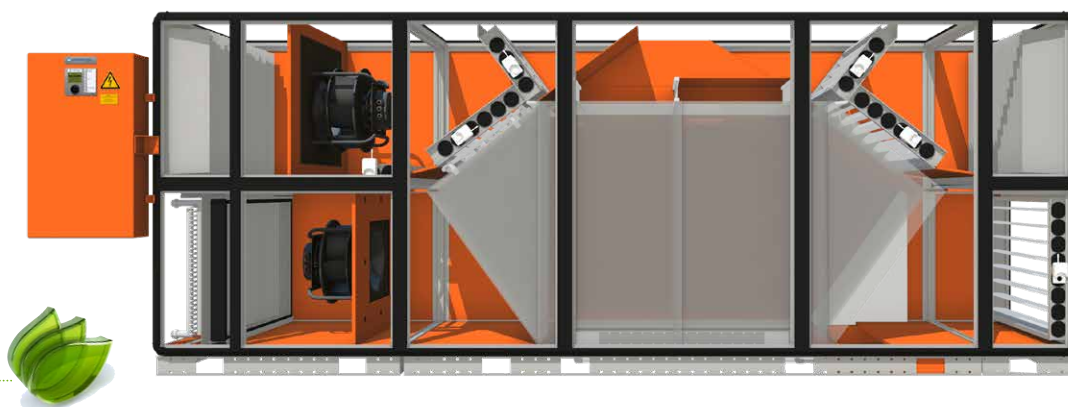


Vzduchotechnická jednotka s kříženým rekuperátorem pro středně velké a velké veřejné bazény



ThermoCond 38 13 01 Zjednodušená ilustrace

Automaticky vybírá
nejekonomičtější provozní režim

ThermoCond 38

PRŮTOK VZDUCHU: 2,600 – 50,000 m³/h

Dodáváno s Eurovent MB
50 certifikovaným šasím



Specifikace:

- Více než 95% účinnost rekuperace tepla s pouze 115 tlakovou ztrátou
- Navrženo pro požadavky nejvyšší třídy energetické účinnosti
- HRC třída H1, i pro velké rychlosti vzduchu
- Úsporné EC motory
- Volitelné - ohřívač čerstvé vody
- Integrovaná funkce odtávání
- Faktor tepelného mostu $k_p = 0.78$ - třída TB1
- Dvoustupňová filtrace vzduchu
- Plně nastavitelný HVAC systém
- Variabilní objemový průtok závislý na zatížení
- Splňuje požadavky VDI 6022

Jednotky série 3 dosahují velmi vysoké energetické účinnosti, díky automatické regulaci, která do prostoru bazény přivádí jen takové množství vzduchu, které je potřebné pro odvlhčení bazénové haly. ThermoCond 3 odvlhčuje pouze čerstvým vzduchem. Design jednotky zajišťuje čistitelnost dle normy VDI 6022. The integrated

,QWHJURYDQZ3HQEHNXSHUWRU
GRVDKXMHVNXWHQSRWLSURXGSRGD
3 VQHMYBQRXJSMQKR
JUNXQWHSOD< Jednotka může být volitelně vybavena ohřívačem čerstvé vody pro ještě účinnější využití tepelné energie obsažené v odpadním vzduchu.

Další výkonnostní parametry a možnosti:

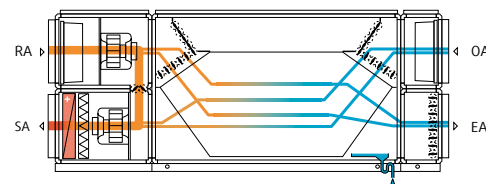
- Antikorozní křížený rekuperátor, který je vyroben z kvalitního polypropylenu
 - Heating coil
 - Air filtration in all operating conditions, with filters in return, outside and supply air
 - Constantly regulated recirculation air dampers for heating purposes
 - Recirculation air defrost damper
 - Integrated freely programmable control and regulation unit
 - Complete unit, contains all structural elements for heating, dehumidification and ventilation
 - Intensive quality inspection with factory test run
 - Čištění tepelného výměníku je možné v namontované poloze
- Volitelné:
- Integrovaný obtok rekuperátoru s použitím odvod/odpad a sání/přívod klapek
 - Rekuperátor v krátké verzi
 - Tlumič hluku
 - Venkovní provedení
 - Vzdálené servisní připojení na jednotku
 - Ohřívač čerstvé vody
 - a mnoho dalšího

Popis funkce

Standby - režim připraveno

Ve standby režimu In standby operation of the swimming pool hall, the amount of water evaporation is lower. The air handling unit operates with reduced dehumidification performance. The proportion of recirculated air in this operation mode is maximized. For hygiene reasons and to ensure the pollutant removal, it is

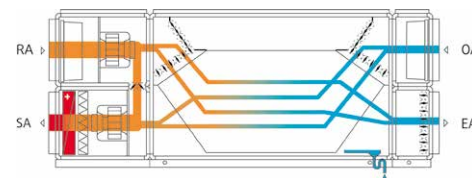
recommended to mix a small proportion of outside air to the supply air, thus continuous dehumidification of the pool hall air also takes place in idle mode. Despite reduced fan performance, the air circulation in the swimming pool is guaranteed. The swimming pool is heated, if required, by the heating coil.



