



ACO PIPE® Push Fit System
ACO Marine Product Catalogue



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Introduction

The ACO PIPE® stainless steel socketed pipe systems offer a modern alternative to plastic and galvanized pipes for water drainage. The ACO PIPE® system is highly resistant to aggressive media. The fitted stainless steel ACO PIPE® system offers many advantages starting with simple assembly enabling greater flexibility in its application and installation. Installations are considerably lighter than with conventional piped systems, high fire safety and high resistance to corrosion. All these attributes offer the user a system that represents not only excellent value but also high performance. The ACO PIPE® fitted system is recognized and approved by all leading ship registers.

Material Properties

The ACO PIPE® stainless steel socketed pipe systems are made of austenitic stainless steel.

Quality Grades:

Material No.: AISI 304 = DIN 1.4301

Material No.: AISI 316 = DIN 1.4571

Expansion Coefficient

Due to the low expansion coefficient, ACO PIPE® stainless steel products do not require any special measurements to be taken for installation in standard drainage applications.

The expansion coefficients of different materials are specified below. The values refer to linear expandability in mm per 1 m pipe length at a temperature of approx. 60 °C.

Raw Materials

■ Aluminum alloy	1.44 mm
■ Copper	0.98 mm
■ HDPE	9.00 mm
■ PVC	3.00 mm
■ Stainless steel	0.99 mm

The coefficients of linear expansion for various materials are as follows (°K-1)

Aluminum	24 x 10 ⁻⁶
Copper	16.4 x 10 ⁻⁶
HDPE	150 x 10 ⁻⁶
PVC	50 x 10 ⁻⁶
Stainless steel	16.5 x 10 ⁻⁶

Sound Properties

Stainless steel systems, such as ACO PIPE® fitted system, conform to the requirements for the sound properties of drainage technology under DIN 4109.

Flammability

ACO PIPE® fitted systems of stainless steel are classified as inflammable. Drainage products of stainless steel are classified as fire-resistant materials according to fire regulations in DIN 4102 Standards.

ACO PIPE® Sockets

The ACO PIPE® sockets are designed as two-chamber components for stable and durable joint fitting in the ACO PIPE® system of pipes and fittings.

ACO PIPE® Seals

In the first socket chamber is a factory-inserted special ACO seal. The special engineering parameters of the seal ensure that the end of the ACO PIPE® fits tightly, not only onto the seal in the chamber, but also around the diameter of the inserted pipe. This slip-proof and double-seal function of the ACO seal guarantees long lasting and leakproof installation. Standard ACO PIPE® sockets are provided with seals made of EPDM = Ethylen-Propylen-Terpolymer rubber (APTK). ACO PIPE® fittings with EPDM seals may be installed in systems exposed to temperature ranges from -50 °C to +130 °C. To further enhance performance of the ACO PIPE® system in extreme temperature or media conditions, the system can be fitted with sealing elements made of Viton® (FKM). Detailed information concerning the durability of seals and resistance to aggressive media are available from ACO Marine.

Tightness Values

The ACO PIPE® stainless steel socketed pipe system is suitable for operation in both vacuum applications and gravity drainage installations.

Protection against Corrosion

The ACO PIPE® stainless steel socketed pipe system (as per EN 1124) is made of Chromium-Nickel-Steel alloys that are highly resistant to corrosion and therefore suitable for operation with very aggressive media.

The ACO PIPE® elements are suitable for a variety of applications in the shipping industry due to their flexibility. They offer solutions where high performance is a pre-requisite. Detailed information and guidance on the assessment of system suitability and durability against exposure to specific media is available on request.

ACO PIPE® Installation

Effective installation is critical in ensuring reliable operation of the pipe system. The quality of the raw materials along with high-quality workmanship during production of ACO PIPE® stainless steel products are indispensable quality assurance factors.

Drainage systems must provide for trouble-free, simply installation and flawless operation. A wide range of components provides an effective and economic solution for all situations.

ACO PIPE® fittings offer technically sophisticated, state-of-the-art socket options, quick and easy to install even in situations requiring bends and combinations of various shapes of ACO PIPE® sockets and fittings.

Stainless steel pipes and fittings are easy to work with, resistant to impact and combustion, and able to withstand robust handling during installation.

Stainless steel pipes in the ACO PIPE® range may also be delivered with long sockets. Length adjustment is carried out with the aid of extension pipes, also fitted with end spigots.

Stainless drainage pipes and components, fitted with specially designed ACO PIPE® sockets, ensure enhanced stability of the drainage system. ACO PIPE® offers a variety of components with threaded connectors (with or without soundproof inserts) and pipes with penetrations that enable installation in a wide range of applications.

Cutting to Length

The length of a stainless steel pipe is adjustable with the aid of a pipe cutter.

Only the tools designated for work with stainless steel components should be used during installation as using tools for other purposes may cause problems in the ACO PIPE® system.

Making ACO PIPE® Sockets

1. ACO PIPE® seals are inserted in the stainless steel sockets of the ACO PIPE® components and pipes during the assembly process at the factory and continuous Quality Assurance checks ensure the correct fit.

2. Before installing ACO PIPE® components and pipes, it is advisable to check the position of each seal prior to installation as any damage or displacement during transport or handling is beyond the control of ACO Marine.

3. The ACO lubricant, Order No.: E80 350 000, is applied in a thin layer on the spigots.

4. Push-fit the pipe end into the socket but do not push fully home into the socket recess to allow for thermal expansion within the system.

Loose Socket Connections

The lubricant dries out after a short time. Heating up the ACO PIPE® socket will loosen the connection for adjustment. Making sure that the end of the pipe fits tightly into the bottom of the socket is particularly important when installing vacuum and pressurised pipe systems. Marking the depth of the insertion with a marker helps prevent problems during installation/ assembly.

Fastening of Pipes

With horizontally laid pipes, the weight of water in the pipe system should be considered when selecting suitable fastening material and determining the number of mounting points.

The following ACO PIPE® mounting/fastening material options are available:

- pipe clamps for threaded rods with soundproofing
- pipe clamps support with support function and soundproofing
- pipe clamps support with support function and soundproofing for mounting points

One (1) meter of ACO PIPE® stainless steel pipe, filled with water, weighs:

DN-050	approx. 3.11 kg
DN-075	approx. 6.18 kg
DN-110	approx. 12.40 kg
DN-125	approx. 15.8 kg
DN-160	approx. 24.87 kg
DN-200	approx. 38.72 kg

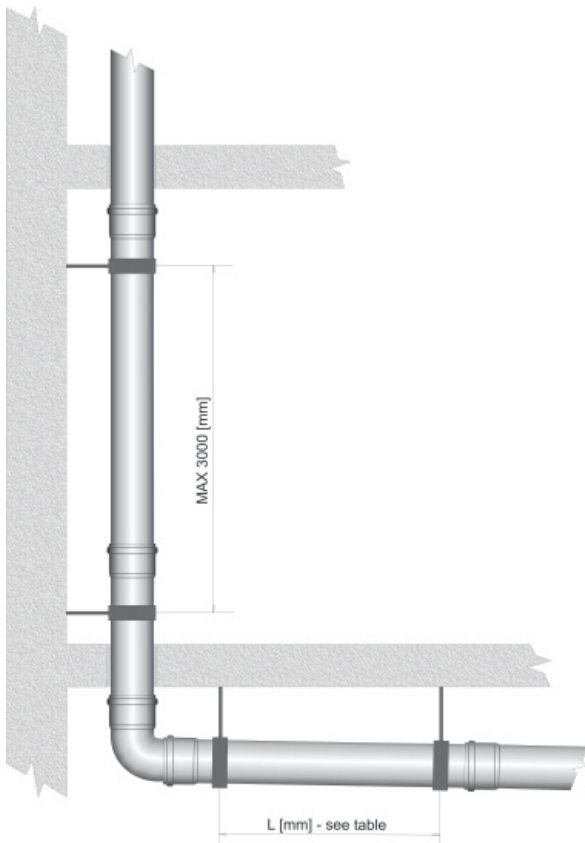
Working pressure

ACO pipe system is designed to withstand operation pressure in accordance to EN 1124-4. See the chart below.

