



# DCT 75-315 kW ROTARY SCREW COMPRESSORS

SINGLE STAGE

## HEAVY INDUSTRIAL Series

air technology systems



## DCT:

**Fixed speed single-stage rotary screw compressors with direct transmission.**

## DCT - VSD:

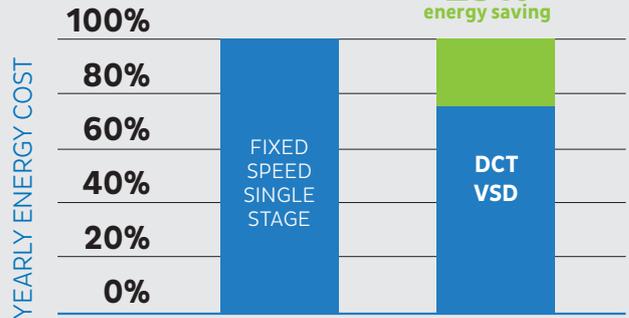
**Variable speed single-stage rotary screw compressors with direct transmission.**



The DCT and DCT - VSD series lubricated screw compressors are particularly indicated for generating industrial use compressed air. In case of continuous and constant air demand the compressed air needs are perfectly satisfied with DCT Fix Speed. In case of non-continuous needs and several daily fluctuations of air demand DCT - VSD is the most suitable solution.

## ADVANTAGES

DCT - VSD version with **Permanent Magnet Variable Speed Motor (PM)** guarantees an excellent ratio of energy costs and air flow rates. It also capable of an unlimited operating pressure adjustment. The direct drive fixed speed DCT models are equipped with IE3 motors offering an additional contribution to energy saving.

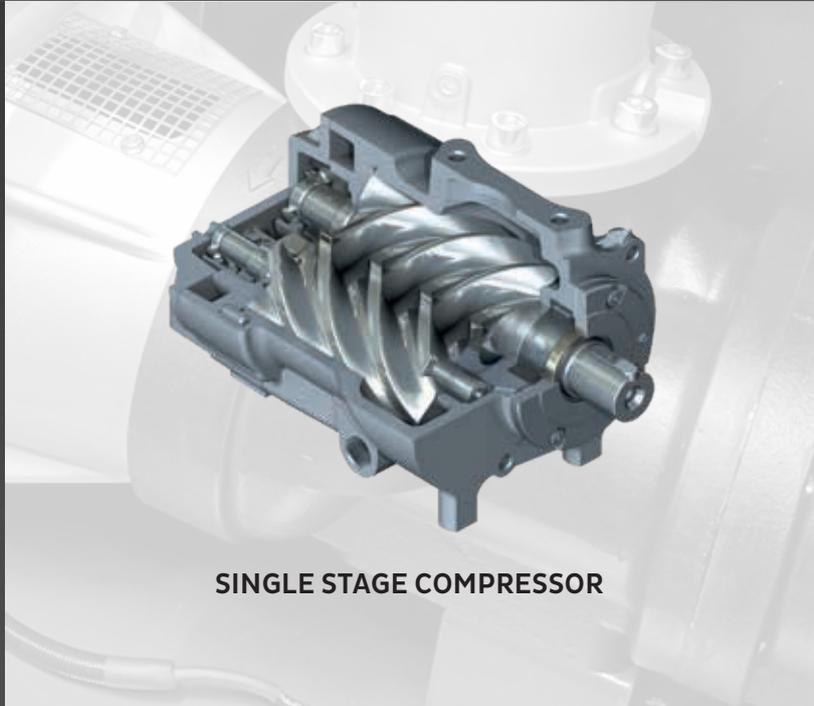
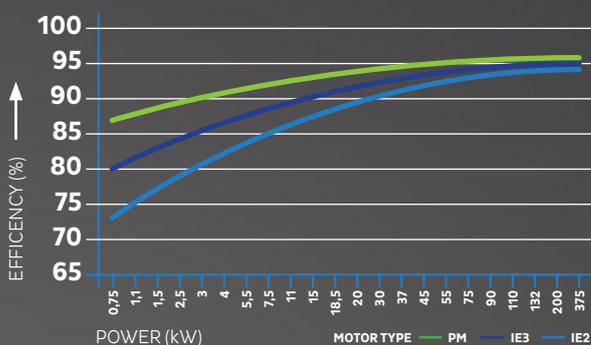


## SINGLE STAGE ROTARY SCREW COMPRESSOR

Low rotation speeds allow longer bearings service life. OUR AIR-END Installed on the **DCT** range has an optimized rotor's profile from the fluid dynamics point of view. By optimizing the internal circuit, the pressure drops have been further reduced thus obtaining a 8% less energy consumption improving the specific power output.

