KOMATSU

Underground Conveyor Systems

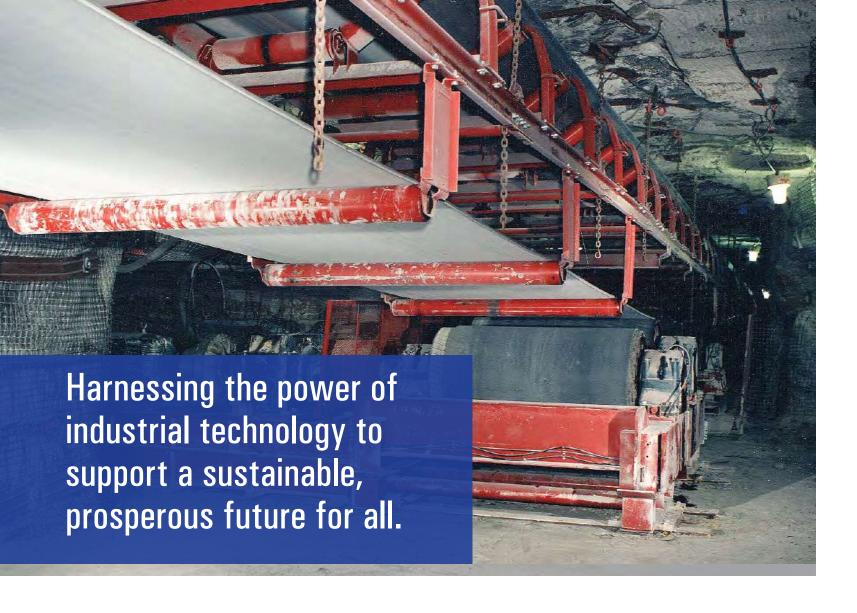












Why Komatsu?

Because it's all about you. Leveraging decades of expertise and a proven track record in safety, quality and reliability, we're committed to helping YOU reach YOUR goals. The equipment, technologies and innovative solutions we deliver are built upon our rich history and a visionary focus on the work sites of tomorrow.

As we continue to develop products that advance mining, foster sustainability and promote safety, we find our inspiration in the Gemba.

Gemba means "the real place" or "the place where value is created" — and for our customers, value is at the work site. Spending time immersed in your operation has equipped and inspired us to provide effective, real-world mining solutions.

Why Komatsu? Because at Komatsu, we are committed to your success and zero harm for all.

Joy conveyor equipment

Joy conveyor products are utilized in some of the most productive material handling applications worldwide. Our conveyor systems are designed for optimal availability and reliability.

A material handling system, simple or complex, will perform only as well as its component parts, the engineering that went into its design, and its installation. At Komatsu, we strive to make sure that all products work together at the highest levels. We are committed to supplying technologically-advanced equipment backed by a dedication to service.

Conveyor structure



Terminals

Joy terminals are designed and manufactured for the most grueling mining conditions. Critical items such as pulleys, shafts and bearings are designed for each application by experienced Komatsu engineers. Power train components, such as motors, gear reducers and couplings are sized with ample service factors.

All-electric winch

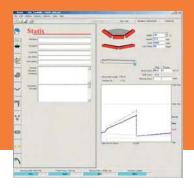
Durable, reliable and compact

When properly equipped, the all-electric winch design allows a user to easily change the amount of rope pull being applied to the take-up carriage or belt storage unit. The All-Electric Winch is "smart" and can adjust to dynamic load conditions found in many complicated conveyor systems. It allows the motor to reach full torque at zero speed. These features help the winch to maintain proper belt tension in a wide range of loading conditions and belt speeds.

Engineering expertise

Conveyor system simulation software

Komatsu utilizes Statix™ and
Dynamix™ proprietary conveyor
simulation software to model system
behavior under a wide range of
loading conditions for both new
and existing conveyor systems.





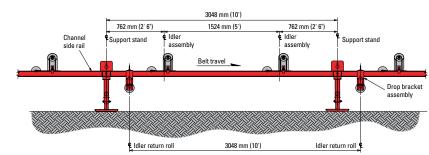


Typical structure arrangements

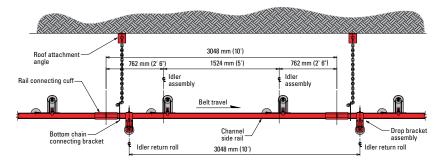
Mine duty rigid conveyors

With the introduction of high production longwall mining many years ago, the need developed for a conveyor structure that was more sturdy, yet still portable enough to be installed quickly. The Joy mine duty rigid conveyor, with a boltless construction, structural channel sidemember, was designed to fill this need.

Floor mounted rigid structure



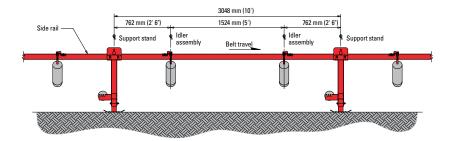
Roof mounted rigid structure



Catenary conveyors

Longwall mining requires conveyor structure that is extremely portable due to the rapid rate of extraction during the longwall retreat. This structure must be very rugged in order to withstand the heavy loading encountered in longwall mining. The Joy hinged-handle catenary structure is designed to meet this need. The design uses rigid side rails made of round tubing. In addition, the number of loose parts is minimized to reduce losses while moving from one mining panel to another.

Catenary structure



Conveyor structure

Troughing idlers are supplemented by rubber disc impacts, selfaligning idlers, transition idlers and returns of corresponding sizes in flat and v-return configurations.

Idlers — uncompromised quality

HC Series – The HC Series utilizes 19 mm (¾") modified geometry, tapered roller bearings. The advanced five-stage seal design helps to achieve long-life operation without relubrication. Series LR-C frames with HC rolls are offered in offset configurations from 762 mm (30") belt width, with 102 mm (4") and 127 mm (5") diameter rolls. Series OR-C frames are offered from 762 mm (30") belt width with 127 mm (5") and 152 mm (6") diameter rolls.

HD Series – The HD series is a heavy-duty idler meeting the requirements for today's higher capacity applications. Series OR-C frames are offered in offset configurations, from 914 mm (36") belt width, in 35° and 45° troughing angles with 127 mm (5"), and 152 mm (6") diameter rolls equipped with 19 mm (¾") modified geometry tapered roller bearings. Our patented, engineered shaft is available on all return rolls and 1067 mm (42") belt width and wider center troughing rolls.

HD-1500 – The HD-1500 is a heavy-duty version of our HD series for today's higher capacity applications up to 1500 lb. load rating.

HX series – HX series idlers are available with "open" or "2RS factory sealed" deep-groove ball bearings for CEMA D and CEMA E applications. The HX-30 idler incorporates a 6306 (30 mm) bearing that meets and exceeds CEMA D specifications. The HX-40 idler incorporates a 6308 (40 mm) bearing that meets and exceeds CEMA E specifications. Our patented, engineered shaft is available on all return rolls and on 1067 mm (42") belt width and wider troughing rolls. Both idlers are paired with a heavy-duty OR-C frame design incorporating die-formed end brackets to increase rigidity. For more information see page 24.

SDX-2200 super-duty idler – SDX-2200 series OR-C idlers are offered in 35° and 45° troughers. Both sealed and regreasable designs are available. The SDX-2200 idlers are furnished with 152 mm (6") or 178 mm (7") diameter rolls equipped with 32 mm (11/4") tapered roller bearings, which provide generous load and thrust capacities. The combination labyrinth and contact seal has proven to be far superior to the cartridge type or conventional labyrinth seal utilized in many so-called heavy duty idlers. Our patented, engineered shaft is available on all return rolls and on 1067 mm (42") belt width and wider troughing rolls.

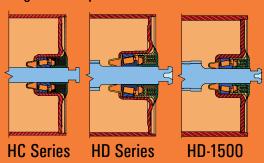
HXF-40 super high-capacity idler HXF- 40 series idlers are offered with our in-line design or with our OR-C frame design from 60" to 120" BW. For more information see page 24.



