

BDS Series

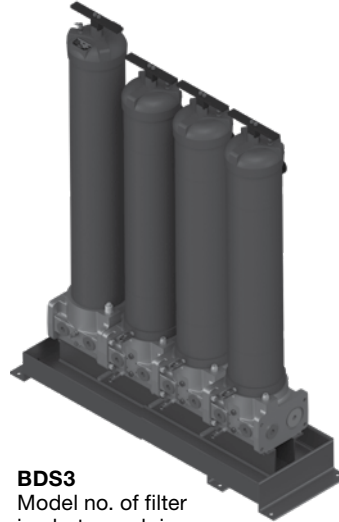
Bulk Diesel Fuel Skid/ Bulk Diesel Multi-Skid
100 psi • up to 70-280 gpm



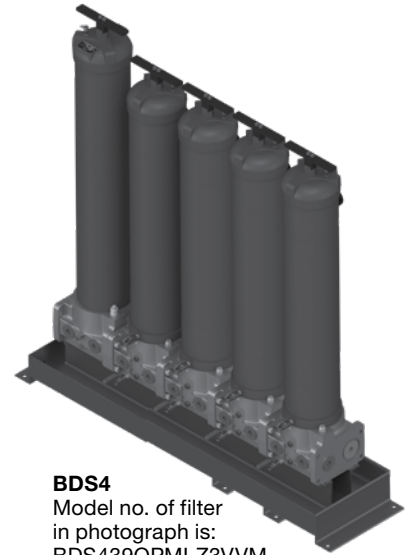
BDS1
Model no. of filter
in photograph is:
BDS39QPMLZ3VVM



BDS2
Model no. of filter
in photograph is:
BDS239QPMLZ3VVM



BDS3
Model no. of filter
in photograph is:
BDS339QPMLZ3VVM



BDS4
Model no. of filter
in photograph is:
BDS439QPMLZ3VVM

Features

- Designed with integrated particulate removal pre-filtration for maximum coalescing filter element life in the downstream housing
- Sized for high flow or highly contaminated fluid applications
- Routine element change is only needed on Pre-filter (the particulate filter) which saves time and money
- Patent-pending, three-phase, particulate and fuel/water separation media technology
- A revolutionary element designed for the highest single-pass water and particulate removal efficiencies in today's ultra-low sulfur diesel (ULSD) fluids
- Protects expensive Tier 3 and Tier 4 engine components against failures caused by particulate and water transferred from the bulk fuel tank to the vehicle
- Allows users to achieve or exceed the particulate and water removal specifications of the injection system OEMs
- Previously acceptable industry standard products no longer provide the high-efficiency separation needed in today's ULSD fluids
- In applications >32°F (0°C) complete automation is achievable with a water in fuel sensor and fail-safe auto-drain feature using a remote 5 gallons (18L) or 20 gallons (75L) sump with alarm and auto shutdown
- HYDAC Stat-Free media is standard for all coalescing elements

Applications

- Point of use fuel dispensing
- Fleet fill/bulk fuel transfer
- Bulk fuel unloading
- Protection for high-flow fuel injection systems
- Bulk tank kidney loop/recirculation

Markets

- Industrial
- Mobile Vehicles
- Marine
- Mining Technology
- Agriculture
- Power Generation
- Common Rail Injector Systems
- Fleet
- Railroad
- Bulk Fuel Filtration

