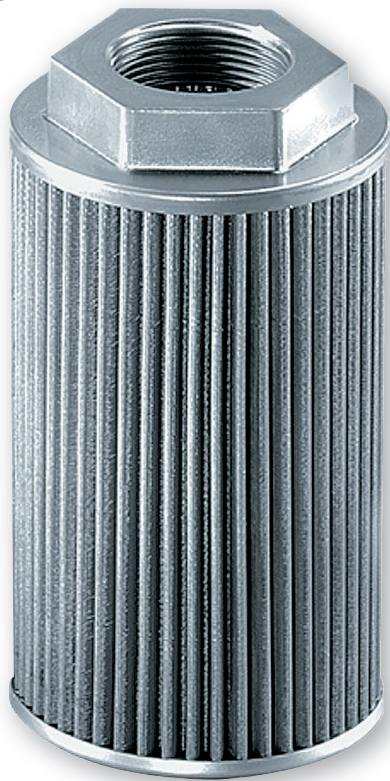


Suction Filters**AS 010 · AS 025 · AS 040 · AS 060 · AS 080 · AS 100 · AS 150**

In-tank mounting · Connection up to G2½ · Nominal flow rate up to 350 l/min / 92.5 gpm



Suction Filter AS 080

Description**Application**

In the suction line of pumps of hydraulic or lubricating circuits.

Performance features*Protection against malfunction:*

By full-flow filtration in the suction line, particularly the pumps are protected from coarse dirt particles that have remained in the system after manufacture or repair, or enter the system when it is filled with oil.

Special features

The robust construction with end caps, inner core and mesh screen material, all out of metal, offers the following advantages:

- › maximum reliability at increased operating temperatures
- › enormous shock and vibration resistance

Construction

Flow direction from outside to center.

The star-shaped pleating of the filter material results in:

- › large filter surfaces
- › low pressure drop
- › long service life

Filter maintenance

- › Cleaning in ultrasonic bath for a few minutes.
As an alternative, put suction filter in cleaning agent for approx. 15 minutes and remove dirt from the outside using a brush.
- › Then flush with fresh cleaning fluid from the inside to the outside.
- › Blow out with compressed air from the inside to the outside.

In any case, be careful that no dirt enters the inner side (clean oil side) of the suction filter.

Nominal flow rate

Up to 350 l/min / 92.5 gpm (see Selection Chart, column 2).
The nominal flow rates indicated by ARGO-HYTOS are based on the following features:

- › pressure drop Δp < 0.035 bar at $v = 35 \text{ mm}^2/\text{s}$
< 0.507 psi at $v = 162 \text{ SUS}$
- › closed by-pass valve at $v \leq 200 \text{ mm}^2/\text{s} / 927 \text{ SUS}$
- › flow velocity in the connection lines $\leq 1.5 \text{ m/s} / 4.9 \text{ ft/s}$

Connection

Threaded ports according to ISO 228 or DIN 13.
Sizes see Selection Chart, column 7,
(other port threads on request).

Filter fineness

100 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)

Materials

- › AS 010-00 / AS 025-01 / AS 040-01 / AS 060-01 / AS 150-01
end caps out of steel,
support mesh out of steel, zinc plated,
filter mesh out of stainless steel (1.4301)
- › AS 080-01 / AS 100-01
end cap with hexagon out of aluminum,
bottom end cap out of steel,
support mesh out of steel, zinc plated,
filter mesh out of stainless steel (1.4301)
- › AS 040-71
end caps out of steel,
filter mesh out of stainless steel (1.4301)
- › AS 080-81 / AS 100-81
end cap with hexagon out of aluminum,
bottom end cap out of steel,
filter mesh out of stainless steel (1.4301)

Viscosity at nominal flow rate

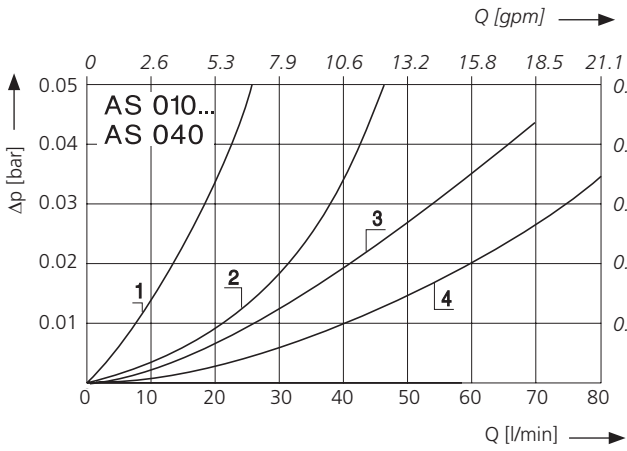
- › $v < 60 \text{ mm}^2/\text{s} / 280 \text{ SUS}$ at operating temperature
- › start-up viscosity v_{max} equivalent to the permitted pump inlet pressure (refer to diagram D), Δp to be determined as a function of the viscosity (take pressure loss in connection lines into account!).

