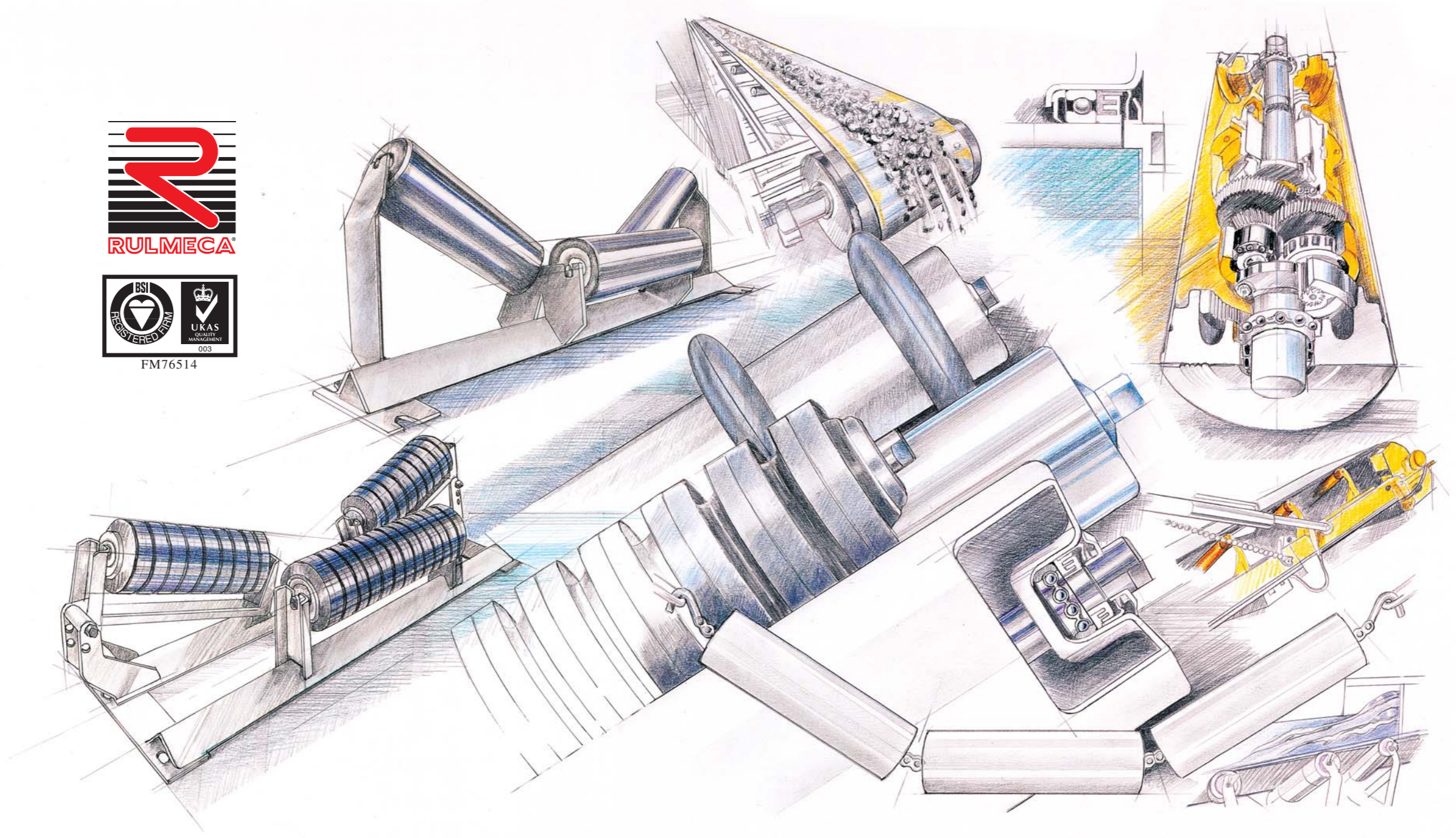


RULMECA UK LTD

Rollers and components for bulk handling



FM76514



BULK HANDLING



The Rulmecca group of companies span the globe as one of the largest 'Bulk' conveyor component manufacturing entities. Our enormous range of products cover such items as rollers and transom sets, motorized pulleys, fabricated pulleys and other ancillaries such as conveyor covers and belt cleaners.

Rulmecca UK Limited have manufactured for the UK market at our purpose built facility in Corby, Northants for the last 25 years and service a market deep in tradition and quality to which our products are extremely well suited.

The Rulmecca design of rollers have proved themselves time and time again, operating 24 hours a day in the most extreme and hostile environments, demonstrating the reliability and rugged construction that is common to all Rulmecca products.

We have the ability to produce British standards and local derivatives, along with international DIN & ISO Standards. The variation of sizes within our range of available diameters and roller types is unsurpassed worldwide.



The Rulmecca group has invested heavily in the use of CNC and semi-automatic manufacturing, in advanced techniques in computer aided design and has extreme accelerated testing facilities to prove its products in all conditions. We strive to utilise latest working practices to blend all aspects of management, administration, project design and quality control in an efficient, functional and harmonious way and to provide the best working conditions for staff and operatives.

The company philosophy has always been to satisfy the needs, requests and problems of customers, providing not only products but a service based on a specialised technical competence



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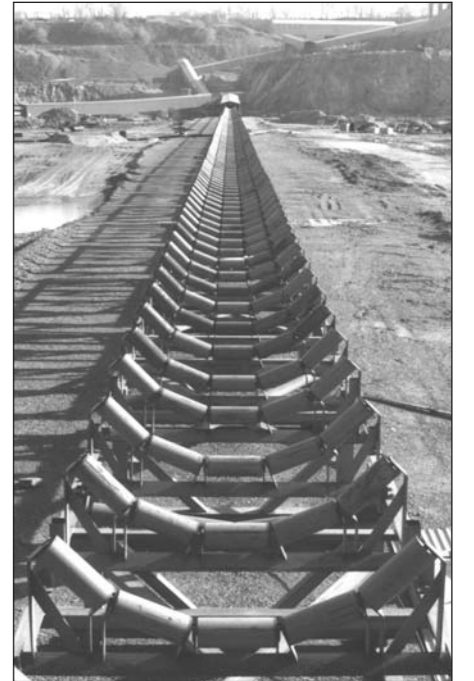


PSV Rollers



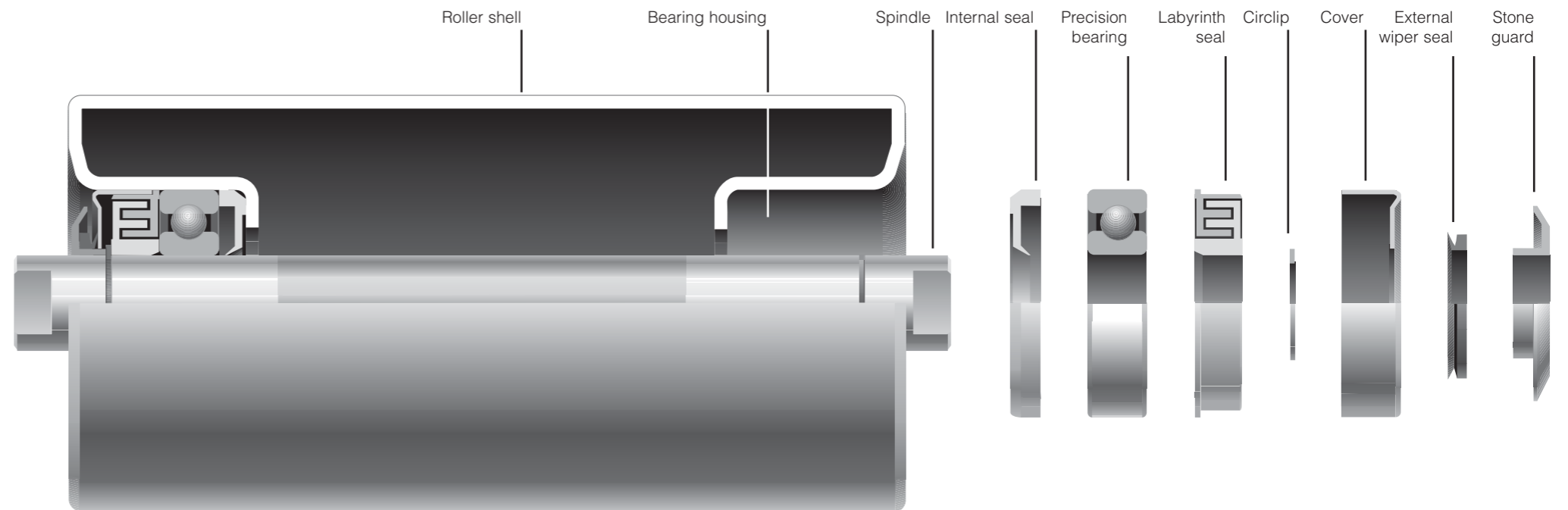
MAIN FEATURES

- Rugged construction for heavy duties in all Bulk handling applications
- Precision manufactured with CNC machines to ensure strict tolerances and fits
- Hermetically sealed
- Maintenance free
- Low starting and frictional resistance for efficiencies and power cost savings
- Excellent low eccentricity and balancing for smooth running
- Low noise, even at high speeds
- Sizes to local and international specifications
- Normal working temperature range of -20°C to +100°C



MATERIAL SPECIFICATION

TUBES:	To BS 6323 Part 5 ERW1 / DIN2394 Material - St 37 DIN 17100 (63/76/89/102/108/127/133/159/168 Dia)
SHAFTS:	To BS 970 Material - 230M07 Free Cutting
HOUSINGS:	Cold pressed and calibrated to ISO M7 tolerances Material – Steel for Deep Drawing DIN 1623/1624
BEARING ASSEMBLY:	Rear Lip Seal – Material ISO PA6 (Nylon 6) Bearing – Deep Groove Precision Ball Bearings (6204/6205/6305/6206/6306/6308) Triple Lip Labyrinth – Material ISO PA6 (Nylon 6) Circlip – Heavy Duty Cover Cap– Cold Pressed Deep Drawn Steel to DIN 1623/1624 and Zinc Plated
OUTER SEAL RING	Rubber Sliding V-Ring – Material Anti-Abrasive, Low Friction, Anti-Ozone, Nitrilic Rubber
STONE GUARD	Alloy Protective Shield – Material POM Polymer
LUBRICATION	Permanent for roller life – Lithium grease NLGI Grade 2 or 3
PROTECTION	Single coat of quick drying grey primer paint or options to Zinc Plate, Tectyl Oil or Powder Coat





PSV Rollers

MANUFACTURING PROCESS

Tubes are cut true and square by fully automatic Comecel, rotating head, parting off machinery to very close tolerances. These are then MIG welded to the housings by means of purpose-built double-ended automatic self-centralising welding machines to keep radial tolerances to an absolute minimum. The welded shell is what we call a UNIBLOC construction and gives a strong and watertight enclosure.

