

Sweepolet® Contoured Branch Outlet Fittings

Integrally reinforced, contoured butt-weld outlets · Outlet NPS 1¼" to 24" · Run pipe NPS 6" to 36"

PRODUCT DESCRIPTION

The Sweepolet® is a forged, contoured, integrally reinforced butt-weld branch outlet with a low-profile, swept body. The base blends smoothly into the run pipe through a large-radius contour, and the attachment weld is a full-penetration butt weld that can be readily examined by radiography or ultrasonics.

The swept profile gives a low stress-intensification factor and low stress concentration, so the Sweepolet® is the preferred branch fitting for large-diameter, high-pressure, cyclic or critical services — main steam and feedwater lines, transmission pipelines and process headers.

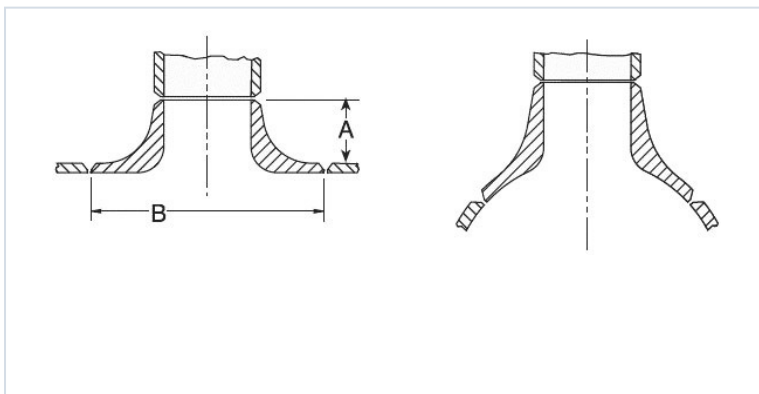
KEY FEATURES

- **Contoured, swept body** — low stress-intensification factor; excellent fatigue performance.
- **Integral reinforcement** — meets branch reinforcement requirements of the piping code without pads.
- **Fully examinable attachment weld** — butt-weld geometry suits RT / UT inspection.
- **Large sizes** — outlets to NPS 24" on run pipe to NPS 36".
- **Low profile** — minimal height above the run pipe compared with a Weldolet® of the same size.

SPECIFICATION SUMMARY

Product	Sweepolet® (Contoured Body Outlet) — 90° branch outlet fitting
Design standard	MSS SP-97 — Integrally Reinforced Forged Branch Outlet Fittings
End connections	Butt-weld (contoured) to run pipe; butt-weld (bevelled) to branch pipe
Outlet sizes	NPS 1¼" – 24" (DN 32 – DN 600)
Run pipe sizes	NPS 6" – 36"; minimum run size depends on outlet size (see table)
Wall schedules	Bevelled to match branch pipe — STD, XS, Sch 160, XXS or as specified
Manufacturing	Forged and contoured to the run-pipe outside diameter
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 / RT) and third-party inspection on request
Marking	Manufacturer, outlet size, run size, schedule, material grade, heat number

DIMENSIONAL DRAWING



A Height — run-pipe surface to branch weld end (* minimum; varies with run size)

B Outside diameter of the contoured base at the run pipe

Run-pipe specific: each Sweepolet® is contoured to a particular run-pipe OD. Always specify both the outlet size and the run pipe size and schedule when ordering.

DIMENSIONS — BUTT-WELD CONTOURED OUTLETS

SWEEPOLET Butt-weld CONTOURED OUTLET		14 outlet sizes	
Outlet size NPS inch	Run pipe size range NPS inch	A* — Height inch (mm)	B — Base OD inch (mm)
1 1/4	NPS 6 – 36	1 1/4 (31.8)	4 (101.6)
1 1/2	NPS 6 – 36	1 3/4 (44.4)	5 1/2 (139.7)
2	NPS 6 – 36	1 1/2 (38.1)	5 1/2 (139.7)
3	NPS 6 – 36	1 21/32 (42.1)	7 (177.8)
4	NPS 6 – 36	2 1/32 (51.6)	8 3/4 (222.2)
6	NPS 10 – 36	2 11/16 (68.3)	13 (330.2)
8	NPS 12 – 36	3 (76.2)	15 (381.0)
10	NPS 16 – 36	3 1/8 (79.4)	18 1/2 (469.9)
12	NPS 16 – 36	3 5/16 (84.1)	20 1/2 (520.7)
14	NPS 20 – 36	3 5/8 (92.1)	24 (609.6)
16	NPS 24 – 36	3 3/4 (95.2)	28 (711.2)
18	NPS 24 – 36	4 5/8 (117.5)	31 (787.4)
20	NPS 24 – 36	5 1/8 (130.2)	33 (838.2)
24	NPS 30 – 36	5 5/8 (142.9)	38 (965.2)

- Catalogue dimensions in inches; millimetre equivalents shown beneath each value (1" = 25.4 mm). Design per MSS SP-97.
- * A is the minimum height; actual height depends on the run-pipe OD. Outlets are contoured to the run pipe size stated on the order.

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

QUALITY & DOCUMENTATION

- Manufactured under an ISO-certified quality management system.
- Material test certificates with heat-number traceability; dimensional report to MSS SP-97.
- Optional NDT (MPI / DPT / UT / RT) and third-party inspection on request.

INSTALLATION GUIDANCE

- **Run-pipe cut-out:** cut the hole to the outlet bore, prepare the edge and verify fit of the contoured base before tacking.
- **Attachment weld:** full-penetration butt weld around the contoured base; examine by RT or UT as the code or specification requires.
- **Branch end:** butt-weld to the bevelled end with the mating branch pipe of the same schedule.

ORDERING & RELATED PRODUCTS

Ordering information: specify outlet size and schedule, run pipe size and schedule, material grade, quantity and any NDT or certification requirements.

Weldolet	Sockolet	Thredolet	Elbolet
Latrolet	Nipolet	Flanges	Butt-weld fittings