DN	D(D1)	Working pressure	"Working pressure (Joints with socket clamps)"	Negative working pressure
50	50	0,5 bar	2 bar	-0,8 bar
65	75	0,5 bar	2 bar	-0,8 bar
100	110	0,5 bar	2 bar	-0,6 bar
125	125	0,5 bar	1 bar	-0,6 bar
150	160	0,5 bar	1 bar	-0,6 bar
200	200	0,5 bar		

Vertical runs

- max. distance of brackets 3 meters
- very inlet (branch) must be additionally fixed



Horizontal runs

Diameter (mm)	Max distance between brackets (mm)
50	2,2
75	2,5
110	2,8
125	3,0
160	3,3
200	3,3

Production monitoring

ACO PIPE® stainless steel socketed pipe systems are subject to production monitoring by a certified institute.

ACO PIPE® seals are also subject to production monitoring by a certified institute.

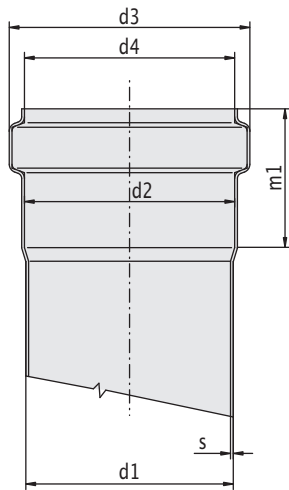
Quality management

ACO PIPE® stainless steel socketed pipe systems are subject to production monitoring in accordance to DIN EN ISO 9001:2000.

Certification

ACO PIPE® stainless steel socketed pipe systems are certified by renowned test registers. This affirms their high operational safety.

ACO Pipe® Socket dimensions



EN 1124
short socket

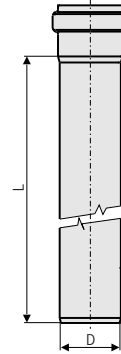
<i>DN</i>	<i>d1</i>	<i>d2</i>	<i>d3</i>	<i>d4</i>	<i>s</i>	<i>m1</i>
050	50	50,6	61,6	50,6	1,0	42
075	75	75,7	87,2	75,7	1,0	50
110	110	110,8	125,3	110,8	1,0	57
125	125	126	141	126	1,0	63
160	160	161	177,8	161	1,25	70
200	200	201	219	201	1,50	80

For pipes and fittings with 2 sockets, both sockets are the same design

ACO Pipe® Pipes

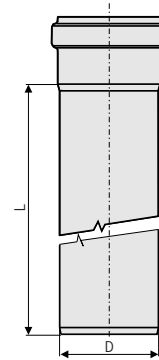
Socketed Pipe 50 mm acc. to EN 1124 form B1

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	150	42	1,0	0,3	98500	98550
50	250	42	1,0	0,4	98502	98552
50	500	42	1,0	0,7	98504	98554
50	750	42	1,0	1,0	98506	98556
50	1000	42	1,0	1,3	98508	98558
50	1500	42	1,0	2,0	98510	98560
50	2000	42	1,0	2,6	98512	98562
50	3000	42	1,0	3,8	98514	98564



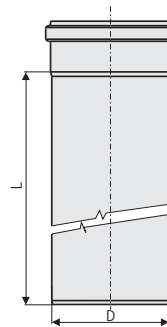
Socketed Pipe 75 mm acc. to EN 1124 form B1

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	150	50	1,0	0,4	98516	98566
75	250	50	1,0	0,6	98518	98568
75	500	50	1,0	1,1	98520	98570
75	750	50	1,0	1,5	98522	98572
75	1000	50	1,0	2,0	98524	98574
75	1500	50	1,0	2,9	98526	98576
75	2000	50	1,0	3,9	98528	98578
75	3000	50	1,0	5,7	98530	98580



Socketed Pipe 110 mm acc. to EN 1124 form B1

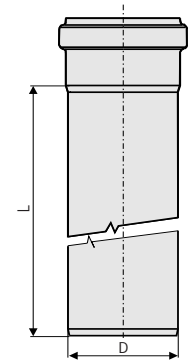
D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
110	150	57	1,0	0,6	98532	98582
110	250	57	1,0	0,9	98534	98584
110	500	57	1,0	1,5	98536	98586
110	750	57	1,0	2,2	98538	98588
110	1000	57	1,0	2,9	98540	98590
110	1500	57	1,0	4,2	98542	98592
110	2000	57	1,0	5,5	98544	98594
110	3000	57	1,0	8,2	98546	98596



Order numbers of products fitted with Viton seal are available on request.

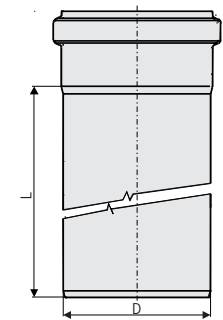
Socketed Pipe 125 mm acc. to EN 1124 form B1

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
125	150	57	1,0	0,68	419692	419712
125	250	57	1,0	1,02	419694	419714
125	500	57	1,0	1,71	419696	419716
125	750	57	1,0	2,5	419698	419718
125	1000	57	1,0	3,3	419700	419720
125	1500	57	1,0	4,9	419702	419722
125	2000	57	1,0	6,49	419704	419724
125	2500	57	1,0	8,09	419706	419726
125	3000			9,57	419708	419728
125	6000			19,03	419710	419730



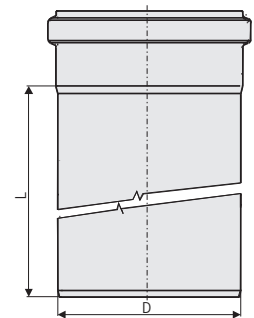
Socketed Pipe 160 mm acc. to EN 1124 form B1

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
160	150	70	1,25	1,2	98548	98598
160	250	70	1,25	1,7	98600	98650
160	500	70	1,25	2,9	98602	98652
160	750	70	1,25	4,2	98604	98654
160	1000	70	1,25	5,4	98606	98656
160	1500	70	1,25	7,9	98608	98658
160	2000	70	1,25	10,3	98610	98660
160	3000	70	1,25	15,3	98612	98662



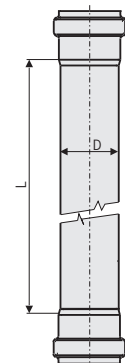
Socketed Pipe 200 mm acc. to EN 1124 form B1

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
200	500	80	1,5	4,4	419383	419384
200	1000	80	1,5	8,0	419387	419388
200	2000	80	1,5	15,3	419391	419392
200	3000	80	1,5	22,5	419395	419396



Double Socketed Pipe 50 mm

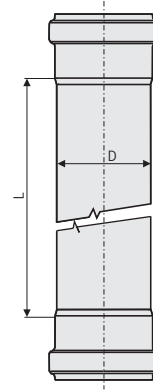
D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	250	42	1,0	0,4	419554	419594
50	500	42	1,0	0,7	419556	419596
50	750	42	1,0	1,1	419558	419598
50	1000	42	1,0	1,4	419560	419600
50	1500	42	1,0	2,0	419562	419602
50	2000	42	1,0	2,6	419564	419604
50	3000	42	1,0	3,9	419566	419606



Order numbers of products fitted with Viton seal are available on request.

