



ACIPCO WELDED FABRICATION

In addition to the full complement of mechanical joint, Fastite®, restrained joint and flanged fittings, **ACIPCO** makes many special welded fabrications to meet special construction requirements. By utilizing special fabricated outlets, the customer will eliminate many costly fittings and the number of joints to be installed, thereby reducing the material cost of the project.

ACIPCO DUCTILE IRON PIPE

GENERAL NOTES RELATING TO ACIPCO SPECIALS

- Pipe is manufactured of ductile iron with minimum tensile strength: 420 N/mm²; minimum yield strength: 300 N/mm²; minimum elongation: 10% in accordance with ISO 2531.
- Flanges can be tapped for studs when specified.
- All pressure ratings shown are **ACIPCO**'s suggested standard and are for water service.
- All Fastite and flanged joints comply with AWWA C111 and ISO 2531. Weights of flanged outlets correspond to ISO 2531. PN10, PN16, and PN25 flanges are available.
- All fabricated pipe outlets are air tested to one bar as per ISO 2531.
- **ACIPCO** produces many specials other than those listed in this Section. Consult **ACIPCO** regarding any specific requirements.

The principal standards relating to **ACIPCO** specials are ANSI/AWWA C110/A21.10, C151/A21.51, and C153/A21.53. These and other standards are referenced throughout this section either by the full ANSI/AWWA designation or by only the AWWA numbering, such as AWWA C110.

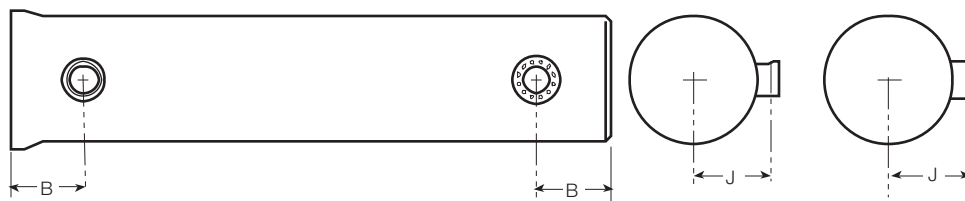
WELDED-ON OUTLETS **ACIPCO** regularly furnishes pipe with welded-on outlets for proven effectiveness and simplicity of layout and installation. An outlet can be located at any position along the pipeline while rotation of the pipe can position the outlet at any desired angle.

ACIPCO DUCTILE IRON SPECIALS— WELDED-ON OUTLETS FOR DUCTILE IRON PIPE

JOINTS The outlets are fabricated from centrifugally cast ductile iron pipe, manufactured and tested in accordance with ISO 2531. They may be furnished with **ACIPCO**'s ends such as Fastite or flanged joints. The parent pipe can also be furnished with Fastite or Lok-Ring® joint.

THICKNESS Minimum nominal thicknesses for both parent and outlet pipe are K12. In general, outlets are rated for PN16 working pressure. Please consult **ACIPCO** if higher working pressures are required.

This is a shop fabricated product and is not intended for field fabrication. Joint materials are furnished with Fastite, Lok-Ring bells, and flanged joints. Parent and outlet pipe are normally furnished cement lined in accordance with ISO 4179. Contact **ACIPCO** if linings other than cement linings are required.



ACIPCO DUCTILE IRON WELDED-ON OUTLETS								
PARENT PIPE DIAMETER (mm)	MAXIMUM OUTLET DIAMETER (mm)	NOMINAL THICKNESS PARENT PIPE (mm)	J SOCKET OUTLET (mm)	J FLANGED OUTLET (mm)	OUTLET DIAMETER (mm)	NOMINAL THICKNESS OUTLET PIPE (mm)	RATED WORKING PRESSURE (bar)	B MIN. DISTANCE TO PIPE END (mm)
250	150	9	300	375	150	7.8	16	375
300	200	9.6	325	400	200	8.4	16	425
350	200	10.2	350	425	-	-	-	-
400	250	10.8	375	450	250	9	16	450
450	300	11.4	400	500	300	9.6	16	500
500	350	11	425	525	350	10.2	16	575
600	400	12.1	475	575	400	10.8	16	650
700	450	13.2	550	650	450	11.4	16	725
800	500	14.3	600	700	500	11	16	800
900	600	15.4	650	750	600	12.1	16	950
1000	700	16.5	750	850	700	13.2	16	1100
1200	800	18.7	875	975	800	14.3	16	1275
1400	800	20.9	975	1075	-	-	-	-
1500	800	22	1025	1125	-	-	-	-
1600	800	23.1	1075	1175	-	-	-	-

Large diameter outlets may be available for greater pressure applications. Check **ACIPCO** for details.

