17, PN10
180/110mm	SDR17, PN10
180/125mm	SDR17, PN10
180/140mm	SDR17, PN10
180/160mm	SDR17, PN10
200/90mm	SDR17, PN10
200/140mm	SDR17, PN10
200/160mm	SDR17, PN10
200/180mm	SDR17, PN10
225/75mm	SDR17, PN10
225/90mm	SDR17, PN10
225/110mm	SDR17, PN10
225/140mm	SDR17, PN10

225/160mm	SDR17, PN10
225/180mm	SDR17, PN10
250/110mm	SDR17,PN10
250/125mm	SDR17, PN10
250/140mm	SDR17, PN10
250/160mm	SDR11, PN16
250/180mm	SDR17, PN10
250/225mm	SDR11, PN16
	SDR17, PN10
280/90mm	SDR17, PN10
280/110mm	SDR17, PN10
280/140mm	SDR17, PN10
280/160mm	SDR11, PN16
280/225mm	SDR11, PN16
	SDR17, PN10
280/250mm	SDR11, PN16
315/125mm	SDR17, PN10
315/160mm	SDR17, PN10
315/180mm	SDR17,PN10
315/280mm	SDR11, PN16
	SDR17, PN10

355/160mm	SDR17,PN10
355/200mm	SDR17, PN10
355/250mm	SDR17, PN10
355/280mm	SDR17, PN10
355/315mm	SDR17, PN10
400/160mm	SDR17, PN10
400/200mm	SDR17, PN10
400/225mm	SDR17, PN10
400/250mm	SDR17, PN10
400/280mm	SDR17, PN10
400/315mm	SDR11, PN16
400/355mm	SDR17, PN10
	SDR11, PN16
500/315mm	SDR11, PN16
	SDR17, PN10
500/355mm	SDR11, PN16
	SDR17, PN10
500/400mm	SDR11, PN16
	SDR17, PN10

6.6. BLACK PE EQUAL TEE

Black PE Equal Tee is used to add an additional network line of the same size to the existing line or divert the line to a 90 degrees angle for additional line.



AVAILABLE SIZES:

25mm	SDR11, PN16
50mm	SDR11, PN16
75mm	SDR11, PN16
110mm	SDR11, PN16
	SDR17, PN10
125mm	SDR11, PN16
	SDR17, PN10
140mm	SDR17, PN10
160mm	SDR11, PN16
	SDR17, PN10
180mm	SDR17, PN10
225mm	SDR17, PN10
250mm	SDR11, PN16
	SDR17, PN10
280mm	SDR17, PN10
315mm	SDR17, PN10

355mm	SDR17, PN10
	SDR17, PN10
400mm	SDR11, PN16
	SDR17, PN10
	SDR17, PN10
500mm	SDR11, PN16
	SDR17, PN10

6.7. BLACK PE REDUCING TEE

Black PE reducing tee is used to reduce the pipe line to an another size with an additional angle (15, 30, 45, 90 degrees)



AVAILABLE SIZES:

63/32/63mm	SDR11, PN16
75/40/75mm	SDR11, PN16
75/63/75mm	SDR11, PN16
90/50/90mm	SDR17, PN10
90/63/90mm	SDR17, PN10
90/75/90mm	SDR11, PN16
110/63/110mm	SDR17, PN10
140/063/140mm	SDR17,PN10
140/075/140mm	SDR17,PN10
140/110/140mm	SDR17,PN10
140/90/140mm	SDR17, PN10
160/110/160mm	SDR17,PN10
160/280/160mm	SDR17,PN10
160/63/160mm	SDR17, PN10
160/75/160mm	SDR17, PN10

180/110/180mm	SDR17, PN10
200/110/200mm	SDR17, PN10
200/160/200mm	SDR17, PN10
225/110/225mm	SDR17, PN10
225/345/225mm	SDR17,PN10
225/75/225mm	SDR17, PN10
250/110/250mm	SDR17,PN10
250/160/250mm	SDR17,PN10
250/200/250mm	SDR17,PN10
280/63/280mm	SDR17, PN10
355/160/355mm	SDR17,PN10

