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## Introduction

ACO pipe is the ideal system for gray and black water, rainwater and industrial waste water drainage applications. When used with ACO gully and ACO channel systems, ACO pipe provides a unique, complex building drainage solution.

ACO pipe and fittings are available in 40 mm, 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm, 250 mm and 315 mm external diameters with the standard lengths from 0.15 meter up to 6 meter for optimum practicality and ease of assembly.

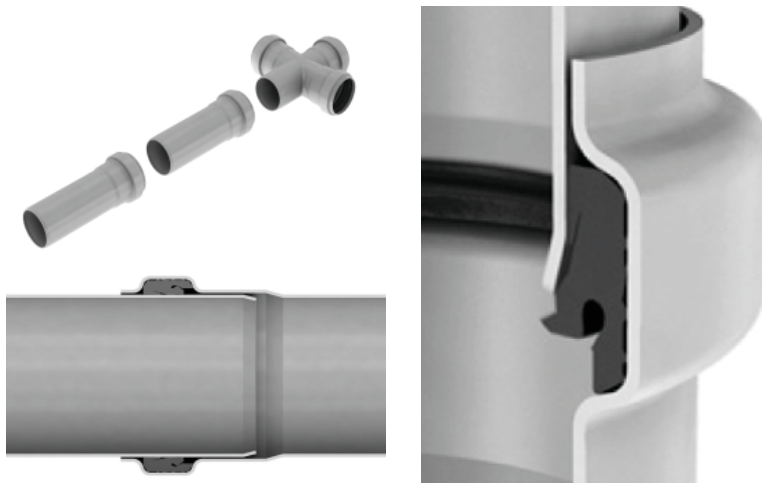
### ACO pipe push-fit connection

Reliable for vacuum and gravity piping systems.

ACO pipe double lip seal delivers the ultimate system reliability. The unique and sophisticated design of lips and cavities provide tight connections.

**Push-fit advantages**

- Easy to assemble
- Time saving
- Cost saving
- Tight connection



**System overview**

**Straight pipes**



**Fittings**



**Bends**



**Branches**



**Accessories**

**Straight pipes**

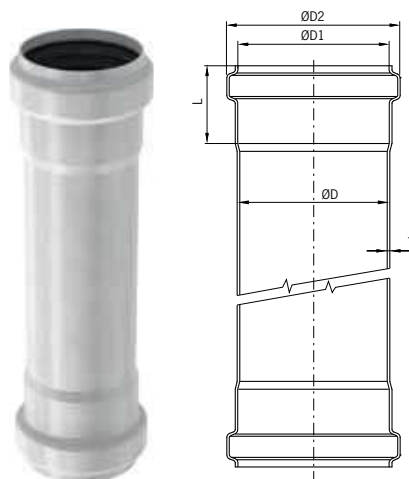
**Product information**

- Pipes are available in 40 mm, 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm, 250 mm and 315 mm external diameters
- Lengths from 0.15 meter up to 6 meter
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully comply to EN 1124
- EPDM and Viton® seals available
- Fully pickled and passivated

**ACO pipe - straight pipe**



**ACO pipe - double socketed pipe**

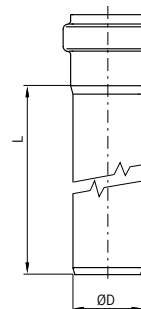


**Dimensions of socket and spigot**

øD [mm]	øD <sub>1</sub> [mm]	øD <sub>2</sub> [mm]	øD <sub>3</sub> [mm]	Socket length	Wall thickness
				L [mm]	T [mm]
40	41	51.5	38	40	1.0
50	51	62.0	47	42	1.0
75	76	87.5	72	50	1.0
110	111	125.5	107	57	1.0
125	126	141.0	122	63	1.0
160	161	178.0	156	70	1.25
200	201	219.0	195	80	1.5
250	251	268.6	245	90	1.5
315	316.2	334.2	309	100	2.0

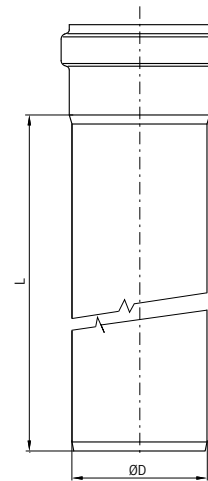
**ACO pipe - straight pipe 40 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	40	150	0.2	<b>417304</b>	<b>417320</b>
	40	250	0.3	<b>417306</b>	<b>417322</b>
	40	500	0.6	<b>417308</b>	<b>417324</b>
	40	750	0.8	<b>417310</b>	<b>417326</b>
	40	1000	1.1	<b>417312</b>	<b>417328</b>
	40	1500	1.6	<b>417314</b>	<b>417330</b>
	40	2000	2.1	<b>417316</b>	<b>417332</b>
	40	2500	2.8	<b>417260</b>	<b>417262</b>
	40	3000	3.1	<b>417318</b>	<b>417334</b>
	40	4000	4.1	<b>417264</b>	<b>417270</b>
	40	5000	5.1	<b>417266</b>	<b>417272</b>
	40	6000	6.1	<b>417268</b>	<b>417274</b>



**ACO pipe - straight pipe 50 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	50	150	0.2	<b>98500</b>	<b>98550</b>
	50	250	0.4	<b>98502</b>	<b>98552</b>
	50	500	0.7	<b>98504</b>	<b>98554</b>
	50	750	1.0	<b>98506</b>	<b>98556</b>
	50	1000	1.3	<b>98508</b>	<b>98558</b>
	50	1500	1.9	<b>98510</b>	<b>98560</b>
	50	2000	2.6	<b>98512</b>	<b>98562</b>
	50	2500	3.2	<b>419274</b>	<b>419282</b>
	50	3000	3.8	<b>98514</b>	<b>98564</b>
	50	4000	5.0	<b>419458</b>	<b>419482</b>
	50	5000	6.3	<b>419466</b>	<b>419490</b>
	50	6000	7.5	<b>419474</b>	<b>419498</b>



**ACO pipe - straight pipe 75 mm**

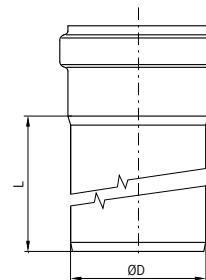
Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	75	150	0.4	<b>98516</b>	<b>98566</b>
	75	250	0.6	<b>98518</b>	<b>98568</b>
	75	500	1.0	<b>98520</b>	<b>98570</b>
	75	750	1.5	<b>98522</b>	<b>98572</b>
	75	1000	2.0	<b>98524</b>	<b>98574</b>
	75	1500	2.9	<b>98526</b>	<b>98576</b>
	75	2000	3.6	<b>98528</b>	<b>98578</b>
	75	2500	4.8	<b>419276</b>	<b>419284</b>
	75	3000	5.7	<b>98530</b>	<b>98580</b>
	75	4000	7.6	<b>419460</b>	<b>419484</b>
	75	5000	9.4	<b>419468</b>	<b>419492</b>
	75	6000	11.3	<b>419476</b>	<b>419500</b>

**ACO pipe - straight pipe 110 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	110	150	0.6	<b>98532</b>	<b>98582</b>
	110	250	0.9	<b>98534</b>	<b>98584</b>
	110	500	1.5	<b>98536</b>	<b>98586</b>
	110	750	2.2	<b>98538</b>	<b>98588</b>
	110	1000	2.9	<b>98540</b>	<b>98590</b>
	110	1500	4.3	<b>98542</b>	<b>98592</b>
	110	2000	5.7	<b>98544</b>	<b>98594</b>
	110	2500	7.1	<b>419278</b>	<b>419286</b>
	110	3000	8.4	<b>98546</b>	<b>98596</b>
	110	4000	11.1	<b>419462</b>	<b>419486</b>
	110	5000	13.9	<b>419470</b>	<b>419494</b>
	110	6000	16.7	<b>419478</b>	<b>419502</b>

**ACO pipe - straight pipe 125 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
				1.4301	1.4404
EPDM	125	150	0.7	<b>419692</b>	<b>419712</b>
	125	250	1.0	<b>419694</b>	<b>419714</b>
	125	500	1.7	<b>419696</b>	<b>419716</b>
	125	750	2.5	<b>419698</b>	<b>419718</b>
	125	1000	3.3	<b>419700</b>	<b>419720</b>
	125	1500	4.9	<b>419702</b>	<b>419722</b>
	125	2000	6.5	<b>419704</b>	<b>419724</b>
	125	2500	8.1	<b>419708</b>	<b>419728</b>
	125	3000	9.6	<b>419706</b>	<b>419726</b>
	125	6000	19.0	<b>419710</b>	<b>419730</b>



**ACO pipe - straight pipe 160 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
				1.4301	1.4404
EPDM	160	150	1.1	<b>98548</b>	<b>98598</b>
	160	250	1.6	<b>98600</b>	<b>98650</b>
	160	500	2.9	<b>98602</b>	<b>98652</b>
	160	750	4.1	<b>98604</b>	<b>98654</b>
	160	1000	5.4	<b>98606</b>	<b>98656</b>
	160	1500	7.9	<b>98608</b>	<b>98658</b>
	160	2000	10.4	<b>98610</b>	<b>98660</b>
	160	2500	12.9	<b>419280</b>	<b>419288</b>
	160	3000	15.4	<b>98612</b>	<b>98662</b>
	160	4000	20.4	<b>419464</b>	<b>419488</b>
	160	5000	25.4	<b>419472</b>	<b>419496</b>
		160	6000	30.4	<b>419480</b>