The selection of low rotation speed motor (4/6 poles in the fixed speed version) and properly sized rotary screws (max 1400 rpm) ensures the bearings a long life.

The variable speed version is equipped with Permanent Magnet Motor.



**SINGLE STAGE COMPRESSOR**

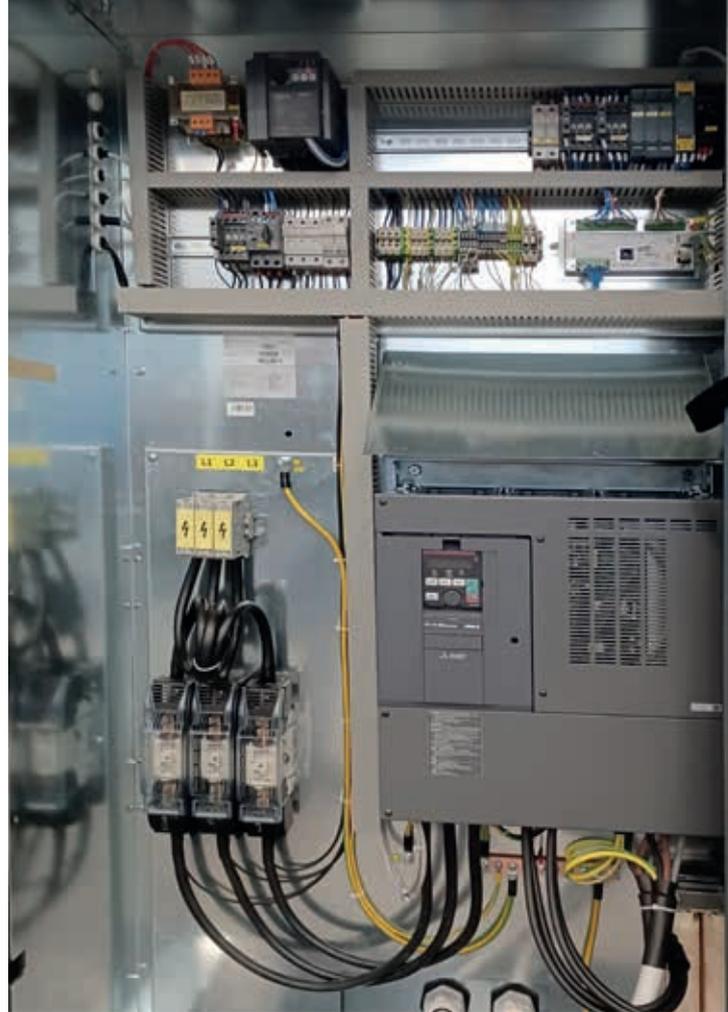
# BENEFITS OF SPEED CONTROL

The high precision detection of the working pressure and the motor speed control guarantee the perfect flow rate according to the real air demand, with considerable energy savings.



## Electronic Controller

The intuitive KTronic 1000 touch screen panel permits full access to the functions, parameter control and diagnostics of the unit, increasing the efficiency of the compressor.



# INDUSTRY 4.0 REMOTE CONTROL & CONNECTIVITY ALWAYS WITH YOU!

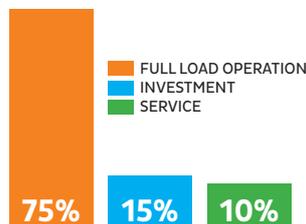
The KTronic 1000 can be connected to a LAN allowing the compressor to be monitored and managed from a remote PC or a SMARTPHONE.



