

## Hydraulic Tank

# TH 028

Ready-to-install complete module · Volume 28 l / 7.4 gal (total) · Nominal flow rate up to 170 l/min / 44.9 gpm



Tank TH 028

## Description

### Application

Complete tank solution for use in mobile application. The reservoir can be used with hydraulic or lubrication fluids.

### General

The HIT - Hybrid Integrated Tank® intelligently combines the two manufacturing technologies of rotational molding and injection molding.

### Performance features

The hybrid tank is a ready-to-install complete module. All required tank functions are already integrated. Since the filter housing is part of the tank, there is no sealing point and therefore no risk of leakage. 100% replacement filter element business is ensured by special copy protection. The high thermal strength of the Polyamide material used allows the tank to be used even at higher operating temperatures. Quick-Connect fittings allow fault-free and tool-free hose mounting on the tank and can also be dismantled at any time.

### Integrated return filter

For standard applications

### Integrated return-suction filter

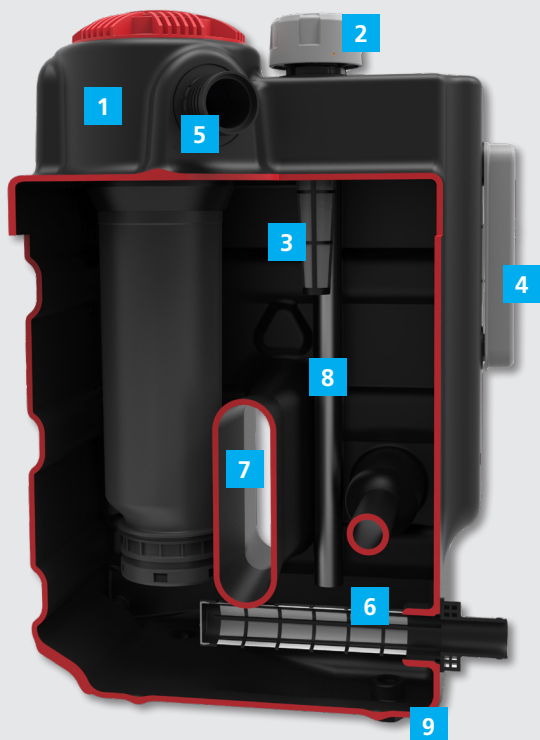
For operation in units with hydrostatic systems, when the return flow is under all operating conditions higher than the oil flow of the feed pump

### Extension pipe optional

Depending on the differential volume in the tank during operation, there is the option of adding an extension pipe to the filter bowl. In this case, the usable oil volume can be increased to 18 l / 4.75 gal.

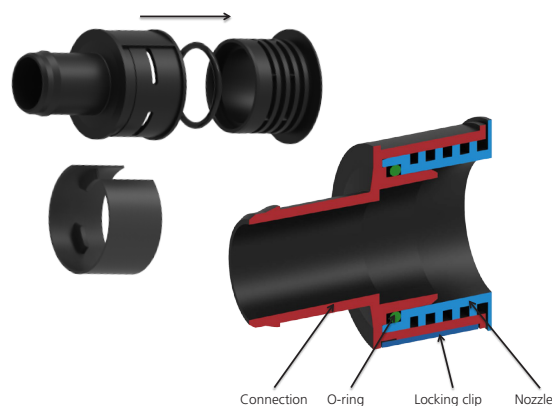
### Accessories

Electrical and / or optical clogging indicators are available on request. For technical data and dimensions see datasheet 60.20.



### Function integration

- 1 Filter housing is integrated in the tank
- 2 Ventilating filter
- 3 Filling filter
- 4 Integrated oil level indicator
- 5 Quick-Connect fittings (see figure below)
- 6 Suction strainer
- 7 Baffle wall (in the shape of a channel)
- 8 Internal suction or return pipes
- 9 Oil drain plug