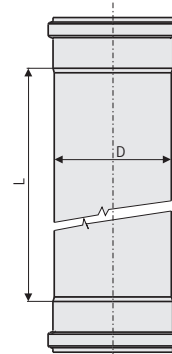
Double Socketed Pipe 75 mm

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	250	50	1,0	0,7	419568	419608
75	500	50	1,0	1,2	419570	419610
75	750	50	1,0	1,6	419572	419612
75	1000	50	1,0	2,1	419574	419614
75	1500	50	1,0	3,0	419576	419616
75	2000	50	1,0	4,0	419578	419618
75	3000	50	1,0	5,8	419580	419620



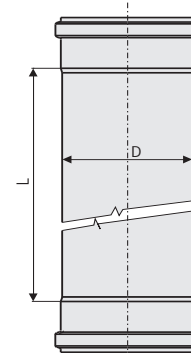
Double Socketed Pipe 110 mm

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
110	500	57	1,0	1,7	419582	419622
110	750	57	1,0	2,4	419584	419624
110	1000	57	1,0	3,0	419586	419626
110	1500	57	1,0	4,4	419588	419628
110	2000	57	1,0	5,7	419590	419630
110	3000	57	1,0	8,4	419592	419632



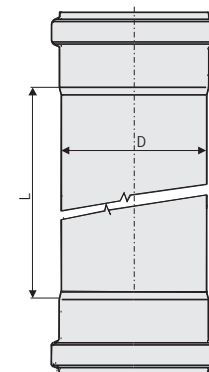
Double Socketed Pipe 125 mm

D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
125	500	57	1,0	1,71	419787	419799
125	750	57	1,0	2,5	419789	419801
125	1000	57	1,0	3,3	419791	419803
125	1500	57	1,0	4,9	419793	419805
125	2000	57	1,0	6,49	419795	419807
125	3000	57	1,0	9,57	419797	419809



Double Socketed Pipe 160 mm

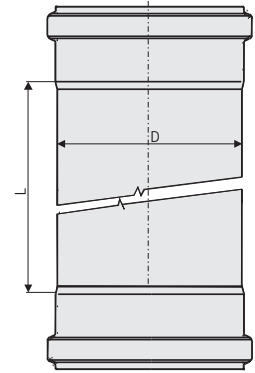
D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
160	500	70	1,25	3,3	419634	419646
160	750	70	1,25	4,5	419636	419648
160	1000	70	1,25	5,8	419638	419650
160	1500	70	1,25	8,2	419640	419652
160	2000	70	1,25	10,7	419642	419654
160	3000	70	1,25	15,7	419644	419656



Order numbers of products fitted with Viton seal are available on request.

Double Socketed Pipe 200 mm

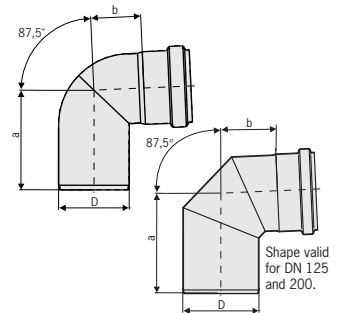
D (mm)	Active Length L (mm)	Socket Length (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
200	500	80	1,5	5,0	419658	419659
200	1000	80	1,5	8,6	419662	419663
200	2000	80	1,5	15,9	419666	419667
200	3000	80	1,5	23,1	419670	419671



ACO Pipe® Bends

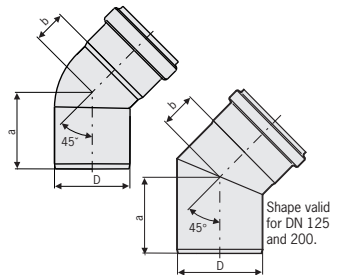
Bogen 87,5° nach EN 1124 Form C2

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	86	40	1,0	0,2	98700	98750
75	107	53	1,0	0,4	98702	98752
110	134	67	1,0	0,7	98704	98754
125	161	93	1,0	0,8	419732	419734
160	181	105	1,25	1,7	98706	98756
200	215	129	1,5	3,9	419411	419413



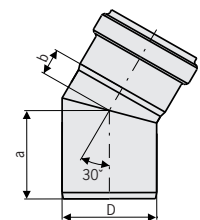
Bend 45° acc. to EN 1124 form C2

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	62	24	1,0	0,2	98708	98758
75	76	32	1,0	0,3	98710	98760
110	93	42	1,0	0,5	98712	98762
125	110	50	1,0	0,57	419736	419738
160	131	55	1,25	1,3	98714	98764
200	152	60	1,5	2,7	419407	419409



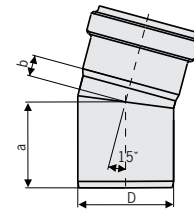
Bend 30° acc. to EN 1124 form C2

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	57	16	1,0	0,2	98716	98766
75	71	21	1,0	0,3	98718	98768
110	85	27	1,0	0,5	98720	98770
125	98	28	1,0	0,57	419740	419742
160	110	40	1,25	1,2	98722	98772
200	137	45	1,5	2,3	419403	419405



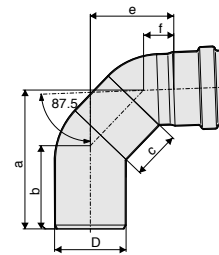
Bend 15° acc. to EN 1124 form C2

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	54	12	1,0	0,1	98724	98774
75	66	16	1,0	0,3	98726	98776
110	78	15	1,0	0,4	98728	98778
125	84	19	1,0	0,4	419744	419746
160	99	29	1,25	1,0	98730	98780
200	123	31	1,5	1,9	419399	419401



Long Bend 87.5°

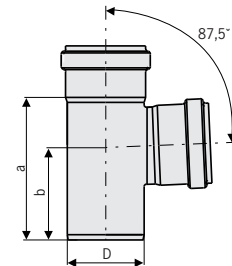
D (mm)	a (mm)	b (mm)	c (mm)	e (mm)	f (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	123	71	50	75	25	0,3	419146	419000
75	146	87	50	88	32	0,4	419148	419002
110	321	103	250	242	42	1,4	419150	419004
160	364	126	250	269	50	2,2	419152	419144



ACO Pipe® Branches

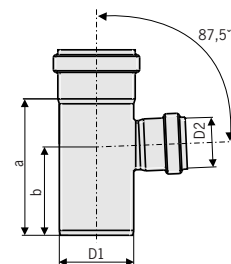
Single Branch 87.5° acc. to EN 1124 form D1

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	106	71	1,0	0,3	98732	98782
75	139	90	1,0	0,5	98734	98784
110	183	117	1,0	0,8	98736	98786
125	220	135	1,0	0,91	419748	419750
160	288	184	1,25	2,3	98738	98788
200	333	206	1,5	4,5	419419	419421



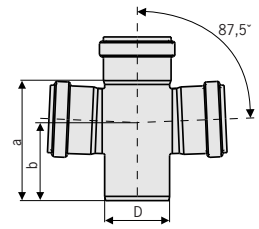
Single Branch Reduction 87.5° acc. to EN 1124 form D11

D1 (mm)	D2 (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	50	139	90	1,0	0,3	98928	98930
110	50	183	117	1,0	0,5	98932	98934
110	75	183	117	1,0	0,8	98936	98938
125	75	187	110	1,0	0,9	419752	419754
125	110	205	127	1,0	0,9	419756	419758
160	110	288	184	1,25	2,3	400691	400693
200	160	293	186	1,5	3,7	419415	419417



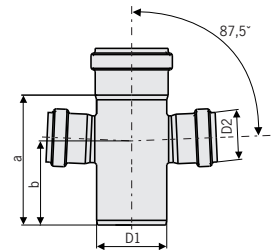
Double Branch 87.5° acc. to EN 1124 form D2

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	106	71	1,0	0,3	98740	98790
75	139	90	1,0	0,6	98742	98792
110	183	117	1,0	0,9	98744	98794
160	288	184	1,25	2,7	98746	98796



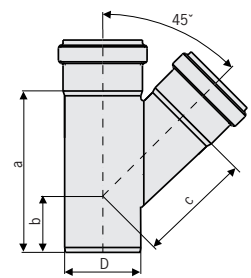
Double Branch Reduction 87.5° acc. to EN 1124 form D21

D1 (mm)	D2 (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	50	139	90	1,0	0,3	98940	98942
110	50	183	117	1,0	0,6	98944	98946
110	75	183	117	1,0	0,9	98900	98902
160	110	288	184	1,25	2,7	400695	400697



