OXiStop
OXS LID series

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.

The OXS LID series is installed in a custom-designed tank and contains all necessary components.

The OXS LID comes in seven standard sizes, with differential operating volumes ranging from 30 to 500 litres. Combinations are also available.

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 30LID	OXS 45LID	OXS 70LID	OXS 150LID	OXS 250LID	OXS 325LID	OXS 500LID
Hydraulic data							
Differential operating volume	≤ 30 l	≤ 45 l	≤ 70 l	≤ 150 l	≤ 250 l	≤ 325 l	≤ 500 l
Typical degassing rate *	4 l/h						
Viscosity range	15 to 300 mm²/s with ACD to 200 mm²/s						
Maximum fluid flow rate IN / OUT							
OXS 30, 45, 70	900 l/min						
OXS 150, 250	2700 l/min						
OXS 325, 500	5400 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						

Electrical data, filtration unit	
Supply voltage, motor	See model code
Electrical power consumption	370 W
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 at 40 – 60 °C fluid temperature ≈ 2 years at 60 – 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 – 30LID – N – 1 – Z – Z – 2 – 2 – ACD – /-

Product
OXS = OXiStop

Size
30LID = differential operating volume ≤ 30 l
45LID = differential operating volume ≤ 45 l
70LID = differential operating volume ≤ 70 l
150LID = differential operating volume ≤ 150 l
250LID = differential operating volume ≤ 250 l
325LID = differential operating volume ≤ 325 l
500LID = differential operating volume ≤ 500 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

Plate heat exchanger + motor-pump unit
Z = without

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

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

Supplementary details
No details = standard

* Supplied without cable or plug

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 LID according to model code 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, gasket (interface to tank)
- Operating and maintenance instructions
- Instructions for tank installation

Accessories

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

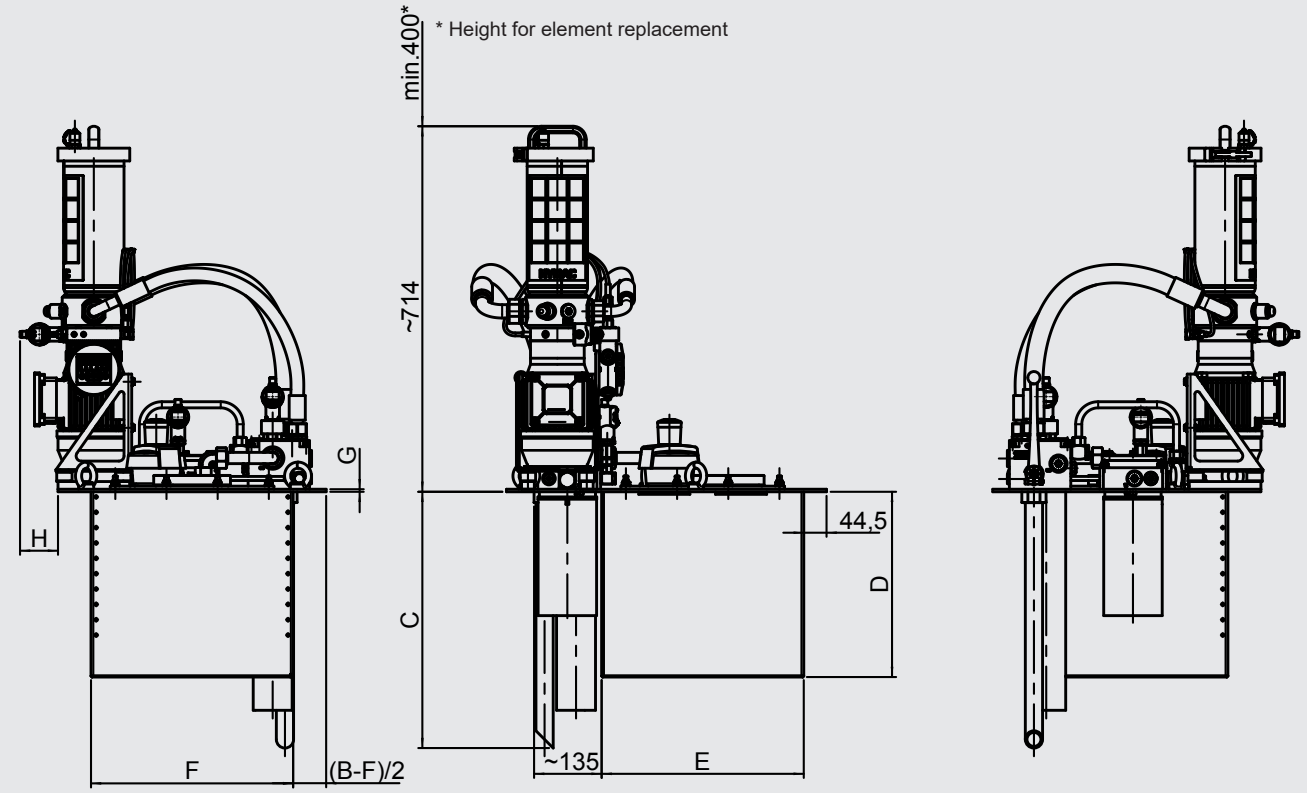
Part number	Designation
349494	N5DM002 (2 µm)