225/160/225mm	SDR11, PN16
225/160/225mm	SDR17, PN10
225/90/225mm	SDR17, PN10
250/160/250mm	SDR11, PN16
250/225/250mm	SDR11, PN16
252/90/250mm	SDR17, PN10
280/110/280mm	SDR17, PN10
280/160/280mm	SDR11, PN16
	SDR17, PN10
280/225/280mm	SDR11, PN16
280/250/280mm	SDR11, PN16
	SDR17, PN10
315/110/315mm	SDR17, PN10
315/160/315mm	SDR17, PN10
315/200/315mm	SDR17, PN10
315/250/315mm	SDR17, PN10
315/280/315mm	SDR17, PN10
345/225/345mm	SDR17, PN10
355/160/355mm	SDR11, PN16
400/110/400mm	SDR17, PN10
400/160/400mm	SDR17, PN10

400/200/400mm	SDR17, PN10
400/225/400mm	SDR17, PN10
400/250/400mm	SDR17, PN10
400/280/400mm	SDR17, PN10
400/315/400mm	SDR17, PN10
500/160/500mm	SDR11, PN16

6.8. BLACK PE 'Y' TEE

Black PE 'Y' Tee is used to add or divert the pipe angle or add a line/ pipe to the same size of pipe.



AVAILABLE SIZES:

63mm/45°	SDR17,PN10
75mm/45°	SDR11,PN16
	SDR17,PN10
90mm/45°	SDR17,PN10
110mm/45°	SDR11,PN16
	SDR17,PN10
140mm/45°	SDR17,PN10
160mm/45°	SDR11,PN16
	SDR17,PN10
180mm/45°	SDR11,PN16
	SDR17,PN10
200mm/45°	SDR11,PN16
	SDR17,PN10
225/90/225mm	SDR17,PN10
225mm/45°	SDR17,PN10
250mm/45°	SDR17,PN10

280mm/45°	SDR17,PN10
315mm/45°	SDR17,PN10
400mm/45°	SDR17,PN10

6.9. BLACK PE CROSS TEE

Black PE cross Tee is used to make a straight network line to a 4 way connection.



AVAILABLE SIZES:

63mm	SDR11, PN16
	SDR17, PN10
75mm	SDR17, PN10
90mm	SDR11, PN16
110mm	SDR17, PN10
140mm	SDR17, PN10
160mm	SDR11, PN16
	SDR17, PN10
225mm	SDR11, PN16
	SDR17, PN10
250mm	SDR17, PN10
280mm	SDR17, PN10
355mm	SDR17, PN10
400mm	SDR17, PN10
280mm	SDR17, PN10
315mm	SDR17, PN10

6.10. MWSC FABRICATED FITTINGS

MWSC Fabricated fittings are which are fabricated internally as per the customer requirements



AVAILABLE SIZES:

Black PE Brand

90mm	90°,SDR17,PN10	180mm	30°,SDR17,PN10	315mm	15°,SDR17,PN10
110mm	15°,SDR17,PN10		45°,SDR17,PN10		45°,SDR17,PN10
	45°,SDR11,PN16		90°,SDR17,PN10		90°,SDR17,PN10
	45°,SDR17,PN10	200mm	30°,SDR17,PN10		
	90°,SDR11,PN16		45°,SDR17,PN10		
	90°,SDR17,PN10		90°,SDR17,PN10		
125mm	45°,SDR17,PN10	225mm	15°,SDR17,PN10	30°,SDR17,PN10	
	90°,SDR17,PN10		45°,SDR17,PN10	45°,SDR17,PN10	
140mm	15°,SDR17,PN10		90°,SDR17,PN10	90°,SDR17,PN10	
	45°,SDR17,PN10		250mm	45°,SDR17,PN10	90°,SDR17,PN10
	90°,SDR17,PN10	280mm		15°,SDR17,PN10	45°,SDR17,PN10
160mm	15°,SDR17,PN10		45°,SDR17,PN10	90°,SDR17,PN10	
	45°,SDR11,PN16		90°,SDR11,PN16	90°,SDR17,PN10	
	45°,SDR17,PN10		90°,SDR17,PN10		
	90°,SDR11,PN16	90°,SDR17,PN10			
	90°,SDR17,PN10				

Black PE Cross Tee

90mm	SDR17,PN10
110mm	SDR17,PN10
140mm	SDR17,PN10
160mm	SDR17,PN10
200mm	SDR17,PN10
225mm	SDR17,PN10
280mm	SDR17,PN10
315mm	SDR17,PN10



