



Manta

SERIES



COMPATIBLE WITH
EXISTING BWMS

Up to
500 m³/h
Max. Flow Rate

25, 40 & 50 µm
Filtration
Degree

6.9 bar
Pressure
Rating

**In-Line &
Vertical
Configuration**

1.5 bar
Min. Operating
Pressure

3,000-16,200 cm²
Screen Area

Max. Working
Temp 50°C

ENGINEERED FOR BALLAST WATER FILTRATION.

Filtersafe

Our Story

Filtersafe started with the goal of creating a seawater filter that would make ballasting more effective for shipowners and safer for aquatic environments.

Since our beginning in 2004, Filtersafe has grown to be a world leader in seawater filtration and our filters are installed in over 3,500 ships around the world.



Skid Packages



Filtersafe filter within an ERMA FIRST BWMS installation



Installing our patented **nozzlex** screen cleaning technology within a BSE Multi-Screen filter.



Our **BallastSafe** filters are modular and can be oriented in any direction to fit any installation.

WE LEAD THE MARINE WATER FILTRATION INDUSTRY FILTERING OVER 25% OF GLOBAL BALLAST WATER

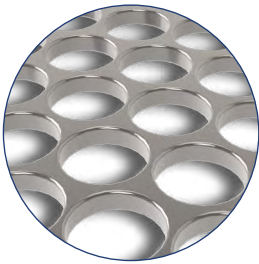


Filtersafe® Advantages for Owners & Operators

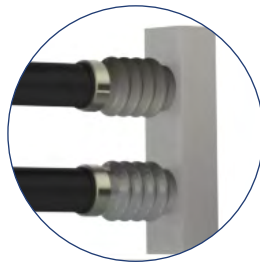
- **RELIABLE FILTERS:** The dependable filter choice and approved by all major class societies + IMO & USCG.
- **SAIL ANYWHERE:** We filter the most challenging waters so you can sail anywhere. Our filters won't clog.
- **Ease of Maintenance:** Easy removal of lid, screen & scanner for safe and speedy maintenance.
- **HIGH FLOW/SMALL FOOTPRINT:** Just one unit can filter up to 500 m³/hr, while taking up minimal space.
- **GLOBAL PRESENCE:** With manufacturing facilities, offices, and support personnel located across the globe, we're there when you need us.
- **LOWER BALLAST TANK MAINTENANCE:** Our **smartweave™** screen technology ensures minimal sediment intake to the disinfection process and ballast tanks.
- **REAL ENERGY SAVINGS:** Use less energy and chemicals during the disinfection stage because the MANTA removes 99.6% of Organisms Over 50µm.

OUR TECHNOLOGY

Filtersafe ensures high performance automatic screen filters with our patented technologies, **smartweave™** filter screens and **nozzlex®** proximity suction nozzels.



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smartweave™

nozzlex® OneMotion

EVERCLEAR™

High performance filtration screens:

