

MASTER®

GB DEHUMIDIFIERS
OWNER'S MANUAL

FR DÉSHUMIDIFICATEURS
MANUEL D'UTILISATION

DE LUFTENTFEUCHTER
BEDIENUNGSANLEITUNG

IT DEUMIDIFICATORI
MANUALE OPERATIVO

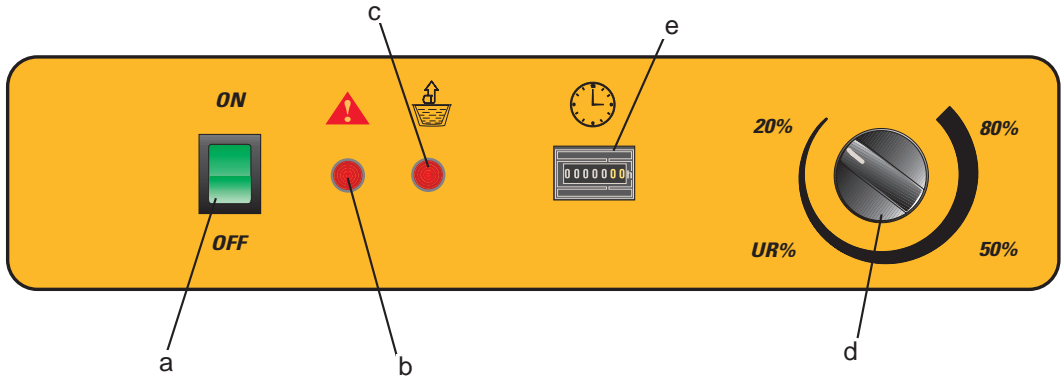
ES DESHUMIDIFICADORES
MANUAL DE INSTRUCCIONES

NL LUCHTONTVOCHTIGER
GEBRUIKERSHANDLEIDING

MODELS - MODÈLES - MODELLE - MODELLI - MODELOS - MODELLEN :
DH 25, DH 40, DH 55, DH 80



CONTROL BOARD - TABLEAU DE COMMANDE - KONTROLLTAFEL QUADRO COMANDI - TABLEO DE MANDOS - BEDIENINGSPANEEL



- a** Interruttore principale
Interrupteurur marche/arrêt
Ein/aus Schalter
Main switch
Interruptor ON/OFF
Aan/uitschakelaar
- b** Spia di sicurezza
Lampe témoin sécurité
Kontrolllampe
Control lamp
Testigo de seguridad
Veiligheidscontrolelampje
- c** Spia di segnalazione della vaschetta piena
(Eccetto DH 80)
Lampe témoin - bac récupérateur plein
(Sauf DH 80)
Kontrolllampe - Wasserbehälter "voll"
(Mit Ausnahme von DH 80)
Pilot lamp - water container full
(Except DH 80)
Control depósito lleno
(Excepto DH 80)
Controlelampje – waterreservoir vol
(Niet in DH 80)
- d** Manopola regolazione dell'umidità stato
Commande d'humidistat
Hygrostat Regelknopf
Hygrostat adjusting knob
Regulación humidostato
Hydrostaat regelknop
- e** Contaore
Compte-heures
Stundenzähler
Hour-counter
Cuentahoras
Urenteller

MASTER®

CE DECLARATION OF CONFORMITY DÉCLARATION DE CONFORMITÉ CE KONFORMITÄTSEKTLÄRUNG DICHIARAZIONE DI CONFORMITÀ CE DECLARACIÓN DE CONFORMIDAD CE CE CONFORMITEITSVERKLARING

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portable forced air heaters, models:
appareils de chauffage à air forcé, modèles:
Mobile Hochdruck-Heißluftgeneratoren, Modelle:
riscaldatori mobili ad aria forzata, modelli:
calentadores móviles de aire forzata, modelos:
draagbare hoge druk verwarmingstoestellen, modellen:
DH 25, DH 40, DH 55, DH 80

It is hereby declared that these models conform to the essential safety requirements laid down by Machines Directive 89/392, including the modifications introduced by Directives 91/368, 93/44, 93/68, 98/37 and by directives 89/336, 92/31, 73/23.