**ACO pipe - straight pipe 200 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
				1.4301	1.4404
EPDM	200	500	4.5	<b>419383</b>	<b>419384</b>
	200	1000	8.3	<b>419387</b>	<b>419388</b>
	200	2000	15.8	<b>419391</b>	<b>419392</b>
	200	3000	23.2	<b>419395</b>	<b>419396</b>

**ACO pipe - straight pipe 250 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
				1.4301	1.4404
EPDM	250	500	5.5	<b>417071</b>	<b>417072</b>
	250	1000	10.2	<b>417075</b>	<b>417076</b>
	250	2000	19.4	<b>417079</b>	<b>417080</b>
	250	3000	28.7	<b>417083</b>	<b>417084</b>

**ACO pipe - straight pipe 315 mm**

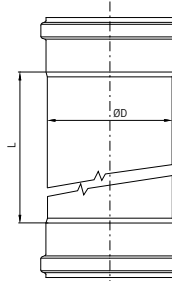
Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
				1.4301	1.4404
EPDM	315	500	9.8	<b>417238</b>	<b>417200</b>
	315	1000	17.7	<b>417239</b>	<b>417201</b>
	315	2000	33.5	<b>417240</b>	<b>417202</b>
	315	3000	49.3	<b>417241</b>	<b>417203</b>



**Double socketed pipes**

**ACO pipe - double socketed pipe 40 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
EPDM	40	250	0.2	1.4301	1.4404
	40	500	0.6	<b>417276</b>	<b>417290</b>
	40	750	0.9	<b>417280</b>	<b>417294</b>
	40	1000	1.2	<b>417282</b>	<b>417296</b>
	40	1500	1.8	<b>417284</b>	<b>417298</b>
	40	2000	2.4	<b>417286</b>	<b>417300</b>
	40	3000	3.6	<b>417288</b>	<b>417302</b>



**ACO pipe - double socketed pipe 50 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
EPDM	50	250	0.4	1.4301	1.4404
	50	500	0.7	<b>419554</b>	<b>419594</b>
	50	750	1.1	<b>419558</b>	<b>419598</b>
	50	1000	1.4	<b>419560</b>	<b>419600</b>
	50	1500	2.0	<b>419562</b>	<b>419602</b>
	50	2000	2.6	<b>419564</b>	<b>419604</b>
	50	3000	3.9	<b>419566</b>	<b>419606</b>

**ACO pipe - double socketed pipe 75 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
EPDM	75	250	0.7	1.4301	1.4404
	75	500	1.2	<b>419568</b>	<b>419608</b>
	75	750	1.6	<b>419572</b>	<b>419612</b>
	75	1000	2.1	<b>419574</b>	<b>419614</b>
	75	1500	3.0	<b>419576</b>	<b>419616</b>
	75	2000	4.0	<b>419578</b>	<b>419618</b>
	75	3000	5.8	<b>419580</b>	<b>419620</b>

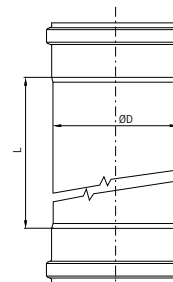
**ACO pipe - double socketed pipe 110 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number	Item number
EPDM	110	500	1.7	1.4301	1.4404
	110	750	2.4	<b>419582</b>	<b>419622</b>
	110	1000	3.0	<b>419584</b>	<b>419624</b>
	110	1500	4.4	<b>419586</b>	<b>419626</b>
	110	2000	5.7	<b>419588</b>	<b>419628</b>
	110	3000	8.4	<b>419590</b>	<b>419630</b>



**ACO pipe - double socketed pipe 125 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	125	500	1.7	<b>419787</b>	<b>419799</b>
	125	750	2.5	<b>419789</b>	<b>419801</b>
	125	1000	3.3	<b>419791</b>	<b>419803</b>
	125	1500	4.9	<b>419793</b>	<b>419805</b>
	125	2000	6.5	<b>419795</b>	<b>419807</b>
	125	3000	9.6	<b>419797</b>	<b>419809</b>



**ACO pipe - double socketed pipe 160 mm**

Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	160	500	3.3	<b>419634</b>	<b>419646</b>
	160	750	4.5	<b>419636</b>	<b>419648</b>
	160	1000	5.8	<b>419638</b>	<b>419650</b>
	160	1500	8.2	<b>419640</b>	<b>419652</b>
	160	2000	10.7	<b>419642</b>	<b>419654</b>
	160	3000	15.7	<b>419644</b>	<b>419656</b>

**ACO pipe - double socketed pipe 200 mm**

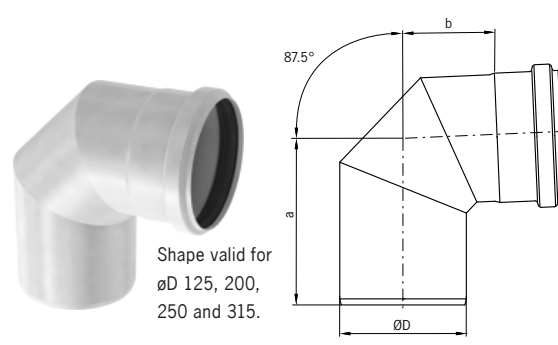
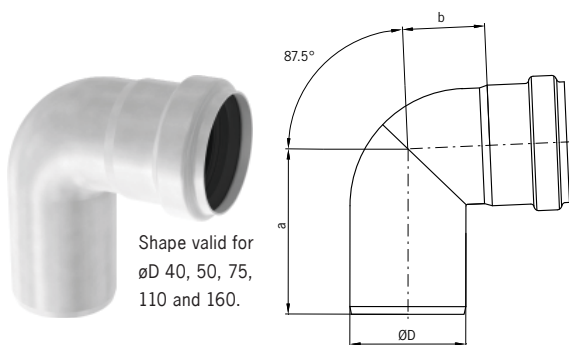
Seal material	Outlet diameter øD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	200	500	5.0	<b>419658</b>	<b>419659</b>
	200	1000	8.6	<b>419662</b>	<b>419663</b>
	200	2000	15.9	<b>419666</b>	<b>419667</b>
	200	3000	23.1	<b>419670</b>	<b>419671</b>

**Bends**

**Product information**

- Bends are available in 40 mm, 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm, 250 mm and 315 mm external diameters
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully chemically pickled and passivated
- EPDM and Viton® seals available
- Fully comply to EN 1124

**ACO pipe - bend 87.5°**



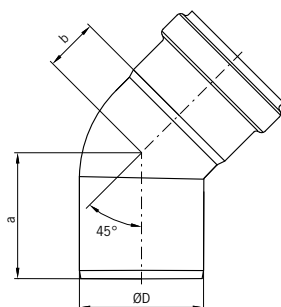
Seal material	Outlet diameter	Dimensions		Weight [kg]	Item number	
	$\varnothing D$ [mm]	a [mm]	b [mm]		1.4301	1.4404
EPDM	40	79	32	0.2	<b>417342</b>	<b>417350</b>
	50	86	40	0.2	<b>98700</b>	<b>98750</b>
	75	107	53	0.4	<b>98702</b>	<b>98752</b>
	110	134	67	0.7	<b>98704</b>	<b>98754</b>
	125	161	93	0.8	<b>419732</b>	<b>419734</b>
	160	181	105	1.7	<b>98706</b>	<b>98756</b>
	200	215	129	3.9	<b>419411</b>	<b>419413</b>
	250	297	198	5.1	-	<b>417088</b>
315	393	286	12.8	-	<b>417204</b>	

ACO pipe

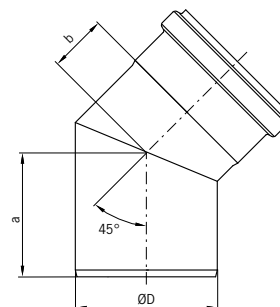
**ACO pipe - bend 45°**



Shape valid for  
øD 40, 50, 75,  
110 and 160.

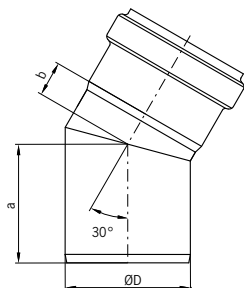


Shape valid for  
øD 125, 200,  
250 and 315.