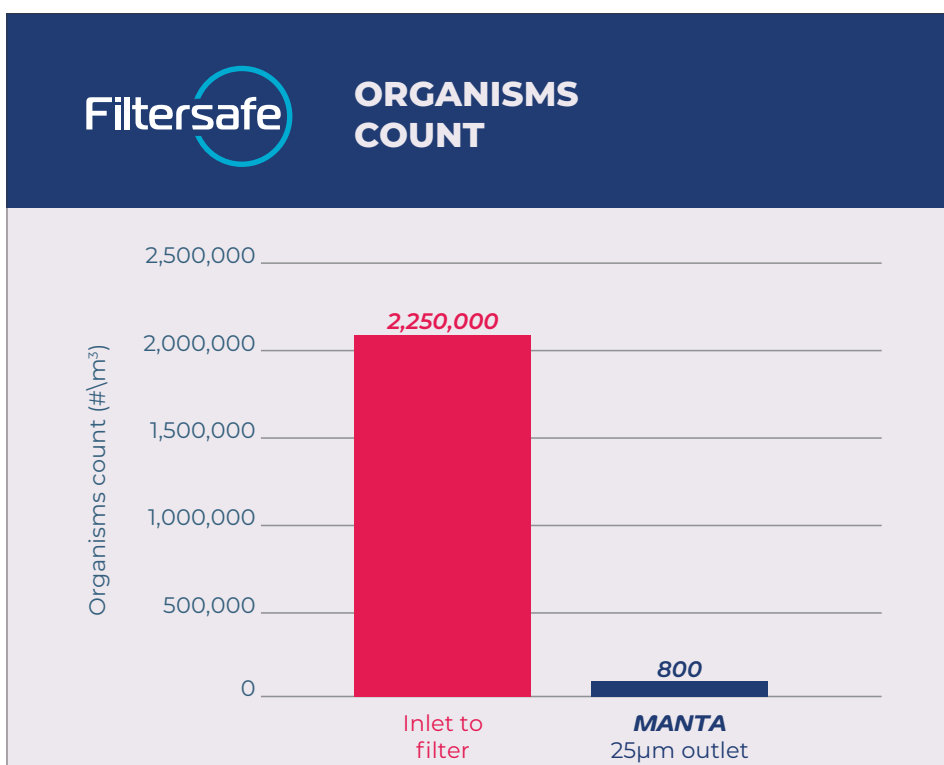
- 4 Layer sintered weaved screen
- Enhanced strength & durability
- Available material: 316L, 904L

Self-cleaning cycle for maximum removal efficiency:

- Self balancing cleaning nozzle
- Zero screen wear + reduced nozzle wear
- **OneMotion** scanners overlap to ensure 100% Screen cleaning.
- Low pressure operation

The **MANTA**'s **EVERCLEAR™** cleaning cycle is comparable to the **BallastSafe** series **EVERCLEAR™** + **superturbo™**, offering unparalleled filtration.

Independent Assessment of the **MANTA** Filters by DNV & The United States Coast Guard



