iCombi® Pro/iCombi® Classic
iVario® Pro/iVario®

Designers manual

Dear kitchen planners,

Commercial kitchens face new challenges every day. They need to plan their business in a more sustainable manner ensuring they reduce energy and water whilst working with less space availability. The kitchens need to be flexible to meet the ever increasing challenges including the reduced availability of skilled staff whilst maintaining high standards of production and hygiene. All of this can be achieved with the new generation of units on iCombi Pro, iCombi Classic and iVario. Combi-steamer and multi-functional cooking units based on over 45 years of experience and consistent focus on customer benefit. High performance reserves, precise air circulation and active dehumidification enable a further increase in productivity of up to 50% with a reduced cooking time. High connected loads and reduced energy consumption are not a contradiction, but rather the consequence.
iCombi cooking systems control and regulate in an intelligent manner, they do not need to be monitored - not even when cooking overnight. Your displays can be individually customised according to customer requirements for simple and safe handling and standardised quality. Quick cooking results as well as flexible intervention options when required ensure excellent cooking results every time.
After work, or in just 12 minutes now and again, an automatic phosphate-free cleaning and care system ensures the system's hygienic operation.
Integrated Ethernet and/or WiFi are the foundation for ConnectedCooking or the networking and control of the entire kitchen. With the modules for menu and production control, hygiene management and unit management and maintenance, in which the service partners can also be integrated, you can ensure all current and future requirements on the networked kitchen.
The objective of this designer manual is to simplify your everyday work. We have compiled all the important technical information in clearly arranged sections. On the RATIONAL portal at www.portal.rational.com you will also find, for example, all data sheets, 2D CAD files with all views, as well as our intelligent BIM families with the option to conveniently configure your unit and of course this designer manual together with connection diagrams as an online version with navigation aids.
Should you have any questions, you can also contact us at any time in person.
We wish you every success with your projects and look forward to a successful collaboration.

Planner hotline:

Telephone	+44 1582 480388
Website	rational-onine.com
E-Mail	rational@rational-uk.co.uk

Specific national and regional standards and regulations which concern the installation and operation of commercial cooking appliances must be complied with. We reserve the right to make technical changes in the interest of progress.

Table of contents

iCombi Pro/iCombi Classic

1. Technical data iCombi Pro/iCombi Classic 8

1.1 Unit overview technical data – Electric units 8

1.2 Unit overview technical data – gas units 10

1.3 Connected load, nominal thermal load, noise levels 12

1.4 Consumption 13

1.5 Sizes, weights and maximum load sizes 14

2. Installation iCombi Pro/ iCombi Classic 15

2.1 On-site connections 15

2.2 Unit transportation 17

2.3 Unit setup 18

2.4 Electrical connection 24

2.5 Water connection 29

2.6 Wastewater connection 32

2.7 Gas connection 35

2.8 Exhaust gas outlet 37

3. Ventilation technology iCombi Pro/ iCombi Classic 40

3.1 Thermal load 40

3.2 Extraction requirement 41

3.3 RATIONAL extractor hoods 42

4. Unit permissions iCombi Pro/ iCombi Classic 45

5. Combi-Duo/Variants iCombi Pro/iCombi Classic 46

5.1 Combi-Duo XS 6-2/3 46

5.2 Combi-Duo models 6-1/1, 10-1/1, 6-2/1 and 10-2/1 47

5.3 Combi-Duo variants 49

Table of contents

6. Options/accessories iCombi Pro/iCombi Classic 53

6.1 Options model XS 6-2/3 53

6.2 Options model 6-1/1 and model 10-1/1 53

6.3 Options model 6-2/1 and model 10-2/1 54

6.4 Options model 20-1/1 and model 20-2/1 54

6.5 Option MarineLine 55

6.6 Option SecurityLine 57

6.7 Option HeavyDutyLine 59

6.8 Option integrated fat drain 61

6.9 Accessories – MobilityLine 63

6.10 Accessories – USB core temperature probes 64

6.11 Accessories – VarioSmoker 66

7. CombiMaster Plus XS 6-2/3 68

8. Service examples iCombi Pro/ iCombi Classic 72

9. Connection diagrams iCombi Pro/ iCombi Classic 78

9.1 Electric units 78

9.2 Gas units 92

9.3 MobilityLine 104

9.4 Unit with UltraVent or extractor hood 106

9.5 Unit with UltraVent Plus 113

10. Connection diagrams – Combi-Duo iCombi Pro/iCombi Classic 118

10.1 Model XS 6-2/3 on XS 6-2/3 118

10.2 Model 6-1/1 Electric/Gas on 6-1/1 Electric 120

10.3 Model 6-1/1 Electric/Gas on 10-1/1 Electric 122

10.4. Model 6-2/1 Electric/Gas on 6-2/1 Electric 124

10.5 Model 6-2/1 Electric/Gas on 10-2/1 Electric 126

10.6 Model 6-1/1 Gas on 6-1/1 Gas 128

10.7 Model 6-2/1 Gas on 6-2/1 Gas 130

10.8 Model 6-1/1 Electric/Gas on 6-2/1 Electric 132

10.9 Model 6-1/1 Gas on 6-2/1 Gas 134

Table of contents

11 Drawings – extractor hoods iCombi Pro/iCombi Classic 136

11.1 Model XS 6-2/3 136

11.2 Model 6-1/1 and 10-1/1 137

11.3 Model 6-2/1 and 10-2/1 138

11.4 Model 20-1/1 and 20-2/1 140

12. Drawings – stands iCombi Pro/iCombi Classic 141

12.1 Model XS 6-2/3 141

12.2 Model 6-1/1 and 10-1/1 143

12.3 Model 6-2/1 and 10-2/1 148

13. Drawings – trolleys iCombi Pro/iCombi Classic 152

14. Drawings – mobile oven racks iCombi Pro/iCombi Classic 153

15. Drawing – installation kit model XS 6-2/3 iCombi Pro/iCombi Classic 155

iVario Pro/iVario

16. Technical data – iVario Pro/iVario 158

17. Installation iVario Pro/iVario 160

17.1 On-site connections 160

17.2 Unit transportation 162

17.3 Unit installation 163

17.4 Electrical connection 167

17.5 Water connection 170

17.6 Wastewater connection 171

17.7 Instructions drain channel model 2-XS and 2-S 172

17.8 Instructions drain channel model L and model XL 173

18. Ventilation technology iVario Pro/iVario 174

18.1 Thermal load 174

18.2 Extraction requirement 175

Table of contents

19. Fire extinguishing system iVario Pro/iVario 176

19.1 Fire extinguishing system 176

20. Unit options iVario Pro/iVario 177

21. Service examples iVario Pro/iVario 179

22. Connection diagrams iVario Pro/iVario 182

22.1 Model 2-XS (2 × 17 litres) 182

22.2 Model 2-S (2 × 25 litres) 184

22.3 Model L (100 litres) 186

22.4 Model XL (150 litres) 188

22.4 Model XL (150 litres) 189

22.5 Model 2-XS and model 2-S on stand 190

22.6 Model L and model XL on stand with feet 191

22.7 Model 2-XS and model 2-S on a cooker block 192

22.8 Plinth installation model 2-XS and model 2-S 193

22.9 Plinth installation model L and model XL 194

22.10 Wall attachment model L and model XL 195

23. ConnectedCooking 196

24. Conversion tables 198

1.1 Unit overview technical data – Electric units

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size	6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Unit dimensions							
Width (mm)	655	850	1072	850	1072	877	1082
Depth (mm)	555	775	975	775	975	847	1052
Height (mm)	567	754	754	1014	1014	1807	1807
Weight iCombi Pro							
Gross weight (kg) [1]	76	117	163	147	206	300	382
Net weight (kg) [2]	67	99	137	127	179	263	336
Weight iCombi Classic							
Gross weight (kg) [1]	–	111	157	141	187	268	350
Net weight (kg) [2]	–	93	131	121	160	231	304
Electrical values 3 NAC 400 V							
Connected load (kW)	5,7	10,8	22,4	18,9	37,4	37,2	67,9
Power convection mode (kW)	5,4	10,25	21,6	18	36	36	66
Steam generator (kW)	5,4	9	18	18	36	36	54
Fuse (A)	3 × 10	3 × 16	3 × 35	3 × 32	3 × 63	3 × 63	3 × 100
Connection cable (mm^2) [3]	5 × 1,5	5 × 2,5	5 × 4	5 × 4	5 × 10	5 × 10	5 × 35
Water connection							
Connection (inches)	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pressure hose DN 15 (inches)	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Flow pressure (bar)	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0
Waste water connection							
Connection (DN)	40 [4]	50	50	50	50	50	50
Network connection (iCombi Classic: optional)							
Wired	Ethernet RJ45						
Wireless	WiFi 802.11 b/g/n (2.4 GHz)						

[1] shipping weight including packaging and pallet
[2] weight installed and ready for operation (including shelf rack/mobile oven racks)
[3] cross sections for maximum cable length 2.5 m
[4] Adapter DN 40/50 included

1.1 Unit overview technical data – Electric units

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Thermal load iCombi Pro								
Latent	(kJ/h)	1020	2050	3450	3450	6350	6850	10900
	(W)	283	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	1350	2450	4450	4450	7750	8850	14000
	(W)	375	680	1235	1235	2152	2457	3887
Thermal load iCombi Classic								
Latent	(kJ/h)	–	2050	3450	3450	6350	6850	10900
	(W)	–	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	–	2523	4583	4583	7982	9115	14420
	(W)	–	700	1272	1272	2216	2531	4004

1.2 Unit overview technical data – gas units

Model		6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Unit dimensions							
Width	(mm)	850	1072	850	1072	877	1082
Depth	(mm)	775	975	775	975	847	1052
Height	(mm)	754	754	1014	1014	1807	1807
Weight iCombi Pro							
Gross weight	(kg) [1]	135	170	175	219	321	425
Net weight	(kg) [2]	117	144	155	192	284	379
Weight iCombi Classic							
Gross weight	(kg) [1]	119	166	159	211	313	417
Net weight	(kg) [2]	101	128	139	184	276	371
Electrical values 1 NAC 230 V							
Connected load	(kW)	0,6	0,9	0,9	1,5	1,3	2,2
Fuse	(A)	1 × 16	1 × 16	1 × 16	1 × 16	1 × 16	1 × 16
Connection cable	(mm^2) [3]	3 × 2.5	3 × 2.5	3 × 2.5	3 × 2.5	3 × 2.5	3 × 2.5
Output natural gas E, H, EK, L and liquid gas propane (3P)							
Nominal thermal load	(kW)	13	28	22	40	42	80
Convection	(kW)	13	28	22	40	42	80
Steam generator	(kW)	12	21	20	40	38	51
Output liquid gas butane/propane (3 B/P)							
Nominal thermal load	(kW)	13,5	29,5	23	42	44	84
Convection	(kW)	13,5	29,5	23	42	44	84
Steam generator	(kW)	12,5	22	21	42	40	53,5
Gas connection							
Connection (internal thread)	(inches)	3/4	3/4	3/4	3/4	3/4	3/4
Exhaust system							
Classification		A3, B13, B13BS, B23	A3, B13, B13BS, B23	A3, B13, B13BS, B23	A3, B13, B13BS, B23	A3, B13, B13BS, B23	A3, B13, B13BS, B23
Water connection							
Connection	(inches)	3/4	3/4	3/4	3/4	3/4	3/4
Pressure hose DN 15	(inches)	1/2	1/2	1/2	1/2	1/2	1/2
Flow pressure	(bar)	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0	1,0 - 6,0

[1] shipping weight including packaging and pallet
[2] weight installed and ready for operation (including shelf rack/mobile oven racks)
[3] cross sections for maximum cable length 2.5 m

1.2 Unit overview technical data – gas units

Model		6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Waste water connection							
Connection	(DN)	50	50	50	50	50	50
Network connection (iCombi Classic: optional)							
Wired		Ethernet RJ45					
Wireless		WiFi 802.11 b/g/n (2.4 GHz)					
Thermal load iCombi Pro							
Latent	(kJ/h)	2050	3450	3450	6350	6850	10900
	(W)	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	2450	4450	4450	7750	8850	14000
	(W)	680	1235	1235	2152	2457	3887
Thermal load iCombi Classic							
Latent	(kJ/h)	2050	3450	3450	6350	6850	10900
	(W)	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	2523	4583	4583	7982	9115	14420
	(W)	700	1272	1272	2216	2531	4004

1.3 Connected load, nominal thermal load, noise levels

Connected load

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Electrical units 3 NAC 400 V								
Total	(kW)	5,7	10,8	22,4	18,9	37,4	37,2	67,9
Convection	(kW)	5,4	10,25	21,6	18	36	36	66
Steam	(kW)	5,4	9	18	18	36	36	54

Nominal thermal load

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Gas units **Natural gas E, H, EK, L and liquid gas propane (3P)**								
Total	(kW)	–	13	28	22	40	42	80
Convection	(kW)	–	13	28	22	40	42	80
Steam	(kW)	–	12	21	20	40	38	51
Liquid gas 3 butane/propane (3 B/P)								
Total	(kW)	–	13,5	29,5	23	42	44	84
Convection	(kW)	–	13,5	29,5	23	42	44	84
Steam	(kW)	–	12,5	22	21	42	40	53,5

For electrical connected load of gas units see chapter 1.2

Noise level

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Electric units								
Noise level	(dBA)	52	55	56	55	58	60	60
Gas units								
Noise level	(dBA)	–	60	61	60	63	65	65

1.4 Consumption

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Average water consumption including steam generator (without consumption by cleaning programmes)							
[l/h]	3.5	7.0	12.5	13.5	22.5	24.5	35.0
Average energy consumption electric units							
iCombi Pro							
(kWh)	2.4	4.1	6.0	5.8	8.8	8.8	15.6
iCombi Classic							
(kWh)	–	4.6	6.6	6.4	9.8	9.8	17.3
Average energy consumption gas units							
iCombi Pro							
(kWh)	–	5.7	8.6	9.5	13.2	13.2	19.7
iCombi Classic							
(kWh)	–	6.3	9.5	10.5	14.7	14.7	21.9
Average energy consumption gas units - liquid gas							
iCombi Pro							
(kg/h)	–	0.45	0.75	0.72	1.05	1.05	1.6
iCombi Classic							
(kg/h)	–	0.5	0.83	0.8	1.17	1.17	1.75
Average energy consumption gas units - natural gas							
iCombi Pro							
(m^3/h)	–	0.55	0.9	0.86	1.3	1.3	1.9
iCombi Classic							
(m^3/h)	–	0.6	1.0	0.96	1.41	1.41	2.11

[1] Experience in typical kitchen operations in hotels and restaurant kitchens.

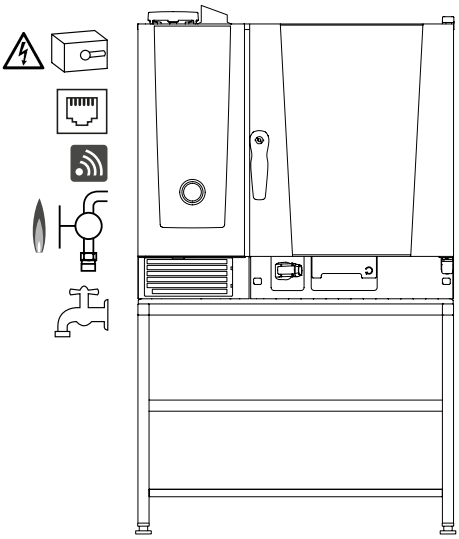
1.5 Sizes, weights and maximum load sizes

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit dimensions							
Width (mm)	655	850	1072	850	1072	877	1082
Depth (mm)	555	775	975	775	975	847	1052
Depth with door handle and air intake cover (mm)	621	842	1042	842	1042	913	1117
Height (mm)	567	754	754	1014	1014	1807	1807
Height with ventilation pipe and intake manifold (mm)	594	804	804	1064	1064	1872	1872
Weight iCombi Pro – Electric							
Gross weight (kg) [1]	76	117	163	147	206	300	382
Net weight (kg) [2]	67	99	137	127	179	263	336
Maximum load mass (kg)	20	30	60	45	90	90	180
Weight iCombi Classic – Electric							
Gross weight (kg) [1]	–	111	157	141	187	268	350
Net weight (kg) [2]	–	93	131	121	160	231	304
Maximum load mass (kg)	–	30	60	45	90	90	180
Weight iCombi Pro – Gas							
Gross weight (kg) [1]	–	135	170	175	219	321	425
Net weight (kg) [2]	–	117	144	155	192	284	379
Maximum load mass(kg)	–	30	60	45	90	90	180
Weight iCombi Classic – Gas							
Gross weight (kg) [1]	–	119	166	159	211	313	417
Net weight (kg) [2]	–	101	128	139	184	276	371
Maximum load mass (kg)	–	30	60	45	90	90	180

[1] shipping weight including packaging and pallet

[2] weight installed and ready for operation (including shelf rack/mobile oven racks)

2.1 On-site connections models XS 6-2/3, 6-1/1, 6-2/1, 10-1/1 and 10-2/1



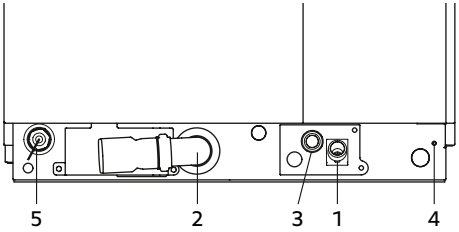
Unit connection kit including water hose (2 m) and DN50 waste water pipes with connecting parts.

Unit connection kit	No. 60.70.464

Notes:

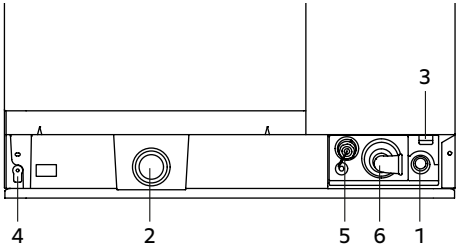
› RATIONAL AG has no requirements regarding the minimum height of gas, water or electrical connections. The country-specific requirements and the planning situation are fundamental here.

› For models 6-1/1, 6-2/1, 10-1/1 and 10-2/1 an odour trap is already integrated in the unit. Therefore, no additional odour trap may be installed without an upstream ventilation device (see section 2.6).



On-site connections model XS 6-2/3

1 Water inlet
2 Water outlet
3 Electrical connection
4 Equipotential bonding
5 Ethernet interface



On-site connections models 6-1/1, 6-2/1, 10-1/1 and 10-2/1

1 Water inlet
2 Water outlet
3 Electrical connection
4 Equipotential bonding
5 Ethernet interface (optional for iCombi Classic)
6 Only gas units: Gas connection

2.1 On-site connections models 20-1/1 and 20-2/1

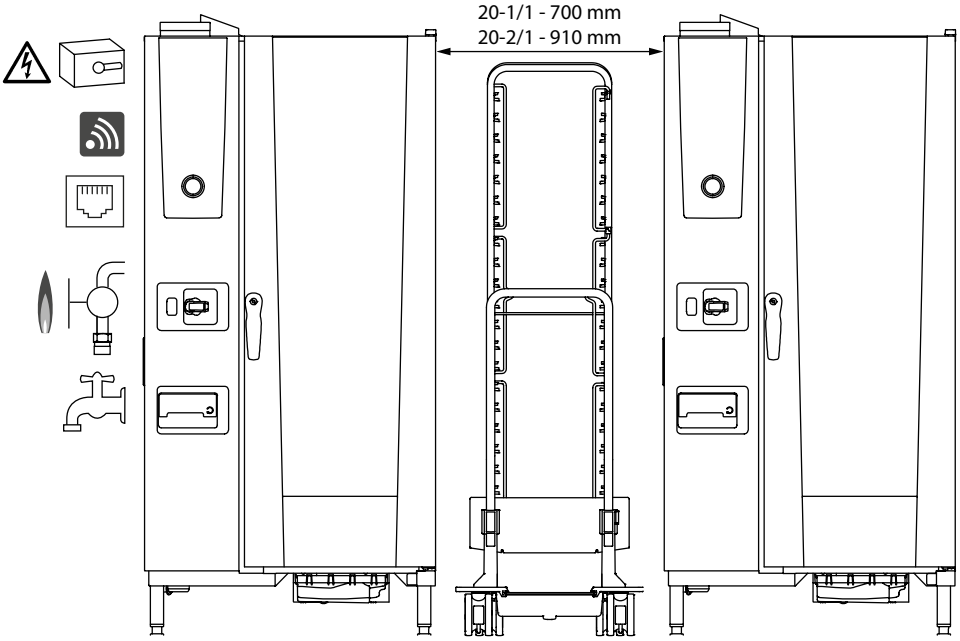
Unit connection kit including water hose (2 m) and DN50 waste water pipes with connecting parts.

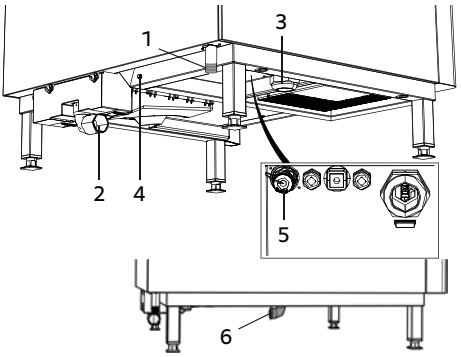
Unit connection kit	No. 60.70.464

Notes:

› RATIONAL AG has no requirements regarding the minimum height of gas, water or electrical connections. The country-specific requirements and the planning situation are fundamental here.

› For models 20-1/1 and 20-2/1 an odour trap is already integrated in the unit. Therefore, no additional odour trap may be installed without an upstream ventilation device (see section 2.6).





On-site connections models 20-1/1 and 20-2/1

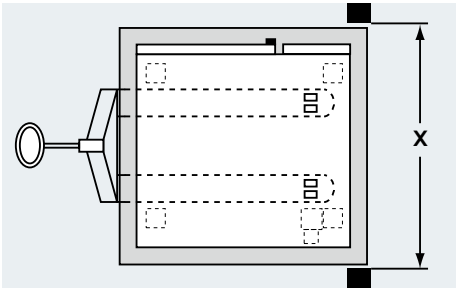
1 Water inlet
2 Water outlet
3 Electrical connection
4 Equipotential bonding
5 Ethernet interface (optional for iCombi Classic)
6 Only gas units: Gas connection

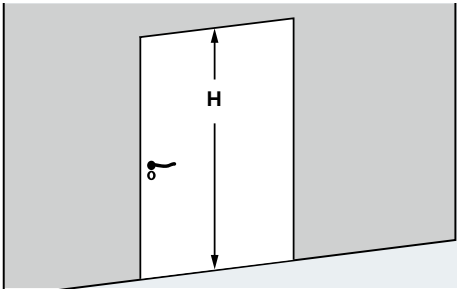
2.2 Unit transportation

› To prevent damage, the units should only be transported on the transport pallet, if possible, and in the original packaging with the aid of a pallet truck.
› In principle, transport without a transport pallet and without the original packaging using a pallet truck is also possible. Protect the unit from damage from below, for example with wooden beams or the enclosed transport beams (only models 20-1/1 and 20-2/1). Special care must be taken to ensure that the air filter box and the USB connection are not damaged.
› Tabletop units models 6-1/1, 10-1/1, 6-2/1 and 10-2/1 can be transported without pallet trucks using the carrying straps (optional).

Carrying strap set	No.: 91.01.135

› Depending on the transport variant, please note the respective minimum door width **X**, as well as the minimum door height for models 20-1/1 and 20-2/1 **H**.
› The values of the minimum door width **X** correspond to the unit depth with door handle and air intake cover. For the values of the minimum door height **H**, the steam nozzle and the exhaust pipe are included for gas units.

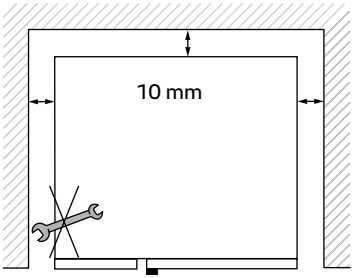




Minimum door width X		**XS 6-2/3**	**6-1/1**	**6-2/1**	**10-1/1**	**10-2/1**	**20-1/1**	**20-2/1**
With transport on pallet with packaging	(mm)	910	935	1155	955	1155	1010	1190
With transport on pallet without packaging	(mm)	880	935	1150	935	1150	970	1175
With transport without pallet and without packaging	(mm)	575	800	1000	800	1000	865	1155

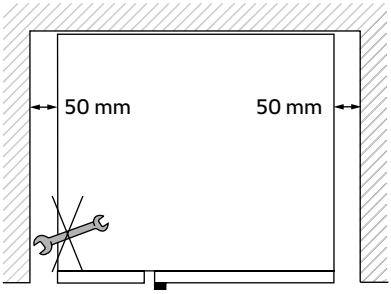
Minimum door height H		**20-1/1**	**20-2/1**
With transport on pallet with packaging	(mm)	2045	2045
With transport on pallet without packaging	(mm)	2020	2020
With transport without pallet and without packaging	(mm)	1875	1875

2.3 Unit setup



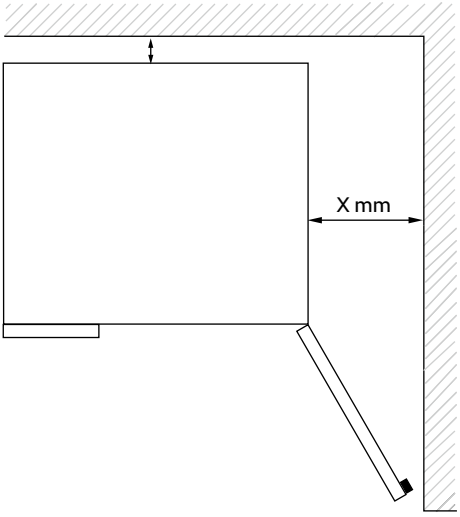
Side clearance for model XS 6-2/3

› If no external heat sources are acting on the unit, the minimum clearance to walls and objects should be 10 mm on all sides.



Side clearance for models 6-1/1 to 20-2/1

› If no external heat sources are acting on the unit, the minimum clearance to walls and objects should be 50 mm on each side. No clearance needs to be left at the rear.

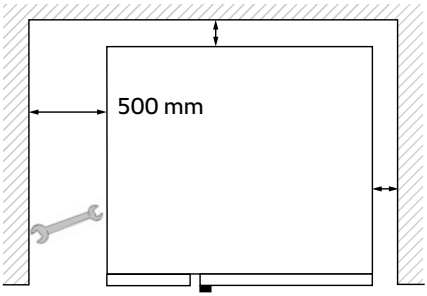


Side clearance for right-aligned wall installation

› If the unit (door hinge on the right) is to be set up on a right-aligned wall, the minimum clearance of 50 mm also applies here. For kitchen operation, particularly when using a mobile oven rack, a greater distance is more practical. The optimum clearance is when the open door is in the first rest position, the clearances (X) for this are listed in the table.

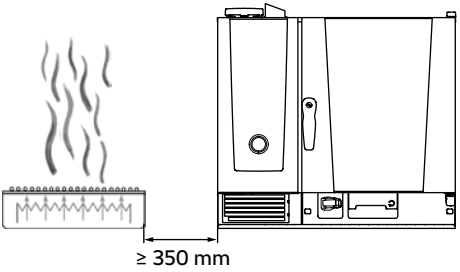
Model	(mm)
XS 6-2/3	214
6-1/1, 10-1/1	246
6-2/1, 10-2/1	316
20-1/1	268
20-2/1	338

2.3 Unit setup



Side clearance for servicing

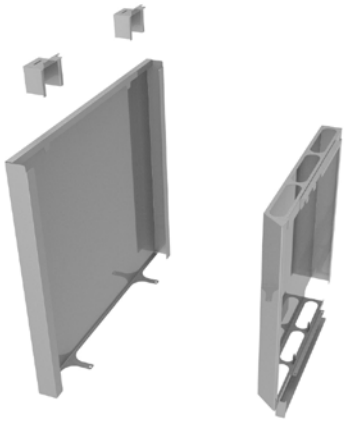
› To make servicing easier, we recommend a clearance of 500 mm on the left side of the unit. If this positioning is not possible, we recommend placing the unit in such a way that it can be pulled out for connection and maintenance work.



Side clearance for positioning next to heat sources

› If heat sources are acting on the left side of the unit, the minimum clearance on the left must be at least 350 mm. For models 6-1/1 to 20-2/1, this clearance can be reduced to 50 mm by using a heat shield (optional).

› Using a heat shield increases the overall width of the units. The additional width can be found in the table (below).



Additional width using a heat shield

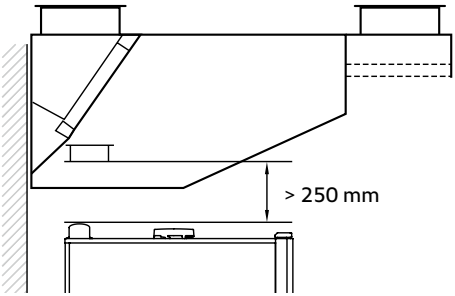
Model	**No.**	**Width** (mm)
XS 6-2/3 left	60.74.182	58
6-1/1 left	60.75.110	53
6-1/1 right	60.75.113	53
6-2/1 left	60.75.769	53
10-1/1 left	60.75.773	53
10-1/1 right	60.75.771	53
10-2/1 left	60.75.776	53
20-1/1 left	60.75.829	52
20-2/1 left	60.75.826	52

Note:

› No deep fryers may be installed on the rear of the units.

› Units may only be installed in frost-proof rooms.

2.3 Unit setup

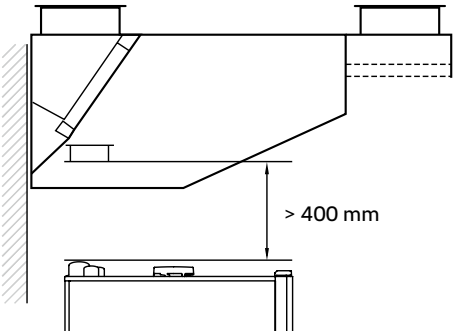


Recommended clearance to ceiling electric units

› For electric units, a clearance of at least 250 mm must be maintained between the ventilation pipe of the unit and the fat filters of the extractor hoods/ventilation ceiling.

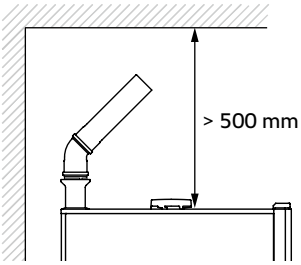
Note:

› For units with an UltraVent and UltraVent Plus, a ceiling clearance of at least 450 mm must be observed.



Recommended clearance to ceiling gas units

› For gas units, a clearance of at least 400 mm must be maintained between the ventilation pipe of the unit and the fat filters of the extractor hoods/ventilation ceiling.



Condensation breaker

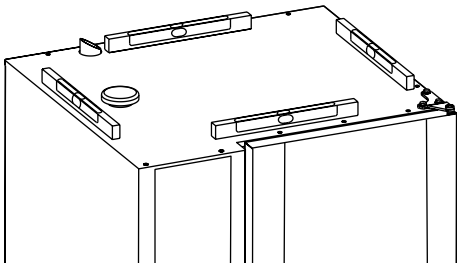
› By installing a condensation breaker and the enclosed pipes, the steam outlet on the ventilation pipe can be redirected in such a way that the steam blows into non-critical areas or into the suction area of a drain system.

› If steam from the ventilation pipe cannot be directed into an extractor hood or ventilation ceiling, a minimum clearance of 500 mm above the unit to the ceiling must be maintained.

› The condensation breaker sets consist of a stainless steel pipe (depending on the unit) and a pipe bend (stainless steel) with a 45° pipe.

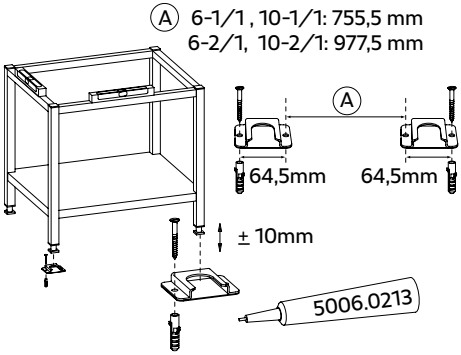
Model		XS 6-2/3	6-1/1, 6-2/1, 10-1/1, 10-2/1	20-1/1, 20-2/1
Pipe diameter	(DN)	50	70	110
No.		60.74.037	60.72.592	60.75.326
Height of the condensation breaker (from unit ceiling)	(mm)	440	430	470

2.3 Unit setup



Installation models XS 6-2/3, 6-1/1, 6-2/1, 10-1/1, 10-2/1

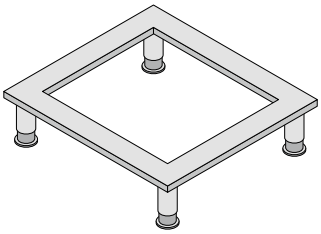
› The units have no feet and are mounted directly on the installation surface. The installation surface must be level, clean and free of grease. Unevenness across the width of the appliance must be no greater than 1 mm. A sealing strip is affixed to the underside of the unit to seal it. When moving the device, take care not to damage this seal.



Installation models XS 6-2/3, 6-1/1, 6-2/1, 10-1/1, 10-2/1 on stand

› If the unit is placed on an original stand, the stand should be attached to the kitchen floor using the fixing set (optional) to ensure it is securely fixed. In addition, it must be ensured that the stand is firmly screwed to the unit using the two screws supplied and that the spring pins of the stand are fixed.

Mounting kit	No. 8700.0317



Installation model XS 6-2/3 on stand XS

› The units of model XS 6-2/3 can be placed on the stand XS (148 mm) for horizontal alignment and to compensate any unevenness. This can compensate unevenness of up to 50 mm.

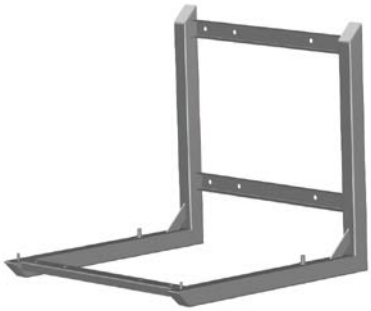
Stand XS (148 mm)	No. 60.31.029

2.3 Unit setup

Installation models 6-1/1, 6-2/1, 10-1/1, 10-2/1 on levelling kit

› For horizontal alignment and to compensate any unevenness, models 6-1/1, 6-2/1, 10-1/1 and 10-2/1 can be placed on a levelling kit (optional). This can compensate unevenness of up to 20 mm. The height of the moveable kit with rollers can be adjusted by up to 10 mm.

Models 6-1/1 and 10-1/1	
Levelling kit	No. 60.74.795
Kit with height-adjustable castors	No. 60.31.545
Models 6-2/1 and 10-2/1	
Levelling kit	No. 60.74.597
Kit with height-adjustable castors	No. 60.31.574

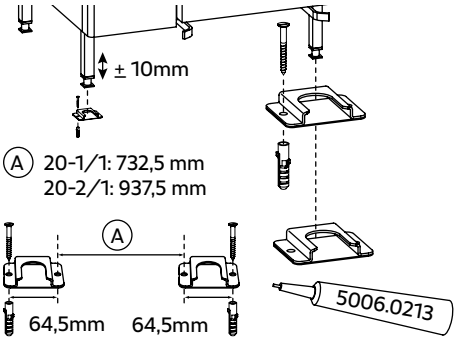


Wall bracket models XS 6-2/3 and 6-1/1

These units can also be mounted with a space-saving wall bracket (optional). The load bearing capacity of the wall must be verified beforehand. Total depth when mounting the unit on the wall bracket:
640 mm (model XS 6-2/3) or
775 mm (model 6-1/1).
Values = front edge of the unit without handle

Model XS 6-2/3	No. 60.30.968
Model 6-1/1	No. 60.70.963

2.3 Unit setup

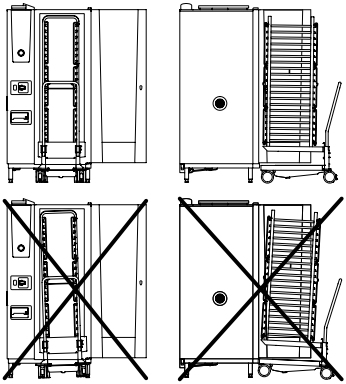


Installation models 20-1/1, 20-2/1

› An installation kit is included in the scope of delivery for the safe installation of the standalone units.

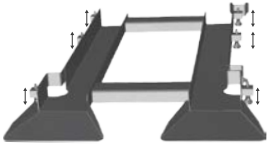
› To increase the ground clearance of models 20-1/1 and 20-2/1, the units (optional) can be set to a unit height (70 mm). This is only possible in combination with an increase in the mobile oven rack.

Appliance height extension (70 mm)	No. 60.70.407
Mobile oven rack height extension model 20-1/1	No. 60.21.297
Mobile oven rack height extension model 20-2/1	No. 60.22.386



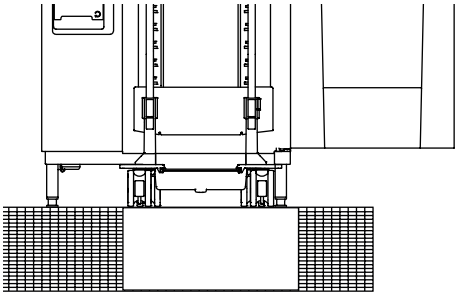
Installation models 20-1/1, 20-2/1 with mobile oven racks

› Make sure that the mobile oven rack is level in the cooking chamber.



Mobile oven rack entry ramp

› Slopes in the kitchen floor of up to 3% can be compensated with models 20-1/1 and 20-2/1 using the entry ramp (optional).



Rolling aid drain grill

› If there is a drain grill in front of model 20-1/1, 20-2/1 standalone unit, a rolling aid should be fitted in the entry area of the mobile oven rack.

2.4 Electrical connection

Important notes:
- Specific national and regional standards and provisions/regulations that concern the installation and operation of commercial cooking appliances must be complied with.
- Units may only be connected by a qualified electrician, who shall be responsible for this. Either a fixed connection or a plug connection may be used.
- Units may only be connected to a standardised supply network with protective conductors.
- Each unit must have its own fused supply.
- The site must have an accessible all-pole disconnection switch. The contact distance must be at least 3 mm.
- The cross-section of the power cables are dependent on the unit size, voltage, cable length and the local regulations.

Instructions for connection to a residual current device:
- All RATIONAL Combi-steamers are generally equipped with a protective conductor terminal. In accordance with national standards and regulations, an RCD (residual current device) must be incorporated in the installation of the unit.
- In these cases, please select the type of residual current device (RCD) from the following tables.

Instructions for the connection of the equipotential bonding system for gas and electric appliances:
- Always connect the equipotential bonding with an equipotential bonding conductor to the main earthing bar.
- Position of the equipotential bonding: see section 2.1 On-site connections.

Connecting electric units:
- Models XS 6-2/3, 6-1/1, 6-2/1, 10-1/1, 10-2/1) are supplied with a 2.5 m connection cable (without plug).
- Models 20-1/1, 20-2/1 are supplied without a connection cable.
- To connect the standalone units or when replacing the original cable, cables must meet the minimum specification of "H07RN-F" cables with a temperature rating of at least 60 °C.
- For models XS 6-2/3, 6-1/1, 6-2/1, 10-1/1,10-2/1, the maximum connection impedance at the grid connection point is 0.2 Ω.
- For models 20-1/1, 20-2/1), the maximum connection impedance at the grid connection point is 0.09 Ω.
- The units are available in all common voltage variants (see the following pages).

Connecting electric units to energy optimisation system (optional):
- Units can be ordered with a connection port for an energy optimisation system.
- The connection cable required for this must be 5 × 1.5 mm².
- The energy disconnection time should be as brief as possible, no more than 20 seconds. The energy must then be re-supplied for 2 minutes at least.

Connecting gas units:
- All unit models 6-1/1, 6-2/1, 10-1/1, 10-2/1, 20-1/1, 20-2/1 are supplied with a 2.5 m long connection cable (without a plug).
- If a longer cable is used, these cables must meet the minimum specification of "H07RN-F" cables with a temperature rating of at least 60 °C.
- If gas units model 20-1/1 or 20-2/1 are fused with a circuit breaker, this must at least correspond to the type "C".

2.4 Electrical connection electric units

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Power (kW)							
1 NAC 230 V	5.3	10.8	-	-	-	-	-
1 NAC 240 V	5.7	11.7	-	-	-	-	-
3 NAC 400 V	5.7	10.8	22.4	18.9	37.4	37.2	67.9
3 NAC 415 V	6.3	10.8	24.2	20.5	40.6	40.4	73.8
2 AC 208 V	5.7	10.8	-	-	-	-	-
2 AC 230 V	5.3	10.8	-	-	-	-	-
2 AC 240 V	5.7	11.7	-	-	-	-	-
3 AC 200V	5.3	9.9	20.6	17.3	34.3	34.1	62.4
3AC 208V	5.7	10.8	22.4	18.9	37.4	37.2	67.9
3AC 220V	5.3	9.9	20.6	17.3	34.3	34.1	62.4
3 AC 230V	5.7	10.8	22.4	18.9	37.4	37.2	67.9
3 AC 240V	6.2	11.7	24.3	20.5	40.6	40.4	73.8
3 AC 400V	5.7*	10.8	22.4	18.9	37.4	37.2	67.9
3 AC 415 V	-	10.8	24.2	20.5	40.6	40.4	73.8
3 AC 440V	-	10.8	22.4	18.9	37.4	37.2	67.9
3 AC 480V	-	10.8	22.4	18.9	37.4	37.2	67.9

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Current consumption (A)							
1 NAC 230 V	23.1	47.0	-	-	-	-	-
1 NAC 240 V	24.0	48.8	-	-	-	-	-
3 NAC 400 V	9.2	15.6	32.3	27.3	54.0	53.7	98.0
3 NAC 415 V	9.5	15.0	33.7	28.5	56.5	56.2	102.7
2 AC 208 V	24.0	52.0	-	-	-	-	-
2 AC 230 V	23.1	47.0	-	-	-	-	-
2 AC 240 V	24.0	48.8	-	-	-	-	-
3 AC 200V	15.9	28.9	60.0	50.5	99.9	99.6	181.9
3 AC 208V	15.9	30.0	62.2	52.5	103.8	103.3	188.5
3 AC 220V	14.4	26.0	54.1	45.4	90.0	89.5	163.8
3 AC 230V	14.9	27.1	56.2	47.4	93.9	93.4	170.4
3 AC 240V	15.5	28.1	58.5	49.3	97.7	97.2	177.5
3 AC 400V	10.2	15.6	32.3	27.3	54.0	53.7	98.0
3 AC 415V	-	15.0	33.7	28.5	56.5	56.2	102.7
3 AC 440V	-	14.2	29.4	24.8	49.1	48.8	89.1
3 AC 480V	-	13.0	26.9	22.7	45.0	44.7	81.7

* Available when the uninterruptible power supply option is installed.

2.4 Electrical connection electric units

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Fuse (A)							
1 NAC 230V	25	50	-	-	-	-	-
1 NAC 240V	25	50	-	-	-	-	-
3 NAC 400V	10	16	35	32	63	63	100
3 NAC 415V	10	16	35	32	63	63	125
2 AC 208V	32	70	-	-	-	-	-
2 AC 230V	25	50	-	-	-	-	-
2 AC 240V	25	50	-	-	-	-	-
3 AC 200V	16	32	63	63	100	100	200
3 AC 208V	25	40	80	70	150	150	250
3 AC 220V	16	32	63	50	100	100	200
3 AC 230V	16	32	63	50	100	100	200
3 AC 240V	16	32	63	50	100	100	200
3 AC 400V	10*	16	35	32	63	63	100
3 AC 415V	-	16	50	32	63	63	125
3 AC 440V	-	16	32	32	63	63	100
3 AC 480V	-	16	32	25	50	50	100

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
RCD type (F/B or B)							
1 NAC 230V	F/B	F/B	-	-	-	-	-
1 NAC 240V	F/B	F/B	-	-	-	-	-
3 NAC 400V	F/B	F/B	B	F/B	B	F/B	B
3 NAC 415V	F/B	F/B	B	F/B	B	F/B	B
2 AC 208V	B	B	-	-	-	-	-
2 AC 230V	B	B	-	-	-	-	-
2 AC 240V	B	B	-	-	-	-	-
3 AC 200V	B	B	B	B	B	B	B
3 AC 208V	B	B	B	B	B	B	B
3 AC 220V	B	B	B	B	B	B	B
3 AC 230V	B	B	B	B	B	B	B
3 AC 240V	B	B	B	B	B	B	B
3 AC 400V	B*	B	B	B	B	B	B
3 AC 415V	-	B	B	B	B	B	B
3 AC 440V	-	B	B	B	B	B	B
3 AC 480V	-	B	B	B	B	B	B

* Available when the uninterruptible power supply option is installed.

** If country specific standards or regulation require a RCD

2.4 Electrical connection electric units

Model XS 6-2/3 MarineLine (Marine design)				
	Power (kW)	Current consumption (A)	Fuse (A)	RCD type (F/B or B)
3 NAC 400 V	4.9	7.1	10	F/B
2 AC 220 V	4.84	22	25	F/B
3 AC 220V	5.0	13.3	16	B

2.4 Electrical connection gas units

Model	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Power (kW)						
1NAC 100V	0.6	-	0.9	-	1.3	-
1NAC 110V	0.6	-	0.9	-	1.3	-
1NAC 120V	0.6	-	0.9	-	1.3	-
1NAC 127V	0.6	-	0.9	-	1.3	-
1NAC 230V	0.6	0.9	0.9	1.5	1.3	2.2
1NAC 240V	0.6	0.9	0.9	1.5	1.3	2.2
2 AC 208V	0.6	0.9	0.9	1.5	1.3	2.2
2 AC 200V	0.6	0.9	0.9	1.5	1.3	2.2
2 AC 220V	0.6	0.9	0.9	1.5	1.3	2.2
2 AC 230V	0.6	0.9	0.9	1.5	1.3	2.2
2 AC 240V	0.6	0.9	0.9	1.5	1.3	2.2

Model	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Current consumption (A)						
1NAC 100V	6.1	-	9.1	-	13.0	-
1NAC 110V	5.5	-	8.3	-	11.8	-
1NAC 120V	5.1	-	7.6	-	10.8	-
1NAC 127V	4.7	-	7.2	-	10.2	-
1NAC 230V	2.6	3.9	4.0	6.4	5.7	9.4
1NAC 240V	2.5	3.8	3.8	6.1	5.4	9.0
2 AC 200V	3.0	4.5	4.6	7.3	6.5	10.8
2 AC 208V	2.9	4.3	4.4	7.0	6.3	10.3
2 AC 220V	2.7	4.1	4.1	6.6	5.9	9.8
2 AC 230V	2.6	3.9	4.0	6.3	5.7	9.3
2 AC 240V	2.5	3.8	3.8	6.1	5.4	9.0

2.4 Electrical connection gas units

Model Unit size	6-1/1 6×1/1 GN	6-2/1 6×2/1 GN	10-1/1 10×1/1 GN	10-2/1 10×2/1 GN	20-1/1 20×1/1 GN	20-2/1 20×2/1 GN
RCD type (F/B or B)						
1NAC 100V	F/B	-	B	-	F/B	-
1NAC 110V	F/B	-	B	-	F/B	-
1NAC 120V	F/B	-	B	-	F/B	-
1NAC 127V	F/B	-	B	-	F/B	-
1NAC 230V	F/B	B	B	B	F/B	B
1NAC 240V	F/B	B	B	B	F/B	B
2 AC 200V	B	B	B	B	B	B
2 AC 208V	B	B	B	B	B	B
2 AC 220V	B	B	B	B	B	B
2 AC 230V	B	B	B	B	B	B
2 AC 240V	B	B	B	B	B	B

2.5 Water connection

General information:

› With the iCombi Pro and iCombi Classic units, only one water inlet is required.
› The units can either be connected via a 3/4 inch drinking water inlet or 3/4 inch soft water inlet (cold water up to max. 30 °C).
› Each unit must be connected to its own tap and with an approved drinking water hose, which as a minimum meets the requirements of IEC 61770, EN 61770, EN 13618 or equivalent quality.

Water hose (2.5 m) according to EN 61770	No. 2067.0709

› If necessary, safety devices like a backflow preventer must be installed in the supply line on the tap.
› The unit may only be connected to drinking water.
› The minimum conductivity of the water must be 50 µS (microsiemens).
› The pipe cross-section should be at least DN 15 (1/2 inches).
› Units are supplied without a water hose. A unit connection kit (optional) consisting of a water hose (2 m) and waste water pipes with connecting bends is available.

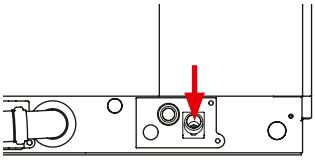
Unit connection kit	No. 60.70.464

› The water pressure (flow pressure) must be between 100 kPa (1 bar) and 600 kPa (6 bar). The recommended flow pressure is 300 kPa (3 bar). Falling below or exceeding the minimum or maximum water pressure can result in malfunctions.

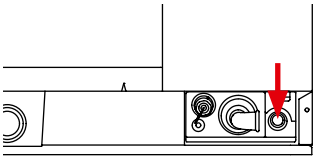
Country-specific information:

› Switzerland: The external water connection must be made using a SVGW-certified connection hose according to EN 61770.

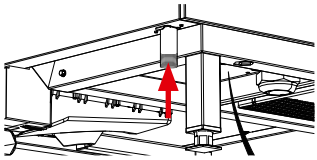
Water inlet
Model XS 6-2/3



Model 6-1/1, 6-2/1, 10-1/1 and 10-2/1



Model 20-1/1 and 20-2/1



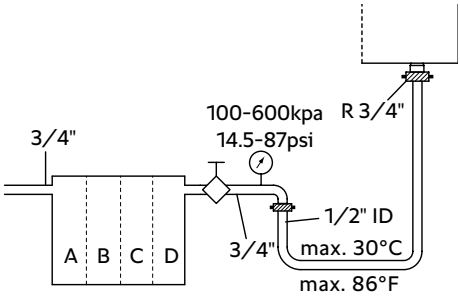
2.5 Water connection

General information:

› The iCareSystem of the iCombi Pro and the Care System of the iCombi Classic prevent the formation of limescale. A connection to a water softening system is not necessary.
› Before the unit is connected, the water hardness and mineral content should be requested from the local water supplier.
› The water connection must not use treated water with hardness below 5°dH, as such water is aggressive and corrosive, and can shorten the lifespan of the unit.
› Depending on the water hardness and water quality, the following measures are recommended:

A.) Fine filters: 5-15 µm
If the water is contaminated by sand, iron particles or suspended particles.

B.) Activated carbon filters
In the event of strong chlorination (Cl_2 and chloramines) of the water above 0.2 mg/l (0.2 ppm), an activated carbon filter must be installed upstream to avoid corrosion.



C.) Reverse osmosis systems
A reverse osmosis system must only be connected upstream to avoid corrosion, if the chloride concentration (Cl^-) is above 80 mg/l (80 ppm).
Note: Please ensure that the minimum conductivity of the water when connected to a reverse osmosis system is at least 50 µS (microsiemens).

D.) Water softening/water carbonate removal
iCombi units do not require softened water. However, if the water for the kitchen as a whole is softened and all units are operated with it, the order of the filter systems must be followed as described in the drawing.
Hydrogen-ion exchange systems should be used to soften the water.
Sodium-ion exchange systems, as they are often used in dishwashers, result in corrosion if the unit is set up incorrectly or has malfunctions, and should therefore not be used.

2.5 Water connection

Notes:

› Phosphate dosing is also discouraged, due to the negative effects it can have on the water system.
› If a combination of filters is installed, the sequence A-B-C-D of the filters in the direction of flow must be observed. The filter and water treatment system should be designed for the following maximum flow rates:

Maximum flow rates including filling and operating the steam generator and extinguishing (without hand shower)

Model	(l/min)
XS 6-2/3	5
6-1/1	12
6-2/1	12
10-1/1	12
10-2/1	12
20-1/1	12
20-2/1	12

When using the hand shower in parallel, the values increase by approximately 7 litres per minute (value at approximately 4 bar flow pressure).

Observe all country-specific regulations regarding water and sewer connections, especially those regarding installation of water intake points.

2.6 Wastewater connection

Note:

› iCombi Pro and iCombi Classic models 6-1/1, 6-2/1, 10-1/1, 10-2/1, 20-1/1 and 20-2/1 are supplied with an integrated odour trap, meaning that no additional odour trap can be installed. However if an additional odour trap is installed on site, an additional ventilation system must also be installed.
› For XS 6-2/3, an odour trap must be integrated into the wastewater connection.
› The maximum short-term amount of wastewater is 0.4 litres per second.

General information

› Each unit must have its own wastewater connection.
› Units can have a wall drain and a floor drain as well.
› Units are supplied without wastewater pipes. An appliance connection kit (optional) featuring water hose and waste water pipes is available.

Unit connection kit	No. 60.70.464

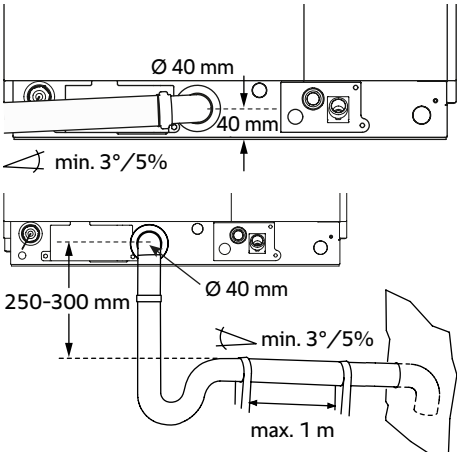
› If there is a floor drain without an odour trap, there must be a free outlet section of 20 mm.
› Drain pipes must be laid with a constant gradient of at least 5% (3°).
› The average wastewater temperature is 60 °C.
› The maximum amount of wastewater within one minute is:

Model	(l/min)
XS 6-2/3	8
6-1/1	10
6-2/1	15
10-1/1	12
10-2/1	18
20-1/1	18
20-2/1	20

Grease extraction system

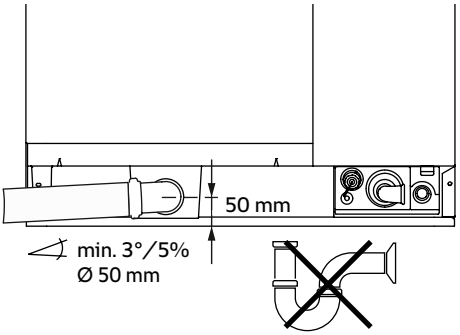
› All food processing companies - including commercial kitchens - are obliged to pre-treat wastewater containing fat by installing a fat separator before it is discharged into the public network.
› The dimensions of the fat separator depend on the number of food servings per day.

2.6 Wastewater connection



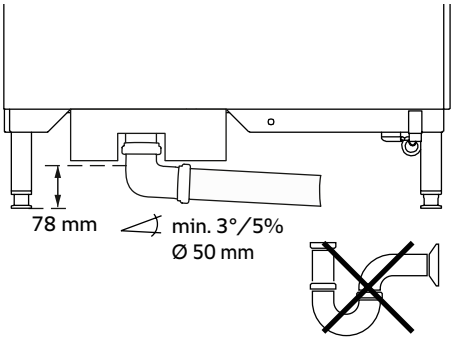
Wastewater connection model XS 6-2/3

› Units that are model XS 6-2/3 have a DN 40 mm wastewater connection (adapter DN 40/50 (mm) is included in the scope of delivery).
› To achieve optimal energy consumption, we recommend installing an odour trap (odour trap is not included). The ventilated outlet section is already an integrated part of the units.
› Wastewater connection height: approx. 40 mm



Wastewater connection for models 6-1/1, 6-2/1, 10-1/1 and 10-2/1

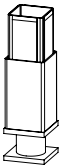
› Units that are models 6-1/1, 6-2/1, 10-1/1 and 10-2/1 have a DN 50 mm wastewater connection.
› A permanent connection is only permitted without an odour trap. The odour trap and the ventilated outlet section are an integrated part of the units. However, if an additional odour trap is installed please ensure the pipe work is ventilated.
› Wastewater connection height: approx. 50 mm

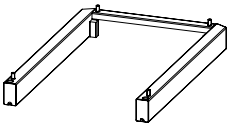


Wastewater connection for models 20-1/1 and 20-2/1

› Units that are models 20-1/1 and 20-2/1 have a DN 50 mm wastewater connection.
› A permanent connection is only permitted without an odour trap. The odour trap and the ventilated outlet section are an integrated part of the units. However, if an additional odour trap is installed please ensure the pipe work is ventilated.
› Average wastewater connection height: approx. 78 mm

2.6 Wastewater connection





Feet extensions

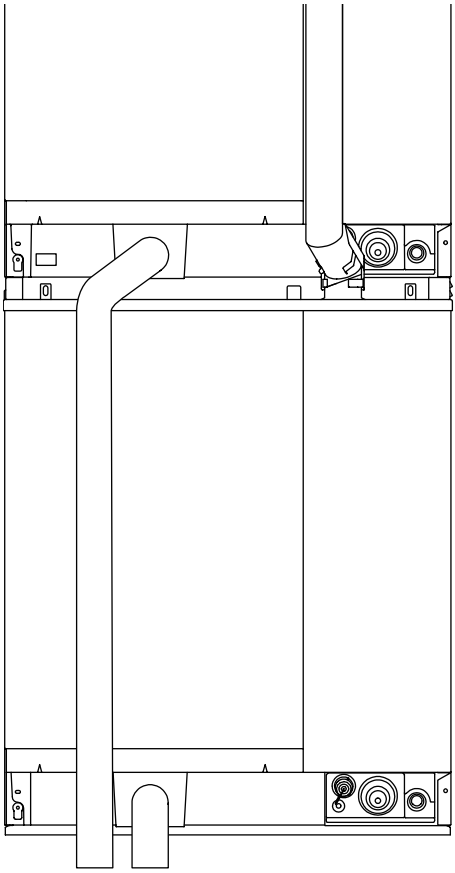
› The floor clearance of standalone units can optionally be increased by 70 mm with the use of a unit elevation device and a mobile rack oven rack elevation device.

Unit elevation:

Models 20-1/1, 20-2/1	No. 60.70.407

Mobile oven rack height extensions:

Model 20-1/1	No. 60.21.297
Model 20-2/1	No. 60.22.386



Combi-Duo wastewater connection

› When installing Combi-Duo units, a separate wastewater connection must be installed for each unit.

› By only using one combined wastewater connection for two units, there may be a backflow into the lower unit or unwanted odours.

2.7 Gas connection

› Local regulations of the gas supply company must be observed.
› Units may only be installed in rooms with adequate ventilation.
› A separate gas stopcock must be provided for each unit.
› Gas connection 3/4 inches internal thread.
› All on-site gas connection parts must comply with the applicable standards for gas supply technology.
› To protect against movement, RATIONAL offers a floor fixing set for standalone units and floor units.