"Quick-Connect" system technology

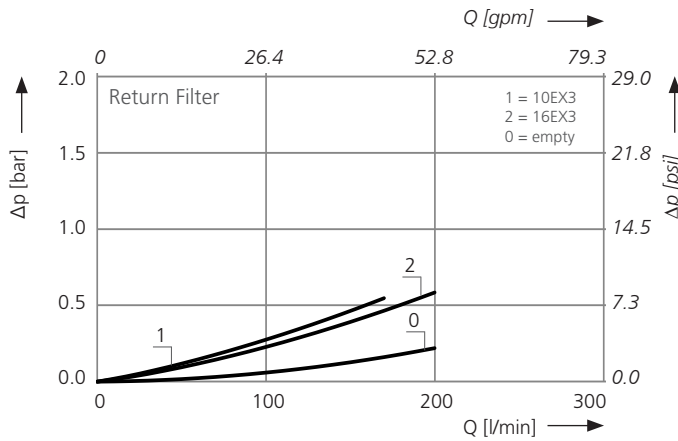
## Characteristics

Tank material:	Polyamide PA6 and Polyamide PA6GF30
Tank volume:	24 l / 6.3 gal usable volume at max. level of oil level gauge. 28 l / 7.4 gal total volume.
Filter fineness:	10 µm(c) and 16 µm(c) for return or return-suction filter; β-values according to ISO16889 280 µm for suction strainer
Nominal flow rates:	Integrated return filter: 170 l/min / 44.9 gpm with 16 µm element 140 l/min / 37.0 gpm with 10 µm element Integrated return suction filter: 120 l/min / 31.7 gpm with 16 µm element 100 l/min / 26.4 gpm with 10 µm element Suction strainer: 60 l/min / 15.8 gpm

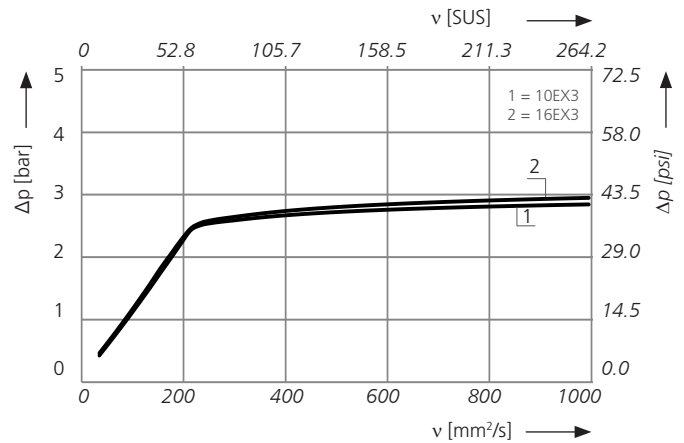
Breather:	2 µm
Filling strainer:	450 µm
Hydraulic fluids:	Mineral oil and biodegradable fluids (HEES and HETG, see info-sheet 00.20)
Temperature range:	-30 °C ... +100 °C (temporary -40 °C ... +120 °C) +22 °F ... + 212 °F (temporary +40 °F ... +248 °F)
Weight of tank:	8 kg / 17.6 lbs
Connections:	- Hose barb connection - Quick-Connect system (see catalog sheet 75.00) - For installation recommendations, see info sheet 00.325.

### $\Delta p$ -curves of integrated return and return-suction filter

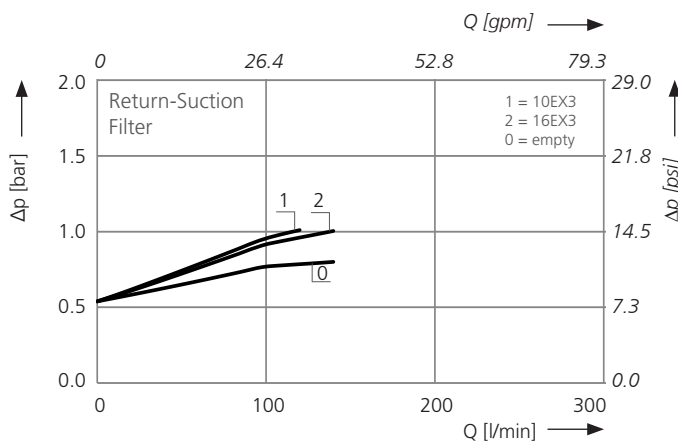
**D1** Pressure drop as a function of the **flow volume**  
at  $v = 35 \text{ mm}^2/\text{s} / 162 \text{ SUS}$