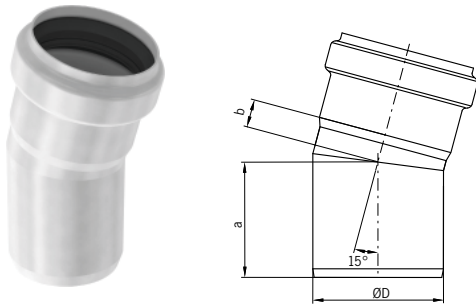
Seal material	Outlet diameter	Dimensions		Weight [kg]	Item number	Item number
	øD [mm]	a [mm]	b [mm]			
EPDM	40	58	21	0.2	1.4301	1.4404
	50	62	24	0.2	<b>417344</b>	<b>417352</b>
	75	76	32	0.3	<b>98708</b>	<b>98758</b>
	110	93	42	0.5	<b>98710</b>	<b>98760</b>
	125	110	50	0.6	<b>98712</b>	<b>98762</b>
	160	131	55	1.3	<b>419736</b>	<b>419738</b>
	200	152	60	2.7	<b>98714</b>	<b>98764</b>
	250	177	76	4.1	<b>419407</b>	<b>419409</b>
315	199	91	7.2	-	<b>417092</b>	
					-	<b>417205</b>

**ACO pipe - bend 30°**



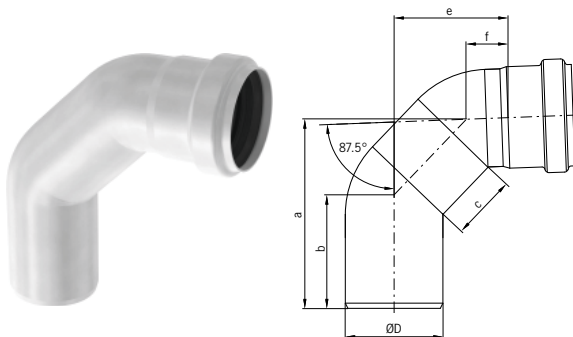
Seal material	Outlet diameter	Dimensions		Weight [kg]	Item number	Item number
	øD [mm]	a [mm]	b [mm]			
EPDM	40	55	14	0.1	1.4301	1.4404
	50	57	16	0.2	<b>417346</b>	<b>417354</b>
	75	71	21	0.3	<b>98716</b>	<b>98766</b>
	110	85	27	0.5	<b>98718</b>	<b>98768</b>
	125	98	28	0.6	<b>98720</b>	<b>98770</b>
	160	110	40	1.2	<b>419740</b>	<b>419742</b>
	200	137	45	2.3	<b>98722</b>	<b>98772</b>
	250	153	58	2.9	<b>419403</b>	<b>419405</b>
315	172	68	5.8	-	<b>417096</b>	
					-	<b>417206</b>

**ACO pipe - bend 15°**



Seal material	Outlet diameter øD [mm]	Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
		a [mm]	b [mm]			
EPDM	40	53	11	0.1	<b>417348</b>	<b>417356</b>
	50	54	12	0.1	<b>98724</b>	<b>98774</b>
	75	66	16	0.3	<b>98726</b>	<b>98776</b>
	110	78	15	0.4	<b>98728</b>	<b>98778</b>
	125	84	19	0.5	<b>419744</b>	<b>419746</b>
	160	99	29	1.0	<b>98730</b>	<b>98780</b>
	200	123	31	1.9	<b>419399</b>	<b>419401</b>
	250	136	40	2.5	-	<b>417100</b>
315	151	46	5.4	-	<b>417207</b>	

**ACO pipe - long bend 87.5°**



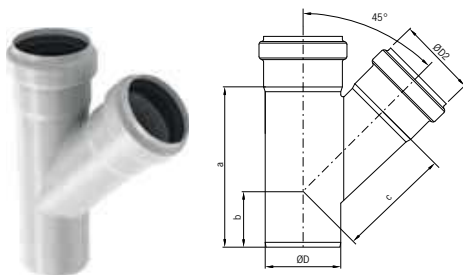
Seal material	Outlet diameter øD [mm]	Dimensions					Weight [kg]	Item number 1.4301	Item number 1.4404
		a [mm]	b [mm]	c [mm]	e [mm]	f [mm]			
EPDM	40	105	64	50	67	40	0.2	<b>417340</b>	<b>417338</b>
	50	123	71	50	75	25	0.3	<b>419146</b>	<b>419000</b>
	75	146	87	50	88	32	0.5	<b>419148</b>	<b>419002</b>
	110	316	103	250	246	39	1.4	<b>419150</b>	<b>419004</b>
	160	360	126	250	270	92	2.2	<b>419152</b>	<b>419144</b>

**Branches**

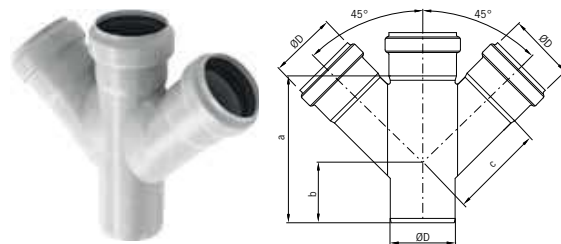
**Product information**

- Branches are available in 40 mm, 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm, 250 mm and 315 mm external diameters
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully comply to EN 1124
- EPDM and Viton® seals available
- Fully pickled and passivated

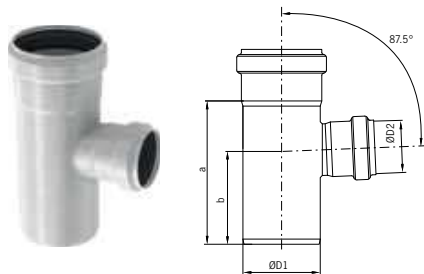
**ACO pipe - single branch**



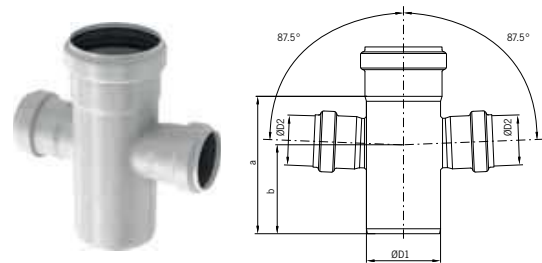
**ACO pipe - double branch**



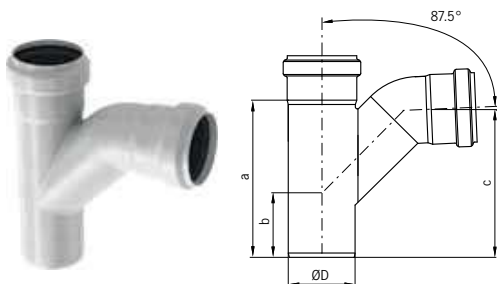
**ACO pipe - single branch reduction**



**ACO pipe - double branch reduction**

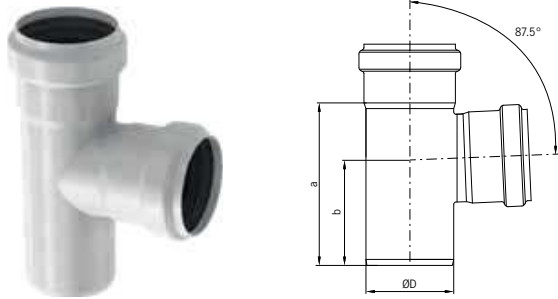


**ACO pipe - swept single branch**



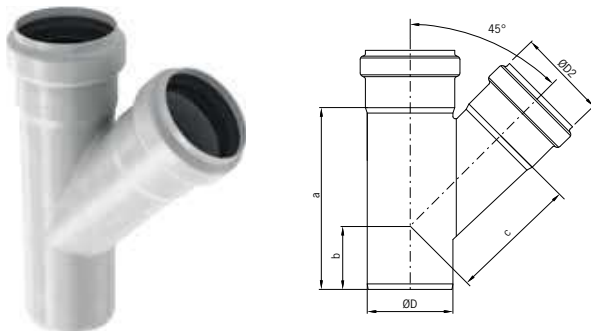
**Single branches**

**ACO pipe - single branch 87.5°**



Seal material	Outlet diameter øD [mm]	Dimensions		Weight [kg]	Item number	Item number
		a [mm]	b [mm]			
EPDM	40	101	69	0.3	1.4301	1.4404
	50	106	71	0.3	<b>417362</b>	<b>417368</b>
	75	139	90	0.5	<b>98732</b>	<b>98782</b>
	110	183	117	0.8	<b>98734</b>	<b>98784</b>
	125	220	135	0.9	<b>98736</b>	<b>98786</b>
	160	288	184	2.3	<b>419748</b>	<b>419750</b>
	200	333	206	4.5	<b>98738</b>	<b>98788</b>
	250	363	215	5.5	<b>419419</b>	<b>419421</b>
315	476	281	14.8	-	<b>417104</b>	<b>417208</b>

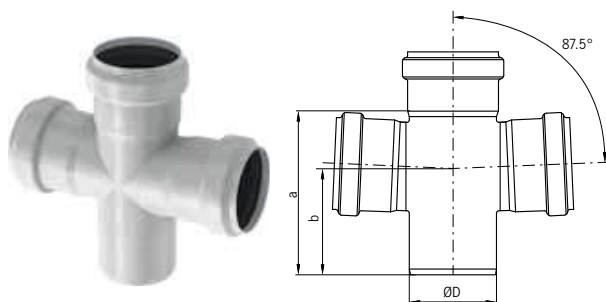
**ACO pipe - single branch 45°**



Seal material	Outlet diameter øD [mm]	Dimensions			Weight [kg]	Item number	Item number
		a [mm]	b [mm]	c [mm]			
EPDM	40	118	58	63	0.3	1.4301	1.4404
	50	128	57	76	0.3	<b>417366</b>	<b>417372</b>
	75	179	74	110	0.5	<b>98748</b>	<b>98798</b>
	110	233	88	149	1.0	<b>98800</b>	<b>98850</b>
	125	273	103	170	1.1	<b>98802</b>	<b>98852</b>
	160	332	119	222	2.6	<b>419760</b>	<b>419762</b>
	200	415	151	274	5.7	<b>98804</b>	<b>98854</b>
	250	513	172	336	9.2	<b>419427</b>	<b>419429</b>
315	616	195	521	20.6	-	<b>417108</b>	<b>417209</b>