Floor fixing for floor units and standalone units (optional)	No. 8700.0317

Floor fixing for standalone units included in the scope of delivery of gas units.
› The installation may only be carried out by a locally approved gas technician.

The gas flow pressure must always be in the range of the specified values.

Gas type	Connection flow pressure	Wobbe Index Wi (15 °C – 1013 mbar)	Wobbe Index Ws (15 °C – 1013 mbar)
Natural gas E and H	17-25 mbar	45.67 MJ/m³	50.72 MJ/m³
Natural gas EK and L	20-30 mbar	37.38 MJ/m³	41.52 MJ/m³
Liquid gas 3 butane/ propane (3 B/P)	25-57.5 mbar	80.58 MJ/m³	87.33 MJ/m³
Liquid gas 3 propane (3 P)	25-57.5 mbar	70.69 MJ/m³	76.84 MJ/m³

Maximum consumption at nominal thermal load

Gas type		6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Natural gas E and H	(m³/h)	1.4	3.05	2.35	4.33	4.77	8.76
	(kW/h)	13	28	22	40	42	80
Natural gas EK and L	(m³/h)	1.63	3.53	2.76	5.12	5.58	10.13
	(kW/h)	13	28	22	40	42	80
Liquid gas	(m³/h)	1.22	2.66	2.09	3.79	4.15	7.53
3 butane/propane (3 B/P)	(kW/h)	13,5	29,5	23	42	44	84
Liquid gas	(m³/h)	1.08	2.33	1.84	3.34	3.69	6.72
3 propane (3 P)	(kW/h)	13	28	22	40	42	80

Please note that when removing from a gas bottle (ambient temperature 20 °C) with a nominal weight of 11 kg, only 0.8 kg/h can be removed, and with a gas bottle with a nominal weight of 33 kg, only 1.8 kg/h can be removed.

2.7 Gas connection

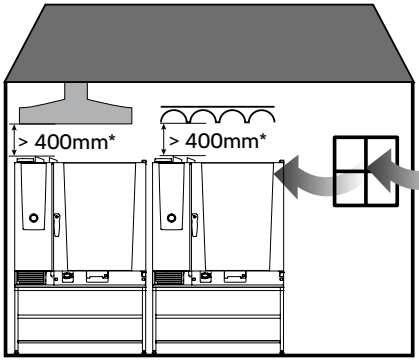
Exhaust gas and room volumes (specified values only apply to the individual units)

		6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Maximum power P	(kW)	13	28	22	40	42	80
Room size with free ventilation Calculation: P (kW) × 4	(m³)	52	112	88	160	168	*
Room size with constant ventilation Calculation: P (kW) × 2	(m³)	26	56	44	80	84	*
Combustion air supply Calculation: P (kW) × 1.6	(m³/h)	21	45	35	64	67	128
Exhaust volumes Calculation: P(kW) × 4	(m³/h)	52	112	88	160	168	320
Maximum exhaust gas temperature	(°C)	350	530	470	590	430	520

Free ventilation = combustion air supply through windows and doors.
Constant ventilation = combustion air supply through two ventilation openings to the outside each with 150 cm² free cross-section (one near the ceiling, the other near the floor).

* Kitchens in which type A and/or B gas units with a total nominal thermal load of more than 50 kW are installed must be ventilated with ventilation and ventilation systems that also ensure the combustion air supply for the gas units. Air conditioning systems must comply with VDI 2052. Outside the scope of application of VDI 2052, the air conditioning systems must meet the country-specific requirements.

2.8 Exhaust gas outlet



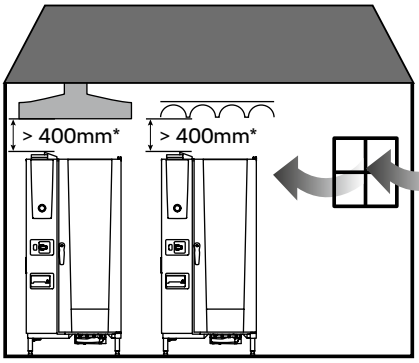
Exhaust hood Ventilating ceiling

Note:
A clearance of at least 400 mm must be kept between the exhaust pipe of the unit and the fat filters of the extractor hood/ventilation ceiling.

Type A3, B23, B13, B13BS gas units
Installation according to DVGW G631 dated 03/2012. Observe instructions given in the currently valid versions of all local standards during installation.

Type A3, B23
Model 6-1/1
Room air-dependent gas furnaces with fans in front of burners without flow guards and total rated load in installation space greater than 12kW and less than 18 kW. It is not mandatory that gas only be supplied to the burners when the exhaust system is in operation.
Updraft lines are not required. For the installation of type A gas units with a total nominal thermal load of up to 18 kW, it is sufficient if

- the installation space has a capacity of more than $2m^3/kW$,
- there is a door or window to the outside that can be opened,
- the kitchen ventilation system in use has a minimum extraction volume of $15m^3/h$ per kW total rated load and corresponding ventilation openings.



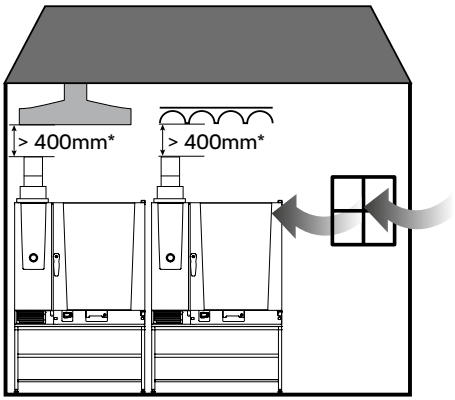
Exhaust hood Ventilating ceiling

Models 6-2/1, 10-1/1, 10-2/1, 20-1/1 and 20-2/1 room air-dependent gas furnaces with fans in front of burners without flow guards and total nominal thermal load greater than 18 kW.

- Updraft lines are not required.
- Exhaust gases must be directed outside through kitchen ventilation systems. Type A gas appliances first emit exhaust gases into the room, and must promptly be extracted via the kitchen ventilation system.
- Monitor the exhaust vent to ensure that gas is only fed to the burners when extraction is ensured.

For the required room volume, see section 2.7. Gas connection

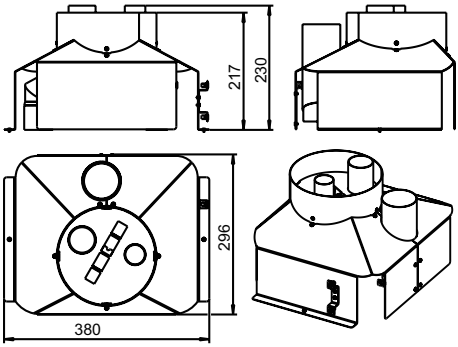
2.8 Exhaust gas outlet



Exhaust hood Ventilating ceiling

Type B13
Models 6-1/1, 6-2/1, 10-1/1, 10-2/1, 20-1/1 and 20-2/1
Room air-dependent gas furnaces with fans in front of burners and flow guards. The type B13 installation may only be carried out with the original flue gas collector listed below. The flue gas collector is not included in the scope of delivery of the unit, but can be ordered with the following article numbers:

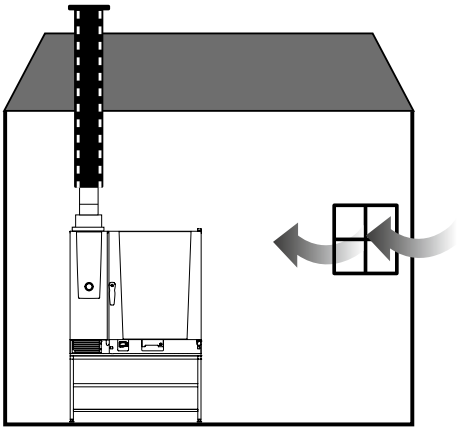
Model	No.
6-1/1	70.01.360
6-2/1	70.01.432
10-1/1	70.01.376
10-2/1	70.01.586
20-1/1	70.01.587
20-2/1	70.01.493



The installation instructions are enclosed with the flue gas collector.
With B13 installations, please note that an updraft line must be available. The updraft line must end 400 mm beneath the fat filter. The device must be installed underneath an exhaust hood or a ventilation ceiling.
Monitor the exhaust vent to ensure that gas is only fed to the burners when extraction is ensured.

For the required room volume, see section 2.7. Gas connection

2.8 Exhaust gas outlet



Type B13BS
Fixed connection to a chimney is allowed. To calculate the required supply and exhaust air, contact your local chimney sweep or a suitably authorised authority.

Exhaust system
- Lay the exhaust pipes in such a way that they are tightly connected according to local standards.
- Due to high exhaust gas temperatures, do not use exhaust pipes made of aluminium or of any materials that are not temperature-resistant up to 400 °C!

Model	No.
Flow guard 6-1/1	70.01.339
Flow guard 6-2/1	70.01.431
Flow guard 10-1/1	70.01.340
Flow guard 10-2/1	70.01.582
Flow guard 20-1/1	70.01.583
Flow guard 20-2/1	70.01.492

Installation instructions are included with the flow guards.

Note for Switzerland
Observe the following regulations during set up and installation:
- SVGW gas regulations G1 (2015)
- EKAS directive No. 6517: Liquid gas (EKAS: Federal Coordination Commission for Occupational Safety)
- Rules of the Association of Cantonal Fire Insurance (VKF)

3.1 Thermal load

Please note the technical guidelines (e.g. VDI 2052) and the local provisions for ventilation technology in commercial kitchens.

Latent heat
Latent heat is contained in the vapours and steam which are produced when cooking. The exhaust system for the production areas in the kitchen must be designed so that latent heat is quickly and effectively extracted, so that the persons working in the room are only subjected to low amounts of heat.

Sensitive heat load
Sensitive, or perceptible heat, is released from the thermal output of hot appliances.

Electric units

Thermal load iCombi Pro

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Latent	(kJ/h)	1020	2050	3450	3450	6350	6850	10900
	(W)	283	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	1350	2450	4450	4450	7750	8850	14000
	(W)	375	680	1235	1235	2152	2457	3887
Thermal load iCombi Classic								
Latent	(kJ/h)	–	2050	3450	3450	6350	6850	10900
	(W)	–	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	–	2523	4583	4583	7982	9115	14420
	(W)	–	700	1272	1272	2216	2531	4004

Gas units

Thermal load iCombi Pro

Model		6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Latent	(kJ/h)	2050	3450	3450	6350	6850	10900
	(W)	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	2450	4450	4450	7750	8850	14000
	(W)	680	1235	1235	2152	2457	3887
Thermal load iCombi Classic							
Latent	(kJ/h)	2050	3450	3450	6350	6850	10900
	(W)	569	958	958	1763	1902	3026
Sensitive	(kJ/h)	2523	4583	4583	7982	9115	14420
	(W)	700	1272	1272	2216	2531	4004

3.2 Extraction requirement

Control calculation extraction requirement for convection steamer

› According to the DIN 16282 standard, a convection steamer emits an average of 265 g water per hour and kilowatt connected load (265 g/h × kW). The increase of the water content in the air should not be more than 6 g/kg of dry air.

Example air volume requirement iCombi Pro 6-1/1:

› Connected load 10,8 kW
Specific weight of dry air 1.20 kg/m³
Water release: 10,8 kW × 265 g/(h × kW) = 2,862 g/h
2,862 g/h / (6 g/kg × 1.20 kg/m³) = 398 m³/h
The extraction volume requirement is 398 m³/h.

Notes:

› In consideration of unfavourable flow conditions or an unsafe thermal lift (mixed airflow), it is recommended that the air requirement be increased by 25%.
That means the extraction requirement is 398 m³/h × 1.25 = 498 m³/h.
The value is reduced to 63% if the unit is on one side of a wall.

› RATIONAL offers the UltraVent and UltraVent Plus condensation hoods for electric units. With the use of these condensation hoods, the air volume requirement of the units can be reduced by up to 70%.

	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Connected load electric units							
kW	5,7	10,8	22,4	18,9	37,4	37,2	67,9
Extraction requirement – free-standing unit in the room (100%)							
m³/h	210	398	824	696	1377	1369	2499
Extraction requirement with UltraVent condensation hood – free-standing unit in the room (100%)							
m³/h	63	119	247	209	413	411	750
Extraction requirement – unit with one side against a wall (63%)							
m³/h	132	251	519	438	868	862	1574
Extraction requirement with UltraVent condensation hood – unit with one side against a wall (63%)							
m³/h	40	194	156	132	260	259	473
Maximum power P gas units							
kW	–	13	28	22	40	42	80
Combustion air supply per hour gas units(required minimum supply air volume)							
m³/h	-	21	45	35	64	67	128
Exhaust gas volume per hour gas units (maximum exhaust volumes)							
m³/h	–	52	112	88	160	168	320

Note:
In the case of gas units, the required minimum supply air volume and the maximum exhaust volumes must be added to the air volume requirement for the units.

3.3 RATIONAL extractor hoods

RATIONAL offers hoods without external exhaust air (UltraVent and UltraVent Plus) and with external exhaust air (extractor hoods) as accessories.

UltraVent condensation good (without smoke filter)

- The main function of the UltraVent is the condensation of vapours and steam during the cooking process with the help of the integrated condensation technology. The vapours are fed through the riser pipe directly into the UltraVent, where they are absorbed and condensed. The condensate is then drained through the integrated drain. The dry air is then directed out of the top of the UltraVent.
- In addition, the UltraVent collects vapours that escape from the unit when the oven door is opened.
- The UltraVent is not connected to channels with a ventilation and air conditioning system (RLT). Therefore, it is not part of the HVAC system and does not fall under the provisions of VDI 2052 or other country-specific provisions in this context.
- However, the condensation effect of the UltraVent can reduce the exhaust air requirement to 30% of the nominal volume requirement (see section 3.2 - Air volume requirements with UltraVent condensation hood).
- The UltraVent controls the necessary extraction capacity independently, continuously and intelligently.
- Installation is simple and possible at any time - even retrospectively.

UltraVent Plus condensation hood with smoke filter

- The UltraVent Plus is additionally fitted with a special filter technology. This prevents both vapours containing fat and lingering smoke, such as smoke that is produced while grilling and roasting. As a result, RATIONAL units can also be installed in demanding locations, such as front areas.
- The UltraVent Plus has the same condensation technology and the same continuous and intelligent extraction power as the UltraVent (see above).
- The same requirements as for an UltraVent also apply to the ventilation system and the nominal volume requirement.

3.3 RATIONAL extractor hoods

Technical data of the UltraVent/UltraVent Plus

› UltraVent and UltraVent Plus are available for single units and Combi-Duo units (see table below).
› Electrical connection: 1 NAC 230V (delivery includes 2.5 m cable without plug). On-site power socket is required!

› For units of the model XS 6-2/3, the UltraVent/UltraVent Plus can be ordered pre-assembled on the unit. In this case, no on-site power socket needs to be provided for the UltraVent/UltraVent Plus XS. The power supply takes place directly from the unit itself.
› Power with all variants: 170 W
› Maximum extraction capacity: 705 m³/h
› Operating noise: Average: 50-65 dB(A)
› An installation kit, including integrated UltraVent or UltraVent Plus and a hygienic cover, is available for integrating a unit of the model XS 6-2/3 into a wall unit.

Installation kit UltraVent	No. 60.74.063
Installation kit UltraVent Plus	No. 60.74.405

Available variants UltraVent/UltraVent Plus

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
UltraVent							
Electric	●	●	●	●	●	●	●
Combi-Duo	●	●	●	●	●	–	–
UltraVent Plus							
Electric	●	●	●	●	●	–	–
Combi-Duo	●	●	●	●	●	–	–

3.3 RATIONAL extractor hoods

Extractor hood

- The RATIONAL extractor hood is connected to the outside by means of an exhaust pipe or to an exhaust system.
- The main function of the extractor hood is to collect and remove vapours and steam during the cooking process. These are introduced at the top into an exhaust pipe or exhaust system.
- The vapours are automatically extracted even while the cooking chamber door is being and when the door is open (without condensation technology).

Technical data of the extractor hood

- Electric connection: 1 NAC 230V and 1 NAC 120–125 V available (delivery includes a 2.5 m cable without plug). On-site power socket is required!
- Power with all variants: 170 W.
- Maximum extraction capacity: 705 m³/h
- Operating noise: Average: 50–65 dB(A)
- Discharge pressure level 1 approx. 80 Pascal, level 2 approx. 300 Pascal

Available variants

Model	XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Extractor hood							
Electrical	–	●	●	●	●	–	–
Combi-Duo	–	●	●	●	●	–	–

4. Unit permissions iCombi Pro/ iCombi Classic

All appliances have been tested and approved by authorised testing institutes.

Declaration of conformity:	CE
Electrical safety:	UL, $_{c}$UL, KTL (Korea), KIWA, CSA (Canada), INMETRO (Brazil), RCM (Australia), EAC (Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan), IRAM (Argentina), SCVOO (Ukraine), SANS (South Africa), PSE (Japan)
Electromagnetic compatibility:	KIWA EMV, RRA (Korea),
Gas approval:	KIWA (CE declaration), QA (energy label), AGA Australia), CSA (Canada), SVGW (Switzerland), JIA (Japan), EAC (Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan), KGS (Korea), SANS (South Africa), SVCOO (Ukraine), MOLDAC (Moldova), cCSAus (North America), IRAM (Argentina)
Drinking water protection:	SVGW (Switzerland), KIWA (Netherlands), WRAS (UK), Watermark (Australia), Jet (Japan), TZW (CE declaration)
Hygiene:	NSF, NSF-HCV-EU, Kosher
Mechanical safety - accident prevention:	tested according to machine directive 2006/42/EC
Splash and water jet protection:	IPX 5
MarineLine design:	DNV GL (for the protected deck area)
WiFi:	RED (Europe), IECC (USA), ISED (Canada), MIC (Japan), + 64 additional country approvals
Cleaning agent:	the cleaning products are approved for worldwide use
Note:	According to IEC/EN 60335-1, all units are approved for unsupervised operation (overnight cooking, overnight cleaning).

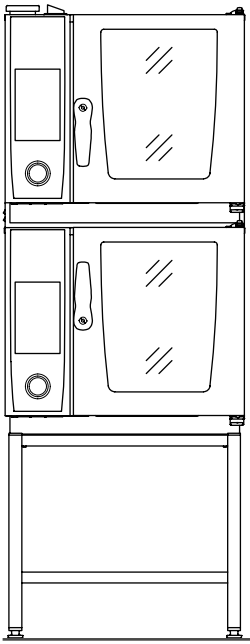
5.1 Combi-Duo XS 6-2/3

Notes:
› Two units of the model XS 6-2/3 can be built on top of each other as a Combi-Duo.
› Diameter of the drain pipes (similar to single units) each DN 40 (mm). An adapter DN 40/50 (mm) is included with every unit.
› A combination with our UltraVent and UltraVent Plus is also possible (see section 3.3: Extractor hoods).

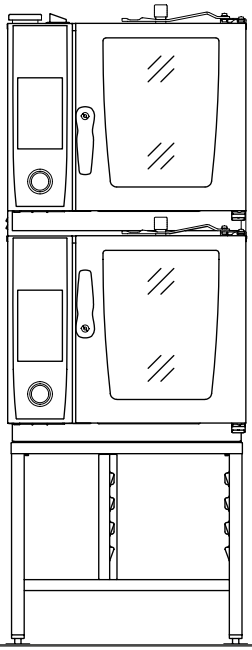
Installation on a stand
› The height of the top shelf of 1.60 m is only maintained when using the stands listed here.
› The Combi-Duo stands with feet and fixing mount are height-adjustable for levelling.
› Clearance from floor to centre of drain pipe: approx. 600 mm

Model	Standard	With castors	With fixing mount
Stand I for Combi-Duo XS 6-2/3	60.31.020	60.31.170	–
Stand II for Combi-Duo XS 6-2/3	60.31.046	–	60.31.058

Installation on a stand I Combi-Duo



Installation on a stand II Combi-Duo MarineLine



5.2 Combi-Duo models 6-1/1, 10-1/1, 6-2/1 and 10-2/1

Notes:
› Tabletop units of models 6-1/1, 10-1/1, 6-2/1 and 10-2/1 can be set up in various combinations as a Combi-Duo.
› Please note the combination tables in this section.
› Diameter of the drain pipes (similar to single units) each DN 50 (mm).
› A combination with our extractor hoods, UltraVent and UltraVent Plus is also possible. (see section 3.3: Extractor hoods).
› The Combi-Duo tabletop units of models 6-1/1, 10-1/1, 6-2/1 and 10-1/1 can be set up in two different ways:

1. Installation on a levelling kit
› This variant is recommended if unevenness has to be compensated for.
› The levelling kit can compensate for unevenness of up to 20 mm. The height of the height-adjustable kit with rollers can be varied by 10 mm.
› In this variant, a floor drain is absolutely necessary, otherwise the unit drain is lower than a wall drain, for example.
› Clearance from floor to centre of drain pipe: approx. 90 mm

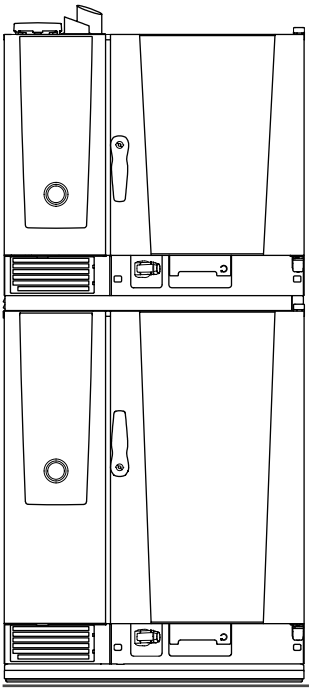
Levelling kit 6-1/1 and 10-1/1	No. 60.74.795
Kit with height-adjustable rollers, models 6-1/1, 10-1/1	No. 60.31.545
Levelling kit 6-2/1 and 10-2/1	No. 60.74.597
Kit with height-adjustable rollers, models 6-2/1, 10-2/1	No. 60.31.574

2. Installation on a stand
› All Combi-Duo units can be installed on a stand I (height: 200 mm).
› Combi-Duo variants of the models 6-1/1 and 6-2/1 can also be installed with a stand II (height: 445 mm).
› All Combi-Duo stands are height-adjustable for levelling.
› Clearance from floor to centre of drain pipe when installed on the stand UG I: approx. 250 mm
› Clearance from floor to centre of drain pipe when installed on the stand UG II: approx. 500 mm

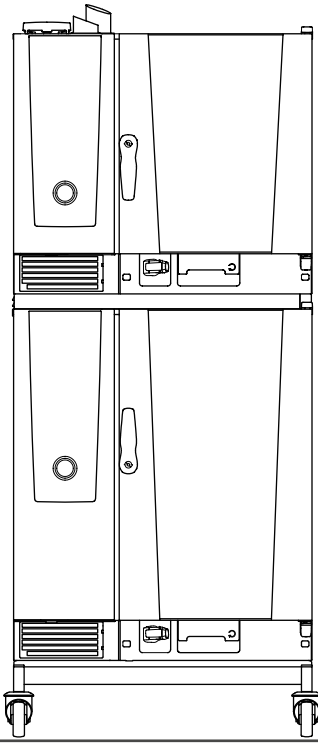
Model	Standard	With castors	With fixing mount
Stand I for Combi-Duo 6-1/1 and 10-1/1	60.31.200	60.31.201	60.31.202
Stand I for Combi-Duo 6-2/1 and 10-2/1	60.31.203	60.31.204	60.31.205
Stand II for Combi-Duo 6-1/1 on 6-1/1	60.31.206	60.31.207	–
Stand II for Combi-Duo 6-2/1 on 6-2/1 and 6-1/1 on 6-2/1	60.31.208	–	–

5.2 Combi-Duo models 6-1/1, 10-1/1, 6-2/1 and 10-2/1

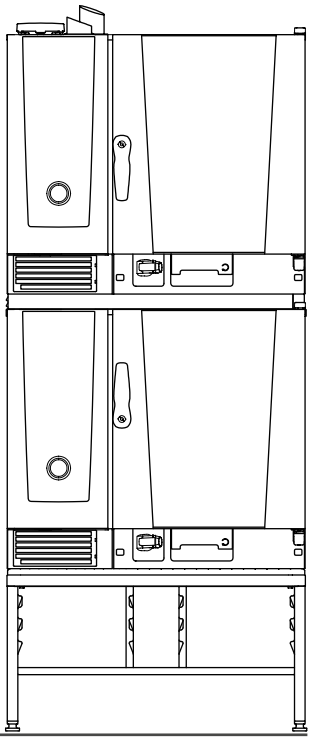
Installation on a levelling kit (here 6-1/1 Electric on 10-1/1 Electric)



Installation on a stand I (here 6-1/1 Electric on 10-1/1 Electric)



Installation on a stand II (here 6-1/1 Electric on 6-1/1 Electric)



5.3 Combi-Duo variants

Combi-Duo kits for iCombi Pro/ iCombi Classic model XS 6-2/3

Lower unit	Top unit	Model XS 6-2/3 N°:	Highest rack level
Model XS 6-2/3	Base installation, door hinged to the right	60.73.768	1.04 m
	Base installation, door hinged to the left	60.74.276	
	Stand I standard, door hinged to the right	60.73.768	1.59 m
	Stand I standard, door hinged to the left	60.74.276	
	Stand I castors, door hinged to the right	60.73.768	1.60 m
	Stand I castors, door hinged to the left	60.74.276	
	Stand II standard, door hinged to the right	60.73.768	1.59 m
	Stand II standard, door hinged to the left	60.74.276	
Model XS 6-2/3 Marine	Stand II fixing mount, door hinged to the right	60.73.780	1.59 m
	Stand II fixing mount, door hinged to the left	60.74.929	
Model 6-1/1 Electric	Base installation, door hinged to the right	60.75.755	1.24 m
	Base installation, door hinged to the left	60.75.756	
	On levelling kit, door hinged to the right	60.75.755	1.27 m
	On levelling kit, door hinged to the left	60.75.756	
	Stand I, door hinged to the right	60.75.755	1.44 m
	Stand I, door hinged to the left	60.75.756	
	Stand II, door hinged to the right	60.75.755	1.68 m
	Stand II, door hinged to the left	60.75.756	
Model 10-1/1 Electric	Base installation, door hinged to the right	60.75.755	1.50 m
	Base installation, door hinged to the left	60.75.756	
	On levelling kit, door hinged to the right	60.75.755	1.53 m
	On levelling kit, door hinged to the left	60.75.756	
	Stand I, door hinged to the right	60.75.755	1.70 m
	Stand I, door hinged to the left	60.75.756	
Model 6-2/1 Electric	Base installation, door hinged to the right	60.75.757	1.24 m
	Base installation, door hinged to the left	60.75.758	
	On levelling kit, door hinged to the right	60.75.757	1.27 m
	On levelling kit, door hinged to the left	60.75.758	
	Stand I, door hinged to the right	60.75.757	1.44 m
	Stand I, door hinged to the left	60.75.758	
	Stand II, door hinged to the right	60.75.757	1.68 m
	Stand II, door hinged to the left	60.75.758	
Model 10-2/1 Electric	Base installation, door hinged to the right	60.75.757	1.50 m
	Base installation, door hinged to the left	60.75.758	
	On levelling kit, door hinged to the right	60.75.757	1.53 m
	On levelling kit, door hinged to the left	60.75.758	
	Stand I, door hinged to the right	60.75.757	1.70 m
	Stand I, door hinged to the left	60.75.758	

5.3 Combi-Duo variants

Combi-Duo kits for iCombi Pro/ iCombi Classic model 6-1/1 and 10-1/1

Lower unit	Top unit	Model 6-1/1 Electric No.	Highest rack level	Model 6-1/1 Gas No.	Highest rack level
Model 6-1/1 Electric	Base set-up	60.73.991	1.41 m	60.73.991	1.41 m
	On levelling kit	60.73.991	1.44 m	60.73.991	1.44 m
	On stand I	60.73.991	1.60 m	60.73.991	1.60 m
Model 10-1/1 Electric	Base set-up	60.73.991	1.67 m	60.73.991	1.67 m
	On levelling kit	60.73.991	1.70 m	60.73.991	1.70 m
	On kit with height-adjustable rollers	60.73.991	1.72 m	60.73.991	1.72 m
	On stand I	60.73.991	1.87 m	60.73.991	1.87 m
Model 6-1/1 Gas	Base installation, door hinged to the right	–	–	60.73.751	1.53 m
	Base installation, door hinged to the left	–	–	60.73.752	
	On levelling kit, door hinged to the right	–	–	60.73.751	1.56 m
	On levelling kit, door hinged to the left	–	–	60.73.752	
	On kit with height-adjustable rollers, door hinged to the right	–	–	60.73.751	1.58 m
	On kit with height-adjustable rollers, door hinged to the left	–	–	60.73.752	
	Stand I, door hinged to the right	–	–	60.73.751	1.73 m
	Stand I, door hinged to the left	–	–	60.73.752	

5.3 Combi-Duo variants

Combi-Duo kits for iCombi Pro/ iCombi Classic model 6-2/1 and 10-2/1

Lower unit	Top unit	Model 6-2/1 Electric No.	Highest rack level	Model 6-2/1 Gas No.	Highest rack level
Model 6-2/1 Electric	Base set-up	60.73.725	1.41 m	60.73.725	1.41 m
	On levelling kit	60.73.725	1.44 m	60.73.725	1.44 m
	On stand I	60.73.725	1.60 m	60.73.725	1.60 m
Model 10-2/1 Electric	Base set-up	60.73.725	1.67 m	60.73.725	1.67 m
	On levelling kit	60.73.725	1.70 m	60.73.725	1.70 m
	On kit with height-adjustable rollers	60.73.725	1.72 m	60.73.725	1.72 m
	On stand I	60.73.725	1.87 m	60.73.725	1.87 m
Model 6-2/1 Gas	Base installation, door hinged to the right	–	–	60.73.753	1.53 m
	Base installation, door hinged to the left	–	–	60.73.754	
	On levelling kit, door hinged to the right	–	–	60.73.753	1.56 m
	On levelling kit, door hinged to the left	–	–	60.73.754	
	On kit with height-adjustable rollers, door hinged to the right	–	–	60.73.753	1.58 m
	On kit with height-adjustable rollers, door hinged to the left	–	–	60.73.755	
	Stand I, door hinged to the right	–	–	60.73.753	1.73 m
	Stand I, door hinged to the left	–	–	60.73.754	

5.3 Combi-Duo variants

Combi-Duo kits for iCombi Pro/ iCombi Classic model 6-1/1 on model 6-2/1

Lower unit	Top unit	Model 6-1/1 Electric No.	Highest rack level	Model 6-1/1 Gas No.	Highest rack level
Model 6-2/1 Electric	Base installation, door hinged to the right	60.75.757	1.41 m	60.75.757	1.41 m
	Base installation, door hinged to the left	60.75.758		60.75.758	
	On levelling kit, door hinged to the right	60.75.757	1.44 m	60.75.757	1.44 m
	On levelling kit, door hinged to the left	60.75.758		60.75.758	
	Stand I, door hinged to the right	60.75.757	1.60 m	60.75.757	1.60 m
	Stand I, door hinged to the left	60.75.758		60.75.758	
	Stand II, door hinged to the right	60.75.757	1.85 m	60.75.757	1.85 m
	Stand II, door hinged to the left	60.75.758		60.75.758	
Model 6-2/1 Gas	Base installation, door hinged to the right	–	–	60.73.753	1.53 m
	Base installation, door hinged to the left	–	–	60.74.754	
	On levelling kit, door hinged to the right	–	–	60.73.753	1.56 m
	On levelling kit, door hinged to the left	–	–	60.74.754	
	Stand I, door hinged to the right	–	–	60.73.753	1.73 m
	Stand I, door hinged to the left	–	–	60.74.754	

6.1 Options model XS 6-2/3

iCombi Pro
- Left-sided hinge for unit door
- Safety door lock
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Switch signal for external control (e.g. in-house ventilation system)
- MarineLine (Marine design)
- UltraVent pre-assembled
- UltraVent Plus pre-assembled

6.2 Options model 6-1/1 and model 10-1/1

iCombi Pro
- Left-sided hinge for unit door
- Mobile oven rack package
- MarineLine (Marine design)
- Integrated fat drain
- Lockable control panel
- SecurityLine (Security design)
- Safety door lock
- HeavyDutyLine
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Control panel protection
- Switch signal for external control (e.g. in-house ventilation system)
- Unit with oven rack in baking standard (400 × 600 mm)
- Unit with mobile oven rack in baking standard (400 × 600 mm)
- Unit with oven rack for meat trays (400 × 600 mm), butcher)
- Unit with oven rack 85 mm rail spacing
- Unit with mobile oven rack 80 mm rail spacing
- Unit with oven rack grilling, chicken (400 × 600 mm)
- Unit with mobile oven rack grilling, chicken

iCombi Classic
- Left-sided hinge for unit door
- Mobile oven rack package
- MarineLine (Marine design)
- Integrated fat drain
- Lockable control panel
- SecurityLine (Security design)
- Safety door lock
- HeavyDutyLine
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Control panel protection
- Switch signal for external control (e.g. in-house ventilation system)
- Ethernet interface
- WiFi interface
- Unit with oven rack in baking standard (400 × 600 mm)
- Unit with mobile oven rack in baking standard (400 × 600 mm)
- Unit with mobile oven rack for meat trays (400 × 600 mm), butcher)
- Unit with oven rack 85 mm rail spacing
- Unit with mobile oven rack 80 mm rail spacing
- Unit with oven rack grilling, chicken (400 × 600 mm)
- Unit with mobile oven rack grilling, chicken

6.3 Options model 6-2/1 and model 10-2/1

iCombi Pro
- Left-sided hinge for unit door
- Mobile oven rack package
- MarineLine (Marine design)
- Integrated fat drain
- Lockable control panel
- SecurityLine (Security design)
- Safety door lock
- HeavyDutyLine
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Control panel protection
- Switch signal for external control (e.g. in-house ventilation system)
- Unit with oven rack 85 mm rail spacing
- Unit with mobile oven rack 80 mm rail spacing
- Unit with oven rack grilling, chicken (400 × 600 mm)

iCombi Classic
- Left-sided hinge for unit door
- Mobile oven rack package
- MarineLine (Marine design)
- Integrated fat drain
- Lockable control panel
- SecurityLine (Security design)
- Safety door lock
- HeavyDutyLine
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Control panel protection
- Switch signal for external control (e.g. in-house ventilation system)
- Ethernet interface
- WiFi interface
- Unit with oven rack 85 mm rail spacing
- Unit with mobile oven rack 80 mm rail spacing

6.4 Options model 20-1/1 and model 20-2/1

iCombi Pro
- MarineLine (Marine design)
- Integrated fat drain
- Lockable control panel
- SecurityLine (Security design)
- Safety door lock
- HeavyDutyLine
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Control panel protection
- Switch signal for external control (e.g. in-house ventilation system)
- Unit with oven rack 83 mm rail spacing
- Unit with mobile oven rack in baking standard (400 × 600 mm) (only model 20-1/1)

iCombi Classic
- MarineLine (Marine design)
- Integrated fat drain
- Lockable control panel
- SecurityLine (Security design)
- Safety door lock
- HeavyDutyLine
- Energy optimisation system connection
- Connection to operating display/potential-free contacts
- Control panel protection
- Switch signal for external control (e.g. in-house ventilation system)
- Ethernet interface
- WiFi interface
- Unit with oven rack 83 mm rail spacing
- Unit with mobile oven rack in baking standard (400 × 600 mm) (only model 20-1/1)

6.5 Option MarineLine

With the MarineLine, RATIONAL offers a special marine version for all iCombi Pro and iCombi Classic electric units. This ensures uninterrupted production, even in rough seas. The RATIONAL MarineLine is approved by the internationally recognised Germanischer Lloyd and complies with strict USPHS hygiene requirements.

Protection against tipping models XS 6-2/3, 6-1/1, 10-1/1, 6-2/1 and 10-2/1
The cooking system is screwed onto the stand and its stainless steel feet can in turn be screwed or welded to the floor or table. This makes the cooking system non-slip and tilt-proof.
The option includes:
› Stand with fixing mount

Protection against tipping models 20-1/1, 20-2/1 and Combi-Duo
For floor standing cooking systems, the stainless steel feet can be welded directly to the ship floor or fastened using special mounting kits to prevent slipping and tilting. For the Combi-Duo, the lower cooking system is screwed onto the stand, which in turn can be screwed or welded to the floor. The Combi-Duo kit has fixing points that enable the cooking systems to be fixed to the wall of the ship. Both cooking systems can be prevented from slipping and tilting in this way.
The option includes:
› Floor standing cooking systems with stainless steel feet
› Mounting kit
› Stand Combi-Duo with fixing mount

Doorstop models XS 6-2/3, 6-1/1, 10-1/1, 6-2/1, 10-2/1, 20-1/1 and 20-1/1
The flexibly adjustable doorstops soften the opening and closing movement of the cooking cabinet door and keeps it in an open state, even in choppy seas. The strength of this softening effect can be adjusted by turning the positioning knob. Due to the flat design, the doorstop does not protrude from the lines of the unit, so it can also be used with Combi-Duo cooking systems.

6.5 Option MarineLine

Oven racks and mobile oven racks with safety mechanisms for hospitality industry accessories
A special upstand on the rack rails of the hinging rack and a fixing bracket on the mobile oven rack secure the accessory from slipping out. In addition, the joins of the mobile oven racks and oven racks are welded all around and meet strict USPHS requirements. This guarantees secure and hygienic use of the units at sea.
The option includes:
› Mobile oven rack or oven rack for MarineLine

Impact protection for door (optional)
The external glass on the cooking chamber door can be protected against damage, if required, by means of metal grid impact protection. Visibility into the cooking cabinet is ensured even when the door is closed.

6.6 Option SecurityLine

The security designs of the RATIONAL cooking systems can be tailored to your own specified security requirements. For example, in prisons, features are required to protect against wilful destruction or to prevent misuse on behalf of third parties. The following security designs are optionally available for all iCombi Pro and iCombi Classic (except iCombi Pro XS 6-2/3).

Lockable control panel (model 6-1/1, 10-1/1, 6-2/1, 10-2/1, 20-1/1 and 20-2/1)
The control panel of the cooking system is protected against vandalism with a robust, almost indestructible cover made from synthetic glass (Lexan). However, the control panel still remains visible even if the cover is closed. On floor cooking systems, another cover protects the care drawer and the hand shower. The cover can be secured with a snap latch and padlock, or with an integrated lock.
The option includes:
› Lockable control panel
› Lockable cover for the hand shower and care drawer (only standalone units)

Lockable cooking chamber doors
The cooking systems can therefore only be loaded and unloaded by authorised persons. The core probe is also flexible and cannot be used as a weapon. As an option, floor units can be equipped with a device to open the cooking cabinet door from inside.
The option includes:
› Latch in the control panel cover to lock the cooking chamber door
› Unlocking from inside (optional)
› Flexible core temperature probe without point

6.6 Option SecurityLine

Safety door
The external glass on the cooking cabinet door is protected against wilful damage by a steel grille. Visibility into the cooking cabinet is ensured even when the door is closed.
The option includes:
› Safety door

Mobile oven rack with retractable handle model 20-1/1, 20-2/1
The handle for the mobile oven rack is securely mounted and can be retracted under the rack once inserted into the cooking chamber. This excluded misuse of the handle.
The option includes:
› Mobile oven rack with fixed handle

6.7 Option HeavyDutyLine

The HeavyDutyLine of iCombi Pro and iCombi Classic has been specifically designed for use in rough conditions, such as in large production kitchens. The cooking systems are therefore ideally equipped for high temperatures, long operating times, heavy loads and rough handling. In particular, the mechanical protection and the easily replaceable components ensure a long service life and guarantee full productivity without downtime, even when subject to adverse conditions.

Impact protection unit front models 6-1/1, 6-2/1, 10-1/1, 10-2/1, 20-1/1 and 20-2/1
Stable metal plates protect the control panel and central dial against mechanical damage, which could occur through bumping into the mobile oven rack, for example. For floor standing cooking systems, the care drawer and hand shower are also protected.
The option includes:
› Metal protective plates to protect the unit front

Externally attachable core temperature probes models 6-1/1, 6-2/1, 10-1/1, 10-2/1, 20-1/1 and 20-2/1)
For the HeavyDutyLine the core probe is replaced by an externally attachable core probe with USB connection box. The magnetic mount significantly reduces the risk of damage. It is also easier to replace the core probe or use it on different cooking systems.
Downtimes are significantly reduced and safe food production ensured through continuous HACCP documentation.
The option includes:
› Externally attachable core temperature probe with USB connection box

Reinforced mobile oven rack models 20-1/1, 20-2/1
The reinforced mobile oven rack of the HeavyDutyLine is made from a more robust material and equipped with reinforced castors. In addition, all joints are continuously welded. Thanks to this, the mobile oven racks are perfectly equipped to withstand excessive strain and high load sizes, but also particularly easy to keep hygienically clean.
The option includes:
› HeavyDutyLine mobile oven rack

6.7 Option HeavyDutyLine

Lateral impact protection models 6-1/1, 6-2/1, 10-1/1, 10-2/1, 20-1/1 and 20-2/1 (optional)
In addition to the standard scope of delivery of the HeavyDutyLine, the side panels and front edges of the cooking system can be protected against damage with the use of impact protection bars. For tabletop units, a support with stable metal bars is mounted onto the stand for this purpose. The support is compatible with all original RATIONAL stands. Standalone units can be protected with protective bars mounted on the left and/or right-side support legs. When setting up multiple cooking systems next to each other, the bars can only be mounted to the cooking systems on the outside.
Possible extensions:
› Table support with impact protection brackets left and right
› Impact protection bars for standalone units, left
› Impact protection bars for standalone units, right

Impact protection unit door models 6-1/1 – 20-2/1 (optional)
A full-surface metal grid protects the door against damage without limiting visibility into the cooking cabinet. This ensures that the appliance can be operated safely as usual.

6.8 Option integrated fat drain

The integrated fat drain is ideal when preparing particularly greasy food such as poultry or knuckles of veal and avoids the build-up of fat in the drain system. Dripping grease is collected in the cooking cabinet and drained into special grease collectors. An integrated shut-off valve facilitates changing full containers safely during the cooking process, ensuring the collected fat can be disposed of safely and properly. An additional plug/stopper protects the exit point during the cleaning process. This means that the costs for the maintenance and emptying of the fat separators can be significantly reduced and the maintenance intervals can be extended.

Integrated fat drain for models 6-1/1, 10-1/1, 6-2/1 and 10-2/1)
The grease drip tray is simply placed in the bottom rack rail of the cooking cabinet, which is intended for this purpose. The dripping fat is collected here and can be drained into the appropriate canisters. These can be placed safely and in a space-saving manner in a RATIONAL stand (II or IV) or placed flexibly next to a table.
The option includes:
› Fat drip tray
› Drain pipes
› Shut-off valve
› 2 canisters 10 litres (2.64 USGAL)
The following application-specific accessories are available for this:
› Levelling kit for direct table installation
› Stand II (open)
› Stand IV (closed)

Integrated fat drain for models 20-1/1, 20-2/1
Special drip trays are placed in the rails provided in the mobile oven rack. Via these drip trays and the corresponding drain rails dripping fat can now be collected in the grease drip tray and drained into a shallow, coverable collection container. For maximum operational safety this is placed in a fixed holding tray next to the cooking system.
The option includes:
› Fat drip tray
› 2 drip trays and drain rail
› Drain pipes
› Shut-off valve
› Collection container 1/1 GN with handles
› Holding tray

6.8 Option integrated fat drain

Integrated fat drain for Combi-Duo
For Combi-Duo fitted with integrated applications the upper and lower cooking system need to be selected with integrated fat drain. To match this, either a Combi-Duo kit and a Combi-Duo stand suitable for setting up, or the levelling kit is selected. Finally, to be able to connect the fat drain, a specially adjusted Combi-Duo fat drain kit with the appropriate piping and brackets needs to be selected. Depending on the setup, the fat will be drained into containers or canisters next to the Combi-Duo. To safely store these, a fixable holding tray is available for the containers or canisters.
To ensure the safe operation, Combi-Duo models 6-1/1 on 6-1/1 or 6-2/1 on 6-2/1 must be mounted on a stand I for Combi-Duo or a stand II for Combi-Duo. The Combi-Duo models 6-1/1 on 10-1/1 or 6-2/1 on 10-2/1 must be mounted on a stand I for Combi-Duo or on a levelling kit
Specifically matched Combi-Duo kits with integrated fat drain include the following elements:
› Additional piping
› Holding tray
› 2 collection containers 1/2 GN (only for installation with levelling kit)

Transport trolley for containers (Combi-Duo and standalone units)
Enables secure transport of filled canisters/containers for disposal.
The option includes:
› Trolley
› Removable handle

6.9 Accessories – MobilityLine

Cooking systems with MobilityLine equipment offer maximum flexibility and mobility for use in catering, banqueting, party events or marquee operations. Thanks to the smooth and stable castors, tabletop and standalone units can easily be moved to various locations. The unit can also be connected very quickly. In conventional kitchens, for example, the mobile version enables easy basic cleaning of the kitchen. Space between the cooking systems for servicing are no longer required. This reduces the space required in the kitchen. The mobile version is available as an optional accessory for all iCombi units, and can be retrofitted by a service technician at any time.

MobilityLine tabletop units models 6-1/1, 10-1/1, 6-2/1 and 10-2/1
The tabletop unit is firmly screwed to stand II MobilityLine. Side bars protect the cooking system and together with the large stable castors, they facilitate mobility.
The MobilityLine unit comes with:
› Stand II MobilityLine

MobilityLine models 20-1/1, 20-2/1
A special frame with four robust castors and parking brakes, on which the floor unit is mounted, allows effortless mobility. The mobile oven rack handle is used for this purpose.
The MobilityLine unit comes with:
› Special frame with four castors and parking brakes
Note:
A specially designed pallet with ramp for quick and easy loading and unloading, as well as flexible transport to the place of use is available upon request.

6.10 Accessories – USB core temperature probes

With the external core temperature probes, the application possibilities can be expanded and the quality of the products can be monitored even better. With the two additional core temperature probes that can be externally attached, up to three different products can be controlled simultaneously. In iProductionManager or when finishing, different dishes can always be cooked to perfection.

Two externally attachable core temperature probes
Preparation of up to three different products at the same time, simply place the desired core temperature probe, select the corresponding product on the display and assign it to the respective rack in the iProductionManager. The core probes are colour-coded to prevent any confusion. Together with the internal core probe, this means there are 3 probes each with 6 measuring points available. With the help of 6 measuring points, the coldest point in the food to be cooked is always identified and false readings are recognised and corrected.
The scope of delivery includes:
› USB connection box with two 6-point core temperature probes
› Holder for core temperature probe
› Magnet holder for the USB connection box

Sous-vide cooking
The special extra thin sous-vide core probe supports the cooking intelligence of the iCombi Pro to precisely achieve the core temperature without compromising the vacuum in the bag.
The scope of delivery includes:
› USB connection box with 2-point Sous-Vide core temperature probes
› Holder for core temperature probe
› Magnet holder for the USB connection box

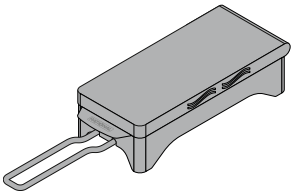
Externally attachable core temperature probe
The core probe has 6 measuring points and is used for all cooking methods. It can easily be used as a replacement for the internal core temperature probe.
The scope of delivery includes:
› USB connection box with simple 6-point core temperature probe
› Holder for core temperature probe
› Magnet holder for the USB connection box

6.10 Accessories – USB core temperature probes

USB connection outside the cooking chamber
Thanks to the external USB connection, the additional core temperature probes are easy to install and easy to use in other cooking systems. When there is no core probe inserted, the USB interface is protected by a splash-water resistant cover flap.

Magnet holder/holder for core temperature probe
The USB connection box is secured above the display with a magnetic holder. If the core temperature probes are not used, they can be stored in the holder on the side of the iCombi Pro and iCombi Classic. The holder can be removed for cleaning.

6.11 Accessories – VarioSmoker



With the VarioSmoker, the iCombi cooking systems can also take over the function of smoke ovens. It can be used to add aromatic smoke flavour and colour to meat, fish and vegetables. The user can determine this themselves according to their taste

Smoking box
The VarioSmoker works with standard smoking materials, such as wood chips or pellets. By selecting natural smoking materials, the temperature in the cooking chamber and the appropriate preparation of the raw materials, flavour and intensity can be achieved in a customised manner. The powerful smoker box heats up and is ready to use in just a few minutes.

Plug & Play
The VarioSmoker can be used in all RATIONAL Combi steamers in manual mode.

Power supply bracket
The VarioSmoker is supplied with a variable power supply bracket that is attached to the RATIONAL Combi steamer. This means the power supply is always safely placed at the correct working height. If the smoker box is not used, it can also be hung in the bracket to save space.
The VarioSmoker comes with:
› Smoking box with power supply connection cable
› Power supply unit
› Power supply bracket
› Application manual

Application manual
For a simple introduction to perfect smoking. The application manual accompanying the VarioSmoker offers delicious recipes and tips on the optimal cooking parameters. The user is given extensive support for manual smoking in RATIONAL Combi steamers. Even users without any experience in smoking will achieve professional smoked and flavouring results from the very beginning.

6.11 Accessories – VarioSmoker

Safety note:
The VarioSmoker must not be operated outside of the cooking system and only under an operational exhaust system. The smoke gases must be discharged from the building by the exhaust air system. Air circulation systems, such as the UltraVent or UltraVent Plus are not suitable for use with a VarioSmoker, because there is no direct connection to the exhaust.

Design information:
A separate power supply must be provided for the VarioSmoker

7. Technical data CombiMaster Plus XS 6-2/3

In general, the technical data corresponds to the data of the iCombi Pro XS 6-2/3 1 (sections 1.1 to 1.5). Any data that deviates from this is listed below:

Weight CombiMaster Plus		
Gross weight	(kg)	82
Net weight	(kg)	62
Electrical values 3 NAC 400 V CombiMaster Plus		
Connected load	(kW)	5,7
Power convection mode	(kW)	5,4
Steam generator	(kW)	5,4
Fuse	(A)	3 × 10
Connection cable	(mm^2)	5 × 1.5
Water connection CombiMaster Plus		
Flow pressure	(bar)	1.0 - 6.0
Noise level CombiMaster Plus		
Noise level	(dBA)	52

Consumption		
Average water consumption including steam generator (without consumption by cleaning programmes) CombiMaster Plus	(l/h)	3.8

On-site connections
The connections of the CombiMaster Plus XS 6-2/3 are in the same position as the connections of the iCombi Pro XS 6-2/3 (section 2.1). No optional WiFi interface is available for CombiMaster Plus XS 6-2/3 units.

Unit transportation
The same information, regulations and technical values apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 2.2).

Unit installation
The same information, regulations and technical values apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 2.3).

7. Technical data CombiMaster Plus XS 6-2/3

Electrical connection
The same information and regulations apply to CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 2.4).
The following electrical values apply to the CombiMaster Plus XS 6-2/3:

	Power (kW)	Current consumption (A)	Fuse (A)	RCD type (F/B or B)
1 NAC 220 V	5.0	22.8	25	F/B
1 NAC 230 V	5.3	22.9	25	F/B
1 NAC 240 V	5.7	24.0	25	F/B
3 NAC 380 V	5.3	8.1	10	F/B
3 NAC 400 V	5.7	8.5	10	F/B
3 NAC 415 V	6.2	8.7	10	F/B
2 AC 230 V	5.3	22.9	25	B
2 AC 240 V	5.3	24.0	25	B
3 AC 200 V	5.3	15.5	16	B
3 AC 220 V	5.3	14.0	16	B
3 AC 230 V	5.7	14.5	16	B
3 AC 240 V	6.2	15.0	16	B

CombiMaster Plus XS 6-2/3 MarineLine (Marine design)

	Power (kW)	Current consumption (A)	Fuse (A)	RCD type (F/B or B)
3 NAC 400 V	4.9	7.1	10	F/B
2 AC 220 V	5.0	22.8	25	B
3 AC 220 V	5.0	13.2	16	B

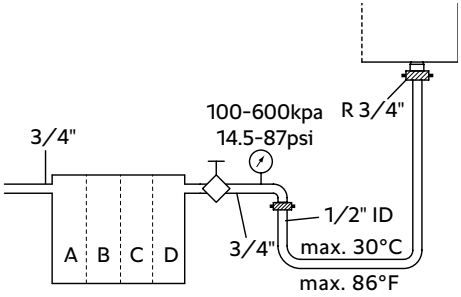
CombiMaster Plus XS 6-2/3 USA/Canada

	Power (kW)	Current consumption (A)	Fuse (A)	RCD type (F/B or B)
2 AC 208 V	5.7	27.5	50	B
2 AC 240 V	5.7	31.5	50	B
3 AC 208 V	5.7	16.5	30	B
3 AC 240 V	5.7	19.0	30	B

7. Technical data CombiMaster Plus XS 6-2/3

Water connection
The same information, regulations and technical values apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 2.5).

NOTE:
In addition to the provisions and notes from section 2.5, the following notes apply:
› To connect the CombiMaster Plus XS 6-2/3 to the drinking water network, drinking water protection for substance class 3 pursuant to EN 1717, e.g. CA system separator pursuant to EN 14367, to be installed in the supply line at the tap.
Country-specific information:
› Switzerland/Netherlands/Japan: System separator is an integral part of the scope of delivery.



Water softening/decarbonisation:
In the case of water with a high calcium content (> 15° dH) and use for more than 3 hours per day in the "humid heat" or "combination" operating modes, a water treatment system should be installed upstream. Hydrogen-ion exchange systems (H+ ion exchange systems) should be used. The water treatment system must be inserted at position D.

Maximum flow rate

Maximum flow rate model XS 6-2/3	(l/min)	15.0

Average water consumption

Wastewater connection CombiMaster Plus XS
The same information, regulations and technical values apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 2.6).
Maximum short-term wastewater volume 0.7 litres/second.

Thermal load CombiMaster Plus XS
The values of the latent and sensitive thermal load of CombiMaster Plus XS 6-2/3 are identical to those of the iCombi Pro XS-6-2/3 (section 3.1).

Exhaust requirement
The same information, regulations and technical values apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 3.2).

RATIONAL extractor hoods
The UltraVent and UltraVent Plus extractor hoods of the iCombi Pro XS 6-2/3 are also compatible with the CombiMaster Plus XS 6-2/3. The same information, regulations and technical values apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (section 3.3).

7. Technical data CombiMaster Plus XS 6-2/3

Unit permissions
The unit permissions for CombiMaster Plus XS 6-2/3 and iCombi Pro are identical (section 4).

Combi-Duo
CombiMaster Plus XS 6-2/3 units can also be installed with iCombi Pro XS 6-2/3 units as a Combi-Duo. The CombiMaster Plus XS 6-2/3 unit must always be installed as the lower unit. Installation of the CombiMaster Plus XS 6-2/3 on other unit sizes is not intended. The same information on installation and height dimensions apply for CombiMaster Plus XS 6-2/3 and iCombi Pro XS 6-2/3 (sections 5.1 and 5.3).

Options
No optional WiFi interface is possible for CombiMaster Plus XS 6-2/3 units. The Ethernet interface is available as an option for the CombiMaster Plus XS 6-2/3. Otherwise, the same options are available for CombiMaster Plus XS 6-2/3 as for iCombi Pro XS 6-2/3 units (section 6.1).

8. Service examples iCombi Pro/ iCombi Classic

In the first line of each service example, the maximum capacity is listed, either the number of GN containers, the information in kilograms, litres or units or combined in the number of plug-in units combined with the respective load quantity (times without pre-heating).

