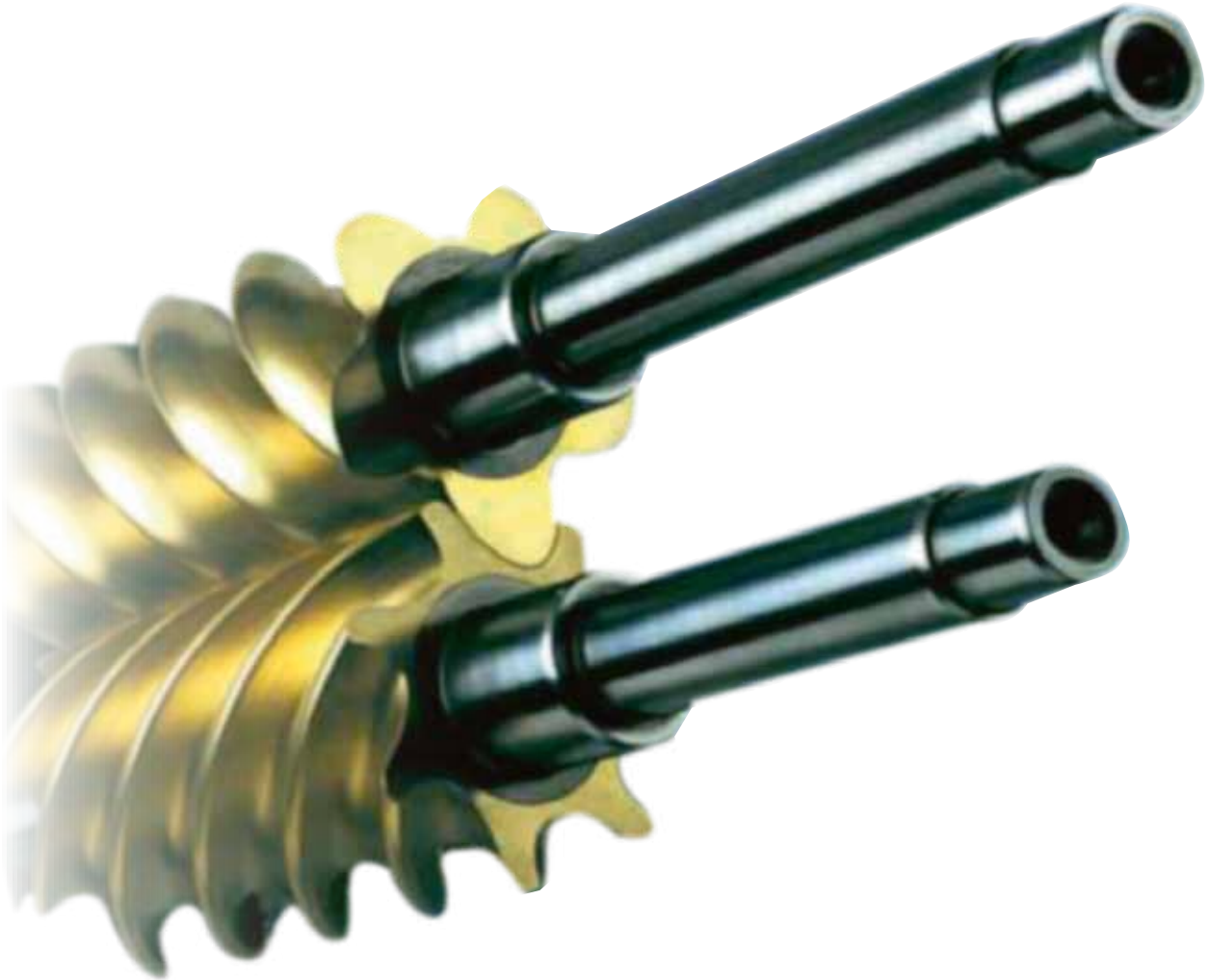




S391/S616 SCREW COMPRESSOR

Designed Exclusively for Bus Transport Applications

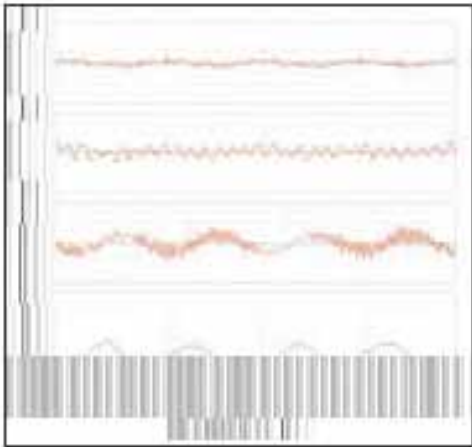


Reduced fuel consumption
Reduced maintenance
Low installation cost
Unmatched reliability
Whisper-quiet operation

