CS A105N 6000 PSI ELBOW 90°, SOCKET WELD

90° Elbow · Forged Carbon Steel ASTM A105N · Socket Weld Ends to ASME B16.11

BRAND: BOTHWELL | SKU: SW-0210 | SIZE 1/8" TO 2" | CLASS 6000



FIG. 1 | CS A105N 6000 PSI ELBOW 90°, SOCKET WELD

PRODUCT OVERVIEW

The Bothwell CS A105N 6000 PSI Socket Weld 90° Elbow turns a small bore line through a right angle. It is forged from ASTM A105N carbon steel, normalized, and machined to ASME B16.11 Class 6000.

Each end is counterbored to receive plain end pipe for a fillet welded joint. The heavy Class 6000 wall suits high pressure hydrocarbon, hydraulic and steam service where a threaded joint would not be accepted.

Fitting type	**Elbow 90°, forged**
End connection	**Socket weld, ASME B16.11**
Material	**ASTM A105N forged carbon steel**
Pressure class	**Class 6000 (6000 lb)**
Standard	**ASME B16.11**
Size range	**1/8" to 2" (DN6 to DN50)**

TECHNICAL SPECIFICATION

Design standard	**ASME B16.11**
Material	**ASTM A105N forged carbon steel**
Pressure class	**Class 6000**
End connection	**Socket weld, ASME B16.11**
Size range	**1/8" to 2" (DN6 to DN50)**
Socket dimensions	**ASME B16.11**

Heat treatment	**Normalized (A105N)**
Marking	**MSS SP-25**
Surface finish	**Natural forged, machined ends**
Temperature range	**-29°C to +425°C**
Country of origin	**Taiwan**

BILL OF MATERIALS

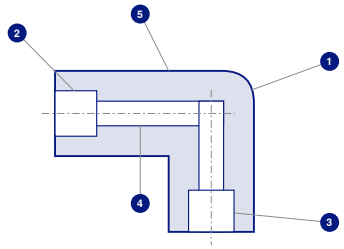


FIG. 2 | SECTIONAL ARRANGEMENT (SCHEMATIC)

#	COMPONENT	MATERIAL / DETAIL
1	Body	ASTM A105N forged carbon steel, normalized
2	Socket end (2 nos.)	Bored to ASME B16.11, Class 6000
3	Socket shoulder	Stop for the 1.6 mm expansion gap
4	Waterway bore	Bore D, Class 6000
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	4.00	4.0	11.0	3.15	10.5
1/4"	8	14.2	4.60	6.4	13.5	3.68	10.5
3/8"	10	17.6	5.05	9.2	15.5	4.01	12.5
1/2"	15	21.8	6.00	11.8	19.0	4.78	14.0
3/4"	20	27.2	7.00	15.6	22.5	5.56	15.0
1"	25	33.9	7.95	20.7	27.0	6.35	17.0
1.1/4"	32	42.7	7.95	29.5	32.0	6.35	17.5
1.1/2"	40	48.8	8.95	34.0	38.0	7.14	22.0
2"	50	61.2	10.95	42.9	41.0	8.74	22.0

B = socket bore, C = socket wall, D = bore, A = centre to bottom of socket, G = minimum body wall, J = socket depth. Dimensions from the Bothwell manufacturer catalogue, Class 6000, in accordance with ASME B16.11. Dimensions are nominal. Weights and certified drawings are issued on request.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0210
Size	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2", 2"
Class	Class 6000
End connection	Socket weld to ASME B16.11
Certification	EN 10204 3.1 on request
Order example	**SW-0210 / 1" / CL6000 / SW / A105N**

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 160 seamless pipe**
Material group	**ASTM A105N, ASME B16.5 Gr. 1.1**
Temperature range	**-29°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.

TYPICAL APPLICATIONS

- Oil and gas production and process piping
- Petrochemical and refinery small bore lines
- Steam, condensate and boiler auxiliaries
- Compressed air, gas and hydraulic utility lines
- Marine, offshore and shipyard piping
- Instrument, vent and drain connections

COMPLIANCE AND QUALITY

- Dimensions and tolerances to ASME B16.11
- Material to ASTM A105N, normalized
- 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 Bothwell

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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