

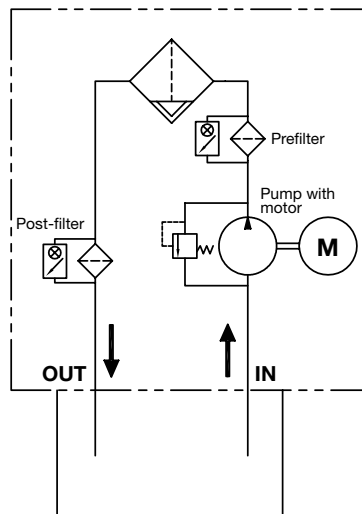
OFFLINE FILTRATION SYSTEMS

IXU 1/4 Series

Ion eXchange Unit



Hydraulic Schematic



* optional equipment, see ordering details
VA = Clogging indicator

Description

The user-friendly Ion eXchange Unit is designed to condition flame resistant, phosphate-ester-based (HFD-R) hydraulic and lubrication fluids.

They effectively remove acidic products of decomposition and dissolved metal soaps caused by the hydrolysis and/or oxidation of the fluid.

The units are applied to hydraulic and lubrication oil tanks of up to ≈ 5285 gallons ($\approx 20,000$ liters) with a volumetric flow of ≈ 2.4 gpm (≈ 9 l/min) in the bypass flow.

Mobile or stationary IXU are available.

The IXU uses HYDAC Ion eXchange Elements (IXE).

Features

- Effective removal of acids and metallic salts
- No extractable metals or particles, as in the case of fuller's earth or active aluminum oxide
- Easy to service units
- Available as complete unit for service, and as a modular system for retrofitting existing bypass circuits or for OEM

Advantages

- Extended service life of the operating fluid
- Reduction in functional problems, e.g. with servo valves
- Greater machine and system availability

Water contamination is a primary source of acidic product generation in HFD-R fluids. We additionally recommend continuous dewatering, for example, using an NAV.

Applications

- Power plants
- Steel industry
- Other applications with ester-base, flame resistant fluids

Technical Specifications

Hydraulic Data	
Neutralization value achievable	< 0.1 mg KOH / g possible
Typically, possible to use up to	1 mg KOH / g
Flow rate	IXU 1 ≈ 0.5 gpm (≈ 2.2 l/min) IXU 4 ≈ 2.4 gpm (≈ 8.9 l/min)
Fluid temperature	86 to 140 °F (30 to 60 °C)
Max. operating pressure	87 psi (6 bar)
Permissible suction pressure at suction inlet IN	-5.8 to 14.5 psi (-0.4 to 1 bar)
Viscosity range	80 to 370 SUS (15 to 80 cSt)
Permissible operating fluid	HFD-R – Flame resistant, phosphate-based hydraulic fluids.
Connectors IN / OUT	1/2" Male JIC
Pump type	Gear
Electrical Data	
Power supply voltage	See ordering details
Power consumption	0.25 to 0.6 kW / 16 Amps
Ambient Conditions	
Operating temperature range	32 to 104 °F (0 to 40 °C)
Storage temperature range	32 to 140 °F (0 to 60 °C)
Relative humidity	0 to 80%, non-condensing
Protection class to DIN 40050	IP 55
General Data	
Length of electrical connection cable (optional)	5' (1.5 m)
Sealing material	FKM (Viton®)
Sound level at 1m	< 80 dB(A)
Weight* (empty)	IXU 1 = 155 lbs (70 kg), IXU 4 = 660 lbs (300 kg)
Fluid cleanliness required	ISO 19/17/14 (ISO 4406:1999) 9A/9B/9C (SAE AS4059)

*Weight noted is for a stationary unit.

Model Code

IXU - 4 - M - G - F - G10 - BM - G05 /-PKZ

Series	IXU = Ion eXchange Unit
Size	1 = 1 Ion eXchange element NAIXE200 ≈ 0.5 gpm (2.2 l/min) 4 = 4 Ion eXchange elements NAIXE200 ≈ 2.4 gpm (8.9 l/min)
Type	M = mobile S = stationary
Type of pump	G = gear pump Z = without
Power supply voltage	F = 230 V, 60 Hz, 3 Ph K = 115 V, 60 Hz, 1 Ph O = 460 V, 60 Hz, 3 Ph Z = without (only available with "Z" pump type option)
Prefilter	G05 = with 5µm element G10 = with 10µm element
Clogging indicator	BM = differential pressure indicator – visual C = differential pressure indicator – electrical
Postfilter	G05 = with 5µm element G10 = with 10µm element
Supplementary details	PKZ = with on-off switch and overload protective motor switch (include with Mobile Option) FA1 = with on-off switch, overload protective motor switch and cut-out when filter clogged (requires neutral wire in power supply) FA2 = with on-off switch, overload protective motor switch and cut-out when filter clogged (does not require neutral wire in power supply)

Model Codes Containing RED are non-standard items – Minimum quantities and longer lead times may apply - Contact HYDAC for information and availability.