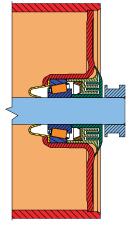
HC & HD series idler rolls

Manufacturing breakthrough...

HC and HD idler rolls are produced using proprietary manufacturing and assembly techniques that control the bearing end-play setting to precise engineered specifications.



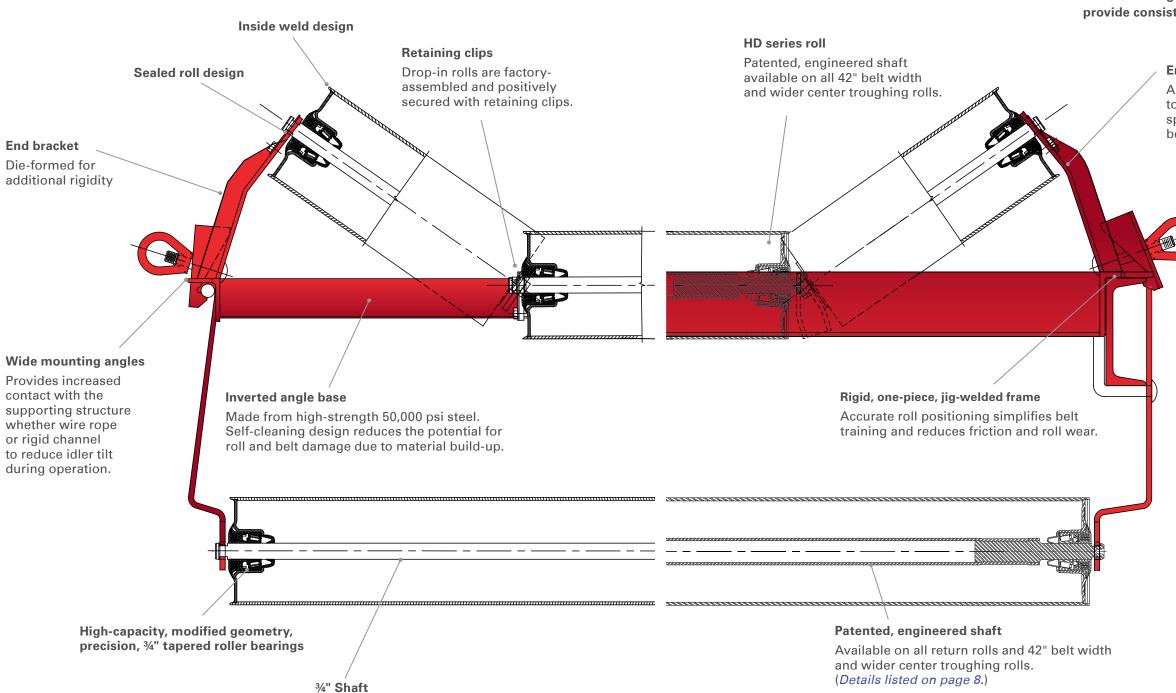
HC and HD series idlers are available with a press-on nut.



HC shown above

HC and **HD** series

HC series HD series



HC and HD rolls are produced using proprietary manufacturing and assembly techniques, which provide consistency roll to roll.

End bracket design

Ample clearance is provided to reduce the potential for spilled material to wedge between roll and end bracket.

The HC and HD series idler meets the requirements for today's mining applications.

Idler frames are jig-welded for accuracy with formed end brackets and heavy cross angles of high-strength steel. Rolls are positively secured to the frame with retaining clips.

Note: For more information refer to HC and HD Series idler rolls shown on page 8. Catalog subject to change or correction without notice.

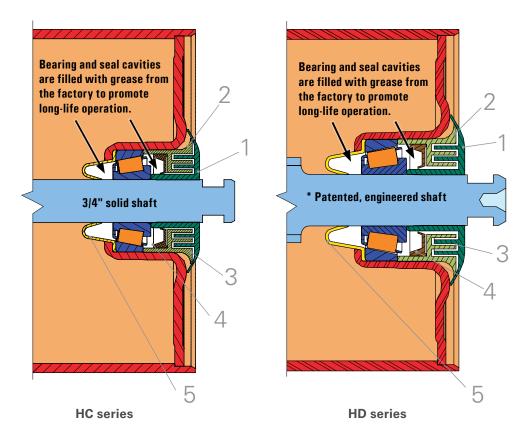
HC and **HD** series

HC and HD series rolls are produced using proprietary manufacturing techniques that allow adjustment of the bearing endplay setting to precise engineered specifications. These proprietary methods provide consistency roll-to-roll. We utilize 19 mm (¾") modified geometry, automotive class, tapered roller bearings that provide more bearing contact area than ball bearings, which spreads the load over a larger area and results in more than twice the $L_{\rm 10}$ life. This relieves stress and enhances bearing life under heavy loads and impact.

1. An exterior shield provides an initial barrier to divert contaminants away from the bearing cavity

- 2. A **flinger** employs the natural centrifugal forces of a rotating idler roll to redirect potential contaminants away from the bearing cavity.
- 3. A grease-filled, horizontal labyrinth seal retards lateral movement of contaminants.
- A contact lip seal provides additional sealing protection and keeps lubricant in the bearing cavity.
- A rear seal provides added protection for the grease reservoir.

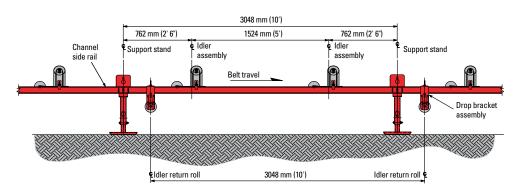
Advanced five-stage seal design



^{*} Available on all return rolls and on all 42-inch belt width and wider center troughing rolls.

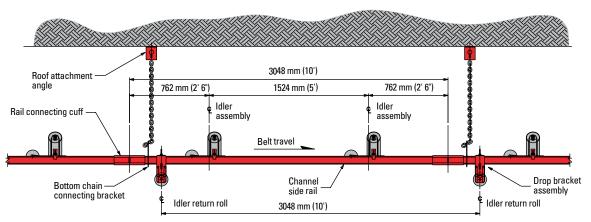
Conveyor structure

Floor mounted rigid structure



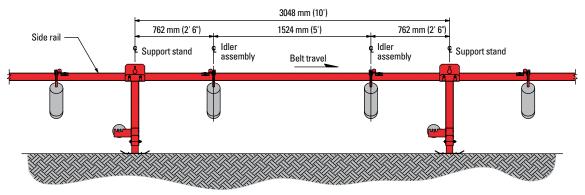
Other idler spacing available upon request. Wire rope arrangements also available.

Roof mounted rigid structure



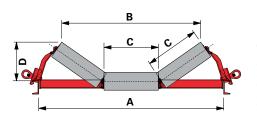
Other idler spacing available upon request. Wire rope arrangements also available.

Catenary structure



Other idler spacing available upon request.