Mounting position

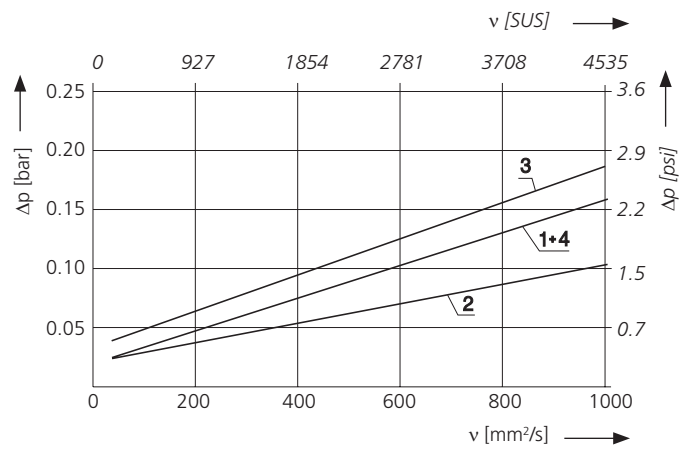
Optional; versions equipped with bypass valve preferably in horizontal position.
Under all operating conditions (min. oil level, max. inclination) the suction must occur under the oil level.

Δp -curves for filters in Selection Chart, column 3

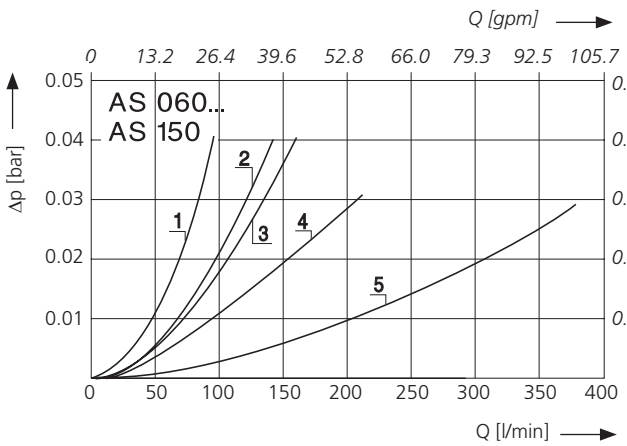
D1 Pressure drop as a function of the flow volume at $v = 35 \text{ mm}^2/\text{s} / 162 \text{ SUS}$



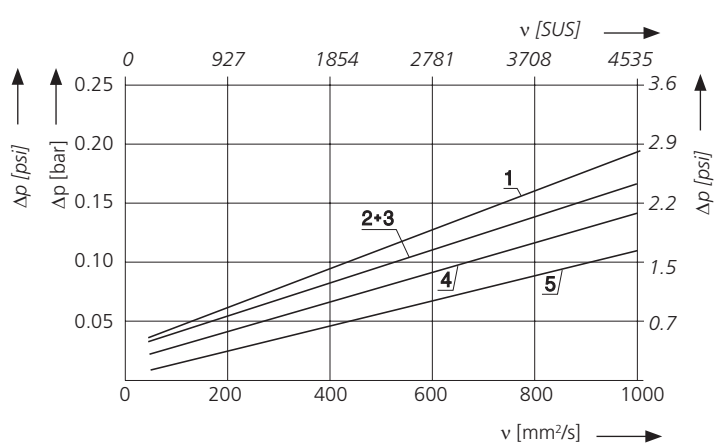
Pressure drop as a function of the kinematic viscosity at nominal flow



D2 Pressure drop as a function of the flow volume at $v = 35 \text{ mm}^2/\text{s} / 162 \text{ SUS}$