All the models listed conform to these requirements.

Nous déclarons que ces modèles sont conformes aux conditions essentielles de qualité indiquées dans la Directive Machines 89/392, y compris les variantes introduites par les Directives 91/368, 93/44, 93/68, 98/37 et par les Directives 89/336, 92/31, 73/23.

Nous déclarons que tous les modèles listés sont conformes.

Der Hersteller erklärt, dass die angegebenen Modelle den grundlegenden Sicherheitsanforderungen gemäß EG-Maschinenrichtlinie 89/392, einschließlich der mit den Richtlinien 91/368, 93/44, 93/68, 98/37 und von den Richtlinien 89/336, 92/31, 73/23 eingeführten Änderungen, genügen.

Wir erklären alle aufgelisteten Modelle für konform.

Si dichiara che questi modelli sono conformi ai requisiti essenziali di sicurezza indicati dalla Direttiva Macchine 89/392 comprese le varianti introdotte con le Direttive 91/368, 93/44, 93/68, 98/37 e dalle Direttive 89/336, 92/31, 73/23.

Dichiariamo conformi tutti i modelli elencati.

Se declara que estos modelos responden a los requisitos fundamentales de seguridad indicados por la Directiva Máquinas 89/392 incluidas las variantes introducidas con las Directivas 91/368, 93/44, 93/68, 98/37 y con las Directivas 89/336, 92/31, 73/23.

Se declaran conformes todos los modelos a continuación.

Bij deze wordt verklaard dat deze modellen conform de veiligheidseisen zijn van de Machine Richtlijnen 89/392, inclusief de veranderingen aangebracht in de Richtlijnen 91/368, 93/44, 93/68, alsook in de Richtlijnen 89/336, 92/31, 73/2.

Alle genoemde modellen zijn conform deze vereisten.

Company
Name
Position

DESA Europe B.V.
Augusto Millan
Technical Manager

Date and place
Sliedrecht, 15-04-2003

Signature


DESCRIPTION

DH dehumidifiers have been designed for use in places which have to be dried quickly or where an uncontrolled rise in levels of relative humidity cannot be permitted.

DH dehumidifiers reduce the relative water vapour condensation level in the air.

As you can see in figure 1, each unit has a refrigeration circuit and a fan. The air which is drawn in by the fan (3) passes through the filter (5) and strikes the cold walls of the evaporator (6) where it cools to a temperature which is slightly below condensation point. Some of the vapour condenses and is collected in the water tank (9). Then the air passes through the condenser (4) and is heated to a temperature which is slightly higher than room temperature.

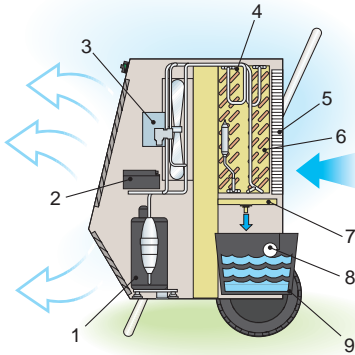


Fig. 1 How the unit works: 1. Air-tight compressor. 2. Control device 3. Helical fan 4. Condenser 5. Air filter 6. Evaporator 7. Tube fitting 8. Float 9. Water tank (Except DH 80).

Best results are obtained at relative humidity levels of between 40% and 100% and at temperatures that range from 3° to 40°.

A humidistat automatically controls the unit, turning it on and off when the desired level has been attained. The electronic control device (2) automatically starts and stops the defrosting process in accordance with the workings of the unit. In case of overheating due to malfunction or if the unit has been used in a place where the temperature exceeds the maximum permitted limit of 40°C, the control device automatically blocks the unit, the fan and compressor stop and the control lamp (b) lights up.

⚠ WARNING: If room temperature is lower than the minimum permitted value (3°C) the dehumidifier doesn't work and the control lamp (b) flashes.

⚠ WARNING: The mains supply to the heater (230V, monophase, 50 Hz) must be earthed and have a magneto-thermal switch with differential.

The dehumidifier should preferably be placed in the middle of the space where it will operate so that the intake and expulsion of air will not be hindered. It should be at least 20-30 cm from any wall. It should not be placed next to sources of heat such as radiators, stoves or other heat outlets. It should not be placed near doors or openings. When the dehumidifier is working all doors and windows must be shut.