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Beef and veal								
Roast beef	kg	2x3	3x6	3x12	5x6	6x12	10x6	10x12
	Hours	2	2	2	2	2	2	2
Fillet steaks 200 g, veal fillet, veal cutlet, beef tenderloin 180 g	kg	3x1	5x1.5	5x3	8x1.5	8x3	16x1.5	16x3
	Min.	7	7	7	7	7	7	7
Braised beef, beef roulades 180 g	kg	2x3	3x6	3x12	3x4	6x12	10x6	10x12
	Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Boiled veal	kg	2x4	3x6	3x12	5x4	6x12	10x6	10x12
	Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Breaded veal escalopes	Pc.	4x4	5x6	5x12	8x6	8x12	14x6	16x12
	Min.	12	12	12	12	12	12	12
Veal bones for sauce	kg	4x1.5	6x2	12x2	10x2	20x2	20x2	40x2
	Min.	30	30	30	30	30	30	30
Pork and lamb								
Roast pork, leg of lamb, meat loaf	kg	2x3		3x10	5x5	6x10	7x2	10x10
	Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Lamb chop, breaded rack of lamb	kg	3x1	5x1.5	5x3	8x1.5	8x3	16x1.5	16x3
	Min.	10	10	10	10	10	10	10
Spare ribs	kg	4x1.5	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	45	45	45	45	45	45	45
Pork medallions	kg	4x1	5x1.5	5x3	7x1.5	8x3	16x1.5	16x3
	Min.	7	7	7	7	7	7	7
Breaded pork chops	Pc.	3x4	3x8	3x16	5x8	5x16	10x8	10x16
	Min.	9	9	9	9	9	9	9
Rissoles	Pc.	3x6	5x8	5x16	7x8	7x16	15x8	15x16
	Min.	12	12	12	12	12	12	12
Bacon	kg	4x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	2	2	2	2	2	2	2
Meatloaf	kg	2x4	3x6	6x6	5x6	10x6	10x6	20x6
	Hours	1	1	1	1	1	1	1

8. Service examples iCombi Pro/ iCombi Classic

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Game and poultry								
Saddle of venison	kg	2x3	3x4	3x8	5x4	5x8	10x4	10x8
	Min.	12	12	12	12	12	12	12
Leg of venison, braised	kg	2x3	3x5	3x10	5x5	6x10	7x2	10x10
	Min.	45	45	45	45	45	45	45
Wild duck 1,300g, whole	Pc.	-	1x4	1x8	2x4	2x8	4x4	4x8
	Hours	1	1	1	1	1	1	1
Turkey, whole	Pc.	-	1x1	2x1	2x1	2x2	5x1	5x2
	Hours	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Goose, whole	Pc.	-	2x2	2x4	3x2	3x4	6x2	6x4
	Hours	2	2	2	2	2	2	2
Chicken 950 g	Pc.	1x4	2x8	2x16	3x8	3x16	6x8	6x16
	Min.	35	35	35	35	35	35	35
Duck 2,200g	Pc.	1x2	2x2	4x2	3x2	6x2	6x2	12x2
	Hours	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Fish								
Salmon (portion pieces)	kg	4x1	5x1.5	5x3	8x1.5	8x3	16x1.5	16x3
	Min.	6	6	6	6	6	6	6
Salmon trout fillet, turbot fillet, halibut, sole rolls	kg	4x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Salmon steak	kg	4x1	5x1.5	5x3	6x1.5	8x3	16x1.2	16x3
	Min.	7	7	7	7	7	7	7
Blue trout; seabream	kg	3x1	5x1.5	5x3	8x1.5	8x3	16x1.5	16x3
	Min.	12	12	12	12	12	12	12
Mussels, mixed seafood	kg	6x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	4	4	4	4	4	4	4
King prawns	kg	6x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	5	5	5	5	5	5	5

8. Service examples iCombi Pro/ iCombi Classic

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Sausages, terrines and savoury bakes								
Boiling veal sausage, reshaping sausages	Pc.	40	60	120	100	200	200	400
	Min.	30	30	30	30	30	30	30
Lasagne, canneloni, potato- vegetable gratin, moussaka	kg	3x1.5	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	35	35	35	35	35	35	35
Grilled sausages	kg	3x1	4x1	4x2	7x1	7x2	14x1	14x2
	Min.	12	12	12	12	12	12	12
Terrine	kg	2x3	3x5	3x10	5x5	5x10	10x5	10x10
	Min.	35	35	35	35	35	35	35
Pies	GN	2x3	3x5	3x10	5x5	5x10	10x5	10x10
	Hours	1	1	1	1	1	1	1
Quiche Lorraine	kg	3x1.5	3x3	3x6	5x3	5x6	10x3	10x6
	Min.	14	14	14	14	14	14	14
Potatoes and side dishes								
Boiled potatoes	kg	4x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	14	14	14	14	14	14	14
Jacket potatoes	kg	4x2	6x4	6x8	10x4	10x8	20x4	
	Min.	35	35	35	35	35	35	35
Dumplings	Pc.	4x18	3x28	3x56	5x28	5x56	10x28	10x56
	Min.	22	22	22	22	22	22	22
Roast potatoes precooked	kg	4x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	8	8	8	8	8	8	8
Baked potatoes	kg	4x1	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	35	35	35	35	35	35	35
Pommes Macaire	kg	4x1	6x1	6x2	10x1	10x2	20x1	20x2
	Min.	12	12	12	12	12	12	12
Rice	kg	4x1	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	25	25	25	25	25	25	25
Wild rice	kg	4x1	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	50	50	50	50	50	50	50
Rice pudding	kg	4x1	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	25	25	25	25	25	25	25
Frozen chips	kg	4x0.65	6x1	12x1	10x1	20x1	20x1	40x1
	Min.	18	18	18	18	18	18	18
Potato gratin	kg	4x1.5	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	40	40	40	40	40	40	40

8. Service examples iCombi Pro/ iCombi Classic

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Vegetables and side dishes								
Broccoli	kg	4x1.5	3x5	3x10	5x5	5x10	10x5	10x10
	Min.	7	7	7	7	7	7	7
Brussel sprouts, kohlrabi, carrots, beans	GN	3x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	8	8	8	8	8	8	8
Spinach, savoy cabbage (blanching)	kg	4x1.5	6x1.5	6x3	10x1.5	10x3	20x1.5	20x3
	Min.	3	3	3	3	3	3	3
Cauliflower, completely steam	GN	3x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	20	20	20	20	20	20	20
Young peas	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	10	10	10	10	10	10	10
Asparagus	kg	4x1	6x1.5	6x3	10x1.5	10x3	10x1.5	10x3
	Min.	16	16	16	16	16	16	16
Tomatoes	GN	4x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	2	2	2	2	2	2	2
Cauliflower, gratinated	GN	3x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	4	4	4	4	4	4	4
Vegetable quiche	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	12	12	12	12	12	12	12
Cabbage roulades	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	45	45	45	45	45	45	45
Fried mushrooms	kg	4x1	6x1.5	6x3	10x1.5	10x3	10x1.5	10x3
	Min.	3	3	3	3	3	3	3

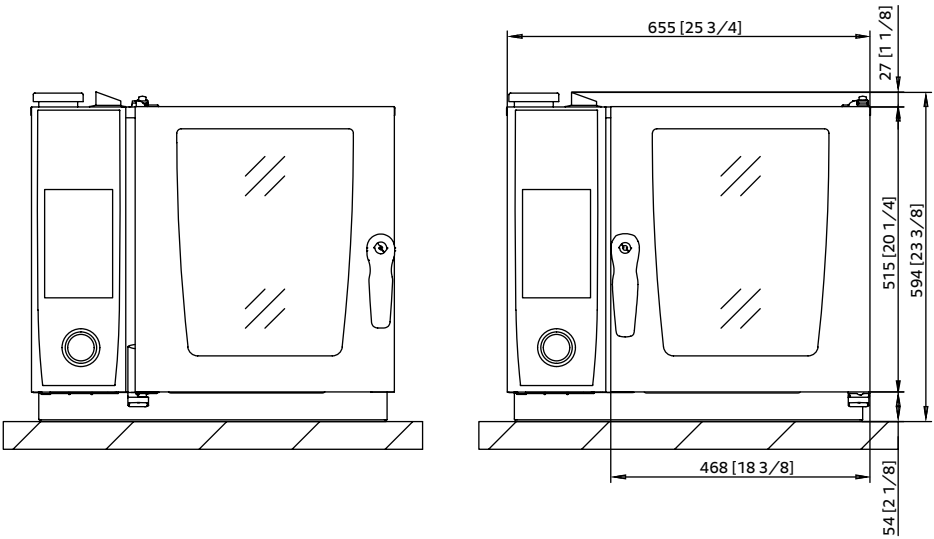
8. Service examples iCombi Pro/ iCombi Classic

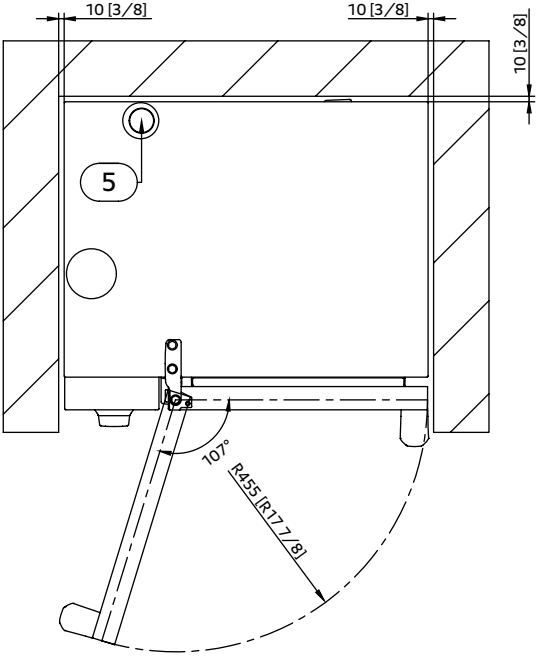
Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Eggs								
Eggs (hard-boiled)	Pc.	6x30	6x45	6x90	10x45	10x90	20x45	20x90
	Min.	10	10	10	10	10	10	10
Eggs in the cocotte (poached eggs)	Pc.	3x12	3x12	3x24	5x12	5x24	10x12	10x24
	Min.	7	7	7	7	7	7	7
Egg royale	L	4x1.5	6x2	6x4	10x2	10x4	20x2	20x4
	Min.	10	10	10	10	10	10	10
Scrambled eggs	L	4x1.5	3x3	3x6	5x3	5x6	10x3	10x6
	Min.	10	10	10	10	10	10	10
Fried eggs	Pc.	4x5	6x8	6x16	10x8	10x16	20x8	20x16
	Min.	2	2	2	2	2	2	2
Omelette	kg	4x1.5	6x3	6x6	10x3	10x6	20x3	20x6
	Min.	5	5	5	5	5	5	5
Frozen convenience (Finishing)								
Chicken breast, defrosted	kg	4x1	5x1.5	5x3	10x1.5	8x3	16x1.5	16x3
	Min.	8	8	8	8	8	8	8
Turkey breast, portion slices, defrosted	kg	2x3	3x6	3x12	5x6	5x12	10x6	10x12
	Min.	6	6	6	6	6	6	6
Pork fillet, portion, defrosted	kg	3x6	6x10	6x20	10x10	10x20	20x10	20x20
	Min.	10	10	10	10	10	10	10
Frozen pizza, frozen	Pc.	2x1	6x2	6x4	10x2	10x4	20x2	20x4
	Min.	4	4	4	4	4	4	4
Frozen apple strudel, portion, frozen	GN	3x2/3	3x1/1	3x2/1	5x1/1	5x2/1	10x1/1	10x2/1
	Min.	12	12	12	12	12	12	12
Kaiserschmarrn (shredded sweet pancake) frozen goods	GN	3x2/3	3x1/1	3x2/1	5x1/1	5x2/1	10x1/1	10x2/1
	Min.	8	8	8	8	8	8	8

8. Service examples iCombi Pro/ iCombi Classic

Model		XS 6-2/3	6-1/1	6-2/1	10-1/1	10-2/1	20-1/1	20-2/1
Unit size		6×2/3 GN	6×1/1 GN	6×2/1 GN	10×1/1 GN	10×2/1 GN	20×1/1 GN	20×2/1 GN
Bake								
Tray bake	GN	3x2/3	3x1/1	3x2/1	5x1/1	5x2/1	10x1/1	10x2/1
	Min.	35	35	35	35	35	35	35
Apple strudel	GN	2x2/3	3x1/1	3x2/1	5x1/1	5x2/1	10x1/1	10x2/1
	Min.	25	25	25	25	25	25	25
Sponge base	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	12	12	12	12	12	12	12
Sponge bases ring	GN	3x2/3	3x1/1	3x2/1	5x1/1	5x2/1	10x1/1	10x2/1
	Min.	30	30	30	30	30	30	30
Choux pastry (cream puffs)	Pc.	4x6	6x8	6x16	10x8	10x16	20x8	20x16
	Min.	8	8	8	8	8	8	8
Crème Caramel (jars)	GN	4x2/3	3x1/1	3x2/1	5x1/1	5x2/1	10x1/1	10x2/1
	Min.	50	50	50	50	50	50	50
Yeast-leavened cakes	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	50	50	50	50	50	50	50
Yeast plaits	Pc.	2x2	3x2	3x4	5x2	5x4	10x2	10x4
	Min.	35	35	35	35	35	35	35
Cheesecake (shortcrust pastry base)	Pc.	3x1	3x2	3x4	5x2	5x4	10x2	10x4
	Min.	50	50	50	50	50	50	50
Shortcrust pastry base	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	4	4	4	4	4	4	4
Marble cake; pound cake	Pc.	2x2	3x2	3x4	5x2	5x4	10x2	10x4
	Min.	50	50	50	50	50	50	50
Cookies	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	10	10	10	10	10	10	10
Shortcrust pastry and shortbread biscuits (biscuits)	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	5	5	5	5	5	5	5
Streuselkuchen	GN	6x2/3	6x1/1	6x2/1	10x1/1	10x2/1	20x1/1	20x2/1
	Min.	35	35	35	35	35	35	35
Bread rolls (fresh dough)	GN	4x8	6x12	6x24	10x12	10x24	20x12	20x24
	Min.	16	16	16	16	16	16	16

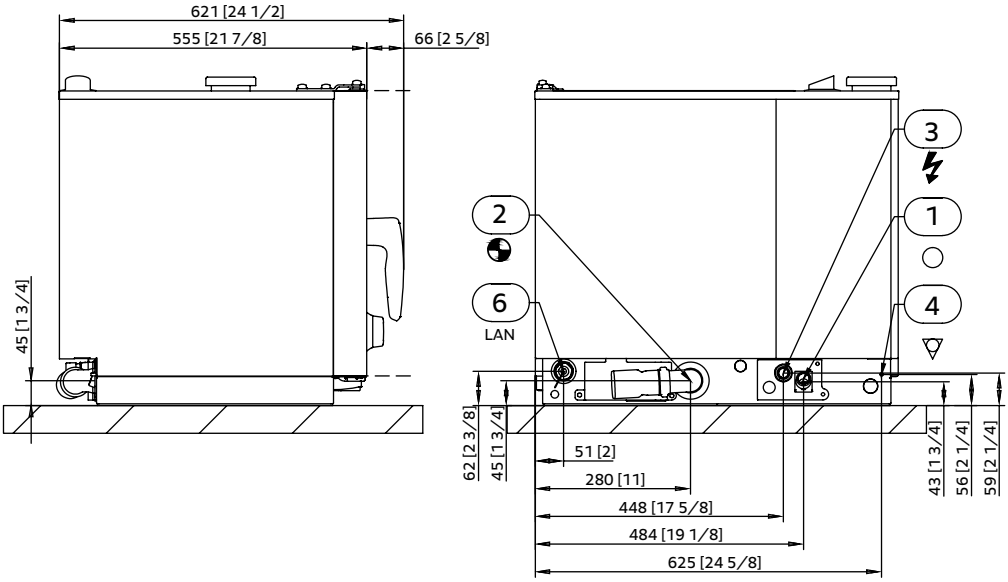
9.1.1 Model XS 6-2/3 Electric

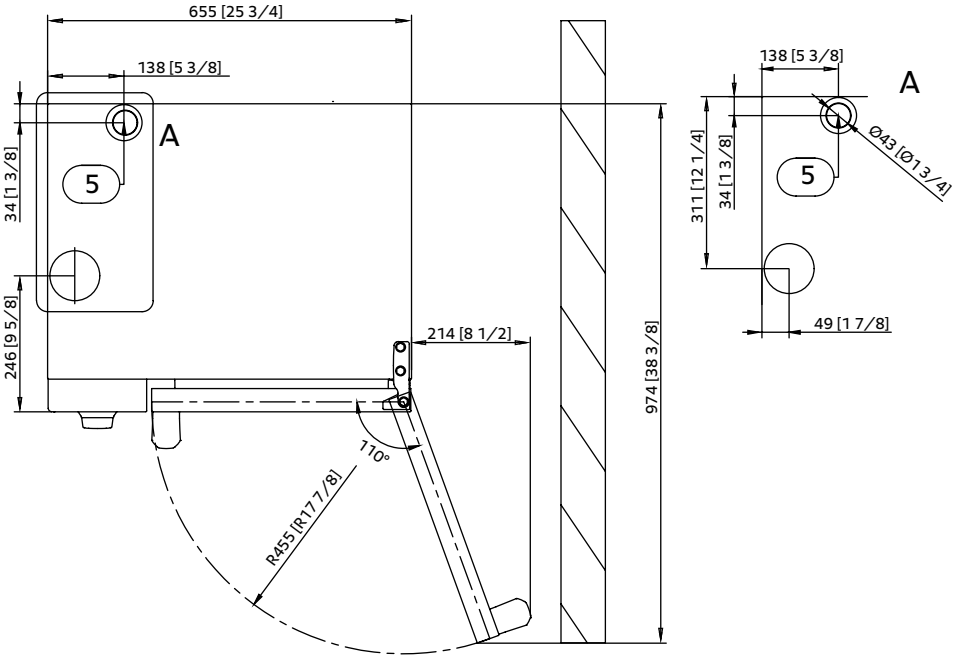




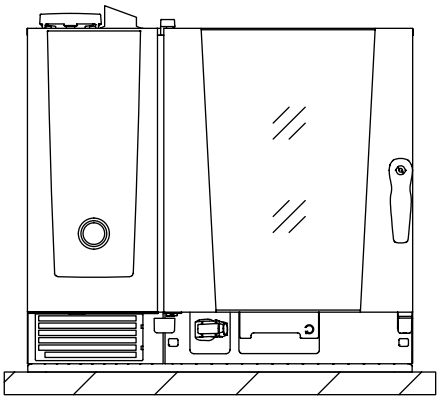
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

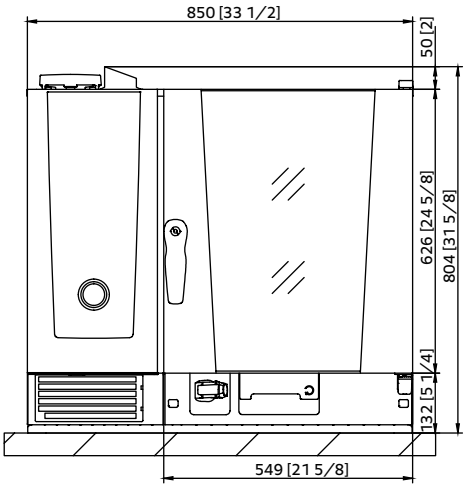
9.1.1 Model XS 6-2/3 Electric

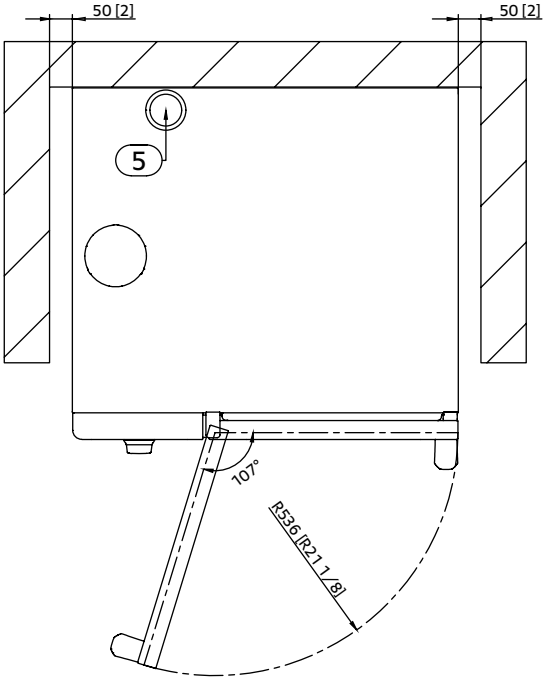




9.1.2 Model 6-1/1 Electric

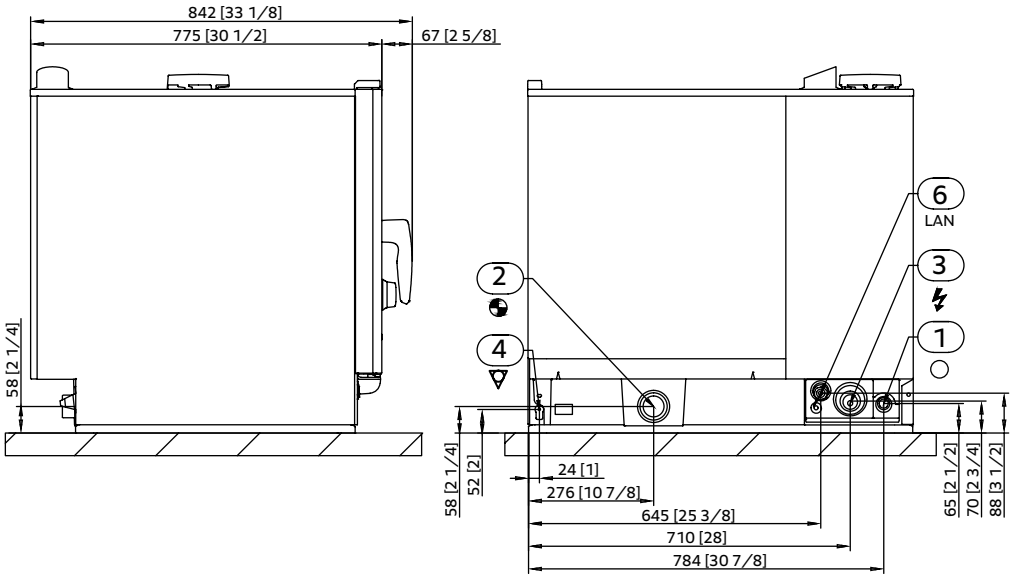


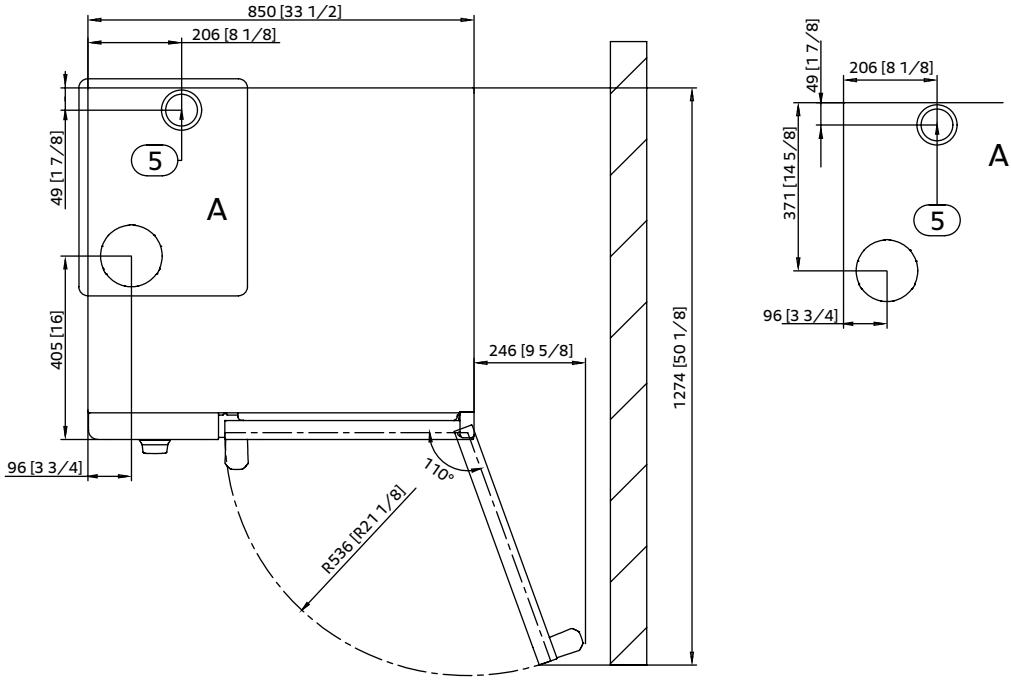




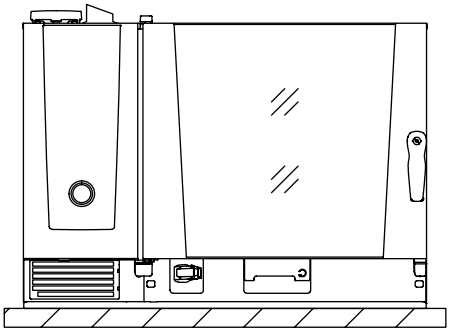
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

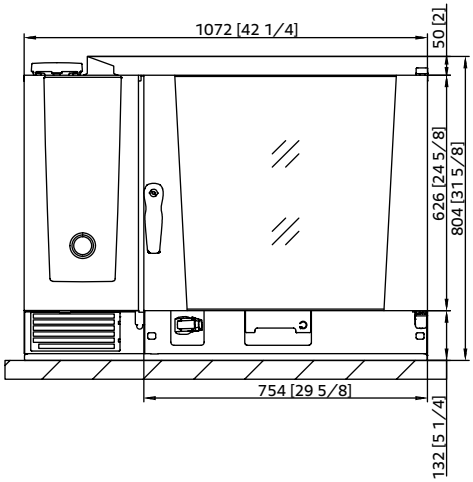
9.1.2 Model 6-1/1 Electric

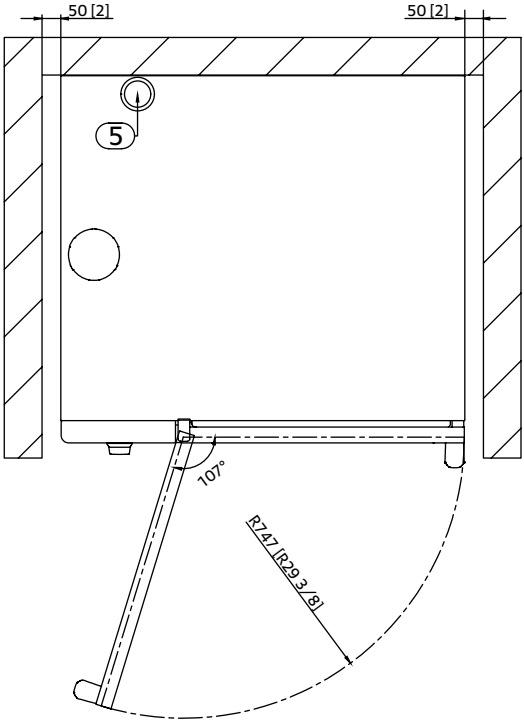




9.1.3 Model 6-2/1 Electric

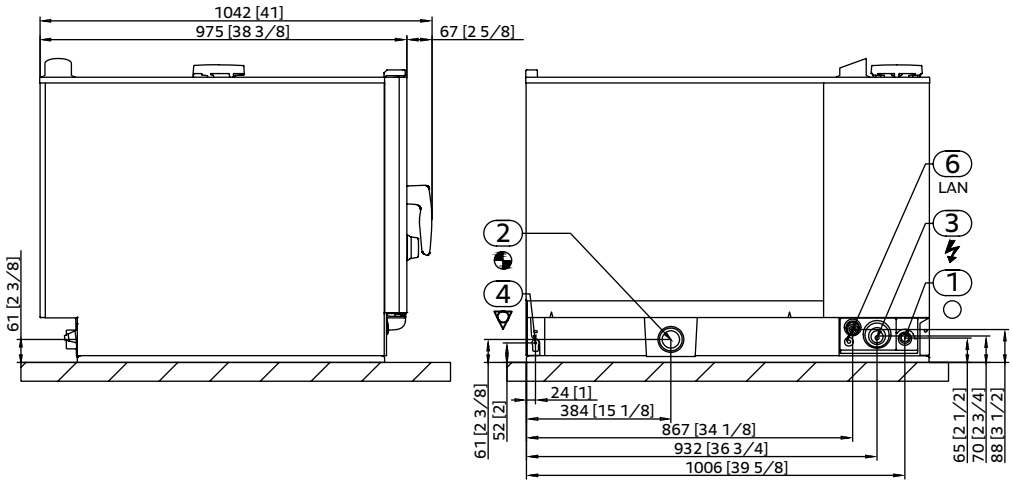


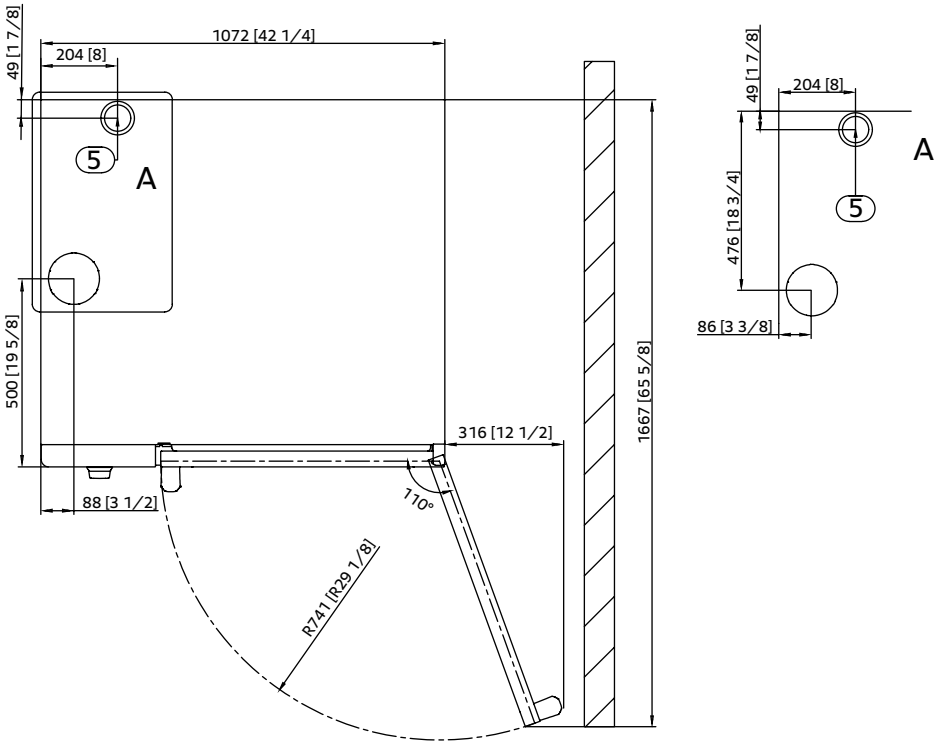




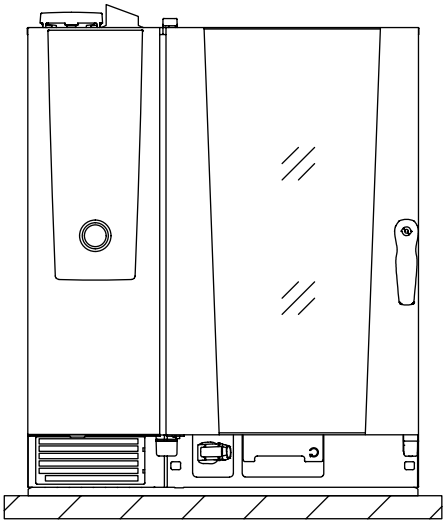
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

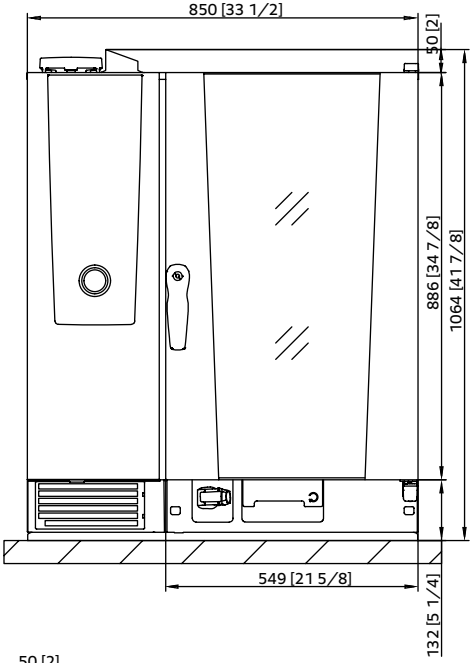
9.1.3 Model 6-2/1 Electric

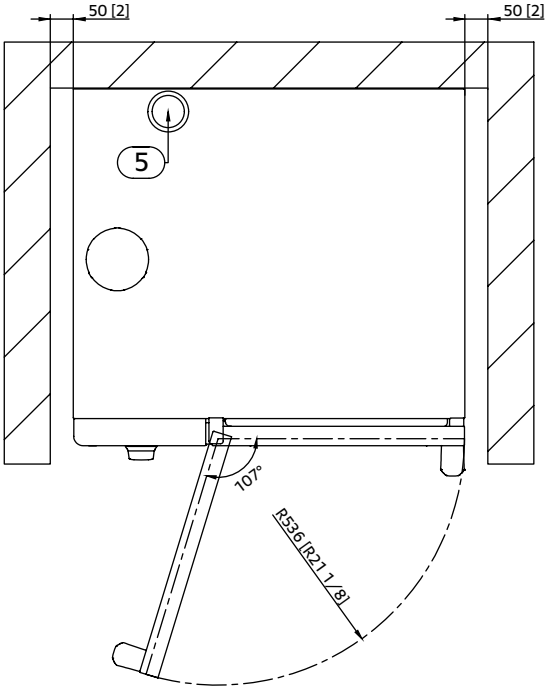




9.1.4 Model 10-1/1 Electric

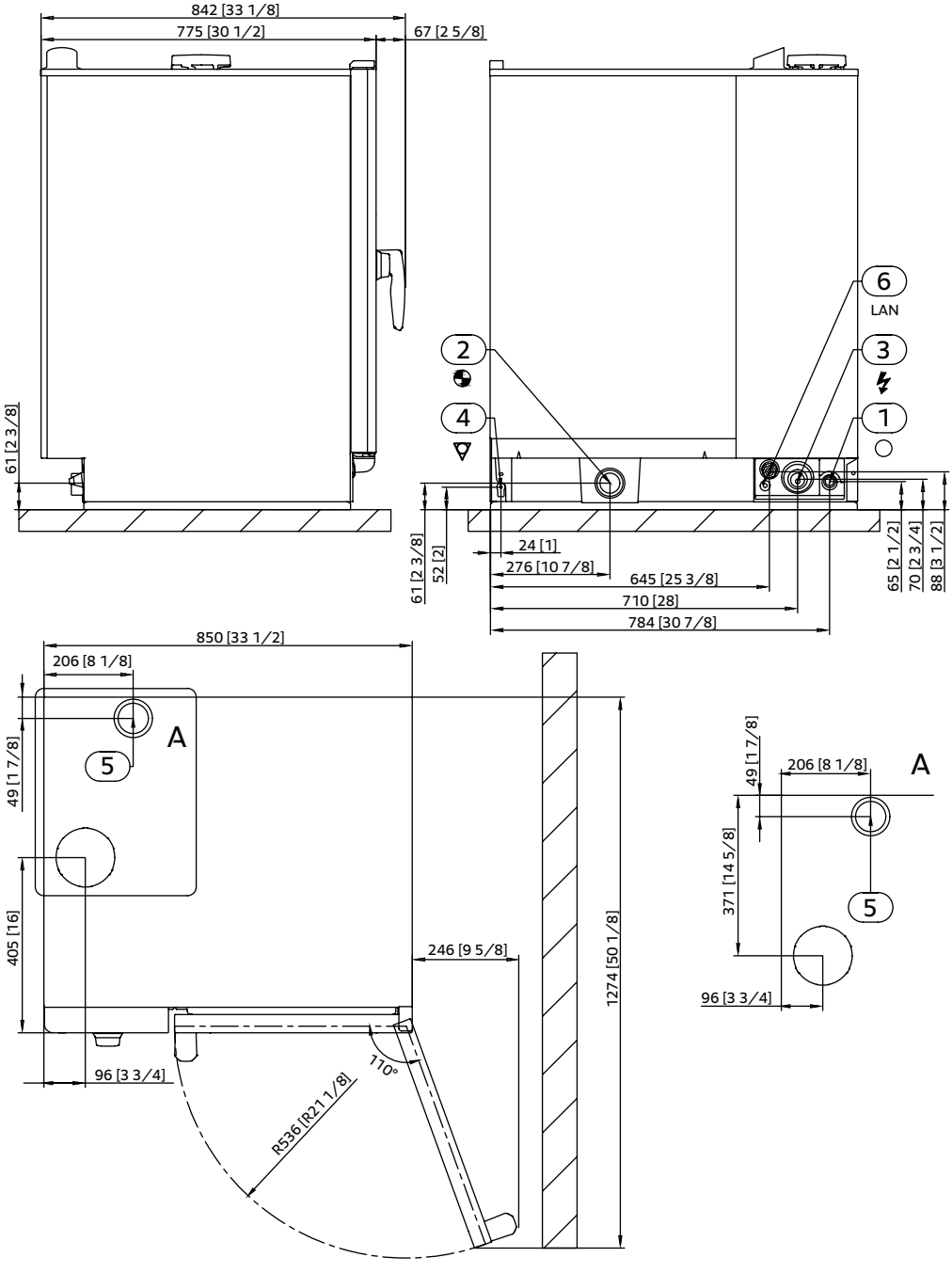




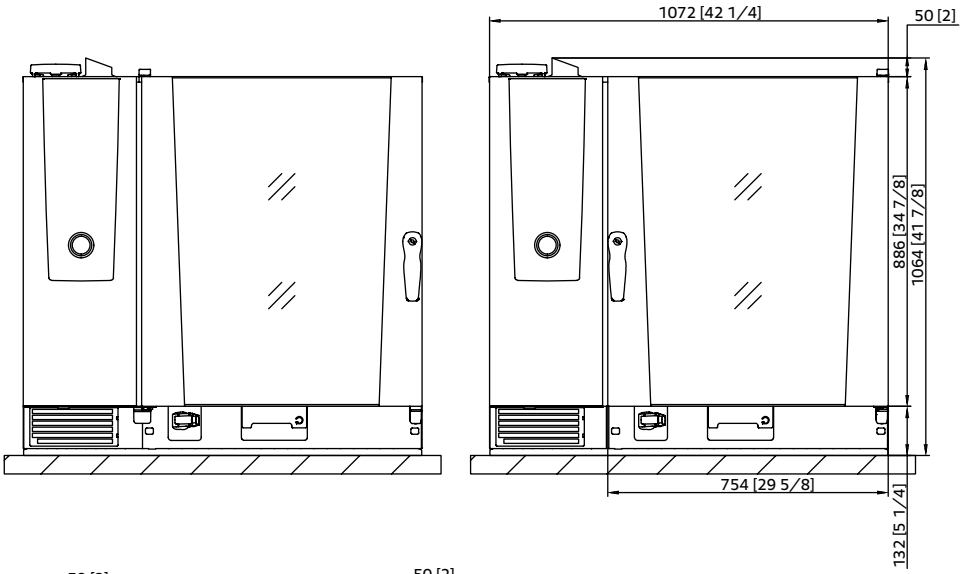


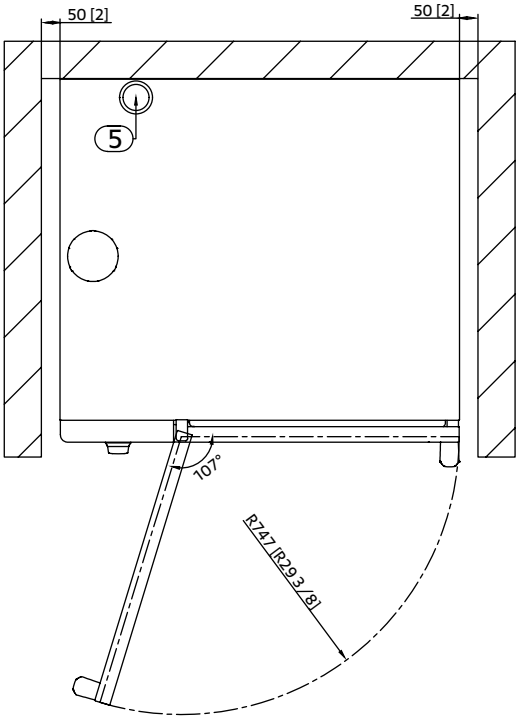
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

9.1.4 Model 10-1/1 Electric



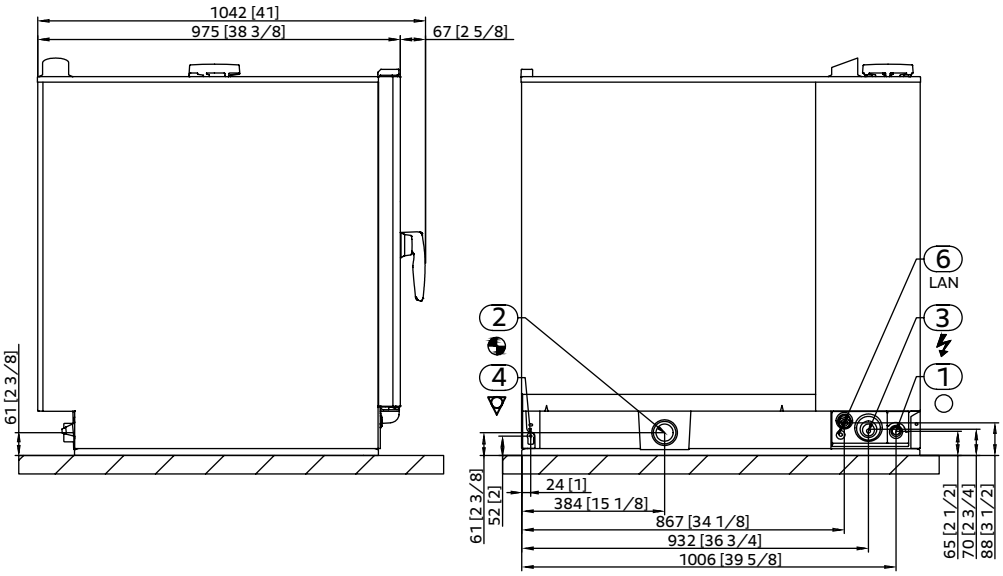
9.1.5 Model 10-2/1 Electric

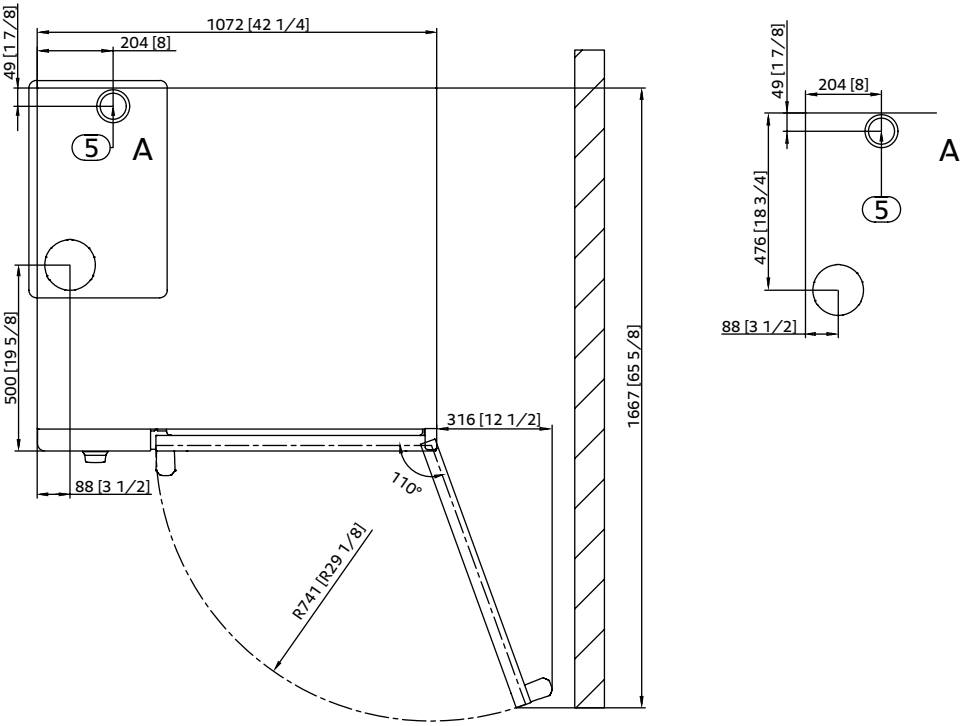




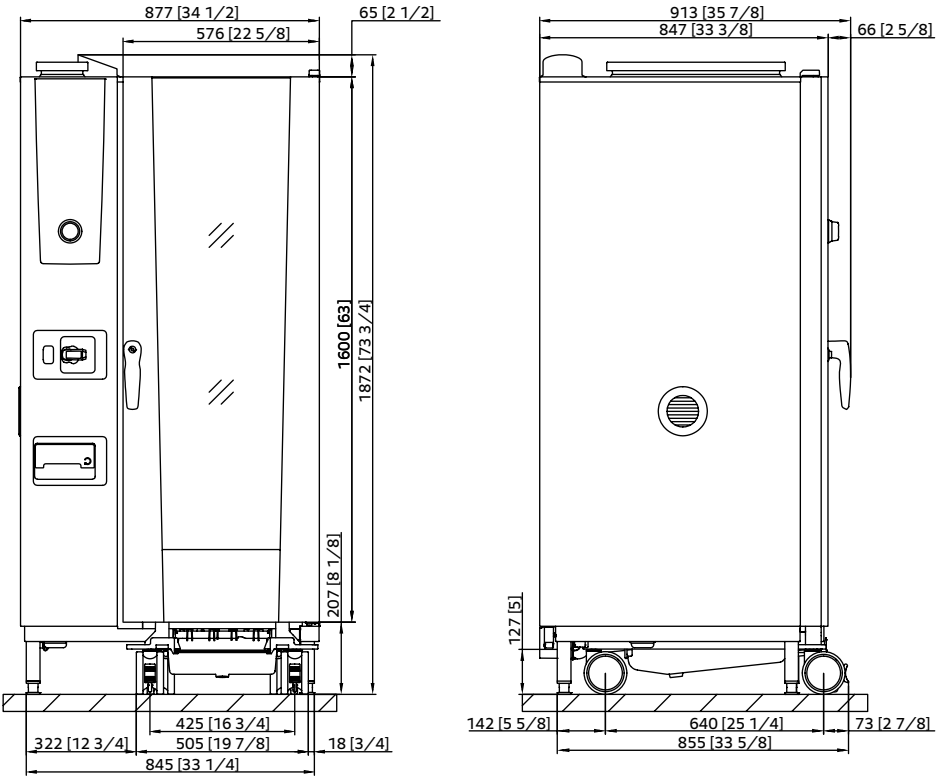
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

9.1.5 Model 10-2/1 Electric

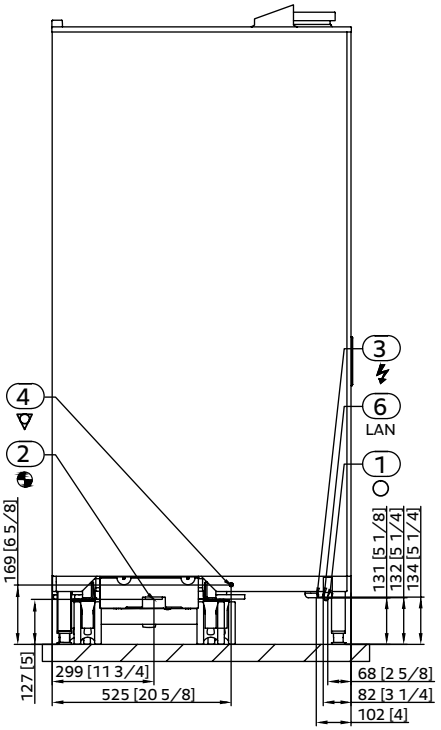




9.1.6 Model 20-1/1 Electric

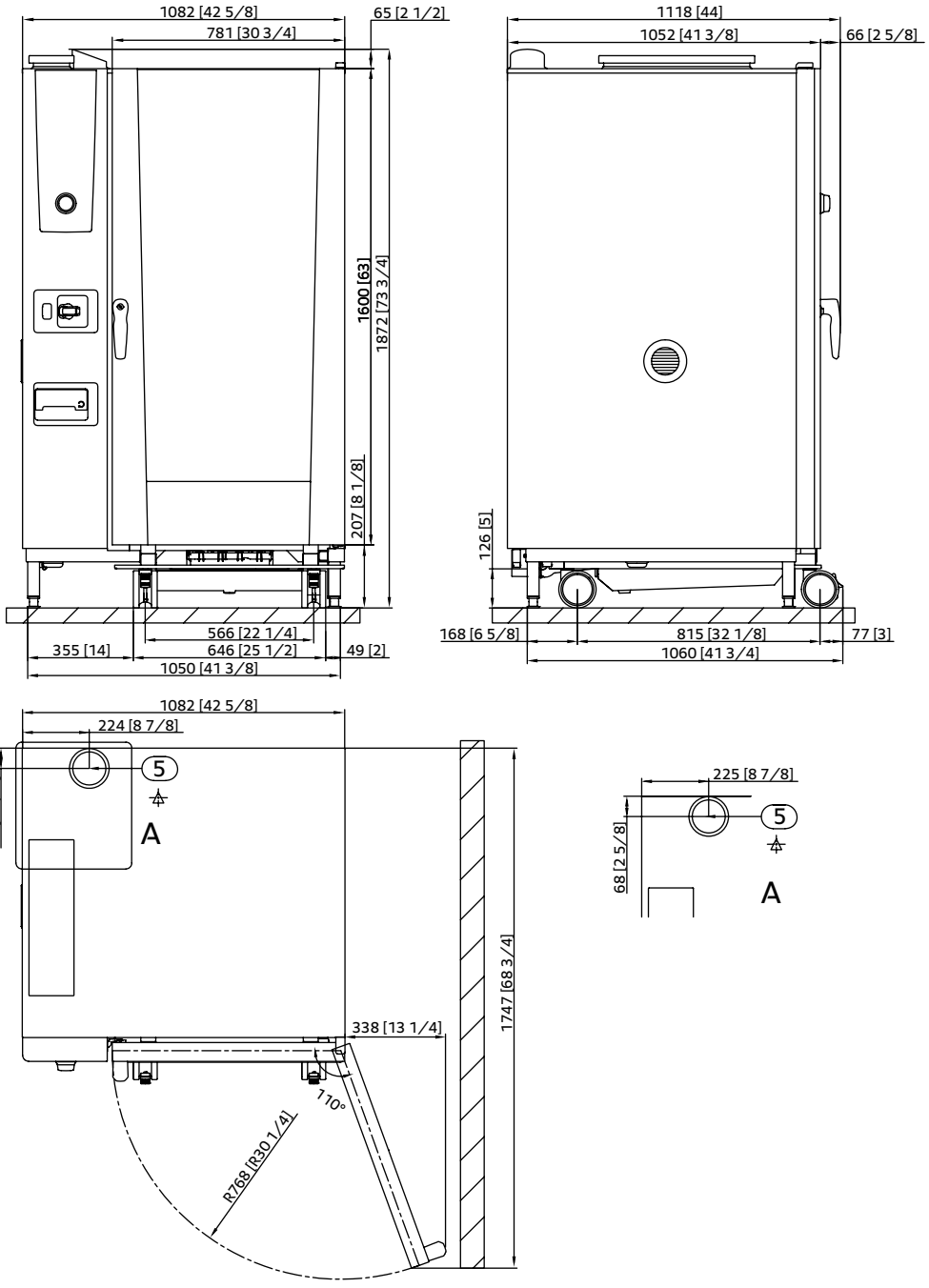


9.1.6 Model 20-1/1 Electric

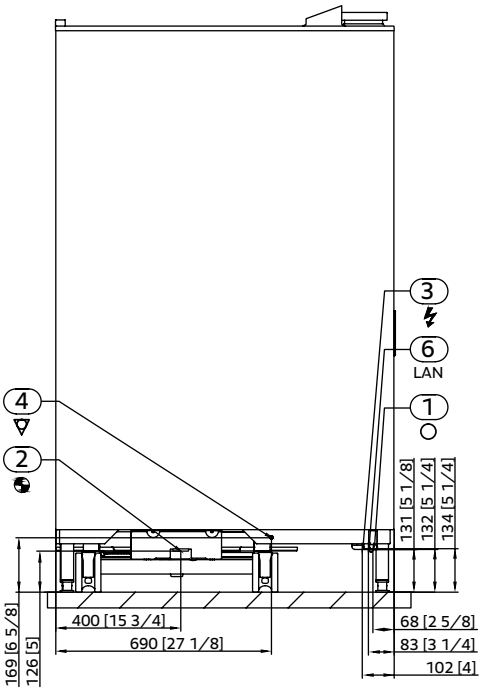


1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

9.1.7 Model 20-2/1 Electric

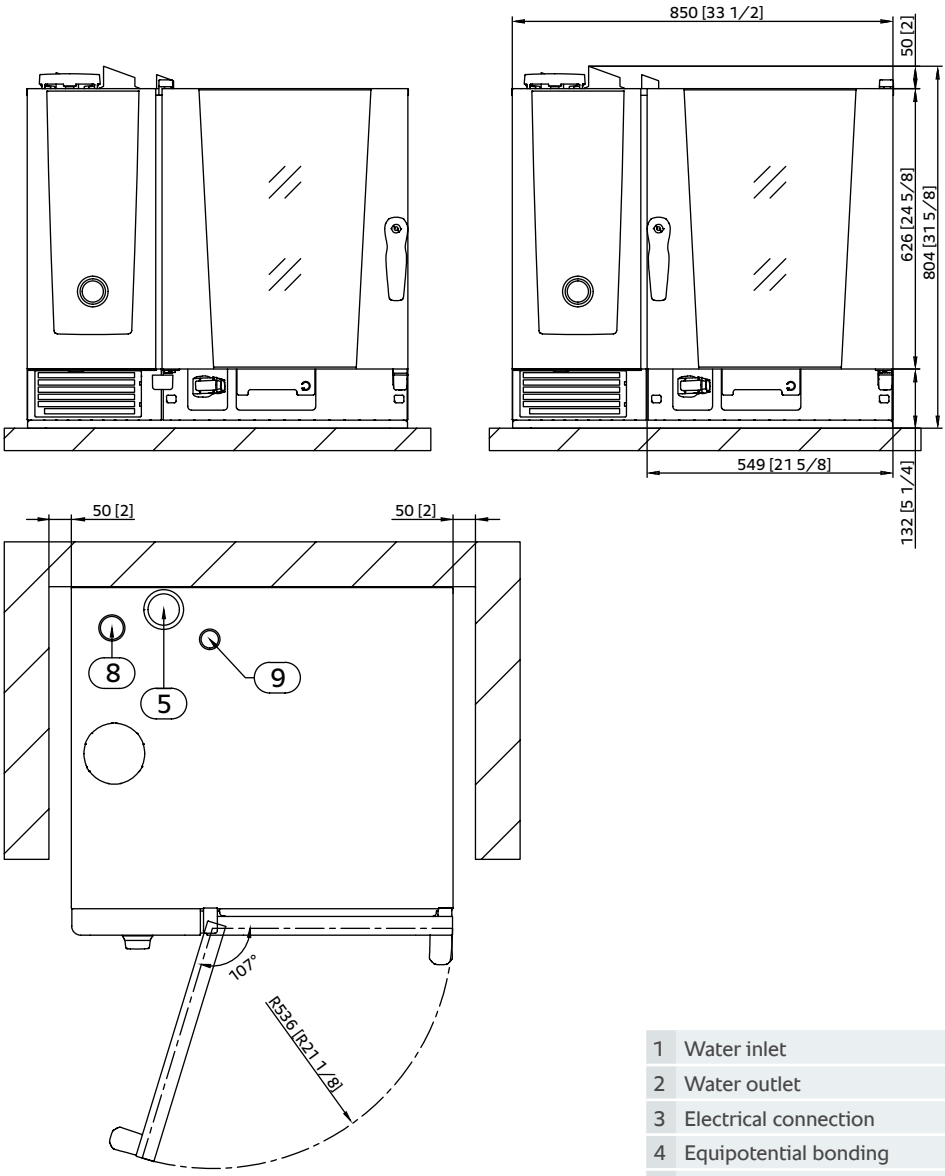


9.1.7 Model 20-2/1 Electric



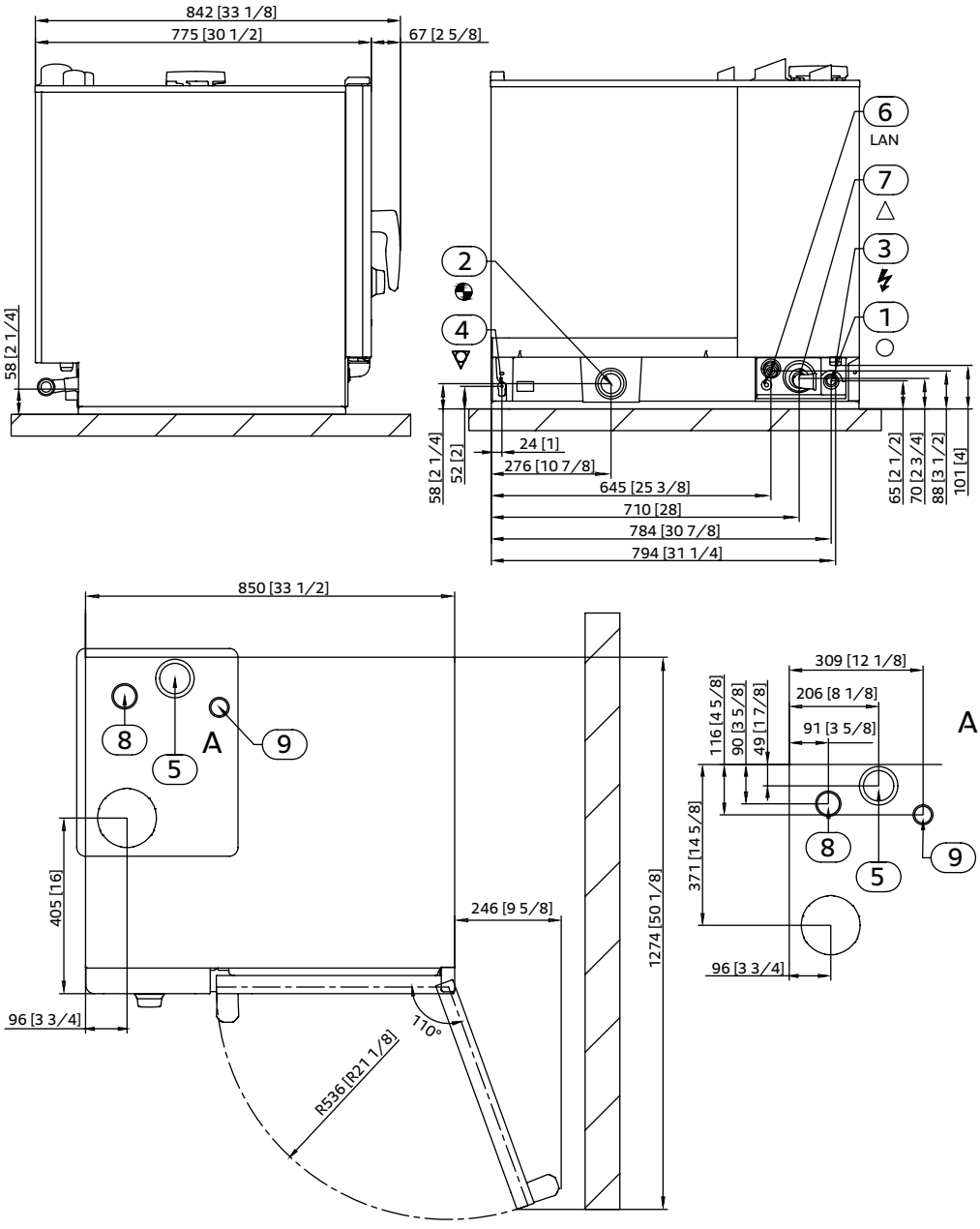
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port

