

Digital Receiver Unit - HLR

Product Launch Package

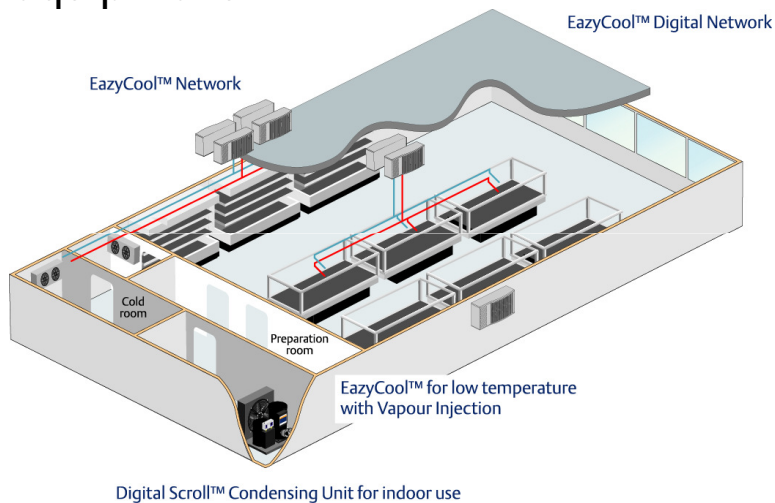
*Refrigeration Marketing Units
Emerson Climate Technologies Europe*




EMERSON[™]
Climate Technologies

Emerson Climate Technologies Existing Digital Range – Application

- **Outdoor Installations**, such as Convenience stores, Small Retail Stores and Large Kitchen equipment



Copeland EasyCool Digital Unit



Copeland EasyCool Network Digital

- **Indoor Installations** with machine room, as Small Retail & Hard Discount Stores and Storage Warehouse



MC Indoor Scroll Digital Unit

Copeland Digital Receiver Unit HLR Benefits

- **HLR Digital Scroll Receiver Unit for remote condenser installations**
 - Compact design, reduced footprint = space Gain
 - Digital modulation = one unit for all store refrigeration system
 - Reduced sound level with remote condenser and low noise fans or water cooled condenser
 - Increased system efficiency by generous condenser sizing opportunities
 - Energy saving by using most efficient Digital Scroll technology
 - Quick and easy installation due to complete equipment scope and clear design

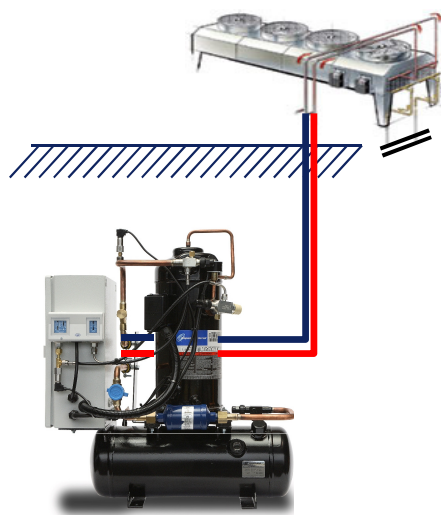
HLR Benefits vs. Competition

- **Wider range of capacity modulation than SH compressor**
 - 10-100 % modulation with HLR and single compressor
 - 5-100 % modulation with HLR and tandem compressor
 - 43-100 % modulation with competitive SH and inverter control
 - 50/100 % modulation with competitive SH and tandem compressor

- **Best in class efficiency**
 - 5% to 10% efficiency advantage depending on model

