

A2L Outdoor Condensing Unit

BOYARD

BOYARD SYSTEMS CO., LTD.

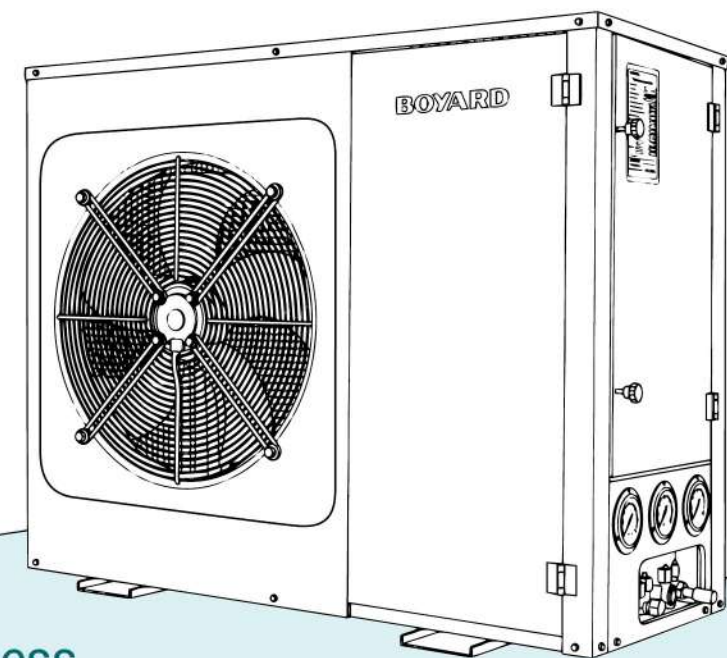
Web: www.boyard.com Email: sales@boyard.com



A2L Outdoor Condensing Unit

A New Era in Cold-Room Business

BOYARD





20+

The company has been established for over 20 years.



300+

Employs nearly 300 people.



30+

It owns more than 30 patents.



30000+

The company covers an area of 33,000 m².



1000000+

Annual production capacity of 1 million units.

BOYARD

AT THE SERVICE OF INSTALLERS

At BOYARD, for 25 years our goal has been to provide high quality products and services throughout the entire life cycle of your commercial refrigeration installation. We take your needs into account and develop reliable solutions while helping you achieve savings thanks to the energy performance of our high efficiency rotary compressors dedicated to Commercial Refrigeration.

Our Outdoor Condensing Unit family, from 1 to 4 HP, is compatible with both A2L refrigerants (R454C and R455A) and A1 refrigerants (R448A/R449A/R452A).

ODU range is equipped with rotary compressors, ODU-010 to ODU-040, to meet the requirements of urban areas, where low noise levels are not optional but essential. Drawing on our field experience, the new condensing unit range has been designed with installer needs in mind, such as easy and reliable accessibility. At BOYARD, standard equipment is never optional. This allows us to offer high-quality components designed and installed directly at the factory: electrical cabinet, dual HP/LP safety pressure switch, condenser fan HP control, and a complete liquid line.

Nomenclature

ref	DESCRIPTION	ODU 1	030 2	L 3	K 4	D 5	V 6	-	BY 7	** 8
1	Product Series	ODU=Outdoor Condensing Unit; MON=Monoblock; CDU=Indoor Condensing Unit; DRY=Dry Cooler; WCU=Water-Cooled unit;								
2	Horsepower	030=3 HP								
3	Application	M=MBP; L=LBP; H=HBP								
4	Power Supply	E= (1PH) 220V/50Hz; Y= (1PH) 220V/60Hz; T= (1PH) 115V/60Hz; K= (1PH) 220-240 /50Hz; M= 3PH 50/60Hz (Voltage include 200V,220V,380V,460V); Z=DC								
5	Refrigerant	A=R410A; B=R134a/R1234yf/R513A; C=R744; D=R449A/R448A/A2L/R404A; P=R290/R1270								
6	Control Type	V=Variable Speed; F=Fixed Speed								
7	Compressor	BY=BOYARD; CP=COPELAND; HT=HITACHI; BS=Bsonyo; EB=Embraco; HY=Cubigel; SC=SECOP								
8	Suffix	The suffix distinguishes special content and customized content, and is not displayed in the brochure.								

