PRODUCT BROCHURE

Roof Extract Fans
Roof*JETT*

The Way to a new age of energy savings

DencoHappel®

The signs of the times are unmistakable

Investors, plant engineers, planners, and architects no longer ask "whether" but "how" they can enhance the degree of sustainability of their plants and building management systems. Each building is unique. Its location, size, construction quality, and increasingly the building management system determine its value and profit. The energy state of a building has gained appreciably in significance here: it is a fact that buildings consume around 40 percent of the world's energy, and produce 21 percent of global greenhouse-gas emissions. The proportion of the energy costs in the "second rent" for users and residents is constantly increasing.

Where the heating, cooling, cleaning, purification, humidification and dehumidification of air are required, DencoHappel makes its contribution to progress. Customised climate control and air treatment, with the maximum-possible reduction in energy consumption over the entire life cycle of the facilities: this all pays out handsomely in euros and cents, in comfort, and in staff productivity. Our solutions reliably comply with all international standards in highly sensitive areas such as hospitals and cleanroom applications. They likewise set new standards for sustainability and flawless system integration in advanced sports arenas, production facilities, airport buildings, and swimming pools – as well as in offices, museums, and hotels.

The one who processes air must master it

It is due to the precision work that has gone into the development of the hardware and software that our air treatment can neither be seen nor be heard, provides pleasant experience and helps in avoiding wastage of energy and money.

Can a building with large glazed areas be heated during spring and autumn on its north side and cooled on its south side, with only one system and without having to switch on the central heating? Does a system used, e. g., for heating cooling, humidification and dehumidification in pharmaceutical or electronic industry also protect against dirt and bacteria? Can investors and building owners calculate the life cycle costs of a central plant air handling unit, determine the effect of an energy-saving equipment on the operating cost for this purpose and thus select the optimal efficiency class right in the configuration stage of the plant?

DencoHappel has found answers to these and many other questions concerning air treatment and climate control – and has implemented them in solutions which reflect its experience gained in many and various successful applications. The core proposal consists of a broad spectrum of central and decentral air treatment plants, separators and filter plants up to complete clean-room systems. Their function, control and design can be fine tuned to their task, the condition and infrastructure of buildings, the operating cost calculations and the highest standards of energy efficiency and climate protection. State-of-the-art control technology developed in-house permits the individual control in individual rooms just as it permits the central handling in the context of building management system.

Control unit, which has interfaces to all usual systems of the building automation, provide for the trouble-free integration of the devices into the building management system. The fact that planners and users can implement their own desires at the design stage of the plant itself is the proof of the precision work involved in the air conditioning equipment.

DencoHappel stands for:

- Tailor-made air quality and a healthy, comfortable room climate with extremely noiseless operation
- Maximum energy efficiency and reduction in the CO_2 emission
- Precise central and decentral control and regulation
- High adaptability to most diverse functions and environments
- Easy system integration
- Durability and high degree of availability at low maintenance costs

Making room for fresh air

An overview of RoofJETT:

- Solutions for customized exhaust-air management
- 12 model sizes
- Air-flow rates from 1,000 to 19,000 m³/h
- Standard motors for exhaust-air temperatures up to 60 °C
- EEx-rated motors for enhanced safety in hazardous atmospheres
- Motors for smoke exhaust up to 400 °C and 2 hours
- Automatic isolation flaps
- The MATRIX exhaust-air management system

RoofJETT exhaust-air systems effectively remove spent air, or air polluted with particles and gases, from hall-type buildings – and make room for supply air, rich in oxygen, at a pleasant temperature. In other words: RoofJETT systems make a major contribution to more personal comfort, greater productivity, and enhanced safety.

In many open-space, hall-type buildings – for example, automobile dealerships, furniture showrooms, and production shop floors – decentral solutions provide for heating and exchange of air. In the selection of components, air-exhaust systems deserve just as much attention as the rest of the equipment park after all, it is critical that vitiated air, gases and vapors, as well as airborne particles be effectively and reliably removed. And it is essential that this takes place as quietly and with as little consumption of energy as possible.

A total of 12 model sizes, for air-flow rates from approx. 1,000 to 19,000 m³/h, in addition to various motor variants, make it possible to select the equipment to optimally match the prevailing requirements. In addition to models for single-stage operation, solutions are available with several fan speeds and for operation with frequency converters for infinitely variable fan-speed matching. In this way, the MATRIX control system can assure equilibrium between supply and exhaust air, with economical use of resources. When the units are shut down (for example, during non-working hours), automatic isolation flaps will shut to prevent the entry of cold air.

