

## Balcony and terrace drainage



## ACO Balcony and terrace drains

Flooding on balconies and terraces is a regular occurrence when drains overflow during periods of heavy rainfall.

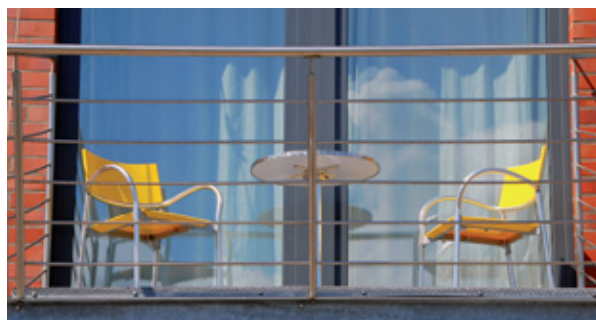
This is one of the reasons why there are laws stipulating that rainwater must be properly drained from balconies (DIN 1986-100 Paragraph 5.10). To cater to this need, ACO developed a comprehensive modular system for the point drainage of terraces and balconies.

This product line not only complies with the regulations, it also satisfies a very large number of individual requirements. After all, planning not only has to take into account the differences between terraces and balconies on a whole range of buildings, but also the individual requirements of owners and occupiers.

The ACO range is divided up into four main categories for balcony and terrace drains:

- Single and direct drains  
(joining up several balconies)
- Insulated and uninsulated installation
- With a supporting flange and with a compression sealing flange
- Outlet socket inclinations of 90° and 1.5°

All ACO balcony and terrace drains are made of stainless steel, material 1.4301. All of the drains are available in nominal widths of DN 50 or DN 70, as well as a few in DN 100. Thanks to the comprehensive spectrum of accessories – intermediate sections and top section systems, loose flanges and flange seals, sieve pipes, full sieves and annular sieves, grid supports and gratings, formwork bells etc., our balcony and terrace drains satisfy almost every specification.



**Standards**

Standards have to be observed when planning and constructing drainage systems for balconies, terraces and loggias. Some of the most important aspects are discussed in the following:

**Drains for balconies and loggias**

DIN 1986-100, Chapter 5.10 specifies that balconies and loggias must have a drain or channel hung in front of the balcony.

**Emergency drainage**

Balconies and loggias with closed balustrades must also have an additional emergency drain with an internal width of at least 40 mm in the balustrade (DIN 1986-100, Chapter 5.10).

**Connecting balcony drains to roof rainwater downpipes**

DIN 1986-100, Chapter 5.10 specifies that none of the underlying floors with balconies, loggia and terrace drains must be connected to rainwater downpipes draining the roof. This could lead to flooding and is also forbidden even if the balustrades have emergency drainage systems.



