

October 6, 2016

For piping applications using branch lines, fusion outlets offer many advantages over conventional and reducer tees. Fusion outlets are fused directly into the pipe; this allows the installer to add the branch lines after the main line has been installed. Fusion outlets also have less friction loss in comparison to reducing tees; this reduces the pipe systems total pressure loss.

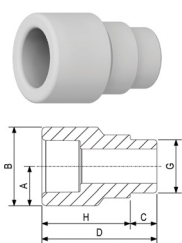
aquatechnik® offers two types of fusion outlets: direct and saddle. Direct outlets are typically easier to install, while saddle outlets are more aesthetically pleasing. Direct outlets can also be installed using standard socket fusion dies; saddle outlets, on the other hand, require specialized dies.

To install a fusion outlet, the installer must first drill a properly sized hole and then fuse the fitting in place using socket fusion. **aquatechnik®** offers drilling bores which will produce a properly sized hole for the fitting. Pipes that are larger than 2" require the use of a drill press. If the installer is using another company's drilling bore, it must be at least 1/32" smaller than the intended branch, and no more than 1/8" smaller than the intended branch.

The tables below list the available fusion outlet sizes and threaded fusion outlet options that are available as well as the recommended boring bit size if the installer plans on using another company's drilling bore.

Direct Joint

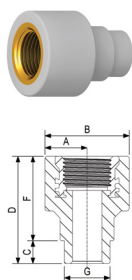
Socket fusion



Part #	Nominal Diameter	Actual Diameter	A	B	C	D	H	G	Boring Bit Size
	in.	mm	in.	in.	in.	in.	in.	in.	in.
65132U	1/2	20	9/16	1 3/16	3/8	1 11/16	1 5/16	13/16	1 1/16 - 25/32
65134U	3/4	25	1 1/16	1 3/8	7/16	1 3/4	1 5/16	1	7/8 - 31/32
65136U	1	32	7/8	1 3/4	1/2	2	1 9/16	1 1/4	1 1/8 - 1 7/32
65138U	1 1/4	40	1 1/16	2 1/8	9/16	2 3/16	1 5/8	1 9/16	1 7/16 - 1 17/32

Direct Threaded Female Joint

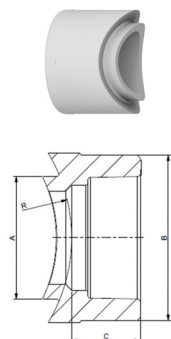
Socket fusion



Part #	Nominal Diameter	Actual Diameter	A	B	C	D	F	G	Boring Bit Size
	in.	mm	in.	in.	in.	in.	in.	in.	in.
65152U	1/2	20	3/4	1 7/16	3/8	1 7/8	1 7/16	13/16	1 1/16 - 25/32
65154U	3/4	25	7/8	1 3/4	7/16	1 15/16	1 1/2	1	7/8 - 31/32

Saddle Joint

Socket fusion



Part #	Nominal Diameter	Actual Diameter	For Pipe Diameter		A	B	C	Boring Bit Size
	in.	mm	in.	mm	in.	in.	in.	in.
650480U	¾	20	1 ½	50	1 ⅝	1 ⅝	⅞	1 ⅜ - 1 ⅞
650500U	¾	25	2	63	2 ½	1 ⅝	⅞	2 ⅜ - 2 ⅝
650502U	1	32	2 ½	75	2 ⅝	1 ⅞	1	2 ⅜ - 2 ⅝
650540U	1 ¼	40	2 ½	75	1 ⅞	2	1	1 ⅞ - 1 ⅝
650560U	1	32	3	90	3 ⅞	1 ⅞	1	3 ⅞ - 3 ⅝
650580U	1 ¼	40	3	90	1 ⅞	2	1	1 ⅞ - 1 ⅝
650600U	1 ¼	40	3 ½	110	1 ⅞	2	1	1 ½ - 1 ⅝
650620U	1 ½	50	3 ½	110	1 ⅝	2 ⅝	1 ⅞	1 ⅜ - 1 ⅝
650640U	1 ½	50	4	125	1 ⅝	2 ⅝	1 ⅞	1 ⅜ - 1 ⅝
650660U	2	63	4	125	2 ½	3 ⅞	1 ⅞	2 ⅜ - 2 ⅝
650680U	1 ½	50	6	160	1 ⅝	2 ⅝	1 ⅞	1 ⅜ - 1 ⅝
650700U	2	63	6	160	2 ½	3 ⅞	1 ⅞	2 ⅜ - 1 ⅝
650720U	2 ½	75	6	160	2 ⅝	4	1 ⅞	2 ⅜ - 2 ⅝
650740U	3	90	6	160	3 ⅞	4 ¾	1 ¾	3 ⅞ - 3 ⅝
650760U	1 ½	50	8	200	1 ⅝	2 ⅝	1 ⅞	1 ⅜ - 1 ⅝
650780U	2	63	8	200	2 ½	3 ⅞	1 ⅞	2 ⅜ - 2 ⅝
650800U	2 ½	75	8	200	2 ⅝	4	1 ⅞	2 ⅜ - 2 ⅝
650820U	3	90	8	200	3 ⅞	4 ¾	1 ¾	3 ⅞ - 3 ⅝
650840U	3 ½	110	8	200	4 ⅞	5 ⅜	2 ⅞	4 ⅞ - 4 ⅝
650860U	4	125	8	200	4 ⅞	6 ⅞	2 ⅞	4 ⅞ - 4 ⅝
650880U	1 ½	50	10	250	1 ⅝	2 ⅝	1 ⅞	1 ⅜ - 1 ⅝
650900U	2	63	10	250	2 ½	3 ⅞	1 ⅞	2 ⅜ - 2 ⅝
650920U	2 ½	75	10	250	2 ⅝	4	1 ⅞	2 ⅜ - 2 ⅝
650940U	3	90	10	250	3 ⅞	4 ¾	1 ¾	3 ⅞ - 3 ⅝
650960U	3 ½	110	10	250	4 ⅞	5 ⅜	1 ⅞	4 ⅞ - 4 ⅝
650980U	4	125	10	250	4 ⅞	6 ⅞	2 ⅞	4 ⅞ - 4 ⅝

Please feel free to contact us should you require any additional information.