Technical Specifications

Flow Rating	BDS1: Up to 70 gpm (265 l/min) for ULSD15 BDS2: Up to 140 gpm (530 l/min) for ULSD15 BDS3: Up to 140 gpm to 210 gpm (530 to 795 l/min) for ULSD15 BDS4: From 210 gpm to 280 gpm (795 to 1060 L/min) for ULSD15	
Inlet/Outlet Connection	BDS1: -24 (ORB) SAE J1926 BDS2, BDS3, BDS4: -32 (ORB) SAE J1926	
Drain Connection Upper	1/4" NPT Ball Valve	
Drain Connection Lower	1/4" NPT Ball Valve	
Max. Operating Pressure	100 psi (7 bar)	
Min. Yield Pressure	400 psi (27.6 bar) without sight glass <i>(Contact factory for use with sight gauge)</i>	
Rated Fatigue Pressure	Contact Factory	
Temperature Range	-20°F to 165°F (-29°C to 74°C) <i>(standard)</i> 32°F to 165°F (0°C to 74°C) <i>(with optional sight gauge or AWD option)</i>	
Bypass Indication: (Lower indication options available)	Particulate Filter Particulate: 15 psi (1.03 bar)	Coalescing Filter Coalescing: 25 psi (1.7 bar)
Bypass Valve Cracking	Particulate Filter Particulate: 20 psi (1.37 bar)	Coalescing Filter Coalescing: 30 psi (2 bar)
Materials of Construction	Particulate Filter Porting Base: Anodized Aluminum Element Bowl: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard) Cap: Plated Steel	Coalescing Filter Porting Base: Anodized Aluminum Element Bowl: Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard) Cap: Plated Steel
Weight	BDS1: 441 lbs (200 kg) BDS2: 596 lbs. (270 kg) BDS3: 751 lbs. (341 kg) BDS4: 906 lbs. (411 kg)	
Element Change Clearance	33.8" (858 mm)	

*Note: Elements are sold with the housing

PARTICULATE & COALESCING

Model Code

BDS - 4 - Q3 - V - VM -

Filter Series _____
 BDS = Bulk Diesel Skid

Number of Coalescing Filters _____
 Omit = 1 Coalescing Filter at 70 gpm
 2 = 2 Coalescing Filter at 140 gpm
 3 = 3 Coalescing Filter at 210 gpm
 4 = 4 Coalescing Filter at 280 gpm

Particulate Filtration Rating _____
 Q1 = 1 µm
 Q3 = 3 µm

Sealing Material _____
 V = Fluorocarbon Elastomer (FKM)

Element Change Indicator _____
 VM = Visual Pop-Up w/ Manual Reset

Options _____
 Omit = None
 S = Sight Glass
 H = Filter Sump Heater, 120 VAC 60 Hz Single Phase
 AWD5* = Auto water drain 5 gal. tank w/failsafe valve (only offered for applications above 32°F (0°C) and units ordered without heater)
 AWD20* = Auto water drain 20 gal. tank w/failsafe valve (only offered for applications above 32°F (0°C) and units ordered without heater)

*Note: Optional and AWD's for use only >32° F (0°C)

Element Particulate Performance

Particulate Elements	Filtration Ratio Per ISO 16889 Using automated particle counter (APC) calibrated per ISO 11171		
	DHC	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
1.14.39D01ECON2 / -V	1259 grams	<4.0	4.2
1.14.39D03ECON2 / -V	1293 grams	<4.0	4.8

Element Water Coalescing Performance

Element	Pressure Side Coalescing	
	Max Flow	Single Pass Water Removal Efficiency
C396Z5V	70 gpm	≥ 99.5%

Flow Direction: Inside Out

Element Nominal Dimensions: ø6.4" (ø163mm) x 39.4" (1001mm) long

Note: Based on ULSD15 with 27 Dyne/cm surface tension and 0.25% (2500 PPM) water injection

Particulate Element

Flow Direction: Outside In
 Element Nominal Dimensions: 6.0" (150 mm) O.D. x 37.80" (960 mm) long

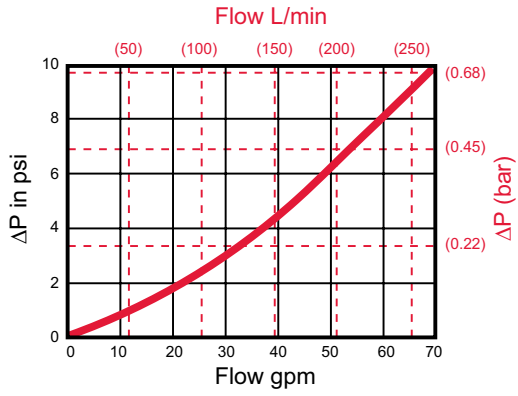
Coalescing Element

Flow Direction: Inside Out
 Element Nominal Dimensions: 6.4" (163 mm) O.D. x 39.4" (1001 mm) long