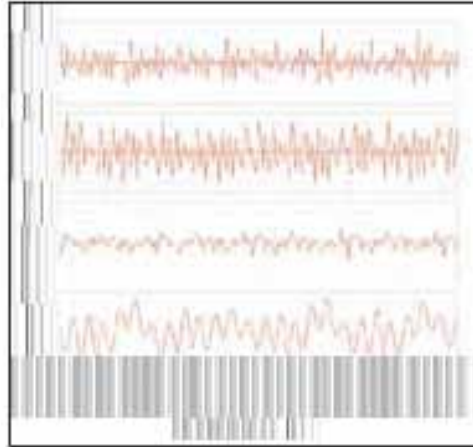
Take a closer look.

S391

Lower acceleration vibration and torque fluctuation than any other transport compressor.



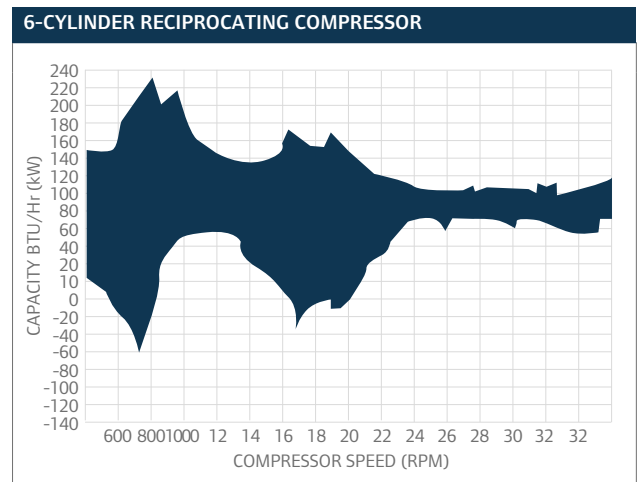
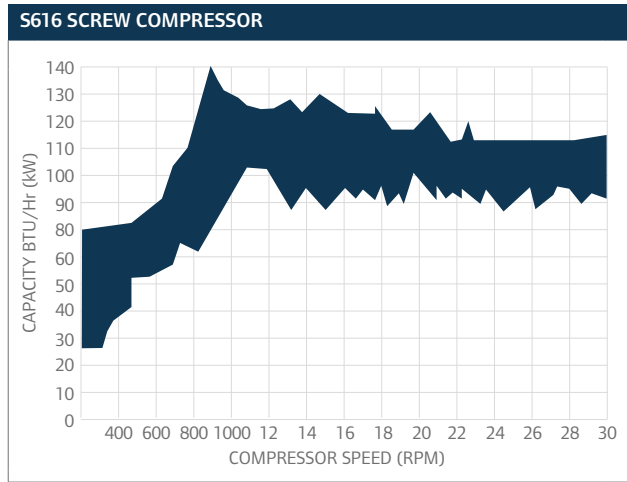
S391 Screw Compressor



6-Cylinder Reciprocating Compressor

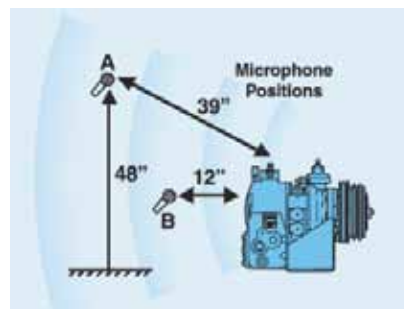
S616

Lower starting torque. Uniform torque throughout operating speed range.



Actual laboratory tests reveal dramatic noise reduction

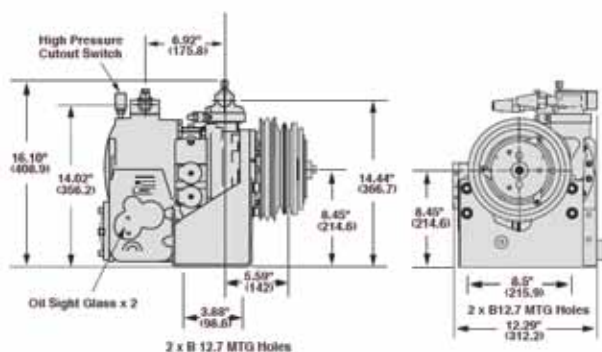
COMPRESSOR	MICROPHONE POSITION	SPEED (RPM)	NOISE LEVEL (DBA)
Screw	A (39")	1400	79.0
6 Cyl. reci.	A (39")	1400	87.5
Screw	B (12")	1400	87.2
6 Cyl. reci.	B (12")	1400	89.5
Screw	A (39")	2200	87.9
6 Cyl. reci.	A (39")	2200	88.7
Screw	B (12")	2200	91.3
6 Cyl. reci.	B (12")	2200	92.7