⚠ WARNING: Cloths or coverings of any kind must not be placed on the dehumidifier when it is working.

If necessary, the water tank can be removed and the water drained off directly by attaching a rubber tube to the tube fitting (7).

INSTRUCTIONS FOR USE

TURNING ON

⚠ WARNING: The dehumidifier must be used, stocked and, for DH 25, transported in a vertical position. Should this not be the case, the machine will not function properly.

To turn on the unit proceed as follows:

- Turn the hydrostat adjusting knob clockwise to 20%.
- Turn ON the green switch (a) -position "1". The fan and compressor start and the switch lights up.
- Turn the hydrostat adjusting knob (d) anti-clockwise to the desired relative humidity level.

⚠ WARNING: The dehumidifier is provided with an automatic security device which starts the compressor just 1 minute after the switch (a) is on.

TURNING OFF

Turn OFF the green switch (a)-position "0".

⚠ WARNING: If room temperature is lower than the minimum permitted value (3°C) the dehumidifier doesn't work and the control lamp (b) flashes.

THE WATER TANK (EXCEPT DH 80)

When the water tank is full the unit stops immediately and the pilot lamp (c) comes on. The tank must be emptied before the unit can start working again.

⚠ WARNING: Before taking out the water tank, turn OFF the main switch and take out the plug.

⚠ WARNING: After emptying, put the water tank very carefully back in its bay so as not to damage or interfere with the switch which is connected to the float.

MAINTENANCE

⚠ WARNING: Before any maintenance operation turn OFF the main switch and take out the plug.

To work efficiently the air filter and the internal parts of the humidifier must be cleaned periodically. To clean the air filter apply compressed air or wash with tepid soapy water.

To gain access to the internal parts unscrew the external casing panels. The internal parts must be cleaned with an aspirator. Take special care when cleaning the condenser's and evaporator's ribbed batteries and the fan blades.

TRANSPORT AND MOVEMENT

⚠ WARNING: Before moving a unit turn OFF the main switch and take out the plug.

The dehumidifier must not be transported in a horizontal position. Having wound up the electrical cable, wheel the unit. must be tilted as illustrated in Fig. 2.

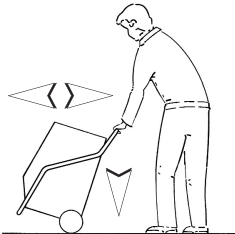
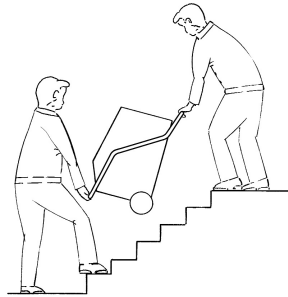


Fig. 2

To move the unit up or down a stairs or steep incline proceed as illustrated in Fig. 3

Fig. 3



DISMANTLING AND DISPOSAL

There is a pressurized refrigerant, R407C, in the refrigeration circuit and oil in the compressor. For this reason, when a unit has come to the end of its working life, it must not be dumped. It must be dismantled and the various parts can be recycled and/or scrapped. Refrigerants cannot be dumped. In order to extract R407C you need:

1. A pliers like the one in Fig. 4.

⚠ WARNING: The following operations must be carried out by qualified personnel.

2. Motorcondenser
3. Pressurized vessel



Fig. 4

Proceed as follows:

- Connect the pressurized vessel to the motorcondenser, and the motorcondenser to the pliers.
- Punch a hole in the compressor's exit tube and leave the pliers in position.
- Open both motorcondenser taps, turn it on and empty the refrigeration circuit.
- Stop the motorcondenser and close both taps. Then close the tap on the pressurized vessel.
- Remove the pliers.
- If the pressurized vessel is full it should be given to a company that specializes in the disposal of waste fluids.

