

ABIK

i n n o v e n t



Hottes

Plans de travail

i-Cooking et plaques de cuisson

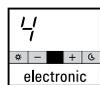
Éviers

Divers et Accessoires

Liste de prix

Gamme principale

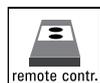
Symbols



Electronic control
4 speed and lighting digital indicator
delayed auto-off after app. 20 min



Internal motor | High pressure
2-sides extracting axial EC motor capacity per
hour



Remote control
see above at Electronic
control



Low-noise EBM motor
56dB[A] free running at speed 3
even lower through insulation



LED standard round
2.2W diffused lighting | quantity
varies per extractor



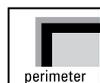
Air recirculating extractor
Returns the filtered air back into the kitchen
| no loss of heat



Dimmer
Always dimmable at max. 8 lights
with use of remote control



CMVR®
Hybrid extractor for Central Extraction Ventila-
tion systems.



Perimeter extraction
Steel filter-cover panel, increases
extraction speed and surface



Extractor depth
Different depths available, also for extra deep
worktops



Accelair® extraction
Patented perimeter extraction for extra
flat extractors with controlled zones



RAL powder coated
Some extractors are optionally available in
RAL colour(s)



Standard metal grease filter
12-layered | dishwasher proof



Custom made
Custom made possibilities



Magnetic perfo grease filter
stainless steel cassette
12-layered | dishwasher proof



Magnetic metal grease filter
sublime airtight filtering
12-layered | dishwasher proof



Charcoal filter
Odour filter | up to 20x washable in
dishwasher | replaceable

Colofon

issue: July 2015
validity: up to and including December 2015
copyright: ABK innovent

*Rien dans cette édition ne peut être copié et / ou publié sans autorisation écrite par ABK
InnoVent. Nous ne sommes pas responsables des dommages résultant de la mauvaise
utilisation des produits, ou de l'utilisation qui ne sont pas en conformité avec les
informations contenues dans cette brochure. Nous nous réservons le droit de modifier les
prix et les modèles sans préavis. Nous ne sommes pas responsables des erreurs d'impression*

EXTRACTOR HOODS

NEERIM	06
KILPA	11
KILPALIE	16
WINANI	20
PSH	22
PSX	27
PSFR	30
Made-to-measure examples	32

Ventilation Technology

Ground rules	36
Extraction systems	37
Recirculation versus CMVR system	38
CMVR system	40
Installation recommendations	43
Internal EC motor	44
External indoor motor	45
Flat roof motor	47
Tiled roof motor	48
Outside wall motor	49

Ducts and grilles

Round duct	51
HR+ flat duct	54
Grilles Wall ducts	58

WORKTOPS

4mm solid stainless steel	62
4mm solid hot rolled	65
i-Cooking ICG 4mm	66
i-Cooking induction 4mm	68

Other stainless steel worktops & Tables	69
Worktop 12-20mm thick	70
Worktop 30-185mm thick	72
Table	74
i-Cooking ICGX Stainless steel worktops	75
i-Cooking induction Stainless steel worktops	77
Side panel	78

Options

Sink options	80
Cooktop options	82
Worktop and Table options	83

I-COOKING AND COOKING EQUIPMENT

i-Cooking ICG 4mm	86
i-Cooking ICGX Other materials & thicknesses	90
i-Cooking induction	96
KOONAKA	101
KPGM	104
Built-in instructions KOONAKA and KPGM	108

SINKS

BINGARA	112
BARONGA	115
Sink accessories	118
Installation Built-under	120
Installation Flush mount	121
Made-to-measure examples	122

MISCELLANEOUS

Frame	125
Stainless steel feet Table legs	126
Stainless steel frame	127
Splashback	128
KILPA Lighting shelves	129
Bar handles	130
Square handles	131
Wine rack	132
Wine rack, shelf, saucepan rack	133

SERVICE PARTS

Lighting	135
Filters	136

DELIVERY TERMS AND CONDITIONS

Extractor hoods





As from 2015, practically all ABK extractors will be equipped with the newest energy efficient direct current motors [EC]. The great advantage of these motors is that they use up to 80% less energy and produce even less noise.

With these advanced EC motors we are again taking the lead as the ventilation specialist and are complying with the statutory requirements. For the time being we will use the two extremely pressure resistant motors shown below, which will replace all other motors:

- 815m³/h
- 1080m³/h

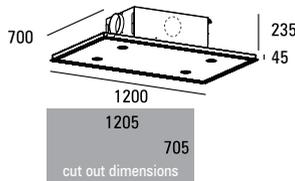
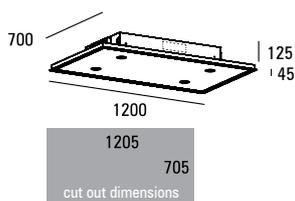
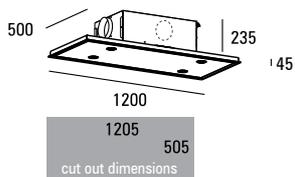
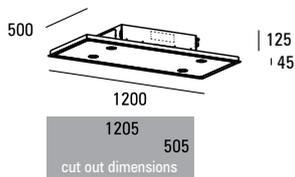
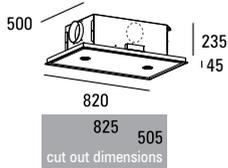
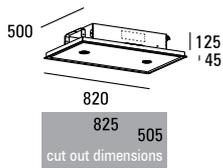
The flat outside wall motor GABK240AP 1200m³/h will be replaced by an EC version rated at 1075m³/h.

All our extractors equipped with an EC motor will from now on also have dimmable, round LED lights as standard.

Made-to-measure options for sizes up to 4 metres or more, and RAL colours are also possible. ABK innovent also provides a solution for installation with CMVR[®], the patented system for use with a central mechanical ventilation or heat exchanger unit.

NEERIM | Ceiling unit

Dimensions [mm]

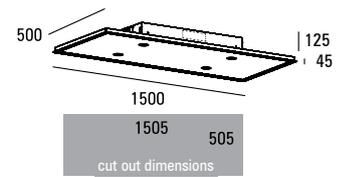


Order code	Description [WxDxT]	INDEX
	82x50cm for use with external EC motor* [order separately]	
PA07082RZL*	RAL9010** Ceiling unit 82x50x4+14cm for use with external motor Lighting 2x2.2W 2 filters Power consumption: motor + 4.4W	1316
PA07082RZ*	Stainless steel Ceiling unit 82x50x4+14cm, as above With a universal outlet positioned to the left, right, top, front or rear	1417
	82x50cm Internal EC motor	
PA07082HZL	RAL9010** Ceiling unit 82x50x4+24cm Internal EC motor 815m ³ /h lighting 2x2.2W 2 filters Power consumption 104.4W	1645
PA07082HRZ	Stainless steel Ceiling unit 82x50x4+24cm, as above With a universal outlet positioned to the left, right, top, front or rear	1747
	120x50cm for use with external EC motor* [order separately]	
PA07125RZL*	RAL9010** Ceiling unit 120x50x4+14cm for use with external motor lighting 4x2.2W 2 filters Power consumption: motor + 8.8W	1535
PA07125RZ*	Stainless steel Ceiling unit 120x50x4+14cm, as above With a universal outlet positioned to the left, right, top, front or rear	1637
	120x50cm Internal EC motor	
PA07125HZL	RAL9010** Ceiling unit 120x50x4+24cm Internal EC motor 815m ³ /h lighting 4x2.2W 2 filters Power consumption: 108.8W	1865
PA07125HRZ	Stainless steel Ceiling unit 120x50x4+24cm, as above With a universal outlet positioned to the left, right, top, front or rear	1967
	120x70cm for use with external EC motor* [order separately]	
PA07127RZL*	RAL9010** Ceiling unit 120x70x4+14cm for use with external motor lighting 4x2.2W 2 filters Power consumption: motor + 8.8W	1535
PA07127RZ*	Stainless steel Ceiling unit 120x70x4+14cm, as above With a universal outlet positioned to the left, right, top, front or rear	1637
	120x70cm Internal EC motor	
PA07127HZL	RAL9010** Ceiling unit 120x70x4+24cm Internal motor 815m ³ /h lighting 4x2.2W 2 filters Power consumption 108.8W	1865
PA07127HRZ	Stainless steel Ceiling unit 120x70x4+24cm, as above With a universal outlet positioned to the left, right, top, front or rear	1967
Tip	The high location results in faster accumulation of grease deposits due to grease condensation on the stainless steel panels. We therefore recommend that you regularly clean the panels and extraction vents of the extractor hood.	

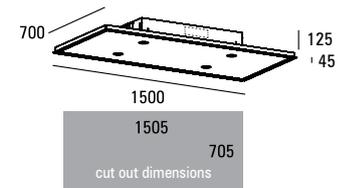
NEERIM | Ceiling unit



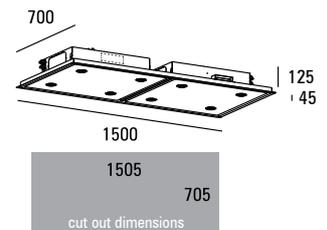
Order code	Description [WxDxT]	INDEX
	150x50cm for use with external EC motor* [order separately]	
PA07155RZL*	RAL9010** Ceiling unit 150x50x4+14cm for use with external motor lighting 4x2.2W 2 filters Power consumption: motor + 8.8W	2186
PA07155RZ*	RVS Ceiling unit 150x50x4+14cm, as above With a universal outlet positioned to the left, right, top, front or rear	1857



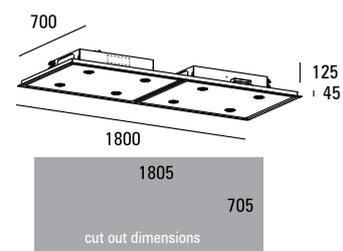
	150x70cm for use with external EC motor* [order separately]	
PA07157RZL*	RAL9010** Ceiling unit 150x70x4+14cm for use with external motor lighting 4x2.2W 2 filters Power consumption: motor + 8.8W HR+ exhaust; flat duct 220x90mm or Ø200mm [above]	2186
PA07157RZ*	Stainless steel Ceiling unit 150x70x4+14cm, as above With a universal outlet positioned to the left, right, top, front or rear	1857
Note:	Minimum 1080m ³ /h external motor when connection is on top.	



	150x70cm for use with external EC motor* [order separately]	
PA071572RZ*	Ceiling unit 150x70x4+14cm Dual motor connection Lighting 8x2.2W 4 filters Power consumption: motor + 17.6W 1 remote control With a universal outlet positioned to the left, right, top, front or rear	2406
Note:	Minimum 1080m ³ /h external motor when connection is on top.	

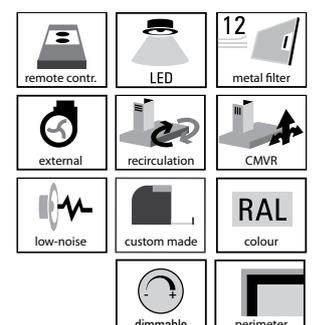


	180x70cm or use with an external EC motor* [order separately]	
PA071872RZ*	Ceiling unit 180x70x4+14cm Dual motor connection Lighting 8x2.2W 4 filters Power consumption: motor + 17.6W 1 remote control With a universal outlet positioned to the left, right, top, front or rear	2625
Note:	Minimum 1080m ³ /h external motor when connection is on top.	



Options

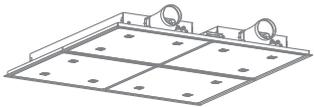
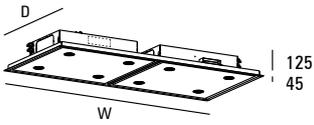
Options	Reduction Surcharge	INDEX
PA03KVZ	Ext. lighting connection with power plug [own transformer]	+ / + 25
REC01B	Recirculating version	+ / + 437
CMVR01B	CMVR® version with CMVR® box	+ / + 547
PSRAL9016**	Painted in RAL 9016	0
PSRAL**	Painted in RAL colour of your choice	+ / + 324
PSKF01	Replacement charcoal filter, 15x washable Per filter Extensive motor options Ventilation Technology section	+ / + 68



* For external motors and HR+ flat ducts, see Ventilation Technology section

NEERIM | Made-to-measure ceiling unit

Dimensions [mm]



431x181x26cm



Order code Description [WxDxT] INDEX

Ceiling unit | Width up to:

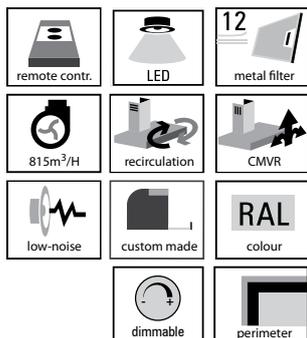
Order code	Dimensions	Filters	Panels	LED spots 2.2W	INDEX
EA03100	100x70x4+14cm	2	1	4	2955
EA03120	120x70x4+14cm	2	1	4	3174
EA03150	150x70x4+14cm	2	1	4	3394
EA03180	180x70x4+14cm	4	2	8	3614
EA03210	210x70x4+14cm	4	2	8	3833
EA03240	240x70x4+14cm	4	2	8	4053
EA03270	270x70x4+14cm	4	2	8	4273
EA03300	300x70x4+14cm	4	2	8	4492
EA03330	330x70x4+14cm	4	3	8	4822
EA03360	360x70x4+14cm	4	3	8	5151

Finish: Variable depth 50-94cm, deeper on request.
For use with external EC motor [order separately] | Connection Ø200mm
 Power consumption: motor + lighting [W] round LED spots

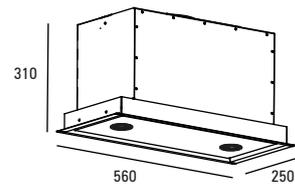
Note: The high location results in faster accumulation of grease deposits due to grease condensation on the stainless steel panels. We therefore recommend that you regularly clean the panels and extraction vents of the extractor hood.

Options Reduction | Surcharge INDEX

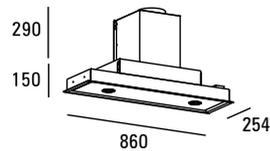
PA03KVZ	Ext. light connection + power plug [own transformer]	+ / +	25
REC01B	Recirculating version	+ / +	437
CMVR01B	CMVR® version with CMVR® box	+ / +	547
PSRAL**	Painted in RAL colour of your choice		On request
PSKF01	Replacement charcoal filter, 15x washable Per filter Extensive motor options Ventilation Technology section	+ / +	68



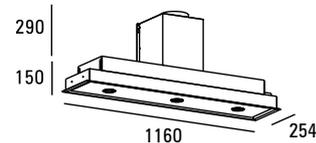
Order code	Description [WxDxT]	INDEX
	Wall unit	
	Dimensions Filters LED spots 2.2W	
PA07056RZ	56x25x31cm 2 2 With internal EC motor 815m ³ /h	1535
Finish	Connection Ø150mm [on top] Power consumption 100W + lighting Round LED spots Remote control	
	As above. Version for external motor	1354
	As above. Version for recirculation [integrated] Incl. 2 charcoal filters PAKF04	1716



	Wall unit	
	Dimensions Filters LED spots 2.2W	
PA07086RZ	86x25x15+29cm 2 2	1582
PA07116RZ	116x25x15+29cm 2 3	1747
Finish	Internal EC motor 815m ³ /h Connection Ø150mm [on top] Power consumption 100W + lighting Circular LED spots Remote control	



864 260
cut out dimensions



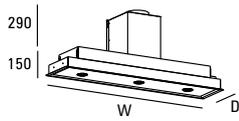
1164 260
cut out dimensions

NEERIM wall unit | 116x25x15+29cm



NEERIM | Made-to-measure wall unit

Dimensions [mm]



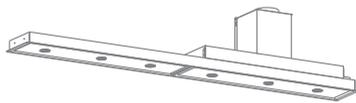
Order code	Description [WxDxT]	INDEX
------------	---------------------	-------

EA03xyz	Wall unit Width up to:				
	Dimensions	Filters	Panels	LED spots 2.2W	
EA03086	86x25x15+29cm	1	1	2	2406
EA03116	116x25x15+29cm	2	1	3	2845
EA03146	146x25x15+29cm	2	2	4	3065
EA03176	176x25x15+29cm	2	2	4	3284
EA03206*	206x25x15+29cm	2	2	4	3504
EA03236*	236x25x15+29cm	2	2	6	3724
EA03266*	266x25x15+29cm	2	3	6	3943
EA03296*	296x25x15+29cm	2	3	6	4163

* 1 functional panel | Width of cooking area max. 120cm
Specify [L] left or [R] right functional panel

Finish: Internal EC motor 815m³/h | Connection Ø150mm
Power consumption 100W + lighting | Circular LED spots
Remote control