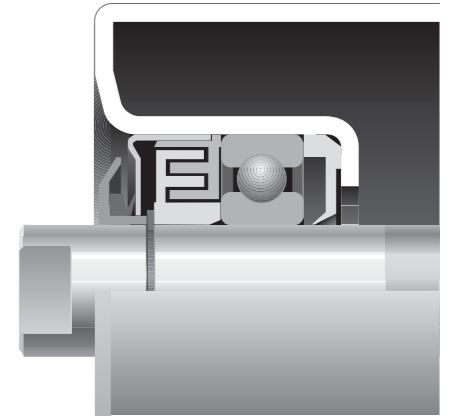
The spindles are cut and machined on fully automatic double-headed sliding headstock CNC's to achieve true and accurate fits within the bearings and seals and accurate fitment into whatever mounting elements will be present.

Each roller is then assembled on our purpose-built presses. First a nylon back seal prevents any foreign particles or

moisture affecting the bearing from within the shell. The bearings are pre-lubricated with the correct amount of approved grease and pressed into the housing. Labyrinths are also pre-greased and then also pressed into position, as is the steel cover. The bearing assembly is held in position by means of heavy-duty circlips. Further to the above, a sintered steel alloy stone guard is fitted which acts as a highly efficient first barrier to aggregates down to a millimetre in size.

A very low friction anti-abrasive rubber lip vee-ring seal mounted behind the stone guard stops the ingress of any liquids or moisture and also acts as a flinger.

Following assembly, the rollers are painted one coat of grey primer applied through our electro-static paint booth and then packed in cases or on pallets for onward delivery.



Section through sealing

ROLLER STANDARDS

Roller Type	Roller Diameter	Tube Thickness	Spindle Dia	Bearing Type	Approximate Weights (kgs)	
					First 200mm	Add'l 10mm
PSV1	63	3	20	6204	2.1	0.07
	76	3			2.3	0.09
	89	3			2.5	0.1
	102	3			3.1	0.11
	108	3.5			3.2	0.12
	127	3.6			3.9	0.14
	133	4			4.1	0.16
PSV2	76	3	25	6205	2.9	0.09
	89	3			3	0.1
	102	3			3.5	0.13
	108	3.5			3.6	0.14
	127	3.6			4.5	0.16
	133	4			4.7	0.17
	159	4.5			5.4	0.19
168	5.0	5.7	0.20			
PSV3	89	3	25	6305	3.4	0.11
	102	3			3.9	0.13
	108	3.5			4	0.14
	127	3.6			4.7	0.16
	133	4			4.8	0.17
	159	4.5			6	0.19
	168	5.0			6.3	0.22
PSV4	89	3	30	6206	3.9	0.12
	102	3			4.5	0.13
	108	3.5			4.7	0.14
	127	3.6			5.7	0.17
	133	4			5.9	0.18
	159	4.5			6.5	0.22
PSV5	89	3	30	6306	6.3	0.12
	102	3			7	0.13
	108	3.5			7.1	0.14
	127	3.6			8	0.17
	133	4			8.3	0.18
	159	4.5			8.9	0.22
	168	5.0			9.5	0.25
PSV7	108	3.5	40	6308	8.2	0.19
	127	3.6			8.9	0.21
	133	4			9.3	0.22
	159	4.5			10.7	0.25
	194	6.3			14	0.39

Other diameters and tube thicknesses available on request



End-supported Troughing Sets to BS8438: 2004

for Rollers

PSV1 -20mm shafts

PSV2 -25mm shafts

PSV4 -30mm shafts

102, 127 & 159 Dia



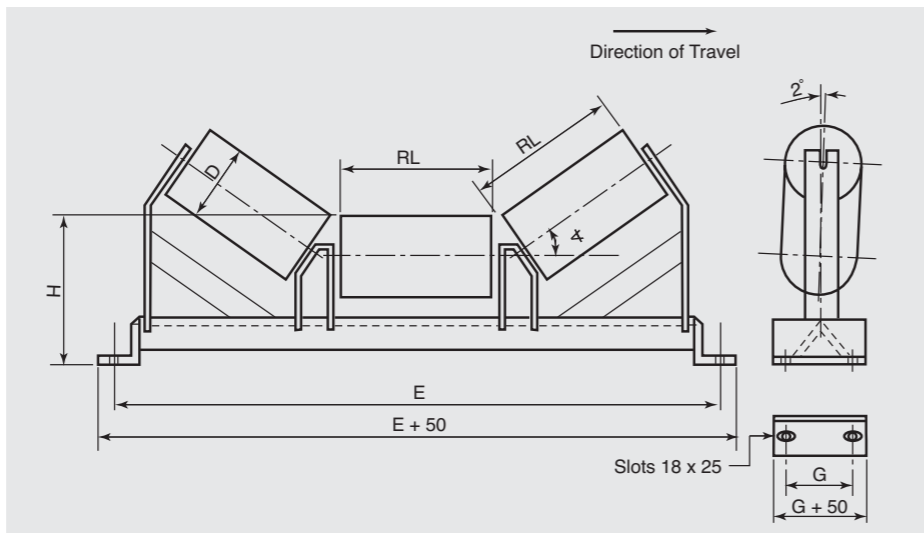
Choosing the correct roller and transom combination for each application is important to ensure that the maximum designed capacity is always reliably available.

By advising us of the required conveyor parameters and capacities, we can recommend the correct size and duty to suit each specific application.

Rulmeca standard transom sets are of a heavy duty jig-fabricated construction, manufactured to BS8438 dimensions with inverted angle self-cleaning bases.

Roller shafts have machined flats for drop-in fitment into frames.

Two, four and five roll sets are also available upon request.



∠ Angle Variations 20° 25° 30° 35° 40° & 45°



STANDARD TROUGHING SET DIMENSIONS

Belt Width	RL	E	G	102 Diameter		127 Diameter		159 Diameter	
				H	Weight kgs	H	Weight kgs	H	Weight kgs
400	160	640	75	200	23	225	25		
500	200	740	75	200	25	225	28		
600	240	840	75	200	27	225	31	275	33
650	250	890	75	200	28	225	32	275	34
750	295	990	75	200	31	225	35	275	38
800	315	1040	75	200	32	225	36	275	40
900	350	1140	75	200	33	225	39	275	43
1000	380	1240	75	200	35	225	42	275	45
1050	410	1300	75	200	36	225	44	275	48
1200	465	1450	100	215	41	240	48	275	52
1350	530	1650	100	215	45	240	52	275	61
1400	530	1700	100	215	49	240	54	275	63
1600	600	1900	100			240	61	275	73
1800	670	2100	100			240	70	275	82
2000	750	2300	100			240	79	275	95

Weights are approximate for complete assemblies.

Other diameters available on request.



Impact Rollers & Impact Troughing Sets to BS8438: 2004

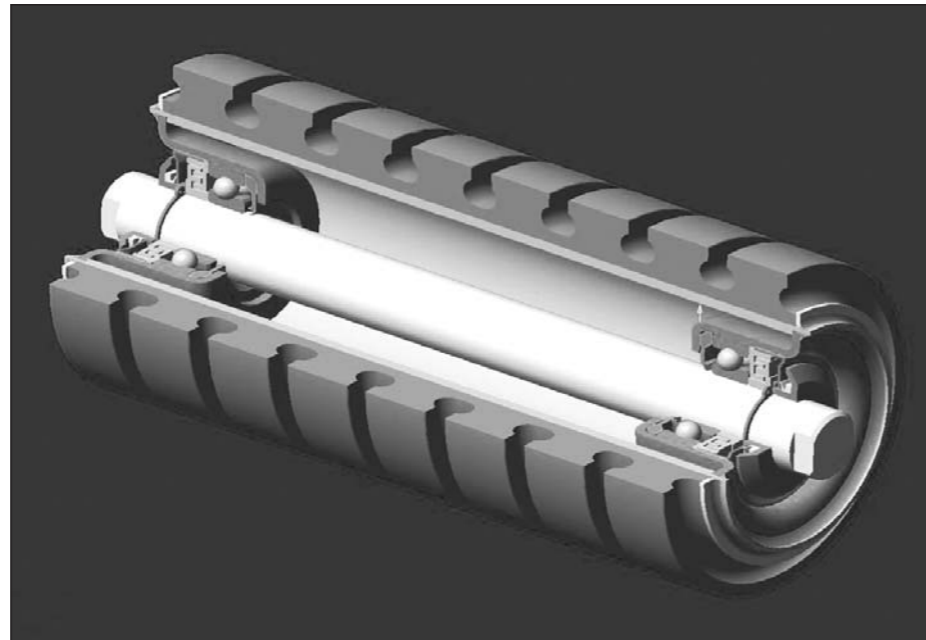
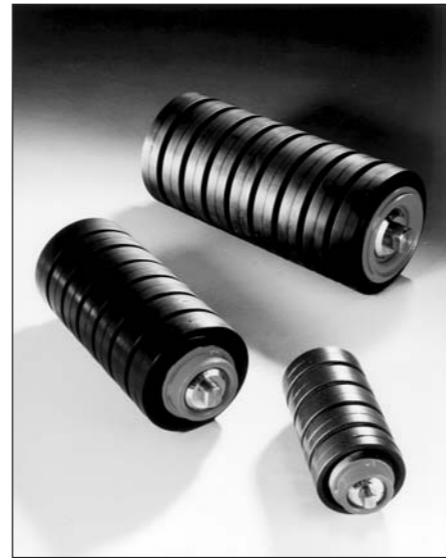
for Rollers

