

INDOOR UNITS



Split-system
R-410A Refrigerant
Indoor unit with centrifugal fan
Configuration flexibility

40ZS/ZF 90 - 600

The **40ZS/ZF** series are units with horizontal construction designed for installation indoors, connected to a network of ducts.

They are equipped with centrifugal fan (EC plug-fan also available in models 90 to 360), and expansion valve.

A vast number of options meet numerous operating demands.

All of the units are tested and checked in the factory.

Range

- 1 circuit:
 - Models: 90 / 100 / 120 / 160 / 180 / 182
- 2 circuits:
 - Models: 200 / 240 / 320 / 360 / 420 / 485 / 540 / 600

UNIT COMPONENTS

- Casing made of galvanised steel metal with polyester paint, white colour RAL 7035. Self-supporting frame.

Air circuit

- Coil(s) with copper pipes and aluminium fins.
- Centrifugal fan(s) coupling by pulleys and belts. Electric motor(s) with tensioner, class F, IP55 and internal thermal protection. Double-intake turbines, with an impeller of front-curved blades. Greased spherical bearings, with no maintenance required.
- Reusable air filters, assembled on a frame.
- Condensate drain pan.

Cooling circuit

- Thermostatic expansion valve(s) with external equalisation (check valve in ICZ series).

Protections

- Main door switch.

Optional

Outdoor environment

Corrosion

- Coil with copper pipes and copper fins.
- INERA® coil with copper pipes and fins of an aluminium alloy, of high performance and great resistance to the corrosion.
- Coil with copper pipes and aluminium fins with polyurethane and Blygold® coating (indoor unit and/or hot water coil).
- Condensates drain pan in stainless steel.

Humidity

- Stop-drop in the indoor air coil. Recommended in cases where a high moisture content in the air is foreseen or when the air flow is high.
- Stop-drop in the outdoor air intake.

Comfort / heating options

- Hot water auxiliary coil, with three-way valve. Two options:
 - Nominal coil for heating in cooling-only units.
 - Auxiliary coil for heating in heat pump units.

If the unit includes hot water coil and free-cooling, and works with negative temperatures of outdoor air, an anti-freeze thermostat as safety system is mandatory.

- Auxiliary electrical heaters. With this option, the air flow controller is included.

Comfort / indoor air quality options

- Filtration of the supply air:
 - Gravimetric filter G4.
 - Gravimetric filter G4 + creased opacimetric filters F6 to F9.
- Filtration of the return air (with centrifugal return fan):
 - Gravimetric filter G4.
 - Gravimetric filter G4 + creased opacimetric filters F6.

Safety

- Soft starter of the supply and/or return centrifugal fans which prolongs the set time mainly aimed at installations with cloth ducts. Compulsory for motors with an output of 15 kW and above.
- Differential pressostat for the detection of clogged filters.

- Differential pressostat for control of air flow.
- Smoke detecting station in accordance with the NF S 61-961 standard.
- Refrigerant leak detector (with CARRIERtc control). This allows prompt identification of gas leaks, guaranteeing the safety of any people in the vicinity. Installation of the device ensures compliance with European standards F-GAS and EN378 as well as ASHRAE 15.

Installation

- Antivibration mounts made of rubber.
- Position of supply and/or return of the indoor unit air.
- Supply and/or return fan with high available pressure.
- Electronic plug-fan(s) in air supply (upon request).
- Assemblies with **mixing box** for air renewal and free-cooling:
 - 2 motorised dampers:
 - MS assembly: outdoor air intake.
 - 3 motorised dampers:
 - MC assembly: outdoor air intake, air extraction and centrifugal return (models 90 to 180 and 420 to 600) or plug-fan (models 420 to 600 with MC0 assembly). Note: Plug-fan in models 420 to 600 with MC0 assembly: upon request.

All the possible combinations of "Assemblies with mixing boxes" are represented on the following page.



Free-cooling



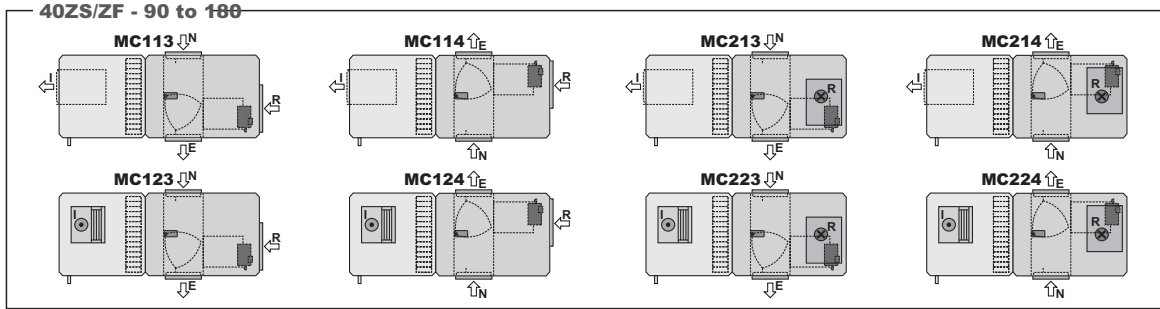
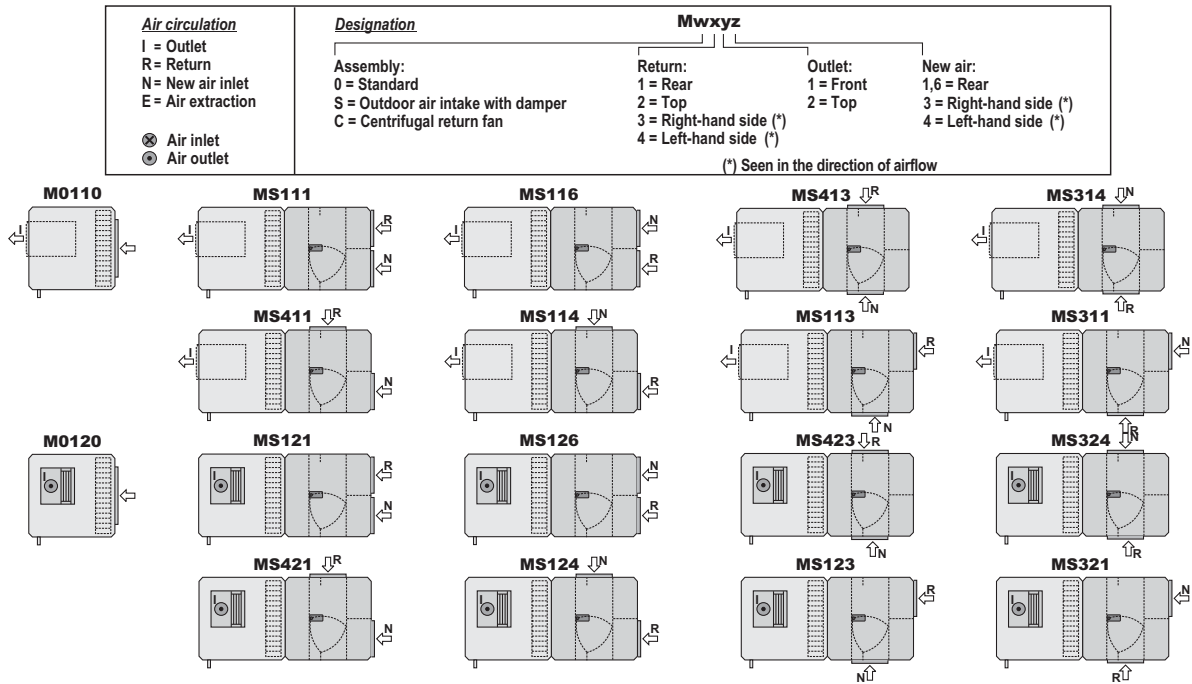
On units with mixing box, the free-cooling can be managed by the electronic control. This function allows the outdoor air conditions to be taken advantage of when these are more favourable than those of the return (or ambient) air. As such, this allows the cooling capacity to be reduced under these circumstances. The percentage of air renewal will range from 0% to 100%.

There are three options for the free-cooling management:

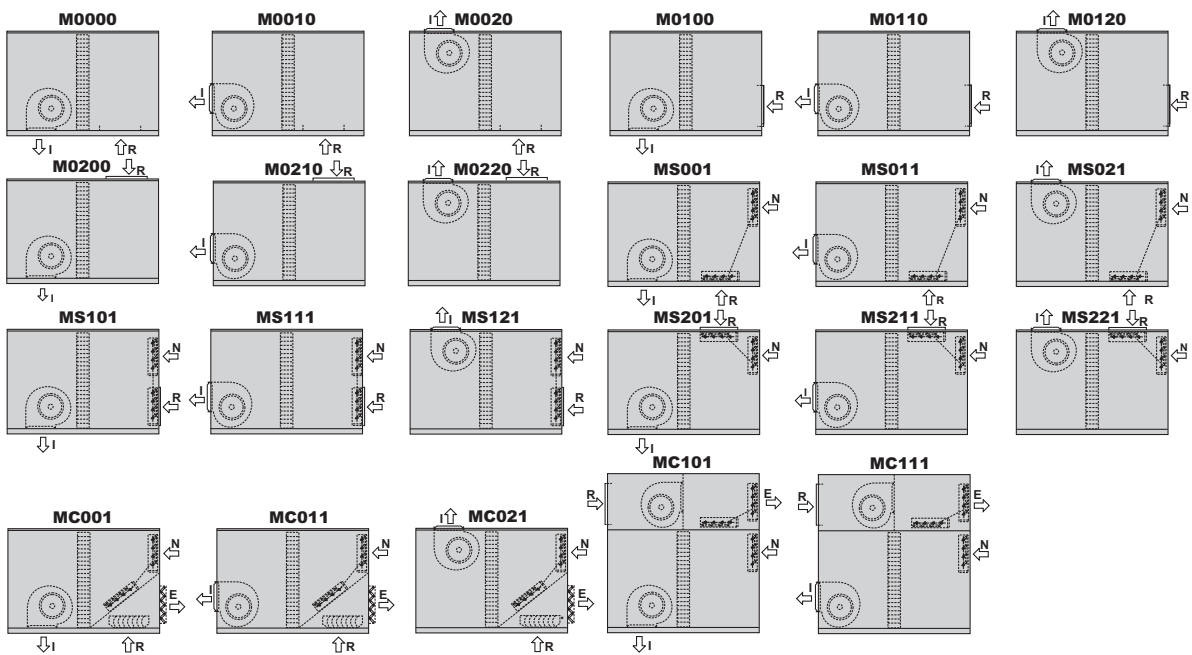
- Thermal, with comparison of temperatures.
- Enthalpic, with comparison of enthalpies.
- Thermoenthalpic, with comparison of enthalpies and a correction for temperature.

Note: With enthalpic or thermoenthalpic free-cooling change to the CARRIERtc electronic control is obligatory

40ZS/ZF - 90 to 360: assemblies with mixing box (plan view)



40ZS/ZF - 420 to 600: assemblies with mixing box (raised view)



<p>Air circulation</p> <p>I = Outlet R = Return N = New air inlet E = Air extraction</p>	<p>Designation</p> <p>Mwxyz</p> <p>Assembly: 0 = Standard S = Outdoor air intake with damper C0 = Lower return plug-fan C1 = Centrifugal return fan in top box</p> <p>Return: 0 = Bottom 1 = Side 2 = Top</p> <p>Supply: 1 = Side 2 = Top</p> <p>New air: 0 = No inlet 1 = Side</p>
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TECHNICAL CHARACTERISTICS

40ZS/ZF		90	100	120	160	180	182	200	
Centrifugal fan	Nominal air flow (m ³ /h)	4.000	4.600	5.200	7.000	7.000	8.000	9.200	
	Available static pressure (mm.w.c)	15	15	15	15	15	15	20	
	Number / turbines	1 / 1				2 / 2			
	Motor output (kW)	1,1	1,1	1,1	1,5	1,5	2 x 0,75	2 x 1,1	
	Power input (kW)	0,61	0,83	0,88	1,08	1,08	2 x 0,59	2 x 0,91	
	Speed (r.p.m.)	985	1049	916	761	761	963	1126	
Max. absorbed current	Fan (A)	2,7	2,7	2,7	3,6	3,6	4,2	5,4	
Dimensions	Length (mm)	1.190			1.520		2.144		
	Width (mm)	950			1.028		950		
	Height (mm)	731			731		731		
Weight	(kg)	147	147	190	199	199	262	262	

40ZS/ZF		240	320	360	420	485	540	600	
Centrifugal fan	Nominal air flow (m ³ /h)	10.300	14.000	15.500	18.000	18.200	20.400	24.000	
	Available static pressure (mm.w.c)	20	20	20	20	20	20	20	
	Number / turbines	2 / 2			1 / 3				
	Motor output (kW)	2 x 1,5	2 x 1,5	2 x 2,2	4	4	4	5,5	
	Power input (kW)	2 x 0,94	2 x 1,15	2 x 1,39	2,52	2,82	2,96	3,40	
	Speed (r.p.m.)	974	789	816	677	677	643	681	
Max. absorbed current	Fan (A)	7,2	7,2	10,0	9,0	9,0	9,0	11,6	
Dimensions	Length (mm)	2.144	2.804		2.853				
	Width (mm)	950	1.028		2.160				
	Height (mm)	731	800		1.524				
Weight	(kg)	262	365	365	920	920	963	964	

SOUND LEVELS dB(A)

Sound power level on the indoor unit

Sound power level in the indoor fan supply to be taken into account for the silencer calculation:

40ZS/ZF	90	100	120	160	180	182	200	240	320	360	420	485	540	600
Total dB(A)	79	82	80	80	80	82	85	82	83	85	86	87	89	92

OPTIONAL

Lower radial centrifugal return fan (MC0 assembly)

40ZS/ZF		420	485	540	600
Nominal air flow	(m ³ /h)	18.000	18.200	20.400	24.000
Available static pressure	(mm.c.a.)	21	21	19	17
Number / Diameter		4 / 500			
Motor output	(kW)	2 x (2,7 + 1,4)			
Speed	(r.p.m.)	2 x 1.700 / 2 x 1.375			
Maximum absorbed current	(A)	14,6			

OPTIONAL

Centrifugal return fan (MC1 and MC2 assembly)

40ZS/ZF		90	100	120	160	180	420	485	540	600	
Nominal air flow	(m ³ /h)	4.000	4.600	5.200	7.000	7.000	18.000	18.200	20.400	24.000	
Available static pressure	(mm.w.c)	15	15	15	15	15	20	20	20	20	
Number / turbines		1 / 1					1 / 2				
Motor output	(kW)	0,75	1,1	0,75	1,1	1,1	4	4	5,5	5,5	
Power input	(kW)	0,48	0,65	0,58	0,72	0,72	2,73	2,85	3,57	3,86	
Speed	(r.p.m.)	834	882	689	578	578	602	616	644	619	
Maximum absorbed current	(A)	2,1	2,7	2,1	2,7	2,7	9,0	9,0	11,6	11,6	

Nominal hot water coil

Hot water coil assembled inside the unit with a three-way valve managed by the unit control for heating in cooling-only unit.

40ZS/ZF		90	100	120	160	180	182	200	240	320	360	420	485	540	600	
Air pressure drop	(mm.w.c)	3,0	3,8	4,7	4,4	4,4	2,8	3,5	4,1	3,6	4,2	2,0	2,1	2,5	3,2	
Water 80/60°C and inlet air 20°C	Heating capacity	(kW)	29,1	31,7	34,2	57,9	57,9	71,2	77,6	83,0	121,2	128,9	172,3	173,5	186,3	205,5
	Water flow	(m ³ /h)	1,3	1,4	1,5	2,6	2,6	3,2	3,4	3,7	5,4	5,7	7,4	7,5	8,0	8,8
	Water pressure drop	(m.w.c)	0,3	0,4	0,4	1,4	1,4	0,7	0,9	1,0	2,1	2,3	0,3	0,3	0,3	0,4
Water 90/70°C and inlet air 20°C	Heating capacity	(kW)	36,2	39,5	42,7	71,4	71,4	87,8	95,9	102,6	148,9	158,4	212,9	214,5	230,5	254,7
	Water flow	(m ³ /h)	1,6	1,8	1,9	3,2	3,2	3,9	4,3	4,6	6,6	7,0	9,2	9,2	9,9	11,0
	Water pressure drop	(m.w.c)	0,5	0,6	0,6	2,1	2,1	1,1	1,2	1,4	3,0	3,3	0,4	0,4	0,4	0,4
Weight (empty)	(kg)	10,4	10,4	10,4	16,3	16,3	23,4	23,4	34,4	34,4	34,4	62,5	62,5	62,5	62,5	
Diameter of hydraulic connections		1"			1 1/4"				1 1/2"			2"				

Note: with stop-drop in the indoor air coil it is not possible to assemble the hot water coil.

Auxiliary hot water coil

Hot water coil assembled inside the unit with a three-way valve managed by the unit control for back-up during heating in heat pump units. In this case the air inlet temperature matches the air supply temperature of the indoor coil.

40ZS/ZF		90	100	120	160	180	182	200	240	320	360	420	485	540	600	
Air pressure drop	(mm.w.c)	2,9	3,6	4,5	4,2	4,2	2,7	3,4	4,0	6,6	7,8	1,9	2,0	2,4	3,2	
Water 80/60°C	Heating capacity	(kW)	12,9	13,7	14,9	23,0	23,0	30,2	31,6	33,6	40,9	43,7	66,1	60,8	63,6	76,9
	Water flow	(m ³ /h)	0,6	0,6	0,7	1,0	1,0	1,3	1,4	1,5	1,8	1,9	2,9	2,7	2,8	3,4
	Water pressure drop	(m.w.c)	0,1	0,1	0,2	0,5	0,5	0,4	0,5	0,5	0,8	0,9	0,6	0,5	0,6	0,8
Water 90/70°C	Heating capacity	(kW)	17,9	19,2	20,8	31,5	31,5	41,2	43,5	46,5	56,3	60,1	90,1	85,0	89,8	106,1
	Water flow	(m ³ /h)	0,8	0,9	0,9	1,4	1,4	1,8	1,9	2,0	2,5	2,6	4,0	3,8	3,9	4,6
	Water pressure drop	(m.w.c)	0,2	0,3	0,3	0,8	0,8	0,8	0,9	1,0	1,4	1,6	1,1	1,0	1,1	1,5
Weight (empty)	(kg)	7,8	7,8	7,8	11,0	11,0	16,3	16,3	16,3	16,3	16,3	38,4	38,4	38,4	38,4	
Diameter of hydraulic connections		3/4"				1"										

Note: with stop-drop in the indoor air coil it is not possible to assemble the hot water coil.

OPTIONAL

Electrical heaters

Important: with this option, the air flow controller is included.

Standard assembly in two stages (optional assembly in one stage with no over price).

In the case of two indoor units with the one outdoor unit the assembly of the support is not possible in two stages (each indoor unit is equivalent to 1 stage).

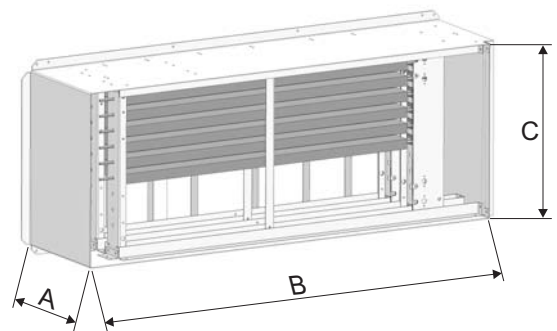
Models 90 to 360 (assembled in the fan outlet): available capacities

40ZS/ZF	Total output (kW)	6	9	12	15	18	24	30	36
	Stage power (kW)	3 + 3	3 + 6	6 + 6	6 + 9	9 + 9	12 + 12	15 + 15	18 + 18
Current (A) (400V / IIIph / 50Hz)	90 / 100 / 120	8,7	13,0	17,3	unavailable				
	160 / 180	unavailable		17,3	21,7	26,0	unavailable		
	182 / 200 / 240 / 320 / 360	unavailable			21,7	26,0	34,6	53,4	52,0

Note: in models with centrifugal return fan it is not possible to assemble electrical heaters with outputs of 30 and 36 kW.

Frame for assembly of the auxiliary heater in the supply fan outlet:

40ZS/ZF	Total output	Dimensions (mm)		
		A	B	C
90 / 100 / 120 (1 supply outlet)	6 / 9 kW (1 row)	150	482	443
	12 kW (2 rows)	262	482	443
160 / 180 (1 supply outlet)	12 / 15 / 18 kW (1 row)	189	1.142	443
182 / 200 / 240 (2 supply outlets)	15 / 18 kW (1 row)	189	1.142	443
	24 / 30 / 36 kW (2 rows)	297	1.142	443
320 / 360 (2 supply outlets)	15 / 18 / 24 / 30 / 36 kW (1 row)	189	1.142	443



This frame is designed with side access for maintenance purposes.

In models 90 to 120 each of the rows of electrical heaters has an output of 1 kW. As from model 160, the output of each row will be 2 or 3 kW according to the total output.

In models with two supply fan outlets (two frames), as well as in the case of 1 supply outlet with 2 rails, the electrical heaters are distributed as symmetrically as possible between both frames.

Models 420 to 600 (assembled inside the unit): available capacities

40ZS/ZF	Total output (kW)	36	45	54	72
	Stage power (kW)	18 + 18	18 + 27	27 + 27	36 + 36
Current (A) (400V / IIIph / 50Hz)	420 / 485	52,0	65,0	78,0	unavailable
	540 / 600	unavailable	65,0	78,0	104,0

Stop-drop in the indoor air coil

Air flow as from which it is recommended to install a stop-drop in the indoor coil.