NEERIM made-to-measure wall unit | 236x25x15+29cm

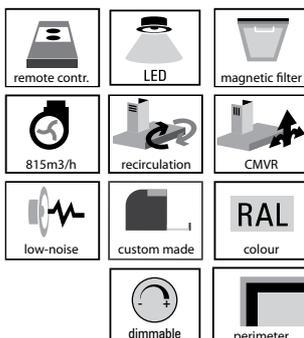


240x27x15+29cm

Options	Reduction Surcharge	INDEX
---------	-----------------------	-------

PA03KVZ	Ext. light connection + power plug [own transformer]	+ / +	25
PSEM2	Version for external motor Connection Ø200mm	- / -	329
REC01A	Recirculation version with recirculation filter box on top	+ / +	285
REC01B	Recirculation version with recirculation box	+ / +	437
CMVR01B	CMVR® version with CMVR® box	+ / +	547
PSRAL**	Painted in an RAL colour	+ / +	On request

Extensive motor options | Ventilation Technology section

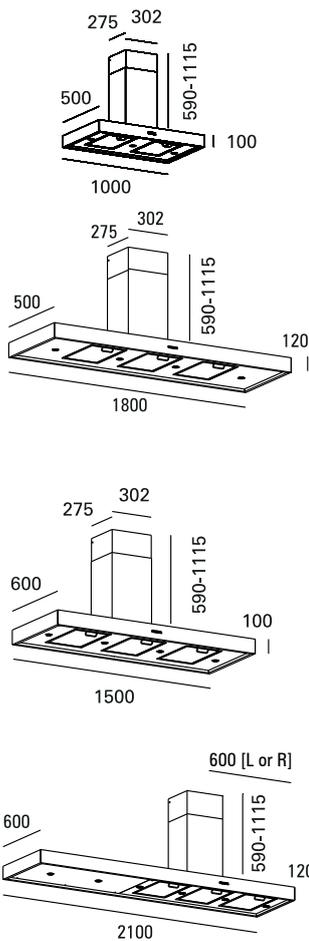


KILPA



KILPA | Wall

Dimensions [mm]



Order code Description [WxDxT]

50cm deep		Wall extractor hood		
Order code	Dimensions	Filters	LED spots 2.2W	INDEX
PA200605WS	60x50x10cm	1	2	1967
PA200905WS	90x50x10cm	2	3	2076
PA201005WS	100x50x10cm	2	3	2186
PA201205WS	120x50x10cm	3	4	2296
PA201505WS	150x50x10cm	3	4	2735
PA201805WS	180x50x12cm	3	4	2955
PA202105WS*	210x50x12cm	3	6	3229
PA202405WS*	240x50x12cm	3	7	3504

60cm deep		Wall extractor hood		
Order code	Dimensions	Filters	LED spots 2.2W	INDEX
PA200906WS	90x60x10cm	2	3	2296
PA201006WS	100x60x10cm	2	3	2406
PA201206WS	120x60x10cm	3	4	2516
PA201506WS	150x60x10cm	3	4	2955
PA201806WS	180x60x12cm	3	4	3174
PA202106WS*	210x60x12cm	3	6	3449
PA202406WS*	240x60x12cm	3	7	3724

* Shaft position | spacing 600mm, cooking area width max. 120cm
Specify motor [L] left or [R] right

Finish: Internal EC motor 815m³/h | Connection Ø150mm
Power consumption 100W + lighting | Circular LED spots
Telescopic shaft 590-1115mm

KILPA | Made-to-measure extractor hood 210x60x12cm built-under.



Options

Options	Reduction Surcharge	INDEX
PSSM09 Replacement shaft any height < 1000mm	+ / +	99

Order code	Description [WxDxT]			INDEX
EA20xyz	Wall extractor hood Width up to: Dimensions Filters LED spots 2.2W			
EA20090	90x55x10cm	2	2	2406
EA20100	100x55x10cm	2	3	2516
EA20110	110x55x10cm	2	3	2625
EA20120	120x55x10cm	3	4	2735
EA20130	130x55x10cm	3	4	2845
EA20140	140x55x10cm	3	4	2955
EA20150	150x55x10cm	3	4	3174
EA20180	180x55x12cm	3	4	3504
EA20210*	210x55x12cm	3	5	3833
EA20240*	240x55x12cm	3	6	4273
EA20270*	270x55x12cm	3	7	4712
EA20300*	300x55x12cm	3	8	5151
EA20330*	330x55x12cm	3	9**	5590
EA20360*	360x55x12cm	3	10**	6030

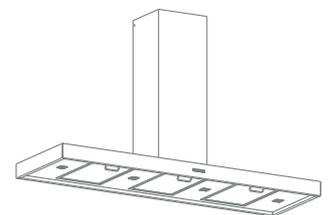
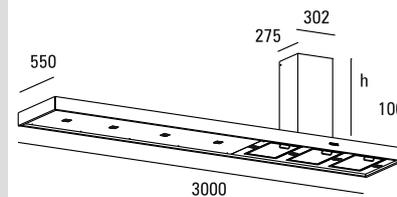
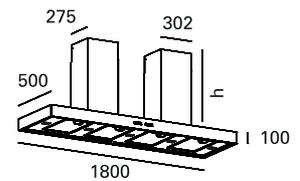
* Shaft position | spacing 600mm, cooking area width max. 120cm

Specify motor [L] left or [R] right

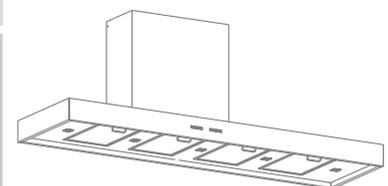
** With 9 or more spots and single control, lighting is NOT dimmable

Finish: Variable thickness 8-12cm
 Variable depth 50-60cm
 Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Single shaft 302x302mm height made-to-measure < 1000 mm
 Other made-to-measure options on request

Dimensions [mm]

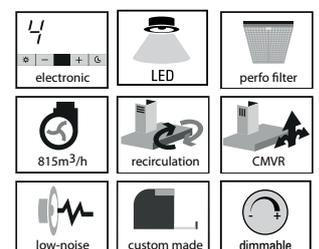


160x50x8cm



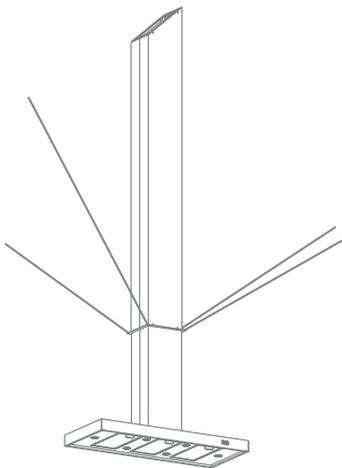
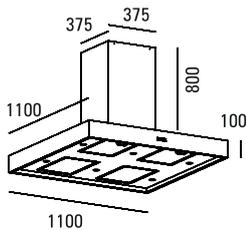
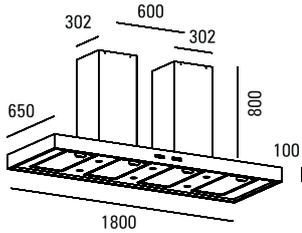
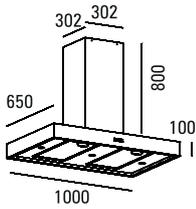
195x55x12cm

Options	Reduction Surcharge	INDEX
PAFZ060	Thickness 12-18.5cm	+ / + 6%
PSEM	Version for external motor Connection Ø200mm	- / - 181
PADBDIM	Twin controls + twin motor	+ / + 896
PASP	Set of supports made-to-measure 2 pieces < 1000mm	+ / + 184
PASM09	Twin shaft height made-to-measure [from width 180cm]	+ / + 351
PSSZ	Built-under version No shaft	- / - 199
PSSM10	Shaft height > 1000mm Per 100mm	+ / + 36
PASR	Recirculation version [excl. washable charcoal filters]	+ / + 125
PASCMVR	CMVR® version [excl. washable charcoal filters]	+ / + 208
PAKF	A-REC washable charcoal filter set	+ / + 160
PAKF02	Replacement charcoal filter, 15x washable Per filter	+ / + 142
Wide range of motor options Ventilation Technology section		



KILPA | Island

Dimensions [mm]



Order code

Description [WxDxT]

INDEX

Island extractor hood

Order code	Dimensions	Filters	LED spots 2.2W	INDEX
PA90090ES	90x65x10cm	2	3	2516
PA90100ES	100x65x10cm	2	3	2680
PA90120ES	120x65x10cm	3	4	2845
PA90150ES	150x65x10cm	3	6	3284

PA90180ES	180x65x10cm	4	6	3943
Version with twin controls, motors and shafts				

PA90110ES	110x110x10cm	4	6	4053
Only external motor, minimum 1080m ³ /h Order separately Connection Ø200mm, shaft 37.5x37.5cm				

Finish: Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Shaft height 800mm | Optionally 750 or 850mm, No add. cost
 With shafts higher than 1750mm we recommend using a clamping system or a shaft support for stability. [additional cost]

KILPA | Made-to-measure island extractor hood 240x60x12cm twin shaft



Options

Reduction | Surcharge

INDEX

PSSM09	Replacement shaft any height < 1000mm	+ / +	99
--------	---------------------------------------	-------	----

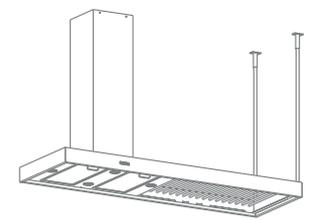
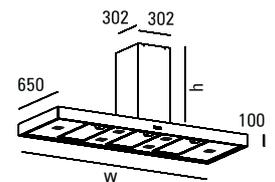
Order code	Description [WxDxT]	INDEX
EA90xyz	Island extractor hood Width up to: Dimensions Filters LED spots 2.2W	
EA90090	90x65x10cm 2 4	2955
EA90100	100x65x10cm 2 4	3174
EA90120	120x65x10cm 3 4	3284
EA90150	150x65x12cm 3 6	3724
EA90180	180x65x12cm 3 6	4053
	[Shaft size 450x300mm]	
EA90210*	210x65x12cm 3 7	4382
EA90240*	240x65x12cm 3 8	4822
EA90270*	270x65x12cm 3 9**	5261
EA90300*	300x65x12cm 3 10**	5700
EA90330*	330x65x12cm 3 11**	6139
EA90360*	360x65x12cm 3 12**	6579

* Version with twin shaft | Cooking area max. 120cm width

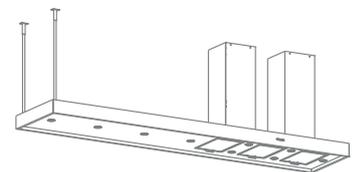
Specify [L] left or [R] right functional panel

** With 9 or more spots and single control, lighting is NOT dimmable

Finish: Variable thickness 8-12cm
 Variable depth 60-70cm
 Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Single shaft 302x302mm height made-to-measure < 1000 mm
 With shafts higher than 1750mm we recommend using a clamping system or shaft support for stability. [additional cost]
 Other made-to-measure options on request

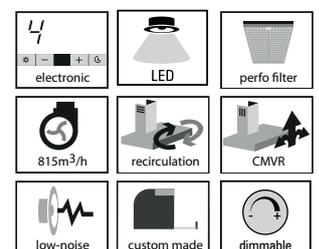


180cmx60x10cm



300x65x12cm

Options	Reduction Surcharge	INDEX
PAFZ060 Thickness 12-18.5cm	+ / +	6%
PSEM Version for external motor Connection Ø200mm	- / -	181
PADBDIM Twin controls + twin motor	+ / +	896
PASP Set of supports 2 pieces [replacing 2nd shaft, No add. cost]	+ / +	184
PSSM10 Shaft height > 1000mm Per 100mm	+ / +	36
Note: h > 1750mm is made with a horizontal seam		
PASR Recirculation version [excl. washable charcoal filters]	+ / +	125
PASCMVR CMVR® version [excl. washable charcoal filters]	+ / +	208
PAKF A-REC washable charcoal filter set	+ / +	160
PAKF02 Replacement charcoal filter, 15x washable Per filter	+ / +	142
Wide range of motor options Ventilation Technology section		



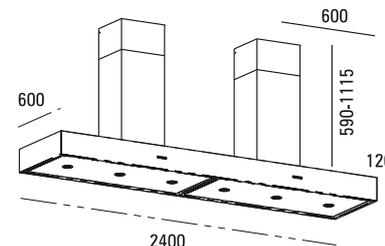
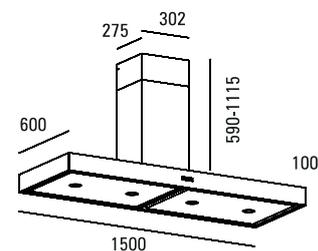
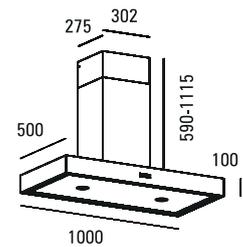
KILPALIE



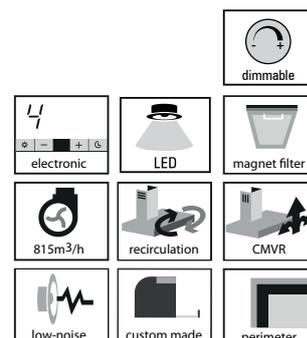
Order code	Description [WxDxT]				INDEX
KILPALIE Wall					
50cm deep Wall extractor hood					
	Dimensions	Filters	Panels	LED spots 2.2W	
PA130905RZ	90x50x10cm	1	1	2	2296
PA131005RZ	100x50x10cm	2	1	2	2406
PA131205RZ	120x50x10cm	2	1	3	2516
PA131505RZ	150x50x10cm	2	2	4	2955
PA131805RZ	180x50x12cm	2	2	4	3394
The following models have dual controls, motors and shafts					
PA132105RZ	210x50x12cm	2	2	4	4382
PA132405RZ	240x50x12cm	2	2	6	4712

60cm deep Wall extractor hood					
	Dimensions	Filters	Panels	LED spots 2.2W	
PA130906RZ	90x60x10cm	1	1	4	2516
PA131006RZ	100x60x10cm	2	1	4	2625
PA131206RZ	120x60x10cm	2	1	4	2735
PA131506RZ	150x60x10cm	2	2	8	3174
PA131806RZ	180x60x12cm	2	2	8	3614
The following models have dual controls, motors and shafts					
PA132106RZ	210x60x12cm	2	2	8	4712
PA132406RZ	240x60x12cm	2	2	12**	5041

Finish: Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Telescopic shaft 590-1115mm
 Shaft position in the centre of the panel

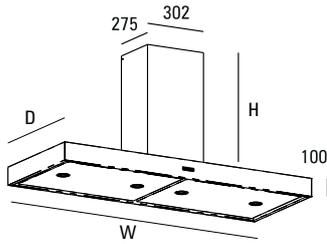


Options	Reduction Surcharge	INDEX
PSSM09 Replacement shaft any height < 1000mm	+ / +	99



KILPALIE | Wall made-to-measure

Dimensions [mm]



Order code Description [WxDxT] INDEX

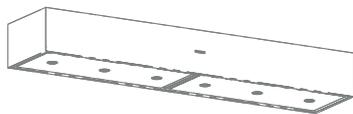
Order code	Description [WxDxT]	INDEX
EA13RZxyz	Wall extractor hood Width up to:	
	Dimensions Filters Panels LED spots 2.2W	
EA13R090	90x55x10cm 1 1 2	3020
EA13R100	100x55x10cm 2 1 2	3152
EA13R120	120x55x10cm 2 1 3	3284
EA13R150	150x55x10cm 2 2 4	3833
EA13R180	180x55x12cm 2 2 4	4207
EA13R210*	210x55x12cm 2 2 4	4986
EA13R240*	240x55x12cm 2 2 4	5557
EA13R270*	270x55x12cm 2 2 4	6128
EA13R300*	300x55x12cm 2 3 6	6689
EA13R330*	330x55x12cm 2 3 6	7270
EA13R360*	360x55x12cm 2 3 9**	7842

* Shaft position | spacing 600mm, cooking area width max. 120cm

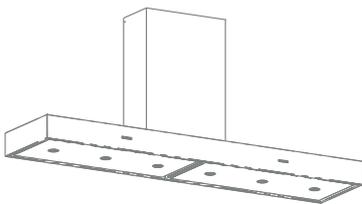
Specify motor [L] left or [R] right

** With 9 or more spots and single control, lighting is NOT dimmable

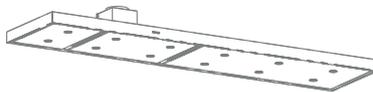
Finish: Variable thickness 10-12cm
 Variable depth 50-60cm
 Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Single shaft 302x275mm height made-to-measure < 1000 mm
 Other made-to-measure options on request



234x50x30cm



240x55x16cm



330x80x10cm

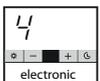
Options Reduction | Surcharge INDEX

PAFZ060	Thickness 12-18.5cm	+ / +	6%
PSEM	Version for external motor Connection Ø200mm	- / -	181
PADBDIM	Twin controls + twin motor	+ / +	896
PASP	Set of supports made-to-measure 2 pieces < 1000mm	+ / +	184
PASM09	Twin shaft height made-to-measure [from width 180cm]	+ / +	351
PSSZ	Built-under version No shaft	- / -	199
PSSM10	Shaft height > 1000mm Per 100mm	+ / +	36
PASR	Recirculation version [excl. washable charcoal filters]	+ / +	125
PASCMVR	CMVR® version [excl. washable charcoal filters]	+ / +	208
PAKF	A-REC washable charcoal filter set	+ / +	160
PAKF02	Replacement charcoal filter, 15x washable Per filter	+ / +	142