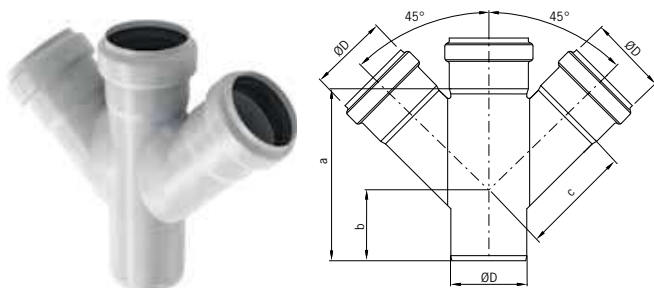
**Double branches**

**ACO pipe - double branch 87.5°**



Seal material	Outlet diameter	Dimensions		Weight [kg]	Item number	
	ØD [mm]	a [mm]	b [mm]		1.4301	1.4404
EPDM	40	101	69	0.3	<b>417364</b>	<b>417370</b>
	50	106	71	0.3	<b>98740</b>	<b>98790</b>
	75	139	90	0.6	<b>98742</b>	<b>98792</b>
	110	183	117	0.9	<b>98744</b>	<b>98794</b>
	160	288	184	2.7	<b>98746</b>	<b>98796</b>

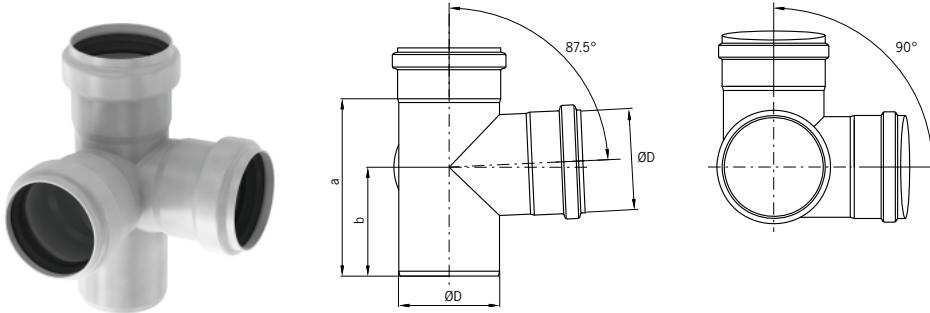
**ACO pipe - double branch 45°**



Seal material	Outlet diameter	Dimensions			Weight [kg]	Item number	
	ØD [mm]	a [mm]	b [mm]	c [mm]		1.4301	1.4404
EPDM	40	118	58	63	0.4	<b>417374</b>	<b>417378</b>
	50	128	57	76	0.4	<b>98806</b>	<b>98856</b>
	75	179	74	110	0.7	<b>98808</b>	<b>98858</b>
	110	233	88	149	1.2	<b>98810</b>	<b>98860</b>
	160	332	184	222	3.5	<b>98812</b>	<b>98862</b>
	250	509	172	336	11	-	<b>417120</b>
	315	616	195	521	29.7	-	<b>417212</b>



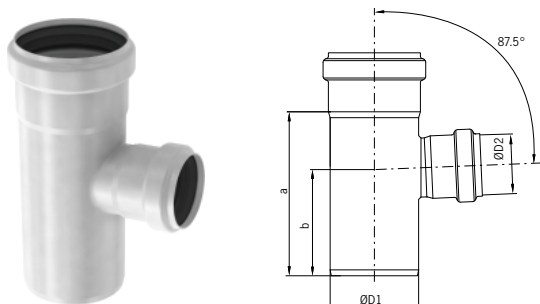
**ACO pipe - corner branch 87.5°**



Seal material	Outlet diameter	Dimensions		Weight [kg]	Item number	
	ØD [mm]	a [mm]	b [mm]		1.4301	1.4404
EPDM	40	101	69	0.3	<b>417414</b>	<b>417415</b>
	50	106	71	0.4	<b>419162</b>	<b>419210</b>
	75	139	90	0.7	<b>419164</b>	<b>419212</b>
	110	183	117	1.1	<b>419166</b>	<b>419214</b>
	160	288	184	2.9	<b>419168</b>	<b>419216</b>

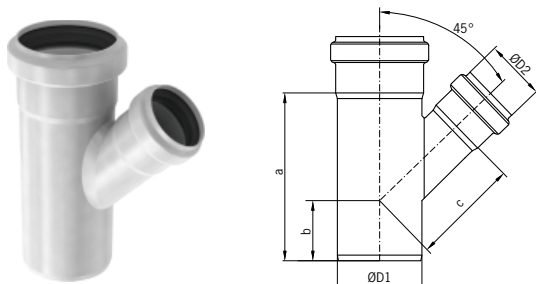
**Single branch reductions**

**ACO pipe - single branch reduction 87.5°**



Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]			
EPDM	50	40	106	98	0.3	<b>417442</b>	<b>417443</b>
	75	40	139	98	0.3	<b>417444</b>	<b>417445</b>
	75	50	139	90	0.3	<b>98928</b>	<b>98930</b>
	110	50	183	117	0.5	<b>98932</b>	<b>98934</b>
	110	75	183	117	0.8	<b>98936</b>	<b>98938</b>
	125	75	187	110	0.9	<b>419752</b>	<b>419754</b>
	125	110	205	127	0.9	<b>419756</b>	<b>419758</b>
	160	110	288	184	2.3	<b>400691</b>	<b>400693</b>
	200	160	293	186	3.7	<b>419415</b>	<b>419417</b>
	250	200	349	226	5.8	-	<b>417112</b>
315	250	411	248	10.5	-	<b>417210</b>	

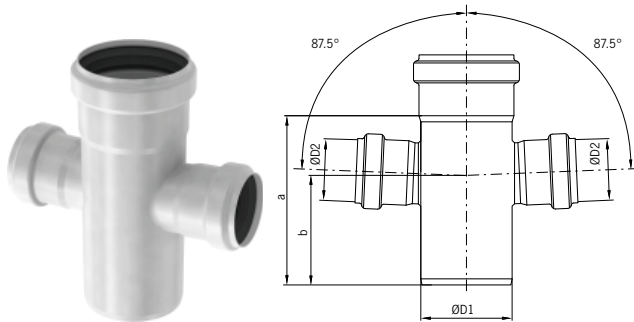
**ACO pipe - single branch reduction 45°**



Seal material	Outlet diameter		Dimensions			Weight [kg]	Item number 1.4301	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]	c [mm]			
EPDM	50	40	119	55	71	0.3	<b>417406</b>	<b>417408</b>
	75	40	144	94	56	0.3	<b>417446</b>	<b>417447</b>
	75	50	144	56	94	0.3	<b>400661</b>	<b>400663</b>
	110	50	147	42	119	0.5	<b>400665</b>	<b>400667</b>
	110	75	182	60	135	1.0	<b>400669</b>	<b>400671</b>
	125	75	200	65	141	1.1	<b>419764</b>	<b>419766</b>
	125	110	250	90	160	1.1	<b>419768</b>	<b>419770</b>
	160	110	332	119	191	2.6	<b>400699</b>	<b>400701</b>
	200	160	359	123	250	4.7	<b>419423</b>	<b>419425</b>
	250	200	429	175	307	7.6	-	<b>417116</b>
	315	250	513	149	382	14.0	-	<b>417211</b>

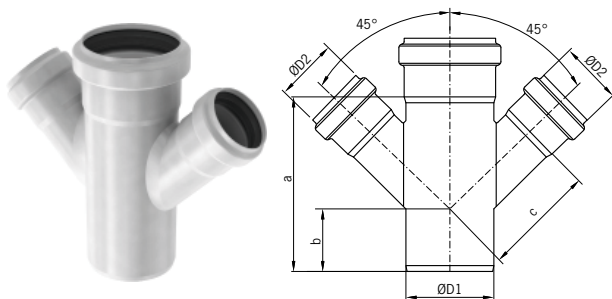
**Double branch reductions**

**ACO pipe - double branch reduction 87.5°**



Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number	Item number
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]			
EPDM	50	40				1.4301	1.4404
	75	50	139	90	0.3	<b>417398</b>	<b>417399</b>
	110	50	183	117	0.6	<b>98940</b>	<b>98942</b>
	110	75	183	117	0.9	<b>98944</b>	<b>98946</b>
	160	110	288	184	2.7	<b>98900</b>	<b>98902</b>
						<b>400695</b>	<b>400697</b>