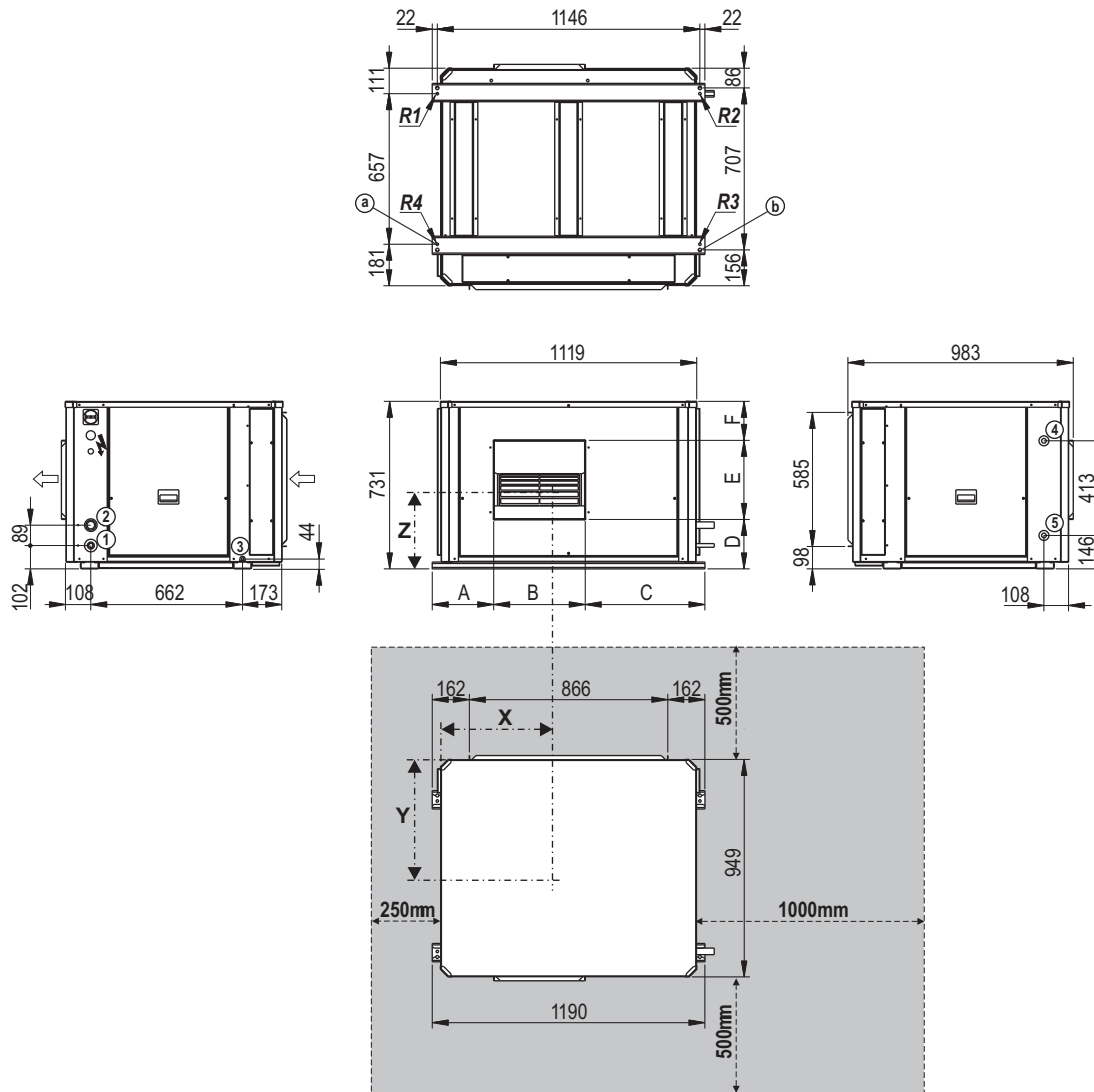
40ZS/ZF		90	100	120	160	180	182	200	240	320	630	420	485	540	600
Air flow	(m³/h)	5.246		7.283		11.110			16.566		30.089				

Note: for operating conditions with high dehumidification in the indoor coil (e.g. in installations close to the coast) it may be necessary to install a separator even if the flow is less than the previous one.

Note: with hot water coil (nominal or auxiliary) it is not possible to assemble the stop-drop.

DIMENSIONAL DRAWINGS

40ZS/ZF - 90, 100 and 120 with side supply (mm)



LEGEND

- Indoor air circulation
- Electric power supply
- Door switch
- ① Liquid line
- ② Gas line
- ③ Condensate outlet: trunk 3/4" M
- ④ Auxiliary coil water inlet (optional)
- ⑤ Auxiliary coil water outlet (optional)

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

b: Ceiling anchoring: threaded rod \varnothing 15mm

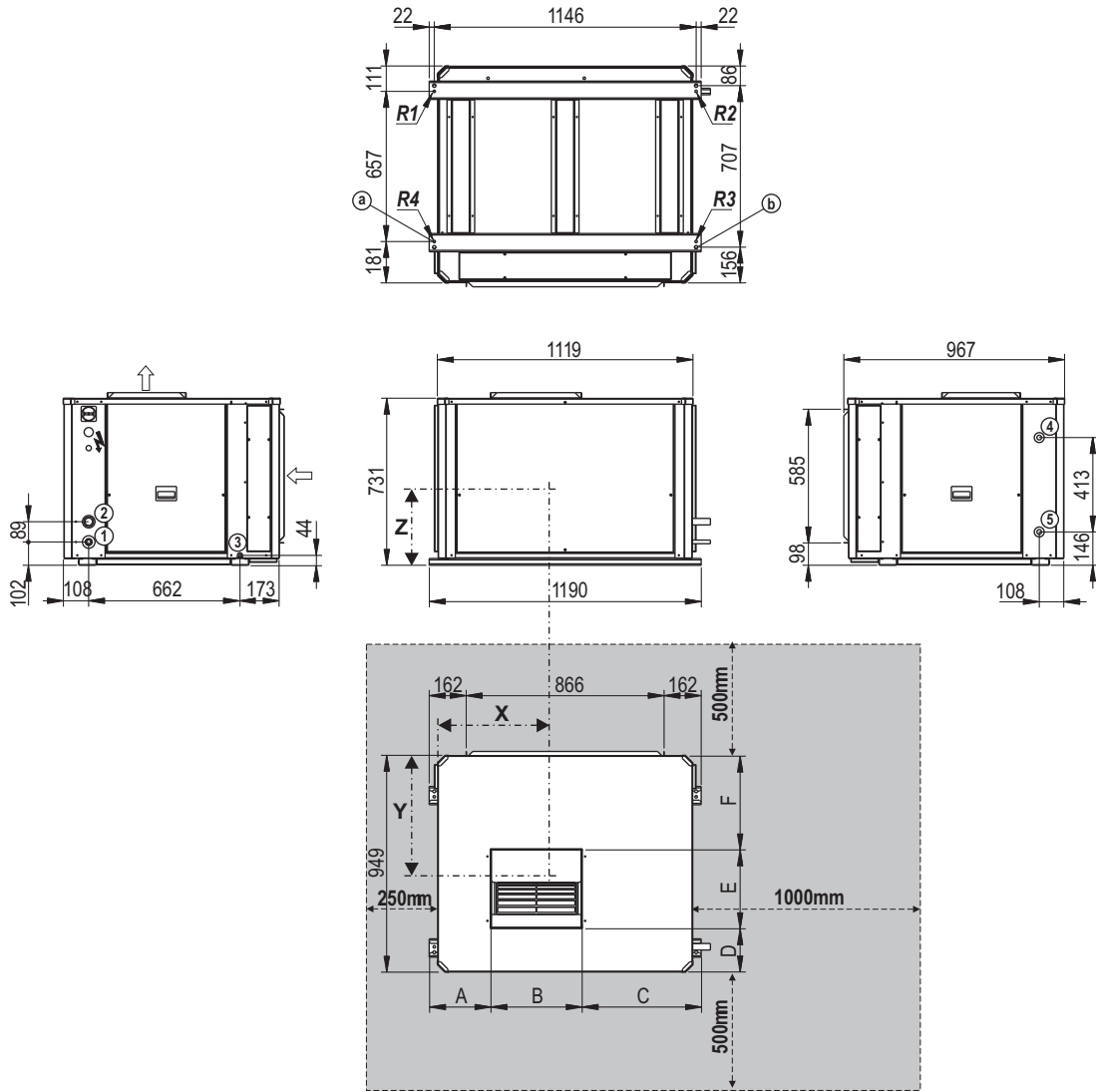
Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	A	B	C	D	E	F
90 / 100 (mm)	301	334	555	190	285	256
120 (mm)	268	399	522	216	345	170

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
90 / 100	539	327	391	147	22	19	52	55
120	539	327	391	190	28	24	67	71

DIMENSIONAL DRAWINGS

40ZS/ZF - 90, 100 and 120 with upper supply (mm)



LEGEND

- ⇨ Indoor air circulation
- ⚡ Electric power supply
- ⊗ Door switch
- ① Liquid line
- ② Gas line
- ③ Condensate outlet: trunk 3/4" M
- ④ Auxiliary coil water inlet (optional)
- ⑤ Auxiliary coil water outlet (optional)

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8
b: Ceiling anchoring: threaded rod Ø15mm

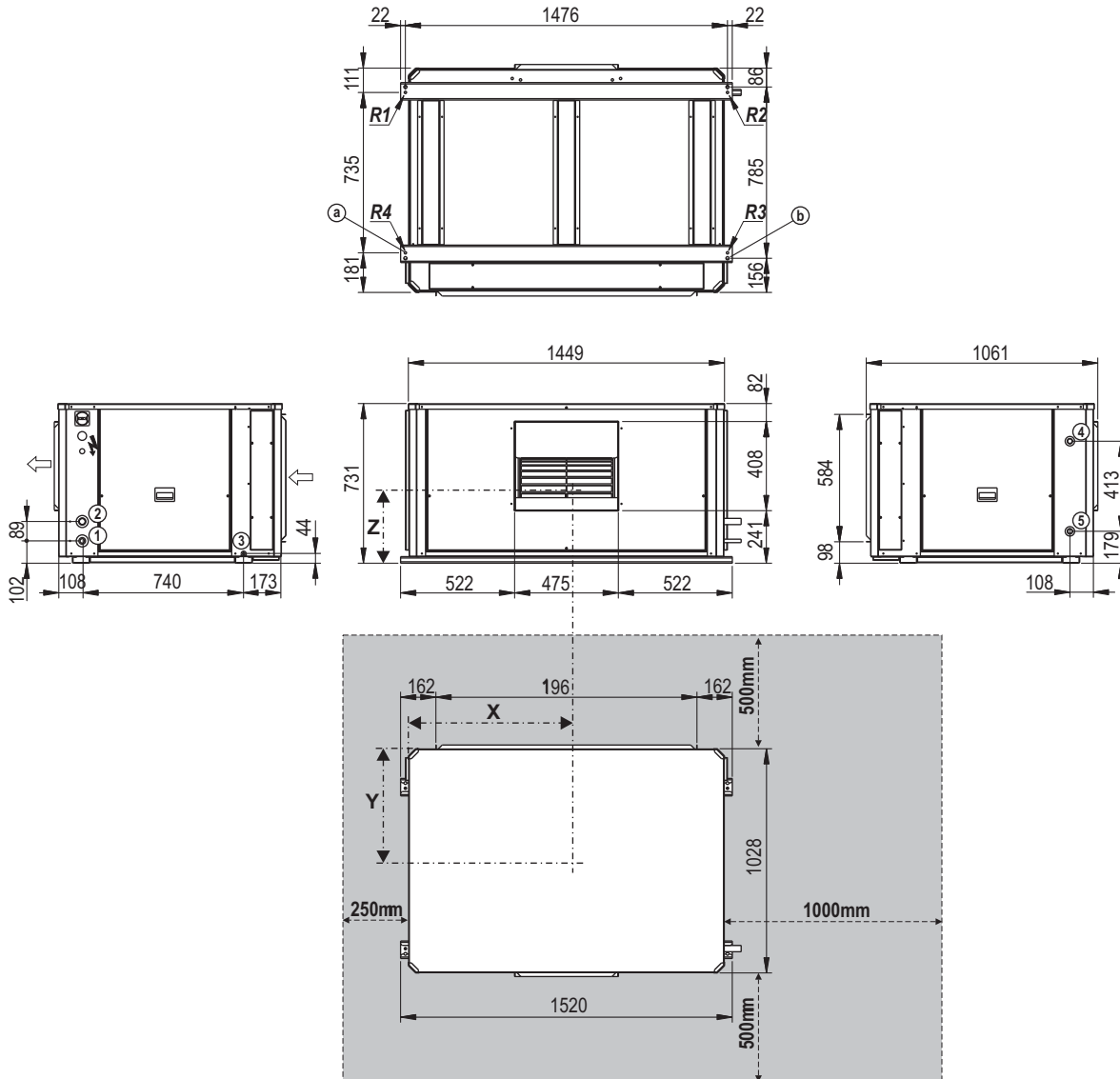
☐ Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	A	B	C	D	E	F
90 / 100 (mm)	301	334	555	168	285	497
120 (mm)	268	399	522	193	345	411

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
90 / 100	539	327	391	147	22	19	52	55
120	539	327	391	190	28	24	67	71

DIMENSIONAL DRAWINGS

40ZS/ZF - 160 and 180 with side supply (mm)



LEGEND

- Indoor air circulation
- Electric power supply
- Door switch
- ① Liquid line
- ② Gas line
- ③ Condensate outlet: trunk 3/4" M
- ④ Auxiliary coil water inlet (optional)
- ⑤ Auxiliary coil water outlet (optional)

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

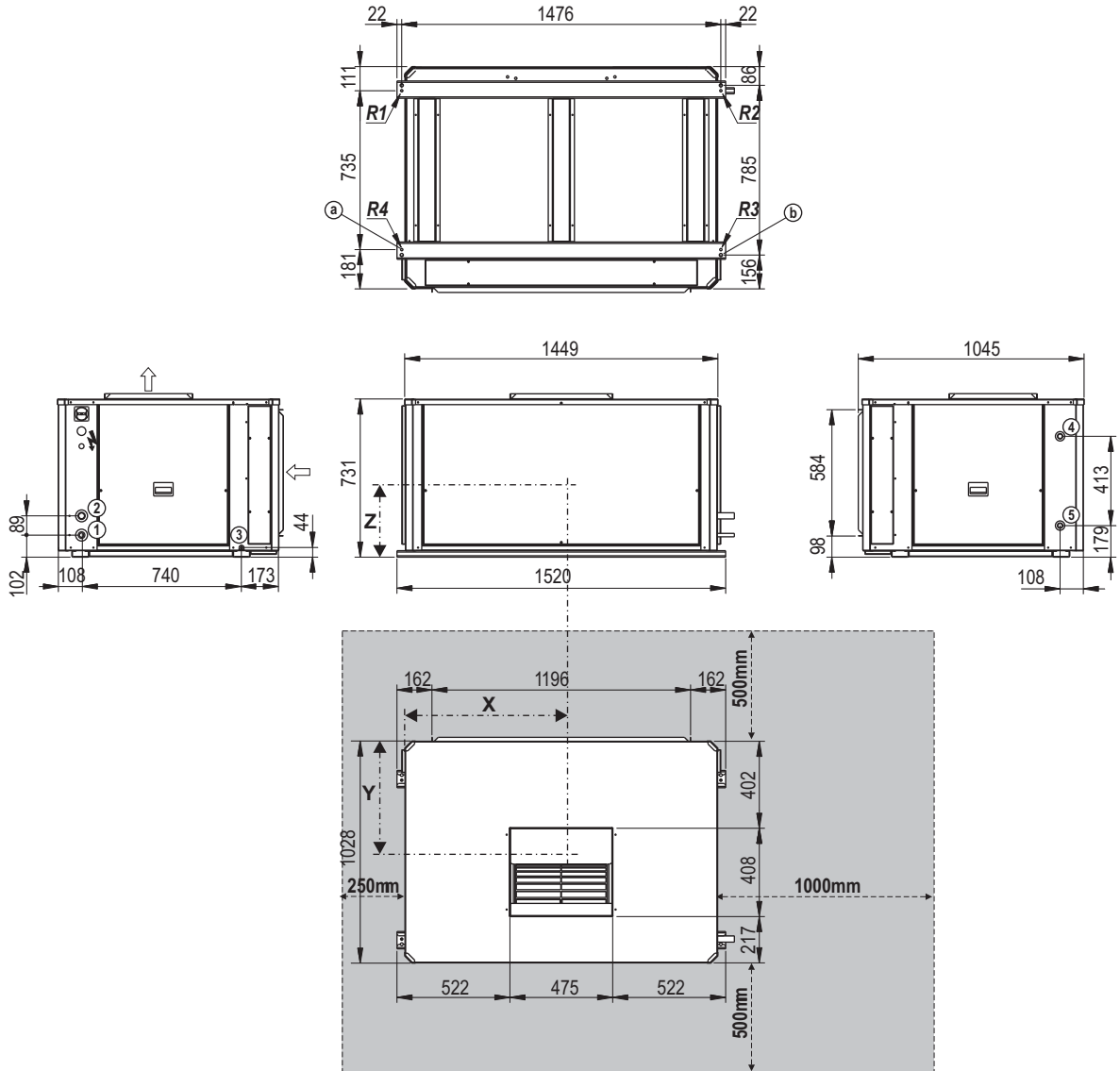
b: Ceiling anchoring: threaded rod $\varnothing 15$ mm

Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
160 / 180	757	346	387	199	25	29	75	70

DIMENSIONAL DRAWINGS

40ZS/ZF - 160 and 180 with upper supply (mm)



LEGEND

- ⇨ Indoor air circulation
- ⚡ Electric power supply
- ⊗ Door switch
- ① Liquid line
- ② Gas line
- ③ Condensate outlet: trunk 3/4" M
- ④ Auxiliary coil water inlet (optional)
- ⑤ Auxiliary coil water outlet (optional)

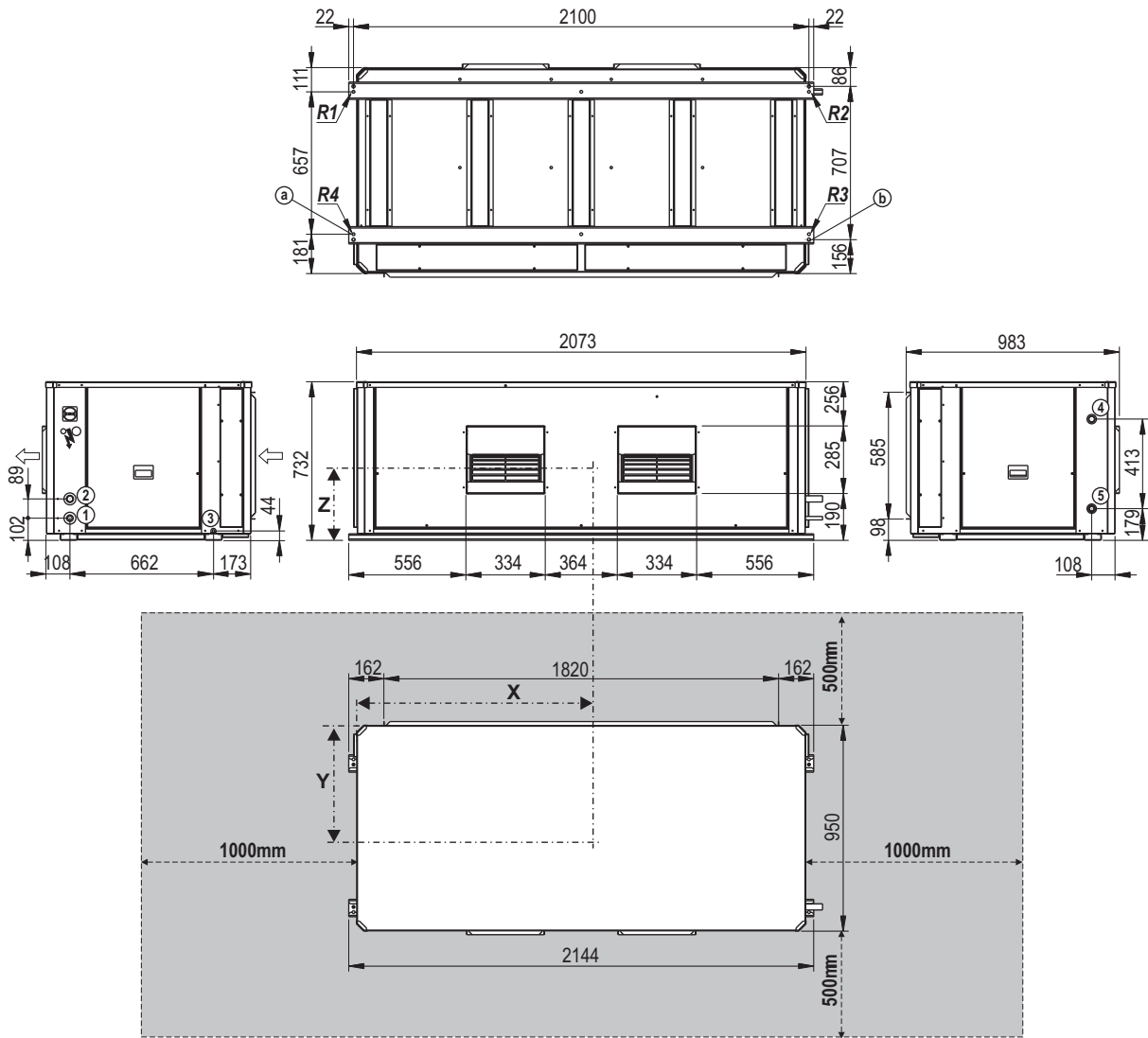
Intake profile: 20mm
 a: Antivibration anchoring: rivet nut M8
 b: Ceiling anchoring: threaded rod Ø15mm

Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
160 / 180	757	346	387	199	25	29	75	70

DIMENSIONAL DRAWINGS

40ZS/ZF - 182 with side supply (mm)



LEGEND

- Indoor air circulation
- Electric power supply
- Door switch
- ① Liquid line
- ② Gas line
- ③ Condensate outlet: trunk 3/4" M
- ④ Auxiliary coil water inlet (optional)
- ⑤ Auxiliary coil water outlet (optional)