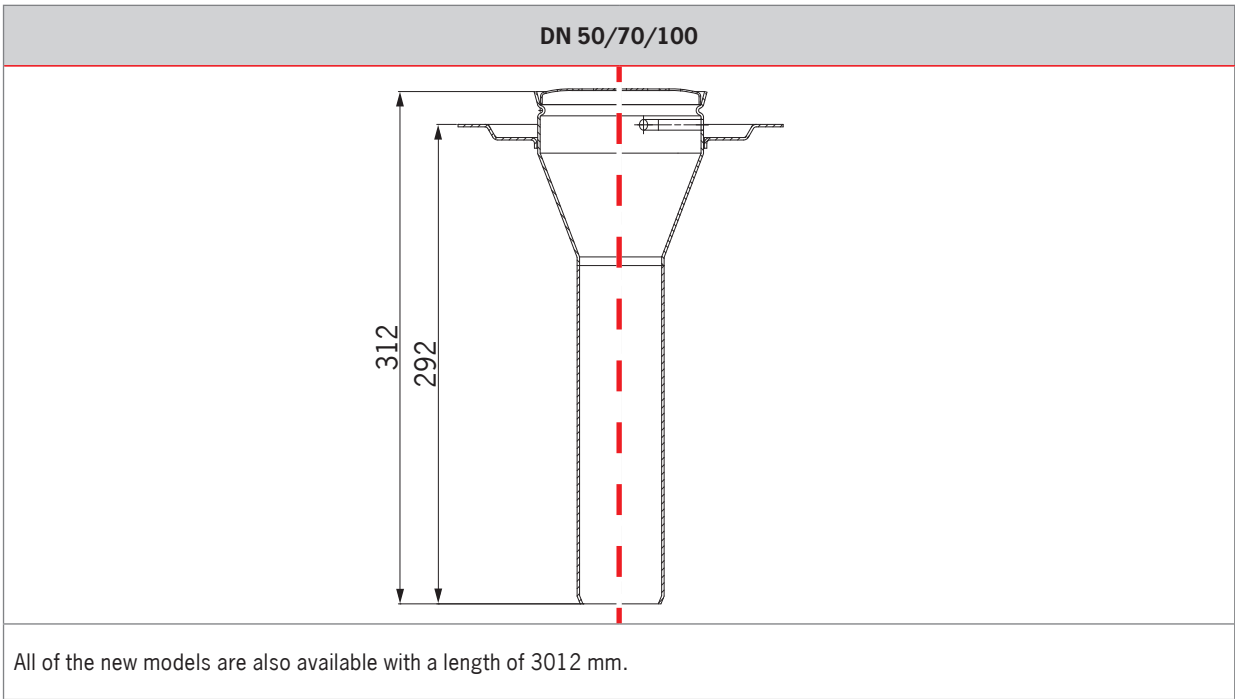


Installation recommendation balcony slab  
without a moisture barrier



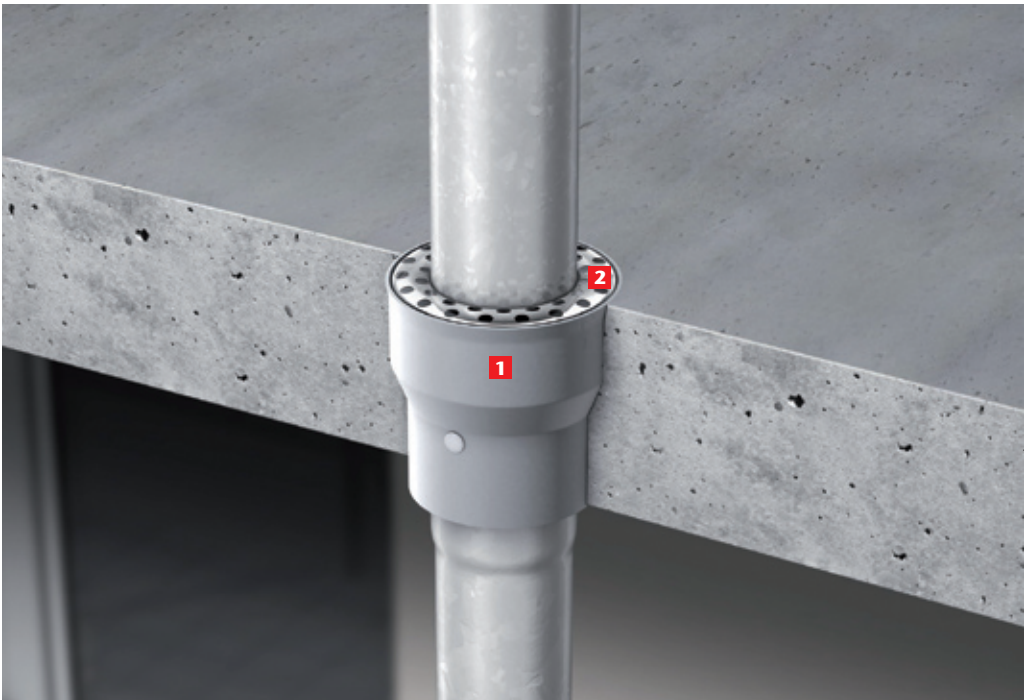
**1** Direct drain DN 70, stainless steel, with supporting flange installation length 300 mm  
Article No. 0174.42.80

**2** Stainless steel sieve for direct drain  
Article No. 0174.52.48



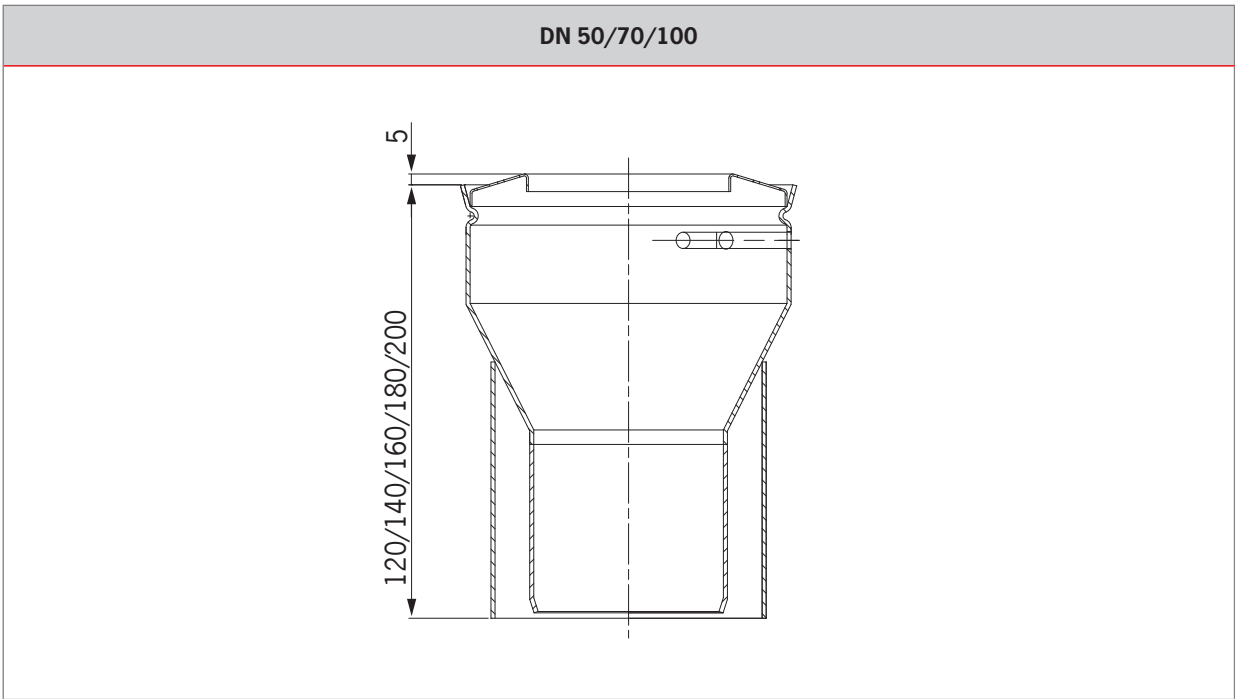
Extension heights in mm.

