SS316L 3000 PSI ELBOW 45°, SOCKET WELD

45° Elbow · Forged Stainless Steel ASTM A182 F316/F316L · Socket Weld Ends to ASME B16.11

BRAND: SW FLOW CONTROLS | SKU: SW-0230 | SIZE 1/8" TO 4" | CLASS 3000



FIG. 1 | SS316L 3000 PSI ELBOW 45°, SOCKET WELD

PRODUCT OVERVIEW

The SWBM SS316L 3000 PSI Socket Weld 45° Elbow makes a 45° change of direction in small bore piping. It is forged from ASTM A182 F316/F316L stainless steel, solution annealed, and machined to ASME B16.11 Class 3000.

Each end is counterbored to receive plain end pipe for a fillet welded joint. The gentler turn reduces pressure drop against a 90° elbow and suits offsets in stainless process lines.

Fitting type	**Elbow 45°, forged**
End connection	**Socket weld, ASME B16.11**
Material	**ASTM A182 F316/F316L forged stainless steel**
Pressure class	**Class 3000 (3000 lb)**
Standard	**ASME B16.11**
Size range	**1/8" to 4" (DN6 to DN100)**

TECHNICAL SPECIFICATION

Design standard	**ASME B16.11**
Material	**ASTM A182 F316/F316L forged stainless steel**
Pressure class	**Class 3000**
End connection	**Socket weld, ASME B16.11**
Size range	**1/8" to 4" (DN6 to DN100)**
Socket dimensions	**ASME B16.11**

Heat treatment	**Solution annealed**
Marking	**MSS SP-25**
Surface finish	**Natural forged, machined ends**
Temperature range	**-196°C to +425°C**

BILL OF MATERIALS

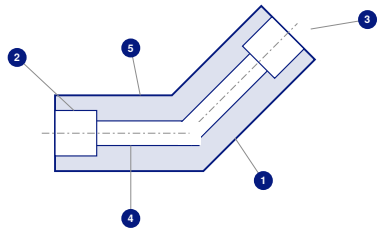


FIG. 2 | SECTIONAL ARRANGEMENT (SCHEMATIC)

#	COMPONENT	MATERIAL / DETAIL
1	Body	ASTM A182 F316/F316L, solution annealed
2	Socket end (2 nos.)	Bored to ASME B16.11, Class 3000
3	Socket shoulder	Stop for the 1.6 mm expansion gap
4	Waterway bore	Bore D, Class 3000
5	Identification marking	Die stamped to MSS SP-25

One piece closed die forging. Items 2 to 5 are integral features, listed to identify the critical dimensional and inspection points.

DIMENSIONS

SIZE	DN	SOCKET BORE B (MM)	SOCKET WALL C (MM)	BORE D (MM)	A (MM)	BODY WALL G MIN (MM)	SOCKET DEPTH J (MM)
1/8"	6	10.8	3.20	6.9	8.0	2.41	10.0
1/4"	8	14.2	3.80	9.3	8.0	3.02	10.0
3/8"	10	17.6	4.05	12.6	8.0	3.20	10.5
1/2"	15	21.8	4.70	15.8	11.0	3.73	11.0
3/4"	20	27.2	4.90	21.0	13.0	3.91	13.0
1"	25	33.9	5.70	26.7	14.0	4.55	15.0
1.1/4"	32	42.7	6.10	35.1	17.5	4.85	15.5
1.1/2"	40	48.8	6.40	40.9	20.5	5.08	14.5
2"	50	61.2	6.95	52.5	25.5	5.54	17.5
2.1/2"	65	73.9	8.80	62.7	28.5	7.01	22.0
3"	80	89.8	9.55	78.0	32.0	7.62	32.0
4"	100	115.2	10.70	102.3	41.0	8.56	38.0

B = socket bore, C = socket wall, D = bore, A = centre to bottom of socket, G = minimum body wall, J = socket depth. Dimensions in accordance with ASME B16.11 Class 3000. Dimensions are nominal. Weights and certified drawings are issued on request.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0230
Size	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2", 2", 2.1/2", 3", 4"
Class	Class 3000
End connection	Socket weld to ASME B16.11
Certification	EN 10204 3.1 on request
Order example	**SW-0230 / 1" / CL3000 / SW / F316L**

Stock held in Dubai for fast despatch across the UAE and GCC. Contact our sales desk for pricing, availability, project quantities and certification requirements.

PRESSURE AND TEMPERATURE

Pressure class	**Class 3000 to ASME B16.11**
Rating basis	**Equal to Sch 80 seamless pipe**
Material group	**ASTM A182 F316/F316L, ASME B16.5 Gr. 2.2**
Temperature range	**-196°C to +425°C**

Class 3000 is a class designation, not a working pressure. The allowable pressure equals that of the matching pipe schedule, size and design temperature under ASME B31.3 or the governing code. Confirm duty with SWBM before use on media or temperatures outside normal service.

COMPLIANCE AND QUALITY

- Dimensions and tolerances to ASME B16.11
- Material to ASTM A182 F316/F316L, solution annealed
- Marking to MSS SP-25: maker, material, class and size
- Material test certificate EN 10204 3.1 on request
- Hydrostatic test and third party inspection on request
- Supplied under brand SW Flow Controls

TYPICAL APPLICATIONS

- Chemical and petrochemical process piping
- Offshore, marine and seawater service
- Instrument, sample and analyser lines
- Food, pharmaceutical and water treatment plant
- Hydraulic and utility systems
- Corrosive and low temperature service

INSTALLATION AND OPERATION

- Cut the pipe square and deburr before fit-up
- Insert the pipe fully, then withdraw about 1.6 mm to leave the bottoming gap before welding
- Fillet weld size and procedure to ASME B31.3 with a qualified welder
- Keep the socket and pipe free of oil, paint and scale in the weld zone
- Do not use socket weld joints where crevice corrosion is a concern
- Inspect welds visually or by MT/PT as required by the piping code

COMPANY

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