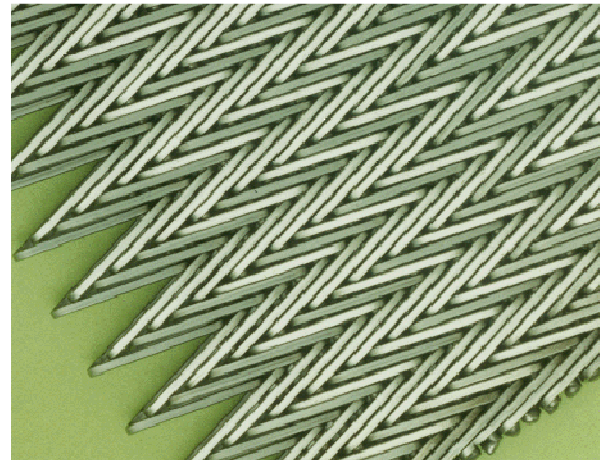


BS-KK: Wide Spiral belt with welded edges



BS-KK-MV Multiple woven wide spiral belt with welded edges

BS wide spiral conveyor belts have been successfully used in e.g. the food industry, the steel industry, the chemical industry and the glass industry for many years. Its simple design, the big range of dimensions (wire diameters and pitches) and the various ranges of belt materials are the main reason for its success.

The **BS** wide spiral conveyor belt is a balanced woven belt with left and right hand wound spirals, connected by crimped cross wires. At the sides of the belt the cross wire is welded (**BS-KK**) to the spiral wire.

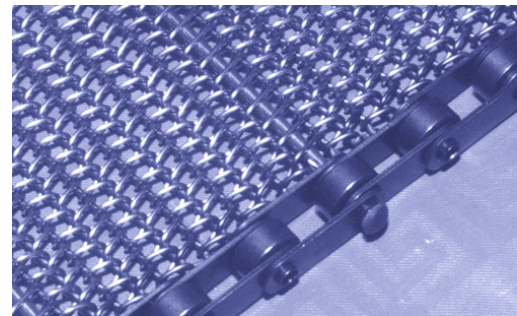
The opening ('drain') of the **BS** wide spiral belt is determined by the pitch of the spirals and the pitch of the cross rods. The range of **BS** belts starts with a pitch of the spirals and pitch of the cross rods of 4 mm and goes up to pitches of 50 mm. The wire diameters can be chosen from 0,8 mm up to 5 mm but are in a way determined by the belt pitches too. Normally the **BS** belt has round wires, but can be executed with flattened wire as well.

BS wide spiral belts can be used in a temperature range of -50° up to $+1100^{\circ}$ C, and can be delivered in every length and belt width up to 4 metres or more.

For a very tight mesh the belt can be multiple woven or compound balanced. In this belt **BS-KK-MV** the spirals are nested and one spiral has 3 or 4 or 5 cross rods instead of 2.

BS wide spiral belts can be executed with chains at both sides, **BS-HK** (with hollow pin chains) or **BS-VK** (with solid pin chains). The connection between the chains and the belt is mostly by means of extra cross rods going through the (spiral of the) belt and trough the chains.

The spiral part of the belt will carry the product. The chains will drive and guide the spiral part. Driving this belt is easy by means of chain sprockets.



BS-HK: Spiral belt with side chain

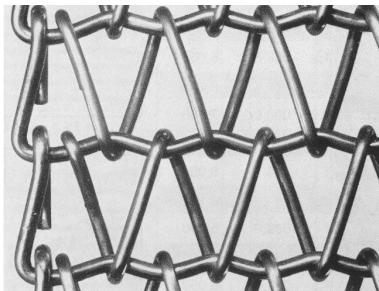


BS-KK wide spiral belts normally have to be driven, tensioned and guided by means of plain rollers. In many cases the position of the belt has to be controlled and one or more rollers are executed as dynamic steering rollers. Belt speeds from 0,5 m/min up to 60 m/min are possible.

Driving the **BS-KK** with sprockets is possible in case of light products on small conveyor belts and a normal belt speed.

BS-KK wide spiral belts can on occasion be equipped with flights.

BS-KK wide spiral belts can be easily made endless by placing a crimped cross wire between a left hand wound and a right hand wound spiral and welding this crimped wire ends together with the spiral wire ends.



