



editorial

Cubigel Compressors' New CEO

Dear Customer,

My name is Mark Johnston and I am the new CEO of Cubigel Compressors. Having been with the company since August I have to say the industry faces a great deal of challenges. The market remains difficult but our order book at least seems to be improving. Cubigel is now part of the AIAC Group a company with a number of businesses in the sector in the US, Mexico and Europe. My background is in manufacturing in having run businesses in the UK, USA, Mexico, France, Germany, Spain, Netherlands and Japan.

My mission is to make Cubigel Compressors the leading supplier into the commercial refrigeration market, to achieve this target we will continue with our efforts in improving productivity, by investing in new manufacturing assets, new products development, following the market trends in terms of reduction of energy consumption and the use of natural refrigerants, and the most important being customer oriented by improving our service and reducing our lead times.

Since September we have cleared all our back orders and established industry leading lead times.



I have also introduced a World Class Manufacturing Programme which will help to improve further our quality ratings. I hope you have all benefited from at least our shorter lead times and I look forward to working with you all over the coming few months.

Mark Johnston | CEO

mknews

Cubigel Compressors' Learning '09

Under the name "Learning 2009", we started to implement technical seminars in collaboration with our clients. The objective of this activity is to update and extend the knowledge of our Compressors' Ranges to our Clients and End Users.

During Febrava Exhibition in September, we had the opportunity to run our first Learning 2009 conference with the support of our client Simplex Comercial in Brazil. A group of 25 technicians and end users attended to the presentation, and covered topics related to our current product range, refrigeration world trends, high efficiency compressors, variable speed compressors and mobile applications (12V DC compressors).



learning
2009

One month later, we also carried out the same activity in Russia during Agroprodmash fair.

We are planning to continue with these seminars with the support of our clients during the rest of the year and getting ready for Learning 2010.

We expect to translate this activity into a differentiated technical assessment and a better use of our products, while meeting our customers' needs.

COnews

COMPANYnews

New Responsible for Customer Quality

We are very pleased to introduce Mr. Ramón Cortina Subirana as the new responsible for Customer Quality at Cubigel Compressors.

Mr. Cortina is Mechanical Engineer and has a long and excellent professional career into this company. He started in the organization in June of 1990 as Product Engineer at the acoustic laboratory working with acoustic circuit simulators. He also worked in an important project developing Rotary Compressors along with Mr. Daniel Audi, a legend in our company, who passed on all the knowledge and passion for the hermetic compressor.

In 2002 passed through different positions into the Quality Laboratory, first as responsible of the defective compressor's analysis, then auditing performance and life test for manufactured product.

In September 2007 assumed the responsibilities of Operative Quality, and then, became the responsible for Customers' Quality.



Ramón Cortina
Customer Quality

In October 2000, EC Regulation no. 2037/2000 was brought into force as the last step in eliminating ozone-depleting substances (ODSs) as per the Montreal Protocol.

Based on the agreements taken during the 19th Montreal Protocol meeting in September 2007, the phase out of the R22 was accelerated. The regulation stipulates that the use and sale of virgin hydro chlorofluorocarbons (HCFC's) will be banned according to following calendar:

For USA	2010 for new equipments 2020 for existent equipments
For Europe	2010 for new and existing equipments
For Countries referred at Montreal Protocol Article 5	Progressive reduction till 2040

R22 REPLACEMENT ALTERNATIVES

1. Drop-in refrigerants:

During last years it has been developed several refrigerant blends (HFC) as an easy alternative to the HCFC's (including R22). These drop-in gases can work with Mineral or Synthetic Oils allowing the use in existing equipments. The most known alternatives to the current R22 Cubigel Compressors' range are:

R417A	<ul style="list-style-type: none"> • For AC and HMBP appliances. Lower working pressures and lower cooling capacity. • In certain circumstances better COP. • Can be added to current R22 systems without previous cleaning.
R422A	<ul style="list-style-type: none"> • For LBP and MBP appliances. • In certain circumstances better cooling capacity and COP. • Can be added to current R22 systems without previous cleaning.

NOTE:
 1. To reach equivalent system performances, the main refrigeration system elements have to be reviewed: heat exchangers, expansion systems,...
 2. Cubigel Compressors has not approved all the drop-in gases then, we do not guarantee the reliability and performances of such drop in gases charged in our compressors (See point 2).

2. Alternative Cubigel Compressors existing compressors:

Cubigel Compressors already offers in its catalogue a complete alternative compressors range:

- HFC: R404A for LBP and HMBP applications and R407C for AC.
- HC: R290 for LBP and HMBP applications.

They perfectly cover the existing R22 models for all voltages and applications moreover, with higher efficiency levels if required.

tips

Capillary tubes

Capillary tube is one of the most commonly used expansion system in small commercial refrigeration appliances. It consists of a relatively long tube (1 to 5 m) of small cross section (0.6 to 2 mm of inner diameter) that reduces the pressure of the refrigerant because of the high friction of the flow with its walls. It is of low cost and trouble free. In spite of its name there is no physical capillary effect through it.

It is highly recommended providing heat exchange between the capillary tube and the suction tube, particularly with low temperature systems. This fact gives additional difficulties when preparing capillary tube computer models so, defining a capillary tube for an application is largely empirical. At Cubigel's web page there are tables that help selecting a capillary tube for starting laboratory tests aiming to its final specification.

An important characteristic of a capillary tube is that the pressure at its outlet cross section can not go beyond a value that depends on the refrigerant conditions at its inlet (pressure and temperature), the heat exchanged along it and the specific mass flow rate (mass flow rate per unit of cross section area). If the evaporating pressure is lower than the critical value there is a sudden pressure reduction at the evaporator inlet. This final pressure drop reduces with the specific mass flow rate and oppositely to the amount of heat exchange along the capillary.

In general, capillary tubes work under "critical" conditions (evaporating pressure below the critical value). In such a case, the evaporating temperature has no practical effect in the mass flow rate of the capillary. The mass flow rate is determined by tube dimensions (diameter, length and roughness), refrigerant conditions at capillary inlet (pressure and temperature) and amount of heat released along. With similar inlet conditions and similar evaporating temperature, non adiabatic capillary tubes, for the same mass flow rate, must be longer than those considering an adiabatic flow.

More information on capillary tubes and selection tables at Cubigel.com
<http://www.cubigel.com/java/X?cgi=cubigel.infotecnica.InformacionTecnicaArticulo2.pattern&seccion=informaciontecnica>