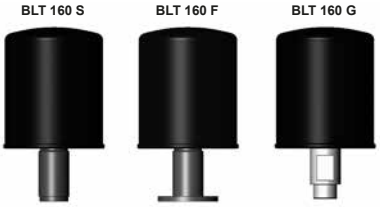
# Tank Breather Filter and Dehumidifier BLT
up to 270 l/min




## 1. TECHNICAL SPECIFICATIONS

### 1.1 FILTER HOUSING

**Construction**
The filters consist of a spin-on filter can which screws onto a connection tube installed on the oil tank. The connection can either be a flange, weld or threaded version.

### 1.2 FILTER CARTRIDGES

The replacement cartridges comply with all relevant ISO test criteria.

### 1.3 SEALS

Cardboard for flange model.

### 1.4 SPECIAL MODELS AND ACCESSORIES

On request

### 1.5 SPARE PARTS

See Original Spare Parts List

### 1.6 CERTIFICATES AND APPROVALS

On request

### 1.7 FILTER SPECIFICATIONS

| | |
|---|---|
| Temperature range | -30 °C to +100 °C |
| Material of connection tube | Steel |
| Material of spin-on can | Sheet steel |

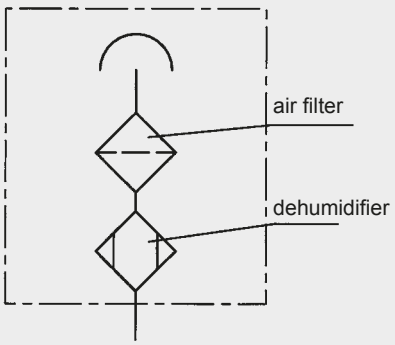
### 1.8 COMPATIBILITY WITH HYDRAULIC FLUIDS ISO 2943

The tank breather filter/dryer BLT is suitable for use with all standard mineral and lubrication oils.

### 1.9 CHANGING INTERVALS

The filter elements or filters must be replaced as frequently as the fluid filters, but at least every 6 months.

**Symbol**




## 2. MODEL CODE

**BLT M 160 F 3 W 1 . X**

### 2.1 COMPLETE FILTER

**Filter type**
BLT

**Filter material**
M molecular sieve

**Size of filter**
160

**Type and size of connection**

| Type | Connection | Size of filter 160 |
|---|---|---|
| F | Flange connection | ● |
| S | Weld connection | ● |
| G | Threaded connection | ● |

**Filtration rating in µm**
3 3 µm absolute

**Type of clogging indicator**
W without port, no clogging indicator

**Type code**
1

**Modification number**
X the latest version is always supplied

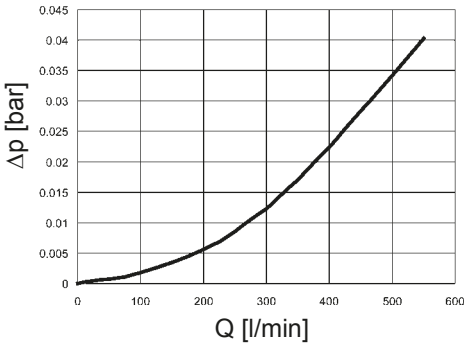
**2.2 REPLACEMENT CARTRIDGE:** 0160 MU 003 M

# 3. FILTER CALCULATION / SIZING

**Differential pressure across breather filter**

The differential pressure in the clean condition is shown in the graph below.

**BLT 160**




## 3.1 SIZING GUIDELINES

The rate at which contamination and humidity enters a hydraulic system can be considerably reduced by using efficient tank breather filtration.

**CAUTION:**
Incorrectly sized tank breather filters can place additional strain on the system and reduce the service life of hydraulic filter elements.

For optimum sizing the following should therefore be observed:

- Filtration rating of breather filter = filtration rating of hydraulic filter
- Only use breather filters with an absolute retention rate (d100 = x µm; x = given filtration rating)
- Max. permitted initial pressure drop: 0.01 bar (with a clean filter element and at calculated air flow)
- Determining the calculated air flow:
  $Q_A$ = f5 x $Q_p$
  $Q_A$ = calculated air flow in $l_N$/min
  f5 = factor for operating conditions
  $Q_p$ = max. flow rate of the hydraulic pump in l/min

| Ambient conditions | Factor f5 |
|---|---|
| Low dust concentration; filter fitted with clogging indicator; continuous monitoring of the filter | 1-2 |
| Average dust concentration; filter without clogging indicator; intermittent monitoring of the filter | 3-6 |
| High dust concentration; filter without clogging indicator; infrequent or no monitoring of the filter | 7-10 |