Sizing

Tank Volume	Ion eXchange Unit
< 924.6 gal. (< 3,500 liters)	IXU-1
924.6 – 3,962.6 gal. (3,500 – 15,000 liters)	IXU-4
> 3,962.6 gal. (> 15,000 liters)	2x IXU-4

Ion eXchange Element & Filter Elements

Ion eXchange Element	Part No.
NAIXE200	7645980
Particle Filter Element	Part No.
<i>(pre-filter and post-filter)</i>	
5.03.18D 05 BN4 /-V-G	2077497
5.03.18 D 10 BN4 /-V-G	2056369

Scope of delivery

- IXU according to the model purchased. Ion eXchange elements (NAIXE200, see Ion eXchange Element & Filter Elements) purchased separately.
- Operation and maintenance manual

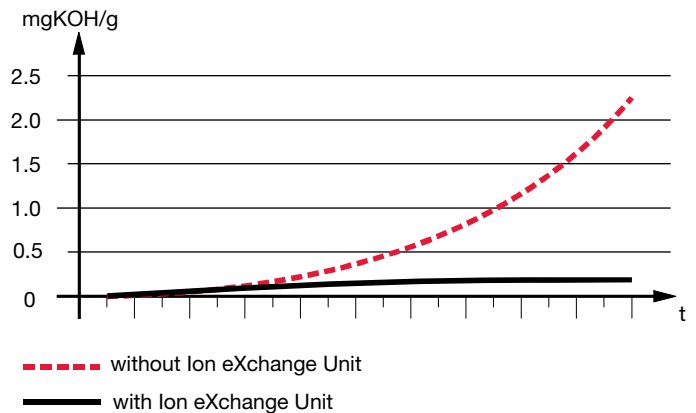
Order examples:

