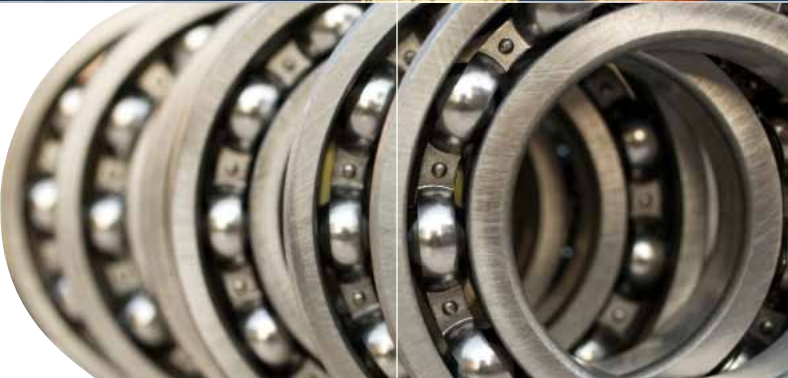




TSS Rotterdam BV

Technical products for Marine, Offshore and Industry





INTRO

TSS Rotterdam supplies equipment to Marine, Offshore and Industry

Ships and industry need to be kept operational for 24 hours a day. That's why a reliable supplier of technical products is of the utmost importance. Pumps, e-motors, compressors have to be replaced as quickly as possible when they break down. TSS Rotterdam BV supplies the required equipment and spare parts to Marine, Offshore and Industry. We have stocking points available for pumps, e-motors, compressors, bearings, shaft seals and valves and we take great care to maintain a high quality in the products we supply.

As a brand independent trading company we are dealing in both European and Asian equipment and related spare parts. Besides the replacement of equipment and spare parts, TSS Rotterdam also takes on 'special projects', which can be viewed on our website www.tssr.nl/special-projects

Strategic location and brand independent

TSS Rotterdam is strategically located in the ARA-region (Amsterdam, Rotterdam and Antwerp). Our warehouse and head office is located in

Schiedam at industrial estate "Vijfsluizen". Part of the famous Wilton Fijenoord Shipyard from 1929 until 1999, "Vijfsluizen" is centrally located between Vlaardingen and Schiedam, fifteen minutes from all major ports in Rotterdam. The ports of Amsterdam and Antwerp (Belgium) are both one hour away.

TSS Rotterdam operates brand independent and is known for its innovative and resourceful ways of dealing with the delivering of equipment and spare parts. We understand that time and money are limiting factors. TSS Rotterdam is not committed to one manufacturer, which means we can anticipate quickly and are flexible in our operations. We supply the requested equipment and spare parts from our stocking points, but are also able to find those hard-to-locate and critical parts you are looking for.

International network and a unique computer system

When it comes to logistics, TSS Rotterdam doesn't see any barriers, only challenges. Our products can be shipped worldwide by road, sea or air. Our international network extends through forwarders and shipping agents around the globe. We can ship the desired

products to your warehouse or deliver directly on board of your vessel, if necessary.

TSS Rotterdam uses a unique registration system. With this computer system, we create a client related database and/or vessel related database by registering each item we deliver. Our computer system creates a unique article number for each item shipped, which relates to the client and/or vessel. Our database enables us to provide better, faster and more reliable service to our clients.

Specialized knowledge and reliable service

With our years of experience in the replacement market and our in-house product specialists we are actively involved during the process of replacing equipment. TSS Rotterdam specialists with an extended knowledge of pumps, e-motors, bearings and power transmission are at your disposal. We know what you are talking about. We are able to offer reliable and high quality service due to our specialized knowledge and our familiarity with all the facets of the Maritime industry. TSS Rotterdam is your source for technical products from the ARA-region.



COMPRESSORS (AIR)

What is an air compressor?

An air compressor is a mechanical device that by reducing the volume of air increases the pressure. Compressors are similar to pumps as they both increase the pressure of a fluid and both pumps and compressors can transport the fluid through a piping system.



Breathing Apparatus Compressors (for ex.Bauer)

Compressors come in a wide variety of different types and sizes.

The three basic types of air compressors are

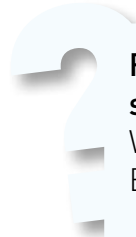
- ✓ reciprocating
- ✓ rotary screw
- ✓ rotary centrifugal

These types are further specified by:

- ✓ the number of compression stages
- ✓ cooling method (air, water, oil)
- ✓ drive method (motor, engine, steam, other)
- ✓ lubrication (oil, Oil-Free where oil free means no lubricating oil contacts the compressed air)
- ✓ packaged or custom built position

What type of air compressors does TSS Rotterdam Supply?

TSS Rotterdam supplies a wide range of marine and industrial compressors. Available in air cooled, fresh water cooled or sea water cooled versions. Our compressors meet all major classification society requirements such as Lloyd's, Bureau Veritas and Germanischer Lloyd and other classification societies.



For which manufacturers does TSS Rotterdam supply compressor spare parts?

