

Weldolet® Branch Outlet Fittings

Integrally reinforced butt-weld branch connections · NPS ¼" to 48" · Schedules STD, XS, XXS & 160

PRODUCT DESCRIPTION

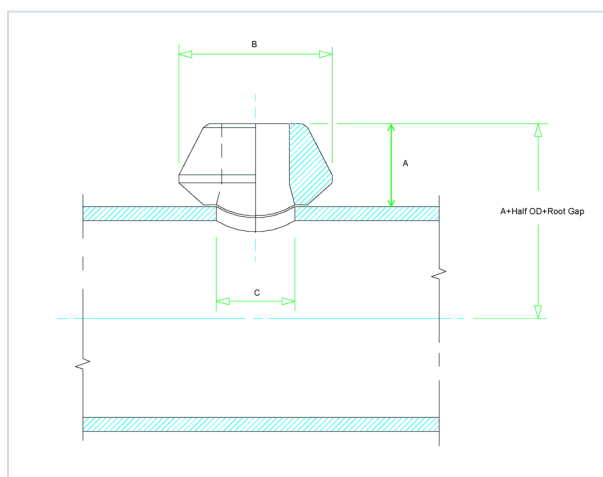
The Weldolet® is a forged, integrally reinforced 90° branch outlet fitting that is butt-welded to the run (header) pipe and butt-welded to the branch pipe. It provides a full-strength, self-reinforced branch connection without the need for additional reinforcing pads or saddles.

Contoured to the run-pipe curvature and supplied with a bevelled branch end, it is the standard choice for 90° butt-welded branch connections in process, oil & gas, power, petrochemical and utility piping.

KEY FEATURES

- **Integral reinforcement** — designed to meet the branch reinforcement requirements of the piping code without pads.
- **Butt-weld on both ends** — full-penetration welds give the highest joint strength and fatigue resistance.
- **Reduced stress concentration** compared with stub-in or pad-reinforced branches.
- **Wide size range** — run-to-branch combinations from NPS ¼" to 48".
- **Bevelled to match branch pipe** in STD, XS, XXS and Sch 160 wall thicknesses.

DIMENSIONAL DRAWING



SPECIFICATION SUMMARY

Product	Weldolet® (Welding Outlet) — 90° branch outlet fitting
Design standard	MSS SP-97 — Integrally Reinforced Forged Branch Outlet Fittings
End connections	Butt-weld (bevelled) to run pipe and branch pipe
Size range	NPS ¼" – 48" (DN 8 – DN 1200)
Wall schedules	STD XS XXS Sch 160
Configuration	Full-size (equal) and reducing outlets; contoured to run-pipe OD
Manufacturing	Forged; machined and bevelled to schedule
Materials	Carbon steel, low-temperature carbon steel, alloy steel, stainless steel, duplex and nickel alloys — as specified by the customer
Testing & certification	Material test certificate; NDT (MPI / DPT / UT / RT) and third-party inspection on request
Marking	Manufacturer, size, schedule, material grade, heat number

DIMENSION REFERENCE

A Height — from run-pipe outside surface to branch weld end

B Outside diameter of the outlet base at the run pipe

C Hole diameter to be cut in the run pipe

Installed height: distance from run-pipe centreline to branch weld end = **A + ½ run OD + root gap**. Use this value for spool fabrication and isometric take-offs.

- Tables overleaf give A, B, C and approximate weight for full-size (equal) outlets; for reducing outlets A and B vary with run-pipe size. All dimensions in mm, per MSS SP-97.

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Dimensions — Schedule STD & Schedule XS

DIMENSIONS — SCHEDULE STD

SCHEDULE STD					28 sizes
NPS inch	DN mm	Height A mm	OD B mm	Hole Ø C mm	Weight kg
1/4	8	14.3	25.4	15.9	0.04
3/8	10	19.05	31.75	19.05	0.07
1/2	15	19.05	34.93	23.81	0.08
3/4	20	22.23	44.45	30.16	0.11
1	25	26.99	53.98	36.51	0.23
1 1/4	32	31.75	65.09	44.45	0.36
1 1/2	40	33.34	73.03	50.8	0.45
2	50	38.1	88.9	65.09	0.79
2 1/2	65	41.28	103.19	76.2	1.13
3	80	44.45	122.24	93.66	1.81
3 1/2	90	47.63	142.88	112.71	2.5
4	100	50.8	152.4	120.65	2.86
5	130	57.15	179.3	141.29	4.65
6	150	60.33	215.9	169.86	6.44
8	200	69.85	263.53	220.66	10.66
10	250	77.79	322.26	274.64	17.69
12	300	85.73	377.83	325.44	26.76
14	350	88.9	409.58	357.19	29.94
16	400	93.6	463.55	407.99	34.02
18	450	96.84	520.7	458.79	44
20	500	101.6	571.5	508	53.52
24	600	144.5	717.5	609.6	101
26	650	155.6	778	660.4	120
30	750	174.6	893.6	762	190
36	900	206.4	1070	914.4	310
40	1000	225.4	1187.6	1016	435
42	1050	235	1244.6	1066.8	540
48	1200	241.3	1404	1219.2	750