MANTA
Removes
99.6% of
Organisms
Over 50µm

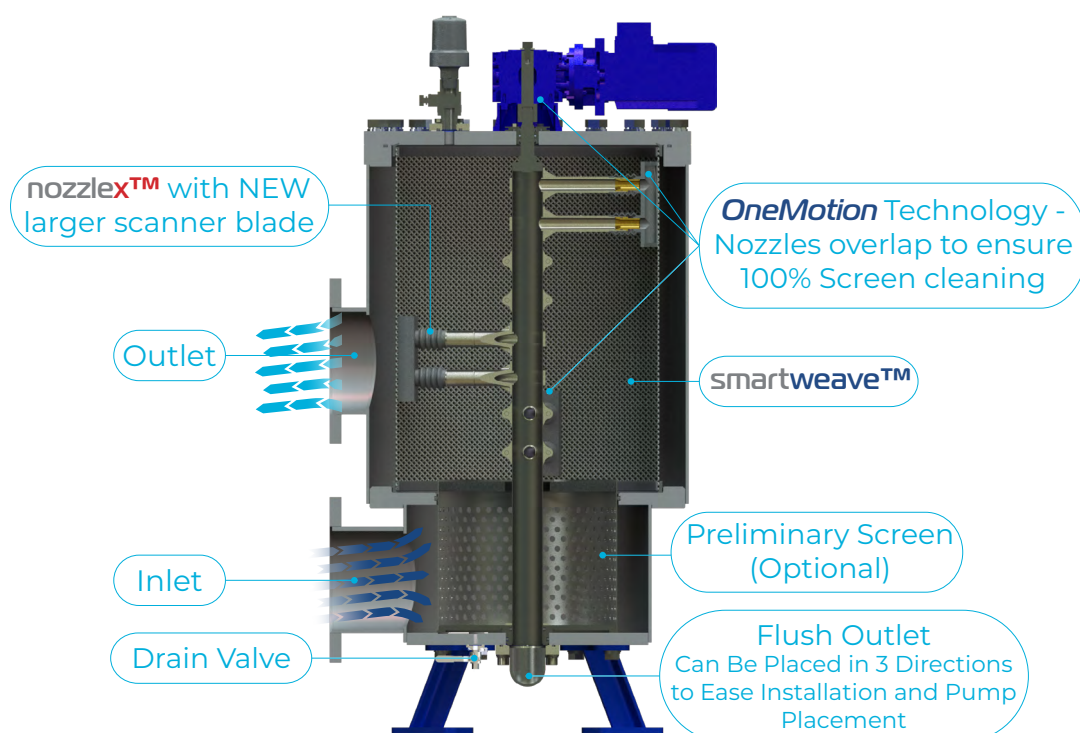
EASE OF MAINTENANCE

Safe & Speedy 1 Person Maintenance

- Remove the drive unit (4 bolts), the seal housing (4 bolts) then the lid (20 Bolts).
- Pull out the scanner, then the screen – easy and no complications.
- To put back just reverse these actions – **IT'S AS SIMPLE AS THAT!**

Cleans While In Operation:

1. Removable primary screen prevents large objects from entering the filter body.
2. Organic matter and debris begin to build up on the screen interior.
3. Once a differential pressure of 0.3 bars is reached the automatic cleaning sequence is initiated.
4. Filter remains in operation with downstream flow remaining consistent during self-cleaning.
5. Overlapping proximity nozzle heads cover the entire surface area of the screen's interior, fully cleaning the screen in one rotation.
6. Cleaning sequence finishes and filter continues to filter as normal.



MANTA SERIES

Technical Specifications

1 | GENERAL DATA

Model Name Catalog number	MANTA 33 #MAN033	MANTA 56 #MAN0056	MANTA 110 #MAN0110	MANTA 162 #MAN0162
Max Capacity* (m ³ /hr.)	90 m ³ /hr.	150 m ³ /hr.	340 m ³ /hr.	500 m ³ /hr.
Inlet/Outlet***	4" DIN PN10	6" DIN PN10	8" DIN PN10	10" DIN PN10
Configuration	In-line & Vertical	In-line & Vertical	In-line & Vertical	In-line & Vertical
Filtration Degrees	25, 40 & 50 µm			
Cleaning Mechanism	Pattend nozzlex OneMotion Proximity nozzle			
Min. Pressure	1.5 bar			
Pressure Rating	10 bar			
Design Code	DNV (Pending), BV (Pending)			
Weight (Dry) kg	210 kg	223 kg	410 kg	560 kg
Weight (Wet) kg	290 kg	335 kg	720 kg	1,200 kg

2 | OPERATION

Min. Flush Flow Rate*	22 m ³ /hr	33 m ³ /hr	44 m ³ /hr	55 m ³ /hr
Min. Flush Volume (@ 1bar)	185 L	275 L	365 L	460 L
Flush Duration	30 sec.	30 sec.	30 sec.	30 sec.
Flushing***	2.5"	2.5"	2.5"	2.5"

3 | SCREEN DATA

Screen Area (cm ²)	3,300 cm ²	5,600 cm ²	11,000 cm ²	16,200 cm ²
Filtration Medium	smartweave™ 4 layer sintered weaved screen			
Screen Material	SS316L / SS904L			

4 | CONSTRUCTION MATERIALS

Body	Carbon Steel
Internal & External Finish	Epoxy Coated
Internals	SS 316L
Seals	NBR