Installation recommendation balcony slab  
without a moisture barrier



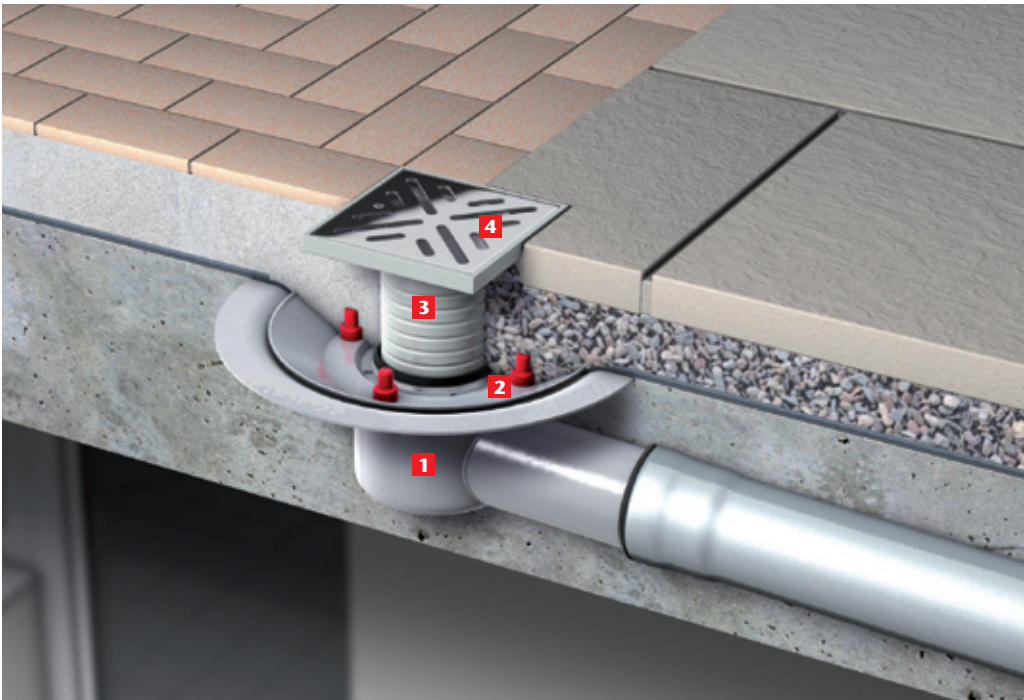
**1** Direct drain DN 70, stainless steel, for balcony slab thickness of 140 mm  
Article No. 0174.52.67

**2** Stainless steel annulus sieve for direct drainage of media pipes up to an external diameter of 54 mm  
Article No. 0174.52.56



Extension heights in mm.

Installation recommendation balcony slab  
with moisture barrier in the form of a sealing membrane

