

## AIR COMPRESSORS -TURBO COMPRESSORS



### STANDARD EQUIPMENT

Turbo compressors represent the latest technology achieved in the production of industrial air compressors. We are proud to manufacture these products in Turkey by the IHI Dalgakiran Makine A.Ş. (joint venture by IHI and Dalgakiran).



### SERVICEABILITY

The wide range of products offered in terms of capacity and pressure is beyond any competitors and the return on investment times are realized below the average of the industry as very beneficial results in terms of energy efficiency are achieved.

# GENERAL FEATURES



## DURABLE BODY

THE GEAR BOX AND AIR COOLERS ARE CAST IN A SINGLE PIECE, AND THEY HAVE A COMPACT AND DURABLE STRUCTURE. COMPRESSOR UNIT AND AIR DUCTS ARE SURROUNDED BY A THICK AND UNWELDED WALL, AND THIS STRUCTURE IS VERY EFFECTIVE FOR REDUCING NOISE.



## TITANIUM IMPELLERS

Designed with Hertz Kompressoren's vast experience and CFD technology, 3D impellers offer the highest level efficiency in the world and a wide operating range to the customers.

With the use of impellers made of titanium (except TRX), you shall not encounter problems such as wear and corrosion.

## DIFFUSERS

Speed energy charged to air by the rotation of the impellers is efficiently converted into pressure energy by the diffusers. With CFD technology, diffusers and impellers are analysed together to ensure minimum air turbulence, and thus operation noise is minimized.

## IGV (INTAKE GUIDE VANES)

With IGV, the air intake is controlled according to the consumption, furthermore, the efficiency is also increased as the air intake is provided in the same direction as the direction of rotation of the impellers.

## PADDED ROLLER BEARING

Padded roller bearings, which allow high-speed and stable operation, are used. Pads move according to the variation of the bearing load, which ensures perfect adaptation to the load changes in the compressor.

## LABYRINTH SEAL

The air and oil seals are labyrinth type and they do not contact the shaft. For this reason, abrasions do not occur and they do not require periodic replacement.

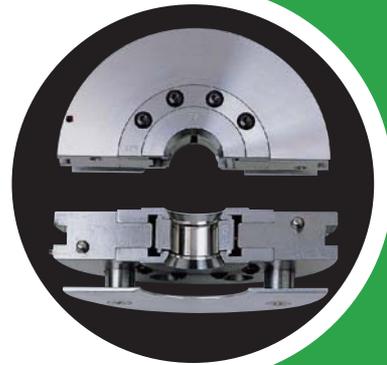




- Made of titanium and stainless steel, impeller is very resistant to corrosion and abrasion. As a result, it does not require periodic replacement, and thus the maintenance costs are reduced.

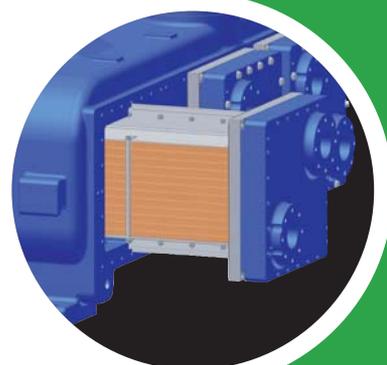


- Optimum impeller designs prepared to meet your requirements on flow rate and pressure provide energy saving.

