

K65[®]

The tube system for high-pressure applications



SIMPLE.
NATURAL.
COOL.

K65[®]-System



The tube system for high-pressure applications

The K65 tube system has been developed in response to the use of CO₂ R744 as an environmentally friendly refrigerant in the commercial field, especially that of 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 Wieland K65 alloy provides the mechanical strength high enough to withstand the huge pressure ratings required. K65 has already been used with success in electrical engineering and the automotive industry, and is a safe and economical installation in refrigeration systems with high operating pressures.

Applications

High-pressure tube systems, particularly when CO₂ is used as a refrigerant. K65 can be used in other fluids applications in consultation with the manufacturer.

Proven joining technique

K65 has excellent processing properties that are similar to those of copper. Wieland K65 tubes can be brazed to Conex | Bänninger K65 fittings without any need for expensive or special equipment.

Safety ensured by two well-known manufacturers

K65 tubes by Wieland and K65 fittings by IBP Conex | Bänninger fall under a joint system guarantee that includes CO₂ applications for the items listed in the tables (page 5).

Easy to identify – even after installation

All K65 system components are marked with the manufacturers own mark, as well as the K65 mark and the pressure rating making them easy to identify at all times. In addition, the material is slightly magnetic and can be easily distinguished from copper by means of a strong magnet – a helpful and practical advantage.

Economical

Having such a high mechanical strength, the K65 tube can be made with comparatively thin walls allowing for an economical utilization of material, while still meeting high technical demands.

Lighter for easy handling

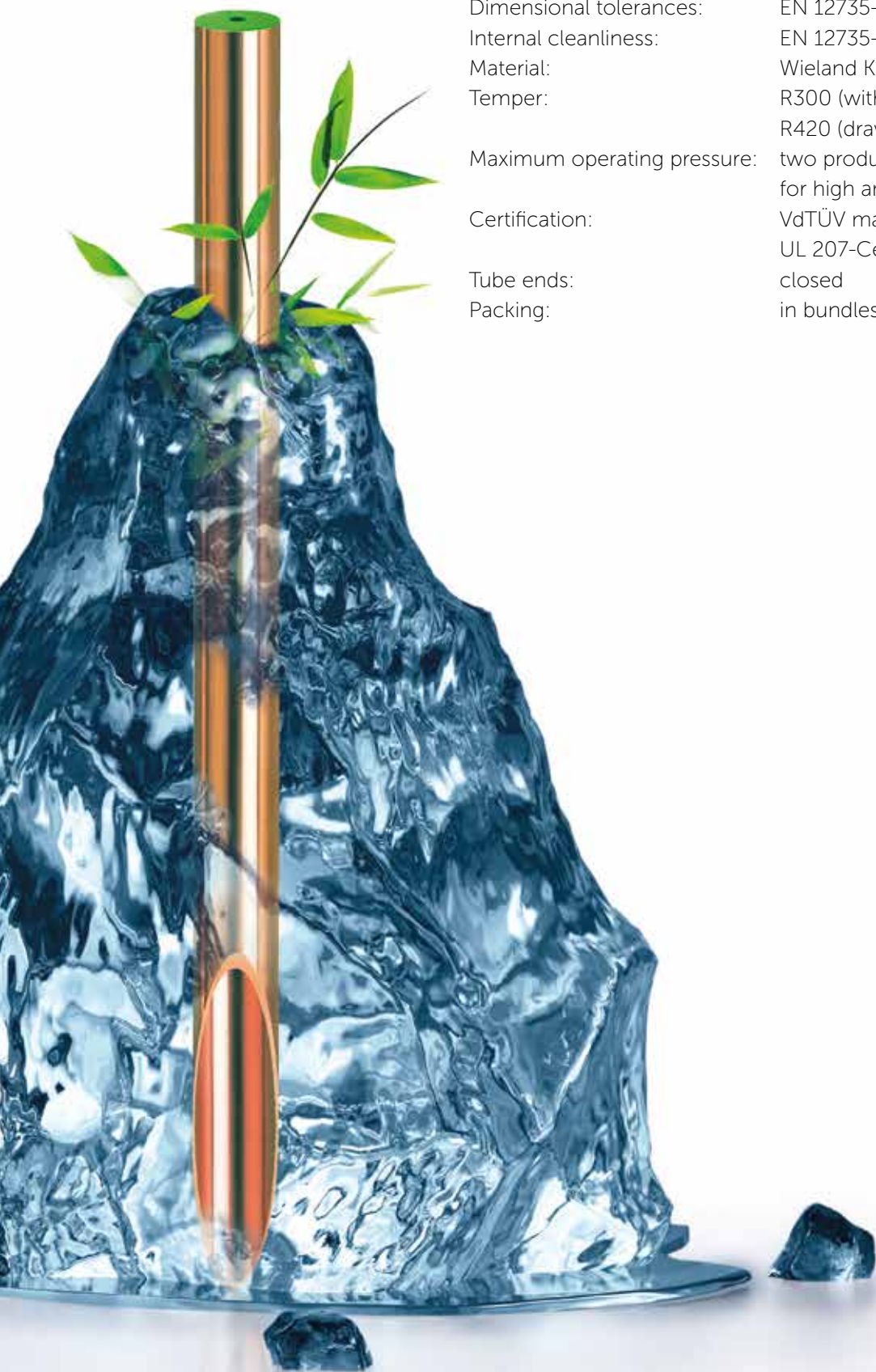
The thinner walls of the tubes not only saves on material, but results in a lighter weight product that is easier to handle, for example, when mounting the tubes on ceilings.