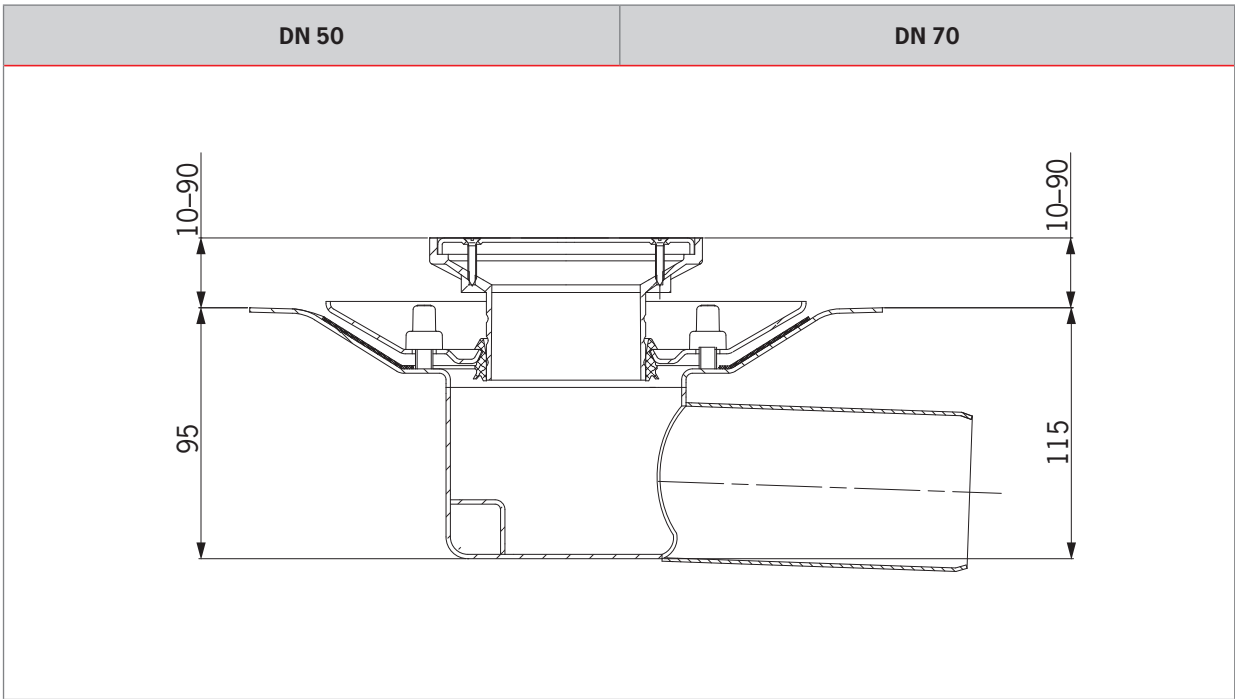


Floor covering according to building specifications

Sealing membrane

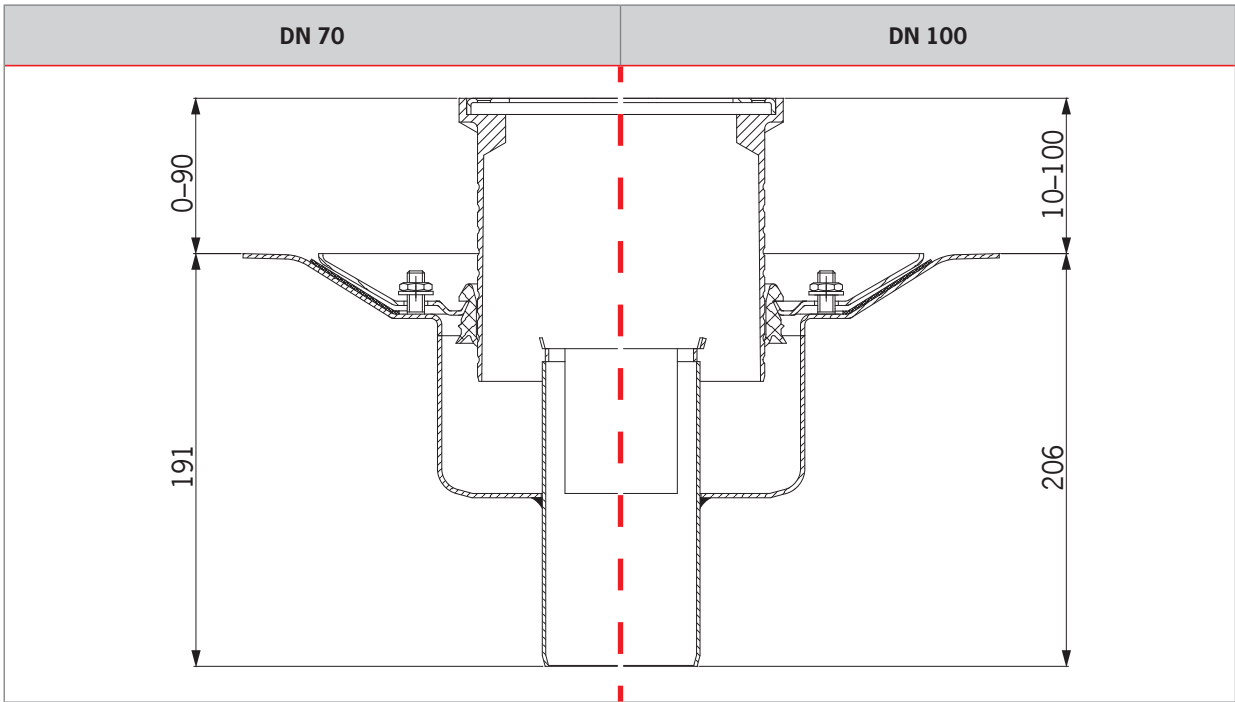
Reinforced concrete

- 1** Point drain DN 50, stainless steel, outlet socket inclination 1.5°  
Article No. 0174.44.05
- 2** Loose flange, stainless steel with seepage openings  
Article No. 0174.43.76
- 3** Grating holder □ 125 mm, plastic  
Article No. 0174.43.46
- 4** Stainless steel grating □ 117 mm  
Article No. 0174.52.58



Extension heights in mm

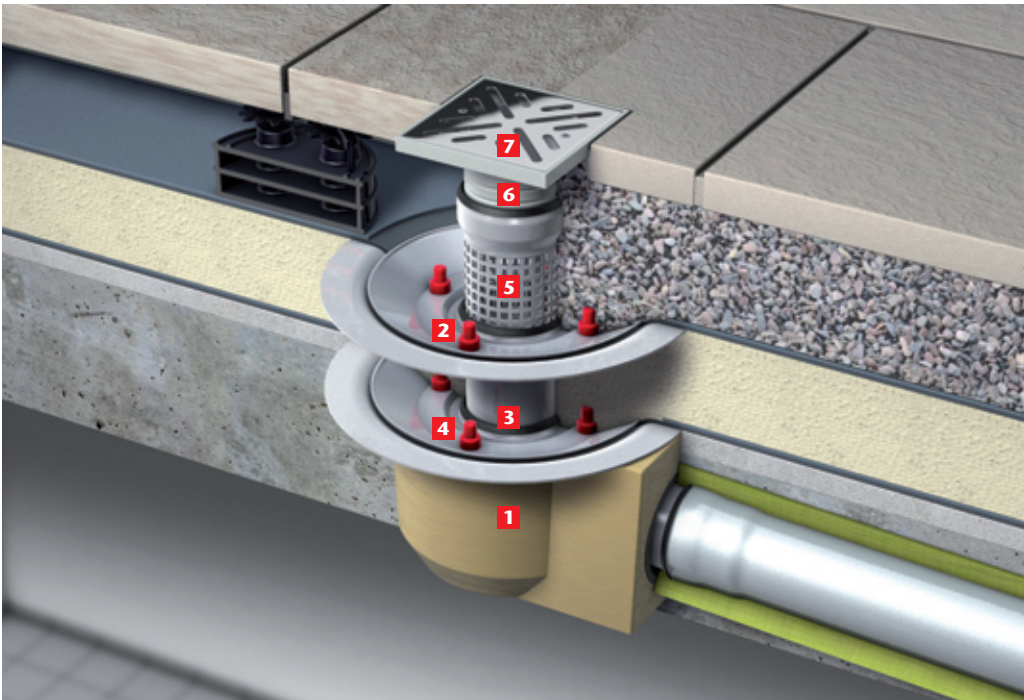
**Installation example balcony slab**  
**with moisture barrier in the form of a sealing membrane**