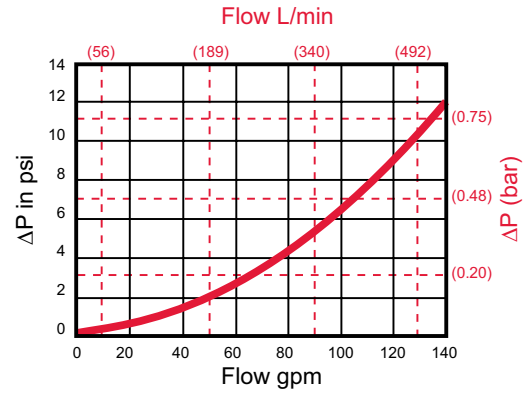
Fuel Oils

- ULSD15, low sulfur diesel and high sulfur diesel
- Biodiesel blends
- Synthetic diesel and blends
- No. 2 fuel oil and heating oil

Pressure Drop BDS1

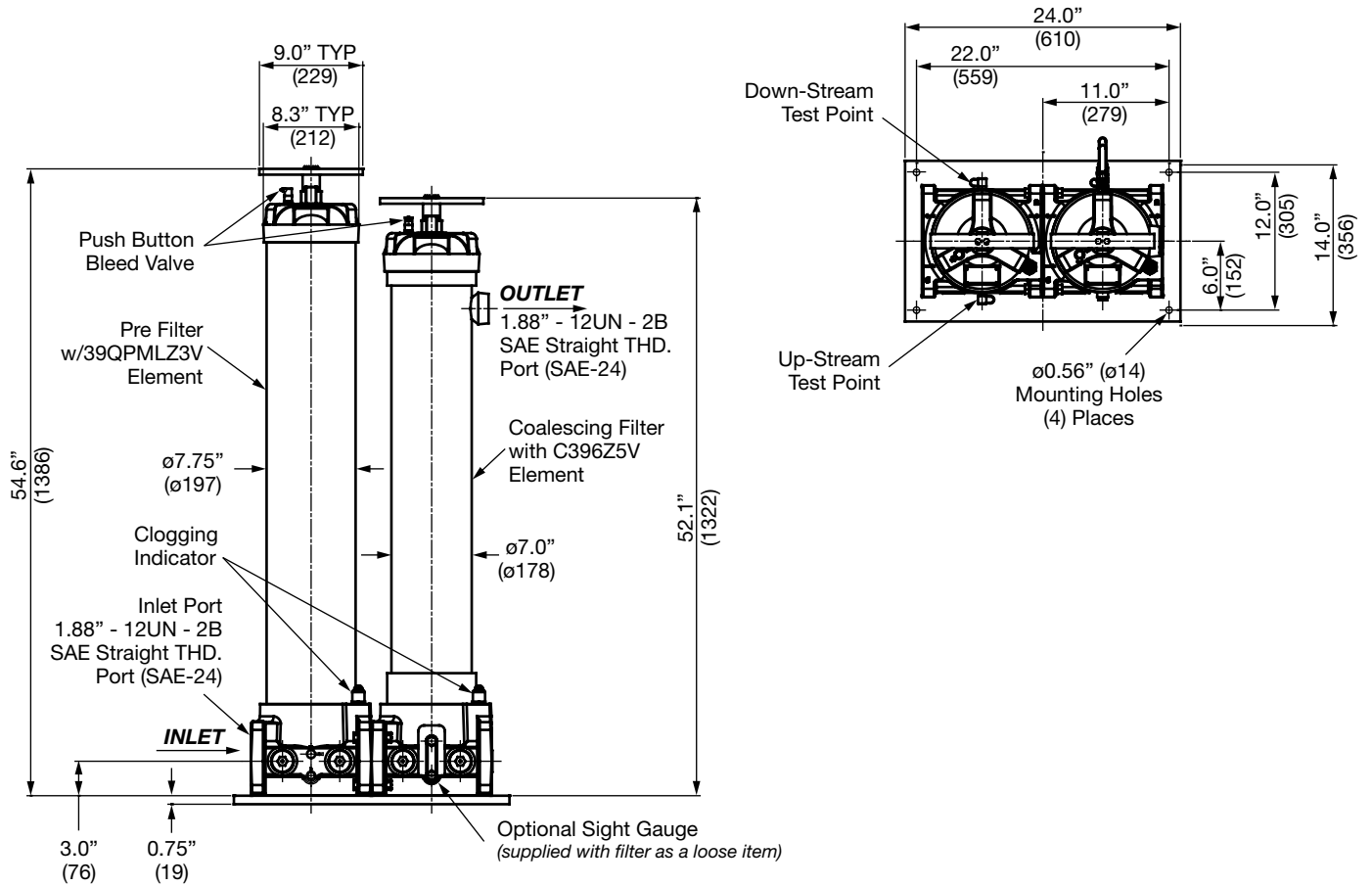


BDS2



Note: For BDS3 and BDS4 pressure curve information, contact factory.

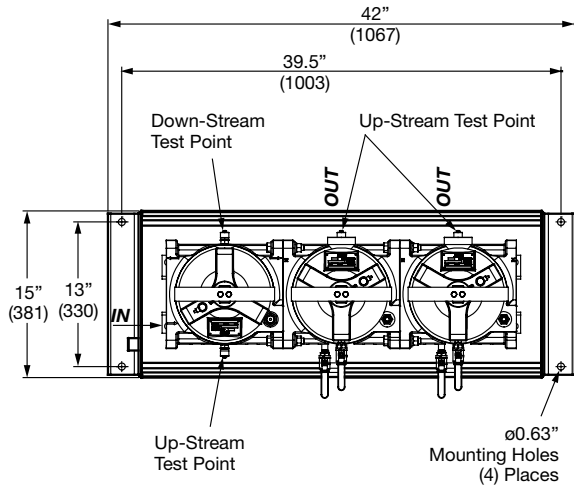
Dimensions BDS1



