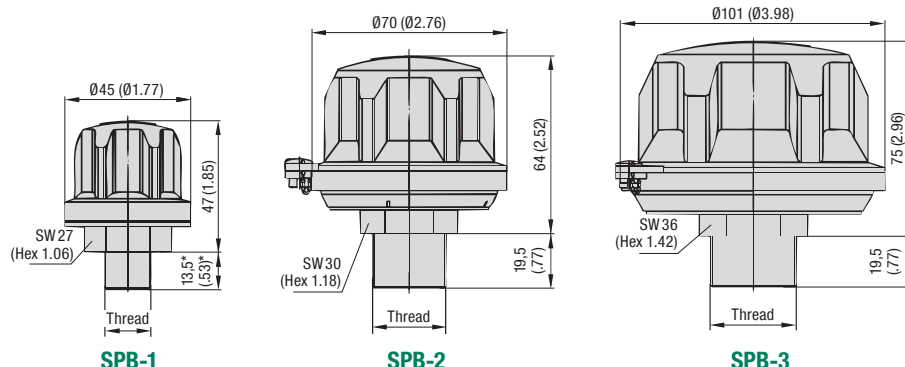


## Plastic Filler Breather Types SPB-1 / 2 / 3 (Threaded Version)

B



**SPB-1**

**SPB-2**

**SPB-3**

\* for thread type N12: 16,0 (.63)

(See page 28 for compact version SPBN)

### Characteristics

Designed to be used as filler ports for hydraulic reservoirs, allowing the reservoir to breathe whilst protecting it from contamination found in harsh environments

#### Features

- Available with 3 different cap diameters
- Threaded version, equipped with male BSP thread (ISO 228) or male NPT thread (ANSI B1.20.1)
- Operating temperature range: -40 °C ... +120 °C / -40 °F ... +248 °F

#### Materials

- Made of non-corrosive materials
- Body and cap made of glass-fibre reinforced Polyamide (PA)
- Sealings made of NBR (Buna-N®)

Contact STAUFF for alternative materials.

#### Accessories / Options

- Pressurisation up to 0,7 bar / 10 PSI (not available for SPB-1)
- Air filter element
- Anti-splash feature
- Plastic dipstick with integrated anti-splash feature
- Plastic dipstick with integrated magnet
- Oil Demister (not available for SPB-1)

Please see pages 26 and 47 for details.

#### Maximum Air Flow Rate

- 0,15 m³/min / 5.30 cfm for SPB-1
- 0,40 m³/min / 14.13 cfm for SPB-2
- 1,00 m³/min / 35.31 cfm for SPB-3

Please see page 27 for detailed air flow curves.

#### Installation

- Recommended mounting spaces:
  - Ø48 mm / Ø1.89 in for SPB-1,
  - Ø90 mm / Ø3.54 in for SPB-2, and
  - Ø122 mm / Ø4.80 in for SPB-3

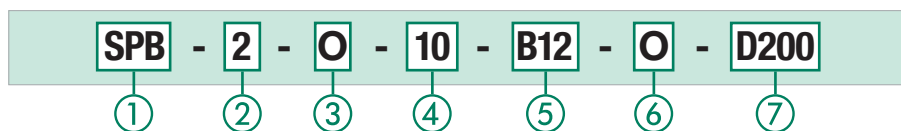
### Thread Options

Thread	SPB-1	SPB-2	SPB-3	Code
Male BSP Thread (ISO 228)				
G1/4	●	○	○	B04
G3/8	●	●	○	B06
G1/2	●	●	●	B08
G3/4	○	●	●	B12
G1	○	○	●	B16

Thread	SPB-1	SPB-2	SPB-3	Code
Male NPT Thread (ANSI B1.20.1)				
1/4	●	○	○	N04
3/8	●	○	○	N06
1/2	●	○	○	N08
3/4	●	●	●	N12
1	○	○	●	N16

● Standard Option

### Order Codes



#### ① Type

Plastic Filler Breather **SPB**

#### ② Version

Threaded version; Cap diameter Ø45 mm (Ø1.77 in) **1**  
 Threaded version; Cap diameter Ø70 mm (Ø2.76 in) **2**  
 Threaded version; Cap diameter Ø101 mm (Ø3.98 in) **3**

#### ③ Pressurisation

Without pressurisation (standard option) **0**  
 Pressurised at 0,2 bar / 3 PSI **B0.2**  
 Pressurised at 0,35 bar / 5 PSI **B0.35**  
 Pressurised at 0,7 bar / 10 PSI **B0.7**

Type SPB-1 is only available without pressurisation. Please see page 26 for details.