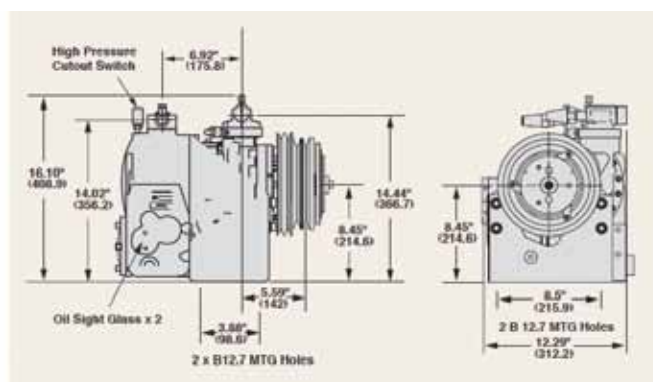
Specifications

SCREW COMPRESSOR			
S391		S616	
Type	Helical Lobed Screw	Type	Helical Lobed Screw
Displacement	23.86 cu. in./rev. (391 cu. cm/rev.)	Displacement	37.59 cu. in./rev. (616 cu. cm/rev.)
Refrigerant	HFC (R-134a or R-407C)	Refrigerant	HFC (R-134a or R-407C)
Oil separator	Integrated	Oil separator	Integrated
Oil sump	Integrated, on discharge side	Oil sump	Integrated, on discharge side
Oil charge	1.8 liter	Oil charge	1.8 liter
Oil type	POE SOLEST 120	Oil type	POE SOLEST 120
Oil filter	Integrated full-flow	Oil filter	Integrated full-flow
Max tilt	10 degrees any direction	Max tilt	10 degrees any direction
Drive Method	Belt or direct	Drive Method	Belt or direct
Max belt side loading	136 kg	Max belt side loading	136 kg
Maximum BHP (R-407C)	35 hp at 450 psi discharge and 100 psi suction @ 3000 rpm	Maximum BHP (R-407C)	41 hp at 450 psi discharge and 100 psi suction @ 3000 rpm
Maximum BHP (R-134a)	24 hp at 350 psi discharge and 65 psi suction @ 3000 rpm	Maximum BHP (R-134a)	28 hp at 350 psi discharge and 65 psi suction @ 3000 rpm
Maximum speed	3000 rpm	Maximum speed	3000 rpm
Maximum discharge temperature	148°C	Maximum discharge temperature	148°C
Maximum operating pressure	350 psig (R-134a) 450 psig (R-407C)	Maximum operating pressure	350 psig (R-134a) 450 psig (R-407C)
Weight	66.8 kg (including oil, service valves and clutch)	Weight	77.2 kg (including oil, service valves and clutch)

Dimensions S391 (mm)



Dimensions S616 (mm)



WARRANTY SUMMARY

Terms of the Thermo King Warranty are available on request from your local Thermo King dealer. Please reference document TK50049 for the Thermo King Bus Unit Warranty.

The new standard for reliability. Innovative features, inside and out.

Revolutionary benefits.

- Reduced fuel consumption
- Reduced maintenance
- Low installation cost
- Unmatched reliability
- Whisper-quiet operation
- Enhanced serviceability
- Increased rider comfort
- Thermo King quality & service