PSV1 -20mm shafts

PSV2 -25mm shafts

PSV4 -30mm shafts

89, 108, 133, 159 & 180 o/all Dia



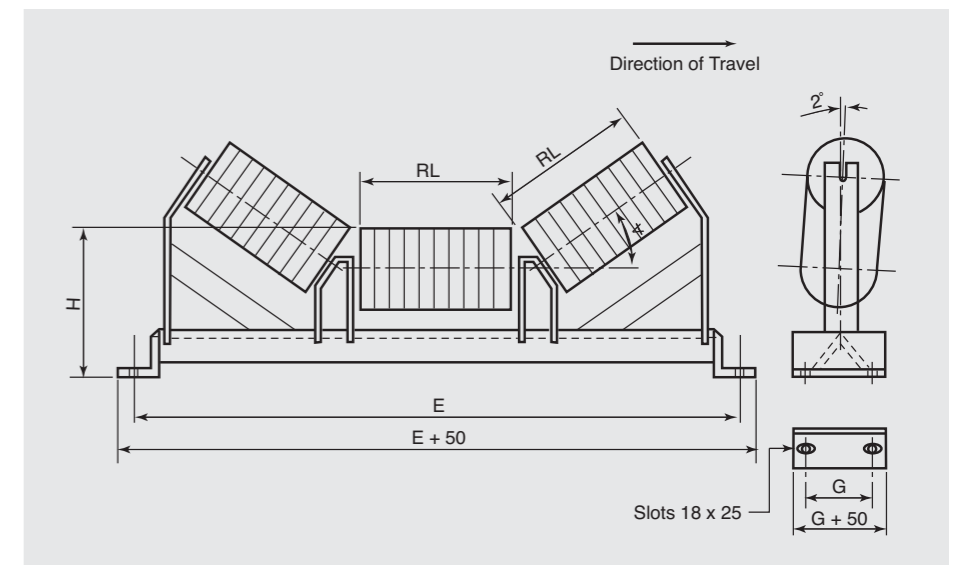
ROLLER STANDARDS

	Impact Diameter	Inner Roller Diameter	Spindle Dia	Bearing Type
PSV 1	89	63	20	6204
	108	63		
	133	89		
	159	89		
PSV 2	133	89	25	6205
	159	89		
PSV 4	133	89	30	6206
	159	89		
	180	108		

Impact rollers are normally required in areas around transfer points where shock loads need to be absorbed, and to give the belt and the material carried, added protection from damage or degradation.

Rulmeca impact rollers consist of a base steel roller on to which are fitted our own design of shock absorbing rubber impact discs in various sizes held in place by welded retaining rings.

Other diameters or special vulcanised sizes are available on request



∠Angle Variations 20° 25° 30° 35° 40° & 45°

STANDARD IMPACT SET DIMENSIONS

Belt Width	RL	E	G	108 Diameter		133 Diameter		159 Diameter	
				H	Weight kgs	H	Weight kgs	H	Weight kgs
400	160	640	75	200	25	225	29		
500	200	740	75	200	27	225	32		
600	240	840	75	200	27	225	35	275	38
650	250	890	75	200	31	225	36	275	39
750	295	990	75	200	33	225	39	275	42
800	315	1040	75	200	34	225	40	275	44
900	350	1140	75	200	36	225	43	275	47
1000	380	1240	75	200	38	225	46	275	50
1050	410	1300	75	200	39	225	48	275	51
1200	465	1450	100	215	44	240	52	275	57
1350	530	1650	100	215	48	240	56	275	63
1400	530	1700	100	215	53	240	60	275	68
1600	600	1900	100			240	66	275	76
1800	670	2100	100			240	76	275	87
2000	750	2300	100			240	86	275	98

Weights are approximate for complete assemblies.

Other diameters available on request.



Variable Angle Troughing Sets

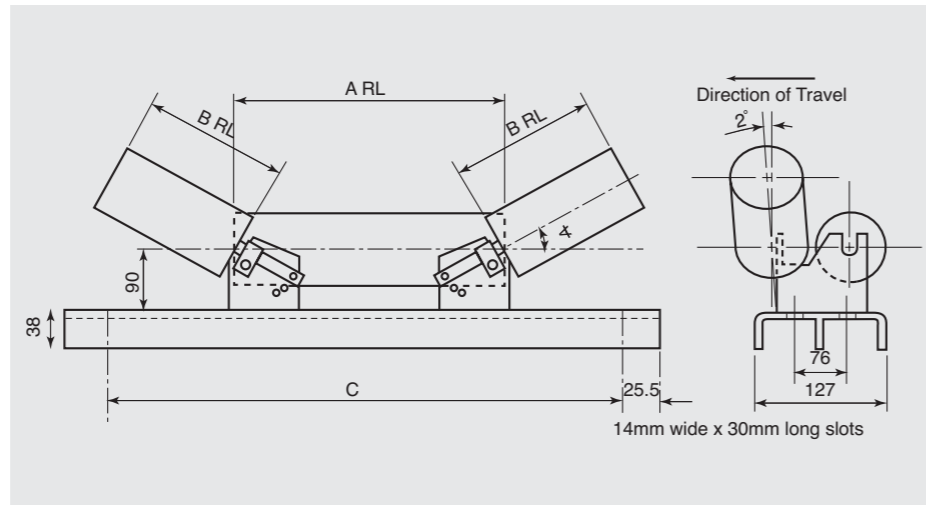
for Rollers

PSV1 -20mm shafts

102 & 127 Dia

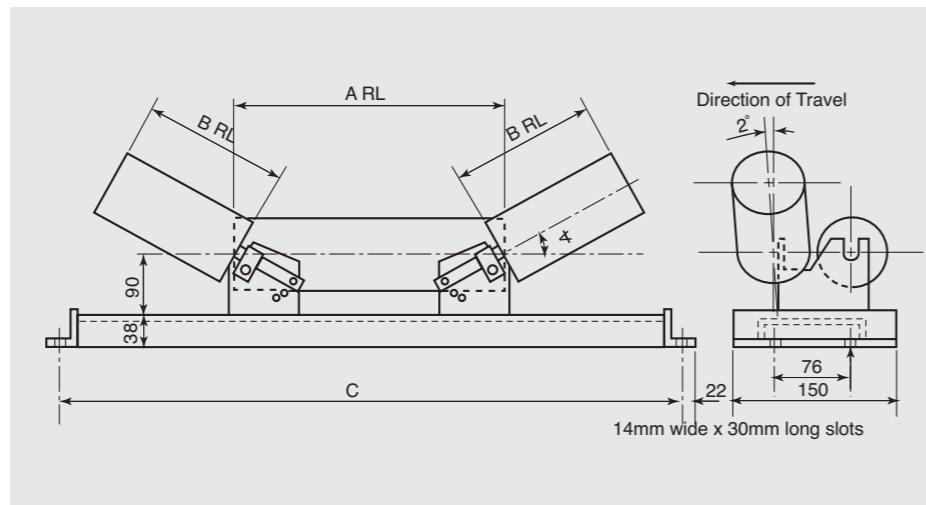


STANDARD VARIABLE ANGLE SET DIMENSIONS



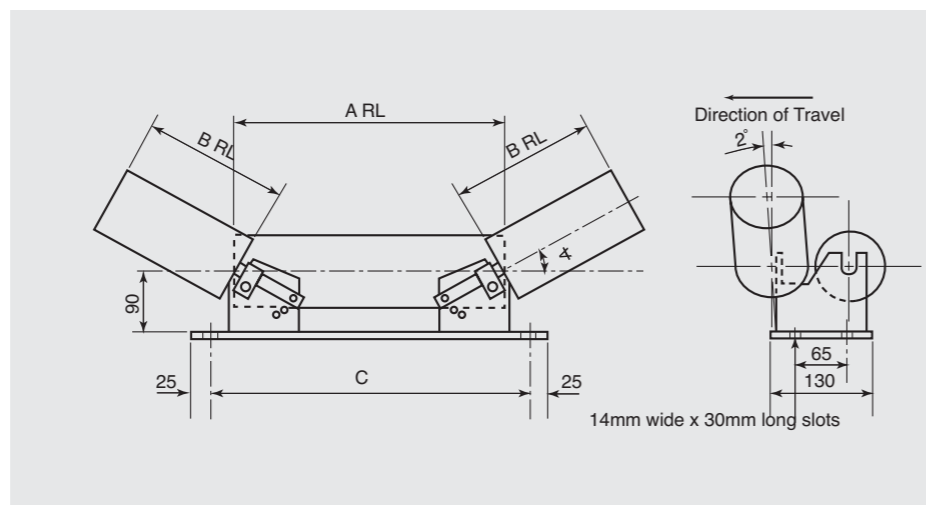
Channel Mounted

Belt Width	102 Dia Rollers			127 Dia Rollers			'A' RL	C
	'B' RL	Code for Transome	Weight Kgs	'B' RL	Code for Transome	Weight Kgs		
450	220	49VC	15	225	49VF	18	200	686
500	220	49VC	16	225	49VF	19	220	737
600	220	49VC	17	225	49VF	20	320	838
650	220	49VC	18	225	49VF	21	370	889
750	270	49VC	19	275	49VF	23	370	991
800	270	49VC	20	275	49VF	24	420	1041
900	270	49VC	21	275	49VF	26	520	1143
1000	270	49VC	23	275	49VF	28	620	1245
1050	220	49VC	24	225	49VF	30	780	1295



Foot Mounted

Belt Width	102 Dia Rollers			127 Dia Rollers			'A' RL	C
	'B' RL	Code for Transome	Weight Kgs	'B' RL	Code for Transome	Weight Kgs		
450	220	49VE	15	225	49VG	18	200	690
500	220	49VE	16	225	49VG	19	220	740
600	220	49VE	17	225	49VG	20	320	840
650	220	49VE	18	225	49VG	21	370	890
750	270	49VE	19	275	49VG	23	370	990
800	270	49VE	20	275	49VG	24	420	1040
900	270	49VE	21	275	49VG	26	520	1140
1000	270	49VE	23	275	49VG	28	620	1240
1050	220	49VE	24	225	49VG	30	780	1300



Baseplate Mounted

Belt Width	102 Dia Rollers			127 Dia Rollers			'A' RL	C
	'B' RL	Code for Transome	Weight Kgs	'B' RL	Code for Transome	Weight Kgs		
450	220	49VB	14	225	49VA	17	200	305
500	220	49VB	15	225	49VA	18	220	330
600	220	49VB	16	225	49VA	19	320	405
650	220	49VB	17	225	49VA	20	370	485
750	270	49VB	18	275	49VA	22	370	485
800	270	49VB	19	275	49VA	23	420	535
900	270	49VB	20	275	49VA	24	520	635
1000	270	49VB	21	275	49VA	26	620	840
1050	220	49VB	22	225	49VA	28	780	890

∠ Angle Variations 20° 30° 40° 50° 60° Available on all sets

Weights are approximate for complete assemblies.