K65[®]

K65 Tubes

Identification:	Wieland K65
Dimensional tolerances:	EN 12735-1
Internal cleanliness:	EN 12735-1
Material:	Wieland K65
Temper:	R300 (with heat treatment) R420 (drawn)
Maximum operating pressure:	two product ranges available from stock for high and medium pressure, see tables
Certification:	VdTÜV material data sheet 567 UL 207-Certification on request
Tube ends:	closed
Packing:	in bundles



According to the requirements of the EN 14276:2020-Standard, the following dimensions are available ex stock*:

Wieland K65 tubes for up to 80 bar (at 150 °C service temperature)**, acc. to EN 14276:2020, temper R300								
Wieland material number	Dimensions		Wall thickness mm	Packaging unit: bundle		Packaging unit: ballot		Minimum bending radius*** mm
	mm	inch		Number of tubes per 5 m	Metres per bundle	Bundles per ballot	Metres per ballot	
433015878	15.87	5/8"	0.63	10	50	20	1,000	63
433019058	19.05	3/4"	0.76	10	50	20	1,000	75
433022238	22.23	7/8"	0.89	10	50	10	500	98
433028578	28.57	1 1/8"	1.2	5	25	20	500	102
433034928	34.92	1 3/8"	1.47	3	15	10	150	140
433041278	41.27	1 5/8"	1.74	3	15	10	150	140
433053978	53.97	2 1/8"	2.27	1	5	–	–	not defined

Wieland K65 tubes for up to 120 bar (at 150 °C service temperature)**, acc. to EN 14276:2020, temper R300								
Wieland material number	Dimensions		Wall thickness mm	Packaging unit: bundle		Packaging unit: ballot		Minimum bending radius*** mm
	mm	inch		Number of tubes per 5 m	Metres per bundle	Bundles per ballot	Metres per ballot	
433009522	9.52	3/8"	0.56	20	100	20	2,000	43
433012702	12.70	1/2"	0.75	20	100	20	2,000	52
433015872	15.87	5/8"	0.93	10	50	20	1,000	63
433019052	19.05	3/4"	1.19	10	50	20	1,000	75
433022232	22.23	7/8"	1.38	10	50	10	500	98
433028572	28.57	1 1/8"	1.78	5	25	20	500	102
433034922	34.92	1 3/8"	2.17	3	15	10	150	140
433041272	41.27	1 5/8"	2.56	3	15	10	150	140
433053972	53.97	2 1/8"	3.35	1	5	–	–	not defined

* Other dimensions are available on request.

** K65 tubes are suitable for temperatures down to –196 °C.

*** The dimensions mentioned here can be cold bent with suitable bending equipment and bending segments that are precisely tailored to the outside diameter. Hot bending is not recommended. Industrial bending machines also enable tighter bending radii. Bending of hairpins is possible on suitable bending equipment.