Body-mounted clutch

Minimizes stress and wear from side loading

Rolling element antifriction bearings

Withstands a wide range of lubrication conditions

No sleeve bearings

Oil separator

Integrated, no external plumbing

Oil filter

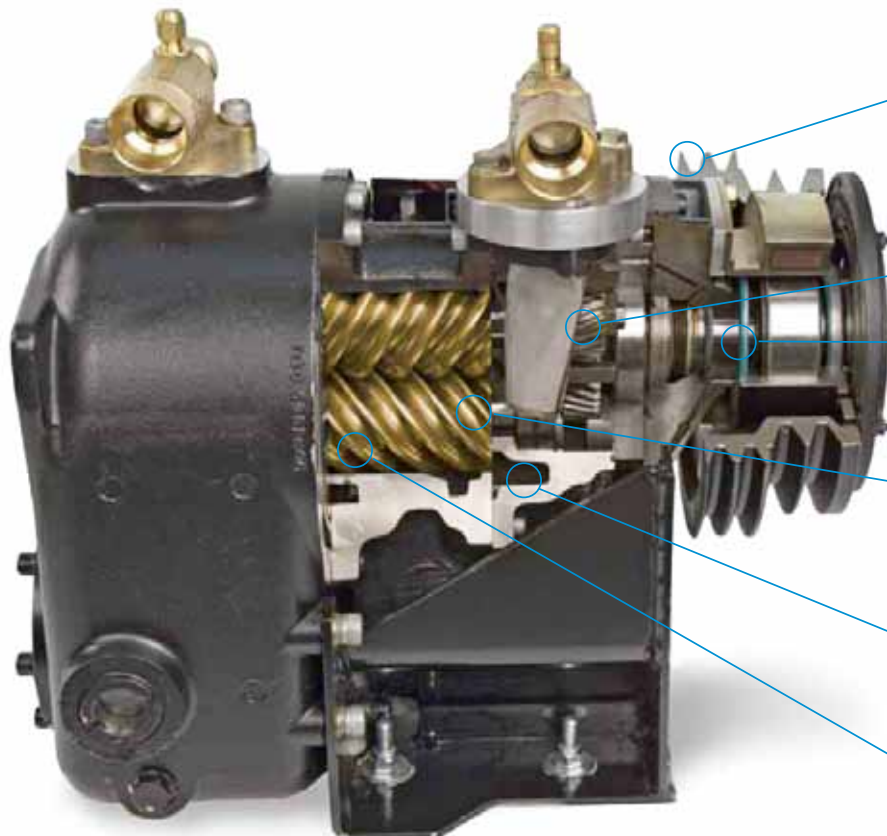
Low micron filtering

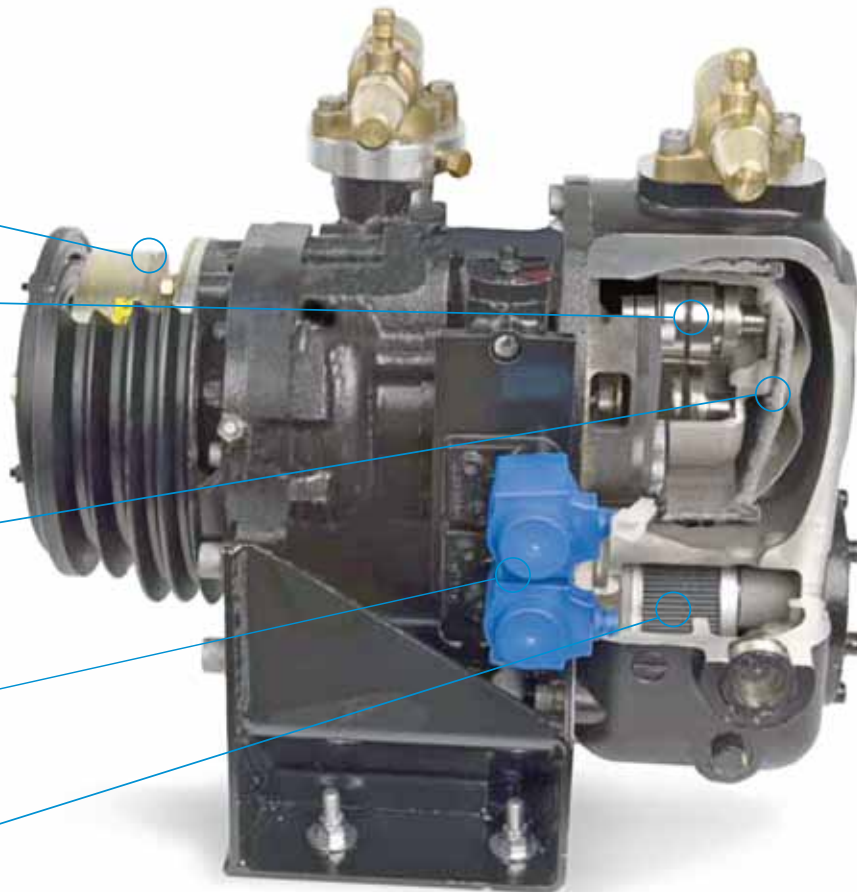
Full-flow oil filter with automatic bypass function

