Mining
Products Catalog

metzer

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About Metzer

Founded in 1970, Metzer Group is a global irrigation
solutions provider dedicated to growers' success.
Our farming origins and customer-oriented approach leads us
to continuously explore and learn the clients' challenges.
We aspire to develop and manufacture practical and proven solutions
that reflect the needs, goals, and mindset of those who work the land.

Our core values—commitment, innovation, and dedication—
have been our compass as we've grown to become
one of the leaders in the global irrigation industry.
With decades of engineering expertise and in-house production capabilities,
Metzer serves the mining industry by delivering high-performance
drip and sprinkler systems engineered for reliability in aggressive chemical environments
and challenging mines' conditions.

Introduction

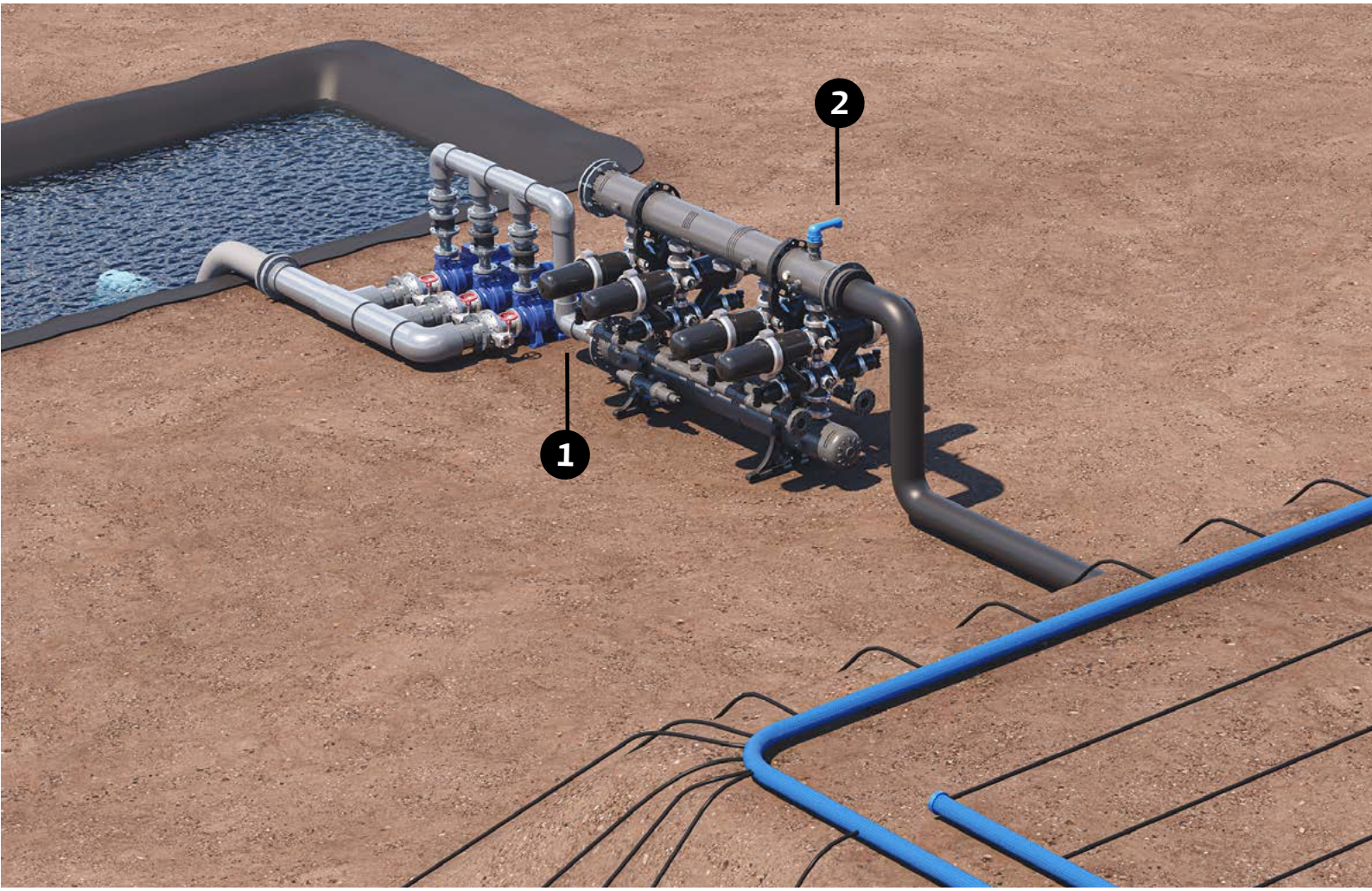
Heap leaching is a widely applied extraction method used primarily for gold, silver, and copper recovery, as well as selected uranium and other base metals.

Crushed ore is stacked on engineered pads and irrigated with a chemical solution—typically alkaline cyanide for precious metals or sulfuric acid for copper—allowing target minerals to dissolve and be collected for downstream processing. The efficiency of this process depends on uniform solution distribution, controlled application rates, and long-term hydraulic stability across the entire leach pad.

Metzer's offering

Metzer's mining products portfolio is specifically adapted for heap leaching operations, supporting gold, silver, copper, and other mineral recovery processes. By combining hydraulic precision, chemical resistance, and strict manufacturing quality control, Metzer ensures consistent solution distribution, long-term durability, and operational efficiency across engineered leach pads worldwide.

Main head leaching system

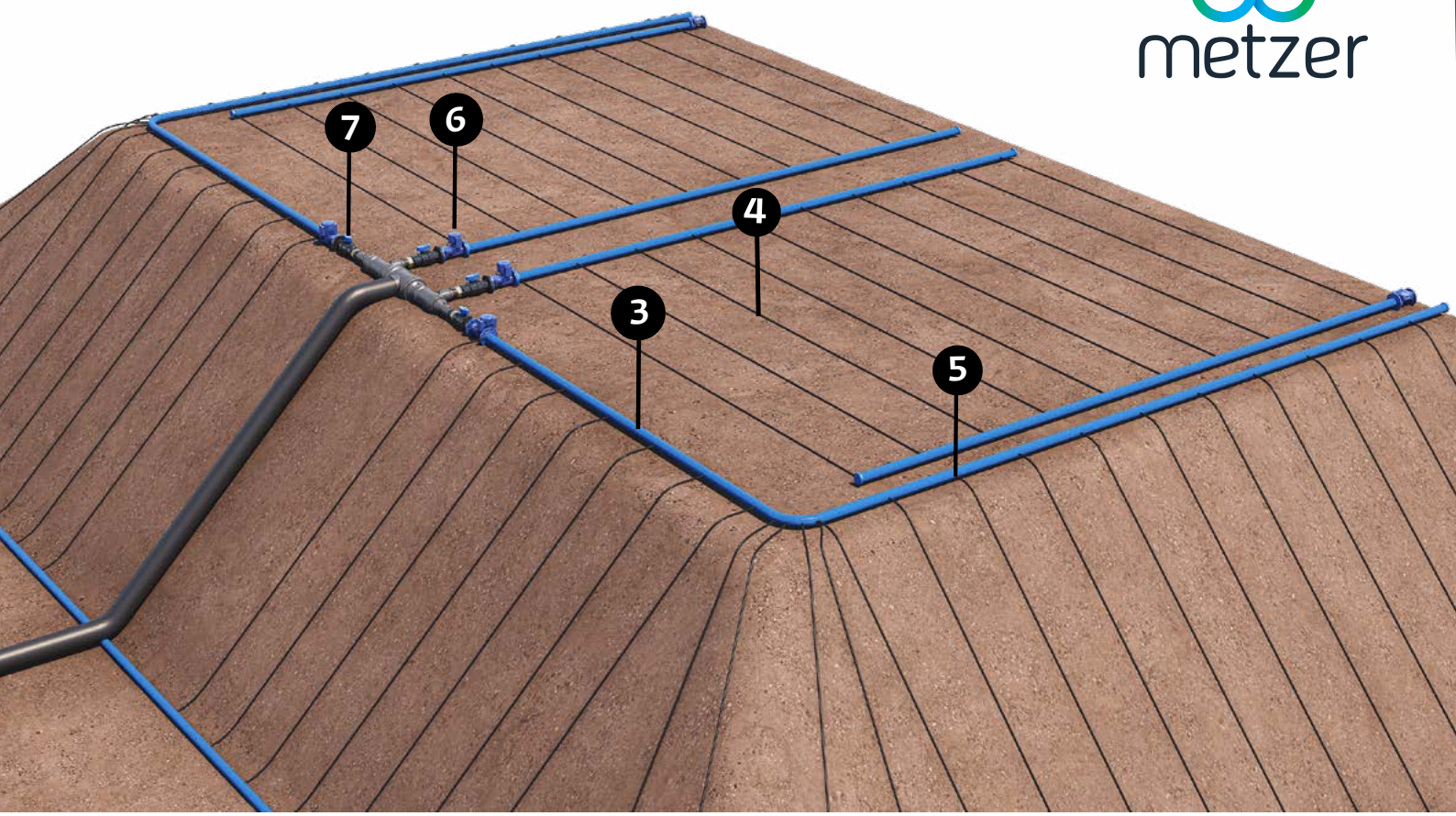


Heap leaching irrigation system layout will consist of:

1. **Filtration System**
   Metzer filtration solutions are engineered to protect emitters and sprinklers from clogging by removing suspended solids from the process solution and maintain hydraulic stability and consistent discharge under mining operating conditions. We offer automatic, semi- automatic and manual disc and screen filters.

2. **Air Release and Vacuum Protection Valves**
   Prevent air accumulation and vacuum formation that may disrupt hydraulic performance. Metzer air and vacuum valves maintain pipeline integrity and steady system operation.

On-pile leaching system



3 Main & Submains flexible distribution lines
Metzer's LeachFlex™ layflat solution provide durable, chemically resistant and operationally flexible distribution for active leaching fields.

4 **Leaching laterals**
Metzer's LeachFlow™ V and LeachFlow™ R pressure-compensated leach lines are selected for sloped or hydraulically variable pads, while LeachFlow™ L and LeachFlow™ I non-compensated lines are designed for engineered pads with controlled pressure conditions and high clog resistance requirements.

5 **Connectors**
Metzer's heavy-duty dripline connectors and accessories are designed for repeated deployment and harsh field conditions.

6 Hydraulic Control Valves
Metzer hydraulic control valves are designed to regulate pressure and flow between pad zones to ensure stable application rates and system balance. the valves are available in reinforced plastic and cast-iron configurations for mining-grade durability.