Other diameters available on request.



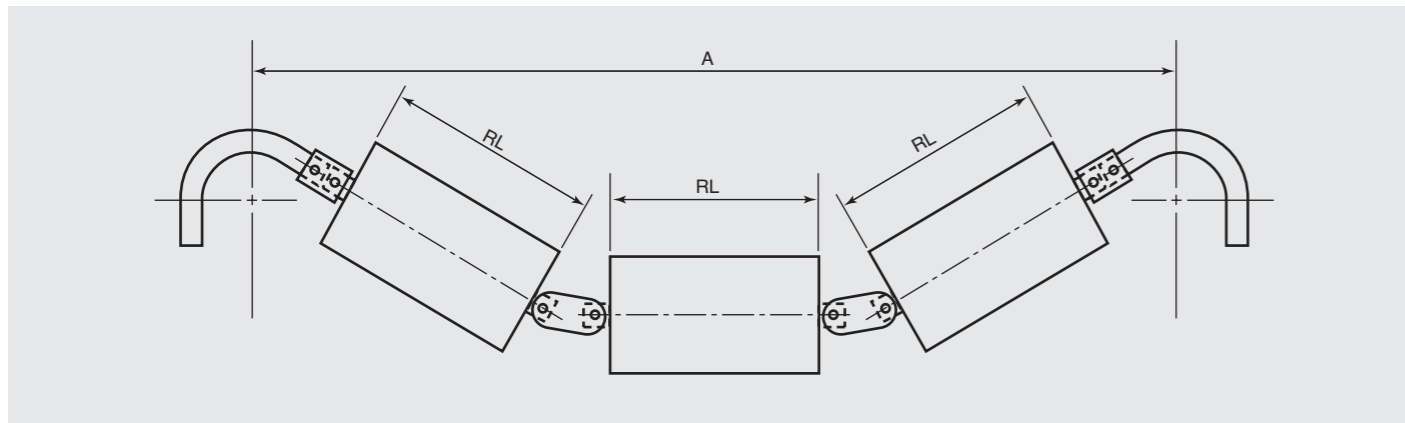
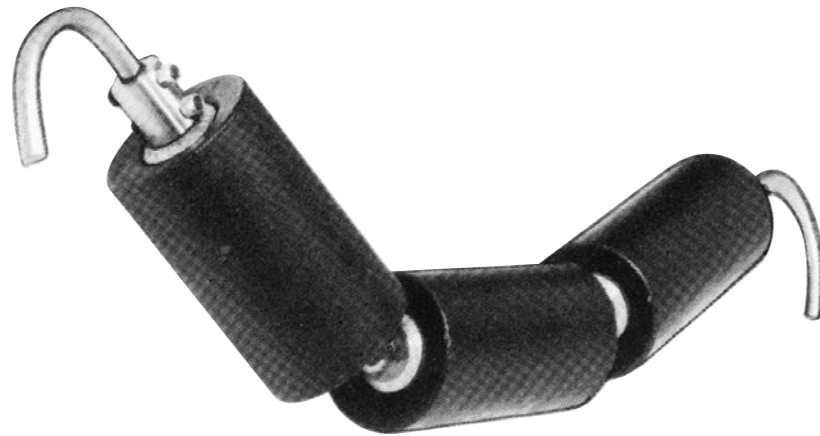
Suspended Field Troughing Sets

for Rollers

PSV1 -20mm shafts

PSV2 -25mm shafts

102 & 127 Dia



Belt Width	Roller Length	Mounting Hole Centres
500	190	813
600	224	889
650	240	940
750	280	1041
800	295	1092
900	330	1194
1000	360	1280
1050	380	1346
1200	432	1499

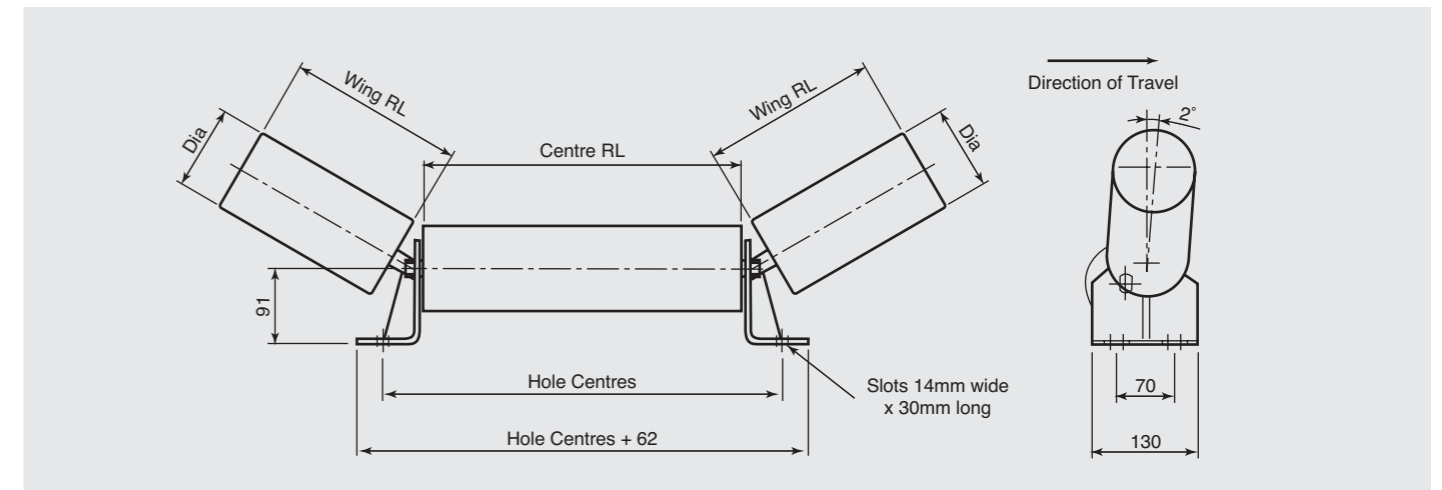
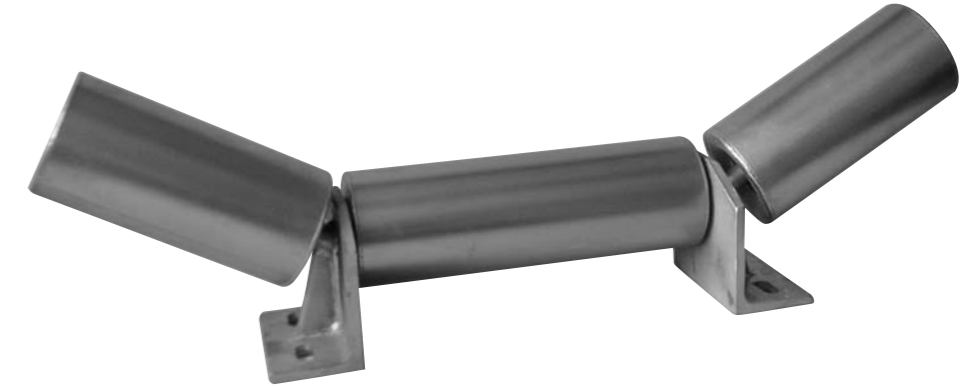


Fabricated Bracket Troughing Sets

for Rollers

PSV1 -20mm shafts

102 & 127 Dia



Angle of Wing Rollers 20° 30° 40° 50° 60°

FABRICATED BRACKET TROUGHING SETS

Belt Width	Roller Lengths			102 Dia Weight Kg	127 Dia Weight Kg
	Centre	Wing	Hole Centres		
450	209	213	305	14	16
500	209	213	305	14	16
600	310	213	406	15	18
650	310	213	406	15	18
750	387	213	483	16	19
800	424	213	520	17	20
900	541	213	637	18	21
1000	617	254	713	20	23
1200	762	254	858	21	25

Weights are approximate for complete assemblies.

Other diameters available on request.



Plain Return Rollers

for Rollers

PSV1 -20mm shafts

PSV2 -25mm shafts

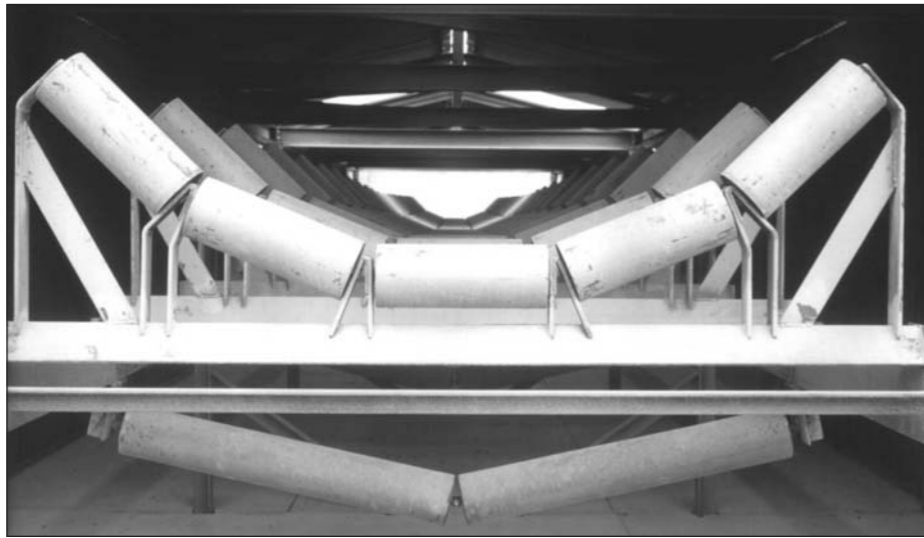
PSV3 -25mm shafts

PSV4 -30mm shafts

PSV5 -30mm shafts

PSV7 -40mm shafts

63.5, 76, 89, 102, 127 & 159 Dia



Belt Width	Roller Length	BS8438 Mounting Hole Centres
400	500	640
500	600	740
600	700	840
650	750	890
750	900	990
800	950	1040
900	1050	1140
1000	1150	1240
1050	1200	1300
1200	1350	1450
1350	1500	1650
1400	1600	1700
1600	1800	1900
1800	2000	2100
2000	2200	2300

Other diameters available on request.



