

CS A105N 3000 PSI UNION, THREADED

Three Piece Union · Forged Carbon Steel ASTM A105N · Female NPT to ASME B16.11

BRAND: BOTHWELL

SKU: SW-0197

SIZE 1/8" TO 3"

CLASS 3000



FIG. 1 | CS A105N 3000 PSI UNION, THREADED

PRODUCT OVERVIEW

The Bothwell CS A105N 3000 PSI Threaded Union is a three piece fitting that allows a threaded line to be broken and remade without turning the pipe. It is forged from ASTM A105N carbon steel, normalized, and made to MSS SP-83 Class 3000.

The male and female ends carry female NPT threads to ASME B1.20.1, and the union nut draws them together on an integral metal to metal seat. This gives a leak tight joint that can be opened for maintenance of valves, pumps and instruments.

Fitting type	Union, three piece, forged
End connection	Female NPT, ASME B1.20.1
Material	ASTM A105N forged carbon steel
Pressure class	Class 3000 (3000 lb)
Standard	MSS SP-83
Size range	1/8" to 3" (DN6 to DN80)

TECHNICAL SPECIFICATION

Design standard	MSS SP-83	Heat treatment	Normalized (A105N)
Material	ASTM A105N forged carbon steel	Marking	MSS SP-25
Pressure class	Class 3000	Surface finish	Natural forged, machined ends
End connection	Female NPT, 2 ends	Temperature range	-29°C to +425°C
Size range	1/8" to 3" (DN6 to DN80)	Country of origin	Taiwan
Thread standard	ASME B1.20.1 (NPT)		



PRODUCT DATA SHEET

CS A105N 3000 PSI UNION, THREADED

Ref. SW-0197 | Rev. 01

BILL OF MATERIALS

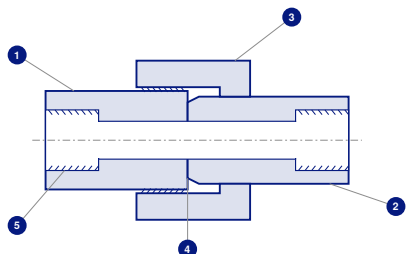


FIG. 2 | SECTIONAL ARRANGEMENT (SCHEMATIC)

#	COMPONENT	MATERIAL / DETAIL
1	Female end (thread end)	ASTM A105N forged carbon steel
2	Male end (seat end)	ASTM A105N forged carbon steel
3	Union nut	ASTM A105N forged carbon steel
4	Seat	Integral metal to metal, no gasket
5	Pipe end (2 nos.)	Female NPT to ASME B1.20.1

Three piece assembly. Item 4 is an integral feature of the end pieces. Nut thread engagement is a minimum of 4 full threads, class 2A/2B fit. BSPT pipe threads can be offered against enquiry.

DIMENSIONS

SIZE	DN	THREAD	THREAD L2 (MM)	END OD A (MM)	WALL C MIN (MM)	BORE D (MM)	LENGTH L (MM)	NUT CLEARANCE N (MM)
1/8"	6	1/8" NPT	8.8	22.9	2.41	8.40	41.4	50.8
1/4"	8	1/4" NPT	11.4	22.9	3.02	11.20	41.4	50.8
3/8"	10	3/8" NPT	12.4	22.9	3.20	14.60	46.0	55.9
1/2"	15	1/2" NPT	14.9	27.7	3.73	17.27	49.0	58.4
3/4"	20	3/4" NPT	16.8	33.5	3.91	21.59	56.9	66.0
1"	25	1" NPT	19.6	41.4	4.55	27.94	62.0	78.7
1.1/4"	32	1.1/4" NPT	21.9	50.5	4.85	35.56	71.1	94.0
1.1/2"	40	1.1/2" NPT	22.7	57.2	5.08	41.40	76.5	111.8
2"	50	2" NPT	23.9	70.1	5.54	52.33	86.1	132.1
2.1/2"	65	2.1/2" NPT	30.5	85.3	7.01	64.52	102.4	149.9
3"	80	3" NPT	32.8	102.4	7.62	77.47	109.0	175.3

L2 = length of useful thread to ASME B1.20.1, A = outside diameter of pipe end, C = minimum wall, D = waterway bore (1/8" to 3/8" to the Bothwell machining standard), L = assembled length (nominal), N = clearance diameter of assembled nut. Dimensions from the Bothwell manufacturer catalogue, in accordance with MSS SP-83 Class 3000. Dimensions are nominal. Weights and certified drawings are issued on request.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0197
Size	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2", 2", 2.1/2", 3"
Class	Class 3000
Thread	NPT female to ASME B1.20.1. BSPT on enquiry
Certification	EN 10204 3.1 on request
Order example	SW-0197 / 1" / CL3000 / NPT / 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.



PRODUCT DATA SHEET

CS A105N 3000 PSI UNION, THREADED
Ref. SW-0197 | Rev. 01

PRESSURE AND TEMPERATURE

Pressure class	Class 3000 to MSS SP-83
Rating basis	For use with Sch 80 pipe, same NPS
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

- Break points at pumps, valves and equipment
- Instrument and analyser connections
- Oil and gas production and process piping
- Steam, condensate and utility lines
- Skid packages needing removable spools
- Marine, offshore and shipyard piping

COMPLIANCE AND QUALITY

- Dimensions and testing to MSS SP-83, Class 3000
- Material to ASTM A105N, normalized
- Integral metal to metal seat, no gasket
- Pipe threads to ASME B1.20.1 (NPT)
- Material test certificate EN 10204 3.1 on request
- Third party inspection on request

INSTALLATION AND OPERATION

- Separate the ends and make each one up on its pipe with sealant on the male thread only
- Tighten each end with a wrench on the flats, not on the nut
- Align the two ends before engaging the nut, never use the nut to pull pipe into line
- Keep the seat faces clean and free of sealant and damage
- Tighten the nut with a spanner while holding the female end
- Seal weld the pipe threads after make-up where the specification requires it

COMPANY

Sunel Wala Building Materials
Trading Co. LLC (SWBM)
Dubai, United Arab Emirates

SALES ENQUIRIES

info@swbm-fittings.com
Tel: +971 4 238 5652
Mobile / WhatsApp: +971 50 748 1772

ONLINE

www.swbm-fittings.com
Brand: Bothwell

The information in this data sheet is provided in good faith and is believed to be accurate at the date of issue. Dimensions, weights and ratings are nominal and may vary with the manufacturer and production batch. It remains the responsibility of the purchaser to confirm that the product is suitable for the intended service conditions. Sunel Wala Building Materials Trading Co. LLC reserves the right to amend specifications without prior notice. This document does not form part of any contract of sale.