Single Branch 45° acc. to EN 1124 form D1

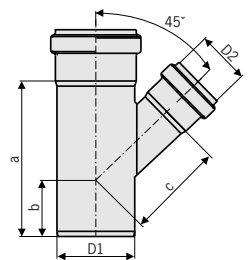
D (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	128	57	76	1,0	0,3	98748	98798
75	179	74	110	1,0	0,5	98800	98850
110	233	88	149	1,0	1,0	98802	98852
125	273	103	170	1,0	1,14	419760	419762
160	332	119	222	1,25	2,6	98804	98854
200	415	151	274	1,5	5,7	419427	419429



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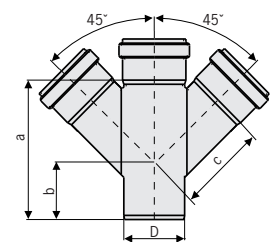
Single Branch Reduction 45° acc. to EN 1124 form D11

D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 304
75	50	144	56	94	1,0	0,3	400661	400663
110	50	147	42	119	1,0	0,5	400665	400667
110	75	182	60	135	1,0	1,0	400669	400671
125	75	200	65	141	1,0	1,12	419764	419766
125	110	250	90	160	1,0	1,13	419768	419770
160	110	332	119	190	1,25	2,6	400699	400701
200	160	359	123	250	1,5	4,7	419423	419425



Double Branch 45° acc. to EN 1124 form D2

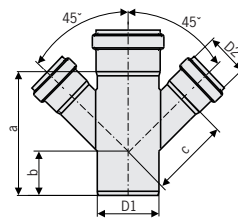
D (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 304
50	128	57	76	1,0	0,4	98806	98856
75	179	74	110	1,0	0,7	98808	98858
110	233	88	149	1,0	1,2	98810	98860
160	332	184	222	1,25	3,5	98812	98862



Order numbers of products fitted with Viton seal are available on request.

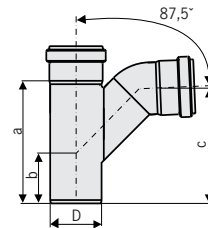
Double Branch Reduction 45° acc. to EN 1124 form D21

D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	50	144	56	94	1,0	0,4	400673	400675
110	50	147	42	119	1,0	0,7	400677	400679
110	75	182	60	135	1,0	1,2	400681	400683
160	110	332	119	190	1,25	3,5	400703	400705



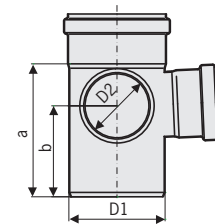
Swept Branch 87.5°

D (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	128	57	117	1,0	0,3	98814	98864
75	179	74	157	1,0	0,6	98816	98866
110	233	88	209	1,0	1,1	98818	98868
160	332	184	302	1,25	2,8	98820	98870



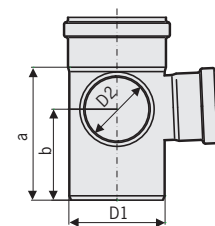
Corner Branch 87.5°

D1 (mm)	D1 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	50	106	71	0,35	419162	419210
75	75	139	90	0,65	419164	419212
110	110	183	117	1,15	419166	419214
125	125	220	135	1,55	417020	417021
160	160	288	184	2,86	419168	419216



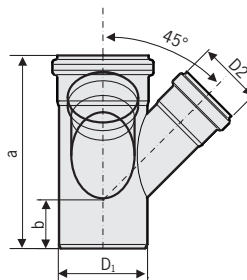
Corner branch 87,5° reduced

D1 (mm)	D2 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	50	139	98	0,52	419170	419218
110	50	132	93	0,75	419172	419220
110	75	152	104	0,9	419174	419222
125	75	200	141	1,23	419985	419987
125	110	250	155	1,72	419997	417000
160	110	236	152	2,01	419176	419224



Corner Branch 45°

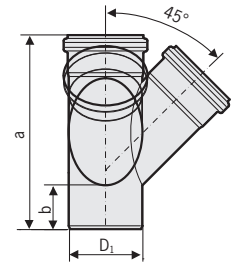
D1 (mm)	D2 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	50	128	57	0,43	419178	419226
75	75	147	42	0,8	419180	419228
110	110	233	88	1,53	419182	419230
125	125	273	103	2,31	417022	417023
160	160	320	117	4,25	419184	419232



Order numbers of products fitted with Viton seal are available on request.

Corner branch 45° reduced

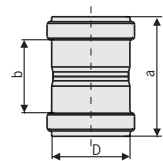
D1 (mm)	D2 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	50	144	56	0,59	419186	419234
110	50	219	74	1,01	419188	419236
110	75	182	60	1,12	419190	419238
125	75	207	75	1,42	419979	419981
125	110	250	93	2,19	419991	419993
160	110	258	80	2,56	419192	419240



ACO Pipe® Connecting pieces

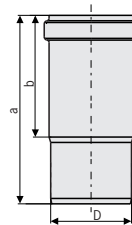
Straight Coupling acc. to EN 1124 form F4

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	97	54	1,0	0,1	98920	98970
75	119	75	1,0	0,2	98922	98972
110	130	84	1,0	0,4	98924	98974
125	140	95	1,0	0,4	419813	419815
160	175	110	1,25	0,8	98926	98976
200	196	136	1,5	1,8	419431	419433



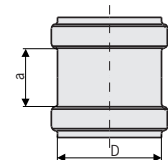
Long socket acc. to EN 1124 Form F5

D (mm)	a (mm)	b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	159	102	1,0	0,2	98664	98666
75	175	113	1,0	0,3	98668	98670
110	200	121	1,0	0,5	98672	98674
125	250	165	1,0	0,57	419776	419778
160	292	170	1,25	1,4	98676	98678



Repair Coupling acc. to EN 1124 form F41

D (mm)	a (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	44	1,0	0,1	98830	98880
75	46	1,0	0,2	98832	98882
110	52	1,0	0,3	98834	98884
125	70	1,0	0,34	419772	419774
160	76	1,25	0,7	98836	98886
200	100	1,5	1,5	419435	419437



ACO PIPE repair couplings are used to facilitate in-situ repairs to damaged pipe. Unlike the standard Straight Coupling, there is no central registration to limit the insertion depth of the pipe.

The ACO PIPE repair coupling slides completely over a pipe joint and is positioned to bridge the required pipe joint.

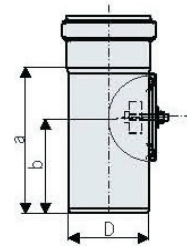
Installation tip: mark the final position of the ACO PIPE repair coupling on the installed pipe system to ensure the coupling seals are positioned symmetrically over the pipe joint.

Order numbers of products fitted with Viton seal are available on request.

ACO Pipe® Cleaning pipes

Access pipe according to EN 1124-2 H1

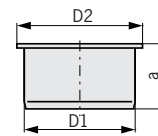
D (mm)	a (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
75	139	1,0	0,5	98913	98963
110	183	1,0	0,8	98915	98965
125	210	1,0	0,91	419783	419785
160	288	1,25	2,3	98917	98967
200	293	1,5	3,7	419676	419678



ACO Pipe® Drain plugs

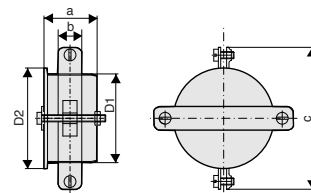
Socket plugs according to EN 1124 - 2K10

D1 (mm)	a (mm)	D2 (mm)	Weight (kg)	Order No AISI 316
50	42	58	0,1	98888
75	42	85	0,3	98889
110	42	120	0,5	98890
125	50	135	0,57	419782
160	50	170	0,8	98891
200	50	210	1,0	98994



Socket Plug with Clamp

D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	Weight (kg)	Order No AISI 316
50	58	45	18	88	0,4	419138
75	85	45	20	120	0,55	419139
110	120	45	22	167	0,8	419140
125	135	50	22	179	1	419833
160	170	50	22	214	1,1	419141

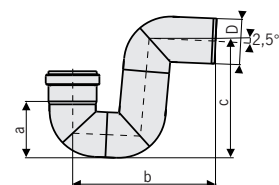


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ACO Pipe® Drain traps

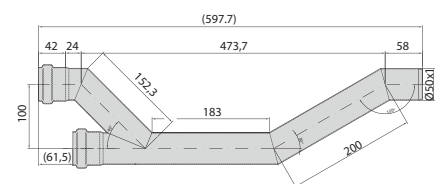
P-Trap acc. to EN 1124 form G1

D (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	68	187	149	1,0	0,5	98822	98872
75	94	232	193	1,0	0,7	98824	98874
110	132	300	254	1,0	1,3	98826	98876
160	190	404	347	1,25	3,3	98828	98878



Vacuum Transport Pockets

D (mm)	a (mm)	b (mm)	c (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	68	187	149	1,0	0,5	98822	98872
75	94	232	193	1,0	0,7	98824	98874

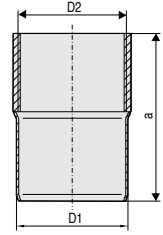


Order numbers of products fitted with Viton seal are available on request.

