STAINLESS



Join

Faster to Install

with ACO

Fast and reliable push-fit design. No welding, glueing, priming or electro-fusing required.

Lightweight to carry and position onsite. Less dead weight to support. Pipe stays straight and doesn't distort from direct sun or heat.

A wide range of fittings off-the-shelf, available in diameters **50 to 315mm**.

Experience Counts

We were the first to supply stainless drainage in Australia and New Zealand.

We work with consultants and installers on specialised complex projects regularly.

In-house design staff with local fabrication available for project requirements.

Quality to Install

Approved to WaterMark, Australian and international standards. Superior temperature tolerance.

Designed specifically for hygiene, WaterMark and HACCP approved.

Temp

Suitable

Reliable Design

Used by leading Australian food processors in demanding environments since 2002.

With the strength and chemical resistance qualities of stainless steel. Pre-fitted double lip ring seal for trouble-free sealing.

Environmental Choice

Long service life. Closed loop material (completely recycled to make more stainless).

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AP 14 Design

Installation Guide

Start to install stainless quicker... AusPress Stainless Drainage is a socket & spigot design that joins together by pushing the fittings together easily & quickly.

Refer to the technical section for installation recommendations & more information.

Start

here

Cutters are available for hire or purchase.





Confirm the stainless steel and the ring seal (eg EPDM) are suitable for the application and situation. Some chemicals and environments can be unsuitable, please ask us if unsure.

Ring Seal Colours

EPDM ring seals are supplied as standard unless ordered otherwise.

Colour	Motorial	Temperature*						
Colour	wateria	Min	Max					
Black	EPDM	-50°C	100°C					
Green	FPM	-20°C	200°C					
* Maximum continuous temperatures.								
For ring seal suitability								

For ring seal suitability with chemicals and other applications, please contact us for assessment.

This guide is only for standard applications.

For specific or specialised applications please contact us first - www.auspress.com.au

Ordering & Design

Stainless drainage pipe is available in different lengths (from 150mm to 6m) so choose the length closest to what is needed to reduce offcut waste.

Cut Pipe to Length

Cutting stainless drainage to length is easy with an appropriate cutter that:

- Is fitted with 'inox' blades designed to cold cut stainless,
- Clamps the pipe in position,
- Cuts the pipe square (with or without a guide) and,
- Forms a bevel to the spigot end of the pipe.

Approved cutting tools are listed below for reference - if in doubt, please contact us for advice.

Pipes are supplied with a socket and a spigot end; cut off from the spigot end keeping the socket. Using offcut spigotspigot pipe pieces is not recommended.

Note fittings are not to be cut.

		Diameter:	50	75	110	160	200	250	315
		006.050.110	\checkmark	\checkmark	\checkmark				
	Blucher Tools	800.050.160	\checkmark	\checkmark	\checkmark	\checkmark			
		006.125.200			\checkmark	\checkmark	\checkmark		
		006.200.315					\checkmark	\checkmark	\checkmark
		419363	\checkmark	\checkmark	\checkmark				
	Aco Tools	400738			\checkmark	\checkmark			
		417225				\checkmark	\checkmark	\checkmark	

Note: Using a guide or holder is recommended for diameters 160mm & larger.



Dual Lip Ring Seal

ACO's dual lip ring seal provides superior sealing technology where hygiene and joint security are of the utmost importance.

Inspect the Ring Seal

In the socket, check that the rubber ring seal is:

- The correct material specified (by colour) and,
- With the mitred edges facing outwards and,
- Not damaged and is free of debris.



Lubricate the Ring Seal Apply a small amount of joining lubricant to the ring seal inside the socket. We stock a silicon based lubricant.

Do not use oil or grease as a lubricant, this may damage the ring seal material.

Push, Twist & Pull

Using a slight twisting movement, push the spigot fully into the socket.

Then, retract 5-10mm to allow for expansion & contraction to occur within each socket. Marking the full insertion depth is a good method to see the distance retracted.

Pipe Lengths Socket - Spigot Material: 316 stainless steel, mill finish. Ring Seal: EPDM x1 fitted.

Supplied in stainless steel, items identified with a green label are grade 316L.

Each length of stainless drainage pipe is supplied with a socket (fitted with a rubber ring seal) and spigot end.

Ordered in various lengths to reduce offcut wastage then cut to length on site using an appropriate cutter.

The system is directional; the water flow must travel from socket to spigot.

An EPDM ring seal is prefitted in the socket end and can be change to another type of rubber type depending on chemicals or temperature requirements.

Our extensive technical experience is available to help with your individual project requirements or further information.



Refer to the technical section for installation guides & other reference information.

Socket & Spigot Details



		Insertion Depth			
D1	Х	i	D2	D3	Т
50	42	32 - 37	51	62	1.0
75	50	40 - 45	76	88	1.0
110	57	47 - 52	111	126	1.0
160	70	60 - 65	161	178	1.25
200	80	70 - 75	201	219	1.5
250	90	80 - 85	251	269	1.5
315	100	90 - 95	316	334	2.0
		Retract 5-10mm after pushing together for expansion & contraction.			

