



OXiStop OXS

Description

HYDAC's OXiStop is a tank solution for hydraulic systems with integrated, hydraulically driven degassing and dewatering unit.

An integrated membrane prevents direct contact with the ambient air. This means that the tank can be calculated for the differential operating volume actually needed, thus reducing its size. The pump flow rate is not important for the tank calculation.

A very low gas and water content is achieved in the fluid.

Thanks to the membrane which keeps the fluid "vacuum packed", it is also possible to install the OXiStop in extremely dusty or humid environments.

HYDAC offers the OXS as a complete solution with tank in three standard sizes, with differential operating volumes ranging from 30 to 70 litres. Custom-designed solutions are also available.

The OXiStop can also be equipped with a return line filter and plate heat exchanger as an interface to the cooling circuit.

Advantages:

- Reduced oil volume, typically by a factor of 10
- Up to 80 % less air content and reduced dirt ingress extends oil service life
- Higher process speeds
- Higher efficiency
- Reduced noise and wear due to less cavitation
- Ideal for humid and dusty environments
- Reduced costs due to smaller size, fewer installation costs, less oil required and easier transport
- Longer component service life, less servicing

Technical specifications

	OXS 30	OXS 45	OXS 70
Hydraulic data			
Differential operating volume**	≤ 30 l	≤ 45 l	≤ 70 l
Total tank volume	110 l	135 l	185 l
Typical degassing rate*	4 l/h		
Viscosity range	15 to 300 mm ² /s with ACD to 200 mm ² /s		
Maximum fluid flow rate IN / OUT OXS 30, 45, 70	900 l/min		
Fluid temperature range	10 ... 80 °C		
Ambient temperature range**	-20 ... 40 °C		
Storage temperature range	0 ... 40 °C		
Relative humidity**	0 ... 80%, non-condensing		
Filtration unit	OLF 5		
Filter element, filtration unit	N5DM002		
Contamination retention capacity, filter element	200 g ISOMTD® Δp = 2.5 bar		
Pump type, filtration unit	Vane pump		
Flow rate, filtration unit	10 l/min		
Operating pressure, filtration unit	10 bar		
Clogging indicator	Visual differential pressure indicator		
Connection A (IN / OUT)	2 x SAE 3" 3000PSI		
Connection B (IN / OUT)	2 x SAE 3" 3000PSI		

Electrical data, filtration unit

Supply voltage, motors	See model code
Electrical power consumption	370 ... 1,500 W, depending on version
Protection class to DIN 40050	IP54

General data

Permitted fluids**	Mineral oil to DIN 51524
Sealing material**	NBR
Membrane material**	PUR
Typical membrane service life	≈ 6 years with 40 °C – 60 °C fluid temperature ≈ 2 years with 60 °C – 80 °C fluid temperature

* Typical values for ISO VG 46, 40 °C at gas saturation. The degassing rate depends on the total gas content in the oil, the oil temperature, and especially the oil viscosity. The degassing rate reduces as viscosity increases.
** Others on request

Model code

OXS - 30 - N - 1 - Z - Z - 2 - 2 - ACD - /-

Product

OXS = OXiStop

Size

30 = differential operating volume ≤ 30 l
 45 = differential operating volume ≤ 45 l
 70 = differential operating volume ≤ 70 l

Supply voltage, motors

N = 400 V / 50Hz / 3 Ph (MPG standard)*

Sealing material/membrane material

1 = NBR seals, PUR membranes

Return line filter **

Z = without
 1 = NF160
 2 = NF240
 3 = NF280
 4 = NF330
 5 = NF500
 6 = NF750

up to 125 l/min
 up to 450 l/min

Plate heat exchanger + motor-pump unit

Z = without
 1 = HYDAC HEX S615, 20 plates + MFZP-2 * / ***
 2 = HYDAC HEX S615, 40 plates + MFZP-2 * / ***

Vacuum pressure monitoring, degassing unit

1 = pressure gauge
 2 = electronic pressure sensor (EDS)

Level and temperature monitoring

2 = electronic level sensor (HNS)
 with integrated temperature sensor
 FSA visual fluid level indicator on tank as standard

Measuring equipment

Z = without
 ACD = AquaSensor (AS) + ContaminationSensor (CS)

Supplementary details

No details = standard

* Supplied without cable or plug

** The return line filter is supplied without filter element or clogging indicator. Please order separately. For information about sizing and for technical details, see brochure 7.112 NF Inline Filter

*** For information about sizing and for technical details of the cooler, see brochure 5.804 Brazed Plate Heat Exchangers

Sizing

The required OXiStop size (differential operating volume) can be calculated from the actual volume differences of cylinders, accumulators, hoses etc. present in the system. In addition, allowances must be made for the volume required for thermal expansion in the oil and for possible continuous oil losses. This volume (except for accumulators) should be doubled as a safety margin.