Swimming pool mode with dehumidification requirement

The swimming pool hall is dehumidified through the addition of outside air to the recirculation air volume flow. In swimming pool mode the minimum required amount of outside air is added to the recirculation air for hygienic reasons (VDI 2089). The proportion of outside air depends on the

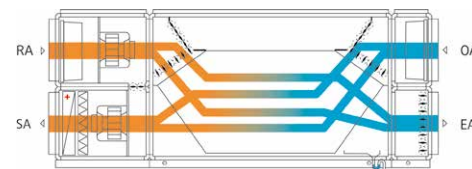
current evaporation of water (and therefore the occupancy level of the swimming pool hall), as well as the outside air humidity. This is continuously and automatically adjusted. If the waste heat recovery is not sufficient for achieving the desired supply air temperature, the supply air is reheated in the heating coil.



Outside air / exhaust air mode

In the case of rising outside air humidity, the recirculation air damper is continuously closing as required. When the outside air humidity is high, the damper closes

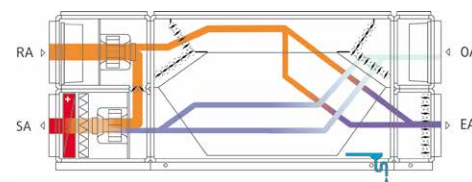
completely. The system works at 100 % outside air / exhaust air operation through the counterflow plate heat exchanger.



Defrost operation

All recuperative heat exchangers tend to ice over in the case of low outside temperatures. The integrated defrost mode removes any icing by opening the return air/exhaust air bypass as the return air is

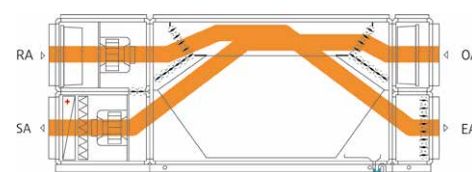
directed to the area of possible icing. The fresh air supply is not stopped during the defrost operation.



Bypass operation

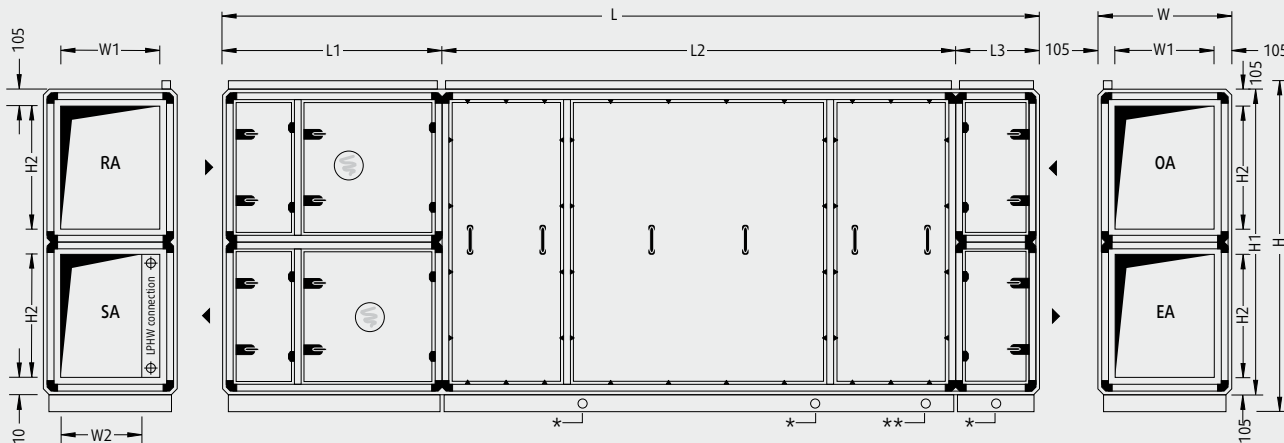
The unit is equipped with a heat exchanger bypass. The proportion of the air guided through the heat exchanger and the bypass can be regulated as

required up to free ventilation according to ErP-guidelines 1253/2014. In this way a heating up of the building can be delayed or avoided.