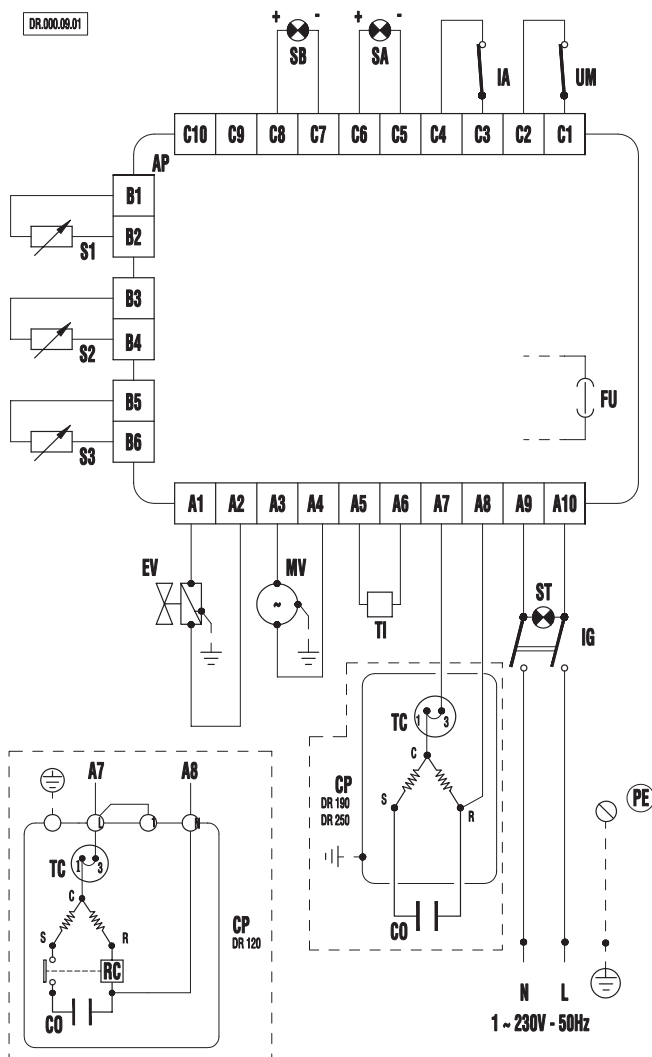
The welded joints on the compressor's entry and exit tubes should be eliminated and lock bolts removed. Then drill a hole in the underside of the chassis, and pour the mineral oil into a vessel which should be delivered to a company that specializes in the recycling and disposal of oil.

The remaining metal parts which contain copper, aluminium and steel can be recycled or scrapped.

OBSERVED FAULT, POSSIBLE CAUSES AND REMEDIES

PROBLEM	CAUSE	REMEDY
The unit won't start	1 No electricity	1a Check that the the switch is working and that it is ON 1b Check mains characteristics (220V, 1 ~, 50 Hz)
	2 Humidistat not set correctly	2 Set the humidistat at a relative humidity level which is lower than the room humidity level
	3 Water tank full (pilot light "c"on)	3 Empty the water tank.
The ventilator and compressor are working but neither water nor ice form on the walls of the evaporator	1 Air flow not sufficient	1a Check that nothing is blocking intake and expulsion of air 1b Check that there aren't any deposits or incrustation on the filter or on the ribbed batteries of the condenser or of the evaporator
	2 Room temperature and relative humidity level too low.	2 Check that the temperature is between 0° and 40° and that relative humidity is between 40%
	3 Refrigeration circuit not working correctly	3 Call an Authorised Service Technician
The unit stops and the pilot lamp (c) comes on	1 Water tank full	1 Empty the water tank
The unit stops and the control lamp (b) comes on (the condenser's ribbed battery has over heated)	1 Air flow obstructed	1 Remove obstacles to air flow and start unit again
	2 Air temperature above 40 °C	2 Only use unit when temperature drops below 40°C
	3 Fan motor broken	3 Call an Authorized Service Technician
	4 Refrigeration circuit not working correctly	4 Call an Authorized Service Technician
The unit stops and the control lamp (b) flashes	1 Temperature lower than 3°C	1 Move the dehumidifier in a place where temperature is 3°C