Discreetly quiet, and very obviously pleasant in design

The Roof*JETT* is one of the quietest roof exhaust fans on the European market. At the same time, it is an attractive esthetic component of rooftop landscapes – in any RAL color that the customer wishes.

Even at top output, the Roof*JETT* purrs quietly along. This is made possible by decoupling the structure-borne noise of the motor-fan unit, and by implementation of optimal air-flow routing. In especially noise-sensitive areas, the noise level can be further attenuated by additional noise-suppression measures. Then there's no problem with your neighbors in peaceful residential areas.

The Roof*JETT* is also highly attractive from the optical standpoint. Its long-life, zinc-plated and additionally powder-coated casing is available in the standard RAL 9002 color, and upon request in all other RAL shades. The highly functional roof exhaust fan therefore becomes a pleasant eye-catcher in rooftop landscapes with high optical standards.

Despite all design expectations, however: when installation and maintenance are involved, interior technical value and sophisticated details are essential. A selection of roof mounting bases makes installation faster and simpler, and an optional tiltable model makes it easy to open the unit for easy inspections or repairs on the ducts. It is also simple to open the cover hood with a few turns of the hand, which ensures fast cleaning and maintenance.

Benefits of the Roof*JETT*:

- Optimized air flow and quiet operation
- Zinc-plated, powder-coated sheet-steel casing
- Availability of all RAL colors
- Various roof mounting bases for simple and reliable installation
- Fast cleaning and maintenance with only a few quick steps
- Optional tiltable version
- Extensive accessories for handling the exhaust of interior air

The Roof*JETT* is available, as an option, with a tiltable casing. Matching accessories are likewise offered for a great number of applications. One example here is roof crossing, which simplifies connection of the roof exhaust unit with interior air ducts below.

ALSO EQUALLY EFFECTIVE IN MEETING SPECIAL REQUIREMENTS

Exhaust vapors and gases from your buildings

- Roof*JETT* meets current requirements of EN 12101-3 for safe smoke exhaust in accordance with Fire-Protection Class F400
- Models are available for explosion-endangered environments

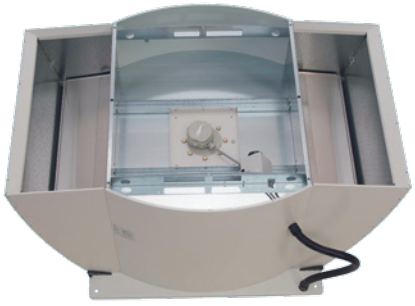
It's not always stale or vitiated air that must be removed from a building. Often, vapors, explosive gases, or smoke from fires must be safely and reliably exhaust into the open air. Absolutely no problem with the appropriate models of Roof*JETT*.

Roof*JETT* not only quickly handles normal vitiated air: it also reliably removes smoke from fires and explosive gases from buildings.

Models with motors mounted outside the air flow can transport gases and vapors on a continuous-duty basis. The Roof*JETT* systems for smoke exhaust after a fire are suitable for up to 2 hours' duty at a maximum smoke temperature of 400 °C. These features conform to EN 12101-3 for safe smoke exhaust in accordance with Fire-Protection Class F400 (400 °C for 2 h).

In applications with explosive atmospheres, Roof*JETT* is used in its Ex version, in accordance with the stipulations for enhanced security in explosion-endangered environments Ex II 2 G c IIB T3 and Ex II 2 G c IIB + H_2 T4.

Thanks to the extensive spectrum of versions and model sizes, units in the Roof*JETT* range can exhaust from buildings any kind of vitiated or polluted air that can encounter. For market halls, factory floors, paint lines, or restaurant kitchens: Roof*JETT* is the safe and reliable solution against bad air.



The standard versions of Roof*JETT* are equipped with automatic isolation flaps.