Extension heights in mm



**Installation recommendation balcony slab  
with moisture barrier in the form of two sealing membranes**

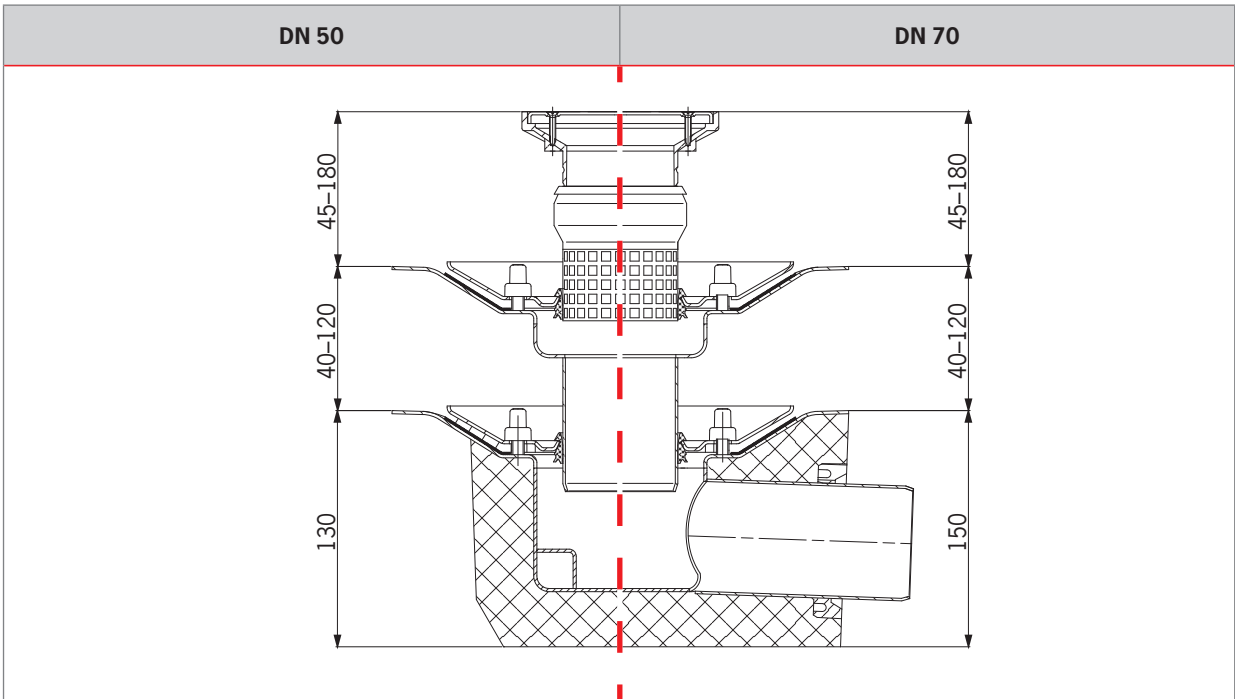


Floor covering according to building specifications

Sealing membrane (Damp proof membrane)  
Insulation

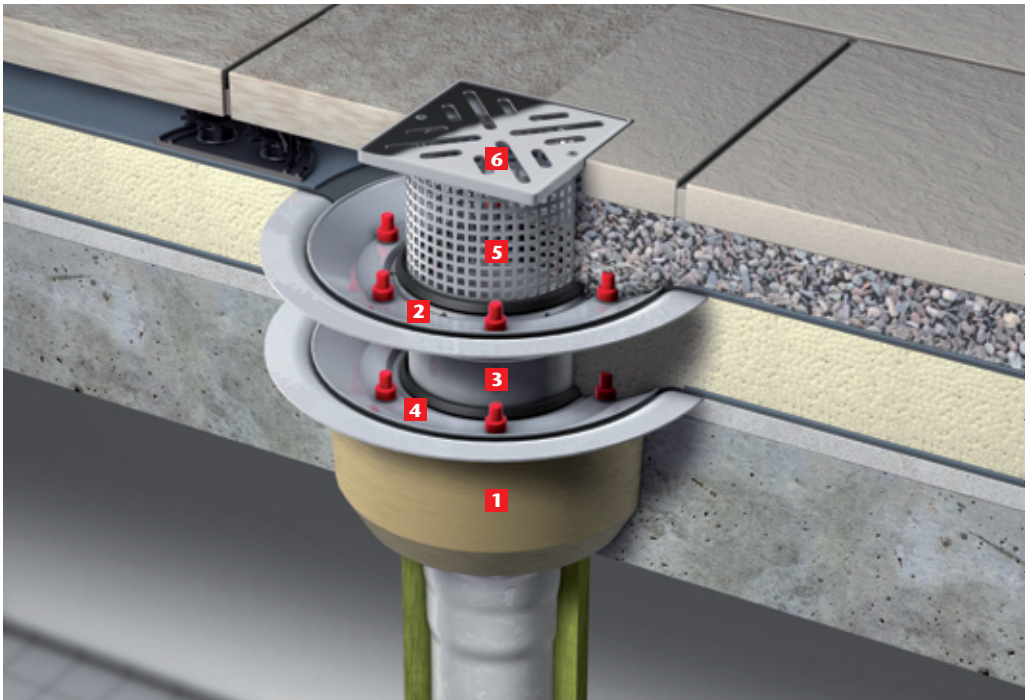
Sealing membrane  
Reinforced concrete

- |   |  |   |
|---|--|---|
| <b>1</b> Point drain DN 70, stainless steel, socket outlet inclination 1.5 °, insulated<br>Article No. 0174.44.08 | <b>3</b> Extension unit, stainless steel<br>Article No. 0174.43.92                     | <b>6</b> Grating holder □ 125 mm, plastic, Article No. 0174.43.46   |
| <b>2</b> Loose flange, stainless steel with seepage openings<br>Article No. 0174.43.76                            | <b>4</b> Loose flange, stainless steel with seepage openings<br>Article No. 0174.43.75 | <b>7</b> Stainless steel grating □ 117 mm<br>Article No. 0174.52.58 |
|   | <b>5</b> Sieve pipe, stainless steel<br>Article No. 0174.43.49                         |   |



Extension heights in mm

Installation recommendation balcony slab  