Black PE 'Y' TEE

110mm	45°,SDR11,PN16
	45°,SDR17,PN10
160mm	45°,SDR11,PN16
	45°,SDR17,PN10
180mm	45°,SDR17,PN10
200mm	45°,SDR17,PN10
225mm	45°,SDR17,PN10
250mm	45°,SDR17,PN10
280mm	45°,SDR17,PN10
315mm	45°,SDR17,PN10



Black PE equal Tee

90mm	SDR17, PN10
110mm	SDR11,PN16
	SDR17, PN10
125mm	SDR17, PN10
140mm	SDR17,PN10
160mm	SDR11,PN16
	SDR17, PN10
200mm	SDR17, PN10
225mm	SDR17, PN10
250mm	SDR17, PN10

280mm	SDR17, PN10
315mm	SDR17, PN10

07

FLANGES

- 7.1. PE Blank Flange
- 7.2. PE Flange
- 7.3. PP Backing Flange
- 7.4. PP Blind Flange
- 7.5. PP Dead Flange
- 7.6. PP Flange

7.1. PE BLIND FLANGE

They are used to seal the end of piping systems or pressure vessel openings. They are commonly used for testing the flow of gas or liquid through a pipe or vessel, in addition to allowing for easy access to the pipe in case work must be done inside the line



AVAILABLE SIZES:

90mm	8 Holes
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7.2. PE FLANGE

They are used in piping as part of a fitting for the purpose of redirecting or changing pipes diameter. They are usually produced during the process of casting machinery components and molding. They are connectors of pipes, valves & equipment.



AVAILABLE SIZES:

75mm	4 Holes
90mm	8 Holes

7.3. PP BACKING FLANGE

It is used to terminate the end of a piping system. The Backing flange is basically a flange that does not have a hub or a bored center. Blind flanges have the face thickness of a flange, a matching face type, and similar bolting pattern. Backing flanges can also be used to seal a nozzle opening on a pressure vessel.



AVAILABLE SIZES:

160mm	8 Holes
200mm	8 Holes
250mm	12 Holes

7.4. PP BLIND FLANGE

It is used to terminate the end of a piping system. The blind flange is basically a flange that does not have a hub or a bored center. Blind flanges have the face thickness of a flange, a matching face type, and similar bolting pattern. Blind flanges can also be used to seal a nozzle opening on a pressure vessel.

AVAILABLE SIZES:

40mm	4 Holes
63mm	4 Holes
75mm	4 Holes
90mm	8 Holes
110mm	8 Holes
140mm	8 Holes
180mm	8 Holes
200mm	8 Holes
250mm	12 Holes
280mm	12 Holes
315mm	12 Holes

7.5. PP DEAD FLANGE

Generally be used for the detachable connecting of plastic pipes as well as transitions from plastic fittings to devices (valves, pumps).

**AVAILABLE SIZES:**

DN 225	PN16
DN 400	PN16

7.6. PP FLANGE

Generally be used for the detachable connecting of plastic pipes as well as transitions from plastic fittings to devices (valves, pumps).

**AVAILABLE SIZES:**

25mm	4 Holes
32mm	4 Holes
40mm	4 Holes
50mm	4 Holes
63mm	4 Holes
75mm	4 Holes
90mm	8 Holes
	8 Holes, SDR11, PN16
110mm	8 Holes
	8 Holes, SDR11, PN16
125mm	8 Holes
140mm	8 Holes
160mm	8 Holes
180mm	8 Holes
200mm	8 Holes

225mm	8Holes
250mm	12 Holes
280mm	12 Holes
315mm	12 Holes
355mm	16 Holes
400mm	16 Holes
DN 500	20 Holes, PN16

08

PUMPS

- 8.1. Submersible Pumps for 4" Borehole
- 8.2. Submersible Pumps for 8" Borehole
- 8.3. Submersible Pumps for 10" & 12" Borehole
- 8.4. Sewage transfer pump
- 8.5. Sewage transfer pump
- 8.6. Sewage transfer pump
- 8.7. Ready pumps
- 8.8. Submersible Grinder Pumps
- 8.9. GV Variable Speed Booster sets
- 8.10. Inline Stainless steel
vertical Multi-Stage Pump
- 8.11. Inline Stainless steel
Horizontal Multi-Stage Pump

8.1. SUBMERSIBLE PUMPS FOR 4" BOREHOLE

The Z6-ZN6 Series is designed for use in 6" wells. The head and motor support of this lightweight and sturdy pump is cast in stainless steel as are the shaft sleeves ensuring long lasting reliability and efficiency.