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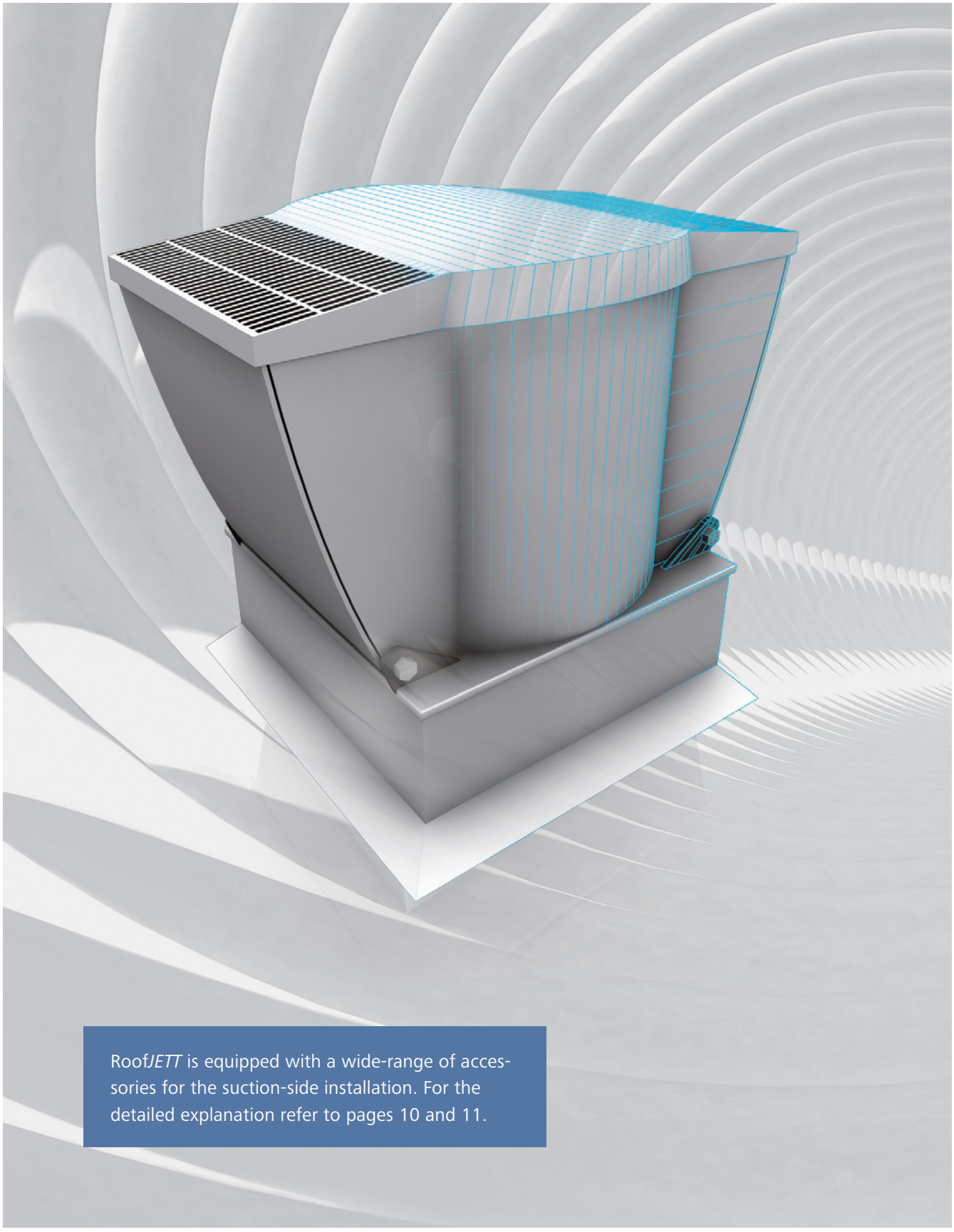
Unit series RJ



RoofJETT is equipped with a wide-range of accessories for the suction-side installation. For the detailed explanation refer to pages 10 and 11.

Available models of RoofJETT			
Casing		**Motors with 1, 2, or 3 speeds, depending on RJ series (continuously variable upon request)**	
R J N	Casing not tiltable	**L**	Motor inside the air flow - max. exhaust-air temp. 40 °C
		M	Motor outside the air flow - max. exhaust-air temp. 60 °C
R J V	Casing tiltable	**L**	Motor inside the air flow - max. exhaust-air temp. 40 °C
			Motors outside the air flow
		M	Max. exhaust-air temp. 60 °C
		H	Max. exhaust-air temp. 400 °C / 2h smoke exhaust
		X	Max. exhaust-air temp. 40 °C - enhanced safety as per Ⓔx II 2 G c IIB T3
		Y	Max. exhaust-air temp. 40 °C - enhanced safety as per Ⓔx II 2 G c IIB + H_2 T4
R J S	Casing tiltable and	**L**	Motor inside the air flow - Max. exhaust-air temp. 40 °C
*	Noise suppression on air-discharge side	**M**	Motor outside the air flow - Max. exhaust-air temp. 60 °C

Increased exhaust-air temperature limits for L and M motors are available upon request.