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

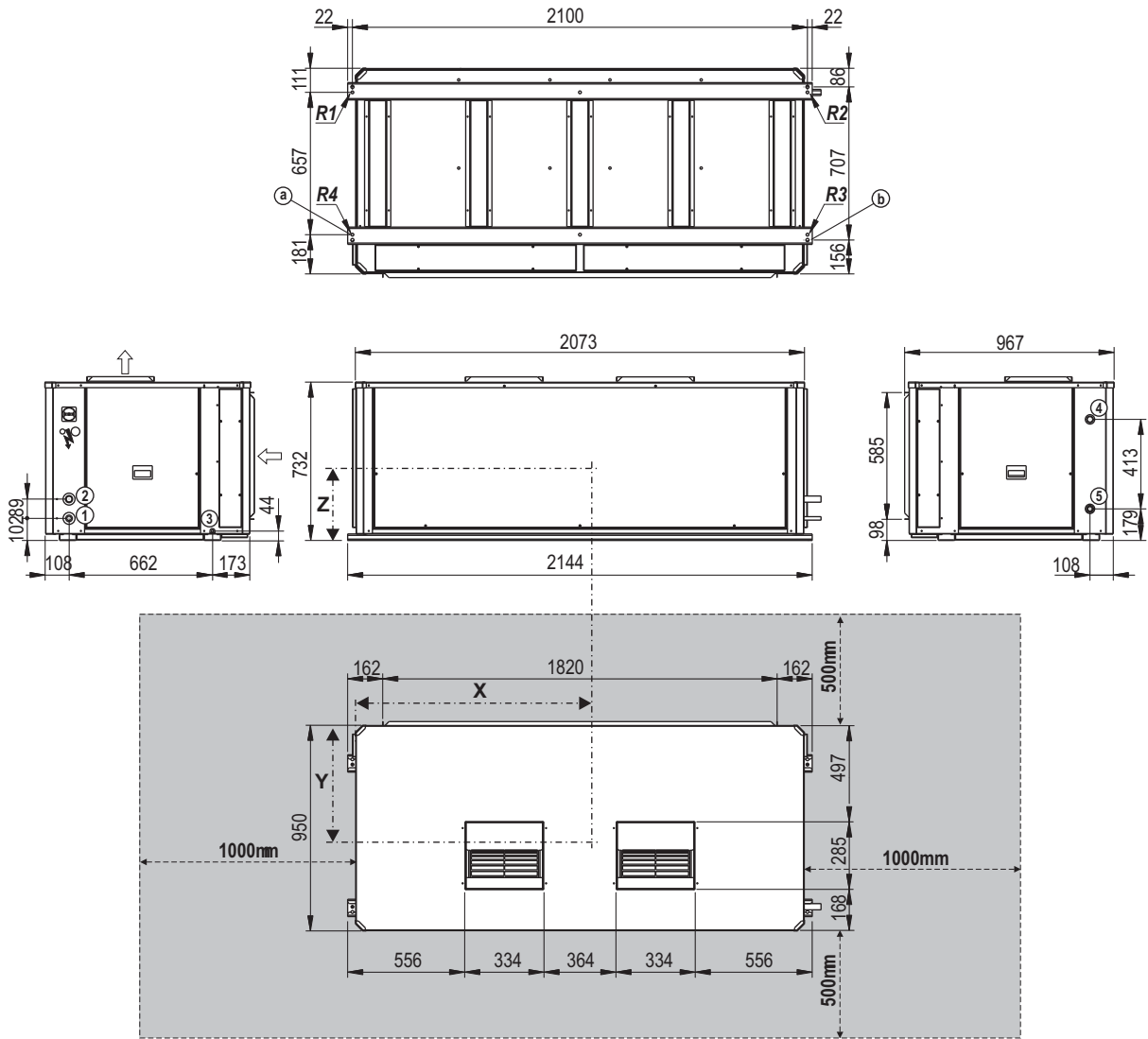
b: Ceiling anchoring: threaded rod $\varnothing 15\text{mm}$

Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
182	1.048	333	390	262	36	38	95	93

DIMENSIONAL DRAWINGS

40ZS/ZF - 182 with upper supply (mm)



LEGEND

- ⇨ Indoor air circulation
- ⚡ Electric power supply
- ⊞ Door switch
- ① Liquid line
- ② Gas line
- ③ Condensate outlet: trunk 3/4" M
- ④ Auxiliary coil water inlet (optional)
- ⑤ Auxiliary coil water outlet (optional)

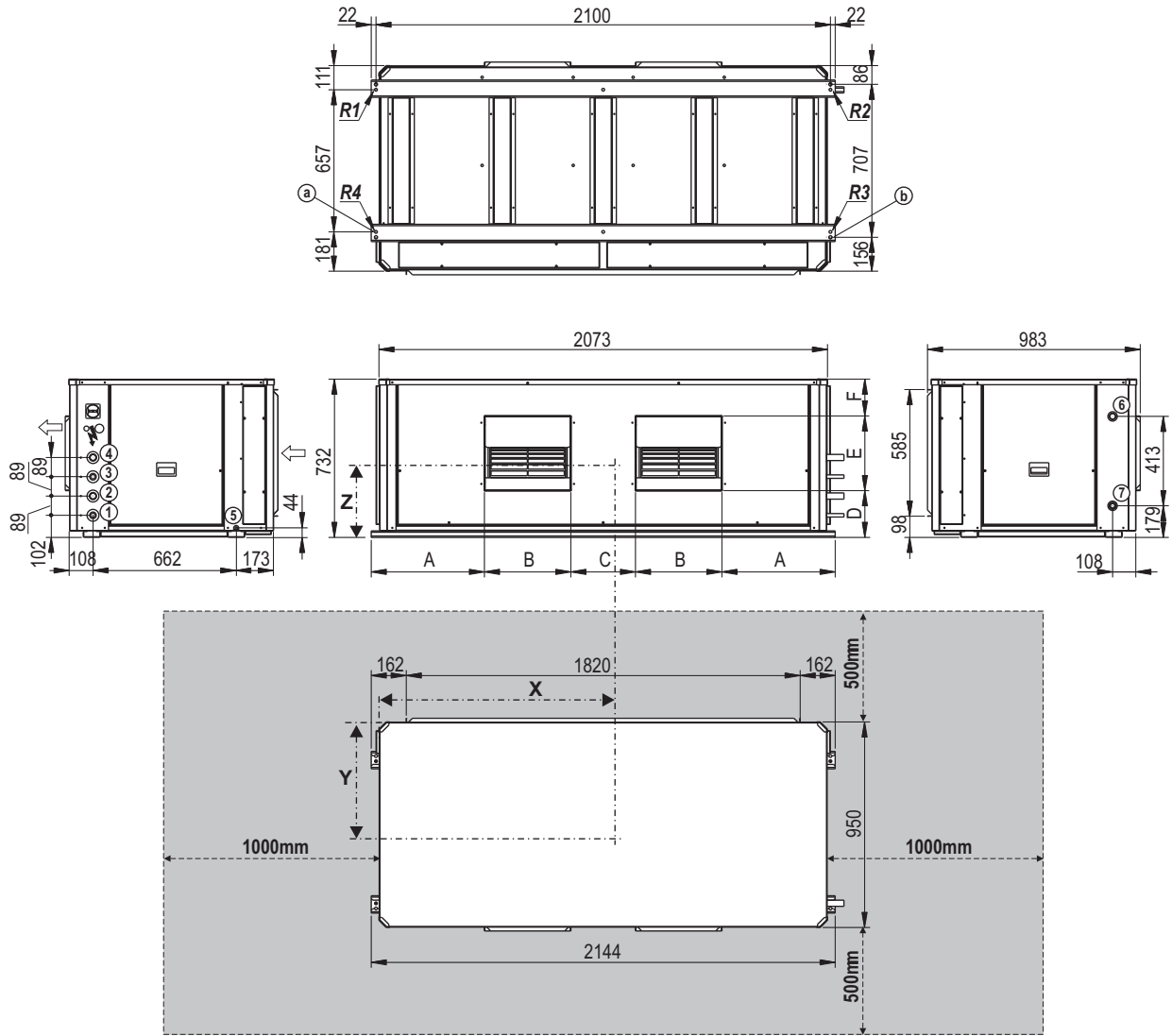
Intake profile: 20mm
 a: Antivibration anchoring: rivet nut M8
 b: Ceiling anchoring: threaded rod Ø15mm

Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
182	1.048	333	390	262	36	38	95	93

DIMENSIONAL DRAWINGS

40ZS/ZF - 200 and 240 with side supply (mm)



LEGEND

- ⇒ Indoor air circulation
- ⚡ Electric power supply
- ⊞ Door switch
- ① Liquid line circuit 1
- ② Gas line circuit 1
- ③ Liquid line circuit 2
- ④ Gas line circuit 2
- ⑤ Condensate outlet: trunk 3/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

b: Ceiling anchoring: threaded rod Ø15mm

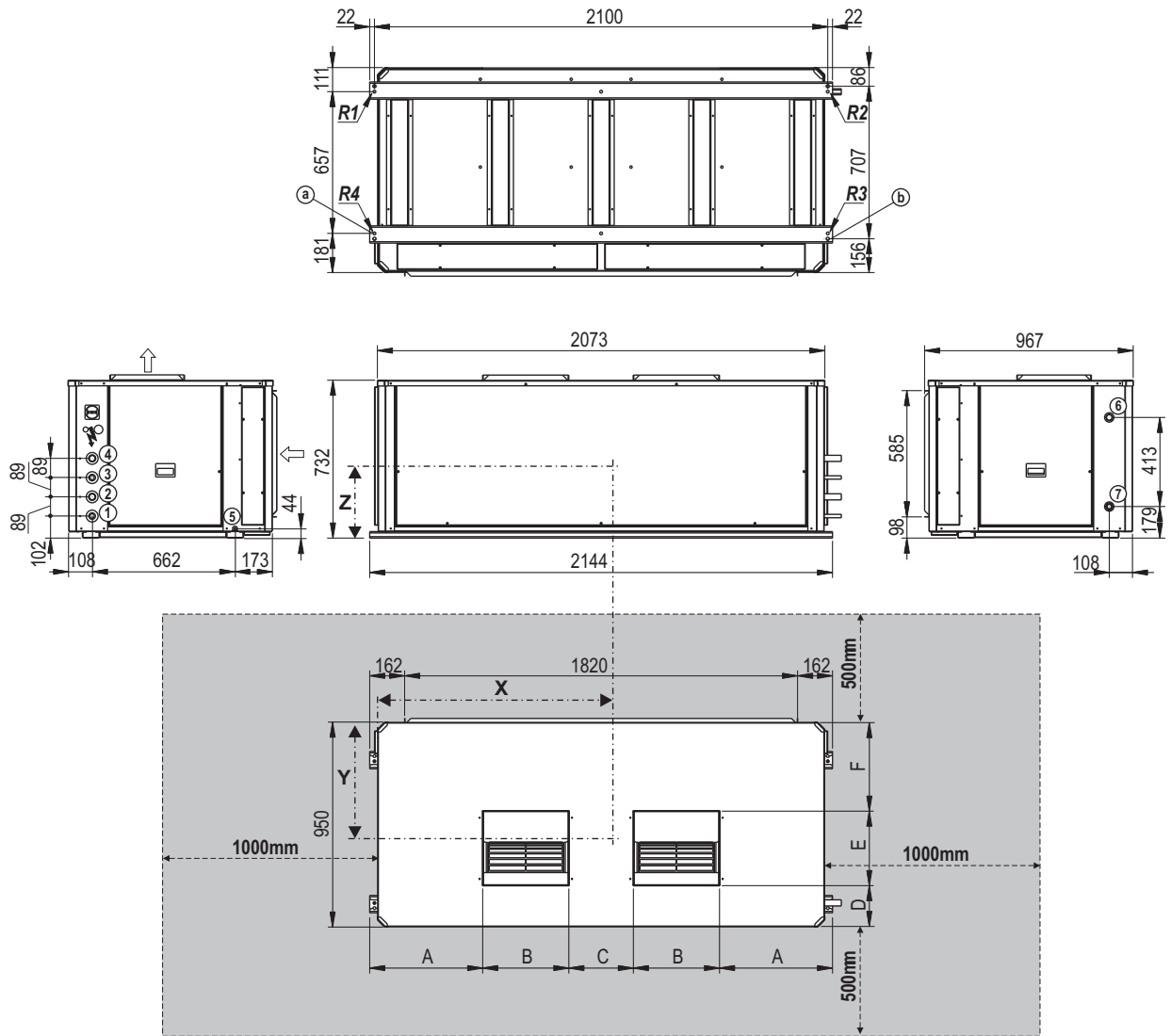
Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	A	B	C	D	E	F
200 (mm)	556	334	364	190	285	256
240 (mm)	523	399	299	216	345	170

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
200 / 240	1.048	333	390	262	36	38	95	93

DIMENSIONAL DRAWINGS

40ZS/ZF - 200 and 240 with upper supply (mm)



LEGEND

- ⇒ Indoor air circulation
- ⚡ Electric power supply
- ⊞ Door switch
- ① Liquid line circuit 1
- ② Gas line circuit 1
- ③ Liquid line circuit 2
- ④ Gas line circuit 2
- ⑤ Condensate outlet: trunk 3/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)

Intake profile: 20mm
 a: Antivibration anchoring: rivet nut M8
 b: Ceiling anchoring: threaded rod Ø15mm

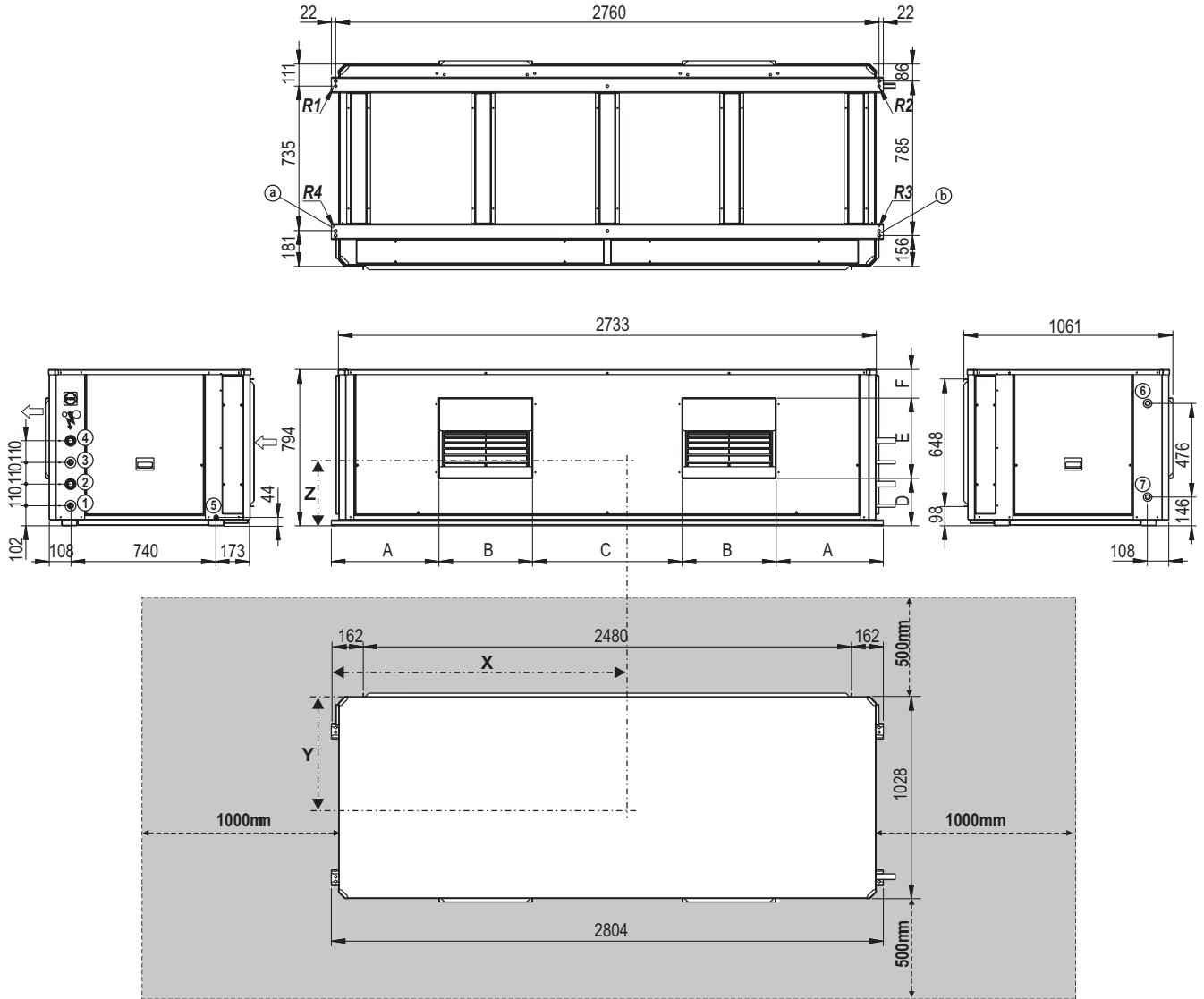
Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	A	B	C	D	E	F
200 (mm)	556	334	364	168	285	497
240 (mm)	523	399	299	139	345	411

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
200 / 240	1.048	333	390	262	36	38	95	93

DIMENSIONAL DRAWINGS

40ZS/ZF - 320 and 360 with side supply (mm)



LEGEND

- ⇒ Indoor air circulation
- ⚡ Electric power supply
- ⊞ Door switch
- ① Liquid line circuit 1
- ② Gas line circuit 1
- ③ Liquid line circuit 2
- ④ Gas line circuit 2
- ⑤ Condensate outlet: trunk 3/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

b: Ceiling anchoring: threaded rod Ø15mm

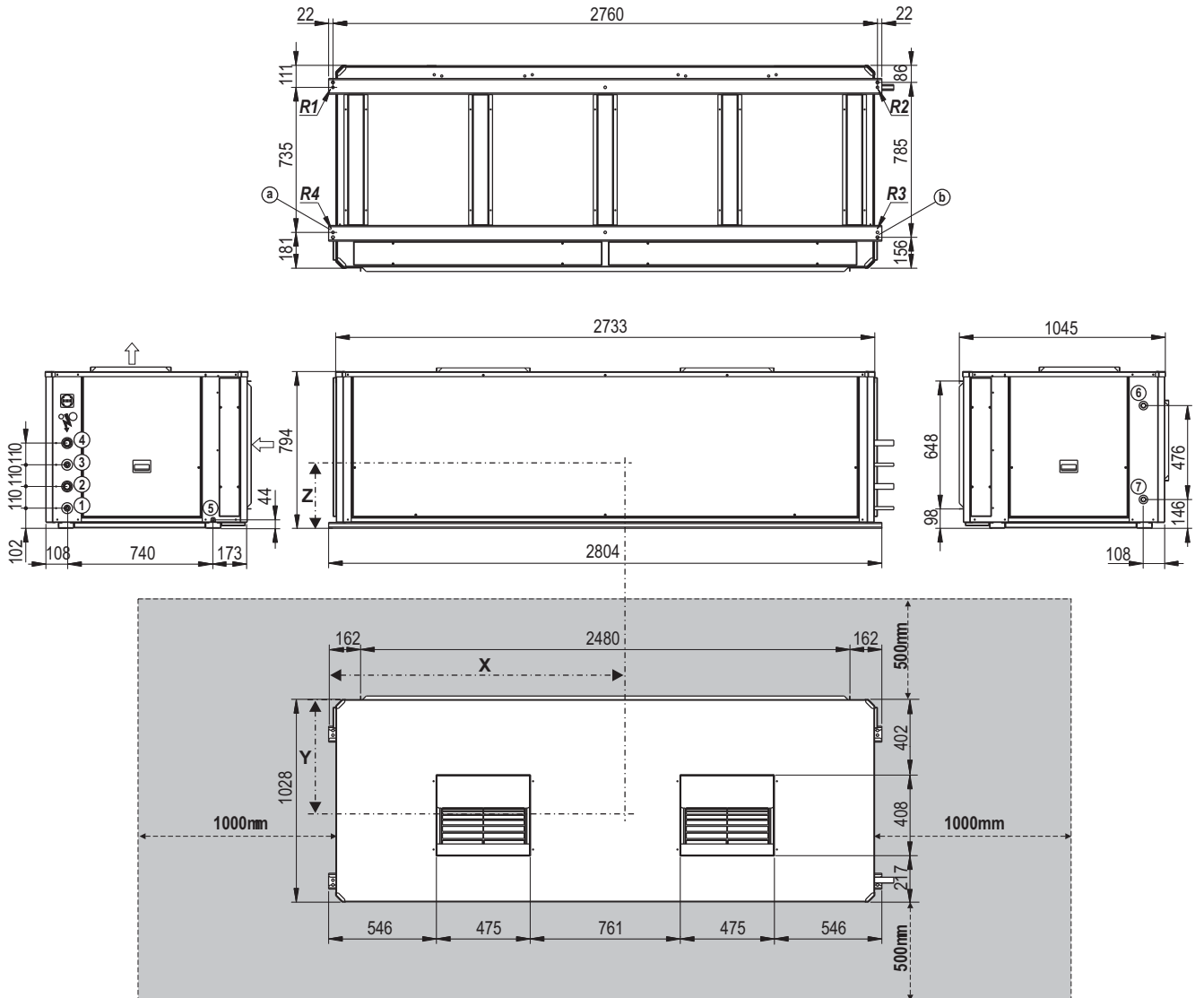
Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	A	B	C	D	E	F
320 / 360 (mm)	546	475	761	241	408	145

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
320 / 360	1.384	330	416	365	44	47	138	136

DIMENSIONAL DRAWINGS

40ZS/ZF - 320 and 360 with upper supply (mm)



LEGEND

- ⇨ Indoor air circulation
- ⚡ Electric power supply
- ⊗ Door switch
- ① Liquid line circuit 1
- ② Gas line circuit 1
- ③ Liquid line circuit 2
- ④ Gas line circuit 2
- ⑤ Condensate outlet: trunk 3/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)

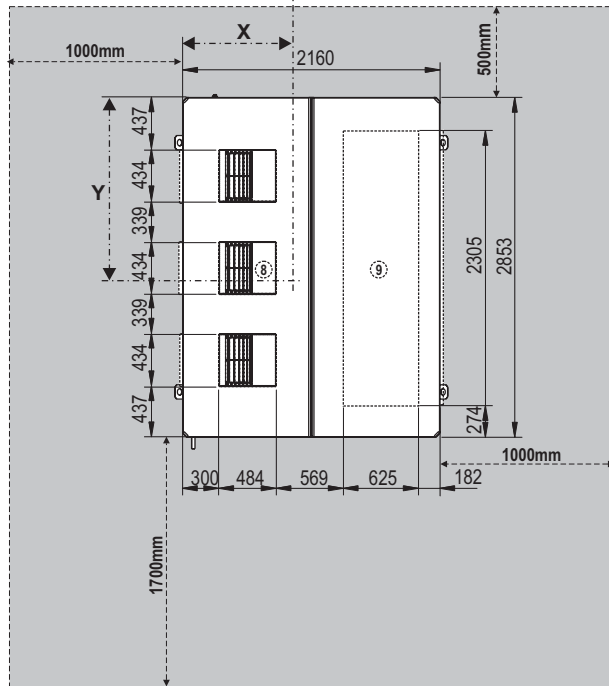
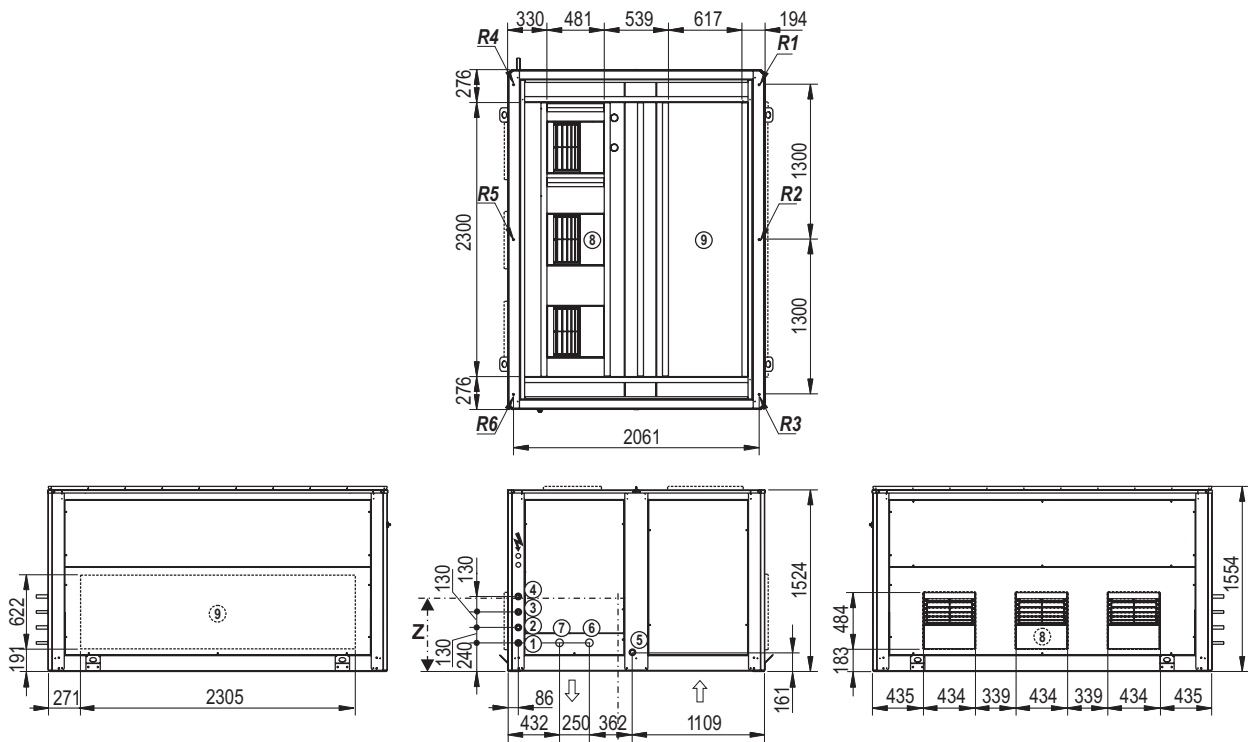
Intake profile: 20mm
 a: Antivibration anchoring: rivet nut M8
 b: Ceiling anchoring: threaded rod Ø15mm

Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)				
	X	Y	Z	Weight	R1	R2	R3	R4
320 / 360	1.384	330	416	365	44	47	138	136

DIMENSIONAL DRAWINGS

40ZS/ZF - 420, 485, 540 and 600 MO assembly (mm)



Note: The input / output connections of the hot water coil (optional) are located inside the unit. The connection can be established via the unit base using flexible sleeves or via the side panel. In the diagram enclosed, the position of the sheet metal precuts is shown on the side panel.