Disc Type Return Rollers

for Rollers

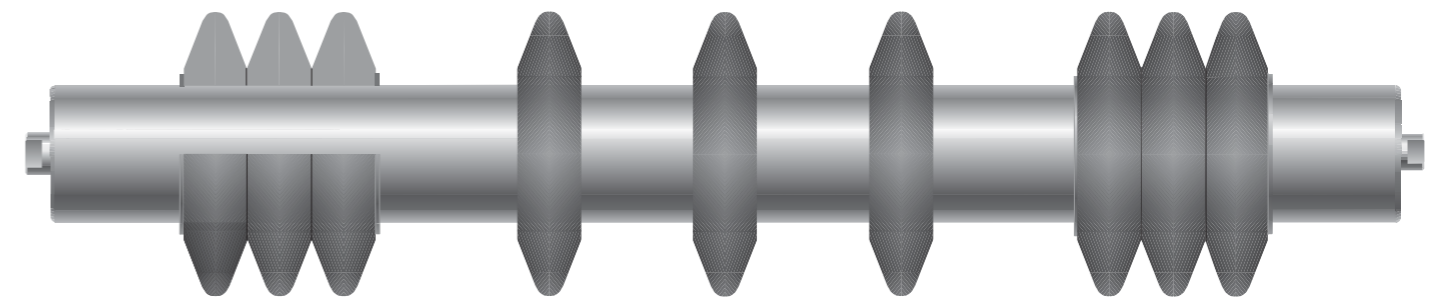
PSV1 -20mm shafts

PSV2 -25mm shafts

PSV3 -25mm shafts

PSV4 -30mm shafts

108, 133 & 159 o/all Dia



Belt Width	Standard Roller Dia / Disc Diameters Available				Roller Length	No. of Discs per Roller	BS8438 Mounting Hole Centres
400	63.5 / 108	63.5 / 133			500	7	640
500	63.5 / 108	63.5 / 133			600	7	740
600	63.5 / 108	63.5 / 133	89 / 133	89 / 159	700	7	840
650	63.5 / 108	63.5 / 133	89 / 133	89 / 159	750	8	890
750	63.5 / 108	63.5 / 133	89 / 133	89 / 159	900	9	990
800	63.5 / 108	63.5 / 133	89 / 133	89 / 159	950	9	1040
900	63.5 / 108	63.5 / 133	89 / 133	89 / 159	1050	9	1140
1000	63.5 / 108	63.5 / 133	89 / 133	89 / 159	1150	10	1240
1050	63.5 / 108	63.5 / 133	89 / 133	89 / 159	1200	11	1300
1200			89 / 133	89 / 159	1350	12	1450
1350			89 / 133	89 / 159	1500	13	1650
1400			89 / 133	89 / 159	1600	13	1700
1600				89 / 159	1800	15	1900
1800				89 / 159	2000	16	2100
2000				89 / 159	2200	17	2300

Other diameters available on request.



Rubber Spiral Return Rollers

for Rollers

PSV1 -20mm shafts

PSV2 -25mm shafts

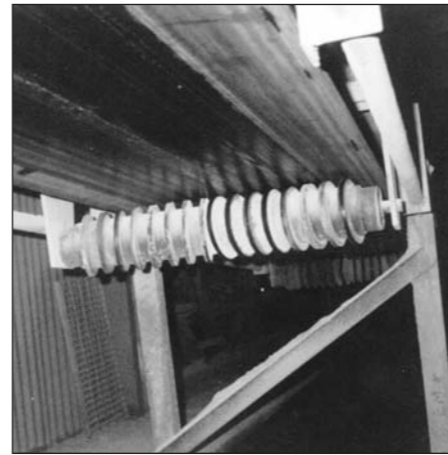
PSV3 -25mm shafts

PSV4 -30mm shafts

108, 133 & 180 o/all Dia

Rubber spiral return rollers enable a greater degree of belt tracking to be achieved than with normal disc return rollers.

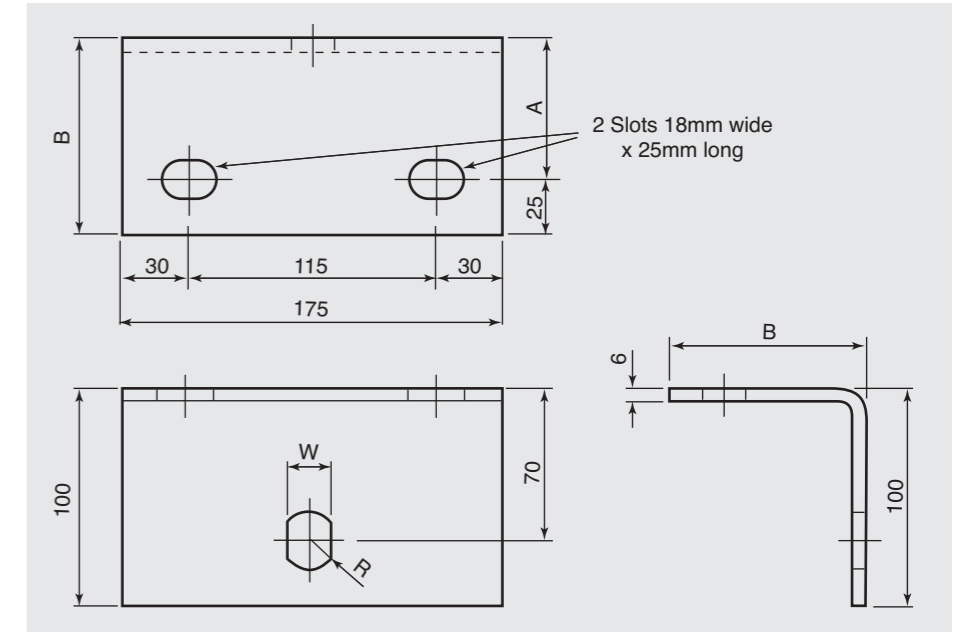
They also perform a cleaning action on the dirty side of the belt due to the flat top helical spiral form of the rings.



Belt Width	Standard Roller Dia / Disc Diameters Available		Roller Length	BS8438 Mounting Hole Centres
400	63.5 / 108	89 / 133	500	640
500	63.5 / 108	89 / 133	600	740
600	63.5 / 108	89 / 133	700	840
650	63.5 / 108	89 / 133	750	890
750	63.5 / 108	89 / 133	900	990
800	63.5 / 108	89 / 133	950	1040
900	63.5 / 108	89 / 133	1050	1140
1000	63.5 / 108	89 / 133	1150	1240
1050	63.5 / 108	89 / 133	1200	1300
1200		89 / 133	1350	1450
1350			1500	1650
1400			1600	1700
1600			1800	1900
1800			2000	2100
2000			2200	2300

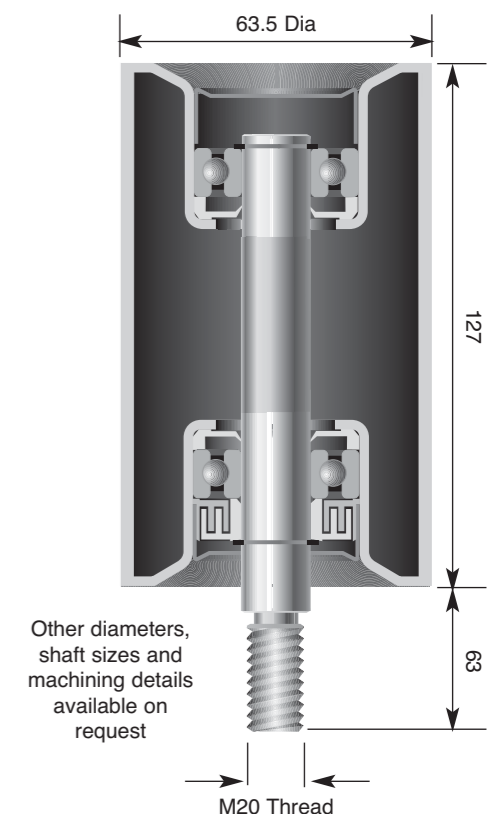


Return Idler Brackets to BS8438



Type	Spindle	Belt Width mm	Dim A	Dim B	Dim W	Dim R
44WD	20 Dia	400 to 650	65	90	16	10.5
44WE	25 Dia	400 to 650	65	90	20	13
44WF	20 Dia	750 to 1000	40	65	16	10.5
44WG	25 Dia	750 to 1000	40	65	20	13
44WH	25 Dia	1050 to 2000	45	70	20	13
44WK	30 Dia	1050 to 2000	45	70	24	16

GUIDE ROLLERS





PL Rollers

PL2 -20mm shafts

PL4 -20mm shafts

90, 110 & 140 Dia



There are some environments where extremely corrosive elements are a major hindrance to the smooth running of belt conveyors. Those such as in the production of **salt, various chemicals, fertilisers and some marine conditions** require a reliable and corrosive resistant roller. It must demonstrate a particular resistance to high humidity and water and to the aggressive material that is to be conveyed. The use of plastic/PVC materials in our range of PL rollers is an excellent and economic alternative for traditional roller materials in poor environments such as stainless steel, bronze and aluminium.

Testing and actual plant trials have demonstrated the efficiency and versatility of these rollers with their excellent low running resistance in severe conditions, especially when one considers their low purchase and maintenance costs.

PL Rollers can be supplied with shafts that are completely covered with polypropylene caps (PL2) or with exposed shafts (PL4) where they can then be machined to be utilised as replacements for existing machinery. Stainless steel shafts are commonly supplied in these instances.