Fan motors	L	M	H	X	Y
			smoke exhaust	Ⓔx II 2 G c IIB T3	Ⓔx II 2 G c IIB + H_2 T4
Max. exhaust-air temp.	40 °C	60 °C	400 °C / 2h	40 °C	40 °C
Air-flow rate	m³/h	m³/h	m³/h	m³/h	m³/h
Model size	**max**	**max**	**max**	**max**	**max**
2022	940	-	-	-	-
2025	1,480	-	-	-	-
2528	1,170	1,150	-	-	-
2531	1,720	1,740	2,810	1,440	1,480
3135	2,690	2,650	2,550	2,600	-
3140	3,620	3,640	3,240	3,300	-
4045	5,120	5,290	4,980	5,040	5,110
4050	6,900	7,380	6,810	6,980	-
5056	6,260	6,710	9,580	6,340	6,340
5063	8,550	9,250	13,250	8,640	8,830
6371	12,780	13,500	18,940	12,490	-
6380	16,920	18,690	-	16,610	-

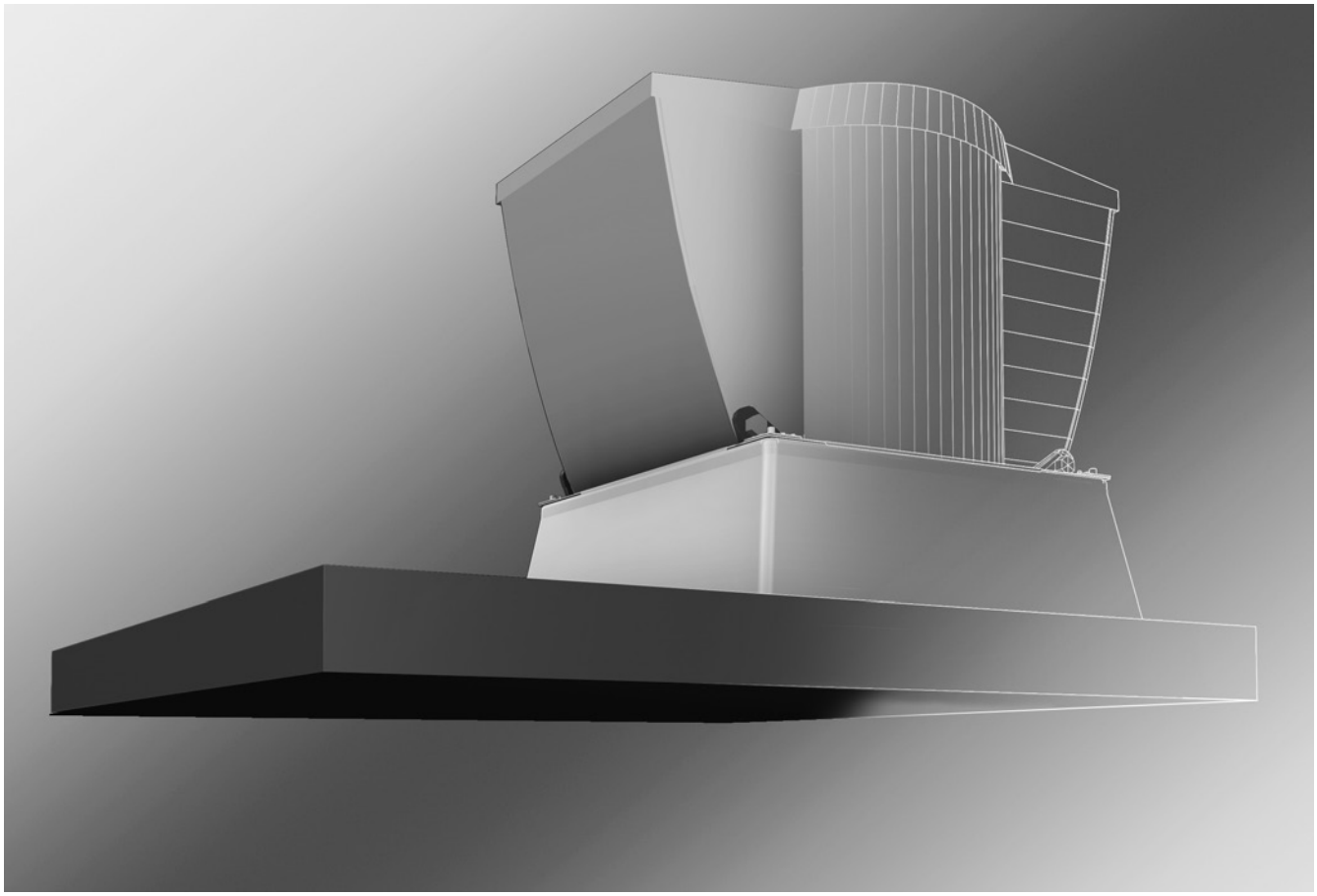
Increased exhaust-air temperature limits for L and M motors are available upon request.