Wide range of motor options | Ventilation Technology section



dimmable



electronic



LED



magnet filter



815m³/h



recirculation



CMVR



low-noise



custom made



perimeter

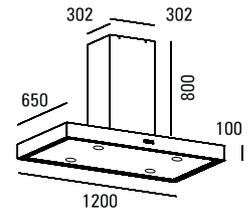
Order code	Description [WxDxT]
------------	---------------------

Dimensions [mm]

KILPALIE | Island

Island extractor hood | 65cm deep

	Dimensions	Filters	Panels	LED spots 2.2W	
PA83090RZ	90x65x10cm	1	1	4	2735
PA83100RZ	100x65x10cm	2	1	4	2900
PA83120RZ	120x65x10cm	2	1	4	3065
PA83150RZ	150x65x10cm	2	2	8	3504

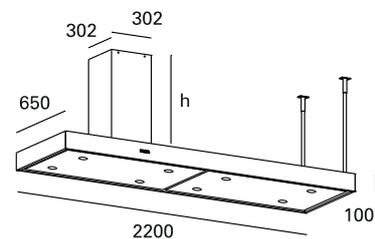


Finish: Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Shaft height 800mm | Optionally 750 or 850mm, No add. cost

KILPALIE | Made-to-measure

EA90RZxyz **Island extractor hood** width up to:

	Dimensions	Filters	Panels	LED spots 2.2W	
EA83R090	90x65x10cm	2	1	4	3614
EA83R100	100x65x10cm	2	1	4	3778
EA83R120	120x65x10cm	2	1	4	3943
EA83R150	150x65x10cm	2	2	8	4382
EA83R180	180x65x10cm	2	2	8	4932
Shaft dimensions 450x302mm					
EA83R210*	210x65x12cm	2	2	8	5590
EA83R240*	240x65x12cm	2	2	8	6139
EA83R270*	270x65x12cm	2	3	12**	6689
EA83R300*	300x65x12cm	2	3	12**	7238
EA83R330*	330x65x12cm	2	3	12**	7787
EA83R360*	360x65x12cm	2	3	12**	8336



* Version with twin shafts | Cooking area width max. 120cm
 Specify [L] left or [R] right functional panel
 ** With 9 or more spots and single control, lighting is NOT dimmable

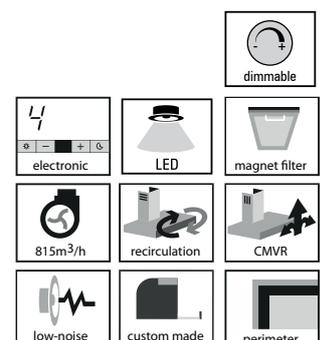
Finish: Variable thickness 8-18.5cm
 Variable depth 60-70cm
 Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED spots
 Single shaft 302x302mm height made-to-measure < 1000 mm
 For shafts taller than 1750mm we recommend using a suspension system or supports for stability [additional cost]
 Other made-to-measure options on request

Options

Reduction | Surcharge

INDEX

PSSM09	Replacement shaft any height < 1000mm	+ / +	99
--------	---------------------------------------	-------	----



WINANI



Order code **Description [WxDxT]** **INDEX**

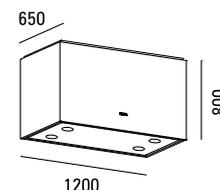
Dimensions [mm]

WINANI | Island

Island extractor hood

	Dimensions	Filters	Panels	LED spots 2.2W	
PA82090ES	90x65x80cm	1	1	4	3394
PA82100ES	100x65x80cm	2	1	4	3614
PA82120ES	120x65x80cm	2	1	4	3943
PA82150ES	150x65x80cm	2	2	8	4273
PA82180ES	180x65x80cm	2	2	8	4602

Finish: Internal EC motor 815m³/h | Connection Ø150mm
 Power consumption 100W + lighting | Circular LED lights
 Darker outlined edge around top of the extractor hood

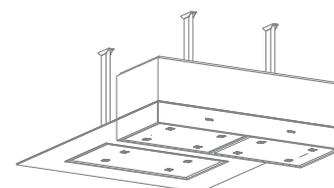
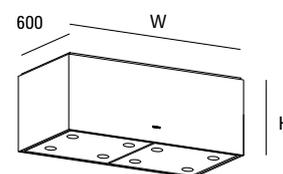


WINANI | Made-to-measure

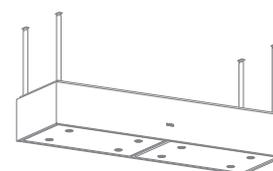
EA82xyz	Island extractor hood Width up to:	Dimensions	Filters	Panels	LED spots 2.2W	
EA82090	90x60x80cm	1	1	4	4380	
EA82100	100x60x80cm	2	1	4	4514	
EA82120	120x60x80cm	2	1	4	4655	
EA82150	150x60x80cm	2	2	8	4929	
EA82180	180x60x80cm	2	2	8	5204	
EA82210	210x60x80cm	4	2	8	5798	
EA82240*	240x60x80cm	2	2	8	5942	
EA82270*	270x60x80cm	2	3	12**	6207	
EA82300*	300x60x80cm	2	3	12**	6470	
EA82330*	330x60x80cm	2	3	12**	6733	
EA82360*	360x60x80cm	2	3	12**	6997	

* 1 functional panel | Width of cooking area max. 120cm
 Specify [L] left or [R] right functional panel
 ** With 9 or more spots and single control, lighting is NOT dimmable

Finish: Variable depth 40-70cm
 Variable height 40-110cm
 Internal EC motor 815m³/h | Connection Ø150mm
 Seamless welded
 Power consumption 100W + lighting | Circular LED spots
 Other made-to-measure options on request



180x70cm



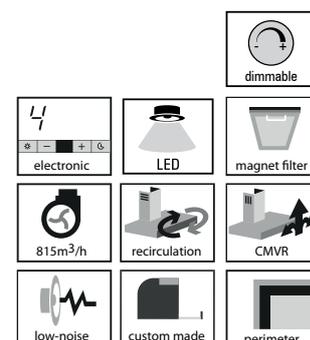
280cm

Options

Reduction | Surcharge **INDEX**

PAWH	Height to measure Any height from 40-110cm	+ / +	123
PSEM	Version for external motor Connection Ø200mm	- / -	181
PADBDIM	Twin controls + twin motor	+ / +	896
PASP	Set of hangers 2 pieces	+ / +	184
PASR	Recirculation version [excl. washable charcoal filters]	+ / +	125
PASCMVR	CMVR® version [excl. washable charcoal filters]	+ / +	208
PAKF	A-REC washable charcoal filter set	+ / +	160
PAKF02	Replacement charcoal filter, 15x washable Per filter	+ / +	142

Wide range of motor options | Ventilation Technology section

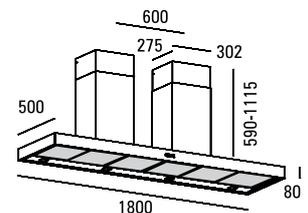
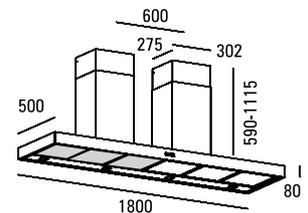
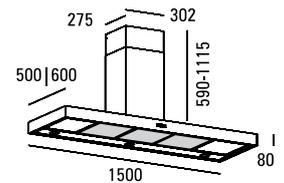
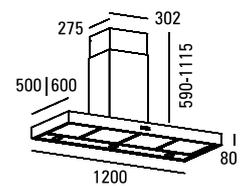
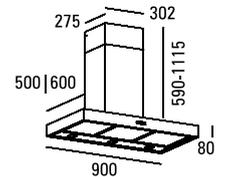
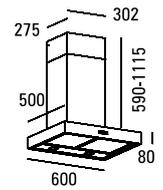


PSH

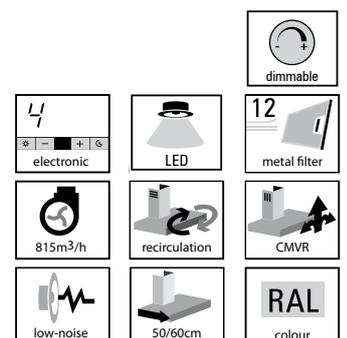


Order code	Description [WxDxT]	INDEX
PSH0605WS	Wall extractor hood 60x50x8cm 2 filters 2x2.2W LED spots Capacity 815m ³ /h Power consumption 104.4W Exhaust Ø150mm	1527
PSH0905WS	Wall extractor hood 90x50x8cm 3 filters 3x2.2W LED spots Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	1637
PSH0906WS extra deep	As above, but 60cm deep 90x60x8cm	1857
PSH1205WS	Wall extractor hood 120x50x8cm 4 filters 3x2.2W LED spots Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	1747
PSH1206WS extra deep	As above, but 60cm deep 120x60x8cm	1967
PSH1505WS	Wall extractor hood 150x50x8cm 5 filters 3x2.2W LED spots Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	2186
PSH1506WS extra deep	As above, but 60cm deep 150x60x8cm [Shaded filters are functional]	2406
PSH1805WS[L/R]	Wall extractor hood 180x50x8cm 6 filters 4x2.2W LED spots Capacity 815m ³ /h Power consumption 108.8W Exhaust Ø150mm Motor shown on left Shaded filters are functional Specify [L] left or [R] right functional panel	2516
PSH1805WSD	Wall extractor hood 180x50x8cm 6 filters 4x2.2W LED spots Capacity 2x815m ³ /h Power consumption 208.8W Exhaust 2x Ø150mm Twin motors	2885

Dimensions [mm]



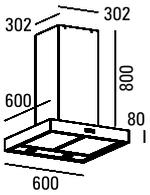
Options	Reduction Surcharge	INDEX
PSSR*	Recirculation (with washable charcoal filter), not dimmable	+ / + 181
PSSCMVR*	CMVR® (with washable charcoal filter)	+ / + 291
PSEM*	Version for external motor Ø200mm connection	- / - 181
PSSM09**	Replacement shaft any height < 1000mm	99
PSSM10**	Shaft height > 1000mm Per 100mm	+ / + 36
PSSZ**	Built-under version No shaft	- / - 199
PSRAL9016#	Body + shaft in RAL 9016	0
PSRAL#	Body + shaft in any RAL colour of your choice	+ / + On request
PSKF01	Replacement charcoal filter, 15x washable Per filter	+ / + 68
#	Because of steam and grease from cooking, colour consistency is not guaranteed	



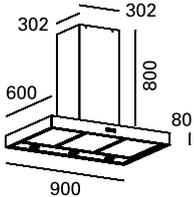
* PSH180WSD twin Reduction | Surcharge ** PSH180WS[L/R/D] twin Reduction | Surcharge

PSH | Island

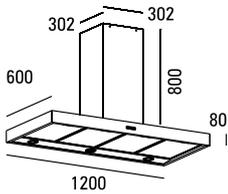
Dimensions [mm]



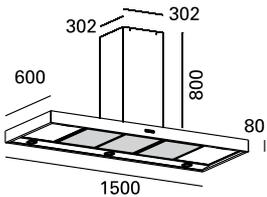
Order code	Description [WxDxT]	INDEX
PSH060ES	Island extractor hood 60x60x8cm 2 filters 2x2.2W LED spots Capacity 815m ³ /h Power consumption 104.4W Exhaust Ø150mm	1747



PSH090ES	Island extractor hood 90x60x8cm 3 filters 3x2.2W LED spots Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	1857
PSH090ESL	As above, painted in RAL 9010 [white] or RAL 7016 [anthracite]	2186



PSH120ES	Island extractor hood 120x60x8cm 4 filters 3x2.2W LED spots Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	2076
PSH120ESL	As above, painted in RAL 9010 [white] or RAL 7016 [anthracite]	2406



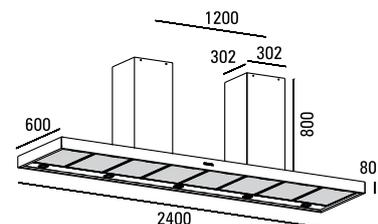
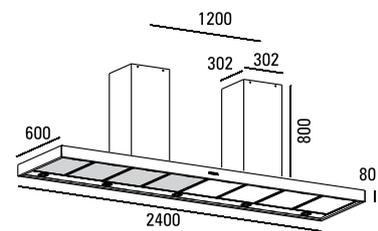
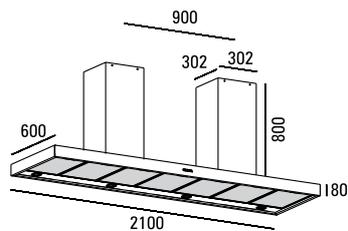
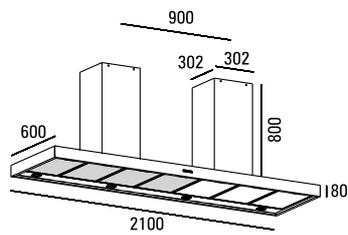
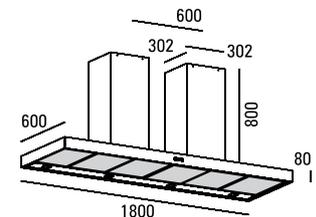
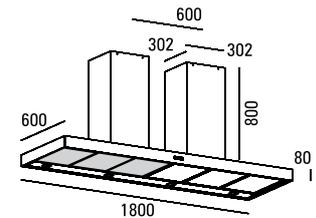
PSH150ES	Island extractor hood 150x60x8cm 5 filters 3x2.2W LED spots Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm Shaded filters are functional	2406
----------	---	------

PSH090ES | Island extractor hood 90x60x8cm



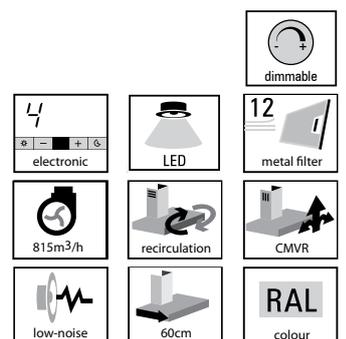
Order code	Description [WxDxT]	INDEX
PSH180ES[L/R]	Island extractor hood 180x60x8cm 6 filters 4x2.2W LED spots Capacity 815m ³ /h Power consumption 108.8W Exhaust Ø150mm Motor shown on left Shaded filters are functional Specify [L] left or [R] right functional panel	2955
PSH180ESD	Island extractor hood 180x60x8cm 6 filters 4x2.2W LED spots Capacity 2x815m ³ /h Power consumption 208.8W Exhaust 2x Ø150mm Twin motors	3324
PSH210ES[L/R]	Island extractor hood 210x60x8cm 7 filters 4x2.2W LED spots Capacity 815m ³ /h Power consumption 108.8W Exhaust Ø150mm Motor shown on left Shaded filters are functional Specify [L] left or [R] right functional panel	3614
PSH210ESD	Island extractor hood 210x60x8cm 7 filters 4x2.2W LED spots Capacity 2x815m ³ /h Power consumption 208.8W Exhaust 2x Ø150mm Twin motors	3983
PSH240ES[L/R]	Island extractor hood 240x60x8cm 8 filters 5x2.2W LED spots Capacity 2x815m ³ /h Power consumption 111W Exhaust Ø150mm Motor shown on left Shaded filters are functional Specify [L] left or [R] right functional panel	4053
PSH240ESD	Island extractor hood 240x60x8cm 8 filters 5x2.2W LED spots Capacity 2x815m ³ /h Power consumption 211W Exhaust 2x Ø150mm Twin motors	4422

Dimensions [mm]



Options	Reduction Surcharge	INDEX
PSES80	Shaft height 80 cm	Standard
PSES75	Optional shaft height 75cm	No add. cost
PSES85	optional shaft height 85cm	No add. cost
PSSM09*	Made-to-measure shaft height < 1,000mm	+ / + 99
PSSM10	Made-to-measure shaft height > 1,000mm per 100mm	+ / + 36
PSSR**	Recirculation (with washable charcoal filter), not dimmable	+ / + 181
PSSCMVR**CMVR®	(with washable charcoal filter)	+ / + 291
PSEM**	Version for external motor Ø200mm connection	- / - 181
PSSZ*	Built-under version No shaft	- / - 199
PSRAL#	Body + shaft in any RAL colour of your choice	324
PSKF01	Replacement charcoal filter, 15x washable Per filter	+ / + 68