#### ④ Air Filter Element (Material / Micron Rating)

10 µm Foam / PUR (standard option) **10**  
 40 µm Foam / PUR **40**  
 3 µm Inorganic Glass-Fibre, pleated **E03**  
 10 µm Filter Paper, pleated **L10**

Options E03 and L10 are only available for type SPB-3. Contact STAUFF for alternative materials / micron ratings.

#### ⑤ Connection Thread (Male)

G1/4 (for SPB-1 only) **B04**  
 G3/8 (for SPB-1 and 2 only) **B06**  
 G1/2 (for SPB-1, 2 and 3) **B08**  
 G3/4 (for SPB-2 and 3 only) **B12**  
 G1 (for SPB-3 only) **B16**  
 1/4 NPT (for SPB-1 only) **N04**  
 3/8 NPT (for SPB-1 only) **N06**  
 1/2 NPT (for SPB-1 only) **N08**  
 3/4 NPT (for SPB-1, 2 and 3) **N12**  
 1 NPT (for SPB-3 only) **N16**

#### ⑥ Anti-Splash Feature

With anti-splash feature (standard option) **A**  
 Without anti-splash feature **0**

The anti-splash feature for the SPB-1, can only be achieved in conjunction with a dipstick, but is not available for the SPB-1 with connection sizes B04 and N04. Please see page 26 for details.

#### ⑦ Dipstick

Plastic dipstick (200 mm / 7.88 in) with integrated anti-splash feature **D200**  
 Plastic dipstick (300 mm / 11.81 in) with integrated anti-splash feature **D300**  
 Plastic dipstick (300 mm / 11.81 in) with integrated magnet **D300M**  
 Without dipstick **-**

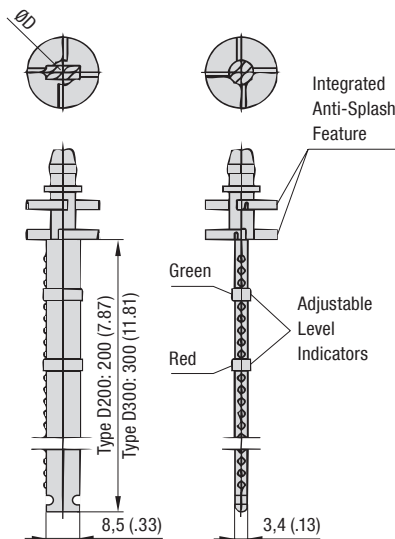
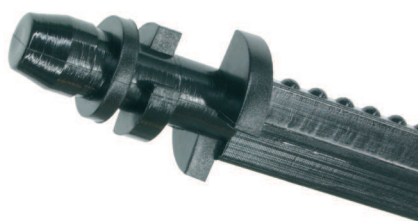
A shorter dipstick length can be achieved by simply cutting down the total length according to individual requirements. Please see page 26 for details.

Dimensional drawings: All dimensions in mm (in).



## Plastic Dipstick Types DS-1 / 2 / 3 Anti-Splash Feature

B



Connection	Code	For Type	Suitable Dipstick*	ØD (mm/in)	
Male BSP Thread (ISO 228)	G1/4	B04	SPB-1	Dipstick Option Not Available	
	G3/8	B06	SPB-1/2	DS-1	10 / .39
	G1/2	B08	SPB-1/2/3	DS-2	14 / .55
			SPBM		
	G3/4	B12	SPB-1/2	DS-3	18 / .71
			SMBT-80	DS-1	10 / .39
G1	B16	SPB-3	DS-3	18 / .71	
		SMBT-80	DS-1	10 / .39	
Male NPT Thread (ANSI B1.20.1)	1/4	N04	SPB-1	Dipstick Option Not Available	
	3/8	N06	SPB-1	DS-1	10 / .39
	1/2	N08	SPB-1	DS-2	14 / .55
			SPB-1/2/3	DS-3	18 / .71
	3/4	N12	SMBT-80	DS-1	10 / .39
			SPB-3	DS-3	18 / .71
1	N16	SMBT-80	DS-1	10 / .39	
Plastic Basket	S080	SPB-4/5	DS-3	18 / .71	
	S095-P	SPB-5	DS-3	18 / .71	
	S200	SPB-4/5	DS-3	18 / .71	
w/o Basket	X	SPB-4/5	DS-3	18 / .71	
		SMBB-80	DS-1	10 / .39	

\* When ordered separately, please add the length of the dipstick (in mm) to the ordering code (e.g. DS-2-300).

