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#### This information was generated by the HP KEYMARK database on 18 Mar 2022

#### **Login**

Summary of	MAB 4-6 v10 240	Reg. No.	041-K012-03	
Certificate Holder				
Name	Salvador Escoda S.A.	Salvador Escoda S.A.		
Address	Carrer Nàpols 249 Pl.1	Zip	08013	
City	Barcelona	Country	Spain	
Certification Body	BRE Global Limited	BRE Global Limited		
Subtype title	MAB 4-6 v10 240	MAB 4-6 v10 240		
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32			
Mass of Refrigerant	1.5 kg			
Certification Date	21.05.2021			
Testing basis	Heat Pump Keymark Scheme Rules Rev 09			



# Model: MAB-4-V10M + HR-4-6-240L-V10M

Configure model		
Model name MAB-4-V10M + HR-4-6-240L-V10M		
Application	Heating + DHW + low temp	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.25 kW	4.40 kW
El input	0.82 kW	1.49 kW
СОР	5.20	2.95

## **Average Climate**



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	191 %	130 %
Prated	5.52 kW	4.40 kW
SCOP	4.85	3.31
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.88 kW	3.89 kW
COP Tj = -7°C	3.19	2.17
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = $+2^{\circ}$ C	3.06 kW	2.38 kW
COP Tj = +2°C	4.78	3.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	1.93 kW	2.95 kW
COP Tj = +7°C	6.13	4.41
Cdh Tj = +7 °C	0.90	0.90





Pdh Tj = 12°C	1.48 kW	1.32 kW
COP Tj = 12°C	8.05	5.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	4.88 kW	3.89 kW
COP Tj = Tbiv	3.19	2.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.42 kW	3.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.86	1.91
WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.11 kW	0.98 kW
Annual energy consumption Qhe	2351 kWh	2744 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)





#### EN 14825

	Low temperature	Medium temperature
$\eta_{S}$	254 %	162 %
Prated	5.54 kW	5.02 kW
SCOP	6.52	4.14
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	5.35 kW	4.84 kW
$COPTj = +2^{\circ}C$	3.94	2.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	3.56 kW	3.23 kW
$COPTj = +7^{\circ}C$	5.92	3.68
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.64 kW	1.47 kW
COP Tj = 12°C	7.91	5.15
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	3.56 kW	3.23 kW
COP Tj = Tbiv	5.92	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.35 kW	4.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.94	2.51
WTOL	65 °C	65 °C





Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.19 kW	0.18 kW
Annual energy consumption Qhe	1152 kWh	1621 kWh

## Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	159 %	102 %
Prated	4.57 kW	3.37 kW
SCOP	4.06	2.63
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	2.76 kW	2.14 kW
COP Tj = -7°C	3.49	2.32
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	1.77 kW	1.28 kW
COP Tj = +2°C	4.95	2.99





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Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	1.17 kW	1.01 kW
$COPTj = +7^{\circ}C$	5.53	3.86
Cdh Tj = $+7$ °C	0.90	0.90
Pdh Tj = 12°C	1.43 kW	1.36 kW
COP Tj = 12°C	7.67	6.28
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	3.72 kW	2.75 kW
COP Tj = Tbiv	2.57	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	2.80 kW	1.64 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.02
WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.76 kW	1.73 kW
Annual energy consumption Qhe	2770 kWh	3159 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.72	2.75
COP Tj = $-15$ °C (if TOL< $-20$ °C)	2.57	1.74
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Cdh Tj = -15 °C	0.90	0.90
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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

## Domestic Hot Water (DHW)

## **Average Climate**

EN 16147	
Declared load profile	XL
Efficiency ηDHW	136 %
СОР	3.34
Heating up time	2:21 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 l



EN 16147	
Declared load profile	XL
Efficiency ηDHW	174 %
СОР	4.24
Heating up time	2:09 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 I

## Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	107 %	
СОР	2.63	
Heating up time	2:38 h:min	
Standby power input	24.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 I	



## Model: MAB-6-V10M + HR-4-6-240L-V10M

Configure model		
Model name	MAB-6-V10M + HR-4-6-240L-V10M	
Application Heating + DHW + low temp		
Units Indoor + Outdoor		
Climate Zone Colder Climate + Warmer Climate		
Reversibility Yes		
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

EN 14511-2		
Low temperature Medium temperature		
Heat output	6.20 kW	6.00 kW
El input	1.24 kW	2.00 kW
СОР	5.00	3.00

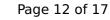
# **Average Climate**



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	58 dB(A)	58 dB(A)

