



CS A105N 3000 PSI ELBOW 45D – THREADED

45 Degree Elbow · Forged Carbon Steel · Class 3000 NPT

SKU: SW-0181

BRAND: BOTHWELL

CLASS 3000

NPT THREADED



FIG. 1 | CS A105N CLASS 3000 ELBOW 45 DEGREE, NPT THREADED

PRODUCT OVERVIEW

The SWBM CS A105N Class 3000 45 Degree Elbow changes direction with a gentler flow path than a right angle, which lowers turbulence and pressure drop. It is often used in pairs to offset a small bore run around an obstruction.

Both ends are NPT threaded to ASME B1.20.1 and the body is made to ASME B16.11 in Class 3000.

Fitting type	45 degree elbow
Function	Gradual change of direction
Material	ASTM A105N forged steel
End connection	NPT threaded, both ends
Standard	ASME B16.11
Size range	1/8" to 4" (DN6 to DN100)

TECHNICAL SPECIFICATION

Material	ASTM A105N carbon steel	Finish	Black, oiled for transport
Manufacture	Forged and normalised	Marking	Grade, class, size and heat number
Dimensional standard	ASME B16.11	Temperature range	-29°C to +425°C
Pressure class	Class 3000	Country of origin	Taiwan
Ends	NPT threaded, both ends	Certification	EN 10204 3.1 on request
Threads	ASME B1.20.1 NPT		



PRODUCT DATA SHEET

CS A105N 3000 PSI ELBOW 45D – THREADED

Ref. SW-0181 | Rev. 01

BILL OF MATERIALS

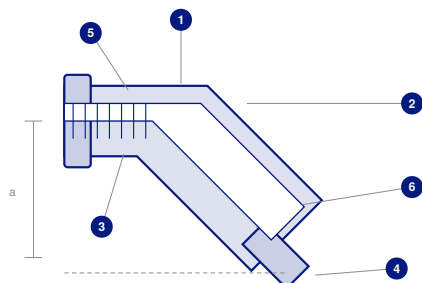


FIG. 2 | SECTIONAL ARRANGEMENT

#	FEATURE	DESCRIPTION
1	Body	ASTM A105N, forged one piece
2	Socket, end 1	NPT thread to ASME B1.20.1
3	Socket, end 2	NPT thread to ASME B1.20.1
4	Waterway	Machined bore through the body
5	Thread run-out	Machined relief at the thread start
6	Marking	Grade, class, size and heat number

One piece forged fitting with no seals or moving parts. The same figure is stocked in the threaded and socket weld patterns and in higher classes as separate items.

DIMENSIONS AND WEIGHTS

SIZE	DN	THREAD / SOCKET	PIPE OD (MM)
1/8"	6	1/8" NPT	10.3
1/4"	8	1/4" NPT	13.7
3/8"	10	3/8" NPT	17.1
1/2"	15	1/2" NPT	21.3
3/4"	20	3/4" NPT	26.7
1"	25	1" NPT	33.4
1.1/4"	32	1.1/4" NPT	42.2
1.1/2"	40	1.1/2" NPT	48.3
2"	50	2" NPT	60.3
2.1/2"	65	2.1/2" NPT	73.0
3"	80	3" NPT	88.9
4"	100	4" NPT	114.3

Pipe outside diameters are to ASME B36.10M and are the sizes the socket or thread is made to suit. Body dimensions, socket depth and minimum wall are to ASME B16.11 and are issued on certified drawings against order. Masses are not published for this item.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SW-0181
Size	1/8", 1/4", 3/8", 1/2", 3/4", 1", 1.1/4", 1.1/2", 2", 2.1/2", 3", 4"
Thread	NPT to ASME B1.20.1
Material	ASTM A105N forged carbon steel
Order example	SW-0181 / 3/4" / NPT / CLASS 3000

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	To ASME B16.11
Basis of the class	A class designation, not a psi rating
Temperature range	-29°C to +425°C for A105N
Rating	Take the allowable from the design code

ASME B16.11 class designations are not cold working pressures in psi. The allowable pressure at temperature must be taken from the applicable design code for A105N. Confirm the duty with SWBM before use above 425°C or below -29°C, and for sour service.

TYPICAL APPLICATIONS

- Oil and gas gathering and process piping
- Refinery and petrochemical plant
- Steam, condensate and boiler house piping
- Instrument tappings and small bore branch connections
- Hydraulic and high pressure utility lines
- Power generation and industrial process plant

COMPLIANCE AND QUALITY

- Manufactured to ASME B16.11
- Material ASTM A105N, normalised carbon steel forging
- NPT threads to ASME B1.20.1
- Marked with grade, class, size and heat number
- Material test certificate EN 10204 3.1 on request
- Suitable for ASME B31.1 and B31.3 piping systems
- NACE MR0175 compliant material against enquiry

INSTALLATION AND OPERATION

- Check the thread form and class against the mating component before assembly
- Apply an approved thread sealant or PTFE tape to the male thread only
- Make up to the correct engagement, do not rely on sealant to bridge a slack fit
- Support small bore branch connections against vibration and cantilever load
- Do not exceed the allowable stress for A105N at the design temperature
- Hydrotest the joint in line with the applicable design code

COMPANY

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