IXU-1-M-G-O-G10-BM-G05-PKZ requires:
1x NAIXE200

IXU-4-M-G-O-G10-BM-G05-PKZ requires:
4x NAIXE200

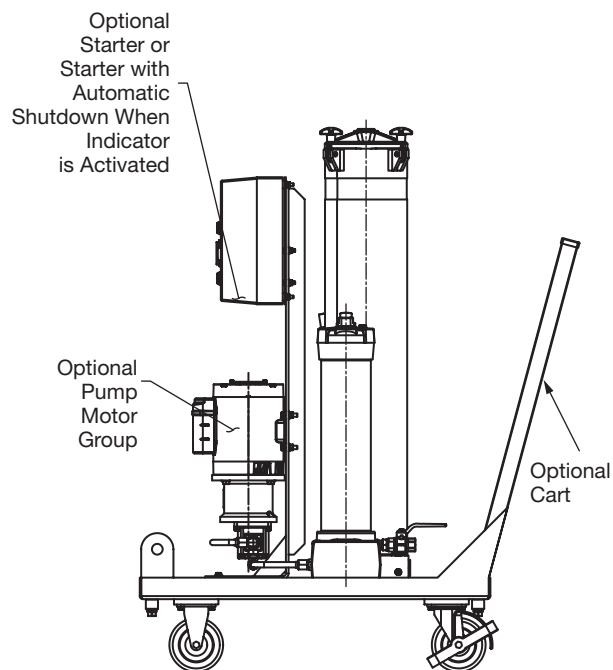
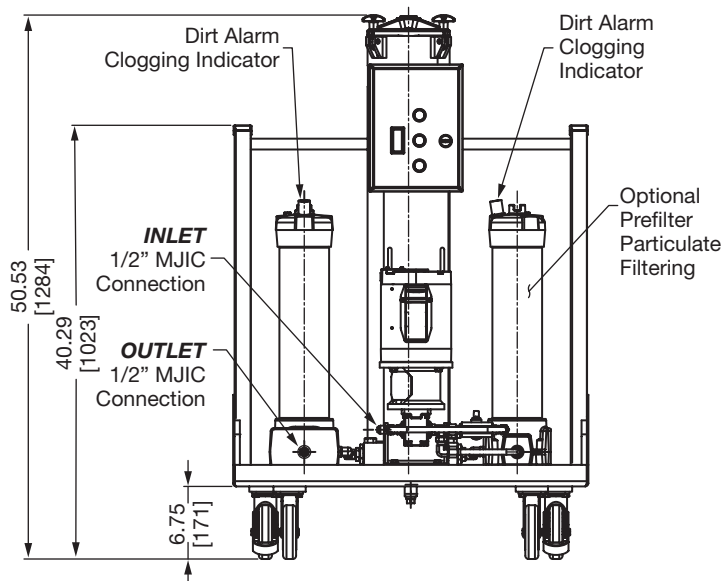
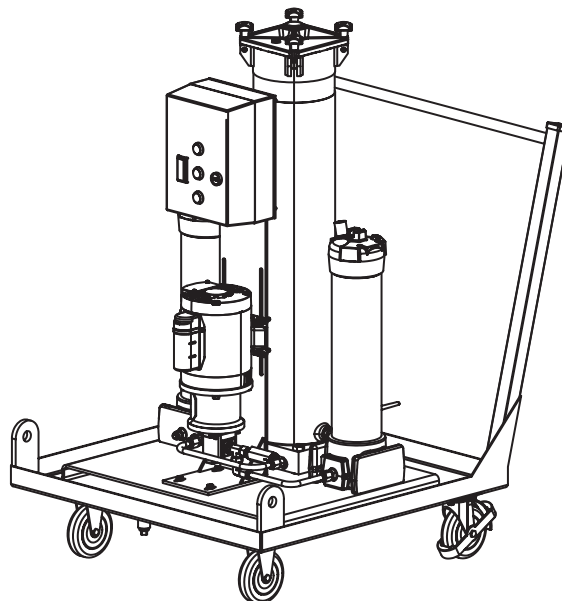
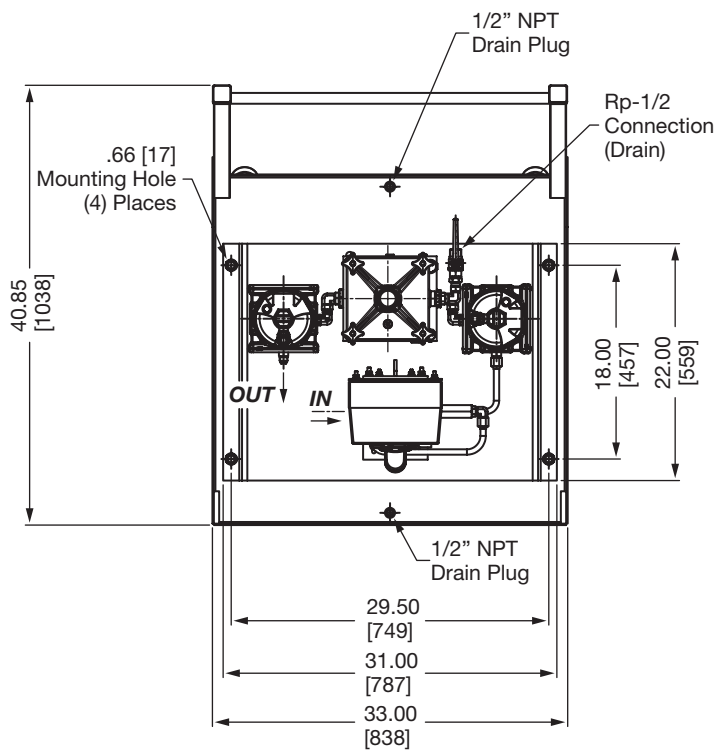
Performance