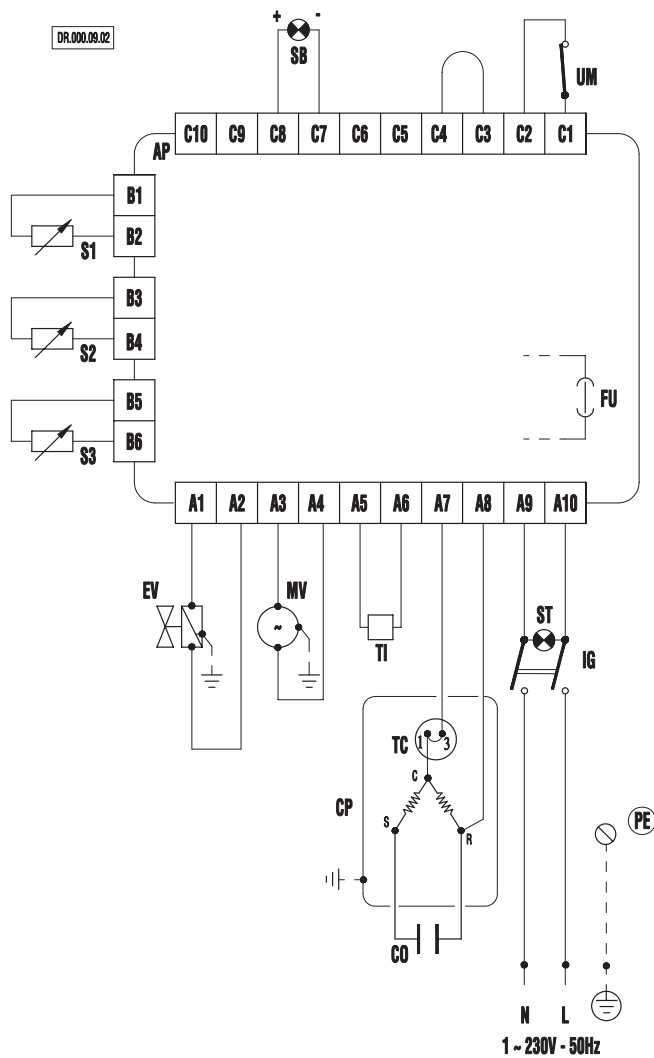
WIRING DIAGRAM - SCHEMA ELECTRIQUE - SCHALTSCHHEMA SCHEMA ELETTRICO - ESQUAMA ELÉCTRICO - ELEKTRISCH SCHEMA