Because of steam and grease from cooking, colour consistency is not guaranteed

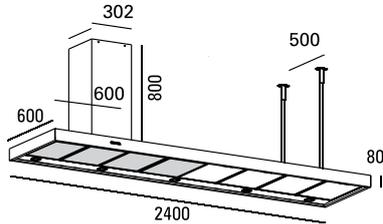
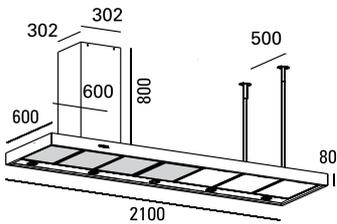
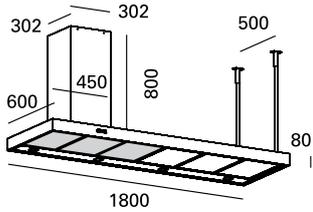
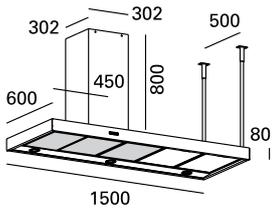


*PSH180ES, PSH210ES and PSH240ES twin reduction | surcharge

**PSH180ESD, PSH210ESD and PSH240ESD twin reduction | surcharge

PSH | Asymmetric island

Dimensions [mm]

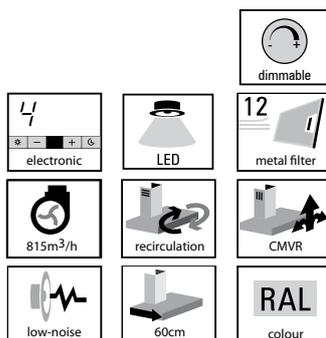


Order code	Description [WxDxT]	INDEX
PSH150ESAL	Island extractor hood 150x60x8cm 5 filters 3x2.2W LED spots 2 supports Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm Shaded filters are functional	2406
PSH150ESAR	As above, but mirror image	2406
PSH180ESAL	Island extractor hood 180x60x8cm 6 filters 4x2.2W LED spots 2 supports Capacity 815m ³ /h Power consumption 108.8W Exhaust Ø150mm Shaded filters are functional	2735
PSH180ESAR	As above, but mirror image	2735
PSH210ESAL	Island extractor hood 210x60x8cm 7 filters 5x2.2W LED spots 2 supports Capacity 815m ³ /h Power consumption 110W Exhaust Ø150mm Shaded filters are functional	3174
PSH210ESAR	As above, but mirror image	3174
PSH240ESAL	Island extractor hood 240x60x8cm 8 filters 5x2.2W LED spots 2 supports Capacity 815m ³ /h Power consumption 110W Exhaust Ø150mm Shaded filters are functional	3614
PSH240ESAR	As above, but mirror image	3614

Note: For all models: cooking area must be symmetrically under the shaft.
Max. width cooking area 120cm

Options

Reduction | Surcharge INDEX



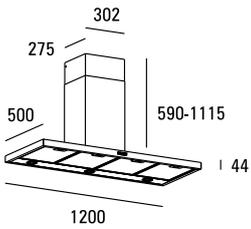
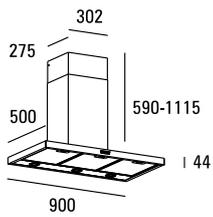
PSER+P80	Shaft height + supports 80cm		Standard
PSER+P75	Optional shaft height + supports 75cm		No add. cost
PSER+P85	Optional shaft height + supports 85cm		No add. cost
PSSM+P09	Made-to-measure shaft height + supports < 1000mm	+ / +	124
PSSM+P10	Shaft height + supports > 1000mm Per 100mm	+ / +	55
PSSR	Recirculation (with washable charcoal filter), not dimmable	+ / +	181
PSSCMVR	CMVR® (with washable charcoal filter)	+ / +	291
PSEM	Version for external motor Ø200mm connection	- / -	181
PSRAL#	Body + shaft in any RAL colour of your choice		On request
PSKF01	Replacement charcoal filter, 15x washable Per filter	+ / +	68

PSX



PSX | Wall

Dimensions [mm]

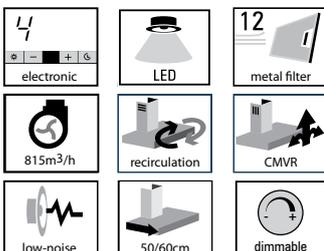


Order code	Description [WxDxT]	INDEX
PSX0905WS	Wall extractor hood 90x50x4cm 3x2.2W LED spots 3 filters Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	1857
PSX0906WS extra deep	As above, but 60cm deep 90x60x4cm	2076
PSX1205WS	Wall extractor hood 120x50x4cm 3x2.2W LED spots 4 filters Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	1967
PSX1206WS extra deep	As above, but 60cm deep 120x60x4cm	2186

PSX1206WS | PSX wall extractor hood 120x60x4cm

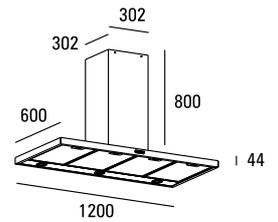
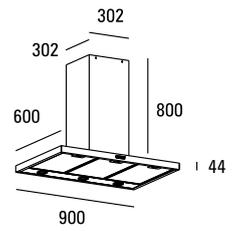


Options	Reduction Surcharge	INDEX
PSSR	Recirculation (with washable charcoal filter), not dimmable	+ / + 181
PSSCMVR	CMVR® (with washable charcoal filter)	+ / + 291
PSEM	Version for external motor Ø200mm connection	- / - 181
PSSM09	Replacement shaft any height < 1000mm	99
PSSM10	Shaft height > 1000mm Per 100mm	+ / + 36
PSSZ	Built-under version No shaft	- / - 199
PSKF01	Replacement charcoal filter, 15x washable Per filter	+ / + 68



Order code	Description [WxDxT]	INDEX
PSX0906ES	Island extractor hood 90x60x4cm 3x2.2W LED spots 3 filters Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	2076
PSX1206ES	Island extractor hood 120x60x4cm 3x2.2W LED spots 4 filters Capacity 815m ³ /h Power consumption 106.6W Exhaust Ø150mm	2296

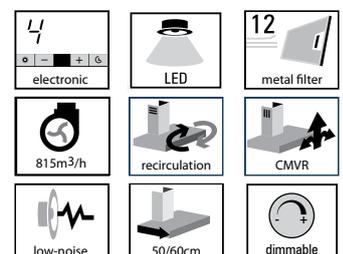
Dimensions [mm]



PSX1206ES | PSX island extractor hood 120x60x4cm



Options	Reduction Surcharge	INDEX
PSES80	Shaft height 80 cm	Standard
PSES75	Optional shaft height 75cm	No add. cost
PSES85	optional shaft height 85cm	No add. cost
PSSM09	Replacement shaft Height to measure < 1000mm	+/+ 99
PSSM10	Shaft height > 1000mm Per 100mm	+/+ 36
PSSR	Recirculation (with washable charcoal filter), not dimmable	+/+ 181
PSSCMVR	CMVR® (with washable charcoal filter)	+/+ 291
PSEM	Version for external motor Ø200mm connection	-/- 181
PSKF01	Replacement charcoal filter, 15x washable Per filter	+/+ 68



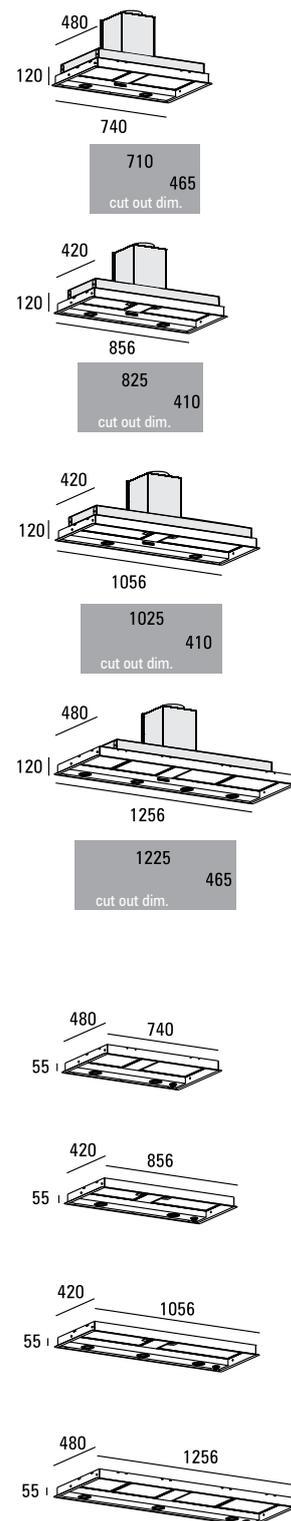
PSFR



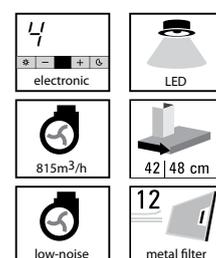
PSFR | built-in unit | filter frame

Order code	Description [WxHxD]	INDEX
PSFR074	Built-in unit 74x48x12+29cm 2x2.2W LED spots 2 filters Capacity 815m³/h Power consumption 104.4W Exhaust Ø150mm	1308
PSFR074E	As above for use with external motor [order separately] Duct connection Ø200mm Power consumption motor + 4.4W	978
PSFR086	Built-in unit 86x42x12+29cm 2x2.2W LED spots 2 filters Capacity 815m³/h Power consumption 104.4W Exhaust Ø150mm	1417
PSFR086E	As above for use with external motor [order separately] Duct connection Ø200mm Power consumption motor + 4.4W	1088
PSFR106	Built-in unit 106x42x12+29cm 2x2.2W LED spots 2 filters Capacity 815m³/h Power consumption 104.4W Exhaust Ø150mm	1637
PSFR106E	As above for use with external motor [order separately] Duct connection Ø200mm Power consumption motor + 4.4W	1308
PSFR126	Built-in unit 126x48x12+29cm 4x2.2W LED spots 4 filters Capacity 815m³/h Power consumption 108.8W Exhaust Ø150mm	1857
PSFR126E	As above for use with external motor [order separately] Duct connection Ø200mm Power consumption motor + 8.8W	1527
PSFRK074	Filter frame 74x48x6cm 2x2.2W LED spots 2 filters Power consumption 4.4W Rocker switch and transformer For recess dimensions see PSFR074	539
PSFRK086	Filter frame 86x42x6cm 2x2.2W LED spots 2 filters Power consumption 4.4W Rocker switch and transformer For recess dimensions see PSFR086	649
PSFRK106	Filter frame 106x42x6cm 3x2.2W LED spots 2 filters Power consumption 6.6W Rocker switch and transformer For recess dimensions see PSFR106	759
PSFRK126	Filter frame 126x48x6cm 3x2.2W LED spots 4 filters Power consumption 6.6W Rocker switch and transformer For recess dimensions see PSFR126	933

Dimensions [mm]



Options	Reduction Surcharge	INDEX
REC01A* Recirculation [version installed in high cupboard], not dimmable	+/+	285
REC01B* Recirculation [installed on wall and ceiling], not dimmable	+/+	437
CMVR01S* CMVR® [installation in high cupboard]	+/+	175
CMVR01B* CMVR® [installed on wall and ceiling]	+/+	547
PAAB Remote control	+/+	112
PSKF01 Replacement charcoal filter, 15x washable Per filter	+/+	68



Made-to-measure | Extractor hood examples

BEGA | This partition wall extractor with its steep angle creates a modern-classic look. The extractor is fitted with 6 LED spots and 5 grease filters.



2 | 20 | Display kitchen at the Hotel Villa Ruimzicht with an impressive 2 | 20 design, the unique 2cm slimline extractor hood 360x70x2+4cm | Accelair® panels, twin shafts and twin motors.





MALAWA | 4mm island extractor, the subtle 4mm stainless steel design which runs throughout the worktop, extractor hood, wall coverings and cupboards.



WINANI | Block island model with dark outline on the top 130x110x60cm rim extractor 4 settings | 8 LED spots.

Ventilation Technology





Ventilation Technology

As a specialist in ventilation we are always well informed about the latest developments and options for kitchen ventilation. In this section, we offer you some basic guidelines to support you in making recommendations. In specific cases where there are complications, it is always a good idea to get in touch with our experienced in-house sales service.

With our extensive range of motors for installation both indoors and out, we have a solution available for every situation. With a variety of sizes of round and flat HR+ ducts, we can provide the perfect connection between hood and motor. In particular, we present the CMVR® system here. This patented system is specifically designed for use with a central mechanical ventilation (CEV) system or heat recovery system [HRV].

Ground rules



Air supply

No kitchen ventilation can be provided without an adequate and reliable supply of air.



Motor capacity

As a rule of thumb for motor capacity, the motor needs to be able to exchange 10 times the volume of the space concerned per hour, or up to 20 times when using a grill, chip fryer or wok burner. With large or open kitchens the situation is not so straightforward.



Checklist

For a detailed recommendation covering ventilation technology you need to supply a sketch of the situation, plus detailed information about:

- Type of cooking equipment, dimensions and position under the hood.
- Diameter, length and number of bends in the evacuation duct.
- Size and layout of the kitchen.
- Position of any openings [doors, windows, open hearth, etc.].
- Options for locating external motor [e.g. attic | scullery | wall | roof].

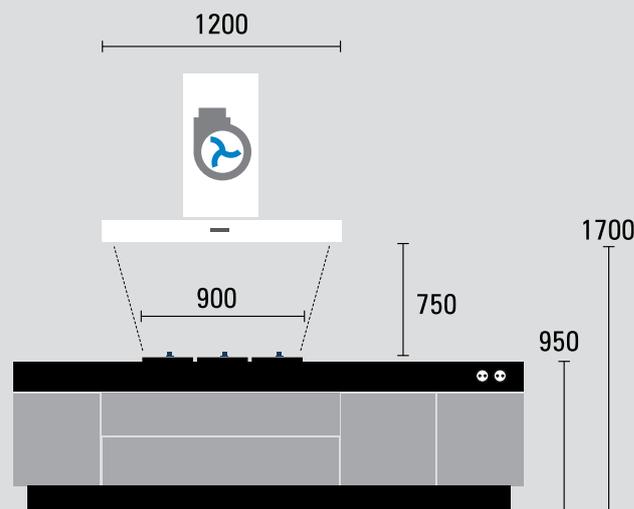


Segmented air extraction

For larger cooking surfaces (approximately 120cm or more), we normally provide twin controls and motors to be able to provide extraction where it is most needed. This form of ventilation also helps to create a comfortable environment, given that much less hot air (and so humidity) is withdrawn from the room and the noise level is lower.

Basic design for good extraction

When designing your kitchen, bear the following recommended guidelines in mind. The sketch shows an optimum situation.



Basic configuration
[Dimensions in mm]

- Cooking vapours spread sideways, so use an extractor hood which is larger than the dimensions of the cooking area.
- The distance between the working surface and a wall-mounted hood needs to be about 75cm.
- The distance between the worktop and an island hood depends on the user.
- If the hood is hanging higher up then it also needs to be wider.
- Make sure that the extraction hood and motor are centred above the cooking area.

External motor

Pulling the air out from the end of the duct with an external indoor, roof or outside wall motor delivers a much better result than pushing the air out from inside. It also means that motors with higher capacity can be used and the noise level in the kitchen is lower because the motor is located somewhere else.

Reducing noise levels

We recommend that when using an external motor, you always install at least 2 metres of acoustically insulated duct, as this will further reduce the noise level. The effective noise reduction is 18dB for the first metre and 3dB for the second metre.

Cold air

With an external outdoor motor a non-return valve is supplied as standard. We recommend that this be located as far as possible towards the end of the duct. For external indoor motors and hoods with internal EC motors, you need to order a non-return valve yourself. Note: the valve is noisy; for a truly low noise solution we recommend a motorised valve. More recommendations for electronic connections are available on request.

Internal EC motor

ABK supplies a powerful 815m³/h low noise EBM motor as standard; for recirculation we use a 520m³/h AC motor. Some models even have dual motors. Fitting a non-return valve at the end of the duct is desirable.

Indoor motor [external]

A motor located outside the kitchen, e.g. in an attic or scullery. The motor should be placed as close to the end of the duct as possible. These motors are available in a number of different capacities from 815m³/h to 1080/2160m³/h. Fitting a non-return valve at the end of the duct is desirable.

Outside wall motor

The same as an external indoor motor, but located on an outside wall. Available from 815m³/h to approximately 1080m³/h. Motors are equipped with a non-return valve.

Tiled roof motor

The same as an external outside wall motor, but adapted for installation on sloping and tiled roofs. Available in 815/1080/2160m³/h. The motors are equipped with a roof mounting frame, lead sheet and non-return valve.

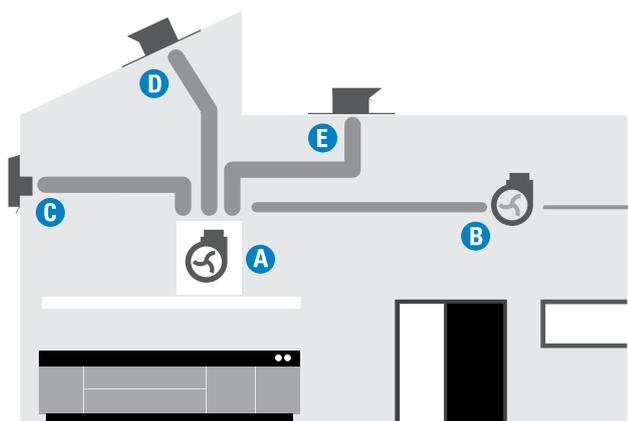
Flat roof motor

Same as tiled roof motor, but suitable for flat roofs. Available from 815m³/h up to 2160m³/h. Motors come with a roof mounting frame, flashing and non-return valve.



