CS A105N 3000 PSI WELDOLET

Butt Weld Branch Outlet · Forged Carbon Steel ASTM A105N · MSS SP-97

BRAND: BOTHWELL | SKU: SW-0205 | OUTLET 1/8" TO 4" | STD WEIGHT



FIG. 1 | CS A105N 3000 PSI WELDOLET

PRODUCT OVERVIEW

The Bothwell CS A105N Weldolet is an integrally reinforced branch outlet fitting that provides a butt weld branch from a larger run pipe. It is forged from ASTM A105N carbon steel, normalized, and made to the design and dimensions of MSS SP-97.

The contoured base is welded to the run pipe and the bevelled outlet, prepared to ASME B16.25, is butt welded to the branch pipe. The integral reinforcement removes the need for a reinforcing pad and keeps stress concentration at the branch low.

Fitting type	**Branch outlet (olet), forged**
Outlet connection	**Butt weld, bevel to ASME B16.25**
Run connection	**Butt weld, contoured base**
Material	**ASTM A105N forged carbon steel**
Wall	**Standard weight (STD)**
Outlet size range	**1/8" to 4" (DN6 to DN100)**

TECHNICAL SPECIFICATION

Design standard	**MSS SP-97**
Material	**ASTM A105N forged carbon steel**
Wall	**Standard weight (STD)**
End connection	**BW outlet, BW base to run**
Size range	**Outlet 1/8" to 4"**
Weld bevel	**ASME B16.25, 37.5°**

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

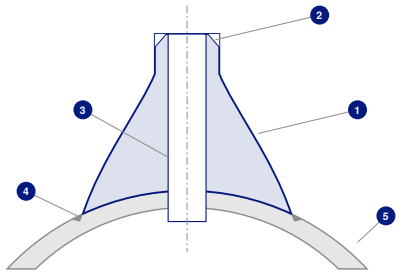


FIG. 2 | SECTIONAL ARRANGEMENT (SCHEMATIC)

#	COMPONENT	MATERIAL / DETAIL
1	Body	ASTM A105N forged carbon steel, normalized
2	Outlet weld bevel	37.5° bevel to ASME B16.25, root face 1.6 mm
3	Waterway bore	Matched to STD branch pipe bore
4	Contoured base and weld bevel	Profiled to suit the run pipe OD
5	Run pipe (by others)	Not supplied, shown for reference

One piece forging. Items 2 to 4 are integral features. Outlets 4" and smaller fit a range of run sizes and are marked accordingly, so the run size must be stated on order.

DIMENSIONS

OUTLET	DN	HEIGHT A (MM)	BASE OPENING C (MM)	OUTLET OD F (MM)	OUTLET WALL T (MM)
1/8"	6	16.0	13.7	10.3	1.73
1/4"	8	16.0	13.7	13.7	2.24
3/8"	10	19.0	17.1	17.1	2.31
1/2"	15	19.0	21.3	21.3	2.77
3/4"	20	22.0	26.7	26.7	2.87
1"	25	27.0	33.4	33.4	3.38
1.1/4"	32	32.0	42.2	42.2	3.56
1.1/2"	40	33.0	48.3	48.3	3.68
2"	50	38.0	60.3	60.3	3.91
2.1/2"	65	41.0	73.0	73.0	5.16
3"	80	44.0	88.9	88.9	5.49
4"	100	51.0	114.3	114.3	6.02

Reducing type, standard weight. A = height from run pipe to outlet face (tolerance ±0.8 mm to 3/4", ±1.6 mm 1" to 4"), C = opening at base, F = outlet outside diameter, T = outlet wall at the bevel. Dimensions from the Bothwell manufacturer catalogue, design to MSS SP-97. Outlets 3.1/2" and 5" to 24", XS and heavier weights, weights and certified drawings are issued on request.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0205
Outlet size	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2", 2", 2.1/2", 3", 4"
Run pipe size	State run NPS, base is contoured to suit
Wall	STD standard. XS and heavier on enquiry
Certification	EN 10204 3.1 on request
Order example	**SW-0205 / 1" x 6" / STD / BW / 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

Wall	**Standard weight (STD) to MSS SP-97**
Rating basis	**Equal to STD seamless pipe**
Material group	**ASTM A105N, ASME B16.5 Gr. 1.1**
Temperature range	**-29°C to +425°C**

The allowable pressure of a weldolet equals that of the matching branch and run 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

- Design and dimensions to MSS SP-97
- Material to ASTM A105N, normalized
- Outlet weld bevel to ASME B16.25
- Marking to MSS SP-25: maker, material, weight and size
- Material test certificate EN 10204 3.1 on request
- Third party inspection on request

TYPICAL APPLICATIONS

- Branch take-offs from process and utility headers
- Full flow branches where a tee is impractical
- Oil and gas, petrochemical and refinery piping
- Steam and condensate distribution headers
- Water, fire and cooling water mains
- Marine and offshore piping systems

INSTALLATION AND OPERATION

- Mark the branch centre and cut the run pipe hole to the olet bore, then deburr
- Set the olet on the run with a root gap of about 1.6 mm using spacers
- Full penetration weld the base to the run pipe to ASME B31.3 with a qualified procedure
- Butt weld the branch pipe to the outlet bevel with a full penetration weld
- Keep the weld zone free of oil, paint and scale
- Inspect welds to the requirements of the piping code

COMPANY

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