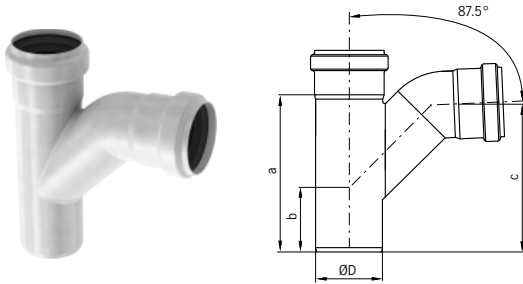
**ACO pipe - double branch reduction 45°**



Seal material	Outlet diameter		Dimensions			Weight [kg]	Item number	Item number
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]	c [mm]			
EPDM	50	40	119	55	71	0.3	1.4301	1.4404
	75	50	144	56	94	0.4	<b>417410</b>	<b>417412</b>
	110	50	147	42	119	0.7	<b>400673</b>	<b>400675</b>
	110	75	182	60	135	1.2	<b>400677</b>	<b>400679</b>
	160	110	332	119	190	3.5	<b>400681</b>	<b>400683</b>
	250	200	429	150	307	10.1	<b>400703</b>	<b>400705</b>
	315	250	513	149	382	17.8	-	<b>417124</b>
						-	<b>417213</b>	

**Swept single branch**

**ACO pipe - swept single branch 87.5°**



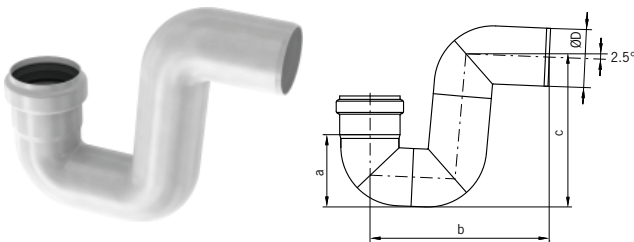
Seal material	Outlet diameter	Dimensions			Weight [kg]	Item number	Item number
	øD [mm]	a [mm]	b [mm]	c [mm]			
EPDM	40	115	55	105	0.3	<b>417376</b>	<b>417380</b>
	50	128	57	117	0.3	<b>98814</b>	<b>98864</b>
	75	179	74	157	0.6	<b>98816</b>	<b>98866</b>
	110	233	88	209	1.1	<b>98818</b>	<b>98868</b>
	160	332	184	302	2.8	<b>98820</b>	<b>98870</b>

**Accessories**

**Product information**

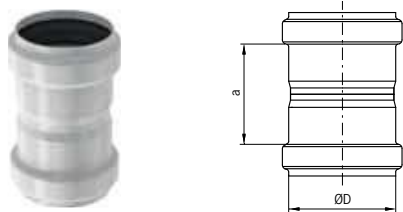
- Accessories are available in 40 mm, 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm, 250 mm and 315 mm external diameters
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully comply to EN 1124
- EPDM and Viton® seals available
- Fully pickled and passivated

**“P” trap**



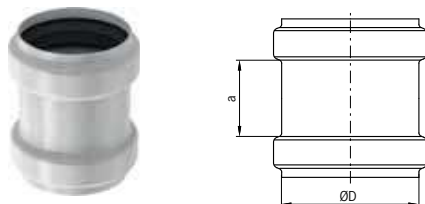
Seal material	Outlet diameter	Dimensions			Weight [kg]	Item number	Item number
	øD [mm]	a [mm]	b [mm]	c [mm]			
EPDM	50	68	187	149	0.5	1.4301 <b>98822</b>	1.4404 <b>98872</b>
	75	94	232	193	0.7	<b>98824</b>	<b>98874</b>
	110	132	300	254	1.3	<b>98826</b>	<b>98876</b>
	160	190	403	347	3.3	<b>98828</b>	<b>98878</b>

**Straight coupling**



Seal material	Outlet diameter øD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	40	51	0.1	<b>417392</b>	<b>417394</b>
	50	54	0.1	<b>98920</b>	<b>98970</b>
	75	75	0.2	<b>98922</b>	<b>98972</b>
	110	84	0.4	<b>98924</b>	<b>98974</b>
	125	140	0.4	<b>419813</b>	<b>419815</b>
	160	110	0.8	<b>98926</b>	<b>98976</b>
	200	136	1.8	<b>419431</b>	<b>419433</b>
	250	181	3.1	-	<b>417160</b>
	315	179	5.2	-	<b>417225</b>

**Repair coupling**



Seal material	Outlet diameter øD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	40	57	0.1	<b>417388</b>	<b>417390</b>
	50	44	0.1	<b>98830</b>	<b>98880</b>
	75	46	0.2	<b>98832</b>	<b>98882</b>
	110	52	0.3	<b>98834</b>	<b>98884</b>
	125	70	0.3	<b>419772</b>	<b>419774</b>
	160	76	0.7	<b>98836</b>	<b>98886</b>
	200	100	1.5	<b>419435</b>	<b>419437</b>
	250	182	2.4	-	<b>417139</b>
	315	179	4.9	-	<b>417220</b>

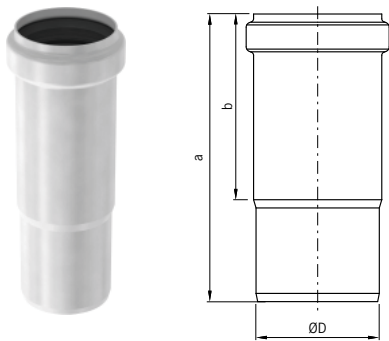
Note:

Repair couplings are used to aid a convenient repair to a damaged in-situ pipe. Unlike the standard straight coupling, there is no central registration to limit the insertion depth of the pipe. The repair coupling slides completely over a pipe joint and simply re-positioned to bridge the required pipe joint.

Installation tip:

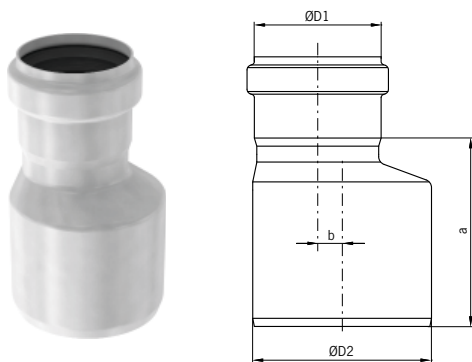
Mark the final position of the repair coupling on the installed pipe system to ensure the coupling seals are positioned symmetrically about the pipe joint.

**Expansion socket**



Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number	Item number
	ØD [mm]		a [mm]	b [mm]			
EPDM	40		150	90	0.2	<b>417382</b>	1.4404
	50		159	102	0.2	<b>98664</b>	<b>98666</b>
	75		175	113	0.3	<b>98668</b>	<b>98670</b>
	110		200	121	0.5	<b>98672</b>	<b>98674</b>
	125		250	165	0.6	<b>419776</b>	<b>419778</b>
	160		292	170	1.4	<b>98676</b>	<b>98678</b>
	250		400	190	3.8	-	<b>417143</b>
315		450	200	7.2	-	<b>417221</b>	

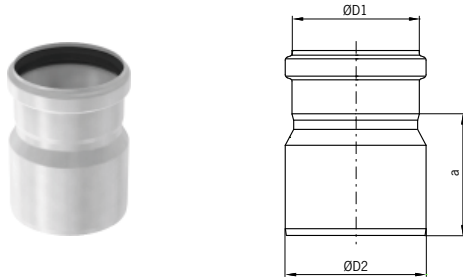
**Eccentric increaser coupling**



Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]		
EPDM	40	50	85	5	0.3	<b>417418</b>
	40	75	85	17	0.3	<b>417419</b>
	50	75	75	7	0.3	<b>98892</b>
	50	110	110	25	0.4	<b>98978</b>
	75	110	110	15	0.5	<b>98894</b>
	110	160	160	22	1.1	<b>98896</b>
	200	250	180	15	2.4	<b>417135</b>
	250	315	190	15	4.4	<b>417218</b>

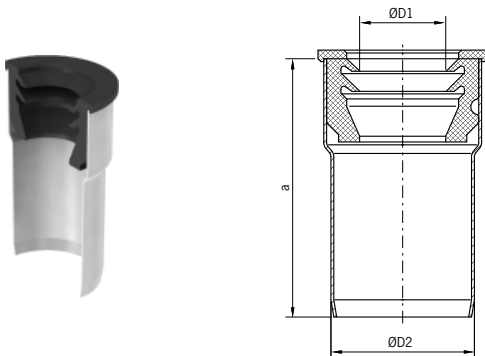


**Concentric increaser coupling**



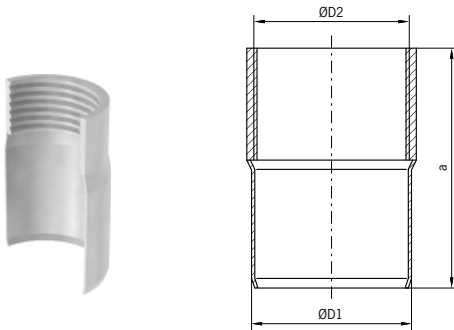
Seal material	Outlet diameter		Dimension a [mm]	Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]			
EPDM	40	50			1.4404 <b>417403</b>
	40	75	85	0.3	<b>417417</b>
	50	75	88	0.3	<b>419826</b>
	50	110	113	1.4	<b>417018</b>
	75	125	105	0.6	<b>419828</b>
	110	125	107	0.6	<b>419780</b>
	110	160	126	0.9	<b>419830</b>
	125	160	160	1.2	<b>419811</b>
	160	200	200	1.8	<b>419441</b>
	200	250	180	2.4	<b>417133</b>
	315	250	190	4.4	<b>417217</b>

