CS A105N 3000 PSI TEE, SOCKET WELD

Equal Tee · Forged Carbon Steel ASTM A105N · Socket Weld Ends to ASME B16.11

BRAND: BOTHWELL | SKU: SW-0193 | SIZE 1/8" TO 4" | CLASS 3000

FIG. 1 | CS A105N 3000 PSI TEE, SOCKET WELD

PRODUCT OVERVIEW

The Bothwell CS A105N 3000 PSI Socket Weld Tee is a forged equal tee that makes a 90° branch from the main run of small bore piping. It is forged from ASTM A105N carbon steel, normalized, and machined to the dimensions and tolerances of ASME B16.11 Class 3000.

Each end has a counterbored socket that receives plain end pipe for a fillet welded joint. The socket weld design gives a strong, leak tight connection with good fatigue resistance, suited to high pressure process, utility and hydrocarbon lines.

Fitting type	**Equal tee, forged**
End connection	**Socket weld, ASME B16.11**
Material	**ASTM A105N forged carbon steel**
Pressure class	**Class 3000 (3000 lb)**
Size range	**1/8" to 4" (DN6 to DN100)**

TECHNICAL SPECIFICATION

Design standard	**ASME B16.11**
Material	**ASTM A105N forged carbon steel**
Pressure class	**Class 3000**
End connection	**Socket weld, 3 ends**
Size range	**1/8" to 4" (DN6 to DN100)**
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

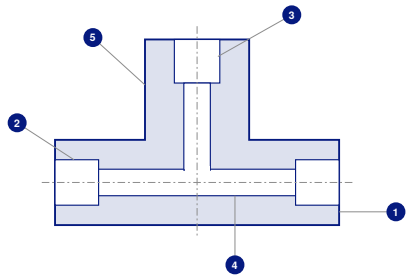

FIG. 2 | SECTIONAL ARRANGEMENT (SCHEMATIC)

#	COMPONENT	MATERIAL / DETAIL
1	Body	ASTM A105N forged carbon steel, normalized
2	Run socket (2 nos.)	Bored to ASME B16.11 Class 3000
3	Branch socket	Bored to ASME B16.11 Class 3000
4	Waterway bore	Bore D to ASME B16.11
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	11.0	2.41	10.5
1/4"	8	14.2	3.80	9.3	11.0	3.02	10.5
3/8"	10	17.6	4.05	12.6	13.5	3.20	10.5
1/2"	15	21.8	4.70	15.8	15.5	3.73	12.5
3/4"	20	27.2	4.90	21.0	19.0	3.91	14.0
1"	25	33.9	5.70	26.7	22.5	4.55	15.0
1.1/4"	32	42.7	6.10	35.1	27.0	4.85	17.0
1.1/2"	40	48.8	6.40	40.9	32.0	5.08	17.5
2"	50	61.2	6.95	52.5	38.0	5.54	22.0
2.1/2"	65	73.9	8.80	62.7	41.0	7.01	34.0
3"	80	89.8	9.55	78.0	57.0	7.62	28.0
4"	100	115.2	10.70	102.3	66.5	8.56	38.5

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 3000, in accordance with ASME B16.11. Dimensions are nominal. Weights and certified drawings are issued on request.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0193
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-0193 / 1" / CL3000 / 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 80 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

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