RoofJETT DIMENSIONS AND WEIGHTS – WITHOUT FLAT-ROOF PLINTH

Model size		2022	2025	2528	2531	3135	3140
Dimensions	**mm**	**max**	**max**	**max**	**max**	**max**	**max**
Width	mm	588	588	588	820	820	820
Height	mm	364	364	364	480	480	480
Depth	mm	400	400	400	560	560	560
Weight	**kg**	**max**	**max**	**max**	**max**	**max**	**max**
	kg	20	22	23	43	35	39

Model size		4045	4050	5056	5063	6371	6380
Dimensions	**mm**	**max**	**max**	**max**	**max**	**max**	**max**
Width	mm	1,168	1,168	1,168	1,630	1,630	1,630
Height	mm	632	632	632	865	865	865
Depth	mm	800	800	800	1,120	1,120	1,120
Weight	**kg**	**max**	**max**	**max**	**max**	**max**	**max**
	kg	78	79	88	157	182	187

Illustration of the Roof*JETT* with flat-roof plinth (optional)



Fan motor L in air flow Model size Max. exhaust-air temp. 40 °C		2022	2025	2528	2531	3135	3140
Max. air-flow rate	**m³/h**	**940**	**1,480**	**1,170**	**1,720**	**2,690**	**3,620**
Sound power level, intake side	Lw	77	81	66	69	76	77
Sound pressure level	Lp	61	66	51	54	60	62
Sound power level, output side	Lw	80	83	68	73	78	79
Sound pressure level	Lp	60	63	48	53	58	59
Output-side sound attenuation - RJSL	**m³/h**	**860**	**1,290**	**940**	**1,660**	**2,560**	**3,360**
Sound pressure level - RJSL	Lp	55	56	41	47	52	53

Fan motor L in air flow Model size Max. exhaust-air temp. 40 °C		4045	4050	5056	5063	6371	6380
Max. air-flow rate	**m³/h**	**5,120**	**6,900**	**6,260**	**8,550**	**12,780**	**16,920**
Sound power level, intake side	Lw	82	84	75	79	84	86
Sound pressure level	Lp	67	69	60	63	69	71
Sound power level, output side	Lw	84	87	78	81	86	88
Sound pressure level	Lp	64	67	58	61	66	68
Output-side sound attenuation - RJSL	**m³/h**	**5,000**	**6,640**	**5,620**	**8,440**	**11,680**	**16,840**
Sound pressure level - RJSL	Lp	59	61	51	55	60	63

Fan motor M outside the air flow Model size Max. exhaust-air temp. 60 °C		2528	2531	3135	3140	4045
Max. air-flow rate	**m³/h**	**1,150**	**1,740**	**2,650**	**3,640**	**5,290**
Sound power level, intake side	Lw	66	70	75	77	83
Sound pressure level	Lp	50	54	60	62	68
Sound power level, output side	Lw	68	73	77	80	85
Sound pressure level	Lp	48	53	57	60	65
Output-side sound attenuation - RJSL	**m³/h**	**930**	**1,690**	**2,520**	**3,390**	**5,160**
Sound pressure level - RJSM	Lp	41	47	51	53	60

Fan motor M outside the air flow Model size Max. exhaust-air temp. 60 °C		4050	5056	5063	6371	6380
Max. air-flow rate	**m³/h**	**7,380**	**6,710**	**9,250**	**13,500**	**18,690**
Sound power level, intake side	Lw	86	77	81	86	88
Sound pressure level	Lp	71	61	65	71	73
Sound power level, output side	Lw	89	80	83	88	91
Sound pressure level	Lp	69	60	63	68	70
Output-side sound attenuation - RJSL	**m³/h**	**7,100**	**6,020**	**9,140**	**12,340**	**18,610**
Sound pressure level - RJSM	Lp	63	53	57	61	65

Measuring conditions for the sound pressure level Lp
Intake side: interval = 4 m; room volume = 2,500 m³; reverberation time = 2 s; directional factor = 2 (hemispherical radiation)
Output side: interval = 4 m; free field; directional factor = 2 (hemispherical radiation)

Fan motor H outside the air flow Model size Max. exhaust-air temp. 400 °C / 2 h		2531	3135	3140	4045
Max. air-flow rate	**m³/h**	**2,810**	**2,550**	**3,240**	**4,980**
Sound power level, intake side	Lw	85	74	75	82
Sound pressure level	Lp	70	59	60	66
Sound power level, output side	Lw	90	78	80	85
Sound pressure level	Lp	70	58	60	65

Fan motor H outside the air flow Model size Max. exhaust-air temp. 400 °C / 2 h		4050	5056	5063	6371
Max. air-flow rate	**m³/h**	**6,810**	**9,580**	**13,250**	**18,940**
Sound power level, intake side	Lw	84	87	92	100
Sound pressure level	Lp	69	71	77	84
Sound power level, output side	Lw	88	91	96	101
Sound pressure level	Lp	68	71	76	81

