

## Single Pack MS18UHULTM 115V 60Hz CSCR

Single pack code number: **195B4664**

Position	Title	Code	Amount
1	Compressor MS18UHULTM	104M0810	1
2	SC starting device (600mm)	117-7801	1
3	Bolt joint for one compressor   M6   $\varnothing$ 16mm	118-1917	1

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**ULT - ready**

**Model**

Designation	<b>MS18UHULTM</b>	115V/60Hz 1~	Sales code:	<b>104M0810</b>
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**Compressor design**

Oil type	Polyolester	Refrigerant(s)	<b>R170, R508B</b>
Oil viscosity	32cST	Displacement	17,68cm <sup>3</sup> / 1,08cu.in
Oil quantity	620cm <sup>3</sup> / 21fl.oz	Compressors on pallet	80
Refr. charge - tech. limit	450g / 15,9oz		
Free gas volume comp.	1460cm <sup>3</sup> / 49,4fl.oz		
Weight	14,2kg / 31,3lbs		
Motor protection	external		
Winding resistance main	0,82Ω (at 25°C)		
Winding resistance aux	2,9Ω (at 25°C)		
Max. winding temp.	125°C / 257°F		
Max. discharge temp.	140°C / 284°F		



**General - Configurations with MS18UHULTM**

	<b>Conf. 1</b>
Motorconfiguration	CSCR
Power supply (nominal)	115V/60Hz
Number of phases	1
Voltage range	103-127V
Approvals	UL
Starting torque	HST
Note	ULT-ready. Compressor for low-temp-stage of cascade refrigeration systems.

**Applications with MS18UHULTM**

	<b>Conf. 1</b>
Refrigerant	R170
Application	LBP
System cooling	fan 3m/s
Hot gas defrost	-/-
Long interval pull down	-/-

**Electrical data - Configurations with MS18UHULTM**

	<b>Conf. 1</b>
Starting device type	relay
Run capacitor	23,5μF
Start capacitor	280μF
LRA (locked rotor amps / 4s)	44,12A
RLA (rated load amps / 1s)	7,48A
Cut in current	44,12A

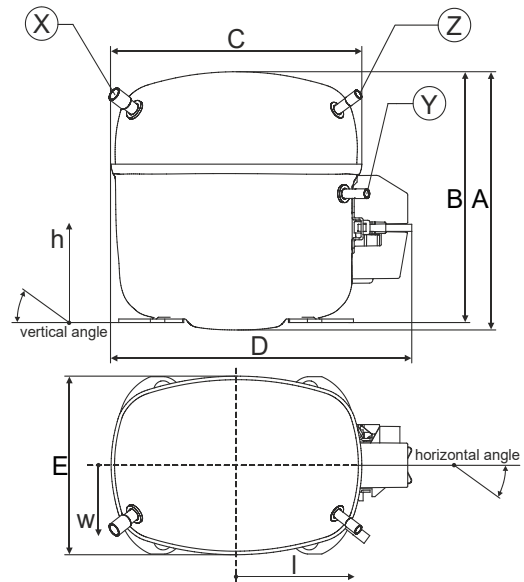
ULT - ready

**Model**

Designation	<b>MS18UHULTM</b>	115V/60Hz 1~	Sales code:	<b>104M0810</b>
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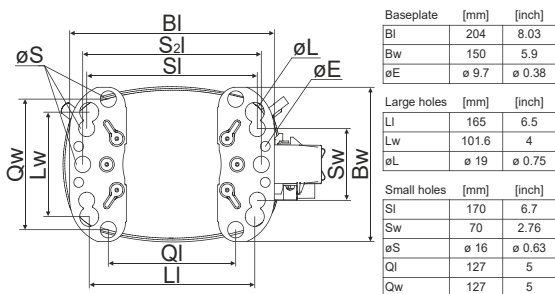
**Compressor dimensions**

<b>Housing</b>	A Height	219mm / 8,62in
	B Height	213mm / 8,39in
	C Length shell	218mm / 8,58in
	D Length w. cover	255mm / 10,04in
	E Width	151mm / 5,94in