	Product No	L	D1	Weig	ht (kg)
				Dry	Wet [‡]
K	AP.P.0150.050	150	50	0.2	0.5
(50)	AP.P.0250.050	250	50	0.4	0.8
mm	AP.P.0500.050	500	50	0.7	1.5
	AP.P.0750.050	750	50	1.0	2.3
	AP.P.1000.050	1000	50	1.3	3.1
	AP.P.1500.050	1500	50	1.9	4.2
	AP.P.2000.050	2000	50	2.6	6.0
	AP.P.3000.050	3000	50	3.8	9.0
	AP.P.4000.050	4000	50	5.0	12.0
\sim	AP.P.0150.075	150	75	0.4	0.9
(75)	AP.P.0250.075	250	75	0.6	1.5
	AP.P.0500.075	500	75	1.0	3.0
	AP.P.0750.075	750	75	1.5	4.5
	AP.P.1000.075	1000	75	2.0	6.0
	AP.P.1500.075	1500	75	2.9	9.0
	AP.P.2000.075	2000	75	3.6	12.1
	AP.P.3000.075	3000	75	5.7	18.0
	AP.P.4000.075	4000	75	7.6	24.1
K	AP.P.0150.110	150	110	0.6	1.8
(110)	AP.P.0250.110	250	110	0.9	3.0
mm	AP.P.0500.110	500	110	1.5	6.0
	AP.P.0750.110	750	110	2.2	8.9
	AP.P.1000.110	1000	110	2.9	11.9
	AP.P.1500.110	1500	110	4.3	17.8
	AP.P.2000.110	2000	110	5.7	23.7
	AP.P.3000.110	3000	110	8.4	35.6
,	AP.P.6000.110	6000	110	16.7	71.8
K	AP.P.0250.160	250	160	1.6	6.6
(160)	AP.P.0500.160	500	160	2.9	12.7
	AP.P.0750.160	750	160	4.1	18.8
	AP.P.1000.160	1000	160	5.4	25.0
	AP.P.1500.160	1500	160	7.9	37.2
	AP.P.2000.160	2000	160	10.4	49.5
	AP.P.3000.160	3000	160	15.4	74.0
. /	AP.P.6000.160	6000	160	30.4	147.6
	AP.P.0500.200	500	200	4.5	19.8
(200) mm	AP.P.1000.200	1000	200	8.3	38.8
	AP.P.2000.200	2000	200	15.8	76.7
. /	AP.P.3000.200	3000	200	23.2	114.5
050	AP.P.0500.250	500	250	5.5	29.8
(250) mm	AP.P.1000.250	1000	250	10.2	58.4
	AP.P.2000.250	2000	250	19.4	115.5
. /	AP.P.3000.250	3000	250	28.7	172.7
215	AP.P.0500.315	500	315	9.8	47.9
(315)	AP.P.1000.315	1000	315	17.7	93.7
	APP2000315	2000	315	335	1751

315 [‡]Wet weights calculated using full volume filled with water.

49.3

276.7

Lubricant

AP.P.3000.315



3000

Product No	Description
AP.Lube.250	Lubricant jointing paste 250mL
AP.Lube.500	Lubricant jointing paste 500mL
AP.Lube.1000	Lubricant jointing paste 1000mL

Ring Seal: EPDM x1 fitted.







Swept Bend 87.5° Socket - Spigot



Material: 316 stainless	Material: 316 stainless steel, mill finish.							
Product No	D1	X1	X2	ХЗ				
AP.SB.87.050	50	102	97	22				
AP.SB.87.075	75	128	126	30				
AP.SB.87.110	110	173	160	46				
AP.SB.87.160	160	229	224	75				

Bend 45° Socket - Spigot



Double bend arrangements shown for offset dimensions only - each bend sold separately.

Material: 316 stainless steel, mill finish.

D1

50

75

110

160

200

250

315

Image

А

А

А

А

в

В

В

X1

86

107

134

181

215

297

393

Х2

40

53

67

105

129

198

286

Product No

AP.B.87.050

AP.B.87.075

AP.B.87.110

AP.B.87.160

AP.B.87.200

AP.B.87.250

AP.B.87.315

Material: 316 stainless steel, mill finish.						Ring Seal: EPDM x1 fitted.		
Product No	D1	X1	X2	ХЗ	X4	X5	X6	
AP.B.45.050	50	62	24	157	68	130	95	
AP.B.45.075	75	76	32	197	83	159	121	
AP.B.45.110	110	93	42	243	103	195	150	
AP.B.45.160	160	131	55	331	138	269	200	
AP.B.45.200	200	152	60	380	156	308	228	
AP.B.45.250	250	177	76	438	185	362	273	
AP.B.45.315	315	199	91	502	212	411	317	

Bend 30° Socket - Spigot



Double bend arrangements shown for offset dimensions only - each bend sold separately.

Material: 316 stainless	Ring Se	al: EPDM x1 fitted.				
Product No	D1	X1	X2	ХЗ	X4	
AP.B.30.050	50	57	16	138	37	
AP.B.30.075	75	71	21	172	45	
AP.B.30.110	110	85	27	223	61	
AP.B.30.160	160	110	40	278	73	
AP.B.30.200	200	137	45	336	89	
AP.B.30.250	250	153	58	413	110	
AP.B.30.315	315	172	68	448	121	

Bend 15° Socket - Spigot



Double bend arrangements shown for offset dimensions only - each bend sold separately.