ThermoCond Type 38

System dimensions and weights



Important! Where a system is operated in parallel, the supply air and return air ducts of the two units have to be brought together.

Where units are run in parallel, each unit has a controls cabinet.

Mirror-image design possible.

- * Floor drain
- ** Condensate drainage

Unit type	L ¹	W ²	H ³	L1 ¹	L2 ¹	L3 ¹	W1	W2	H1	H2	Weight ¹
38 03 01	4,810	790	1,700	1,240	2,970	600	580	510	1,520	580	1,220
38 05 01	4,970	1,110	1,700	1,400	2,970	600	900	830	1,520	580	1,500
38 06 01	5,610	790	2,340	1,400	3,610	600	580	420	2,160	900	1,650
38 10 01	5,610	1,110	2,340	1,400	3,610	600	900	740	2,160	900	1,900
38 13 01	5,770	1,430	2,340	1,560	3,610	600	1,220	1,060	2,160	900	2,350
38 16 01	5,770	1,750	2,340	1,560	3,610	600	1,540	1,380	2,160	900	2,650
38 19 01	5,770	2,070	2,340	1,560	3,610	600	1,860	1,700	2,160	900	3,000
38 25 01	6,250	2,070	2,980	1,560	4,090	600	1,860	1,700	2,800	1,220	3,900
38 29 01	6,250	2,390	2,980	1,560	4,090	600	2,180	2,020	2,800	1,220	4,300
38 37 01	6,250	3,030	2,980	1,560	4,090	600	2,820	2,660	2,800	1,220	5,700

For service work, a clearance corresponding to dimension W is required on the operating side of the unit. If dimension W is smaller than one metre, please leave a clearance of one metre. For service work above the unit, please allow 50 mm working height clearance above the cable duct. For service work at unit type 38 37 01 a clearance at the rear of at least 1,500 mm is required.

Please comply with the dimensions for body size, air duct connections and electrical controls cabinet.

All length dimensions in mm, weight in kg, weight incl. controls cabinet.

- 1 May change depending on chosen option, e.g. recuperator in short version (- 960 mm)
- 2 Door fitting assembly increase unit width by 65 mm each operating side
- 3 incl. 120 mm base frame, incl. 60 mm cable duct

3 transportation units are supplied, including controls cabinet until unit type 38 29 01. Unit type 38 37 01 is delivered in 4 transportation units including controls cabinet. Further partitioning for smaller apertures possible (at extra cost).

Largest transport unit

Unit Type	L ¹	W	H ³	Weight ¹
38 03 01	2,970	790	1,700	660
38 05 01	2,970	1,110	1,700	810
38 06 01	3,610	790	2,340	930
38 10 01	3,610	1,110	2,340	1,110
38 13 01	3,610	1,430	2,340	1,300
38 16 01	3,610	1,750	2,340	1,500
38 19 01	3,610	2,070	2,340	1,720
38 25 01	4,090	2,070	2,980	2,330
38 29 01	4,090	2,390	2,980	2,600
38 37 01	4,090	1,515	2,980	1,750

Controls cabinet

Unit Type	H x W x D ¹	Position at unit
38 03 01	1,120 x 640 x 210	SA/RA side
38 05 01	1,120 x 640 x 210	SA/RA side
38 06 01	1,120 x 640 x 210	SA/RA side
38 10 01	1,120 x 640 x 210	SA/RA side
38 13 01	1,120 x 640 x 210	SA/RA side
38 16 01	1,120 x 640 x 210	SA/RA side
38 19 01	1,120 x 640 x 210	SA/RA side
38 25 01	1,280 x 640 x 210	SA/RA side
38 29 01	1,280 x 640 x 210	SA/RA side
38 37 01	1,280 x 640 x 210	SA/RA side