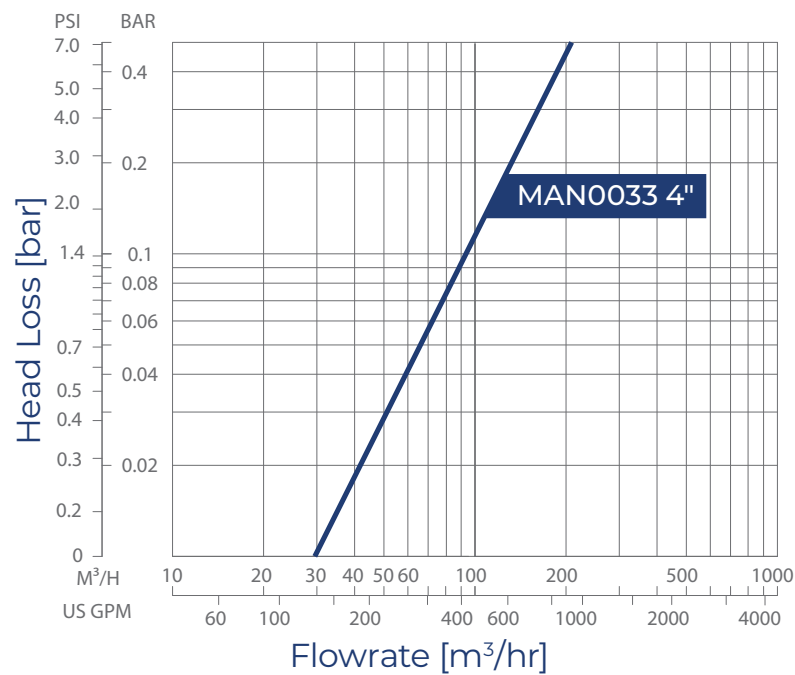
* Dependent on filtration degree, water quality and inlet size. Contact us for more information.

** Other Equipment & Materials are available on request.

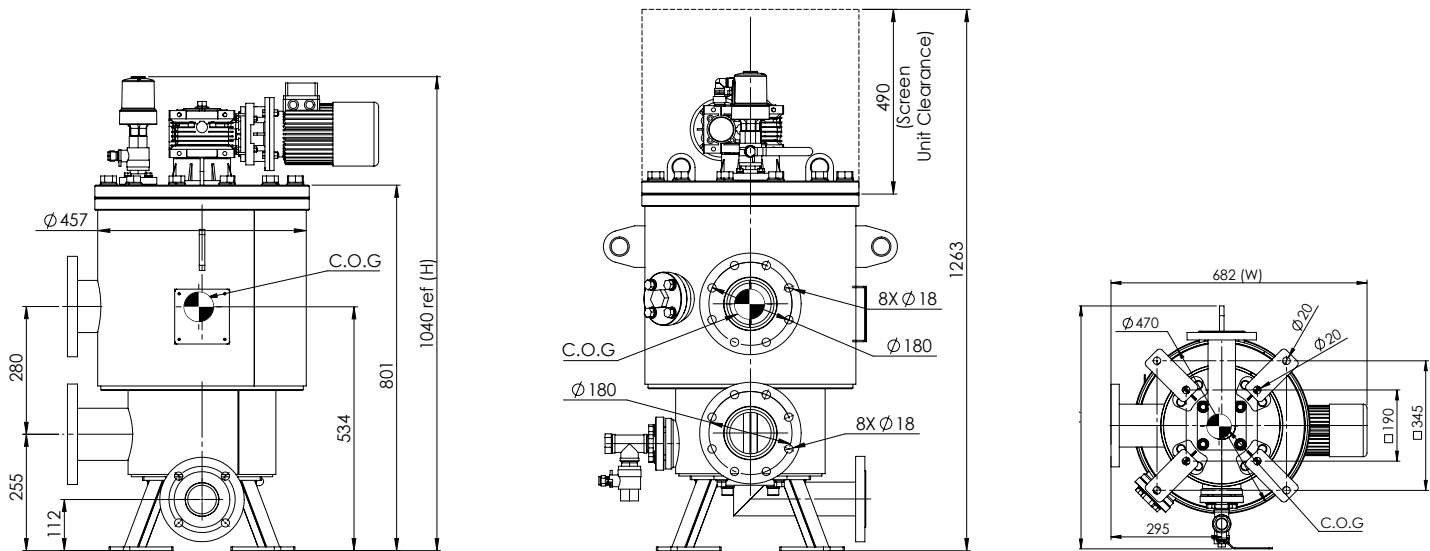
*** Available in DIN PN10. For additional standards contact us.