Processing information



The processing instructions for the installation of copper tubes according to EN 378 common for refrigeration are to be followed. Please refer to the K65 installation instructions. The safety precautions for high-pressure systems, particularly for pressure testing and commissioning have to be observed!


K65 fittings



Identification: >B< K65
 Maximum operating pressure: 130 bar / 1885 psi

The following K65-fitting designs are available:

Type designation	Detailed designation	Size	Item No.
K65 Bend 90° i/a 	K5001 i/a	3/8"	K5001003000000
	K5001 i/a	1/2"	K5001004000000
	K5001 i/a	5/8"	K5001005000000
	K5001 i/a	3/4"	K5001006000000
	K5001 i/a	7/8"	K5001007000000
	K5001 i/a	1 1/8"	K5001009000000
	K5001 i/a	1 1/3"	K5001011000000
	K5001 i/a	1 5/8"	K5001013000000
	K5001 i/a	2 1/8"	K5001017000000
K65 Bend 90° i/i 	K5002 i/i	3/8"	K5002003000000
	K5002 i/i	1/2"	K5002004000000
	K5002 i/i	5/8"	K5002005000000
	K5002 i/i	3/4"	K5002006000000
	K5002 i/i	7/8"	K5002007000000
	K5002 i/i	1 1/8"	K5002009000000
	K5002 i/i	1 3/8"	K5002011000000
	K5002 i/i	1 5/8"	K5002013000000
	K5002 i/i	2 1/8"	K5002017000000
K65 Bend 45° i/a 	K5040 i/a	3/4"	K5040006000000
	K5040 i/a	7/8"	K5040007000000
	K5040 i/a	1 1/8"	K5040009000000
	K5040 i/a	1 3/8"	K5040011000000
	K5040 i/a	1 5/8"	K5040013000000
K65 Bend 45° i/i 	K5041 i/i	3/8"	K5041003000000
	K5041 i/i	1/2"	K5041004000000
	K5041 i/i	5/8"	K5041005000000
	K5041 i/i	3/4"	K5041006000000
	K5041 i/i	7/8"	K5041007000000
	K5041 i/i	1 1/8"	K5041009000000
	K5041 i/i	1 3/8"	K5041011000000
	K5041 i/i	1 5/8"	K5041013000000
	K5041 i/i	2 1/8"	K5041017000000
K65 Tee 	K5130	3/8"	K5130003003003
	K5130	1/2" x 3/8" x 3/8"	K5130004003003
	K5130	1/2" x 1/2" x 3/8"	K5130004004003
	K5130	1/2"	K5130004004004
	K5130	5/8" x 1/2" x 1/2"	K5130005004004
	K5130	5/8" x 5/8" x 3/8"	K5130005005003
	K5130	5/8" x 5/8" x 1/2"	K5130005005004