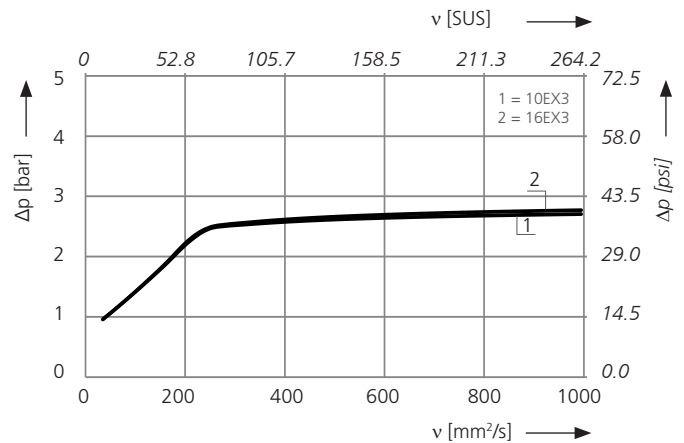
Pressure drop as a function of the  
**kinematic viscosity** at nominal flow



**D2** Pressure drop as a function of the **flow volume**  
at  $v = 35 \text{ mm}^2/\text{s} / 162 \text{ SUS}$   
50% of the nominal flow volume via connection B<sub>1</sub> / B<sub>2</sub>

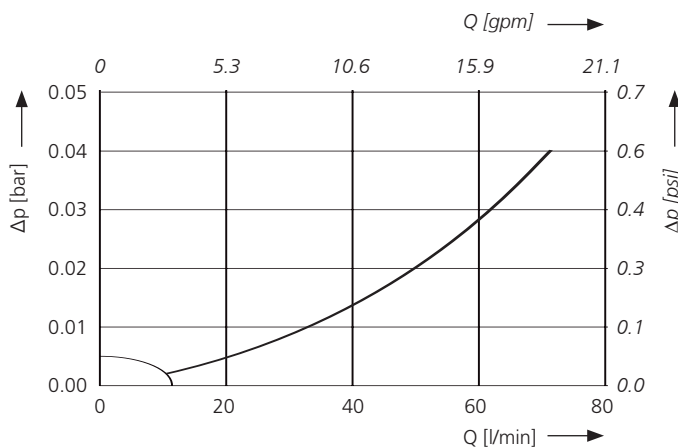


Pressure drop as a function of the  
**kinematic viscosity** at nominal flow

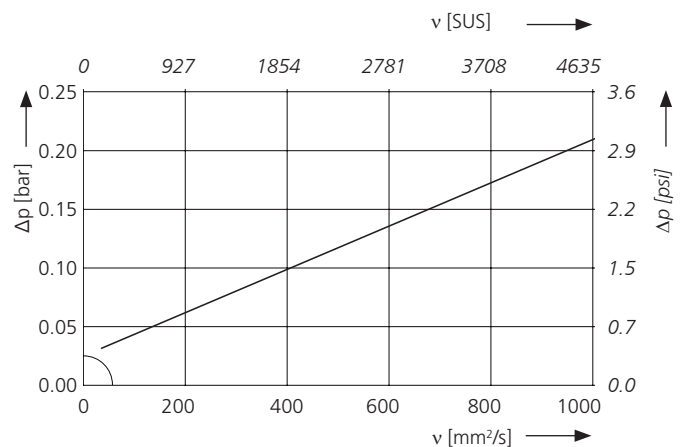


### $\Delta p$ -curves of suction strainer

**D3** Pressure drop as a function of the **flow volume**  
at  $v = 35 \text{ mm}^2/\text{s} / 162 \text{ SUS}$

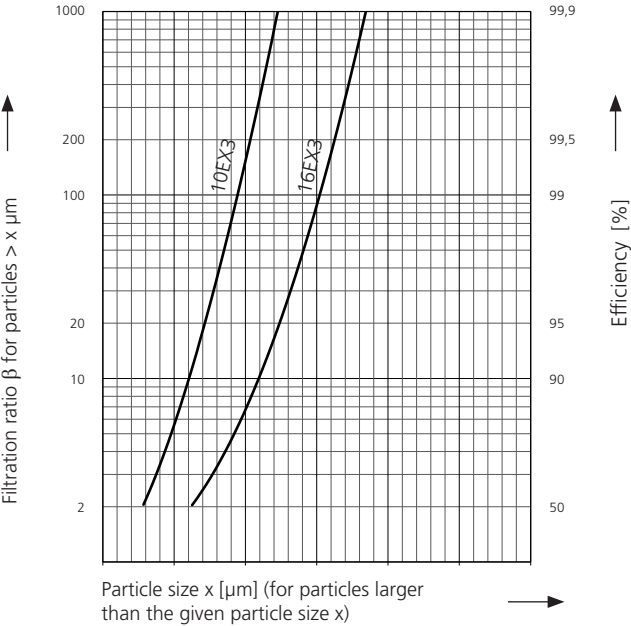


Pressure drop as a function of the  
**kinematic viscosity** at nominal flow



Filter fineness curves

**Dx** Filtration ratio  $\beta$  as a function of particle size  $x$  obtained by the Multi-Pass Test according to ISO 16889



