

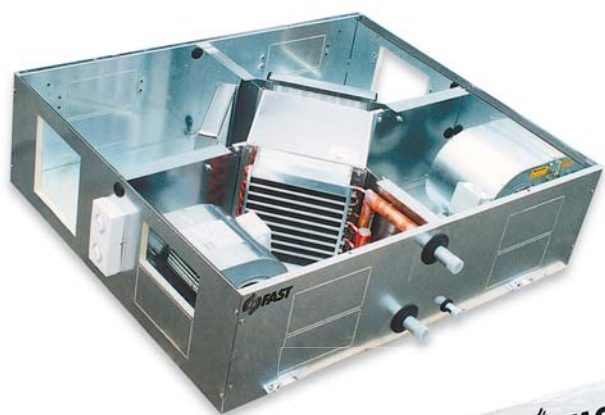
NRC

Heat recovery units

Air flow rates from 350 to 3.300 m³/h

The NRC series units have been designed to meet the requirements of thermohygrometric well-being and air replacement and quality. They make it possible to extract a certain quantity of air from the rooms and replace it with fresh air. An aluminium plate type heat recuperator makes an effective heat exchange between the exhaust air flow and the fresh air possible. The fresh air is thus preheated or pre-cooled according to the season by the exhaust air. The fresh air is filtered before going through the recuperator which is protected from getting dirty by a filter of the same type on the expulsion side too. The high degree of flexibility in the installation (suspended ceiling type and vertical) and in the possibility of ducting the unit makes the supply and expulsion of air homogeneous to and from the rooms.

The NRC series unit has been expressly designed to comply with the recent legal instructions regarding the protection of non-smokers' health.



> Versions

Standard configuration **horizontal** or **vertical**.

Standard horizontal or vertical configuration **with water heating coil** downline from the heat recuperator.

Standard horizontal or vertical configuration **with electric heating coil** downline from the heat recuperator.

> Accessories

- BF** module with water cooling coil.
- MPW** module with water cooling and re-heating coil.
- MPX** module with cooling and re-heating electric coil.
- BFD** module with direct expansion coil.
- BFDW** module with direct expansion and water re-heating coil.
- BFDX** module with direct expansion and electric re-heating coil.
- G4** G4 efficiency filters.
- SU** module with silencers.
- FGC** circular flanges.
- SE** dampers.
- RG** control kit.

>Main technical data

NRC Model		03	05	07	10	15	21	33
Nominal air flow rate ¹	m ³ /h	350	550	750	1.000	1.500	2.100	3.300
Static pressure available (base vers.) ¹	Pa	125	140	170	150	120	120	150
Heating capacity recovered ²	kW	1,5	2,5	3,4	4,6	6,7	9,3	14,3
Cooling capacity recovered ³	kW	0,4	0,7	1,0	1,3	1,9	2,6	4,3
Heat recovery unit efficiency ²	%	52,1	55,0	54,3	54,4	53,1	52,7	52,0
Internal heating coil capacity H ₂ O (air 8°C; H ₂ O 70/60°C)	kW	4,1	6,7	8,8	13	18,7	25,9	36,6
Internal heating coil capacity H ₂ O (air 8°C; H ₂ O 45/40°C)	kW	2,4	4,0	5,2	7,7	11,2	15,4	22,0
Internal electric coil heating capacity (electrical power supply 400V-3-50Hz)	kW	2,5	2,5	5,0	6,0	10,0	15,0	25,0
Cooling coil capacity H ₂ O (air 30°C, 60% RH; H ₂ O 7/12°C) BF	kW	3,4	4,9	6,5	10,2	13,8	18,5	28,0
Direct expansion coil cooling capacity (air 30°C, 60% RH; Tev 5°C; Tcond 47°C; R407C) BFD	kW	3,8	5,1	7,2	10,9	14,8	19,2	27,0
Direct expansion coil cooling capacity (air 30°C, 60% RH; Tev 5°C; Tcond 47°C; R410A) BFDR	kW	3,8	5,1	7,2	10,9	14,8	19,2	27,0
Re-heating coil capacity H ₂ O (air 17°C; H ₂ O 70/60°C) MPW-BFDW	kW	1,5	2,4	3,4	4,8	5,7	7,4	10,2
Re-heating coil capacity H ₂ O (air 17°C; H ₂ O 45/40°C) MPW-BFDW	kW	0,8	1,2	1,7	2,5	3,0	3,8	5,2
Electric re-heating coil capacity (electrical power supply 400V-3-50Hz) MPX-BFDX	kW	1,5	2,0	3,0	4,0	6,0	8,0	13,0
Total input power of the fans (elect. power supply 230V-1-50Hz)	kW	0,27	0,44	0,65	1,12	1,12	2,0	4,0

¹ At maximum fan speed.