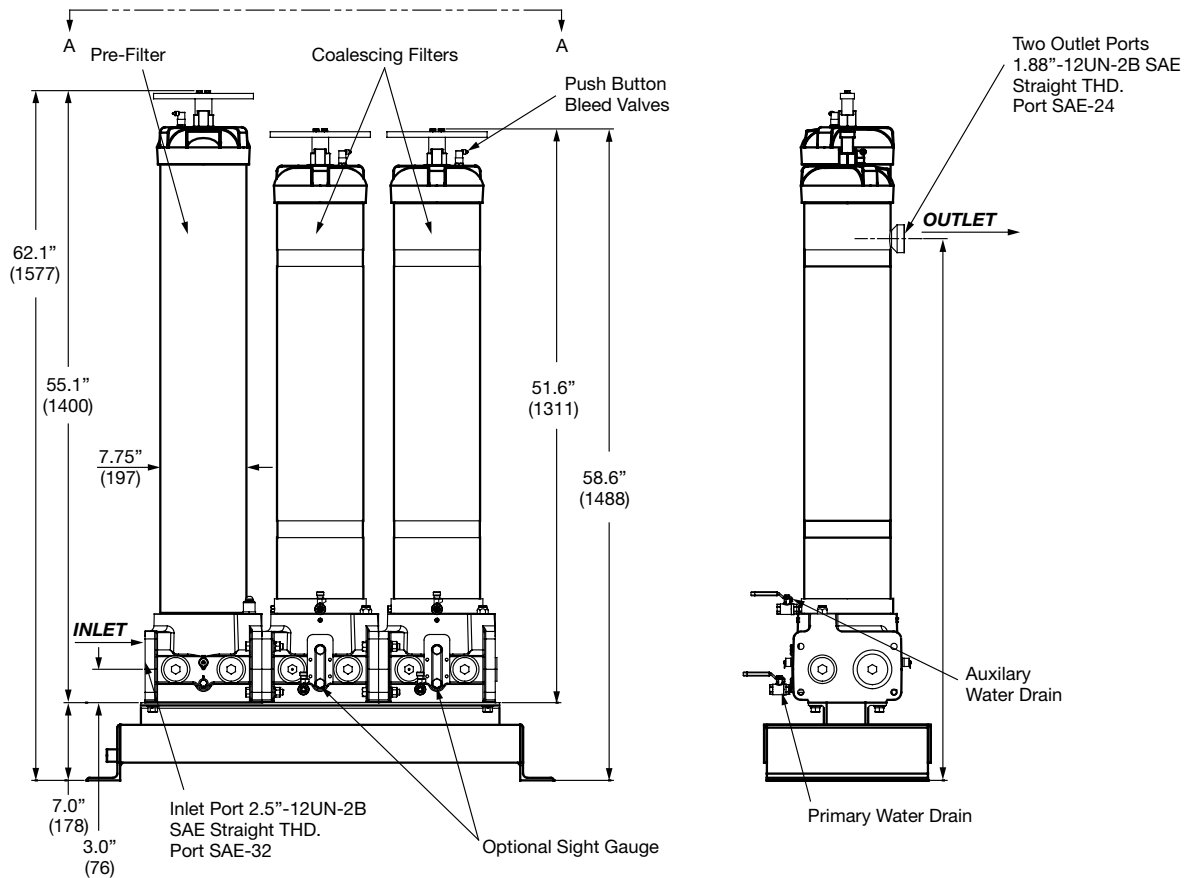
Dimensions shown are inches (millimeters) and for general information only. For complete dimensions please contact HYDAC to request a certified print.