Noise level of an external motor

- EC-146 series - 815m³/h 56dB[A]
- EC-225 series - 1080m³/h 62dB[A]
- EC-300 series - 2160m³/h 69dB[A]
- EC240AP series - 1075m³/h 62dB[A]



We would like to help you with the best possible ventilation advise, specifically for your situation. Please ask one of our specialists

Recirculation | CMVR[®]



Recirculation

Besides an extractor hood with an internal or powerful external motor, extracting the cooking vapours to the outside in an effective manner, you can also choose for recirculation or CMVR®. In this procedure the cooking vapours are not extracted to the outside but the grease is extracted by way of a grease filter and any cooking smells are removed by a high-quality, washable carbon filter. The clean air is then returned to the kitchen area by way of either grills in the shaft or extractor hood, or by way of a distribution box for ceiling and built-in units. The big advantage is that in this way no warm air (= energy) is unnecessarily extracted to the outside and there is no need to install a long duct. This also means that the motor can have a smaller capacity.

However, recirculation has in principle been developed for induction cooking because this type of cooking does not produce combustion gasses, which will not be removed from the area when using recirculation. This also applies to humidity. This technology is very well adapted to the current and future regulations regarding energy saving and can solve certain problems, but it also has some practical negative effects on a healthy living environment.

CMVR®

Besides a recirculation version, most hoods are also available in the so-called CMVR® version. Contrary to 100% recirculation, this system makes partial use of extraction by way of the central ventilation system already present [CEV with or without HRV]. This can be an individual system in one single house or a system for several houses. Due to a patented safety mechanism the balanced ventilation system is never interrupted, meaning that it not only saves energy but also adds to a healthy living environment. In other words, a best-of-both-worlds solution.

Because developments in energy saving technology are becoming increasingly effective, we expect that this technology will become more important and will also be applied more often at an international level. For more specific information on CMVR®, also on site, you can contact our office or see the explanation in the pricelist.

We would like to help you with the best possible ventilation advise, specifically for your situation. Please ask one of our specialists

Maximum comfort + Minimal energy consumption

Disadvantages current solutions:

Motorless extractors: poor extraction when you are cooking

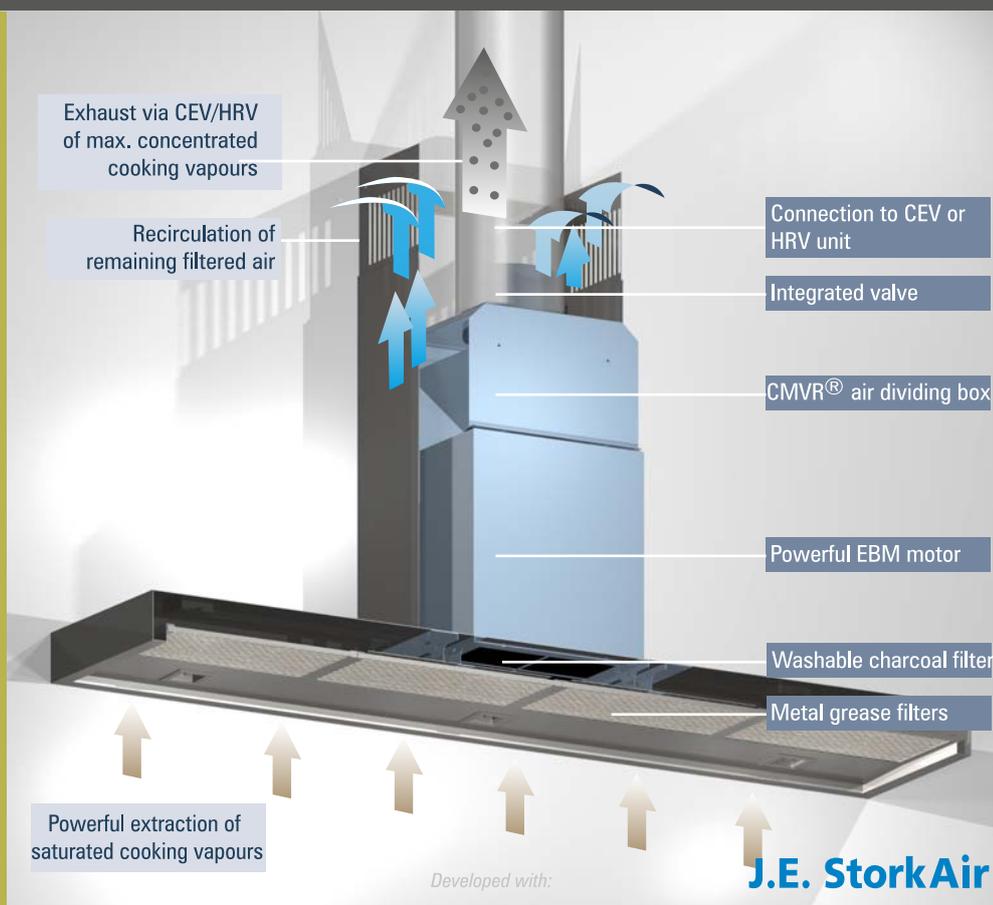
100% recirculation: unhealthy indoor climate; gasses, moist and heat stay in kitchen

Regular extractor with duct to the outside: unnecessary loss of energy (heat)

Advantages CMVR[®] system

- + Powerful extraction by super low noise 820m³/h motor
- + Healthy indoor climate
- + Available on all ABK InnoVent extractors

**Can be fitted
directly to any
CEV
[central exhaust ventilation]
or HRV
[heat recovery ventilation]
system**



CMVR[®] system

Patented by ABK InnoVent bv

The benefits of a Central Exhaust Ventilation (CEV) system and/or heat exchanger units are now enjoyed in many modern homes. The heat of the polluted air to be evacuated is transferred to warm up the incoming air and this saves valuable energy. This is also known as a balanced ventilation system. Normal extractor hoods cannot be attached to this type of system because they would unbalance the system. For these situations ABK innovent has developed its unique CMVR[®] system. This "green" system fits in perfectly with current and future energy-saving developments.

The technically innovative system combines an internal 520m³/h motor with the CEV system. Only the air which is not drawn off by the CEV system is filtered intensively and returned to the kitchen.

Benefits of a CMVR[®] hood

- Silent extraction of 520m³/h mainly via the CEV system
- Optimum extraction via CEV and heat exchanger unit of the pollution from cooking steam, smells and humidity at maximum concentration
- Excellent grease filtering
- Energy-saving and maintenance of the balanced ventilation system
- Healthy indoor conditions thanks to permanent extraction
- Can be applied with any ABK innovent models

How the hybrid hood works with the CMVR[®] system

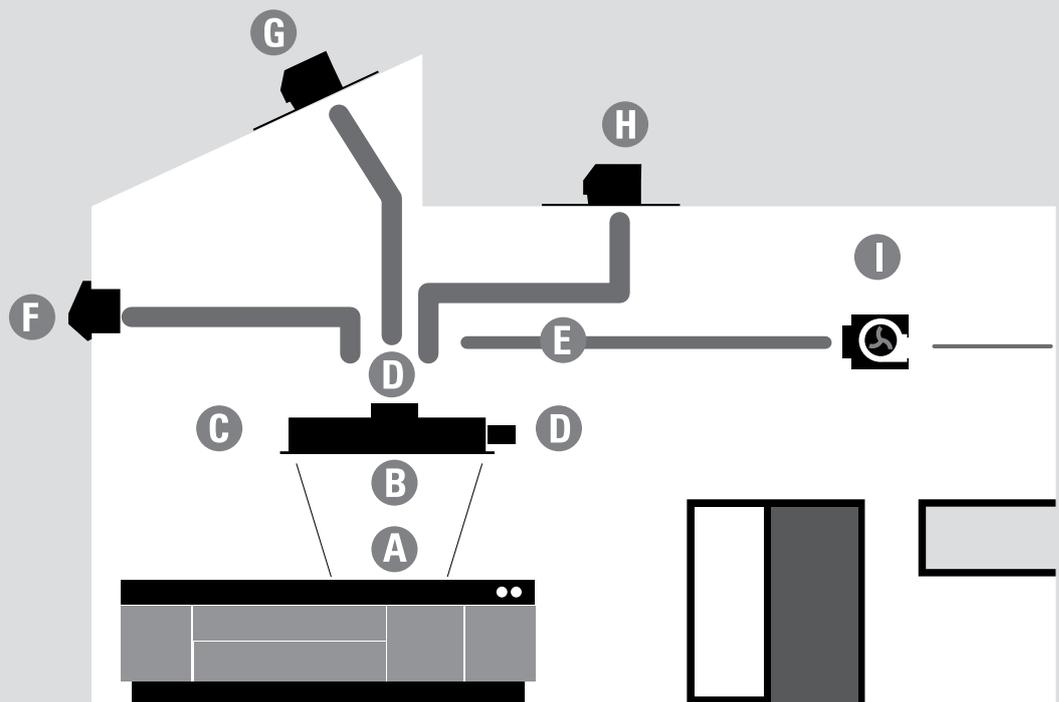
- 1 The air is drawn in powerfully and first is filtered through the metal grease filter.
- 2 Then the air is pulled through a special charcoal cassette filter where the odour particles are neutralised by the washable active charcoal filter (can be washed up to 15 times in the dishwasher).
- 3 The filtered air is blown into a special air chamber.
- 4 In this air chamber the air is divided. A modulator valve ensures that the CEV or heat exchanger system is supplied with the maximum capacity which it can draw off.
- 5 The remaining air, which cannot be fed directly to the CEV or heat exchanger system, is recirculated back into the kitchen through the slots on the side of the shaft.

We would like to help you with the best possible ventilation advise, specifically for your situation. Please ask one of our specialists

For a detailed recommendation for your specific installation, we need at least the following details:

- A Dimensions, type and power of the cooking area
- B Height to the suspended ceiling
- C Installation height | Just 176mm with HR+ duct
- D Type of connection: Above [A] or on Left [L] or Right [R] side
- E Duct diameter which exists or will be installed, total length and number of bends
- F Type of external motor
 - Outside wall [F] tiled roof [G] flat roof [H] or external indoor motor [I]

Further on in this catalogue you will find a complete overview of all the options available for external indoor and outdoor motors, ducts, gratings or roof conduits.



We would like to help you with the best possible ventilation advise, specifically for your situation. Please ask one of our specialists

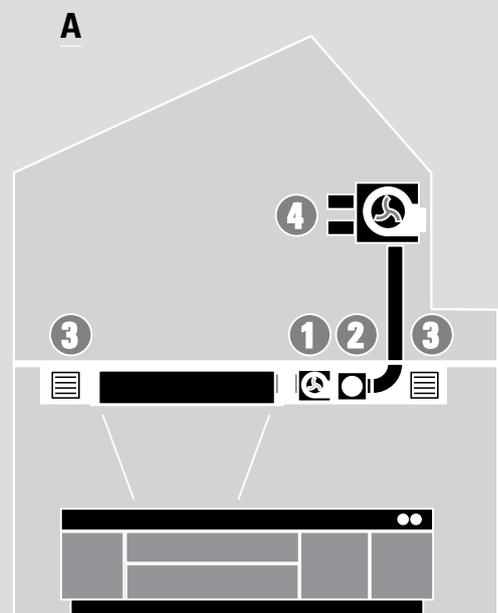
see A. Installing recirculation or CMVR® box in a built-in or ceiling unit

For a CMVR® or recirculation installation with an island design, we recommend the following design:

Use an external indoor EC motor of type GEC146BHR or GEC225BHR [only for recirculation][1]. This can be placed flush in the suspended ceiling.

Use the CMVR® box[2] behind this motor, where two small exhaust gratings with charcoal filters need to be fitted[3].

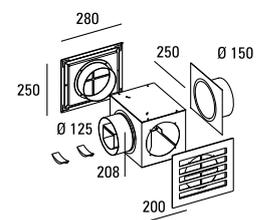
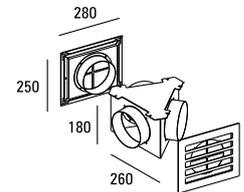
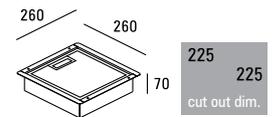
The third output from the modulator valve can be connected directly to the CEV unit[4].



Installation | Recommendation

Order code	Description [WxDxT]	INDEX
REC01A	Recirculation box Installation in upper cupboard Only suitable for installation in an upper cupboard, up to 815m ³ /h Includes PAKF04 charcoal filter.	285
PAKF04	Replacement charcoal filter, 15x washable Per filter	+ / + 68
REC01B	Recirculation box Wall and ceiling installation Available with either outdoor or indoor EC motor up to 1080m ³ /h Includes 2 exhaust gratings 2 washable charcoal filters Connection Ø150mm No ducts	437
PSKF01	Replacement charcoal filter, 15x washable Per filter	+ / + 68
CMVR01B	CMVR® box Wall and ceiling installation Available with either outdoor or indoor EC motor up to 1080m ³ /h Modulator valve can be installed on CEV systems of 120 150 180m ³ /h Terminal box can be mounted directly on energy-efficient motor Includes 2 discharge grilles Washable charcoal filters Connection Ø150mm Modulator valve Ø125mm Ducts not included	547
PSKF01	Replacement charcoal filter, 15x washable Per filter	+ / + 68

Dimensions [mm]

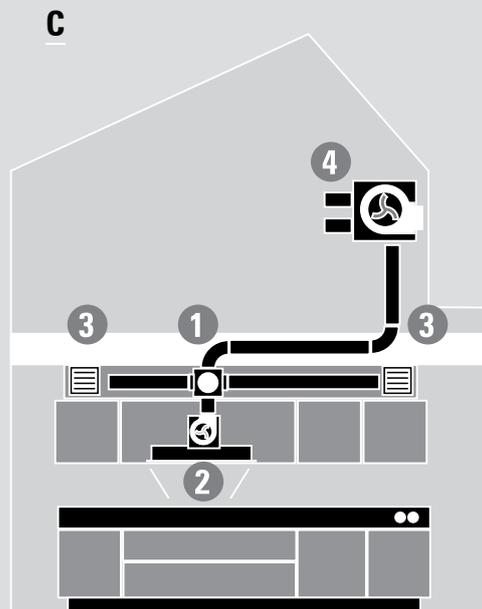
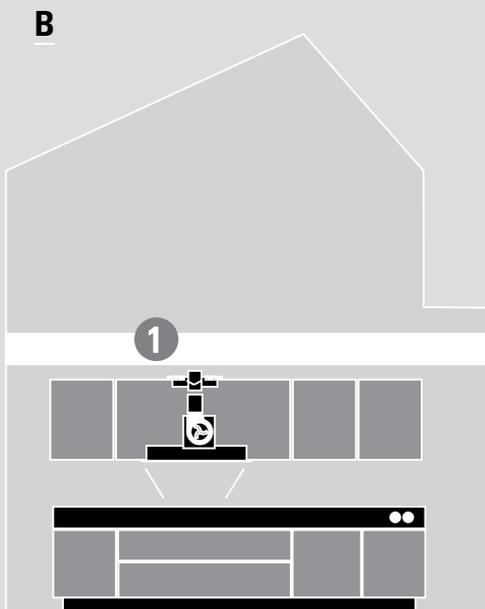


see B. Installing a recirculation box in an upper cupboard/PSFR

Attach the NEERIM with a hose to the recirculation box[1]. Connect the pressure valve directly to the CEV unit[2]. Make sure that the exhaust openings on the upper side next to the pressure valve (for recirculation of the remaining air) are kept unblocked and feed directly into the kitchen space.

see C. Installation of a CMVR® box on a NEERIM wall unit

Place the CMVR® box[1] above or in the cupboard and attach the NEERIM[2] with a hose. Use the two side openings to connect the two exhaust gratings with charcoal filters[3]. The third output from the modulator valve can be connected directly to the CEV unit[4].