For all Plastic Filler Breathers (except type SPB-1 with connection sizes B04 and N04), dipsticks made of Polyamide are available as an option. These dipsticks are available in 2 standard lengths of 200 mm / 7.87 in and 300 mm / 11.81 in and equipped with 2 adjustable level indicators in green and red colour.

All dipsticks have an integrated anti-splash feature protecting the SPB from backspilling fluid and avoiding an early breakdown of the air filter element.

Optionally a powerful magnet collects metal particles from the oil and gives extra safety for your application.

A shorter dipstick length can be achieved by simply cutting down the total length according to individual requirements. The markings at 25,4 mm / 1.00 in do assist simply cutting.

Please note: When choosing a combination of a dipstick and a basket (see below), the dipstick has to be at least 15 mm / .59 in shorter than the basket.

**Special designs and alternative materials available on request. Please contact STAUFF for further details.**

## Plastic Basket ▪ Types S080 / S095-P / S200

For the Plastic Filler Breathers SPB-4 and SPB-5, different types of baskets are available as an option. All baskets have a reinforced 0,8 x 3,5 mm / .03 x .14 in mesh (800µm), so that rough dirt particles are filtered out of the medium and a smooth flow into the tank is being ensured.

The **Plastic Basket S080** (length of 105 mm / 4.13 in) snaps into the breather housing and suitable for the SPB-4 and SPB-5.

The **Plastic Basket S095-P** (length of 95 mm / 3.74 in) is equipped with a six-hole bolt pattern with flange interface similar to DIN 24557, part 2. It is suitable for the SPB-5 / SMBB-80 only and is installed between the breather housing and the reservoir.

The **Telescopic Plastic Basket S200** (maximum length of 205 mm / 8.07 in) is ideal to further improve the straining ability and oil flow-through and allowing longer dipstick lengths, where reservoir depth allows. It also snaps into the breather housing and is suitable for the SPB-4 and SPB-5.

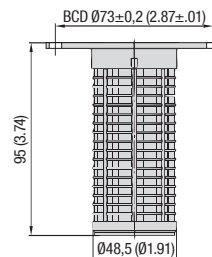
Please note: When choosing a combination of a dipstick (see above) and a basket, the dipstick has to be at least 15 mm / .59 in shorter than the basket.

**Special designs and alternative materials available on request. Please contact STAUFF for further details.**

**Plastic Basket S080** (for SPB-4/5)  
Material: Polypropylene (PP)

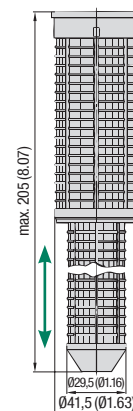


**Plastic Basket S095-P** (only for SPB-5 / SMBB-80)  
Material: Polyamide (PA)



Six-hole bolt pattern with flange interface according to DIN 24557, part 2

**Telescopic Plastic Basket S200** (for SPB-4/5)  
Material: Polypropylene (PP)



## Pressurisation

Many tank filler breathers of the SPB, SMBB and SMBT series are also available as pressurised versions. Information on the specific valve and pressurization settings that are available by default can be found on the corresponding catalogue pages.

When the fluid level inside the reservoir rises, no air is expelled from the reservoir until the pressurisation level is reached. With decreasing fluid level inside the reservoir, the tank pressure drops and it is ensured that air is drawn into the reservoir.

Due to less breathing, the service life of a filler breather and the oil can be increased by using the pressurisation feature. It also minimizes foaming and cavitation, and provides additional protection from moisture entering the reservoir which causes erosion and oil degradation.

## Further Accessories / Options



**Weld Riser - Type WR**  
Suitable for SPB-5  
(See page 39 for details)



**Side Mount Bracket (Polyamide) - Type ASMB-1**  
Suitable for SPB-5  
(See page 38 for details)



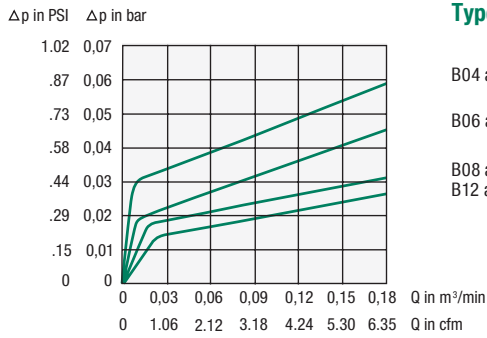
**Side Mount Bracket (Aluminium) - Type ASMB-2**  
Suitable for SPB-5  
(See page 38 for details)

Dimensional drawings: All dimensions in mm (in).