Rule of thumb:

Sum of total accumulator volume + 2x sum of volume difference for cylinders, hoses, temperature expansion, etc.

= OXiStop differential operating volume

Also, it is necessary to check whether the total oil volume in the system needs to be returned to the tank when maintenance work is carried out.

Items supplied

- OXiStop tank according to model code incl. tank with membrane cage and integrated membrane, MiniOx degassing unit, OLF 5 offline filtration unit with optional CS 1000 ContaminationSensor and AS 3000 AquaSensor, HNS electronic level sensor, breather filter and piping for individual components.
- Operating and maintenance instructions

Accessories

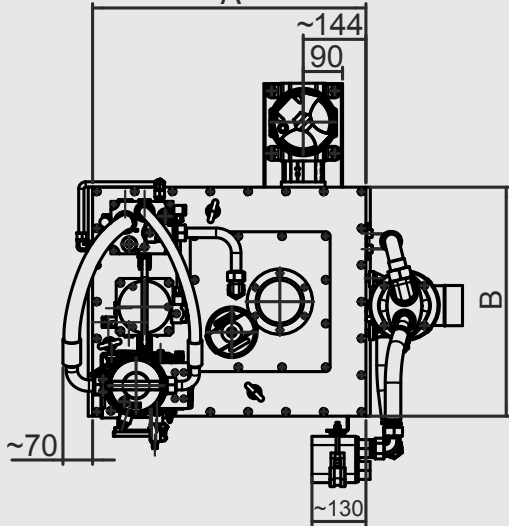
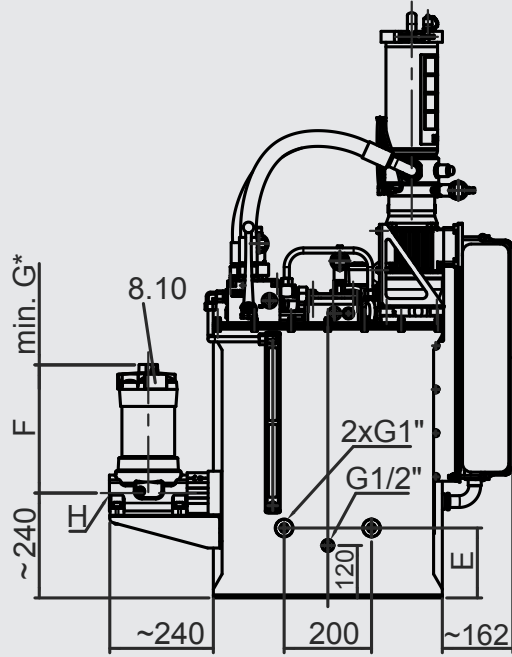
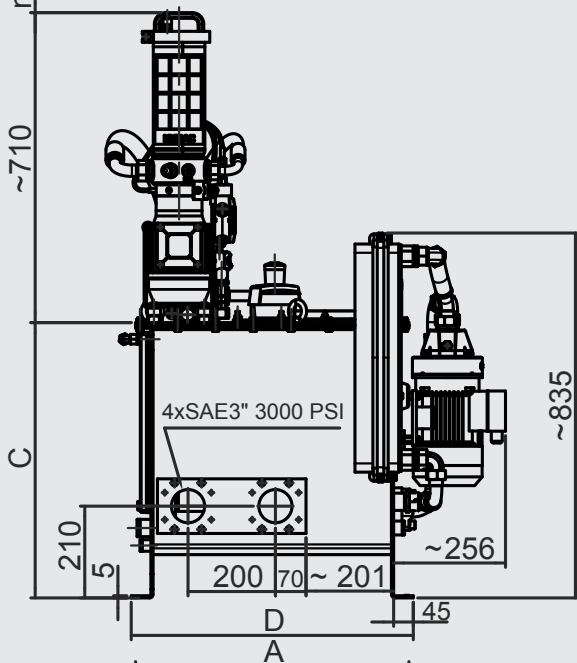
- Filter elements for offline filter OLF 5 (1 × N5DM002 already installed)