The 5 reasons to choose BOYARD condensing units:

- **Maximum flexibility** via an extended operating envelope.
- **Ultra-quiet operation** that easily surpasses urban noise and vibration standards.
- **Ready-to-run reliability**—a fully integrated factory package, assembled and tested in-house.
- **Plug-and-play simplicity** that cuts installation time, reduces complexity, and boosts site safety.
- **Smart, secure control** via intuitive electronics that prioritize efficiency and protection.

And for applications requiring even more, BOYARD offers the possibility to customize your unit with technical options designed to meet specific operational requirements.

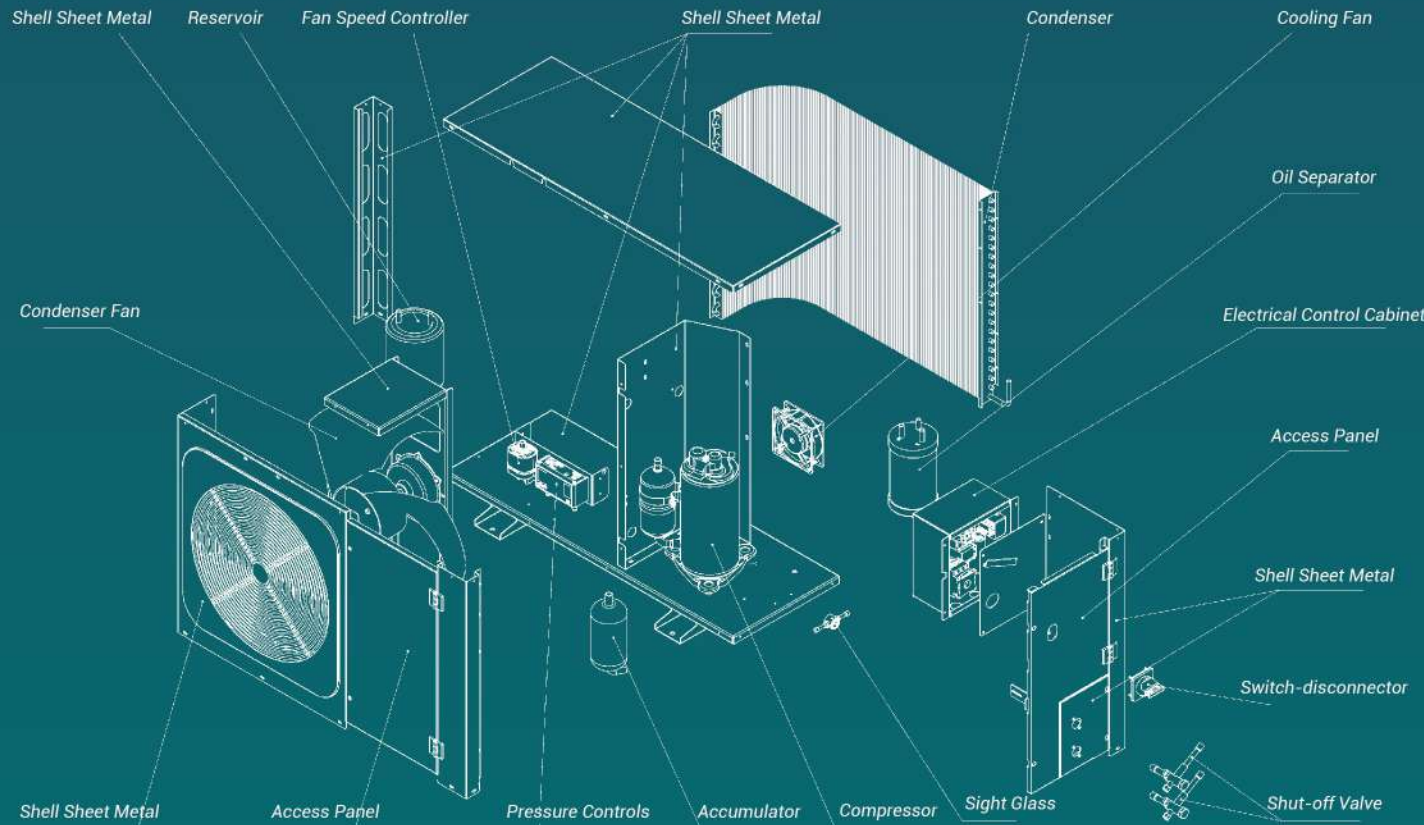
Detailed Features:

Compressor :

- Boyard rotary compressor qualified for A2L refrigerants.
- Available for low-temperature (LBP) and medium-temperature (MBP) applications.
- High COP for excellent efficiency and low power consumption.
- Standardly equipped with a crankshaft heating belt to ensure normal start-up under low-temperature environments and protect the equipment from cold-start damage.
- Support liquid injection cooling in case of high discharge temperature.

Condenser :

- Optimized condenser design with increasing heat exchange area by over 20% compared to similar products on the market.
- Microchannel condenser technology — reduces refrigerant charge.
- The condenser fan can be quickly operated through a service door and the adjustable speed helps reduce noise and power consumption.



A2L Designs:

Electrical components are housed in a dedicated electrical cabinet, isolated from the compressor section.

Specially equipped with a small cooling fan for active ventilation to prevent refrigerant ingress in case of leakage.

Serviceability & Noise:

All components are sourced from internationally renowned brands, with support for customized customer requirements.

Access panels are provided for both the refrigeration and electrical sections, allowing direct component access without disassembly, facilitating easy maintenance and assembly.

High-performance soundproofing for the compressor, combined with adjustable fan speed, ensures low operating noise.

BOYARD Condensing Units

The Solution for All Commercial Refrigeration application



PROFESSIONAL KITCHEN



RESTAURANT



BUTCHERY



