

Choice of material of construction

When selecting the material to be used, important factors to be considered are – Corrosion, temperature and stability. Some commonly used materials are listed in the table :

Material Designation	Werkstoff Nr.	Composition – Elements in % of weight						Max. operating temperature °C
		C	Si	Mn	Cr	Mo	Ni	
Spring Steel		0.5-0.6	0.15-0.30	0.60-0.9	–	–	–	550
AISI-430	1.4016	≤0.12	≤1.00	≤1.00	14.00-18.00	–	–	700
AISI-304	1.4301	≤0.08	≤1.00	≤2.00	18.00-20.00	–	8.00-12.00	800
AISI-304L	1.4306	≤0.03	≤1.00	≤2.00	18.00-20.00	–	8.00-12.00	800
AISI-316	1.4401	≤0.08	≤1.00	≤2.00	16.00-18.00	2.00-3.00	10.00-14.00	850
AISI-316L	1.4404	≤0.03	≤1.00	≤2.00	16.00-18.00	2.00-3.00	10.00-14.00	850
AISI-310	–	≤0.25	≤1.50	≤2.00	24.00-26.00	–	19.00-22.00	1100
AISI-314	1.4841	≤0.25	1.5-3.00	≤2.00	23.00-26.00	–	19.00-22.00	1150
AISI-330	1.4864	≤0.15	≤1.50	≤2.00	14.00-17.00	–	33.00-37.00	1150
Ni Cr 80-20	2.4869	≤0.15	≤1.50	≤1.50	18.00-21.00	–	77.00-79.00	1150

Temperature strength factor : Allowable working tension for different materials is greatly reduced at elevated temperatures. Approximate strength factor may be obtained from the following table.

Material	Temperature–Strength factors at °C									
	400	500	600	700	800	900	1000	1050	1100	1150
Spring Steel	1.4	3.5	12.0	–	–	–	–	–	–	–
AISI-430	1.1	2.0	4.8	10.5	–	–	–	-	–	–
AISI-304	1.0	1.3	1.7	3.6	9.8	25.0	–	–	–	–
AISI-316	1.0	1.2	1.4	2.0	4.9	13.0	–	–	–	–
AISI-310	1.0	1.1	1.4	2.2	4.2	6.5	15.0	20.0	28.0	–
AISI-314	1.0	1.1	1.3	1.9	3.3	6.0	13.0	15.0	20.0	25.0
AISI-330	1.0	1.1	1.3	1.9	3.3	5.0	10.0	14.0	20.0	25.0
Ni Cr 80-20	1.0	1.1	1.4	2.2	4.5	7.5	13.0	15.0	19.0	24.0

BAR SCREENS

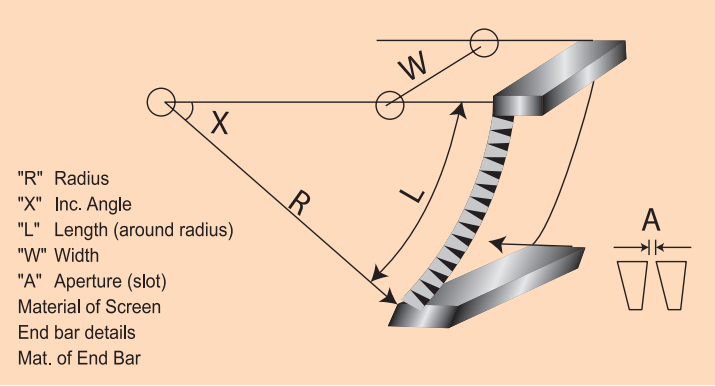
Continental manufactures Wedge Wire Screens to suit a wide variety of applications such as Sugar, Coal, Mining & Quarrying, Mineral Processing, Cement etc. The screens are made of the finest quality wedge wire in various grades of stainless steel.

LOOPED WIRE SCREENS

Extremely effective for static separation and dewatering. The wedge screens consist of conical section wire arranged in Rows with loops, which bind them on round cross bar. The opening between the wires form a conical slit for free and easy separation. Due to this special wedge profile clogging is prevented.