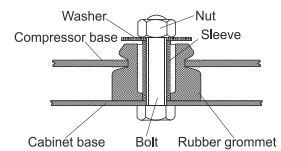


<b>Connectors</b>		<b>Suction</b>	<b>Discharge</b>	<b>Process</b>
		<b>X</b>	<b>Y</b>	<b>Z</b>
Diameter	[mm]	øi 9,54-9,72	øi 6,41-6,59	øi 6,41-6,59
	(i:inside, o:outside) [in]	øi 0,38-0,38	øi 0,25-0,26	øi 0,25-0,26
Material		copper	copper	copper
Horizontal angle	±2°	37°	37°	143°
Vertical angle	±2°	30°	0°	150°
Position l/h/w	[mm]	107/193/55	115/110/63	-107/193/55
	[in]	4,2/7,6/2,2	4,5/4,3/2,5	-4,2/7,6/2,2
Straight tube l.	[mm]	12	12	12
	[in]	0,5	0,5	0,5

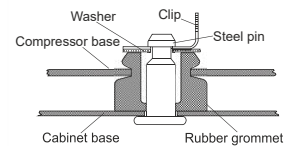
**Compressor fixation**



**Bolt joint**



**Snap-on**



**Mounting accessories**

	one comp.	multi pack
Bolt joint   M6   ø16mm	118-1917	118-1918
Bolt joint   ø1/4"   ø16mm	118-1946	
Bolt joint   ø1/4"   ø19mm	118-1949	
Snap-on   ø7,3   ø16mm	118-1947	118-1919

**Application notes**

ULT-ready. Compressor for low-temp-stage of cascade refrigeration systems.

No warranty if compressor operated relevant time outside of published operation limits.

Contact SECOP-Sales to agree on warranty limits (depends on kind of application).

ULT - ready

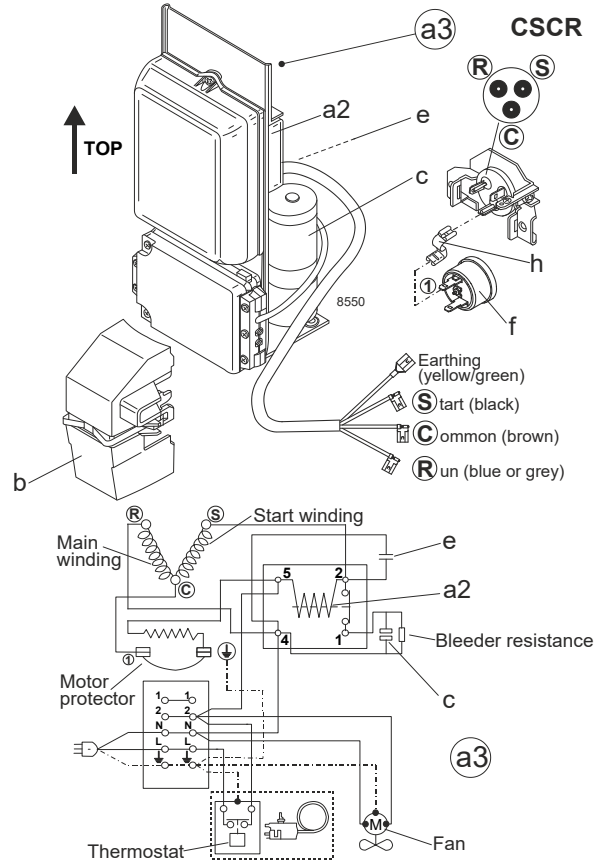
**Model**

Designation	<b>MS18UHULTM 115V/60Hz</b>	Conf. 1	Sales code:	<b>104M0810</b>
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**Configuration**

Motorconfiguration	CSCR
Power supply (nominal)	115V/60Hz 1~
Refrigerant	R170
Application	LBP
Voltage range	103-127V
Starting torque	HST
Approvals	UL