PETROL STATION



BAKERY



PROXIMITY STORE



R449A/R448A Cooling Capacity

Fixed-Speed

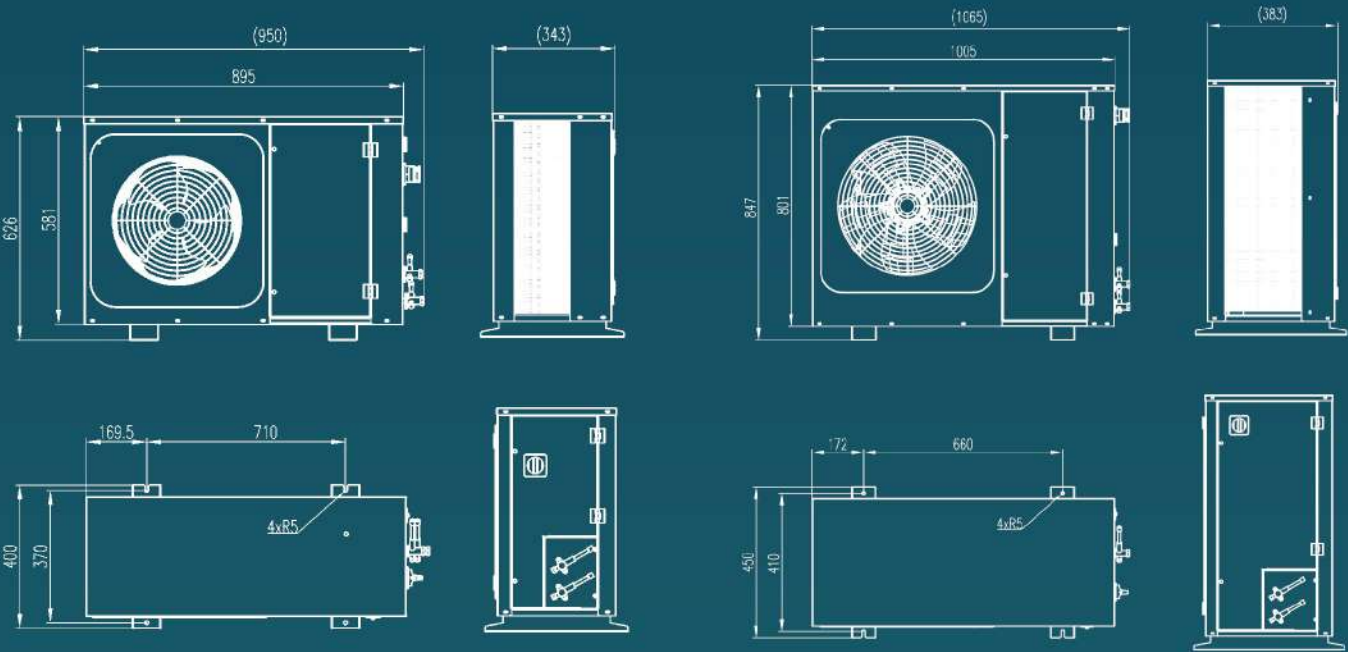
Model		ODU010LK DF_BY	ODU015LK DF_BY	ODU020LK DF_BY	ODU025LK DF_BY	ODU030LK DF_BY	ODU040LM DF_EB
R449A/R448A Cooling Capacity(W)	Evap. Temp. (°C)	Test Conditions: GB/T 21363-2018 Ambient Temp.:32°C Subcooling Temp.:0°C Suction Temp.:18°C					
	-40	445	560	735	820	1145	1205
	-35	585	730	920	1050	1365	1435
	-30	670	820	1130	1215	1730	1815
	-25	810	1030	1300	1450	2085	2195
	-20	1130	1395	1860	2045	2880	3030
	-15	1440	1645	2230	2520	3300	3470
	-10	1625	2090	2600	3020	4205	4425
	-5	1860	2415	2925	3625	5055	5320

R454C/R455A Cooling Capacity

Fixed-Speed

Model		ODU010LK DF_BY	ODU015LK DF_BY	ODU020LK DF_BY	ODU025LK DF_BY	ODU030LK DF_BY	ODU040LM DF_EB
R454C Cooling Capacity (W)	Evap. Temp. (°C)	Test Conditions: GB/T 21363-2018 Ambient Temp.:32°C Subcooling Temp.:0°C Suction Temp.:18°C					
	-40	455	625	755	880	1115	1775
	-35	605	825	970	1130	1330	2230
	-30	705	960	1180	1370	1685	2990
	-25	895	1230	1480	1720	2035	3360
	-20	1065	1455	1730	2005	2540	3935
	-15	1360	1860	2110	2455	2910	4715
	-10	1525	2080	2530	2940	3710	5615
	-5	1735	2375	3025	3515	4460	6640
R455A Cooling Capacity (W)	Evap. Temp. (°C)	Test Conditions: GB/T 21363-2018 Ambient Temp.:32°C Subcooling Temp.:0°C Suction Temp.:18°C					
	-40	475	655	790	920	1170	1860
	-35	635	865	1015	1185	1395	2340
	-30	740	1005	1235	1435	1765	3135
	-25	935	1290	1550	1805	2135	3525
	-20	1115	1525	1815	2105	2665	4130
	-15	1425	1950	2215	2575	3055	4950
	-10	1600	2180	2655	3085	3895	5895
	-5	1820	2490	3175	3690	4680	6970