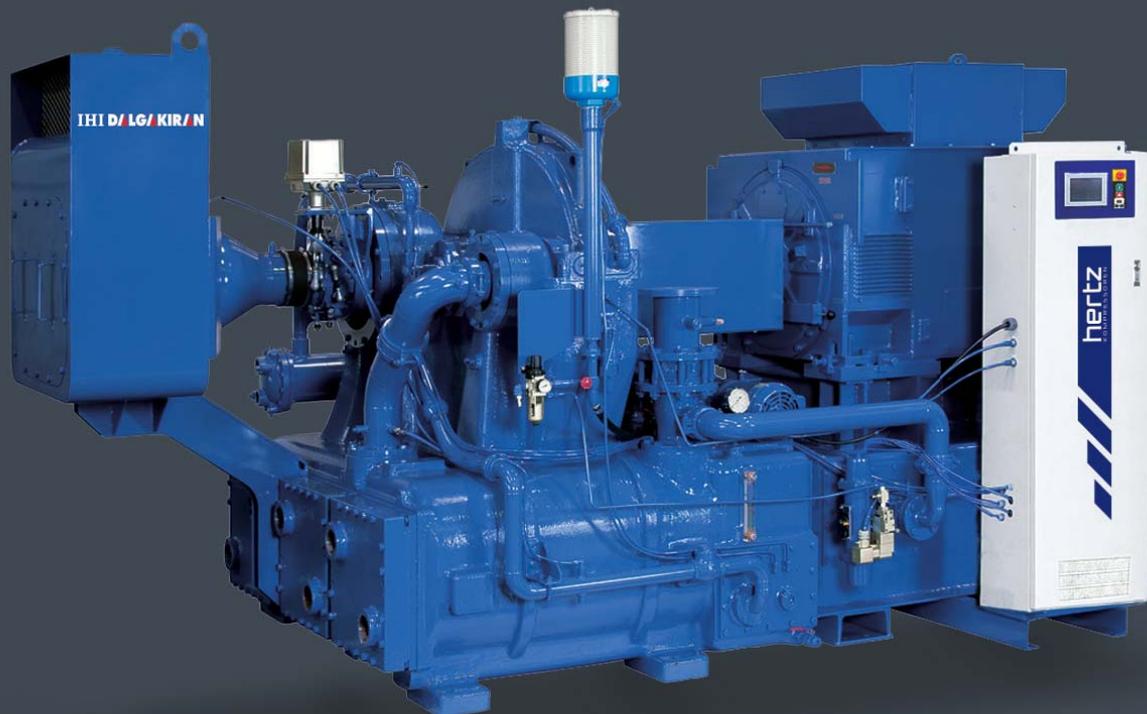


- Roller Bearings are used as bearings of impellers rotating at high speed. No abrasion occurs as the bearings are contactless, and the service life of the part is increased significantly.

- The ability of compressors to operate at maximum efficiency for many years is directly proportional to the performance of the coolers used. All Hertz Kompressoren turbo compressors use "copper pipe and copper fin" heat exchangers as standard feature. Thus, it is possible to achieve high cooling performance, and a long service life.

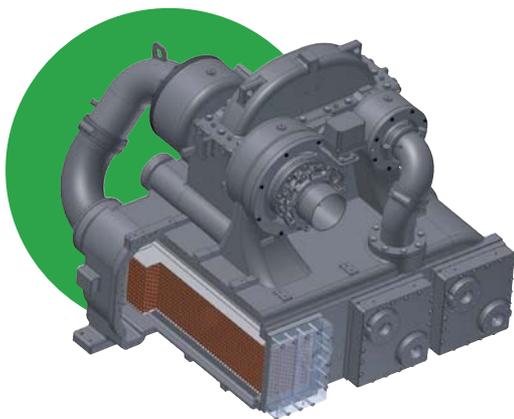


- We offer different options such as compressor cabinet and group control panel to meet the requirements of our customers.



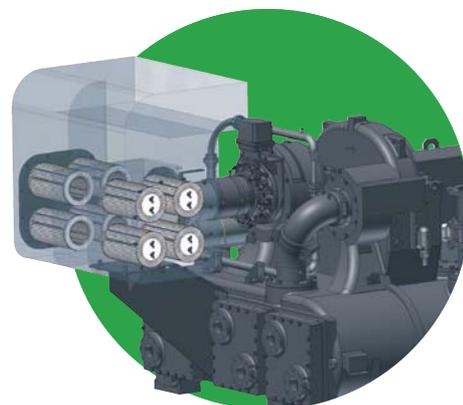
## MAIN BODY OF THE COMPRESSOR (SINGLE PIECE GEAR BOX AND AIR COOLERS)

- The gear box and air coolers are cast in a single piece, and they have a compact and durable structure. Thanks to the unique design of the compressor body, noise level is reduced while the pressure losses are also reduced. Moreover, maintenance costs are reduced significantly, too.