**Electrical accessories / wiring diagram**

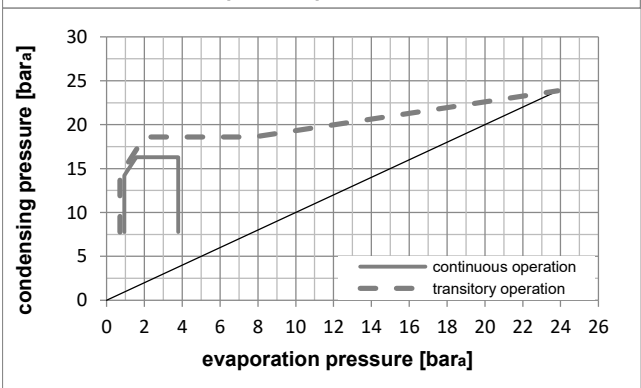
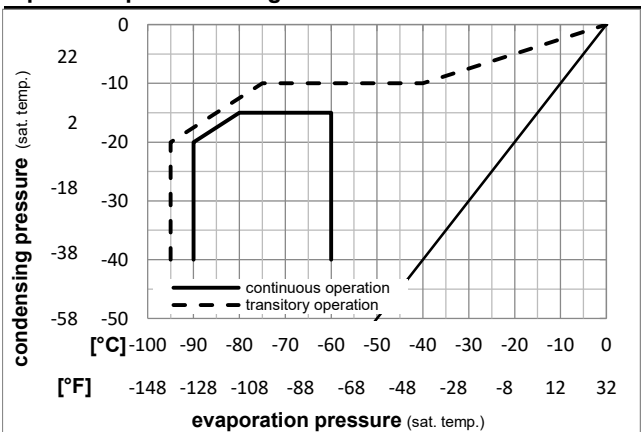


**Ambient temperatures / system cooling**

Ambient temperature min.:	10°C / 50°F
Ambient temperature max.:	38°C / 101°F

System cooling (n/a: outside limits)			
T ambient	LBP	MBP	HBP
32°C / 90°F	fan 3m/s	n/a	n/a
38°C / 100°F	fan 3m/s	n/a	n/a
43°C / 110°F	n/a	n/a	n/a

**Operation pressure range**



Components (protector + ~holder + cover: pre assembled)

a3	SC starter kit (550mm)	117-7801
h	protector holder	117U0439
f	ext. protector (T1100)	117U3219
b	plastic cover	117U1021

Alternative comp. (protector + ~holder + cover: pre assemb.)

a2	potential relay (RVA 7AA3R)	117-7441
e	run capacitor (23,5µF, 6.3mm)	117-7133
c	start capacitor (280µF, 6.3mm)	117U5350
h	protector holder	117U0439
f	ext. protector (T1100)	117U3219
b	plastic cover	117U1021

ULT - ready

Model

Designation **MS18UHULTM 115V/60Hz** Conf. 1 Sales code: **104M0810**

Optimization + standard conditions

R170, 115V/60Hz, CSCR, fan 3m/s, UL

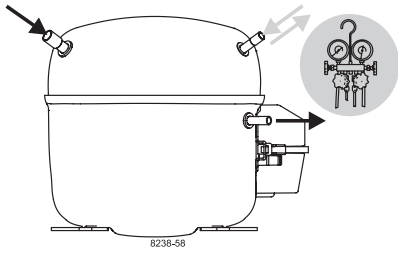
Evaporating pressure (saturation temperature)					Condensing pressure (saturation temperature)					Power consumption				
				Return gas temp.					Current consumption					
			Liquid temp.		Cooling capacity			COP	EER		P1	I		Ref. mass flow
pe	pc	RGT	Tliq		[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]	
[°C]	-90	-15	-20	-15	211,2	721	181,8	0,81	2,75	0,69	262,0	3,54	1,93	1
[°F]	-130	5	-4	5										
[°C]	-90	-20	-20	-20	243,5	832	209,6	0,91	3,09	0,78	269,1	3,58	2,14	2
[°F]	-130	-4	-4	-4										
[°C]	-90	-25	-20	-25	277,6	948	238,9	1,03	3,50	0,88	270,5	3,59	2,36	3
[°F]	-130	-13	-4	-13										
[°C]	-90	-30	-20	-30	312,8	1068	269,2	1,17	4,00	1,01	267,0	3,56	2,57	4
[°F]	-130	-22	-4	-22										
[°C]	-90	-35	-20	-35	348,4	1190	299,9	1,35	4,59	1,16	259,1	3,51	2,77	5
[°F]	-130	-31	-4	-31										
[°C]	-90	-40	-20	-40	383,9	1311	330,3	1,55	5,30	1,34	247,3	3,44	2,96	6
[°F]	-130	-40	-4	-40										

