



# **ESAS SILENT R407F**

## **ENERGY EFFICIENCY DATA SHEETS**

*Values of COP and SEPR in conformity  
to the rule UE2015/1095 of May 5<sup>th</sup> 2015*

Nº DOC. Im000100  
REV. "00" - 01.07.17

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Model	ESAS - GNS20 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-35°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	1,58	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	1,72	kW
Nominal absorbed power	DA	1,67	kW
Declared COP	COPA	1,03	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	1,88	kW
Nominal absorbed power	DB	1,44	kW
Declared COP	COPB	1,30	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	2,07	kW
Nominal absorbed power	DC	1,18	kW
Declared COP	COPC	1,75	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	2,11	kW
Nominal absorbed power	DA	1,13	kW
Declared COP	COPD	1,87	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	1,43	kW
Nominal absorbed power	D3	2,08	kW
Declared COP	COP3	0,69	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GNS28 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-35°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	1,71	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	2,14	kW
Nominal absorbed power	DA	2,03	kW
Declared COP	COPA	1,05	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	2,34	kW
Nominal absorbed power	DB	1,77	kW
Declared COP	COPB	1,32	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	2,58	kW
Nominal absorbed power	DC	1,47	kW
Declared COP	COPC	1,76	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	2,76	kW
Nominal absorbed power	DA	1,23	kW
Declared COP	COPD	2,25	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	1,76	kW
Nominal absorbed power	D3	2,48	kW
Declared COP	COP3	0,71	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GNS40 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-35°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	1,66	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	2,36	kW
Nominal absorbed power	DA	2,46	kW
Declared COP	COPA	0,96	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	2,53	kW
Nominal absorbed power	DB	2,11	kW
Declared COP	COPB	1,20	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	2,77	kW
Nominal absorbed power	DC	1,67	kW
Declared COP	COPC	1,66	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	3,01	kW
Nominal absorbed power	DA	1,32	kW
Declared COP	COPD	2,28	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	2,08	kW
Nominal absorbed power	D3	3,11	kW
Declared COP	COP3	0,67	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model

**ESAS - GNS41 COPELAND**

Refrigerating Fluid

**R407F**

Element	Symbol	Value	Unit
<b>Evaporation temperature</b>	<i>t</i>	-35°C	°C
<b>Annual consumption of electrical energy</b>	<i>Q</i>	x	kWh/a
<b>Seasonal energy efficiency ratio</b>	<i>SEPR</i>	1,62	

**Parameters at full load and at a room temperature of 32°C  
(Point A)**

Nominal cooling capacity	<i>PA</i>	2,86	kW
Nominal absorbed power	<i>DA</i>	3,04	kW
<b>Declared COP</b>	<b><i>COPA</i></b>	0,94	

**Parameters at full load and at a room temperature of 25°C  
(Point B)**

Nominal cooling capacity	<i>PB</i>	3,09	kW
Nominal absorbed power	<i>DB</i>	2,62	kW
<b>Declared COP</b>	<b><i>COPB</i></b>	1,18	

**Parameters at full load and at a room temperature of 15°C  
(Point C)**

Nominal cooling capacity	<i>PC</i>	3,40	kW
Nominal absorbed power	<i>DC</i>	2,10	kW
<b>Declared COP</b>	<b><i>COPC</i></b>	1,62	

**Parameters at full load and at a room temperature of 5°C  
(Point D)**

Nominal cooling capacity	<i>PD</i>	3,71	kW
Nominal absorbed power	<i>DA</i>	1,66	kW
<b>Declared COP</b>	<b><i>COPD</i></b>	2,23	

**Parameters at full load and at a room temperature of 43°C**

Nominal cooling capacity	<i>P3</i>	2,49	kW
Nominal absorbed power	<i>D3</i>	3,84	kW
<b>Declared COP</b>	<b><i>COP3</i></b>	0,65	