**Increaser connector**



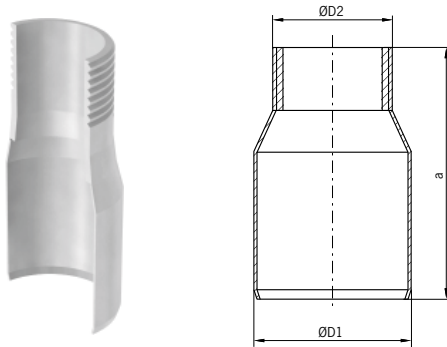
Seal material	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]			
NBR	32	50	90	0.2	1.4404 <b>419373</b>
	40	50	90	0.2	<b>419374</b>

**Connector with internal screw thread and spigot**



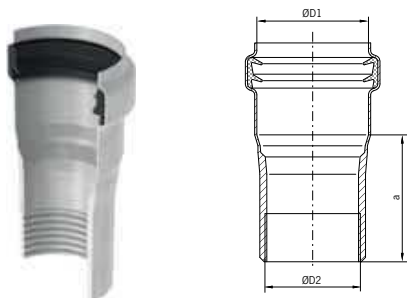
Outlet diameter		Dimensions	Weight	Item number
ØD1 [mm]	ØD2 [mm]	a [mm]	[kg]	1.4404
40	G 1¼"	70	0.2	<b>417337</b>
50	G 1¼"	72	0.2	<b>98956</b>
50	G 1½"	75	0.3	<b>98957</b>
50	G 2"	80	0.3	<b>98958</b>

**Connector with external screw thread and spigot**



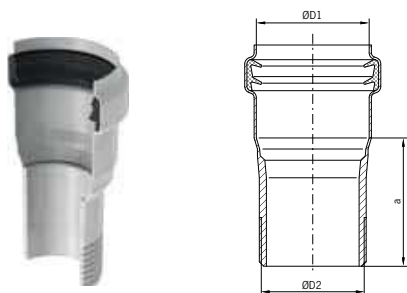
Outlet diameter		Dimensions	Weight	Item number
ØD1 [mm]	ØD2 [mm]	a [mm]	[kg]	1.4404
50	G 1¼"	100	0.2	<b>419330</b>
50	G 1½"	100	0.3	<b>419331</b>
50	G 2"	100	0.3	<b>419332</b>

**Connector with socket and internal screw thread**



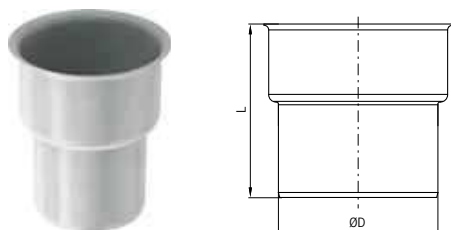
Seal material	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number
	øD1 [mm]	øD2 [mm]			
EPDM	40	G 1¼"	35	0.2	1.4404 <b>417336</b>
	50	G 1¼"	58	0.2	<b>419333</b>
	50	G 1½"	58	0.3	<b>419335</b>
	50	G 2"	58	0.3	<b>419337</b>

**Connector with socket and external screw thread**



Seal material	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number
	øD1 [mm]	øD2 [mm]			
EPDM	50	G 1¼"	58	0.2	1.4404 <b>419250</b>
	50	G 1½"	58	0.3	<b>419252</b>
	50	G 2"	58	0.3	<b>419254</b>

**Connector cast iron spigot → ACO pipe socket**

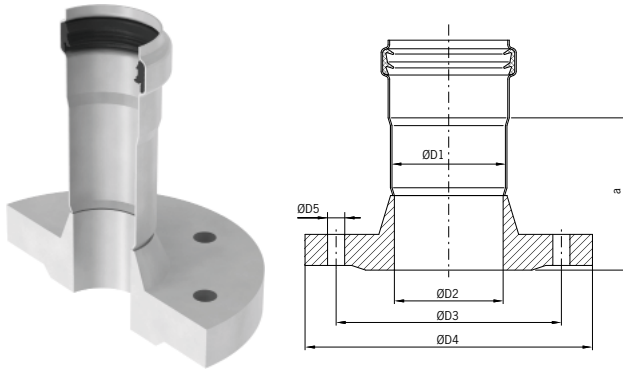


Outlet diameter øD [mm]	Dimensions L [mm]	Weight [kg]	Item number
75	121	0.4	1.4404 <b>98904</b>
110	137	0.6	<b>98906</b>
160	174	1.0	<b>98905</b>

Note:

To be used with reduction sealing item number 400580 for DN 75 and 400581 for DN 110

**Connector with socket and flange**



Seal material	Outlet diameter				n x ØD5 [mm]	Dimensions a [mm]	Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]	ØD3 [mm]	ØD4 [mm]				
EPDM	40	DN 40	110	150	4 x 18	100	2.0	1.4404 <b>417420</b>
	40	DN 40	110	150	4 x 18	100	2.0	<b>417421</b>
	50	DN 40	110	150	4 x 18	100	2.3	<b>419256</b>
	50	DN 50	125	165	4 x 18	100	2.7	<b>419258</b>
	75	DN 65	145	185	4 x 18	100	3.4	<b>419260</b>
	110	DN 100	180	220	8 x 18	100	4.9	<b>419262</b>
200	DN 200	295	340	12 x 22	102	12.0	<b>419514</b>	

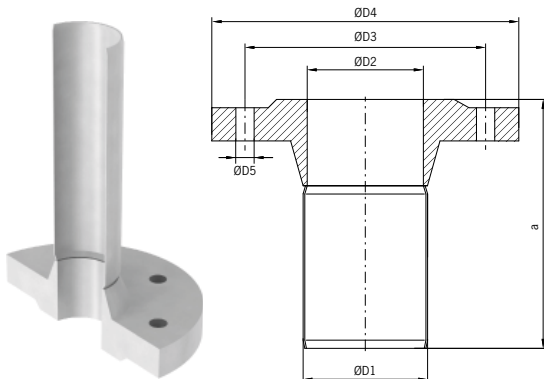
Note:

n – number of holes for screws in the flange.

Flange PN 16 DIN 2633.

Flange PN 6 and PN 10 available on request.

**Connector with flange and spigot**



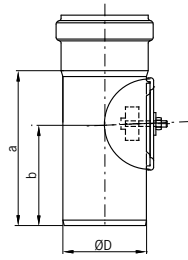
ØD1 [mm]	Outlet diameter			n x ØD5 [mm]	Dimensions a [mm]	Weight [kg]	Item number
	ØD2 [mm]	ØD3 [mm]	ØD4 [mm]				
40	DN 40	100	130	4 x 18	161	1.6	1.4404 <b>417430</b>
40	DN 50	100	130	4 x 18	161	1.6	<b>417431</b>
40	DN 40	110	150	4 x 18	165	2.0	<b>417422</b>
40	DN 50	110	150	4 x 18	165	2.0	<b>417423</b>
50	DN 40	110	150	4 x 18	192	2.3	<b>419264</b>
50	DN 50	125	165	4 x 18	192	2.7	<b>419265</b>
75	DN 65	145	185	4 x 18	245	3.4	<b>419266</b>
110	DN 100	180	220	8 x 18	259	4.9	<b>419267</b>
160	DN 150	240	285	8 x 22	200	8.5	<b>419540</b>
200	DN 200	295	240	12 x 22	240	12.3	<b>419541</b>

Note:

n – number of holes for screws in the flange.

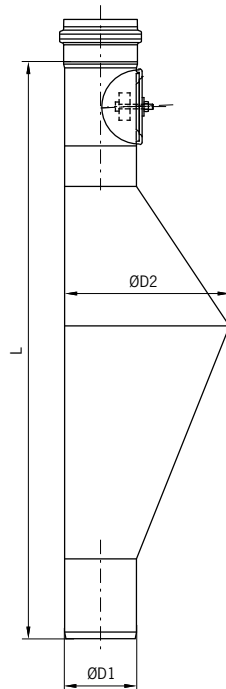
Flange PN 16 DIN 2633. | Flange PN 6 and PN 10 available on request.