LEGENDA

MV	MOTORE VENTILATORE MOTEUR DU VENTILATEUR VENTILATOR MOTOR FAN MOTOR MOTOR VENTILADOR VENTILATORMOTOR	IG	INTERRUTTORE DI ACCENSIONE INTERRUPTEUR MARSCHÉ – ARRET EIN – AUS SCHALTER ON – OFF SWITCH INTERRUPTOR ON-OFF AAN/UITSCHAKELAAR
S1	SONDA SBRINAMENTO SONDE DE DEGIVRAGE ABTAUEN SONDE DE – ICING PROBE SONDA DECONGELACION ONTDOOIINGSSONDE	SA	SPIA DI RIEMPIMENTO VASCHETT LAMPE TEMOIN DE REMPLISSAGE DU BAC AU EAU ANFÜLLSIGNAL DER WASSERWANNE WATER TANK FULL LEVEL LIGHT TESTIGO DE DEPOSITO LLENO CONTROLELAMPJE WATERBAK VOL
S2	SONDA SOVRARISCALDAMENTO SONDE DE SURCHAUFFE' ÜBERHITZUNG SONDE OVETHEA PROBE SONDA DE SOBRECALENTAMIENTO OVERVERHITTINGSSONDE	SB	SPIA DI BLOCCO LAMPE TEMOIN ARRET "AUS" KONTROLLLAMPE STOP CONTROL LAMP TESTIGO DE BLOQUEO "UIT" CONTROLELAMPJE
S3	SONDA AMBIENTE SONDE AMBIANTEFÜHLER FÜR RAUMTEMPERATUR AMBIENT PROBE SONDA AMBIENTE SONDE VOOR OMGEVINGSTEMPERATUUR	UM	UMIDOSTATO HYGROSTAT HYGROSTAT HYGROSTAT HUMIDOSTATO HYDROSTAAT
CP	COMPRESSORE COMPRESSEUR KOMPRESSOR COMPRESSOR COMPRESSOR COMPRESSOR	ST	SPIA TENSIONE LAMPE TEMOIN DE TENSION SPANNUNGSKONTROLLLAMPE VOLTAGE LIGHT TESTIGO DE TENSION VOLTAGELAMPJE
CO	CONDENSATORE CONDENSATEUR KONDENSATOR CONDENSER CONDENSADOR CONDENSATOR	EV	ELETTROVALVOLA ELECTROVANNE MAGNETVENTIL SOLENOID VALVE ELECTROVALVULA ELEKTROMAGNEETVENTIEL
FU	FUSIBILE (500 mA) FUSIBLE (500 mA) SICHERUNG (500 mA) FUUSE (500 mA) FUSIBLE (500 mA) ZEKERING (500 MA)	AP	APPARECCHIATURA DI CONTROLLO COFFRET DE CONTROLLE STEUERGERÄT CONTROL BOX APARATO DE CONTROL CONTROLEAPPARAAT
IA	INTERRUTTORE DI RIEMPIMENTO VASCHETTA ACQUA INTERRUPTEUR DE TROP PLEIN WASSERBEHÄLTERSCHALTER FLOAT SWITCH FLOTADOR SCHAKELAAR VLOTTER	TC	TERMOSTATO COMPRESSORE THERMOSTAT DE COMPRESSEUR KOMPRESSOR THERMOSTAT COMPRESSOR THERMOSTAT TERMOSTATO COMPRESOR COMPRESSORTHERMOSTAAT
TI	CONTAORE COMPTE-HEURES STUNDENZÄHLER HOUR-COUNTER CUENTAHORAS URENTELLER	RC	RELE' COMPRESSORE RALAIS DU COMPRESSEUR KOMPRESSOR THERMOSTAT COMPRESSOR THERMOSTAT RELE' COMPRESOR COMPRESSORTHERMOSTAAT

**WIRING DIAGRAM - SCHEMA ELECTRIQUE - SCHALTSCHEMA
 SCHEMA ELETTRICO - ESQUAMA ELÉCTRICO - ELEKTRISCH SCHEMA**



LEGENDA

MV	MOTORE VENTILATORE MOTEUR DU VENTILATEUR VENTILATOR MOTOR FAN MOTOR MOTOR VENTILADOR VENTILATORMOTOR	IG	INTERRUTTORE DI ACCENSIONE INTERRUPTEUR MARSCHE – ARRET EIN – AUS SCHALTER ON – OFF SWITCH INTERRUPTOR ON-OFF AAN/UITSCHAKELAAR
S1	SONDA SBRINAMENTO SONDE DE DEGIVRAGE ABTAUEN SONDE DE – ICING PROBE SONDA DECONGELACION ONTDOOIINGSSONDE	SB	SPIA DI BLOCCO LAMPE TEMOIN ARRET "AUS" KONTROLLLAMPE STOP CONTROLL LAMP TESTIGO DE BLOQUEO "UIT" CONTROLELAMPJE
S2	SONDA SOVRARISCALDAMENTO SONDE DE SURCHAUFFE' ÜBERHITZUNG SONDE OVETHEA PROBE SONDA DE SOBRECALENTAMIENTO OVERVERHITTINGSSONDE	UM	UMIDOSTATO HYGROSTAT HYGROSTAT HYGROSTAT HUMIDOSTATO HYDROSTAAT
S3	SONDA AMBIENTE SONDE AMBIANTEFÜHLER FÜR RAUMTEMPERATUR AMBIENT PROBE SONDA AMBIENTE SONDE VOOR OMGEVINGSTEMPERATUUR	ST	SPIA TENSIONE LAMPE TEMOIN DE TENSION SPANNUNGSKONTROLLAMPE VOLTAGE LIGHT TESTIGO DE TENSION VOLTAGELAMPJE
CP	COMPRESSORE COMPRESSEUR KOMPRESSOR COMPRESSOR COMPRESSOR COMPRESSOR	EV	ELETTROVALVOLA ELECTROVANNE MAGNETVENTIL SOLENOID VALVE ELECTROVALVULA ELEKTROMAGNEETVENTIEL
CO	CONDENSATORE CONDENSATEUR KONDENSATOR CONDENSER CONDENSADOR CONDENSATOR	AP	APPARECCHIATURA DI CONTROLLO COFFRET DE CONTROLLE STEUERGERÄT CONTROL BOX APARATO DE CONTROL CONTROLEAPPARAAT
FU	FUSIBILE (500 mA) FUSIBLE (500 mA) SICHERUNG (500 mA) FUZE (500 mA) FUSIBLE (500 mA) ZEKERING (500 MA)	TC	TERMOSTATO COMPRESSORE THERMOSTAT DE COMPRESSEUR KOMPRESSOR THERMOSTAT COMPRESSOR THERMOSTAT TERMOSTATO COMPRESOR COMPRESSORTHERMOSTAAT
TI	CONTAORE COMPTE-HEURES STUNDENZÄHLER HOUR-COUNTER CUENTAHORAS URENTELLER		