HC and **HD** series idlers





HC series 35° LR-C 5" diameter rolls* (single crossmember)

47¹/₄

531/4

59¹/₄

47¹/₄

531/4

59¹/₄

Part number

69AHC541-36

69AHC541-42

69AHC541-48

Part number

69AHC538-36

69AHC538-42

69AHC538-48

BW	Part number	Α	В	С	D
36	69AHC441-36	47 ¹ / ₄	357/8	14 ¹ / ₄	107/16
42	69AHC441-42	53 ¹ / ₄	423/4	16 ¹ / ₄	1011/16
48	69AHC441-48	591/4	47 ³ / ₈	181/4	121/4





 ■	В	—— - -
<u> </u>	C	C
	>	
	Α	

IC	series	35°	LR-C 4"	diameter	rolls*	(single	crossmem	oer)

BVV	Part number	А	В	C	D
36	69AHC441-36	47 ¹ / ₄	357/8	14 ¹ / ₄	107/16
42	69AHC441-42	53 ¹ / ₄	423/4	16 ¹ / ₄	1011/16
48	69AHC441-48	591/4	47 ³ / ₈	181/4	12 ¹ / ₄

353/16

42³/₁₆

4611/16

355/16

4211/32

47⁵/₁₆

D 10⁷/8

11¹/₈

1211/16

D

11³/₁₆

111/2

1213/16

D

11⁷/₈

13³/₁₆

14⁵/₁₆

15¹/₂

16¹/₄

18¹/₄

201/4

22¹/₄

14¹/₄

16¹/₄

18¹/₄

14¹/₄

16¹/₄

18¹/₄

HC series 4" diameter return rolls*

BW	Part number	А			
36	69AHC410-45	45			
42	69AHC410-51	51			
48	69AHC410-57	57			

|--|

3W	Part number	А
36	69AHC610-45	45
42	69AHC610-51	51
48	69AHC610-57	57

HD series 6" diameter return rolls**

BW	Part number	Α
36	72AHD610-42	45
42	72AHD610-48	51
48	72AHD610-54	57
54	72AHD610-60	63
60	72AHD610-66	69

HC series 5" diameter return rolls*

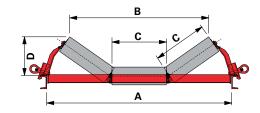
BW	Part number	Α
36	69AHC510-45	45
42	69AHC510-51	51
48	69AHC510-57	57

HD series 5" diameter return rolls*

BW	Part number	Α
36	72AHD510-42	45
42	72AHD510-48	51
48	72AHD510-54	57
54	72AHD510-54	63
60	72AHD510-66	69

Part numbers for 4" and 5" diameter rolls are 9 gauge shell thickness. Add '7' to the part number for 7 gauge. Add '4' to the part number for 1/4" wall. Example: 69AHC410-457 for 7 gauge.

** Part numbers for 6" diameter rolls are 8 gauge shell thickness. Add '4' to the part number for 1/4" wall shell thickness.



HC series 35° OR-C 6" diameter rolls** (box frame)

HC series 35° OR-C 5" diameter rolls* (box frame)

			. ,		
BW	Part number	Α	В	С	D
36	69AHC638-36	47 ¹ / ₄	3411/16	14 ¹ / ₄	11 ⁹ / ₁₆
42	69AHC638-42	53 ¹ / ₄	41 ²⁵ / ₃₂	16¹/₄	11 ⁷ / ₈
48	69AHC638-48	59¹/₄	463/4	181/4	137/32

3" channel brackets Drop Part number 83/4 78AU18987-0308 121/4 78AU18987-0312 16 78AU18987-0316

5″	channel	brackets

	Drop	Part number
8	8¾	78AU19240-0508
2	12	78AU19240-0512
6	16	78AU19240-0516

Universal mine duty rigid drop bracket assembly



HD series 35° OR-C 5" diameter rolls* (box frame)

HD series 35° OR-C 6" diameter rolls** (box frame)

BW	Part number	А	В	С	D	
42	72AHD538-42	531/4	42	16 ¹ / ₄	11 ⁷ / ₁₆	
48	72AHD538-48	59 ¹ / ₄	4631/32	1 8¹/₄	12 ³ / ₄	
54	72AHD538-54	65 ¹ / ₄	52 ¹ / ₄	201/4	13 ⁷ / ₈	
60	72AHD538-60	71 ¹ / ₄	57 ¹⁵ / ₃₂	221/4	15 ¹ / ₁₆	

531/4

591/4

651/4

71¹/₄

7 gauge. Add '4' to the part number for 1/4" wall. Example: 69AHC441-367 for 7 gauge.

Part numbers for 4" and 5" diameter rolls are 9 gauge shell thickness. Add '7' to the part number for

** Part numbers for 6" diameter rolls are 8 gauge shell thickness. Add '4' to the part number for 1/4" wall

463/8

56⁷/8

51¹¹/₃₂

4" channel brackets

Drop	Part number
8¾	78AU18987-0408
121/4	78AU18987-0412
16	78AU18987-0416

6" channel brackets

r	Drop	Part number
08	12	78AU19240-0612
12	14	78AU19240-0614
16	16	78AU19240-0616

	ргор	Part number
8	12	78AU19240-0612
2	14	78AU19240-0614
6	16	78AU19240-0616

Drop Part number	
8¾	78AU18973-0308
121/4	78AU18973-0312
16	78AU18973-0316

3" channel brackets

4" channel brackets

Drop	Part number
8¾	78AU18973-0408
121/4	78AU18973-0412
16	78AU18973-0416

5" channel brackets

Drop	Part number
121/4	78AU18973-0512
16	78AU18973-0516

Drop	Part number
121/4	78AU18973-051
16	78AU18973-051

shell thickness.

Part number

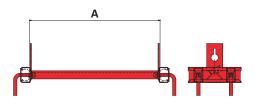
72AHD638-42

72AHD638-48

72AHD638-54

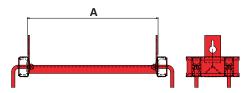
72AHD638-60

Spreader bars



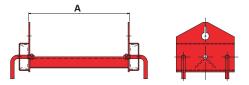
3" spreader bar

BW	Spreader bar part number	А	Wt
30	75DU22824-30	411/4	21 lbs.
36	75DU22824-36	471/4	23 lbs.
42	75DU22824-42	531/4	25 lbs.
48	75DU22824-48	591/4	27 lbs.
54	75DU22824-54	651/4	29 lbs.
60	75DU22824-60	71 ½	31 lbs.



4" spreader bar

BW	Spreader bar part number	А	Wt
30	75DU19385-30	411/4	28 lbs.
36	75DU19385-36	471/4	30 lbs.
42	75DU19385-42	531/4	31 lbs.
48	75DU19385-48	591/4	33 lbs.
54	75DU19385-54	651/4	34 lbs.
60	75DU19385-60	71 ½	36 lbs.



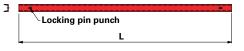
5" spreader bar

BW	Spreader bar part number	А	Wt
42	75AU16159-42	531/2	47 lbs.
48	75AU16159-48	591/2	49 lbs.
54	75AU16159-54	651/2	51 lbs.
60	75AU16159-60	71 ½	53 lbs.

Rails and roof hung accessories

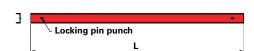
3" rails

Section length	Stringer part no.	Dimensions (L)	Wt
8' 0"	75AU21513-08	7 ' 11½"	28 lbs.
10' 0"	75AU21513-10	9' 11/2"	35 lbs.
12' 0"	75AU21513-12	11' 11½"	42 lbs.



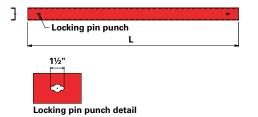
4" rails

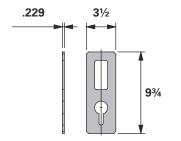
Section length	Stringer part no.	Dimensions (L)	Wt
8' 0"	75AU18813-08	7 ' 11½"	36 lbs.
10' 0"	75AU18813-10	9' 11½"	45 lbs.
12' 0"	75AU18813-12	11' 11½"	54 lbs.

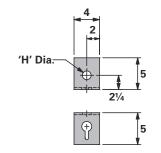


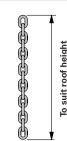
5" rails

Section length	Stringer part no.	Dimensions (L)	Wt
8' 0"	75AU16161-08	7 ' 11½"	54 lbs.
10' 0"	75AU16161-10	9' 11½"	67 lbs.
12' 0"	75AU16161-12	11' 11½"	81 lbs.