7 **Manual Valves**
Enable sectional shutdown and operational flexibility during maintenance or staged leaching cycles. Metzer manual valves provide reliable isolation under aggressive chemical environments.

Driplines, sprinklers and flexible pipes

LeachFlow™ V

Heap Leaching for Gold & Silver mines

Designed for heap leaching operations in gold and silver mines, LeachFlow™ V is an integral 'Heavy duty' pressure-compensated dripper engineered for uniform leaching application under demanding field conditions. Its high clog-resistance flow path and advanced pressure-regulating mechanism ensure consistent discharge across long laterals and sloped pads. The system maintains stable and reliable flow distribution from the top of the heap to the lowest elevation, even under challenging water qualities quality and variable hydraulic conditions.

Specifications

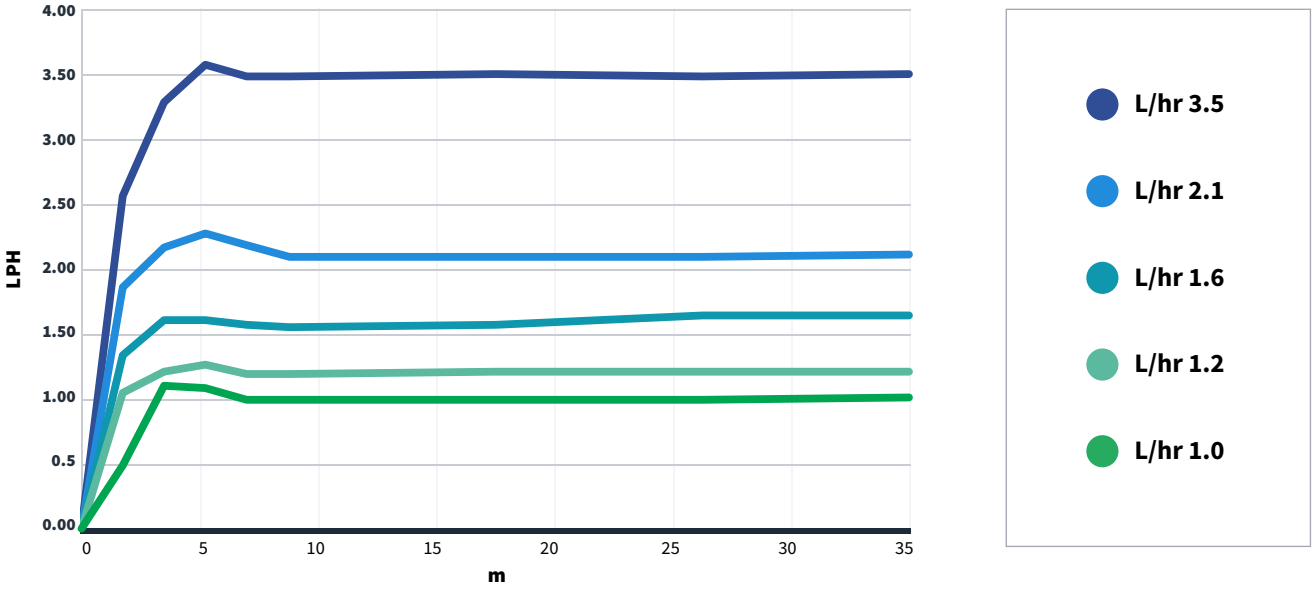
- **Dripline diameters:** 16mm, 20mm
- **Dripline wall thickness:** 0.90mm-1.25mm
- **Drippers spacing:** 10cm and up
- **Dripper's waterflow:** 1/1.2/1.6/2.1/3.5 L/hr
- **Compensation range:** 5-40m

Features & Benefits

- Advanced self-flushing mechanism at the beginning and at the end of each irrigation cycle
- Unique and accurate pressure-compensating labyrinth mechanism
- Wide self-cleaning labyrinth with turbulent flow to prevent particle settling
- Wide range of working pressures for various Heap slopes
- Very low CV
- Highly durable and reliable structure designed for harsh water conditions
- The largest effective filtration area in the market
- The thickest silicone diaphragm in its dripper's category ensures accuracy and high-pressure regulating performance for a long lifetime
- 100% of drippers inspected by online AI quality assurance system
- Compatible with and approved by ISO9261 standard

LeachFlow™ V

Flow rate Vs. Pressure



LeachFlow V Dripline Technical Data

Model	Ø Inside Diameter (mm)	Wall Thickness (mm)	Max working pressure (m)	KD
LeachFlow V 16090	15	0.90	3.0	0.95
LeachFlow V 16100	13.8	1.00	4.0	0.95
LeachFlow V 16115	13.8	1.15	4.0	0.95
LeachFlow V 16120	13.8	1.20	4.0	0.95
LeachFlow V 20120	15	1.20	3.5	0.6
LeachFlow V 20125	17.4	1.25	3.5	0.6

LeachFlow™ R

Heap Leaching for Gold & Silver mines

Designed for heap leaching operations in gold and silver mining, LeachFlow™ R is an integral compact pressure-compensated dripper engineered for uniform leaching application under demanding field conditions. Its high clog-resistance flow path and advanced pressure-regulating mechanism ensure consistent discharge across long laterals and sloped pads. The system maintains stable and reliable flow distribution from the top of the heap to the lowest elevation, even under challenging solution quality and variable hydraulic conditions.

Specifications

- **Dripline diameters:** 16mm, 20mm, 22mm
- **Dripline wall thickness:** 1.0mm-1.25mm
- **Drippers spacing:** 10 cm and up
- **Dripper's waterflow:** 1/1.2/1.6/2.1/3.4 L/hr
- **Compensation range:** 8-40 m.

Features & Benefits

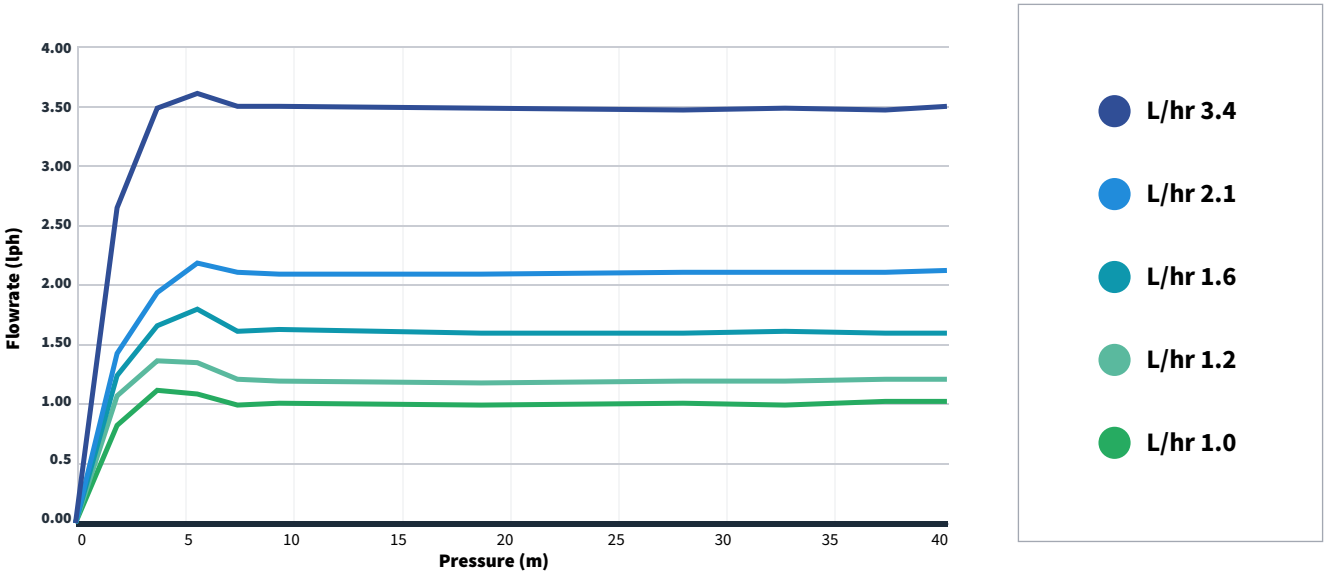
- Higley accurate pressure-compensating self- flushing labyrinth mechanism
- Wide range of working pressures for various topographies and heap slopes
- Highly resistant to UV and chemical abrasions
- Very low CV
- Wide water passages along the primary labyrinth
- Has the largest filtration area in its category
- The thickest silicone diaphragm in its dripper's category ensures accuracy and high-pressure regulating performance for a long lifetime
- 100% of drippers inspected by online AI quality assurance system
- Wide self-cleaning labyrinth with turbulent flow to prevent particle settling

LeachFlow™ R

LeachFlow R Dripper Technical Specifications

Flow Rate L/hr	Working Pressure Range (m)	Primary Labyrinth Dimensions Width-Depth (mm)	Compensating Labyrinth Dimensions Width-Depth (mm)	Inlet Filter Slot width (µ)	Filtration Area (mm^2)	Recommended Filtration (micron/mesh)
0.85	8 - 40	0.7X 0.6	0.4X 0.15	580	137.8	120/130
1.0	8 - 40	0.7X 0.6	0.4 X0.15	580	137.8	120/130
1.2	8 - 40	0.72X 0.7	0.45X 0.25	580	137.8	120/130
1.6	8 - 40	0.7X 0.85	0.5X 0.25	580	137.8	120/130
2.1	8 - 40	0.8X 1.0	0.5X 0.3	580	137.8	120/130
3.4	8 - 40	0.8X 1.3	0.6X 0.4	580	137.8	120/130

Flow rate Vs. Pressure



LeachFlow R Dripline Technical Data

Model	Ø Inside Diameter (mm)	Wall Thickness (mm)	Max working pressure (m)	KD
LeachFlow R 16100	13.8	1.0	4.0	0.27
LeachFlow R 16120	13.8	1.2	4.0	0.27
LeachFlow R 20100	17.4	1.0	3.5	0.10
LeachFlow R 22110	21.0	1.1	3.5	0.08

LeachFlow™ L

Designed for heap leaching applications, LeachFlow™ L is a turbulant dripline engineered for reliable solution distribution on flat or moderately sloped pads. Its wide inlet filtration and robust flow path provide high clog resistance, ensuring continuous and stable discharge even under challenging solution quality