LEGEND

- ➡ Indoor air circulation
 - ⚡ Electric power supply
 - ⊞ Door switch
 - ① Liquid line circuit 1
 - ② Gas line circuit 1
 - ③ Liquid line circuit 2
 - ④ Gas line circuit 2
 - ⑤ Condensate outlet: trunk 1 1/4" M
 - ⑥ Auxiliary coil water inlet (optional)
 - ⑦ Auxiliary coil water outlet (optional)
 - ⑧ Standard air supply
 - ⊙ Optional air supply
 - ⑨ Standard return air
 - ⊙ Optional return air
- Intake profile: 25mm
 Antivibration anchoring: rivet nut M12
- Clear space to be observed for maintenance operations and unit start-up

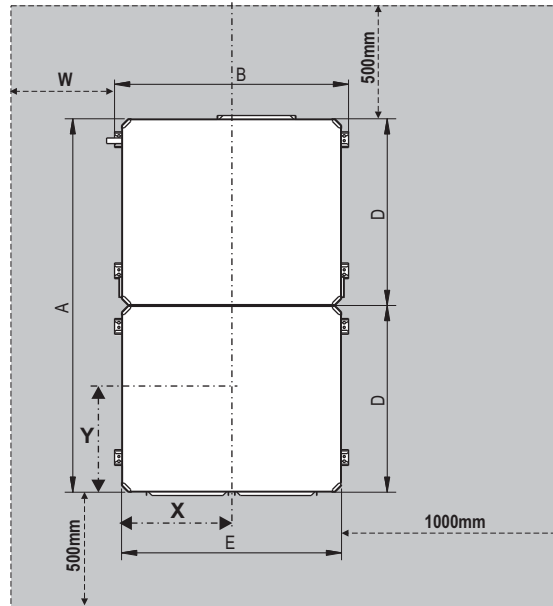
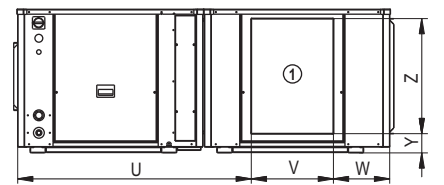
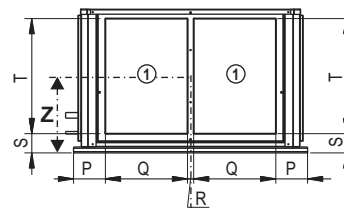
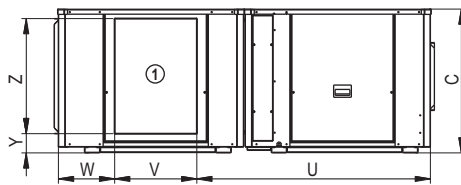
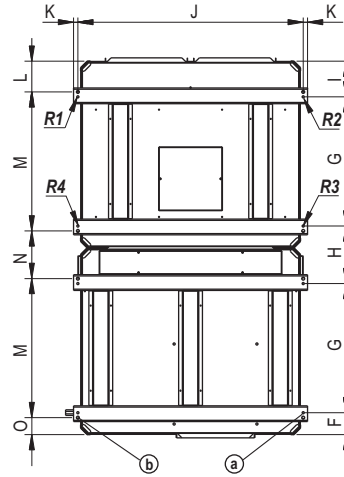
40ZS/ZF	Centre of gravity (mm)			Reactions in the supports (kg)						
	X	Y	Z	Weight	R1	R2	R3	R4	R5	R6
420	924	1.346	676	920	135	208	80	159	232	104
485	924	1.346	676	920	135	208	80	159	232	104
540	931	1.348	682	963	141	218	86	165	243	110
600	931	1.350	682	964	141	219	86	165	243	110

DIMENSIONAL DRAWINGS: ASSEMBLIES WITH MIXING BOXES (OPTIONAL)

40ZS/ZF - 90 to 360 with MS - 111, 116, 413, 314, 411, 114, 113, 311, 121, 126, 423, 324, 421, 124, 123, 321 assemblies (mm)

40ZS/ZF	Centre of gravity of the box (mm)			Weight (kg)
	X	Y	Z	
90 / 100 / 120	558	459	330	98
160 / 180	723	465	327	118
182 / 200 / 240	1.030	436	327	152
320 / 360	1.360	471	360	200

40ZS/ZF	Reactions in the supports of the box (kg)			
	R1	R2	R3	R4
90 / 100 / 120	23	23	26	26
160 / 180	26	26	33	33
182 / 200 / 240	34	33	42	43
320 / 360	44	44	56	56



LEGEND

① New or return air inlet (depending on the assembly)
 Intake profile: 20mm
 a: Antivibration anchoring: rivet nut M8
 b: Ceiling anchoring: threaded rod Ø15mm
 Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF (mm)	W
90 al 180	250
182 al 360	1.000

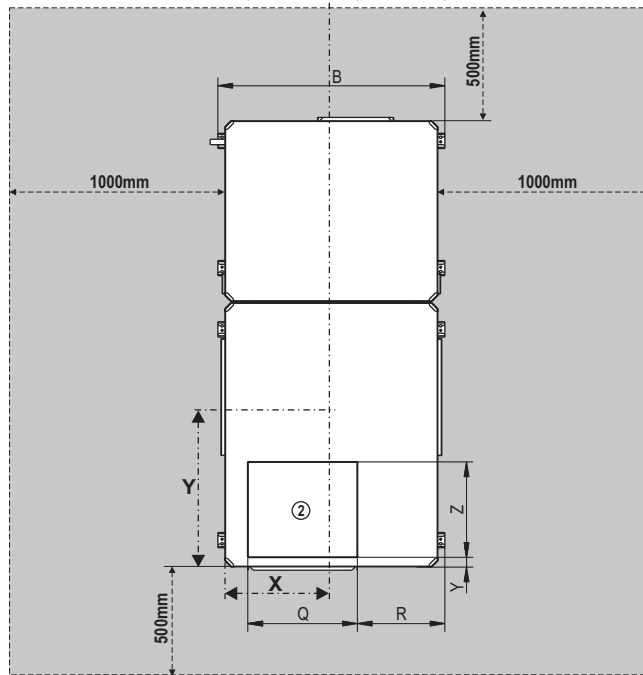
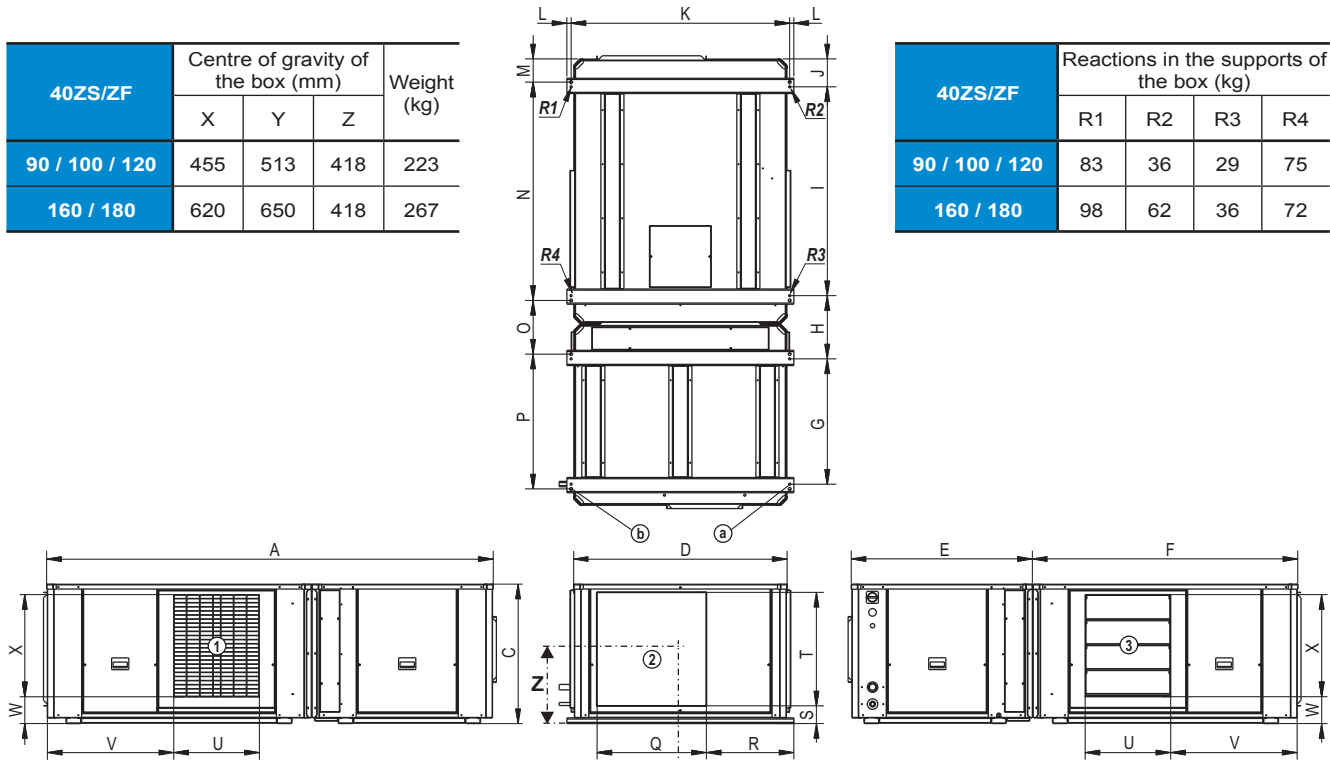
40ZS/ZF (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Y	Z
90 / 100 / 120	1.900	1.190	731	950	1.119	111	657	293	181	1.146	22	156	707	243	86	162	418	30	98	585	1.188	418	286	98	585
160 / 180	2.056	1.520	731	1.028	1.499	111	735	293	181	1.476	22	156	785	243	86	327	418	30	98	585	1.303	418	327	98	585
182 / 200 / 240	1.900	2.144	731	950	2.073	111	657	293	181	2.100	22	156	707	243	86	293	664	230	83	592	1.188	418	286	98	585
320 / 360	2.056	2.804	794	1.028	2.733	111	735	293	181	2.760	22	156	785	243	86	537	750	230	83	655	1.305	418	325	98	648

DIMENSIONAL DRAWINGS: ASSEMBLIES WITH MIXING BOXES (OPTIONAL)

40ZS/ZF - 90 to 180 with MC - 113, 114, 123, 124 assemblies (mm)

40ZS/ZF	Centre of gravity of the box (mm)			Weight (kg)
	X	Y	Z	
90 / 100 / 120	455	513	418	223
160 / 180	620	650	418	267

40ZS/ZF	Reactions in the supports of the box (kg)			
	R1	R2	R3	R4
90 / 100 / 120	83	36	29	75
160 / 180	98	62	36	72



LEGEND

- ① New air inlet
- ② Air return
- ③ Air extraction

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

b: Ceiling anchoring: threaded rod Ø15mm

Clear space to be observed for maintenance operations and unit start-up

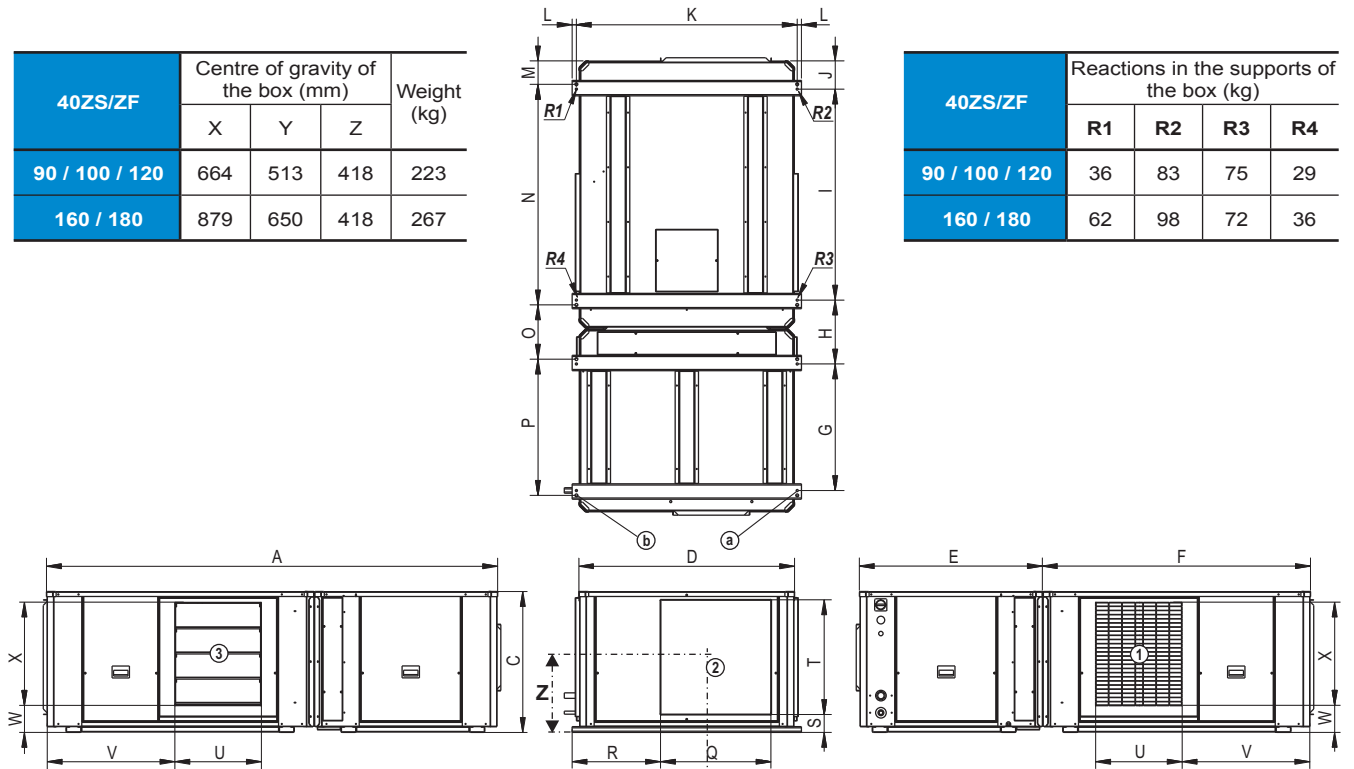
40ZS/ZF (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
90 / 100 / 120	2.338	1.190	731	1.119	950	1.392	657	328	1.095	146	1.146	22	121	1.145	278	707	573	459	93	595	350	663	141	536	51	500
160 / 180	2.731	1.520	731	1.499	1.028	1.635	735	328	1.338	146	1.476	22	121	1.388	278	785	905	459	93	595	452	813	141	536	51	578

DIMENSIONAL DRAWINGS: ASSEMBLIES WITH MIXING BOXES (OPTIONAL)

40ZS/ZF - 90 to 180 with MC - 213, 214, 223, 224 assemblies (mm)

40ZS/ZF	Centre of gravity of the box (mm)			Weight (kg)
	X	Y	Z	
90 / 100 / 120	664	513	418	223
160 / 180	879	650	418	267

40ZS/ZF	Reactions in the supports of the box (kg)			
	R1	R2	R3	R4
90 / 100 / 120	36	83	75	29
160 / 180	62	98	72	36



LEGEND

- ① New air inlet
- ② Air return
- ③ Air extraction

Intake profile: 20mm

a: Antivibration anchoring: rivet nut M8

b: Ceiling anchoring: threaded rod $\varnothing 15\text{mm}$

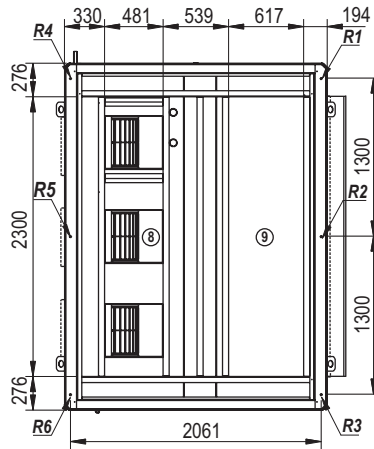
Clear space to be observed for maintenance operations and unit start-up

40ZS/ZF (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
90 / 100 / 120	2338	1190	731	1119	950	1392	657	328	1095	146	1146	22	121	1145	278	707	573	459	93	595	350	663	141	536	51	500
160 / 180	2731	1520	731	1499	1028	1635	735	328	1338	146	1476	22	121	1388	278	785	905	459	93	595	452	813	141	536	51	578

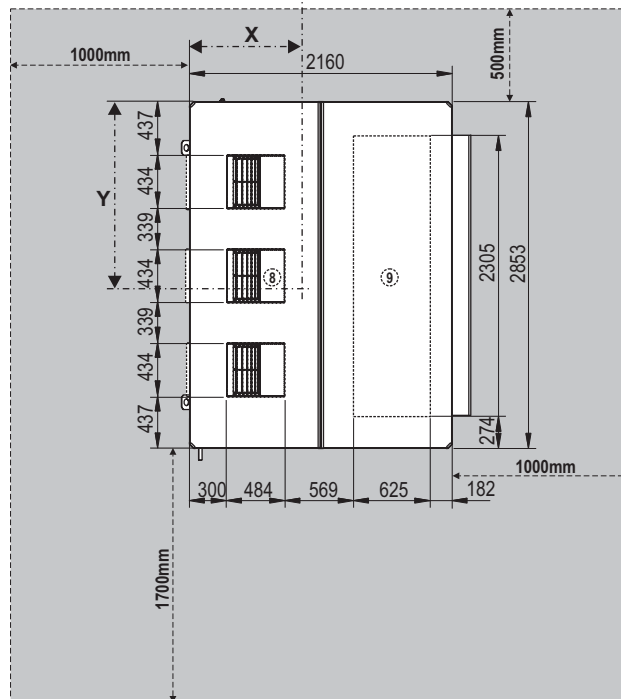
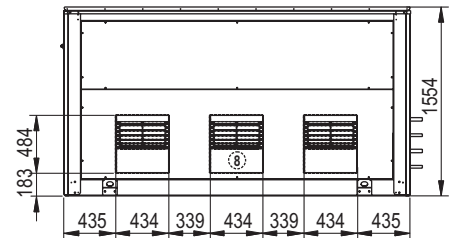
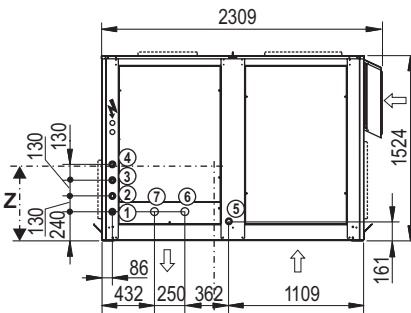
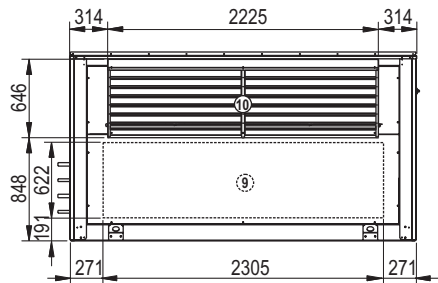
DIMENSIONAL DRAWINGS: ASSEMBLIES WITH MIXING BOXES (OPTIONAL)

40ZS/ZF - 420, 485, 540 and 600, assemblies MS (mm)

40ZS/ZF	C.o.g. (mm)			Weight (kg)
	X	Y	Z	
420	1.104	1.346	699	1.000
485	1.106	1.346	699	1.000
540	1.107	1.348	705	1.043
600	1.107	1.350	705	1.044



40ZS/ZF	Reactions in the supports (kg)					
	R1	R2	R3	R4	R5	R6
420	113	227	122	139	253	148
485	112	227	122	138	253	148
540	117	237	128	144	263	154
600	118	237	128	143	263	154



LEGEND

- ➔ Indoor air circulation
- ⚡ Electric power supply
- ⊗ Door switch
- ① Liquid line: circuit 1
- ② Gas line: circuit 1
- ③ Liquid line: circuit 2
- ④ Gas line: circuit 2
- ⑤ Condensate outlet: trunk 1 1/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)
- ⑧ Standard air supply
- ⊗ Optional air supply
- ⑨ Standard return air
- ⊗ Optional return air
- ⑩ New air inlet

