

# Multifunctional Unit MFE

## for Return-Suction Filters and Return Filters



### Description

#### Application

In particular for mobile machines with hydrostatic drives (closed circuit) and working hydraulic (open circuit), equipped with an oil cooler.

The multifunction unit can be used as collector with integrated check valve and thermostatic valve in combination with ARGO-HYTOS return-suction filters of the series E 084 / E 198 / E 498.

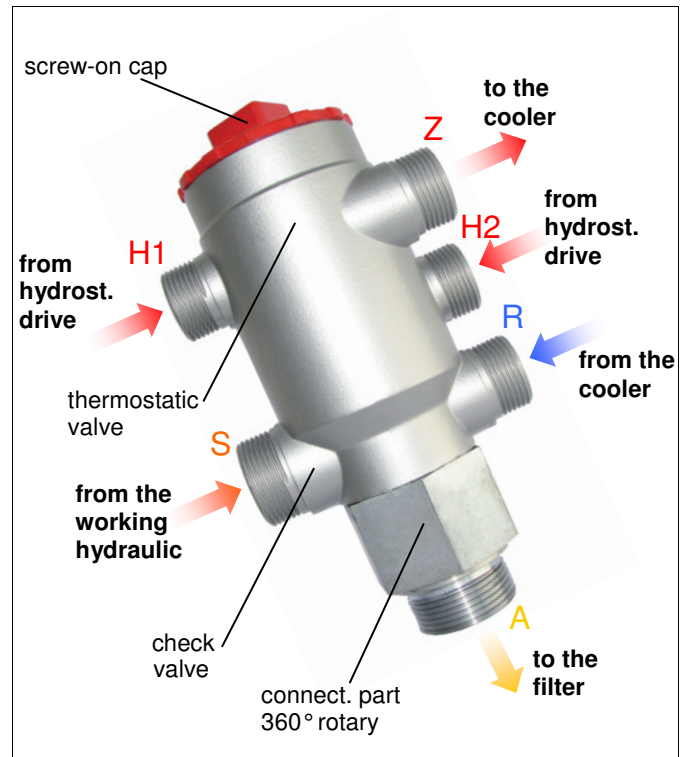
Also separate drain oil/cooler-circuits can be realised by the help of suitable return filters.

#### Function

Drain oil (H1, H2) from the hydrostatic drive (pump and drive motor) is routed either through a thermostatic cooler-by-pass directly to the filter (A), or at higher operating temperatures, through the cooler (Z → R), then the filter, and then into the tank.

Bypassing the cooler at cold start-up maintains the back pressure of the drain lines within the permitted range, and allowing the operating temperature of the hydraulic system to be reached more quickly.

The return oil from the working hydraulic (S) flows, optionally pressurised by a check valve, through the filter (A) and into the tank.



### Characteristics

#### Nominal flow rate

Up to 200 l/min (total supply)  
Splitting: H1+H2 = 80 l/min, S = 120 l/min

#### Connection

All connections for drain oil, return oil, cooler and filter are equipped with external threaded ports (direct installation of hose-/ pipelines with union nut).

H1, H2, R, Z M30x2 (DKOL\* Ø 22)  
S M36x2 (DKOL\* Ø 28)  
A G1¼ or G1 (see dimensions)  
\* acc. to ISO 8433-1 (24°-Schneidring)

#### Hydraulic fluids

Mineral oil and biodegradable fluids  
(HEES or HETG, see info-sheet 00.20)

#### Temperature range

- 20 °C ... + 100 °C (short intervals - 30 °C ... + 120 °C)

#### Operating pressure

Max. 10 bar

#### Thermostatic valve

Operating range + 50 °C ... + 70 °C

#### Check valve

Opening pressure 1 bar

#### Materials

Screw-on cap: Polyester, GF reinforced  
Housing: Aluminium alloy  
Connection: Steel  
Seals: NBR (Viton on request)  
Thermostatic valve: Polyamide, GF reinforced