Unloaders

Programmable two-stage unloading

True capacity control saves fuel





Epoxy sealed clutch coil

Reliable electromagnetic design

Gears

Precision-ground helical gears for quiet, smooth operation

Metal bellows shaft seal

Eliminates carbon graphite seal face

Eliminates rubber bellows

Rotors

Precision manufactured by Thermo King to practically zero clearance between concave and convex rotors

Unique oil

Management system With no internal plumbing All passages machined

Rotary screws

Only two parts needed to compress gas

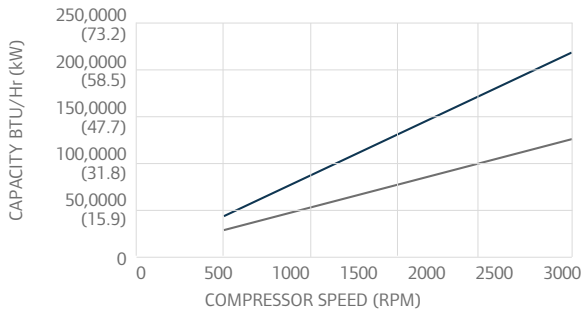
Greater efficiency means more capacity with less horsepower and less fuel used.

S391

COMPRESSOR CAPACITY VS VS RPM

Test Conditions

Sat. suction temperature	4.4° C	Liquid subcooling	0° C
Sat. discharge temperature	54.4° C	Compressor ambient	37.8° C
Return gas temperature	18.3° F		

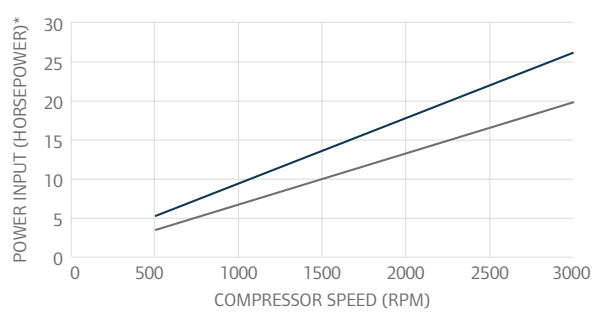


■ R-407C ■ R-134A

COMPRESSOR INPUT POWER VS RPM

Test Conditions

Sat. suction temperature	4.4° C	Liquid subcooling	0° C
Sat. discharge temperature	54.4° C	Compressor ambient	37.8° C
Return gas temperature	18.3° F		



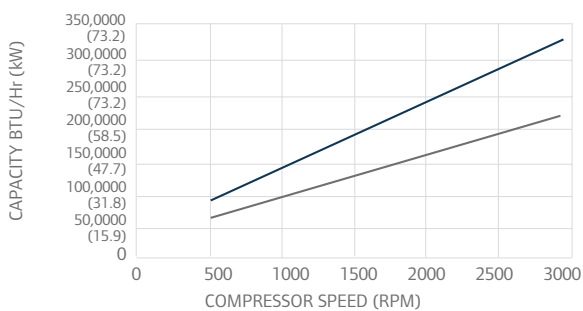
■ R-407C ■ R-134A

S616

COMPRESSOR CAPACITY VS VS RPM

Test Conditions

Sat. suction temperature	4.4° C	Liquid subcooling	0° C
Sat. discharge temperature	54.4° C	Compressor ambient	37.8° C
Return gas temperature	18.3° F		

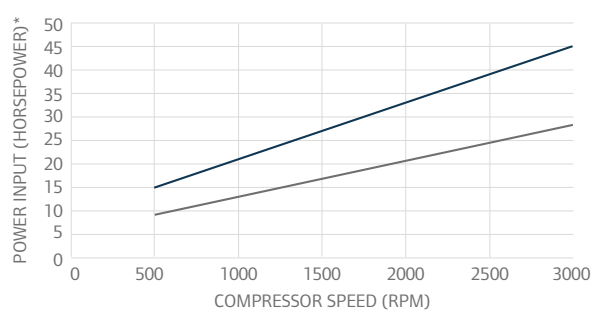


■ R-407C ■ R-134A

COMPRESSOR INPUT POWER VS RPM

Test Conditions

Sat. suction temperature	4.4° C	Liquid subcooling	0° C
Sat. discharge temperature	54.4° C	Compressor ambient	37.8° C
Return gas temperature	18.3° F		



■ R-407C ■ R-134A