Intake profile: 25mm
Antivibration anchoring: rivet nut M12

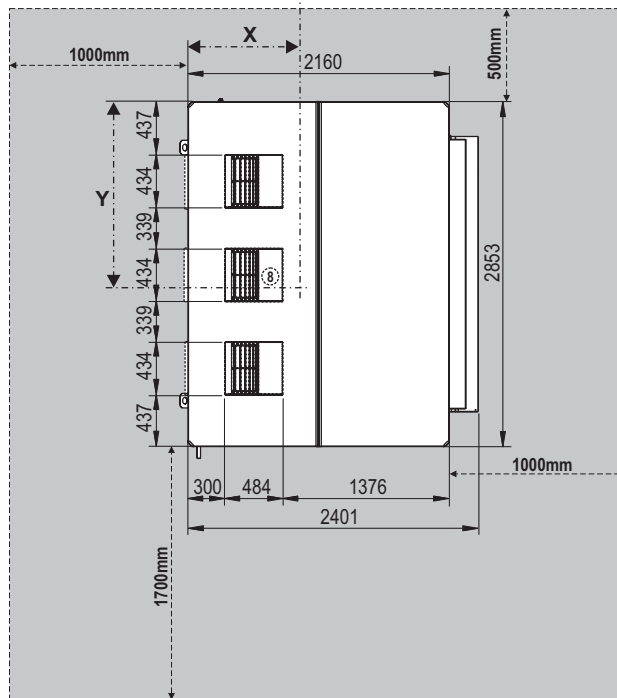
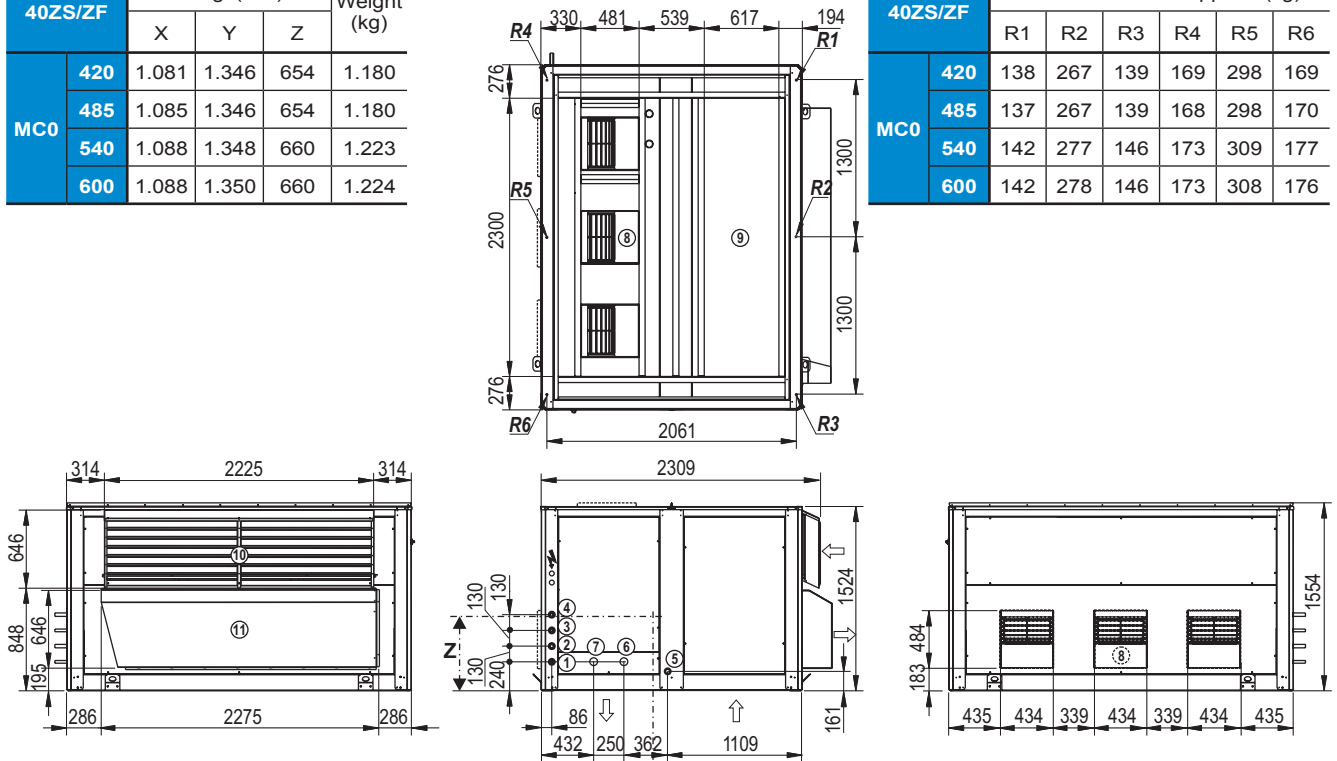
Clear space to be observed for maintenance operations and unit start-up

DIMENSIONAL DRAWINGS: ASSEMBLIES WITH MIXING BOXES (OPTIONAL)

40ZS/ZF - 420, 485, 540 and 600, assemblies MC0 (mm)

40ZS/ZF		C.o.g. (mm)			Weight (kg)
		X	Y	Z	
MC0	420	1.081	1.346	654	1.180
	485	1.085	1.346	654	1.180
	540	1.088	1.348	660	1.223
	600	1.088	1.350	660	1.224

40ZS/ZF		Reactions in the supports (kg)					
		R1	R2	R3	R4	R5	R6
MC0	420	138	267	139	169	298	169
	485	137	267	139	168	298	170
	540	142	277	146	173	309	177
	600	142	278	146	173	308	176



LEGEND

- ⇨ Indoor air circulation
- ⚡ Electric power supply
- ⊞ Door switch
- ① Liquid line: circuit 1
- ② Gas line: circuit 1
- ③ Liquid line: circuit 2
- ④ Gas line: circuit 2
- ⑤ Condensate outlet: trunk 1 1/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)
- ⑧ Standard air supply
- ⊙ Optional air supply
- ⊙ Standard return air
- ⊙ Optional return air
- ⊙ New air inlet

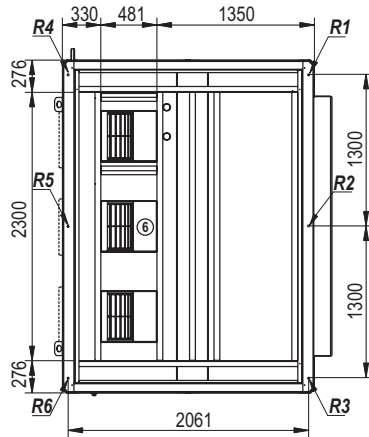
Intake profile: 25mm
 Antivibration anchoring: rivet nut M12

Clear space to be observed for maintenance operations and unit start-up

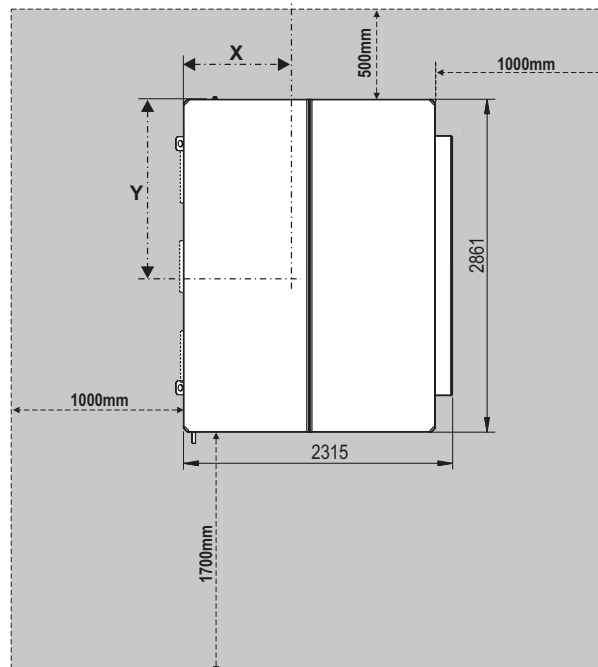
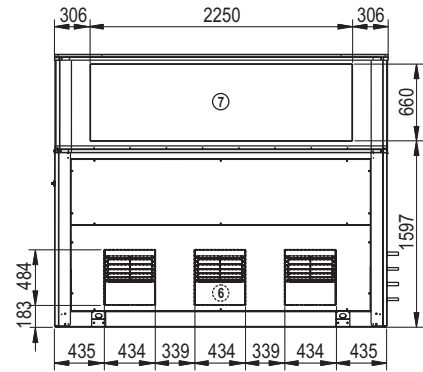
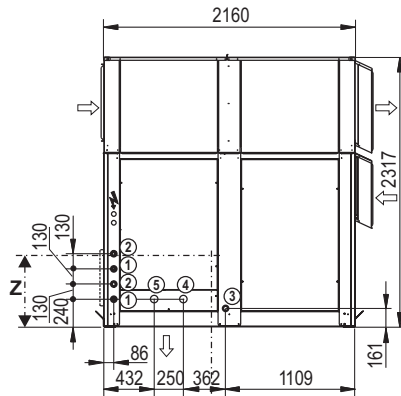
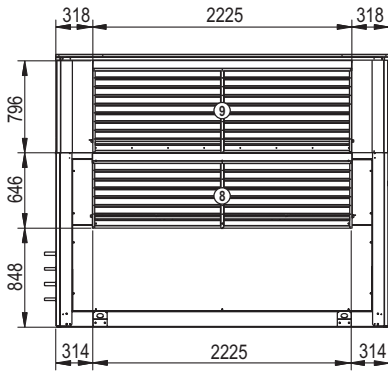
DIMENSIONAL DRAWINGS: ASSEMBLIES WITH MIXING BOXES (OPTIONAL)

40ZS/ZF - 420, 485, 540 and 600, assemblies MC1 (mm)

40ZS/ZF		C.o.g. (mm)			Weight (kg)
		X	Y	Z	
MC1	420	1.156	1.346	933	1.626
	485	1.158	1.346	937	1.626
	540	1.158	1.348	938	1.669
	600	1.148	1.350	930	1.697



40ZS/ZF		Reactions in the supports (kg)					
		R1	R2	R3	R4	R5	R6
MC1	420	167	368	214	209	411	257
	485	166	368	215	208	411	257
	540	171	379	221	213	421	264
	600	178	386	222	220	428	264



LEGEND

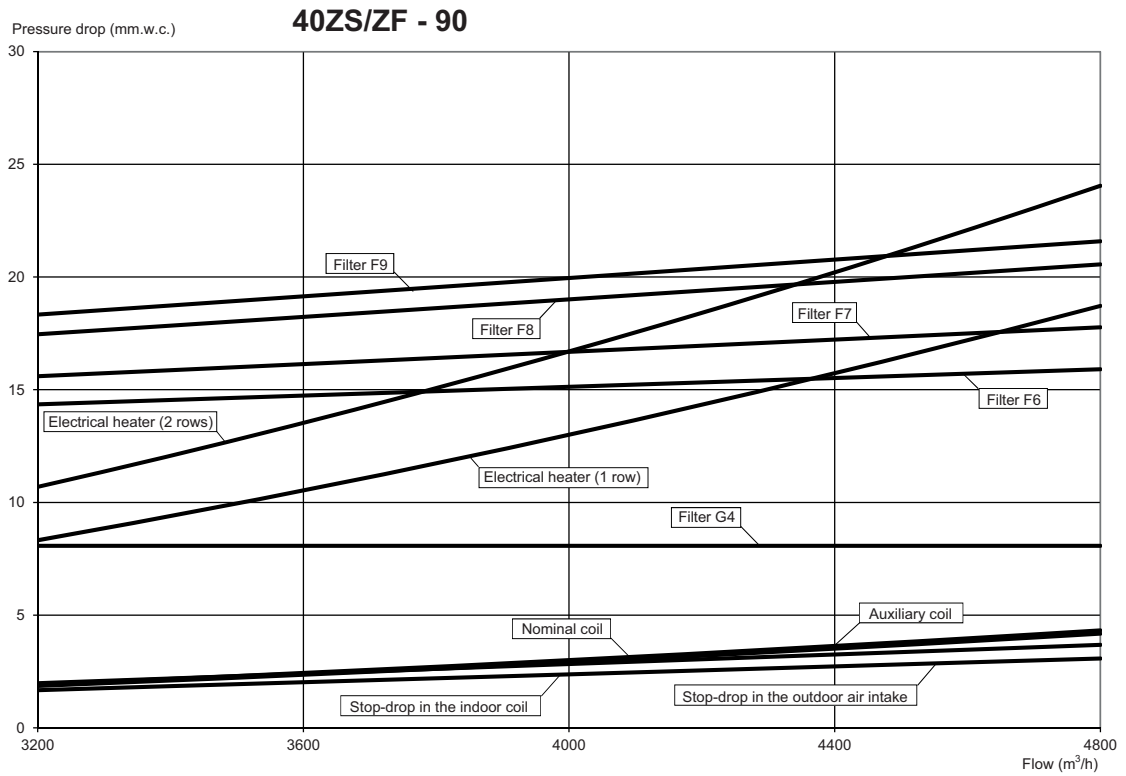
- ➡ Indoor air circulation
- ⚡ Electric power supply
- ⊗ Door switch
- ① Liquid line: circuit 1
- ② Gas line: circuit 1
- ③ Liquid line: circuit 2
- ④ Gas line: circuit 2
- ⑤ Condensate outlet: trunk 1 1/4" M
- ⑥ Auxiliary coil water inlet (optional)
- ⑦ Auxiliary coil water outlet (optional)
- ⑧ Standard air supply
- ⊗ Optional air supply
- ⑨ Standard return air
- ⊗ Optional return air
- ⑩ New air inlet

Intake profile: 25mm
 Antivibration anchoring: rivet nut M12

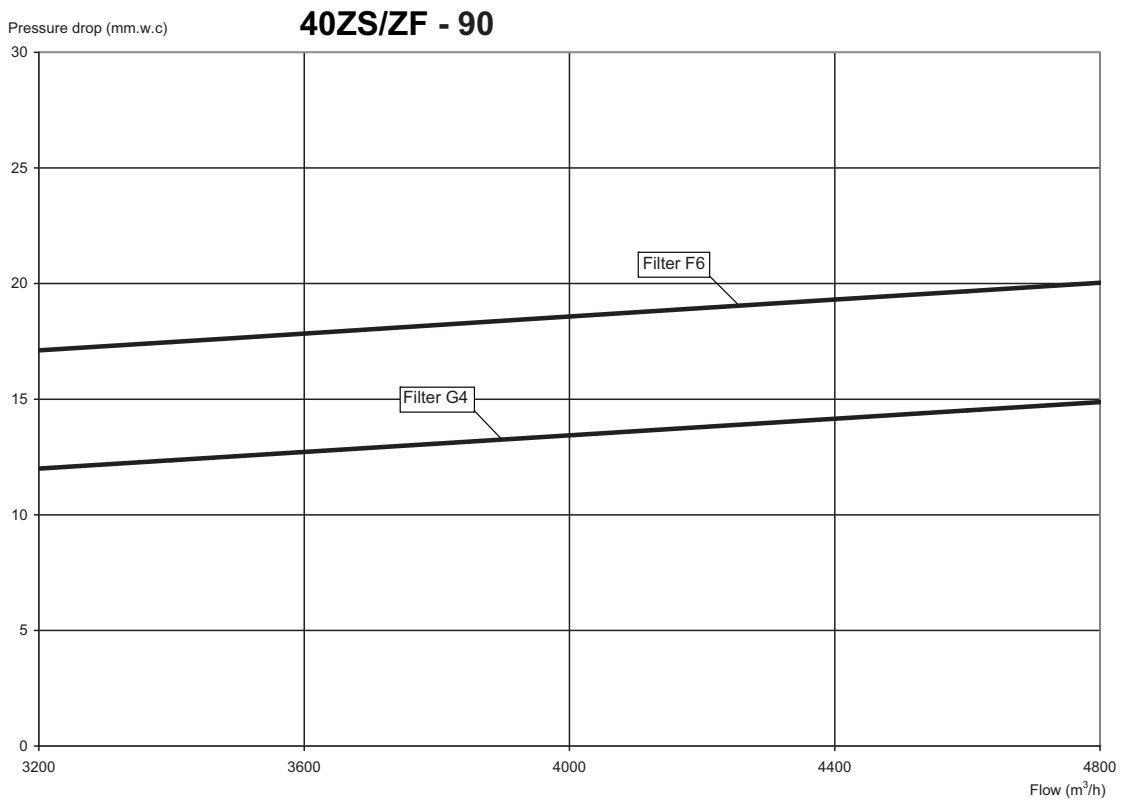
Clear space to be observed for maintenance operations and unit start-up

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



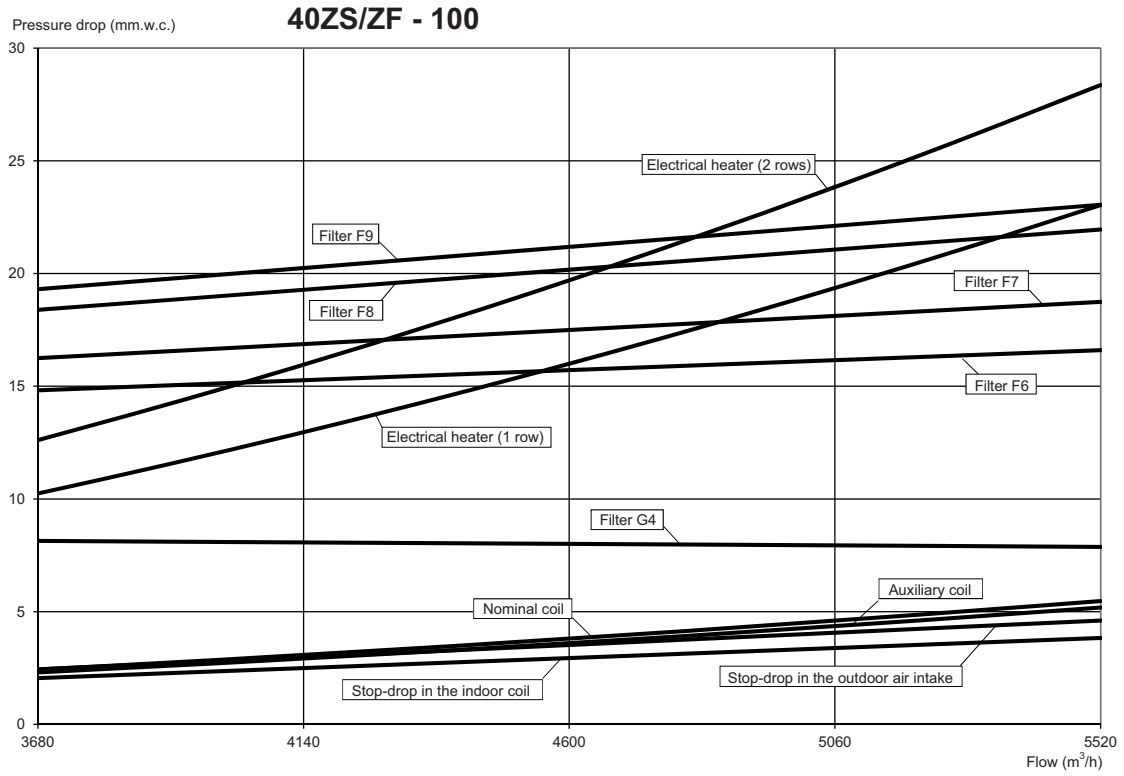
Return pressure drops



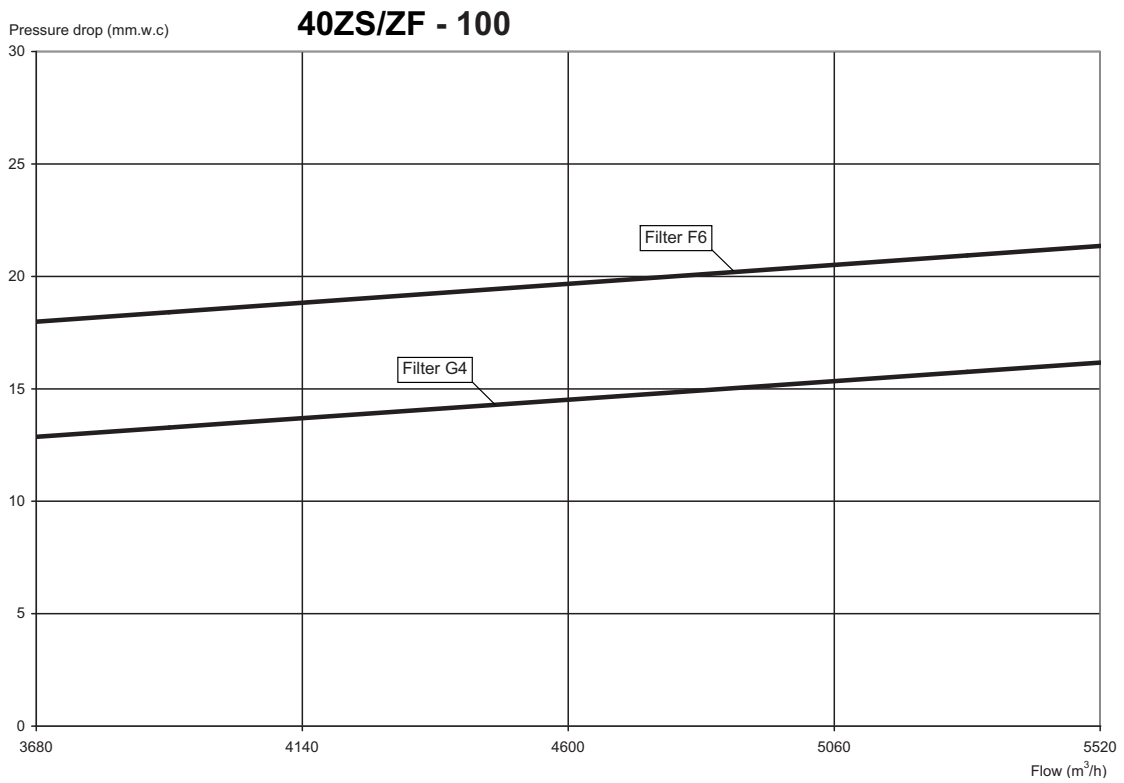
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