Type : Fine & Wide Slit Screens
Profile : 22; 28 & 34
Cross Rod : Dia 7.6 mm, 10 mm, 12 mm etc.
Material : Stainless Steel AISI-304 & AISI-316 with end bars of carbon steel or AISI-304.

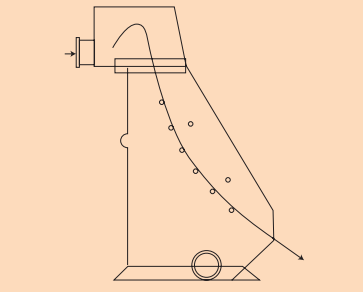
Slit Width : 0.2 mm and above.



WELDED WEDGE WIRE SCREENS

Consists of conical section wires resistance welded on to special cross bars. This provides a straight and continuous, uninterrupted slots for free and easy flow. The feed is evenly distributed over the entire screen area, resulting in higher open area and increased life.

Type : Fine slit screens
Profile : 22; 28
Cross Bar : 6.5 etc.
Material : Stainless steel AISI-304, AISI-316. End bars of carbon steel or AISI-304. Other materials available on request.



Wedge Bar Screen for sugar

CONTINENTAL PROFILES LTD.



Works :
Plot No. : 10, Sector -6,
Mathura Road, Faridabad,
Haryana (India)
Phone: 91-129-5241040; 5241015; 5247515
Fax : 91-129-5242126
E-mail: conprofiles@vsnl.net

Office :
302, Mansarovar Building,
90, Nehru Place,
New Delhi - 110 019 (India)
Ph. : 91-11-6431748; 6288290
Fax : 91-11-6432749
www.continentalprofiles.com

Wedge Wire Screens & Bars

CONTINENTAL PROFILES

METAL CONVEYOR BELTS

METAL CONVEYOR BELTS are used now a days in almost all branches of Industries. Suitable Metal Belts for applications at temperatures between minus 200°C and plus 1200°C are available. Some of the applications are :

FOOD PROCESSING : Biscuit Baking, Candy Cooling, Vegetable Washing, Dewatering and Conveying.

GLASS AND CERAMICS : Annealing, Decorating, Firing, Curing Fibre Glass and Conveying.

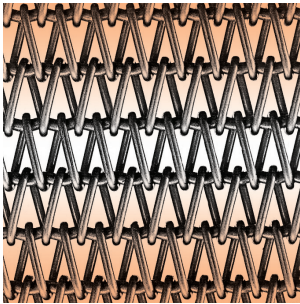
METAL WORKING : Sintering, Copper Brazing, Bright annealing, Silver Soldering and Conveying

PROCESSING : Textile/Coal/Printed Circuits Drying, Rayon Mat Forming, Sterlising, cooling Rubber Sheets, Plywood Processing and Conveying.

Some common types of Metal Belts currently manufactured by CONTINENTAL PROFILES LIMITED are as listed below:

BALANCED BELTING : Balanced Construction is made by immediately following a right-hand wound spiral with a left-hand wound spiral and joining them with a pre-crimped connector wire. The primary purpose of this construction is to eliminate all tendency of the belt to creep to either side on the drive pulley.

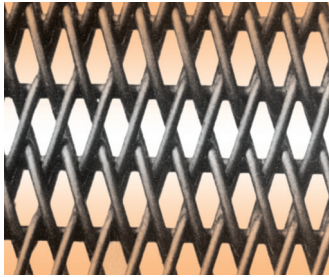
MESH DESIGNATION	PITCH IN MM		WIRE DIA IN MM	
	SPIRAL	CROSS WIRE	CROSS WIRE	SPIRAL
B 25.0-37.0-3.2-2.0	25.0	37.0	3.2	2.0
B 16.6-18.0-3.2	16.6	18.0	3.2	3.2
B 12.5-17.0-3.2	12.5	17.0	3.2	3.2
B 12.5-15.0-3.2-2.6	12.5	15.0	3.2	2.6
B 12.5-15.0-2.6	12.5	15.0	2.6	2.6
B 12.5-15.0-2.6-2.0	12.5	15.0	2.6	2.0
B 10.0-10.0-2.6	10.0	10.0	2.6	2.6
B 8.4-15.4-2.6	8.4	15.0	2.6	2.6
B 8.4-11.0-2.0-1.6	8.4	11.0	2.0	1.6
B 8.4-11.0-1.6	8.4	11.0	1.6	1.6
B 8.4-10.0-1.6-1.2	8.4	10.0	1.6	1.2
B 8.4-11.0-1.6-1.0	8.4	11.0	1.6	1.0
B 7.2-8.0-2.0-1.6	7.2	8.0	2.0	1.6
B 7.2-8.2-1.2	7.2	8.2	1.2	1.2
B 5.1-7.5-1.6	5.1	7.5	1.6	1.6
B 5.1-8.0-1.4	5.1	8.0	1.4	1.4