Specifications

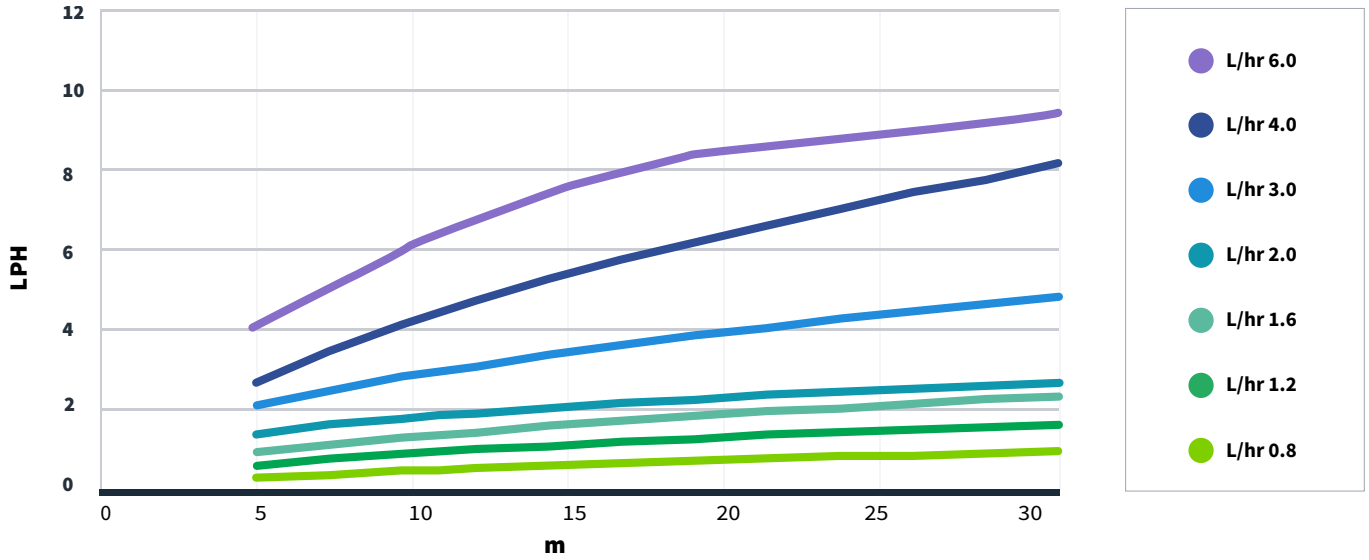
- **Dripline diameters:** 16mm, 20mm
- **Dripline wall thickness:** 0.9-1.2
- **Drippers spacing:** 10 cm and up
- **Dripper's waterflow:** 0.8/1.2/1.6/2/3/4/6 L/hr

Features & Benefits

- Most applicable for copper leaching
- High clogging resistance due to wide water passages along the primary labyrinth
- Short and wide self-cleaning labyrinth with turbulent flow to prevent particle settling
- Highly resistant to UV exposure and common agricultural fertilizers
- Very low CV (Coefficient of Variation) for consistent performance
- Largest effective filtration area in its category for superior clogging prevention
- 100% of drippers inspected by an advanced AI-driven quality assurance system
- Lin driplines can be manufactured with an additional color layer according to the client's request. Available colors include brown, purple, white, and more
- Compliant with ISO 9261 standards for quality and performance

LeachFlow™ L

Flow rate Vs. Pressure



LeachFlow L Technical Specifications

Nominal Flow rate L/hr	Filtration Area (mm²)	Inlet filter slot width (µ)	Labyrinth Dimensions Width-Depth (mm)	Constant K	Exponent X	Recommended filtration (micron/mesh)
1.2	99.87	400	0.59X 0.86	0.41	0.47	120/130
1.6	99.87	400	0.59X 1.04	0.53	0.48	120/130
2	108	400	0.74X 0.95	0.66	0.48	120/130
3	99.87	400	0.74X 0.95	0.97	0.49	120/130
4	108	400	0.98X 0.95	1.29	0.49	120/130
6	99.87	400	1.85X 1.43	1.94	0.49	120/130

LeachFlow L Dripline Technical Data

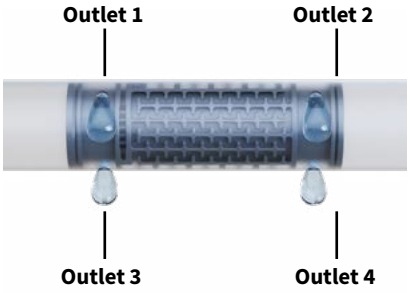
Model	Ø Inside Diameter (mm)	Wall Thickness (mm)	Max working pressure (m)	KD
LeachFlow L 16090	13.8	0.90	30	0.25
LeachFlow L 20090	17.4	0.90	30	0.18
LeachFlow L 20100	17.4	1.00	35	0.18

LeachFlow™ C

Engineered for demanding heap leaching applications, LeachFlow™ C is a turbulant dripline featuring a robust cylindrical emitter design for superior clog resistance. Its large inlet filtration area and wide flow passages ensure continuous and stable discharge even under severe solution quality. Designed withe 2 or 4 outlets for reliable performance in aggressive mining conditions, LeachFlow™ C delivers durable and efficient solution distribution across engineered leach pads.

Specifications

- **Flow rates (l/hr):** 1.4, 2.3,3.1,4.3,10
- **Diameter (mm):**16
- **Drippers spacing:** 10cm and up
- **Wall thickness Range:** 0.9, 1.0, 1.1, 1.15, 1.2
- **Inlets:** 2
- **Outlets:** 2 or 4



Features & Benefits

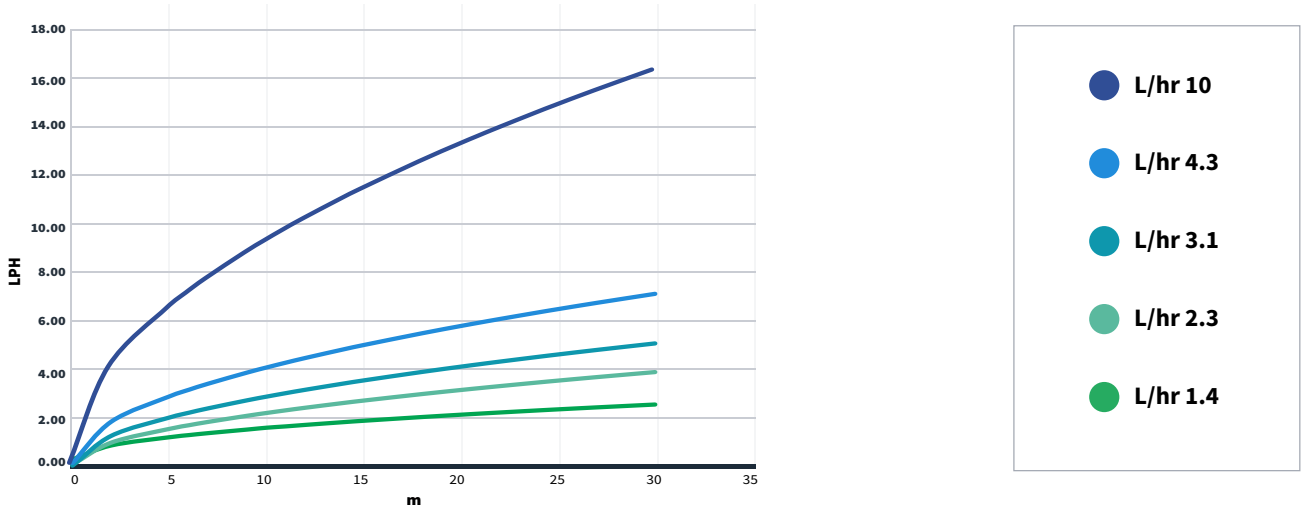
- Most applicable for copper leaching
- Long Turbulent Labyrinth with wide water passages
- Double inlet filter - ensures always water intake from the upper, cleaner, part of the flow
- Highly resistant to UV and and chemical abrasions
- 100% of drippers are inspected by on-line AI quality assurance system
- Highly clog-resistant cylindrical inlet filter - ensures clean and continuous flow
- Very low CV

LeachFlow™ C

LeachFlow C Technical Specifications

Flow Rate L/hr	Filtration Area (mm^2)	Inlet filter slot width (µ)	Labyrinth Dimensions Width-Depth (mm)	Constant (K)	Exponent (X)	Recommended Filtration (micron/mesh)
1.4	21.4	850	1.2X 1.0	0.43	0.51	120/130
2.3	21.4	850	1.2X 1.30	0.68	0.53	120/130
3.1	21.4	850	1.2X 1.58	0.94	0.52	120/130
4.3	21.4	850	1.2X 1.55	1.3	0.52	120/130
10	21.4	850	1.2X 1.55	3.0	0.52	120/130

Flow rate Vs. Pressure



LeachFlow C Dripline Technical Data

Model	Ø Inside Diameter (mm)	Wall Thickness (mm)	Max working pressure (m)	KD
LeachFlow C 16100	13.8	1.00	40	0.25
LeachFlow C 16110	13.8	1.10	40	0.25
LeachFlow C 16115	13.8	1.15	40	0.25
LeachFlow C 16120	13.8	1.20	40	0.25

MZ301HL™

Micro Sprinkler for heap leaching applications.

MZ301HL™ is a heavy-duty micro-sprinkler engineered for overhead solution application in heap leaching operations. Designed for stable performance under aggressive chemical environments, it delivers uniform distribution, controlled droplet formation, and reliable coverage across engineered leach pads. Its optimized trajectory and droplet size improve wind resistance and enhance solution placement accuracy, supporting efficient and consistent mineral recovery.

Technical Data

- **Working pressure range:** 1.5-2.5 bar
- **Flow rate :** 106-325 lph
- **Coverage diameter:** 10-12.5 m’
- **Recommended filtration:** 300 micron (50 mesh)
- **Made of special material for acid/chemical resistance**

Features & Benefits

- Robust micro sprinkler for tough working conditions
- Made of special raw materials of high chemical resistance for mine’s applications
- Excellent water distribution uniformity, for optimum efficiency
- Large droplet size ideal for wind resistance
- Low water trajectory optimum for Goldmine application
- Color-coded nozzles for easy flow rate management
- Up to 6.0m spacing

MZ301HL™

Performance Table MZ301 HL

Nozzle Size & Color	Pressure	Discharge Rate	Wetted Diameter	Precipitation Rate (mm/hr) / Spacing (m)			
mm	bar	lph	m	4 x4	5x5	5 x 6	6 x 6
1.54 mm Orange	1.5	106	10	6.6	4.2	3.5	2.9
	2	122	10	7.6	4.9	4.1	3.4
	2.5	136	10.5	8.4	5.4	4.5	3.7
1.74 mm Black	1.5	140	10	8.8	5.6	4.7	3.9
	2	162	10.5	10.1	6.5	5.4	4.5
	2.5	181	10.5	11.2	7.2	6	5
1.98 mm Blue	1.5	175	10.5	10.9	7	5.8	4.8
	2	202	11	12.5	8	6.7	5.6
	2.5	226	11	14.1	9	7.5	6.2
2.2 mm Yellow	1.5	212	10.5	13.3	8.5	7.1	5.9
	2	245	11.5	15.2	9.7	8.2	6.8
	2.5	274	11.5	17.2	11	9.1	7.6
2.94 mm Red	1.5	251	11.5	15.4	9.8	8.4	6.8
	2	290	12	18.1	11.6	9.7	8
	2.5	324	12.5	20.3	13	10.8	9

- Tested at 50cm above soil.
- Tested in ideal laboratory conditions of temperature, wind and humidity.
- MSH: Maximum Stream Height above nozzle.
- Performance table prepared under laboratory conditions .
- For windy conditions use closer spacing between sprinklers and laterals.