ACO Pipe® Threaded Connectors

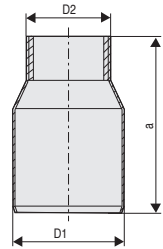
Connector with inner Thread and Spigot

D1 (mm)	D2 (mm)	a (mm)	Weight (kg)	Order No AISI 316
50	Rp 1 1/4"	72	0,2	98956
50	Rp 1 1/2"	75	0,28	98957
50	Rp 2"	80	0,3	98958



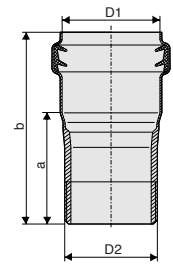
Connector with outer Thread and Spigot

D1 (mm)	D2 (mm)	a (mm)	Weight (kg)	Order No AISI 316
50	Rp 1 1/4"	100	0,2	419330
50	Rp 1 1/2"	100	0,28	419331
50	Rp 2"	100	0,3	419332



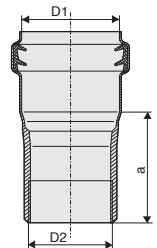
Connector with Socket and outer Thread

D1 (mm)	D2 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 316
50	Rp 1 1/4"	58	100	0,2	419250
50	Rp 1 1/2"	58	100	0,25	419252
50	Rp 2"	58	100	0,3	419254



Connector with Socket and inner Thread

D1 (mm)	D2 (mm)	a (mm)	Seal Material	Weight (kg)	Order No AISI 316
50	Rp 1 1/4"	58	EDPM	0,2	419333
50	Rp 1 1/2"	58	EDPM	0,25	419335
50	Rp 2"	58	EDPM	0,3	419337

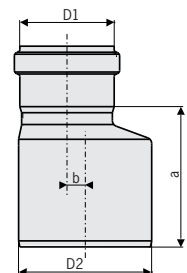


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ACO Pipe® Transition pipes

Eccentric Increaser Coupling acc. to EN 1124 form F1

D1 (mm)	D2 (mm)	a (mm)	Offset b (mm)	Wall Thickness (mm)	Weight (kg)	Order No AISI 316
50	75	88	7	1,0	0,31	98892
50	110	103	25	1,0	0,38	98978
75	110	116	15	1,0	0,52	98894
110	160	123	22	1,25	1,12	98896

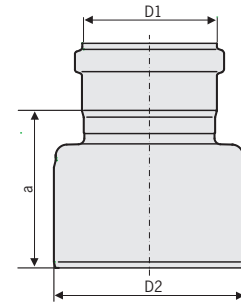


Order numbers of products fitted with Viton seal are available on request.

ACO Marine

Concentric reduction

D1 (mm)	D2 (mm)	a (mm)	Weight (kg)	Order No AISI 316
50	75	88	0,22	419826
50	110	113	1,41	417018
75	110	105	1,42	419828
110	160	126	0,87	419830
125	160	113	0,88	419811
125	110	102	0,58	419780
160	200	170	1,68	419441

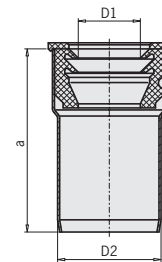


*AP Increaser Coupling diameter 160/200, 110/125, 125/160 available only as concentric.

Connector to other pipe types

D1 (mm)	D2 (mm)	a (mm)	Weight (kg)	Order No AISI 316
32	50	90	0,15	419373
40	50	90	0,15	419374

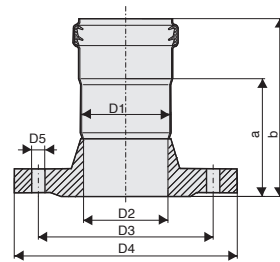
Order numbers of products fitted with Viton seal are available on request.



ACO Pipe® Flanged Connectors

Connector with Socket and Flange acc. to EN 1124 form M1 PN-6 DIN 2631, PN-10 DIN 2632, PN-16 DIN 2633

D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	nxDS (mm)	a (mm)	b (mm)	PN	Weight (kg)	Order No AISI 316
50	DN 40	100	130	4x14	96	138	6	1,3	419528
50	DN 50	110	140	4x14	93	135	6	1,5	419530
75	DN 65	130	160	4x14	93	143	6	1,9	419532
110	DN 100	170	210	4x18	93	150	6	3,6	419534
125	DN 125	200	240	8x18	100	163	6	5,0	419970
*160	DN 150	225	265	8x18	78	148	6	5,7	419536
200	DN 200	280	320	8x18	95	175	6	8,8	419538
50	DN 40	110	150	4x18	100	142	10	2,0	419516
50	DN 50	125	165	4x18	100	142	10	2,7	419518
75	DN 65	145	185	4x18	100	150	10	3,3	419520
110	DN 100	180	220	8x18	100	157	10	4,9	419522
125	DN 125	210	250	8x18	100	163	10	5,0	419972
160	DN 150	240	285	8x22	85	155	10	8,3	419524
200	DN 200	295	340	8x22	102	182	10	12,3	419526
50	DN 40	110	150	4x18	100	142	16	2,0	419256
50	DN 50	125	165	4x18	100	142	16	2,7	419258
75	DN 65	145	185	4x18	100	150	16	3,3	419260
110	DN 100	180	220	8x18	100	157	16	4,9	419262
125	DN 125	210	250	8x18	100	163	16	5,0	419974
160	DN 150	240	285	8x22	85	155	16	8,3	419512
200	DN 200	295	340	12x22	102	182	16	12,0	419514



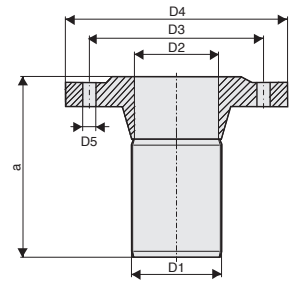
ANSI socket flange in acc. DIN available on request.

Not binding price quotation price in Euro/piece.

Order numbers of products fitted with Viton seal are available on request.

Connector with Flange and Spigot acc. to EN 1124 form M2
PN-6 DIN 2631, PN-10 DIN 2632, PN-16 DIN 2633

<i>D1</i> (mm)	<i>D2</i> (mm)	<i>D3</i> (mm)	<i>D4</i> (mm)	<i>nxD5</i> (mm)	<i>a</i> (mm)	<i>Weight</i> (kg)	<i>PN</i>	<i>Order No</i> <i>AISI 316</i>
50	DN 40	100	130	4x14	188	1,4	6	419548
50	DN 50	110	140	4x14	185	1,5	6	419549
75	DN 65	130	160	4x14	238	2,0	6	419550
110	DN 100	170	210	4x18	252	3,8	6	419551
125	DN 125	200	240	8x18	260	5,3	6	419976
160	DN 150	225	265	8x18	193	5,9	6	419552
200	DN 200	280	320	8x18	233	9,1	6	419553
50	DN 40	110	150	4x18	192	2,0	10	419542
50	DN 50	125	165	4x18	192	2,7	10	419543
75	DN 65	145	185	4x18	245	3,4	10	419544
110	DN 100	180	220	8x18	259	5,2	10	419545
125	DN 125	210	250	8x18	260	5,3	10	419977
160	DN 150	240	285	8x22	200	8,5	10	419546
200	DN 200	295	340	8x22	240	12,6	10	419547
50	DN 40	110	150	4x18	192	2,0	16	419264
50	DN 50	125	165	4x18	192	2,7	16	419265
75	DN 65	145	185	4x18	245	3,4	16	419266
110	DN 100	180	220	8x18	259	5,2	16	419267
125	DN 125	210	250	8x18	260	5,3	16	419978
160	DN 150	240	285	8x22	200	8,5	16	419540
200	DN 200	295	340	12x22	240	12,3	16	419541



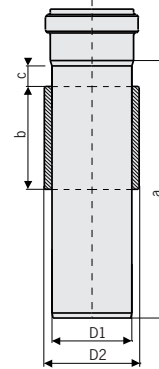
ANSI socket flange in acc. DIN available on request.