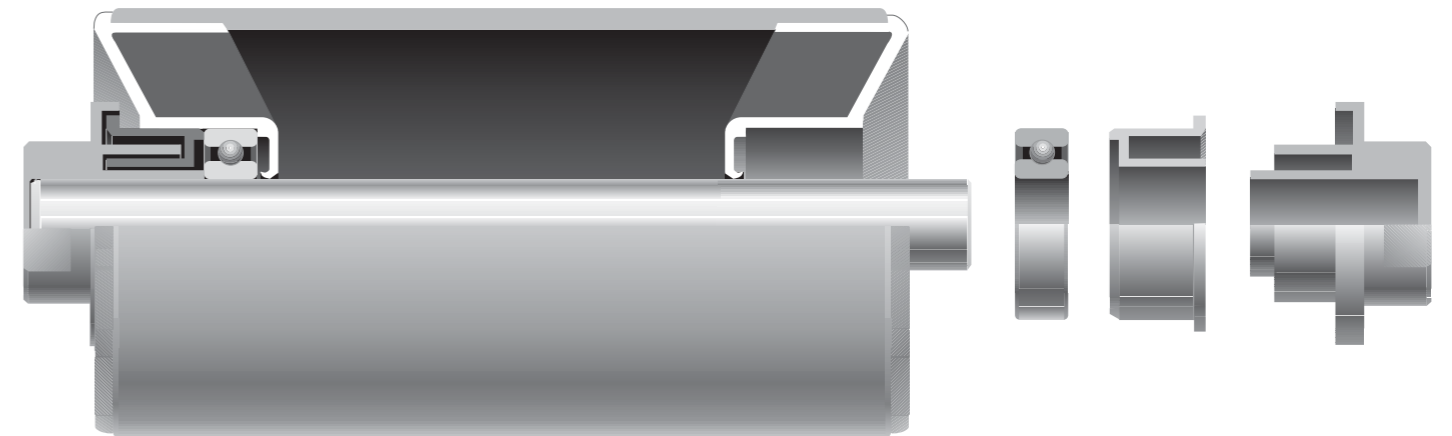
PL rollers can also be manufactured with steel shells and be supplied complete with end supported, variable angle or fabricated bracket type transom sets.

Recommended functioning temperatures are -10 Deg to +50 Deg C.

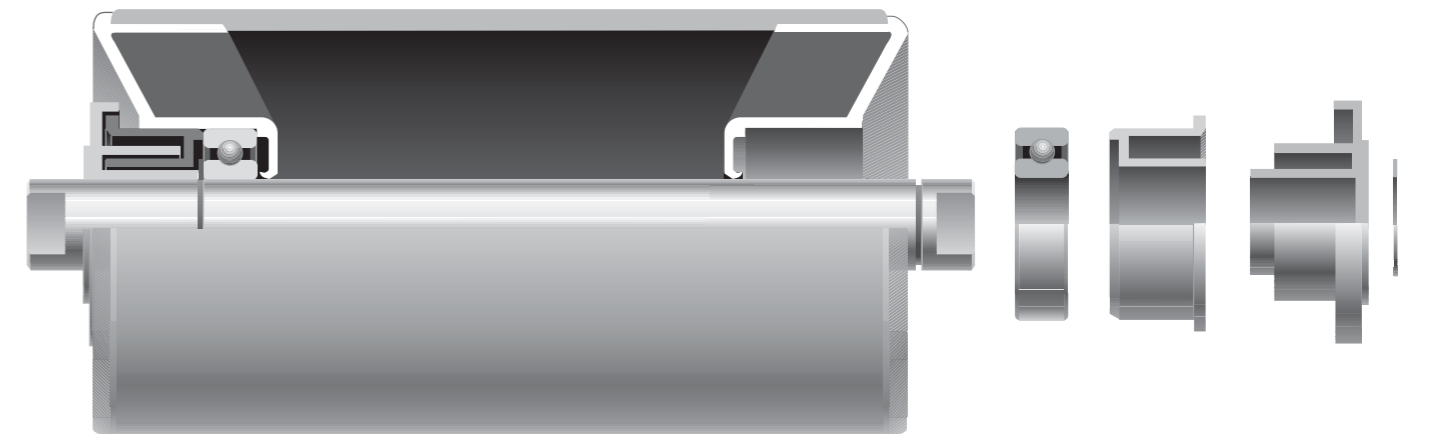
Roller Type	Roller Diameter	Tube Thickness	Spindle Dia	Bearing Type	Approximate Weights (kgs)		Note
					First 200mm	Add'l 10mm	
PL 2	90	4.3	20	6204	1.3	0.04	Fitted with Polyamide Mounting Bush over Shaft Ends (30 a/f x 10 lg)
	110	5.3			1.8	0.06	
	140	8.5			3.1	0.08	
PL 4	90	4.3	20	6204	1.3	0.04	Shafts Exposed and Machined (14 a/f x 9 lg)
	110	5.3			1.8	0.06	
	140	8.5			3.1	0.08	



PL2



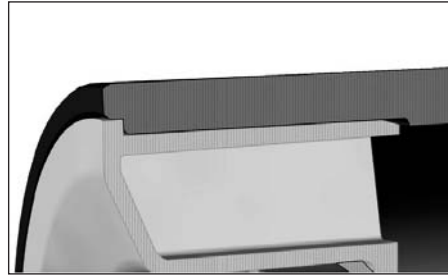
PL4





Top Roller

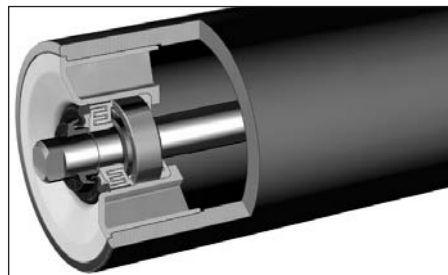
New thermoplastic roller



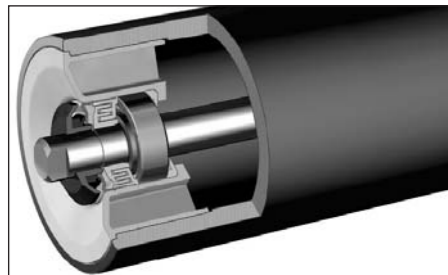
High Density Polyethylene (HDPE) tube, black, colour, long fitting between the tube and the bearing housing



Bearing housing: Homopolymer Acetal Resin (POM), colour: yellow RAL 1018



Sealing system: standard contact-less execution



Sealing system: optional hermetic execution



Rulmecca is proud to introduce the new TOP roller, a totally thermoplastic roller with the exception of the steel in the ball bearing and the shaft.

FEATURES AND BENEFITS:

- lower weight with respect to a steel roller (about 50%). That means:
 - lower power consumption during start/stop operation of the belt conveyor and therefore reduction of power requirements on the plant;
 - easier mounting/maintenance operations, preventing back injuries of the operator and guaranteeing a safer intervention, especially in application where roller mounting or replacement might be critical (suspended belt conveyor, difficult access, long conveyors...)
 - easier/cheaper transportation
- low level of abrasion and corrosion of the roller (wear resistant). That means:
 - longer life of the roller;

- lower maintenance of the whole plant.
- belt friendly, since HDPE tube will not wear the belt
- high resistance to chemical agents. That means:
 - the roller will not rust
 - the roller is suitable for a wide variety of applications
- low noise emission (due to thermoplastic noise absorption)
- self-cleaning roller surface. That means:
 - prevention of build up of material, main cause of belt mis-tracking
 - less spillage from the belt
- low running resistance sealing system. That means:
 - lower motor torque need in conveyor starts
 - lower motor power size
 - reduction of energy consumption of the belt conveyor (added effect to that of the lower weight)
 - lower belt consumption

Available types	89 mm diameter, 20 mm shaft, 6204 bearings 108 mm diameter, 20 mm shaft, 6204 bearings 127 mm diameter, 25 mm shaft, 6205 bearings (*) 133 mm diameter, 25 mm shaft, 6205 bearings
Load capacity (**)	Designed for light/medium duty applications
Sealing	Available in both hermetic and contactless execution, therefore guaranteeing excellent performance in presence of any kind of contaminant
Material:	
Tube	High Density Polyethylene (HDPE)
Bearing Housing	Homopolymer Acetal Resin (POM)
Working temperatures	-25°C, +50°C
Applications	Suitable for use in a wide variety of applications and products such as cement, coal, gravel, fertilisers, ports, chemicals and many others

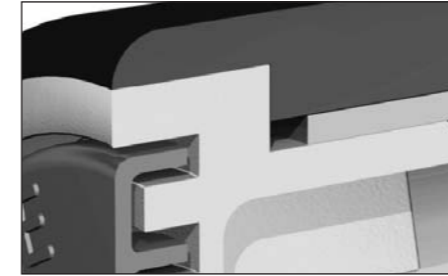
(*) available starting from Mid-2010

(**) contact your local Rulmecca Company for information and updates

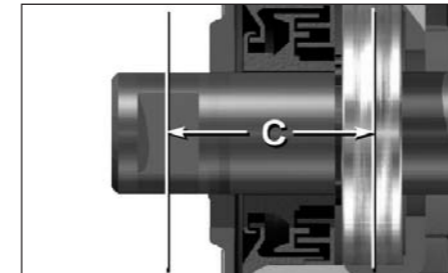


Supreme

Heavy Duty Corrosion and Abrasion Resistant Roller



Ultra thick abrasion and corrosion resistant 12mm HDPE sleeve.



Reduced "C" dimension decreases load induced shaft deflection.



Web reinforced, sturdy polymer bearing housing, smaller diameter results in higher strength ratio.



Unique large diameter stoneguard with integral labyrinth design minimises possibility of being jammed by spilt material.



Melco's well-proven multi part Labyrinth seal.