## SUCTION FILTER

- The cartridge type filter elements used in the suction filter have a very long service life and their maintenance is very easy.





## CONTROL PANEL

### OPERATING CONDITIONS

- Thanks to the easy-to-read graphs of the control panel, it is possible to control the main measurements, data, and operating conditions and it becomes easier to monitor the compressor.

### TREND GRAPHIC

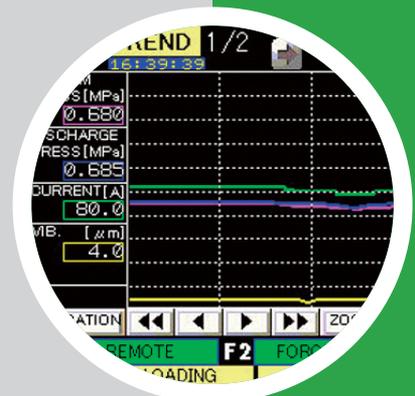
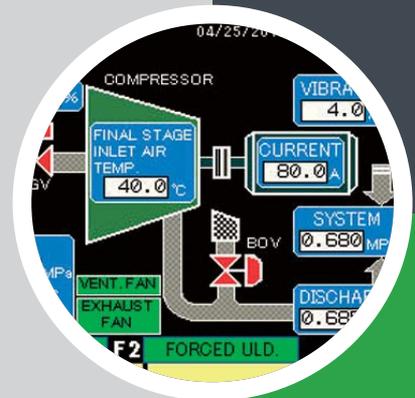
- The control panel provides a graphical interface that allows operators to view the main trends to maintain maximum operating conditions and help to plan maintenance routines.