Bottom chain connection bracket

Part number	Channel size
75AU6032	3"
75AU6233	4"
75HU14149	5"



Part number	'H' Diameter
75A993-100	1
75A993-106	1 ³ / ₈
75A993-110	1 ⁵ / ₈

1/4" plain hanger chain

Part number	Length
10K50001-0400	1/4" x 4' long
10K50001-0500	¹ / ₄ " x 5' long
10K50001-0600	1/4" x 6' long

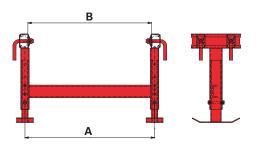
5/16" plain hanger chain

Part number	Length
10K50002-0400	⁵ / ₁₆ " x 4' long
10K50002-0500	⁵ / ₁₆ " x 5' long
10K50002-0600	⁵ / ₁₆ " x 6' long

13

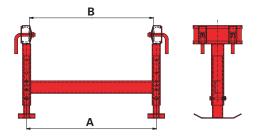
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Support stands



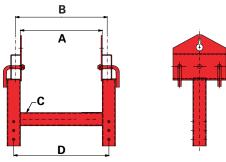
Support stand for 3" channel

BW	Stand assembly part number	Upper support part number	А	В
30	75AU22821-30	75DU22822-30	4 ⁵ / ₈	411/4
36	75AU22821-36	75DU22822-36	485/8	471/4
42	75AU22821-42	75DU22822-42	54 ⁵ / ₈	531/4
48	75AU22821-48	75DU22822-48	605/8	591/4
54	75AU22821-54	75DU22822-54	665/8	651/4



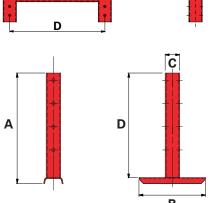
Support stand for 4" channel

BW	Frame weldment part number	Upper support part number	А	В
30	75AU19388-30	75DU19389-30	42 ⁵ / ₈	411/4
36	75AU19388-36	75DU19389-36	485/8	47 1⁄ ₄
42	75AU19388-42	75DU19389-42	54 ⁵ / ₈	531/4
48	75AU19388-48	75DU19389-48	605/8	591/4
54	75AU19388-54	75DU19389-54	665/8	651/4



Support stand for 5" channel

BW	Frame weldment part number	А	В	С	D
48	75DU19988-4830	59½	61¾	59 ⁷ / ₁₆	621/2
54	75DU19988-5430	65½	67¾	65 ⁷ / ₁₆	681/2
60	75DU19988-6030	71 ½	73¾	71 ⁷ / ₁₆	741/2
72	75DU19988-7230	831/2	85¾	837/16	861/2



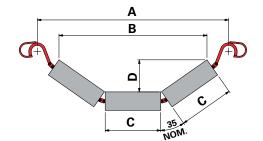
Foot weldment for 5" channel

Weldment part number	Upper support part number	А	В	С	D
75AU9990-30	75AU9991-30	30	26	4 ³ / ₄	18

Catenary idlers, stands and rails

HC series 4" diameter catenary idler

Part number	А	В	С	D
69A5817-30	41	30	11	61/4
69A5817-36	47	3513/16	13	7 ¹ / ₁₆
69A5817-42	53	41 ¹ / ₈	15	7 ¹³ / ₁₆
69A5817-48	59	47	17	89/16
	69A5817-36 69A5817-42	69A5817-30 41 69A5817-36 47 69A5817-42 53	69A5817-30 41 30 69A5817-36 47 35 ¹³ / ₁₆ 69A5817-42 53 41 ¹ / ₈	69A5817-30 41 30 11 69A5817-36 47 35 ¹³ / ₁₆ 13 69A5817-42 53 41 ¹ / ₈ 15



Also available in CEMA D. Consult factory for part numbers.

HC series 5" diameter catenary idler

BW	Part number	А	В	С	D
30	69A5810-30	41	295/16	10 ⁷ /8	61/8
36	69A5810-36	47	35 ³ / ₁₆	12 ⁷ / ₈	7
42	69A5810-42	53	41 ¹ / ₈	14 ⁷ / ₈	7 ¾
48	69A5810-48	59	47	16 ⁷ / ₈	87/16

Also available in CEMA D. Consult factory for part numbers.

5" diameter catenary return

BW	Part number	Е
30	78AU9998-3506	35 ³
36	78AU9998-4106	41 ³
42	78AU9998-4706	47 ³
48	78AU9998-5306	53 ³

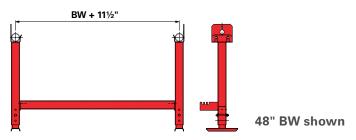
o Diameter Catenary return		
BW	Part number	Е
42	78AU14538-4706	47 ³ / ₈
48	78AU14538-5306	533/8
54	78AU14538-5906	59 ³ / ₈
60	78AU14538-6506	65 ³ / ₈



Also available in CEMA D. Consult factory for part numbers.

Catenary stands

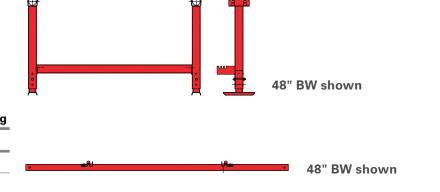
BW	Part number
36	75AU9984-3630
42	75AU9984-4230
48	75AU9985-4834



Catenary rails 3" diameter 7 gauge tubing

BW	Part number
3'	75AU10109
10'	75AU7409
5.0 9.03.1	21.11. 1.6.4

Other rail thicknesses are available, consult factory.



SDX-2200 series super-duty belt conveyor idlers

Adjusting nut

Provides additional protection to seal area and establishes a very precise bearing adjustment.

Positive hold down

Drop-in rolls are factory-assembled and positively secured with a sturdy 3/8" bolt.

External labyrinth seal

The unique roll head and nut designs are combined to produce — an extremely long path, close tolerance labyrinth seal.

Concentric rolls

Mechanical steel tubing cut and machined to rigid tolerances.

The SDX-2200 series idler is furnished with 6" or 7" diameter rolls equipped with 11/4" tapered roller bearings which provide

generous load and thrust capacities. The combination labyrinth and contact seal has proven to be far superior to the cartridge type or conventional labyrinth seal utilized in many so-called heavy-duty idlers. A patented, engineered shaft is

available on all return rolls and

SDX-2200 — super-duty idler

on 42-inch belt width and wider troughing rolls.

The SDX-2200 series idlers incorporate many desirable features into a single unit. For example, the nut surface in contact with the lip seal is burnished to a mirror finish to provide increased seal integrity. The labyrinth protrusion is also machined, providing a close tolerance seal when assembled. The right and left hand threads of the bearing adjusting nut provide infinite

bearing adjustment not possible

utilizing incremental adjustment.

with conventional construction

Smooth and rounded roll edges reduce the potential for belt damage

High-capacity, modified geometry, precision, 11/4" tapered roller bearings

Patented, engineered shaft

Available on all return rolls and on 42" belt width and wider troughing rolls. (See page 18 for details.)

SDX-2200 Series OR-C idlers are offered in 35° and 45° troughers with equal length rolls. Troughers are supplemented by rubber disc impacts, self-aligners, transitions and returns of corresponding sizes in steel, rubber, and urethane discs. Both sealed and regreaseable designs are available.

Rolls interchangeable

Wing and center rolls for a given belt width are interchangeable, reducing spare requirements and simplifying field service.

Ample cl

Ample clearance is provided to reduce the potential for spilled material to wedge between roll and end bracket.

End bracket design

Extra heavy, die-formed bracket

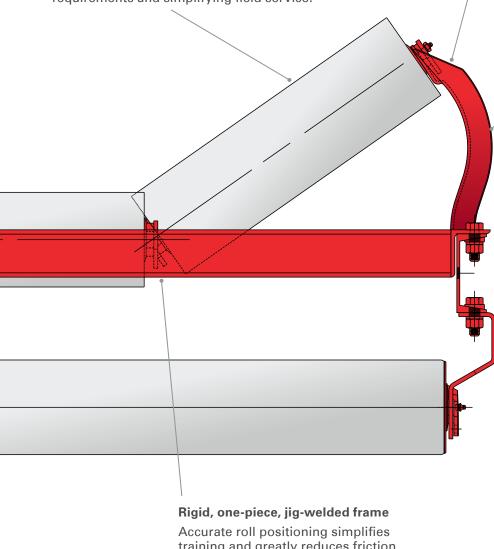
Designed with super wide base and direct foot mounting for increased rigidity and resistance to impact.