** 100% capacity*

Copeland Digital Receiver Unit HLR Differences Vs Traditional Digital units



- **Digital Receiver Unit (HLR)**

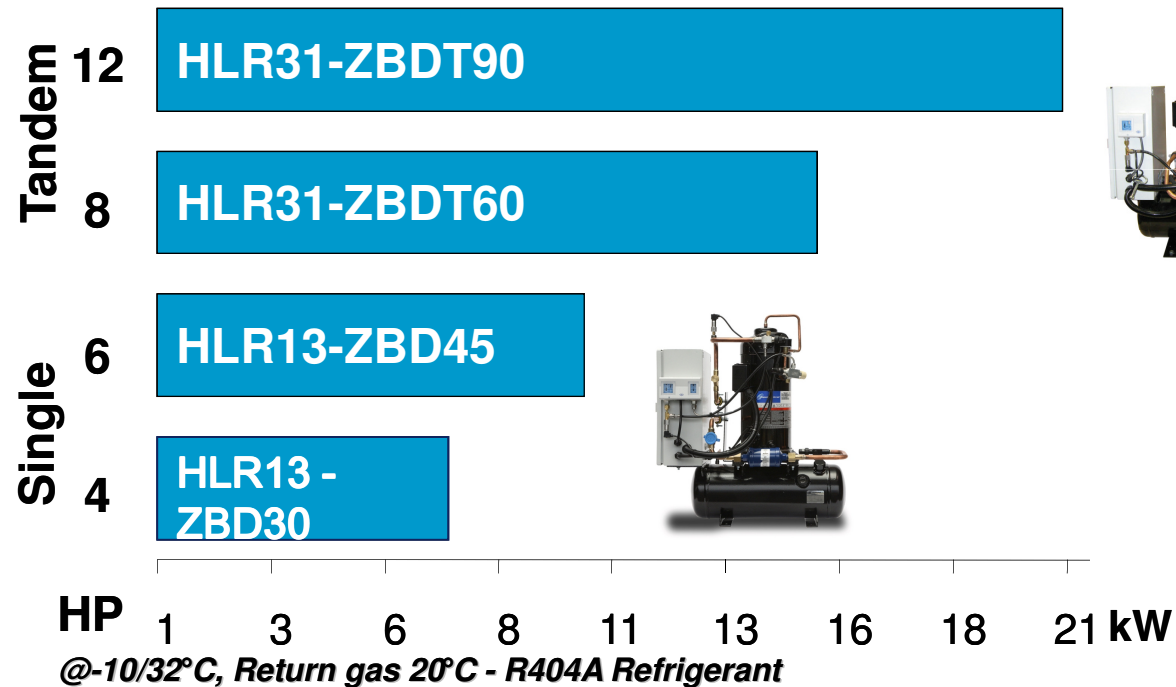
- Digital Compressor
- Electrical panel with:
 - EC2-552 & PT4
 - Contactor & overload protector
- Liquid line w/ Drier & Sight Glass