The pump has a high sand handling capability which make the Z6-ZN6 series suitable for use in aggressive environments such as water supply from deep wells or irrigation over large areas such as golf courses.

All Z6-ZN6 pumps can be coupled to NEMA standard motors



BRAND: Lowara

MODEL: Z8: AISI 304 , ZR8: DUPLEX

SPECIFICATION:

Delivery	up to 78 m ³ /h
Head	up to 700 m
Power supply	three-phase 50 Hz
Power	from 0.55 kW up to 55 kW
Maximum operating pressure	70 bar
Temperature of pumped liquid	to 60 °C
Maximum immersion depth	350m

8.2 SUBMERSIBLE PUMPS FOR 8" BOREHOLE

The Z8-ZR8 series is designed for use in 8" wells. The pump is built in stainless steel and resists corrosion even in more aggressive environments thanks to the ZR8 version in Duplex.

This design feature boasts a "dynamic" wear ring which reduces hydraulic losses to a minimum and prevents the pump from blocking during stand-by periods. Meaning the pump is ideal for use in mining, water supply from deep wells and pressure boosting and water distribution applications in municipal and industrial systems. All Z6-ZN6 pumps can be coupled to NEMA standard motors



BRAND: Lowara

MODEL: Z8: AISI 304 , ZR8: DUPLE

SPECIFICATION:

Delivery	up to 180 m ³ /h
Head	up to 550 m
Power supply	three-phase 50 and 60 Hz
Power	from 5,5 kW up to 150 kW
Maximum operating pressure	55 bar
Temperature of pumped liquid	to 30 °C
Maximum immersion depth	350m

8.3. SUBMERSIBLE PUMPS FOR 10" & 12" BOREHOLE

The Z-ZR10-Z-ZR12 Series is a multistage vertical centrifugal pump designed for use in 10" and 12" wells. The range is designed to give high efficiency throughout its performance area and almost every duty point between 120 m³/h and 460 m³/h has an efficiency higher than 80%.

The shaft alignment of the pump is specifically designed to reduce vibration issues throughout the lifetime of the pump. The wear ring on the Z10/ZR10 pump also keeps recirculation losses to a minimum, ensuring high levels of efficiency in applications such as supply of surge tanks and reservoirs, firefighting and agricultural flood irrigation



BRAND: Lowara

MODEL: Z10-Z12: AISI 304 , ZR10-ZR12: DUPLEX

SPECIFICATION:

Delivery	up to 520 m ³ /h
Head	up to 545 m
Power supply	three-phase 50 Hz
Power	from 4 kW up to 350 kW
Temperature of pumped liquid	to 60 °C
Maximum immersion depth	350 m

8.4. SEWAGE TRANSFER PUMP

Flygt N-pumps take on the toughest applications and get the job done. Every component is designed and manufactured to deliver sustained high efficiency. Thanks to patented N-technology with its innovative self-cleaning impeller, Flygt N-pumps deliver the highest total efficiency. They lower your energy bill and reduce unplanned maintenance costs. That adds up to total peace of mind – and big savings over the long term. Most solid objects entering the pump will pass through the impeller between the impeller vanes. If an object gets caught on the leading edge of one of the vanes, it will slide along the backswept shape towards the perimeter of the inlet. Due to the mechanical self-cleaning design, a sludge concentration up to 8% can easily be pumped.



- State-of-the-art wastewater pump with N-technology
- Enhanced with Adaptive N-hydraulic
- Sustained high efficiency with energy savings up to 25%
- Flexible and modular design
- Robust and reliable

BRAND: FLYGT, XYLEM INC

MODEL: N3085

8.5 SEWAGE TRANSFER PUMP

SPECIFICATION:

PUMP 60Hz US	MT 1 phase Adaptive 4 poles 60hz US	MT 3 phase 4 poles 60hz US	MT 3 phase 4 poles Smart Run 60hz US
IMPELLER MATERIAL	Grey cast iron	Hard-Iron™	Hard-Iron™
IMPELLER MATERIAL	Stainless steel		
DISCHARGE OUTLET	3 1/8 inch	3 1/8 inch	3 1/8 inch
MOTOR EFFICIENCY	Standard	Premium efficiency (IE3)	Standard
FREQUENCY	60 Hz	60 Hz	60 Hz
NUMBER OF POLES	4	4	4
PHASE	1	3	3
RATED POWER	2.4 hp	3.5 hp	3 hp
RATED CURRENTS	10 A	4.9 A	5.7 A

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- State-of-the-art wastewater pump with N-technology
- Enhanced with Adaptive N-hydraulic
- Sustained high efficiency with energy savings up to 25%
- Flexible and modular design
- Robust and reliable

This product is a versatile, multi-use biocide that can be used in cooling water systems, closed systems, for sanitizing reverse osmosis systems, and peripheral equipment ahead of these systems.