The SDX-2200 idler roll heads are heavy section, web-reinforced ductile castings that are precision machined for accurate roll and bearing fit. All machining is done in a single set-up to promote uniformity and dimensional accuracy. The heads are press fit into the rolls and positively locked into position by means of our groove-lock design. This approach provides a truly

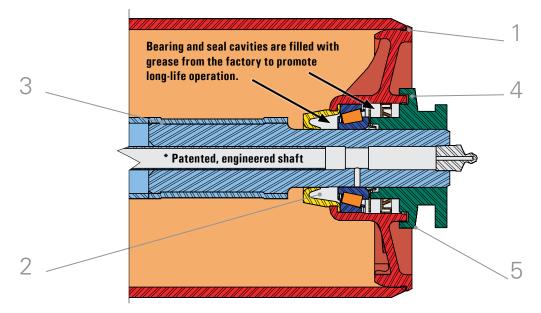
Idler frames are fabricated steel construction and are jig-welded for dimensional accuracy.

17

concentric, scale-quality roll.



training and greatly reduces friction and roll wear.



* Available on all return rolls and on 42-inch belt width and wider troughing rolls

The secrets of SDX-2200 superiority

1. Groove-lock connection of machined head and tube

Heads are press fit into the roll and positively locked into position by means of our unique groove-lock design. This approach provides a truly concentric, scale-quality roll assembly.

2. Relubrication system

Bearings are positively greased from one fitting on either side of the roll. The compensating flats provide a metered grease path which equally distributes lubricant to each bearing cavity. The grease enters behind the bearing, purges around the bearing, through the seal, flushing the bearing cavity of old grease and any contamination. The purpose of the positive purge of the bearing cavity is to prevent excessive back pressure which may blow seals or lock rolls.

3. Patented shaft design

Our patented, multi-piece shaft design includes a hollow tube center section and solid shaft ends that are machined to 11/4" diameter. The center tube sections are sized for high-capacity applications. By design, these shafts increase load capacity by decreasing shaft deflection and bearing misalignment.

4. Combination lip and labyrinth seal

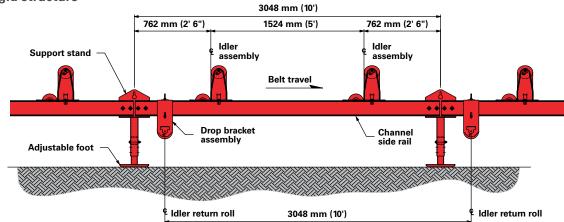
The combination of multiple labyrinths and a contact lip seal filled with grease has proven for decades to be the most effective seal for heavyduty service. The outer labyrinth is formed from mating machined ductile parts which contributes to a precise, close tolerance seal. The lip seal contacts a burnished mirror finish surface to provide increased seal integrity.

5. Heavy section cast ductile head and nut

The SDX-2200 Idler roll head and nut are heavy section, web-reinforced, ductile castings that are precision-machined for accurate roll and bearing fit. All machining is done in a single set-up to promote uniformity and dimensional accuracy.

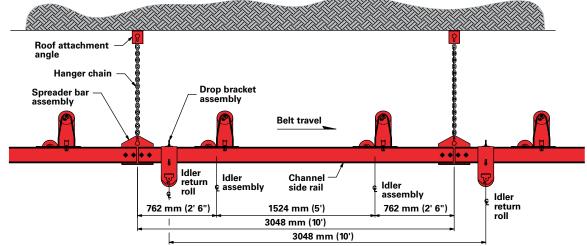
SDX-2200 series structure arrangements

Floor mounted rigid structure



Other idler spacing available upon request.

Roof mounted rigid structure



Other idler spacing available upon request

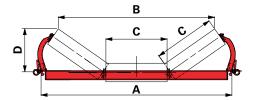


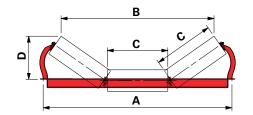
Floor mounted structure



Roof mounted structure

SDX-2200 idlers and return rolls





SDX-2200 35° OR-C 6" diameter rolls (box frame)

BW	Part number	А	В	С	D
54	73AU19664-54G	67¾	55 ¹³ / ₁₆	21¾	15 ³ / ₁₆
60	73AU19664-60G	73¾	62	23¾	16 ⁵ / ₁₆
72	73AU19664-72G	85¾	71 ⁵ / ₈	27 3⁄4	18¾

SDX-2200 35° OR-C 7" diameter rolls (box frame)

BW	Part number	Α	В	С	D
54	73AU14183-54G	67¾	55 ⁵ /8	21¾	15 ⁵ / ₁₆
60	73AU14183-60G	73¾	6015/16	23¾	16 ¹ / ₂
72	73AU14183-72G	85¾	71 ¹ / ₂	27¾	18¾

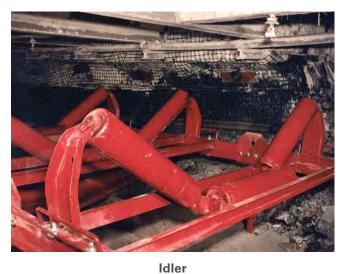
SDX-2200 6" diameter return rolls

BW	Part number	А
54	73ASDX610-60G	6" x 64"
60	73ASDX610-66G	6" x 70"
72	73ASDX610-78G	6" x 82"

SDX-2200 7" diameter return rolls

	BW	Part number	А
	54	73ASDX710-60G	7" x 64"
	60	73ASDX710-66G	7" x 70"
_	72	73ASDX710-78G	7" x 82"

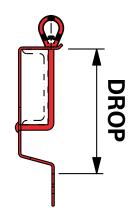
6" diameter idler rolls are furnished 8 gauge as a standard. 6" rolls are available in 1/4" wall shell thickness upon request. Troughing idlers are available with lifting handles.

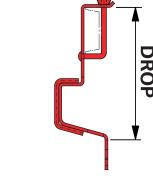


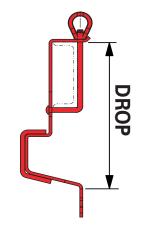


Return roll

SDX-2200 drop brackets and accessories







SDX-2200 5" channel drop bracket assembly

Drop	Part number	
10	78AK8451-0510	
12	78AK8451-0512	
14	78AK8451-0514	

Drop	Part number
12	73AU22064-0412
15	73AU22064-0415
16	73AU22064-0416

SDX-2200 4" channel drop bracket assembly

SDX-2200 5" channel drop bracket assembly Drop Part number 12 **12**¾ 73AU23064-0512 15 14 73AU23064-0514

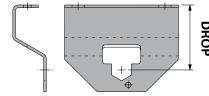
SDX-2200 6" channel drop bracket assembly

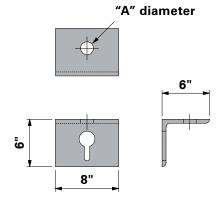
Drop	Part number
12	78AK8932-0612
14	78AK8932-0614

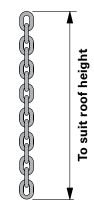
SDX-2200 5" channel drop bracket assen
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Drop	Part number
12	73AU22064-0512
15	73AU22064-0515

SDX-2200 6" channel drop bracket assembly Drop Part number 123/4" 73AU23064-0612 14 73AU23064-0614







SDX-2200 bolted drop bracket assembly

Drop	Part number
3¾	73AK7365-9

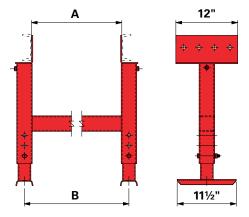
SDX-2200 roof brackets

A	Part number
1	75A9578-100
13/8	75A9578-106
1 ⁵ / ₈	75A9578-110

3/8" plain hanger chain

Part number	Length
10K50005-0400	3/8" X 4' Long
10K50005-0500	³/8" X 5' Long

Support stands



Upper support stand for 5" channel

BW	Part number	А	В
54	75DK9690-5422	65½	681/4
60	75DK9690-6022	711/2	741/4
72	75DK9690-7222	831/2	861/4

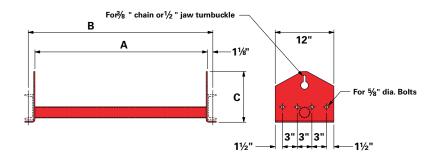
Upper support stand for 6" channel

BW	Part number	А	В
54	75AK9691-5422	651/2	681/4
60	75AK9691-6022	71 ½	741/4
72	75AK9691-7222	831/2	861/4

Part numbers are for upper support stands only. Foot attachment sold separately. Part number for foot attachment is 75A9990-30.