Order numbers of products fitted with Viton seal are available on request.

ACO Pipe® Penetrations

Penetration Pipe acc. to EN 1124 form T2 ⓈA0-A60

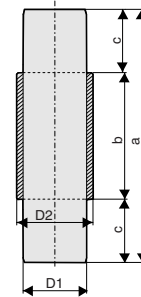
D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	Pipe Wall Thickness (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	60	150	50	33	1,0	0,5	419060	98990
50	60	250	100	33	1,0	1,0	419062	98898
50	60	500	100	33	1,0	1,3	419064	98980
75	85	150	50	24	1,0	0,8	419068	98982
75	85	250	100	24	1,0	1,5	419070	98950
75	85	500	100	24	1,0	2,0	419072	98984
110	120	150	50	18	1,0	1,0	419076	98986
110	120	250	100	18	1,0	2,1	419078	98952
125	135	250	100	12	1,0	3,0	419852	419853
110	120	500	100	18	1,0	2,5	419080	98988
160	170	250	100	10	1,25	3,2	419084	98954



AP Deck- and Bulkhead penetrations with special design are available on request..

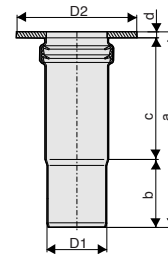
Toilet Penetration

D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	60	200	100	50	1,0	419272	419273



Flange Penetration with Expansion Socket ⓈA0-A60

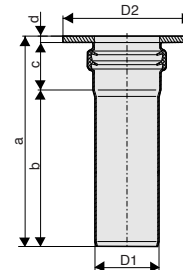
D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	d (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	100	164	57	102	5	0,6	419088	419006
75	125	180	62	113	5	1,0	419094	419008
110	160	205	79	121	5	1,25	419100	419010



AP Deck- and Bulkhead penetrations with special design are available on request.

Flange Penetration with Standard Socket ⓈA0-A60

D1 (mm)	D2 (mm)	a (mm)	b (mm)	c (mm)	d (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
50	100	89	42	42	5	0,5	419090	419022
50	100	164	117	42	5	0,6	419092	419024
75	125	105	50	50	5	0,85	419096	419026
75	125	180	125	50	5	1,0	419098	419028
110	160	117	55	57	5	1,0	419102	419030
125	160	205	143	57	5	1,25	419104	419032

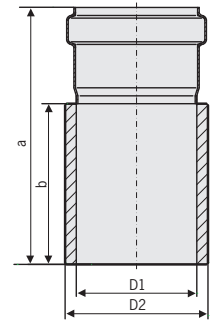


AP Deck- and Bulkhead penetrations with special design are available on request.

Order numbers of products fitted with Viton seal are available on request.

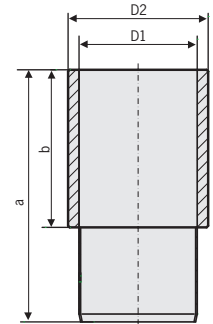
Weld on piece with socket form

D1 (mm)	D2 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 316
50	60,3	155	100	0,77	417006
75	88,9	160	100	1,53	417010
110	125	170	100	2,34	417014



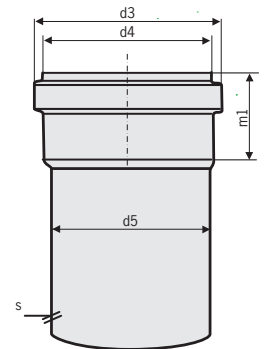
Weld on piece with spigot form E2

D1 (mm)	D2 (mm)	a (mm)	b (mm)	Weight (kg)	Order No AISI 316
50	60,3	155	100	0,82	419963
75	88,9	160	100	1,67	419965
110	125	155	100	1,6	419967



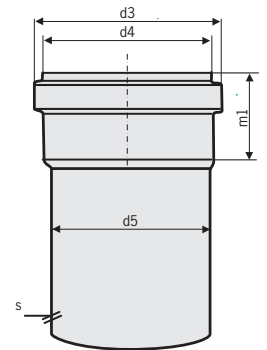
with ACO Pipe discharge pipe on ACO GM- X - Steckmuffen

ACO-Pipe DN	d1	d2	d3	d4	s	ACO Pipe Art.Nr.>	ACO GM-X d5
*050	50	50,6	61,6	50,6	1,00	419821	53
*075	75	75,7	87,2	75,7	1,00	419822	73
110	110	110,8	125,3	110,8	1,00	419823	102
125	125	125,8	141	125,8	1,00	419858	133
160	160	161	177,8	161	1,25	419824	159
200	200	201	219	201	1,50	219	



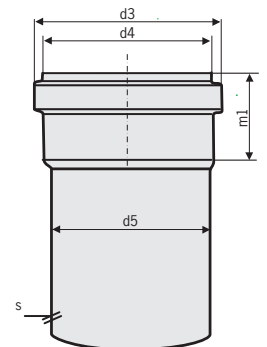
with ACO Pipe discharge pipe on LORO - X - and LORO - XC sockets

ACO-Pipe DN	d1	d2	d3	d4	s	ACO Pipe Art.Nr.>	ACO GM-X d5
*050	50	50,6	61,6	50,6	1,00	419821	53
*075	75	75,7	87,2	75,7	1,00	419822	73
110	110	110,8	125,3	110,8	1,00	419823	103
110	110	110,8	125,3	110,8	1,00	419858	133
160	160	161	177,8	161	1,25	419824	159
200	200	201	219	201	1,50	419825	219



with ACO Pipe discharge pipe on stainless steel-Steckdrain- sockets

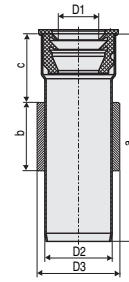
ACO-Pipe DN	d1	d2	d3	d4	s	ACO Pipe Art.Nr.>	ACO GM-X d5
*050	50	50,6	61,6	50,6	1,00	419821	53
*075	75	75,7	87,2	75,7	1,00	419822	73
110	110	110,8	125,3	110,8	1,00	419823	102
110	110	110,8	125,3	110,8	1,00	419858	133
160	160	161	177,8	161	1,25	419824	159
200	200	201	219	201	1,50	419825	219



System ACO pipe is compatible (can be connected directly to PE, PVC pipe systems).
Order numbers of products fitted with Viton seal are available on request.

Wash Basin Penetration

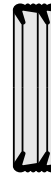
D1 (mm)	D2 (mm)	D3 (mm)	a (mm)	b (mm)	c (mm)	Weight (kg)	Order No AISI 304	Order No AISI 316
32	50	60	150	50	50	0,58	419506	419507
40	50	60	150	50	50	0,58	419508	419509



ACO Pipe® Seals

Pipe Seal

Nominal Pipe Dia (mm)	Pack Quantity	Weight (kg)	Order No EPDM	Order No Viton
50	1	0,01	98400	98404
75	1	0,02	98401	98405
110	1	0,04	98402	98406
125	1	0,06	419453	419454
160	1	0,05	98403	98407
200	1	0,07	98433	98437

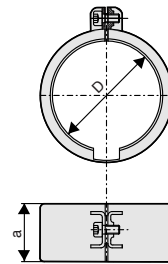


To aid identification, the seals are colour coded as follows: EPDM seals are BLACK. Viton seals are GREEN.