We would like to help you with the best possible ventilation advise, specifically for your situation. Please ask one of our specialists

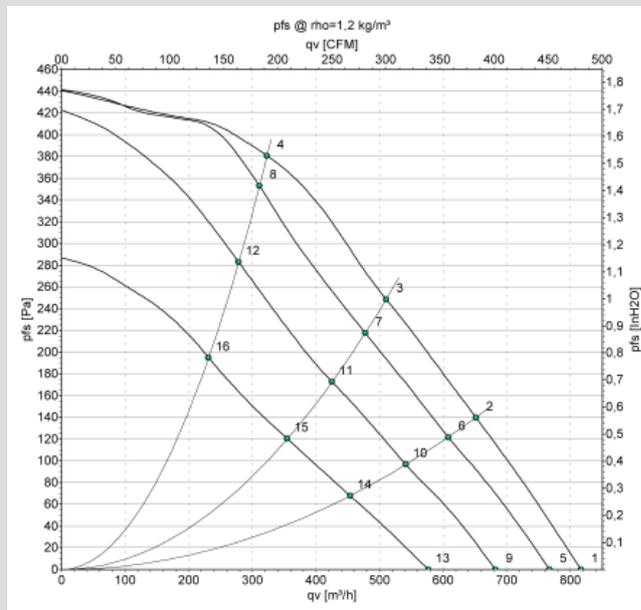
Internal EC motor



Standard internal EC motor | This 815m³/h, constant pressure EBM motor is fitted in most of the extractor hoods. The motor has an exceptional pressure/capacity ratio, see attached diagram. For a motor it is not only important to be able to move a certain volume of air, but also to be able to overcome a certain amount of pressure. The amount of pressure to be overcome is affected by factors such as:

- Length of the duct
- Number of bends
- Diameter of the duct
- Smoothness of the duct.

Motor noise level | The EBM motors are some of the quietest motors to be used in modern extraction technology. The noise is further reduced by applying sound reduction components, such as specially designed sound insulation motor casings. There are several factors which influence the sound level, such as the precise location, dimensions, length, bends and shape of the exhaust ducts. The main impact will be gained by including an acoustic insulation sleeve in your duct in order to reduce the sound levels. The noise level of 56dB[A] which applies to this motor is the data for the unloaded motor, measured at speed 4



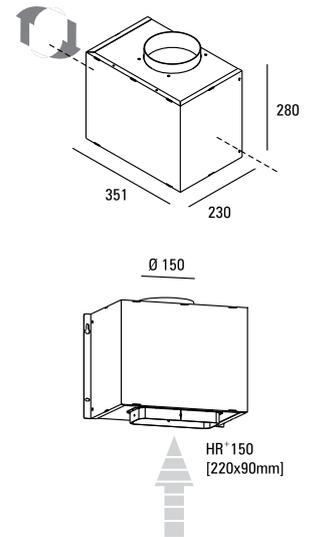
Internal motor for recirculation and CMVR[®] | This 520m³/h, constant pressure EBM motor is used especially in the recirculation and CMVR[®] version. In this version the extracted air is fully or partly [CMVR[®]] blown back into the kitchen environment. It is extremely important that the aspired air is well filtered, not only for grease but also for cooking odours. This is done using washable active charcoal filters.

Note: For PA hoods which are fitted with magnetic filters a 815m³/h motor is used.

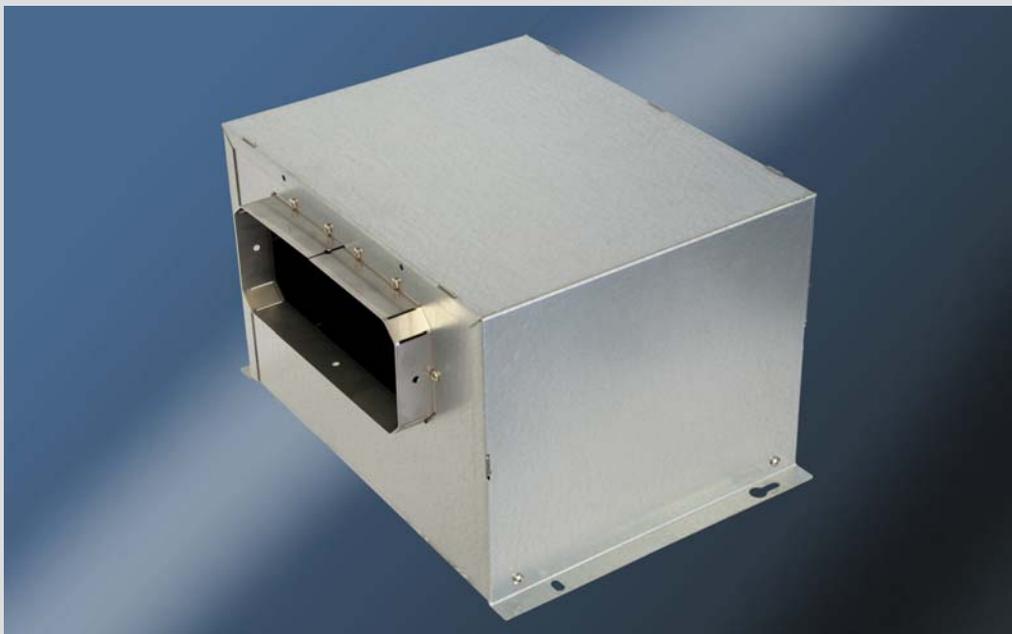
The washable active charcoal filters we use need to be cleaned every two months, during normal use. This can also be done in the dishwasher. The filters can be washed up to a maximum of 15 times. After this time the charcoal filter needs to be replaced. Using saturated charcoal filters for longer than this means inadequate filtering and can also have a negative impact on health.

External indoor EC motor

Order code	Description [WxDxT]	INDEX
GEC146BHR Extra flat	External indoor motor for HR+150 duct 815m ³ /h supply/exhaust HR+150/Ø150mm Power consumption 100W Galvanised casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Installation for wall, floor or ceiling	649
Note:	Use at least HR+150 or Ø200mm ducting whenever possible Always install the motor with the shaft horizontally	
GEC225BHR Extra flat	External indoor motor for HR+150 duct 1080m ³ /h supply/exhaust HR+150/Ø150mm Power consumption 230W Galvanised casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Installation for wall, floor or ceiling	868
Note:	Use at least HR+150 or Ø200mm ducting whenever possible Always install the motor with the shaft horizontally	



GEC146BHR | External indoor motor for HR+150 duct

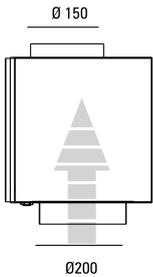
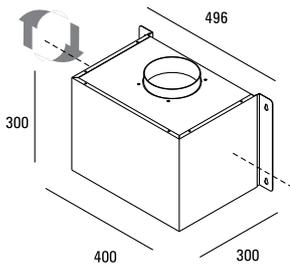


Options	Reduction Surcharge	INDEX
KSET03EC	5-wire motor cable extension 3m ¹ +/+	54
KSET08EC	5-wire motor cable extension 8m ¹ +/+	108

Note: Each meter of duct length and each bend has a negative impact on extraction efficiency.

External indoor EC motor

Dimensions [mm]

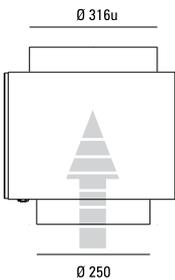
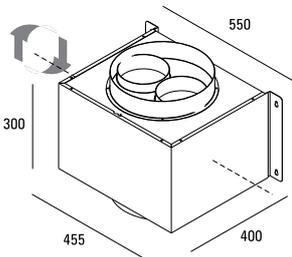


Order code	Description	INDEX
GEC146B	External indoor motor 815m ³ /h supply/exhaust Ø200/150mm Power consumption 100W Galvanised casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Installation for wall, floor or ceiling	604

Note: Use at least Ø200mm duct whenever possible
Always install the motor with the shaft horizontally

GEC225B	External indoor motor 1080m ³ /h supply/exhaust Ø200/150mm Power consumption 230W Galvanised casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Installation for wall, floor or ceiling	824
---------	--	-----

Note: Use at least Ø200mm duct whenever possible
Always install the motor with the shaft horizontally



GEC300B extra powerful	External indoor motor* 2160m ³ /h supply/exhaust Ø250/315mm Power consumption 460W Galvanised casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Installation for wall, floor or ceiling	1592
---------------------------	---	------

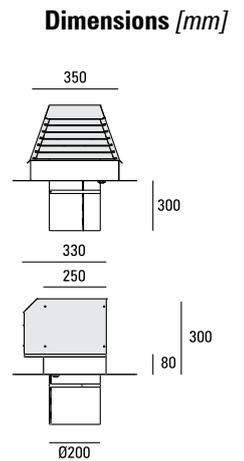
Note: Use at least Ø250mm duct whenever possible
Always install the motor with the shaft horizontally

Options	Reduction Surcharge	INDEX
KSET03EC 5-wire motor cable extension 3m ¹	+ / +	54
KSET08EC 5-wire motor cable extension 8m ¹	+ / +	108

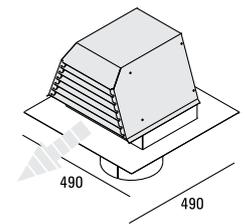
Note: Each meter of duct length and each bend has a negative impact on extraction efficiency.

Flat roof EC motor

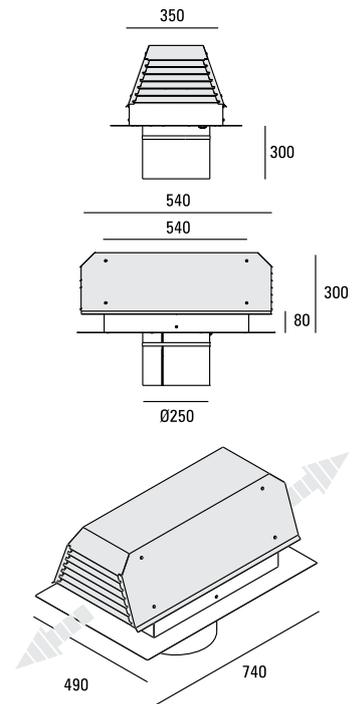
Order code	Description	INDEX
GEC146F	Flat roof motor 815m ³ /h Connection Ø200mm Power consumption 100W Stainless steel casing Incl. flashing Semi-flex Ø200mm, L= 300mm Non-return valve 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood	1043
Note:	Use at least Ø200mm duct whenever possible	



GEC225F	Flat roof motor 1080m ³ /h Connection Ø200mm Power consumption 230W Stainless steel casing Incl. flashing Semi-flex Ø200mm, L= 300mm Non-return valve 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood	1263
Note:	Use at least Ø200mm duct whenever possible	



GEC300F extra powerful	Flat roof motor* ±2160m ³ /h Connection Ø250mm Power consumption 460W Stainless steel casing Incl. flashing Semi-flex Ø250mm, L= 300mm Non-return valve 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood	2296
Note:	Use at least Ø250mm duct whenever possible	

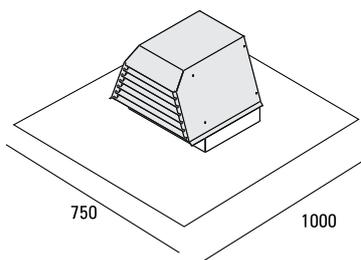
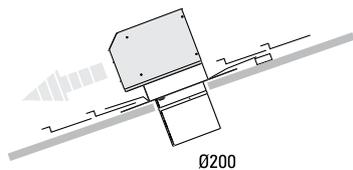


Options	Reduction Surcharge	INDEX
KSET03EC 5-wire motor cable extension 3m ¹	+ / +	54
KSET08EC 5-wire motor cable extension 8m ¹	+ / +	108

Note: Each meter of duct length and each bend has a negative impact on extraction efficiency.

Tiled roof EC motor

Dimensions [mm]



Order code	Description	INDEX
GEC146D	<p>Tiled roof motor 815m³/h Connection Ø200mm Power consumption 100W Stainless steel casing With "lead sheet" Incl. roof mounting frame Semi-flex Ø200mm, L= 300mm Non-return valve 5-wire cable: 1.5m¹ to motor 2m¹ to extractor hood Roof gradient 22-48 degrees</p> <p>Note: Use at least Ø200mm duct whenever possible</p>	1263

GEC225D	<p>Tiled roof motor 1080m³/h Connection Ø200mm Power consumption 230W Stainless steel casing With "lead sheet" Incl. roof mounting frame Semi-flex Ø200mm, L= 300mm Non-return valve 5-wire cable: 1.5m¹ to motor 2m¹ to extractor hood Roof gradient 22-48 degrees</p> <p>Note: Use at least Ø200mm duct whenever possible</p>	1483
---------	---	------

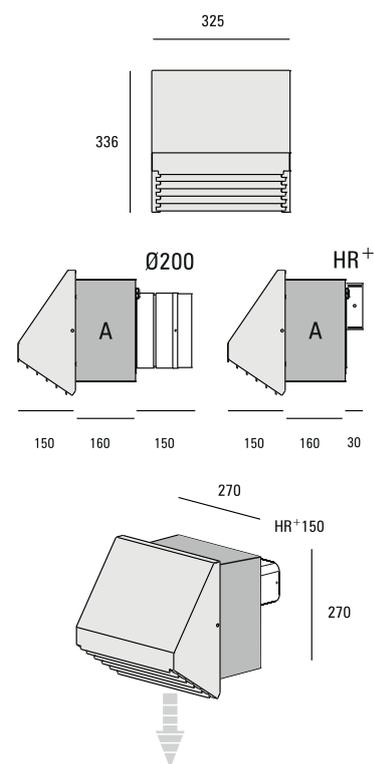
Options	Reduction Surcharge	INDEX
KSET03EC	5-wire motor cable extension 3m ¹	+ / + 54
KSET08EC	5-wire motor cable extension 8m ¹	+ / + 108

Note: Each metre of duct length and each bend has a negative impact on extraction efficiency.

Outside wall EC motor

Order code	Description	INDEX
GEC146AHR	External wall motor for HR+150 duct 815m ³ /h HR+150 supply duct [220x90mm] With non-return valve Power consumption 100W Stainless steel casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Part A inserted into the wall, recess dimensions 275x275mm	978
GEC146A	Outside wall motor As above, but with Ø200mm supply Incl Ø200mm non-return valve	933
Note:	Use at least HR+150 or Ø200mm duct whenever possible	

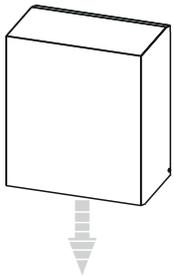
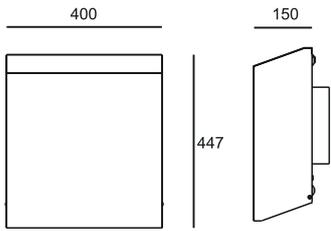
Dimensions [mm]



GEC225AHR	External wall motor for HR+150 duct 1080m ³ /h HR+150 supply duct [220x90mm] With non-return valve Power consumption 230W Stainless steel casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood Part A inserted into the wall, recess dimensions 275x275mm	1198
GEC225A	Outside wall motor As above, but with Ø200mm supply Incl Ø200mm non-return valve	1153
Note:	Use at least HR+150 or Ø200mm duct whenever possible	

Outside wall EC motor

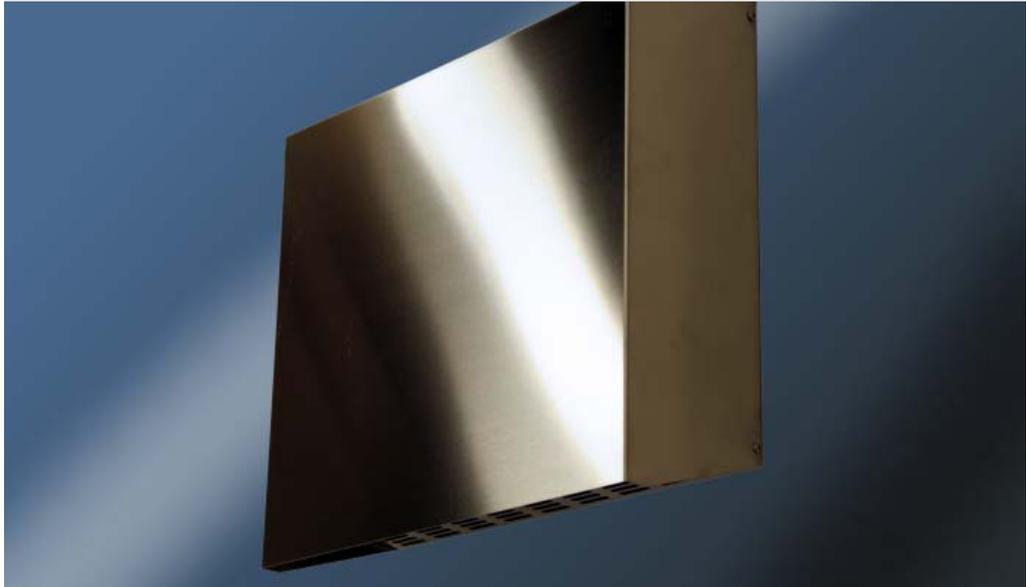
Dimensions [mm]



Type: GABK240AP

Order code	Description	INDEX
GEC240AP New	Outside wall motor 1075m ³ /h Ø200mm supply Incl. Ø200mm non-return valve Power consumption 82W Stainless steel casing 5-wire cable: 1.5m ¹ to motor 2m ¹ to extractor hood	1373
Note:	Use at least Ø200mm duct whenever possible	

GEC240AP | Outside wall motor



GEC146AHR | Outside wall motor



Options	Reduction Surcharge	INDEX
KSET03EC 5-wire motor cable extension 3m ¹	+ / +	54
KSET08EC 5-wire motor cable extension 8m ¹	+ / +	108

Note: Each metre of duct length and each bend has a negative impact on extraction efficiency.

