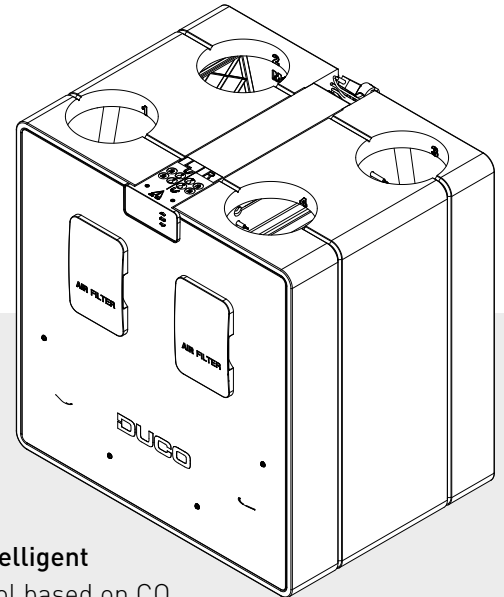


# TECHNICAL DATA SHEET

## DucoBox Energy Comfort D400



The DucoBox Energy Comfort D400 is a **mechanical ventilation unit with heat recovery**. Within the DucoBox Energy Comfort range, the left/right exchange is 100% software-driven thanks to the patented principle of the double by-pass.

The demand control of the DucoBox Energy Comfort D400 results in **intelligent and energy-efficient operation**. Together with the smart demand control based on CO<sub>2</sub> and humidity, the dynamic air distribution filters ensure exceptional efficiency within this compact unit.

The compact and quick-to-install 2-zone valves provide the most energy-efficient result that can be achieved with an MVHR system. Please note that the zone control reduces the noise by **at least 30%**! Comfort rules!

### Versions

Type	Supply and extraction capacity at 150 Pa	Supply and extraction capacity at 200 Pa	2-zone system	Frost protection	Article number
DucoBox Energy Comfort D400	400 m <sup>3</sup> /h	400 m <sup>3</sup> /h	yes (external - optional)	imbalance or external heater (optional)	0000-4707

### Physical characteristics

<b>Width x Height x Depth (mm)</b>	756 x 800 x 584 mm
<b>Casing</b>	Coated sheet steel + EPP
<b>Colours</b>	White + black
<b>Connections</b>	Inner diameter: Ø 180 mm
<b>Condensate drain</b>	Ø 32 mm (1 ¼") (2x)
<b>Heat exchanger</b>	v1: PP - v2: PET/Alu
<b>Material of inside section</b>	EPP / PP / ABS
<b>Weight</b>	31 kg
<b>Power cable length</b>	2 m (from top of unit)
<b>Mounting</b>	Wall mounting (standard) Floor mounting as an option using a support frame

### Electrical characteristics

<b>Maximum power at 50 Pa</b>	118,1 W
<b>Power supply</b>	230 V, 50 Hz via 3-core power cable with earthed plug
<b>Contacts</b>	0-10 V in/output
<b>Type of motor</b>	DC
<b>IP class</b>	IP40
<b>Energy conversion efficiency</b>	87.9 % (EN 13141-7)

## Miscellaneous characteristics

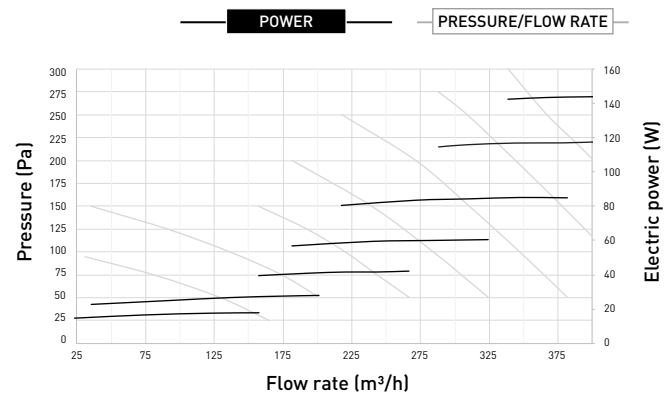
<b>Energy class</b>	With 2 sensors (control factor 0.65): A+ Other: A
<b>Filters</b>	Dynamic airflow filter supply air (520 x 190 x 15 mm) Standard: ISO 16890 Coarse 65 % (= G4) Optional: ISO 16890 ePM1 55% (=F7)  Dynamic airflow filter exhaust air (520 x 190 x 15 mm) Standard: ISO 16890 Coarse 65 % (= G4)
<b>Fans</b>	EC fan with backward curved blades
<b>Automatic calibration</b>	Yes (constant pressure)
<b>Installer App</b>	Via Duco Connectivity Board (if permanently mounted) Via Duco Installation Kit (mobile application)
<b>Passive cooling</b>	Automatic passive cooling control via 'NightBoost' function
<b>Operation</b>	Integrated display Use via remote controls and CO <sub>2</sub> or Humidity Sensors Optional via smartphone/tablet (provided Duco Connectivity Board in device)
<b>Sensors</b>	<b>Integrated:</b> pressure, temperature, onboard switch sensor <b>External:</b> CO <sub>2</sub> (via optional Room sensor), Humidity (via optional Room sensor or measurement in ETA duct), external Switch Sensor (voltage-free input) (optional)
<b>Communication</b>	<b>Standard:</b> Duco RF, Duco Wired, Switch Sensor <b>Expandable with Duco Connectivity Board:</b> Modbus TCP (local), REST API (local or via cloud) - both via Ethernet or Wi-Fi