DIMENSIONS — SCHEDULE XS

SCHEDULE XS					27 sizes
NPS inch	DN mm	Height A mm	OD B mm	Hole Ø C mm	Weight kg
1/4	8	—	25.4	15.88	0.05
3/8	10	—	31.75	19.05	0.07
1/2	15	19.05	34.93	23.81	0.09
3/4	20	22.23	44.45	30.16	0.14
1	25	26.99	53.98	36.51	0.21
1 1/4	32	31.75	65.09	44.45	0.41
1 1/2	40	33.34	73.03	50.8	0.5
2	50	38.1	88.9	65.09	0.79
2 1/2	65	41.28	103.19	76.2	1.18
3	80	44.45	122.24	93.66	1.86
3 1/2	90	47.63	136.53	112.71	2.54
4	100	50.8	152.4	120.65	2.9
6	150	77.79	225.43	169.86	10.43
8	200	98.43	292.1	220.66	16.78
10	250	93.66	323.85	265.11	20.87
12	300	103.1	379.41	317.5	27.67
14	350	100.01	431.8	350.84	31.75
16	400	106.36	466.73	403.23	46.27
18	450	111.13	523.88	455.61	58.97
20	500	119.06	582.61	509.59	71.67
24	600	152.4	722.2	609.6	142
26	650	165.1	782.6	660.4	168
30	750	181	896.8	762	218
36	900	212.7	1074.4	914.4	404
40	1000	235	1194	1016	582
42	1050	244.5	1250.8	1066.8	590
48	1200	273	1425.6	1219.2	910

- All dimensions in millimetres; weights in kilograms and approximate. Design as per MSS SP-97.
- “—” indicates height A is not standardised for that size in Schedule XS; supplied to order.
- Dimensions apply to full-size (equal) outlets. For reducing outlets, height A and OD B depend on the run-pipe size.

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Schedule XXS & 160 · Materials · Quality

DIMENSIONS — SCHEDULE XXS

SCHEDULE XXS					13 sizes
NPS inch	DN mm	Height A mm	OD B mm	Hole Ø C mm	Weight kg
1/2	15	28.58	34.93	14.29	0.11
3/4	20	31.75	44.45	19.05	0.32
1	25	38.1	50.8	25.4	0.38
1 1/4	32	44.45	61.91	33.34	0.57
1 1/2	40	50.8	69.85	38.1	0.79
2	50	55.56	80.96	42.86	0.97
2 1/2	65	61.91	96.84	53.98	1.53
3	80	73.03	120.65	73.03	2.87
4	100	84.14	152.4	98.43	4.76
5	130	93.66	187.33	122.24	6.46
6	150	104.78	220.66	146.05	12.7
8	200	111.12	284.16	173.04	20.41
10	250	125.41	312.74	215.9	38.56

DIMENSIONS — SCHEDULE 160

SCHEDULE 160					13 sizes
NPS inch	DN mm	Height A mm	OD B mm	Hole Ø C mm	Weight kg
1/2	15	28.58	34.93	14.29	0.11
3/4	20	31.75	44.45	19.05	0.32
1	25	38.1	50.8	25.4	0.38
1 1/4	32	44.45	61.91	33.34	0.57
1 1/2	40	50.8	69.85	38.1	0.79
2	50	55.56	80.96	42.86	0.97
2 1/2	65	61.91	96.84	53.98	1.53
3	80	73.03	120.65	73.03	2.87
4	100	84.14	152.4	98.43	4.76
5	130	93.66	187.33	122.24	6.46
6	150	104.78	220.66	146.05	12.7
8	200	111.12	284.16	173.04	20.41
10	250	125.41	312.74	215.9	38.56

- Schedule XXS and 160 outlets available NPS 1/2" – 10"; larger sizes on request. All dimensions in mm; weights approximate.

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 (S32750), F55 (S32760)
Nickel & copper alloys	Inconel, Monel, Hastelloy, Cu-Ni 90/10 & 70/30 — on request

Other grades, dual-certified materials and NACE MR0175 / ISO 15156 compliance available on request.

RELATED PRODUCTS

Socketlet	Thredolet	Elbolet	Latrolet	Nipolet
Sweepolet	Flanges	Butt-weld fittings		

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.
- Optional NDT: magnetic particle, dye penetrant, ultrasonic or radiographic examination.
- Third-party / customer witness inspection arranged on request.
- Hardness and impact testing for low-temperature or sour service as specified.

Ordering information: specify run-pipe size & schedule, branch size & schedule, material grade, quantity, and any additional testing or certification requirements.