Performance tables

R170, 115V/60Hz, CSCR, fan 3m/s, UL

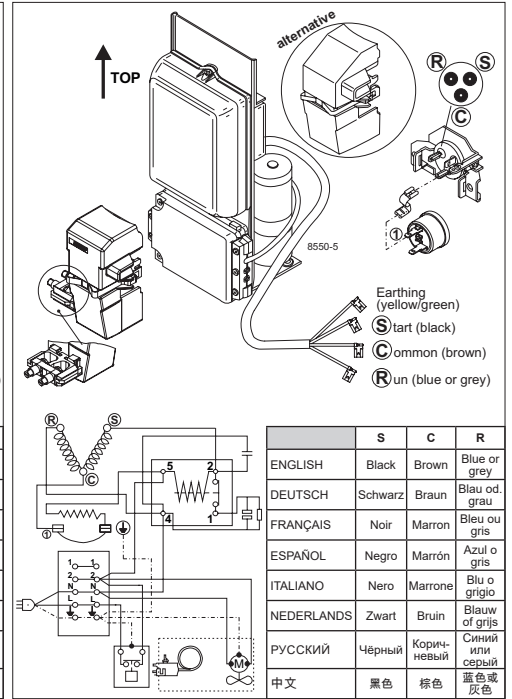
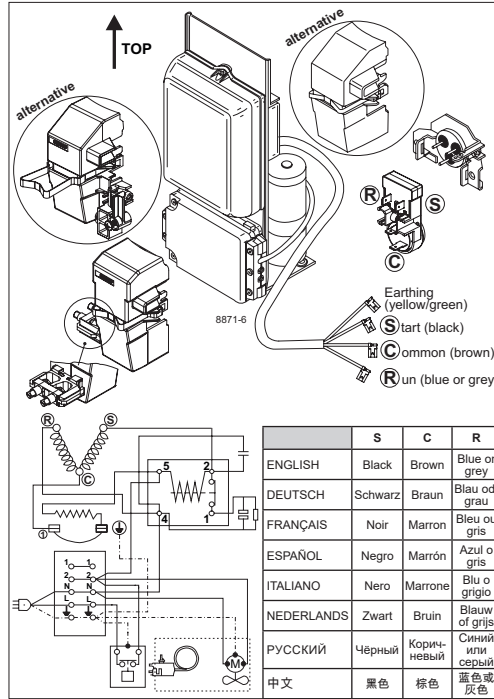
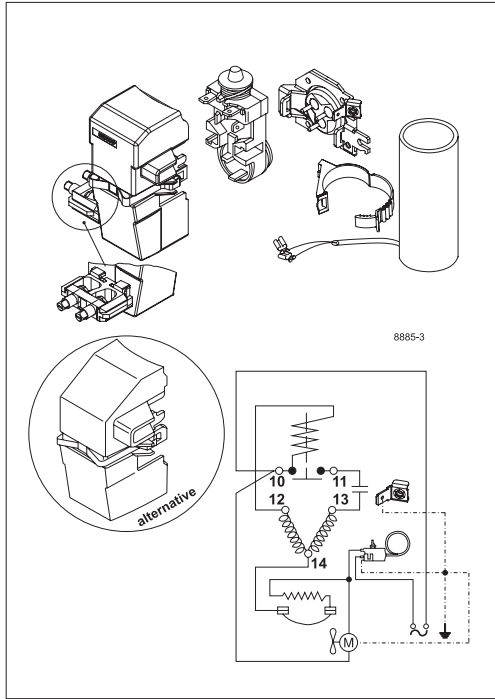
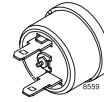
	pe	Cooling capacity			COP		EER		P1	I	m
	[°C]	[°F]	[W]	[Btu/h]	[kcal/h]	[W/W]	[Btu/Wh]	[kcal/Wh]	[W]	[A]	[kg/h]
[°C / °F]	-90	-130	277,6	948	238,9	1,03	3,50	0,88	270,5	3,59	2,36
cond. pressure	-85	-121	416,8	1424	358,7	1,27	4,34	1,09	327,9	3,95	3,55
pc= -25/-13	-80	-112	589,8	2014	507,6	1,53	5,23	1,32	385,0	4,34	5,03
return gas temp.	-75	-103	800,4	2734	688,9	1,82	6,21	1,56	440,2	4,74	6,84
RGT= -20/-4	-70	-94	1052,3	3594	905,6	2,14	7,31	1,84	491,4	5,13	9,03
liquid temp	-65	-85	1349,1	4607	1161,0	2,51	8,58	2,16	536,8	5,49	11,62
Tliq= -25/-13	-60	-76	1694,0	5785	1457,9	2,95	10,07	2,54	574,5	5,80	14,66
[°C / °F]	-90	-130	348,4	1190	299,9	1,35	4,59	1,16	259,1	3,51	2,77
cond. pressure	-85	-121	497,5	1699	428,2	1,63	5,55	1,40	305,9	3,80	3,96
pc= -35/-31	-80	-112	682,5	2331	587,4	1,95	6,66	1,68	350,0	4,10	5,44
return gas temp	-75	-103	907,3	3099	780,8	2,33	7,96	2,01	389,3	4,37	7,26
RGT= -20/-4	-70	-94	1175,5	4015	1011,7	2,79	9,51	2,40	421,9	4,61	9,43
liquid temp	-65	-85	1490,9	5092	1283,1	3,34	11,41	2,88	446,1	4,79	12,00
Tliq= -35/-31	-60	-76	1856,9	6342	1598,0	4,04	13,79	3,47	459,9	4,88	15,02