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Dimensions BDS2

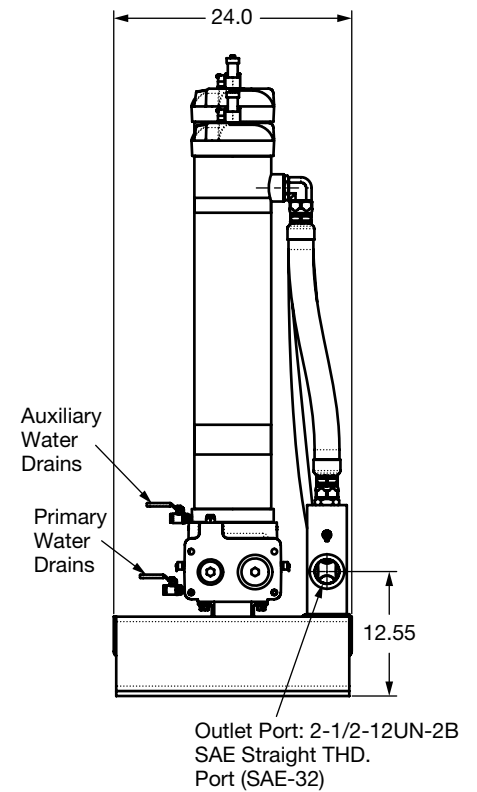
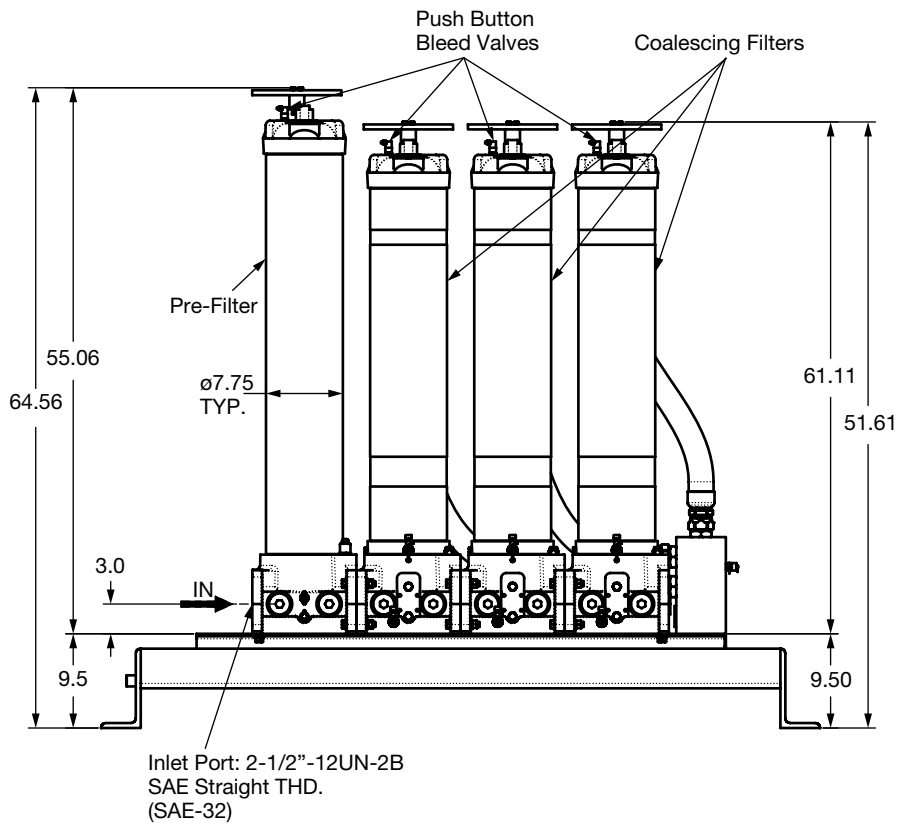
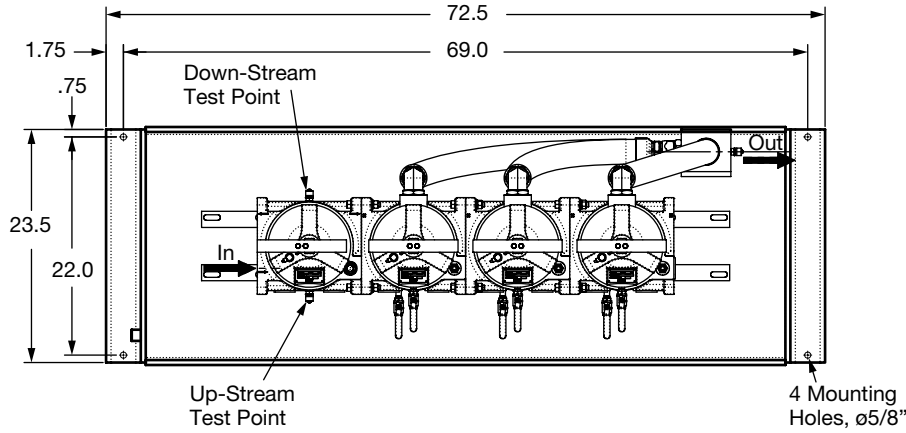


Section A-A



Dimensions shown are inches (mm) and for general information only. For complete dimensions please contact HYDAC to request a certified print.