Balanced Weave

DOUBLE BALANCED BELTING : Double balanced Construction consists of pairs of interlaced right and left hand Spirals. The connector rods are crimped on the more open meshes and straight on the closed meshes.

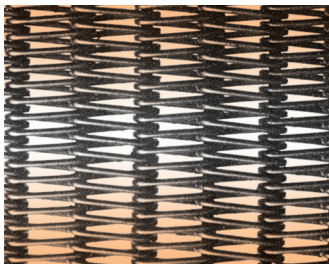
MESH DESIGNATION	PITCH IN MM		WIRE DIA IN MM	
	SPIRAL	CROSS WIRE	CROSS WIRE	SPIRAL
DB 16.6-35.0-3.6-3.2	33.2	35.0	3.6	3.2
DB 12.5-15.0-1.6	25.0	15.0	1.6	1.6
DB 8.4-30.0-3.2	16.8	30.0	3.2	3.2
DB 5.1-15.0-1.6	10.2	15.0	1.6	1.6



Double Balanced Weave

GRATEX BELTING : Gratex Construction is similar to the Balanced Belt, except that the spirals are more closely wound to produce a semi-closed mesh. The closeness of the Weave results in a stronger construction while retaining the advantages of the Balanced Weave.

MESH DESIGNATION	PITCH IN MM		WIRE DIA IN MM	
	SPIRAL	CROSS WIRE	CROSS WIRE	SPIRAL
G 7.2-30.0-5.0-3.2	7.2	30.0	5.0	3.2
G 7.6-17.0-4.0-3.2	7.6	17.0	4.0	3.2
G 3.0-3.0-1.6-1.0	3.0	3.0	1.6	1.0
G 2.1-3.8-1.0-0.7	2.1	3.8	1.0	0.7



Gratex Weave

COMPOUND BALANCED BELTING : Compound Balanced Construction is achieved by fitting tightly together right and left hand Spirals to provide a smooth dense weave. Each spiral is connected by three or more rods. This mesh is ideal for conveying very fine or small products.

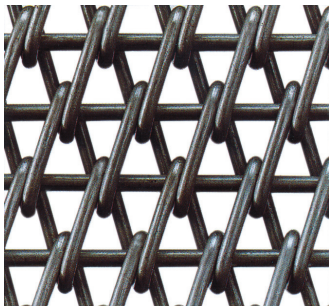
MESH DESIGNATION	NO. OF RODS	PITCH IN MM		WIRE DIA IN MM	
		SPIRAL	CROSS WIRE	CROSS WIRE	SPIRAL
CB 3-13.0-6.0-2.6	4	13.0	6.0	2.6	2.6
CB 2-8.4-3.5-1.6	3	8.4	3.5	1.6	1.6
CB 3-8.4-4.0-2.0-1.6	4	8.4	4.0	2.0	1.6
CB 3-6.8-3.2-1.2	4	6.8	3.2	1.2	1.2



Compound Balanced Weave

ROD REINFORCED BELTING : Rod Reinforced Construction is obtained by weaving together relatively elongated Spiral Wires and reinforcing by transverse rods inserted through the hinge of the spirals. This breaks down the normal quadrilateral opening of conventional weave and forms instead two stable triangles, creating an efficient construction for belt operation at high temperatures.