**TECHNICAL SPECIFICATIONS - CARACTERISTIQUES TECHNICAL - TECHNISCHE DATEN
 CARATTERISTICHE TECNICHE - CARACTERISTICAS TECNICAS - TECHNISCHE GEVEGENS**

		DH 25	DH 40	DH 55	DH 80
Umidità relativa ¹ - Humidité relative ¹ - Relative Luftfeuchtigkeit ¹ Relative humidity ¹ - Humedad relativa ¹ [%] Relatieve luchtvochtigheid ¹		40 - 100			
Temperatura ¹ - Température ¹ - Temperatur ¹ Temperature ¹ - Temperatura ¹ - temperatuur ¹	[°C]	3 - 40			
Portata d' aria - Débit d' air - Luftdurchsatz Air flow - Capacidad aire - Luchtaan- en afvoer	[m3/h]	250	400	650	900
Capacità di deumidificazione ² - Capacité de déshumidification ² Entfeuchtungsleistung ² - Water extraction ² [l/24h] Capacidad de deshumidificación ² - Ontvochtigingscapaciteit ²	[l/24h]	22	40	52	80
Tipo di refrigerante - Type de réfrigérant - Kühlmittel Refrigerant - Tipo de refrigerante - Koelvloeistof		R407C			
Massa di refrigerante - Quantité de réfrigérant Kühlmittel Menge - Refrigerant quantity Cantitat de refrigerante - Hoeveelheid koelvloeistof	[g]	300	425	525	1600
Alimentazione elettrica Alimentation électrique Netzanschluss Power supply Alimentación eléctrica Netspanning	Fase - Phase - Phase - Phase Fase - Fase Tensione - Tension - Spannung Voltage - Tensión - Spanning Frequenza - Fréquence - Frecuency Frequency - Frecuencia - Frequentie				
		1			
	[V]	230			
	[Hz]	50			
Potenza elettrica assorbita ² - Puissance absorbé ² Leistungsaufnahme ² - Power consumption ² - Potencia eléctrica absorbida ² - Energieverbruik ²	[W]	550	800	1000	1350
Livello sonoro, SPL - Niveau sonore, SPL Geräuschspegel, SPL - Noise level, SPL Nivel sonoro - Geluidsniveau, SPL	[dBA]	59	60,8	65,1	63,6
Capacità serbatoio - Capacité réservoir - Tankinhalt Tank capacity - Capacidad depósito - Capaciteit watertank	[l]	5	11	11	-
Dimensioni, L x P x A - Dimensions, L x P x H Masse, H x B x T - Dimensions, L x W x H Dimensiones, L x P x A - Afmeting, B x D x H	[mm]	540 x 585 x 775	650 x 615 x 958	650 x 615 x 958	761 x 776 x 1048
Peso - Poids - Gewicht Weight - Peso - Gewicht	[kg]	39	49	52	76

1 : Intervallo valori di funzionamento / Plage de fonctionnement / Arbeitsbereich / Working range/Intervalo valores de funcionamiento / Functioneringsbereik

²: T= 30 °C; UR= 80%.

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