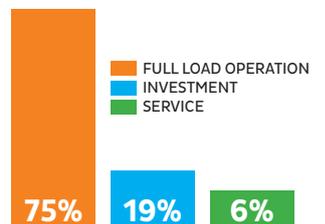
# ENERGY SAVING COMPARISON BETWEEN A VSD AND A FIXED SPEED UNIT (LOAD-UNLOAD) UNIT

The VSD unit allows the compressor to be very flexible and efficient in responding to changes in air demand. The required air demand is fulfilled through the inverter that constantly adjusts the speed of the electric motor. The real air flow and pressure values are constantly monitored through the electronic controller to guarantee the attainment of the pre-set values. The variable speed units guarantees more flexibility, lower energy consumption and less mechanical stress compared to the load/unload (on/off) version. The VSD unit setting can force the standby mode when the inverter has reached the lowest rotation speed.

FIX SPEED ROTARY SCREW  
COMPRESSOR TO 75% AT  
FULL LOAD.



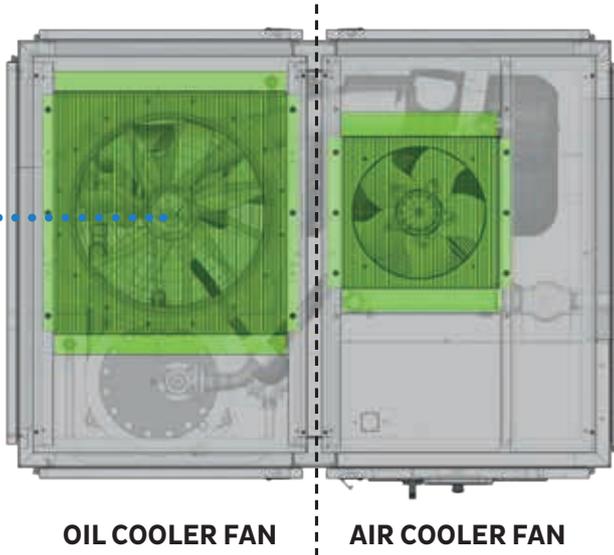
VARIABLE SPEED ROTARY SCREW  
COMPRESSOR TO 75% AT  
FULL LOAD.



## COOLING SYSTEM

The Variable Speed Drive (VSD) range has been developed and sized to work at 100% duty cycle even in the most severe conditions, respecting the energy saving concept due to an inverter controlled fan of the oil cooler.

All the components are fully enclosed and protected from contamination. The air cooling system has been sized to work at up to 50° C ambient temperature.



### Improved fluids temperature control

The coolers are separate and managed individually:

**air / air and air / oil**

**DCT - VSD:** The oil cooler fan is inverter controlled and is dynamically managing the temperature of the fluid. In this way, the oil temperature is controlled perfectly with relevant benefits in the oil circuit, and improving the energy savings as well. In addition, the separate air cooler management allows to optimize the air temperature at the compressors outlet thus avoiding condense formation and eliminating the damages caused by humidity. As consequence the dryer installed after the compressor will have also benefits on the lower operating load.

**All these features allow energy savings for all the system.**



## EXTENDED WARRANTY

Choose our SMART60 package to extend your warranty period up to 5 years!

This is strongly suitable for where compressed air is an important part of your Company's processes.

Our specific scheduled maintenance program - with dedicated spare parts kit- will ensure the best compressor performances and reliability.



## ORIGINAL KTC SPAREPARTS

All external panels of the compressor are easily removable allowing easy access to all the components requiring routine maintenance.

Choose only KTC's original spare parts to get the best performances for your compressor!





# WATER-OIL HEAT EXCHANGERS

## Hot water at no cost

Hot water up to 70°C for industrial use, sanitary use or for heating can be obtained by recovering the heat from the oil allowing savings of approximately 85% of the generated thermal energy.

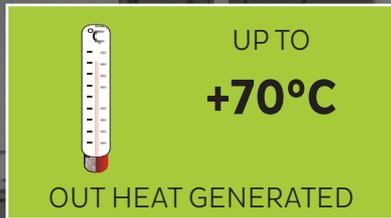
“The combination of the heat exchanger with the thermostatic valve and the dedicated pipes circuit can reduce further the costs for generating compressed air.”



### HEAT RECOVERY AN ALL-ROUND WIN



### PROCESS, HEATING AND SANITARY USE



A huge portion of the electrical drive energy of the electric motor is converted into heat. Thanks to our solution up to 85% of this energy is now available to be used. USE THE POTENTIAL TO YOUR ADVANTAGE!

Hot Water up to 70°C can be produced from reusable compressor heat via heat exchanger systems. Higher water temperature can be reached with a special device upon request.