## 3.2 WATER RETENTION CAPACITY

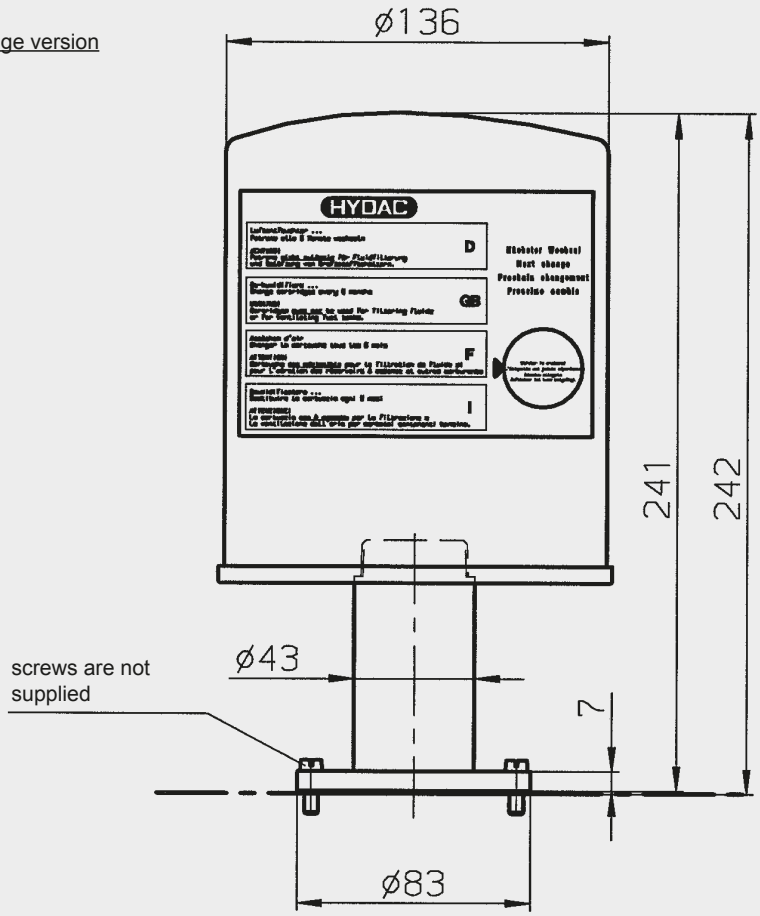
| Temperature | Rel. humidity | $gH_2O$ |
|---|---|---|
| 0 °C | 30 % | 190 |
| 15 °C | 60 % | 210 |
| 25 °C | 90 % | 230 |

# 4. DIMENSIONS

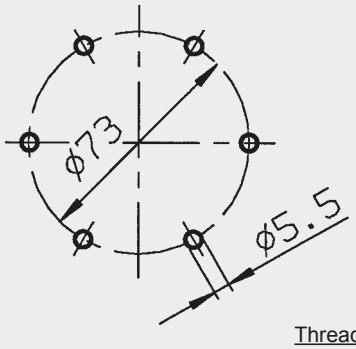
**Tank requirements**

1. In the filter contact area, the tank flange should have a maximum flatness of 0.3 mm and RA 3.2 µm maximum roughness.
2. In addition, the contact area should be free of damage and scratches.
3. The fixing holes of the tank flange must be blind, or stud bolts with threadlocker must be used to fix the filter. As an alternative, the tank flange can be continuously welded from the inside.
4. Both the tank sheet metal and/or the filter mounting flange must be sufficiently robust so that neither deform when the seal is compressed during tightening.

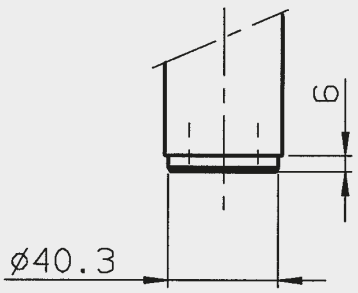
Flange version



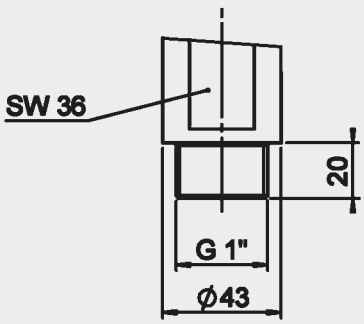

Interface to DIN 24557/Part 2




Weld version




Threaded version




## 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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