Accessories

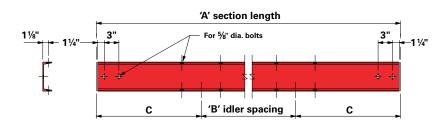


4" or 5" channel for roof hung spreader bar

BW	Part number	А	В	С
48	75DU12361-48	59 ¹ / ₂	61¾	10³/s
54	75DU12361-54	65 ¹ / ₂	67¾	10 ³ /s
60	75DU12361-60	71 ¹ / ₂	73¾	10 ³ /s
72	75DU12361-72	831/2	85¾	10 ³ /s

6" channel for roof hung spreader bar

BW	Part number	Α	В	С
48	75DU12669-48	59 ¹ / ₂	61¾	11³/ ₈
54	75DU12669-54	651/2	67¾	113/8
60	75DU12669-60	71 ¹ / ₂	73¾	11 ³ / ₈
72	75DU12669-72	831/2	85¾	11 ³ /8



5" bolted stringer rail

Part number	А	В	С
75AU15678	8' 0"	48	24
75AU15676	10' 0"	60	30

6" bolted stringer rail

Part number	А	В	С
75AU15679	8' 0"	48	24
75AU15677	10' 0"	60	30

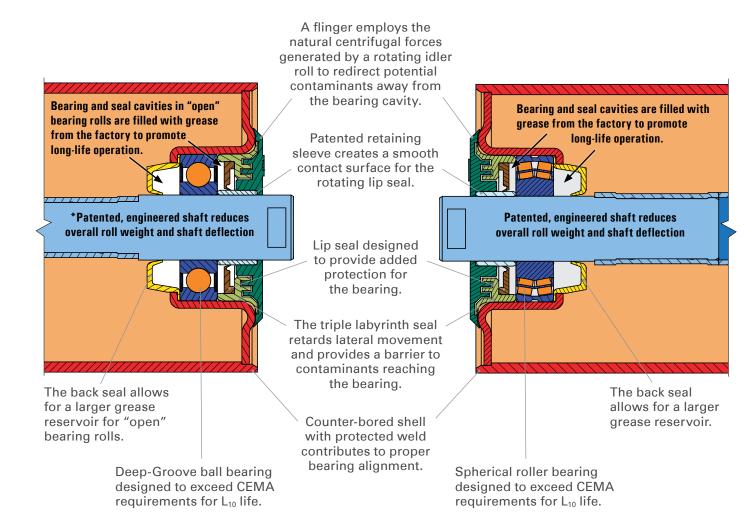
HX series idlers

HX series

30 mm and 40 mm deep-groove ball bearing idlers

HXF-40 series

Spherical roller bearing idlers



HX series idlers are available for CEMA D and CEMA E applications. 2RS factory sealed bearings are standard. Open bearings are available. Consult your Komatsu representative for the idler roll that will best meet your individual requirements.

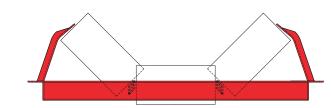
*Available on all HX series return rolls and on 42-inch belt width and wider troughing rolls.

The HXF-40 exceeds CEMA F idler load standards and is designed for today's super high-capacity operations. Applications include high tonnage mining and industrial operations, mining operations with overburden removal and underground longwall coal mining operations that want to more closely match tonnage rates to highly productive longwall mining machines.

Additional idler options

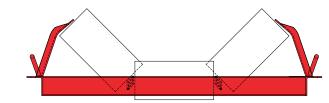
Idler designs are also available in a variety of options not shown in this catalog. Several of the most popular items are listed below:

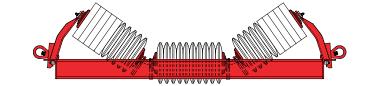
- Bolted construction idlers
- Idlers with handles
- Self-aligning idlers
- Transition idlers
- Rubber disc impact idlers
- Self-aligning return idlers
- V-return idlers



OR-C frame with bolted construction

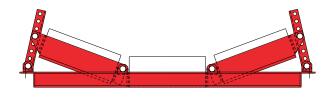
V-return idler

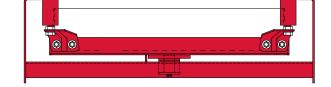




OR-C frame with handles

Regreasable impact idler





Transition idler

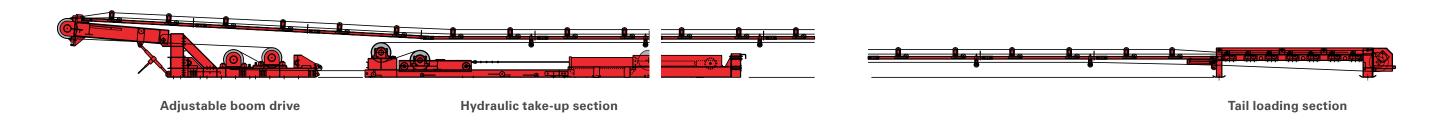
Self-aligning return idler

All-electric winch

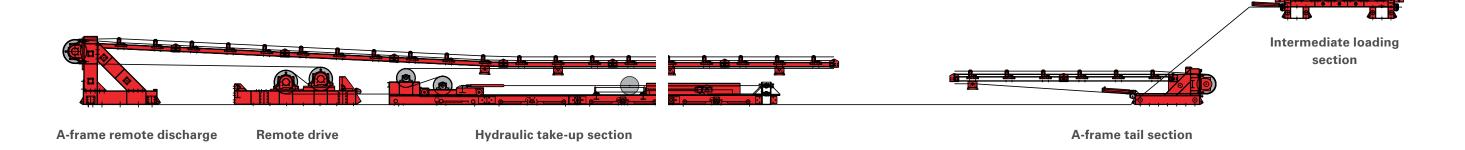
27

Typical conveyor arrangements

Drive arrangement with adjustable boom

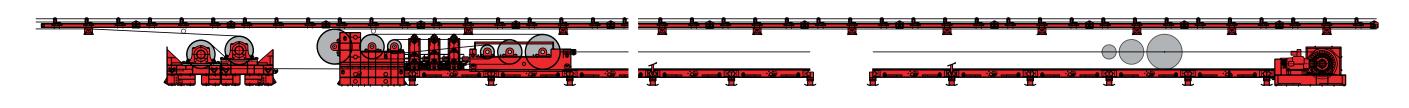


Drive arrangement with remote drive



Drive arrangement with belt storage unit and All-electric winch

Remote drive

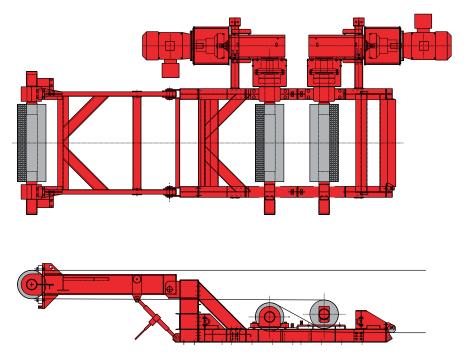


Belt storage unit

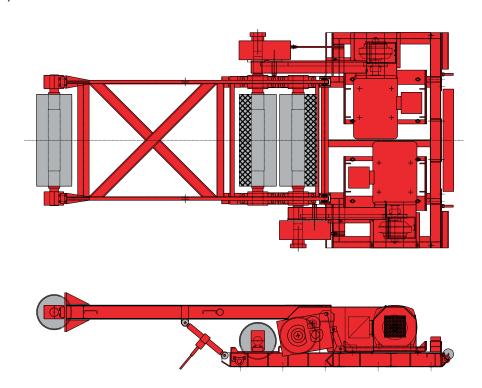
29

Joy drives

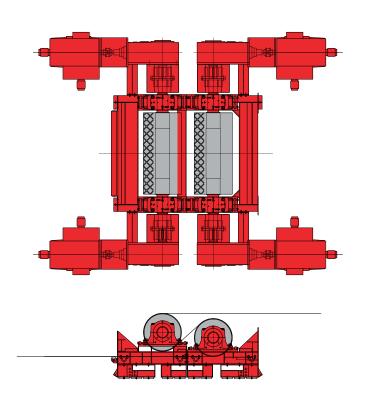
(Alignment-free) drive/discharge section