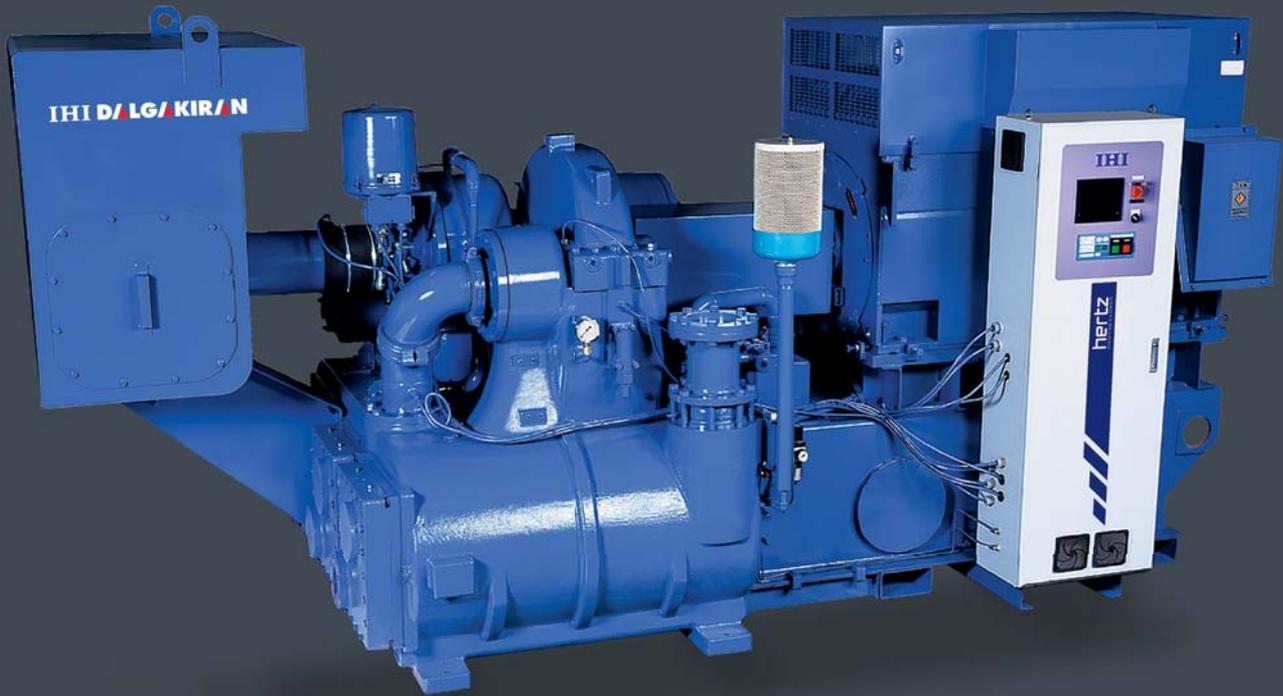
### WARNING RECORD SYSTEM

- All values measured by the controller are stored in its memory in case of any warning or error. Thus, an error or a fault is detected and resolved by quickly and easily.

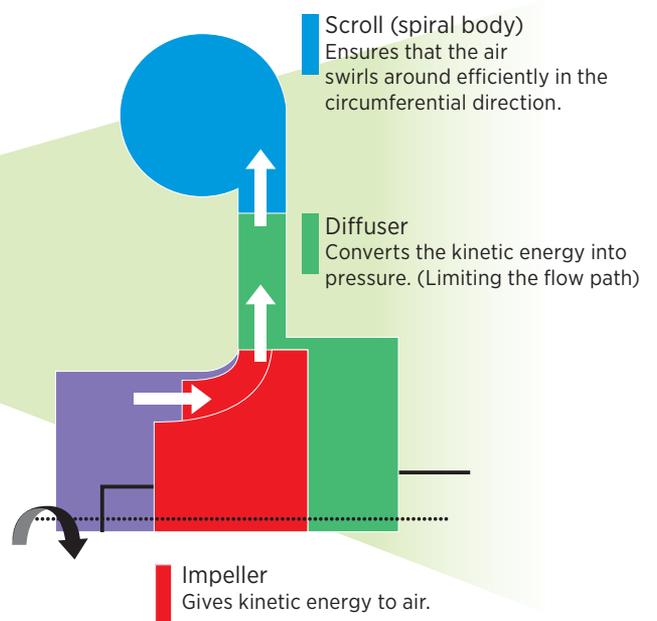
### CAUSES AND PRECAUTIONS

- In the event of an error, operator may see faults and possible precautions from the control panel display.





# OPERATING PRINCIPLE OF THE TURBO COMPRESSOR



Turbo compressors are the type of compressors that provide kinetic energy to the air or gases by the centrifugal force generated by the impellers and convert this kinetic energy into pressure energy in the diffuser by reducing the air flow path.

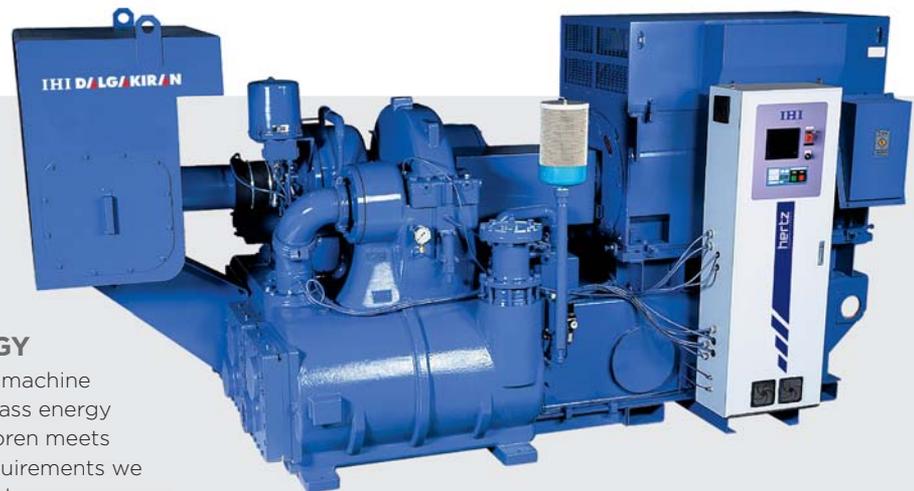
Pressurized air is cooled before entering the next stage with high performance coolers. This results in higher productivity.