ACO Pipe® Pipe Clamps

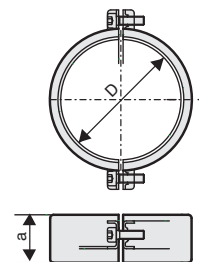
Socket Clamp

D (mm)	a (mm)	Weight (kg)	Order No AISI 316
50	40	0,07	419134
75	40	0,21	419135
110	43	0,3	419136
160	45	0,4	419137



Socket Clamp with two screws

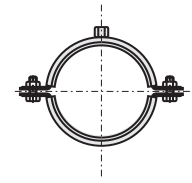
D (mm)	a (mm)	Weight (kg)	Order No AISI 316
50	40	0,14	417 025
75	40	0,25	417 027
110	43	0,34	417 029
125	45	0,38	417 017
160	45	0,48	417 031



ACO Pipe® Pipe Brackets

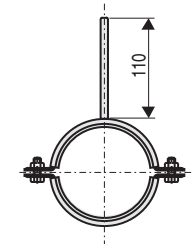
Support bracket with rubber infill

Outside Pipe Dia D (mm)	Weight (kg)	Order No Galvanised Steel	Order No AISI 316
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



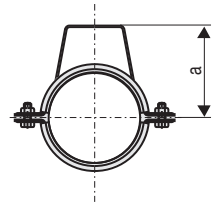
Support Bracket with Weld-on-rod

Outside Pipe Dia D (mm)	Weight (kg)	Order No AISI 316
50	0,24	419680
75	0,33	419681
110	0,43	419682
125	0,46	419856
160	0,49	419683
200	0,54	419684



Support Bracket with Rubber and Stirrup

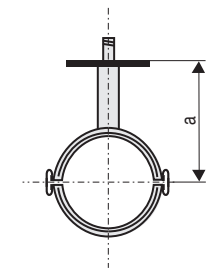
Outside Pipe Dia D (mm)	a (mm)	Weight (kg)	Order No Galvanised Steel	Order No AISI 316
50	56	0,18	400541	400537
75	80	0,28	400542	400538
110	116	0,41	400543	400539
160	166	0,48	400544	400540



Side stress resistant.

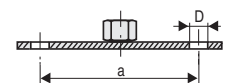
Support Bracket with Rubber and Key

Outside Pipe Dia D (mm)	a (mm)	Weight (kg)	Order No Galvanised Steel	Order No AISI 316
50	120	0,16	400549	400545
75	133	0,26	400550	400546
110	150	0,38	400551	400547
160	175	0,44	400552	400548



Fixing plate

D (mm)	a (mm)	Weight (kg)	Order No Galvanised Steel	Order No AISI 316
8,4	70	0,05	400525	400521



Use with support bracket, support pole or for horizontal fixing.

Order numbers of products fitted with Viton seal are available on request.

Threaded Support Pole

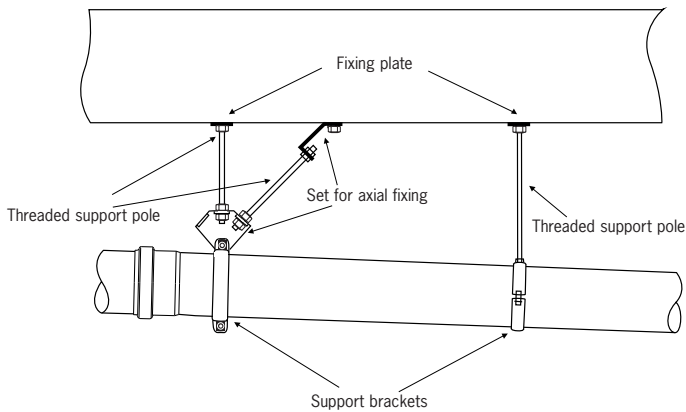
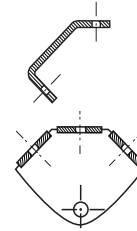
D (mm)	Lenght L (mm)	Gewicht (kg)	Order No Galvanised Steel	Order No AISI 316
M8	1000	0,39	400557	400553
M8	90	0,03	400558	400554
M8	40	0,016	400559	400555



Set for axial fixing

Gewicht (kg)	Order No Galvanised Steel	Order No AISI 316
0,11	400565	400561

Six M8 nuts included.



ACO Pipe® Accessories

Cutter Manual 50-110 mm

	Order No
In plastic case	419363

Replacement discs for Cutter Manual

	Order No
	419365

Minimum Order quantity – 10pcs.

Pipe Cutter Manual

D (mm)	Order No
50 -110	419364
110 - 160	400738

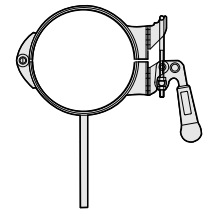
Replacement Manual Cutter Disc

D (mm)	Order No
50 - 110	419363
110 - 160	400578



Holder for Manual Cutting

D (mm)	Order No
160	400742



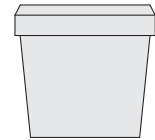
Lubricant in tubes 150 g

Order No
E 80 350 000



Lubricant in bucket 1 kg

Order No
E 80 350 001



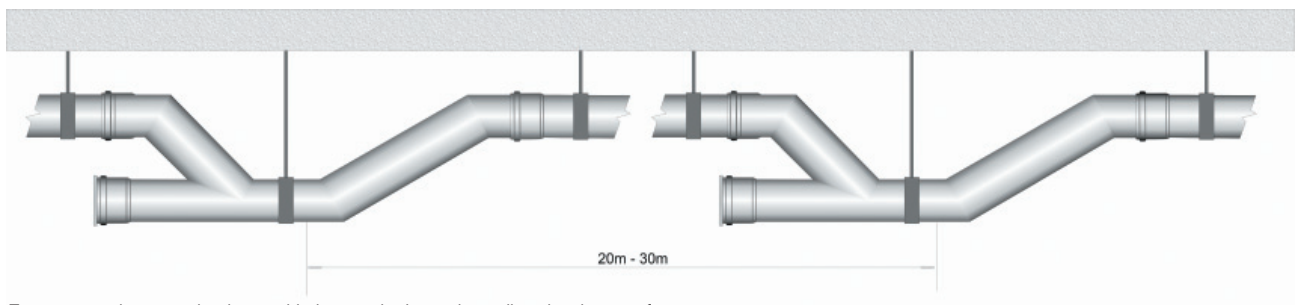
Seal Material Data

		EPDM	Viton*
Water Resistance	Acids	Excellent	Good
Chemical Resistance	Acids	Good	Excellent
	Bases	Good	Good
Solvent Resistance (20 °C)	Alcohol	Good	Good
	Acetone	Good	Unsuitable
	Benzene	Unsatisfactory	Good
Oil Resistance	ASTM Oil No. 1	@ 20 °C	Excellent
		@ 100 °C	150 °C Excellent
	ASTM Oil No. 3	@ 20 °C	Excellent
		@ 100 °C	150 °C Excellent
Fuel Resistance	ASTM Fuel B @ 20 °C	Unsatisfactory	Excellent
Resistances	Oxidation	Excellent	Outstanding
	Ozone & Weathering	Outstanding	Outstanding
Heat Resistance	Maximum Continuous	130 °C	205 °C
	Maximum Intermittent	150 °C	300 °C
Low Temperature Resistance		-50 °C	-20 °C
Gas Permeability		Fairly Low	Very Low
Physical Strength		Good	Good
Compression Set Resistance		Good	Good
Tear & Abrasion Resistance		Good	Good
Cost Factor (1 = low)		1	20