Some wide spiral belts **BS-ZK** can be made with selfedges or so called S-Hooks instead of welded edges.

BS-KK wide spiral belts are used in:

- | | | |
|----------------|----------------------|--------------------|
| -Baking ovens | -Decoration ovens | -Cooling conveyors |
| -Biscuit ovens | -Hardening ovens | -Drying conveyors |
| -Glass ovens | -Take over conveyors | -Washing conveyors |

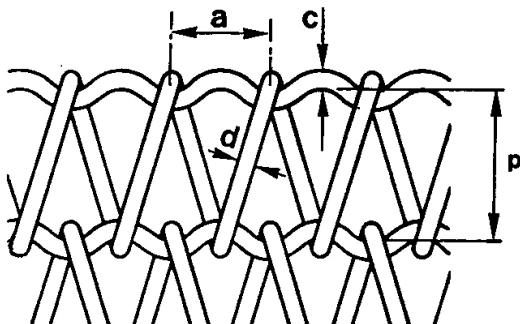


Belt Typ	Edge Typ	Spiral Pitch	Cross Wire Pitch	Diam. Spiral Wire		Diam. Cross Wire	
				p: (mm)	d min.: d max: (mm)	c min (mm)	c max: (mm)
BS - KK	-	4	4	0,9	1,2	--	1,2 - 1,6
BS - KK	-	5	6	0,9	1,6	--	1,2 - 1,6
BS - KK	-	5	6	0,9	1,6	--	1,2 - 1,6
BS - KK	-	5	7	0,9	1,6	--	1,2 - 1,6
BS - KK	-	5,08	6,35	0,9	0,9	--	1,2
BS - KK	-	6	6	0,9	1,6	--	1,2 - 1,6
BS - KK	-	6	8	0,9	1,6	--	1,2 - 1,6
BS - KK	-	6	10	0,9	1,6	--	1,2 - 1,6
BS - KK	-	8	12	1,2	2,0	--	1,2 - 2,5
BS - KK	-	8	13	1,2	2,0	--	1,2 - 2,5
BS - KK	-	8	15	1,2	2,0	--	1,2 - 2,5
BS - KK	-	11	15	1,2	2,0	--	1,2 - 2,5
BS - KK	-	11	20	1,6	3,0	--	1,6 - 3,0
BS - KK	-	11	25	1,6	3,0	--	1,6 - 3,0
BS - KK	-	11	27	1,6	3,0	--	1,6 - 3,0
BS - KK	-	15	20	1,6	3,0	--	1,6 - 3,0
BS - KK	-	15	25	1,6	3,0	--	1,6 - 3,0
BS - KK	-	22	23	1,6	3,0	--	1,6 - 3,0
BS - KK	-	22	33	1,6	3,0	--	2,0 - 4,0

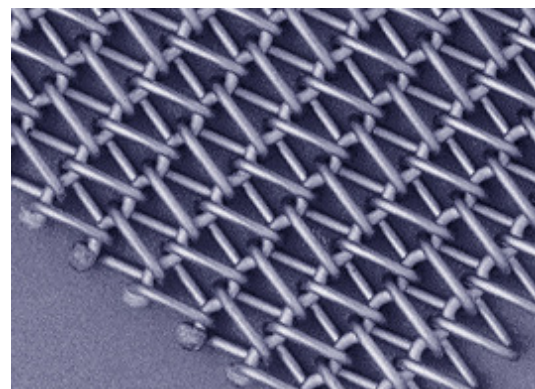
Belt Materials:

Steel, galvanized steel, Stainless steel AISI 304 and AISI 316, heat resistant steel, or other materials

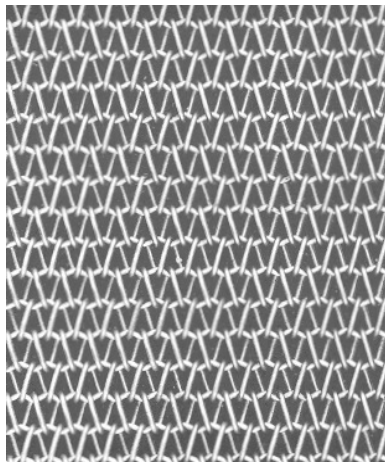
The data mentioned above are a broad selection of the many possible varieties. Please contact our specialists for deviating sizes, designs and materials to enable us to make an appropriate design for you