Part number	Designation
349494	N5DM002 (2 µm)

- Filter elements for optional return line filter, see brochure 7.112 NF Inline Filter
- Electrical clogging indicators, see brochure 7.112 NF Inline Filter
- Silicone heater for attaching to the surface of the tank, self-adhesive, approx. 500 W (on request)

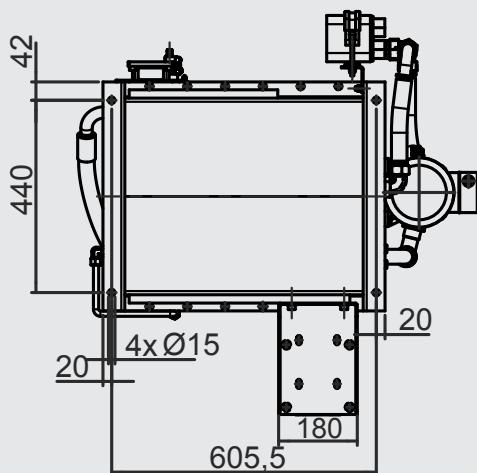
Dimensions

min.400* * Height for element replacement



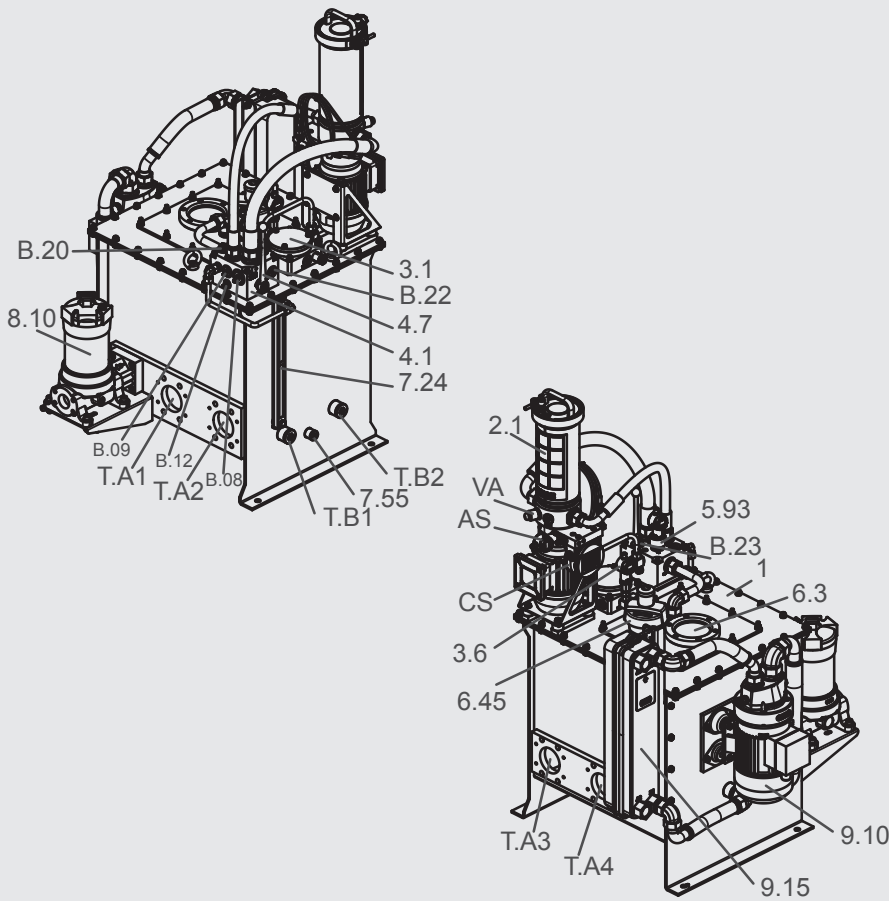
	F	G	H
NF160	205	160	G1 1/4"
NF240	264	220	
NF280	445	400	
NF330	271	170	SAE 1 1/2" 3000 PSI
NF500	352	250	
NF750	702	600	