Technical specifications and performance

Unit Type		38 03 01	38 05 01	38 06 01	38 10 01	38 13 01	38 16 01	38 19 01	38 25 01	38 29 01	38 37 01
Optimum flow rate	m ³ /h	3,100	4,600	4,600	6,800	9,200	11,200	13,200	17,600	20,500	26,000
Max. volume flow rate ¹	m ³ /h	3,500	5,300	5,600	7,900	10,500	13,000	15,500	21,500	25,000	32,000
Heat recovery efficiency ²	%	96.9	96.9	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
Heat recovery efficiency acc. EN 308	%	75.1	75.1	77.3	77.3	77.1	77.4	77.5	79.5	79.5	79.4
Dehumidification capacity acc. VDI 2089 at V _{opt}	kg/h	18.9	28.1	28.1	41.5	56.2	68.4	80.6	107.5	197.9	158.8
Dehumidification capacity acc. VDI 2089 at V _{max}	kg/h	21.3	32.4	34.2	48.2	64.1	79.4	94.6	131.3	241.3	195.4
Total electrical power rating ³	kW	1.98	2.70	2.77	4.04	5.24	6.39	8.60	11.76	15.22	19.44
Max. current consumption ³	A	6.0	7.5	7.5	9.7	12.8	12.8	16.7	26.2	30.8	39.3
Operating voltage		3 / N / PE 400 V 50 Hz									
Ext. pressure losses											
Supply and fresh air channel	Pa	300	300	300	300	300	300	400	400	500	500
Return and exhaust air channel	Pa	300	300	300	300	300	300	400	400	500	500
Sound power level											
Acoustic pressure in 1 m distance from unit ⁴	dB(A)	64	63	63	59	62	58	61	69	63	72
Fan units											
Rated motor input for SA 100% flow rate ⁵	kW	1.12	1.60	1.71	2.46	3.06	3.62	5.22	7.02	9.04	11.67
Rated motor input for SA 60% flow rate ⁵	kW	0.69	0.95	0.99	1.25	1.73	1.94	3.06	4.18	4.96	6.81
Rated motor input for RA 100% flow rate ⁵	kW	0.85	1.20	1.27	2.03	2.39	2.92	4.15	5.72	7.34	9.78
Rated motor input for RA 60% flow rate ⁵	kW	0.54	0.67	0.69	0.99	1.34	1.54	2.14	3.34	4.26	5.97
SFP category supply air return air (60% V _{opt})		2 2	2 2	2 2	2 3	2 2	2 2	2 3	3 3	3 3	3 3
Nominal rating supply air return air	kW	1.7 1.7	3.0 1.7	3.0 1.7	3.0 3.0	4.7 4.7	4.7 4.7	6.0 4.7	9.4 9.4	11.0 9.4	16.5 14.1
Efficiency classes according to EN 13053:2012											
Heat recovery class		H1	H1	H1	H1	H1	H1	H1	H1	H1	H1
Power consumption of fan motors SA RA		P2 P2	P2 P1	P2 P1	P1 P1	P2 P1	P1 P1	P1 P1	P1 P1	P2 P2	P2 P2
Air velocity class		V1	V1	V2	V2	V2	V2	V2	V2	V2	V2
Filtration according to ISO 16890											
Supply air Outside air		ISO ePM1 55 % (F7) ISO ePM10 60 % (M5)									
Return air		ISO ePM10 60 % (M5)									
LPHW											
Heating capacity max. ⁶	kW	19.9	29.6	29.4	43.5	36.6	71.9	60.5	112.5	130.7	165.5
Water flow rate and pressure losses											
LPHW	m ³ /h kPa	1.01 3.7	2.12 6.6	2.21 9.8	2.31 4.0	2.13 2.9	4.05 5.5	2.65 5.8	5.86 3.5	6.59 4.1	7.47 6.4
LPHW (pump warm water) valve	m ³ /h kPa	1.01 4.1	2.14 7.2	2.22 12.4	2.23 5.3	1.60 4.0	4.08 6.5	2.65 7.0	5.17 3.5	5.71 4.4	6.65 8.9
Clean water heater (optional)											
Capacity ⁷	kW	1.46	2.52	2.40	3.57	5.03	6.44	7.64	9.87	11.51	14.52
Clean water volume flow rate	m ³ /h	0.070	0.124	0.122	0.176	0.253	0.328	0.384	0.509	0.584	0.754
Connections											
LPHW connection	DN	32	32	32	32	40	40	40	50	65	65
LPHW control valve connection	DN	15	20	20	25	25	32	32	40	40	40
Condensate drainage	DN	40	40	40	40	40	40	40	40	40	40
Floor drain	DN	20	20	20	20	20	20	20	20	20	20
Clean water heater (optional)	DN	15	15	15	15	15	15	15	15	15	15

Specifications of technical data relate to the optimum flow rate and return air condition 30° C / 54% r.h., outside air condition 15° C / 84% r.h. and standard density (1.204 kg/m³), unless otherwise specified.

1 With regard to return air condition; May require alteration of the technical equipment

2 RA = 30° C / 54% r.h.; OA = -12° C / 90% r.h.; 1/3 OA rate
 3 Depends on configuration of measurement and control system/unit
 4 at 250 Hz mid-band frequency
 5 with average filter contamination

6 FL = 70° C; SA ≈ 50° C
 7 Water inlet temp = 10° C, Water outgoing temperature ≈ 28° C

Please seek approval of technical data and specifications prior to start of the planning process.