with moisture barrier formed by two sealing membranes



Floor covering according to building specifications

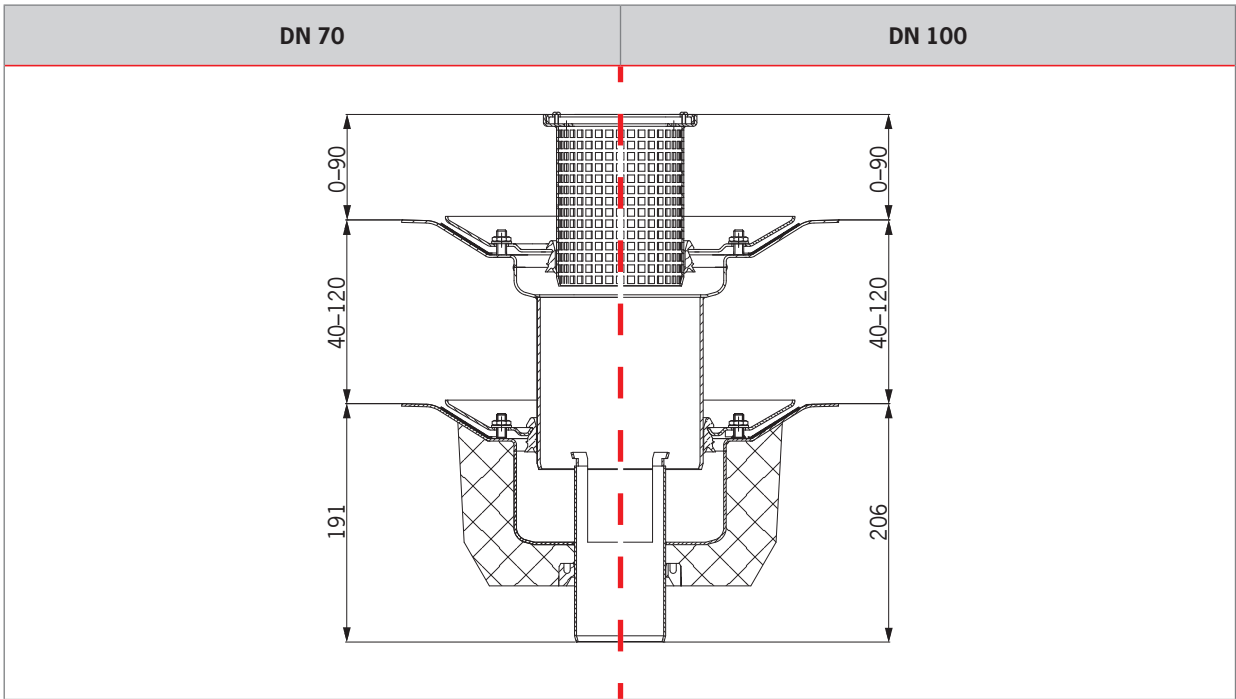
Sealing membrane

Insulation

Sealing membrane (Damp proof membrane)

Reinforced concrete

- 1** Direct drain DN 100, stainless steel  
Outlet socket inclination 90°, insulated, Article No. 0174.44.41
- 2** Loose flange, stainless steel, seepage openings  
Article No. 0174.44.39
- 3** Extension unit, stainless steel  
Article No. 0174.48.64
- 4** Loose flange, stainless steel, without seepage openings  
Article No. 0174.44.37
- 5** Grating holder □ 148 mm, stainless steel with sieve holes  
Article No. 0174.43.26
- 6** Stainless steel grating □ 142.5 mm  
Article No. 0174.52.59



Extension heights in mm

ACO point balcony drains made of stainless steel

DN 50–DN 70



- Drain body DN 50 – DN 70 pursuant to DIN EN 1253
- Stainless steel, material 1.4301, surface pickled
- With supporting flange, not suitable for moisture barrier
- Outflow capacities  
DN 50, 90°: 3,1 l/s  
DN 70, 90°: 7,5 l/s  
DN 50, 1,5°: 2,2 l/s  
DN 70, 1,5°: 5,5 l/s