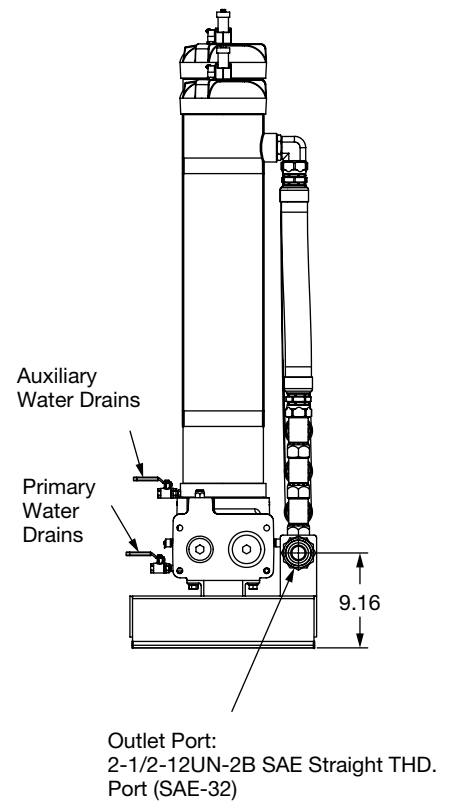
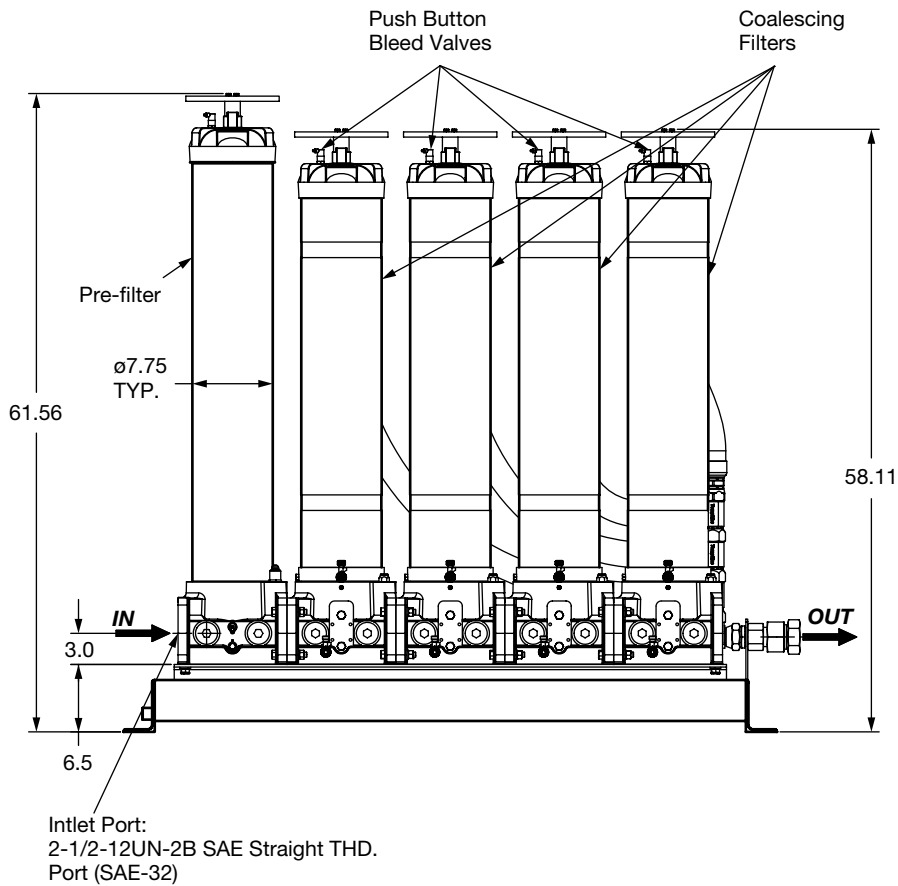
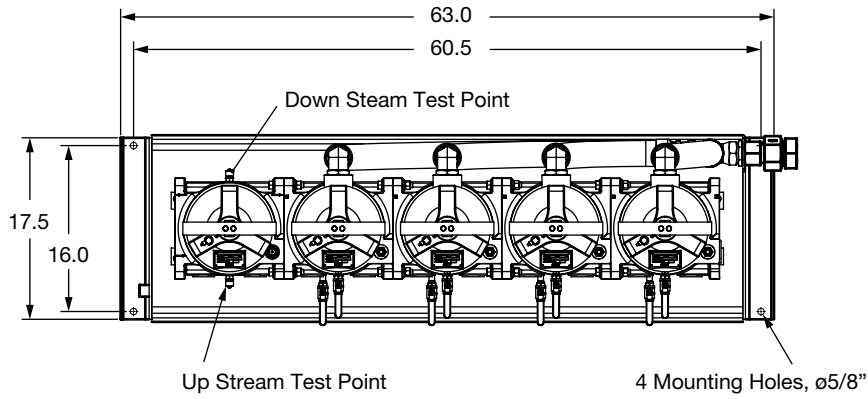
Dimensions BDS3



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PARTICULATE & COALESCING

Dimensions BDS4



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