CDU < 80%	80% ≤ CDU < 85%	85% ≤ CDU < 90%	CDU≥90%

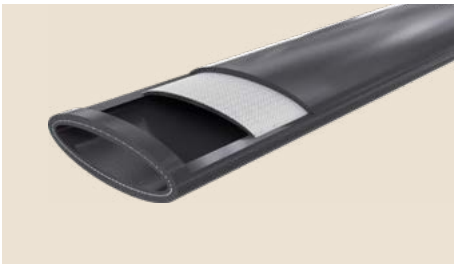
Nozzle Sizes

LeachFlex™

layflat main & submain pipes for leaching solution distribution

LeachFlex™ is a flexible PE layflat hose reinforced with a single-layer polyester textile mesh, engineered for low-to-medium pressure solution transport in heap leaching operations.
Designed for rapid deployment on active leach pads, LeachFlex™ provides a lightweight and compact alternative to rigid piping systems, enabling fast installation, relocation and phased pad expansion while maintaining reliable hydraulic performance.

Specifications



- **Available Diameters:** 2”, 3”, 4”
- **Pre-installed Outlets:** Female ½”
- **Raw material:** PE with textile polyester mesh reinforcement
- **Standard Coil length:** 100m
- **Color*:** Grey
- **Working tempratures****: -10 - +55ºC

*Other colours, diameters and lengths available upon request.
**Lower temp of -30 ºC, can be reached by request and additional cost

Features & Benefits

- **Chemical Resistance** Suitable for use in sulfuric acid and cyanide leaching environments
- (subject to chemical compatibility verification).
- **Hydraulic Stability** Maintains consistent flow under low-pressure distribution typical for drip-fed leach pads.
- **Lightweight & Rapid Deployment** Reduces installation time and mechanical handling compared to rigid HDPE systems.
- **Pre-Installed fittings** Pre-installed threaded outlets enable fast, secure connections while reducing installation time
- and preventing field leaks.
- **Compact Logistics** Supplied in flat coils for efficient transport, storage and field deployment.
- **Abrasion Adaptability** Suitable for surface installation over geomembrane liners and crushed ore pads.

LeachFlex™ Technical Data

LeachFlex Model	Inner Ø (mm)	Outer Ø (mm)	Wall Thickness (mm)	Weight (kg/m)	Working Pressure (bar)	Burst Pressure (bar)
LeachFlex 2.0”	53	55.4	1.2	0.200	4.0	12.0
LeachFlex 3.0”	78	80.6	1.3	0.270	4.0	12.0
LeachFlex 4.0”	103	105.8	1.4	0.420	4.0	12.0

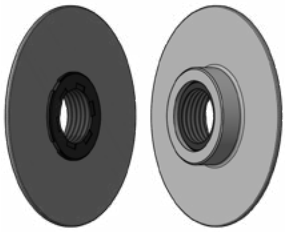
LeachFlex™

LeachFlex™ connectors and fittings

Fittings	Product	Size
	**Lay Flat Starter Nut**	16 mm
	**Lay Flat Super Starter**	One Size Fits All
	**Elbow Connector for Lay Flat Super**	16 mm
	**Tee Connector for Lay Flat Super**	16 mm
	**LF Driver**	10 mm
	**Lay Flat Straight Coupling**	2″ X 2″
	Lay Flat Straight Coupling	3″ X 3″
	Lay Flat Straight Coupling	4″ X 4″
	**Lay Flat Male Adaptor**	2″ X 2″
	Lay Flat Male Adaptor	3″ X 2″
	Lay Flat Male Adaptor	3″ X 3″
	**Lay Flat Male Adaptor**	4″ X 3″
	Lay Flat Line End	2″
	Lay Flat Line End	3″
	**Lay Flat Line End**	4″
	Super Band for Lay Flat 74-79	3″
	Super Band for Lay Flat 98-103	4″

LechFlex smart packing

Female 1/2"



Filters

DiscProtec® AU

Automatic disc filters
2”, 3”, 4” & 6”

The DiscProtec ®AU Fully Automatic Disc Filter is a compact, efficient, and cost- effective solution designed to protect Leaching systems from impurities and prevent emitter clogging. With automated cleaning and minimal water usage during back flushing, this advanced filter system saves time and energy. The integrated IrrimetzerFlush controller ensures optimal operation, enhancing system performance and reducing maintenance efforts.

Specifications

- **Flow rate:** 25-210 m^3/hr
- **Filtration degree:** 100-200 Micron
- **Filtration technology:** Disc
- **Type:** Automatic

Highlights

- **Fully Automatic Operation:** Saves time and energy with automatic self cleaning cycles based on pressure differential, time, or manual triggers.
- **Efficient Back Flushing:** Requires less water and time for effective self cleaning of discs.
- **Advanced Control System:** Equipped with the IrrimetzerFlush controller for precise and efficient operation.
- **High Filtration Efficiency:** Designed for maximum filtration performance, even in challenging conditions.
- **Multiple Connection Options:** Adaptable to both horizontal and vertical pipelines, fitting a wide range of system setups.
- **Durable Construction:** Constructed from materials resistant to chemicals and acidic environmentscommonly encountered in mining operations, helping minimize maintenance and repair requirements.

DiscProtec® AU

Technical Data

filter model		DiscProtec AU-25	DiscProtec AU-50	DiscProtec AU-35	DiscProtec AU-70	DiscProtec AU-105	DiscProtec AU-140	DiscProtec AU-175	DiscProtec AU-210
		2” x 1 Unit	2” x 2 Units	3” x 1 Unit	3” x 2 Units	3” x 3 Units	3” x 4 Units	3” x 5 Units	3” x 6 Units
Connection Size (Inlet/Outlet)	**Inch**	2	3		4		6	6	6
	mm	50	80		100		150	150	150
Connection type		Grooved / Flanged							
Maximum Recommended Flow Rate*	M^3/HR	25	50	35	70	105	140	175	210
Maximum Operating Pressure	BAR	10							
Minimum Backwash Pressure	BAR	2							
Filtration Area	CM^2	1,620	3,240	1,620	3,240	4,860	6,480	8,100	9,720
Construction material		Plastic body (PAGF, PPGF, PP, HDPE, NBR/EPDM, PE), St.St.							
Filtration degree	Mesh	150 / 120 / 80							
	Microns	100 / 130 / 200							
Maximum Working Temperature (°C / °F)		60 / 140							
Power Input To Controller	By Power Adaptor	6V / 12V DC							
	By Batteries	6V By 4 x 1.5 “D” Size Alkaline Batteries							
Flushing Data									
Flush Duration Per Filter		30 seconds							
Flushing Flow Rate	M^3/HR	11							

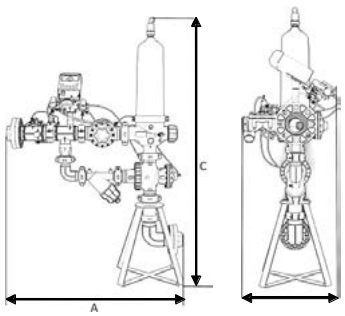
*Maximum flow rate depends on the quality of water and filtration degree.

Dimensions

Dimensions		AU-25	AU-30	AU-35	AU-70	AU-105	AU-140	AU-175	AU-210
		2” x 1 Unit	2” x 2 Units	3” x 1 Unit	3” x 2 Units	3” x 3 Units	3” x 4 Units	3” x 5 Units	3” x 6 Units
A	cm	118	91	115	103	103	123	123	123
B	cm	56	71	67	91	125	141	178	208
C	cm	171	140	183	143	143	145	145	145

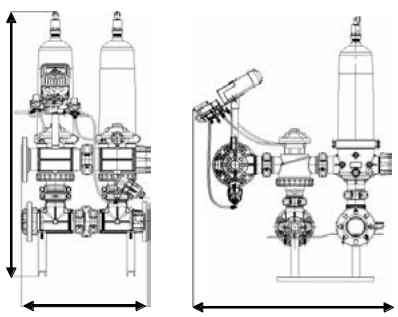
Single Unit Filter

Front View Side View



Multi Unit Filter

Front View Side View



DiscProtec® MDB

Manual Double Body Disc Filter

The Double Body filter offers high efficiency, designed to remove physical impurities from water.
With a robust and versatile design, these filters can be installed in both horizontal and vertical orientations, making them perfect for high-volume applications.

