



Unicla 90 SERIES COMPRESSORS

Suitable for small engine vehicles and single cabin applications



UC90

UPF90

UP90

- Heavy duty clutch
- Small compact design
- Horizontal or Vertical oring hose ports
- R134a service valves
- High pressure relief valve (optional)
- Dust cover (optional)
- Single piece body
- Oil return port (optional)
- PAG or POE Oil

Features

Unicla 90 series compressors are suitable for smaller engine vehicles and single cabin applications, or wherever system rated capacity is 3kW or less. The UPF90 is suitable for use with R404a refrigerant in transport refrigeration applications, and the swing type design of the UC90 is most ideal very tight engine compartments. The compressors feature the famous Unicla 10 cylinder swashplate design which produces an extremely quiet and smooth operation and delivers excellent performance through all rev ranges in either clockwise or counter-clockwise direction. The compressors can be fitted optional with service valves, top and bottom oil plugs and a high pressure relief valve. The outside crankcase is manufactured in one piece to reduce any chance of leaking, which is further enhanced with the special Unicla rear cap and front shaft lip seal.

- Three 90 series models are available:**
 - UP90** R134a refrigerant- Standard lug type
 - UC90** R134a refrigerant- Single lug swing type
 - UPF90** R404a refrigerant- Standard lug type

Mounting

The UP90 and UPF90 compressors are suited to all mounting brackets made for compressors with 67mm lug spacing, and can be interchanged with numerous compressors in various applications available in the market today. The UC90 is a single lug mount (swing or alternator type) version and has two single bottom lugs 60mm apart.

Clutches

A diverse range of clutches are available in AA, B section and Polygroove. Also 12 and 24 volt with metal dust covers. The featured compressor here is a UP90 fitted with AA,24 volt clutch and vertical oring ports, plus with both service valves fitted to the top of the compressor body.

Hose Ports

Vertical or horizontal oring ports are available, and for special applications Unicla has a pad or flange type configuration as an option. The UC90 featured above has both hose ports in the top of the compressor body.

Service Valves

Low and high side service valves are fitted as an option and can be easily removed if not required. Both valves can be placed in two positions on the compressor.

Oil Return Port

A Unicla Oil Return Port and fitting is standard on the UPF90, and is available as an option on the the UP/UC90 models. It screws easily into place of the top oil filler plug or the low side service port. Unicla part no. 42203-000160 and is suited to the Unicla Oil Separator part no.OS000010.

Unicla Compressor Groups

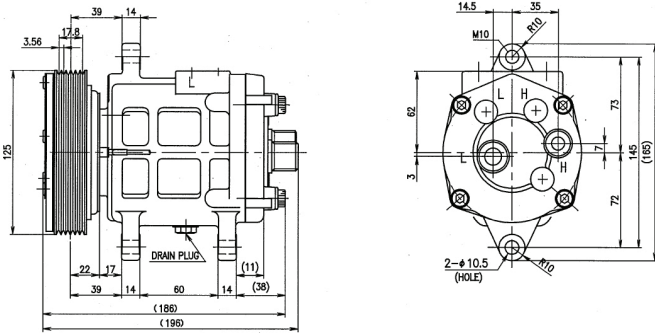
A Group – Smaller capacity models from 45cc to 170cc
C Group – Same as B Group fitted with protection sensor

B Group – Larger capacity models from 200cc to 600cc
D Group – OE and Special Applications

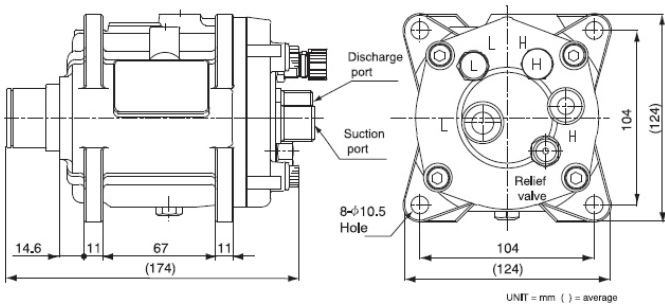


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90 Series Performance Information and Technical Specifications

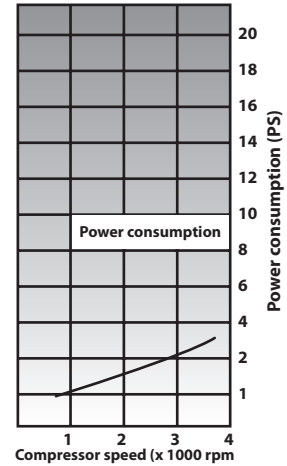
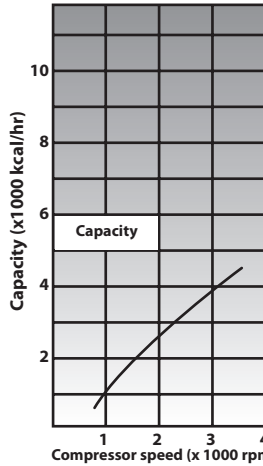
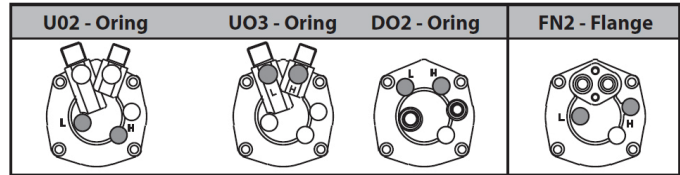


UC90 with horizontal rear hose ports and 6 polygroove clutch fitted (side and rear view)



UP90 with horizontal hose ports (side and rear view). Mounting dimensions also apply to UPF90

Rear Caps and Hose Ports available for Unicla 90 Series Compressors



Operating Conditions

Pressure suction	1.86kg.cm ² G
Pressure discharge	15.5kg/cm ² G
Super heat	10°C
Sub cooling	5°C

Specifications

Model	UP/UX90
Displacement	92cc/rev.
No. of cylinders	10
Max momentary speed	7000 rpm
Lubricant	Unidap 7 (PAG)
Initial oil charge	150cc

90 Series Performance data operating with R134a

Clutches Available for Unicla 90 Series Compressors - Pulley Diameter (mm) and Voltage

Type	119	120	125	130	132	12V	24V
A Groove			•			•	•
AA Groove			•		•	•	•
B Groove							•
BB Groove				•		•	
4 Groove			•			•	
5 Groove	•					•	
6 Groove		•	•			•	
8 Groove	•					•	•
10 Groove			•			•	•

For detailed information about Unicla recommendations on such areas as fitting compressors in special applications, measuring compressor thermal and pressure loads, and calculating extra oil requirements in larger systems, we recommend you visit our website where expert advice from Unicla engineers can be found.



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