9.2.1 Model 6-1/1 Gas

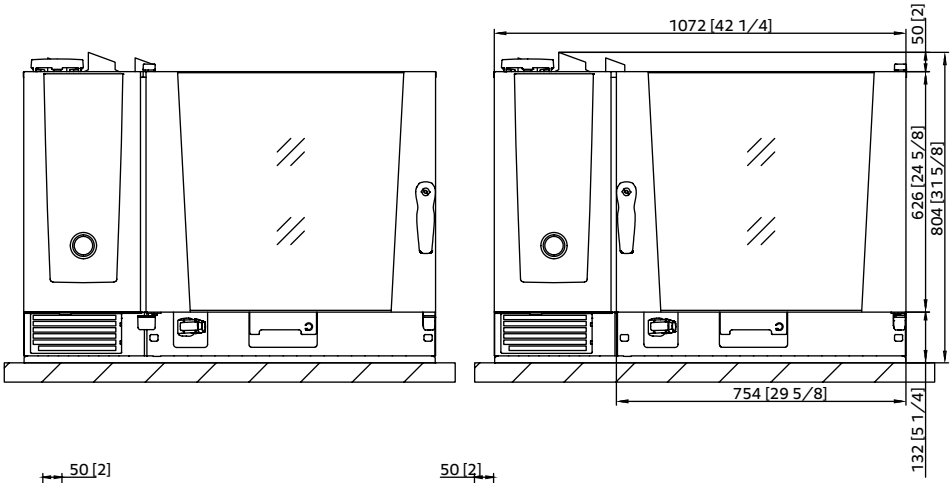


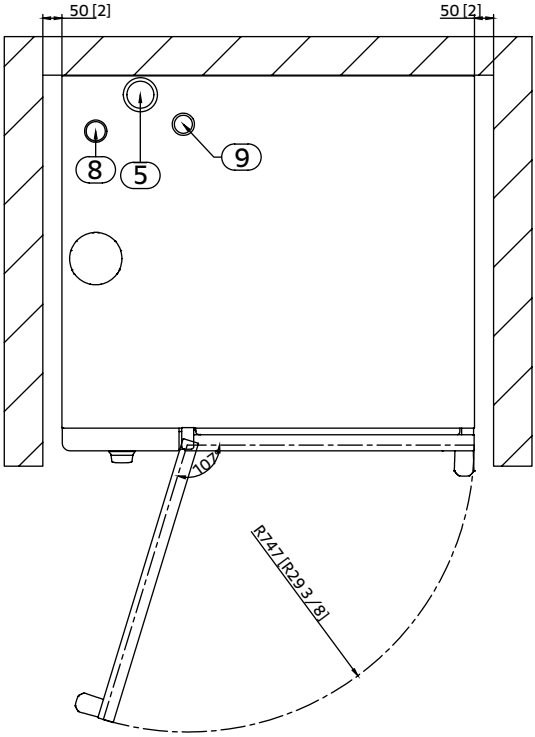
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port
7	Gas connection
8	Exhaust pipe gas (steam)
9	Exhaust pipe gas (convection)

9.2.1 Model 6-1/1 Gas



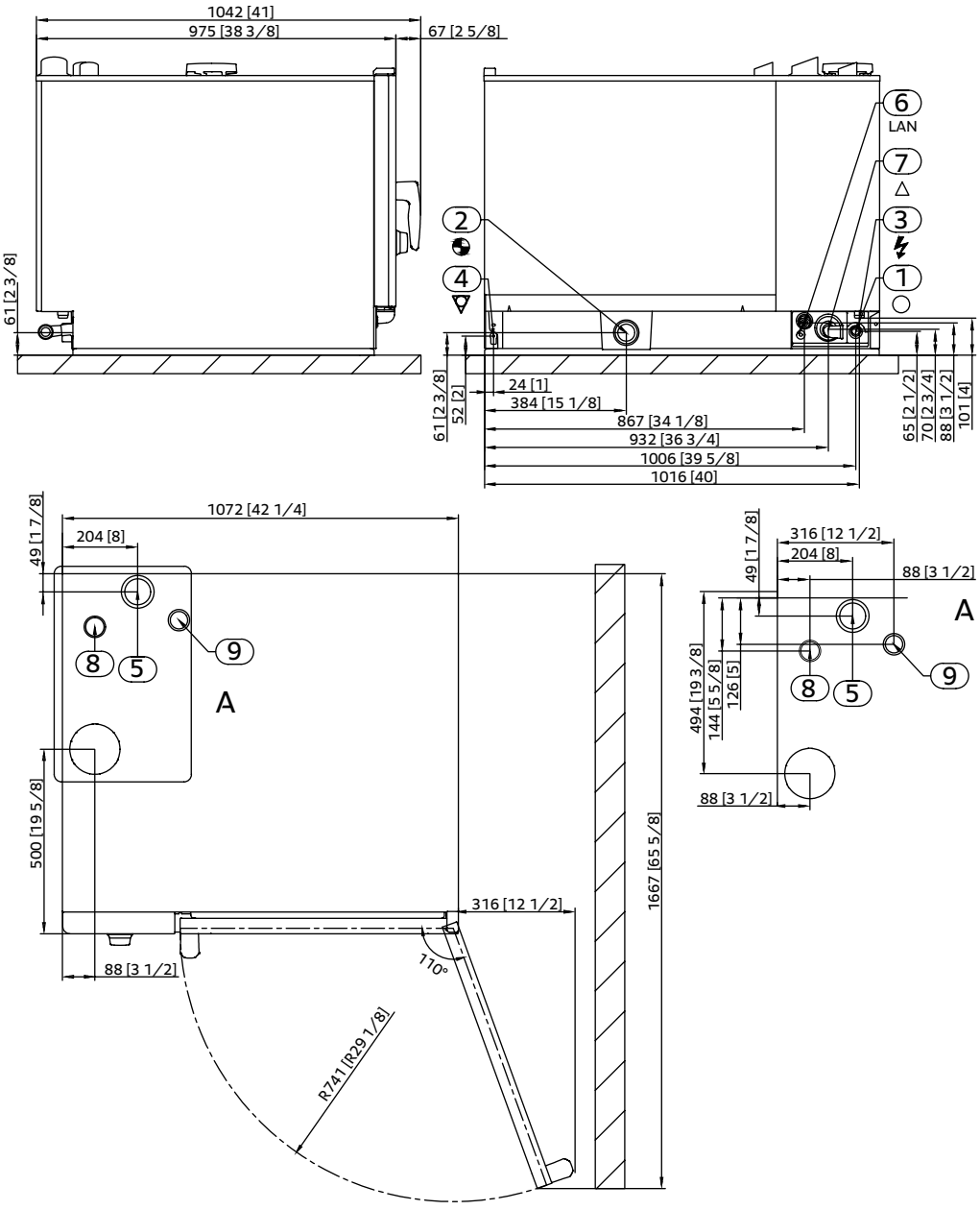
9.2.2 Model 6-2/1 Gas



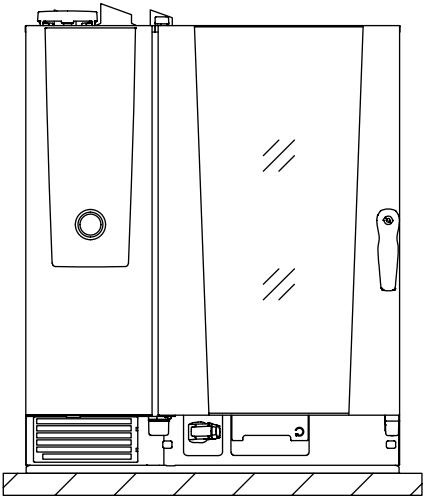


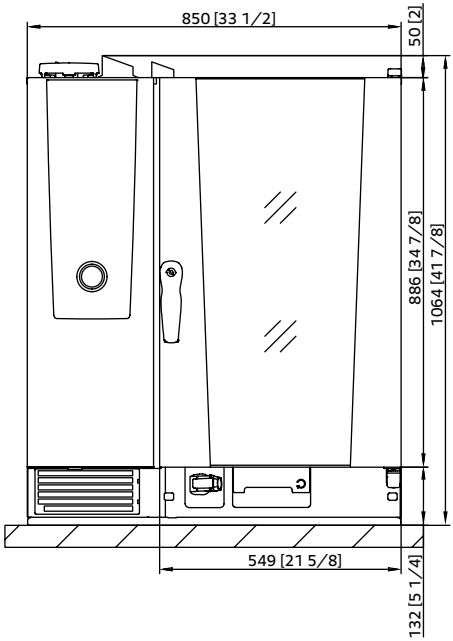
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port
7	Gas connection
8	Exhaust pipe gas (steam)
9	Exhaust pipe gas (convection)

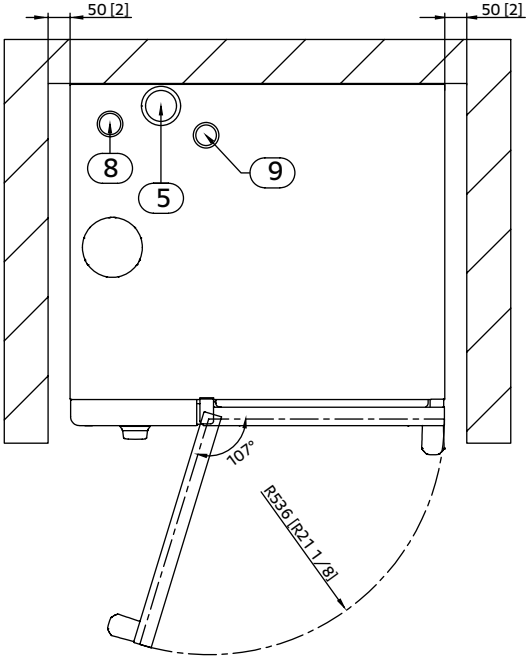
9.2.2 Model 6-2/1 Gas



9.2.3 Model 10-1/1 Gas

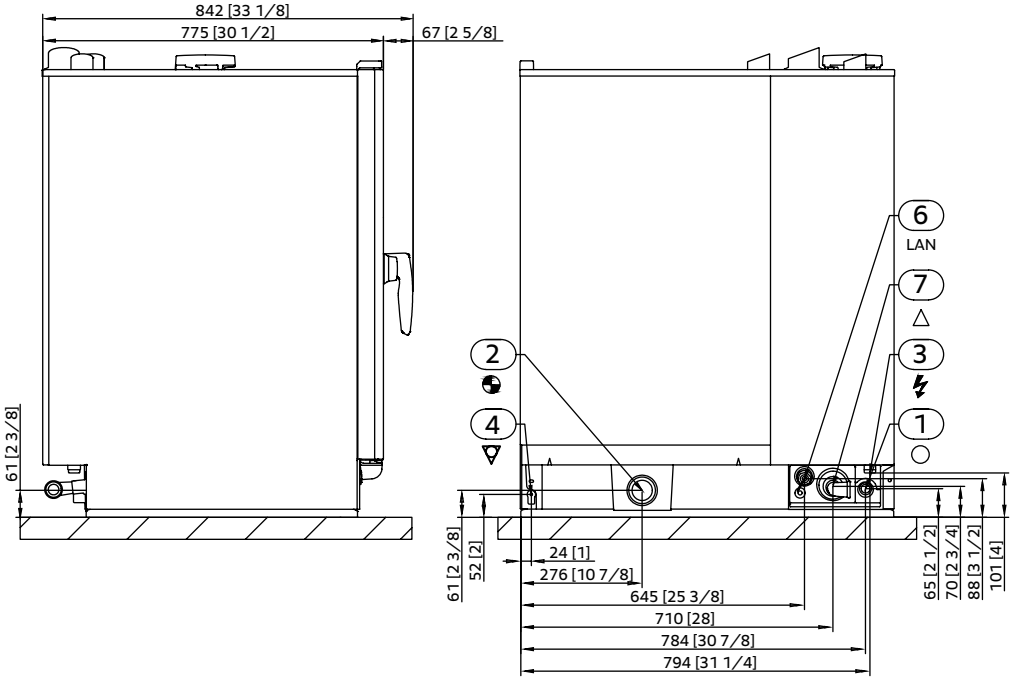


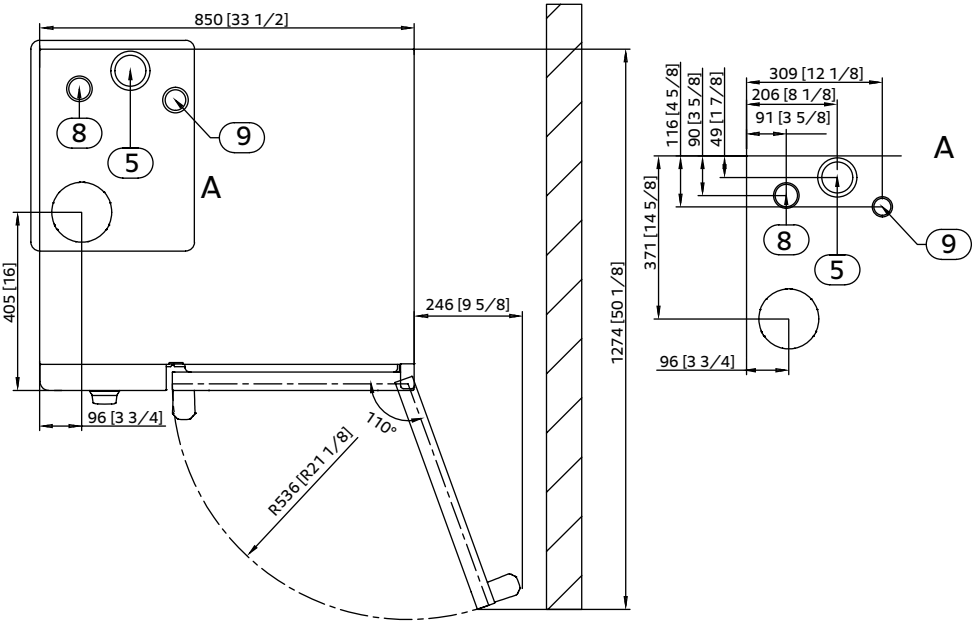




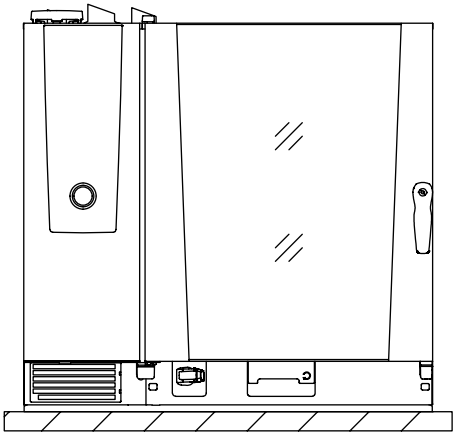
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port
7	Gas connection
8	Exhaust pipe gas (steam)
9	Exhaust pipe gas (convection)

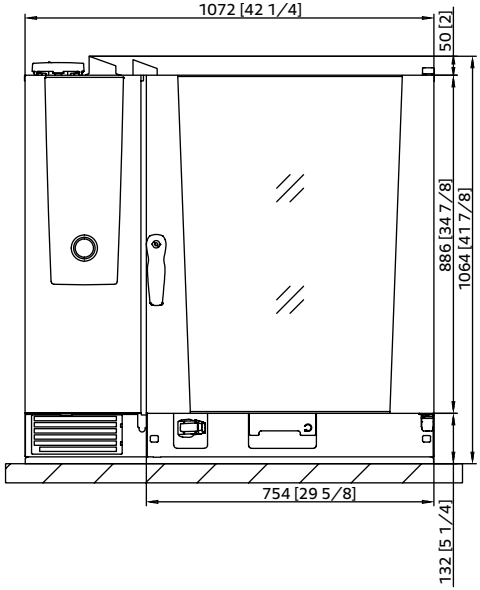
9.2.3 Model 10-1/1 Gas

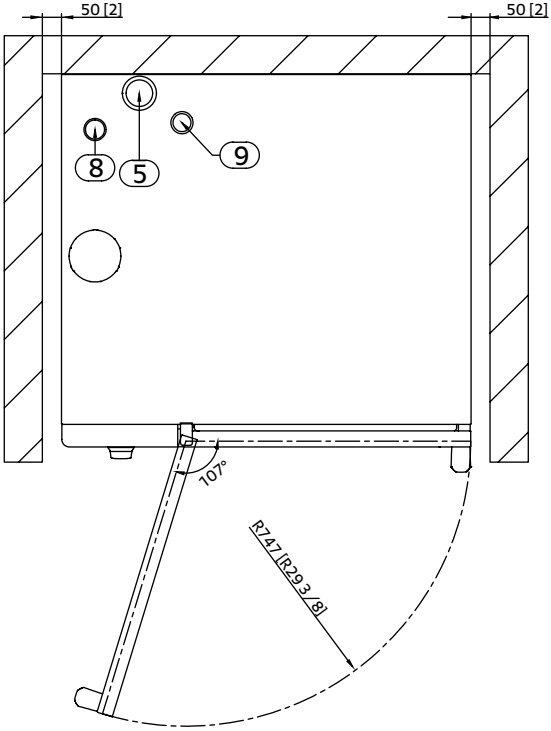




9.2.4 Model 10-2/1 Gas

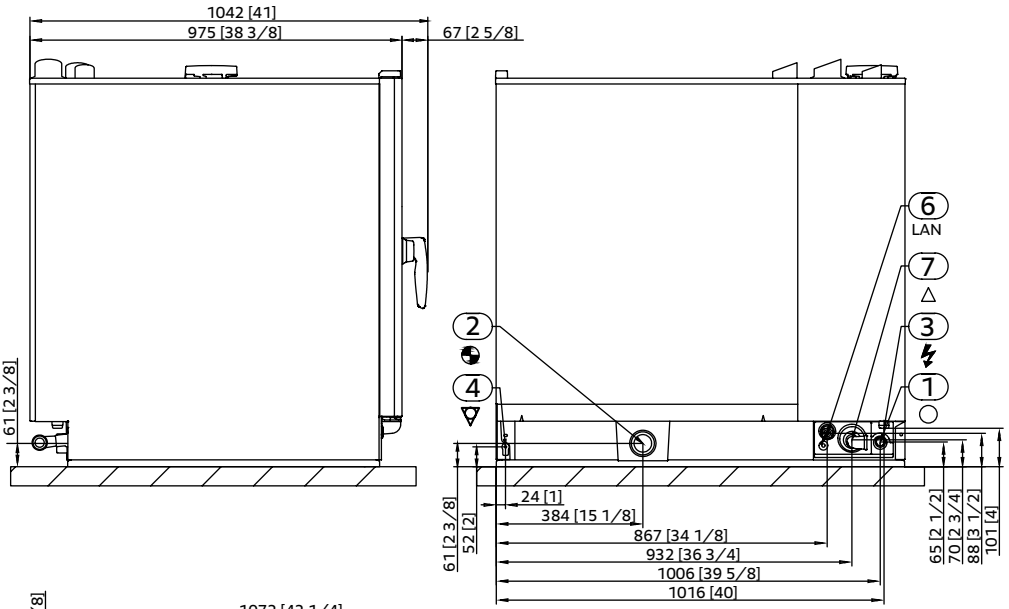


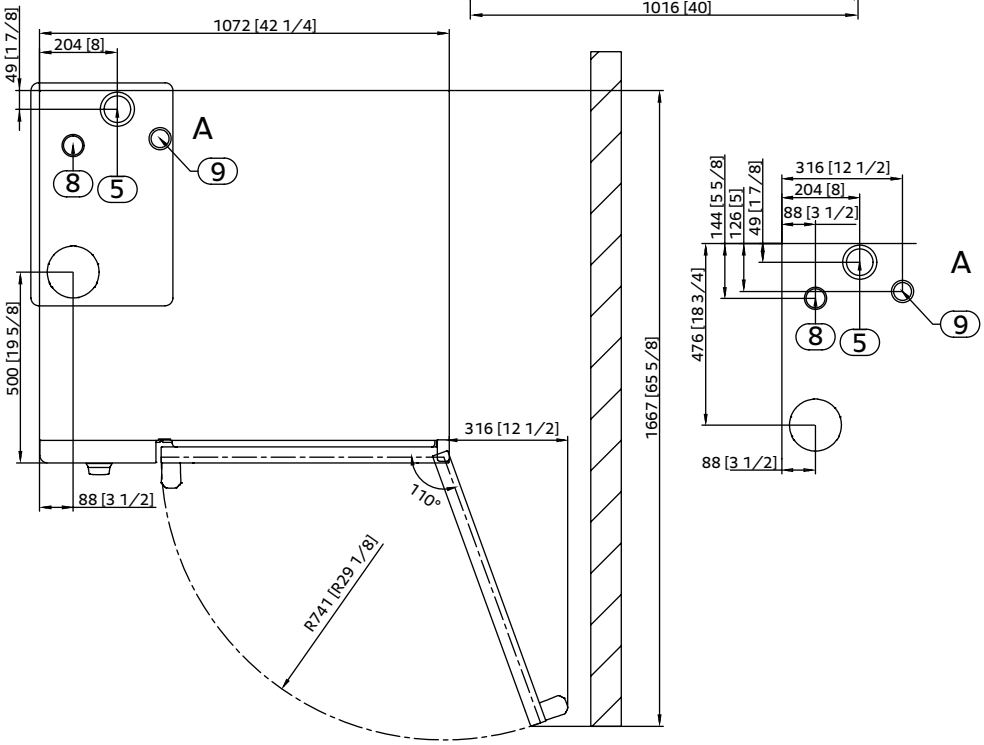




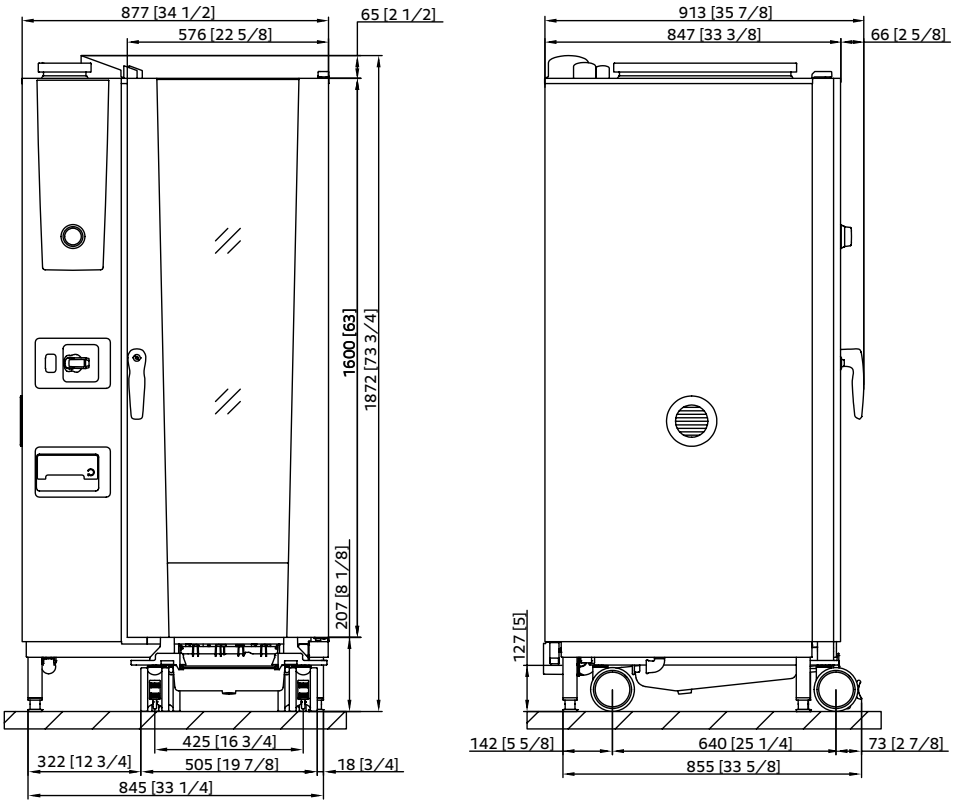
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port
7	Gas connection
8	Exhaust pipe gas (steam)
9	Exhaust pipe gas (convection)

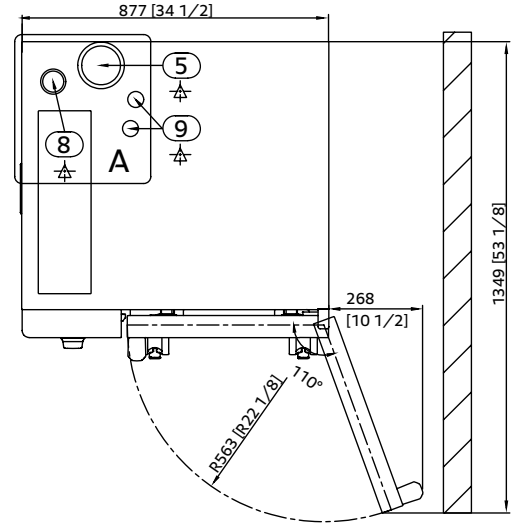
9.2.4 Model 10-2/1 Gas

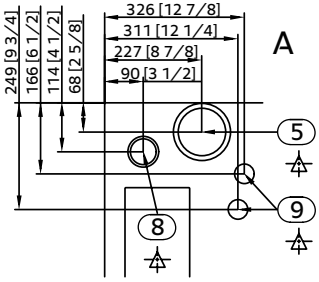




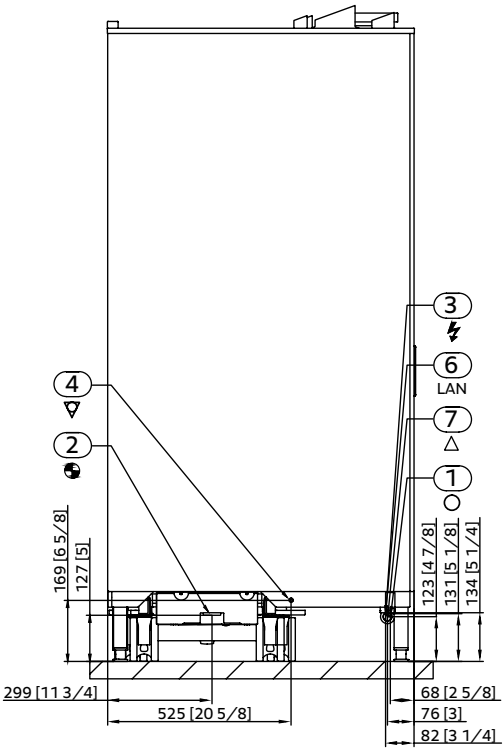
9.2.5 Model 20-1/1 Gas





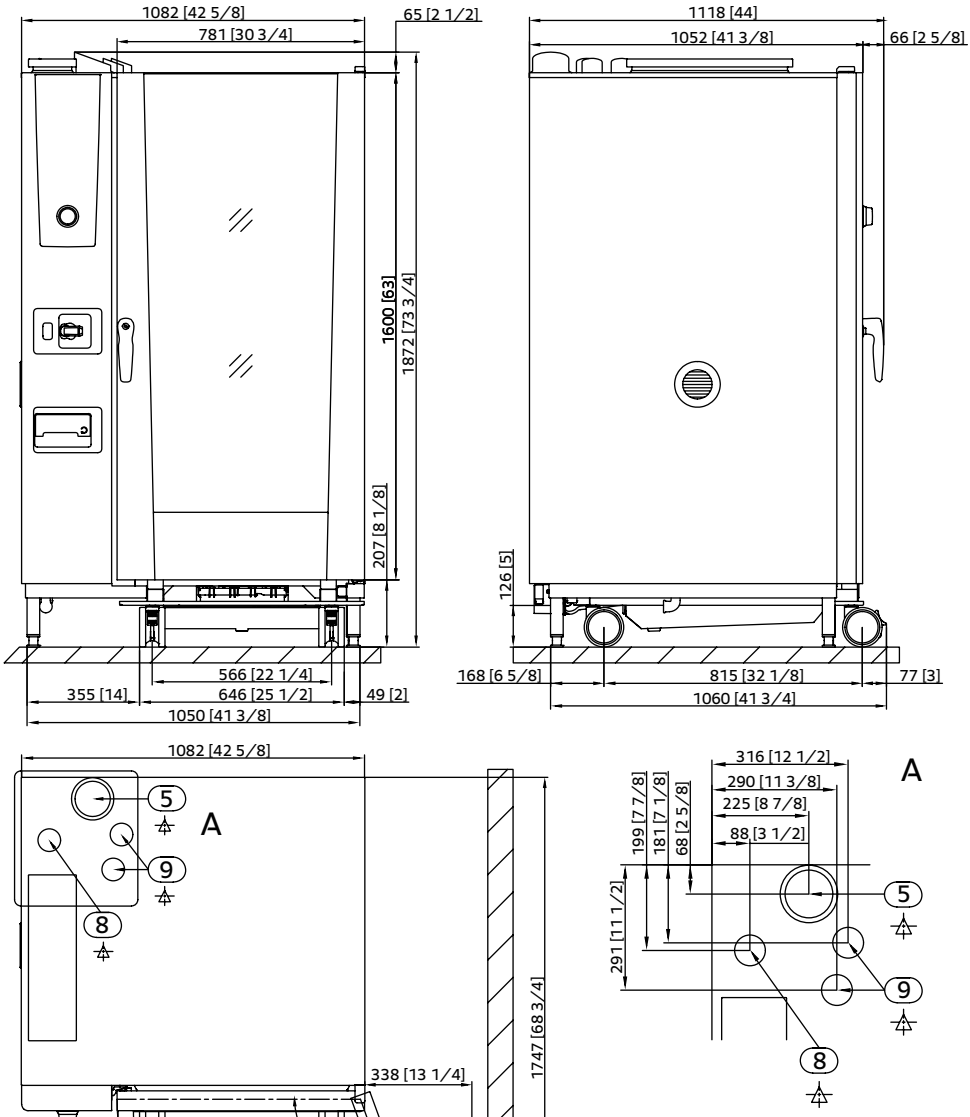


9.2.5 Model 20-1/1 Gas

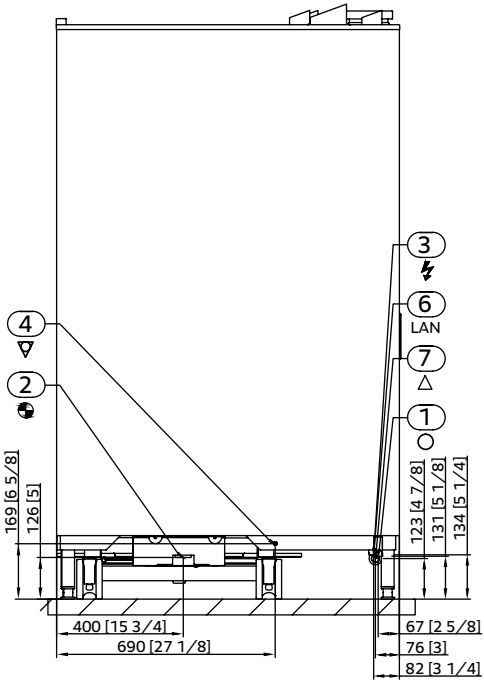


1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port
7	Gas connection
8	Exhaust pipe gas (steam)
9	Exhaust pipe gas (convection)

9.2.6 Model 20-2/1 Gas

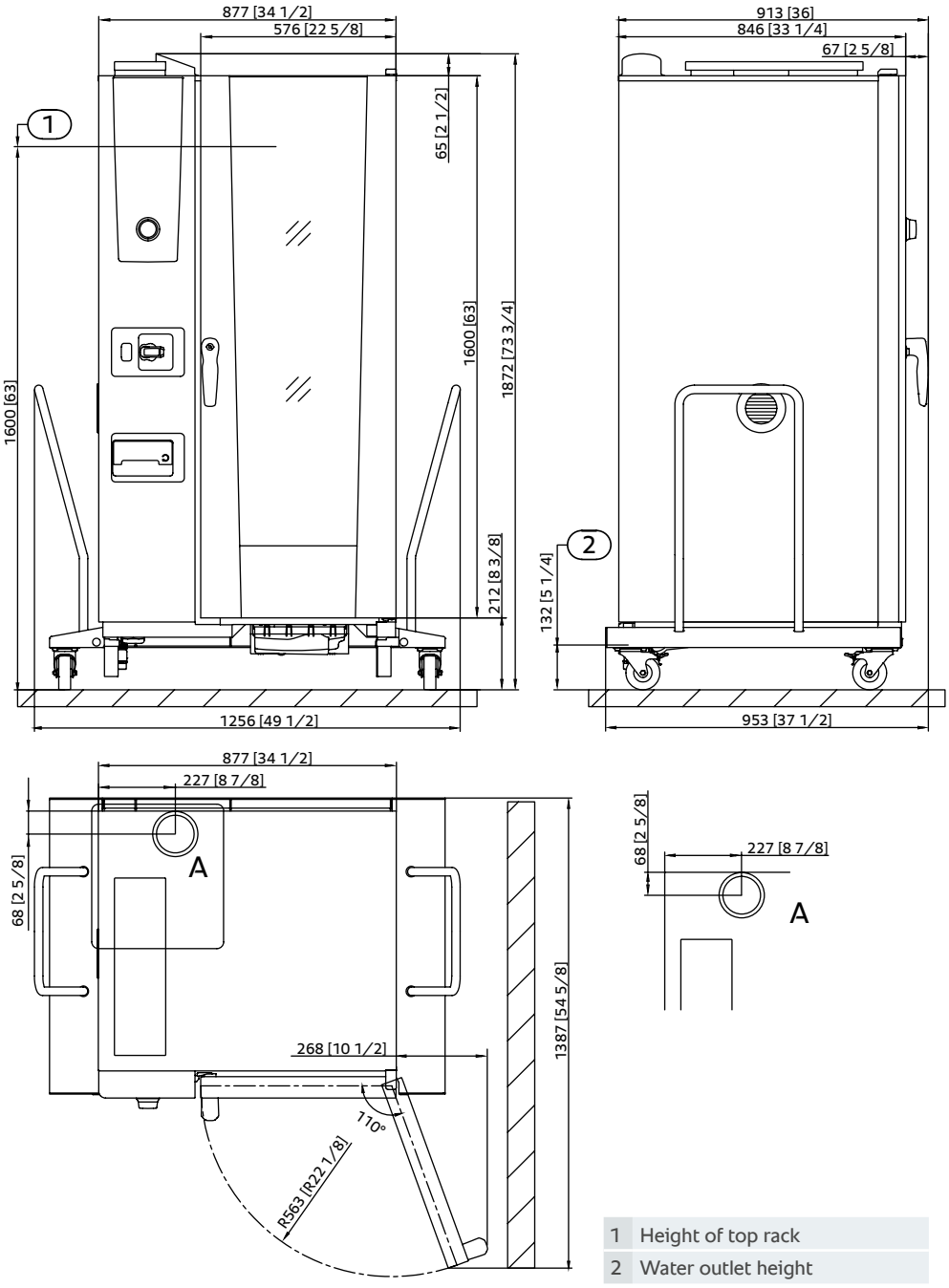


9.2.6 Model 20-2/1 Gas



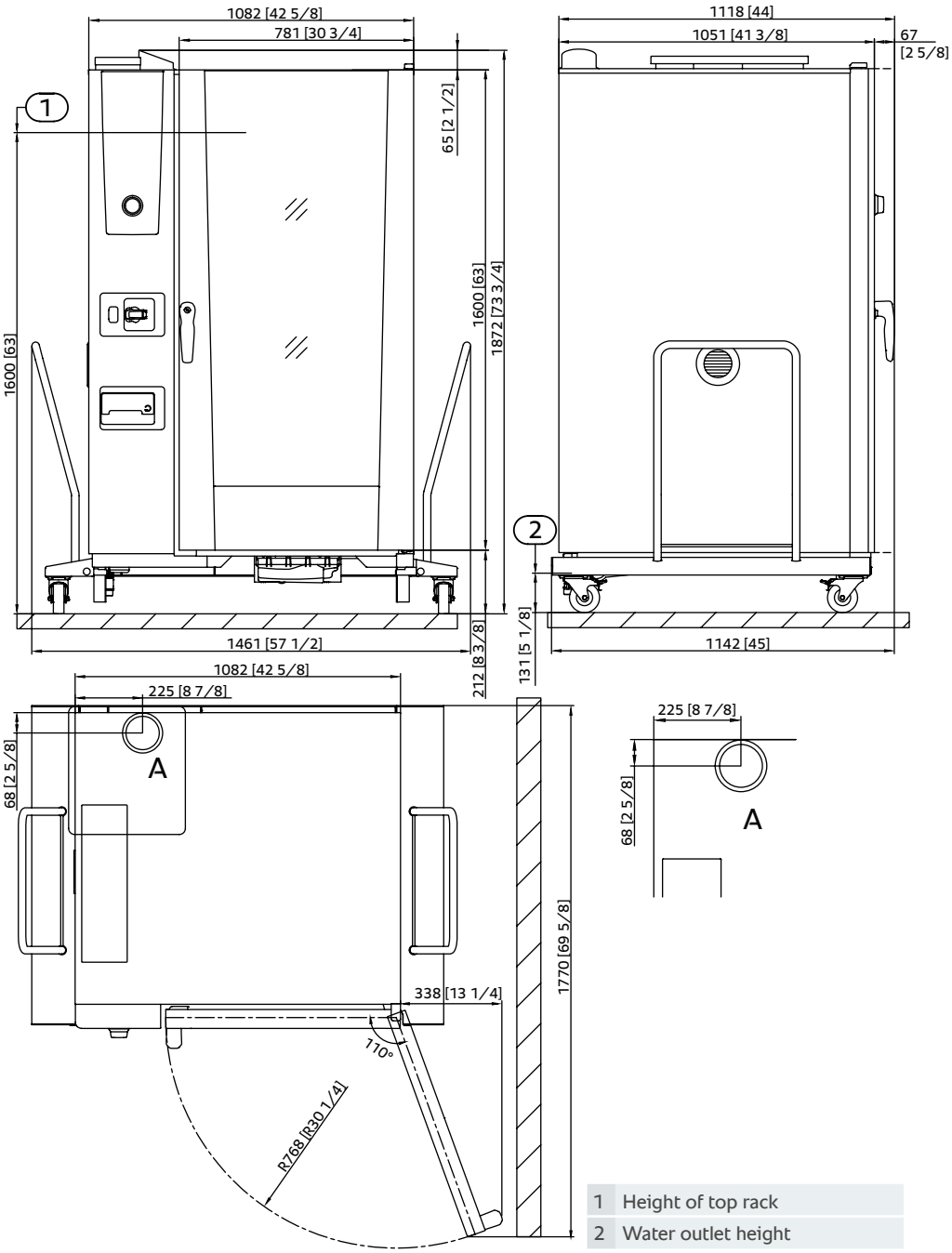
1	Water inlet
2	Water outlet
3	Electrical connection
4	Equipotential bonding
5	Ventilation pipe
6	Ethernet port
7	Gas connection
8	Exhaust pipe gas (steam)
9	Exhaust pipe gas (convection)

9.3.1 Model 20-1/1 MobilityLine Electric



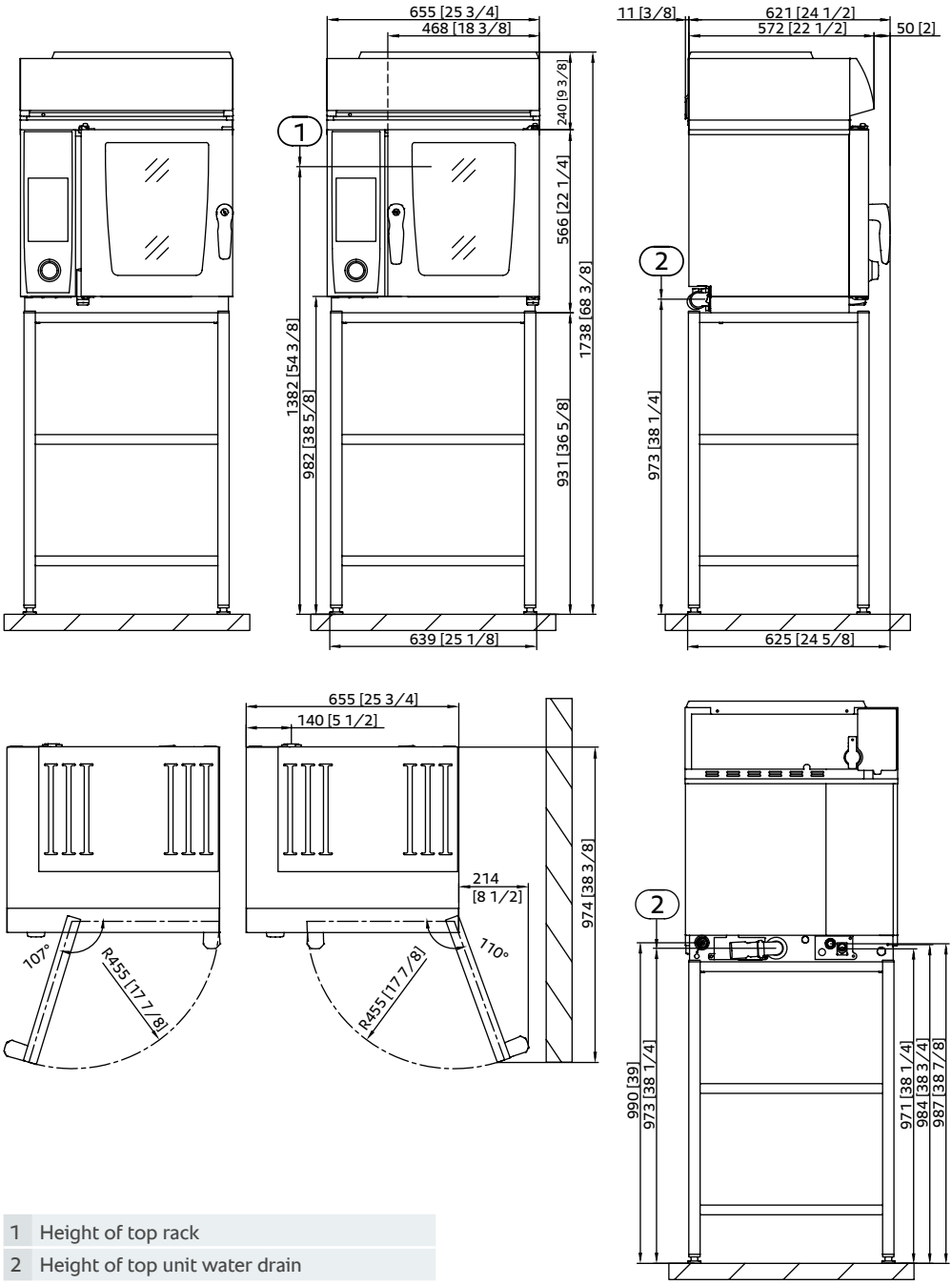
1	Height of top rack
2	Water outlet height

9.3.1 Model 20-1/1 MobilityLine Electric



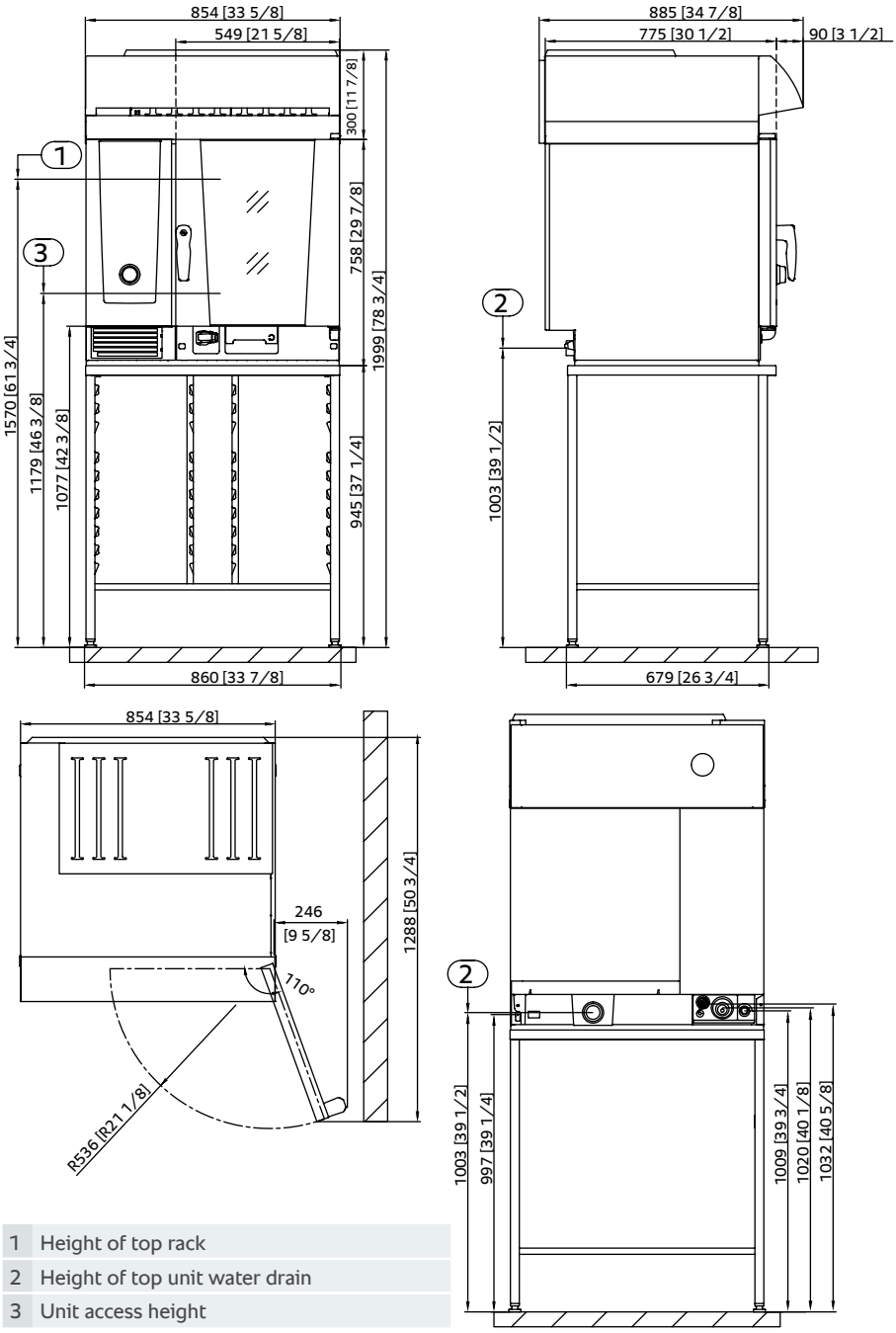
1	Height of top rack
2	Water outlet height

9.4.1 Model XS 6-2/3 with UltraVent on stand I



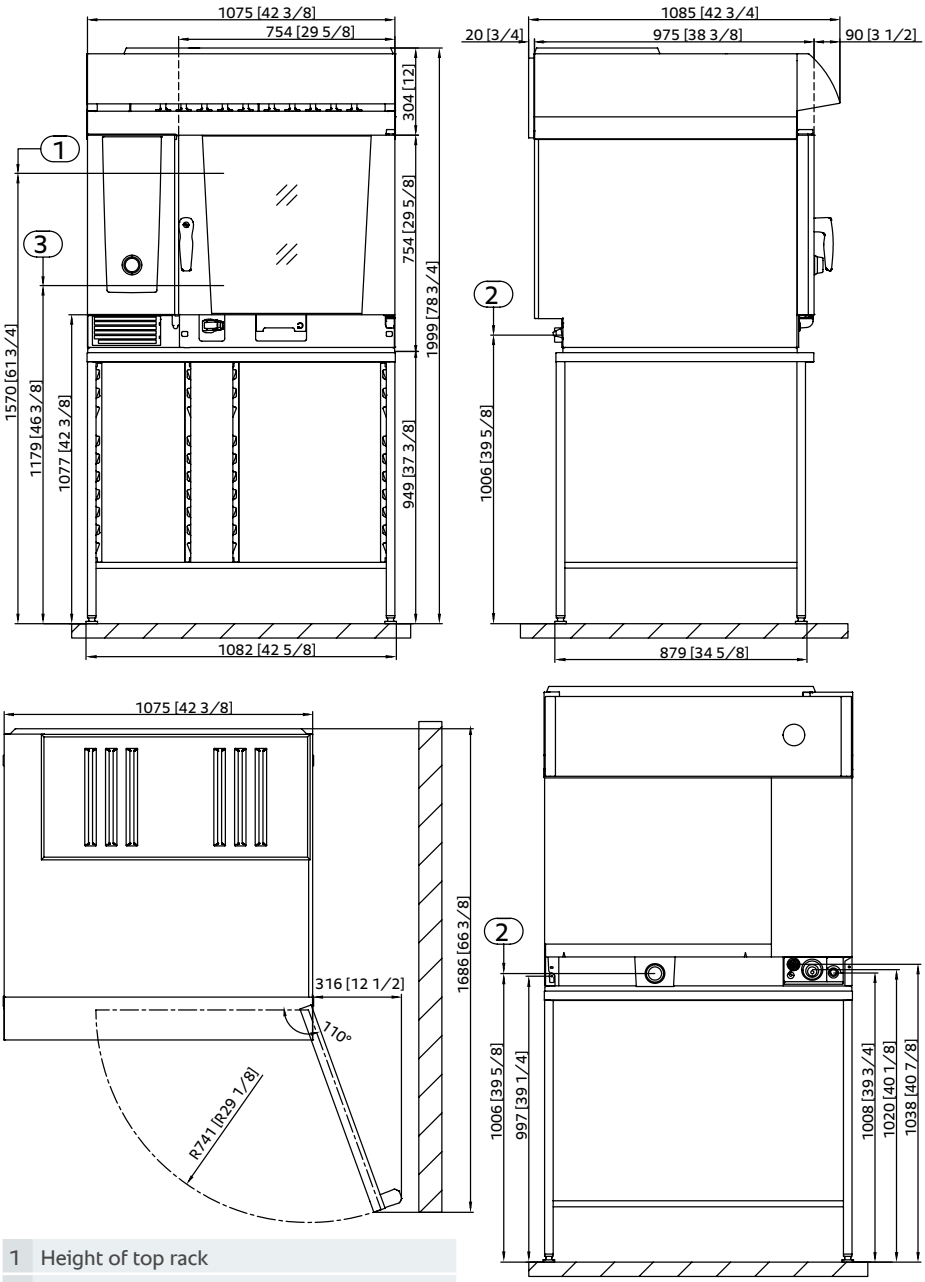
1	Height of top rack
2	Height of top unit water drain

9.4.2 Model 6-1/1 Electric with UltraVent/extractor hood on stand III UltraVent



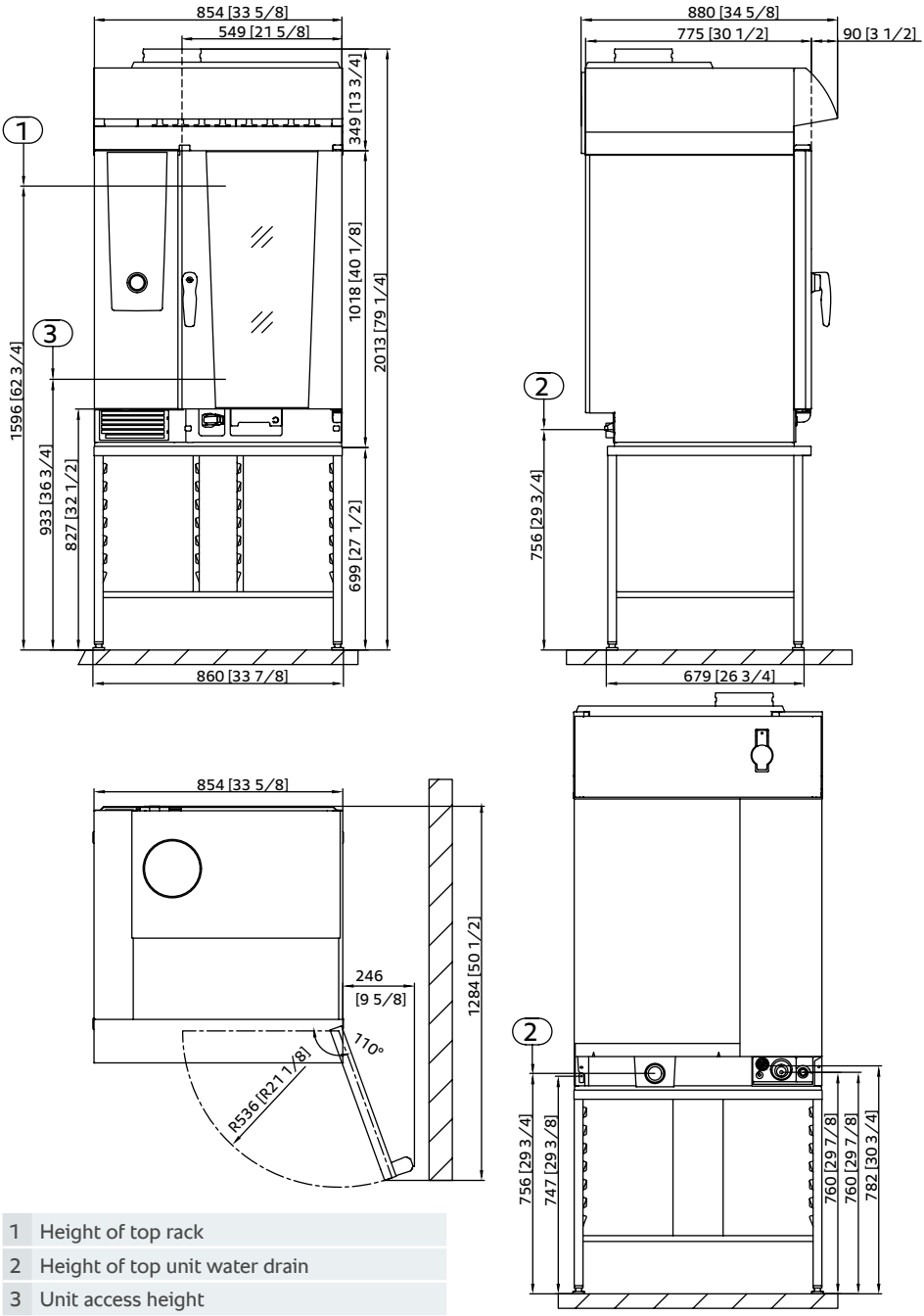
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.4.3 Model 6-2/1 Electric with UltraVent/extractor hood on stand II UltraVent



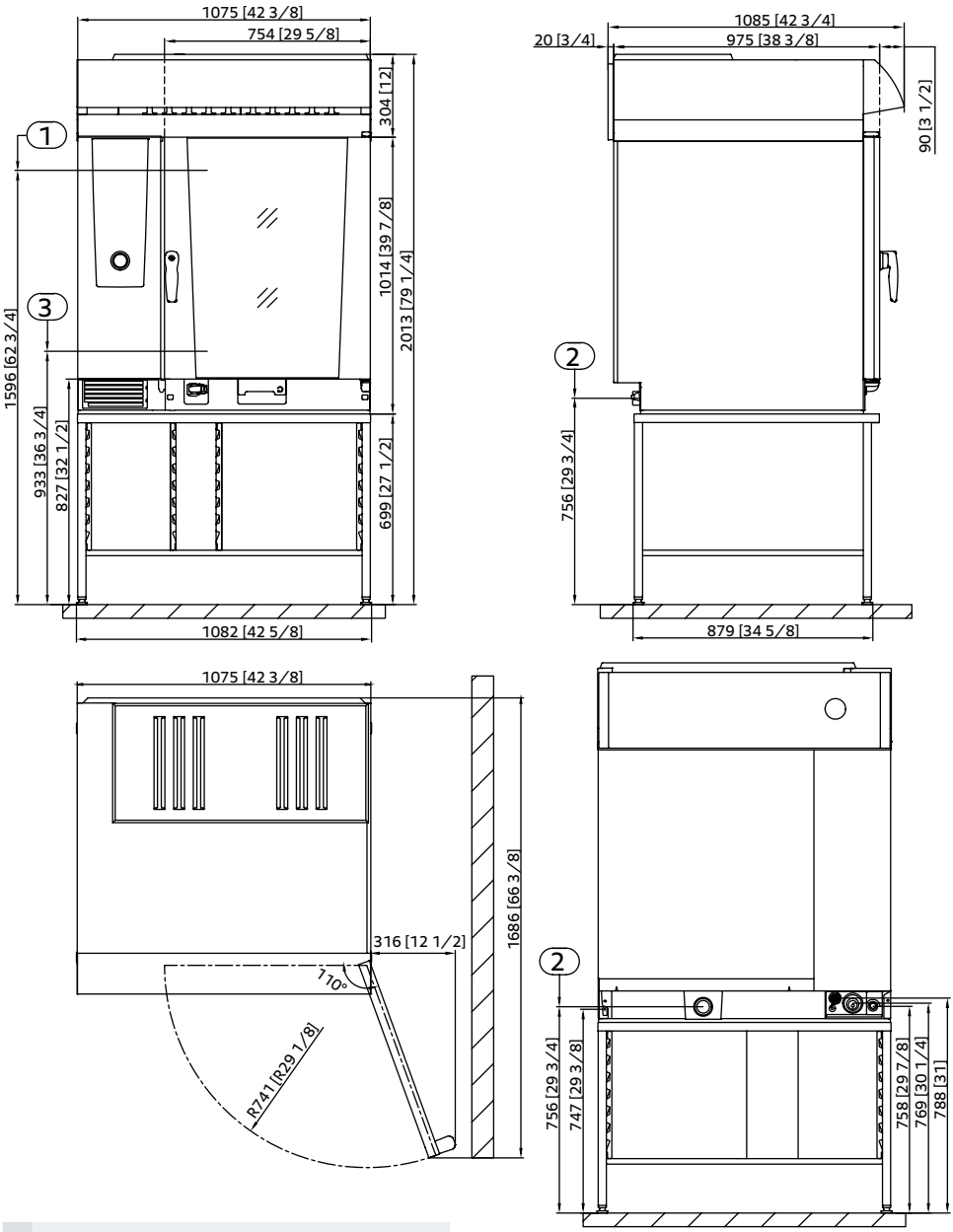
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.4.4 Model 10-1/1 Electric with UltraVent/extractor hood on stand II