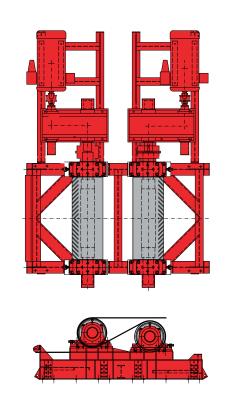
LC drive (belt-driven design)



Large remote drives



Remote drive (parallel shaft)









Service and support

At Komatsu, we strive to make sure that all of our products work together and perform at the highest levels. We are committed to supplying technologically-advanced equipment backed by a dedication to service.



Proven conveyor performance

The drive section is one of the most important terminal components in a conveyor system. It should be carefully selected to ensure that the arrangement is suited to the application. There are three basic types of drives: single pulley, adjustable boom and remote drive.

The single pulley type drive is available for low horsepower conveyors. The adjustable boom type drive is highly portable and can be furnished as a head drive or a tandem pulley skid configuration.

The remote drive is most frequently used on permanent installations. It is available with single, dual, triple, or quadruple drive trains. It is also available with tandem drive pulleys or with our four pulley arrangement.

Each specification is designed and furnished to your requirements utilizing the most modern and up-to-date methods available. We have been a leader in high-tension conveyor terminals for many years and have designed and supplied conveyor systems with up to 10,000 connected horsepower.

Properly designed terminal equipment is at the heart of any conveyor system. The correct application is key to a conveyor's performance and productivity.

Drive options

Proper drive selection varies depending on many factors including the operating environment, maintenance expertise (hydraulic vs. electrical), overall power requirements, and the investment required to make the system perform at the highest level. The goal is to provide a drive package that is controllable and friendly to the system from a starting and load sharing standpoint, thereby protecting the conveyor belt and the many components that make up the conveyor system. Too much stress on the belt or conveyor components can result in extended downtime and lost production. A system that allows a repeatable, linear time ramp during startup, and can balance load distribution during operation, offers the most protection for your conveyor system.

In today's market, low-voltage VFD control systems and medium-voltage VFD control systems have emerged as the best available options and are the most widely used.

A Komatsu representative can assist you in determining the best technology for your application, or assist you with complete system design.

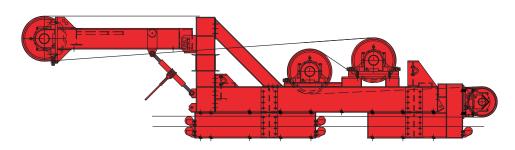
Tripper booster drives

Tripper booster drives provide smooth start-up and shutdown operations with full-tension control on extremely long, single-flight conveyors. Joy tripper booster drives are able to respond to varying load conditions while maintaining a stable operating system.

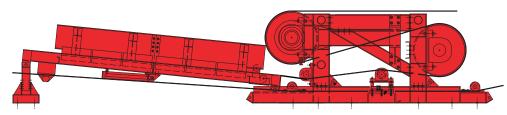
These drives can have a significant impact on reducing downtime and improving productivity on many operating conveyor systems.



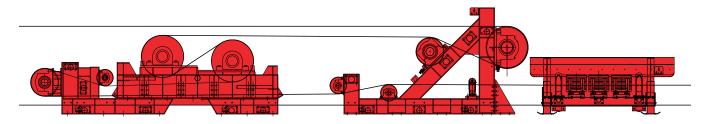






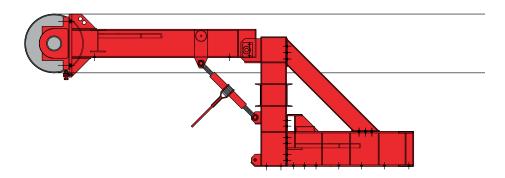


Custom-designed arrangements are available

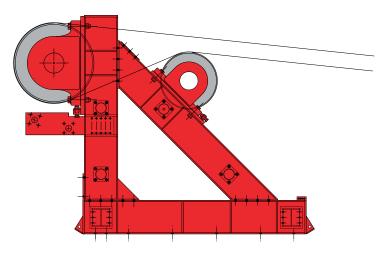


Discharges

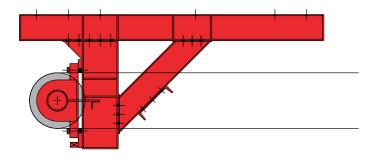
A-frame remote discharge with boom



A-frame remote discharge with snub pulley



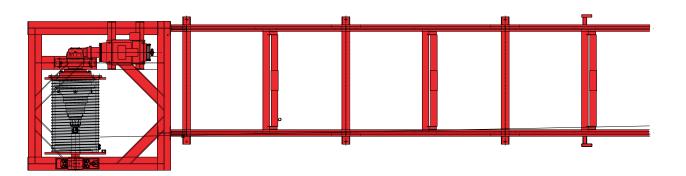
Roof mounted A-frame discharge

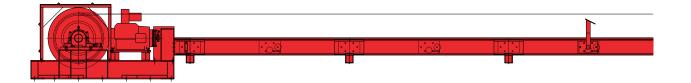


All-electric and Pony™ winches

Constant tension winches are an alternative to the traditional sheaved cylinder take-up designs. Greater line pull and faster reaction speeds are the main advantages of the winch design. Our first generation constant tension winch utilized a winch connected to a large hydraulic power unit. In the fall of 1995, we revolutionized the high-tension take-up market with the introduction of an all-electric constant tension winch. This technology enables us to furnish a take-up system without sheaves, cylinders and hydraulic power units. With single, direct line pull ranging from 30,000 lbf – 150,000 lbf, our constant tension winch take-up is capable of maintaining and providing belt tensioning requirements for a wide range of applications, including lengthy, high-tension conveyor systems.







All-electric Pony winch offers digital control in a very small package

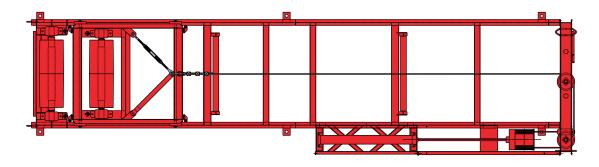
The Pony winch is designed for conveyor systems that require lower take-up tensions. Pony winches are available in 30, 40 and 50 horsepower configurations. The standard configuration utilizes a non-grooved drum, gearbox, electric motor, electric brake, encoder and a controller. The drum can be grooved as an option.

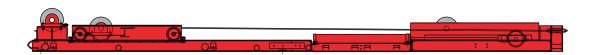


Hydraulic take-ups

Conveyor systems are only as productive as their take-up. Joy hydraulic cylinder take-up systems are designed to pull slack out of the belt for a smooth conveyor start in a wide range of loading conditions. Joy hydraulic take-up systems are available in standard arrangements ranging from 10 feet to 60 feet of travel.