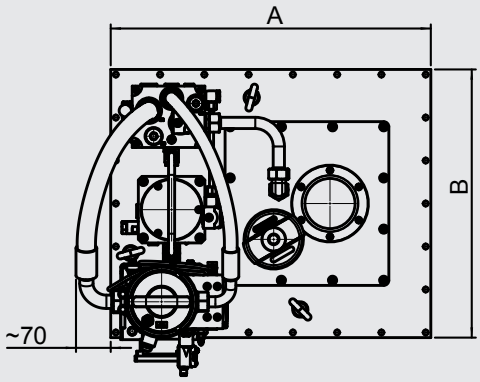
- Electrical clogging indicators, see brochure 7.112 NF Inline Filter

Fluid level gauge (FSA) for mounting on the tank by the customer (recommended)

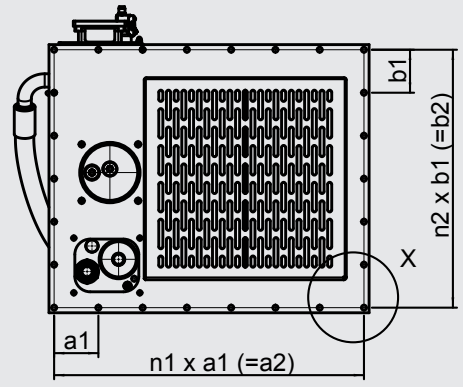
OXS 30	Part no. 700095
OXS 45, 150, 325	Part no. 3858731
OXS 70, 250, 500	Part no. 3858747
Special screw for fluid level gauge (FSA) (1x is required for mounting)	Part no. 3925870

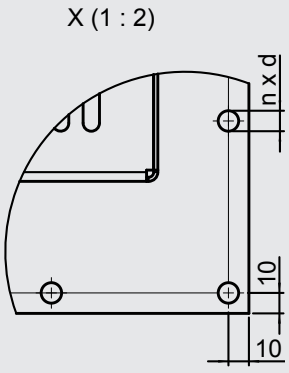
Dimensions





	A	B	C	D	E	F	G	H
OXS 30LID	625.5	524	500	362	395	395	5	74
OXS 45LID	625.5	524	610	472	395	395	5	74
OXS 70LID	625.5	524	820	682	395	395	5	74
OXS 150LID	1015	680	610	472	795	595	5	-14
OXS 250LID	1015	680	820	682	795	595	5	-14
OXS 325LID	1415	880	607	472	1195	795	8	-121
OXS 500LID	1415	880	817	682	1195	795	8	-121