Fan motor X outside the air flow - increased safety per Ⓔx II 2 G c IIB T3 Model size Max. exhaust-air temp. 40 °C		2531	3135	3140	4045	4050
Max. air-flow rate	**m³/h**	**1,440**	**2,600**	**3,300**	**5,040**	**6,980**
Sound power level, intake side	Lw	71	75	76	82	85
Sound pressure level	Lp	56	59	60	67	69
Sound power level, output side	Lw	74	77	78	84	87
Sound pressure level	Lp	54	57	58	64	67

Fan motor X outside the air flow - increased safety per Ⓔx II 2 G c IIB T3 Model size Max. exhaust-air temp. 40 °C		5056	5063	6371	6380
Max. air-flow rate	**m³/h**	**6,340**	**8,640**	**12,490**	**16,610**
Sound power level, intake side	Lw	76	81	89	86
Sound pressure level	Lp	61	65	73	71
Sound power level, output side	Lw	79	83	91	88
Sound pressure level	Lp	59	63	71	68

Fan motor Y outside the air flow - increased safety per Ⓔx II 2 G c IIB + H_2 T4 Model size Max. exhaust-air temp. 40 °C		2531	4045	5056	5063
Max. air-flow rate	**m³/h**	**1,480**	**5,110**	**6,340**	**8,830**
Sound power level, intake side	Lw	72	82	76	81
Sound pressure level	Lp	56	67	61	66
Sound power level, output side	Lw	75	85	79	83
Sound pressure level	Lp	55	65	59	63

Measuring conditions for the sound pressure level Lp
Intake side: interval = 4 m; room volume = 2,500 m³; reverberation time = 2 s; directional factor = 2 (hemispherical radiation)
Output side: interval = 4 m; free field; directional factor = 2 (hemispherical radiation)

Model size			2022 / 2025						2528						2531					
Type for motor versions			**L**	**M**	**H**	**X**	**Y**	**kg**	**L**	**M**	**H**	**X**	**Y**	**kg**	**L**	**M**	**H**	**X**	**Y**	**kg**
10	Flat-roof mounting base, sheet steel		●					7	●	●				7	●	●	●	●	●	12
11	Duct through roof		●					20	●	●				20	●	●	●	●	●	37
12	Flat-roof mounting base, synthetic		●					6	●	●				6	●	●				8
13	Mounting strip for **11, 20**		●					1	●	●				1	●	●	●	●	●	1
20F	Sound-damping base, high - free intake		●					23	●	●				23	●	●	●	●	●	45
20D	Sound-damping base, high - duct connection		●					23	●	●				23	●	●	●	●	●	45
21F	Sound-damping base, flat - free intake		●					24	●	●				24	●	●	●	●	●	47
21D	Sound-damping base, flat - duct connection		●					24	●	●				24	●	●	●	●	●	47
22	Sound-damping unit for **10, 11, 12**		●					17	●	●				17	●	●	●	●	●	32
31	Contact protection grille, intake side		●					1	●	●				1	●	●	●	●	●	1
32	Intake fitting, flexible		●					1	●	●				2	●	●	●	●	●	2
33	Intake fitting, steel sheet		●					3	●	●				3	●	●	●	●	●	3
34	Counter flange, round, for user's piping		●					1	●	●				1	●	●	●	●	●	1
35	Inflow nozzle, only with **31**		●					2	●	●				2	●	●	●	●	●	2
36	Servodriven closure flap, 230 V		●					3	●	●				3	●	●				3
37	Spacers 500...1,000 mm	Top part	●					4	●	●				4	●	●	●	●	●	7
38		Bottom part	●					4	●	●				4	●	●	●	●	●	7