Scale drawing	Nominal width	d1	h	Article No.
	DN 50	53	250	0174.43.55
	DN 70	73	250	0174.43.56
	DN 50	53	90	0174.43.57
	DN 70	73	110	0174.43.58

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## ACO single balcony drain made of stainless steel

## DN 50–DN 70



- Drain body DN 50 – DN 70 pursuant to DIN EN 1253
- Stainless steel, material 1.4301, surface pickled
- With fixed flange
- Loose flange for moisture barrier optionally available
- Optionally available with thermal insulation
- Outflow capacities  
 DN 50, 90°: 3,1 l/s  
 DN 70, 90°: 7,5 l/s  
 DN 50, 1,5°: 2,2 l/s  
 DN 70, 1,5°: 5,5 l/s

## Uninsulated

Scale drawing	Nominal width	d1	h	h2	l1	l2	Article No.
	DN 50	53	—	—	—	165	<b>0174.43.73</b>
	DN 70	73	—	—	—	180	<b>0174.43.74</b>
	DN 50	53	75	95	170	—	<b>0174.44.05</b>
	DN 70	73	85	115	185	—	<b>0174.44.06</b>

## Insulated

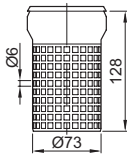

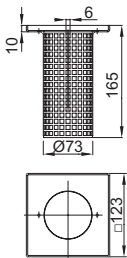

Scale drawing	Nominal width	d1	l1	l2	h	h3	m12	Article No.
	DN 50	53	—	165	—	—	30	<b>0174.43.78</b>
	DN 70	73	—	180	—	—	45	<b>0174.43.79</b>
	DN 50	53	170	—	75	130	30	<b>0174.44.07</b>
	DN 70	73	185	—	85	150	40	<b>0174.44.08</b>



## Additional components

## ACO single drains DN 50 – DN 70

	Scale drawing	Product description	Model	Article No.
		<b>Plastic grating Ø 85 mm, round</b> grating area 21.2 cm <sup>2</sup>		<b>0174.43.45</b>
		<b>Stainless steel grating □ 117 mm</b> grating area 30.6 cm <sup>2</sup>		<b>0174.52.58</b>
		<b>Grating holder □ 125 mm</b> plastic		<b>0174.43.46</b>
		<b>Extension unit</b> stainless steel, 1.4301, with fixed flange		<b>0174.43.92</b>
		<b>Loose flange</b> stainless steel, 1.4301, including sealing element DN 70	Without seepage openings  With seepage openings	<b>0174.43.75</b>  <b>0174.43.76</b>
		<b>Flange seal</b> EPDM, thickness 1.5 mm		<b>0174.43.77</b>

	Scale drawing	Product description	Model	Article No.
		<b>Sieve pipe</b> stainless steel, 1.4301 installation height: 128 mm, including seal		<b>0174.43.49</b>
		<b>Grating holder □ 125 mm</b> stainless steel, with additional polymer coating inside		<b>0174.43.47</b>
		<b>Grating holder □ 125 mm</b> stainless steel, 1.4301 with square sieve holes		<b>0174.43.48</b>
		<b>Formwork bell,</b> polyethylene pushable	DN 50  DN 70	<b>0174.43.50</b>  <b>0174.43.51</b>

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**ACO direct drain with supporting flange, stainless steel****DN 50 – DN 100**

- Drain body DN 50 – DN 100 pursuant to DIN EN 1253
- Stainless steel, material 1.4301, surface pickled
- For screed or poured asphalt, height: 20 mm – without moisture barrier
- For annulus sieve/sieve cap
- Outflow capacities:  
DN 50: 5,4 l/s  
DN 70: 7,5 l/s  
DN 100: 9,0 l/s

Scale drawing	Nominal width	d1	d2	d3	l1	l2	Article No.
	DN 50	53	98	198	300	310	<b>0174.42.79</b>
					3000	3010	<b>0174.42.82</b>
	DN 70	73	117	280	300	312	<b>0174.42.80</b>
					3000	3012	<b>0174.42.83</b>
	DN 100	102	140	280	300	312	<b>0174.42.81</b>
					3000	3012	<b>0174.42.84</b>

**ACO direct drain with supporting collar, stainless steel****DN 50 – DN 100**

- Drain body DN 50 – DN 100 pursuant to DIN EN 1253
- Stainless steel, material 1.4301, surface pickled
- For sealing with liquid polymer, thickness: 2 mm
- For annulus sieve/sieve cap
- Outflow capacities:  
DN 50: 5,4 l/s  
DN 70: 7,5 l/s  
DN 100: 9,0 l/s

Scale drawing	Nominal width	d1	d2	d3	l1	l2	Article No.
	DN 50	53	98	190	300	312	<b>0174.42.73</b>
	DN 70	73	117	190	300	312	<b>0174.42.74</b>
	DN 100	102	140	245	300	312	<b>0174.42.75</b>

## ACO Speed drain body with supporting flange, stainless steel

### DN 50 – DN 70



- Drain body DN 50 – DN 70 pursuant to DIN EN 1253
- Stainless steel, material 1.4301, surface pickled
- For sealing with liquid polymer

Scale drawing	Nominal width	d1	l1	Weight	Article No.
	DN 50	53	320	0,7 kg	<b>0174.42.77</b>
	DN 70	73	310	1,2 kg	<b>0174.42.78</b>