Control of capacity	fixed
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Degradation coefficient of the units with a fixed and progressive capacity	<i>Cdc</i>	0,25
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Model	ESAS - GNS50 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-35°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	1,61	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	3,50	kW
Nominal absorbed power	DA	3,64	kW
Declared COP	COPA	0,96	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	3,75	kW
Nominal absorbed power	DB	3,18	kW
Declared COP	COPB	1,18	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	4,11	kW
Nominal absorbed power	DC	2,57	kW
Declared COP	COPC	1,60	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	4,44	kW
Nominal absorbed power	DA	2,07	kW
Declared COP	COPD	2,15	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	3,08	kW
Nominal absorbed power	D3	4,52	kW
Declared COP	COP3	0,68	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GNS75 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-35°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	1,60	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	4,49	kW
Nominal absorbed power	DA	4,49	kW
Declared COP	COPA	1,00	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	4,84	kW
Nominal absorbed power	DB	3,94	kW
Declared COP	COPB	1,23	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	5,39	kW
Nominal absorbed power	DC	3,37	kW
Declared COP	COPC	1,60	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	5,99	kW
Nominal absorbed power	DA	3,09	kW
Declared COP	COPD	1,94	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	3,97	kW
Nominal absorbed power	D3	5,59	kW
Declared COP	COP3	0,71	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GNS100 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-35°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	1,62	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	6,16	kW
Nominal absorbed power	DA	5,76	kW
Declared COP	COPA	1,07	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	6,69	kW
Nominal absorbed power	DB	5,06	kW
Declared COP	COPB	1,32	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	7,44	kW
Nominal absorbed power	DC	4,37	kW
Declared COP	COPC	1,70	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	8,21	kW
Nominal absorbed power	DA	4,03	kW
Declared COP	COPD	2,04	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	5,32	kW
Nominal absorbed power	D3	7,09	kW
Declared COP	COP3	0,75	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model

**ESAS - GPS15 COPELAND**

Refrigerating Fluid

**R407F**

Element	Symbol	Value	Unit
<b>Evaporation temperature</b>	<i>t</i>	-10°C	°C
<b>Annual consumption of electrical energy</b>	<i>Q</i>	x	kWh/a
<b>Seasonal energy efficiency ratio</b>	<i>SEPR</i>	x	

**Parameters at full load and at a room temperature of 32°C  
(Point A)**

Nominal cooling capacity	<i>PA</i>	3,55	kW
Nominal absorbed power	<i>DA</i>	1,68	kW
<b>Nominal COP</b>	<b><i>COPA</i></b>	<b>2,12</b>	

**Parameters at full load and at a room temperature of 25°C  
(Point B)**

Nominal cooling capacity	<i>PB</i>	3,82	kW
Nominal absorbed power	<i>DB</i>	1,51	kW
<b>Declared COP</b>	<b><i>COPB</i></b>	<b>2,53</b>	

**Parameters at full load and at a room temperature of 15°C  
(Point C)**

Nominal cooling capacity	<i>PC</i>	x	kW
Nominal absorbed power	<i>DC</i>	x	kW
<b>Declared COP</b>	<b><i>COPC</i></b>	<b>x</b>	

**Parameters at full load and at a room temperature of 5°C  
(Point D)**

Nominal cooling capacity	<i>PD</i>	x	kW
Nominal absorbed power	<i>DA</i>	x	kW
<b>Declared COP</b>	<b><i>COPD</i></b>	<b>x</b>	

**Parameters at full load and at a room temperature of 43°C**

Nominal cooling capacity	<i>P3</i>	3,09	kW
Nominal absorbed power	<i>D3</i>	1,53	kW
<b>Declared COP</b>	<b><i>COP3</i></b>	<b>2,02</b>	