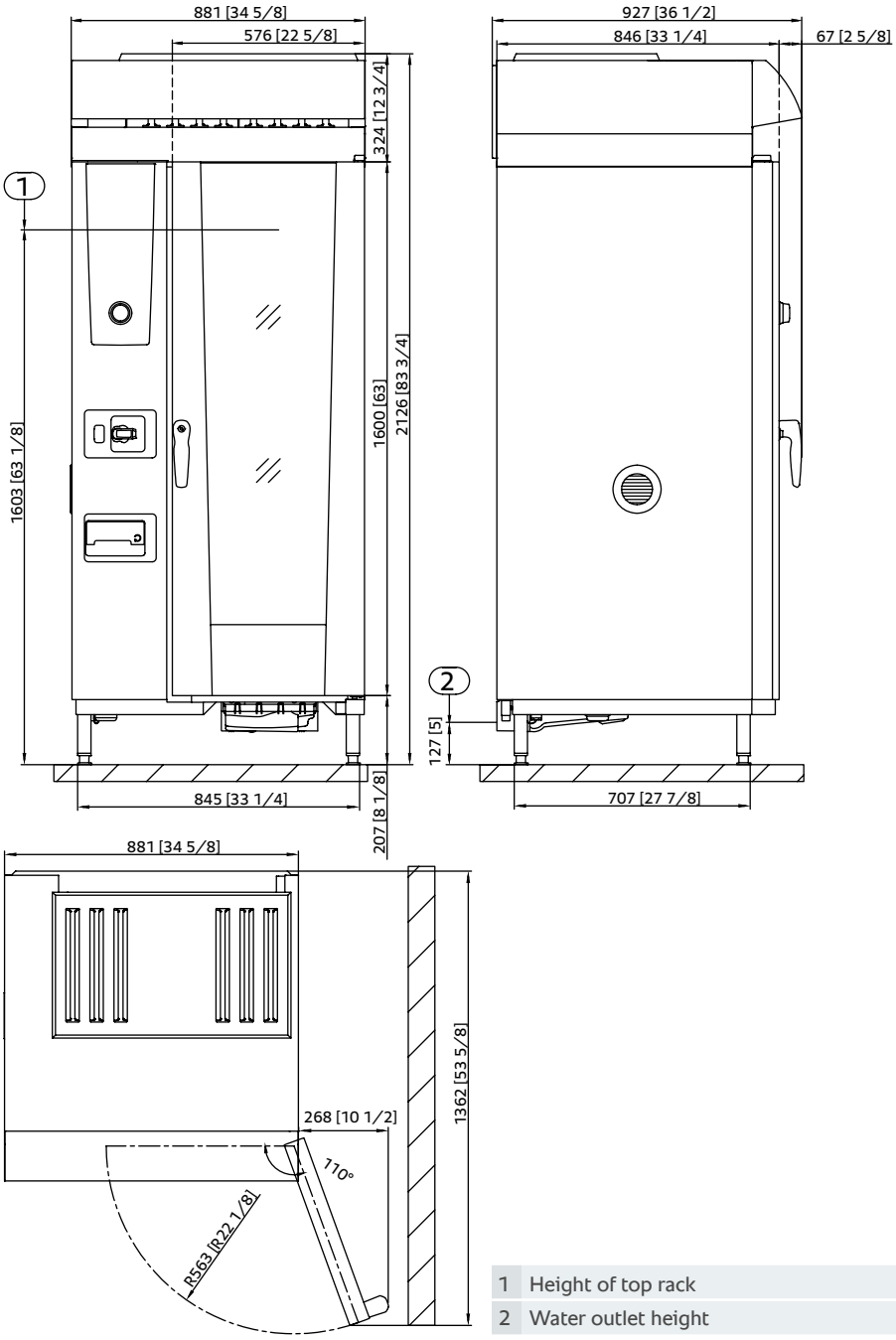
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.4.5 Model 10-2/1 Electric with UltraVent/extractor hood on stand III



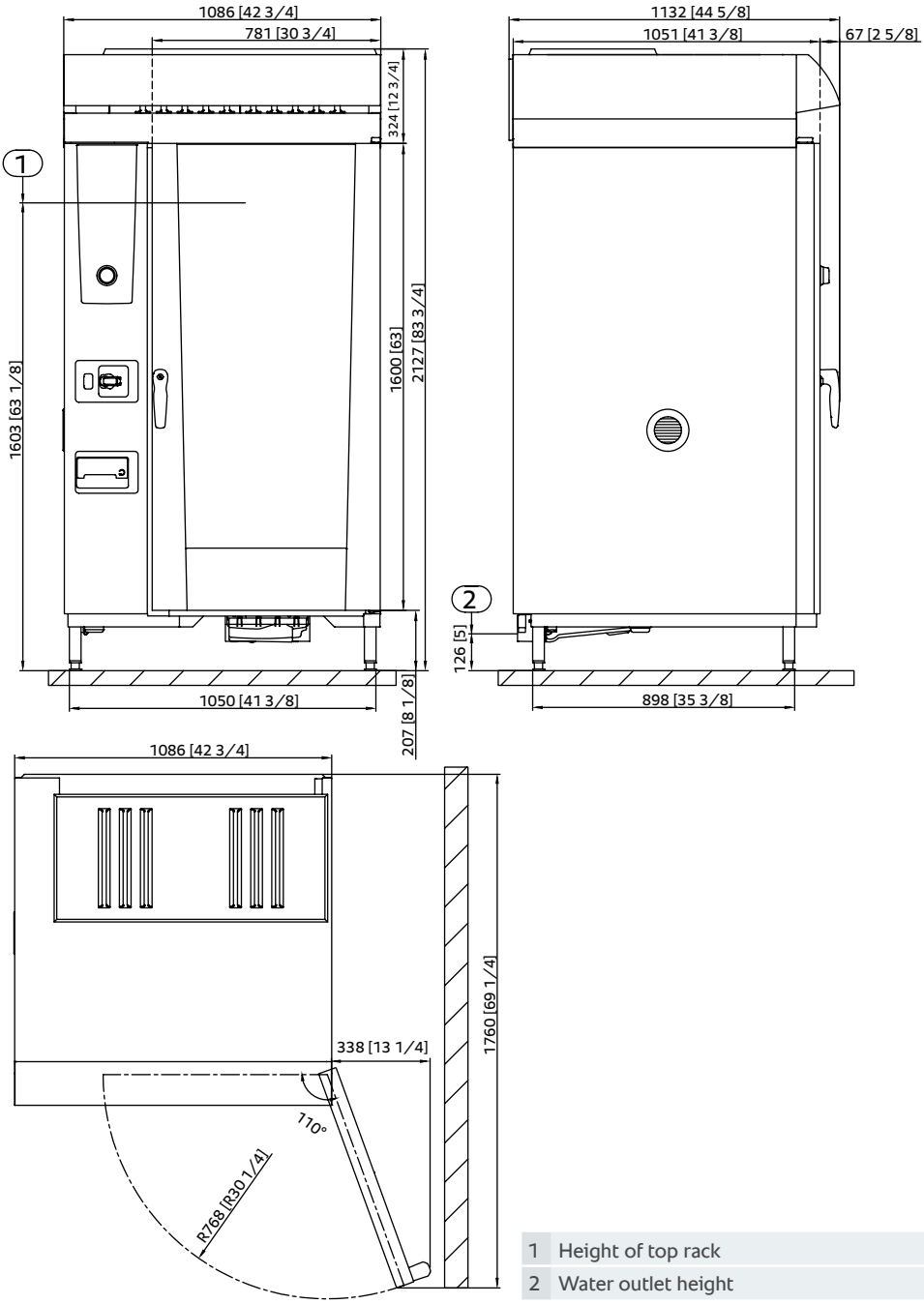
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.4.6 Model 20-1/1 Electric with UltraVent/extractor hood



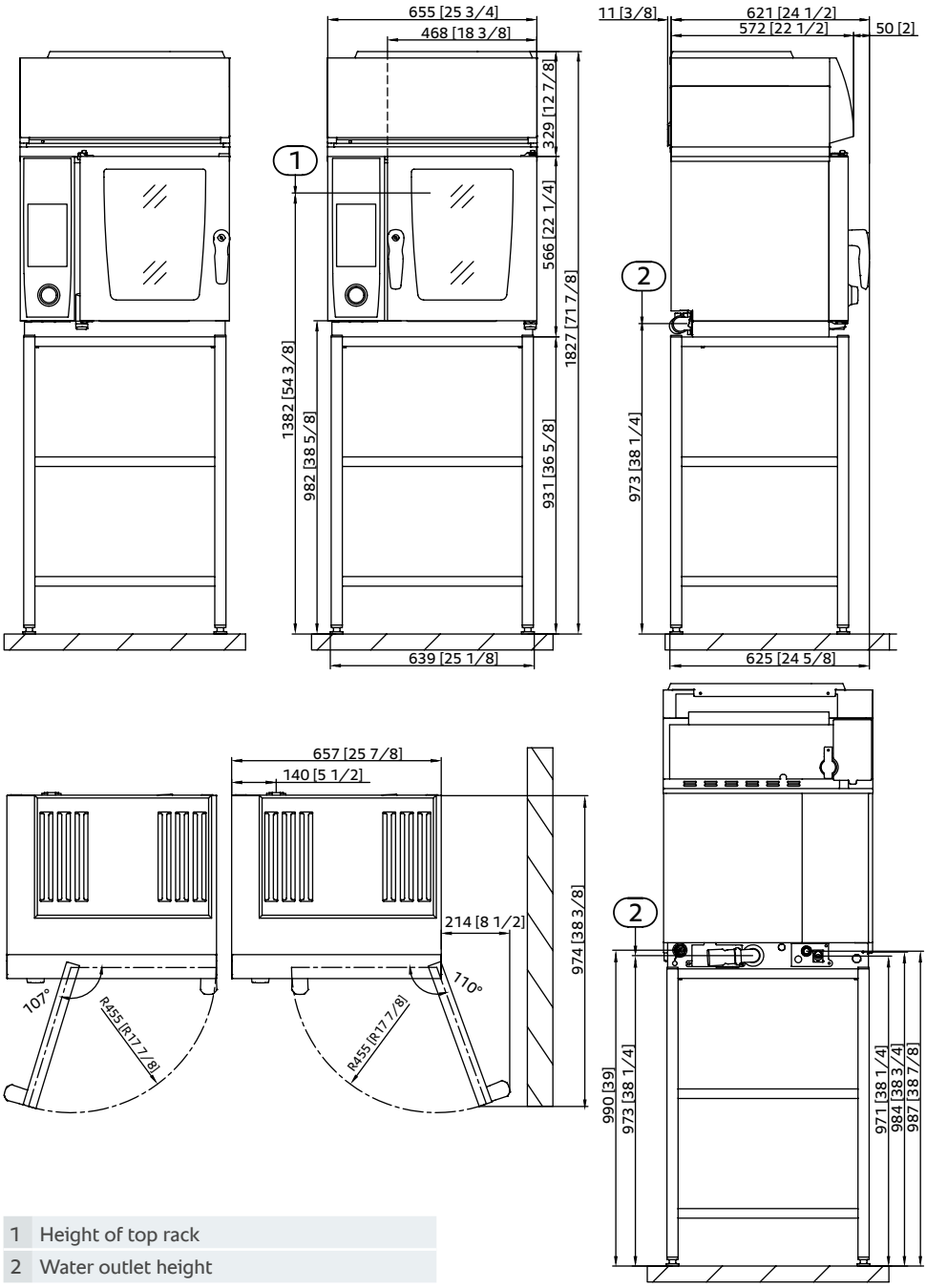
1	Height of top rack
2	Water outlet height

9.4.7 Model 20-2/1 Electric with UltraVent/extractor hood



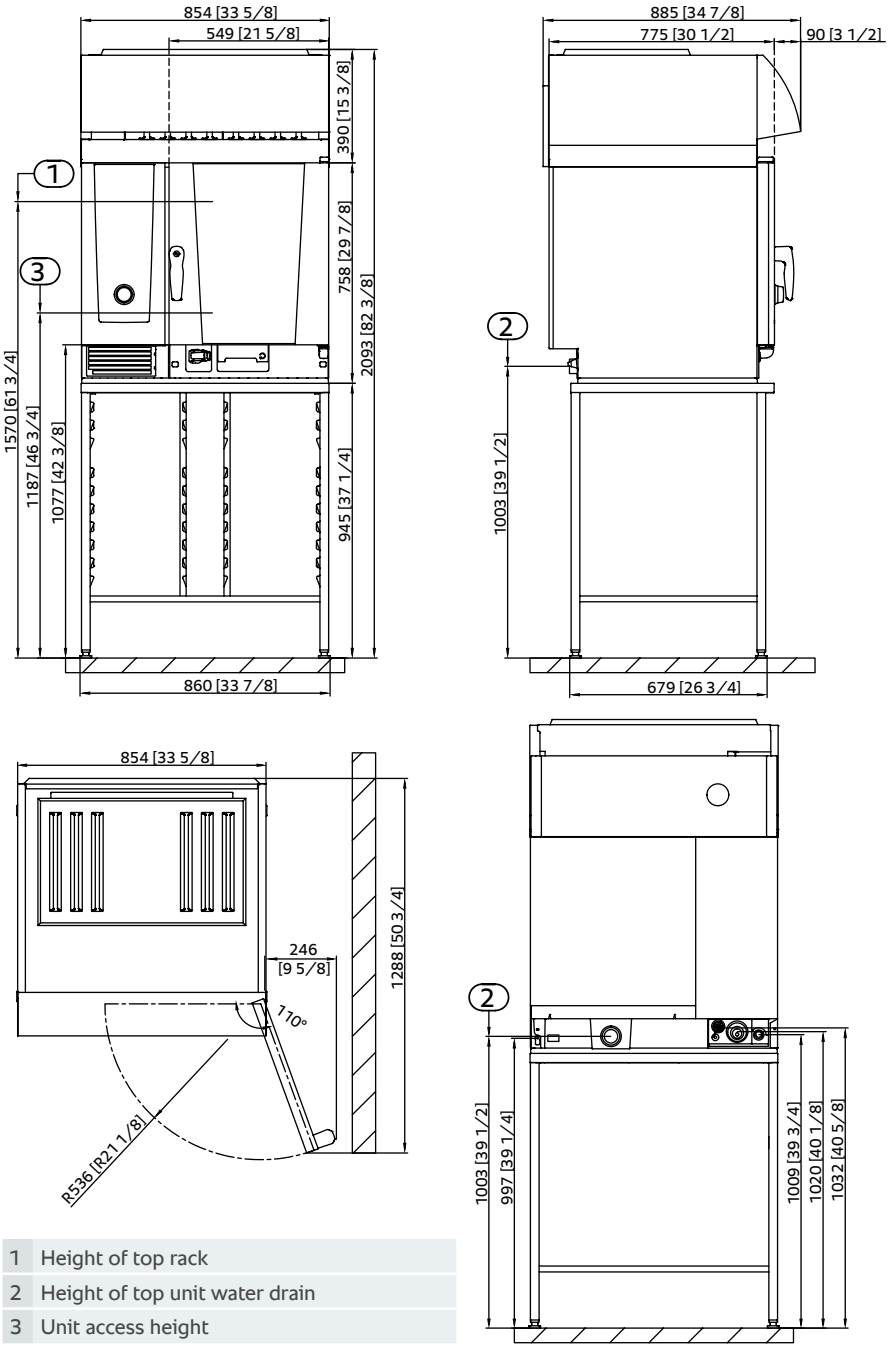
1	Height of top rack
2	Water outlet height

9.5.1 Model XS 6-2/3 with UltraVent Plus on stand I



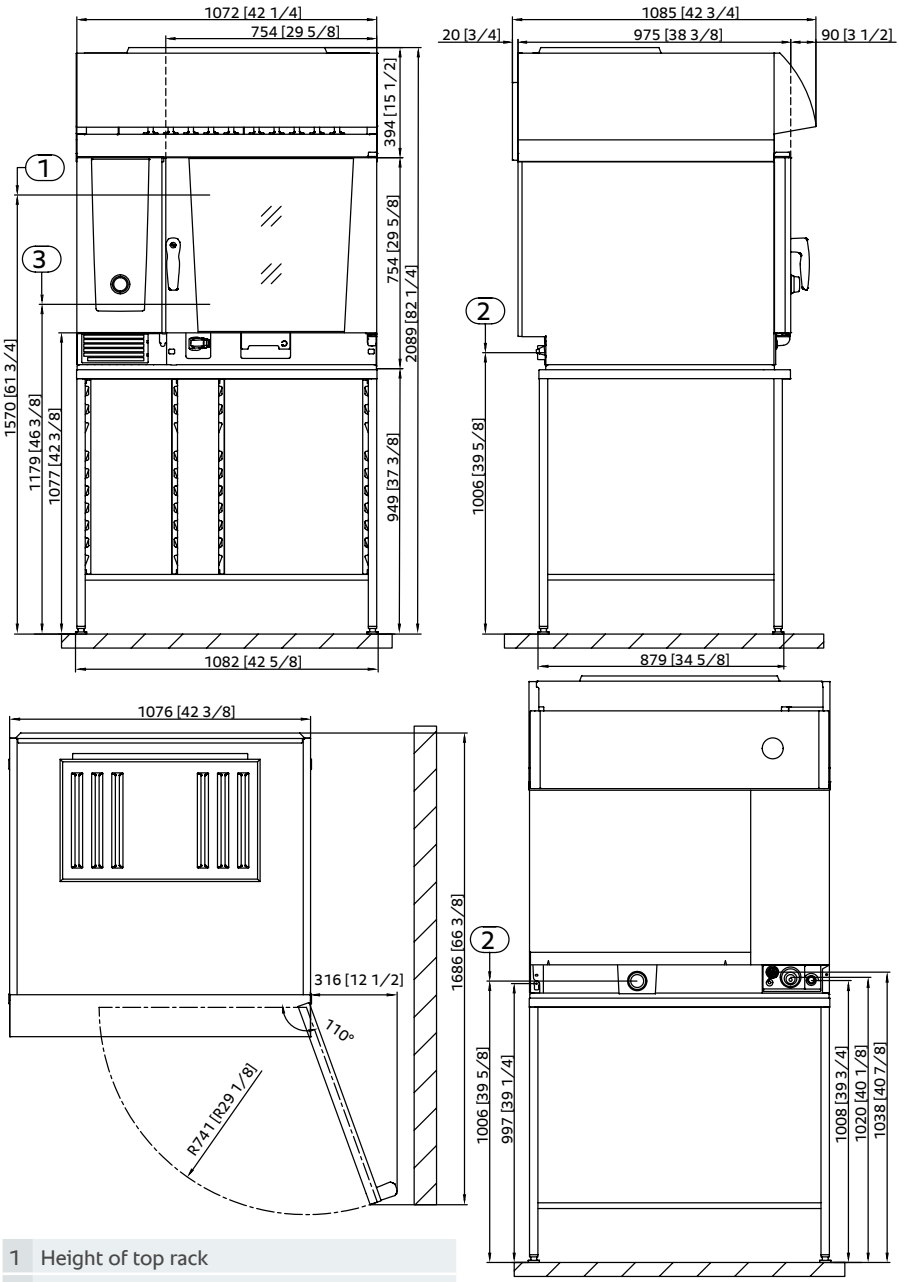
1	Height of top rack
2	Water outlet height

9.5.2 Model 6-1/1 Electric with UltraVent Plus on stand III UltraVent



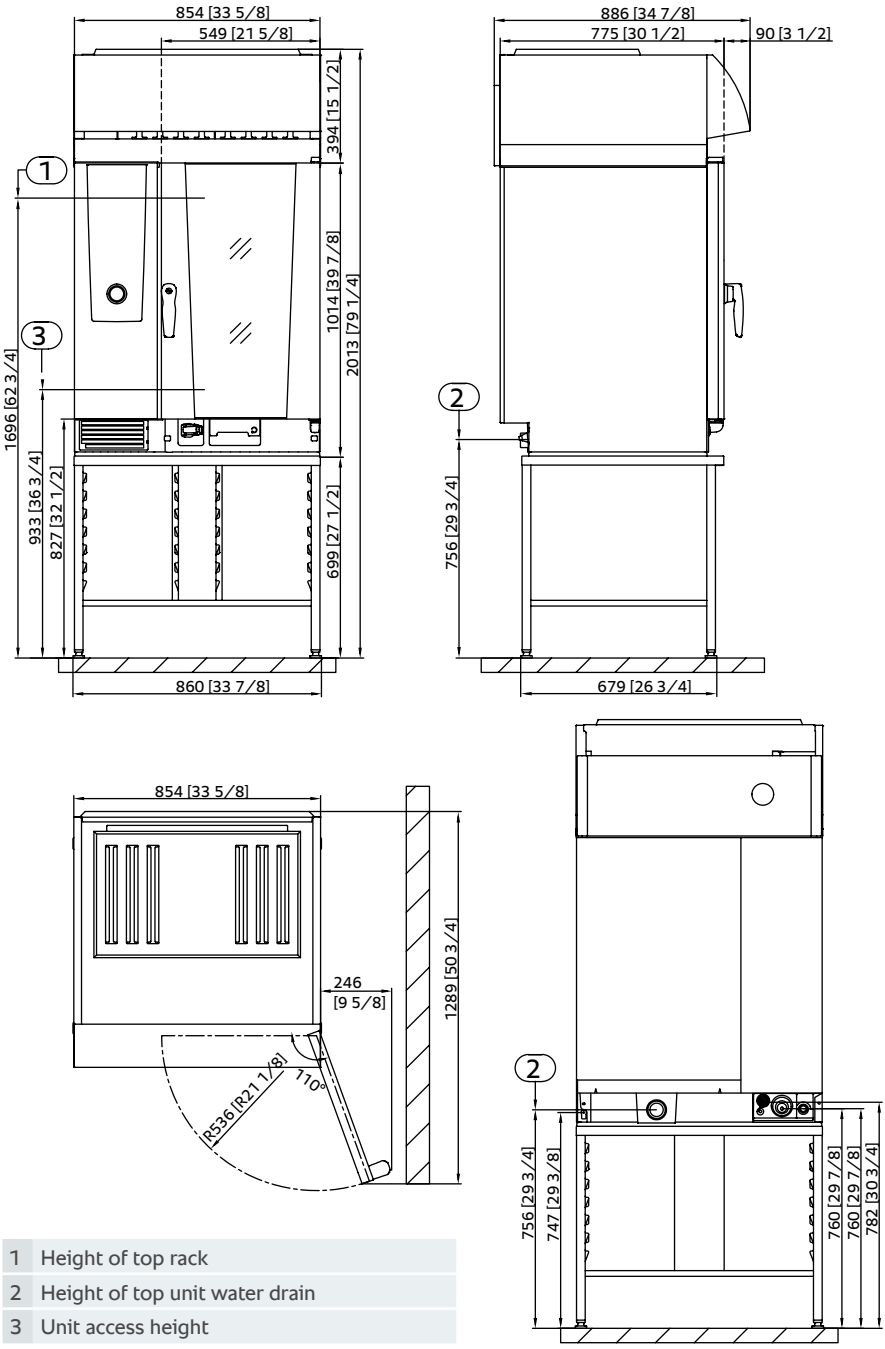
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.5.3 Model 6-2/1 Electric with UltraVent Plus on stand III UltraVent



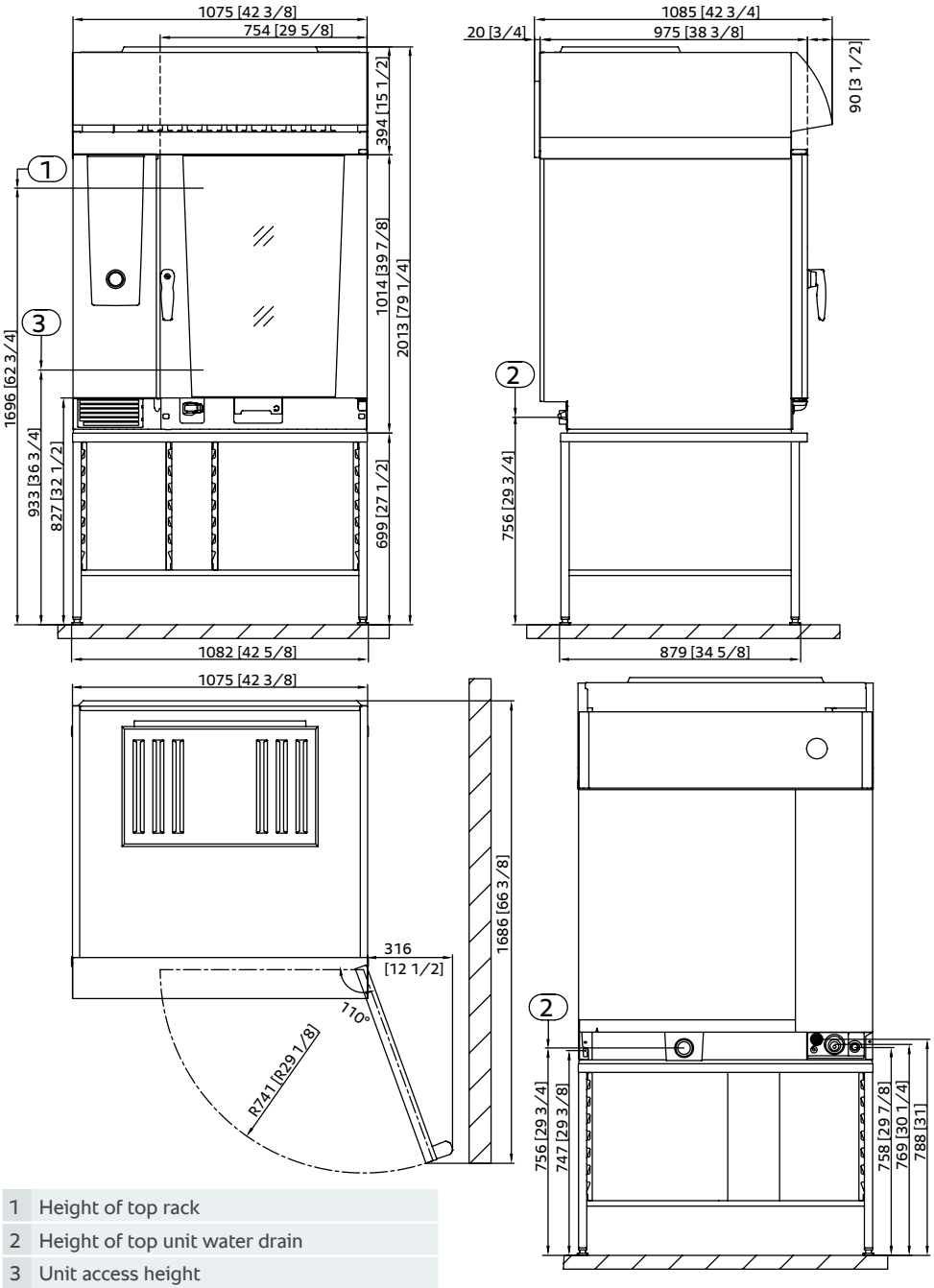
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.5.4 Model 10-1/1 Electric with UltraVent Plus on stand II



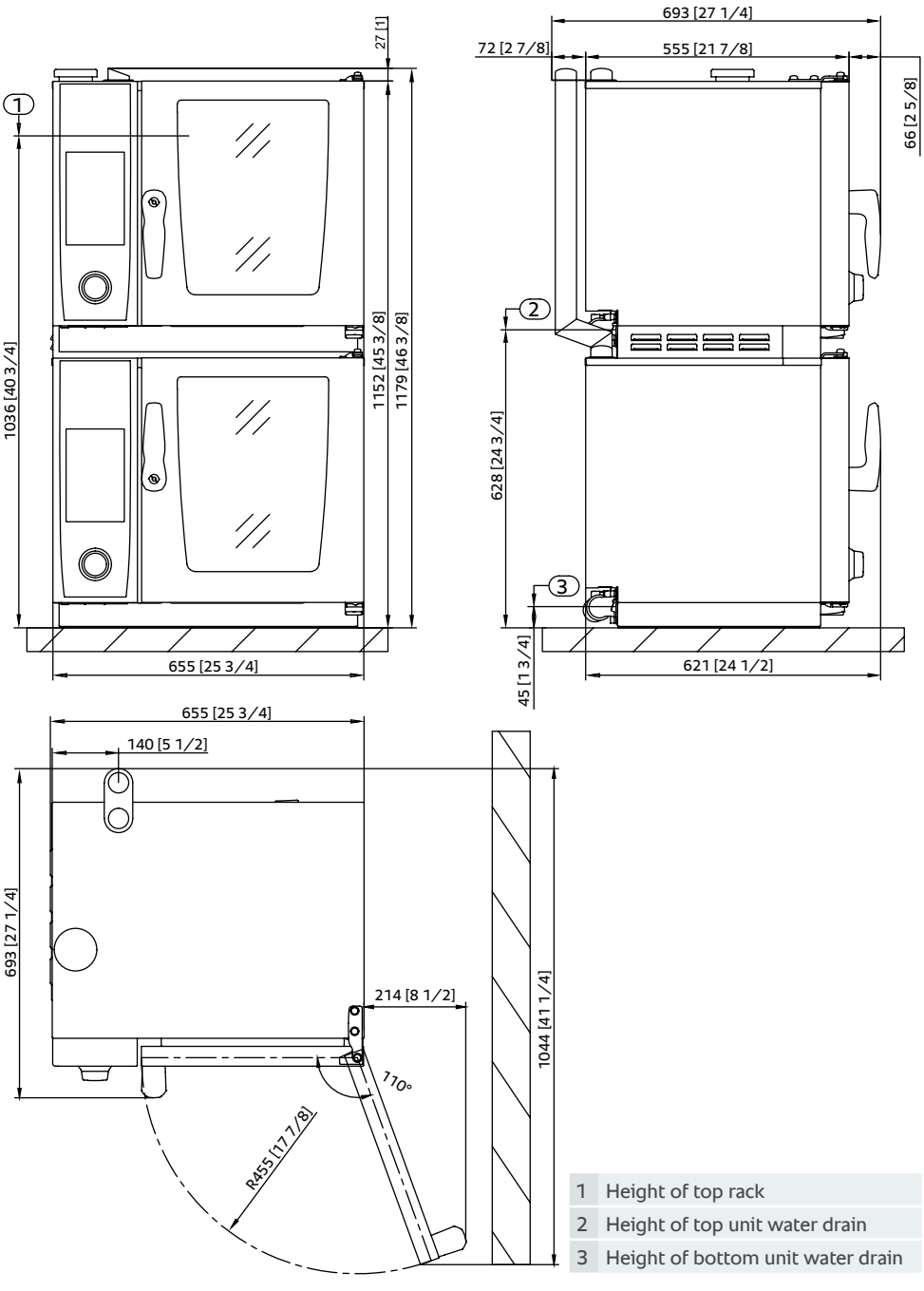
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

9.5.5 Model 10-2/1 Electric with UltraVent Plus on stand II



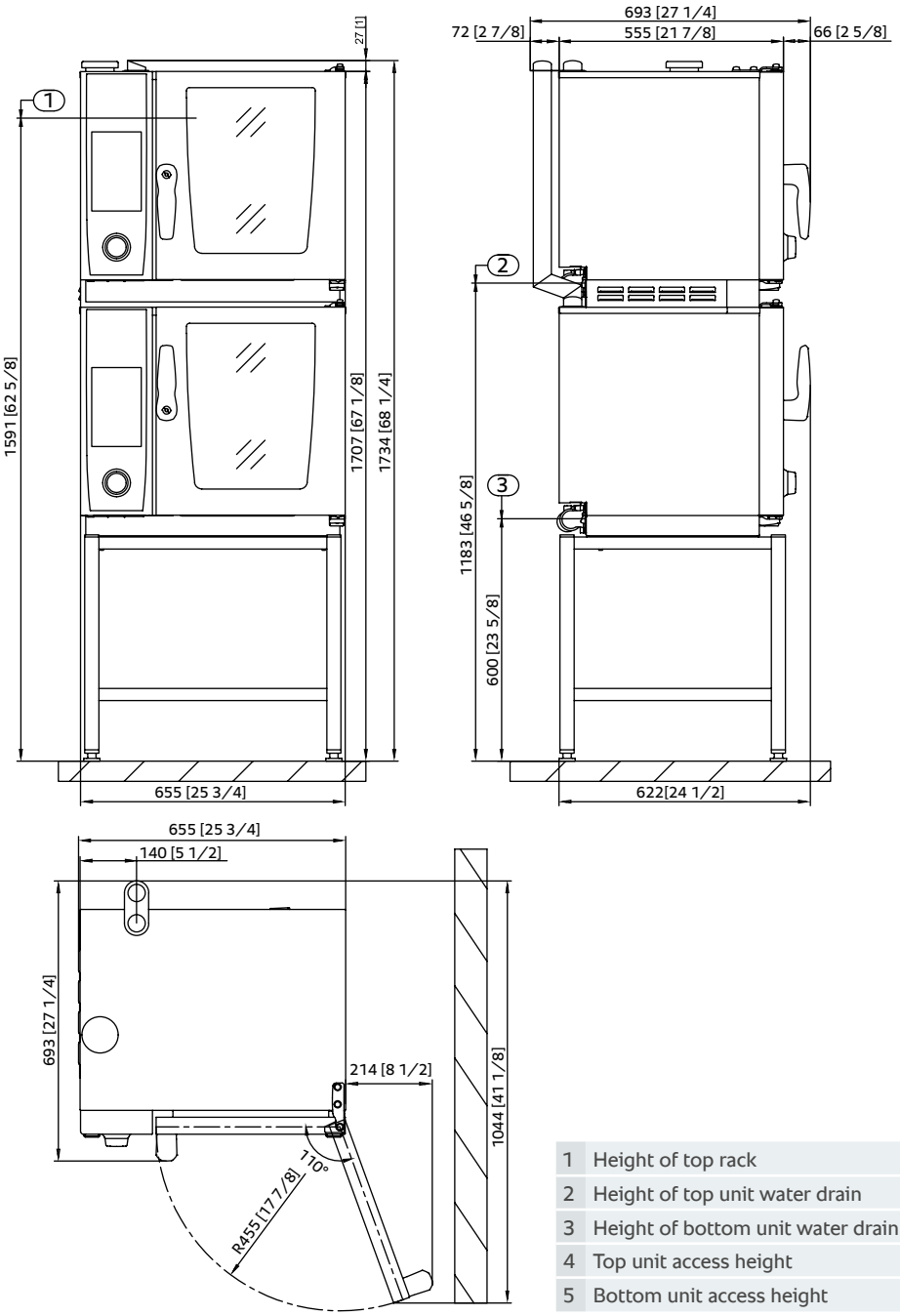
1	Height of top rack
2	Height of top unit water drain
3	Unit access height

10.1.1 Combi-Duo - model XS 6-2/3 on XS 6-2/3



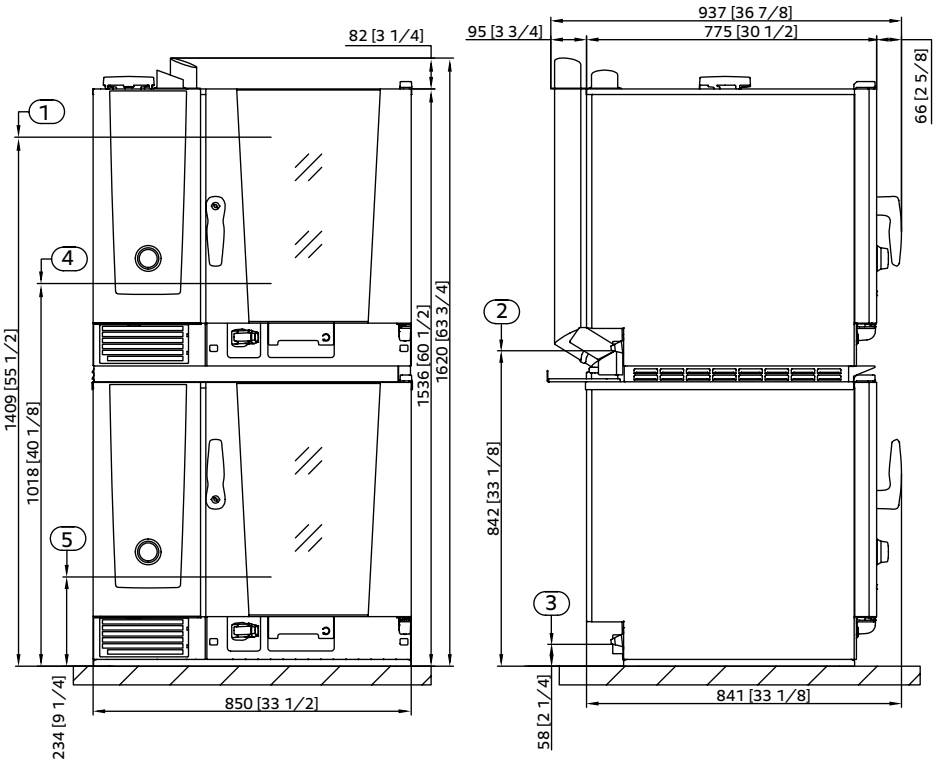
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain

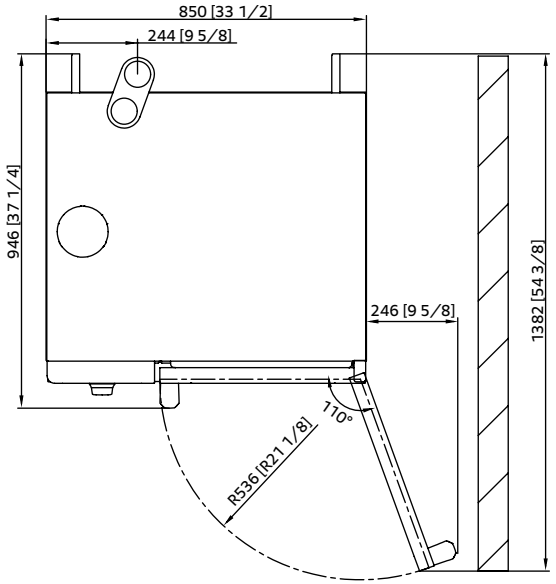
10.1.2 Combi-Duo - model XS 6-2/3 on XS 6-2/3 on stand I



1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

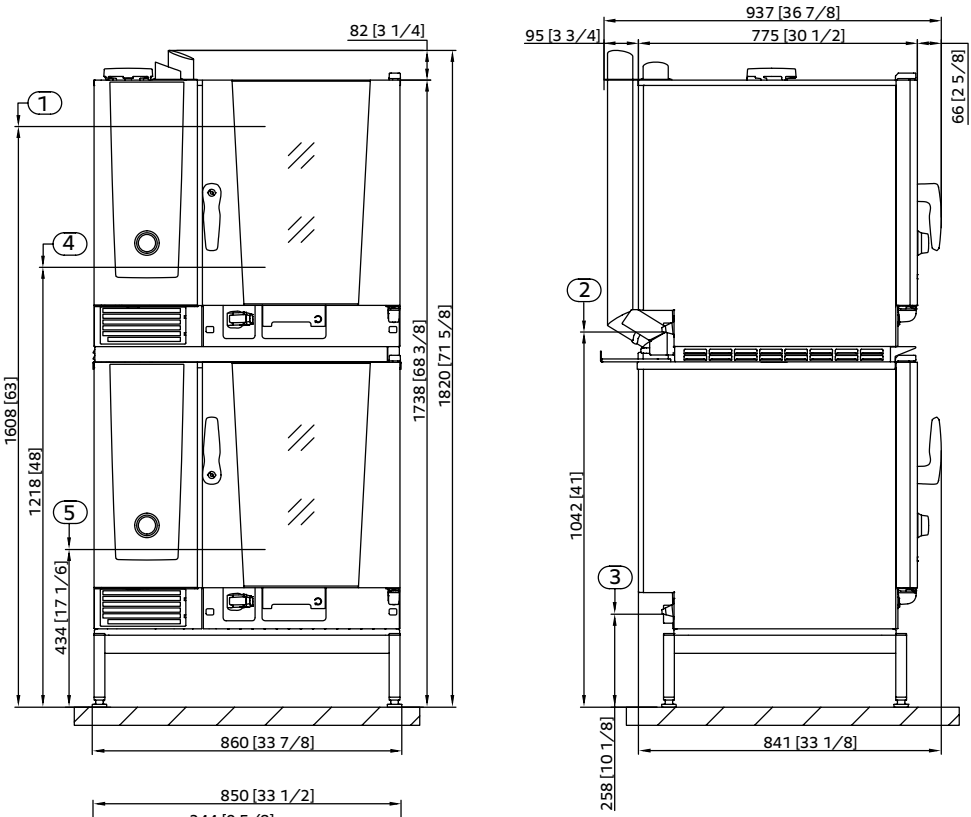
10.2.1 Combi-Duo - model 6-1/1 Electric/Gas on 6-1/1 Electric





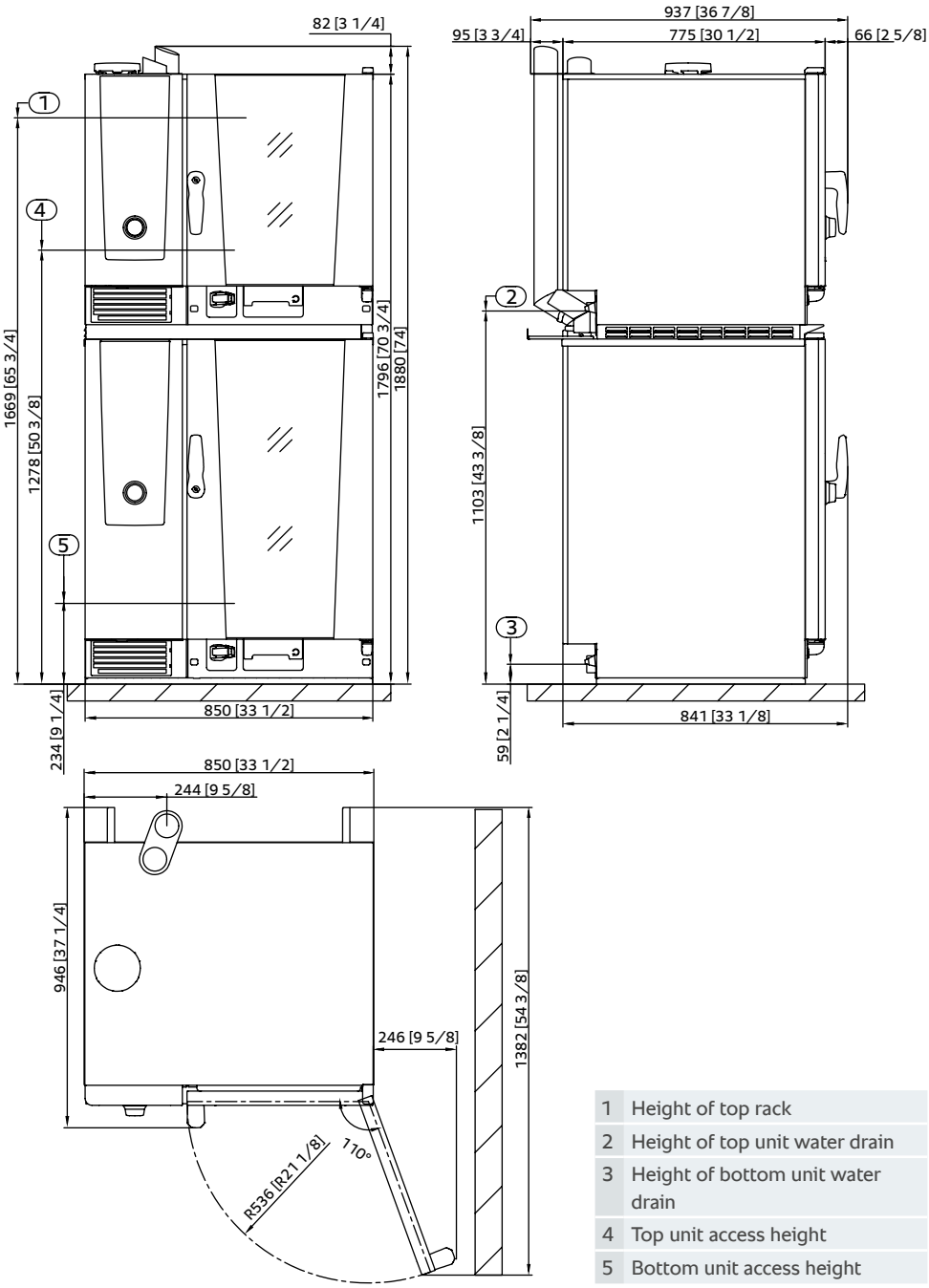
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.2.2 Combi-Duo - model 6-1/1 Electric/Gas on 6-1/1 Electric on stand I Combi-Duo



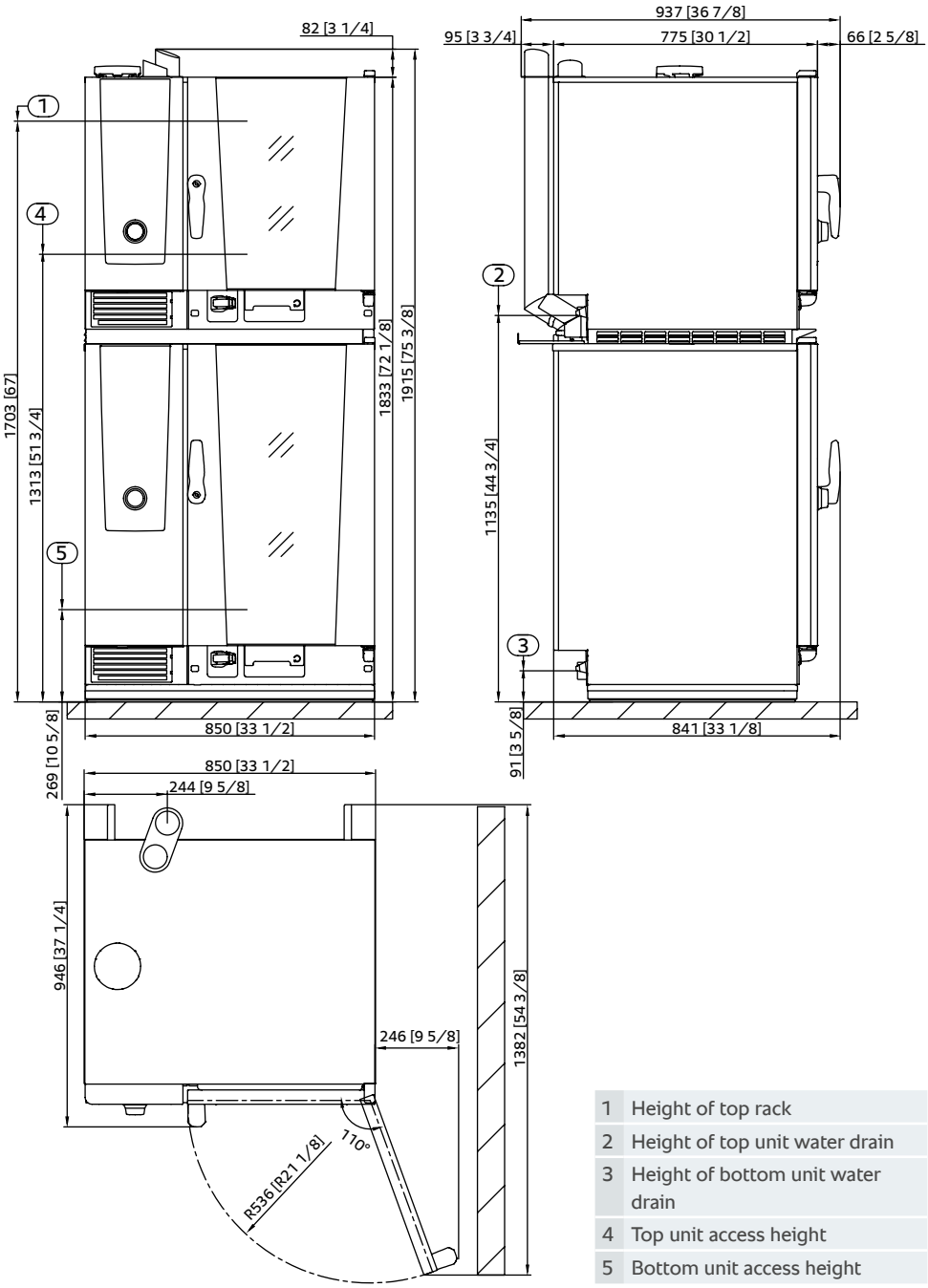
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.3.1 Combi-Duo - model 6-1/1 Electric/Gas on 10-1/1 Electric



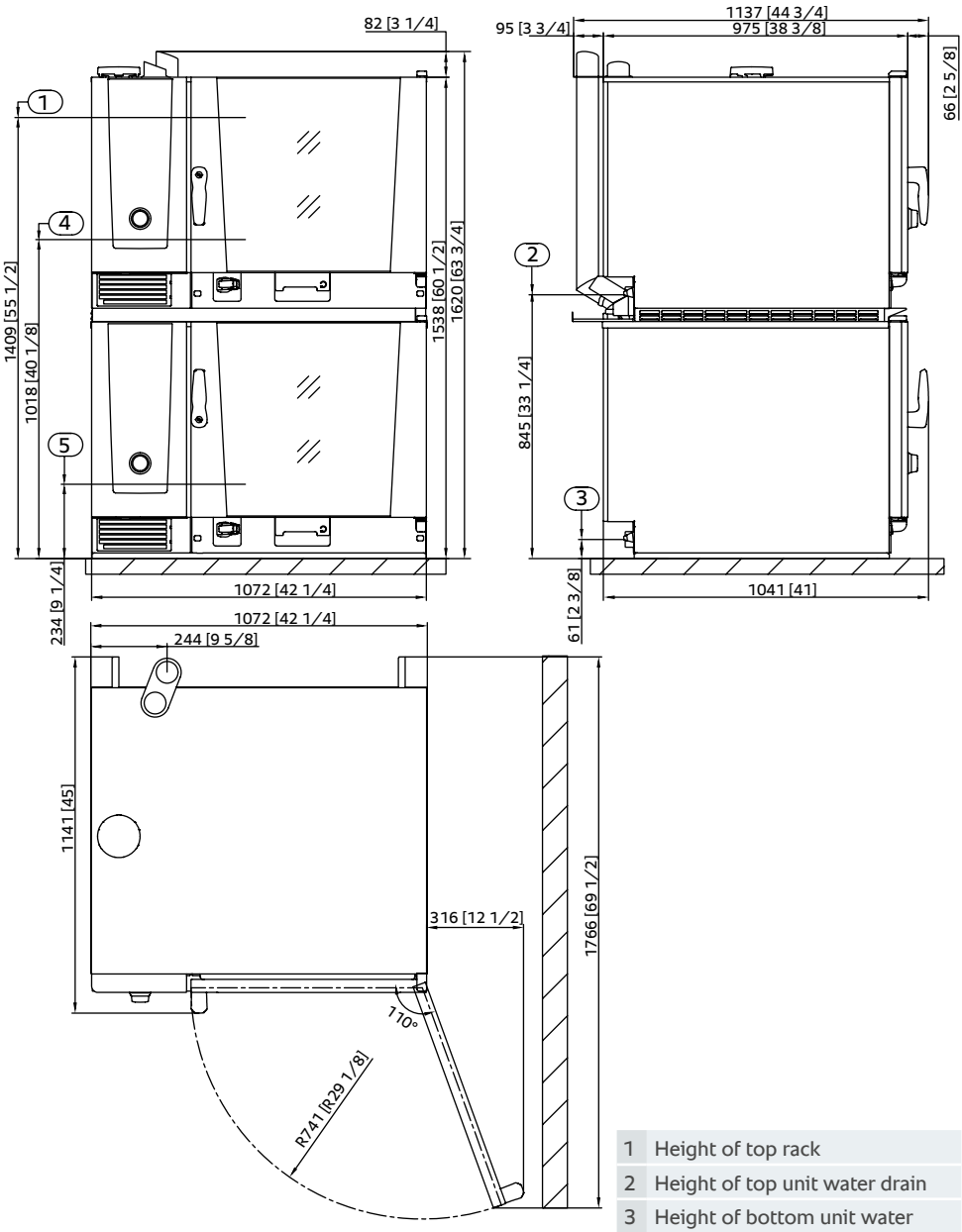
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.3.2 Combi-Duo - model 6-1/1 Electric/Gas on 10-1/1 Electric on levelling kit



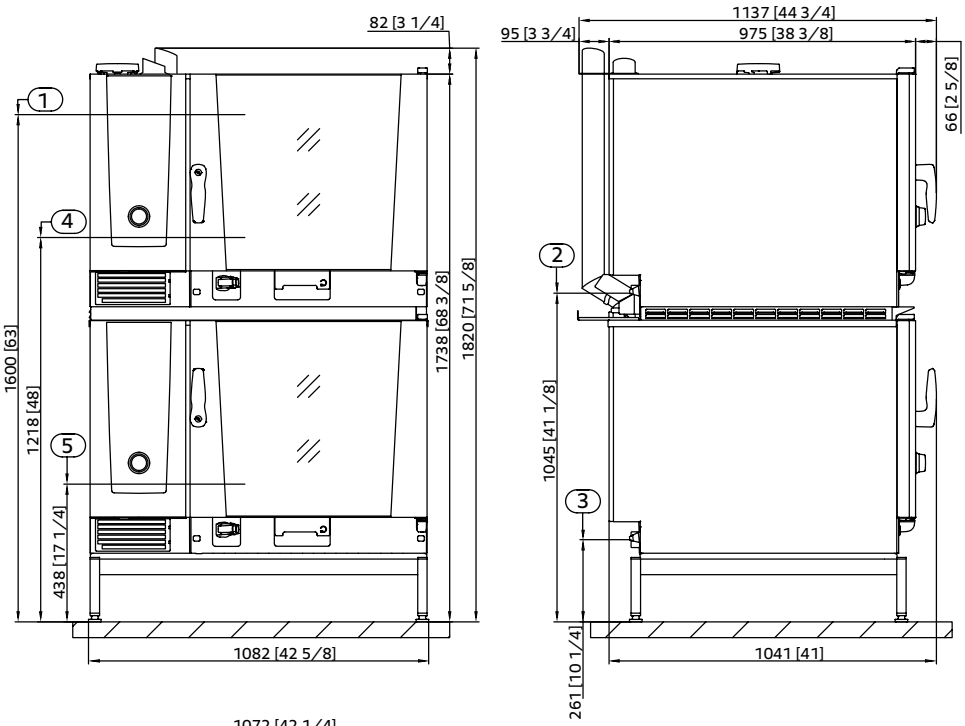
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.4.1 Combi-Duo - model 6-2/1 Electric/Gas on 6-2/1 Electric



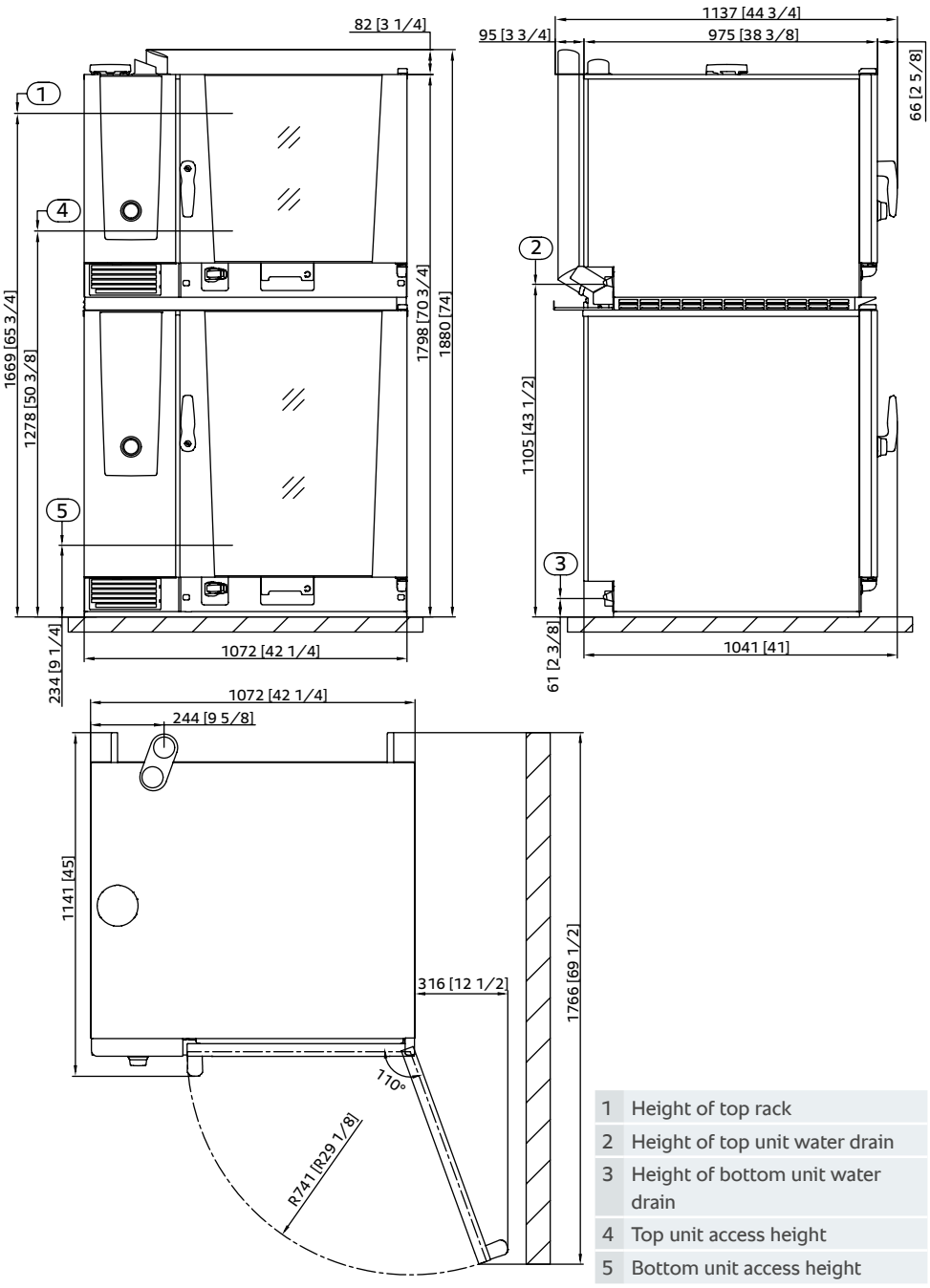
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.4.2 Combi-Duo - model 6-2/1 Electric/Gas on 6-2/1 Electric on stand I Combi-Duo