MANTA 33 #MAN0033

Dimensions and Headloss

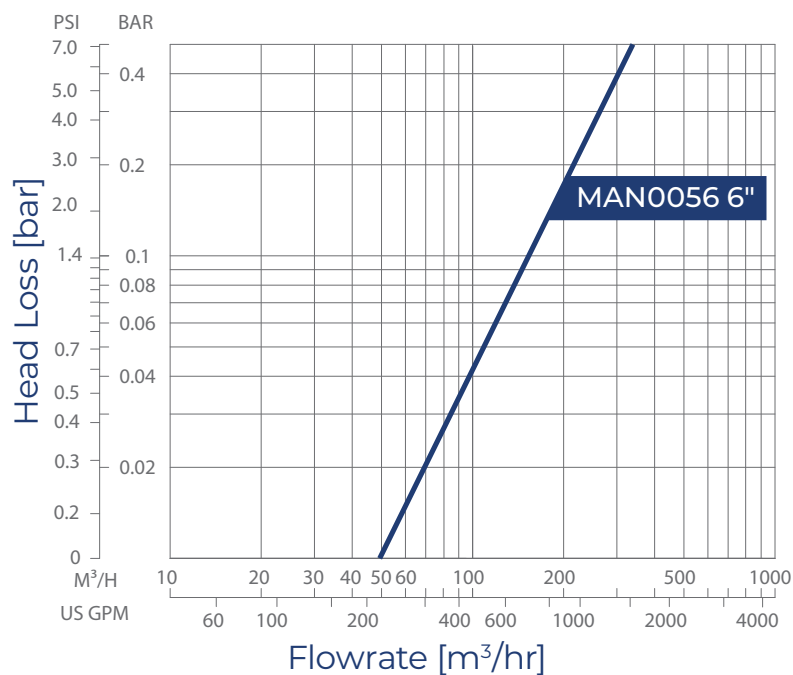


Note: The tolerance for all measurements is +-3 mm

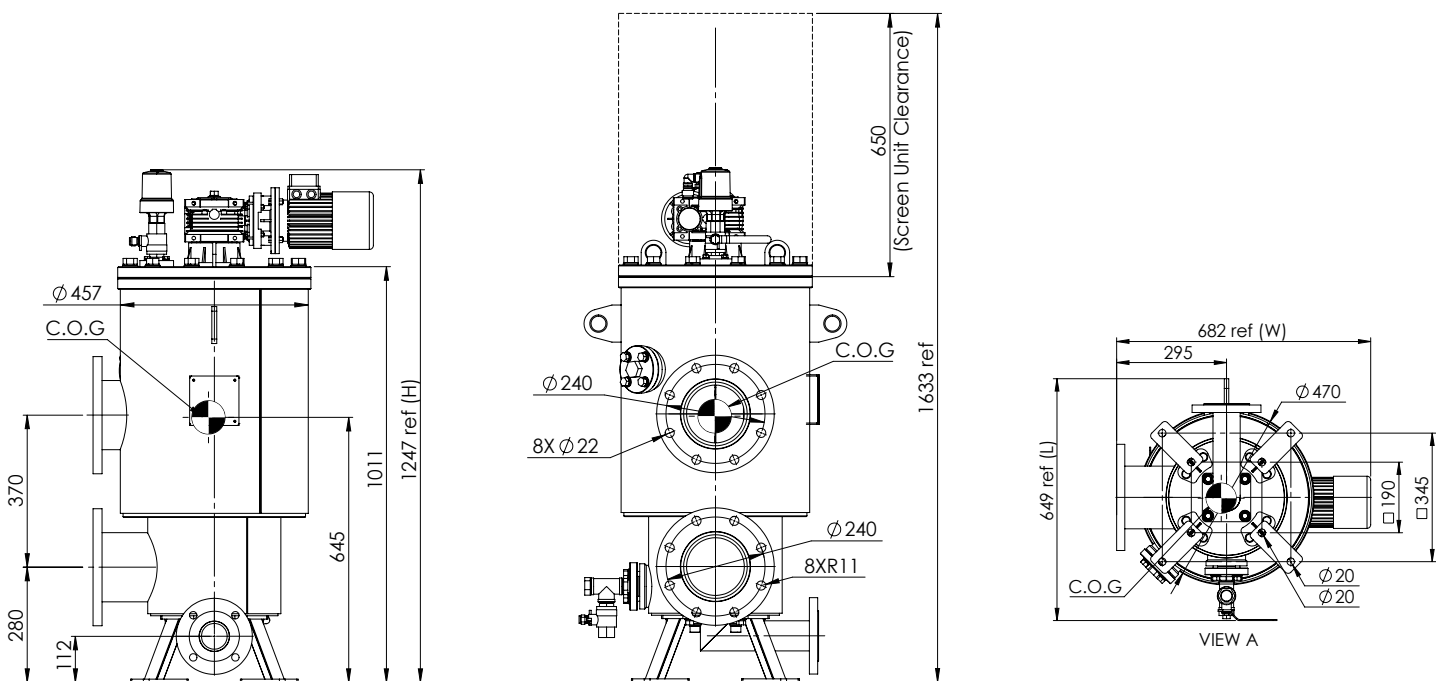


MANTA 56 #MAN0056

Dimensions and Headloss

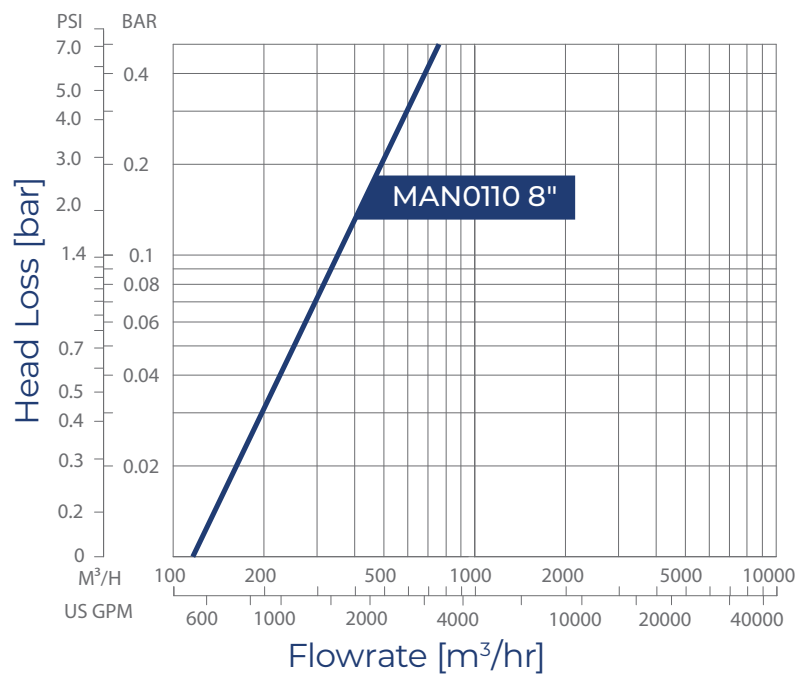