The Melco SUPREME boasts a wide range of superior advantages, features & benefits:

- Steel tube ensures adequate mechanical strength for heavy duty loads
- Ultra thick abrasion and corrosion resistant 12mm thick HDPE sleeve
- HDPE contains carbon black increasing ultra violet resistance
- Steel and HDPE tube combination provides significantly reduced weight
- The bearing housing effectively locks the HDPE tube in position preventing movement along the steel tube
- Minimum "C dimension" decreases load induced shaft deflection
- Unique large diameter stoneguard with integral labyrinth design minimises possibility of being jammed by spilt material, and provides additional protection from water and dust

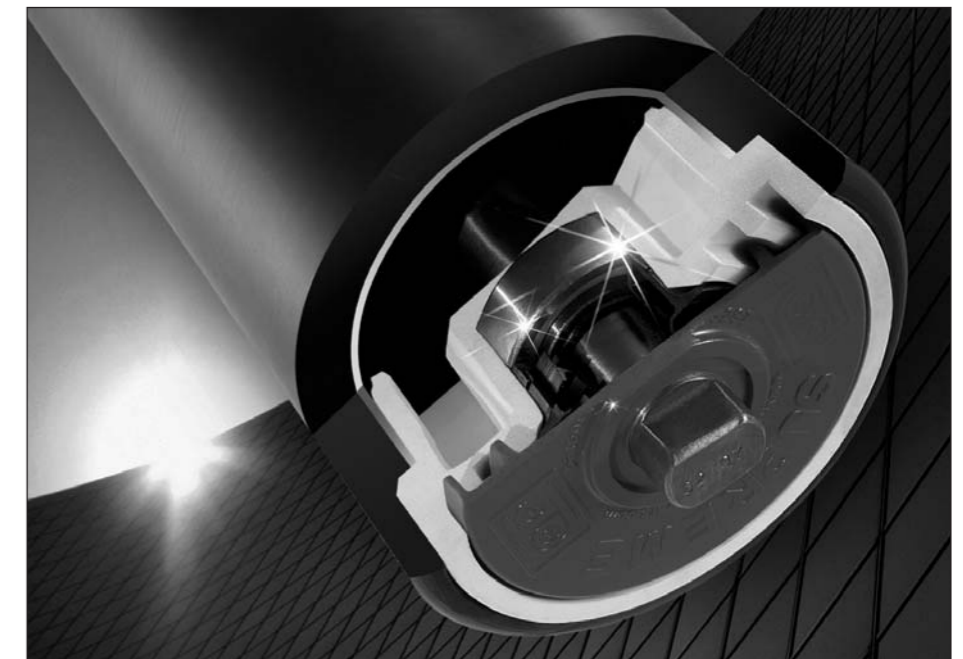
- Multi part labyrinth seal protects the bearing from ingress of contaminants
- Ultra low running resistance and break away mass reduces power consumption for start up and continuous operation
- Machined finish ensures LOW run-out, minimizing vibration and noise emission
- Castellated HDPE tube is a tight interference fit on the steel tube

Typical applications

- Mining – Platinum, Copper, Uranium, Iron Ore, Gold, Diamonds, Sand
- Coal Process Plants
- Coal Fired Power Stations
- Import/Export Terminals
- Belt scales
- Aluminium Smelters
- Steel Plants
- Fertilizer Plants

Programme of production

	SPRM / 2	SPRM / 3	SPRM / 5
shaft ø mm	25	25	30
bearings	6205	6305	6306
Diameter ø mm	127, 133, 152, 159	127, 133	152, 159

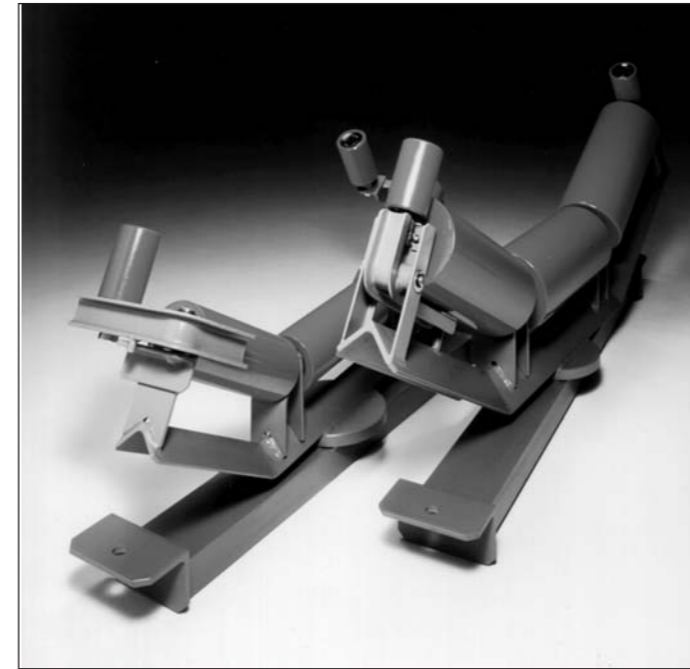
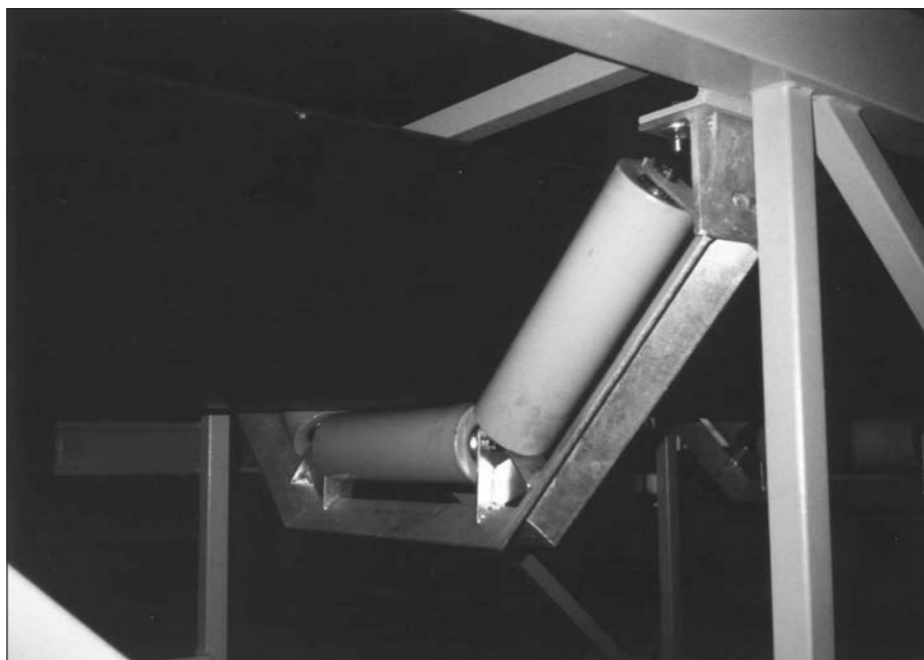
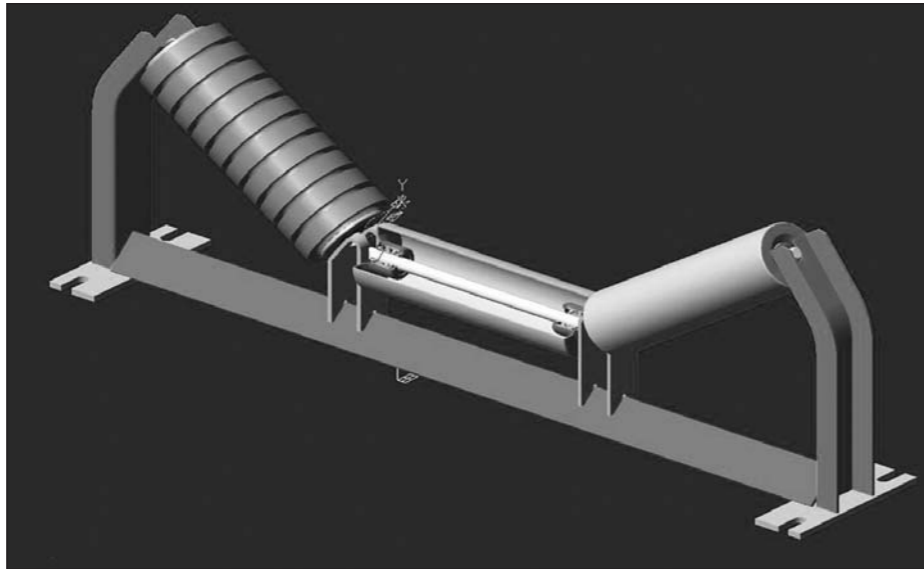


Special Applications

With belt widths and speeds increasing to cope with the higher tonnages that are now being demanded, the call for the design of high-duty and special purpose sets has also increased.

Our experience within Rulmeca enables us to put forward bespoke designs to work with unusual and demanding applications where standard equipment would not normally fit. These can come in the guise of 2, 3, 4, and 5 roll trough sets, garlands, and 2 or 3 roll return sets.

We utilise CAD in the design of special transoms, and when coupled with the correct specification of roller needed from the vast range of sizes available, we can offer, specify and guarantee for each individual application.



Where there are poor loading conditions or indeed where the belt itself is in a poor condition, the tracking of trough belts can sometimes prove troublesome.

An answer in many cases is the fitment of self-aligning or self-centralising sets which can be used on both long and short conveyor stretches. These units work over a central slewing ring mechanism along with guide rollers or brake rollers to keep the belt in line and therefore reduce spillage and undue wear.

Heavier loads and higher speeds can be catered for by providing wider sets with multiples of rollers to spread the load over more bearings. The use of 5 rollers can also enhance the control of spillage by allowing higher wing roller angles.





Motorized Pulleys for Belt Conveyors

General Description

The Rulmecca Motorized Pulley was first produced in 1953 specifically for belt conveyor systems.

The aim was to produce an extremely compact, totally enclosed and highly efficient belt conveyor drive, resistant to dust, water, oil, grease or harmful substances. A Motorized Pulley which would be quick and simple to install and would require virtually no maintenance.

These aims were achieved and today the Rulmecca Motorized Pulley is considered to be one of the most reliable and effective belt conveyor drives available throughout the world.

The Motorized Pulley is a highly efficient geared motor drive, which is hermetically sealed within a steel cylindrical shell.

The shell, which is usually crowned to ensure central belt tracking, is fitted with bearing housings incorporating precision bearings, double lipped seals and rotates about a static pair of shafts.

The motor stator is fixed to the shafts and the motor winding cables pass through one of the shafts, eliminating the need for slip rings and brushes.

The squirrel cage induction motor, manufactured in steel laminate, is machined concentric to high tolerances and designed to give 200% starting torque for 3 phase versions.

The rotor pinion is coupled directly to the gearbox.

The gearbox transmits torque to the shell through a geared rim and provides a highly efficiency motor with very little frictional losses.

The Motorized Pulley is oil filled, which acts as both a lubricant and coolant. Heat is dissipated through the shell and the conveyor belt.

All vital parts are CNC machined!

The Rulmecca Motorized Pulley is supplied as standard with:

- Machined mild steel crowned shell.
- Electric motor manufactured in accordance with IEC 34-1 (EN60034-1), (VDE 0530).
- Class F insulation according to IEC 34-1 (EN60034-1), (VDE 0530).
- Most international voltages.
- Standard voltages supplied with $\pm 10\%$ tolerance in accordance with IEC 38.
- Factory oil filled and tested.
- Degree of protection IP66/67 (EN60034-1).