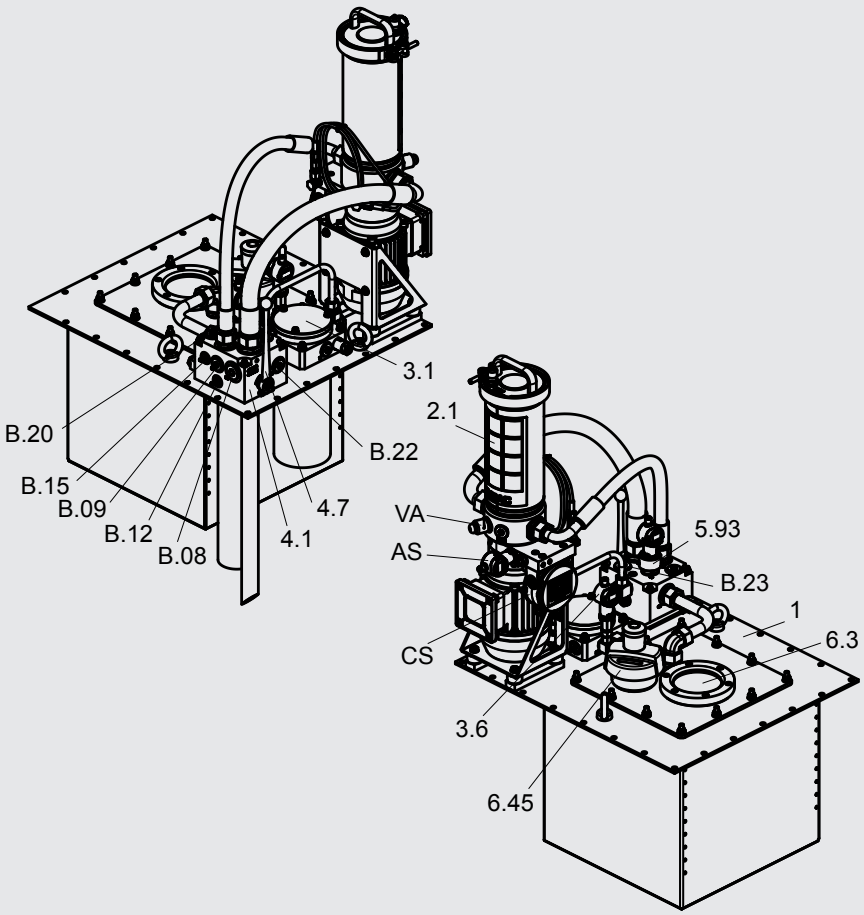




Size	Weight when empty [kg]
OXS 30 LID	66
OXS 45 LID	70
OXS 70 LID	76
OXS 150 LID	99
OXS 250 LID	110
OXS 325 LID	152
OXS 500 LID	166

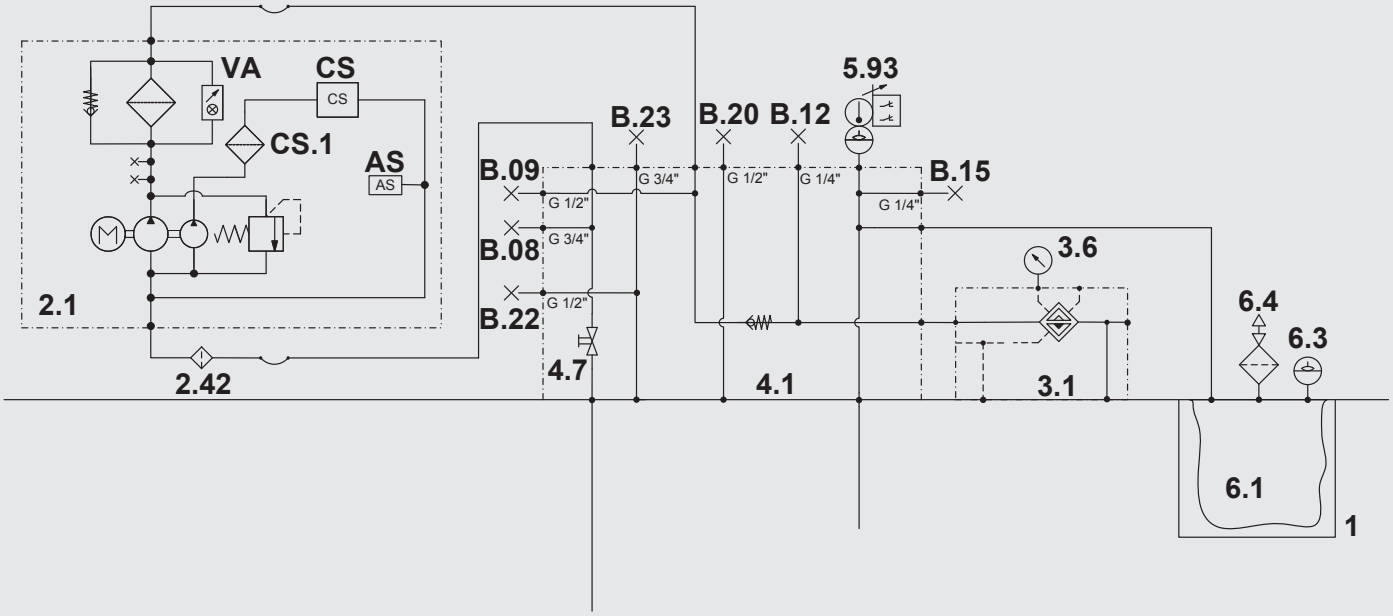
	a1	a2	n1	b1	b2	n2	d	n
OXS 30LID / 45LID / 70LID	86.5	605.5	7	84	504	6	10	26
OXS 150LID / 250LID	99.5	995	10	82.5	660	8	10	36
OXS 325LID / 500LID	116.25	1395	12	86	860	10	10	44

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.15	Port for visual tank fluid level indicator FSA
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

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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