Specifications

- **Flow rate:** 50-90 M^3/hr
- **Filtration degree:** 100-200 Micron
- **Filtration technology:** Disc
- **Type:** Manual double body

Highlights

- **Large Filtration Area:** can handle large quantities of dirt and minimizes the frequency of cleaning, ensuring uninterrupted operation.
- **High Flow Rate:** Capable of handling water volumes of up to 90 cubic meter per hour, depending on connection size and water quality.
- **Efficient Design:** Screen filters feature a new skeleton design for optimal flow, while disc filters include a disc housing fan that generates a hydro-cyclonic effect to reduce cleaning intervals.
- **Durable Construction:** Constructed from materials resistant to chemicals and acidic environments commonly encountered in mining operations, helping minimize maintenance and repair requirements.
- **User-Friendly Maintenance:** Disc filters come with easy-to-install cartridges and metal clamps for fast assembly and disassembly.
- **Pressure Ports:** Equipped with 4 threaded brass pressure ports for easy monitoring and enhanced operational efficiency.
- **Leak-Proof Design**: O-ring seals prevent leaks, ensuring a tight fit and reliable operation. Chemically bonded for long-lasting strength

DiscProtec® MDB

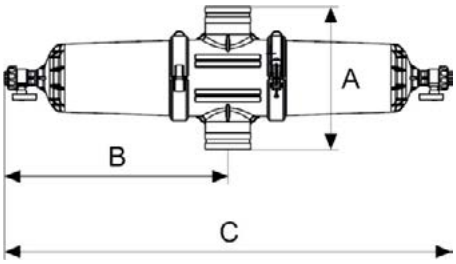
TECHNICAL DATA

Disc filter model		DiscProtec M-50-DB	DiscProtec M-60-DB	DiscProtec M-70-DB	DiscProtec M-90-DB
Inlet/outlet connection		80mm		100mm	
Connection type		Threaded (BSP/NPT) / Grooved / Flanged			
*Max. flow rate	M^3/HR	50	60	70	90
Max. working pressure	BAR	PPGF – 8			
Filtration surface area (Disc)	CM^2	1756	3380	2386	3380
Filtration degree	Mesh	150 / 120 / 80			
	Microns	100 / 130 / 200			
Construction material		Plastic body / NBR / Stainless steel			
Disc material		PP			
Flush port		¾'' – Female Threaded Port (with Flush valve)			

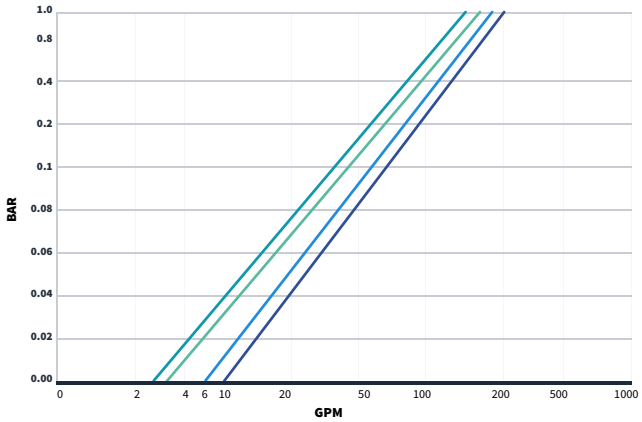
*Flow depends on water quality.

Product Dimensions

Dimensions		M-50-DB	M-60-DB	M-70-DB	M-90-DB
A	cm	34			
B	cm	48.5	69.5	56.5	69.5
C	cm	97	139	113	139



Head Loss Chart



- M-50-DB
- M-60-DB
- M-70-DB
- M-90-DB

DiscProtec® SA

SEMI AUTOMATIC DISC FILTERS
2”, 2½” & 3”

The Semi-Automatic Disc Filter offers reliable filtration with minimal maintenance. Made from a durable, chemically bonded polymer, it ensures long-lasting performance. The user-friendly design allows for easy installation and efficient cleaning with a simple 90-degree handle rotation, keeping the leaching system clog-free.

Specifications

- **Flow rate:** 25-40
- **Filtration degree:** 100-200 Micron
- **Filtration technology:** Disc
- **Type:** Semi automatic

Highlights

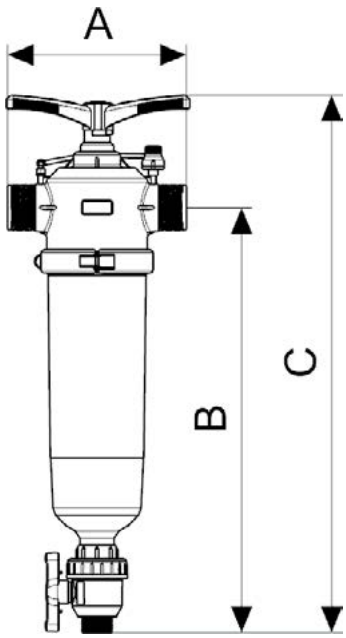
- **Durable Construction:** Constructed from materials resistant to chemicals and acidic environments commonly encountered in mining operations, helping minimize maintenance and repair requirements.
- **Efficient Cleaning:** 90-degree handle rotation enables cleaning without dismantling the filter.
- **Clogging Indicator:** Red pop-up button alerts when cleaning is needed.
- **Hydro Cyclonic Effect:** Disc housing fan keeps particles in suspension, reducing cleaning frequency.

DiscProtec® SA

Technical Data

Disc filter model		DiscProtec SA-25	DiscProtec SA-30	DiscProtec SA-40
Inlet/outlet connection		2''/50mm	2½''/65mm	3''/80mm
Connection type		Threaded (BSP/NPT) / Grooved / Flanged		
*Max. flow rate	M^3/HR	25	30	40
Max. working pressure	BAR	PPGF – 6		
Filtration surface area	CM^2	1620		
Minimum Flushing Pressure	BAR	2		
Filtration degree	Mesh	150 / 120 / 80		
	Microns	100 / 130 / 200		
Construction material		Plastic body / NBR / Stainless steel		
Disc material		PP		
Flush port		1/'' – Male Threaded Port (with Flush valve)		

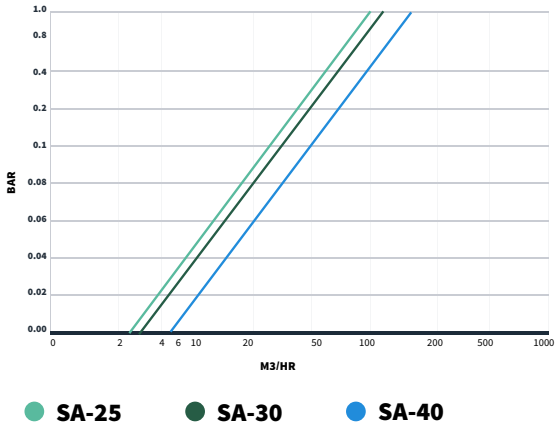
*Flow depends on water quality



Product Dimensions

Dimensions		SA-25	SA-30	SA-40
A	cm	8		
B	cm	78		
C	cm	100		

Head Loss Chart



NetProtec® MDB

Manual double body screen filters

The double body filter offers high efficiency, designed to remove physical impurities from water. With a robust and versatile design, these filters can be installed in both horizontal and vertical orientations, making them perfect for high-volume applications.

Specifications

- **Flow rate:** 50-90 M^3/hr
- **Filtration degree:** 100-200 Micron
- **Filtration technology:** Screen
- **Type:** Manual Double body

Highlights

- **Large Filtration Area:** can handle large quantities of dirt and minimizes the frequency of cleaning, ensuring uninterrupted operation.
- **High Flow Rate:** Capable of handling water volumes of up to 90 cubic meter per hour, depending on connection size and water quality.
- **Efficient Design:** Screen filters feature a new skeleton design for optimal flow, while disc filters include a disc housing fan that generates a hydro-cyclonic effect to reduce cleaning intervals.
- **Durable Construction:** Constructed from materials resistant to chemicals and acidic environments commonly encountered in mining operations, helping minimize maintenance and repair requirements.
- **User-Friendly Maintenance:** Screen and disc filters come with easy-to-install cartridges and metal clamps for fast assembly and disassembly.
- **Pressure Ports:** Equipped with 4 threaded brass pressure ports for easy monitoring and enhanced operational efficiency.
- **Leak-Proof Design**: O-ring seals prevent leaks, ensuring a tight fit and reliable operation. mically bonded for long-lasting strength

NetProtec® MDB

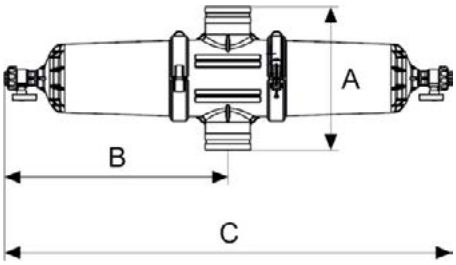
Technical Data

Screen filter model		NetProtec M-50-DB	NetProtec M-60-DB	NetProtec M-70-DB	NetProtec M-90-DB
Inlet/outlet connection		80mm		100mm	
Connection type		Threaded (BSP/NPT) / Grooved / Flanged			
*Max. flow rate	M^3/HR	50	60	70	90
Max. working pressure	BAR	PPGF – 8			
Filtration surface area (Screen)	CM^2	1600	3200	2400	3200
Filtration degree	Mesh	150 / 120 / 80			
	Microns	100 / 130 / 200			
Construction material		Plastic body / NBR / Stainless steel			
Screen material		Stainless steel			
Flush port		¾'' – Female Threaded Port (with Flush valve)			

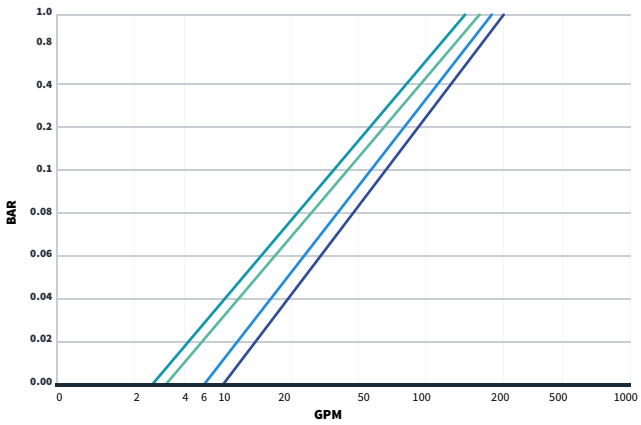
*Flow depends on water quality.

Product Dimensions

Dimensions		M-50-DB	M-60-DB	M-70-DB	M-90-DB
A	cm	34			
B	cm	48.5	69.5	56.5	69.5
C	cm	97	139	113	139



Head Loss Chart



- M-50-DB
- M-60-DB
- M-70-DB
- M-90-DB

NetProtec® SA

Semi automatic screen filters 2”, 2½” & 3”

The Semi-Automatic Screen Filter is a durable and efficient filtration solution. Made from high quality plastic materials, it offers long-lasting performance while being easy to install and maintain. With a simple handle mechanism for cleaning, the filter flushing is performed under system pressure to ensure uninterrupted Water supply. Its non-corrosive stainless- steel mesh enhances durability, making it ideal for primary filtration in Heap leaching systems.

Specifications

- **Flow rate:** 25-40
- **Filtration degree:** 100-200 Micron
- **Filtration technology:** Screen
- **Type:** Semi automatic

Highlights

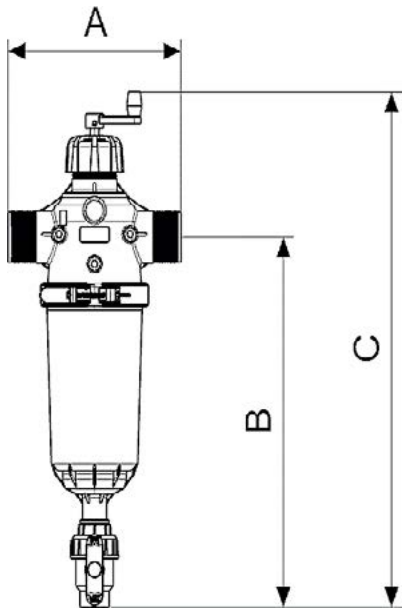
- **Durable Construction:** Constructed from materials resistant to chemicals and acidic environments commonly encountered in mining operations, helping minimize maintenance and repair requirements.
- **Efficient Cleaning:** spiral handle rotation enables cleaning without dismantling the filter.
- **Clogging Indicator:** Red pop-up button alerts when cleaning is needed.
- **Hydro Cyclonic Effect:** Disc housing fan keeps particles in suspension, reducing cleaning frequency.