Rulmecca Motorized Pulleys are manufactured according to the Council Directives of the European Communities.

The CE-marking is according to Directive 73/23/EEC relating to electrical equipment and according to Directive 89/336EEC relating to electrical magnetic compatibility and amendments.



Standard Range of Pulley sizes

Shell Diameter	Reference	Power Range (kW)	Speed Range (Mtr/sec)
138	138i	0.1 to 1.0	0.05 to 1.25
165	165i	0.11 to 2.2	0.06 to 2.00
216	220M/220H	0.37 to 5.5	0.13 to 2.50
320	320L/320M/320H	0.75 to 11.0	0.13 to 2.50
400	400L/400M/400H	2.2 to 15.0	0.16 to 3.15
500	500L/500M/500H	2.2 to 22.0	0.20 to 3.15
630	630M/630H	5.5 to 55.0	0.63 to 4.00
800	800M/800H	22.0 to 132.0	1.25 to 4.50
1000	1000H	160.0 to 250.0	2.50 to 5.50

Please contact Rulmecca for options and advice on the following;

- Rubber or Ceramic lagging
- Rust free and stainless steel options
- Brakes and backstops
- Special electrical and temperature requirements
- Any other special environments or applications you would like us to consider.

Alternatively, please request our separate Motorized Pulley catalogue for more information.



Motorized Pulleys for Belt Conveyors

Features and Benefits of Rulmeca Motorized Pulleys

Purpose-built design

The Rulmeca Motorized Pulley has been specifically designed for belt conveyors.

Totally enclosed

The motor, gearbox and bearings are totally enclosed and sealed inside a steel shell; therefore they are unlikely to fail due to harmful environmental conditions such as water, dust, grit, chemicals, grease, oil, etc.

Space saving design

Because the drive unit and the bearings are mounted inside the Motorized Pulley shell, it takes up much less room than a conventional drive. No need for costly extras like chains, v-belts, couplings, bearings, support structure and special guarding.

Safety

The Rulmeca Motorized Pulley is probably one of the safest drives available because the motor is completely enclosed and the external shafts are always stationary. The only moving external part is the Pulley shell.

Low purchasing and installation cost

The Rulmeca Motorized Pulley is quite often less expensive than a conventional drive because it has fewer parts, which reduces conveyor design and purchasing costs. It is also much quicker and easier to install – certainly less than a quarter of the time needed to fit an exposed system.

Low maintenance cost

The end user also benefits from the Rulmeca Motorized Pulley, because it requires no maintenance other than the recommended oil change every 10.000 hours. In other words, there are almost 5 years between oil changes based on an 8-hour/day 5-day working week.

Efficiency

The Rulmeca Motorized Pulley usually has a much higher efficiency from electrical motor to shell (pulley face) than conventional drives, because it has fewer frictional losses, and therefore efficiencies of up to 97% can be achieved.

Cleanliness

Because the Rulmeca Motorized Pulley is

totally enclosed, it cannot contaminate any special conveyed materials or items such as electrical components; plastics and any other materials that must be kept perfectly clean during handling.

Aesthetic appearance

If installed correctly the Rulmeca Motorized Pulley always looks good. Due to its compact size and smooth lines, quite often the Motorized Pulley is out of sight, because it is hidden within the conveyor frame.

Thermal Protection

All three phased Rulmeca Motorized Pulleys are protected by our thermal protection switch. This heat sensitive bi-metal strip is built into the motor windings to protect the motor from overheating. The thermal protector must be connected to a normally closed circuit.

Weight saving and distribution

Often the Rulmeca Motorized Pulley is lighter than conventional drives and often it is possible to therefore reduce the cost of the conveyor structure. Weight distribution is even within the conveyor frame.

Variable frequency converters

All Rulmeca Motorized Pulleys with 3 phase motors are easily controlled by variable frequency invertors working in the 15 Hz to 65 Hz frequency range.

Fewer parts

A Rulmeca Motorized Pulley consists of the drive and two fixing brackets! Conventional drives can require up to 8 or more separate components, most of which have to be purchased from different suppliers or manufactured specially.

Low noise

Thanks to the totally sealed enclosure and high quality gears, the Rulmeca Motorized Pulley runs almost at a whisper – a very important fact in today's modern site and plant environments.

The Rulmeca Motorized Pulley – the ideal drive unit for all conveyors...

"Fit it and forget it"



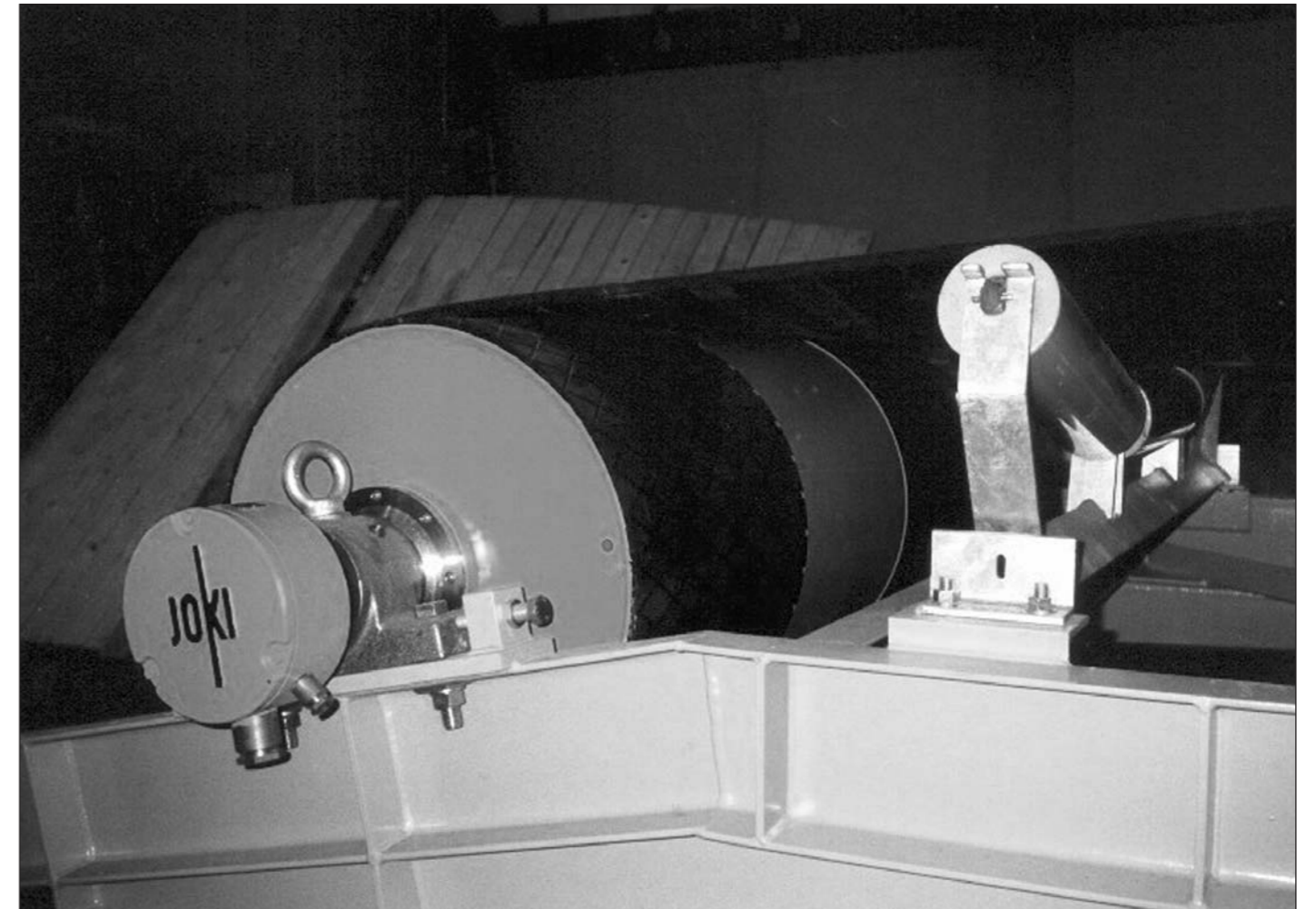
Crushing & Screening



Potash & Fertilizer



Recycling



Sea Dredged Aggregates



Cement & Batching Plants



Chemical Fertilizers

Conveyor Covers

As regulations to control environmental conditions become more stringent, the need to enclose conveyors and minimise noise and dust release to the atmosphere has increased. The use of conveyor covers has the added benefit of;

- Protecting the material carried from contamination
- Protects the belt from the sun and bad weather
- Provides better health and safety conditions for operators

Fitting Rulmecca conveyor covers has the further advantages of;

- Being light, yet rigid and easy to fit to most existing structures
- Less cost than other systems or materials
- Less maintenance
- Has many options/different arrangements such as inspection covers, hinged sections and various quick release fittings
- Provides a better integration into the landscape

Conveyor Covers in Steel



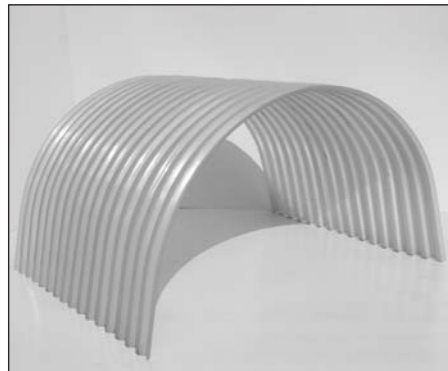
These covers are made from galvanised sheet steel corrugated sections in usable pitches of 1064mm.

They are self supporting, safe, easy to install and adjustable to almost any structure.

On request they can be supplied in other materials or finished with special paint.

They are available for all belt widths and supporting structure and can be supplied with opening windows for inspection, as well as removable sections and ventilated covers for hot environmental conditions. They are maintenance free.

Conveyor Covers in PVC



Plastic covers are made of pre-formed anti-shock, neutral colour, transparent PVC in usable pitches of 1050mm. Thanks to the characteristics of the material, they are light, transparent, anti-corrosive and with a smooth surface. Above all they are easy to adapt to any conveyor.

Apart from their resistance to corrosion they are classified "NON FLAMMABLE" to DIN 4102. Notwithstanding this property of self-extinguishing, the limit to the use of PVC covers in hot areas should not exceed 65° C.

For full details of all types and styles, please request separate cover catalogue