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



Selection Chart

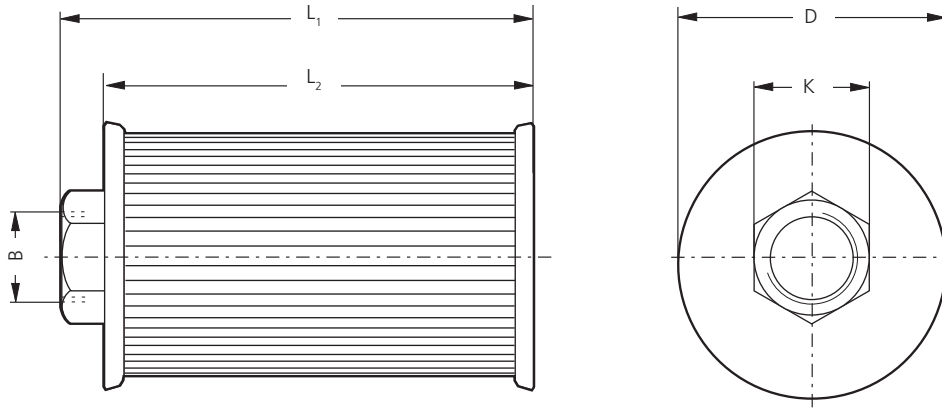
Part No.	Nominal flow rate	Pressure drop see diagram D/curve no.	Filter fineness	Filter surface	Cracking pressure of by-pass	Connection B	Connection D	Length L ₁	Length L ₂	Dimension K	Symbol	Weight	Remarks
	l/min		µm	cm ²	bar		mm	mm	mm	mm		kg	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
AS 010-00	15	D1/1	100	155	-	G½	45	82	60	AF 27	1	0.13	-
AS 025-01	35	D1/2	100	420	-	G¾	69.5	91	75	AF 36	1	0.24	-
AS 040-01	60	D1/4	100	650	-	G1	69.5	133	117	AF 41	1	0.30	-
AS 040-71	60	D1/3	100	650	-0.3	G1	69.5	133	117	AF 41	2	0.30	-
AS 060-01	90	D2/1	100	1030	-	G1¼	70	205	185	AF 50	1	0.42	-
AS 080-01	120	D2/2	100	1280	-	G1½	100	182	165	AF 70	1	0.50	-
AS 080-81	120	D2/2	100	1400	-0.3	G1½	100	182	165	AF 70	2	0.50	-
AS 100-01	200	D2/4	100	2300	-	G2	100	213	196	AF 70	1	0.60	-
AS 100-81	150	D2/3	100	1750	-0.3	G2	100	213	196	AF 70	2	0.60	-
AS 150-01	350	D2/5	100	2300	-	G2½	150	191	165	Ø 82	1	1.40	-

	gpm		µm	inch ²	psi		inch	inch	inch	mm		lbs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
AS 010-00	4.0	D1/1	100	24	-	G½	1.8	3.2	2.4	AF 27	1	0.29	-
AS 025-01	9.2	D1/2	100	65	-	G¾	2.7	3.6	3	AF 36	1	0.53	-
AS 040-01	15.9	D1/4	100	101	-	G1	2.7	5.2	4.6	AF 41	1	0.66	-
AS 040-71	15.9	D1/3	100	101	-4.4	G1	2.7	5.2	4.6	AF 41	2	0.66	-
AS 060-01	23.8	D2/1	100	160	-	G1¼	2.8	8.1	7.3	AF 50	1	0.93	-
AS 080-01	31.7	D2/2	100	198	-	G1½	3.9	7.2	6.5	AF 70	1	1.10	-
AS 080-81	31.7	D2/2	100	217	-4.4	G1½	3.9	7.2	6.5	AF 70	2	1.10	-
AS 100-01	52.8	D2/4	100	357	-	G2	3.9	8.4	7.7	AF 70	1	1.32	-
AS 100-81	39.6	D2/3	100	271	-4.4	G2	3.9	8.4	7.7	AF 70	2	1.32	-
AS 150-01	92.5	D2/5	100	357	-	G2½	5.9	7.5	6.5	Ø 82	1	3.09	-

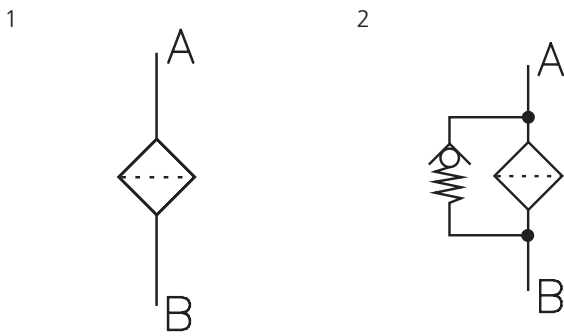
Remarks:

The filters listed in this chart are standard filters. Other designs, e.g. other filter finenesses, available on request.

Dimensions



Symbols



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.