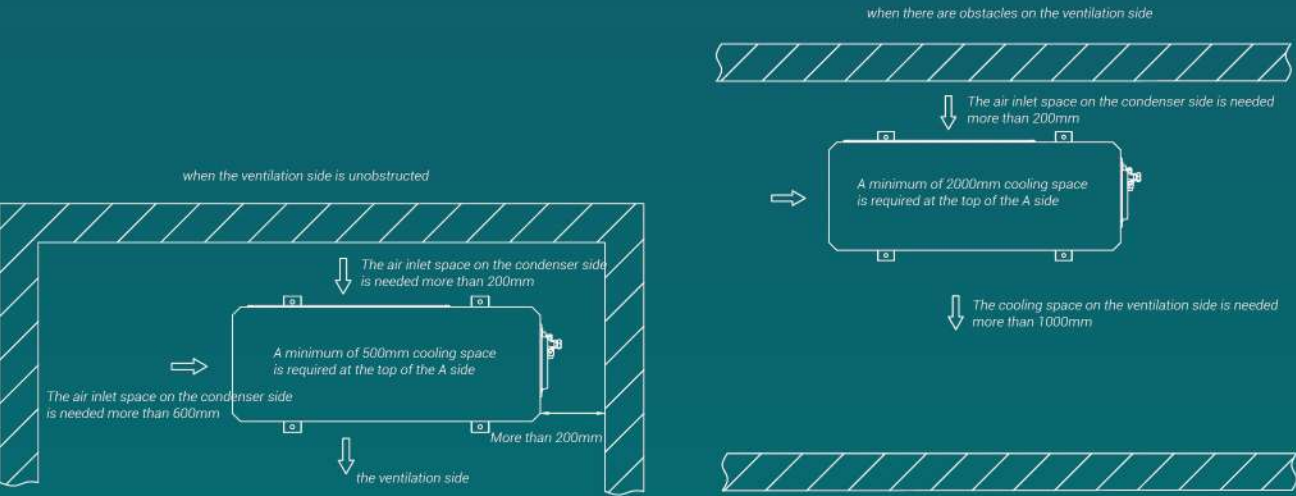
Outline Dimensions



Model	Outlet size	Inlet size
1P、1.5P	1/4	1/2
2P	3/8	1/2

Model	Outlet size	Inlet size
2.5P、3P	3/8	5/8
4P	3/8	3/4

Installation Recommendations



Technical characteristics

STANDARD	Fan Motor/Pressure Controller/Accumulator/Reservoir/Dryer Filter/Check Valve Sight Glass/Oil Separator/Frame Fan/Crankshaft Heating Belt
OPTIONAL	Solenoid Valve/Oil Pressure Gauge/Control Board

Model			ODU010LK DF_BY	ODU015LK DF_BY	ODU020LK DF_BY	ODU025LK DF_BY	ODU030LK DF_BY	ODU040LM DF_EB
Basic configuration	Compressor		QXD-16K	QXD-23K	QXD-30K	QXD-36K	TXSD456KS	XFV28B
	Condenser		Copper tube fin condenser					
	Fan Motor	Diameter(mm) • Quantity	Φ400*1			Φ480*1		
		Power (W)	40			65		
	Pressure Controller		DANFOSS KP15					
	Accumulator		650CC			1L		
	Reservoir		1.1L	2L				
	Dryer filter		083S					
	Check valve		Φ16*110	Φ19*110		SR-10		
	Sight glass		3/8"					
	Oil separator		BLR/A-W 55833					
	Frame fan		120*120*38					
	Crankshaft heating belt		25W		28W			
	Optional	Solenoid valve		SANHUA 3/8'				
Oil pressure gauge		High pressure oil pressure gauge+Low pressure oil pressure gauge						
Control board		Functions such as phase sequence protection and phase loss protection, exhaust temperature protection, liquid spraying control, speed regulation control of condensing fan, fault code alarm output, etc						
Electric control	Schneider switch-disconnector		V1C+KCD1PZC					
	Schneider AC compressor contactor		LC1N1201	LC1N1201	LC1N1801	LC1N1801	LC1N2501	LC1N1201
	Schneider AC compressor protector		LRN12N	LRN14N	LRN16N	LRN16N	LRN21N	LRN16N
	XGE speed controller		XGE-4CC-7					
	Schneider time delay relay		AC230V NTE8-B 48S-480S					
	Schneider Phase sequence protector		/					
Pipe (mm)	Gas Inlet Diam OD		1/2" (12.7)			5/8" (15.88)		3/4" (19.02)
	Liquid Outlet OD		1/4" (6.35)		3/8" (9.53)			