- **Indoor & Outdoor Digital Unit**

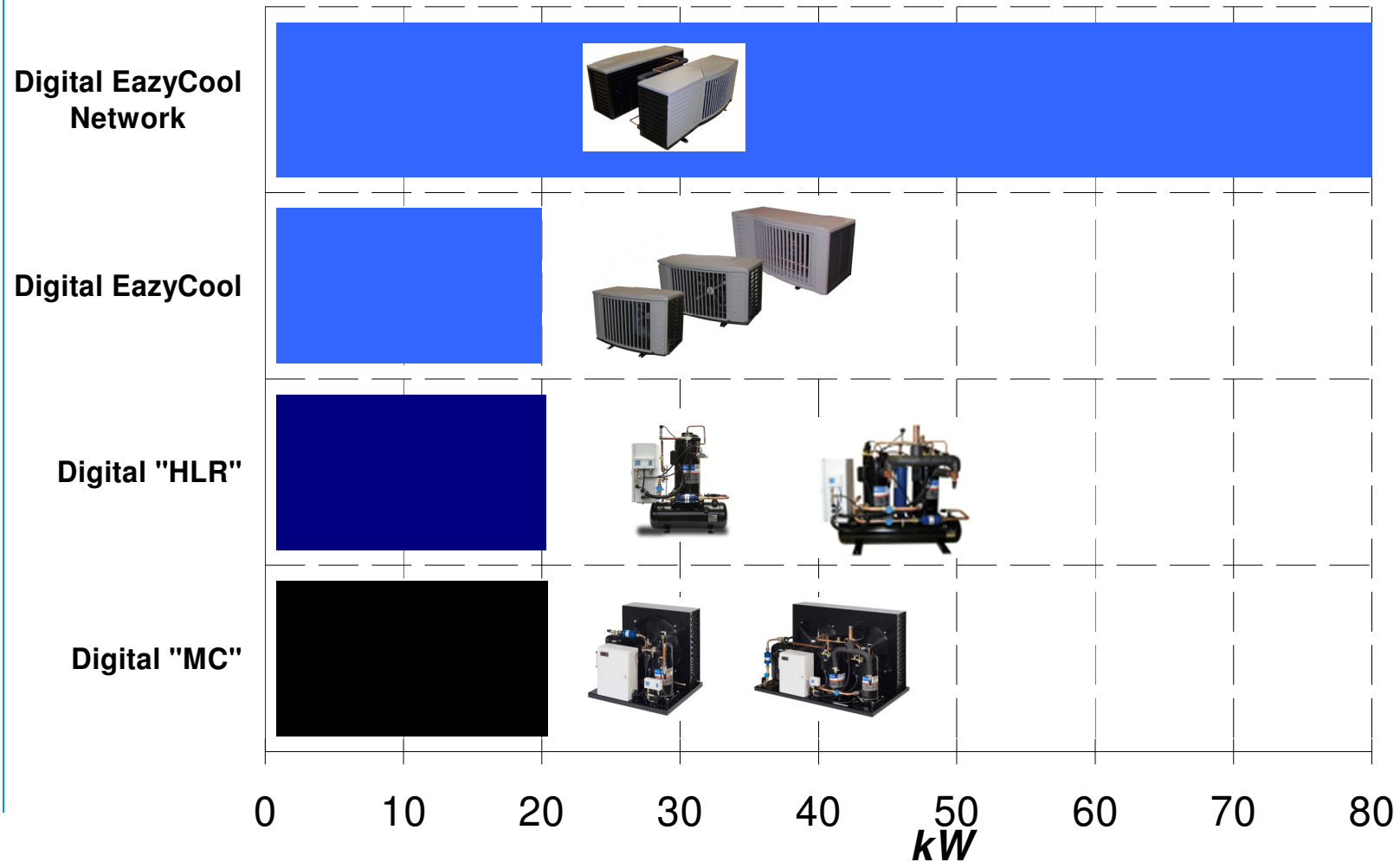
- Digital Compressor
- Electrical panel with:
 - EC2-55x & PT4
 - Contactor & overload protector
- Liquid line w/ Drier & Sight Glass
- **Air cooled condenser**
- **Fan speed controller**

Copeland Digital Receiver Unit HLR Range line-up

- **4 Models based on actual Digital compressors release**
 - Single compressor unit 7 & 10 kW
 - Tandem compressor unit 14 & 20 kW



Emerson Climate Technologies Digital Condensing Unit Ranges



MT Rating @ -10/32°C - Return gas temp 20°C

Emerson Climate Technologies

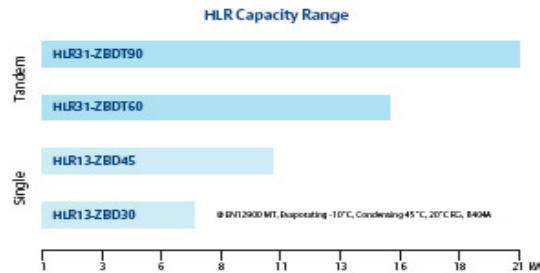
Digital Condensing Unit Ranges

		<i>Corner Shop, Proximity, Convenience Stores & Petrol Station</i>	<i>Bar & Restaurant Kitchen equipment</i>	<i>Hard Discount Small Supermarket</i>
<i>City Centre</i>	<i>Machine room</i>			
	<i>No Machine room</i>			
Capacity @ MT		7 & 10 kW	7, 10, 14 & 20 kW	14 & 20 kW - 24~80 kW
Modulation range		0.7~10 kW	0.7~20 kW	0.7~20 kW

@ 32°C Amb Temp - 20°C returned gas

* 24 kW with 2 unit network (Digital unit as master) & 80 kW with 4 units in network (Digital unit as master)