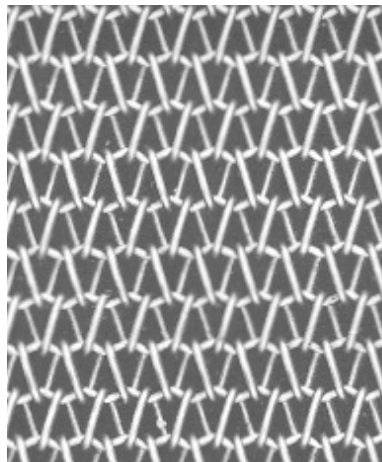
Principle sketch for belt dimensions



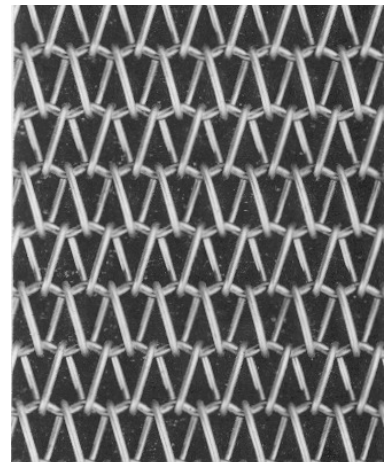
BS-KK example



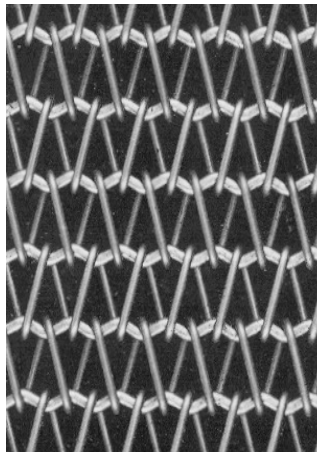
BS-KK: 4-4 / 1-1



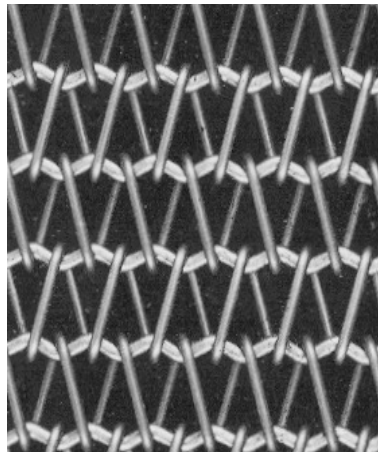
BS-KK: 6-6 / 1,4-1,6



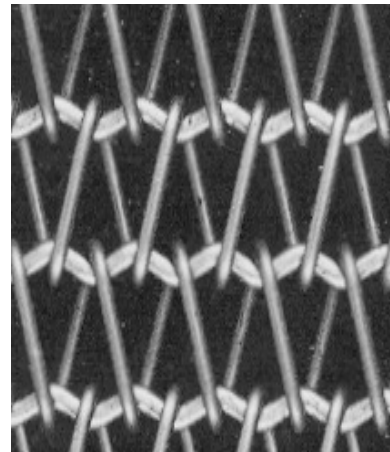
BS-KK 6-8 / 1,4-1,6



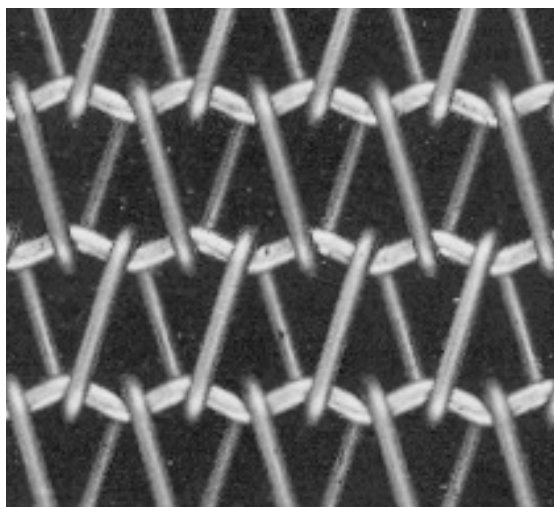
BS-KK: 6-10 / 1,6-1,6



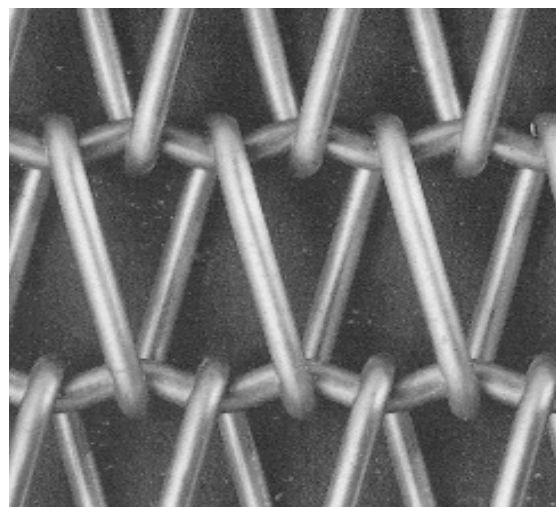
BS-KK: 8-12 / 1,6-2



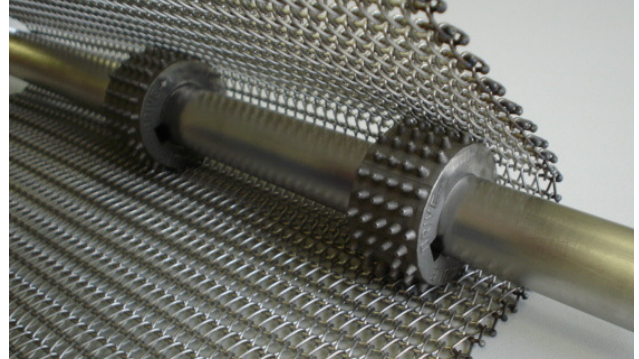
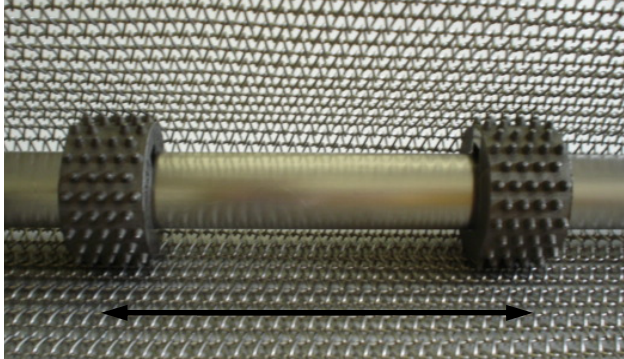
BS-KK 11-20 / 2-2,5



BS-KK: 15-20 / 2,5-3



BS-KK: 22-33 / 3-4



BS-KK 5 – 6,4/0,9 – 1,2 : Adjusting the sprockets to the belt

BS-KK 5 – 6,4/0,9 – 1,2 : Sprockets in line by keyway

Normally the **BS** wide spiral belt is driven by a plain roller. For light conveying the BS 5-6,4/0,9-1,2 has the possibility to be driven by little pin rollers. These rollers normally have a diameter of ca 50 mm outside and fit exactly in the belt. The distance of the rollers on the shaft is recommended at approx. 100 mm. The exact mounting distance on the shaft between the rollers will always be determined by the belt itself because it fits tight but may not be forced. Not only for new belts in new machinery (mounting the first time) but especially also for spare belts on existing pin rollers.

Although the tolerances in the belt are very small every belt is unique. In the length of the belt (pitch of 6,4 mm) the pin rollers have to be mounted 'in line' and the little number of teeth will handle with these tolerances. In the width of the belt (pitch of 5 mm) the great number of windings (a belt of e.g. 1000 mm has already 200 windings) it is necessary to adjust the pin rollers exactly to the belt by moving the rollers a little to the left or right (see photo) on the shaft to fit (again) in to the (new) belt.

For wide or heavy loaded **BS** spiral belts who have to be positively driven it is recommended to use special side chains. These side chains (in many sizes) give the belt a better control, more stability and a better life time. These side chains can be driven by standard (DIN/ASA) sprockets. For the execution of these belts see page 2.1