The abbreviations represent the following  $\beta$ -values resp. finenesses:

Bei EXAPOR®MAX 3:

10EX3 =  $\beta_{10(c)}$  = 200 EXAPOR®MAX 3  
16EX3 =  $\beta_{16(c)}$  = 200 EXAPOR®MAX 3

For special applications, finenesses differing from these curves are also available by using special composed filter material.

Ordering Code

Tank assembly

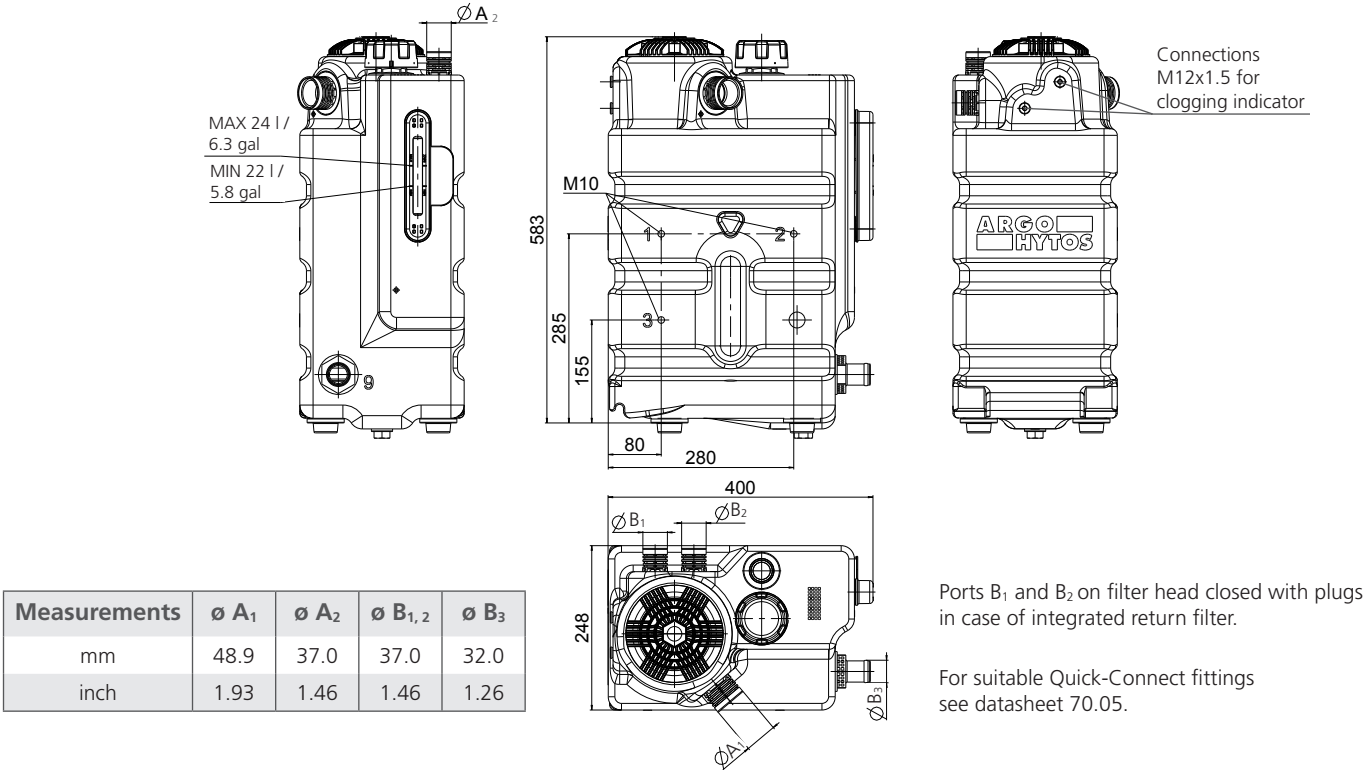
Order example:  
TH028 - RS200 - I1 - OMO - 301