Copeland Digital Receiver Unit HLR Leaflet



HLR Digital Receiver Units for Remote Condenser Systems

Model	Single Compressor Units		Tandem Compressor Units	
	HLR13-ZBD30KCE	HLR13-ZBD45KCE	HLR31-ZBDT60KCE	HLR31-ZBDT90KCE
Nominal Horsepower (hp)	4	6	8	12
Capacity (kW)*	7,0	10,2	14,1	20,3
Capacity Modulation	10 - 100%		5 - 100%	
Voltage (V)	TFD (380-420(3~ 50Hz))			
Receiver with Sight Glass	13 l	13 l	31 l	31 l
Suction Line Ø (inch) with Rotalock	7/8	7/8	1 3/8	1 3/8
Discharge Line Ø (inch) with Rotalock	7/8	7/8	7/8	7/8
Liquid Receiver Inlet Ø (inch)	5/8	5/8	5/8	5/8
Liquid Receiver Outlet Ø (inch) with Rotalock	5/8	5/8	5/8	5/8
Height x Depth x Width (mm)	710 x 400 x 90		910 x 400 x 920	
Weight (kg)	90		130	
Crankcase Heater	✓	✓	✓	✓
Electrical Box (IP54) with:				
Overload Protection	✓	✓	✓	✓
Contactors	✓	✓	✓	✓
Fuse	✓	✓	✓	✓
EC2-552 Controller with:				
TCP/IP Network Interface with Ethernet port	✓	✓	✓	✓
