



HYDRAULIC FILTER ACCESSORIES



MAINTENANCE UNIT FOR FILTER ELEMENT CHANGE



For quick and clean filter element change without oil loss, the Internormen WGR 60 maintenance unit is ideal. Pumping and storing the oil outside of the filter housing, while changing the element avoids oil loss. Returning the extracted oil back into the system, after changing the filter, is a cost saving option.

Applications

for filter element change in wind power plants
hydraulic systems in steel works

Products WGR 60

Technical Data

Dimensions: 520 x 355 x 730 mm

Weight: 12 kg

Barrel capacity: 60 l

Flow rates: 5 – 15 l/min

Viscosity: 4000 mm²/s

Suction / pressure hose: 1,5 m

Connection thread: G 1/2"

Power supply: 230 V

HEATING AND COOLING SYSTEMS



Internormen Oil Heating and Cooling Systems are an essential part of any preventative maintenance programs for wind power systems. They assist in proper oil maintenance, monitoring, and filtration of lubricants that provide protection to gearboxes against corrosion, wear, and tear.

Heating Systems

The HS Heating Systems provide quick additional heating of oil in the gears when low temperatures and extreme conditions cause the oil viscosity reaches up to 741,600 SUS (160 000 cSt (mm²/s)). Both HS systems are maintenance-free and equipped with a monitoring device that prevents the overheating of oil.

Cooling Systems

A wide range of high-quality standard and custom-designed oil coolers with excellent cooling capacities and designed to withstand harshest operating conditions. Eaton Internormen coolers are available in various types and sizes.

Eaton also provides the following for wind power systems.

Additional filtration systems

Metal particle monitoring systems

Solid contamination monitoring systems

Water-in-oil monitoring systems

Water removal systems

High quality desiccant breathers

HEATING AND COOLING SYSTEMS

Applications

Wind Power

Products

Heating Systems

HS10

HS16

Heated Suction Hose HSH

Cooling Systems

CI 71

CI 81

CI 91

CI 101

Plate Cooler WO-CI 95

CLOGGING INDICATORS



Internormen clogging indicators reliably monitor filter clogging caused by particulate accumulation in hydraulic and lubricating oil filters. Different types are available: optical, electrical, optical-electrical, electronic, as well as the following variations: block execution, explosion-proof, thread execution, with reset function and with control function. The clogging indicators easily integrate into automatic control systems, and ensure continuous contamination control.

Characteristics

The AE 30 and AE 40 pollution indicators are electrical differential pressure indicators. The AE 50 to AE 80 pollution indicators are combined optical and electrical differential pressure indicators.

The clogging indicators with designation AOR and AOC are visual pressure difference indicators with a reset function or control function.

The clogging indicator OE is a combined visual and electrical pressure difference indicator. This type of pressure difference indicator can be mounted on all pressure filters with operating pressure ≤ 63 bar, if the corresponding measuring ports on the filter housing are available.

Maintenance free

Continuous pressure difference measuring

Early identification on increased

Applications

Hydraulic and lubrication systems

CLOGGING INDICATORS

Products

AE-Visual-electrical, thread execution
AE- Visual-electrical block execution
AE10_EX - Electrical, explosion-proof
AOR/AOC - Thread execution
OP/OE- Visual/Visual-electrical, block execution
OP/OE- Visual/Visual-electrical
OE-Ex - Visual-electrical, explosion-proof
OE-Ex-Block Visual-electrical, explosion-proof, block execution
E/O – Electrical / visual
E6
VS1-Thread execution
VS1-Block execution
VS2-Thread execution
VS2-Block execution
AV – Shut-off valve

CALIBRATION SET



counting channel	particle size	calibration values:		particle numbers:	
		used	new	set	counted
K1 > 4 µm	0,340	0,295	60898	59085	
K2 > 6 µm	1,210	1,040	24040	21010	
K3 > 10 µm	2,405	2,010	512	592	
K4 > 14 µm	3,990	4,150	173	198	
K5 > 21 µm	6,800	7,010	44	58	
K6 > 27 µm	9,900	9,900	3	3	
K7 > 4,6 µm	0,480	0,425	46700	49310	
K8 > 6,4 µm	1,305	1,210	19980	16831	

set values menu: [5] graphic: [6]
 start flushing: [1] average: [4]
 start calibration: [2] print: [F1]
 loading old values: [3] cancel: [ESC]

CALSOFT 01 - software for automatic secondary calibration for particle sizes of the CCS 2 and CCS 4 - laser sensor based on ISO 11171.

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