Horizontal take-up unit (side mounted cylinder shown)

Hydraulic power units

The Joy hydraulic take-up power unit provides an accurate, reliable system for proper tensioning of your belt system. Improper tensions, whether high or low, can severely damage the belt and components such as pulleys, shafts and bearings.

A system of adjustable pressure-sensing switches is designed to provide constant monitoring of the hydraulic circuit, start the hydraulic pump when the low pressure switch senses that a minimum operating level is reached, and stop the pump when the high pressure switch senses that a high pressure set point has been attained. This system provides an intermittent operating motor and pump as opposed to a continuous operating system, resulting in reduced maintenance requirements. All units are factory set and tested based on your tension requirements prior to delivery.

All hydraulic unit components, including the accumulator, are integrally mounted on a common welded steel skid-type base. The unit is designed to be compatible with either standard hydraulic, synthetic, or water-in-oil type fire-resistant fluids. Immersion heating elements and control circuits are available for cold climate operations. Joy hydraulic power units are available in 25, 40, 60, 100 and 125 horsepower.



Controllers provided by Komatsu

Komatsu has long been an industry leader with its Smartveyor technology. This technology is made possible through the use of PLC control systems. With controllers for main and tripper drives, the overall conveyor control system is capable of handling complex conveyor systems. With tried and proven drive packages, our systems are capable of providing start times in excess of 240 seconds and optimal load sharing between main and multiple tripper drives. We can provide a custom-designed control system for a wide range of applications.



Belt storage units

Increased production afforded by longwall mining systems has had a major impact on the cost of material mined. However, the full potential of a longwall system cannot be realized without the utilization of a properly designed belt storage unit.

The Joy belt storage unit consists of a bolted construction rail system, stationary pulley assembly, rolling carriage assembly and a winch assembly. The rugged framework and carriages are substantial enough to withstand rigorous mining conditions and high tensions, but also portable enough for movement between installations. For relocation, the winch and moveable carriage are removed and the frame is disassembled into sections conducive to your mining environment. After re-assembly, the wire rope is re-attached to the carriage and the unit is ready to operate. Because of its modular design, no tedious reducer/motor/winch realignment is necessary prior to operation.

The moveable carriage and drop-off carriages are designed with vee-grooved wheels. These wheels move along inverted angles that are secured to heavy-duty I-beams. As the moveable carriage travels down the frame, drop-off carriages are released at set intervals. This process continues until the storage unit is replenished with belt. As belt is removed from the storage unit, drop-off carriages

are automatically retracted back to their original standing position.

As the longwall face retreats, the main haulage systems must be shortened. This procedure is completely automatic and requires no operator. All units have manual settings to facilitate belt splicing and maintenance.

Joy belt storage units are available in single or multiple lap configurations that can store up to 1,200 ft. of belt. Our units can be designed to meet the specific needs of your conveyor system. All-electric constant tension winches, used in conjunction with belt storage units, provide carriage travel in excess of 1 ft. per second.







Typical 6 lap belt storage unit





Typical 4 lap belt storage unit and CTW

Engineered transfer systems and loading sections

Engineered transfer systems

Our engineered transfer systems include a discharge section, loading section, and custom-designed transfer chute that are all engineered and designed as one system to effectively transfer material.

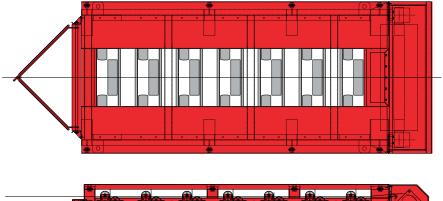


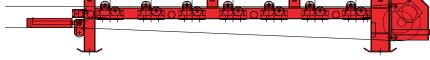
Tail loading section

Tail loading sections are designed to withstand the abusive conditions encountered in conveyor loading. Tail loading sections of varying heights are available with solid type pulley, lagged solid pulley, wing type pulley and spiral type self-cleaning pulley arrangements.

Tail sections are available with hinged deck plates for easier access to skirt rubber and idlers during maintenance. Designs incorporating either rubber disc impact idlers, steel roll idlers or impact/slider beds are available. Special purpose tail loading sections may be furnished to your exact specifications.







Intermediate loading section

Intermediate loading sections are used in loading areas along the length of the belt line. These loading sections can be furnished with impact idlers, impact beds or a combination of the two. Sealing skirt boards are standard on all intermediate loading sections.

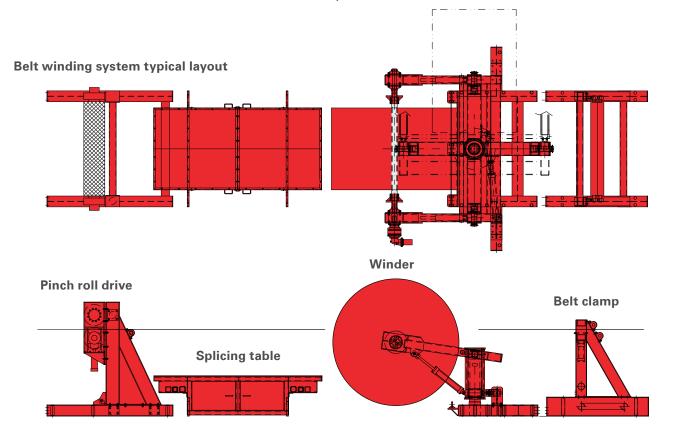


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Belt winders and pinch roll drives



Belt winders simplify and improve the handling of belt when adding to, or removing belt from, your conveyor system. Belt winder systems consist of a pinch roll drive, winder, splicing station, and belt clamp. The pinch roll drive delivers a constant feed of belt to the winder. The belt clamp is utilized to hold the belt in place during spooling. The spool of belt can then be rotated 90 degrees in either direction for removal from the conveyor system. The splicing table is utilized to spot splices for installation, replacement, or repair of belt. Standard belt-winder systems are available for 36" to 72" belt widths.





Pinch roll drives

Although first developed to work in tandem with the belt winder, the pinch roll drive can also be used with numerous belt retrieval devices to add to, or remove belt from your conveyor systems at a constant rate of speed. An additional benefit of the pinch roll drive, when used in conjunction with a belt clamp station, is the improvement of belt splicing. The pinch roll drive will allow you to more easily spot splices for installation, replacement, or repair of the belt.

Joy Rebuild Program

When your Joy equipment begins to age and wear out, it is reassuring to know that many items can be rebuilt, and once again become a highly-reliable component of your conveyor system. When compared to new equipment purchases, you can save both time and money with the Joy Rebuild Program.

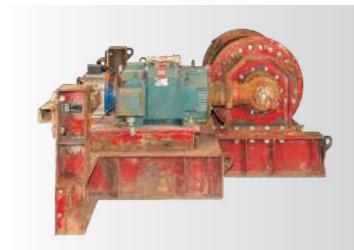
Technology upgrade evaluation

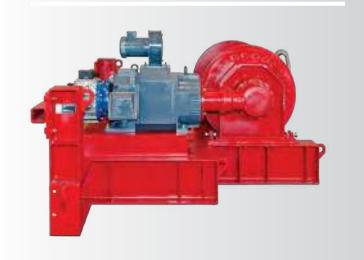
Plus, if your Joy equipment needs a technology retrofit, this can be accomplished during the rebuild process. Your equipment will be evaluated as part of our rebuild program. If new components are available for your specific unit, we will give you the option to upgrade to the latest designs.

Here's how it works

After an initial evaluation of your existing equipment and review of your individual requirements, additions, and available technology retrofits, we will provide you with a specific rebuild estimate. Upon approval of the rebuild estimate, the work on your equipment commences and proceeds along a designed schedule.

Not only will you get like-new performance out of your equipment, you will get a like-new warranty on replaced components.





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The multi-piece shaft discussed herein is covered by U.S. patent No. 9056727, U.S. patent No. 9359144 and Mexico patent No. 362798. Patent pending in Canada. The retaining sleeve is covered by U.S. patent No. 9273731, Canada patent No. 2661822 and Mexico patent No. 344214.

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