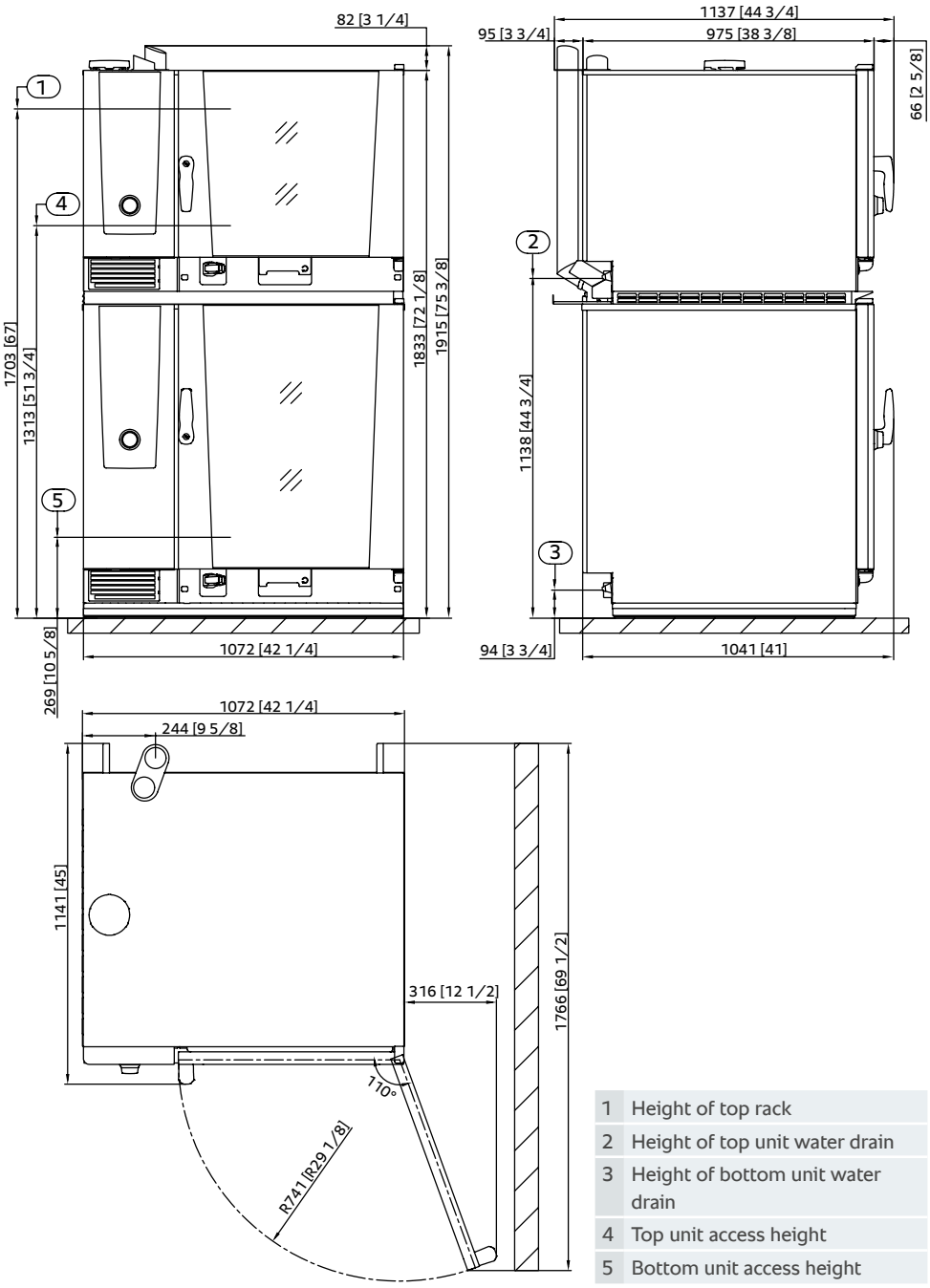
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.5.1 Combi-Duo - model 6-2/1 Electric/Gas on 10-2/1 Electric



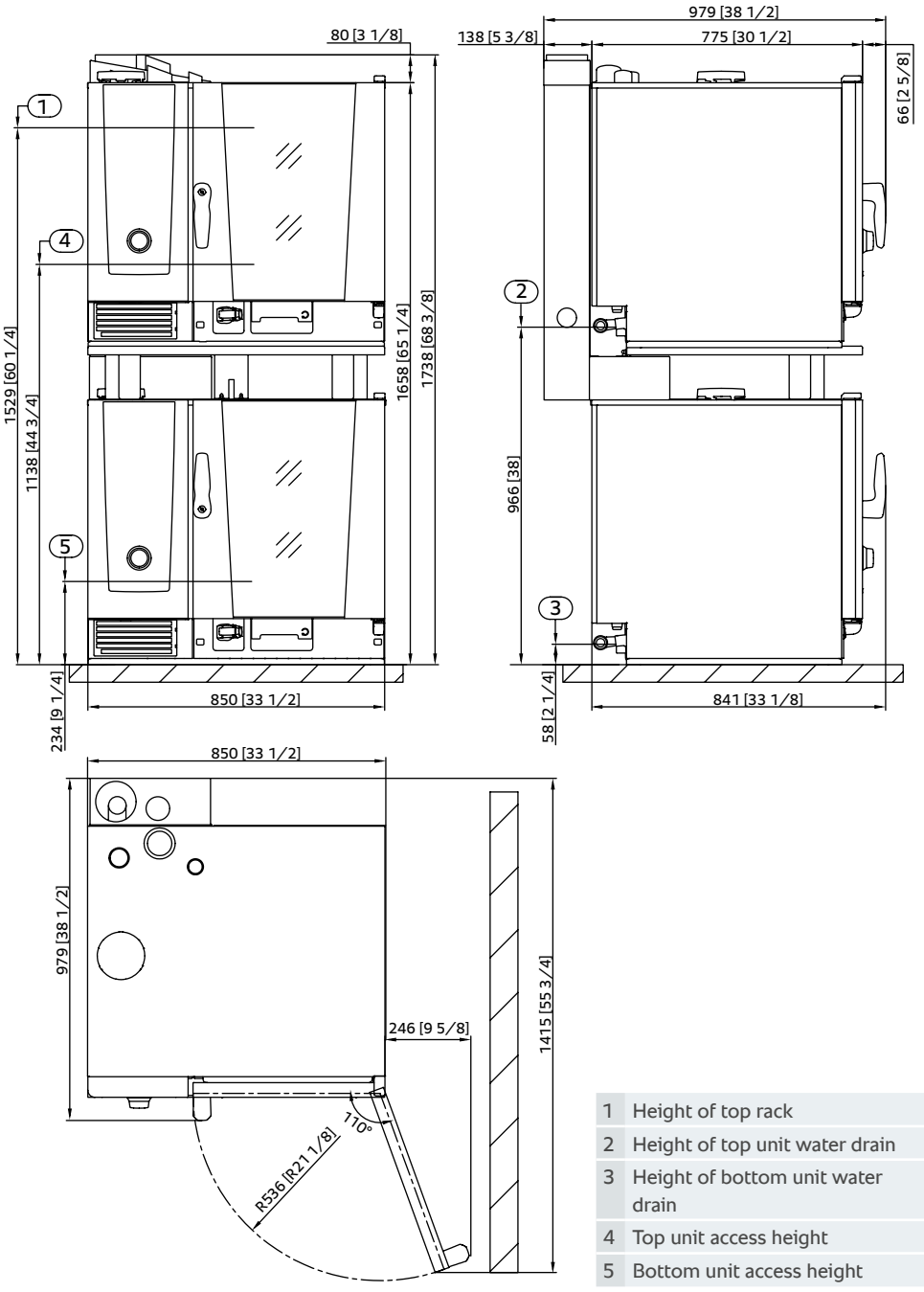
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.5.2 Combi-Duo - model 6-2/1 Electric/Gas on 10-2/1 Electric on levelling kit



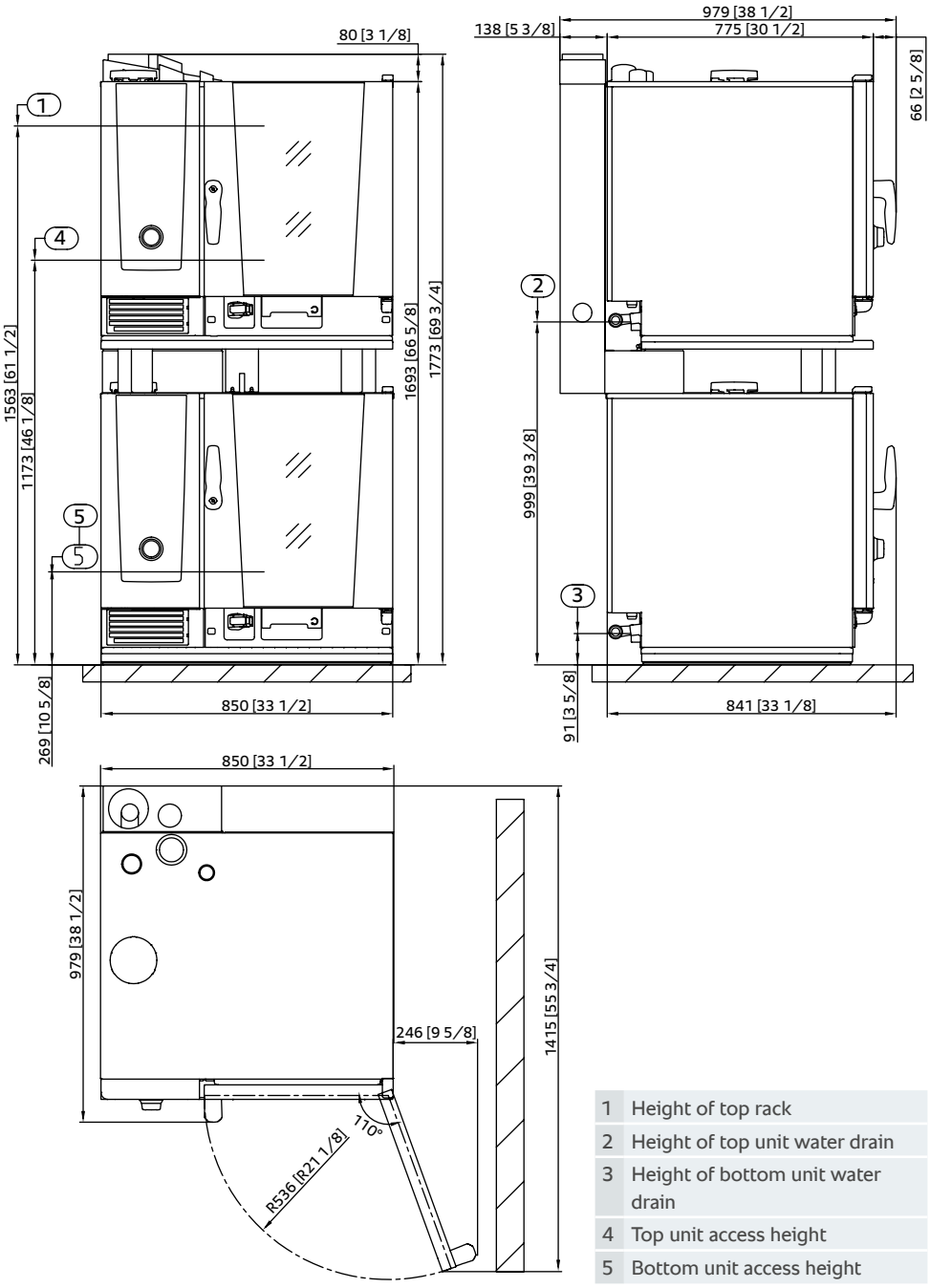
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.6.1 Combi-Duo - model 6-1/1 Gas on 6-1/1 Gas



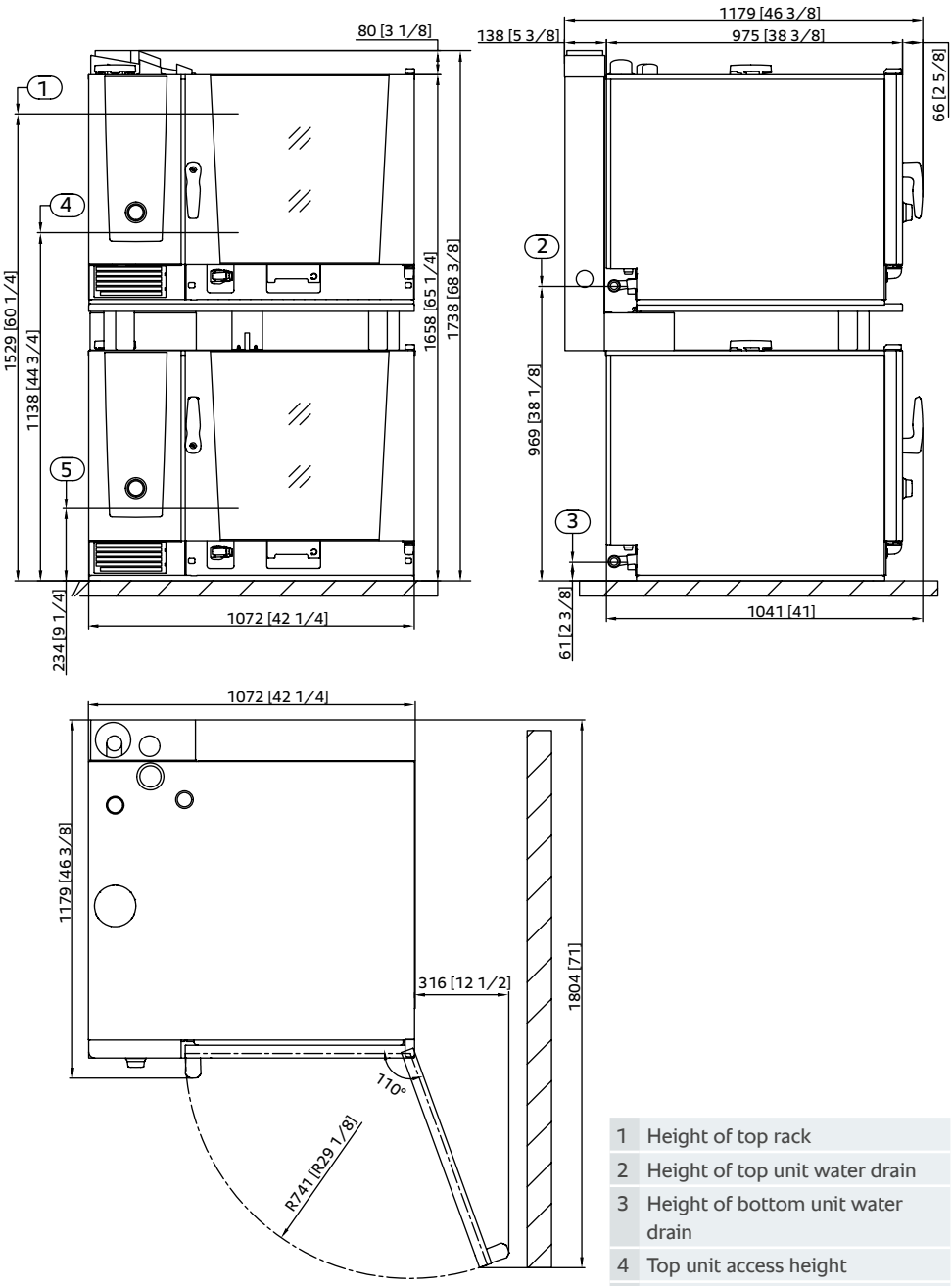
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.6.2 Combi-Duo - model 6-1/1 Gas on 6-1/1 Gas on levelling kit



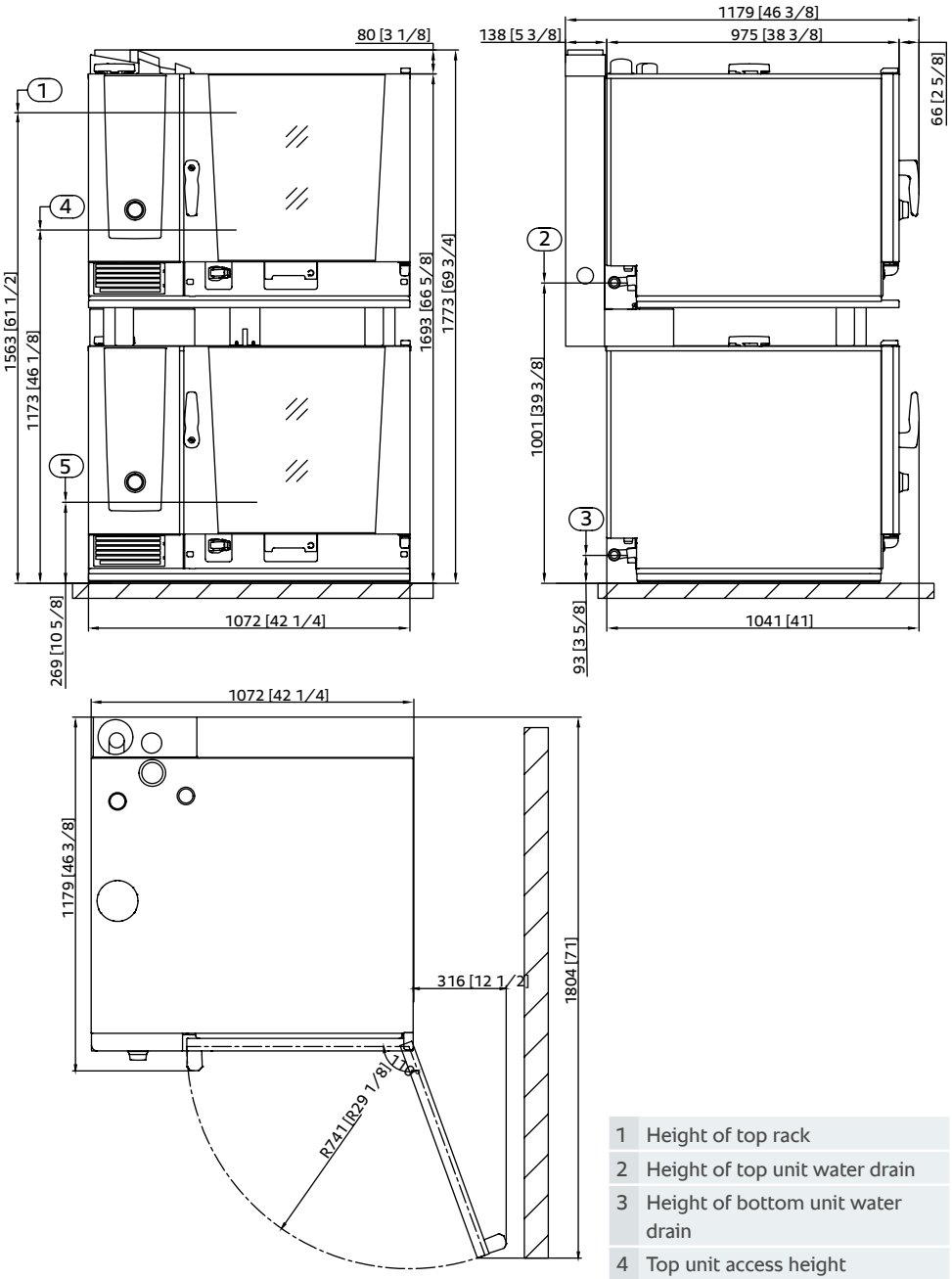
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.7.1 Combi-Duo - model 6-2/1 Gas on 6-2/1 Gas



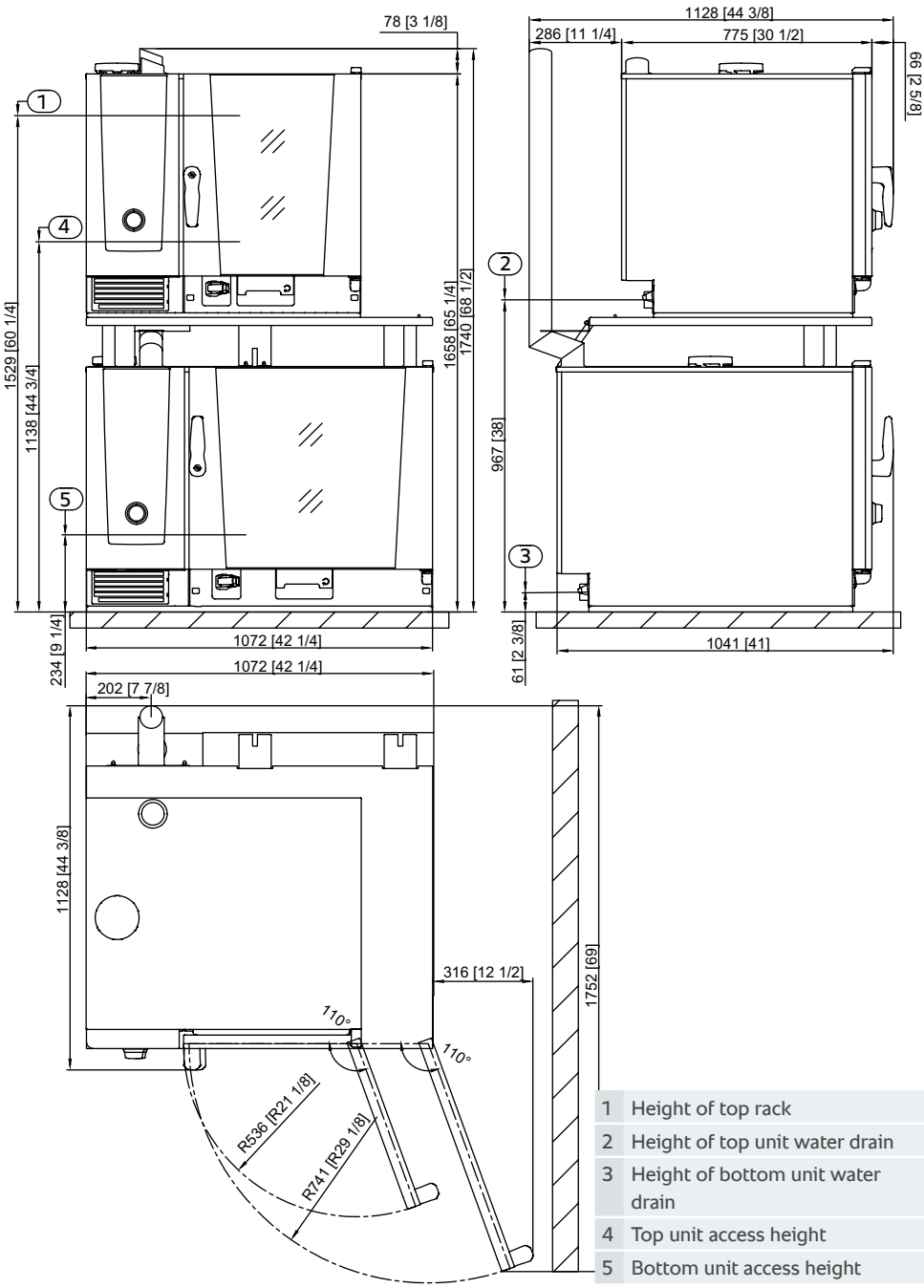
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.7.2 Combi-Duo - model 6-2/1 Gas on 6-2/1 Gas on levelling kit



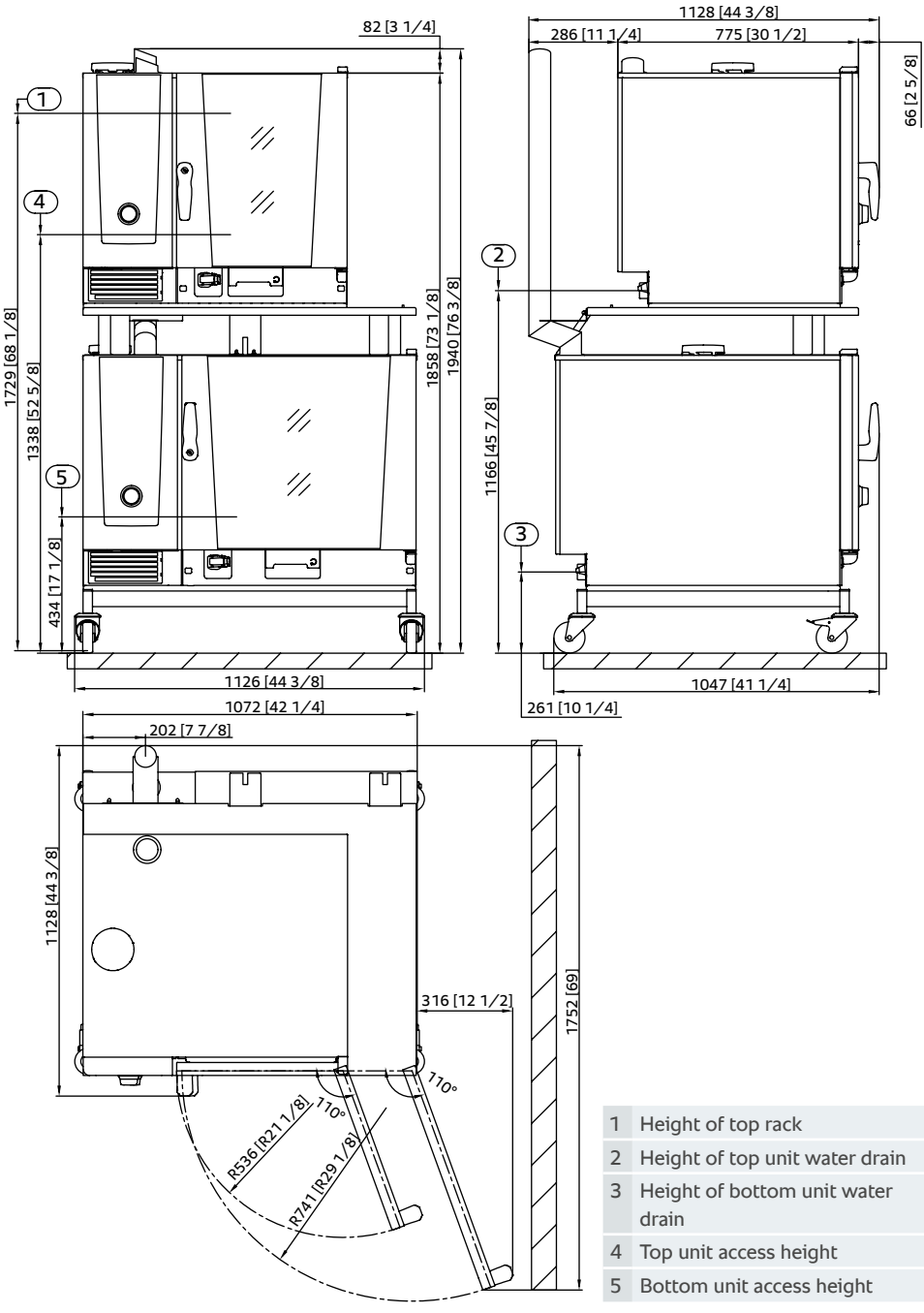
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.8.1 Combi-Duo - model 6-1/1 Electric/Gas on 6-2/1 Electric



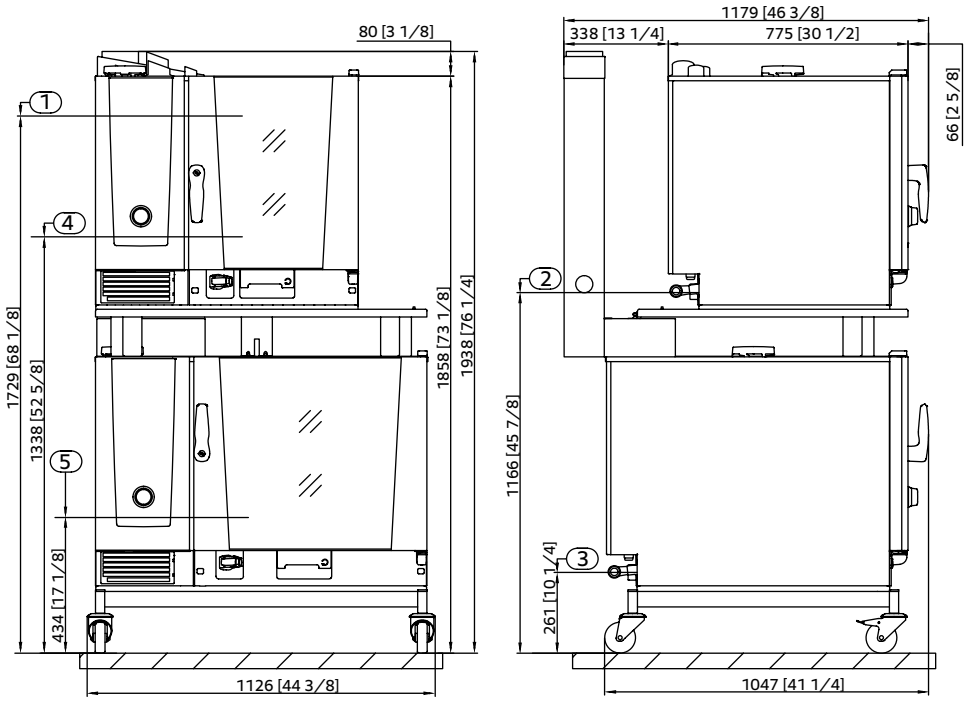
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.8.2 Combi-Duo - model 6-1/1 Electric/Gas on 6-2/1 Electric on stand I Combi-Duo



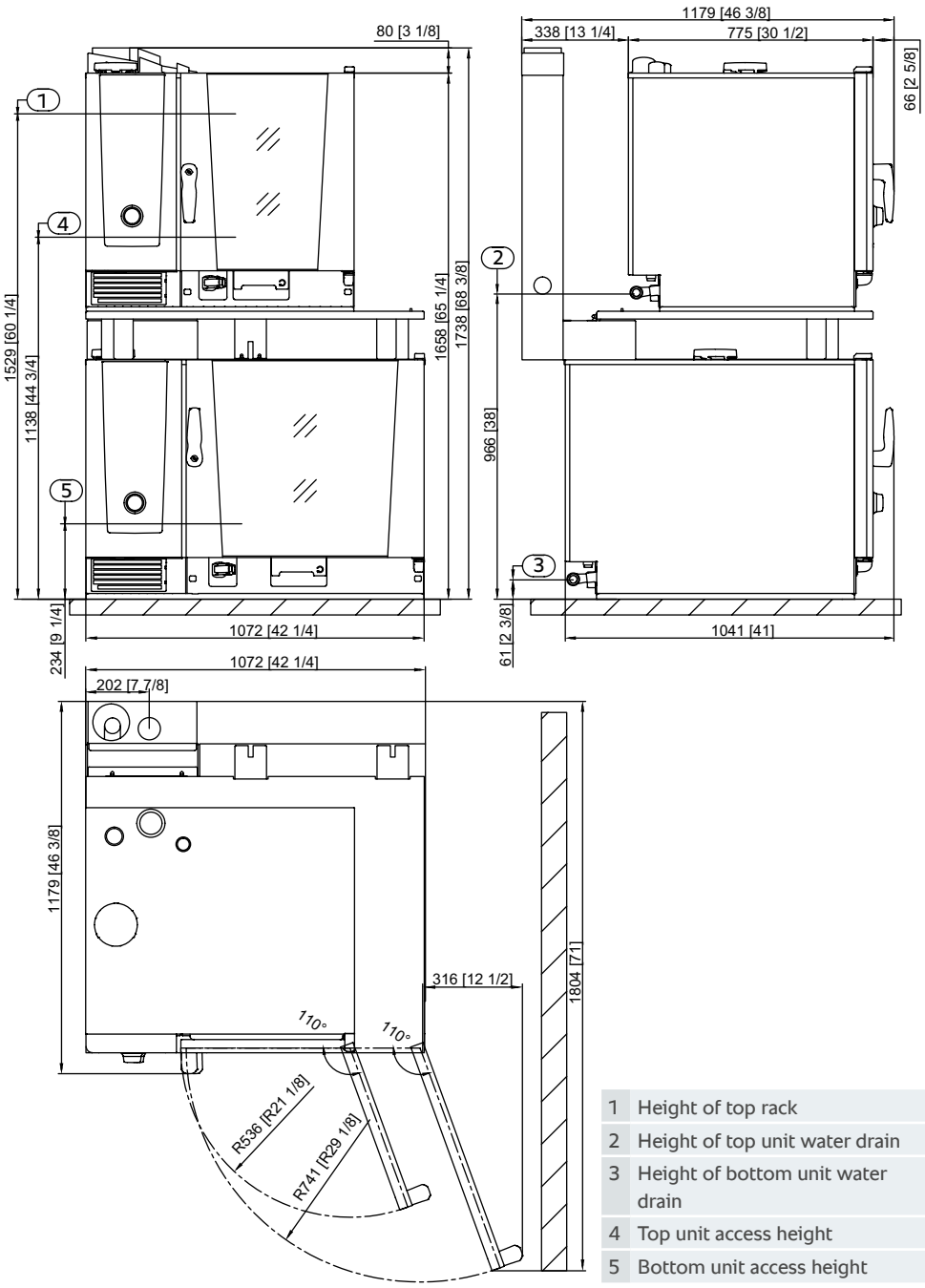
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.9.1 Combi-Duo - model 6-1/1 Gas on 6-2/1 Electric/Gas on stand I Combi-Duo



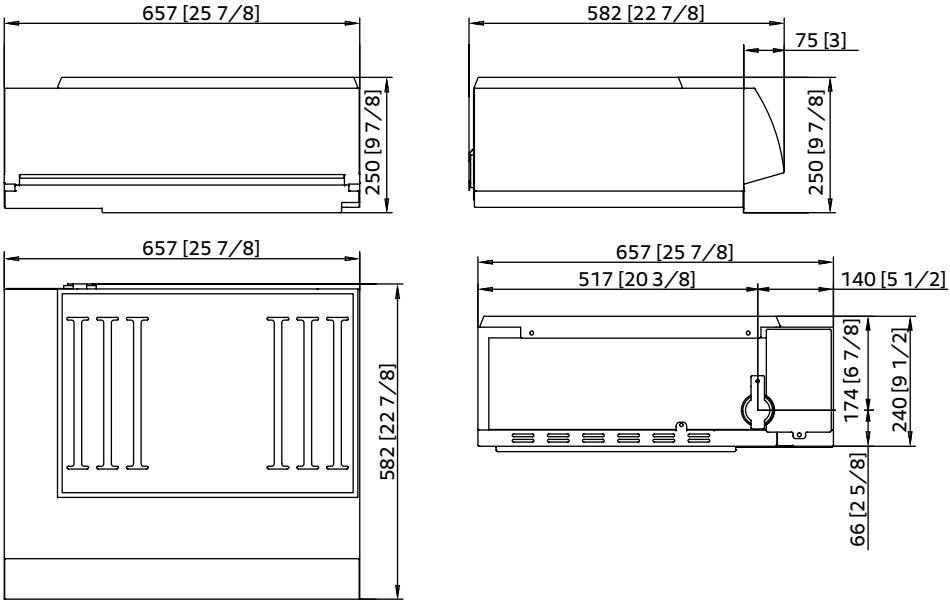
1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

10.10.2.Combi-Duo - model 6-1/1 Gas on 6-2/1 Gas

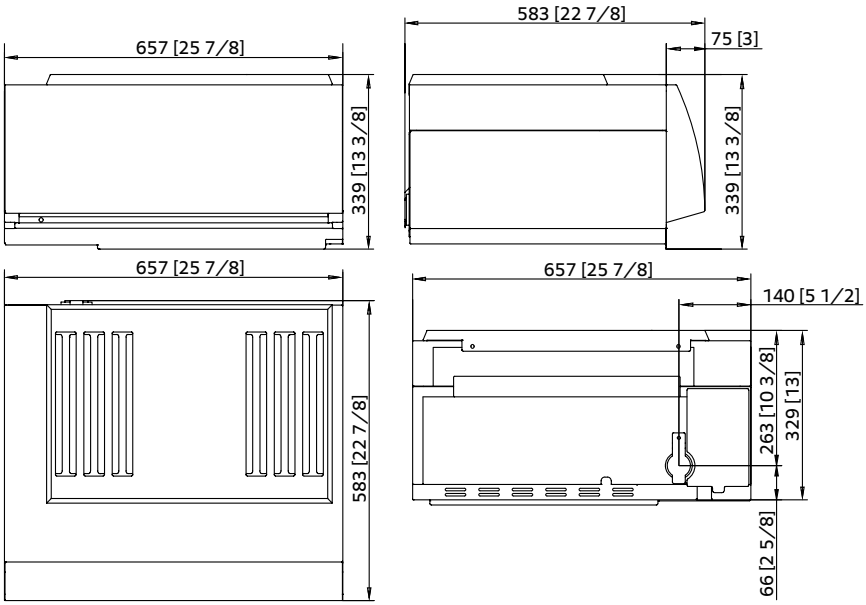


1	Height of top rack
2	Height of top unit water drain
3	Height of bottom unit water drain
4	Top unit access height
5	Bottom unit access height

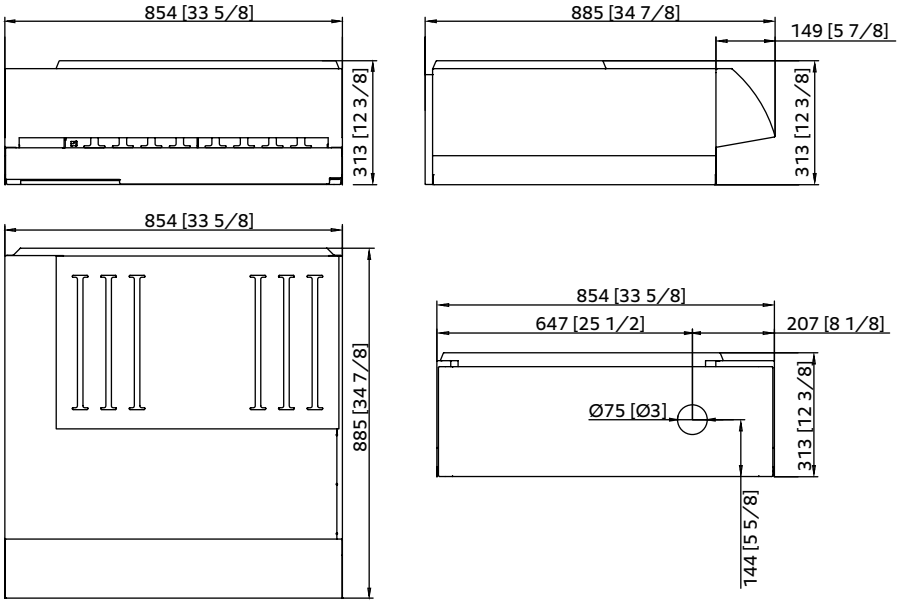
11.1.1 UltraVent model XS 6-2/3



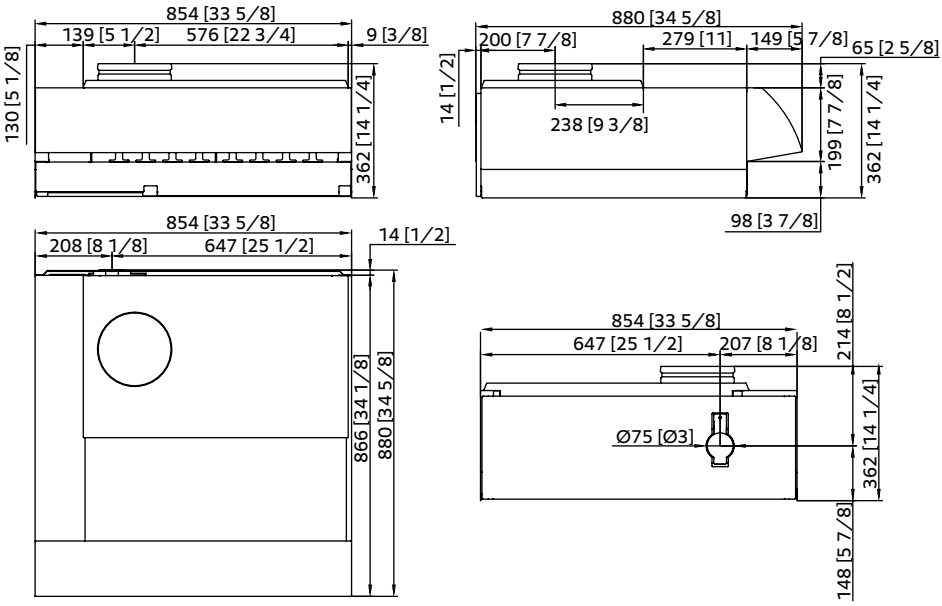
11.1.2 UltraVent Plus model XS 6-2/3



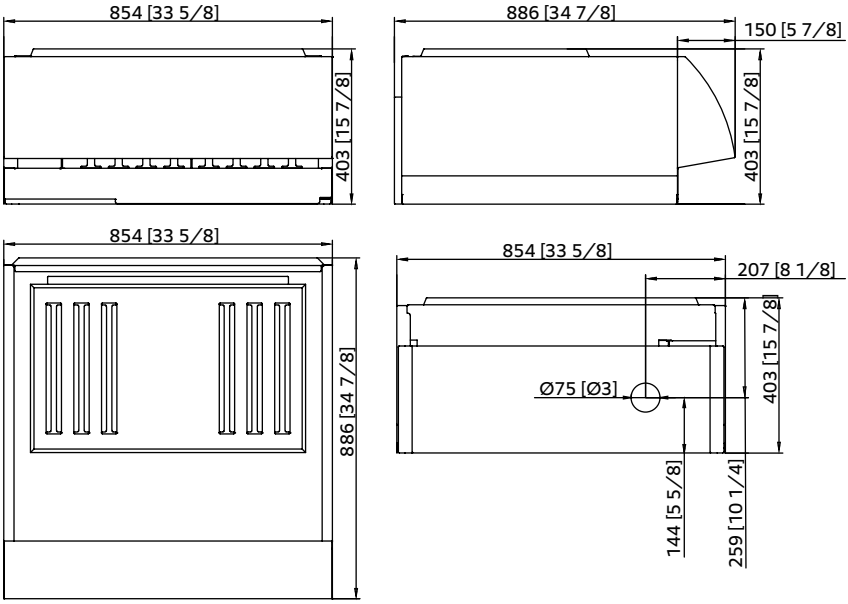
11.2.1 UltraVent model 6-1/1 and 10-1/1



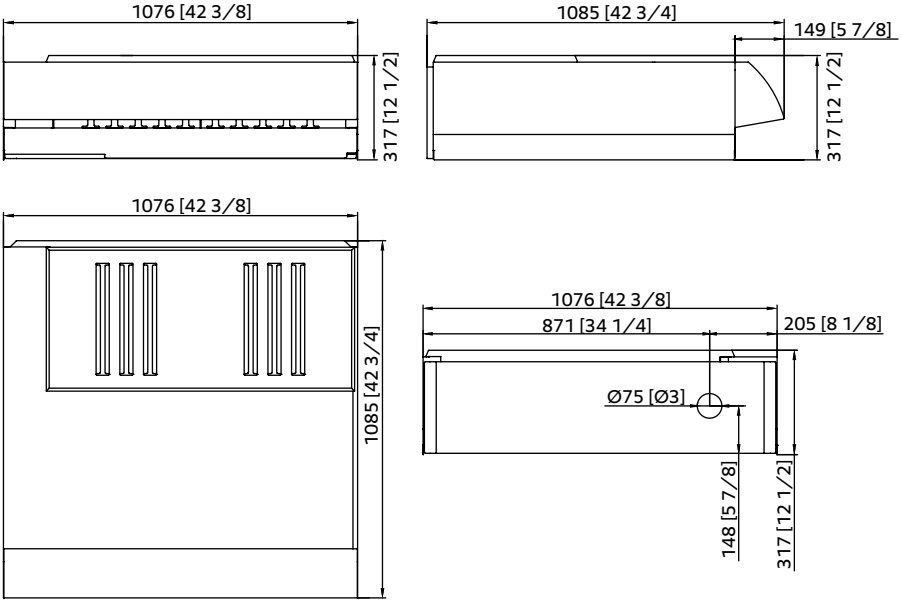
11.2.2 Extractor hood model 6-1/1 and 10-1/1



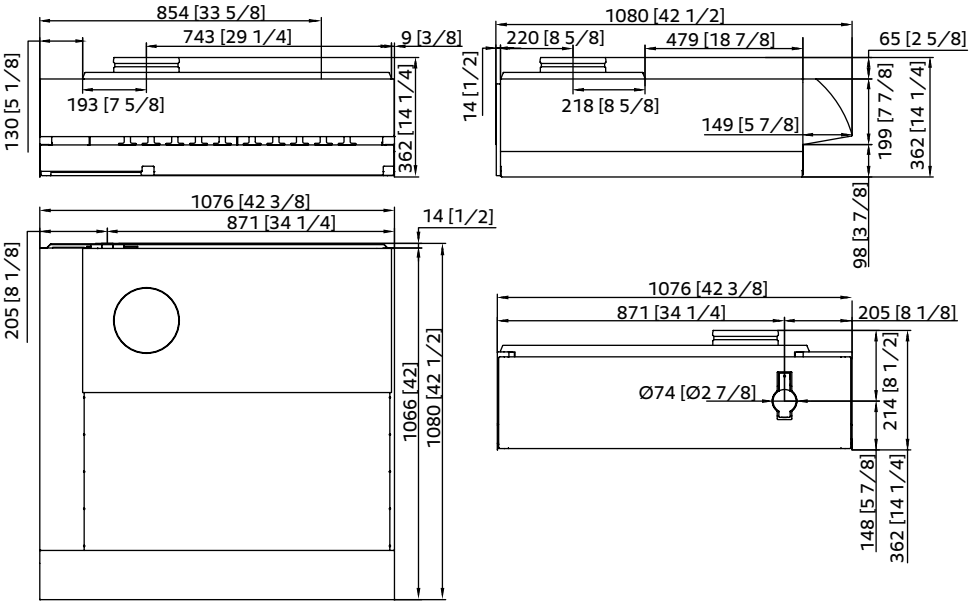
11.2.3 UltraVent Plus model 6-1/1 and 10-1/1



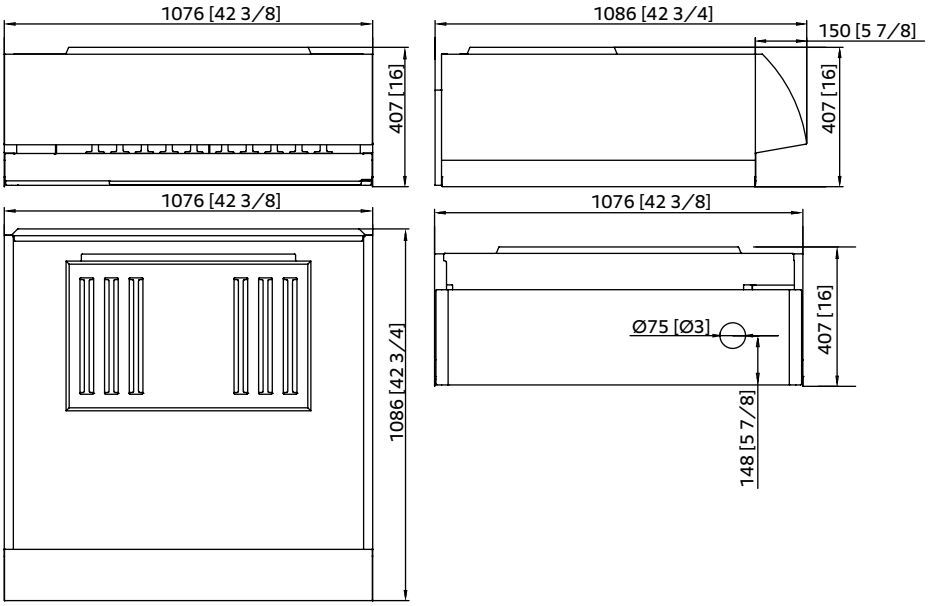
11.3.1 UltraVent model 6-2/1 and 10-2/1



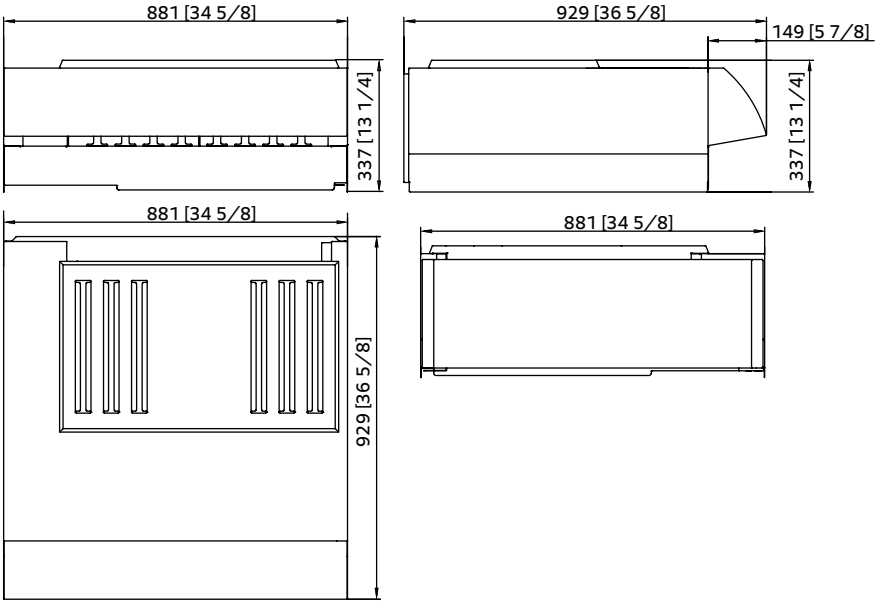
11.3.2 Extractor hood model 6-2/1 and 10-2/1



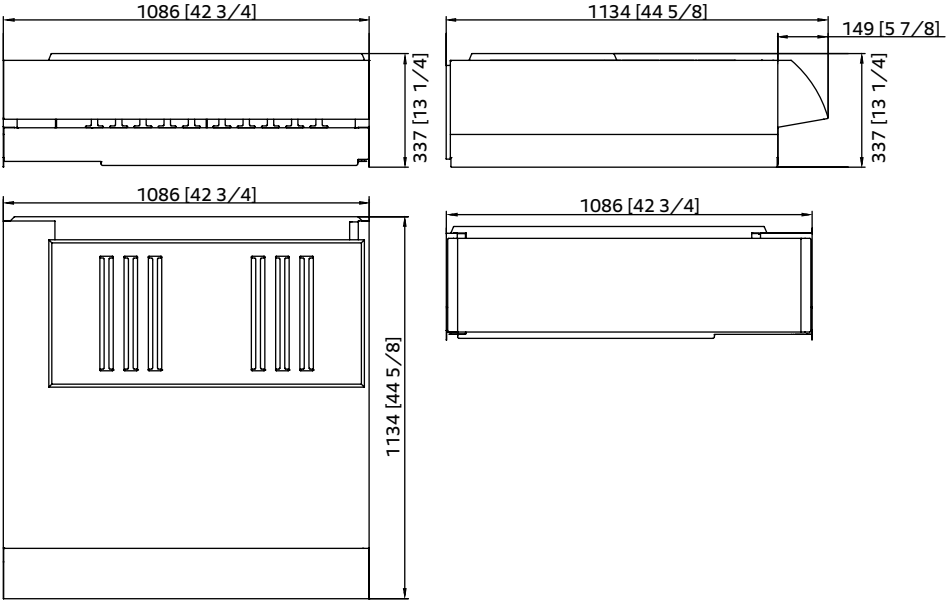
11.3.3 UltraVent Plus model 6-2/1 and 10-2/1



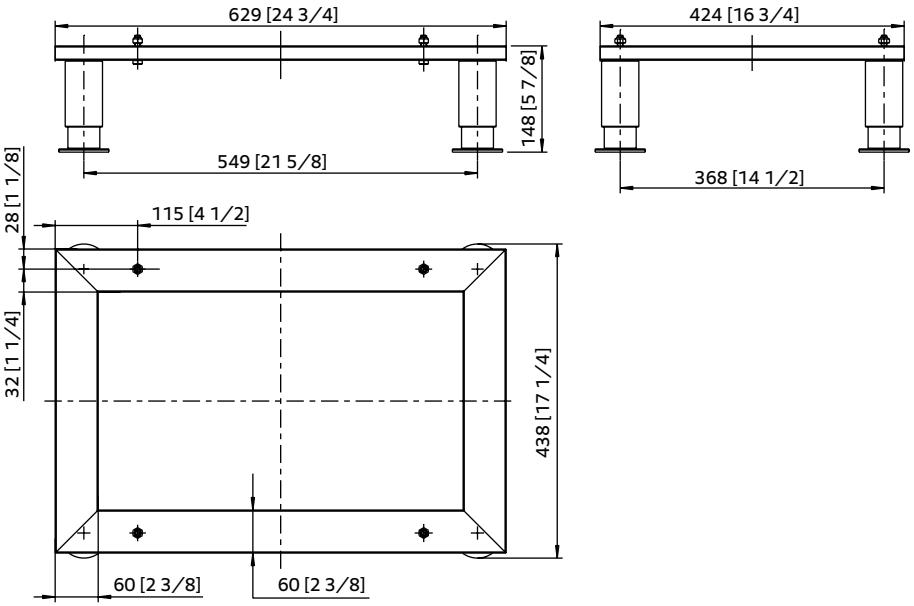
11.4.1 UltraVent model 20-1/1



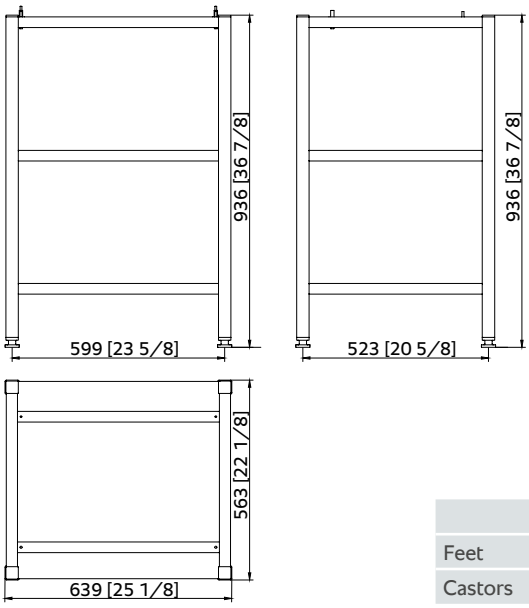
11.4.3 UltraVent model 20-2/1



12.1.1 Stand XS model XS 6-2/3

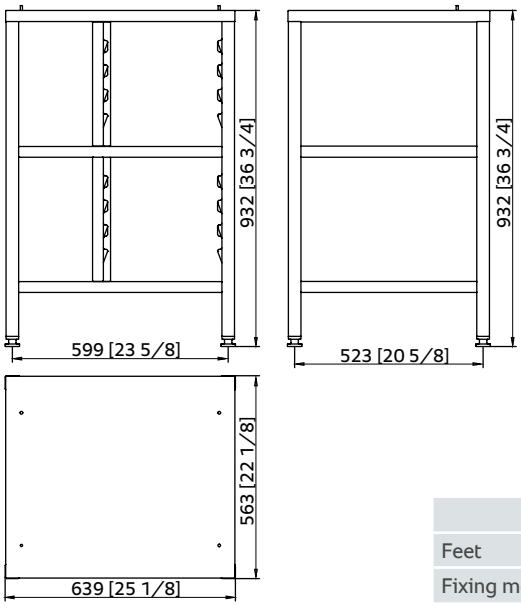


12.1.2 Stand I model XS 6-2/3



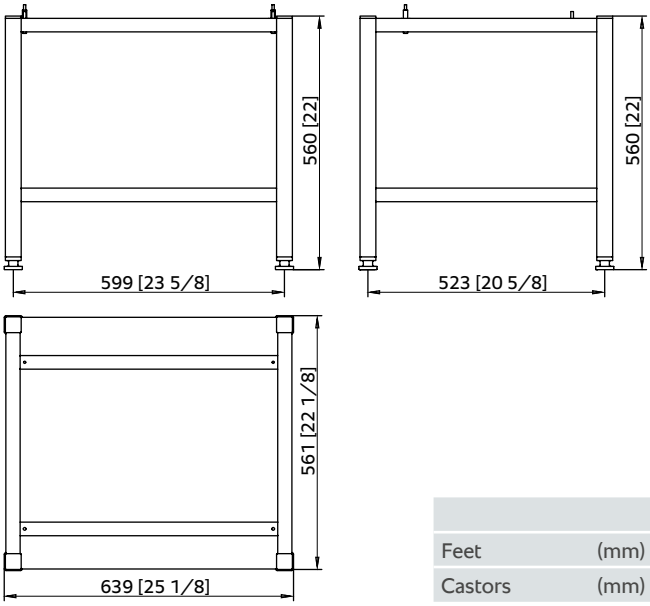
		Length	Width	Height
Feet	(mm)	634	558	931
Castors	(mm)	691	648	938

12.1.3 Stand II model XS 6-2/3



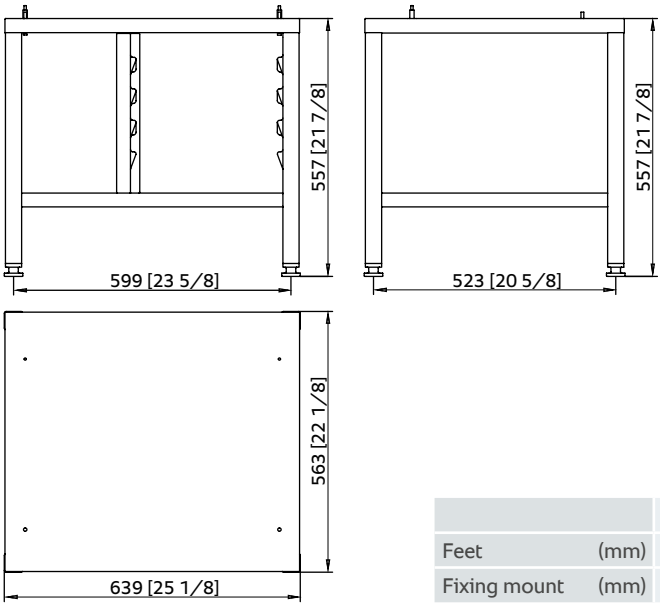
		Length	Width	Height
Feet	(mm)	639	563	933
Fixing mount	(mm)	689	613	932

12.1.4 Stand I Combi-Duo model XS 6-2/3



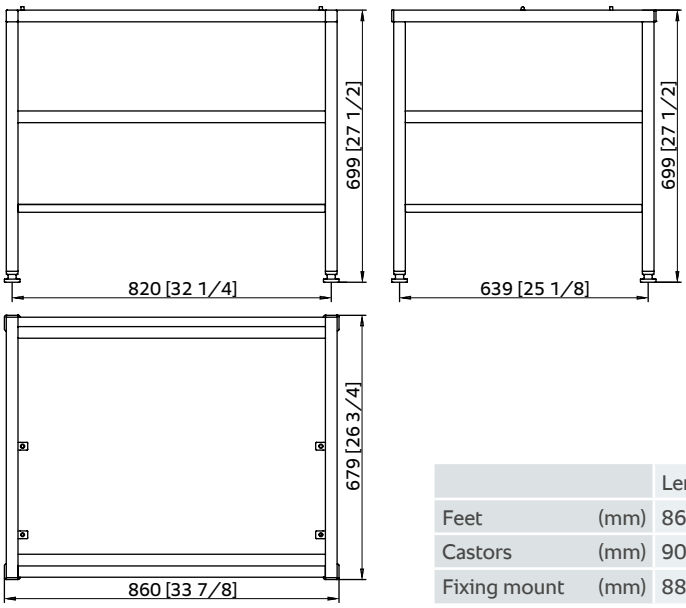
		Length	Width	Height
Feet	(mm)	634	558	555
Castors	(mm)	691	648	562

