

Elbolet® Elbow Outlet Fittings

Integrally reinforced branch outlets for 90° elbows · Butt-weld, socket-weld & threaded · NPS ¼" to 12"

PRODUCT DESCRIPTION

The Elbolet® is a forged, integrally reinforced branch outlet fitting designed to be welded onto the outside radius (back) of a 90° long-radius or short-radius elbow. It provides a full-strength branch connection at an elbow — typically for thermowells, instrument tapplings, drains and vents — where a conventional outlet cannot be fitted.

The base is contoured to the compound curvature of the elbow. The branch end is supplied butt-weld (bevelled), socket-weld or threaded to ASME B16.11, covering both welded and screwed small-bore systems.

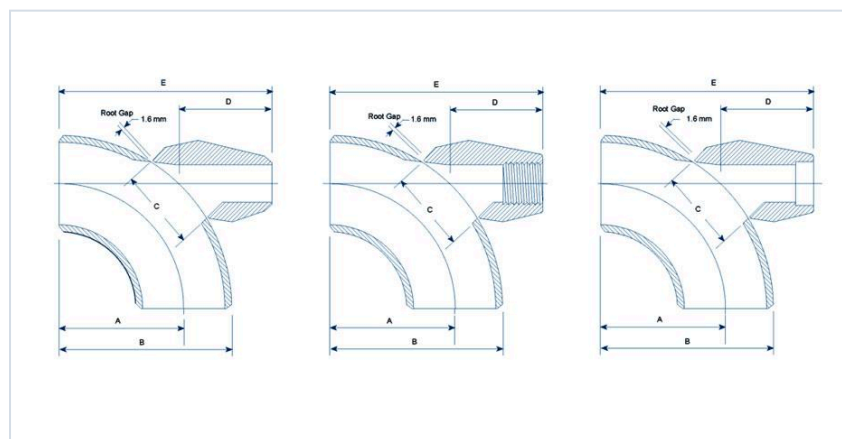
KEY FEATURES

- **Integral reinforcement** — meets branch reinforcement requirements of the piping code without pads.
- **Contoured for elbows** — base machined to suit 1.5D (long-radius) and 2D / 3D elbow radii.
- **Three branch-end options** — butt-weld, socket-weld (Class 3000 / 6000) and threaded.
- **Ideal for instrumentation** — thermowell and pressure tapplings on elbows with minimal flow disturbance.

SPECIFICATION SUMMARY

Product	Elbolet® (Elbow Outlet) — branch outlet fitting for 90° elbows
Design standard	MSS SP-97 — Integrally Reinforced Forged Branch Outlet Fittings
Socket / thread	ASME B16.11 socket-weld and threaded (NPT) ends
End connections	Butt-weld, socket-weld or threaded branch end
Size range	NPS ¼" – 12" (butt-weld STD / XS); NPS ¼" – 1½" (Sch 160 / XXS)
Pressure classes	Class 3000 Class 6000 STD / XS Sch 160 / XXS
Fits elbows	90° long-radius (1.5D) and 2D / 3D elbows
Materials	Carbon steel, low-temperature carbon steel, alloy steel, stainless steel, duplex and nickel alloys — as specified
Testing & certification	Material test certificate; NDT (MPI / DPT / UT) and third-party inspection on request
Marking	Manufacturer, size, class / schedule, material grade, heat number

DIMENSIONAL DRAWING


A Elbow radius — 1.5D (long radius)

B Elbow radius — 2D

C Outlet base length along the elbow

D Branch end length

E Overall — elbow centreline to branch end

Left to right: butt-weld, threaded and socket-weld branch ends. Root gap 1.6 mm.

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Dimensions · Materials · Quality & Documentation

DIMENSIONS — CLASS 3000 / STD & XS

CLASS 3000 THD & SW · STD / XS BW 15 sizes					
NPS inch	A mm	B mm	C mm	D mm	E mm
1/4	Elbow radius 1.5 × NPS long- radius elbow	Elbow radius 2 × NPS 3D / 2D elbow	38.10	40.48	(½ run OD + root gap) ÷ 0.707 + D calculated per run pipe
3/8			38.10	40.48	
1/2			38.10	40.48	
3/4			43.66	47.63	
1			57.15	57.15	
1 1/4			73.03	63.50	
1 1/2			79.38	68.26	
2			106.36	82.55	
2 1/2			106.36	82.55	
3			128.59	98.43	
4			168.28	122.24	
6			238.13	165.10	
8			338.14	204.79	
10			432.59	263.53	
12			498.48	282.58	

- All dimensions in millimetres. C and D as tabulated; A, B and E are derived from the elbow and run-pipe size.
- E** = (run-pipe OD ÷ 2 + root gap) ÷ 0.707 + D, with root gap 1.6 mm as shown on the drawing.
- Design per MSS SP-97; socket-weld and threaded ends per ASME B16.11.

QUALITY & DOCUMENTATION

- Manufactured under an ISO-certified quality management system.
- Material test certificates with full heat-number traceability.
- Dimensional inspection report to MSS SP-97 / ASME B16.11.
- Optional NDT: magnetic particle, dye penetrant or ultrasonic examination.
- Third-party / customer witness inspection arranged on request.

DIMENSIONS — CLASS 6000 / SCH 160

CLASS 6000 THD & SW · 160 / XXS 7 sizes					
NPS inch	A mm	B mm	C mm	D mm	E mm
1/4	Elbow radius 1.5 × NPS long- radius elbow	Elbow radius 2 × NPS 3D / 2D elbow	38.10	40.48	(½ run OD + root gap) ÷ 0.707 + D calculated per run pipe
3/8			38.10	40.48	
1/2			43.66	47.63	
3/4			57.15	57.15	
1			73.03	63.50	
1 1/4			79.38	68.26	
1 1/2			106.36	82.55	

TYPICAL MATERIAL GRADES

Carbon steel	ASTM A105 / A105N
Low-temperature CS	ASTM A350 LF2 Cl.1 / Cl.2
Alloy steel	ASTM A182 F11, F22, F5, F9, F91
Stainless steel	ASTM A182 F304/304L, F316/316L, F321, F347
Duplex / super duplex	ASTM A182 F51 (S31803 / S32205), F53, F55
Nickel & copper alloys	Inconel, Monel, Hastelloy, Cu-Ni 90/10 & 70/30 — on request

ORDERING & RELATED PRODUCTS

Ordering information: specify elbow size, schedule and radius (1.5D / 2D / 3D), branch size, end type (butt-weld / socket-weld / threaded), class or schedule, material grade, quantity and any testing or certification requirements.

Weldolet	Sockolet	Thredolet	Latrolet
Nipolet	Sweeplet	Flanges	Forged fittings