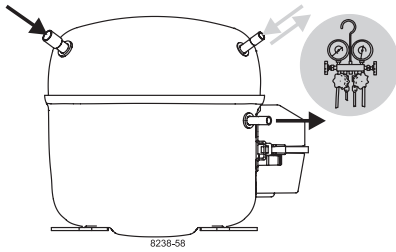
# SCE Compressors

## (External Protector)



	S	C	R
ENGLISH	Black	Brown	Blue or grey
DEUTSCH	Schwarz	Braun	Blau od. grau
FRANÇAIS	Noir	Marron	Bleu ou gris
ESPAÑOL	Negro	Marrón	Azul o gris
ITALIANO	Nero	Marrone	Blu o grigio
NEDERLANDS	Zwart	Bruin	Blauw of grijs
РУССКИЙ	Чёрный	Коричневый	Синий или серый
中文	黑色	棕色	蓝色或灰色

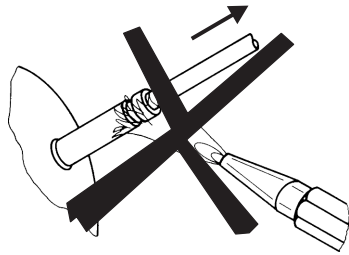
	S	C	R
ENGLISH	Black	Brown	Blue or grey
DEUTSCH	Schwarz	Braun	Blau od. grau
FRANÇAIS	Noir	Marron	Bleu ou gris
ESPAÑOL	Negro	Marrón	Azul o gris
ITALIANO	Nero	Marrone	Blu o grigio
NEDERLANDS	Zwart	Bruin	Blauw of grijs
РУССКИЙ	Чёрный	Коричневый	Синий или серый
中文	黑色	棕色	蓝色或灰色



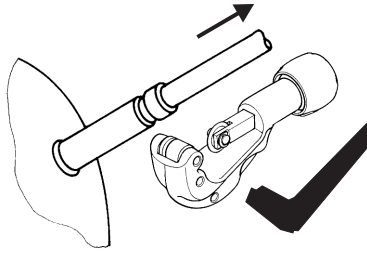
# SCE Compressors (External Protector)



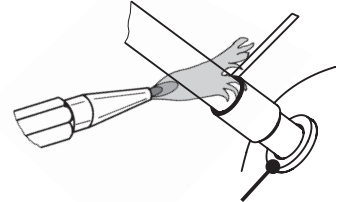
## Service/Repair – R290



8545



## Brazing on Suction Connectors (Direct Intake)



**! max. 350°C/662°F !**  
**at socket**  
brazing solder: phosphor (LP7) or silver

8882

Refer to Product Bulletin:  
**Brazing on Suction Connectors**  
**(SCE Compressors with Direct Suction Intake)**

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