Material: 316 stainles	Ring Seal: EPDM x1 fitted.				
Product No	D1	X1	X2	ХЗ	X4
AP.B.15.050	50	54	12	134	18
AP.B.15.075	75	66	16	162	21
AP.B.15.110	110	78	15	198	26
AP.B.15.160	160	99	29	250	32
AP.B.15.200	200	123	31	300	38
AP.B.15.250	250	136	40	366	48
AP.B.15.315	315	151	46	388	51

Single Junction 45°

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x2 fitted.



Product No	D1	BR	X1	X2	ХЗ		
AP.SJ.45.050	50	50	128	57	76		
AP.SJ.45.075	75	75	179	74	110		
AP.SJ.45.110	110	110	233	88	149		
AP.SJ.45.160	160	160	332	119	222		
AP.SJ.45.200	200	200	415	151	274		
AP.SJ.45.250	250	250	513	172	336		
AP.SJ.45.315	315	315	616	195	521		
AP.RJ.45.075.050	75	50	144	56	94		
AP.RJ.45.110.050	110	50	147	42	119		
AP.RJ.45.110.075	110	75	182	60	135		
AP.RJ.45.160.110	160	110	332	119	191		
AP.RJ.45.200.160	200	160	359	123	250		
AP.RJ.45.250.200	250	200	429	175	307		
AP.RJ.45.315.250	315	250	518	154	382		

■ Single Junction 87.5°

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x2 fitted.



Product No	D1	BR	X1	X2	
AP.SJ.87.050	50	50	106	71	
AP.SJ.87.075	75	75	139	90	
AP.SJ.87.110	110	110	183	117	
AP.SJ.87.160	160	160	288	184	
AP.SJ.87.200	200	200	333	206	
AP.SJ.87.250	250	250	363	215	
AP.SJ.87.315	315	315	476	281	
AP.RJ.87.075.050	75	50	139	90	
AP.RJ.87.110.050	110	50	183	117	
AP.RJ.87.110.075	110	75	183	117	
AP.RJ.87.160.110	160	110	288	184	
AP.RJ.87.200.160	200	160	293	186	
AP.RJ.87.250.200	250	200	349	226	
AP.RJ.87.315.250	315	250	411	248	

Double Junction 45°

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x3 fitted.



Double Junction 87.5°

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x3 fitted.



Product No	D1	BR	X1	X2	X3		
AP.DJ.45.050	50	50	128	57	76		
AP.DJ.45.075	75	75	179	74	110		
AP.DJ.45.110	110	110	233	88	149		
AP.DJ.45.160	160	160	332	184	222		
AP.DRJ.45.075.050	75	50	144	56	94		
AP.DRJ.45.110.050	110	50	147	42	119		
AP.DRJ.45.110.075	110	75	182	60	135		
AP.DRJ.45.160.110	160	110	332	119	190		

Product No	D1	BR	X1	X2
AP.DRJ.87.075.050	75	50	139	90
AP.DRJ.87.110.050	110	50	183	117
AP.DRJ.87.110.075	110	75	183	117
AP.DRJ.87.160.110	160	110	288	184

Increaser Eccentric Socket - Spigot

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x1 fitted (D1).



Product No	D1 —	> D2	X1	X2	
AP.IE.050.075	50	75	75	7	
AP.IE.050.110	50	110	110	25	
AP.IE.075.110	75	110	110	15	
AP.IE.110.160	110	160	160	22	
AP.IE.160.200	160	200			
AP.IE.200.250	200	250	180	15	
AP.IE.250.315	250	315	190	15	

Expansion Socket Socket - Spigot

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x1 fitted.



Although each socket is designed to allow some linear expansion & contraction, for greater movement dimensions are available on request. Installing? Ensure the minimum insertion distance is marked on the incoming spigot prior to inserting.

X1

121

170

×

D1

Т

Μ

74

110

Clearout (IP Cover)

D1

Material: 316 stainless steel, polished top finish. Lid seal: Neoprene gasket.

Polished 316 stainless steel top finish. Allen head screws fitted standard. Security screws are available on request.

 $\mathbf{\Sigma}$



Product No	D1	D2	X1	
AP.CO.110	110	128	90	
AP.CO.160	160	180	100	

Vent Cowl

Material: 316 stainless steel, mill finish.



Product No	D1	X1	Slot	
AP.VC.050	50	90	5x60	
AP.VC.075	75	120	5x60	
AP.VC.110	110	83	11x50	
AP.VC.160	160	127	10x60	

Straight Coupling Socket - Socket

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x2 fitted.

Straight coupling has centre stopper. Recommended vertical use only (to prevent debris catching on the outward lip).



Product No	D1	X1		
AP.SC.050	50	15		
AP.SC.075	75	25		
AP.SC.110	110	25		
AP.SC.160	160	25		
AP.SC.200	200			
AP.SC.250	250			
AP.SC.315	315			





Designed with no centre

coupling can slide entirely

over pipe for new fittings

to be added and then slid

stopper so the repair

Product No	D1	L	
AP.RC.050	50	89	
AP.RC.075	75	96	
AP.RC.110	110	102	
AP.RC.160	160	131	
AP.RC.200	200		
AP.RC.250	250		
AP.RC.315	315		

back over the join. Mark min insertion depth on both spigots to ensure adequate insertion.