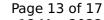
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	195 %	138 %
Prated	6.82 kW	5.70 kW
SCOP	4.95	3.52
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.03 kW	5.05 kW
COP Tj = -7°C	3.09	2.17
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	3.88 kW	3.12 kW
$COP Tj = +2^{\circ}C$	4.85	3.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.40 kW	2.09 kW
COP Tj = +7°C	6.63	4.54
Cdh Tj = +7 °C	0.90	0.90





Pdh Tj = 12°C	1.39 kW	1.28 kW
COP Tj = 12°C	7.83	5.59
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.03 kW	5.05 kW
COP Tj = Tbiv	3.09	2.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.36 kW	4.52 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	1.91
WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.45 kW	1.18 kW
Annual energy consumption Qhe	2846 kWh	3345 kWh

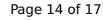
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	58 dB(A)	58 dB(A)	





#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	258 %	165 %
Prated	6.12 kW	5.15 kW
SCOP	6.63	4.19
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.94 kW	5.03 kW
$COP Tj = +2^{\circ}C$	3.91	2.48
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	3.93 kW	3.31 kW
$COPTj = +7^{\circ}C$	5.89	3.67
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.80 kW	1.60 kW
COP Tj = 12°C	8.20	5.29
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	3.93 kW	3.31 kW
COP Tj = Tbiv	5.89	3.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.94 kW	5.03 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.91	2.48
WTOL	65 °C	65 °C





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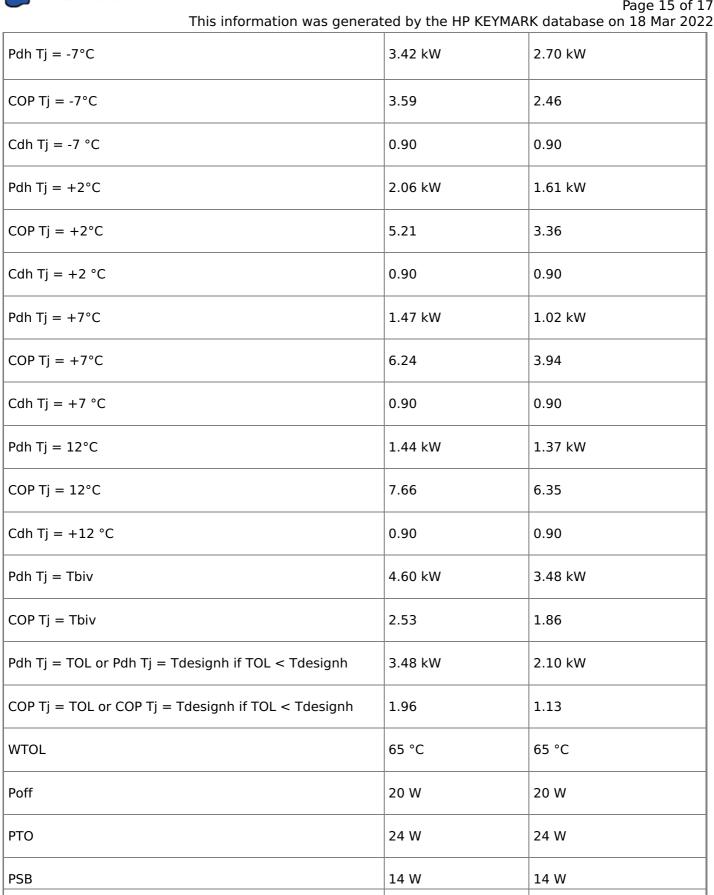
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.18 kW	0.12 kW
Annual energy consumption Qhe	1251 kWh	1640 kWh

## Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	58 dB(A)	58 dB(A)	

EN 14825		
Low temperature	Medium temperature	
165 %	111 %	
5.63 kW	4.26 kW	
4.21	2.85	
-15 °C	-15 °C	
-22 °C	-22 °C	
	Low temperature  165 %  5.63 kW  4.21  -15 °C	





**CEN** heat pump

**PCK** 

EHPA Secretariat | Rue dArlon 63-67 | Phone: +32 2 400 10 17 | Email: secretariat@heatpumpkeymark.com | www.heatpumpkeymark.com

0 W

0 W



Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.15 kW	2.16 kW
Annual energy consumption Qhe	3301 kWh	3681 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.60	3.48
COP Tj = -15°C (if TOL $<$ -20°C)	2.53	1.86
Cdh Tj = -15 °C	0.90	0.90

# Domestic Hot Water (DHW)

## **Average Climate**

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	136 %	
СОР	3.34	
Heating up time	2:21 h:min	
Standby power input	22.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 I	



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	174 %	
СОР	4.24	
Heating up time	2:09 h:min	
Standby power input	22.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 l	

## Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	107 %	
СОР	2.63	
Heating up time	2:38 h:min	
Standby power input	24.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 I	