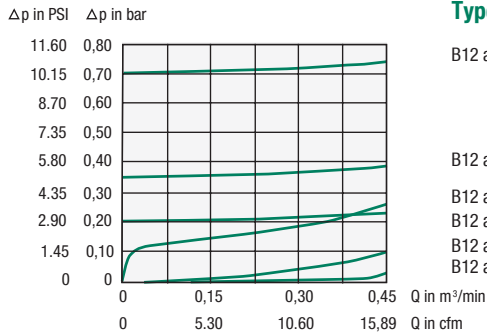
Pressure Drop Flow Curves  
Plastic Filler Breathers

B



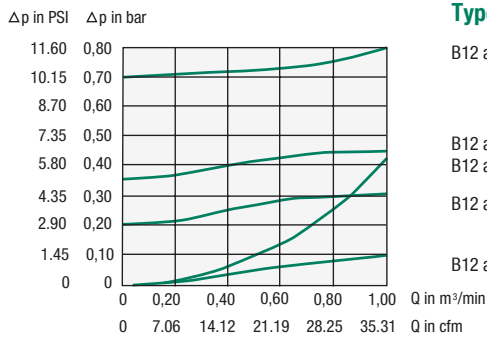
**Type SPB-1 (into / out of the tank)**

- B04 and N04 (into / out of the tank)
- B06 and N06 (into / out of the tank)
- B08 and N08 (into / out of the tank)
- B12 and N12 (into / out of the tank)



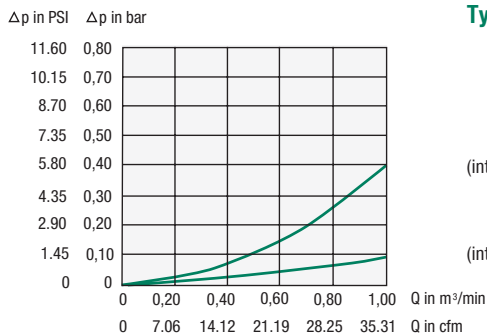
**Type SPB-2 (into / out of the tank)**

- B12 and N12 (out of the tank; pressurised at 0,7 bar / 10 PSI)
- B12 and N12 (out of the tank; pressurised at 0,35 bar / 5 PSI)
- B12 and N12 (into the tank; pressurised at 0,7 bar / 10 PSI, 0,35 bar / 5 PSI or 0,2 bar / 3 PSI)
- B12 and N12 (out of the tank; pressurised at 0,2 bar / 3 PSI)
- B12 and N12 (out of the tank; without pressurisation)
- B12 and N12 (into the tank; without pressurisation)



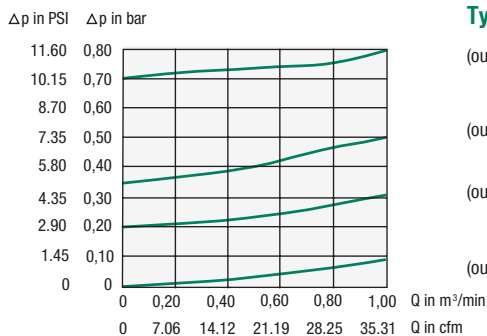
**Type SPB-3 (into / out of the tank)**

- B12 and N12 (out of the tank; pressurised at 0,7 bar / 10 PSI)
- B12 and N12 (out of the tank; pressurised at 0,35 bar / 5 PSI)
- B12 and N12 (into the tank; pressurised at 0,7 bar / 10 PSI, 0,35 bar / 5 PSI or 0,2 bar / 3 PSI)
- B12 and N12 (out of the tank; pressurised at 0,2 bar / 3 PSI)
- B12 and N12 (into / out of the tank; without pressurisation)



**Type SPB-4/5 (into the tank)**

- (into the tank; pressurised at 0,7 bar / 10 PSI, 0,35 bar / 5 PSI or 0,2 bar / 3 PSI)
- (into the tank; without pressurisation)



**Type SPB-4/5 (out of the tank)**

- (out of the tank; pressurised at 0,7 bar / 10 PSI)
- (out of the tank; pressurised at 0,35 bar / 5 PSI)
- (out of the tank; pressurised at 0,2 bar / 3 PSI)
- (out of the tank; without pressurisation)