## Pressure/flow characteristics

Flow rate (m <sup>3</sup> /h)	Pressure (Pa)	Absorbed power* (W)
367	250	144
350	250	135
300	250	111
275	250	101
400	200	144
350	200	117
300	200	95
275	200	85
400	150	129
350	150	102
300	150	80
275	150	71

\* The values mentioned are an estimate and cannot be used as substantiation.

## DucoBox Energy Comfort D400



## Optional accessories

Product	Article number
Siphon flat (Energy)	0000-4376
Duco Connectivity Board	0000-4810
Humidity Sensor (DucoBox Energy Comfort (Plus))	0000-4723
Mounting chair standing (Energy Comfort D400 / Plus)	0000-4740
Filter set 2 x Coarse 65% (Energy Comfort D400 / Plus)	0000-4741
Filter set Coarse 65% / ePM1 55% (Energy Comfort D400 / Plus)	0000-4742
Set Coaxial cable 8m	0000-4418
Pre-Heater DucoBox Energy Comfort (Plus) 1425W	0000-4807
External Multizone Valves	Miscellaneous

# Acoustic properties

Emission from casing measured in accordance with ISO 3741:2010  
 Supply and extraction noise level according to ISO 5135:1997 (with duct correction)

## 1. Emission from casing

Meas- urement #	Flow rate m³/h	Pressure Pa	LwA emission from casing dB(A)	Octave band frequencies Hz							
				63	125	250	500	1000	2000	4000	8000
1	400	200	65	46,5	56,2	63,8	67,9	54,4	51,6	49	41,6
2	350	200	65	49,3	54,9	69,8	63	52	50	46,8	39
3	300	200	62	43,2	53,3	67,5	57,3	50,1	48,3	44,5	35,6
4	400	150	67	47	55,1	70,8	67,9	53	50,3	48,1	41,1
5	350	150	63,5	48,4	54	68,7	58,5	50,7	48,6	46	38,8
6	300	150	61	42,2	52,3	66	55,8	48,8	46,8	43,3	35,1
7	350	100	61	43,3	51,9	65,7	56,8	49	47	44,6	38,1
8	300	100	58	42,4	50,5	63,3	54,3	47,1	44,8	42	34,7
9	300	50	56,5	41,4	48,9	63,4	52,1	45,2	42,8	40,1	33,6
10	280	50	54,5	40,8	48,2	60,6	51,1	44,2	41,5	38,6	<31.7
11	250	50	52,5	40	46,5	59,3	49,4	42,6	39,6	36	28,1
12	200	50	48	37,9	42,3	54,1	47,7	39,6	35,6	29,9	<17.8
13	200	25	46,5	<36.3	44,9	51,8	46,7	37,4	33,5	27,7	<17.0
14	150	25	42	<31.6	44,4	45,2	40,3	34,3	29	<21.5	<10.5
15	100	25	36,5	<28.3	36,8	39,6	35,4	30,1	22,7	<10.7	<7.4

## 2. Supply noise

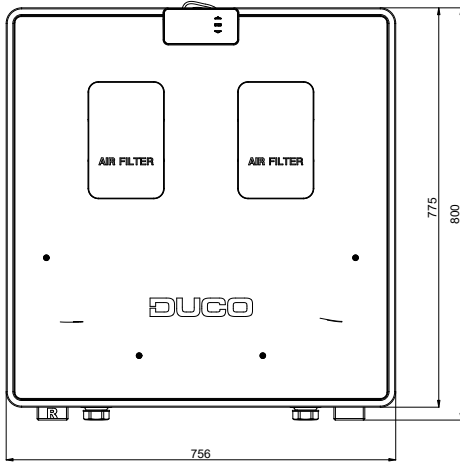
Meas- urement #	Flow rate m³/h	Pressure Pa	LwA supply dB(A)	Octave band frequencies Hz							
				63	125	250	500	1000	2000	4000	8000
1	400	200	79,5	73,4	71,9	77,4	82,7	70	63	59,8	55,9
2	350	200	74,5	71,7	70,8	78,2	72,7	64,9	60,7	57,2	52,6
3	300	200	72	70,7	70	76,2	69,9	61,8	58,1	53,6	47,7
4	400	150	78	74,2	70,9	82,5	77,7	66,1	62,2	59,3	55,7
5	350	150	73,5	71,3	69,8	77,6	70,6	63	59,8	56,7	52,8
6	300	150	72	68,3	68,8	76,5	68,8	60,3	56,8	52,9	47,7
7	350	100	73,5	69,9	69,3	78,5	69,6	61,6	58,6	55,9	52,4
8	300	100	73	67,9	67,3	79,7	67,4	58,8	55,7	52,4	48,1
9	300	50	68	67,4	66,5	74,2	64,9	57,7	54,4	51,5	47,8
10	280	50	68	66,7	66	75,2	63,3	56,8	52,9	49,9	46
11	250	50	64,5	64,8	64,8	71,5	61,4	53,8	50,1	46,5	41,2
12	200	50	64,5	63,7	61,4	74,7	58,2	49,8	45,1	39,1	<29.9
13	200	25	60,5	62,6	64,1	68,9	58,4	48,3	43,7	38,5	<29.7
14	150	25	54,5	59,9	65	56,5	50,6	42,9	36,3	27,4	<15.2
15	100	25	48,5	60,6	60,7	51,9	45	36,4	27	<13.3	<9.8