BRAND: FLYGT, XYLEM INC

MODEL: N3102

SPECIFICATION:

PUMP 60Hz US	HT 1 phase 4 poles 60Hz US	HT 1 phase Adaptive 4 poles 60Hz US	HT 3 phase 4 poles 60Hz U
IMPELLER MATERIAL	Hard-Iron™	Grey cast iron	Hard-Iron™
IMPELLER MATERIAL	Stainless steel		
DISCHARGE OUTLET	3 15/16 inch	3 15/16 inch	3 15/16 inch
MOTOR EFFICIENCY	Standard	Premium efficiency (IE3)	Standard, Premium efficiency (IE3)
FREQUENCY	60 Hz	60 Hz	60 Hz
NUMBER OF POLES	4	4	4
PHASE	1	1	3
RATED POWER	7.5 hp	7.5 hp	10 hp
RATED CURRENTS	30 A	30 A	15 A

8.6 SEWAGE TRANSFER PUMP

Flygt N-pumps take on the toughest applications and get the job done. Every component is designed and manufactured to deliver sustained high efficiency. Thanks to patented N-technology with its innovative self-cleaning impeller, Flygt N-pumps deliver the highest total efficiency. They lower your energy bill and reduce unplanned maintenance costs. That adds up to total peace of mind – and big savings over the long term. Most solid objects entering the pump will pass through the impeller between the impeller vanes. If an object gets caught on the leading edge of one of the vanes, it will slide along the backswept shape towards the perimeter of the inlet.

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- State-of-the-art wastewater pump with N-technology
- Enhanced with Adaptive N-hydraulic
- Sustained high efficiency with energy savings up to 25%
- Flexible and modular design
- Robust and reliable

This product is a versatile, multi-use biocide that can be used in cooling water systems, closed systems, for sanitizing reverse osmosis systems, and peripheral equipment ahead of these systems.

BRAND: FLYGT, XYLEM INC

MODEL: N3127

SPECIFICATION:

PUMP 60Hz US	HT 1 phase 4 poles 60hz US	HT 1 phase Adaptive 4 poles 60hz US	HT 3 phase 4 poles 60hz U
IMPELLER MATERIAL	Hard-Iron™	Grey cast iron	Hard-Iron™
IMPELLER MATERIAL	Stainless steel		
DISCHARGE OUTLET	3 15/16 inch	3 15/16 inch	3 15/16 inch
MOTOR EFFICIENCY	Standard	Premium efficiency (IE3)	Standard, Premium efficiency (IE3)
FREQUENCY	60 Hz	60 Hz	60 Hz
NUMBER OF POLES	4	4	4
PHASE	1	1	3
RATED POWER	7.5 hp	7.5 hp	10 hp
RATED CURRENTS	30 A	30 A	15 A

8.7 READY PUMPS

These types of pumps can be used in construction or industrial sites, manholes or in emergency situations. This type of pumps are used for dewatering purposed on the spot. Flygt Ready pumps handle flows up to 6 l/s (80gpm), heads to 14 m (48ft), and solids up to 38 mm in diameter. Available with power ratings from 0.4 to 0.9 kW (0.6 to 1.1 HP)



BRAND: FLYGT, XYLEM INC

MODEL: Ready 4, Ready 4L, Ready 8, Ready 8S

SPECIFICATION:

Ready 4 and 8	Ready 4L	Ready 8L
Weighing only 12 and 14.5 kilos respectively, Ready 4 and 8 are designed for de-watering of construction sites, flood cleaning operations and similar applications. They can handle abrasive and corrosive liquids in the range of pH 5–8 and particle sizes up to 5 mm.	This is as low as it gets. Ready 4L is the low suction pump that can handle water levels down to 1-2 mm. For a completely dry result just bring out the mop.	The Ready 8S is a solids handling pump designed for contaminated water and water containing sand, gravel and debris with particle sizes up to 38 mm.