Note: The tolerance for all measurements is +3 mm

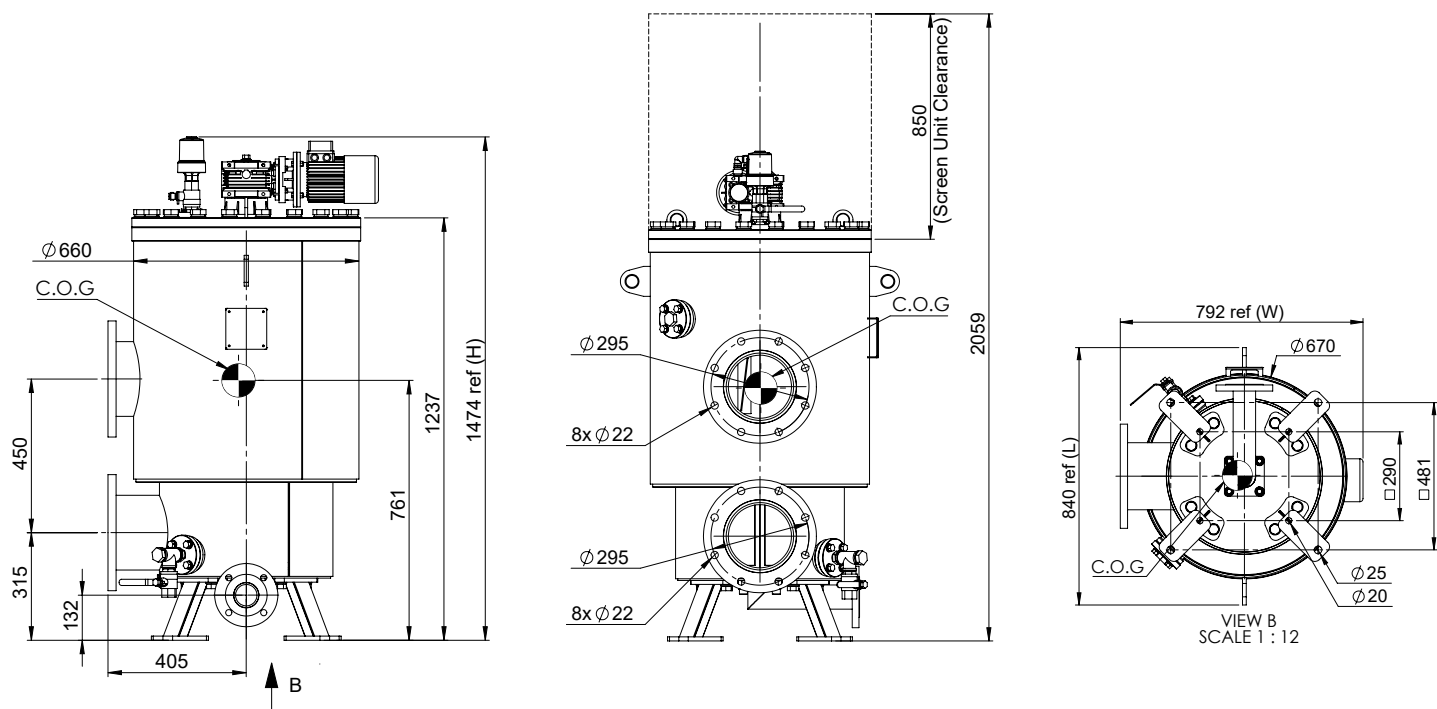


MANTA 110 #MAN0110

Dimensions and Headloss

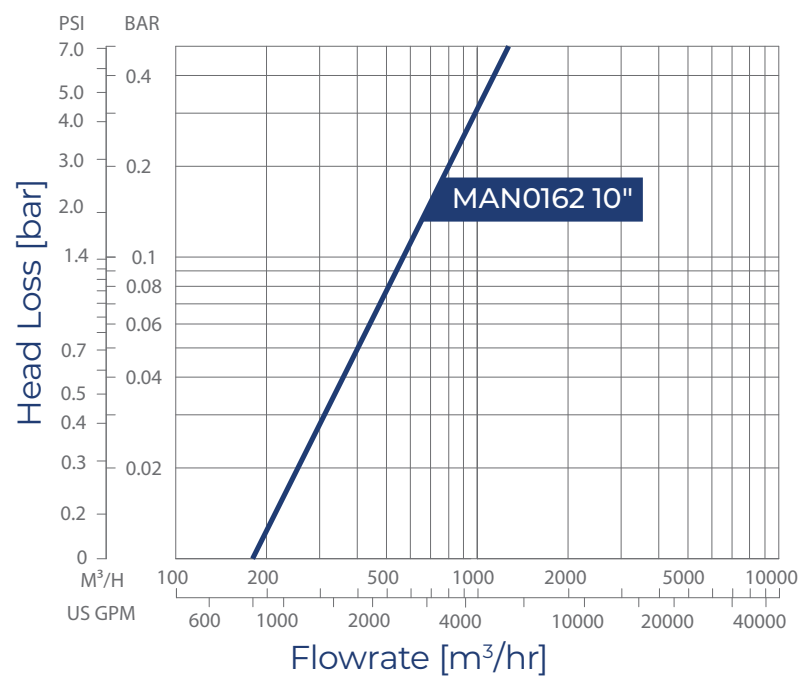


Note: The tolerance for all measurements is +-3 mm

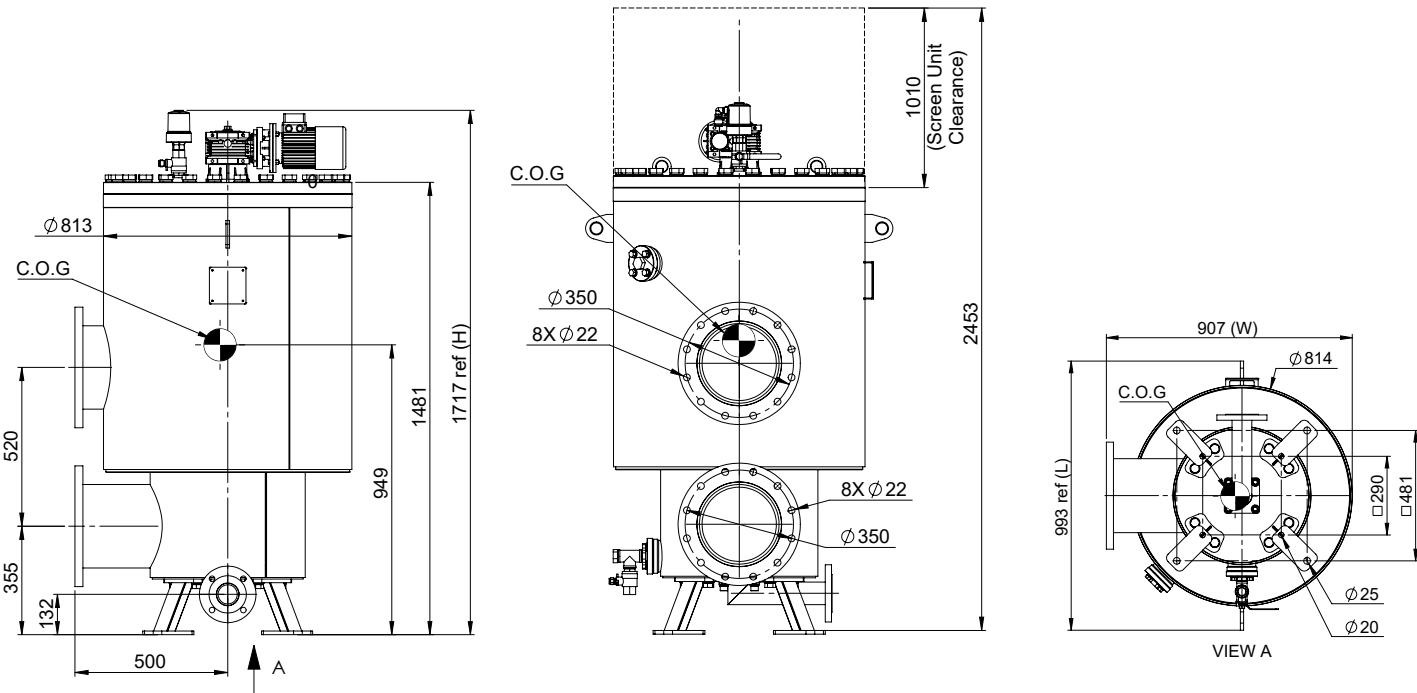


MANTA 162 #MAN0162

Dimensions and Headloss



Note: The tolerance for all measurements is +3 mm





● OUR HEADQUARTERS

Our flagship factory. The 4,000 m² building contains our regional sales offices, R&D facilities and manufacturing and assembly plant. The facility is capable of handling very large volumes of production with an incredibly fast lead time.

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- Filtersafe Offices
- Filtersafe Manufacturing Facilities



www.filtersafe.net



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