NetProtec® SA

Technical Data

Screen filter model		NetProtec SA-25-SB	NetProtec SA-30-SB	NetProtec SA-40-SB
Inlet/outlet connection		2''/50mm	2½''/65mm	3''/80mm
Connection type		Threaded (BSP/NPT) / Grooved / Flanged		
*Max. flow rate	M^3/HR	25	30	40
Max. working pressure	BAR	PPGF – 8 / PAGF – 10		
Filtration surface area	CM^2	800	800	1200
Minimum Flushing Pressure	BAR	1.5		
Filtration degree	Mesh	150 / 120 / 80		
	Microns	100 / 130 / 200		
Construction material		Plastic body / NBR / Stainless steel		
Screen material		St.St.		
Flush port		2'' –Male Threaded Port (with flush cap or Flush valve)		

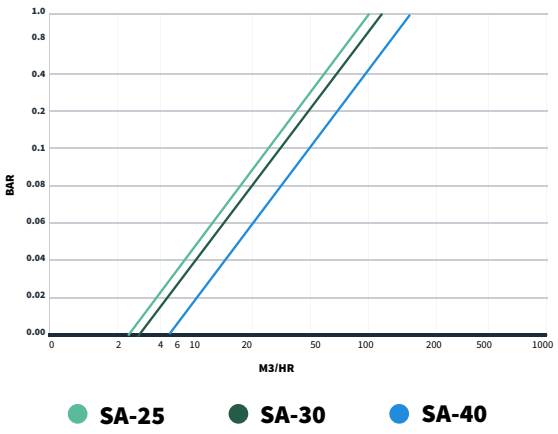
*Flow depends on water quality



Product Dimensions

Dimensions		SA-25	SA-30	SA-40
A	cm	34		
B	cm	58.5	65	66
C	cm	86	95	96

Head Loss Chart



Valves

Air Release / Vacuum Relief Valves

¾”, 1”, 1,5”, 2”, 3”

Air Release / Vacuum Relief valves are designed to provide efficient air releasing and intake for water pipelines when the system is started or shut off. The valves ensure the safe expulsion of air during pipe filling and allow air intake during negative pressure situations preventing damage to pipes and accessories. constructed of reinforced plastics, these valves are durable, weather-resistant, and corrosion-resistant, making them ideal for a wide range of industrial applications.

Applications

Kinetic Air Expulsion:
When the pipeline is being filled, the air release valve remains open, expelling surplus air outside the system. Once the pipe is filled with water, the valve closes tightly, ensuring a secure and leak-free seal.

Kinetic Air Admission:
During negative pressure or vacuum conditions within the pipe, the air release valve opens to allow air inside, preventing damage to pipes and accessories by avoiding vacuum-induced stress.

Highlights

- Lightweight Construction: High-strength durable, weather-resistant reinforced plastic valves ensure easy installation and long-lasting durability.
- Efficient Air Expulsion and Intake: Large volume air release/ intake capability during pipe filling and pump shut off.
- Low Pressure Sealing
- Debris Protection: Venting passage equipped with screen to prevent debris intrusion and blockages.

Air Release / Vacuum Relief Valves

Technical Data

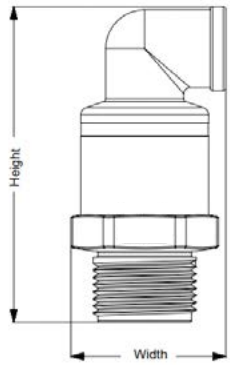
Model No		AVR50/AVR51	AVR53/AVR54	AVR55	AVR56	AVR57
Inlet Connection		¾”/1” (20/25 mm)	¾”/1” (20/25 mm)	1.5” (40 mm)	2” (50 mm)	3” (80 mm)
Maximum Working Pressure	bar	8	12			
Connection	Type	0.5-16 (8-232)			0.7-16	
Min. Recommended Flow Rate		Male Threaded (BSP/NPT)	Male Threaded (BSP/NPT)	Male Threaded (BSP/NPT)		Female Threaded (BSP/NPT)
Sealing Pressure	bar	0.5	0.5	0.5		
Material of Construction		PPGF	PPGF	PPGF		PAGF

Material Specification

Part No	Description	Model No.				
		AVR50/AVR51	AVR53/AVR54	AVR55	AVR56	AVR57
1	Bottom	PPFG	PAGF	PAGF	PAGF	-
2	Bottom O-ring	Viton	Viton	Viton	Viton	-
3	Ball Retainer	POM	PP	PP	-	PAGF
4	Ball/Float	PP	PP	PP	EX-PP	POM
5	Retainer	PPGF	PPGF	PPGF	-	-
6	Seal O-ring/Washer	Viton	Viton	Viton	Viton	Viton
7	Body	PPGF	PPGF	PPGF	PPGF	PAGF
8	Cap Inner	PA	PP	PP	-	-
9	Cap/Elbow	PA	PP	PP	PPGF	PAGF
10	Float Cap	-	-	-	-	PP

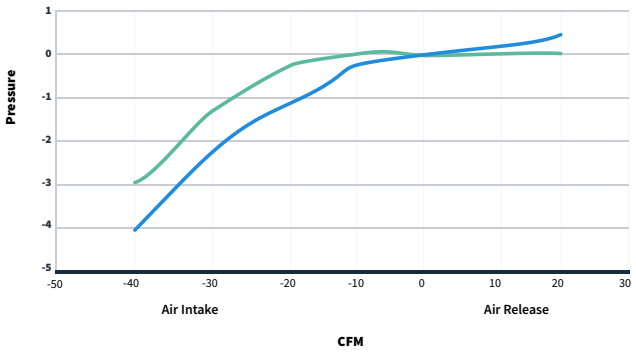
Product Dimensions

Part No	Clear Opening Diameter	Height	Width	Weight
	CM	CM	CM	KG
AVR50/AVR51	1.7	13.3	4.6	0.084
AVR53/AVR54	1.7	14.4	5.5	0.107
AVR55	2.7	18.8	8	0.275
AVR56	3.4	16.8	10.1	0.58
AVR57	5	25.2	11	0.536



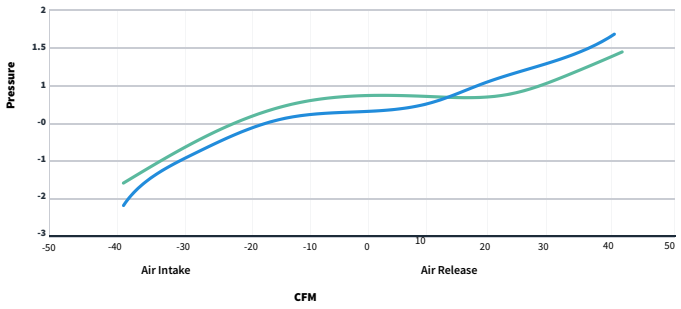
Performance Graphs – Plastic Air Release Valves (Kinetic)

Model AVR50/AVR51



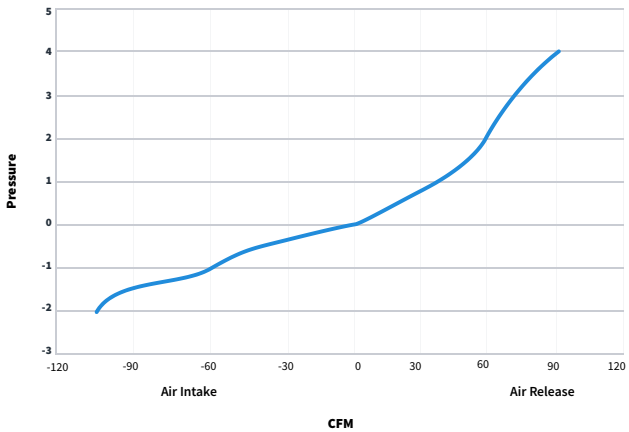
AVR50 AVR51

Model AVR53/AVR54

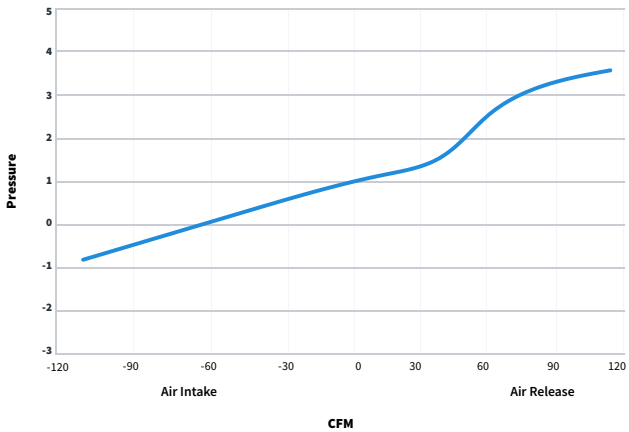


AV R53 AVR54

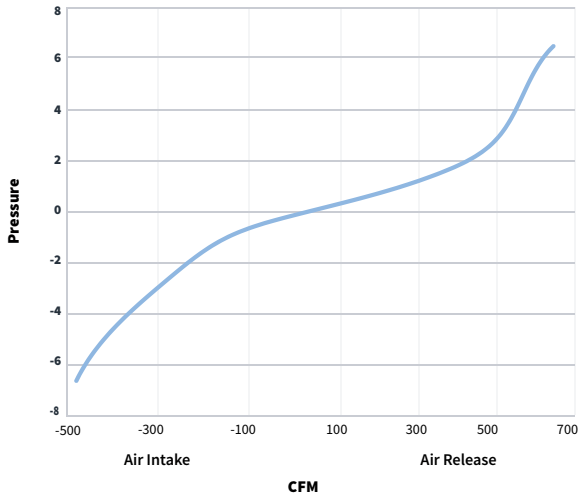
Model AVR55



Model AVR56



Model AVR57



IrriGate®

Plastic Control Valves

1½”, 2”, 2½”, 3”, 4” & 6”

The IrriGate® Control Valves feature an innovative “curved bridge” design that offers exceptional performance for various leaching applications. This revolutionary control valves provide high flow efficiency and low- pressure loss, making them an ideal choice for industrial irrigation systems. The irrigate series offers a combination of high performance, durability, and versatility, making it a trusted solution for heap leaching and water control systems.