MESH DESIGNATION	PITCH IN MM		WIRE DIA IN MM	
	SPIRAL	CROSS WIRE	CROSS WIRE	SPIRAL
RR 28.0-29.0-5.6	28.0	29.0	5.6	5.6
RR 17.0-17.0-2.6	17.0	17.0	2.6	2.6
RR 15.0-19.0-5.0-3.2	15.0	19.0	5.0	3.2
RR13.0-13.0-2.6	13.0	13.0	2.6	2.6
RR 3.4-3.8-1.6	3.4	3.8	1.6	1.6



Rod Reinforced Weave

DUPLEX BELTING : Duplex Belt is woven of pairs of spirals, each pair turned into the preceding pair, and re-inforced with a rod through the hinging point. The percentage of open area is decreased, the weight and tensile strength are increased.

MESH DESIGNATION	PITCH IN MM		WIRE DIA IN MM	
	SPIRAL	CROSS WIRE	CROSS WIRE	SPIRAL
D 9.5-20.0-3.2	19.0	20.0	3.2	3.2
D 9.5-19.0-3.2-2.6	19.0	19.0	3.2	2.6
D 7.5-16.0-2.6	15.0	16.0	2.6	2.6
D 3.2-5.5-1.2	6.4	5.5	1.2	1.2
D 2.5-3.5-1.0	5.0	3.5	1.0	1.0



Duplex Weave

CONVENTIONAL BELTING : Conventional Construction consists of series of either Right or Left hand Spirals, each turned into the preceding spiral to form a continuous Belt.

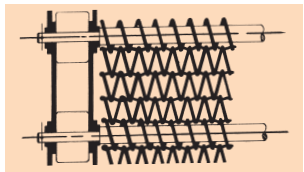
MESH DESIGNATION	APPROXIMATE OPENING IN MM	SPIRAL PITCH IN MM	WIRE DIA IN MM
C 38.0-3.2	25.0	38.0	3.2
C 19.0-2.6	13.0	19.0	2.6
C 16.0-2.0	10.0	16.0	2.0
C 10.0-1.6	7.0	10.0	1.6



Conventional Weave

CHAIN DRIVEN BELTING : Chain Driven Belts, “employing ” Metal Mesh Fabric with Chain Edges and lateral connectors are used Keeping in mind one or more of the following factors :

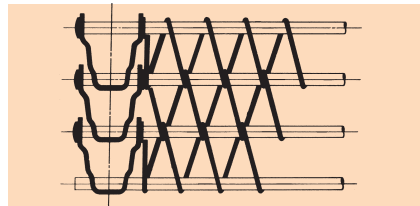
- (a) Positive Drive conveyor
- (b) Synchronization of one or more Conveyors
- (c) Consistent Tracking



Mesh Belt With Roller Chain

MESH BELT WITH SPROCKET CHAIN :

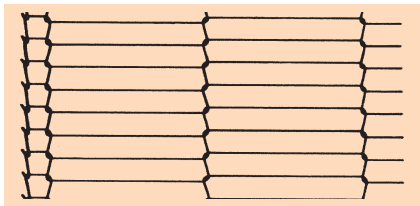
Generally used for washing, baking, drying, and Cooling Units. It is low cost positive drive Belt.



Mesh Belt With Sprocket Chain

INTERLACED BARS BELTING :

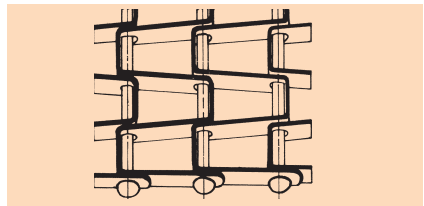
It is used where large open area is required for transporting light goods.



Interlaced Bars Belting

FLAT WIRE BELTING :

This provides positive traction, good strength characteristics along with excellent drainage.



Flat Wire Belting

BELT SELECTION

Dimensions :

- SP = pitch of spiral
- CP = distance between cross bars
- d = diameter of spiral
- D = diameter of cross bar
- t = thickness of the belt