## 3. Extraction noise

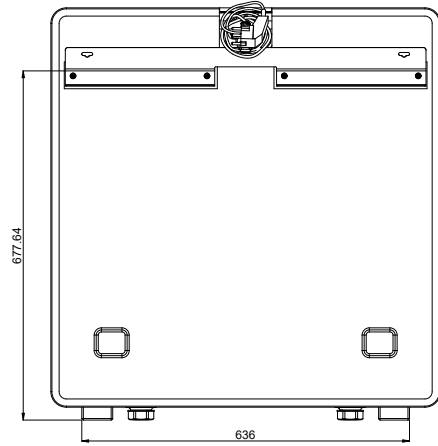
Meas- urement #	Flow rate m³/h	Pressure Pa	LwA extraction dB(A)	Octave band frequencies Hz							
				63	125	250	500	1000	2000	4000	8000
1	400	200	58	68,1	63,4	61,6	56,5	51,1	41,8	37,9	32,4
2	350	200	58	66,1	62,6	63,3	54,6	48,3	39,7	35,7	29,8
3	300	200	57	64,2	61,8	62,5	52,5	46,1	37,8	33,1	<26.2
4	400	150	59	65,4	61,8	64	55,6	49,1	40,6	37,1	32
5	350	150	58,5	65,7	61,3	63,9	53,1	46,8	38,6	34,9	29,5
6	300	150	56	63,5	60,2	61,6	50,5	44,4	36,2	32	<25.6
7	350	100	56,5	62,2	59,4	61,9	51,1	45,3	37,6	34,2	29,4
8	300	100	64	61,5	58,3	72	49,1	43	34,8	31	<25.5
9	300	50	58,5	<57.5	55,7	66,6	46,3	41,3	33	29,5	<24.7
10	280	50	54	<56.4	54,8	61,6	45,7	40,2	31,8	28,2	<23.1
11	250	50	51	<54.9	53,2	58,3	44,8	38,3	29,8	25,6	<19.6
12	200	50	47	<54.6	50,9	55,9	40,9	34,3	24,6	<18.5	<10.2
13	200	25	43,5	<51.3	48,8	51,2	39,5	32,7	23,2	<17.2	<9.8
14	150	25	43	<50.4	<54.1	45,8	<34.0	28,2	<16.6	<9.0	<7.4
15	100	25	36	<49.6	45,7	41,7	28,6	22,4	<9.1	<0.5	<7.0

# Dimensions of DucoBox Energy Comfort D400

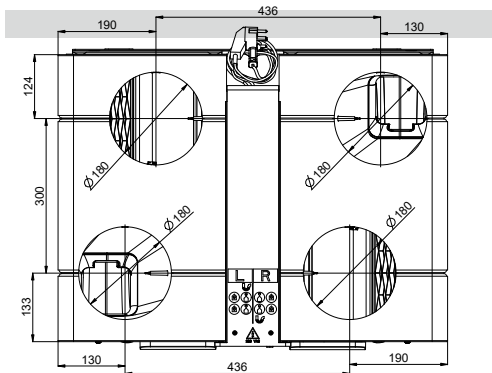
Front view



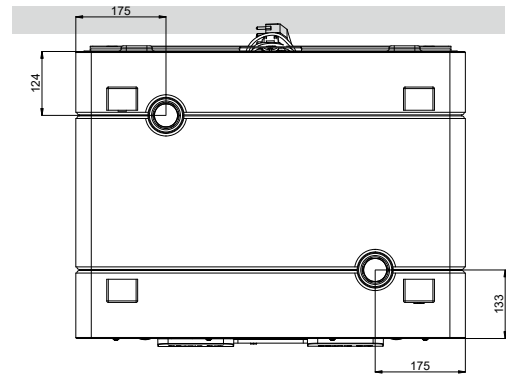
Rear view



Top view



Bottom view



Side view