Webserver for Configuration, Visualisation and Monitoring	✓	✓	✓	✓
Continuous Suction Pressure Control	✓	✓	✓	✓
Continuous Condensing Pressure Control	✓	✓	✓	✓
Liquid Line equipped with:				
Filter Drier	✓	✓	✓	✓
Sight Glass with Moisture Indicator	✓	✓	✓	✓
HP/LP Switch	PS2 (HP/LP)	PS2 (HP/LP)	PS1 + 2 x PS3	PS1 + 2 x PS3
Oil Separator	-	-	-	-

* @ EN 12900 Medium Temperature Conditions: R404A, Evaporating: -10°C, Condensing: 45°C, Suction Return Gas: 20 °C

Digital Receiver Unit HLR
with Continuous
Capacity Modulation
for Remote Condenser
Refrigeration Systems



01 2410202E

For more details, see www.emersonclimate.eu



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Copeland Digital Receiver Unit HLR Select

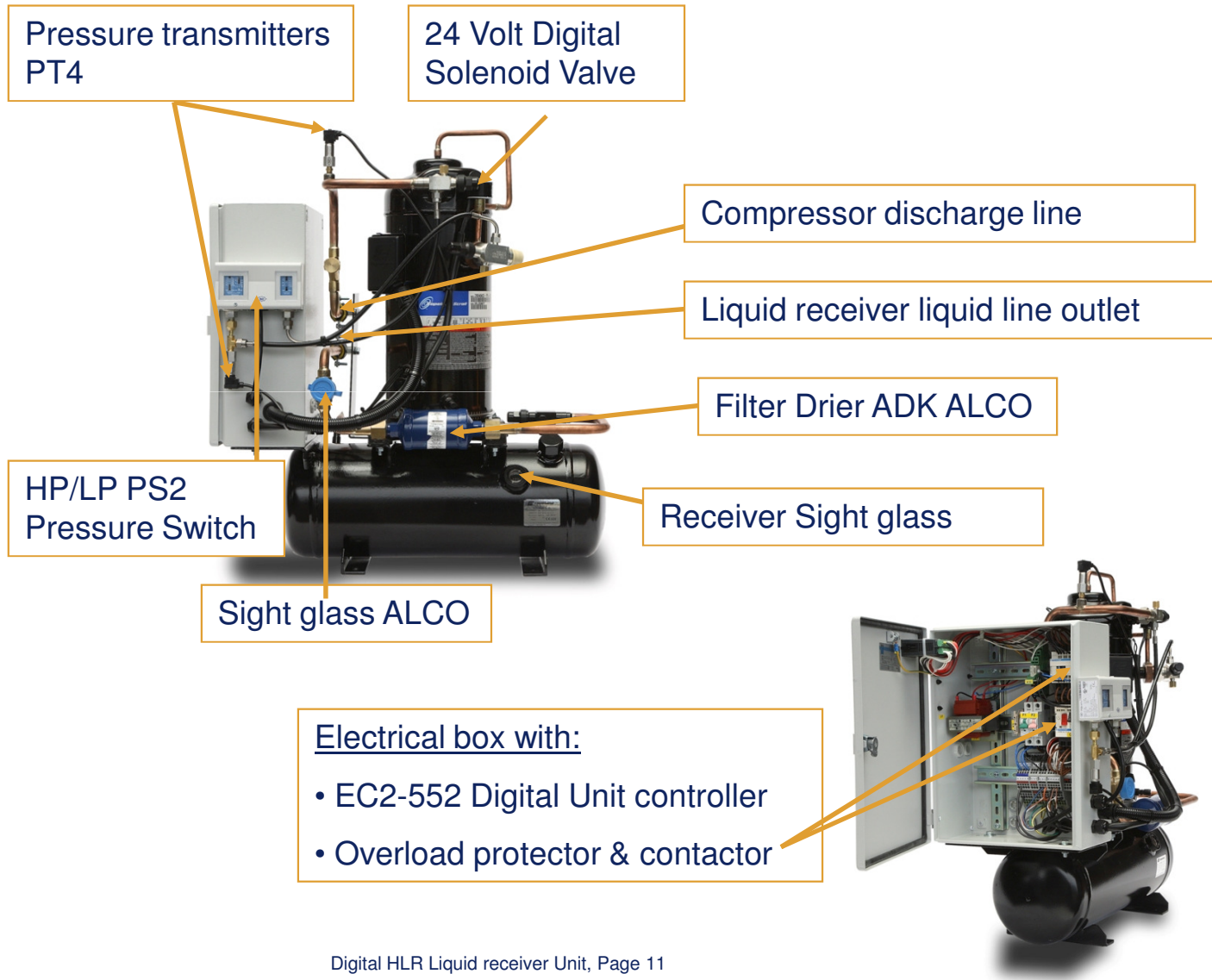
- **Receiver Unit** is part of Condensing Units (below item “Indoor”)
- Performance and Data ratings are the same as for the relevant compressors