8.8 SUBMERSIBLE GRINDER PUMPS

The new DOMO GRI has been design to deliver domestic sewage, liquids containing solids or fibers, and wastewater from residential buildings to the sewer mains or a pressurized sewer network. The grinder cuts solids in sewage into smaller bits that can easily pass through the impeller and discharge pipes. Risks of clogging or blockage are very low, and the grinder system is easily adjustable.



BRAND: Lowara

MODEL: DOMO GRI

SPECIFICATION:

Delivery	up to 6.60 m ³ /h
Head	up to 25 m
Power supply	both single and three-phase 50 and 60 Hz
Power	from 1.10 kW up to 1.10 kW
Temperature of pumped liquid	to 35 °C
Maximum immersion depth	5 m

8.9 GV VARIABLE SPEED BOOSTER SETS

The Lowara GVF series booster sets are fully automatic booster sets for water supply. They are equipped with 2-6 pumps (where one can be a jockey pump), pressure transmitters and control panel with a SD60 controller and a variable frequency drive, all mounted on a frame for easy installation. One pump is speed controlled and the rest operates at full speed. With the SD 60 controller it's easy to set and check the performance either on site or remote via Modbus or internet.



BRAND: Lowara

MODEL: GVF 11, GVF 12, GVF 13

SPECIFICATION:

Fully automatic booster sets
Equipped with 2-6 pumps
One speed controlled pump
Remote set and control via Modbus or Internet
Certified for use with drinking water

8.10 INLINE STAINLESS STEEL VERTICAL MULTI-STAGE PUMP

The Lowara e-SV vertical multistage pump is a highly reliable and technologically advanced multipurpose pump. It's capable of satisfying the needs of a wide variety of users and many different construction designs are available. The e-SV range feature models in eleven sizes with 1-3-5-10-15-22-33-46-66-92-125 m³/h nominal capacities. All pumps ≥ 1.5kW are equipped with IE3 standard motor



BRAND: Lowara

MODEL: E-SV SERIES

SPECIFICATION:

Delivery	up to 160 m ³ /h
Head	up to 330 m
Power supply	both single and three-phase 50 and 60 Hz
Maximum operating pressure	40 bar
Temperature of pumped liquid	from -30°C to 120°C (high temperature version up to 180°C available)
Maximum immersion depth	5 m

8.11 INLINE STAINLESS STEEL HORIZONTAL MULTI-STAGE PUMP

General purpose, multistage pumps particularly suitable for domestic and industrial service with clean liquids.



BRAND: Lowara

MODEL: E-HM SERIES

SPECIFICATION:

Delivery	up to 29 m ³ /h
Head	up to 160 m
Power supply	both single and three-phase 50 and 60 Hz
Power	from 0.30 kW up to 5.50 Kw
Maximum operating pressure	16 bar
Maximum immersion depth	5 m

09

RO SPARES

- 9.1 RO Membranes Elements
- 9.2 Cartridge Filter (Melt Blown)
- 9.3 Cartridge Filter (String Wound)
- 9.4 Pressure Gauges
- 9.5 Temperature Gauges
(Bimetal Thermometer)
- 9.6 Plate Heat Exchangers
- 9.7 Energy Recovery Device

9.1. RO MEMBRANE ELEMENTS

BRAND: Hydranautics

Hydranautics SWC seawater desalination membranes are high productivity elements offering the highest levels of salt rejection and a consistently pure end product.

Membrane formulations are designed to accommodate varying levels of seawater salinities worldwide with reliable field-proven performance.



- High permeate flow
- High salt rejection - 99.8% (99.7% minimum)
- 92% boron rejection
- Lowest biological and colloidal fouling
- Greater tolerance to high pH cleanings
- Lower energy consumption
- Replaces SWC5

MODEL: SWC5- LD

SPECIFICATION:

Permeate Flow	9,000 gpd (34.1 m3/d)
Salt Rejection	99.8% (99.7% minimum)
Boron Rejection (Typical)	92.0%
Configuration	Low Fouling Spiral Wound
Membrane Polymer	Composite Polyamide
Membrane Active Area	400 ft ² (37.1m ²)
Feed Spacer	34 mil (0.864 mm)