Access Pipe Socket - Spigot

Material: 316 stainless steel, mill finish. Ring Seals: EPDM x1 fitted, EPDM gasket x1.





elevation

elevation

Product No	D1	X1	X2	I/O	
AP.IP.075	75	139	90	75	
AP.IP.110	110	183	117	110	
AP.IP.160	160	288	184	160	
AP.IP.200	200	293	186	200	

STAINLESS

STAINLESS



See technical section for more information.

Working Pressures (bar)

Socket Joint Clamp

Material: 316 stainless steel, mill finish.





'Tiger' version of clamp shown. Smooth version also available on request.

Socket Clamps are only needed where possible pressures or force on a join could dislodge the spigot from the socket.

Joins without a clamp are rated up to positive 0.5 bar pressure. Fitting a clamp will increase this rating as listed.

Installing?

Fit the Socket Clamp over the bump of the socket (as shown dashed above) noting the correct direction ... Small lip edge (fit over the socket),

- Large lip edge (fit over the spigot)

Pipe length shown for clarity, not included.

Product No	D1	Without Clamp	With Clamp
AP.SCL.050	50	-0.8 to 0.5	-0.8 to 2.0
AP.SCL.075	75	-0.8 to 0.5	-0.8 to 2.0
AP.SCL.110	110	-0.8 to 0.5	-0.8 to 2.0
AP.SCL.160	160	-0.8 to 0.5	-0.8 to 1.0
AP.SCL.200	200	-0.8 to 0.5	-0.8 to 1.0
AP.SCL.250	250	-0.8 to 0.5	-0.8 to 1.0
AP.SCL.315	315	-0.8 to 0.5	-0.8 to 1.0
			41 40010

1bar = 100kPa



 Leave the ring seal in the pipe socket. Fully insert the plug into

the socket bump, as shown

Tighten nuts x4 to secure

Pipe length shown for clarity,

F

AP.AFS.160

the pipe socket. Position the clamp behind

dashed.

not included.

Product No

AP.SPC.050

AP.SPC.075

AP.SPC.110

AP.SPC.160

AP.SPC.200

AP.SPC.250

AP.SPC.315

Material: 316 stainless steel, mill finish.



Adaptor Flange - Socket

Material: 316 stainless steel, mill finish. Ring Seal: EPDM x1 fitted. ୍ଚିତ୍ର <- Flow Т 5 AP.AFS.110 elevation X1 D2

Adaptor Flange - Spigot

Material: 316 stainless steel, mill finish.



Other flange types and diameters on request.

We manufacture Adaptor Flanges to suit the flange type and pipe length you require.

Product No	D1	Table	X1	Tmin	D2	PCD	D3 x qty
AP.AFS.050	50	E	140	10	150	114	18Ø x4
AP.AFS.075	75	Е	140	11	185	146	18Ø x4
AP.AFS.110	110	E	140	13	215	178	18Ø x8

D1

50

75

110

160

200

250

315

240 280 235 22Ø x8 Confirm flange type at time of ordering. Flange table dimensions are in accordance with AS 2129.

160

F.

We manufacture Adaptor Flanges to suit the flange type and pipe length you require.

Product No	D1	Table	X1	Tmin	D2	PCD	D3 x qty
AP.AF.050	50	E	140	10	150	114	18Ø x4
AP.AF.075	75	E	140	11	185	146	18Ø x4
AP.AF.110	110	E	140	13	215	178	18Ø x8
AP.AF.160	160	E	240	17	280	235	22Ø x8

Confirm flange type at time of ordering. Flange table dimensions are in accordance with AS 2129.

Other flange types and diameters on request.



Stainless Steel Rubber Lined Brackets

Material: 316 stainless steel, mill finish. EPDM rubber lining.





Installing? Do not fit the bracket to the socket part of the stainless pipe.

Product No	Image	D 1	X1	Thk	
316.PC.050	D	50	45	1.5	
316.PC.075	D	75	58	1.5	
316.PC.108	D	110	75	1.5	
316.PC.160	D	160	100	1.5	
316.PC.200	D	200	120	1.5	
316.PC.250	D	250	145	1.5	
316.PC.315	D	315	178	1.5	

Cover Flange (Escutcheon Plate)
 Material: 316 stainless steel, spun finish.





Product No	D1	D2	X1	
AP.CF.050	50	160	51	
AP.CF.075	75	185	51	
AP.CF.110	110	221	51	
AP.CF.160	160	270	51	
			Pipe length shown for clarity, not included.	

 Vermin Flap Socket - Outlet Material: 316 stainless steel, satin finish. Ring Seal: EPDM x1 fitted.



Swinging door prevents the ingress of vermin.

Installing? Install horizontally with the hinge tab at the top.

Product No	D1	X1
AP.VFS.050	50	75
AP.VFS.075	75	100
AP.VFS.110	110	135
AP.VFS.160	160	185

STAINLESS



В

С

WMT-5-BACK

TUN.INWL.AUS

38

1.1/2"

135

71

100

128

80

25

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79

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189

120

150

Joining Drainage To & From Other Materials

Confirm the materials are compatible with stainless steel and the rubber ring seal is lubricated (not with oil). **Remember to observe the flow rule when installing.** All items sold separately. Confirm with manufacturer suitability of non-AusPress products.

This is a guide only! Read with the technical section and contact us for more information.