12.1.5 Stand II Combi-Duo model XS 6-2/3



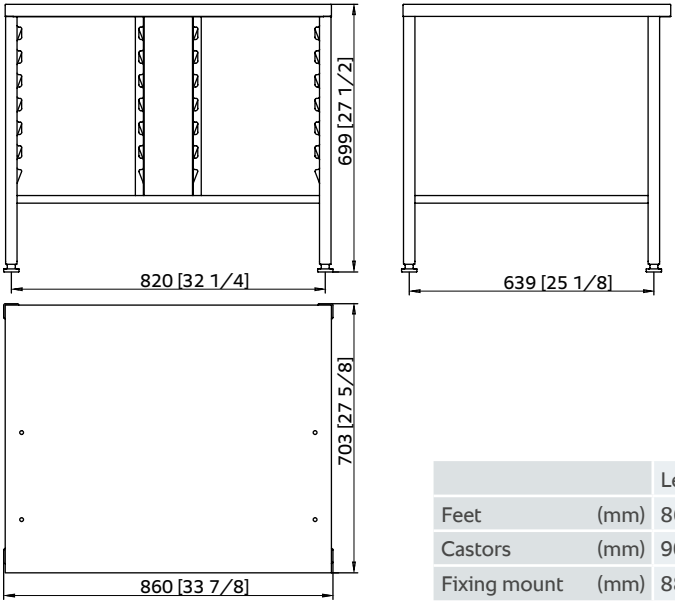
		Length	Width	Height
Feet	(mm)	639	563	557
Fixing mount	(mm)	689	613	557

12.2.1 Stand I model 6-1/1 and 10-1/1



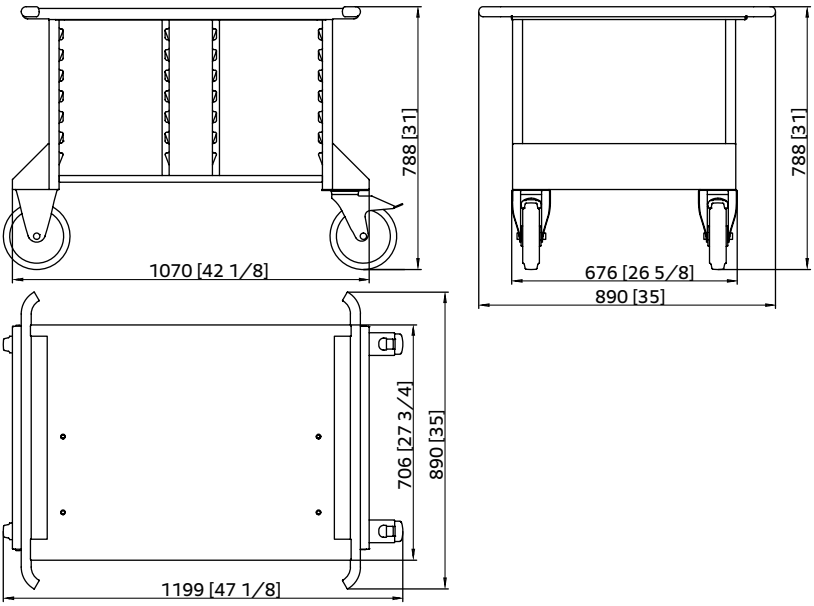
		Length	Width	Height
Feet	(mm)	860	679	699
Castors	(mm)	904	772	699
Fixing mount	(mm)	885	704	699

12.2.2 Stand II model 6-1/1 and 10-1/1

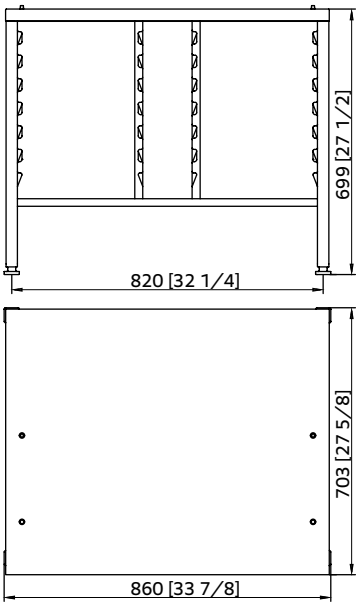


		Length	Width	Height
Feet	(mm)	860	703	699
Castors	(mm)	904	774	699
Fixing mount	(mm)	885	716	699

12.2.3 Stand II mobile model 6-1/1 and 10-1/1

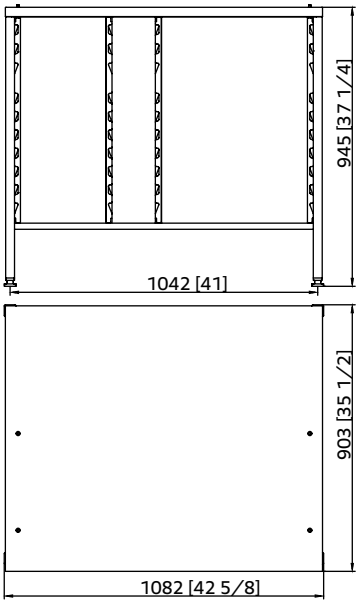


12.2.4 Stand III model 6-1/1 and 10-1/1



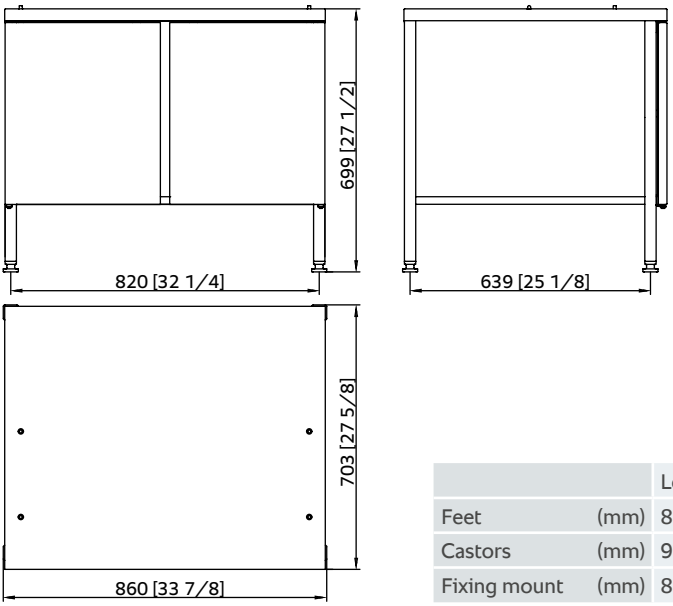
		Length	Width	Height
Feet	(mm)	860	703	699
Castors	(mm)	904	774	699
Fixing mount	(mm)	885	716	699

12.2.5 Stand III UltraVent model 6-1/1 and 10-1/1



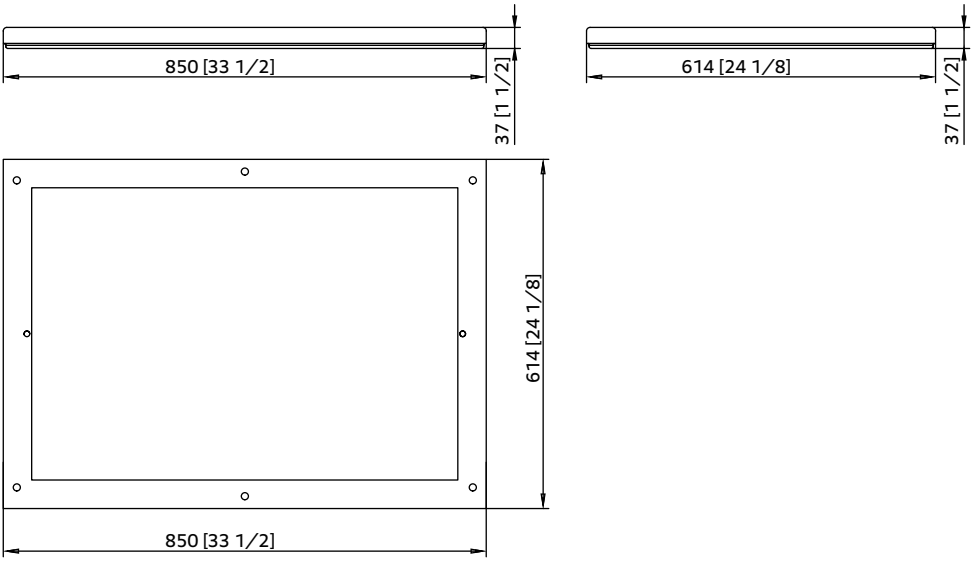
		Length	Width	Height
Feet	(mm)	860	703	945
Castors	(mm)	904	774	945

12.2.6 Stand IV model 6-1/1 and 10-1/1

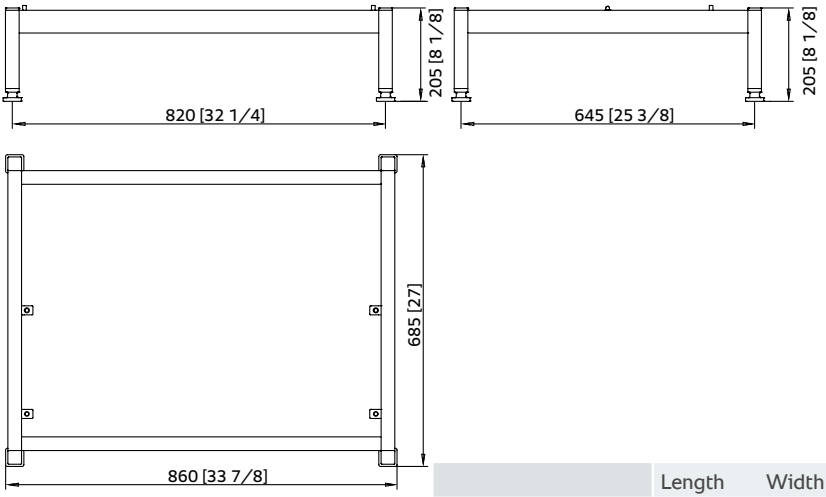


		Length	Width	Height
Feet	(mm)	860	703	699
Castors	(mm)	904	774	699
Fixing mount	(mm)	885	716	699

12.2.7 Levelling kit Combi-Duo and single unit model 6-1/1 and 10-1/1

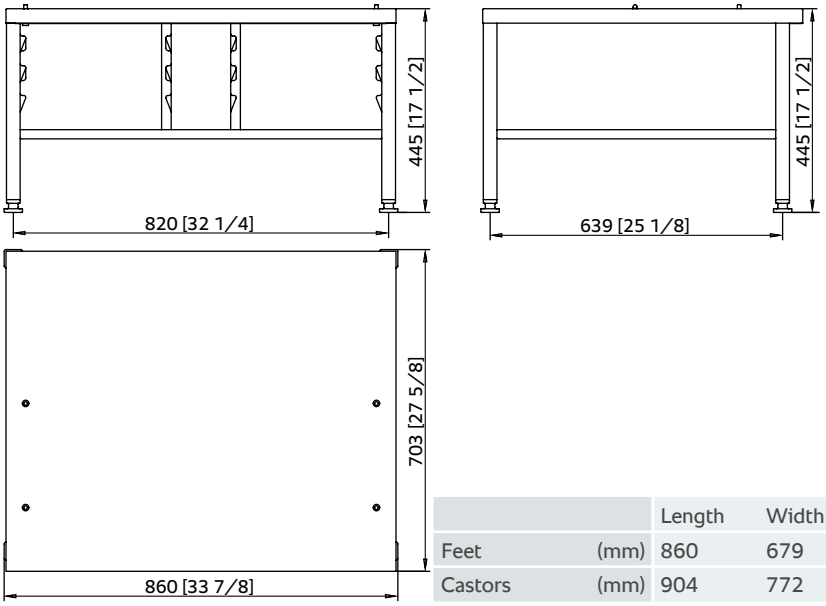


12.2.8 Stand I Combi-Duo and unit elevation single unit model 6-1/1 and 10-1/1



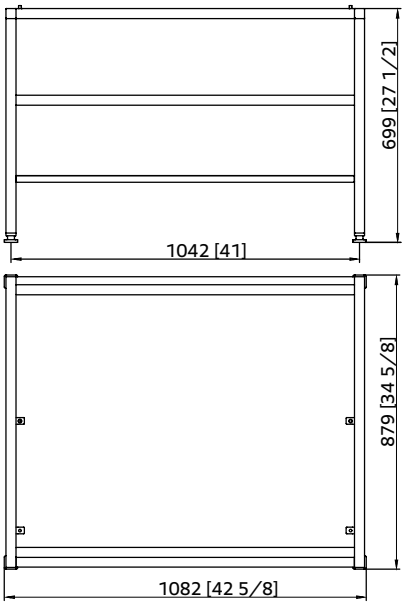
		Length	Width	Height
Feet	(mm)	860	679	200
Castors	(mm)	904	772	200
Fixing mount	(mm)	885	704	200

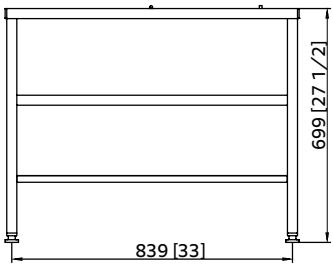
12.2.9 Stand II Combi-Duo model 6-1/1



		Length	Width	Height
Feet	(mm)	860	679	445
Castors	(mm)	904	772	445

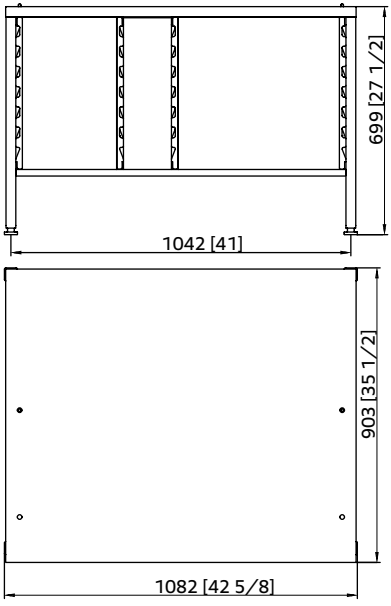
12.3.1 Stand I model 6-2/1 and 10-2/1

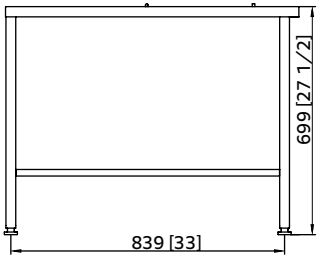




		Length	Width	Height
Feet	(mm)	1082	879	699
Castors	(mm)	1126	972	699
Fixing mount	(mm)	1107	904	699

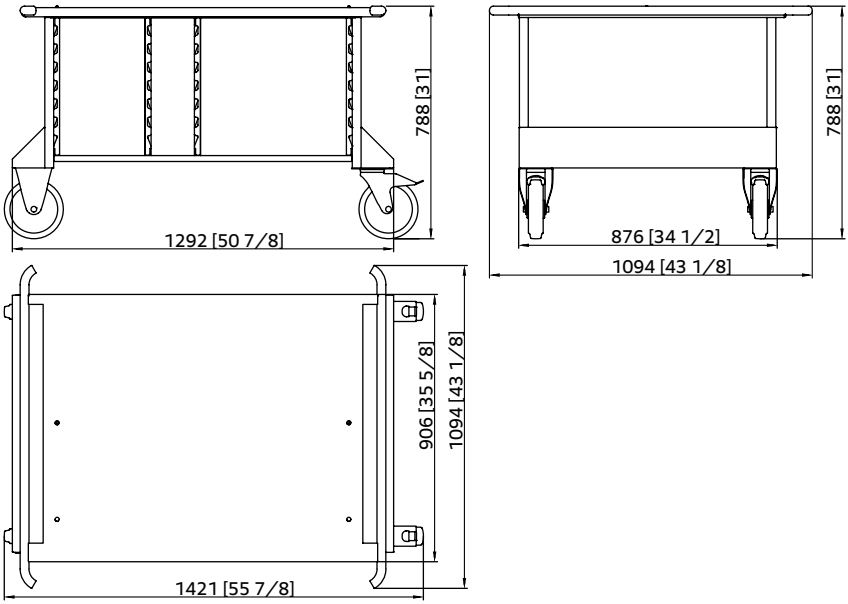
12.3.2 Stand II model 6-2/1 and 10-2/1



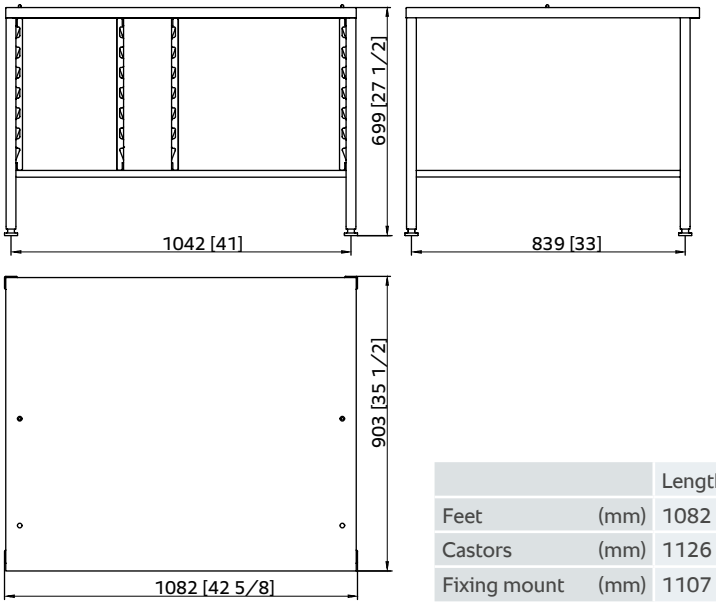


		Length	Width	Height
Feet	(mm)	1082	903	699
Castors	(mm)	1126	974	699
Fixing mount	(mm)	1107	916	699

12.3.3 Stand II mobile model 6-2/1 and 10-2/1

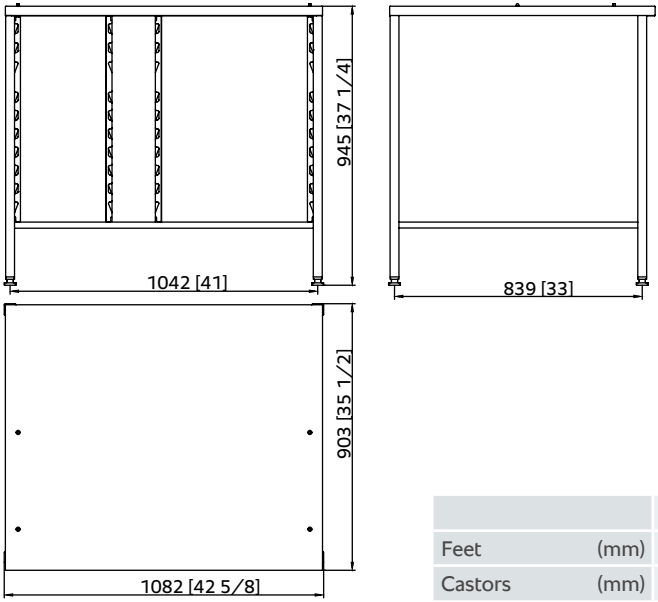


12.3.4 Stand III model 6-2/1 and 10-2/1



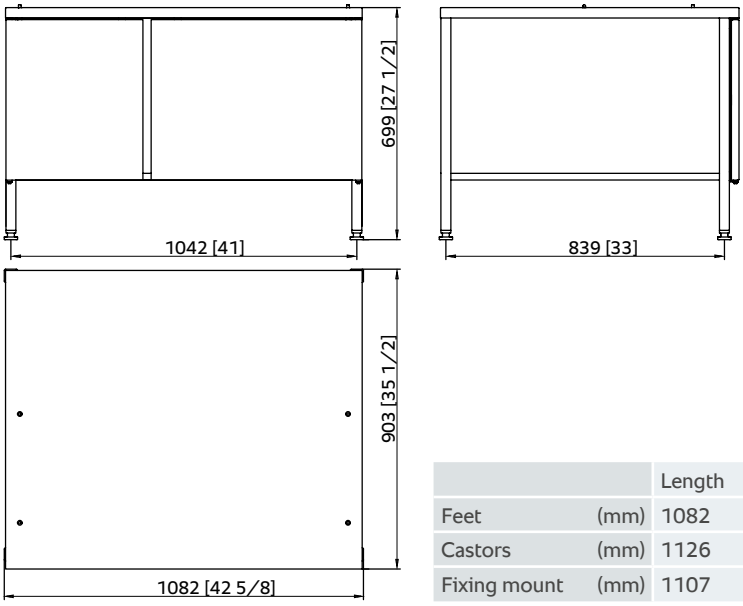
		Length	Width	Height
Feet	(mm)	1082	903	699
Castors	(mm)	1126	974	699
Fixing mount	(mm)	1107	916	699

12.3.5 Stand III UltraVent model 6-2/1 and 10-2/1



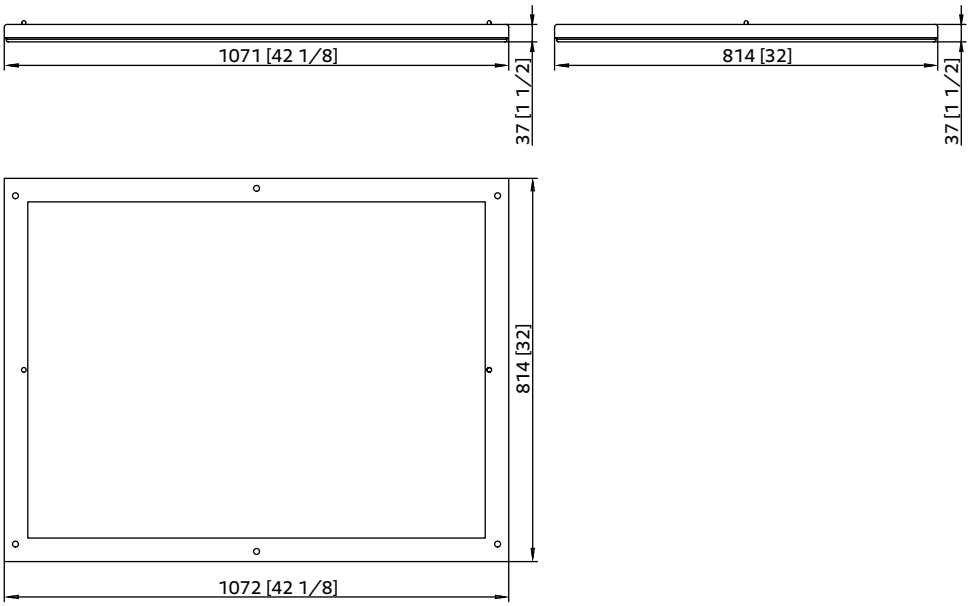
		Length	Width	Height
Feet	(mm)	1082	903	945
Castors	(mm)	1126	974	945

12.3.6 Stand IV model 6-2/1 and 10-2/1

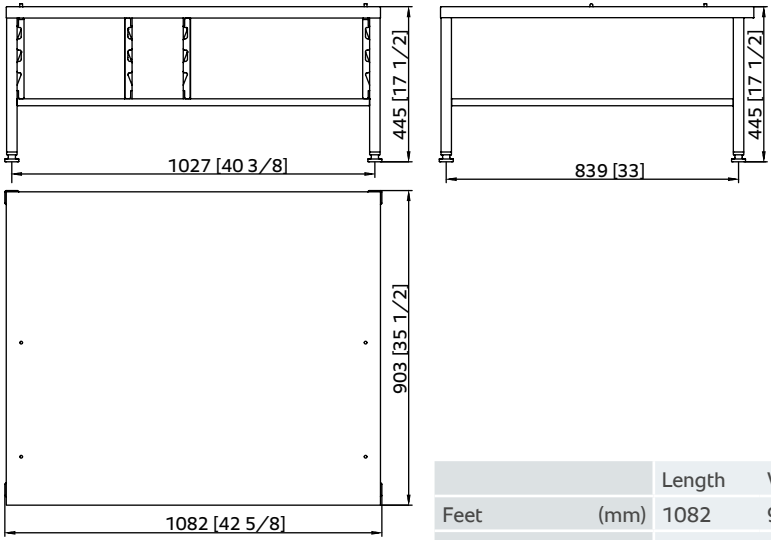


		Length	Width	Height
Feet	(mm)	1082	903	699
Castors	(mm)	1126	974	699
Fixing mount	(mm)	1107	916	699

12.3.7 Levelling kit Combi-Duo and single unit model 6-2/1 and 10-2/1

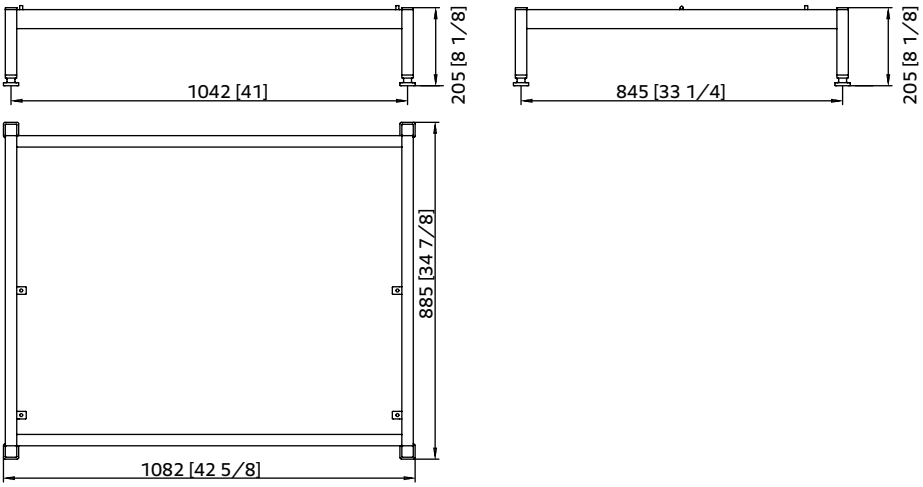


12.3.8 Stand I Combi-Duo and unit elevation single unit model 6-2/1 and 10-2/1



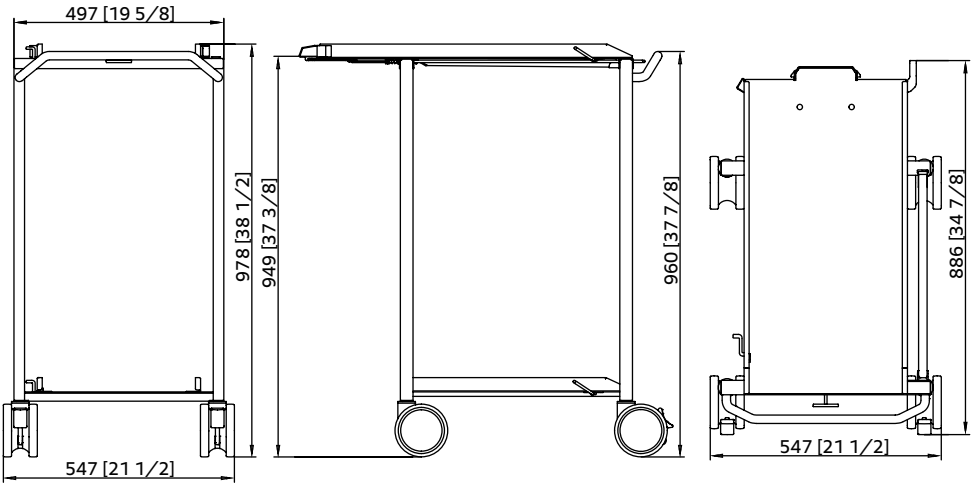
		Length	Width	Height
Feet	(mm)	1082	903	200
Castors	(mm)	1126	974	200
Fixing mount	(mm)	1107	916	200

12.3.9 Stand II Combi-Duo model 6-2/1

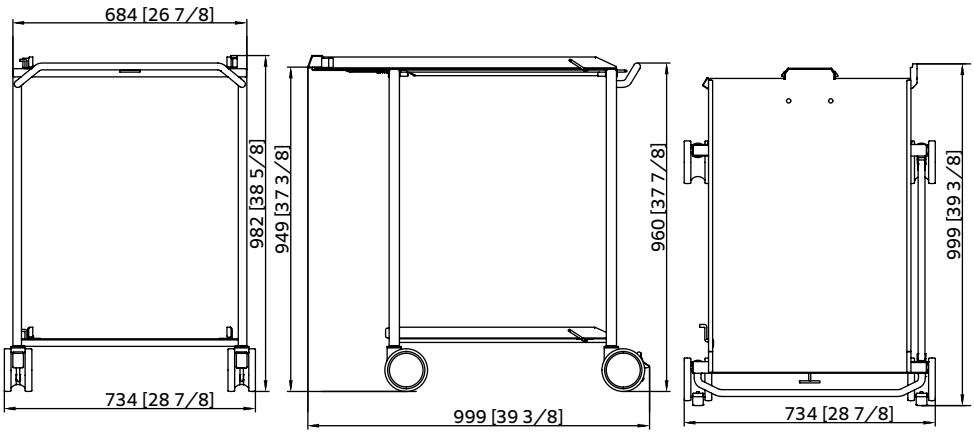


		Length	Width	Height
Feet	(mm)	860	679	445
Castors	(mm)	-	-	-

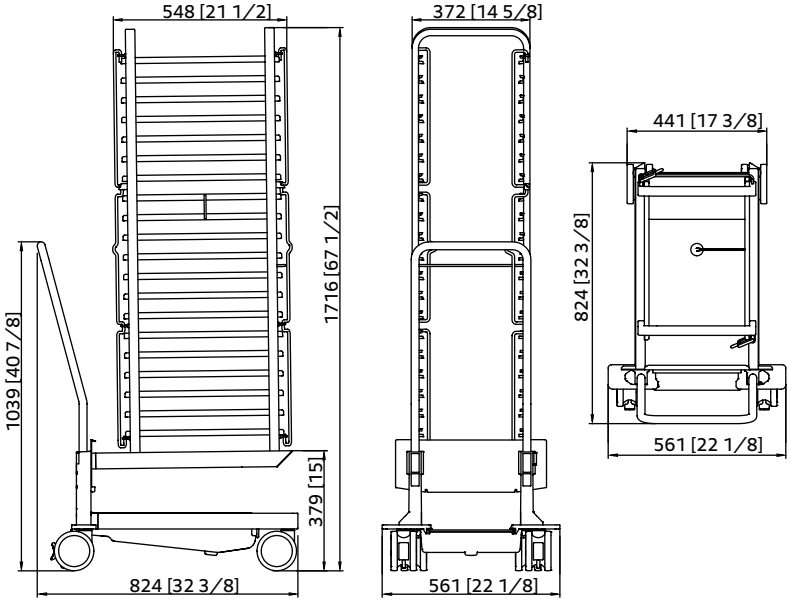
13.1 Drawings – trolleys model 6-1/1 and 10-1/1



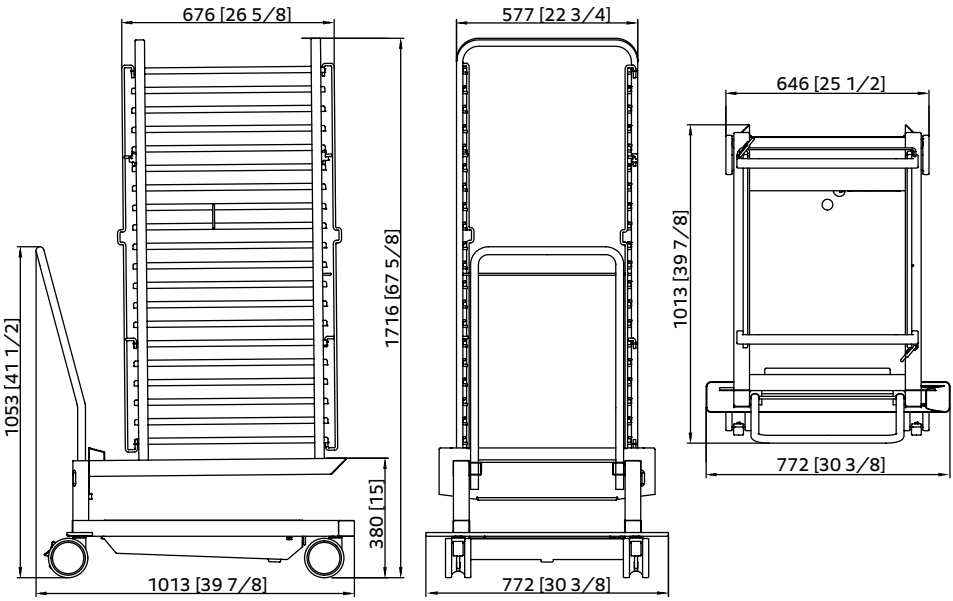
13.2 Drawings – trolleys model 6-2/1 and 10-2/1



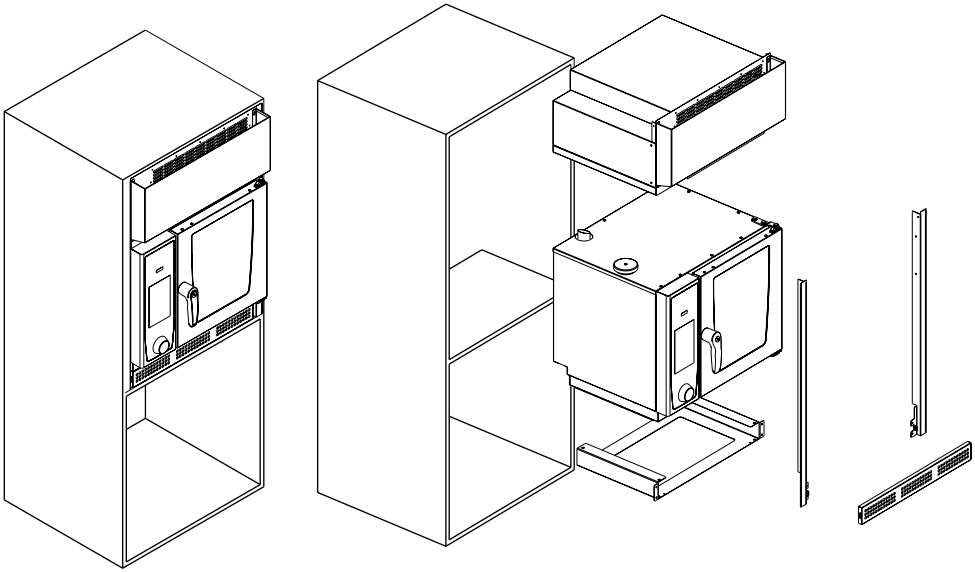
14.1 Drawings – mobile oven racks model 20-1/1



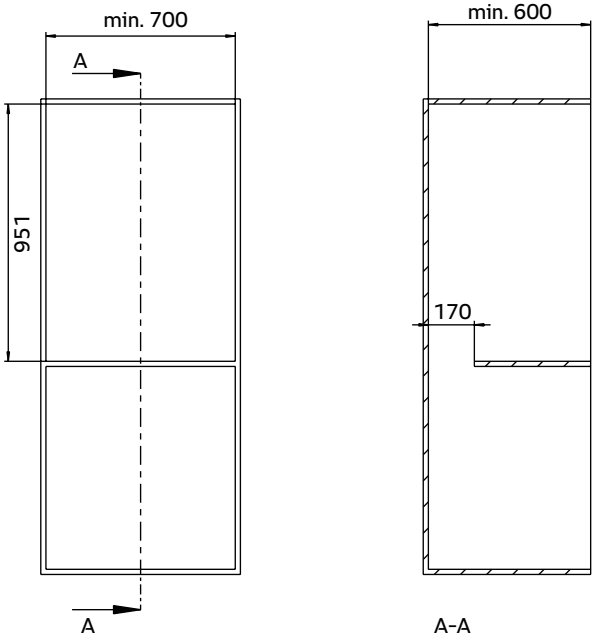
14.2 Drawings – mobile oven racks model 20-2/1



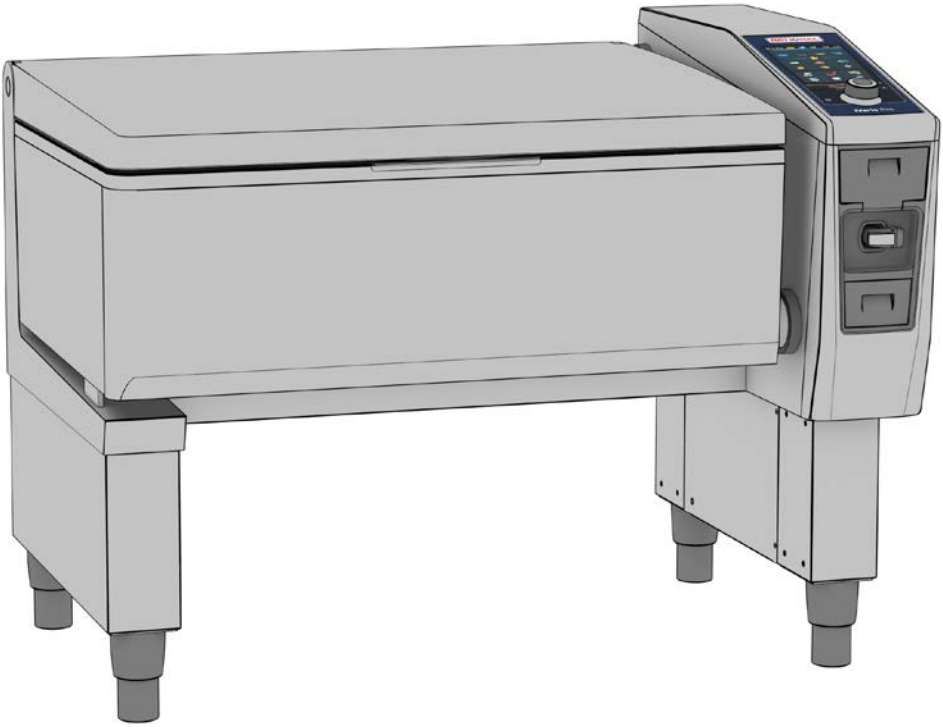
15. Drawing – installation kit model 6-2/3



Necessary cabinet dimensions



iVario 2-XS, iVario Pro 2-S, iVario Pro L and iVario Pro XL



16.1 Overview technical data – iVario

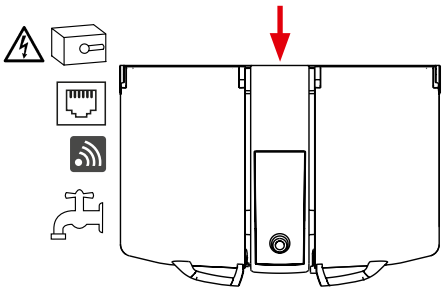
Model		iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Capacity					
Effective volume	(l)	2 × 17	2 × 25	100	150
Usable area	(dm^2)	2 × 13	2 × 19	39	59
Number of pans	(units)	2	2	1	1
Max. Oil fill quantity					
Volume	(l)	2 × 10	2 × 15	30	45
Unit dimensions					
Width	(mm)	1100	1100	1030	1365
Depth	(mm)	756	938	894	894
Height[1]	(mm)	485	485	608	608
Height with stand/sub-structure	(mm)	1080	1080	1078	1078
Weight					
Gross weight[2]	(kg)	147	174	228	279
Net weight[3]	(kg)	117	134	196	236
Weight with pressure cooking option					
Gross weight[2]	(kg)	–	187	247	306
Net weight[3]	(kg)	–	157	215	263
Electrical values 3 NAC 400 V					
Connected load	(kW)	14	21	27	41
Fuse (A)		3 × 20	3 × 32	3 × 40	3 × 63
Connection cable	(mm^2) [4]	5 × 2.5	5 × 4	5 × 6	5 × 10
Water connection					
Connection	(inches)	3/4	3/4	3/4	3/4
Pressure hose DN 15	(inches)	3/4	3/4	3/4	3/4
Flow pressure	(bar)	1.5 - 6.0	1.5 - 6.0	1.5 - 6.0	1.5 - 6.0
Wastewater connection					
Connection	(DN)	40	40	50	50
Network connection					
Wired (optional)		Ethernet RJ45			
Wireless (optional for iVario 2-XS)		WiFi 802.11 b/g/n (2.4 GHz)			

16.1 Overview technical data – iVario

Model		iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Thermal load					
Latent	(kJ/h)	14364	20866	26827	37343
	(W)	3990	5796	7452	10373
Sensitive	(kJ/h)	2873	4309	5540	8413
	(W)	798	1197	1539	2337

[1] Model 2-XS and 2-S on 90 mm feet; model L and XL in each case basic unit
[2] Shipping weight including packaging
[3] Weight installed and ready for operation
[4] Cross-sections for maximum cable length 2 m

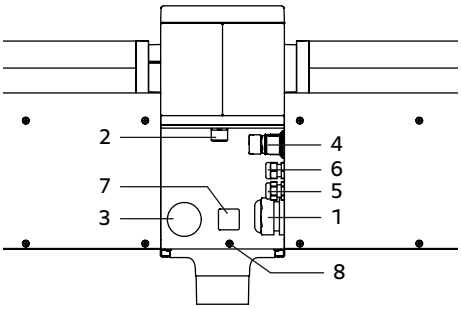
17.1 On-site connections iVario 2-XS and iVario Pro 2-S



› Water hose included in the scope of delivery
› Waste water pipe kit DN 40 available

Drainage unit connection kit model 2-XS and 2-S	No. 87.00.745

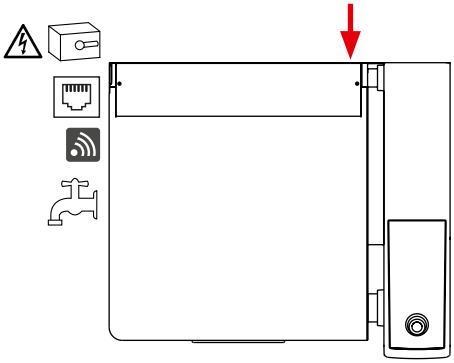
Note:
› RATIONAL AG has no requirements regarding the minimum height of water or electrical connections. The country-specific requirements and the planning situation are fundamental here.



On-site connections iVario 2-XS and iVario Pro 2-S (rear of unit)

1	Electrical connection
2	Water connection cold
3	Waste water connection
4	Optional: Ethernet port
5	Optional: PG connectors for connection option
6	Optional: PG connectors for connection option
7	Safety overflow (no connection)
8	Equipotential bonding

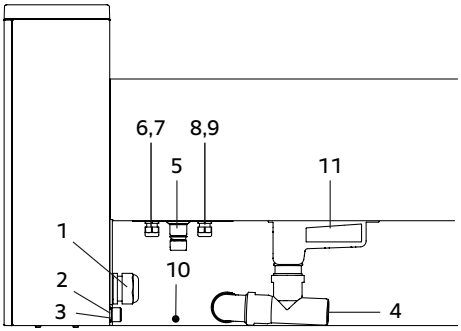
17.1 On-site connections iVario Pro L and iVario Pro XL



› Water hose included in the scope of delivery
› Waste water pipe kit DN 50 available

Drainage unit connection kit model L and XL	No. 87.00.746

Note:
› RATIONAL AG has no requirements regarding the minimum height of water or electrical connections. The country-specific requirements and the planning situation are fundamental here.

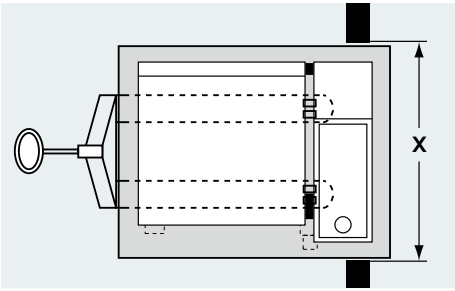


On-site connections iVario Pro L and iVario Pro XL (rear of unit)

1	Electrical connection
2	Water connection cold
3	Optional: Hot water connection
4	Waste water connection
5	Optional: Ethernet port
6	Optional: PG connectors for connection option
7	Optional: PG connectors for connection option
8	Optional: PG connectors for connection option
9	Optional: PG connectors for connection option
10	Equipotential bonding
11	Safety overflow (no connection)

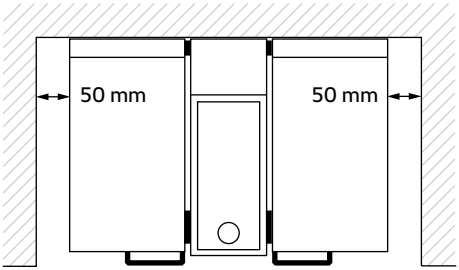
17.2 Unit transportation

› To prevent damage, the units should only be transported on the transport pallet, if possible, and in the original packaging with the aid of a pallet truck.
› In principle, transport without an original transport pallet and without original packaging using a pallet truck (model 2-XS and 2-S) or using cross carrying straps (model L and XL) is possible.
› When transporting without an original transport pallet on a pallet truck, the underside of the unit must be protected against damage. For example, use a wooden board (e.g. plywood board 20 mm or similar).
› Depending on the transport variant, please note the respective minimum door width **X**.



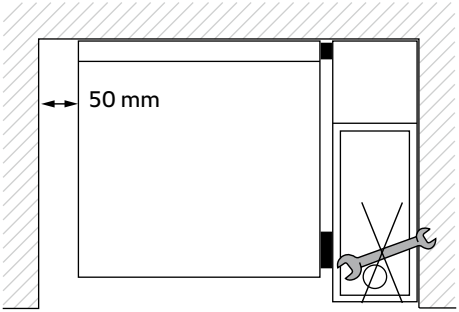
Minimum door width X		**iVario 2-XS** 2 × 17 litres	**iVario Pro 2-S** 2 × 25 litres	**iVario Pro L** 100 litres	**iVario Pro XL** 150 litres
With transport on pallet with packaging Unit flat	(mm)	1100	1100	1100	1100
With transport on pallet without packaging Unit flat	(mm)	1100	1100	1100	1100
With transport without pallet and without packaging Unit flat	(mm)	766	948	904	904
With transport without pallet and without packaging Unit upright without sub-structure (90° horizontal tilted)	(mm)	500	500	620	620

17.3 Unit installation



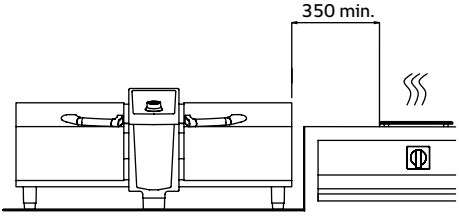
Side clearance for iVario 2-XS and iVario Pro 2-S

› The minimum clearance to walls and objects on the sides should be 50 mm. No clearance needs to be left at the rear.



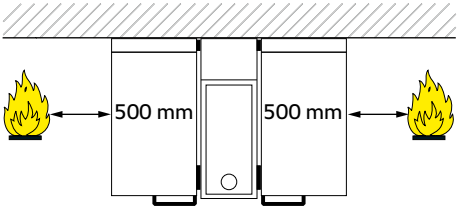
Side clearance for iVario Pro L and XL

› The minimum clearance to walls and objects on the left side should be 50 mm. No clearance is required on the right side or to the rear.



Clearance for positioning next to heat sources

› If there are heat sources acting on one side of the unit, the clearance to the unit on the respective side must be at least 350 mm.



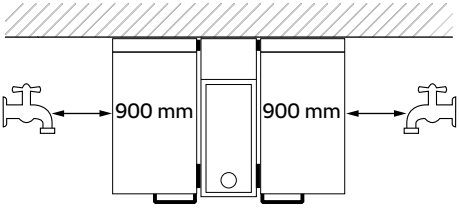
Clearance for positioning next to open flames

› If the unit is installed near open flames, a minimum clearance of 500 mm to the respective side must be observed.

Note:

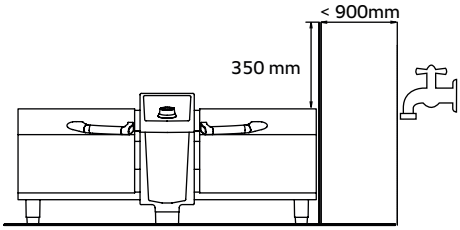
› No deep fryers may be installed on the rear of the units.

17.3 Unit installation



Side clearance when installing next to open water sources (frying mode)

› If the unit is installed near water sources, a minimum clearance of 900 mm must be observed on all sides.

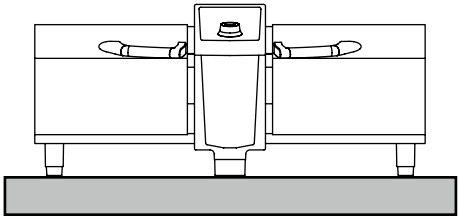


Side clearance when installing next to water sources

› If the minimum clearance of 900 mm cannot be observed, a non-flammable partition must be installed between the unit and the water source. This must project above the height of the pan rim by at least 350 mm.

Note:

› Regardless of the installation variant, always ensure that the unit is installed horizontally.



Installation iVario 2-XS and iVario Pro 2-S (installation on worktop)

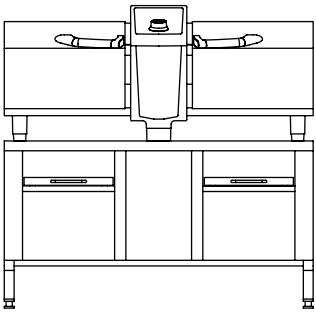
› The units have height-adjustable feet that are 90mm high and can be installed directly onto the worktop.

› Optionally, the units can be installed in such a way that they are flush with the work surface. For this purpose, the units stand on 45 mm high, height-adjustable feet and a sealing base.

› We recommend fixing the unit to the installation surface. A unit fixing kit is optionally available.

Unit fixing kit model 2-XS and 2-S	No. 60.76.118

17.3 Unit installation



Installation iVario 2-XS and iVario Pro 2-S on stand

› The units can be installed on different stands with different feet variants (plastic feet, stainless steel feet, castors). The units with stand can also be installed on a base (without feet).

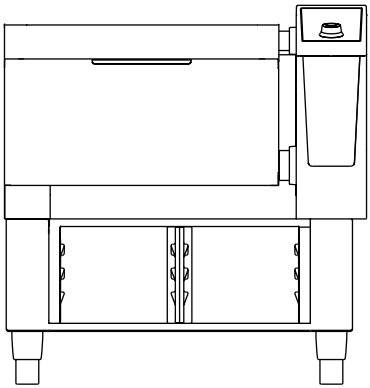
Note:

› No deep fryers may be installed on the rear of the units.

› Units may only be installed in frost-proof rooms.

Installation iVario Pro L and iVario Pro XL on installation surface

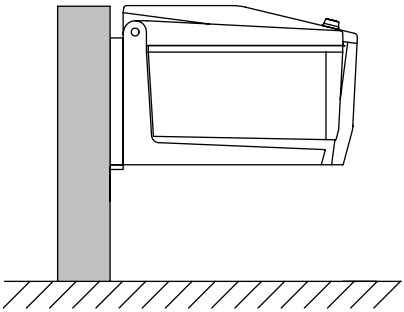
› The units without sub-structure can be installed on an installation surface.



Installation iVario Pro L and iVario Pro XL on sub-structure

› The units can be installed on different sub-structures with different feet variants (plastic feet, stainless steel feet, castors). The units with sub-structure can also be installed on a base (without feet).

17.3 Unit installation



Installation iVario Pro L and iVario Pro XL with wall bracket

› The units can be installed on a wall using a wall bracket (without sub-structure).

Wall attachment kit model L	No. 60.75.993
Wall attachment kit model XL	No. 60.75.934

Note on installation:
The wall-mounted unit brackets must be fixed to a concrete wall or a reinforced concrete wall.
This requires 8 x M12 bolt anchors (4 per bracket).
Max. Weight of the device incl. food: approx. 500 kg.
The weight is evenly distributed over the two iVario brackets.
All bolt anchors work in tension and shear and must have a tensile force of approx. 3200N on each side and 2500N shear force (the safety factor against tension and shear of the bolt anchors is here approx. at 10).
The iVario brackets are held in position by means of frictional locking (with a friction coefficient of 0.35 the safety factor against slipping is 4)

17.4 Electrical connection

Important notes:

› Specific national and regional standards and provisions/regulations that concern the installation and operation of commercial cooking appliances must be complied with.
› Units may only be connected by a qualified electrician, who shall be responsible for this. Either a fixed connection or a plug connection may be used.
› Units may only be connected to a standardised supply network with protective conductors.
› Each unit must have its own fused supply.
› The site must have an accessible all-pole disconnection switch. The contact distance must be at least 3 mm.
› The cross-section of the power cables are dependent on the unit size, voltage, cable length and the local regulations.

Instructions for connection to a residual current device:

› All iVario are always installed with a protective conductor terminal. In accordance with national standards and regulations, an RCD (residual current device) must be incorporated in the installation of the unit.
› The RCD residual current circuit breaker must be of one of the following types for all units: **A/B**

Instructions for the connection of the equipotential bonding system for gas and electric appliances:

› Always connect the equipotential bonding with an equipotential bonding conductor to the main earthing bar.
› Position of the equipotential bonding: see section 17.1 (2) On-site connections.

Connecting electric units:

› Units are delivered without mains cables.
› The manufacturer recommends using a flexible power cable. A rigid power supply cable makes connection difficult and can impact the position of the unit.
› The unit can be connected either with a permanent connection or a plug connection.
› The connection point for the power cable is on the main contactor in the electrical compartment.
› A dedicated supply line is available for the unit.
› The flexible power cable must be at least type H07RN-F.
› The rigid power cable must be at least type U-1000R2V.

Connecting electric units to energy optimisation system (optional):

› Units can be ordered with a connection port for an energy optimisation system.
› The connection cable required for this must be 5 × 1.5 mm².
› The energy disconnection time should be as brief as possible, no more than 20 seconds. The energy must then be re-supplied for 2 minutes at least.

17.4 Electrical connection

The units are available in all common voltage variants.

Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Power (kW)				
3 NAC 400V	14	21	27	41
3 NAC 415V	15	22	29	44
3 AC 200V	13	19	26	48
3 AC 208V	15	23	23	34
3 AC 220V	13	19	25	38
3 AC 230V	14	21	27	41
3 AC 240V	15	22	22	37
3 AC 400V	14	21	27	41
3 AC 415V	15	22	29	44
3 AC 440V	13	19	25	38
3 AC 480V	15	22	29	44

Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Current consumption (A)				
3 NAC 400V	20	30	40	59
3 NAC 415V	20	31	41	61
3 AC 200V	37	55	74	111
3 AC 208V	48	64	64	96
3 AC 220V	33	50	66	100
3 AC 230V	34	51	69	103
3 AC 240V	35	53	53	88
3 AC 400V	20	30	39	59
3 AC 415V	20	31	41	61
3 AC 440V	17	25	33	50
3 AC 480V	18	27	35	53

17.4 Electrical connection

Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Fuse (A)				
3 NAC 400V	20	32	40	63
3 NAC 415V	25	32	50	63
3 AC 200V	40	63	80	125
3 AC 208V	50	70	70	100
3 AC 220V	40	50	80	100
3 AC 230V	40	63	80	125
3 AC 240V	40	63	63	100
3 AC 400V	20	32	40	63
3 AC 415V	20	32	50	63
3 AC 440V	20	25	40	50
3 AC 480V	20	32	32	60

Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Conductor cross-section* (mm²)				
3 NAC 400V	2.5	4.0	6.0	10.0
3 NAC 415V	2.5	4.0	10.0	10.0
3 AC 200V	6.0	10.0	16.0	35.0
3 AC 208V	16.0	25.0	25.0	35.0
3 AC 220V	6.0	10.0	16.0	25.0
3 AC 230V	6.0	10.0	16.0	35.0
3 AC 240V	6.0	10.0	10.0	25.0
3 AC 400V	2.5	4.0	6.0	10.0
3 AC 415V	2.5	4.0	10.0	10.0
3 AC 440V	2.5	4.0	6.0	10.0
3 AC 480V	2.5	6.0	10.0	16.0

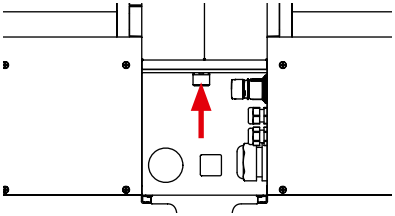
* Values shown are for a maximum cable length of 2 metres. Adjust the values according to the cable length used and the local conditions and regulations.

17.5 Water connection

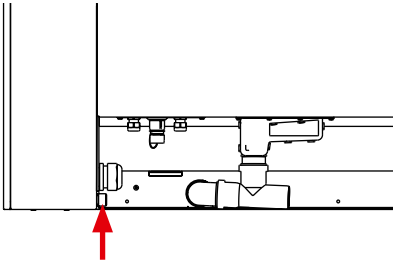
General information:

- The units will be connected via a 3/4 inch drinking water inlet (cold water up to max. 30 °C).
- A connection to a soft water connection is generally not necessary. However, if a soft water connection is used, make sure that the residual hardness is at least 4°dH.
- An additional hot water supply is optionally available for the iVario Pro L and iVario Pro XL. (Hot water max. 60 °C).
- Each unit must be connected to its own tap and with a water hose that at least meets the requirements of IEC 61770, EN 61770, EN 13618 or equivalent quality.
- The units are delivered with a water hose
- The unit may only be connected to drinking water.
- The cable cross-section should be at least 1/2 inch.
- The water pressure (flow pressure) must be between 150 kPa (1.5 bar) and 600 kPa (6 bar). The recommended flow pressure is 300 kPa (3 bar). Falling below or exceeding the minimum or maximum water pressure can result in malfunctions.

Water inlet iVario 2-XS and iVario Pro 2-S (rear of unit)



Water inlet iVario Pro L and XL (rear of unit)



17.6 Wastewater connection

In order to avoid rising odours, the drain pipe must be equipped with an odour trap (Odour trap is not integrated within the cooking system).

Note:

› A permanent connection with odour trap is permitted. A ventilated outlet section is an integral part of the units.
› Each unit must have its own wastewater connection.

iVario 2-XS and iVario Pro 2-S	DN 40
iVario Pro L and iVario Pro XL	DN 50

› Units can have a wall drain and a floor drain as well.
› Units are supplied without wastewater pipes. A unit connection kit (optional) with wastewater pipes is available.

Drainage unit connection kit model 2-XS and 2-S	No. 87.00.745
Drainage unit connection kit model L and XL	No. 87.00.746

› If there is a floor drain without an odour trap, there must be a free outlet section of 20 mm.
› Drain pipes must be laid with a constant gradient of at least 5% (3°).
› The average wastewater temperature is 60 °C.
› The maximum amount of wastewater within one minute is:

Model	(l/min)
iVario 2-XS	18
iVario Pro 2-S	18
iVario Pro L	40
iVario Pro XL	40

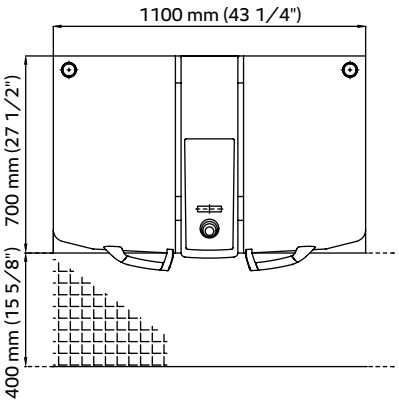
Fat extraction system

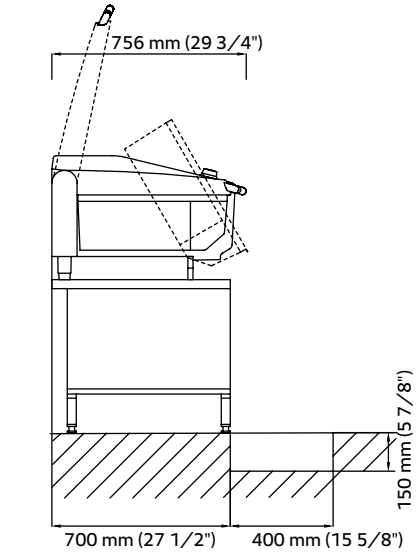
› All food processing companies - including commercial kitchens - are obliged to pre-treat wastewater containing fat by installing a fat separator before it is discharged into the public network.
› The dimensions of the fat separator depend on the number of food servings per day.