* Du Pont Registered Trade Mark

ACO Pipe installations

Vacuum systems – vacuum transport pockets

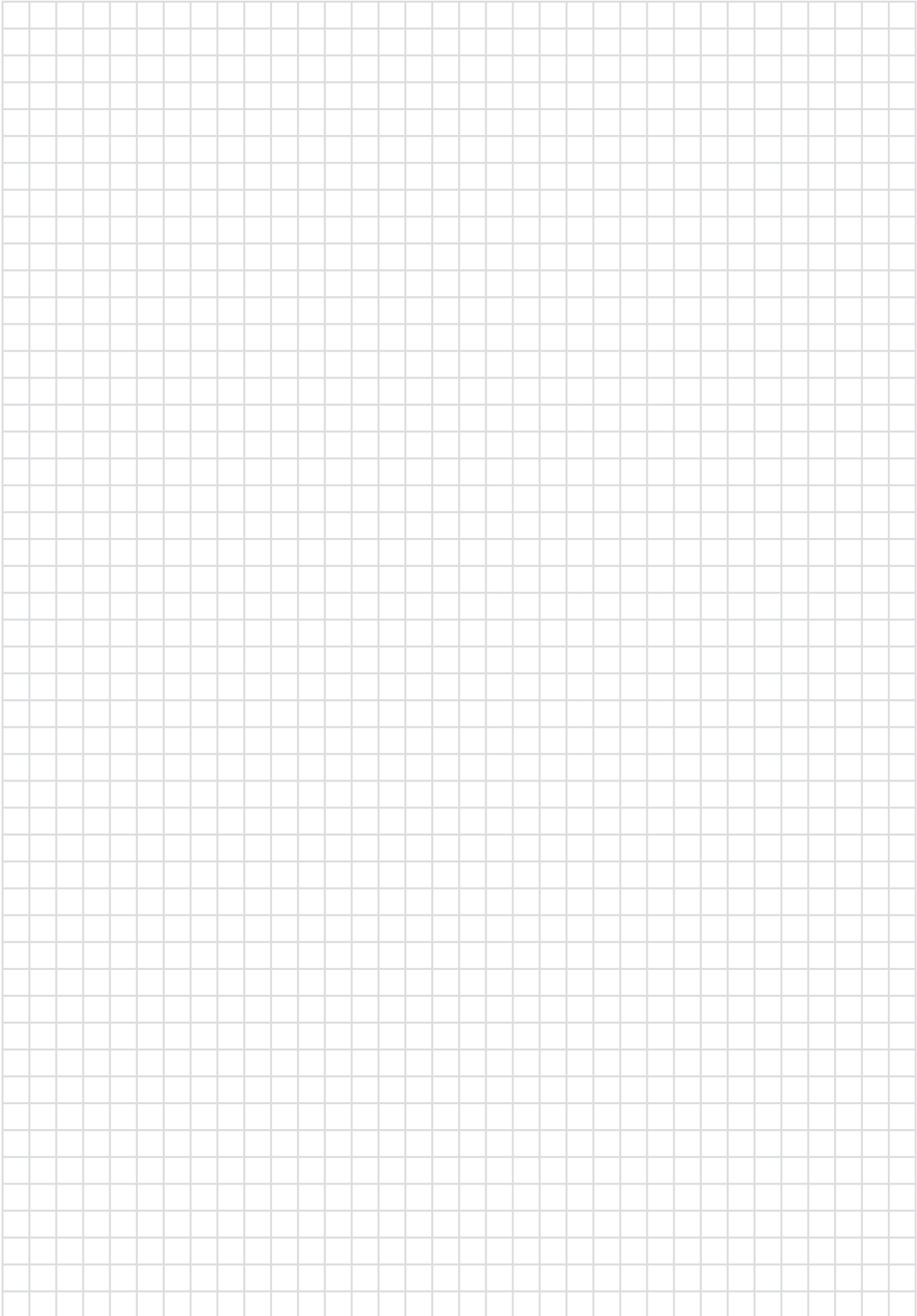


Transport pockets, need to be provided at regular intervals to allow the slug to reform.

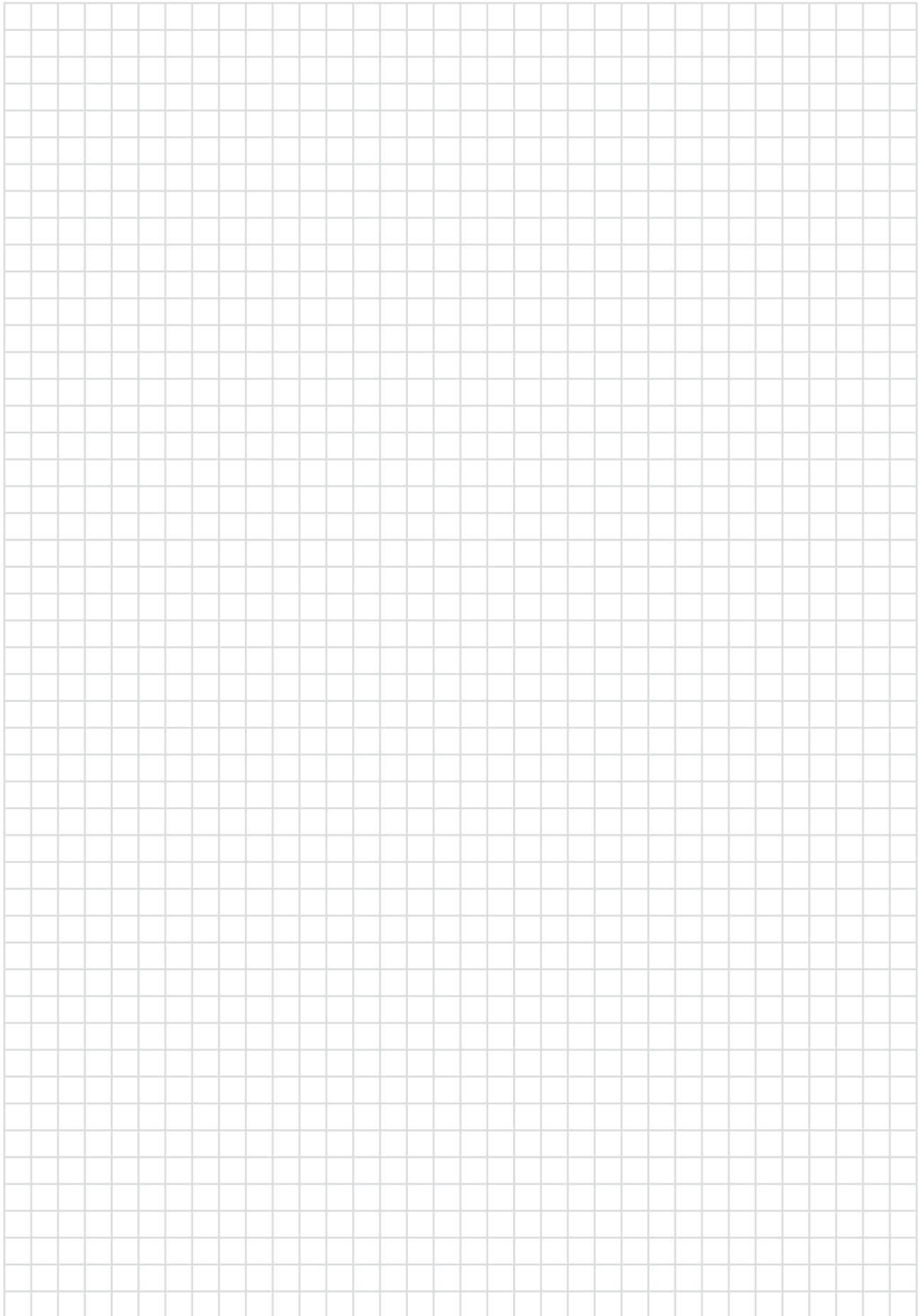
Order numbers of products fitted with Viton seal are available on request.

ACO Marine

Notes



Notes



ACO Marine s.r.o.

Nádražní 72
150 00 Prague 5
Czech republic
Tel.: +420 257 217 990
Fax: + 420 257 310 718

www.acomarine.com
e-mail: info@acomarine.com

ACO Marine Deutschland

Rosenweg 10
D-27793 Wildeshausen
Germany
Tel: +49 4431 738 874
Fax: +49 4431 738 875

E-mail.: kdziuk@acomarine.com

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