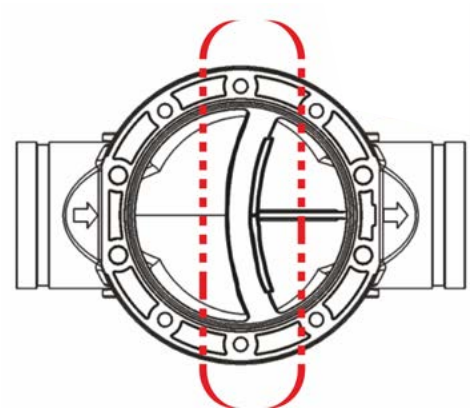
Highlights

- **High Flow Efficiency:** The unique curved bridge design delivers a high flow coefficient, reducing opening pressure while increasing flow capacity and minimizing pressure loss.
- **Flexible Operation**: Equipped with a specially designed diaphragm diaphragm, the valve ensuressmooth operation, tight shut- off and no distortion.
- **Durable Construction:** Made from polymeric materials, the valve offers excellent durability, corrosion resistance, and long service life, even in harsh environments.
- **Rapid Response:** The valve responds quickly to pressure changes, ensuring stable performance without vibration or distortion.
- **Simplified Design:** With only 4 main parts, the valve is easy to maintain, providing reliable operation and simplified servicing.
- **End Connections:** The valves can be equipped with threaded, grooved, or flanged connections for easy and flexible installation across different systems.
- **Available Sizes:** 1½”, 2”, 2½”, 3”, 4” & 6”

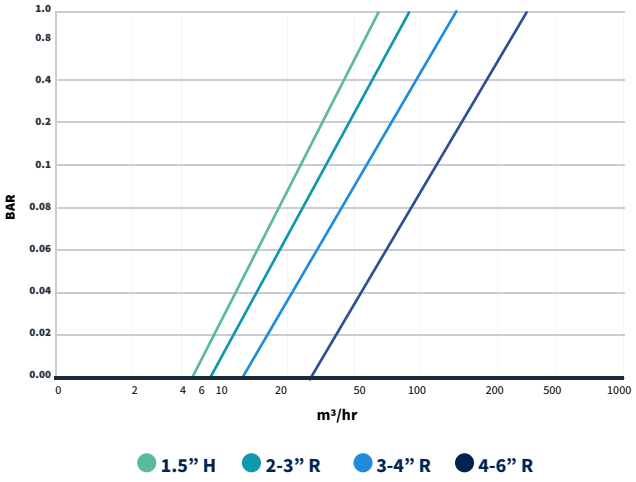
Technical Data

Valve size	mm	40 mm H	50 mm	65 mm R	80 mm R	80 mm	100 mm R	100 mm	150
	Inch	1.5" H	2"	2.5" R	3" R	3"	4" R	4"	6" R
Max. flow rate	m³	40	60	75	90	140	140	180	180
Min. flow rate	m³/hr	>1							
Pressure Range	bar	0.5 - 10						0.7 - 10	
Flow Rate Factor	Kv (metric)	60	86	90	90	170		280	

R = Reduced port
Operating Maximum Temperature : 60 °C



Head Loss Chart



IrriGate® C.I.

Cast Iron Control Valves

1½”, 2”, 3”, 4”

The IrriGate C.I. Cast Iron Hydraulic Control Valve is engineered with a patented “curved bridge” design that delivers superior performance across a variety of management applications. Expertly designed to optimize water flow and regulate pressures, this valve ensures high flow efficiency and minimal pressure loss, making it exceptionally well-suited for industrial irrigation systems. Crafted from robust cast iron, the IrriGate C.I. series combines high performance, durability, and versatility, establishing itself as a trusted and innovative solution for mine water systems.

Applications

- Applicable for systems with variable pressure flucctuations
- Provides consistent, reliable control for heap leaching applications
- Ensures efficient fluid management in water treatment and distribution systems.
- Versatile solution for demanding industrial environments, including mining, wastewater, and marine applications versatility and harsh conditions.

Highlights

- **Performance:**
  - The curved bridge design delivers:
    1. Energy savings with the best KV.
    2. No vibrations at extreme high pressures or when flow is being regulated.
  - Valve stays fully open in low pressure conditions.
- **Corrosion Resistance:**
  High quality coating ensures long life.
- **Wide Working Pressure Range:**
  0.5 to 16 Bar working pressure range.
- **Accessories:**
  Variety of solenoids and pilots to address any application.

IrriGate® C.I.

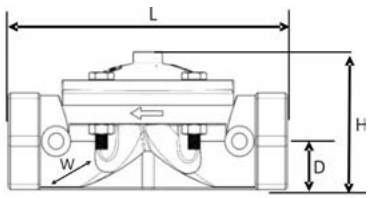
Type of Valves

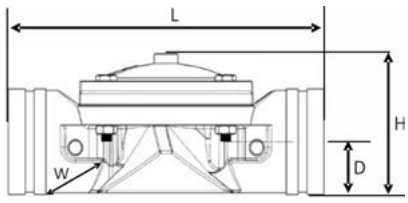
1. Manual On-Off
2. 3 Way, 12-24 VDC Latch,
Motor Type Solenoid (With Mounting Screws)
3. 3 Way, 24 VAC/VDC,
Motor Type Solenoid (With Mounting Screws)
4. 3 Way Electric with 24 VAC Magnetic Solenoid
5. 3 Way Electric with 9-30 VDC Latching Solenoid
6. Pressure Reducing
7. Pressure Sustaining / Relief

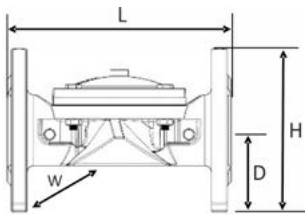
Technical Data

Valve size	mm	40mm	50 mm	80 mm	100 mm
	Inch	1.5"	2"	3"	4"
Max. recommended flow rate for continuous operation	m^3/hr	40	60	140	180
Min. Recommended Flow Rate	m^3/hr	>1 (>5)			
Pressure Range	bar	0.5-16			0.7-16
Flow Rate Factor	Kv (metric)	66	90	160	270
Material of Construction	Cast Iron (GG 20/25)				

Engineering Data







Valve size		Threaded		Grooved	Flanged		
		1½"/40 MM	2"/50 mm	3"/80 mm	2"/50mm	3"/80mm	4"/100mm
		1½" x 2 x 1½"	2 x 2 x 2	3 x 3 x 3	2 x 2 x 2	3 x 3 x 3	4 x 4 x 4
Dimension							
Height	CM	9.9		11.8	15.8	19.9	22
Width	CM	14.5		18	16.5	19.9	25.8
Length	CM	21		29.2	24	27	35

Union Ball Valves HL

Single & Double union

Metzer's union Ball valves are designed to provide reliable and durable performance in various water systems, including heap leaching systems. Crafted from high-quality PVC material, It ensures excellent corrosion and UV resistance. Valves' single and double union options allow user friendly opertation and design flexibility, making it an ideal choice for reliable heap leaching system systems.

Applications

- Manual shut-off for distribution lines in leaching systems
- Shutoff valve for overhead sprinklers.
- Use as isolation valves.

Highlights

- Available in high quality PVC material.
- Connections – Threaded (BSP, NPT & BSPT) Solvent Glued Socket end available in ISO, ASTM, BS and DIN standard
- User friendly design allows smooth handle operation with low operational torque.
- Corrosion resistant and UV stabilized.
- Durable, reliable and easy for maintenance.
- Ideal for application in temperature upto 50°

Union Ball Valves HL

Technical Data (PVC Ball Valves PN-16 /10)

Single Union Ball (SUB)

Nominal Diameter	DN	PN	Connection Type	Connection End	Product Dimensions		
					A	B	C
¾"	20	16	Single Union	Female Threaded x Female Threaded / Solvent Glued	6	8.5	8.3
			Single Union	Male Threaded x Female Threaded	6	8.5	10
1″	25		Single Union	Female Threaded x Female Threaded / Solvent Glued	7	9.5	9
			Single Union	Male Threaded x Female Threaded	7	9.5	10.5
1/¼”	32		Single Union	Female Threaded x Female Threaded / Solvent Glued	10.5	11	12.3
			Single Union	Male Threaded x Female Threaded	10.5	11	12.4
1½"	40		Single Union	Female Threaded x Female Threaded / Solvent Glued	12	13.5	13.7
			Single Union	Male Threaded x Female Threaded	12	13.5	13.7
2"	50		Single Union	Female Threaded x Female Threaded / Solvent Glued	15	15.5	16.5
			Single Union	Male Threaded x Female Threaded	15	15.5	16.5
2½"	65	10	Single Union	Female Threaded x Female Threaded / Solvent Glued	16	17.5	19
			Single Union	Male Threaded x Female Threaded	16	17.5	18
3"	80		Single Union	Female Threaded x Female Threaded / Solvent Glued	20	22.5	22.3
			Single Union	Male Threaded x Female Threaded	20	22.5	23
4"	100		Single Union	Female Threaded x Female Threaded / Solvent Glued	27	26.5	27
			Single Union	Male Threaded x Female Threaded	27	26.5	27

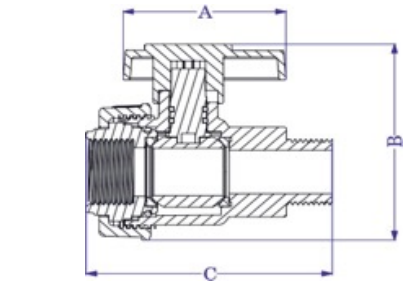
Double Union Ball (DUB)

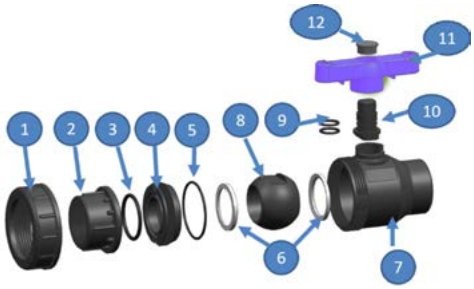
Nominal Diameter	DN	PN	Connection Type	Connection End	Product Dimensions		
					A	B	C
1″	25	16	Double Union	Female Threaded x Female Threaded / Solvent Glued	7	10	11
1.5"	40		Double Union	Female Threaded x Female Threaded / Solvent Glued	12	13.5	15
2"	50		Double Union	Female Threaded x Female Threaded / Solvent Glued	15	16	17.5
2.5"	68	10	Double Union	Female Threaded x Female Threaded / Solvent Glued	16	17	21.5
3"	80		Double Union	Female Threaded x Female Threaded / Solvent Glued	20	22.5	24.5