17.7 Instructions drain channel model 2-XS and 2-S

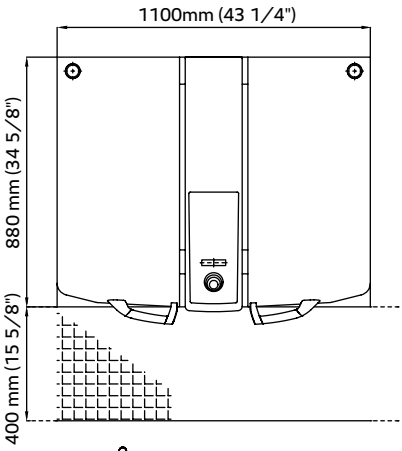
Note: Thanks to the integrated pan drain, the iVario does not increase the occurrence of the amount of liquid on the floor in front of the unit. A drain channel directly on the unit is therefore not necessary if a VarioMobil (No.: 60.73.349/60.70.107) or an oil cart (No.: 60.74.941) is used. Cooking water and cleaning water can be drained through the integrated pan valve and does not need to be tipped out. In order to increase work safety when removing food, we recommend our accessories for the safe emptying of the pan, such as the VarioMobil and the oil cart. Should a drain channel still be required directly on the unit, we recommend the following versions.

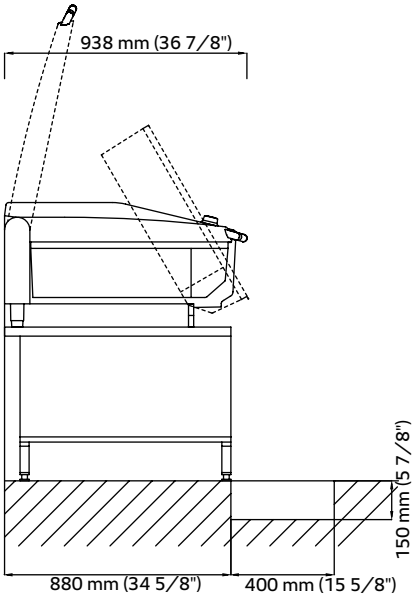
iVario 2-XS





iVario Pro 2-S

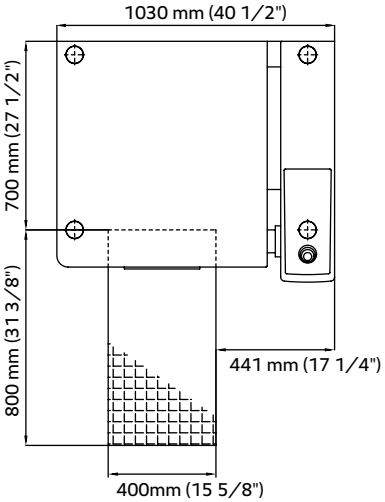




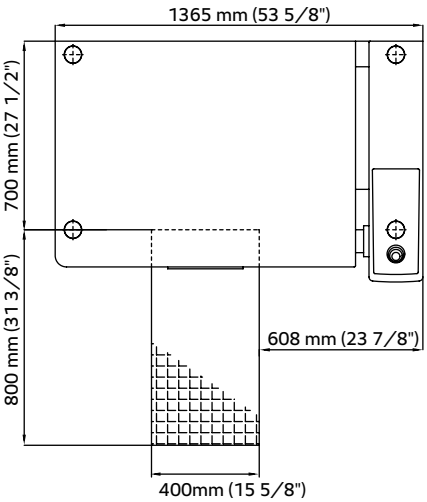
17.8 Instructions drain channel model L and model XL

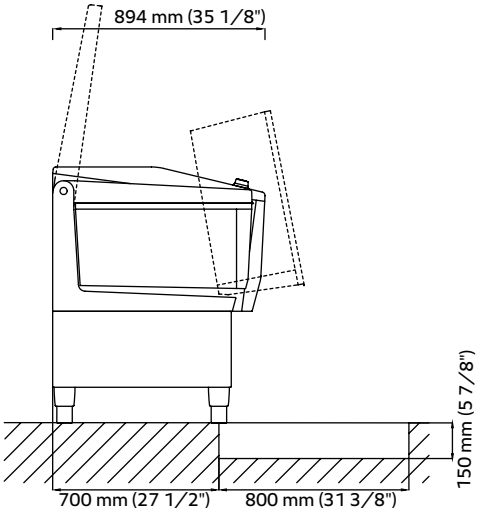
Note: Thanks to the integrated pan drain, the iVario does not increase the occurrence of the amount of liquid on the floor in front of the unit. A drain channel directly on the unit is therefore not necessary used if a VarioMobil (No.: 60.73.349/60.70.107) or an oil cart (No.: 60.74.941) is used. Cooking water and cleaning water can be drained through the integrated pan valve and does not need to be tipped out. In order to increase work safety when removing food, we recommend our accessories for the safe emptying of the pan, such as the VarioMobil and the oil cart. Should a drain channel still be required directly on the unit, we recommend the following versions.

iVario Pro L



iVario Pro XL





18.1 Thermal load

Please note the technical guidelines (e.g. VDI 2052) and the local provisions for ventilation technology in commercial kitchens.

Latent heat
Latent heat is contained in the vapours and steam which are produced when cooking. The exhaust system for the production areas in the kitchen must be designed so that the latent heat is quickly and effectively extracted, so that the persons working in the room are only subjected to low amounts of heat.

Sensitive heat load
Sensitive, or perceptible heat, is released from the thermal output of hot appliances.

Electric units

Thermal load iVario / iVario Pro

Model		iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size		2 × 17 litres	2 × 25 litres	100 litres	150 litres
Latent	(kJ/h)	14364	20866	26827	37343
	(W)	3990	5796	7452	10373
Sensitive	(kJ/h)	2873	4309	5540	8413
	(W)	798	1197	1539	2337
Specific steam output	(g/KWh)	454	434	434	400

Specific steam extraction are average values for the design of ventilation systems, according to VDI 2052 under normal operating conditions (application mix 60% boiling, 38% roasting, 2% frying). Consult RATIONAL prior to designing the ventilation system in case of different operating conditions Heavy-duty operation, for example, is frequent boiling of pasta or deep-frying of frozen products.

18.2 Extraction requirement

Example air volume requirement iVario Pro 2-S

› Connected load 21 kW
Specific weight of dry air 1.20 kg/m³
Water output: 21 kW × 434 g/(h × kW) = 9114 g/h
9114 g/h / (6 g/kg × 1.20 kg/m³) = 1266 m³/h
The extraction requirement is 1266 m³/h.

Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Connected load electric units				
kW (3 NAC 400V)	14	21	27	41
Extraction requirement – free-standing unit in the room (100%)				
m³/h	883	1266	1628	2278
Extraction requirement – unit with one side against a wall (63%)				
m³/h	556	798	1025	1435

Notes:
In consideration of unfavourable flow conditions or an unsafe thermal lift (mixed airflow), it is recommended that the air requirement be increased by 25%.
This means that the exhaust requirement is 1266 m³/h x 1.25 = 1582.5 m³/h.
The value is reduced to 63% if one side of the unit is against a wall.

19.1 Fire extinguishing system

Note on fire extinguishing system: Please comply with requirements specific to your country. For specific installation cases, the units can optionally be ordered "without the frying function".

Model		iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size		2 × 17 litres	2 × 25 litres	100 litres	150 litres
Max. Oil fill quantity	litres	2 x 10	2 x 15	30	45

20.1 Unit options iVario

Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Pressure cooking	–	o	o	o
iZoneControl	o	●	●	●
Low temperature cooking	o	●	●	●
Blocked deep-frying mode	o	o	o	o
WLAN module	o	●	●	●
Ethernet port	o	o	o	o
Energy optimisation system connection	o	o	o	o
SOLAS wiring	o	o	o	o
Dry contact	o	o	o	o
Lockable control panel	o	o	o	o
Socket protected with RCD	o	o	o	o
Hot water connection	–	–	o	o
Electrical height-adjustment	o	o	o	o

o = Optional ● = Standard – = Not available

Pressure cooking
The pressure cooking option enables faster and yet still gentle cooking of a wide range of different dishes. A uniform and optimal pressure level is guaranteed and the cell structure of the food is preserved. This is a reliable and low maintenance system. Maximum overpressure: 300 mbar.

iZoneControl
iZoneControl flexibly divides the pan base in zones with different temperatures.

Low temperature cooking
The low temperature cooking option offers the possibility to use additional intelligent cooking paths for low temperature cooking, confit and sous-vide.

Blocked deep-frying mode
This is a version of the unit whereby the "Deep-fry" mode is not available. This option can be used to save on installation costs for any fire extinguishing equipment, which is required when limits are exceeded.

WLAN module
Using the integrated WLAN module, the unit can be connected to an existing WLAN network, e.g. to connect to ConnectedCooking.

Ethernet interface
Using the integrated Ethernet port, the unit can be connected to an existing network, e.g. to connect to ConnectedCooking or for HACCP data export.

20.1 Unit options iVario

Energy optimisation system connection
The unit can be connected to an energy optimisation system (e.g. Sicotronic, RSW). The relevant connection terminals are in this case pre-installed inside the unit.

SOLAS wiring
The unit has an additional safety temperature limiter and can be connected to an external signalling device 230 V (max. 8 A, not included). The relevant connection terminals are in this case pre-installed inside the unit.

Potential-free contact
The unit has an internal, pre-assembled, potential-free auxiliary contact to report information about the unit status.

Lockable control panel
The lockable control panel protects the unit from unwanted use.

Socket protected with RCD
This option secures the integrated plug in the iVario with an RCD when connecting a defective device. This can be reset by the user.

Hot water connection
This option allows the iVario to be connected to both a cold and hot water inlet. Using the hot water supply shortens heating up times for boiling. The water inflow hose (1.5 m) is included.

Stand / substructure with electrically height-adjustable feet
Installation on a stand / substructure and electrically height-adjustable feet.
Height adjustment: -25 mm / +175 mm

21. Service examples

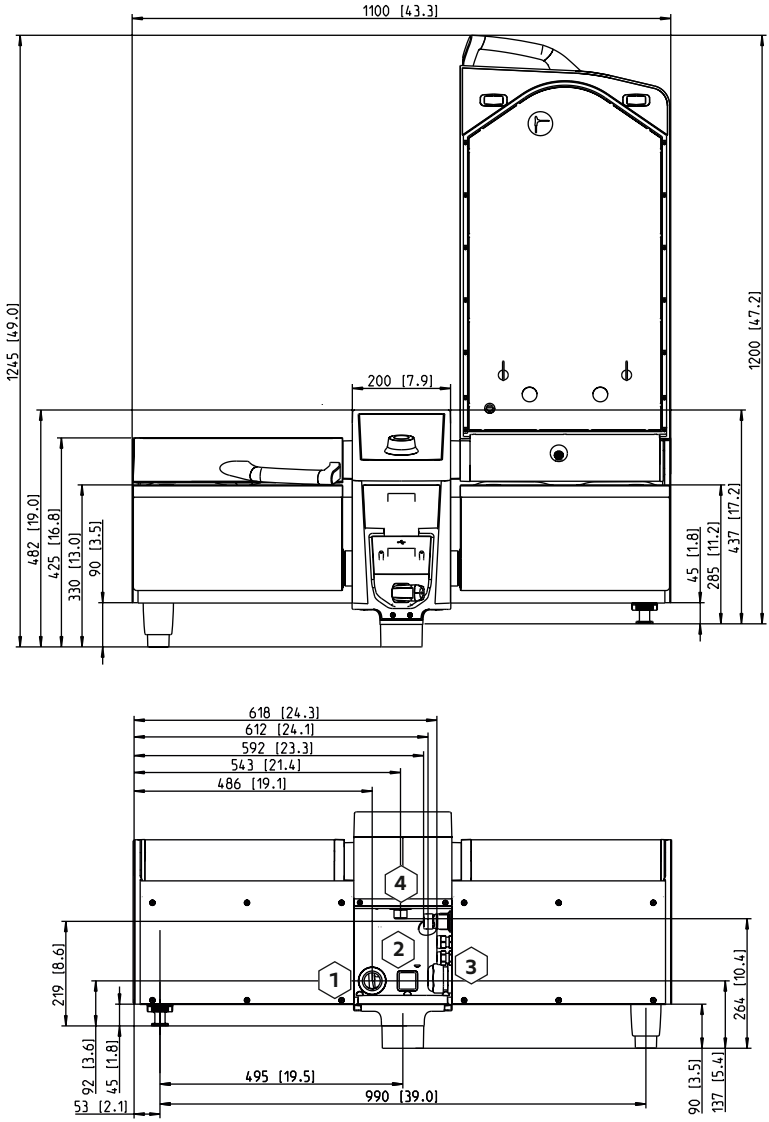
Model		iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size		2 × 17 litres	2 × 25 litres	100 litres	150 litres
Hamburgers	Capacity	8-10 units	15-20 units	40-50 units	60-70 units
	Total cooking time**	9 min	9 min	9 min 30s	9 min 30s
Ragout (searing)	Capacity	4.5 kg	7 kg	15 kg	24 kg
	Total cooking time**	5min	5min	5min	5min
Ragout (boiling)	Capacity	17 kg	25 kg	80 kg	120 kg
	Total cooking time	1hour 42min	1hour 42min	1hour 42min	1hour 42min
	Total cooking time (pressure cooking)	-	1hour 28min	1hour 28min	1hour 28min
Fish fingers (frozen)	Capacity	2 kg	4 kg	12 kg	18 kg
	Total cooking time**	17 min	17 min	18 min 30s	18 min 30s
Béchamel	Capacity	10 l	20 l	40 l	60 l
	Total cooking time*	40 min	40 min	1 hour	1 hour
Fish fillet	Capacity	8-10 units	15-20 units	30-35 units	40-50 units
	Total cooking time	12 min	12 min	12 min 30s	12 min 30s
Brown lentils (not soaked)	Capacity	3 kg	6 kg	20 kg	30 kg
	Total cooking time*	55 min	55 min	55 min	55 min
	Total cooking time pressure cooking*	-	45 min	45 min	45 min
Rice (basmati) (without basket)	Capacity	3 kg	7 kg	20 kg	30 kg
	Total cooking time*	28 min	28 min	35 min	35 min
Noodles (penne) (in basket)	Capacity	2 kg	3 kg	10 kg	15 kg
	Total cooking time**	15min	18 min 30s	22 min	22 min
Chips (frozen) (in basket)	Capacity	1.5 kg	2.5 kg	8 kg	12 kg
	Total cooking time**	16 min	16 min	19 min 30s	19 min 30s
Pudding	Capacity	10 l	15 l	60 l	100 l
	Total cooking time**	27 min	27 min	1 hour 20 min	1 hour 20 min
Omelette	Capacity	8-10 units	12-15 units	40-45 units	60-65 units
	Total cooking time**	5 min	5 min	5 min	5 min

*No preheating time required **Including preheating time

21. Performance examples

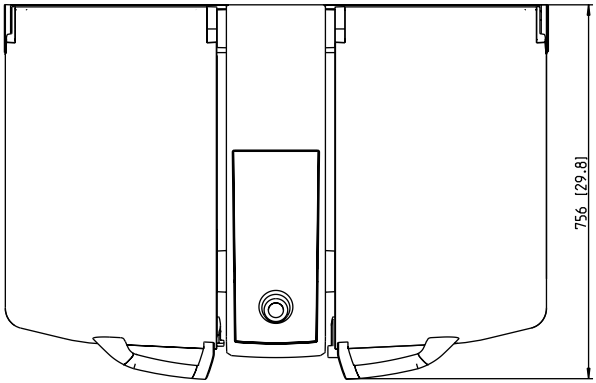
Model	iVario 2-XS	iVario Pro 2-S	iVario Pro L	iVario Pro XL
Unit size	2 × 17 litres	2 × 25 litres	100 litres	150 litres
Preheating times				
Baked (meat, fish, etc.)	approx. 2 min	approx. 2 min	approx. 2 min	approx. 2 min
Boiling water (noodles)	approx. 6 min	approx. 10 min	approx. 13 min	approx. 13 min
Heat fat (deep fry)	approx. 10 min	approx. 10 min	approx. 12 min	approx. 12 min
Reheat fat (after frying)	approx. 2 min	approx. 2 min	approx. 2 min	approx. 2 min
Milk dishes/boil milk (with maximum load)	approx. 12 min	approx. 12 min	approx. 25 min	approx. 25 min

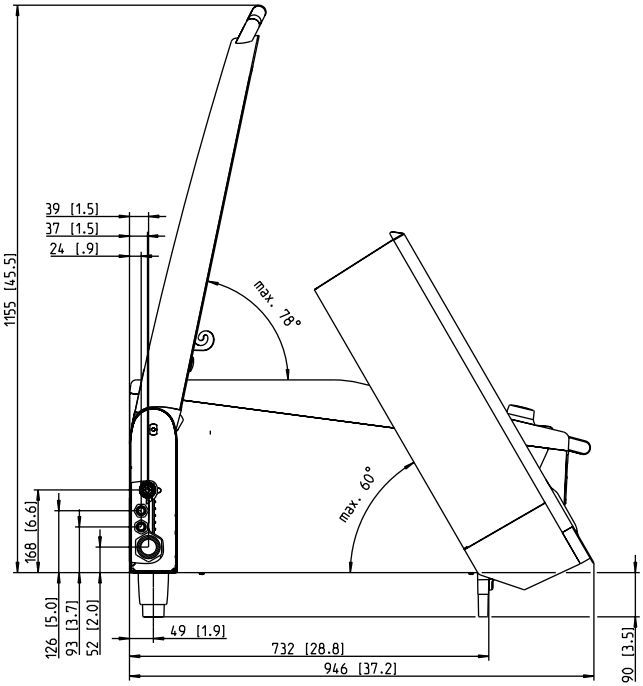
22.1 Model 2-XS (2 × 17 litres)



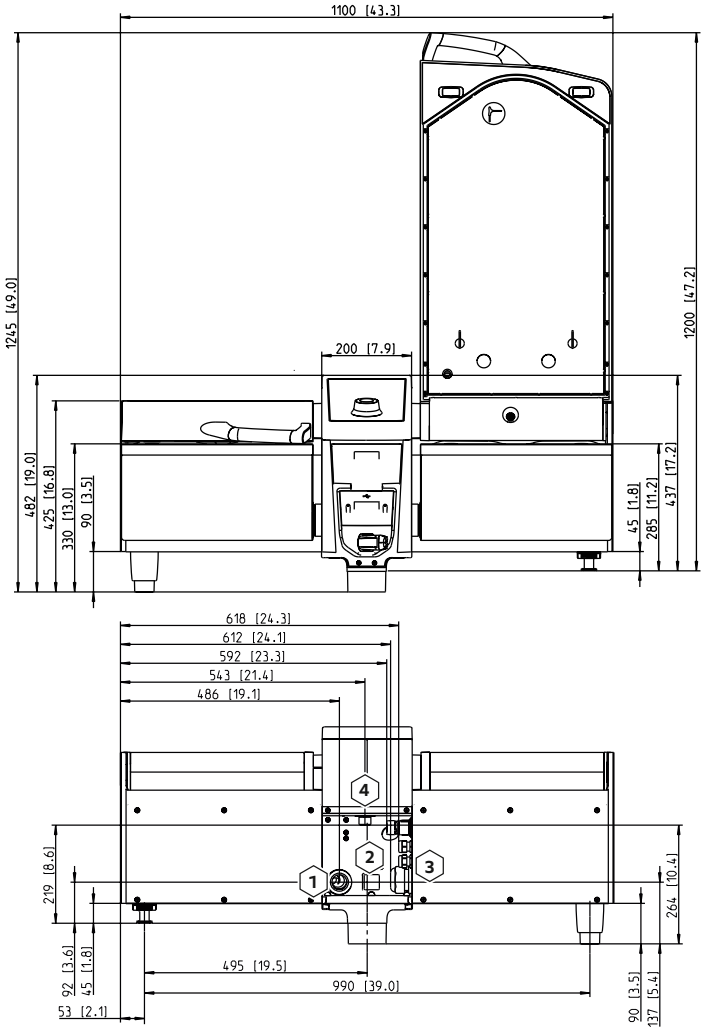
1	Water outlet
2	Overflow outlet
3	Power supply and electrical connections
4	Water inlet

22.1 Model 2-XS (2 × 17 litres)



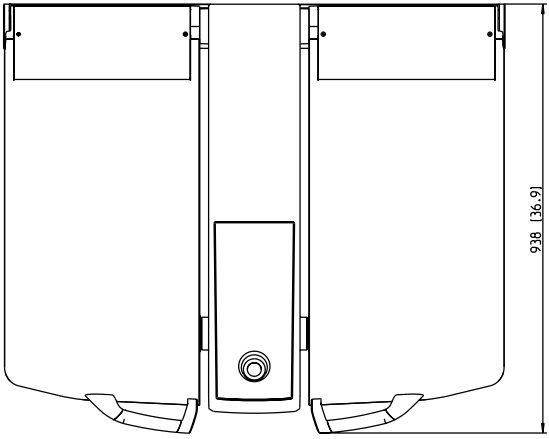


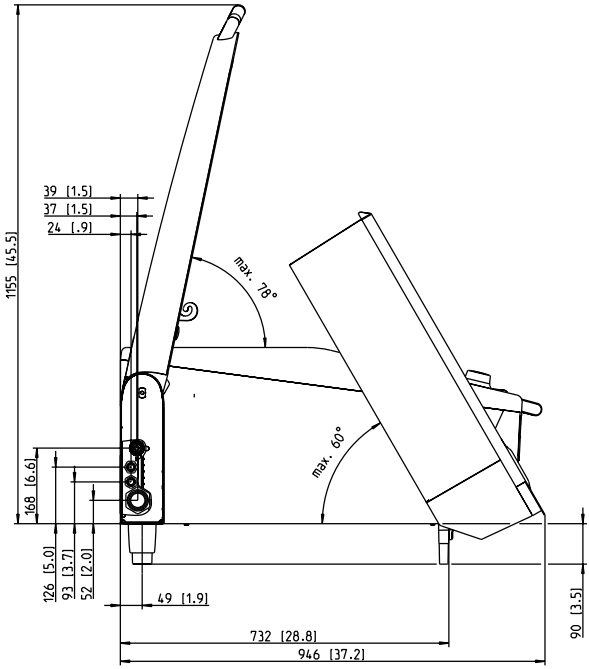
22.2 Model 2-S (2 × 25 litres)



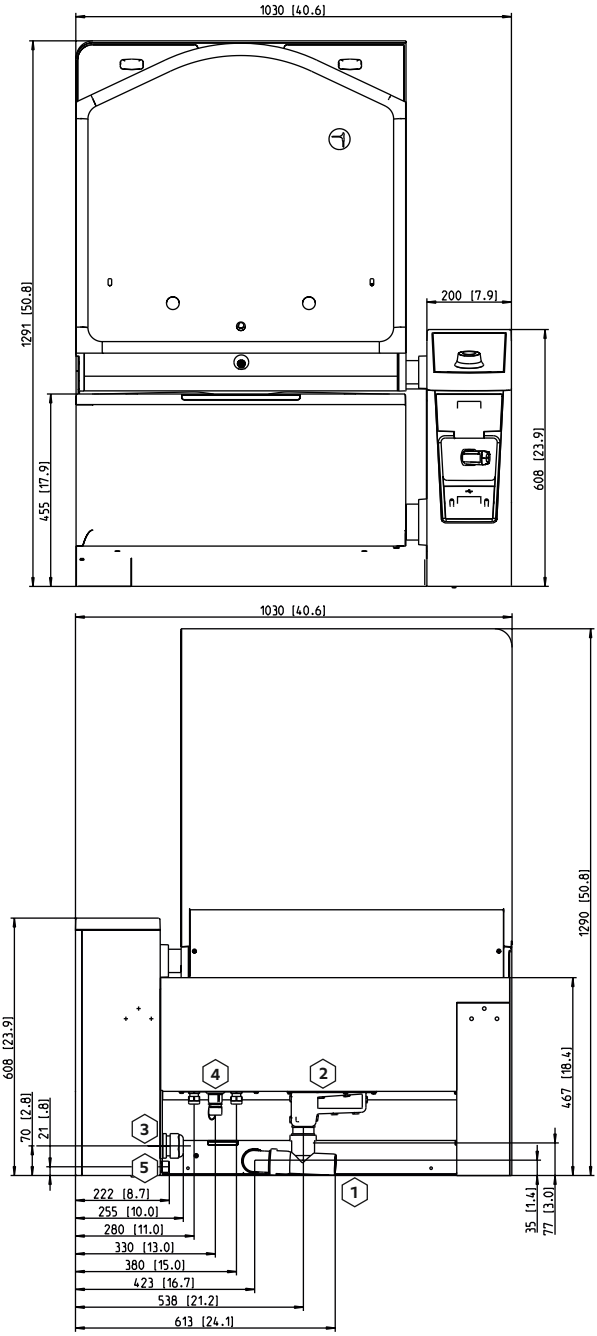
1	Water outlet
2	Overflow outlet
3	Power supply and electrical connections
4	Water inlet

22.2 Model 2-S (2 × 25 litres)

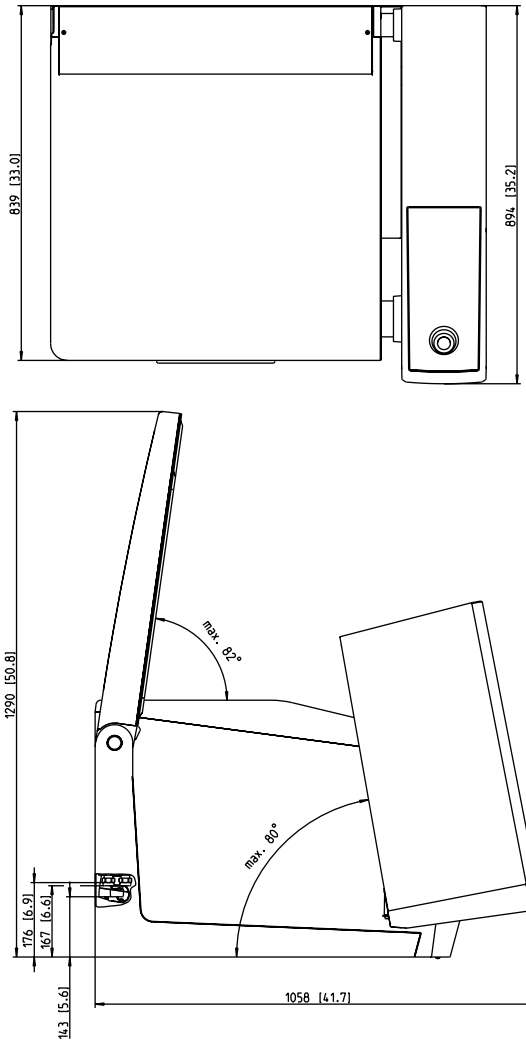




22.3 Model L (100 litres)

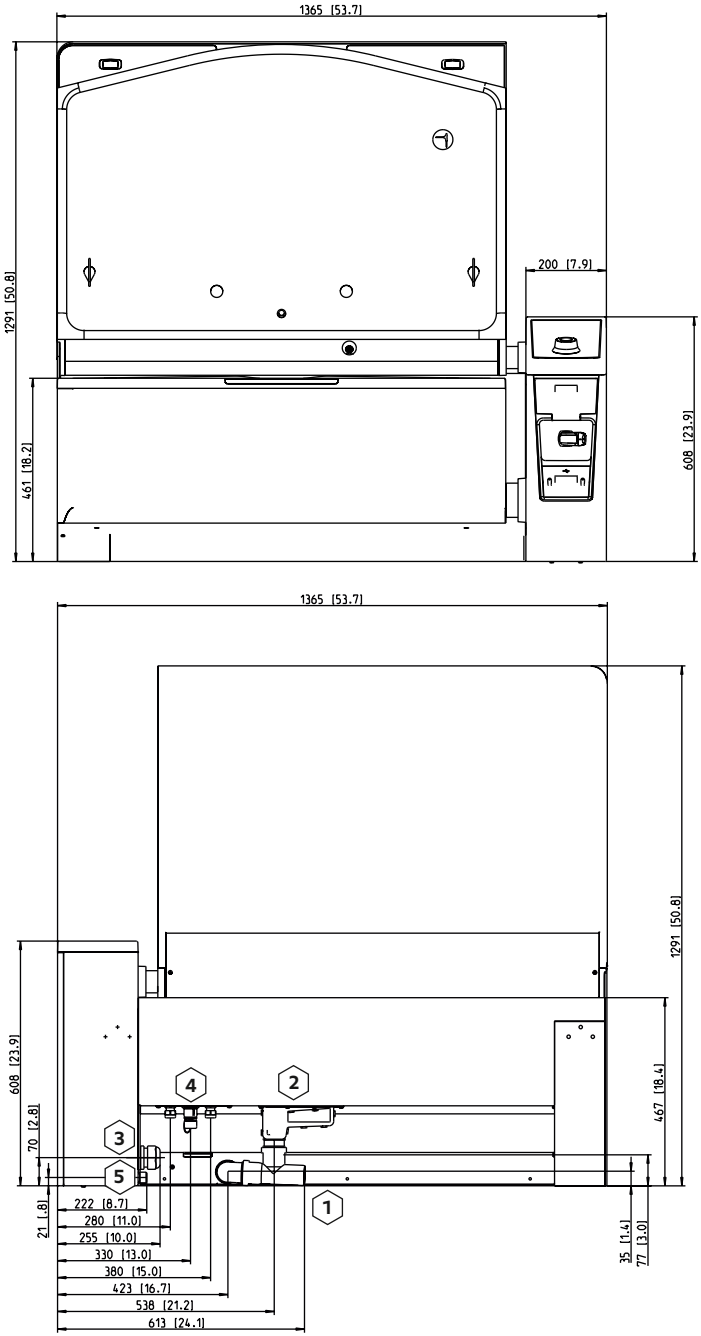


22.3 Model L (100 litres)

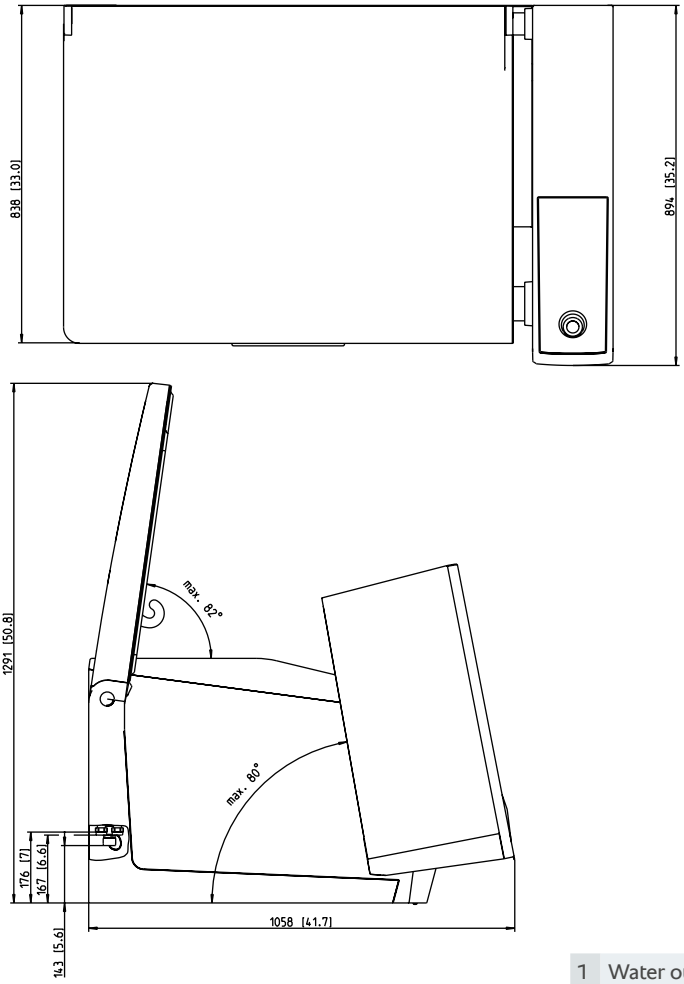


1	Water outlet
2	Overflow outlet
3	Power supply
4	Electrical connections
5	Water inlet

22.4 Model XL (150 litres)

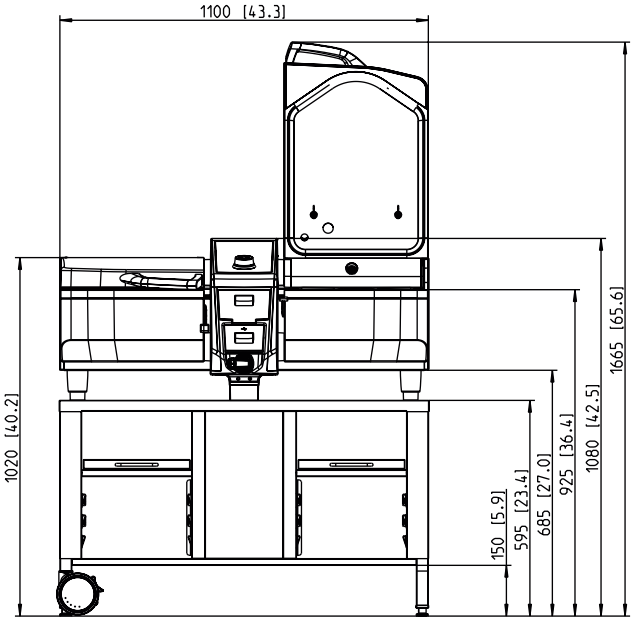


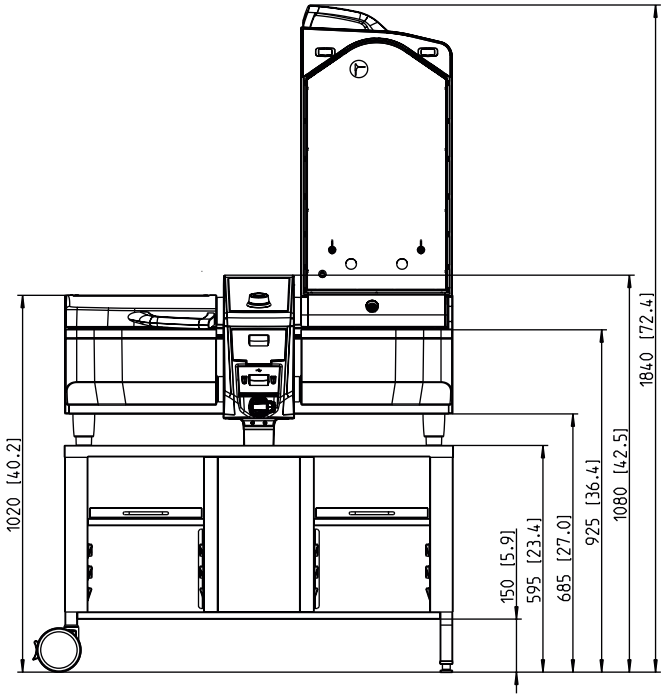
22.4 Model XL (150 litres)



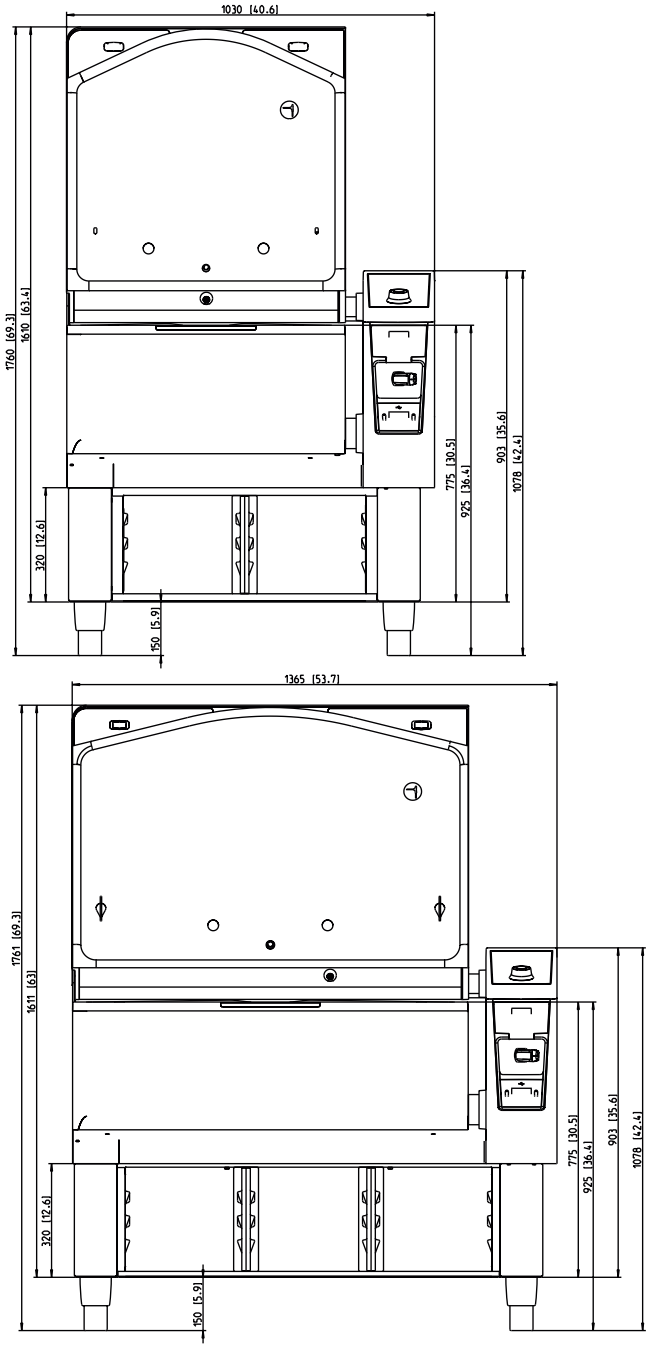
1	Water outlet
2	Overflow outlet
3	Power supply
4	Electrical connections
5	Water inlet

22.5 Model 2-XS and model 2-S on stand

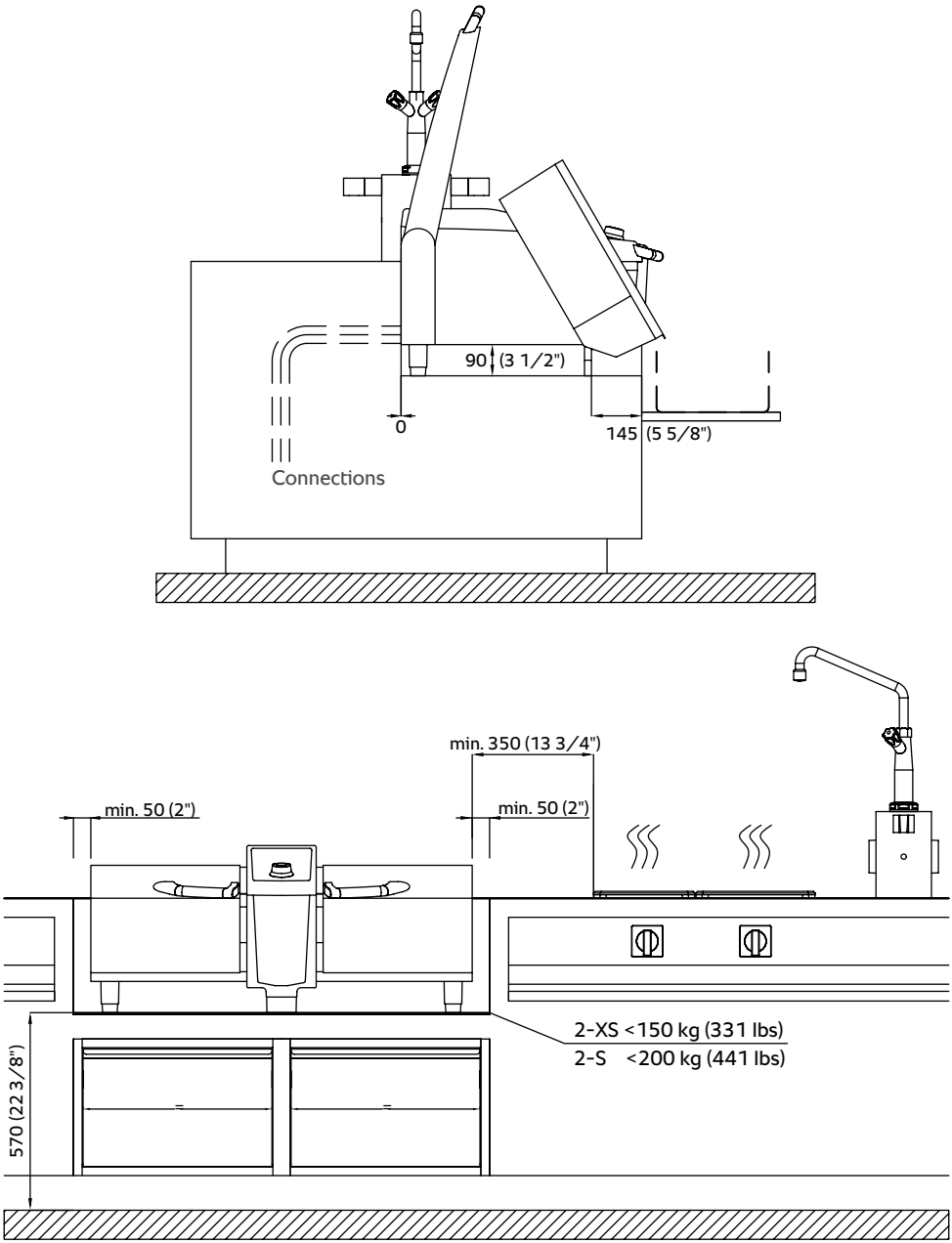




22.6 Model L and model XL on stand with feet

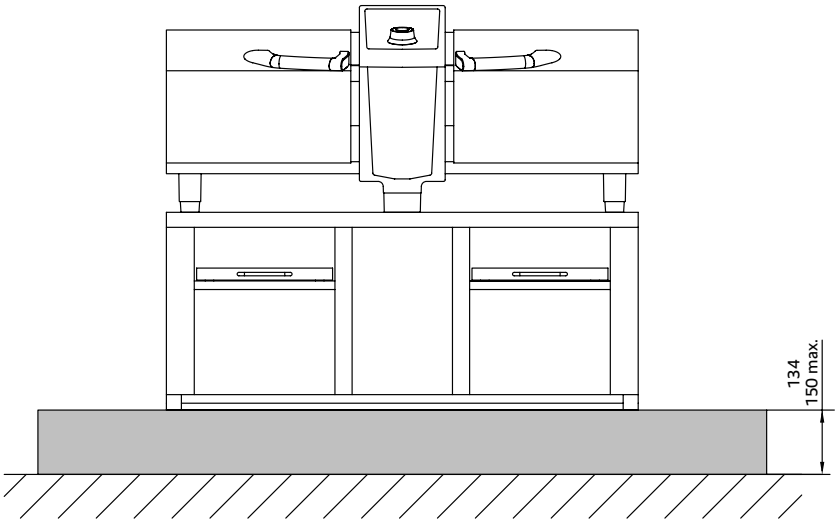


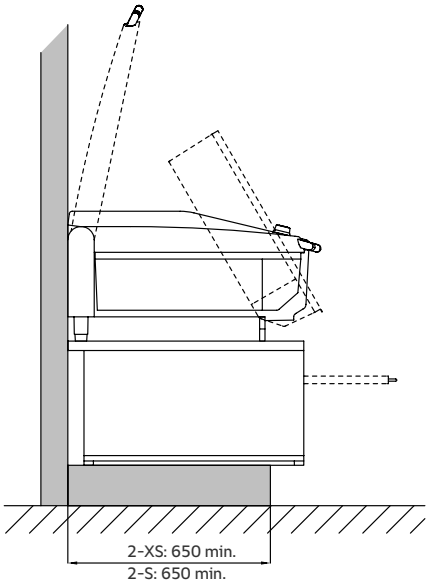
22.7 Model 2-XS and model 2-S on a cooker block

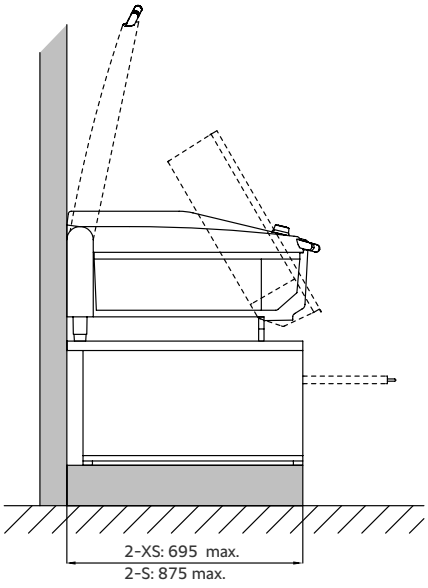


22.8 Plinth installation model 2-XS and model 2-S

Note: No clearance is required to the rear of the unit. The minimum stand depth is 650 mm.
The maximum stand depth should be 750 mm.
The recommended stand height is 100 mm and should not exceed 150 mm. If the base depth is less than 650 mm, the unit may tilt forward. It must be attached to the floor or the wall.

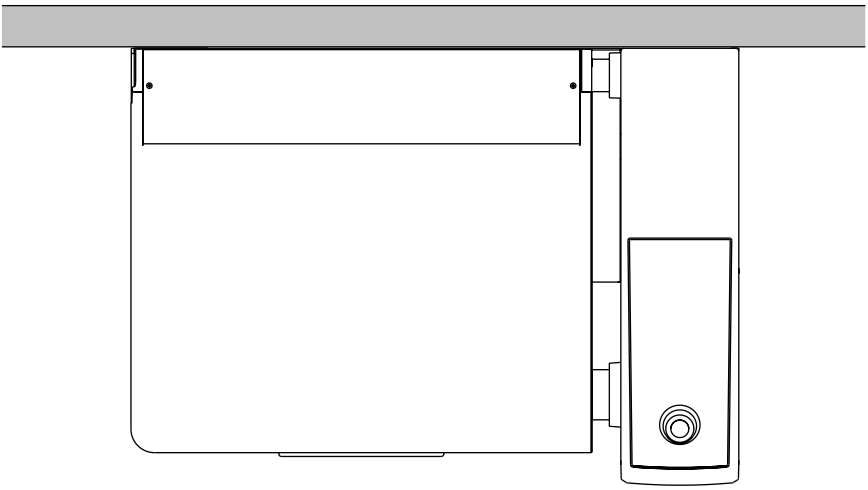


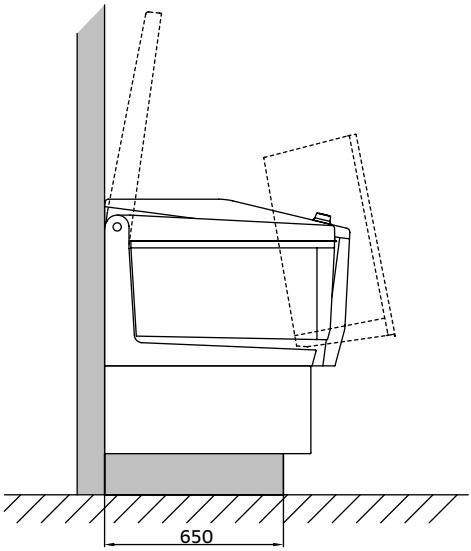


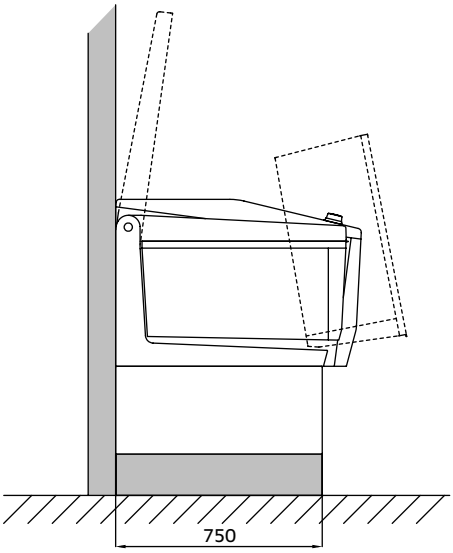


22.9 Plinth installation model L and model XL

Note: No clearance is required to the rear of the unit. The minimum stand depth is 650 mm.
The maximum stand depth should be 750 mm.
The recommended stand height is 100 mm and should not exceed 150 mm. If the base depth is less than 650 mm, the unit may tilt forward. It must be attached to the floor or the wall.

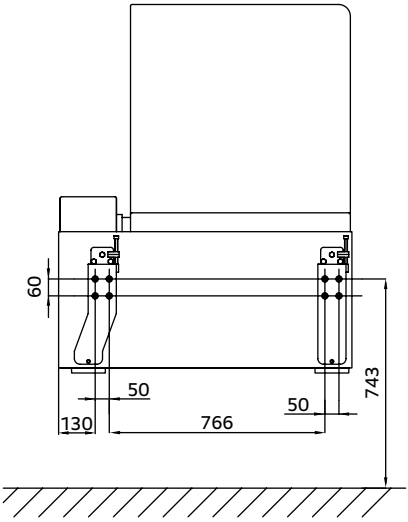




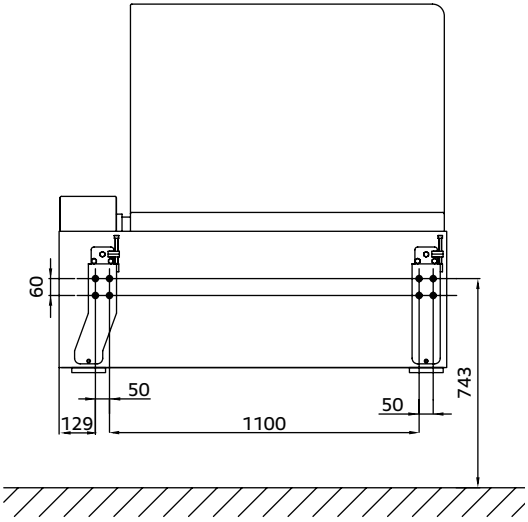


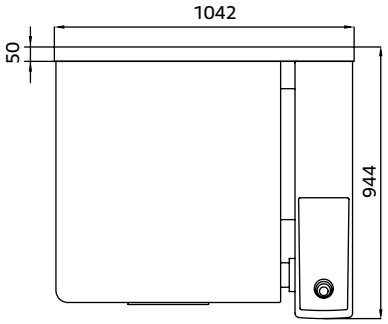
22.10 Wall attachment model L and model XL

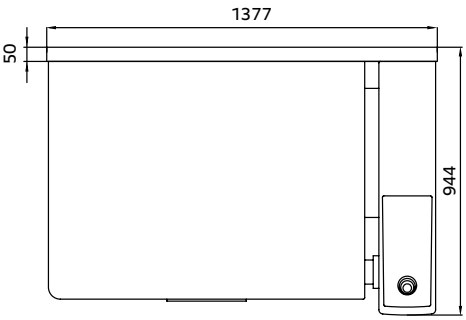
iVario Pro L

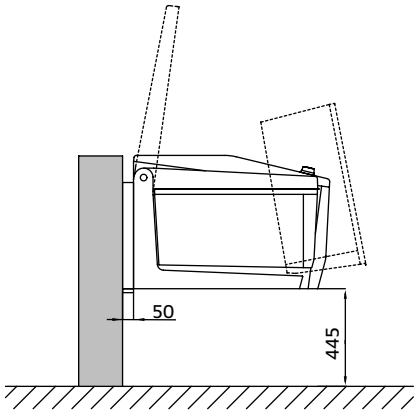


iVario Pro XL









23. ConnectedCooking

ConnectedCooking – iKitchen:
Cloud-based networking solution for all iCombi and iVario units in the commercial kitchen. Here is an overview of the most important functions:

- Customers who operate multiple RATIONAL units in different locations at the same time can control and manage them centrally. For example, recipes and cooking programs can be transferred to all units at the same time.
- Customers who are chains can view our system with a customised user interface and can assign or restrict all the access rights of their employees depending on their level in the hierarchy.
- The automatic HACCP documentation ensures conformity with all statutory hygiene standards. No additional software is required for this.
- At the customer's request, service partners can be granted special access. This ensures both quick and efficient technical support, as well as continuous availability of the units.

ConnectedCooking Pro:
In addition to networking the RATIONAL units, ConnectedCooking Pro is a manufacturer-independent platform for monitoring, controlling and documenting the entire kitchen process. All network connectable units can be integrated into it with their own cloud solutions. Analogue units and process steps that have not yet been digitally recorded can even be integrated using sensors which, for example, record, cache and send the surface, ambient, room or core temperatures and the respective humidity and send it to ConnectedCooking Pro. Other mobile recording and output devices, such as mobiles, tablets, wearables etc. can also be integrated for data collection or for the maintenance of checklists. Here is a brief description of the modules and their most important functions:

ConnectedCooking

23. ConnectedCooking

› **Module quality and hygiene management**
Automatic, seamless and tamper-proof recording and documentation of unit data, process parameters and individually created electronic checklists using mobile devices. After comparison with reference values, measures are displayed.

› **Module recipe management**
Menus, dishes, recipes, cooking programmes, lists of ingredients can be generated on the cooking unit or on the PC and transferred to any number of unit at the same time. Allergy and nutritional values can be added using a stored food database. It contains a library with over 1,000 stored and tested recipes, which is available worldwide. A separate customer database for menu creation can also be set up.

› **Module unit management**
All connected devices can be managed and controlled centrally in terms of user rights, operating status, programmes, parameter settings, error history and alarms. Prompts for action and error messages can be sent to the user by push notification, as well as to the service partner subject to approval. Remote access, diagnosis and maintenance can be established.

› **API interface**
Additional units and functions can be developed and integrated in a customer-specific manner.

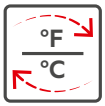
Requirements:
› Provision of a network with patch cables (CAT5) either on-site or provided by the customer. Preferably one RJ45 network socket for each RATIONAL unit
› Alternatively, provision of a wireless network in all common standards (WiFi 802.11 b/g/n (2.4 GHz) either on-site or provided by the customer, router position (separate power supply) in front of/above the unit, objects/obstacles between router and unit should be avoided if possible.
› iCombi Pro and iVario units have integrated wireless network as standard (iVario XS optional) iCombi Pro units have an integrated Ethernet interface as standard (iCombi Classic and iVario optional)
› For example, the software-side integration of the unit is analogous to an integration of a PC or printer in a network.

Further information available at
ConnectedCooking.com

24. Conversion tables

Model	°dH	°f	°e	ppm	mmol/l	gr/gal (US)	mval/kg
°dH	1	1.79	1.25	17.9	0.1783	1.044	0.357
°f	0.56	1	0.70	10.0	0.1	0.584	0.2
°e	0.8	1.43	1	14.32	0.14	0.84	0.286
1 ppm	0.056	0.1	0.07	1	0.01	0.0584	0.02
1 mmol/l	5.6	0.001	0.0007	100	1	0.00058	2
1 gr/gal (US)	0.96	1.71	1.20	17.1	0.171	1	0.342
1 mval/kg	2.8	5.0	3.5	50	0.5	2.922	1

1 °dH:	10.00 mg CaO/kg	**1 ppm:**	0.56 mg CaO/kg	**1 gr/gal:**	9.60 mg CaO/kg
(Germany)	17.86 mg $CaCO_3$/kg	(USA)	1.0 mg $CaCO_3$/kg	(USA)	64.8 mg $CaCO_3$/gal
	7.14 mg Ca_2^+/kg		0.40 mg Ca_2^+/kg		17.11 mg $CaCO^3$/kg
1 °f:	5.60 mg CaO/kg	**1 mmol/l:**	56.00 mg CaO/kg		6.85 mg Ca_2^+/kg
(France)	10.0 mg $CaCO_3$/kg	(chem. cons.)	100.0 mg $CaCO_3$/kg		
	4.00 mg Ca_2^+/kg		39.98 mg Ca_2^+/kg		
1 °e:	8.01 mg CaO/kg	**1 mval/kg:**	28.00 mg CaO/kg		
(GB)	14.3 mg $CaCO_3$/kg	(milliequivalent)	50.0 mg $CaCO_3$/kg		
	5.72 mg Ca_2^+/kg		19.99 mg Ca_2^+/kg		



$°C = \frac{°F - 32}{1.8}$

°F= °C * 1.8 + 32

24. Conversion tables

kPa	mbar	psi	inch/wc
0.1	1	0.0147	0.4014
0.2	2	0.0294	0.8028
0.3	3	0.0441	1.2042
0.4	4	0.0588	1.6056
0.5	5	0.0735	2.0070
0.6	6	0.0882	2.4084
0.7	7	0.1029	2.8098
0.8	8	0.1176	3.2112
0.9	9	0.1323	3.6126
1	10	0.147	4.0140
1.2	12	0.1764	4.8168
1.4	14	0.2058	5.6196
1.6	16	0.2352	6.4224
1.8	18	0.2646	7.2252
2	20	0.294	8.0280
2.5	25	0.3675	10.0350
3	30	0.441	12.0420
3.5	35	0.5145	14.0490

kPa	mbar	psi	inch/wc
4	40	0.588	16.0560
4.5	45	0.6615	18.0630
5	50	0.735	20.0700
5.5	55	0.8085	22.0770
6	60	0.882	24.0840
6.5	65	0.10,5.	26.0910
7	70	1.029	28.0980
7.5	75	1.1025	30.1050
8	80	1.176	32.1120
8.5	85	1.2495	34.1190
9	90	1.323	36.1260
9.5	95	1.3965	38.1330
10	100	1.47	40.1400
20	200	2.94	80.2800
30	300	4.41	120.4200
40	400	5.88	160.5600
50	500	7.35	200.7000
100	1000	14.7	401.4000

1 kW = 3,413 Btu
100,00 Btu = 1 Therm
1 Therm = 29.3 kW
1 kW = 1 kJ/s
1 kW = 3,600 kJ/h
1 Btu = 1.055 kJ
1 kWh = 0.08 kg liquid gas
1 kWh = 0.096 m³ natural gas

RATIONAL UK Limited
Unit 4 Titan Court, Laporte Way
Luton, LU4 8EF
United Kingdom

Tel. +44 1582 480388
Fax +44 1582 485001

info@rational-online.co.uk
rational-online.com

80.06.587 · V-01 · MDS/Ad · 03/20 · en-UK