Round ducts



Round duct

Dimensions [mm]



Order code **Description [WxDxT]** **INDEX**

Tube connector

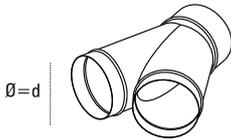
KV0304150M	Tube connector Metal connecting piece d=internal Ø150mm	9
KV0304200M	Tube connector Metal connecting piece d=internal Ø200mm	11
KV0304250M	Tube connector Metal connecting piece d=internal Ø250mm	13
KV0304315M	Tube connector Metal connecting piece d=internal Ø315mm	20

Reducer



KV0304150R	Metal reducer a=Ø150mm to b=Ø125mm	24
KV0304215R	Metal reducer a=Ø200mm to b=Ø150mm	38
KV0304251R	Metal reducer a=Ø250mm to b=Ø200mm	25
KV0304313R	Metal reducer a=Ø315mm to b=Ø250mm	35
KV0304312R	Metal reducer a=Ø315mm to b=Ø200mm	45

Y-piece



KV03041502	45° Y-piece d=Ø150mm externally on all connections	237
KV03042002	45° Y-piece d=Ø200mm externally on all connections	279
KV03042502	45° Y-piece d=Ø250mm externally on all connections	350

Non-return valve



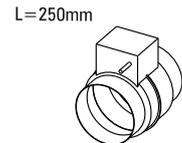
KV02011500	Non-return valve d=Ø148mm external Metal with butterfly valve	44
KV02012000	Non-return valve d=Ø198mm external Metal with butterfly valve	60
KV02012500	Non-return valve d=Ø248mm external Metal with butterfly valve	86

Note: **For large quantities net prices apply [on request]**

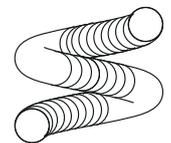
Order code	Description [WxDxT]	INDEX
Elbow		
	With metal bend radius	
KV03051512	90° elbow d=Ø148mm external	33
KV03052002	90° elbow d=Ø198mm external	44
KV03052501	90° elbow d=Ø248mm external	71
KV03053151	90° elbow d=Ø313mm external	103



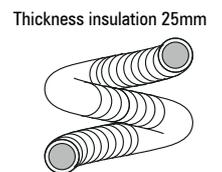
Motorised modulator valve		
KV02021500	Motorised modulator valve Switch Ø150mm	304
KV02022000	Motorised modulator valve Switch Ø200mm	310



Semi-flexible tube		
KV0301150S	Semi-flexible tube Ø152mm internal L= 3m ¹	37
KV0301200S	Semi-flexible tube Ø203mm internal L= 3m ¹	54
KV0301250S	Semi-flexible tube Ø254mm internal L= 3m ¹	79
KV0301315S	Semi-flexible tube Ø315mm internal L= 3m ¹	105



Acoustically insulated tube		
KV0301151i	Sonoflex tube internal Ø153mm internal L= 10m ¹	170
KV0301201i	Sonoflex tube internal Ø203mm internal L= 10m ¹	208
KV0301251i	Sonoflex tube internal Ø254mm internal L= 10m ¹	250
KV0301311i	Sonoflex tube internal Ø315mm internal L= 10m ¹	318



Clamping ring		
KV03023250	Metal clamp Clamping range Ø60 to Ø325mm	7



Tape		
KV03020500	Aluminium tape Self-adhesive 50mm wide 45m ¹ per roll	24
KV03020501	Duct tape Self-adhesive 50mm wide 50m ¹ per roll	25

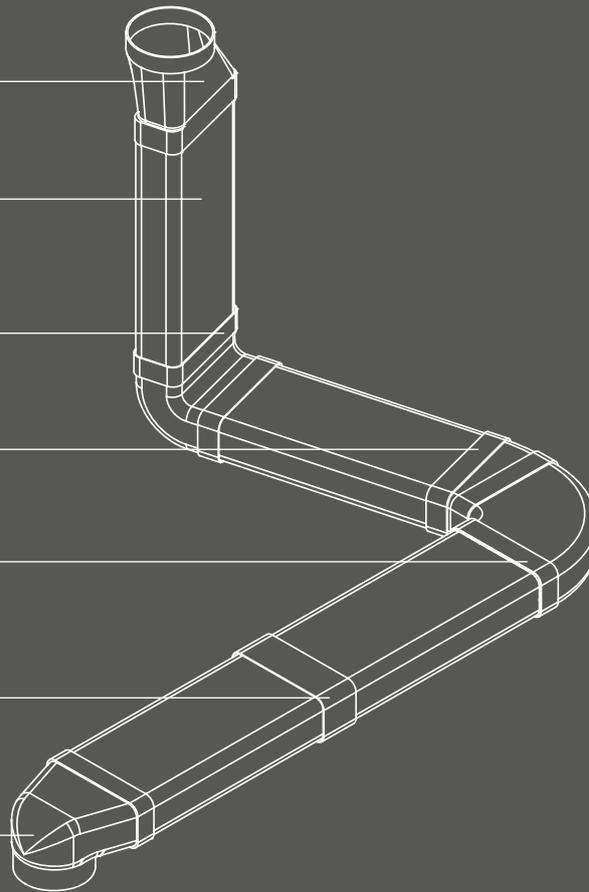


Note: For large quantities net prices apply [on request]

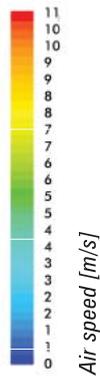
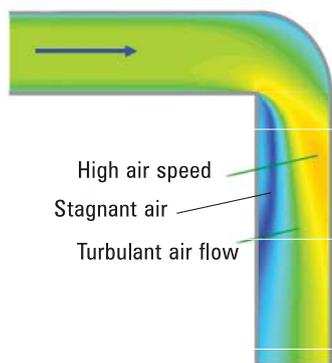
HR+ flat duct



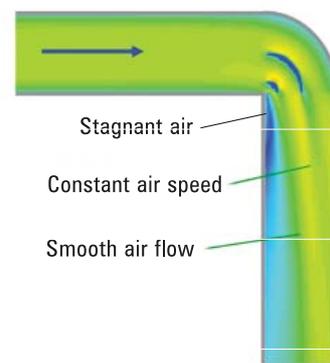
- Adaptor
HR⁺ 150 | KV03051528
- Flat duct pipe
HR⁺ 150 | KV03051524
- Vertical elbow
HR⁺ 150 | KV03051527
- Horizontal elbow 15°
HR⁺ 150 | KV03051532
- Horizontal elbow 90°
HR⁺ 150 | KV03051526
- Pipe connector
HR⁺ 150 | KV03051525
- Elbow adaptor
HR⁺ 150 | KV03051521



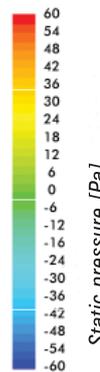
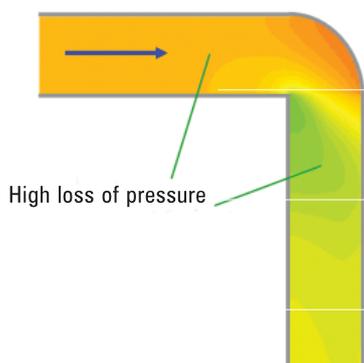
Conventional flat duct



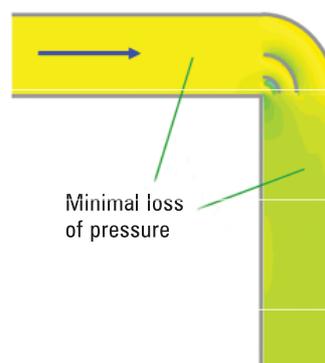
HR⁺ with integrated air conductors



Conventional flat duct

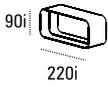
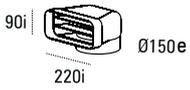
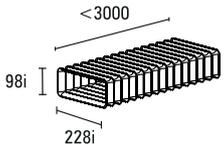
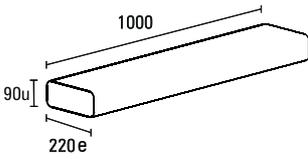


HR⁺ with integrated air conductors



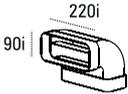
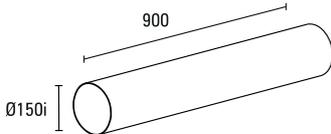
HR+ 150 flat duct

Dimensions [mm]



Order code	Description [WxDxT]	INDEX
KV03051524	HR+ 150 flat duct Dim. 220x90mm Length 1m1 White plastic	33
KV03051555	HR+ 150 flexible duct Dim. 220x90mm Length 3m1 Plastic with steel core Note: Install connector KV03051525 Increases resistance	94
KV03051521	HR+ 150 elbow joint Transition from Ø150>220x90mm flat duct With air conductors	33
KV03051525	HR+ 150 connector Connector socket 220x90mm	10
KV03051532	HR+ 150 horizontal bend 15 degrees Bend without air conductors	20

HR+ 150 flat duct

Order code	Description [WxDxT]	INDEX	Dimensions [mm]
KV03051526	HR+ 150 horizontal bend 90 degrees Bend with air conductors	36	
KV03051527	HR+ 150 vertical bend Bend with air conductors	33	
KV03051528	HR+ 150 transition Transition flat duct 220x90 > Ø150mm	26	
KV03051529	HR+ 150 round duct Ø150mm Dim. Ø150mm Length 0.9 m1 White plastic	37	
KV03051530	HR+ 150 round duct Ø150mm connector Connector for circular tubes	12	

i = internal, | e = external

Note: **For large quantities net prices apply [on request]**
Find out about additional parts for mechanical ventilation and ducts from our in-house sales team

Grilles | outlets



Order code	Description [WxDxT]		Dimensions [mm]
KV02031524 Stainless steel	Wall outlet		
	Telescopic wall outlet connection Ø150mm Fixed blades With non-return valve Range 275-490mm wall outlet size approx. Ø155mm	156	
KV02031527 New	Comfort wall outlet		
	Telescopic wall outlet connection Ø150mm Automatic Non-return valve not necessary Range 314-500mm wall outlet size approx. Ø155mm	287	
KV02031521	Wall grille Wall grille connection Ø150mm White plastic wall grille with 3 inset blades	32	
KV02031502 Stainless steel	Wall grille		
	Stainless steel wall grille connection Ø150mm Dim. [AxB] 180x233mm Non-return valve c = 148mm external wall outlet size Ø155mm	159	
KV02032001 Stainless steel	Wall grille		
	Stainless steel wall grille connection Ø200mm Dim. [AxB] 260x283mm Non-return valve c = 198mm external wall outlet size Ø205mm	259	
KV02032501 Stainless steel	Wall grille		
	Stainless steel wall grille connection Ø250mm Dim. [AxB] 310x333mm Non-return valve c = 248mm external wall outlet size Ø255mm	325	
KV02031522 Stainless steel	HR+ (energy efficient) wall grille		
	HR+ 150 Wall grille connection 220x90mm flat duct Fixed blades With non-return valve	121	
Note:	i = internal, e = external		

General Terms & Conditions of Sale, Delivery and Payment

METAALUNIE TERMS AND CONDITIONS

General Terms and Conditions issued by Koninklijke Metaalunie (the Dutch organization for small and medium-sized enterprises in the metal industry), referred to as the METAALUNIE TERMS AND CONDITIONS, filed at the Registry of the Rotterdam District Court on 1 January 2014. Issued by Koninklijke Metaalunie, P.O. Box 2600, 3430 GA Nieuwegein, the Netherlands. © Koninklijke Metaalunie

Article 1: Applicability

- 1.1. These Terms and Conditions apply to all offers made by members of Koninklijke Metaalunie, all agreements they conclude and all agreements that may result therefrom, all this in so far as the Metaalunie member is offeror or supplier.
- 1.2. A Metaalunie member using these Terms and Conditions is referred to as the Contractor. The other party is referred to as the Client.
- 1.3. In the event of any conflict between the substance of the agreement concluded between the Contractor and the Client and these Terms and Conditions, the provisions of the agreement will prevail.
- 1.4. These Terms and Conditions may only be used by Metaalunie members.

Article 2: Offers

- 2.1. All offers are without obligation.
- 2.2. If the Client provides the Contractor with data, drawings and the like, the Contractor may rely on their accuracy and completeness and will base its offer on the same.
- 2.3. The prices stated in the offer are based on delivery ex works, Contractor's place of establishment, in accordance with the Incoterms 2010. Prices are exclusive of VAT and packaging.
- 2.4. If the Client does not accept the Contractor's offer, the Contractor is entitled to charge the Client for all costs incurred by the Contractor in making the offer to the Client.

Article 3: Intellectual property rights

- 3.1. Unless otherwise agreed in writing, the Contractor retains the copyright and all industrial property rights in the offers made by it and in the designs, pictures, drawings, models (including trial models), software and the like provided by it.
- 3.2. The rights in the data referred to in paragraph 1 of this article will remain the property of the Contractor irrespective of whether the costs of their production have been charged to the Client. These data may not be copied, used or shown to third parties without the Contractor's prior express written consent. The Client will owe the Contractor an immediately payable penalty of € 25,000 for each breach of this provision. This penalty may be claimed in addition to damages pursuant to the law.
- 3.3. On the Contractor's first demand, the Client must return the data provided to it as referred to in paragraph 1 of this Article within the time limit set by the Contractor. Upon breach of this provision, the Client will owe the Contractor an immediately payable penalty of € 1,000 per day. This penalty may be claimed in addition to damages pursuant to the law.

Article 4: Advice and information provided

- 4.1. The Client cannot derive any rights from advice or information it obtains from the Contractor if this does not relate to the assignment.
- 4.2. If the Client provides the Contractor with data, drawings and the like, the Contractor may rely on their accuracy and completeness in the performance of the agreement.
- 4.3. The Client indemnifies the Contractor from and against all liability to third parties relating to use of the advice, drawings, calculations, designs, materials, samples, models and the like provided by or on behalf of the Client.

Article 5: Delivery period / performance period

- 5.1. The delivery period and/or performance period will be set by the Contractor on an approximate basis.
- 5.2. In setting the delivery period and/or performance period, the Contractor will assume that it will be able to perform the assignment under the conditions known to it at that time.
- 5.3. The delivery period and/or performance period will only commence once agreement has been reached on all commercial and technical details, all necessary data, final and approved drawings and the like are in the Contractor's possession, the agreed payment or instalment has been received and the necessary conditions for performance of the assignment have been satisfied.
- 5.4. a. In the event of circumstances that differ from those that were known to the Contractor when it set the delivery period and/or performance period, it may extend the delivery period and/or performance period by such period as it needs to perform the assignment under such circumstances. If the work cannot be incorporated into the Contractor's schedule, it will be performed as soon as the Contractor's schedule so permits. b. In the event of any contract addition, the delivery period and/or performance period will be extended by such period as the Contractor needs to (cause to) supply the materials and parts for such work and to perform the contract addition. If the contract addition cannot be incorporated into the Contractor's schedule, the work will be performed as soon as the Contractor's schedule so permits. c. If the Contractor suspends its obligations, the delivery period and/or performance period will be extended by the duration of the suspension. If the continuation of the work cannot be incorporated into the Contractor's schedule, the work will be performed as soon as the Contractor's schedule so permits. d. In the event of inclement weather, the delivery period and/or per-

formance period will be extended by the resulting delay.

- 5.5. The Client is required to pay all costs incurred by the Contractor as a result of delay affecting the delivery period and/or performance period as referred to in Article 5.4.
- 5.6. If the delivery period and/or performance period is/are exceeded, this will in no event entitle to damages or termination.

Article 6: Transfer of risk

- 6.1. Delivery will be made ex works, Contractor's place of establishment, in accordance with the Incoterms 2010. The risk attached to the good passes to the Client at the time the Contractor makes the good available to the Client.
- 6.2. Notwithstanding the provisions in paragraph 1 of this article, the Client and Contractor may agree that the Contractor will arrange for transport. In that event, the risk of storage, loading, transport and unloading will be borne by the Client. The Client may insure itself against these risks.
- 6.3. In the event of a purchase in which a good is exchanged (inruil) and the Client retains the good to be exchanged pending delivery of the new good, the risk attached to the good to be exchanged remains with the Client until it has placed this good in the possession of the Contractor. If the Client cannot deliver the good to be exchanged in the condition that it was in when the agreement was concluded, the Contractor may terminate the agreement.

Article 7: Price change

- 7.1. The Contractor may pass on to the Client any increase in costing factors occurring after conclusion of the agreement.
- 7.2. The Client will be obliged to pay the price increase as referred to in paragraph 1 of this article on any of the occasions below, such at the discretion of the Contractor:
 - a. upon the occurrence of the price increase;
 - b. at the same time as payment of the principal sum;
 - c. on the next agreed payment deadline.