MODEL: SWC6- MAX

SPECIFICATION:

Low Pressure	High Flow
Permeate Flow	6,600 gpd (25 m3/d) to 13,200 gpd (50 m3/d)
Salt Rejection	99.6% (99.4 % min) to 99.8% (99.7% min)
Boron Rejection (Typical)	83.0% to 91.0%
Applied Pressure	600 psi to (4.1 MPa) 800 psi (5.4 MPa)

BRAND: DOW FILMTEC

Dow Water & Process Solutions offers various premium seawater reverse osmosis (RO) elements designed to reduce capital and operation cost of seawater RO systems. DOW FILMTEC™ Elements combine premium membrane performance with automated precision fabrication which takes system performance to exceptional levels.



- optimize operating cost through lower energy consumption
- High NaCl and boron rejection
- Effective use in permeate staged seawater desalination systems without impairing the performance of the downstream stage.
- Durable
- Low cost of operation

MODEL: SW30HRLE400

SPECIFICATION:

Permeate Flow	7,500 gpd
Salt Rejection	99.8%
Boron Rejection (Typical)	92.0%
Configuration	Spiral wound with thin film composite
Membrane Polymer	Polyamide thin-film composite membrane.
Membrane Active Area	400 ft2 (37.1m2)
EPDM seals	

MODEL: SW30HRLE400I

SPECIFICATION:

Permeate Flow	7,500 gpd
Salt Rejection	99.8%
Boron Rejection (Typical)	92.0%
Configuration	Spiral wound with thin film composite
Membrane Polymer	Polyamide thin-film composite membrane.
Membrane Active Area	400 ft2 (37.1m2)

9.2. CARTRIDGE FILTER (MELT BLOWN)

Pall Corporation is leader in Filtration technology. Cartridge filter widely used in reverse osmosis plants. MS ® PP Melt Blown cartridge filters proven to remove 99.98% of the contaminants at their micron rating. They are ideally suited for pre-RO, resin trap and cooling water applications. They are fusing and intertwined of polypropylene resin without any chemical glues, it based on the manufacturing technology of multi-leveled comprehensive filter, is a kind of melt-blown three leveled PP impurity filter that is produced by three nozzles of different diameters. As the fiber and density from high filtration rating and pollutants holding capacity on diameter of cartridge filter, low pressure drop, gradual changing deep filtration structure with loose outside and close inner, strong pollutants holding capacity, it can remove contaminant effectively, such as suspended substance, particulate and rust, providing efficient filtration and long service life.



MODEL: 1/5/10/20/30/50 micron, 10/20/30/40 Inch Length

SPECIFICATION:

Materials	Medium
Polypropylene Core	
Polypropylene	
Removal Ratings	1 µm, 5µm, 10µm, 20µm, 30µm and 50µm
Configurations	Nominal length 254mm/10in, 508mm/ 20in, 762mm/30in and 1016mm/40in
Diameter	64mm/2.5in
Operating Conditions	Maximum Temperature 82°C / 180°F
Maximum Differential Pressure	4.1bar@30°C/60psid@ 85°F;3.4bar@50°C/50 psid@120°F; 2bar@ 70°C/30psid@160°F;1 bar@82°C/15psid@180°F

9.5 TEMPERATURE GAUGES (BIMETAL THERMOMETER)

In resort Market temperature gauges are used in generator sets to measure temperature. General process instrumentation in the chemical, petrochemical, oil and gas, energy and water/wastewater industries



1. Temperature measurement in harsh and aggressive environments
2. with liquid dampening suitable for applications with high vibrations

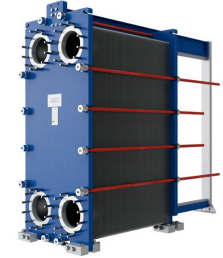
MODEL: 0 to 540 o

SPECIFICATION:

Size	3" (76.2 mm)
Type	TI.31
Accuracy	+ 1.0% full scale value per ASME B40.3, Grade 3A
Ranges	From -100 oF (-70 oC) to +1000 oF (+540 oC) From -50 oC to +550 oC (as single scale)
Working Range Steady	full scale value
Short time	110% of full scale value Over/Under Range Pro-tection < +500 oF (+260 oC)
Temporary	up to 50% of full scale > +500 oF (+260 oC)
Continuous	to 800 oF (+427 oC)
Intermittent	up to 1000 oF (+538 oC)