Model size			3135 / 3140						4045 / 5056						4050					
Type for motor versions			**L**	**M**	**H**	**X**	**Y**	**kg**	**L**	**M**	**H**	**X**	**Y**	**kg**	**L**	**M**	**H**	**X**	**Y**	**kg**
10	Flat-roof mounting base, sheet steel		●	●	●	●		12	●	●	●	●	●	19	●	●	●	●		19
11	Duct through roof		●	●	●	●		37	●	●	●	●	●	66	●	●	●	●		66
12	Flat-roof mounting base, synthetic		●	●				8	●	●				10	●	●				10
13	Mounting strip for **11, 20**		●	●	●	●		1	●	●	●	●	●	2	●	●	●	●		2
20F	Sound-damping base, high - free intake		●	●	●	●		45	●	●	●	●	●	71	●	●	●	●		71
20D	Sound-damping base, high - duct connection		●	●	●	●		45	●	●	●	●	●	71	●	●	●	●		71
21F	Sound-damping base, flat - free intake		●	●	●	●		47	●	●	●	●	●	74	●	●	●	●		74
21D	Sound-damping base, flat - duct connection		●	●	●	●		47	●	●	●	●	●	74	●	●	●	●		74
22	Sound-damping unit for **10, 11, 12**		●	●	●	●		32	●	●	●	●	●	49	●	●	●	●		49
31	Contact protection grille, intake side		●	●	●	●		1	●	●	●	●	●	1	●	●	●	●		1
32	Intake fitting, flexible		●	●	●	●		2	●	●	●	●	●	4	●	●	●	●		3
33	Intake fitting, steel sheet		●	●	●	●		4	●	●	●	●	●	9	●	●	●	●		7
34	Counter flange, round, for user's piping		●	●	●	●		1	●	●	●	●	●	1	●	●	●	●		1
35	Inflow nozzle, only with **31**		●	●	●	●		3	●	●	●	●	●	7	●	●	●	●		5
36	Servodriven closure flap, 230 V		●	●				3	●	●				7	●	●				4
37	Spacers 500...1,000 mm	Top part	●	●	●	●		7	●	●	●	●	●	14	●	●	●	●		14
38		Bottom part	●	●	●	●		7	●	●	●	●	●	14	●	●	●	●		14

RJZ ACCESSORIES – SELECTION AND WEIGHTS

Model size			5063						6371						6380					
Type for motor versions			L	M	H	X	Y	kg	L	M	H	X	Y	kg	L	M	H	X	Y	kg
10	Flat-roof mounting base, sheet steel		●	●	●	●	●	27	●	●	●	●		27	●	●		●		27
11	Duct through roof		●	●	●	●	●	97	●	●	●	●		97	●	●		●		97
12	Flat-roof mounting base, synthetic		●	●				13	●	●				13	●	●				13
13	Mounting strip for **11, 20**		●	●	●	●	●	2	●	●	●	●		2	●	●		●		2
20F	Sound-damping base, high - free intake		●	●	●	●	●	100	●	●	●	●		100	●	●		●		100
20D	Sound-damping base, high - duct connection		●	●	●	●	●	100	●	●	●	●		100	●	●		●		100
21F	Sound-damping base, flat - free intake		●	●	●	●	●	105	●	●	●	●		105	●	●		●		105
21D	Sound-damping base, flat - duct connection		●	●	●	●	●	105	●	●	●	●		105	●	●		●		105
22	Sound-damping unit for **10, 11, 12**		●	●	●	●	●	71	●	●	●	●		71	●	●		●		71
31	Contact protection grille, intake side		●	●	●	●	●	1	●	●	●	●		1	●	●		●		1
32	Intake fitting, flexible		●	●	●	●	●	4	●	●	●	●		5	●	●		●		5
33	Intake fitting, steel sheet		●	●	●	●	●	9	●	●	●	●		11	●	●		●		11
34	Counter flange, round, for user's piping		●	●	●	●	●	1	●	●	●	●		2	●	●		●		2
35	Inflow nozzle, only with **31**		●	●	●	●	●	7	●	●	●	●		9	●	●		●		9
36	Servodriven closure flap, 230 V		●	●				7	●	●				9	●	●				9
37	Spacers 500...1,000 mm	Top part	●	●	●	●	●	21	●	●	●	●		21	●	●		●		21
38		Bottom part	●	●	●	●	●	21	●	●	●	●		21	●	●		●		21

Always at your side

Our services at a glance

- Own heat exchanger production
- Use of certified products and components
- Use of components from well-known component manufacturers
- Short delivery times for spare parts
- Commissioning of new facilities
- Periodic servicing
- Maintenance
- Factory trial run
- Upgrading and optimisation of old facilities
- Maintenance agreements

Economical from the beginning

The technical developments of DencoHappel represent state-of-the-art swimming pool climate control. Our systems support diverse applications that optimally conform to current criteria of cost effectiveness, safety and sustainability. Our products and services go far beyond pure technology. They are integrated into a comprehensive and in every respect customised service package. This programme includes not only conventional services such as spare part delivery, maintenance, and repair. It unites the consulting and engineering of a technology leader with customised after-sales service and rapid response times. And this not only for installing new equipment. This service also applies for upgrading and optimising old equipment and provides you with perfect support in all project phases. The functionality of the system is secured over its entire service life.

International service und support in experienced hands

Wherever you need us, we will be there for you in the shortest time. All over Europe, our own customer service ensures that you are able to make optimal use of our units' advantages at all times. Many technicians are ready on-call in Germany alone for rapid deployment. All services are designed for absolute safety and reliability. For example, an on-site function check is a part of our delivery service, conducted by an experienced DencoHappel technician together with the installer. This way we directly and personally pass on our functional know-how built up over many years. In this context we should also mention the training we offer in the technology of our climate control systems. Such training is a beneficial instrument for ensuring the lasting functionality and availability of the systems.