OL

Tech Data Sheet: AusPress Stainless Drainage





	AusPress Stainless Drainage Push-Fit Pipe & Fittings	AusPress Stainless Floor Gully Floor Waste Gully System	AusPress Stainless Channels Linear Trench Drainage
Product Description:	A push together pipe and fitting system installed easily and quickly with the socket ends pre-fitted with a rubber ring seal.	A drain bowl system designed specifically for hygiene sensitive areas with interchangeable components to suit the application.	Linear drainage trough manufactured in Australia to your project requirements with high hygiene, flow and load ratings.
	Where hygiene and high performance is critical. Traditionally stainless is used in food (meat) & beverage processing with the benefits of our systems now extending to pharmaceutical, laboratories, laundry & aged care, medical & hospital, defence, corrections, education facilities, heavy industrial and mining sectors.		
Applications:	 Trade waste & sewer. Contaminated wastes (eg PC3). Fuels & oils. Chemical lines. Stormwater & downpipes. Rising main, vacuum & siphonic. 	 Equipment washdown areas. Chiller & freezer rooms. Truck and loading bay areas. High flow water processing. Bowl tops for concrete. tiled. epoxy of vinyl sheet floors. 	 Equipment washdown areas. Chiller & freezer rooms. Pharmaceutical laboratories. Commercial kitchen & deli areas. Truck and loading bay areas. High flow water processing.
Key Features:	 High temperature suitable. Lightweight for suspended or in-ground installation. Double lip ring seal standard. Stocked in Australia. Fire resistant design. Chemical resistant[‡]. Adapts to other systems. Full range of fittings available. 	 One-piece hygienic design. Self-draining internal surfaces. High load rated hygienic edging. Extra deep filter basket option. High load rated grates. Connects to common drainage materials incl HDPE & KG2000. Stocked in Australia. Removable water seal option. 	 Hygienic and strong epoxy edge infill standard. Fall to outlet standard. No lap single piece design. Extra deep filter basket option. High load rated grates. Levelling angles standard. Connects to common drainage materials incl HDPE & KG2000.
Standard Sizes:	Diameter ODWall50mm1.0mm75mm1.0mm110mm1.0mm160mm1.25mm200mm1.5mm250mm1.5mm315mm2.0mmPipe lengths supplied in pre-cutM-F lengths, from 150mm to 6m.	 Drain bowl tops available in square or round tops, polished. 200, 300 or XL 400 and 600 sizes, For concrete, tiled, epoxy and vinyl sheet flooring. Standard or low height models. Outlets: Vertical or horizontal, 110 or 160mm. Inlets: Available on request. 	 Hygiene focus channel types include HygieneMAX, Vee, Slot and Half-Round. Width: Standard 150, 200, 300, 400mm. Lengths: Any, made to project requirement. Over 6m supplied in sections with gasket sealed bolted joins. Outlets: 1 or multiple, vertical or horizontal, 110 or 160mm OD.
Material Specs: [‡] Contact us for suitability assessment.	 Stainless steel, grade 316L. Mill finish standard, other finishes available on request. Chemically pickled and passivated standard. Longitudinally TIG welded. Low thermal expansion. Ring seal pre-fitted socket end. Ring Seal Options: EPDM (black) standard. FPM (green) on request. 	 Stainless steel, grade 316L. Chemically pickled and passivated standard. TIG welded. Epoxy edge infill (square tops). Removable Components: Grate – various designs for flow and load ratings. Filter Basket (3mm mesh). Removable Foul Air Trap (FAT) (WM compliant). 	 Stainless steel, 316 or 304. Polished top surface. Epoxy edge infill (option). FKM gasket flange join where channels greater 6.0m in length. Removable Components: Grate – various designs for flow and load ratings. Filter Basket (3mm mesh). Removable Foul Air Trap (FAT) (WM compliant).
System Standards & Approvals:	AusPress operates to an externally audited ISO 9001 & ISO 45001 system. rds & HACCP Certification for all AusPress Stainless Drainage products items to zone class "SSZ". WaterMark Approved for stainless pipes and fittings, and floor drain gullies, and channel components.		
Country of Manufacture:	Czech Republic & Australia. Australian content includes manufacturing of channel bases, channel & floor gully components and custom manufactured items.		
Warranty & Lifecycle	25 year product guarantee, 50+ year design life. Manufacturer plus Australia based technical support. Refer to our Tech Note TN.16 for more information. Stainless is a closed loop material; recycle and reuse.		

AusPress developed hygiene & high flow drainage systems in partnership with ACO for Australian conditions.



Technical Guide

AusPress Stainless Drainage Products

The following information is only a guide. All work must comply with AS/NZ 3500 and any other relevant standards applicable to the installation. For specific installation assistance, or if you're in doubt, please contact us before proceeding.

As with all work using tools, the following points are to be adhered to and understood, along with the general safety practices such as wearing suitable clothing and equipment, being alert and focused, keeping the work area clear of obstacles and observing WHS (OH&S) requirements. **Stainless Drainage Pipe & Fittings**

Installing Stainless Drainage

The socket-spigot stainless drainage system comprises directional pipe and fittings (installed with flow into the socket, out the spigot) with the socket pre-fitted with a rubber ring to seal each join.

Refer to the installation guides at the front of each AusPress Drainage catalogue section for more information.