## ACO direct drain with bell, stainless steel

### DN 50 – DN 100




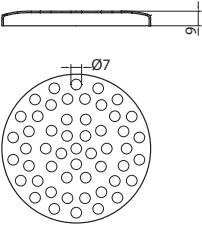

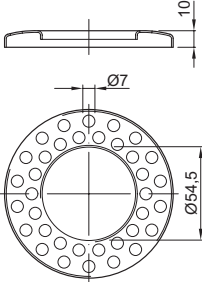
- Drain body DN 50 – DN 100 pursuant to DIN EN 1253
- Stainless steel, material 1.4301, surface pickled
- For poured concrete or pre-fabricated concrete components, balcony slab thicknesses: 120, 140, 160, 180 and 200 mm
- For annulus sieve/sieve cap

Scale drawing	Nominal width	d1	d2	d3	d4	l2	Article No.
	DN 50	53	98	102	73	110	<b>0174.52.63</b>
						130	<b>0174.52.66</b>
						150	<b>0174.52.69</b>
						170	<b>0174.52.75</b>
						190	<b>0174.52.78</b>
	DN 70	73	117	121	102	108	<b>0174.52.64</b>
						128	<b>0174.52.67</b>
						148	<b>0174.52.70</b>
						168	<b>0174.52.76</b>
						188	<b>0174.52.79</b>
	DN 100	102	140	145	133	112	<b>0174.52.65</b>
						132	<b>0174.52.68</b>
						152	<b>0174.52.71</b>
						172	<b>0174.52.77</b>
						190	<b>0174.52.80</b>



Additional components

ACO direct drain DN 50 – DN 100

	Scale drawing	Product description	Model	Article No.
		<b>Sieve</b> stainless steel 1.4301	DN 50	<b>0174.52.47</b>
			DN 70	<b>0174.52.48</b>
			DN 100	<b>0174.52.49</b>
		<b>Annulus sieve</b> stainless steel, 1.4301 for media pipes with diameters of 54 mm	DN 50	<b>0174.52.51</b>
			DN 70	<b>0174.52.56</b>
			DN 100	<b>0174.52.57</b>

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## ACO direct balcony drains made of stainless steel

## DN 70 – DN 100



- Drain body DN 70 – DN 100 pursuant to DIN EN 1253
- Stainless steel, material 1.4301
- Surface pickled
- With fixed flange
- Optional loose flange for installing a sealing membrane
- Optional thermal insulation
- Outflow capacities  
 DN 70, 90°: 5,1 l/s  
 DN 100, 90°: 7,5 l/s  
 DN 70, 1,5°: 5,5 l/s  
 DN 100, 1,5°: 9,0 l/s

## Uninsulated

Scale drawing	Nominal width	d1	h	h2	l1	l2	Article No.
	DN 70	73	—	—	—	191	<b>0174.44.35</b>
	DN 100	102	—	—	—	206	<b>0174.44.36</b>
	DN 70	73	90	121	220	—	<b>0174.44.58</b>
	DN 100	102	104	150	230	—	<b>0174.44.59</b>


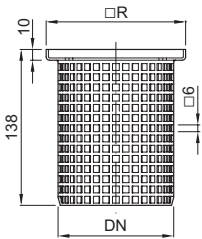

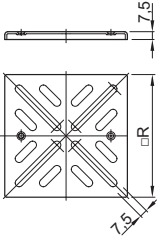
## Insulated

Scale drawing	Nominal width	d1	l1	l2	h	h3	m12	Article No.
	DN 70	73	—	191	—	—	45	<b>0174.44.40</b>
	DN 100	102	—	206	—	—	60	<b>0174.44.41</b>
	DN 70	73	160	—	90	121	220	<b>0174.44.60</b>
	DN 100	102	185	—	104	150	230	<b>0174.44.61</b>

## Additional components

## ACO direct drains DN 70 – DN 100

	Scale drawing	Product description	Model	Article No.
		<b>Extension unit</b> stainless steel, 1.4301, with fixed flange		<b>0174.48.64</b>
		<b>Loose flange</b> stainless steel, 1.4301, without seepage openings, including sealing element DN 100		<b>0174.44.37</b>
		<b>Loose flange</b> stainless steel, 1.4301 with seepage openings, including sealing element	DN 70 DN 100	<b>0174.44.38</b> <b>0174.44.39</b>
		<b>Flange seal</b> EPDM thickness: 1.5 mm		<b>0174.48.59</b>
		<b>Grating holder</b> plastic DN 70: 123 x 123 mm DN 100: 148 x 148 mm	DN 70 DN 100	<b>0174.43.20</b> <b>0174.43.21</b>
		<b>Grating holder</b> stainless steel with additional polymer coating inside DN 70: □ 123 mm DN 100: □ 148 mm	DN 70 DN 100	<b>0174.43.22</b> <b>0174.43.23</b>

	Scale drawing	Product description	Model	Article No.
		<b>Grating holder</b> stainless steel with sieve holes DN 70: □ 123 mm DN 100: □ 148 mm	DN 70	<b>0174.43.24</b>
			DN 100	<b>0174.43.26</b>
		<b>Stainless steel grating for grating holders</b> grating area 30.6 cm². DN 70: □ 117 mm DN 100: □ 142 mm	DN 70	<b>0174.52.58</b>
			DN 100	<b>0174.52.59</b>

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