The screenshot shows the 'Select 7.1' software interface. The 'Condensing Units' section is active, and the 'Receiver Unit' is selected in the tree view. The table below shows the performance data for the selected compressor model.

Compressor	Capacity kW	Power Input kW	COP	Current A	Mass Flow g/s	Displace... m3/h
HLR31-ZBDT90KCE-TFD	12.13	5.95	2.04	13.66	78.04	7.31
HLR13-ZBD30KCE-TFD	4.56	1.83	2.49	3.76	29.35	11.68
HLR13-ZBD45KCE-TFD	5.62	2.90	1.94	6.33	36.20	17.06
HLR31-ZBDT60KCE-TFD	9.15	3.66	2.50	15.04	58.91	23.36

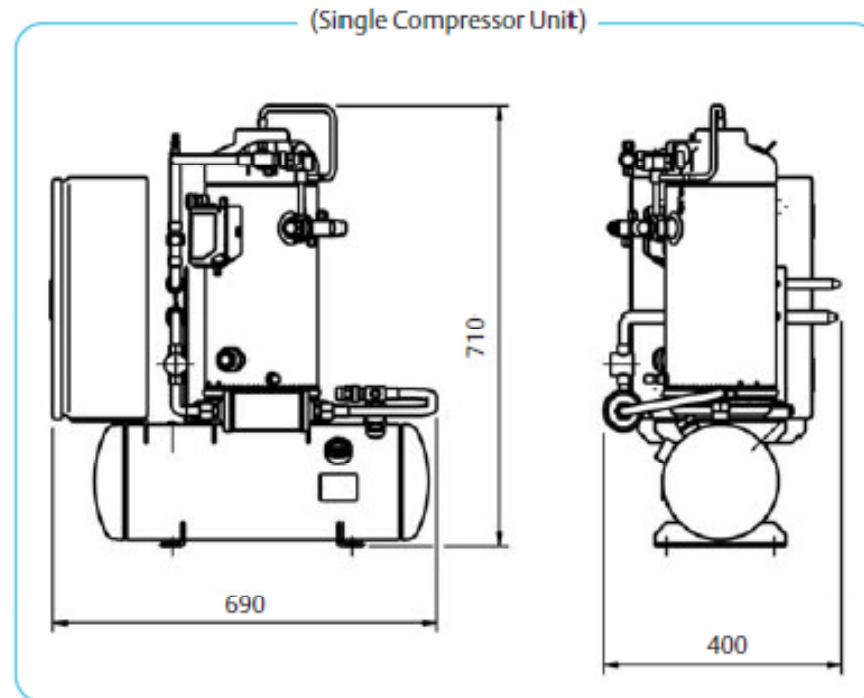
Copeland Digital Receiver Unit HLR

Scope of Supply



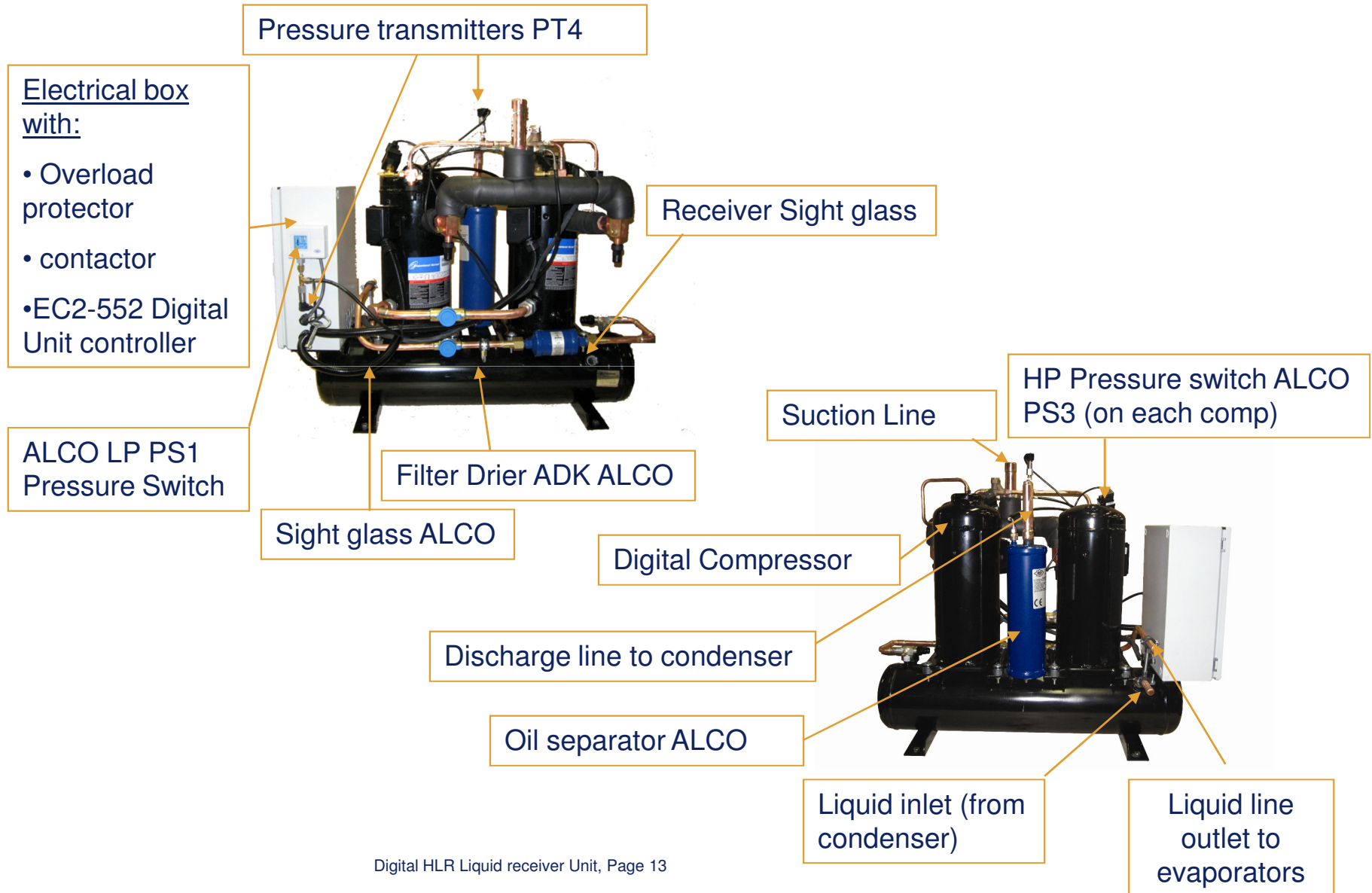
Copeland Digital Receiver Unit HLR

Single unit Dimensions

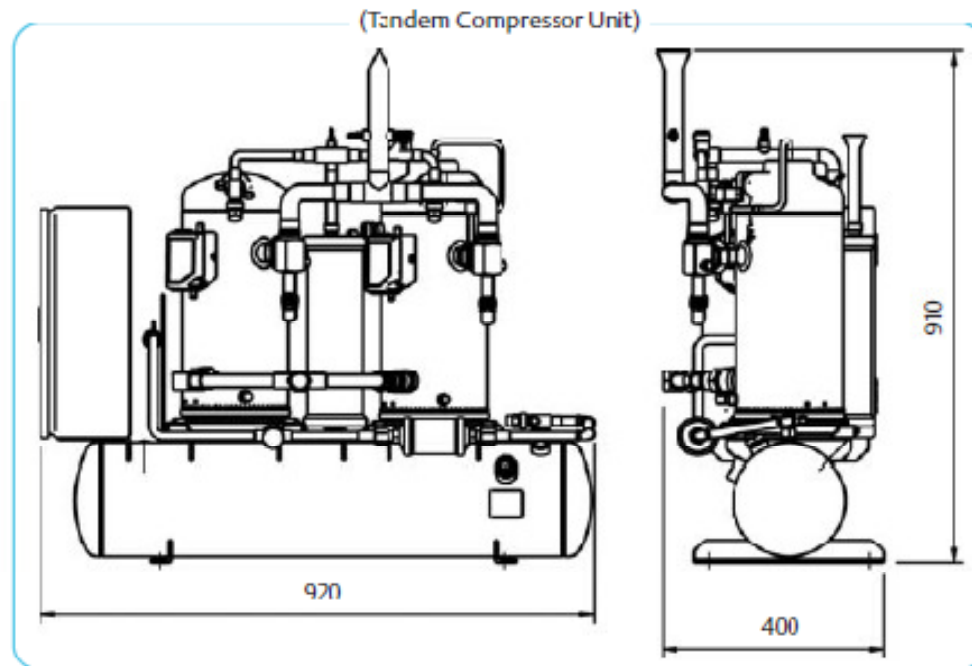


Copeland Digital Receiver Unit HLR

Scope of supply



Copeland Digital Receiver Unit HLR Tandem Unit Dimensions