Type designation	Detailed designation	Size	Item No.
K65 Tee 	K5130	5/8"	K5130005005005
	K5130	3/4" x 3/4" x 1/2"	K5130006006004
	K5130	3/4" x 3/4" x 5/8"	K5130006006005
	K5130	3/4"	K5130006006006
	K5130	7/8" x 7/8" x 1/2"	K5130007007004
	K5130	7/8" x 7/8" x 5/8"	K5130007007005
	K5130	7/8" x 7/8" x 3/4"	K5130007007006
	K5130	7/8"	K5130007007007
	K5130	1 1/8" x 7/8" x 1/2"	K5130009007004
	K5130	1 1/8" x 1 1/8" x 3/4"	K5130009009006
	K5130	1 1/8" x 1 1/8" x 7/8"	K5130009009007
	K5130	1 1/8"	K5130009009009
	K5130	1 3/8" x 1 3/8" x 3/4"	K5130011011006
	K5130	1 3/8" x 1 3/8" x 7/8"	K5130011011007
	K5130	1 3/8" x 1 3/8" x 1 1/8"	K5130011011009
	K5130	1 3/8"	K5130011011011
	K5130	1 5/8" x 1 5/8" x 3/4"	K5130013013006
K5130	1 5/8" x 1 5/8" x 7/8"	K5130013013007	
K5130	1 5/8" x 1 5/8" x 1 1/8"	K5130013013009	
K5130	1 5/8" x 1 5/8" x 1 3/8"	K5130013013011	
K5130	1 5/8"	K5130013013013	
K5130	2 1/8" x 2 1/8" x 1 5/8"	K5130017017013	
K5130	2 1/8" x 2 1/8" x 2 1/8"	K5130017017017	
K65 Red Coupler 	K5240	1/2" x 3/8"	K5240004003000
	K5240	5/8" x 1/2"	K5240005004000
	K5240	3/4" x 5/8"	K5240006005000
	K5240	7/8" x 3/4"	K5240007006000
	K5240	1 1/8" x 1/2"	K5240009004000
	K5240	1 1/8" x 7/8"	K5240009007000
	K5240	1 3/8" x 1/2"	K5240011004000
	K5240	1 3/8" x 5/8"	K5240011005000
	K5240	1 3/8" x 3/4"	K5240011006000
	K5240	1.3/8" x 7/8"	K5240011007000
	K5240	1 3/8" x 1 1/8"	K5240011009000
	K5240	1 5/8" x 3/4"	K5240013006000
	K5240	1 5/8" x 7/8"	K5240013007000
	K5240	1 5/8" x 1 1/8"	K5240013009000
	K5240	1 5/8" x 1 3/8"	K5240013011000
	K5240	2 1/8" x 1 5/8"	K5240017013000

Type designation	Detailed designation	Size	Item No.
	K5243 o-i	1/2" x 3/8"	K5243004003000
	K5243 I/M	1/2" x 12 mm	K5243004012000
	K5243 o-i	5/8" x 3/8"	K5243005003000
	K5243 o-i	5/8" x 1/2"	K5243005004000
	K5243 I/M	5/8" x 15 mm	K5243005015000
	K5243 o-i	3/4" x 3/8"	K5243006003000
	K5243 o-i	3/4" x 1/2"	K5243006004000
	K5243 o-i	3/4" x 5/8"	K5243006005000
	K5243 I/M	3/4" x 18 mm	K5243006018000
	K5243 o-i	7/8" x 3/8"	K5243007003000
	K5243 o-i	7/8" x 1/2"	K5243007004000
	K5243 o-i	7/8" x 5/8"	K5243007005000
	K5243 o-i	7/8" x 3/4"	K5243007006000
	K5243 I/M	7/8" x 22 mm	K5243007022000
	K5243 o-i	1 1/8" x 1/2"	K5243009004000
	K5243 o-i	1 1/8" x 5/8"	K5243009005000
	K5243 o-i	1 1/8" x 3/4"	K5243009006000
	K5243 o-i	1 1/8" x 7/8"	K5243009007000
	K5243 I/M	1 1/8" x 28 mm	K5243009028000
	K5243 o-i	1 3/8" x 1 1/8"	K5243011009000
	K5243 I/M	1 3/8" x 35 mm	K5243011035000
	K5243 o-i	1 5/8" x 7/8"	K5243013007000
	K5243 o-i	1 5/8" x 1 3/8"	K5243013011000
	K5243 I/M	1 5/8" x 42 mm	K5243013042000
K5243 o-i	2 1/8" x 1 5/8"	K5243017013000	

Type designation	Detailed designation	Size	Item No.
	K5270	3/8"	K5270003000000
	K5270	1/2"	K5270004000000
	K5270	5/8"	K5270005000000
	K5270	3/4"	K5270006000000
	K5270	7/8"	K5270007000000
	K5270	1 1/8"	K5270009000000
	K5270	1 3/8"	K5270011000000
	K5270	1 5/8"	K5270013000000
	K5270	2 1/8"	K5270017000000
		K5301	3/8"
K5301		1/2"	K5301004000000
K5301		5/8"	K5301005000000
K5301		3/4"	K5301006000000
K5301		7/8"	K5301007000000
K5301		1 1/8"	K5301009000000
K5301		1 3/8"	K5301011000000
K5301		1 5/8"	K5301013000000
K5301		2 1/8"	K5301017000000



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