## Technology and Eco-Sustainability is our Philosophy



Innovative solution to save money and supporting the environment

Code EAN	Model 	Power  kW	Pressure  bar	Air flow (ISO1217)  m³/min	Outlet dimension  DN	Noise L.  dB[A]	Dimensions  L x W x H (mm)	Weight  Kg Lbs
136141303	DCT-75	75	8	12,7	G2"	74	2095x1523x1956	2150
136142303			10	11,1				
136143303			13	9,5				
136151303	DCT-90	90	8	15,8	DN80	76	2500x1600x1700	2900
136152303			10	12,9				
136153303			13	11,6				
136221303	DCT-110	110	8	19,1	DN80	76	2980x1850x2020	3200
136222303			10	15,3				
136223303			13	13,3				
136231303	DCT-132	132	8	21,8	DN100	78	2980x1850x2020	3600
136232303			10	18,8				
136233303			13	15,5				
136251303	DCT-160	160	8	25,7	DN100	78	3280x1880x2120	3900
136252303			10	24,2				
136253303			13	20,3				
136271303	DCT-200	200	8	31,3	DN100	78	3450x2000x2150	5000
136272303			10	29,1				
136273303			13	22,8				
136241303	DCT-250	250	8	41,2	DN125	78	4000x2150x2250	7000
136242303			10	37,2				
136243303			13	31,5				
136301303	DCT-315	315	8	52,1	DN125	78	4000x2150x2250	7600
136302303			10	47,0				
136303303			13	38,3				

### DCT:

- Direct Drive
- Single Stage
- Fixed Speed
- IE3 Asynchronous Motor

1. The above technical parameters are based on ISO1217, suction temperature 20°C, relative humidity 60% and the ambient pressure 1013 mbar.
2. Different voltages are available upon request.
3. The above water-cooled units are available. If you need any, please contact the sales team.
4. If you need other power models, please contact the sales team.
5. KTC holds the right to modify the mechanical layout and the technical specifications.
6. All noise levels are intended in ducted conditions.

Code	Model	Power	Pressure	Air flow (ISO1217)	Outlet dimension	Noise L.	Dimensions	Weight
EAN		 kW	 bar	 m³/min	 DN	 dB[A]	 L x W x H (mm)	 Kg
135141302	DCT-75 VSD	75	8	3,60 ÷ 12,3	G2"	74	2095x1523x1956	2200
135142302			10	3,90 ÷ 11,2				
135143302			13	3,80 ÷ 9,10				
135151301	DCT-90 VSD	90	8	5,25 ÷ 16,10	DN80	76	2500x1600x1700	3000
135152301			10	4,16 ÷ 13,50				
135153301			13	4,06 ÷ 12,00				
135221301	DCT-110 VSD	110	8	6,47 ÷ 19,30	DN80	76	2980x1850x2020	3200
135222301			10	5,14 ÷ 15,70				
135223301			13	5,07 ÷ 13,80				
135231301	DCT-132 VSD	132	8	7,49 ÷ 22,40	DN100	78	2980x1850x2020	3600
135232301			10	6,40 ÷ 19,50				
135233301			13	5,07 ÷ 16,10				
135251301	DCT-160 VSD	160	8	9,06 ÷ 25,90	DN100	78	3280x1880x2120	3900
135252301			10	8,40 ÷ 24,00				
135253301			13	7,21 ÷ 20,90				
135271301	DCT-200 VSD	200	8	11,20 ÷ 32,12	DN100	78	3450x2000x2150	4900
135272301			10	10,30 ÷ 29,50				
135273301			13	8,15 ÷ 23,31				
135241301	DCT-250 VSD	250	8	14,60 ÷ 41,80	DN125	78	4000x2150x2250	7000
135242301			10	13,20 ÷ 37,70				
135243301			13	13,40 ÷ 32,50				
135301301	DCT-315 VSD	315	8	18,30 ÷ 52,30	DN125	78	4000x2150x2250	7800
135302301			10	16,50 ÷ 47,10				
135301301			13	13,80 ÷ 39,30				

**DCT VSD:**

- Direct Drive
- Single Stage
- Variable Speed
- Permanent magnet motor upon request

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Trykluftshop ApS - 9200 Aalborg SV - Denmark + 82 10 70 20

[www.trykluftshop.dk](http://www.trykluftshop.dk)