**Access unit**



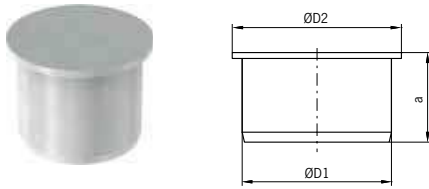
Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number	
	ØD [mm]		a [mm]	b [mm]		1.4301	1.4404
EPDM	75		139	90	0.5	<b>98913</b>	<b>98963</b>
	110		183	117	0.8	<b>98915</b>	<b>98965</b>
	125		210	135	0.9	<b>419783</b>	<b>419785</b>
	160		288	184	2.3	<b>98917</b>	<b>98967</b>
	200		293	186	3.7	<b>419676</b>	<b>419678</b>
	250		290	184	3.8	-	<b>417128</b>
	315		340	228	8.9	-	<b>417214</b>

**Rat-stop**



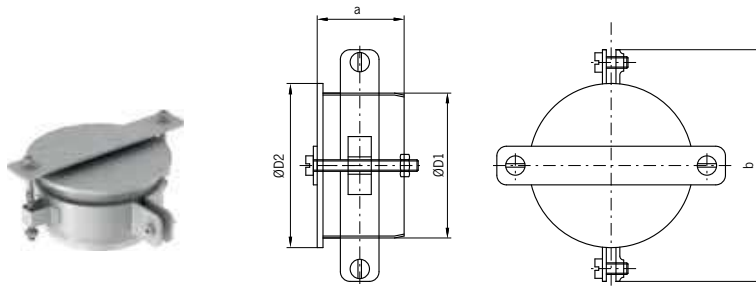
Seal material	Outlet diameter		Dimensions	Weight [kg]	Item number	
	ØD1 [mm]	ØD2 [mm]	L [mm]		1.4301	1.4404
EPDM	110	250	864	3.8	<b>419268</b>	<b>419270</b>

**Socket plug**



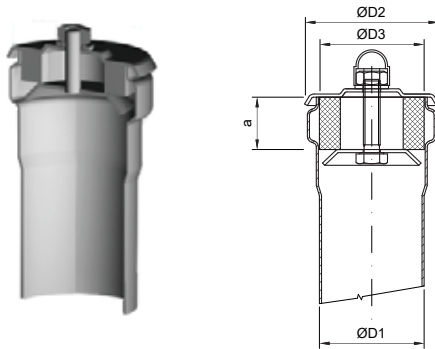
Outlet diameter		Dimensions		Weight	Item number
øD1 [mm]	øD2 [mm]	a [mm]		[kg]	1.4404
40	35	50		0.1	<b>417405</b>
50	58	45		0.1	<b>98888</b>
75	85	45		0.3	<b>98889</b>
110	120	45		0.5	<b>98890</b>
125	135	50		0.6	<b>419782</b>
160	170	50		0.5	<b>98891</b>
200	210	50		0.7	<b>98994</b>
250	260	83		1.0	<b>417131</b>
315	325	73		2.2	<b>417215</b>

**Socket plug with clamp**



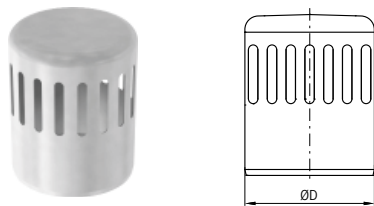
Outlet diameter		Dimensions		Weight	Item number
øD1 [mm]	øD2 [mm]	a [mm]	b [mm]	[kg]	1.4404
40					<b>417402</b>
50	58	45	88	0.4	<b>419138</b>
75	85	45	120	0.6	<b>419139</b>
110	120	45	167	0.8	<b>419140</b>
160	170	50	214	1.1	<b>419141</b>
250	260	83	302	1.3	<b>417132</b>
315	325	130	371	3.7	<b>417216</b>

**Drainplugs with screwed plug**



ØD1 [mm]	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number	
	ØD2 [mm]	ØD3 [mm]			1.4301	1.4404
40				0.1	<b>417404</b>	-
50	64	50	25	0.1	<b>419942</b>	<b>419948</b>
75	92	75	25	0.5	<b>419943</b>	<b>419949</b>
110	126	105	15	0.5	<b>419944</b>	<b>419950</b>
125	160	124	12	0.9	<b>419945</b>	<b>419951</b>
160	186	166	20	1.2	<b>419946</b>	<b>419952</b>

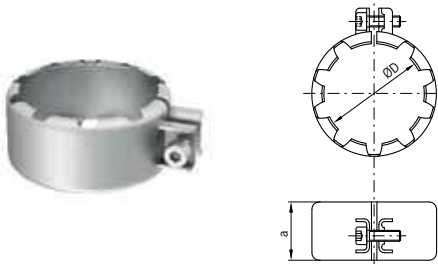
**Vent cowl**



Outlet diameter ØD [mm]	Weight [kg]	Item number
110	0.4	1.4404
		<b>98962</b>



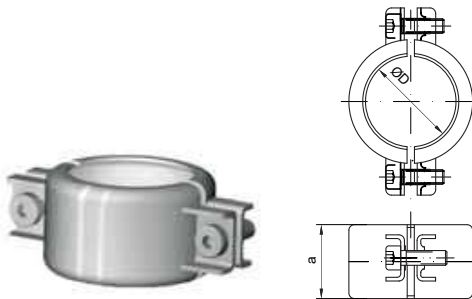
**Socket clamp**



Outlet diameter $\varnothing D$ [mm]	Dimensions a [mm]	Weight [kg]	Item number
			1.4404
50	40	0.11	<b>417067</b>
75	43	0.16	<b>417069</b>
110	43	0.25	<b>417227</b>

Note: See page 193 for maximum operating pressures

**Socket clamp - two parts**



Outlet diameter $\varnothing D$ [mm]	Dimensions a [mm]	Weight [kg]	Item number	Item number
			1.4301	1.4404
40	36	0.10	<b>417396</b>	<b>417397</b>
50	40	0.14	<b>417024</b>	<b>417025</b>
75	40	0.25	<b>417026</b>	<b>417027</b>
110	43	0.34	<b>417028</b>	<b>417029</b>
125	45	0.38	<b>417016</b>	<b>417017</b>
160	45	0.48	<b>417030</b>	<b>417031</b>
200	45	0.51	-	<b>419983</b>
250	45	0.71	-	<b>417137</b>
315	48	0.9	<b>417219</b>	-

Note: See page 193 for maximum operating pressures

**Seal**



Outlet diameter øD [mm]	Weight [kg]	Item number EPDM	Item number NBR	Item number Viton®
40	0.01	<b>417400</b>	<b>417401</b>	–
50	0.01	<b>98400</b>	<b>417037</b>	<b>98404</b>
75	0.02	<b>98401</b>	<b>417038</b>	<b>98405</b>
110	0.05	<b>98402</b>	<b>417039</b>	<b>98406</b>
125	0.06	<b>419453</b>	<b>417041</b>	<b>419454</b>
160	0.08	<b>98403</b>	<b>417040</b>	<b>98407</b>
200	0.10	<b>98433</b>	<b>417042</b>	<b>98437</b>
250	0.12	<b>417146</b>	<b>417148</b>	<b>417147</b>
315	0.30	<b>417222</b>	<b>417223</b>	–

Note:

Detailed technical data sheet on page 228

**Reduction sealing cast iron spigot → ACO pipe socket**



Outlet diameter øD [mm]	Weight [kg]	Item number EPDM
DN 70/75	0.06	<b>400580</b>
DN 100/110	0.10	<b>400581</b>
DN 150/160	0.14	<b>400582</b>

Note:

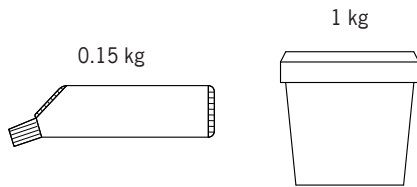
While purchasing AP reduction sealing cast iron spigot → ACO pipe, it is necessary to order AP cast iron connector.

**Reduction sealing ACO pipe spigot → cast iron socket**



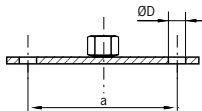
Outlet diameter øD [mm]	Weight [kg]	Item number EPDM
DN 70/75	0.05	<b>400586</b>
DN 100/110	0.08	<b>400587</b>
DN 150/160	0.12	<b>400588</b>

**ACO Universal lubricant**



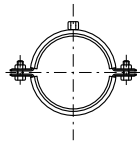
Weight [kg]	Item number
0.15	E80350000
1.00	E80350001

**Fixing plate**



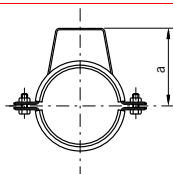
Outlet diameter $\varnothing D$ [mm]	Dimensions a [mm]	Weight [kg]	Item number Galvanised steel	Item number
8.4	70	0.05	400525	1.4404 400521

**Support bracket with rubber infill**



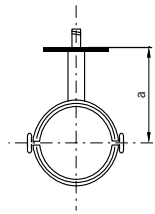
Outlet diameter $\varnothing D$ [mm]	Weight [kg]	Item number Galvanised steel	Item number
40	0.12	417434	1.4404 417359
50	0.14	400533	400529
75	0.23	400534	400530
110	0.33	400535	400531
125	0.36	419854	419855
160	0.39	400536	400532
200	0.44	419451	419675
250	0.60	-	417149
315	1.0	-	417224

**Support bracket with rubber infill and stirrup**



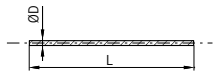
Outlet diameter $\varnothing D$ [mm]	Dimensions a [mm]	Weight [kg]	Item number Galvanised steel	Item number
40			417358	1.4404 417360
50	56	0.18	400541	400537
75	80	0.28	400542	400538
110	116	0.41	400543	400539
160	166	0.48	400544	400540