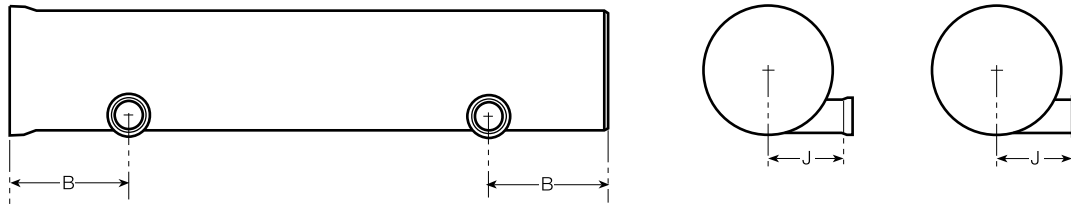
Longer outlet lengths can be furnished; however, consideration must be given to shipping, installation and service conditions.

Outlets can also be furnished on a lateral angle from 45°-89°. Additional diameter restrictions apply. Check **ACIPCO** for details.

Where flanged welded-on outlets must be installed underground, system design and installation should be such so as to avoid bending loads on the flanged joints and/or outlets. It may be necessary in such cases to locate a flexible joint very close to the outlet. The Appendix to ANSI/AWWA C115/A21.15 notes that underground use of the flanged joint is generally not recommended because of the rigidity of the joint.

This is a shop fabricated product and is not intended for field fabrication.

ACIPCO can furnish tangential welded-on outlets in certain diameters. Pipe with tangential outlets can be rotated with the outlets on bottom for blow-offs, or on top for air release. The parent pipe and outlet pipe can be furnished with the **ACIPCO** Fastite or flanged joint ends; however, flanged ends are not recommended for tangential outlets. Minimum classes and location of outlets are the same as for regular welded-on outlets. This is a shop product and is not intended for field fabrication. Parent and outlet pipe are normally furnished cement lined in accordance with ISO 4179. Contact **ACIPCO** if linings other than cement linings are required.



**ACIPCO
DUCTILE
IRON
SPECIALS**

ACIPCO DUCTILE IRON WELDED-ON TANGENTIAL OUTLETS								
PARENT PIPE DIAMETER (mm)	MAXIMUM OUTLET DIAMETER (mm)	NOMINAL THICKNESS PARENT PIPE (mm)	J SOCKET OUTLET (mm)	J FLANGED OUTLET (mm)	OUTLET DIAMETER (mm)	NOMINAL THICKNESS OUTLET PIPE (mm)	RATED WORKING PRESSURE (bar)	B MIN. DISTANCE TO PIPE END (mm)
250	150	9	318	318	150	7.8	16	375
300	200	9.6	343	343	200	8.4	16	425
350	200	10.2	368	368	-	-	-	-
400	250	10.8	394	394	250	9	16	450
450	300	11.4	419	419	300	9.6	16	500
500	350	11	445	445	350	10.2	16	575
600	400	12.1	508	508	400	10.8	16	650
700	450	13.2	559	559	450	11.4	16	725
800	500	14.3	610	610	500	11	16	800
900	600	15.4	660	660	600	12.1	16	950
1000	700	16.5	711	711	700	13.2	16	1100
1200	800	18.7	838	838	800	14.3	16	1275
1400	800	20.9	953	853	800	14.3	16	1275
1500	800	22	1003	1003	800	14.3	16	1275
1600	800	23.1	1054	1054	800	14.3	16	1275

Contact **ACIPCO** for larger diameter tangential outlets or for smaller parent pipe size requirements if needed. The maximum outlet diameter is the same as shown for welded-on outlets in the table on the previous page. The “J” dimension shown above varies depending on the Parent Pipe/Outlet size chosen. Please consult **ACIPCO** if this dimension is needed.