1. Cutting

Stainless drainage pipe lengths are supplied in set lengths from 150mm through to 6.0m and may be cold cut using an approved pipe cutter that creates a bevel on the pipe end and assists fitting. Care should be taken as cut ends could be sharp.

Do NOT cut with drop saws or angle grinders.

Ensure the socket is retained on pipe lengths when cutting shorter. Spigot-spigot pipe lengths are not recommended.

2. Ring Seals

Ring seals are fitted to each socket end with an EPDM type supplied pre-fitted as standard.

Check the ring seal is free of debris and the correct type of seal is fitted for the application and temperatures to be used. **Not sure? Ask!**

Ensure the ring seal is fitted correctly with taper facing outward (see image).

Replace the seal if unsure or incorrect. Remove the seal to see the type labelled on the inside flat surface of the ring seal.

3. Joining

Apply lubricant to ring seal & outside of spigots.

Material	Colour	Application [*]	Operating Temp
EPDM	Black (Dull)	General use.	-40° to +100°C
FPM	Green (or Purple)	High temp, gas, oil, fuel.	-25° to +200°C
NBR	Black (Shiny)	Gas, oil, fuel.	-30° to +80°C

*Confirm with AusPress prior to installation.

Preferred lubricant is silicon based (such as Super Glidex) but an approved soap based lubricant can also be used. Grease is not to be used as this may damage ring seals.

Push the spigot into the socket fully with a slight turning movement.



Joint is then pulled back 5mm to 10mm to allow for expansion and contraction within the socket.

4. In-Ground Installation

When stainless drainage products are being installed inground, grade 316L stainless is to recommended.

Bedding and surrounding fill is to be a minimum thickness of 50mm pH neutral sand, free of chlorides and/or salts.

Crushed aggregate or fine gravel is NOT to be used.

Wrapping of inground drainage is not required for standard applications - contact us if wrapping is required for your installation.

NOTE: Check with us prior to installation if soil is constantly damp, wet or subject to often or occasional high water table levels, reclaimed or contaminated soil or soil of unknown origin is used!

5. Bracketing

Bracketing is to comply with AS/NZ 3500.

If a dissimilar bracket metal is used, a protective isolation barrier is to be provided between the stainless surface and the bracket.

Changes of direction on main suspended drainage should be bracketed in both directions as close as possible to bend, to prevent lateral movement.

Extra bracketing may also be required at socket joints to prevent sagging.

6. Good Practice

Preference installing 45° branches.

All main horizontal 90 degree direction changes should be made using $2 \times 45^{\circ}$ bends with a minimum 150mm length between.

Venting procedures must comply with AS/NZ 3500.

7. Welding

If welding is to be carried out, prior approval must be obtained from AusPress. Purge-welding procedures must be undertaken and all welds are to be pickled and passivated prior to installation and backfilling.

8. Special Applications

Stainless drainage pipe and fitting products can be used for special applications such as ducting, vacuum, siphonic drainage and low pressure pumping applications. Please consult us for technical advice and vacuum specific products.

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Expansion & Contraction

Pipes in any direction (including horizontal suspended and horizontal in ground) must be supported to prevent the force arising through heat expansion can neither bend the pipes nor pull the spigot ends from the sockets.

Expansion Sockets are available for larger expansion and contraction movements.

The below graphs the expected expansion of grade 316 stainless steel with change in temperature. This is expressed as the formula E=L. T.



A 3m length pipe at ambient temperature (20°C) is filled with 70°C hot water. The temperature difference of 50°C (70°C minus 20°C) expands the grade 316L stainless longitudinally approximately 2.5mm overall.

Stainless has a very low coefficient of expansion under normal conditions; as a general rule, fixing points and expansion sleeves may be omitted if the temperature remains under 100°C *and* the maximum straight run of pipework is under 40m. Spigot ends must be pulled the 5 to 10mm from the socket after full insertion.

Suspended Graded Installation

Diameter	Support Spacing
50mm	2.2m
75mm	2.5m
110mm	2.8m
160mm	3.3m
200mm	3.0m
250mm	3.0m
315mm	3.0m

The distance between the suspended supports must be calculated on the basis of a permissible 1mm bending of the pipe. The bending for a single mounting is calculated for a water-filled pipe.

Spacing distances apply to continuous straight lengths. At joins in the suspended drainage, additional fixing points must be placed that either the branch or the through pipe is held directly under the sleeve (not on the socket part). Changes in direction shall be supported with suitable bracketing to prevent movement & the join separating.

If this is not possible, the span between fixing points must be reduced by half or, as an alternative, Joint Clamps can be installed for stability.

Vertical Installation

3.0m maximum gap between each support or designed to support water-filled pipe plus any expected loads.

Where larger inlets are connected, the pipe must be secured immediately below the inlet and under (not on) each socket.

Consideration for forces against change in directions for vertical drops must be provided to suit and securing any joins as part of the installation.

Connecting at Floor Level

Protecting the drainage & socket from damage & debris.



Fire Protection

Stainless drainage is a class A1 fire resistant product (highest rating) and certified as non-combustible (EN1124 parts 1 & 2).

Penetrations that require fire rating can be sealed between the opening and stainless pipe with a suitably rated mortar or insulation/mastic product that is compatible with stainless steel (eg low chloride). Fire collars are not required for stainless pipework. Consult standards for local requirements.