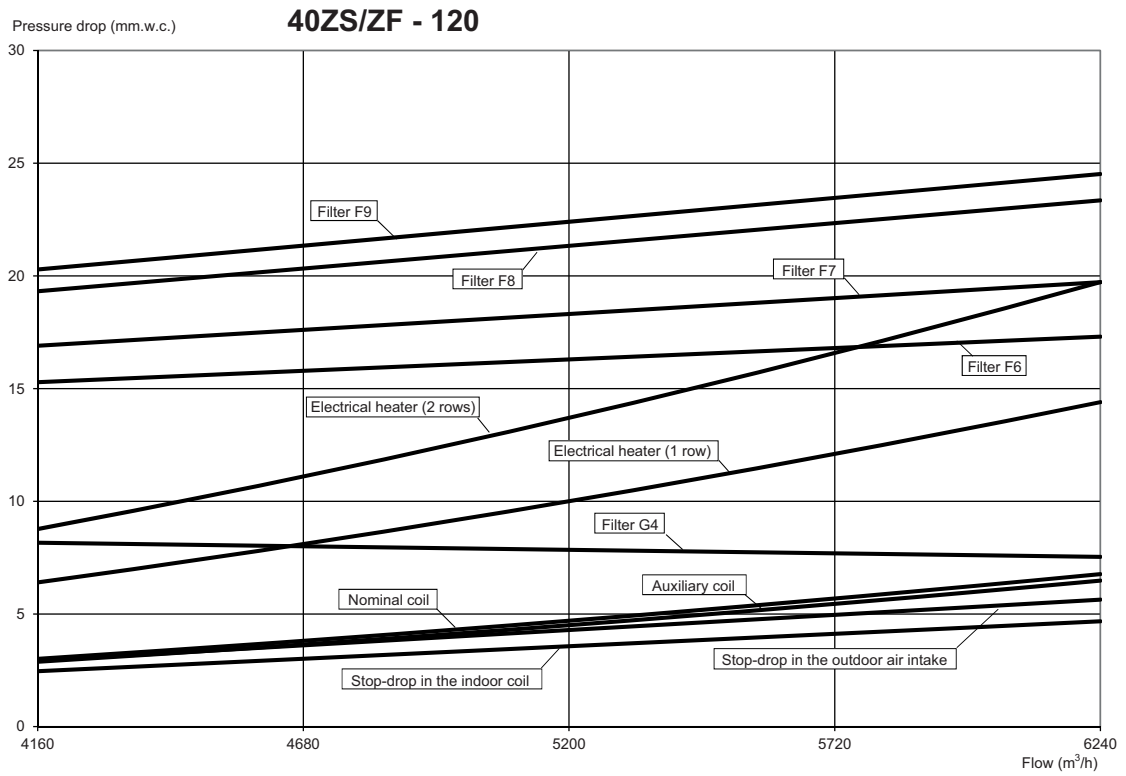
Return pressure drops



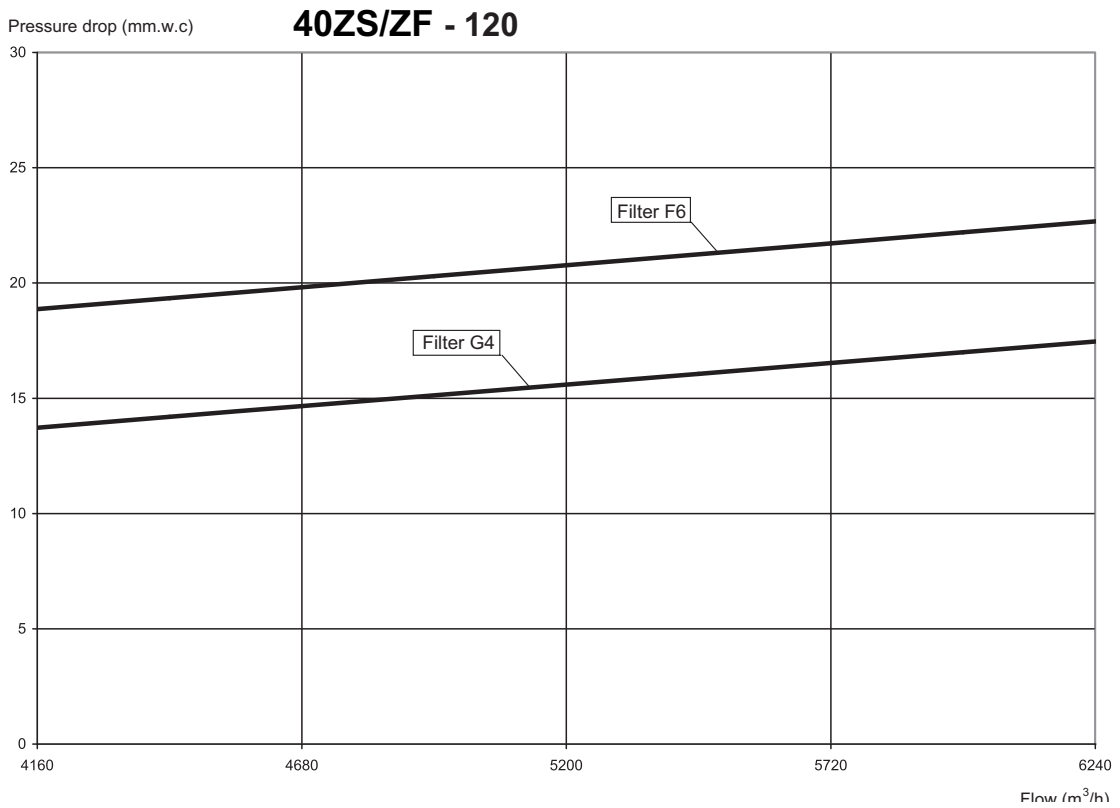
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

■ Supply pressure drops



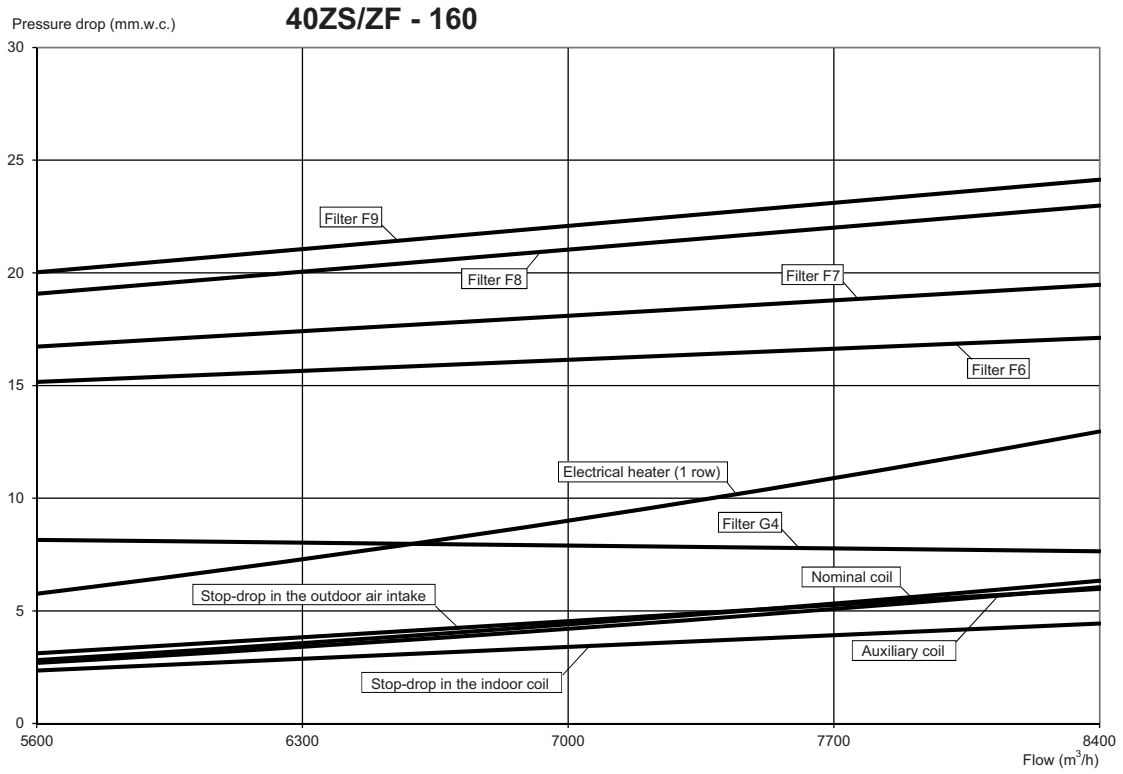
■ Return pressure drops



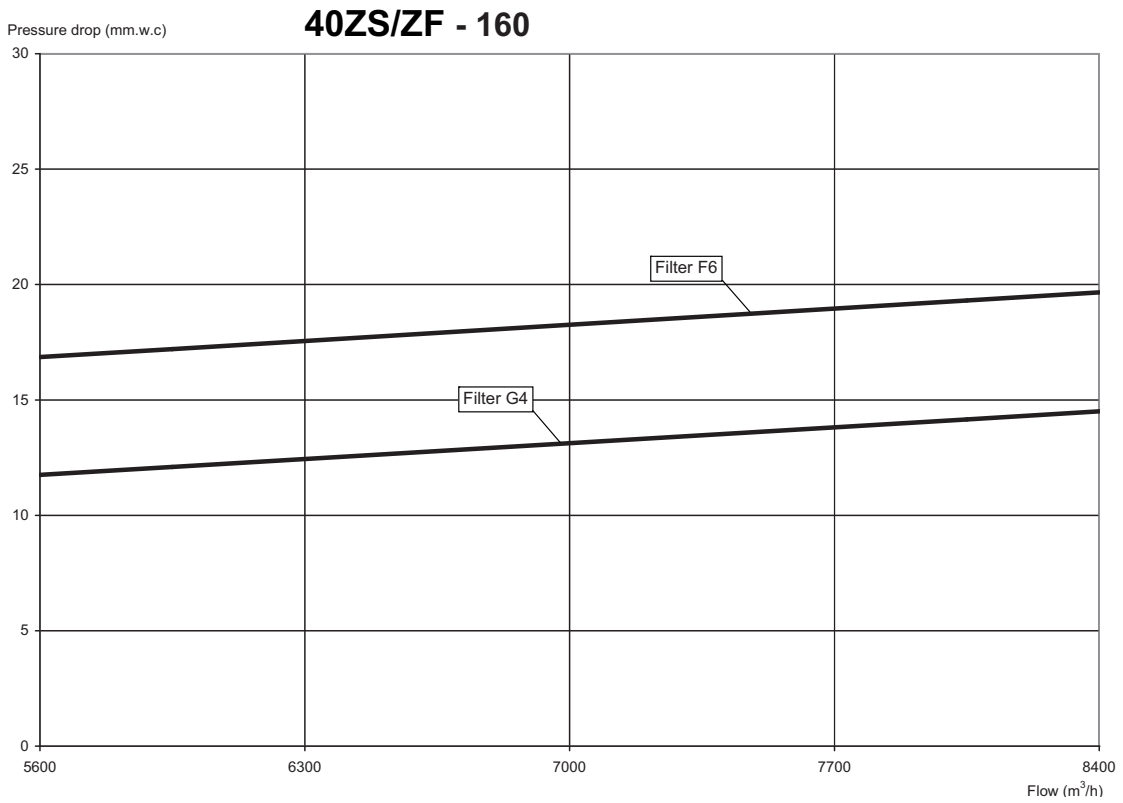
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



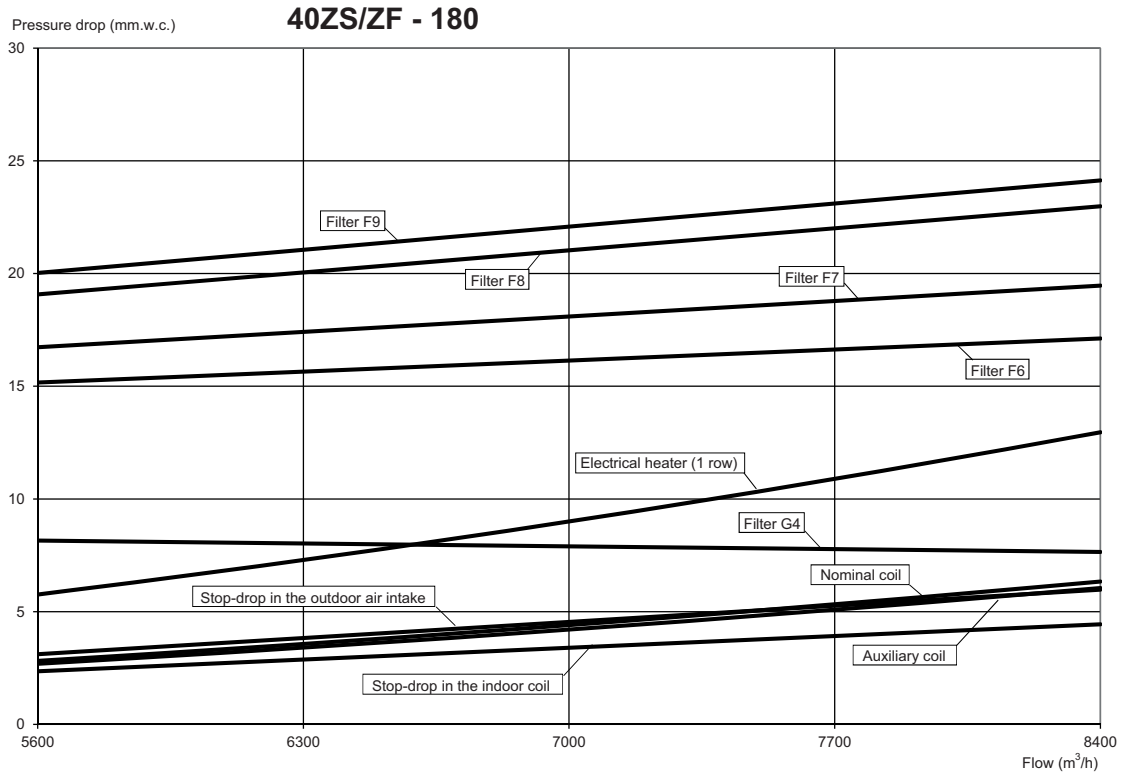
Return pressure drops



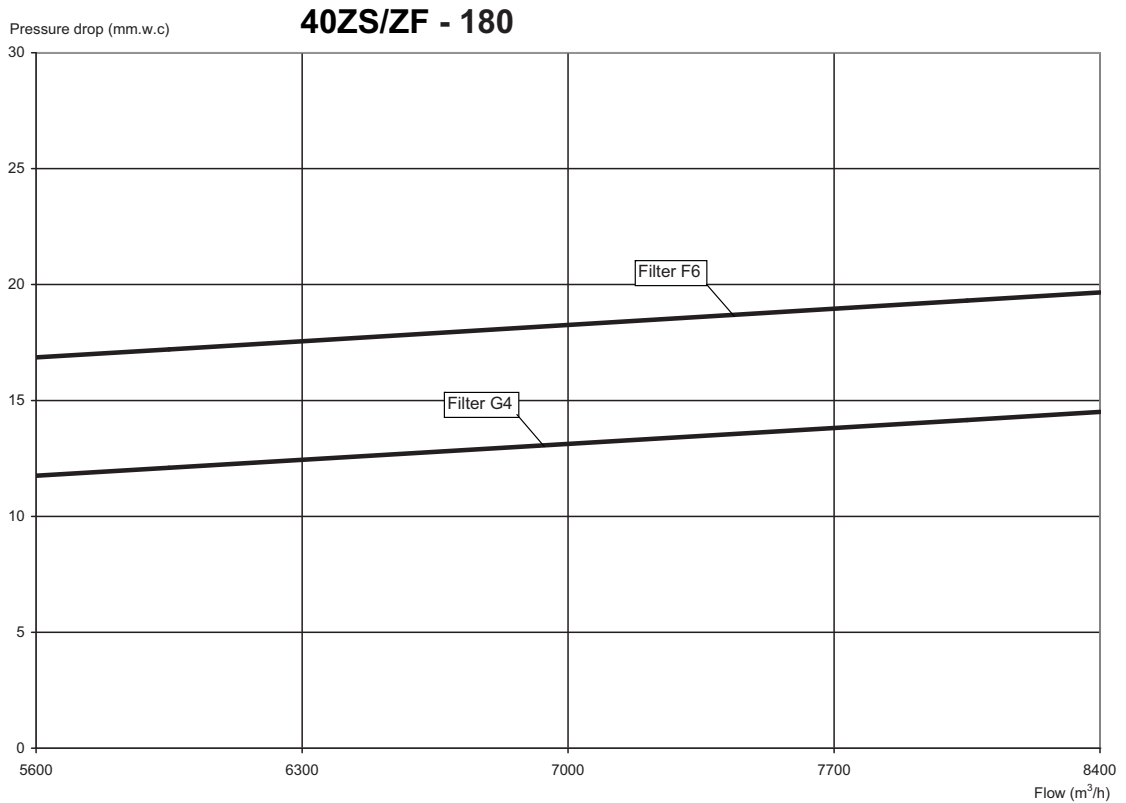
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

■ Supply pressure drops



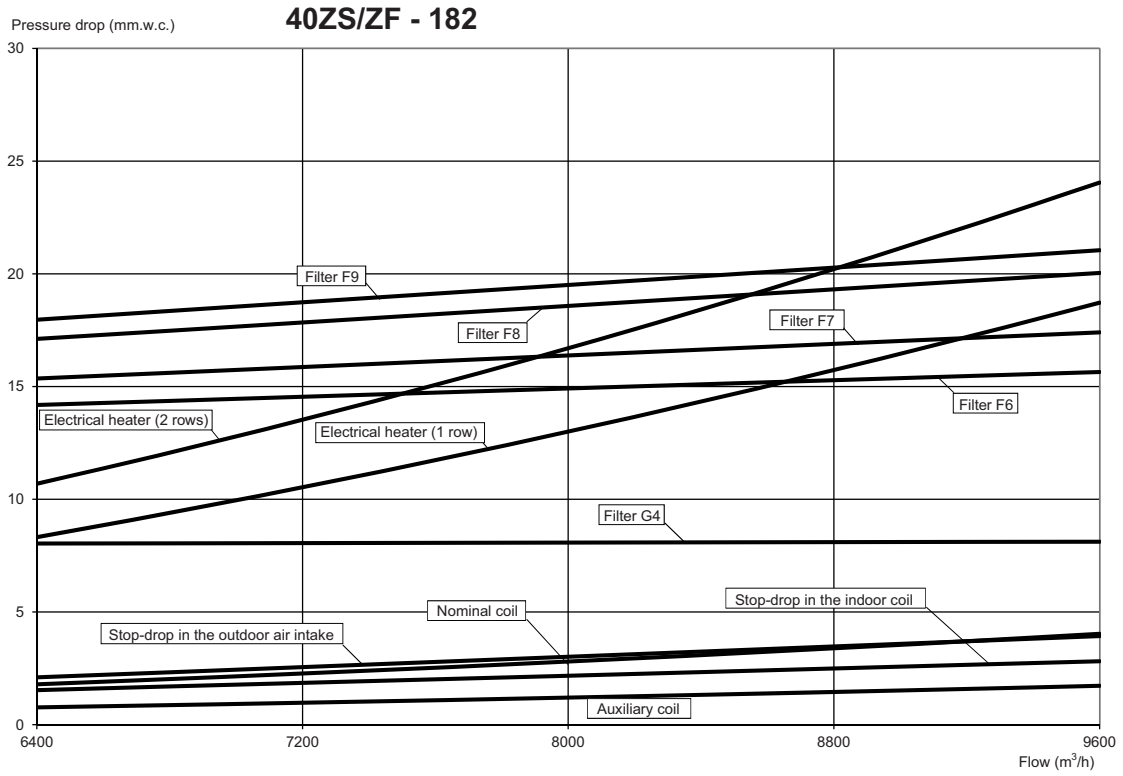
■ Return pressure drops



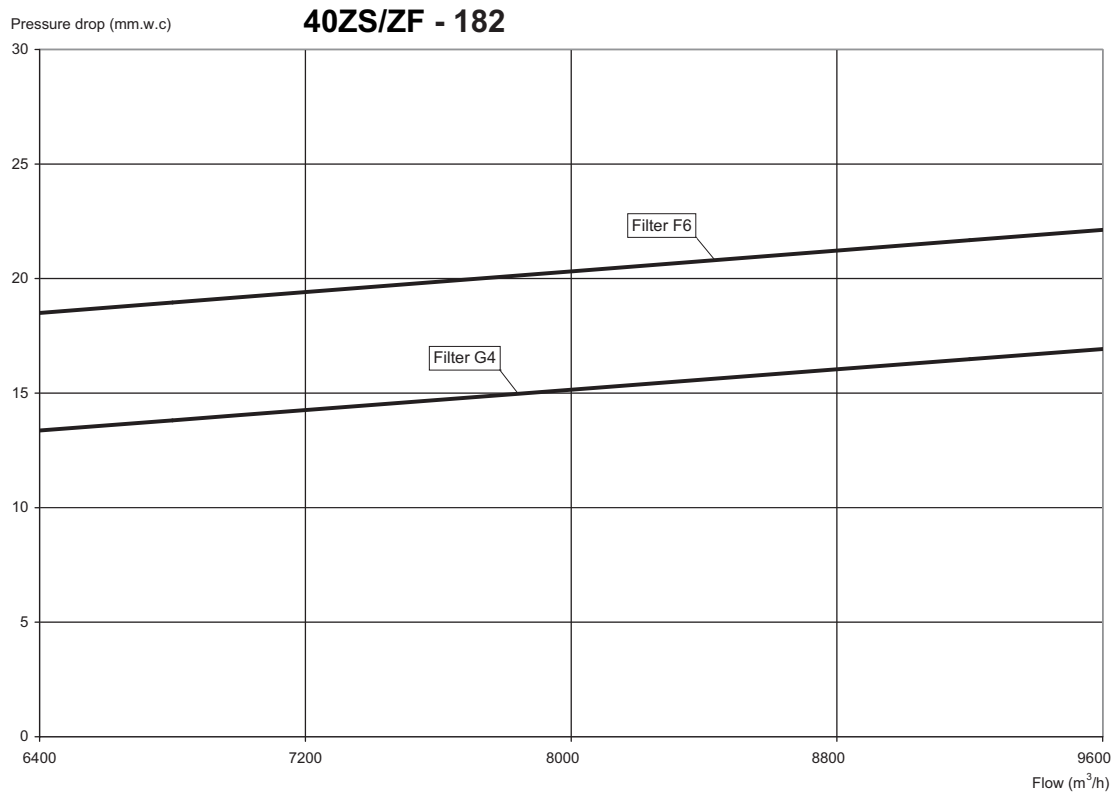
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