Union Ball Valves HL

Single Union

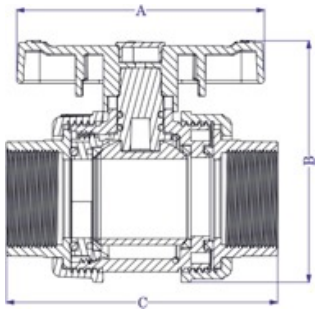
Part No	Part Name	Material	Quantity
1	Ring	PVC	1
2	Socket	PVC	1
3	Small O-ring	Viton	1
4	Bush	PVC	1
5	Big O-ring	Viton	1
6	Seal	TPE	2
7	Body	PVC	1
8	Ball	PVC	1
9	Shaft O-ring	Viton	2
10	Shaft	PVC	1
11	Handle	PPGF	1
12	Handle Logo	PPGF	1

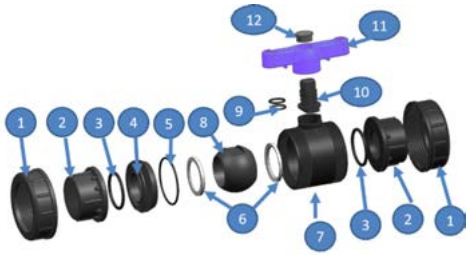




Double Union

Part No	Part Name	Material	Quantity
1	Ring	PVC	2
2	Socket	PVC	2
3	Small O-ring	Viton	2
4	Bush	PVC	1
5	Big O-ring	Viton	1
6	Seal	TPE	2
7	Body	PVC	1
8	Ball	PVC	1
9	Shaft O-ring	Viton	2
10	Shaft	PVC	1
11	Handle	PPGF	1
12	Handle Logo	PPGF	1





Angle Seat Valve HL

1”,1.5”, 2”

Angle Seat Valves are designed for high-flow applications where traditional ball valves and other irrigation valves face installation and operational challenges. Built from durable engineering grade plastic, the valve offers smooth operation, reliable performance and easy maintenance in both horizontal and vertical installations thus making them ideal for demanding heap leaching systems.

Applications

- **Underground Valve Box:** Perfect for installations in valves boxes, where ease of installation, operation and maintenance are required.
- **High-Flowheap leaching Systems:** Full bore offers high flow capacity.

Highlights

- **Durable Construction:** Engineered from high-strength plastic for durability and long-lasting performance.
- **Corrosion and UV Resistant:** Designed to withstand harsh chemicals and UV exposure for outdoor use.
- **Smooth Operation:** Features a multi-turn linear motion internal assembly with an easy-to-use throttle wheel.
- **No Leakage:** Ensures drip tight sealing when fully closed.
- **Versatile Installation:** Suitable for both horizontal and vertical line installations.

Angle Seat Valve HL

Technical Data

Model No		ASV-1”	ASV-1.5”	ASV-2”
Inlet /Outlet Connection		¾” 1”, 11⁄2” & 2” Male Threaded (BSP / NPT)		
Maximum Working Pressure	bar	10		
Material of Construction		Polypropylene		
Seal Material		Viton		
Operation Type		Manual Hand Operated		
Media		Water		
Maximum Working Temperature		60°C		

Material Specification

Part No	Part Name	Material	Quantity
1	Body	PP	1
2	Seal cup Lock	PP/PPGF	1
3	Seal	Viton	1
4	Seal Cup	PP/PPGF	1
5	Lock Clip	PP	1
6	Steam Housing o Ring (Outer)	Viton	1
7	Steam Housing o Ring (Inner)	Viton	1
8	Steam Housing	PP	1
9	Shaft	PP/PPGF	1
10	Cap	PP	1
11	Lock Pin	POM	1
12	Throttle Wheel	PP	1

Connectors & Accessories

Metzer delivers a broad range of dripline connectors produced from strong, long-lasting polymers. Our connectors are designed to be user-friendly, practical, and dependable, meeting the highest market standards while fitting a wide variety of driplines and pipes.

Product	Size
Barb Connector	12 - 12
Barb Connector	12 - 16
Barb Connector	16 - 16
Barb Connector	17 - 17
Barb Connector	16 - 20
Barb Connector	20 - 20

Start Connector	12 mm
Start Connector	16 mm
Start Connector	17 mm
Start Connector	20 mm

Rubber Seal for Start Connector	12, 16, 17, 20 mm

Tee Barb Connector	12-12-12
Tee Barb Connector	12-16-12
Tee Barb Connector	12-16-16
Tee Barb Connector	16-16-16
Tee Barb Connector	16-20-16
Tee Barb Connector	17-17-17
Tee Barb Connector	20-16-20
Tee Barb Connector	20-20-20

Connectors & Accessories

	**Elbow Barb Connector**	12-12
	Elbow Barb Connector	16 -16
	Elbow Barb Connector	17-17
	Elbow Barb Connector	20-20

	**End Line**	12 mm
	End Line	16 mm
	End Line	20 mm

	Product	**Size**
	**Elbow Male Adaptor**	16 - ½"
	Elbow Male Adapto	16 - ¾"
	Elbow Male Adaptor	20 - ½"
	Elbow Male Adaptor	20 - ¾"

	**3-Barb Connector**	16 - ¾"
	3-Barb Connector	20 - ¾"

	**2-Way Male Connector**	16 - ¾"
	2-Way Male Connector	20 - ¾"

	**3-Way Elbow Connector**	¾" - 16
	3-Way Elbow Connector	¾" - 20

	**4-Way Connector**	16 - ¾"
	4-Way Connector	20 - ¾"

Connectors & Accessories

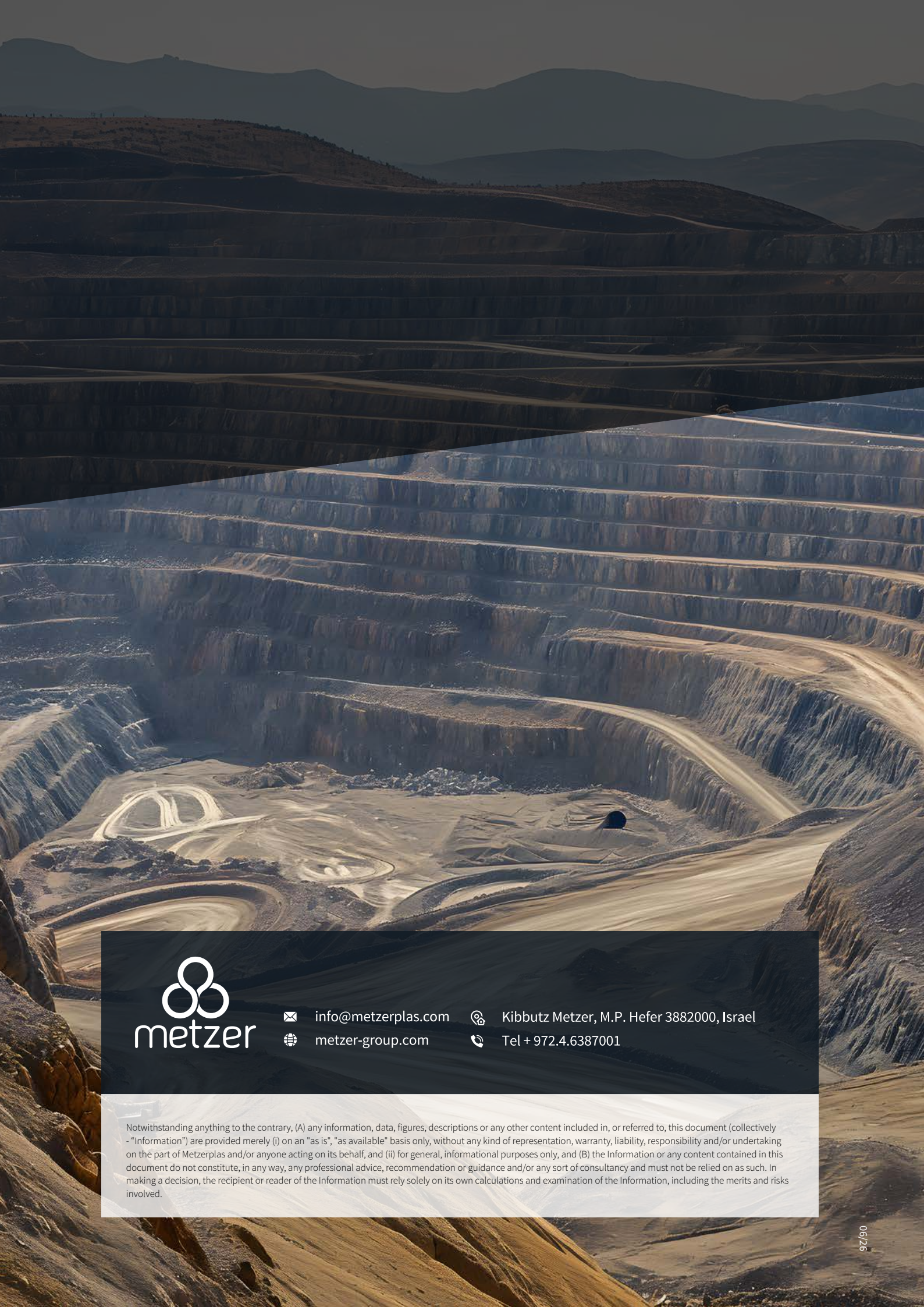
Tee Male Connector	16- ½"-16
Tee Male Connector	16- ¾"-16
Tee Male Connector	20- ½"-20
Tee Male Connector	20-¾"-20

Thread Plug	½"
Thread Plug	¾"

Product	Size	Cat. No.
Nipple	½" - ½"	94000050051
Nipple	¾" - ¾"	94000340341
Nipple	1" - 1"	94000100101
Nipple	1 ¼" -1 ¼"	94001141141
Nipple	1 ½" - 1 ½"	94001121121
Nipple	2" - 2"	94000200201

Male Barb Adaptor	16 - ½"	91641600121
Male Barb Adaptor	16 - ¾"	91641600341
Male Barb Adaptor	20 - ½"	91642000121
Male Barb Adaptor	20 - ¾"	91642000341

6-Way Connector	16 - ¾"	91761634001
6-Way Connector	20 - ¾"	91762034001



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