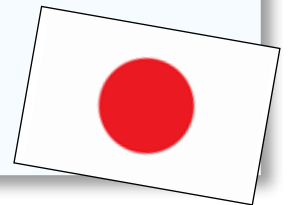
We supply and stock spare parts for the following European compressor manufacturers:

- ✓ Hamworthy
- ✓ Hatlapa
- ✓ Sauer
- ✓ Sperre

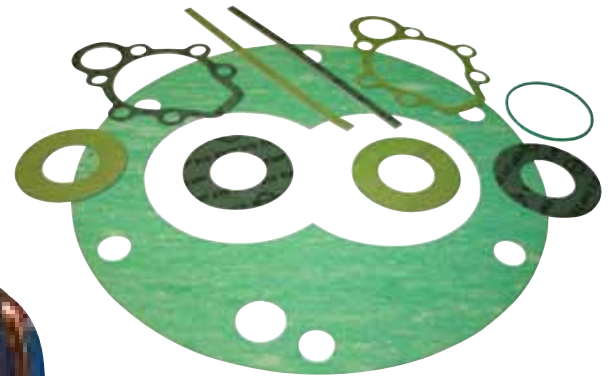


Besides above makers we also supply and stock spare parts for the following Asian compressor manufacturers:

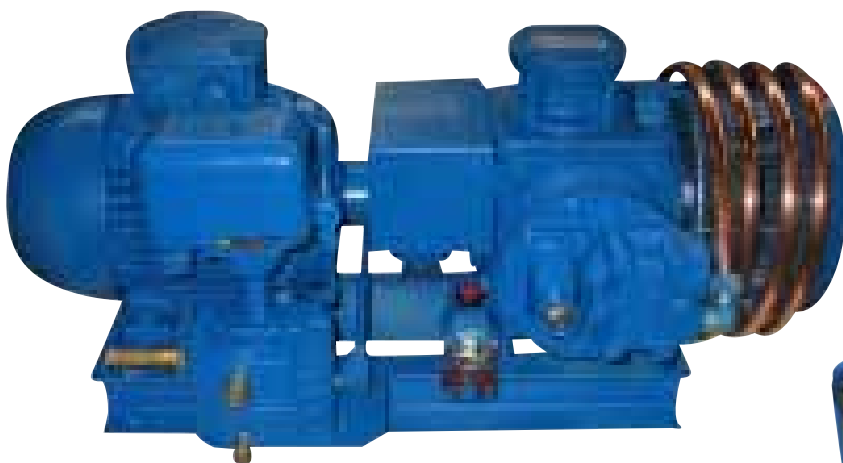
- ✓ Hanshin
- ✓ Hasegawa
- ✓ Matsubara
- ✓ Mitsubishi
- ✓ Tanabe
- ✓ Teikoku
- ✓ Yanmar



Pressure Gauges



Gaskets



Starting Air Compressors (for ex.Sperre)



Oil & Air Filters



COMPRESSORS (REFRIGERATION)

How does a refrigeration and air conditioning compressor work?

Refrigeration compressors and air conditioning compressors provide air conditioning, heat pumping, and refrigeration for large-scale facilities and equipment. They compress low-pressure, low-volume gas into high-pressure and high-temperature gas. Refrigeration compressors and air conditioning compressors also remove vapor from the evaporator. Most refrigeration compressors (refrigerant compressors) are large, mechanical units that form the heart of industrial cooling systems or heating, ventilation, and air conditioning (HVAC) systems. Air conditioning compressors are also large-scale mechanical devices; however, these compressors are designed specifically for air conditioning systems and do not provide heating or ventilation functions.



AC Unit Compressor (for ex.Carrier)

There are three main categories of refrigeration compressors and air conditioning compressors:

- ✓ **Screw:** Screw compressors pass refrigerant vapor through screw spindles which compress the gas. Although most screw compressors have two spindles, products with three or more spindles are also available.
- ✓ **Scroll:** Scroll compressors are the most common type of refrigerant compressor. They have a relatively low rate of leakage and provide high efficiency.
- ✓ **Piston:** Piston compressors or reciprocating compressors are specifically designed for industrial and commercial applications. They compress gases to high pressures and are designed for continuous operation.

Where does a refrigeration or air conditioning exist of?

There are five basic parts to any refrigerator (or air-conditioning system):

1. Compressor
2. Heat-exchanging pipes - serpentine or coiled set of pipes outside the unit
3. Expansion valve
4. Heat-exchanging pipes - serpentine or coiled set of pipes inside the unit
5. Refrigerant - liquid that evaporates inside the refrigerator to create the cold temperatures



For which manufacturers does TSS Rotterdam supply compressor spare parts?

We supply and stock spare parts for the following manufacturers:

- ✓ Bitzer
- ✓ Bock
- ✓ Carlyle
- ✓ Carrier
- ✓ Copeland
- ✓ Daikin
- ✓ Dorin
- ✓ Grasso
- ✓ Howden
- ✓ Mycom
- ✓ Sabroe
- ✓ Stal
- ✓ York



Fridge Compressor
(for ex.Sabroe)

TSS Rotterdam BV

Product overview



Pumps (Centrifugal)



Drive Belts



Pumps (Positive Displacement)



Compressors (Air)



Pumps (Spare Parts)



Compressors (Refrigeration)



E-Motors



Cargo Hoses



Couplings & Inserts



Hydraulics



Bearings



Diesel Engines (Spare Parts)



Valves



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