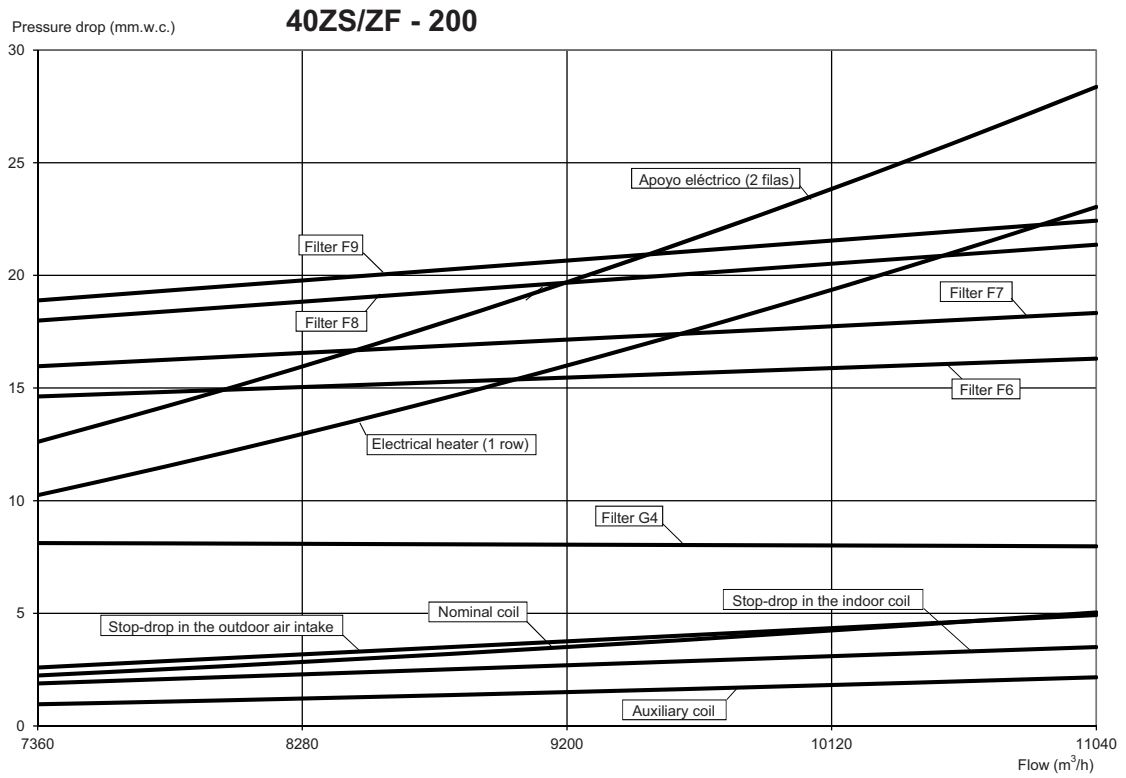
Return pressure drops



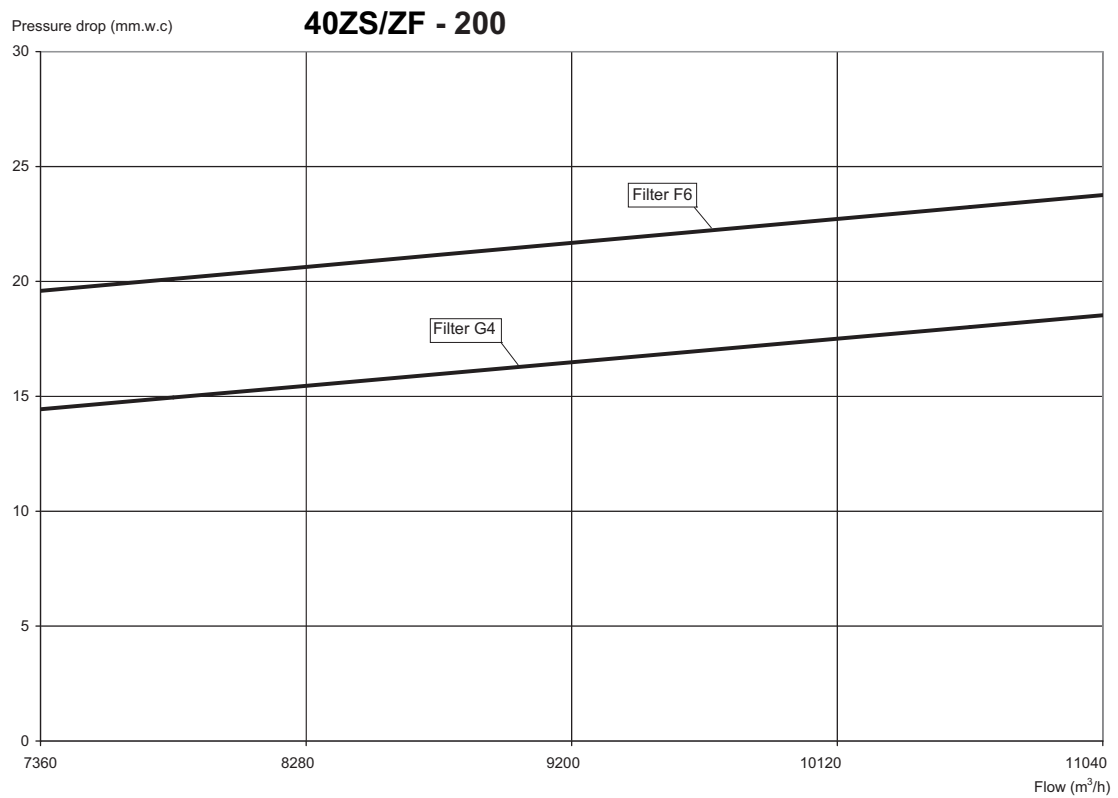
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



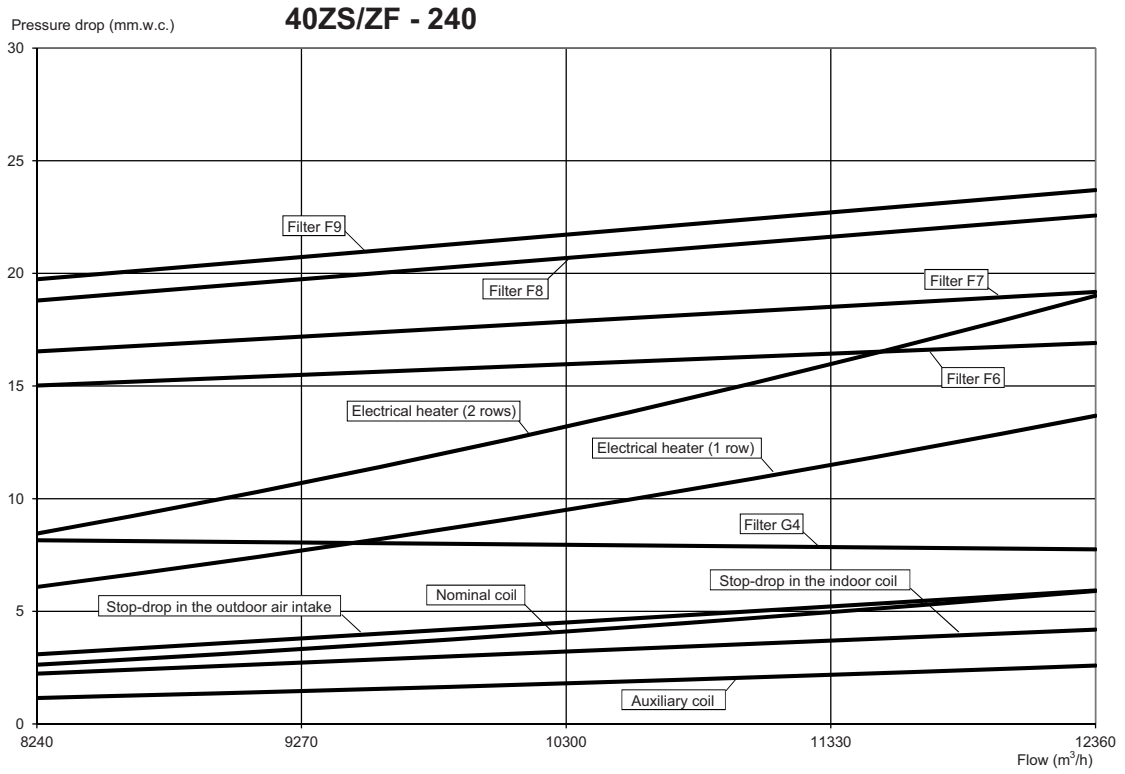
Return pressure drops



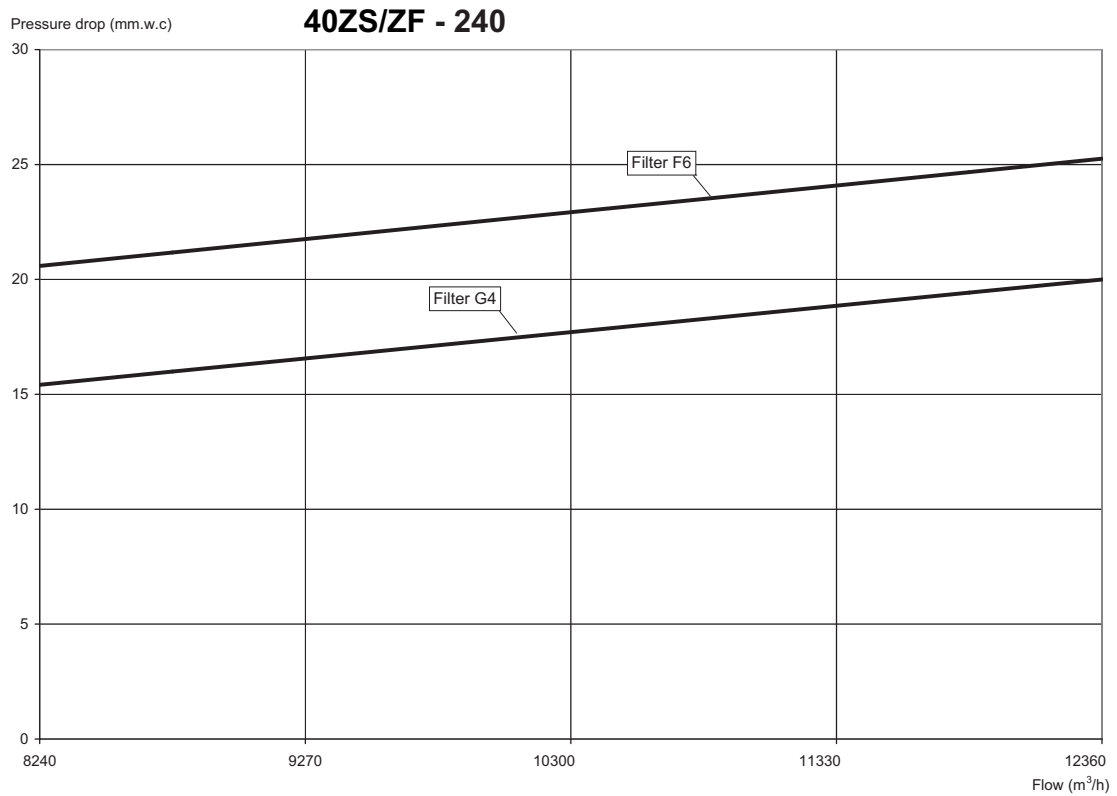
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



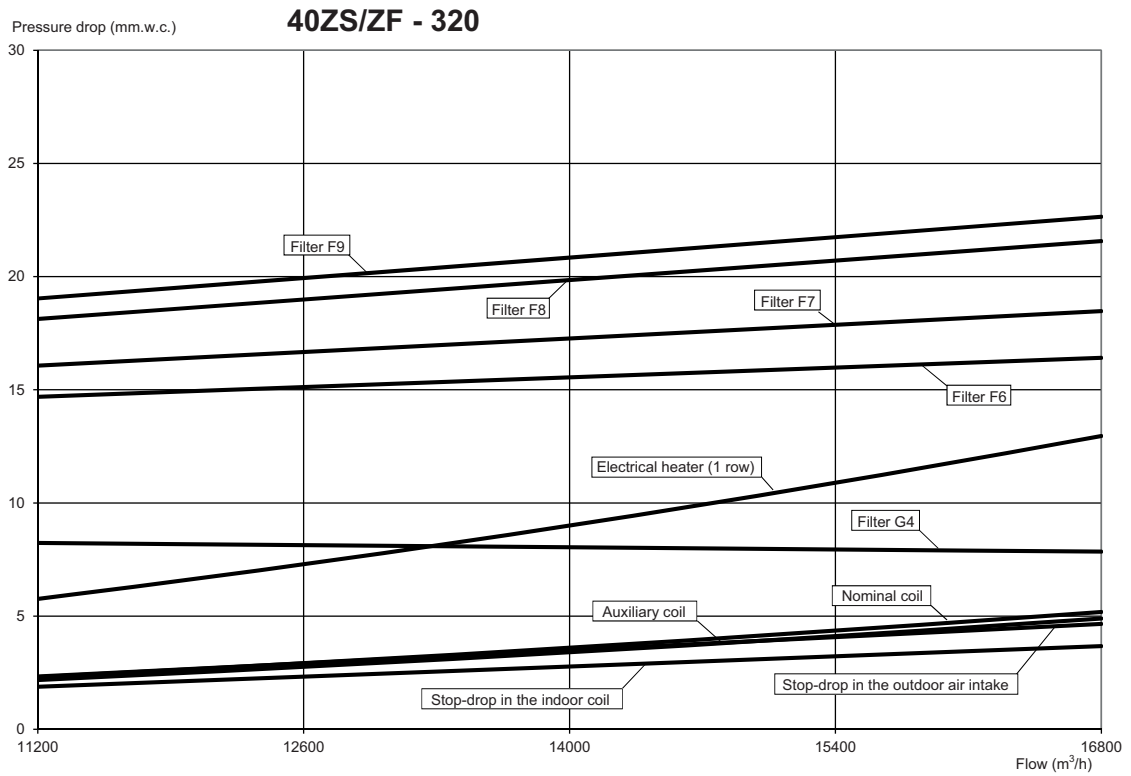
Return pressure drops



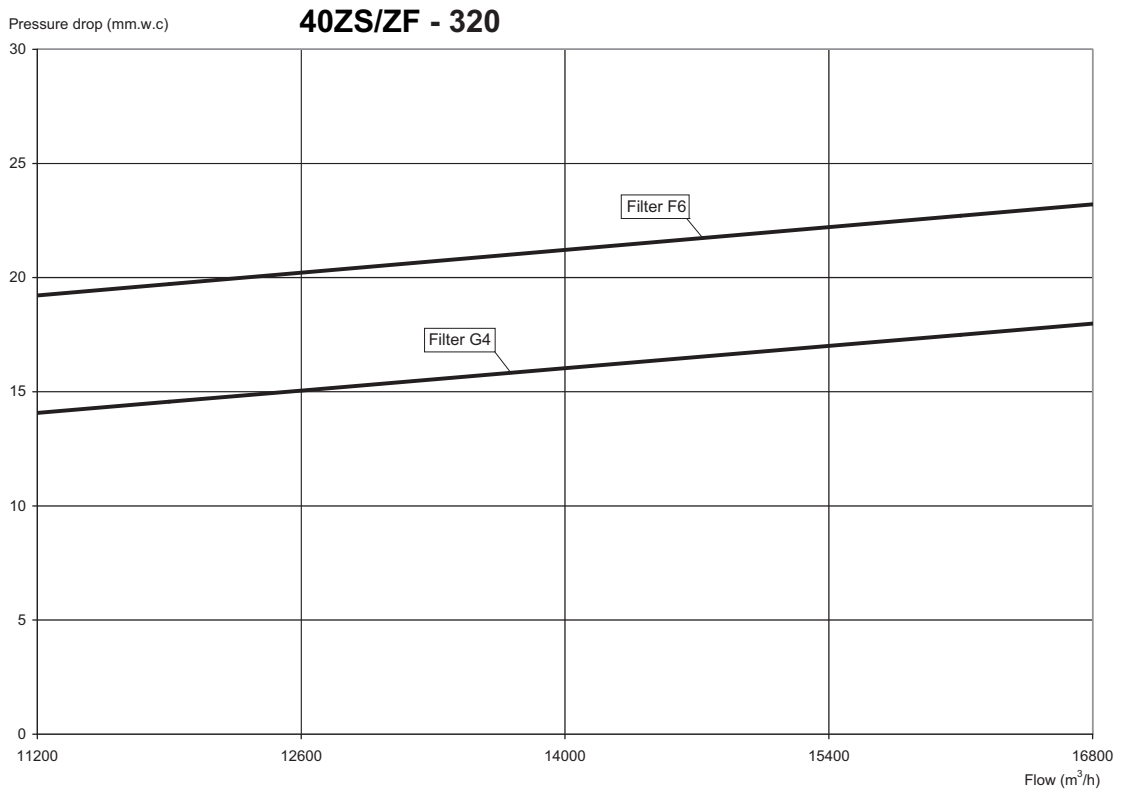
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

■ Supply pressure drops



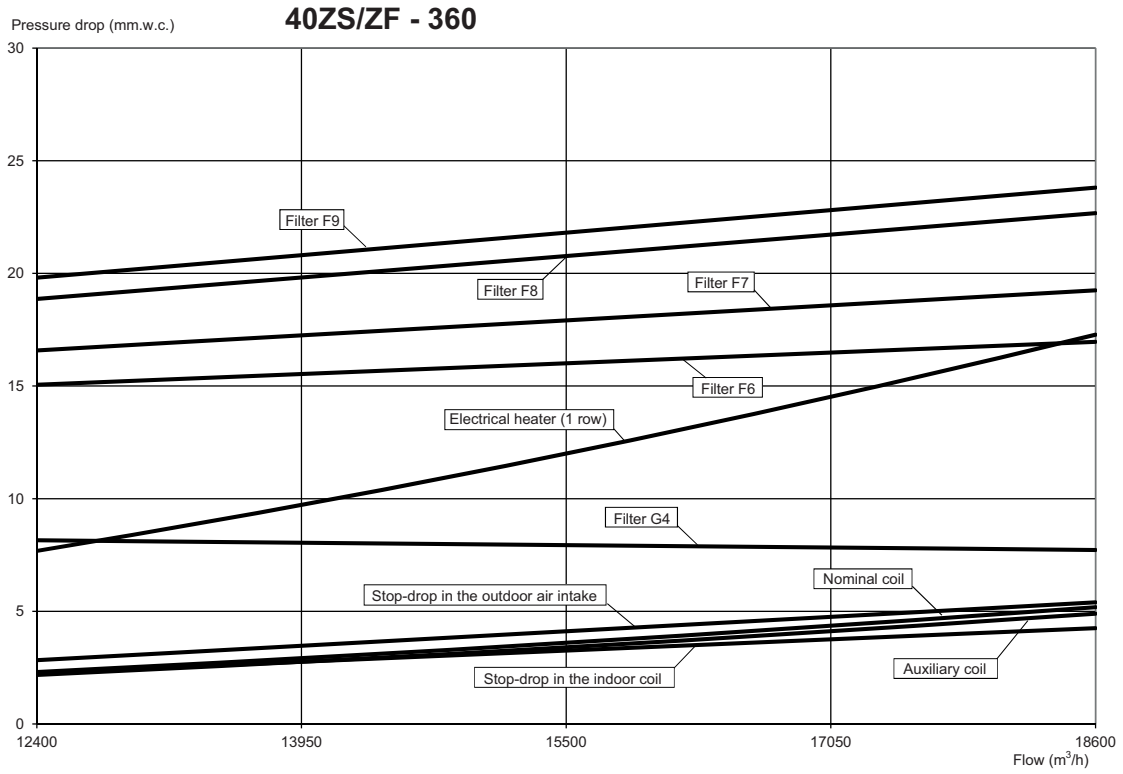
■ Return pressure drops



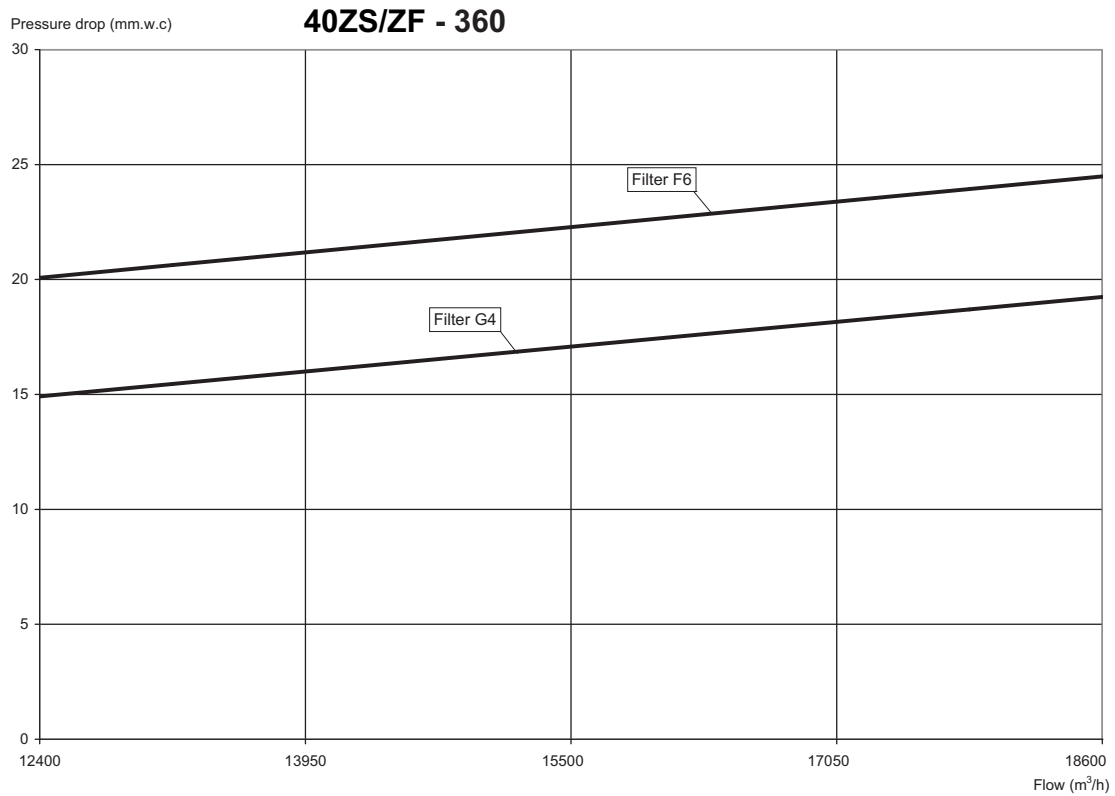
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