## TURBO Air Compressors

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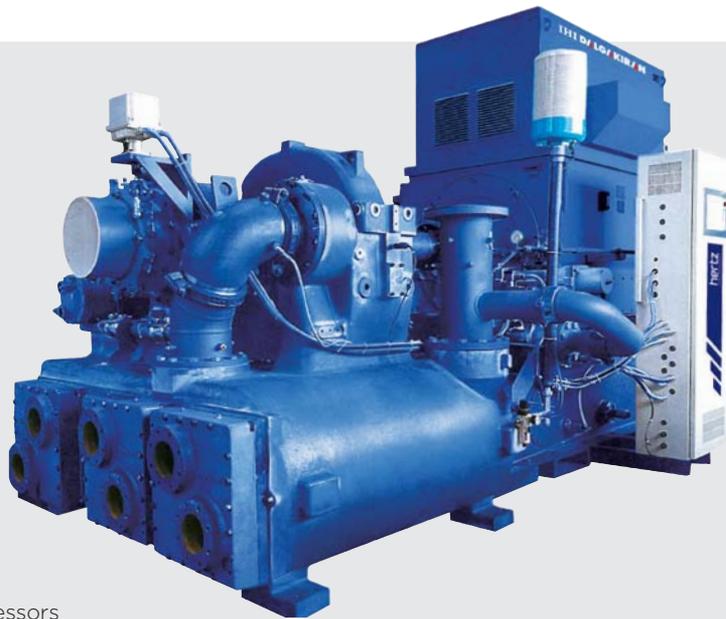
### SUPERIOR TECHNOLOGY

- The use of advanced turbo machine technology provides first class energy efficiency. Hertz Kompressoren meets stringent energy saving requirements we encounter today with its turbo compressors that offer high level of energy saving.



### SINGLE PIECE CAST BODY

- The gear box and air coolers are cast in a single piece, and they have a compact and durable structure. Compressor unit and air ducts are surrounded by a thick and unwelded wall, and this structure is very effective for reducing noise.



### EASY MAINTENANCE

■ Hertz Kompressoren turbo compressors are designed and manufactured to be simple and durable in order to reduce maintenance costs. Working hard to simplify maintenance procedures, Hertz Kompressoren has made it possible to provide stable pressurized air for years with minimal maintenance costs.

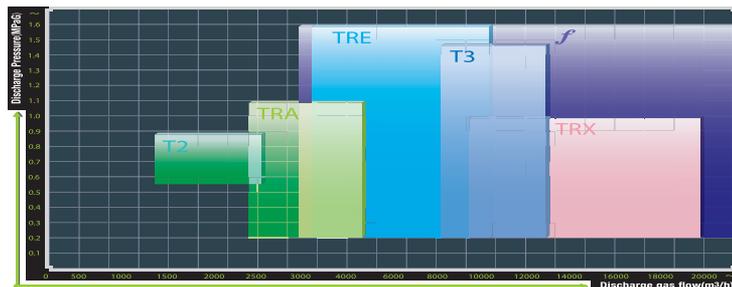


## TECHNICAL DATA

MODEL	COMPRESSOR STAGE NUMBER	OUTPUT MAINTENANCE INTERVAL (Bar)	MOTOR (kW)	COMPRESSOR FLOW RATE RANGE (m <sup>3</sup> /h)
T2A	2	5.5-8.8	125	1,394
			230	2,648
TRA 20	2-3	2-11	250	2,470
TRA 50			500	5,100
TRE 30	2-3-4	2-16	375	3,000
TRE 100E			1060	11,000
T3A 50	2-3	2-14	900	3,600
T3A 140			1,420	15,000
TRX 70	2-3	2-10	710	9,000
TRX 180			1,850	21,000

### NOTES

- Tables above indicate the flow rate in typical output pressures.
- The flow rates were determined with reference to the following suction conditions.
- Reference conditions:
  - Atmospheric pressure: 0.1013MPa (abs.)
  - Suction pressure: 0.0993MPa (abs.)
  - Suction temperature: 35°C
  - Relative humidity: 80 %
  - Cold water inlet temperature: 35°C



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