Article 8: Force majeure

- 8.1. The Contractor is entitled to suspend performance of its obligations if it is temporarily prevented from performing its contractual obligations to the Client due to force majeure.
- 8.2. Force majeure is understood to mean, inter alia, the circumstance of failure by suppliers, the Contractor's subcontractors or transport companies engaged by the Contractor to perform their obligations or perform them in good time, weather conditions, earthquakes, fire, power failure, loss, theft or destruction of tools or materials, road blocks, strikes or work stoppages and import or trade restrictions.
- 8.3. If the Contractor's temporary inability to perform lasts for more than six months, it will no longer be entitled to suspend performance. On expiry of this deadline, the Client and the Contractor may terminate the agreement with immediate effect, but only as regards such part of the obligations that has not yet been performed.
- 8.4. In the event of force majeure where performance is or becomes permanently impossible, both parties are entitled to terminate the agreement with immediate effect as regards such part of the obligations that has not yet been performed.
- 8.5. The parties will not be entitled to compensation for damage suffered or to be suffered as a result of suspension or termination as referred to in this article.

Article 9: Scope of the work

- 9.1. The Client must ensure that all licences, exemptions and other administrative decisions necessary to carry out the work are obtained in good time. The Client is required upon the Contractor's first demand to send the Contractor a copy of the documents mentioned above.
- 9.2. The price of the work does not include:
 - a. the costs of earthwork, pile driving, cutting, breaking, foundation work, cementing, carpentry, plastering, painting, wallpapering, repair work or other construction work;
 - b. the costs of connecting gas, water, electricity or other infrastructural facilities;
 - c. the costs of preventing or limiting damage to any goods present on or near the work site.
 - d. the costs of removal of materials, building materials or waste;
 - e. travel and accommodation expenses.

Article 10: Changes to the work

- 10.1. Changes to the work will in any event result in contract variations work if:
 - a. the design, specifications or contract documents are changed;
 - b. the information provided by the Client is not factually accurate;
 - c. quantities diverge by more than 10% from the estimates.
- 10.2. Contract additions will be charged on the basis of the pricing factors applicable at the time the contract addition is performed. Contract deductions will be charged on the basis of the pricing factors applicable at the time the agreement was concluded.
- 10.3. The Client will be obliged to pay the price of the contract addition as referred to in paragraph 1 of this article on any of the occasions below, such at the discretion of the Contractor:
 - a. when the contract addition arises;
 - b. at the same time as payment of the principal sum;
 - c. on the next agreed payment deadline.
- 10.4. If the sum of the contract deduction exceeds that of the contract addition, in the final settlement the Contractor may charge the Client 10% of the difference. This provision does not apply to contract deductions that result from a request by the Contractor.

Article 11: Performance of the work

- 11.1. The Client will ensure that the Contractor can carry out its activities without interruption and at the agreed time and that the requisite facilities are made available to it when carrying out its activities, such as:
 - a. gas, water and electricity;
 - b. heating;
 - c. lockable and dry storage space;
 - d. facilities required pursuant to the Working Conditions Act and Working Conditions Regulations.
- 11.2. The Client bears the risk of and is liable for any damage connected with loss, theft, burning and damage to goods belonging to the Contractor, the Client and third parties, such as tools, materials intended for the work or material used in the work, that are located on the work site or at another agreed location.
- 11.3. The Client is obliged to adequately insure itself against the risks referred to in paragraph 2 of this article. In addition, the Client must procure insurance of work-related damage as regards the material to be used. Upon the Contractor first demand, the Client must send it a copy of the relevant insurance policy/policies and proof of payment of the premium. In the event of any damage, the Client is required to report this to its insurer without delay for further processing and settlement.
- 11.4. If the Client fails to perform its obligations as described in the previous paragraphs and this results in delayed performance of the activities, the activities will be carried out as soon as the Client performs its obligations as yet and the Contractor's schedule so permits. The Client is liable for all damage suffered by the Contractor as a result of the delay.

Article 12: Completion of the work

- 12.1. The work is deemed to be completed in the following events:
 - a. when the Client has approved the work;
 - b. when the work is been taken into commission by the Client. If the Client takes part of the work into commission, that part will be deemed to be completed;
 - c. if the Contractor notifies the Client in writing that the work has been completed and the Client does not inform it in writing as to whether or not the work is approved within 14 days of such notification having been made;
 - d. if the Client does not approve the work due to minor defects or missing parts that can be rectified or subsequently delivered within 30 days and that do not prevent the work from being taken into commission.
- 12.2. If the Client does not approve the work, it is required to inform the Contractor of this in writing, stating reasons. The Client must provide the Contractor with the opportunity to complete the work as yet.
- 12.3. The Client indemnifies the Contractor from and against any claims by third parties for damage to noncompleted parts of the work caused by use of parts of the work that have already been completed.

Article 13: Liability

- 13.1. In the event of an attributable failure, the Contractor is obliged to perform its contractual obligations as yet.
- 13.2. The Contractor's obligation to pay damages, irrespective of the legal basis, is limited to damage for which the Contractor is insured under an insurance policy taken out by it or on its behalf, but will never exceed the amount paid out under this insurance in the relevant case.
- 13.3. If, for any reason whatsoever, the Contractor cannot invoke the limitation in paragraph 2 of this article, the obligation to pay damages will be limited to a maximum of 15% of the total assignment amount (excluding VAT). If the agreement comprises parts or partial deliveries, the obligation to pay damages is limited to a maximum of 15% (excluding VAT) of the assignment amount of that part or that partial delivery.
- 13.4. The following does not qualify for compensation:
 - a. consequential loss, including business interruption loss, production loss, loss of profit, transport costs and travel and accommodation expenses. The Client may insure itself against this damage if possible;
 - b. damage to goods in or under its care, custody or control. Such damage includes damage caused as a result of or during the performance of the work to goods on which work is being performed or to goods situated in the vicinity of the work site. The Client may insure itself against such damage if it so desires;
 - c. damage caused by the intent or wilful recklessness of agents or nonmanagement employees of the Contractor.
- 13.5. The Contractor is not liable for damage to material provided by or on behalf of the Client where that damage is the result of improper processing.
- 13.6. The Client indemnifies the Contractor from and against all claims by third parties on account of product liability as a result of a defect in a product supplied by the Client to a third party and that consisted, entirely or partially, of products and/or materials supplied by the Contractor. The Client is obliged to compensate all damage suffered by the Contractor in this respect, including the full costs of defence.

Article 14: Warranty and other claims

- 14.1. Unless otherwise agreed in writing, the Contractor warrants the proper execution of the agreed performance for a period of six months after delivery/completion. In the event that a different warranty period is agreed, the other paragraphs of this article are also applicable.
- 14.2. If the agreed performance was not properly executed, the Con-

tractor will decide whether to properly execute it as yet or to credit the Client for a proportionate part of the invoice amount. If the Contractor chooses to properly execute the performance as yet, it will determine the manner and time of execution itself. If the agreed performance consisted (entirely or partially) of the processing of material provided by the Client, the Client must provide new material at its own risk and expense.

- 14.3. Parts or materials that are repaired or replaced by the Contractor must be sent to the Contractor by the Client.
- 14.4. The Client bears the expense of:
- all costs of transport or dispatch;
 - costs of disassembly and assembly;
 - travel and accommodation expenses.
- 14.5. The Client must in all cases offer the Contractor the opportunity to remedy any defect or to perform the processing again.
- 14.6. The Client may only invoke the warranty once it has satisfied all its obligations to the Contractor.
- 14.7. a. No warranty is given if the defects result from:
- normal wear and tear;
 - improper use;
 - lack of maintenance or improper maintenance;
 - installation, fitting, modification or repair by the Client or third parties;
 - defects in or unsuitability of goods originating from, or prescribed by, the Client;
 - defects in or unsuitability of materials or auxiliary materials used by the Client.
- b. No warranty is given in respect of:
- goods supplied that were not new at the time of delivery;
 - the inspection and repair of goods of the Client;
 - parts for which a manufacturer's warranty has been provided.
- 14.8. The provisions of paragraphs 2 to 7 of this article apply mutatis mutandis to any claims by the Client based on breach of contract, non-conformity or on any other basis whatsoever.
- 14.9. The Client cannot assign any rights under this article.

Article 15: Obligation to complain

- 15.1. The Client can no longer invoke a defect in performance if it does not make a written complaint to the Contractor in respect thereof within fourteen days of the date it discovered, or should reasonably have discovered, the defect.
- 15.2. On pain of forfeiture of all rights, the Client must submit complaints regarding the amount invoiced to the Contractor in writing within the payment deadline. If the payment deadline is longer than thirty days, the Client must complain no later than thirty days after the date of the invoice.

Article 16: Failure to take delivery of goods

- 16.1. Upon expiry of the delivery period and/or performance period, the Client is obliged to take delivery of the good or goods forming the subject of the agreement.
- 16.2. The Client must lend all cooperation that can be reasonably expected from it to enable the Contractor to make the delivery.
- 16.3. If the Client does not take delivery of goods, such goods will be stored at the risk and expense of the Client.
- 16.4. Upon breach of the provisions in paragraphs 1 and/or 2 of this article, the Client will owe the Contractor a penalty of € 250 per day, to a maximum of € 25,000. This penalty may be claimed in addition to damages pursuant to the law.

Article 17: Payment

- 17.1. Payment will be made at the Contractor's place of establishment or to an account to be designated by the Contractor.
- 17.2. Unless agreed otherwise, payment will be made as follows:
- in cash where sale is at the service desk;
 - in the case of payments in instalments:
 - 40% of the total price upon assignment;
 - 50% of the total price after supply of the material or, if delivery of the material is not included in the assignment, after commencement of the work;
 - 10% of the total price upon completion;
 - in all other cases, within thirty days of the date of the invoice.
- 17.3. If the Client fails to comply with its payment obligation, instead of paying the sum of money agreed it will be obliged to comply with a request by the Contractor for payment in kind (inbetalinggeving).
- 17.4. The right of the Client to set off or suspend amounts it is owed by the Contractor, save in the event of the Contractor's bankruptcy or if statutory debt rescheduling applies to the Contractor.
- 17.5. Irrespective of whether the Contractor has fully executed the agreed performance, everything that is or will be owed to it by the Client under the agreement is immediately due and payable if:
- deadline for payment has been exceeded;
 - an application has been made for the Client's bankruptcy or suspension of payments;
 - attachment is levied on the Client's goods or claims;
 - the Client (a company) is dissolved or wound up.
 - the Client (a natural person) requests to be admitted to statutory debt rescheduling, is placed under guardianship or dies.
- 17.6. If payment is not made within the agreed payment deadline, the Client will immediately owe interest to the Contractor. The interest rate is 12% per annum, but is equal to the statutory interest rate if the latter rate is higher. When calculating interest, part of a month is regarded as a whole month.
- 17.7. The Contractor is authorised to set off its debts to the Client with amounts owed by the Client to companies affiliated with the Contractor. In addition, the Contractor is authorised to set off amounts owed to it by the Client with debts to the Client of companies af-

filied with the Contractor. Further, the Contractor is authorised to set off its debts to the Client with amounts owed to the Contractor by companies affiliated with the Client. Affiliated companies are understood to mean the companies belonging to the same group, within the meaning of Article 2:24b Dutch Civil Code, and participating interests within the meaning of Article 2:24c Dutch Civil Code.

- 17.8. If payment is not made within the agreed payment deadline, the Client will owe the Contractor all extrajudicial costs, with a minimum of € 75. These costs will be calculated on the basis of the following table (principal sum plus interest):
- | | |
|---|-----|
| on the first € 3,000 | 15% |
| on any additional amount up to € 6,000 | 10% |
| on any additional amount up to € 15,000 | 8% |
| on any additional amount up to € 60,000 | 5% |
| on any additional amount from € 60,000 | 3% |
- The extrajudicial costs actually incurred will be owed if these are higher than they would be according to the above calculation.
- 17.9. If judgment is rendered in favour of the Contractor in legal proceedings, all costs that it has incurred in relation to these proceedings will be borne by the Client.

Article 18: Security

- 18.1. Irrespective of the agreed payment conditions, upon the first demand of the Contractor the Client is obliged to provide such security for payment as the Contractor deems sufficient. If the Client does not comply with such demand within the period set, it will immediately be in default. In that event, the Contractor is entitled to terminate the agreement and to recover its damage from the Client.
- 18.2. The Contractor will retain ownership of any goods delivered as long as the Client:
- fails or will fail in the performance of its obligations under this agreement or other agreements;
 - has not paid debts that have arisen due to non-performance of the aforementioned agreements, such as damage, penalties, interest and costs.
- 18.3. As long as the goods delivered are subject to retention of title, the Client may not encumber or alienate the same other than in the ordinary course of its business.
- 18.4. Once the Contractor has invoked its retention of title, it may take possession of the goods delivered. The Client will lend its full cooperation to this end.
- 18.5. The Contractor has a right of pledge and a right of retention in respect of all goods that are or will be held by it for any reason whatsoever and for all claims it has or might acquire against the Client in respect of anyone seeking their surrender.
- 18.6. If, after the goods have been delivered to the Client by the Contractor in accordance with the agreement, the Client has met its obligations, the retention of title will be revived with regard to such goods if the Client does not meet its obligations under any agreement subsequently concluded.

Article 19: Termination of the Agreement

If the Client wishes to terminate the agreement without the Contractor being in default, and the Contractor agrees to this, the agreement will be terminated by mutual consent. In that case, the Contractor is entitled to compensation for all financial loss, such as loss suffered, loss of profit and costs incurred.

Article 20: Applicable law and competent court

- 20.1. Dutch law applies.
- 20.2. The Vienna Sales Convention (C.I.S.G.) does not apply, nor do any other international regulations the exclusion of which is permitted.
- 20.3. Disputes will be heard exclusively by the Dutch civil court with jurisdiction over the Contractor's place of establishment, unless this is contrary to mandatory law. The Contractor may deviate from this rule of jurisdiction and apply the statutory rules of jurisdiction.

ADDITIONAL ABK INNOVENT TERMS AND CONDITIONS JUNE 2015

Addition to Article 14: Warranty/Other arrangements

- 14.10. If the client exports (parts of) items/goods, the relevant export provisions shall apply. The client shall indemnify ABK InnoVent bv against all third-party claims regarding the client's violations of the applicable export provisions.
- 14.11. The warranty to be provided by ABK InnoVent bv only applies to its items/goods located (permanently) in the Netherlands and Belgium. Once the items/goods have left the Netherlands and Belgium, the warranty shall never resume at a later date.

Addition to Article 15: Duty of complaint and grievances

- 15.3. Any (visible) complaints must be made immediately in writing to ABK InnoVent bv within 24 hours of receiving the items and/or services. After this term, the client is considered to have accepted and approved ABK InnoVent bv's delivery and/or services.

15.4. The client shall have the purchased items examined upon delivery or as soon as possible afterwards. The client shall establish whether the delivery is in accordance with the agreement, i.e.:

- The right items have been delivered in their undamaged original packaging.
 - The quantity of the delivered items (amount or number) matches the agreed quantity.
 - The delivered items meet the agreed quality requirements or if no quality requirements were provided, they meet the requirements for normal use and/or commercial purposes.
- 15.5. ABK InnoVent bv's collection of returns never implies ABK InnoVent bv's acknowledgement of the reasons the client provided for the return. The risks and costs of returned items are borne by the client until they are credited by ABK InnoVent bv.
- 15.6. ABK InnoVent bv reserves the right to deduct order processing costs of at least €50 from credits for returned items.

Addition to Article 17: Payment

- 17.10. In addition to what is provided by these terms and conditions, payment shall be made by bank transfer to an account indicated by ABK InnoVent bv without any discounts or deductions unless specifically agreed otherwise in writing. Payment shall be made in advance in the invoice currency, unless specifically agreed otherwise in writing.
- 17.11. The payment must arrive in ABK InnoVent bv's account at least 5 business days before the actual delivery.

Addition to Article 19: Termination of the agreement

- If returned items are collected due to a client mistake, the applicable charge shall be:
- €100 if the invoice amount is less than €1,000 net excl. VAT and 10% of the invoice amount if the invoice amount is €1,000 net excl. VAT or more.
- 19.1. Cancellation of standard items
- Cancellation within 24 hours of the order is free of charge.
 - If a cancellation is made after 24 hours, the charge for orders below €300 net excl. VAT is €28.
 - If a cancellation is made after 24 hours, the charge for orders of €300 net excl. VAT or more is 10% of the order amount.
- 19.2. Cancellation of bespoke items
- Cancellation within 24 hours of the order is free of charge.
 - If a cancellation is made after 24 hours, the charge is 10% of the order amount and at least €75 excl. VAT.
 - If a cancellation is made after 24 hours and after the design and/or production stage, the charge is 10% of the order amount and at least €75 excl. VAT plus all production charges already incurred.



Uw dealer

a | Gesinkkampstraat 4
NL-7051 HP | Varsseveld
Nederland
t | +31 [0]315-801940
f | +31 [0]315-801950
e | info@abk-innovent.nl
w | www.abk-innovent.com

Onderdeel van **Lentink** groep