Vacuum & Siphonic

Stainless drainage is suitable for vacuum (sewer) piping and siphonic (rainwater) installations. We recommended these systems are professionally designed - we have more information on request.

The material strength of stainless provides a high resistance to implosion and the rigid lengths are lightweight to install. We recommend Joint Clamps are used on each join and bracketing to resist the vibrations at 3m internals maximum or at a change in direction.

Handling & Surface Finish

Stainless is resistant and durable but care must be given during transport and installation to not damage the shape or stainless surface.

Storing: Ensure stainless is kept suitably protected from contaminants, welding and/or grinding sparks, excessive weight or over stacked. Long lengths are recommended to be handled by more than one person.

Mill Finish: A dull surface finish, suitable for drainage however not suitable for exposed or aesthetic applications (such as downpipes as it shows fingerprints). For exposed installations, polishing the external surface is available on request.

Installing Floor Gully & Channel

Stainless Drain Bowls & Channel Bases

Both these systems are installed with the body/base fixed into position permanently with the accessories including grates, filter basket and foul air trap (FAT) fitted into the body/ base afterwards.

These instructions are based on common installation situations for our products. If conditions, requirements or situations vary, contact AusPress for advice before installing. Other elements, including structural, are to be designed and specified by suitably qualified others and shown here for illustration purposes only.

1. Preparation

If to be installed in a recess, it should have a minimum 50mm gap on all edges (eg the cutout is 100mm wider overall than the channel) and 50mm deeper than the outer dimensions.

Remember to allow for the anchor tags and levelling angles in sizing the cutout hole size.

If connecting to metric drainage such as ACO Pipe[®], Blucher[®] EuroPipe or KG2000[®], the outlet spigot will push into a socket end connection. For HDPE and PVC, use an expansion socket; for cast iron use an 'Ensign' joining socket.

Standard outlet dimensions are 110mm and 160mm outside diameter (OD).

2. Installing

Points are illustrated in the adjacent diagrams.

- Ensure drainage piping is set up at correct height to suit depth of floor drain chosen (refer to technical information for measurements).
- Position the support brackets for threaded rod or the supplied support legs to suitably support the drain bowl or channel base from moving.
- Ensure appropriate moisture barriers are used to prevent corrosion as best practice construction, such as under each support leg stand for suspended slabs.
- 4) Place the drain bowl or channel into position and align with the levelling supports.

Long channels with bolted flanges will require this to be completed in sections and with multiple people to prevent the channel from torquing.

- Adjust each of the supports to adjust & level the drain bowl or channel to the correct height. Threaded rod is recommended to be secured with a second nut, one each side of the tag.
- 6) Tie anchor tags to steel reinforcement. This will help prevent movement or floating during concreting and earth the drain bowl or channel.
- 7) Confirm the drain bowl is at correct height and is level.
- Install 10mm thick x 20mm deep styrene foam to outside perimeter of the top of the drain bowl or channel edge.
- 9) Protect the opening with plywood or similar to ensure concrete and other foreign matter does not enter during construction.

- 10) Concrete footing is poured.
- 11) After concrete is set, and before final floor finish is applied (eg epoxy coating), remove the styrene foam from around outside perimeter.
- 12) Fill the gap made by the foam with an approved polyurethane sealant (such as Sikaflex-11FC) as per manufacturer's instructions and ensuring the product installation procedures are adhered to.

Two common methods are used to secure & level the drain bowl or channel when installing are shown below.



Use the easy adjust support legs or threaded rod.







3. Installing Grates and Accessories

We recommend installing the grates and accessories as part of commissioning to prevent damage or loss of items during construction.

Remove any protective covering only if no damage can occur to the drain bowl or channel before use.

Fit the grate and accessories within the drain bowl as supplied. If a removable Foul Air Trap (FAT) is supplied, fit the rubber seal over the drain bowl bump first, then fit the FAT to the seal. The filter basket must be positioned above the removable Foul Air Trap (FAT) within the drain bowl.

Confirm the grating fitted is suitable for the traffic load and application prior to use.

Prevent construction traffic, scissor lifts, forklifts, vehicles or heavy loads from driving over an unprotected floor gully or channel.

4. Bolted Flange Connections

Channels manufactured with bolted connections are supplied with the fixings and a Viton rubber gasket to assemble and join the channel sections together. Tighten bolts evenly and ensure the gasket is not over or under compressed.

5. Special Installation Notes

Site materials can contaminate and damage the surfaces. Ensure the drain bowl and channel are clear of debris and cleaned in the approved method to avoid damage.

It is recommended that channels greater than 2.5m in length or irregular shapes be handled and installed with multiple people. This is to prevent the channel from accidental twisting and being damaged.

6. Flow Rates

Depending on the accessories installed and the drain bowl selected, the flow rates are expected based on 'clean' continuous flow of water, without solids. Flows with solids or contaminated water will experience lesser values.

Use the component with the lowest flow rate value when making flow calculations. Accessories such as Filter Baskets, Secondary Strainers and Silt Baskets will restrict the flow further, whether clean or otherwise.

Corrosion Resistance

Resistance Against Corrosion

316 stainless steel is resistant to corrosion when it is exposed to clean atmosphere (ambient air). The probability of corrosion is increased by contact with corrosionpromoting construction materials or by installation in corrosive atmospheres such as coastal areas or chemical production facilities.