9.6 PLATE HEAT EXCHANGERS

A plate heat exchanger is a type of heat exchanger that uses metal plates to transfer heat between two fluids. This has a major advantage over a conventional heat exchanger in that the fluids are exposed to a much larger surface area because the fluids spread out over the plates. Application in generators in resort market for hot and cold application. Plate heat exchanger can be designed based upon the flow condition and properties of hot fluid and cold fluid for example Density, Specific heat capacity, Thermal conductivity, Viscosity Inlet, Viscosity outlet, Volumetric flow rate, inlet temperature, Outlet temperature, Pressure drop, LMTD from hot side and cold side of the fluid used. Can be customized according to flow rates



BRAND: ALFA LAVAL

9.7 ENERGY RECOVERY DEVICE

Energy recovery devices using isobaric technology, also called pressure or work exchangers, are the most efficient ever developed for the desalination industry. The recovered energy is used to pressurize raw water, reducing the energy input required for the high pressure feed pumps

BRAND: ERI

MODEL: PX-180, PX-70S, PX-140S, PX-220,
PX-260, PX-Q300



10

WATER QUALITY TESTING EQUIPMENTS

- 10.1. PH/Conductivity meter
- 10.2. Colorimeter

10.1 PH/CONDUCTIVITY METER

The SG23 SevenGo Duo™ pH/mV/conductivity meter is best suited for routine measurements of pH or conductivity while allowing for parallel measurements in dual-channel mode. In addition, it also offers Intelligent Sensor Management (ISM®).



BRAND: Hach

MODEL: SG23 SevenGo Duo™

10.2 COLORIMETER

The Pocket Colorimeter II offers accuracy and reproducibility comparable to more expensive lab instruments, and is designed for a long working life in harsh conditions. A long-lasting LED is used as the light source, and low power requirements assure long battery life.



BRAND: Hach

MODEL: POCKET COLORIMETER™ II

SPECIFICATION:

Lamp	Light Emitting Diode (LED)
Detector	Silicon
Enclosure	IP67, waterproof at 1 m for 30 minutes (battery compartment excluded)
Wavelength	Fixed wavelength ± 2 nm, varies with model
Filter Bandwidth	15 nm
Absorbance Range	0 to 2.5 Abs
Sample Cell Path length	1 cm and 1-in. (25 mm)
Operating Conditions	0 to 50°C (32 to 122°F) 0 to 90% relative humidity
Display	LCD, backlit
Power Supply	4 AAA batteries; approximate life of 2000 tests (use of backlight reduces this number)
Compliance	European CE mark
Warranty	2 years
Dimensions	6.1 x 15.5 x 3.5 cm (2.5 x 6.2 x 1.4 in.) Weight 0.23 kg (0.5 lbs.)

11

WATER METERS

11.1 Water Meters

11.1 WATER METERS

Elster Water meters are used to measure the quantity of water passing through the pipe up to 60 degree centigrade

BRAND: Elster

MODEL: 25mm-V100 PSM (screw type) / 50mm H4000, LUPB4528 flange / Kent 65mm (Flange) / N80,S2000 (LUJPD4500) flange / Kent 100mm, (Flange) / Kent 125mm, (Flange) / Kent 200mm, (Flange) / 40mm (Screw type)

AVAILABLE SIZES:

15 mm
25mm
40mm
50mm
65mm
80mm
100mm
125mm
150mm
200mm
250mm
300mm



Capri Water meters are used to measure the quantity of water passing through the pipe up to 50 degree centigrade

BRAND: Capri

MODEL: 15mm Model DS97TAR brass body c/w brass coupling "screwed end"
25mm Model DS97TAR brass body c/w brass coupling "screwed end"
40 mm Model DS90TAR brass body c/w brass coupling "screwed end"
50 mm Model DS90TAR brass body c/w brass coupling "screwed end"

AVAILABLE SIZES:

15 mm
25mm
40mm
50mm



Male' Water & Sewerage Company Pvt. Ltd Fen Building, 5th Floor, Ameenee Magu | Machchangolhi, Male', 20375, Republic of Maldives
Tel: +960 332 3209 | Fax: +960 332 4306 | Hotline: +960 796 0022 /MWSC.mv | @mwsc_mv | @MWSC_Official
sales@mwsc.com.mv www.mwsc.com.mv