² Performance related to: fresh air flow equal to the exhaust air flow; external air temperature -5°C, RH 80%; room air temperature 20°C, 50% RH.

³ Performance related to: fresh air flow equal to the exhaust air flow; external air temperature 34°C, RH 50%; room air temperature 26°C, 50% RH.

>Accessories compatibility

Horizontal configuration

NRC Model	03	05	07	10	15	21	33
BF	BF35	BF55	BF75	BF100	BF150	BF210	BF330
MPW	MPW35	MPW55	MPW75	MPW100	MPW150	MPW210	MPW330
MPX	MPX35	MPX55	MPX75	MPX100	MPX150	MPX210	MPX330
BFD	BFD35	BFD55	BFD75	BFD100	BFD150	BFD210	BFD330
BFDR	BFDR35	BFDR55	BFDR75	BFDR100	BFDR150	BFDR210	BFDR330
BFDW	BFDW35	BFDW55	BFDW75	BFDW100	BFDW150	BFDW210	BFDW330
BFDX	BFDX35	BFDX55	BFDX75	BFDX100	BFDX150	BFDX210	BFDX330
SU	SU1	SU1	SU2	SU3	SU3	SU4	SU5
FGC	FGC1	FGC1	FGC1	FGC2	FGC2	-	-
G4	G435	G455	G475	G4100	G4150	G4210	G4330
SE	SE1	SE1	SE2	SE3	SE3	SE4	SE5
RG	RG35	RG55	RG75	RG100	RG150	RG210	RG330

Vertical configuration

NRC V Model	03	05	07	10	15	21	33
FGC	FGC1	FGC1	FGC1	FGC2	FGC2	-	-
G4	G435	G455	G475	G4100	G4150	G4210	G4330
SE	SE1	SE1	SE2	SE3	SE3	SE4	SE5
RG	RG35	RG55	RG75	RG100	RG150	RG210	RG330

- Not available.

>Characteristics

Self-bearing 20 mm thick sandwich panels made of galvanised steel sheet for the external and internal surfaces and with injected polyurethane insulation (density 40 kg/m³).