		TH028 - - - OMO -				
Tank type	Code					
Hydraulic tank 28 l / 7.4 gal total volume	TH028					
Filter type and size	Code					
Return filter	RF210					
Return-suction filter	RS200					
Filter fineness	Code					
10 µm (10 µm)	G1					
16 µm (16 µm)	I1					
Bypass valve and breather	Code					
2.5 bar / 36.3 psi bypass valve Breather with filling strainer	OMO					
Variant	Code					
With extension pipe	301					
Without extension pipe	empty					

Replacement filter element

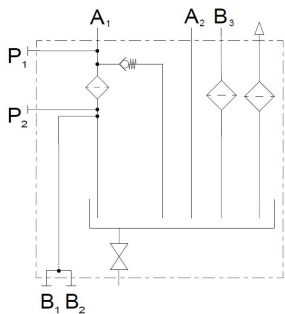
Filter fineness see diagram Dx	Replacement filter element Part No.
10EX3 (10 µm)	V9.1224-56
16EX3 (16 µm)	V9.1224-58

Dimensions

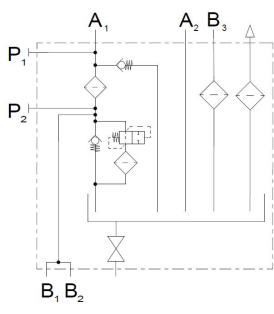


## Symbols

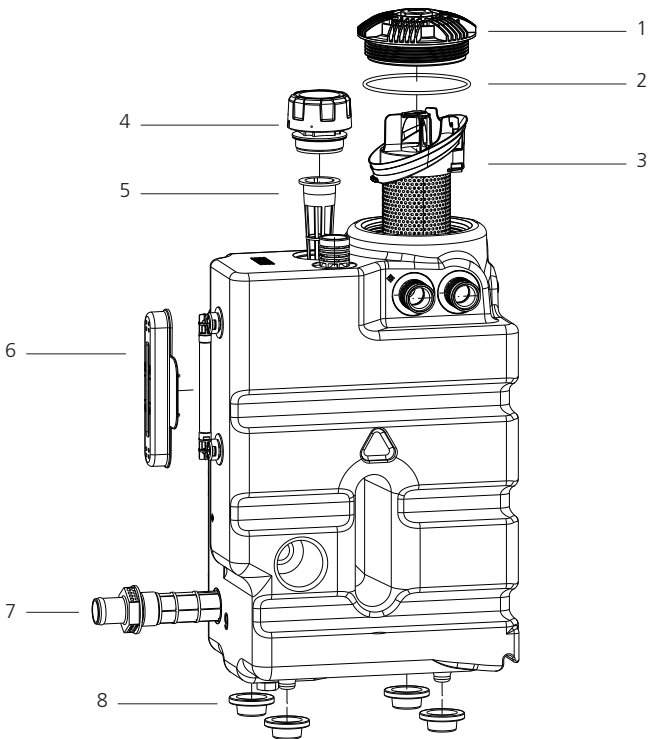
Return Filter



Return Suction Filter



## Spare parts



Pos.	Designation	Part No.
1	Filter cap with O-ring	TH 000.1200
2	O-ring	N007.1264
3	Filter element	see ordering code
4	Ventilating filter	L1.0807-06
5	Filling strainer	S0.0516-04
6	Cover for oil level gauge	TE 0416.0702
7	Suction strainer	S0.0426-02
8	Rubber foot	TH 000.0709

The functions of the complete filters as well as the outstanding features of the filter elements assured by ARGO-HYTOS can only be guaranteed if original ARGO-HYTOS spare parts are used.

## Quality Assurance

### Quality management according to DIN EN ISO 9001

To ensure constant quality in production and operation, ARGO-HYTOS filter elements undergo strict controls and tests according to the following ISO standards:

ISO 2941	Verification of collapse / burst pressure rating
ISO 2942	Verification of fabrication integrity (Bubble Point Test)
ISO 2943	Verification of material compatibility with fluids
ISO 3968	Evaluation of pressure drop versus flow characteristics
ISO 16889	Multi-Pass-Test (evaluation of filter fineness and dirt-holding capacity)
ISO 23181	Determination of resistance to flow fatigue using high viscosity fluid

**Various quality controls during the production process guarantee the leakfree function and solidity of our filters.**

Illustrations may sometimes differ from the original. ARGO-HYTOS is not responsible for any unintentional mistake in this specification sheet.