	A	B	C	D	E
OXS 30	625.5	524	630	645.5	160
OXS 45	625.5	524	750	645.5	160
OXS 70	625.5	524	990	645.5	200



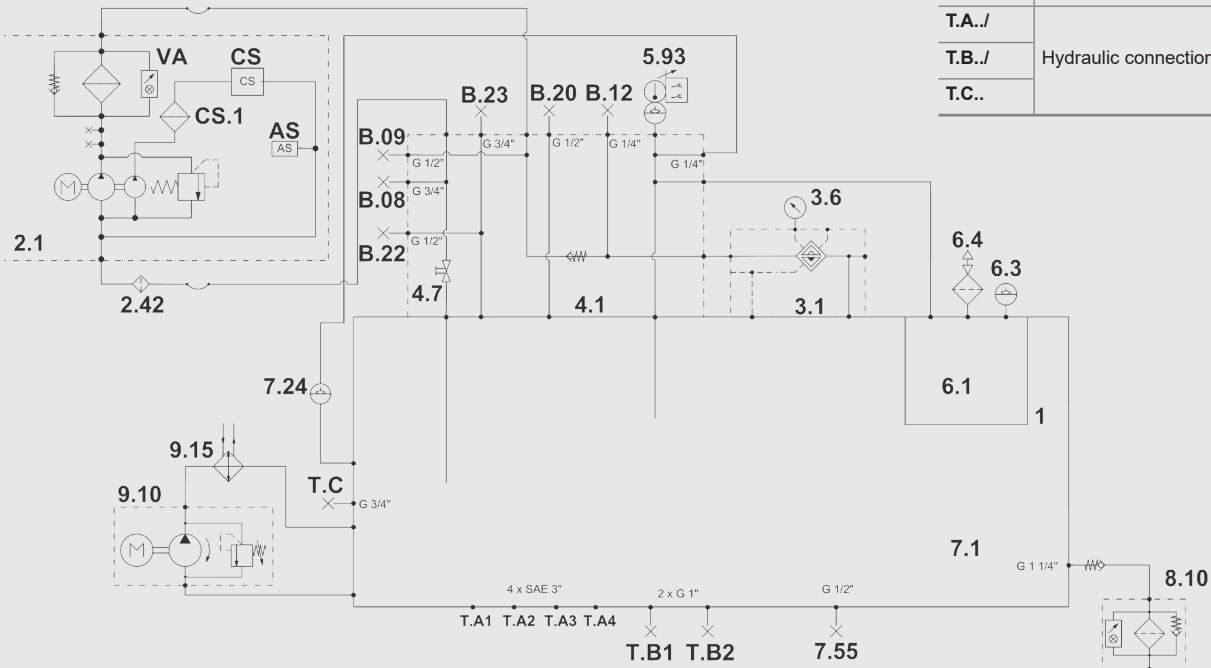
Size	Weight when empty [kg]
OXS 30	148
OXS 45	162
OXS 70	188

Assembly drawing



Item	Component
1	OXS-LID primary body
2.1	OLF 5 offline filtration unit
VA	Clogging indicator on OLF 5 filtration unit
CS	CS ContaminationSensor (optional)
CS.1	Protective screen on fluid filter unit
AS	AS AquaSensor (optional)
2.42	Suction strainer
3.1	MiniOX (MOX) degassing and dewatering unit
3.6	EDS electronic pressure sensor or vacuum gauge (optional)
4	Valve and connection block
4.7	Directional control valve
5.93	Fluid level/temperature sensor HNS, electrical
B.08	Filling port
B.09	Draining port
B.12	Pressure measurement point (pressure line OLF 5)
B.20	Connection for electronic temperature sensor ETS
B.22	Breather fitting / connection for rapid venting
B.23	Connection for additional HNS
6.1	Membrane
6.3	Sight glass
6.4	Breather filter
7.1	Tank
7.24	Fill level indicator, visual
7.55	Drain fitting
8.10	Return line filter (optional)
9.10	Motor-pump assembly for the heat exchanger (optional)
9.15	Heat exchanger (optional)
T.A./	
T.B./	Hydraulic connections
T.C..	

Hydraulic circuit



Note

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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