Control of capacity	fixed
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Degradation coefficient of the units with a fixed and progressive capacity	<i>Cdc</i>	0,25
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Model	ESAS - GPS20 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	x	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	4,48	kW
Nominal absorbed power	DA	2,06	kW
<b>Declared COP</b>	<b>COPA</b>	<b>2,18</b>	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	4,80	kW
Nominal absorbed power	DB	1,86	kW
<b>Declared COP</b>	<b>COPB</b>	<b>2,58</b>	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	x	kW
Nominal absorbed power	DC	x	kW
<b>Declared COP</b>	<b>COPC</b>	<b>x</b>	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	x	kW
Nominal absorbed power	DA	x	kW
<b>Declared COP</b>	<b>COPD</b>	<b>x</b>	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	3,88	kW
Nominal absorbed power	D3	2,47	kW
<b>Declared COP</b>	<b>COP3</b>	<b>1,57</b>	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GPS25 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	3,03	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	4,85	kW
Nominal absorbed power	DA	2,12	kW
Declared COP	COPA	2,29	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	5,24	kW
Nominal absorbed power	DB	1,94	kW
Declared COP	COPB	2,70	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	5,72	kW
Nominal absorbed power	DC	1,74	kW
Declared COP	COPC	3,29	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	6,13	kW
Nominal absorbed power	DA	1,59	kW
Declared COP	COPD	3,86	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	4,17	kW
Nominal absorbed power	D3	2,45	kW
Declared COP	COP3	1,70	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GPS26 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	2,96	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	5,87	kW
Nominal absorbed power	DA	2,63	kW
Declared COP	COPA	2,23	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	6,36	kW
Nominal absorbed power	DB	2,42	kW
Declared COP	COPB	2,63	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	6,97	kW
Nominal absorbed power	DC	2,16	kW
Declared COP	COPC	3,22	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	7,46	kW
Nominal absorbed power	DA	1,98	kW
Declared COP	COPD	3,76	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	5,02	kW
Nominal absorbed power	D3	3,04	kW
Declared COP	COP3	1,65	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GPS30 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	3,19	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	6,82	kW
Nominal absorbed power	DA	3,23	kW
Declared COP	COPA	2,11	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	7,30	kW
Nominal absorbed power	DB	2,82	kW
Declared COP	COPB	2,59	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	7,97	kW
Nominal absorbed power	DC	2,34	kW
Declared COP	COPC	3,41	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	8,60	kW
Nominal absorbed power	DA	1,99	kW
Declared COP	COPD	4,31	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	6,03	kW
Nominal absorbed power	D3	4,05	kW
Declared COP	COP3	1,49	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GPS40 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	3,20	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	8,52	kW
Nominal absorbed power	DA	4,00	kW
Declared COP	COPA	2,13	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	9,17	kW
Nominal absorbed power	DB	3,49	kW
Declared COP	COPB	2,63	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	10,06	kW
Nominal absorbed power	DC	2,92	kW
Declared COP	COPC	3,44	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	10,90	kW
Nominal absorbed power	DA	2,53	kW
Declared COP	COPD	4,31	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	7,46	kW
Nominal absorbed power	D3	4,97	kW
Declared COP	COP3	1,50	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

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Model	ESAS - GPS47 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	3,13	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	10,09	kW
Nominal absorbed power	DA	4,78	kW
Declared COP	COPA	2,11	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	10,87	kW
Nominal absorbed power	DB	4,23	kW
Declared COP	COPB	2,57	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	11,93	kW
Nominal absorbed power	DC	3,56	kW
Declared COP	COPC	3,35	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	12,92	kW
Nominal absorbed power	DA	3,06	kW
Declared COP	COPD	4,23	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	8,81	kW
Nominal absorbed power	D3	5,84	kW
Declared COP	COP3	1,51	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	

TECHNICAL DOCUMENTATION		STATE REVISION OF THE CHAPTER				IN CONFORMITY WHITH THE APPROVED ORIGINAL	Epta	
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		C		F				

Model	ESAS - GPS70 COPELAND
Refrigerating Fluid	R407F

Element	Symbol	Value	Unit
Evaporation temperature	t	-10°C	°C
Annual consumption of electrical energy	Q	x	kWh/a
Seasonal energy efficiency ratio	SEPR	2,92	

Parameters at full load and at a room temperature of 32°C (Point A)			
Nominal cooling capacity	PA	13,08	kW
Nominal absorbed power	DA	6,41	kW
Declared COP	COPA	2,04	

Parameters at full load and at a room temperature of 25°C (Point B)			
Nominal cooling capacity	PB	13,99	kW
Nominal absorbed power	DB	5,73	kW
Declared COP	COPB	2,44	

Parameters at full load and at a room temperature of 15°C (Point C)			
Nominal cooling capacity	PC	15,37	kW
Nominal absorbed power	DC	4,92	kW
Declared COP	COPC	3,12	

Parameters at full load and at a room temperature of 5°C (Point D)			
Nominal cooling capacity	PD	16,82	kW
Nominal absorbed power	DA	4,32	kW
Declared COP	COPD	3,89	

Parameters at full load and at a room temperature of 43°C			
Nominal cooling capacity	P3	11,74	kW
Nominal absorbed power	D3	7,57	kW
Declared COP	COP3	1,55	
Control of capacity	fixed		
Degradation coefficient of the units with a fixed and progressive capacity	Cdc	0,25	



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