

K65



A high strength copper alloy fitting enabling simple, safe and economical installation of high pressure refrigeration applications up to 130 bar.

Conex | Bänninger

Conex Bänninger specialises in providing fittings, valves and accessories across the globe by offering innovative and versatile solutions. Since 1909, Conex Bänninger has produced over 22 billion fittings and valves and has built its reputation for quality European manufacturing, backed by first-class customer service and unrivalled expertise. Passionate about excellence, Conex Bänninger is a byword for quality in the domestic, commercial, industrial, shipbuilding, air conditioning and refrigeration markets worldwide. Conex Bänninger is an ISO 9001 quality assured company, which assures you the very best in quality.



K65

K65 fittings were developed in conjunction with Wieland in response to the use of CO₂ R-744 as an environmentally friendly (zero ODP and GWP of one) refrigerant for commercial refrigeration applications, in particular supermarket refrigeration systems. The use of CO₂ as a refrigerant led to high operating pressures, and therefore variations in the gauge of tube being specified. K65 simplifies the selection process, as the K65 alloy provides a mechanical strength high enough to withstand the huge pressure ratings required. K65 is a safe and economical solution for refrigeration systems with operating pressures of up to 130 bar.

wieland

The name Wieland has stood for quality for almost two centuries. Every individual employee of Wieland is committed to offering quality - closely guided by what you want! High levels of service and customer orientation are further defining features of our quality. For you, this means greater security more flexibility and an even more individual approach. Best quality. Better service.



K65

Features and Benefits

Operating pressure:

K65 fittings are UL 207 recognised and listed with a maximum operating pressure of 130 bar.

Easy to identify – even after installation:

K65 is readily identifiable and easy to distinguish from traditional copper due to its slightly magnetic property, the K65 mark and 130 bar markings.

Guarantee:

When professionally installed K65 fittings are covered by a twenty five year guarantee. For full terms and conditions go to www.conexbanninger.com

Range:

Wide range of fittings from 3/8" to 2 1/8".

Jointing:

K65 has excellent processing properties that are similar to those of copper. K65 tubes can be brazed to K65 fittings without any need for expensive or specialised equipment and skills required for TIG welding of stainless steel tubes.

Corrosion resistance:

K65 (EN CuFe2P CW107C, UNS C19400) is immune to stress corrosion cracking and exhibits a high resistance to natural atmospheric corrosion.

Certification:

K65 tubes are UL recognised components report reference SA44215. K65 fittings are UL 207 recognised and listed, refrigerant fitting report reference SA44668, approved use for field and factory installations.

Electrical continuity:

Maintains earth continuity without the need for additional earth continuity straps.

Lighter for easy handling:

The lower weight of the tubes results in a product that is easier to handle, for example, when mounting the tubes on ceilings.

Lower installed cost:

K65's high mechanical strength lower weight tubes and fittings when supported by traditional brazed jointing leads to lower installed cost and improved handling.

Quality:

Conex Bänninger is an ISO 9001 quality assured company, which assures you the very best in quality.

K65 system:

Conex Bänninger recommends the use of Wieland K65 tube with K65 fittings.

K65

K65 Technical Data

Applications:	Air conditioning and refrigeration in particular high pressure CO ₂ (R-744) Note: Not for use with Ammonia (R-717) nor Acetylene
Material:	Wieland K65, EN CuFe2P CW107C, UNS C19400
Tube compatibility:	K65 fittings are compatible with tubes manufactured from copper iron alloy UNS C19400 CuFe2P with the external dimensions and tolerances conforming to EN 12449, EN 12735-1 and ASTM B280
Maximum operating pressure:	130 bar / 13000 kPa / 1885 psi at 150°C Note: Other pressure ranges for tubes are available
Burst pressure >3 x maximum operating and abnormal pressure EN 378-2:	390 bar / 39 MPa / 5,656 psi
UL 207 recognised and listed continuous operating temperature:	121°C
Maximum operating temperature:	-196°C to 150°C





Brazing

K65 has excellent processing properties which are similar to those of pure copper. K65 tubes may be joined with K65 fittings through brazing.