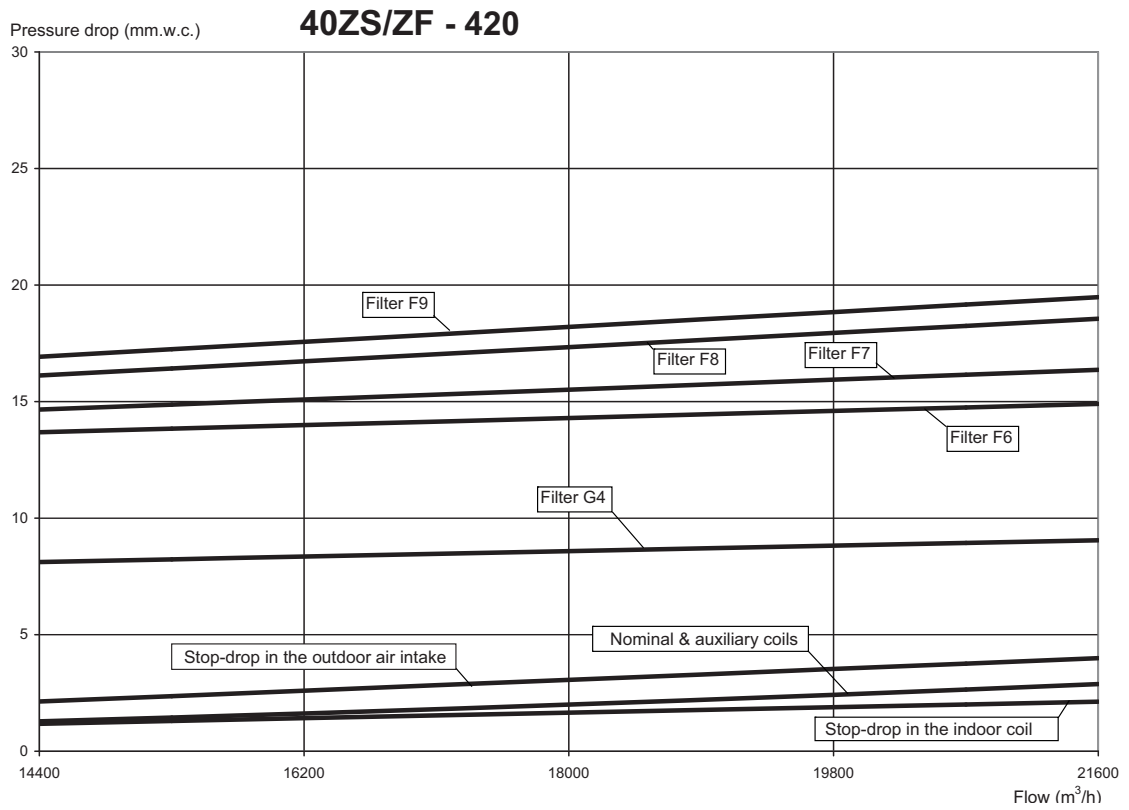
Return pressure drops



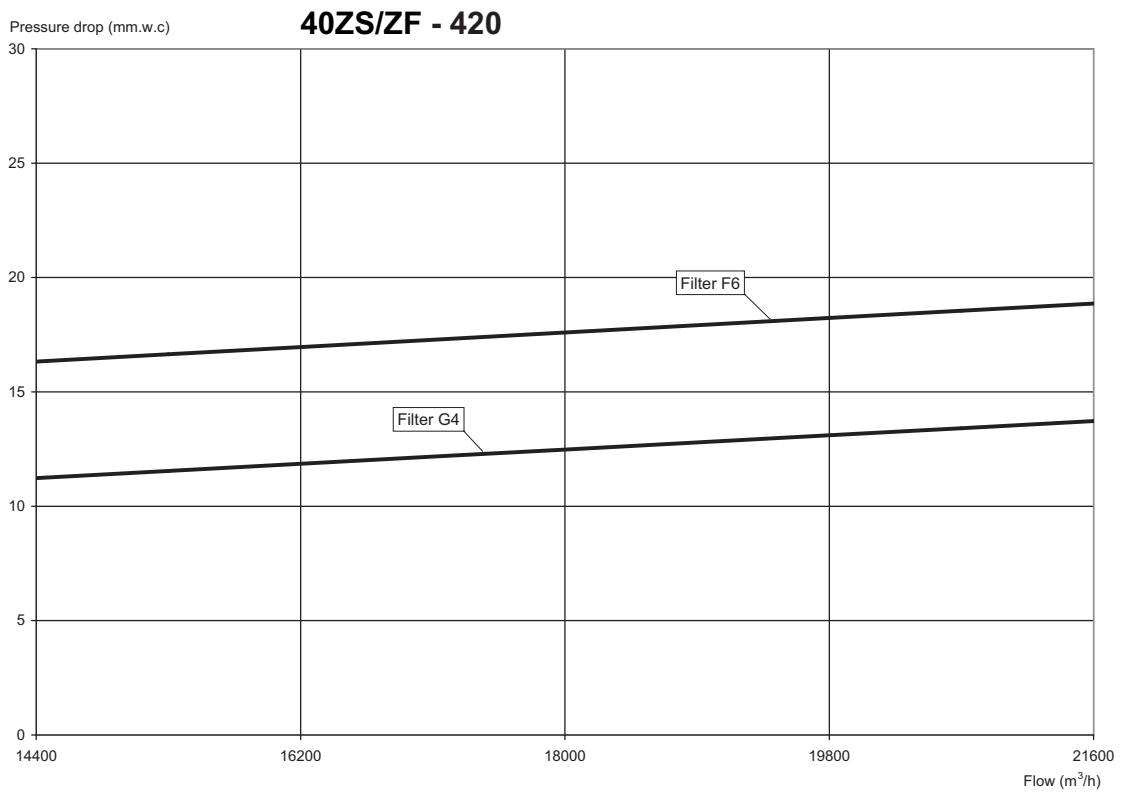
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

■ Supply pressure drops



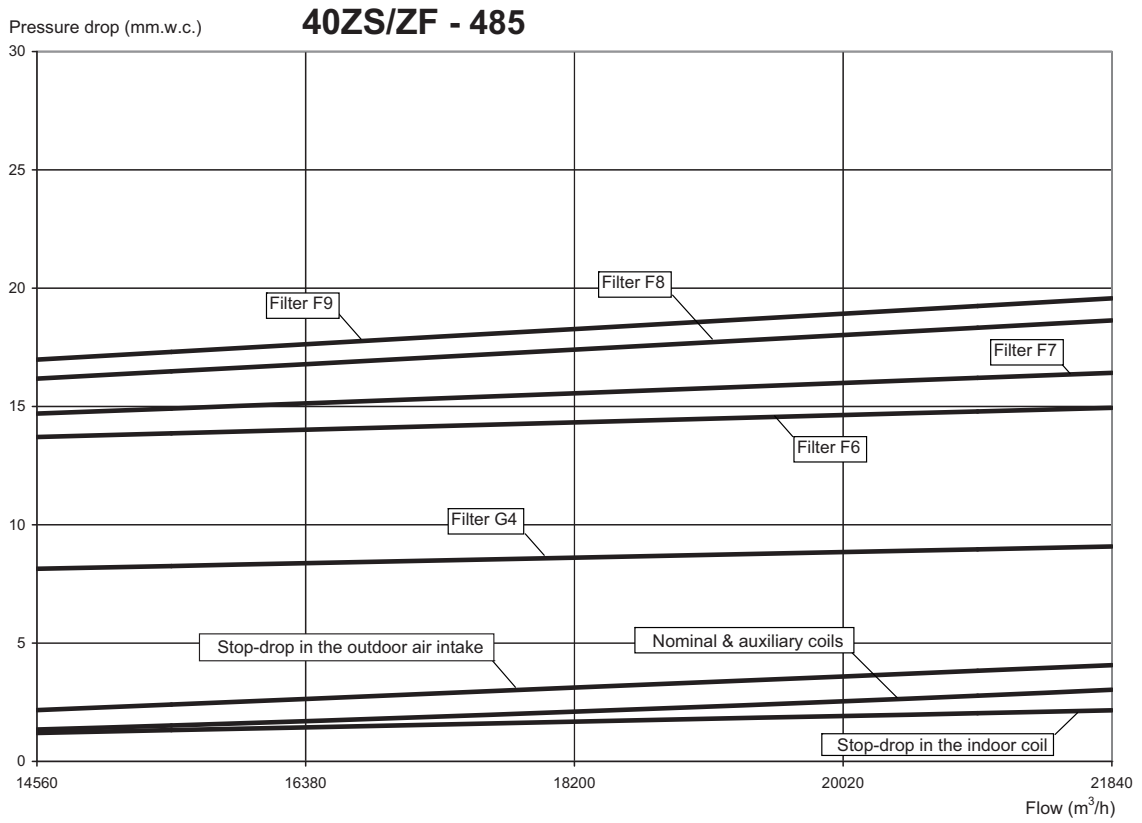
■ Return pressure drops



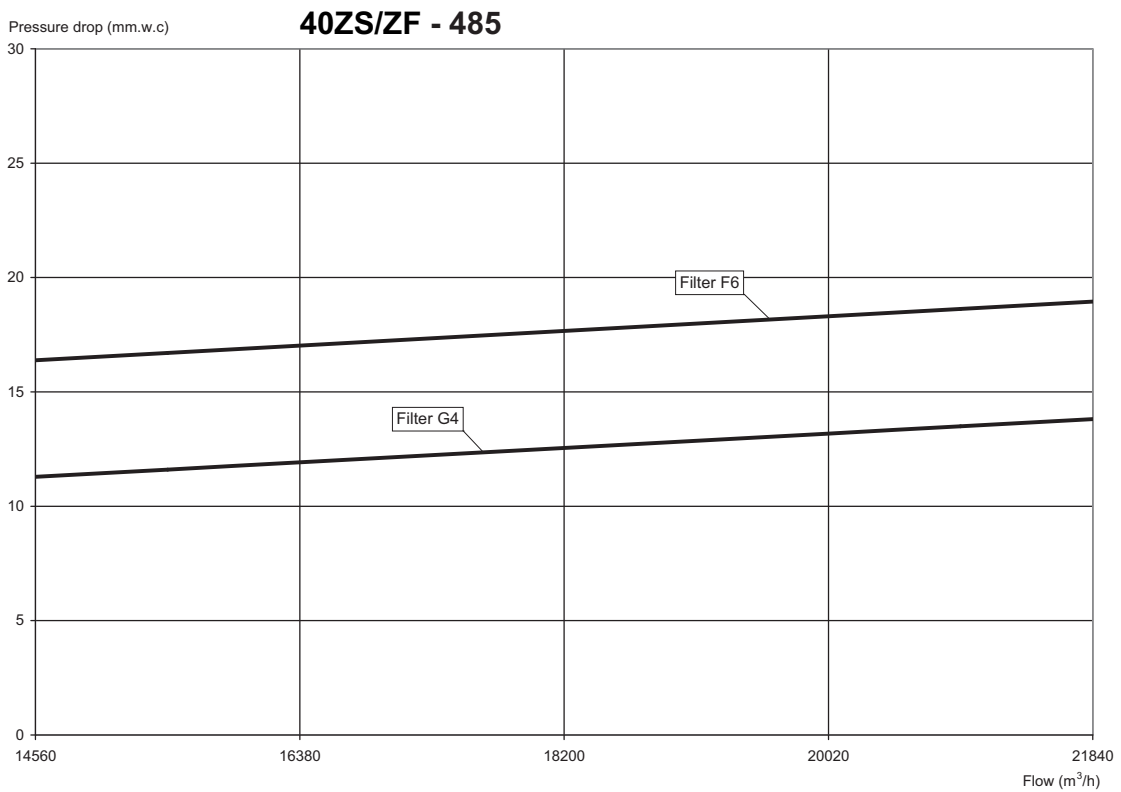
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



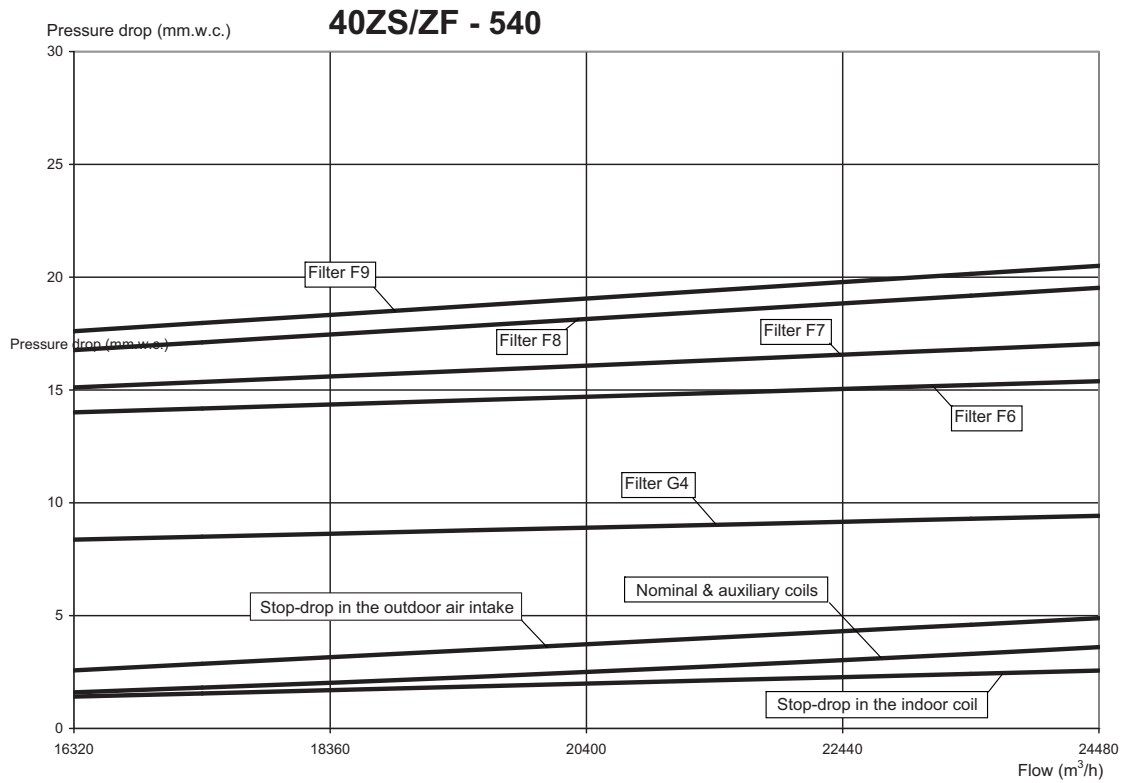
Return pressure drops



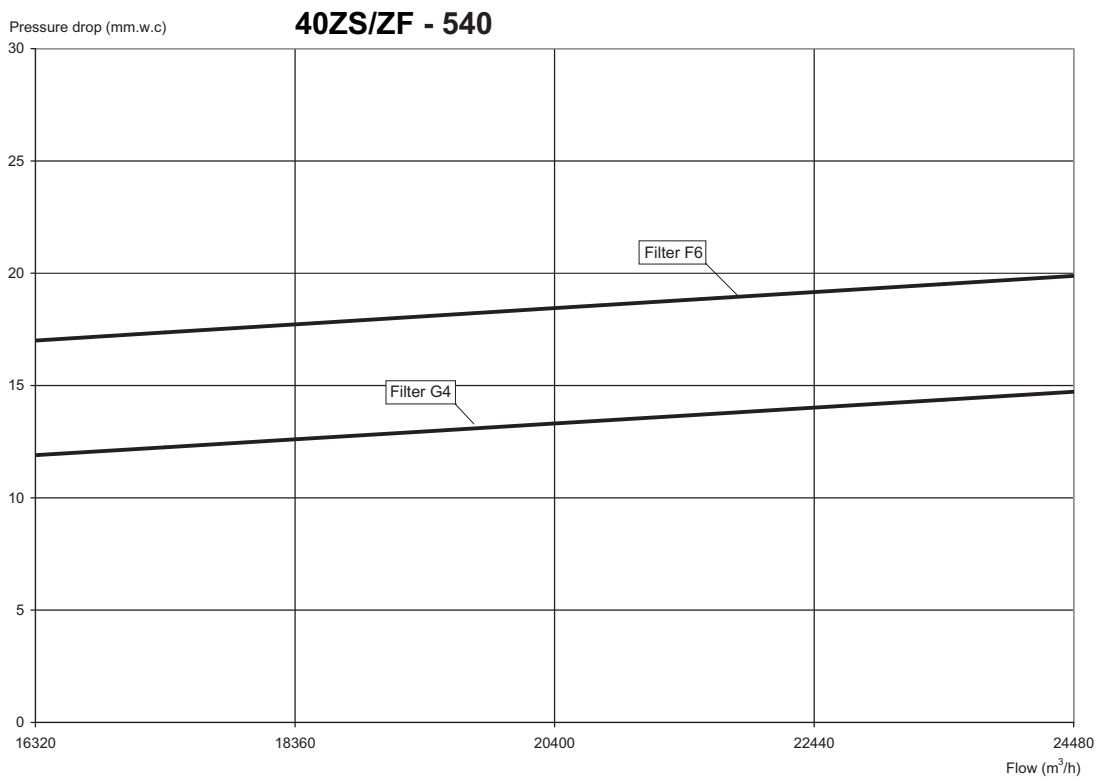
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

■ Supply pressure drops



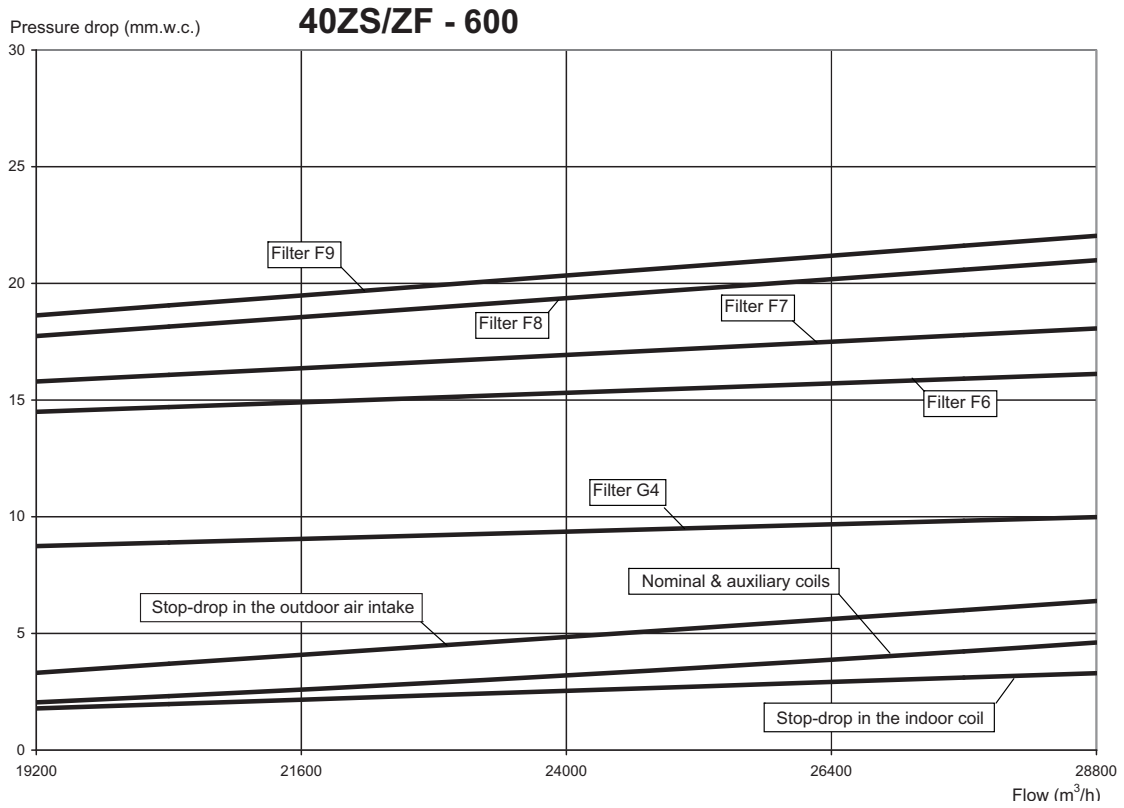
■ Return pressure drops



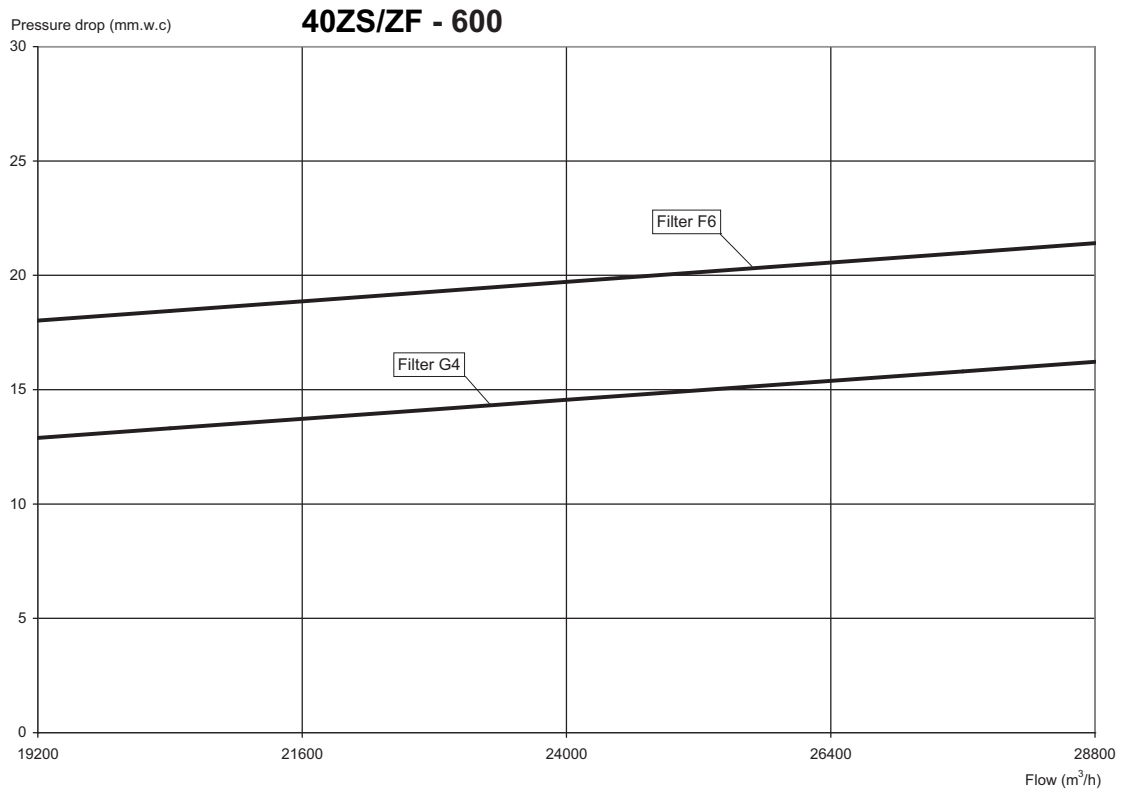
Note: pressure drops in the filters have been calculated for an average level of clogging.

PRESSURE DROPS IN THE AVAILABLE OPTIONS

Supply pressure drops



Return pressure drops



Note: pressure drops in the filters have been calculated for an average level of clogging.



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Manufacturer reserves the right to change any product specifications without notice.



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Printed in the European Union.