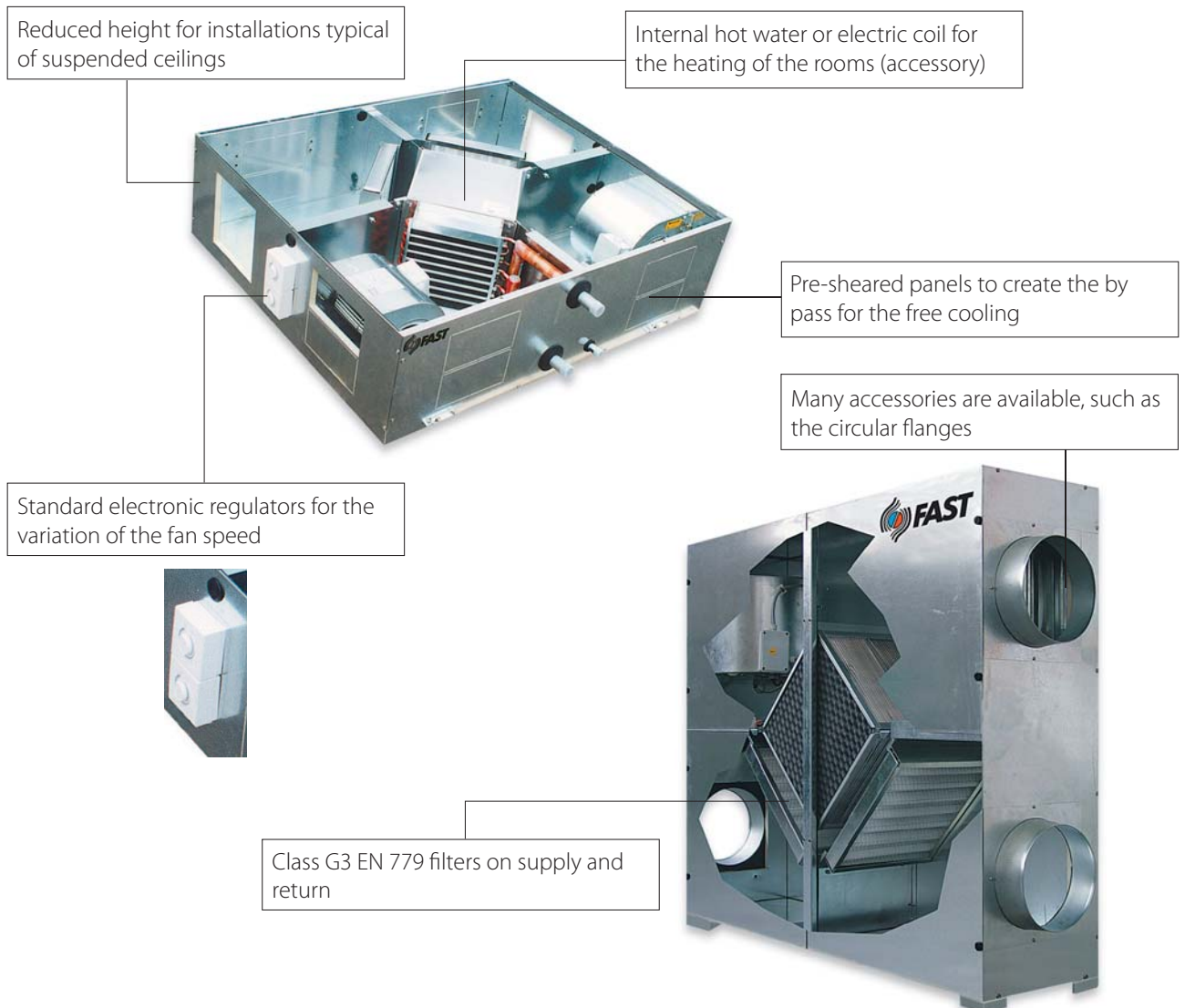
Undulated filters class G3 gravimetric efficiency 80% in accordance with EN 779, 48 mm thick, positioned before the heat recuperator on both air supply and exhaust.

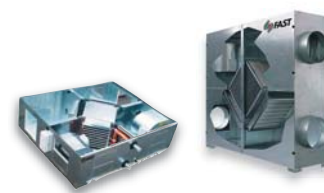
Heat recuperators of the cross-flow type with aluminium plates with performances above 50% in winter operation.

Double-intake radial fans with forward-curved blades with directly coupled motor. The motor, single phase 230V-50Hz, is at single speed. The air flow is controlled by means of standard electronic regulators.

Condensate drain pan made of galvanised steel.

Inspection from below, from above and sideways according to the chosen configuration.





> Sizes and weights

NRC Model			03	05	07	10	15	21	33
Height	H	mm	300	300	330	390	390	390	390
Width	W	mm	900	900	1,000	1.250	1.250	1.400	1.750
Length	L	mm	1.090	1.090	1.190	1.500	1.500	1.750	2.500
Weight (base version)		kg	61	65	74	115	140	180	330

Accessory BF, MPW, BFD, BFDW, BFDX, MPX			35	55	75	100	150	210	330
Height	H₁	mm	300	300	330	390	390	390	390
Width	W₁	mm	460	460	510	635	635	710	860
Length	L₁	mm	800	800	850	950	950	950	950

Accessory weight			35	55	75	100	150	210	330
BF		kg	40	40	50	60	60	70	75
MPW		kg	43	43	54	65	65	76	85
MPX		kg	45	45	57	68	68	79	90
BFD		kg	40	40	50	60	60	70	75
BFDR		kg	40	40	50	60	60	70	75
BFDW		kg	43	43	54	65	65	76	85
BFDX		kg	45	45	57	68	68	79	90
SU		kg	25	25	30	36	36	45	60