Brazed joints should only be made by trained and experienced staff, e.g. a certified installer who holds a current certificate. Typical requirements are set out in EN 13585:2012 Brazing - Qualification test of brazers and brazing operators.

Silver-containing brazing alloys with a silver content of min. 2 % are recommended. For the brazing of brass products to K65 it is recommended that Ag 145 / Ag 155 / Ag 156 and AG 244 or similar brazing alloy is used. Usually, no flux is necessary for the brazing of K65 tube and K65 fittings when using silver-containing CuP brazing alloys. For the joining of copper alloys such as brass and red brass the additional use of fluxes, e.g. FH 10 according to EN 1045, is recommended.

This ensures optimum filling of the capillary gap. Residual flux must be removed after brazing.

The Range

K5001

Street Elbow 90°



From: 3/8"
To: 2 1/8"

K5002

Elbow 90°



From: 3/8"
To: 2 1/8"

K5040

Street Elbow 45°



From: 3/8"
To: 2 1/8"

K5041

Elbow 45°



From: 3/8"
To: 2 1/8"

K5130

Tee Equal



From: 3/8"
To: 2 1/8"

K5130

Tee Reduced End and Branch



From: 1/2" x 3/8" x 3/8"
To: 1 1/8" x 7/8" x 1/2"

K5130

Tee Reduced Branch



From: 1/2" x 1/2" x 3/8"
To: 2 1/8" x 2 1/8" x 1 5/8"

K5240

Reducing Coupler



From: 1/2" x 3/8"
To: 2 1/8" x 1 5/8"

K5243

Fitting Reducer



From: 1/2" x 3/8"
To: 2 1/8" x 1 5/8"

K5243mFitting Reducer to Metric
(Female Inch x Male Metric)

From: 1/2" x 12
To: 1 5/8" x 42

K5270

Coupler



From: 3/8"
To: 2 1/8"

K5301

End Cap



From: 3/8"
To: 2 1/8"

Standards, Specifications and Certifications

- VdTÜV Material Sheet 567, Seamless drawn tubes in CuFe2P (CW107C) Wieland K65.
- EN 12449 Seamless, round tubes for general purposes.
- EN 12735-1 Copper and copper alloys, Seamless, round copper tubes for air conditioning and refrigeration.
- Wieland R-H-1600 Tubes for high pressure systems 130 bar (K65).
- SO 5149-2, EN378-2 5.3.2.2.3 Strength pressure test, compliant.
- EN 14276-2 - 8.9.4.1.2 Type burst proof test, compliant.
- K65 tubes are UL recognised components report reference SA44215.
- K65 fittings are UL 207 recognised and listed, refrigerant fitting report reference SA44668, approved use for field and factory installations.





Conex | Bänninger



Conex Universal Limited: Global House, 95 Vantage Point, The Pensnett Estate, Kingswinford, West Midlands DY6 7FT, UNITED KINGDOM.

Tel: +44 (0)121 557 2831, Fax: +44 (0)121 557 0185

Email: salesuk@ibpgroup.com, Website: www.conexbanninger.com

Wieland-Werke AG: Graf-Arco-Str. 36, 89079 Ulm, Germany

Tel: +49 731 944 0, Fax: +49 731 944 2772

Email: info@wieland.com, Website: www.wieland.com, www.wieland-industrialtubes.com

The content of this publication is for general information only. It is the user's responsibility to determine suitability of any product, product data and specifications, for the purpose intended and reference should be made to our Technical Department if clarification is required – technical@ibpgroup.com. All products must be installed in accordance with our installation instructions. In the interests of technical development we reserve the right to change specification, design and materials without notice.

Conex Bänninger products are approved by numerous Standards Authorities and Certification Bodies. This is a representation of the full range from Conex Universal Ltd. Patents and trademarks are registered in numerous countries. Details on registered and pending patents protecting our products is available at public patent registers or can be requested from legal@ibpgroup.com. All documents, images and technical data are © of Conex Universal Limited. E&OA.

K65 is a registered trademark of Wieland-Werke AG. Wieland trade marks are registered in numerous countries.

Note: For the latest updates and information about K65 please visit: www.conexbanninger.com
www.wieland.com www.k65-system.com