Copeland Digital Receiver Unit HLR Specifications

Digital Receiver Unit

	HLR 13-ZBD30KCE	HLR 13-ZBD45KCE	HLR31-ZBDT60KCE	HLR31-ZBDT90KCE
	Single Compressor Unit		Tandem Compressors Unit	
HP	4	6	8	12
Capacity (kW) @ Te.-10, Td: 45°C RGT 20°C	7,0	10,2	14,1	20,3
Receiver with sight Glass	13 l	13 l	31 l	31 l
Suction Line Ø (inch)	7/8	7/8	1 3/8	1 3/8
Discharge line Ø (inch)	5/8"	5/8"	7/8"	7/8"
Liquid Receiver Inlet Ø (inch)	5/8	5/8	5/8	5/8
Liquid Receiver Outlet Ø (inch)	5/8	5/8	5/8	5/8
Height (mm)	710	710	910	910
Length (mm)	690	690	920	920
width (mm)	400	400	400	400
Weight (kg)	90	90	130	130
Electrical box (IP54) With:				
Overload	√	√	√	√
contactor	√	√	√	√
Fuse	√	√	√	√
EC2-552-Controller	√	√	√	√
Liquid line Equipped with				
Filter drier	√	√	√	√
Sight glass	√	√	√	√
HP/LP Switch	PS2 (HP/LP)	PS2 (HP/LP)	PS1 +PS3	PS1 + PS3
Oil Separator	-	-	√	√

All TFD Voltag 3~ 380-420 V

@ MT standard conditions EN12900,
R404A