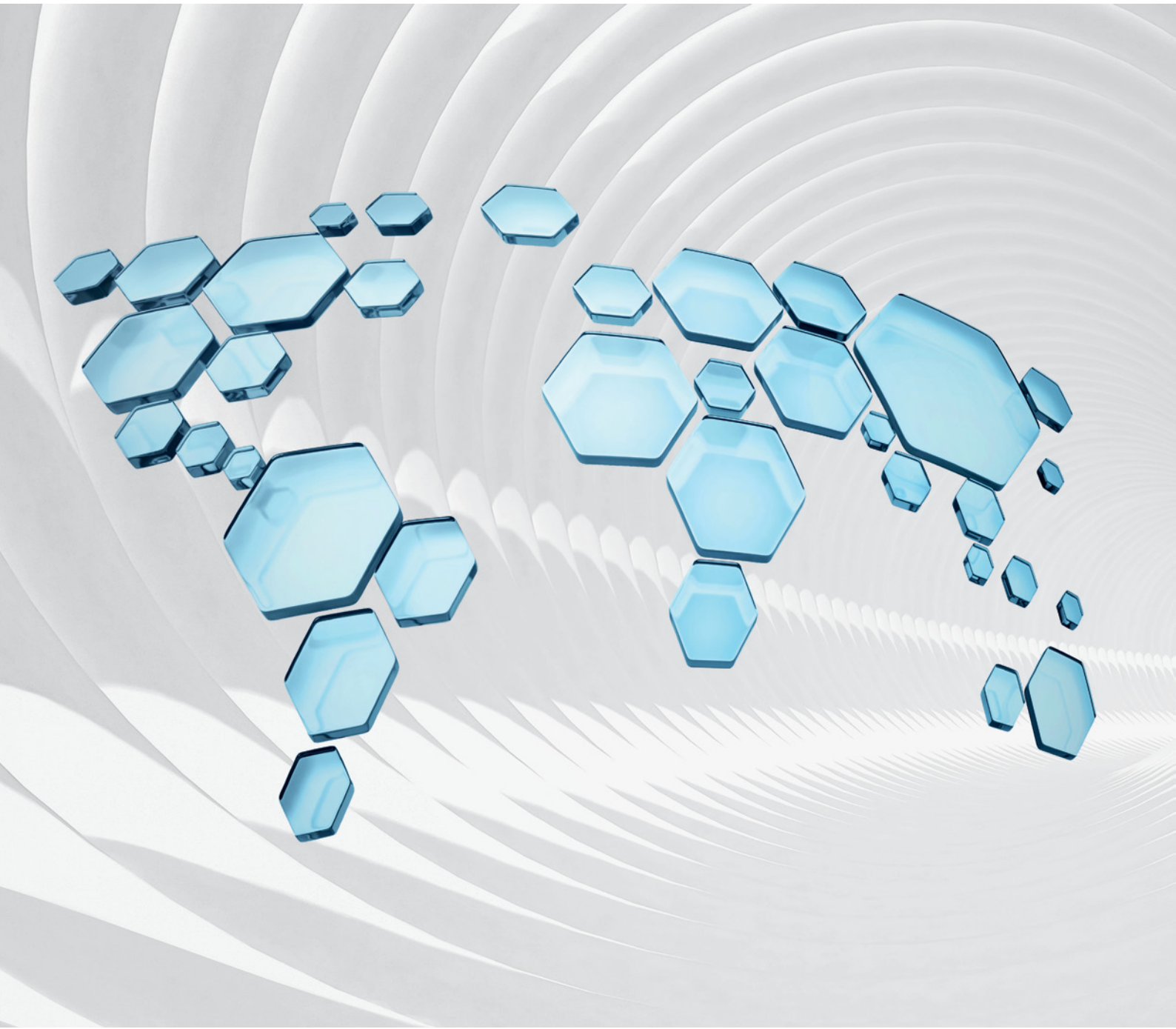
A decision for quality

A high quality standard is the basis and principle for all our services. All our service specialists are highly experienced and devote themselves to their work with great diligence. Technically and personally convincing: this is what you can expect from us.


• Initial installation
• Maintenance and servicing
• Assembly services
• Spare parts
• Customer service
• Consulting
• Refurbishing
• Training

DencoHappel is a globally operating company with great expertise in air treatment, air conditioning and filtration technology.

Our nearest consulting and service teams will be glad to discuss ideas and develop creative and effective solutions with you.



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