Example of acidification in HFD fluids with and without Ion eXchange Unit



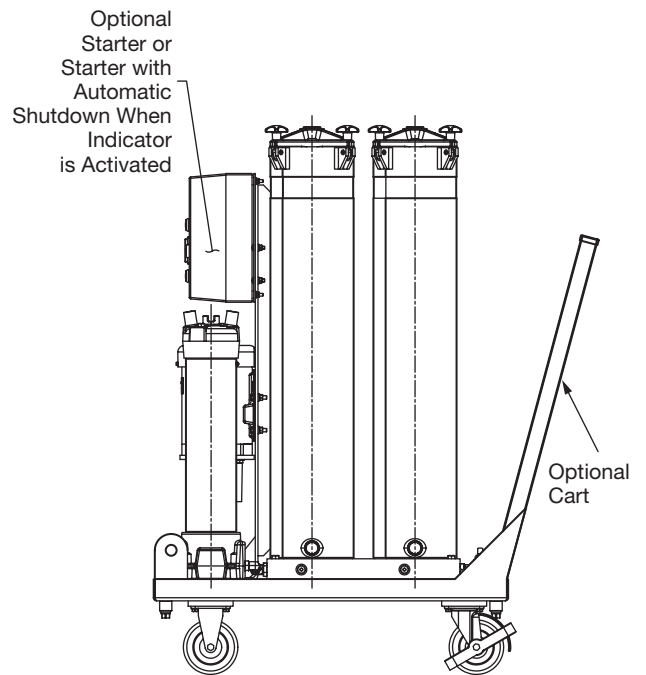
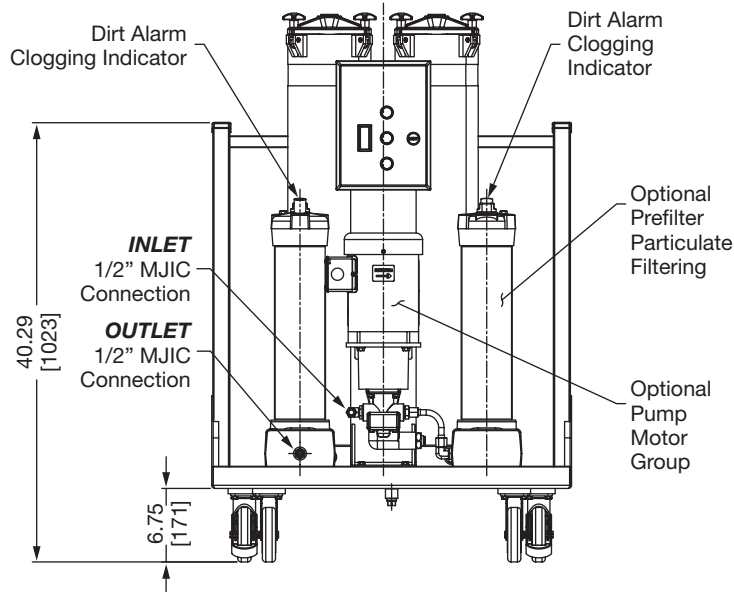
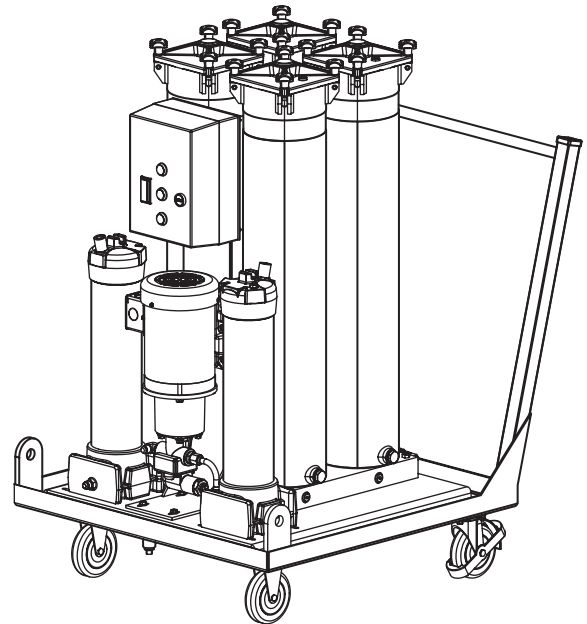
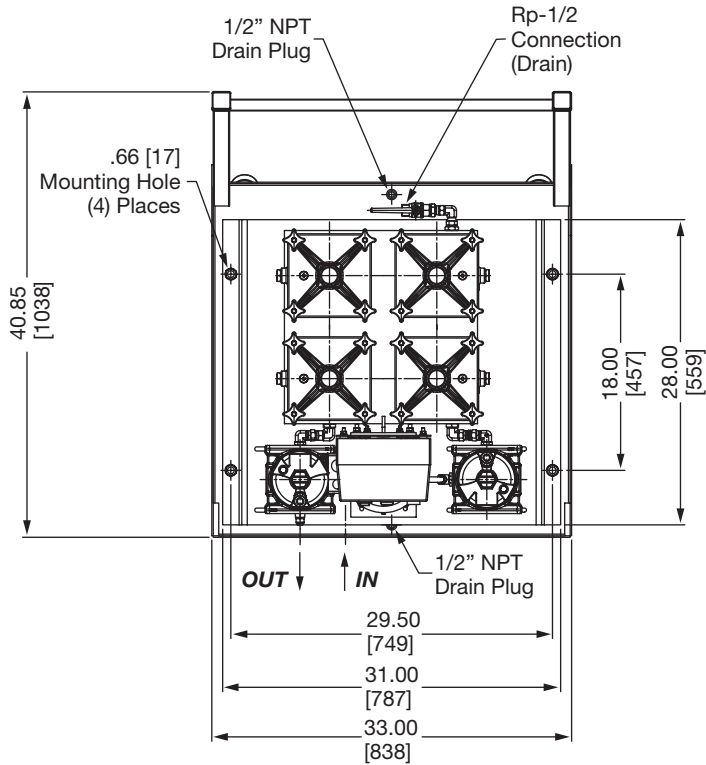
OFFLINE FILTRATION SYSTEMS

Dimensions IXU1 Series



Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Dimensions IXU4 Series



Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.