We offer technical advice and have access to metallurgist specialists for water quality & purity testing for specialised applications or projects with specific needs.

External Surface Protection

High ground water, external conditions such as coastal environments and contaminated soils can all effect the external surface of stainless steel drainage.

In areas where a risk of damaging effects exists, installation of stainless without protection should be avoided.

If there is the risk of corrosive substances (eg. Unsuitably high chloride content waters, plaster, building materials containing chloride, specialised concrete, high ground water levels, nitrite or ammonium) acting on the drainage over prolonged periods, surface-mounting or suitable corrosion protection is recommended.

Protection against external corrosion must meet the following requirements:

Waterproof. Non-porous. Resistant to heat and ageing. Undamaged.

The minimum protection against external corrosion is coating, priming or painting. Denso[®] wrapping is also suitable. Plastic wrapping in not recommended. Contact AusPress for recommended protection options.

Potable Water

Corrosion-resistant steels do not react with potable water due to their protective chromium oxide layer. This makes stainless steel corrosion-resistant to potable water.

Local corrosion effects such as pitting or crevice corrosion can occur in water with unduly high chloride content. This can occur from excessive chlorous disinfectant use or naturally occurring such as in bore water. Therefore, the duration of application and concentration for use must be strictly observed.

The content of water-soluble chloride ions at ambient temperature in potable water and water which is similar to potable water should not exceed 250 mg/l (250 ppm).

Corrosion resistance decreases as the temperature increases. Therefore, AusPress must be notified of maximum media temperature and media contents (eg water analysis) to enable a suitability recommendation.

Treated Water

All water treatment methods such as ion exchange or reverse osmosis can be used with grade 316 stainless steel. No additional measures to protect against corrosion are necessary.

Stainless steel is corrosion-resistant to treated water such as:

Softened/decarbonised water.

Fully desalinated water (deionised, demineralised, distilled and pure condensates).

Ultrapure water with a conductivity of < 0.1 μ S/cm.

Chemical Suitability

Some chemicals are not suitable for stainless steel, diluted or otherwise. Please confirm suitability with the chemical manufacturer before use or contact AusPress for an assessment.

Complete a Project Info Sheet with the relevant MSDS and details from our website.

Commissioning & Maintenance

Stainless products require little maintenance. In most environments, little or no maintenance is necessary. This would include wet areas and shower rooms with no washdown debris.

We recommend installing the grates and accessories as part of commissioning to prevent damage during construction.

Please ensure wash down waters or waste debris do not contain chemicals that are either high in chlorides or not suitable for stainless.

Care is to be taken to prevent scratching the stainless steel surface. Avoid any contact with, grinding and welding sparks, metal shavings, corrosive chemicals or any material or process which may cause failure during construction and also from future maintenance.

Ensure that all drains and accessories are properly "dry" cleaned to remove any foreign products from drain bowls etc, before initial wet clean. A visual inspection is recommended if any rust spots appear caused by these foreign products, please ensure these are removed using a scotch bright cleaning pad only, then thoroughly washed out with cold potable water. This process should also be followed after any maintenance once plant is commissioned.

In especially demanding environments, such as food processing, chemical industries and agriculture, it may be necessary to clean to avoid coating that could lead to corrosion later. Cleaning can be carried out with highpressure cleaning or high pressure flushing equipment using potable water.

If installed in locations effected by coastal conditions, a regular cleaning regime must be implemented to remove external salts and contaminants from the stainless.

Where there is heavy coating, plastic or brass tools can be used. With especially persistent coating, diluted citric acid can be used to loosen the deposit. This must be flushed with large quantities of cold potable water afterwards.

Cleaning of drains, including the emptying of filter basket, is to be performed at least once every shift and when required.

In cases of difficulty, users should consult us for technical advice.

Disinfecting the System

This is carried out to meet more stringent hygiene requirements, and in the event of severe microbial contamination. Contact us for more information.

To protect the environment and simplify handling, the Australian Drinking Water Guidelines (ADWG) recommend the use of hydrogen peroxide, however chlorine can also be used to disinfect.

Before commissioning the system carefully follow the instructions for use, particularly in relation to the contact time, maximum solution concentration and subsequent flushing requirements.

Note: To reliably prevent corrosion damage, during disinfection do not exceed the maximum chlorine concentration and contact times as tabled below:

The Australian water regulations allow dosing with up to 1.2mg/l of free chlorine in the disinfectant solution, provided a limit of 0.3mg/l of free (active) chlorine is not exceeded in the drinking water.

Quantities can be increased to 6mg/l and 0.6mg/l respectively in exceptional circumstances for example, high or increased micro bacterial contamination.

Flushing the System

In the case of stainless steel, the possibility of corrosion promoted by foreign matter such as dirt or swarf can be ruled out. It is therefore sufficient to simply flush the system with potable (drinking) water ensuring the content of watersoluble chloride ions is within approved AusPress limits.

When using any solution, ensure the system is flushed correctly and the manufactures instructions are followed in an accurate and safe manner at all times.

Commissioning

Systems must be commissioned in accordance with the applicable standards and regulations.

The installation contractor must familiarise the user(s) with the system. This is to be documented with a hand-over and acceptance record.

The user must also be provided with the manufacturer's maintenance and operating instructions for all installed valves and equipment.