#### Mounting position

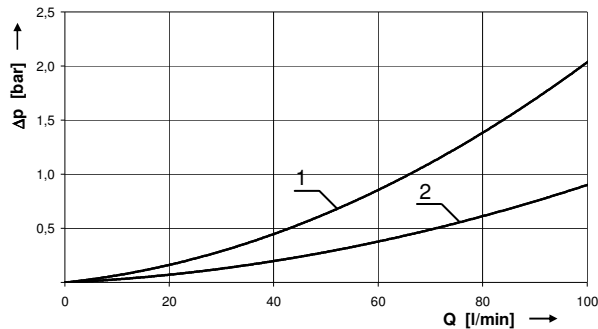
As desired, directly screwed into the filter

## Diagrams

**$\Delta p$ -curves for complete multifunctional units MFE 200-01 (1, 2, 4 and 6) and MFE 200-02 (1, 2, 3 and 5)**  
**Pressure measurement at connection H2** (supply through H1 and H2, S closed, Z hot-wired after R)

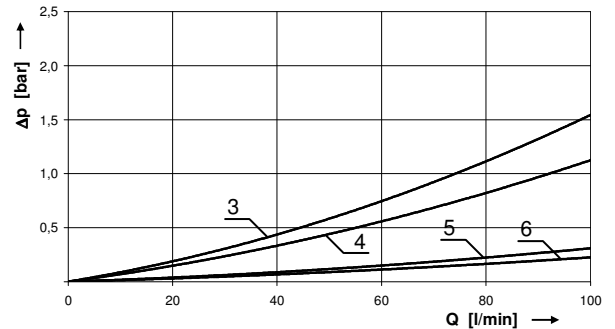
Pressure drop as a function of the **volume flow** at  
 $v = 40 \text{ mm}^2/\text{s}$  (1) and  $v = 20 \text{ mm}^2/\text{s}$  (2)

**Thermostatic valve open**



Pressure drop as a function of the **volume flow** at  
 $v = 1000 \text{ mm}^2/\text{s}$  (3 and 4) and  $v = 200 \text{ mm}^2/\text{s}$  (5 and 6)

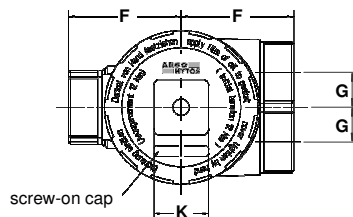
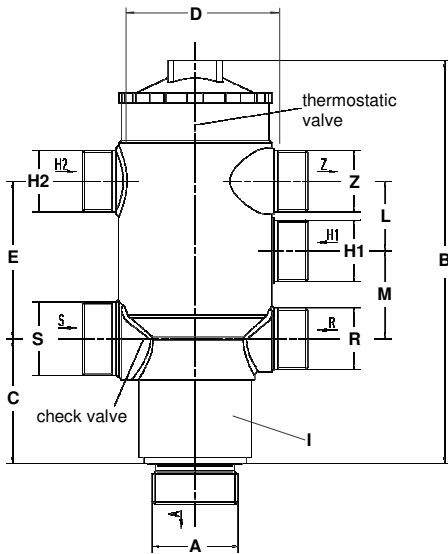
**Thermostatic valve closed**



### Note

The pressure drop produced by the pipelines, cooler and filter must be added to those of the multifunctional unit.

## Dimensions



### Measurements

MFE 200	-01	-02
A	G1 <sup>1/4</sup>	G1
B	200	230
C	62	92
D	75	
E	77	
F	56	
G	17	
H1	M30x2	
H2	M30x2	
I	SW 55	
K	SW 27	
L	34	
M	43	
R	M30x2	
S	M36x2	
Z	M30x2	

### Order no.:

#### MFE 200-01

with G1<sup>1/4</sup> (connection A)

#### MFE 200-02

with G1 (connection A)

### Note

Other types e.g. with alternative temperature range or without check valve, on request.

### Symbol