**Support bracket with rubber infill and key**



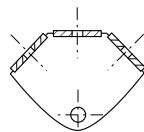
Outlet diameter øD [mm]	Dimensions a [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
40			-	<b>417361</b>
50	120	0.16	<b>400549</b>	<b>400545</b>
75	133	0.26	<b>400550</b>	<b>400546</b>
110	150	0.38	<b>400551</b>	<b>400547</b>
160	175	0.44	<b>400552</b>	<b>400548</b>

**Threaded support pole M8**



øD [mm]	L [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
M8	1000	0.39	<b>400557</b>	<b>400553</b>
M8	90	0.03	<b>400558</b>	<b>400554</b>
M8	40	0.016	<b>400559</b>	<b>400555</b>

**Set for axial fixing**



Weight [kg]	Item number Galvanised steel	Item number 1.4404
0.11	<b>400565</b>	<b>400561</b>

**Joiner/disjoiner**



øD [mm]	Weight [kg]	Item number
100 - 400	25	<b>417070</b>

**Electric cutter 50 – 110 mm**



Note	Weight [kg]	Item number
in plastic case	20	400745

Note: Convenient tool for pipe cutting, suitable for larger projects

**Manual cutter set 50-110 mm**



Note	Weight [kg]	Item number
in plastic case	3.50	419363

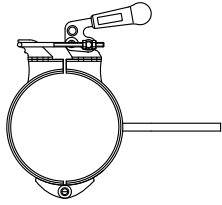
**Manual cutter**



øD [mm]	Weight [kg]	Item number
50-110	1.0	419364
110-160	2.0	400738
160-250	2.0	417228

Note:  
ACO pipe manual cutter should be ordered together with a holder for manual cutting.

**Holder for manual cutting**



<b>øD [mm]</b>	<b>Weight [kg]</b>	<b>Item number</b>
125	3.5	<b>419857</b>
160	4.0	<b>400742</b>
200	4.5	<b>400743</b>

Note: ACO pipe holder for manual cutting should be ordered together with ACO pipe manual cutter.

**Replacement discs for manual cutters**



<b>Note</b>	<b>Weight [kg]</b>	<b>Item number</b>
for cutter 419363	0.005	<b>419365</b>
for cutters 400738 and 419364	0.005	<b>400578</b>

Note:

Minimum order quantity – 10 pcs.

## Full bore flow rate tables for varying gradients

## For rainwater/storm drainage applications

Flow rates based on Colebrook-White formula.

Roughness coefficient  $k_s = 0.6 \text{ mm}$

Gradient [%]	Pipe ø 40 mm		Pipe ø 50 mm		Pipe ø 75 mm		Pipe ø 110 mm		Pipe ø 125 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	1.44	1.28	2.74	1.52	8.40	2.01	23.81	2.60	33.61	2.83
7.5	1.25	1.11	2.38	1.31	7.28	1.74	20.62	2.25	29.11	2.45
5.0	1.01	0.90	1.94	1.07	5.94	1.42	16.83	1.84	23.77	2.00
4.5	0.96	0.86	1.84	1.02	5.64	1.35	15.97	1.74	22.55	1.90
4.0	0.90	0.81	1.73	0.96	5.31	1.27	15.06	1.64	21.26	1.79
3.5	0.84	0.75	1.62	0.90	4.97	1.19	14.08	1.54	19.88	1.67
3.0	0.78	0.70	1.50	0.83	4.60	1.10	13.04	1.42	18.41	1.55
2.5	0.71	0.64	1.37	0.76	4.20	1.00	11.90	1.30	16.80	1.41
2.0	0.63	0.57	1.23	0.68	3.76	0.90	10.64	1.16	15.03	1.26
1.5	0.55	0.49	1.06	0.59	3.25	0.78	9.22	1.01	13.01	1.10
1.0	0.44	0.40	0.87	0.48	2.66	0.63	7.53	0.82	10.63	0.89

Gradient [%]	Pipe ø 160 mm		Pipe ø 200 mm		Pipe ø 250 mm		Pipe ø 315 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	64.15	3.31	116.89	3.83	218.31	4.45	401.51	5.15
7.5	55.56	2.87	101.22	3.32	188.95	3.85	347.54	4.46
5.0	45.36	2.34	82.65	2.71	154.13	3.14	283.52	3.64
4.5	43.03	2.22	78.40	2.57	146.17	2.98	268.90	3.45
4.0	40.57	2.10	73.92	2.43	137.77	2.81	253.45	3.25
3.5	37.95	1.96	69.14	2.27	128.82	2.63	236.99	3.04
3.0	35.13	1.81	64.01	2.10	119.20	2.43	219.31	2.82
2.5	32.07	1.66	58.43	1.92	108.74	2.22	200.09	2.57
2.0	28.68	1.48	52.26	1.71	97.18	1.98	178.83	2.30
1.5	24.84	1.28	45.26	1.48	84.05	1.71	154.70	1.99
1.0	20.28	1.05	36.95	1.21	68.48	1.40	126.07	1.62

Note:

The flow rates shown above assume an unrestricted discharge from the pipe. For installations without an unrestricted discharge, the flow rate will be affected by the downstream throttle.

For shallow gradients, the Colebrook-White formula underestimates flow rates (because when gradient tends towards zero %, velocity also tends to zero).

For level or nearly level installations (slope < 1 %), spatially varied flow tables should be used.

## Flow rates

### Full bore flow rate tables for varying gradients

#### For soil/foul water drainage applications

Flow rates based on Colebrook-White formula.  
Roughness coefficient  $k_s = 0.6 \text{ mm}$

Gradient [%]	Pipe ø 40 mm		Pipe ø 50 mm		Pipe ø 75 mm		Pipe ø 110 mm		Pipe ø 125 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	1.21	1.08	2.30	1.27	7.14	1.71	20.45	2.23	28.97	2.44
7.5	1.04	0.93	1.99	1.10	6.19	1.48	17.71	1.93	25.09	2.11
5.0	0.85	0.76	1.63	0.90	5.05	1.21	14.46	1.58	20.49	1.72
4.5	0.81	0.72	1.54	0.85	4.79	1.14	13.72	1.50	19.43	1.64
4.0	0.76	0.68	1.46	0.80	4.52	1.08	12.94	1.41	18.32	1.54
3.5	0.71	0.64	1.36	0.75	4.23	1.01	12.10	1.32	17.14	1.44
3.0	0.66	0.59	1.26	0.70	3.91	0.93	11.20	1.22	15.87	1.34
2.5	0.60	0.54	1.15	0.64	3.57	0.85	10.23	1.12	14.49	1.22
2.0	0.53	0.48	1.03	0.57	3.19	0.76	9.15	1.00	12.96	1.09
1.5	0.46	0.42	0.89	0.49	2.77	0.66	7.92	0.86	11.22	0.94
1.0	0.37	0.34	0.73	0.40	2.26	0.54	6.47	0.71	9.16	0.77

Gradient [%]	Pipe ø 160 mm		Pipe ø 200 mm		Pipe ø 250 mm		Pipe ø 315 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	55.61	2.87	101.81	3.34	206.87	4.22	382.95	4.92
7.5	48.16	2.49	88.17	2.89	177.84	3.62	329.47	4.23
5.0	39.32	2.03	71.99	2.36	143.52	2.93	266.21	3.42
4.5	37.30	1.93	68.30	2.24	135.71	2.77	251.81	3.23
4.0	35.17	1.82	64.39	2.11	127.46	2.60	236.59	3.04
3.5	32.90	1.70	60.23	1.98	118.69	2.42	220.42	2.83
3.0	30.46	1.57	55.76	1.83	109.29	2.23	203.07	2.61
2.5	27.80	1.44	50.90	1.67	99.10	2.02	184.25	2.37
2.0	24.87	1.28	45.53	1.49	87.86	1.79	163.50	2.10
1.5	21.53	1.11	39.43	1.29	75.18	1.53	140.05	1.80
1.0	17.58	0.91	32.19	1.06	60.25	1.23	112.42	1.44

Note:

The flow rates shown above assume an unrestricted discharge from the pipe. For installations without an unrestricted discharge, the flow rate will be affected by the downstream throttle.

For shallow gradients, the Colebrook-White formula underestimates flow rates (because when gradient tends towards zero %, velocity also tends to zero).  
For level or nearly level installations (slope < 1 %), spatially varied flow tables should be used.



**Operating pressures**

The ACO pipe socketed stainless steel pipe systems are fitted with a unique, double lip seal manufactured from either EPDM or Viton®. The double lip seal arrangement provides added security for the ultimate long term reliability. The ACO pipe; socketed stainless steel pipe systems are tested and approved for operating pressures in gravity, siphonic and vacuum systems.

ACO pipe stainless steel pipe systems are designed for maximum working pressure 0.5 bar according to EN 1124. In case where higher pressure may apply, it is necessary to combine the system with socket clamps.

Pipe diameter [mm]	Operating pressure [bar]	
	Without socket clamp	With socket clamp
40	0.5	2.5
50	0.5	2.5
75	0.5	2.5
110	0.5	2.5
125	0.5	2.5
160	0.5	1.5
200	0.5	1.5
250	0.5	1.0
315	0.5	0.7

Vacuum applications	
Pipe diameter [mm]	Operating pressure [bar]
40	-0.8
50	-0.8
75	-0.8
110	-0.8
125	-0.8
160	-0.8
200	-0.8
250	-0.8
315	-0.8