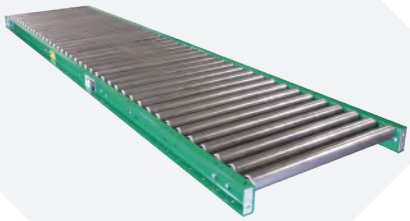
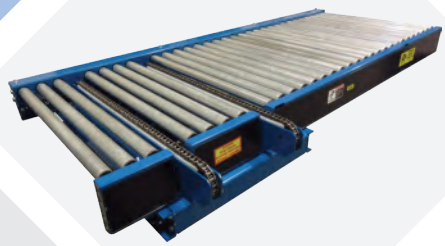
CONVEYOR SYSTEMS & ENGINEERING, INC.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005



Conveyor Systems & Engineering

Conveyor Catalog



This catalog contains standard specification, optional equipment and accessories for the pre-engineered CSE line of conveying equipment. It is designed to make it easier for you and your customers to select the correct equipment for each application. By properly selecting and integrating the equipment contained in this catalog, a conveyor system from the very simple to the highly complex can be created.

If the equipment contained in this catalog does not meet the requirements of a particular application, CSE offers custom engineered or modified standard equipment. The ability to design and manufacture "specials" has been a great contributing factor in the growth of CSE. The company is committed to a program of expanding its standard product line. In keeping with this policy, many new products are in various stages of design and development.

CSE is **"TAKING THE LOAD OFF"** America's Material Handling Needs!

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CSE

CONVEYOR SYSTEMS & ENGINEERING, INC.

3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

Table of Contents

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
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CSE
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MODEL "LPB"

Medium Duty Slider Bed Conveyor

- **Packing**
- **Inspecting**
- **Sorting**
- **Assembly**
- **Testing**
- **Transporting**

STANDARD SPECIFICATIONS

Belt - 8", 12", 18", 20", 24" and 30" Black PVC 120 belt.

Bed - 12 gauge powder painted formed steel, 4" deep. Bed sections are 5 feet and 10 feet long bolted together with splice plates and floor supports.

Tail Pulley - 4" diameter crowned with 1 3/16" diameter shaft.

Drive Pulley - 4" diameter and 8" diameter crowned and fully lagged. 4" diameter pulley with 1 3/16" diameter shaft, 8" diameter pulley with 1 7/16" diameter shaft.

Snub-Roller - 2" diameter for 4" diameter pulley, 2 1/2" diameter for 8" diameter pulley.

Return Roller - 1.9" diameter adjustable on 10'0" centers.

Floor Supports - Adjustable 28 1/4" to 42 1/4" from floor to top of belt. One support supplied at each end of conveyor and at each bed joint.

Take-Up - 6" long screws located at tail pulley to tighten belt.

Bearings - Sealed-prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - 1/2 HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - Maximum load per lineal foot of conveyor - 75 lbs. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Nitrile (white or black) with smooth top cover, Black PVC rough top, Brown Nitrile rough top. Special belts on application.

Side Tables - 10", 16" or 22" wide formed steel side tables provide 12", 18" or 24" work area. Tables are supported by angles bolted to bed section.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher than standard. Castered supports with 4" diameter or 6" diameter rigid or swivel casters.

Ceiling Hangers - 1/2" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Gravity Conveyor Brackets - Adjustable bracket with 1 3/8" diameter pop-out roller for attaching wheel or roller conveyor.

Nose-Over - Adjustable single or double nose-over provides smooth transfer from incline to horizontal. See drawing on page 96 for details.

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum 6" elevation with 4" drive pulley, minimum 9" elevation with 8" drive pulley.

Overhead Drive - End drive mounted above conveyor. Specify clearance required.

Auxiliary Take-Up - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "LPB"

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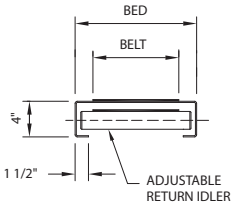
Bed Length	Overall Length	Diameter Drive Pulley	Belt Width	8"	12"	18"	20"	24"	30"
			Bed Width	12"	16"	22"	24"	28"	34"
			Bed	12 Gauge Formed Steel Bed					
5'	5'10"	4"		252	272	315	343	366	389
10'	10'10"	4"		286	314	382	397	422	447
15'	15'10"	4"		343	380	475	494	528	562
20'	20'10"	4"		377	422	542	565	607	649
25'	25'10"	4"	Weight	434	488	635	662	713	764
30'	30'10"	4"	(lbs.)	468	530	702	733	792	851
35'	35'10"	4"		525	596	795	830	898	966
40'	40'10"	4"		559	638	862	901	977	1053
45'	45'10"	4"		616	704	955	998	1083	1168
50'	50'10"	4"		655	753	1032	1081	1176	1271
55'	56' 2"	8"		712	819	1125	1178	1282	1386
60'	61' 2"	8"		746	861	1192	1249	1351	1453
65'	66' 2"	8"		803	927	1285	1346	1457	1568
70'	71' 2"	8"	Weight	839	971	1364	1420	1549	1678
75'	76' 2"	8"	(lbs.)	896	1037	1457	1517	1655	1793
80'	81' 2"	8"		930	1079	1514	1588	1734	1880
85'	86' 2"	8"		987	1145	1607	1685	1840	1995
90'	91' 2"	8"		1021	1187	1673	1756	1920	2084
95'	96' 2"	8"		1078	1253	1766	1853	2026	2199
100'	101' 2"	8"		1112	1295	1833	1924	2105	2286

Load Capacity Chart

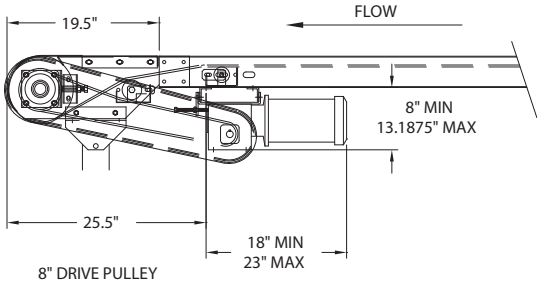
60 FPM	
HP	TOTAL LOAD
1/2	435 lbs.
3/4	650 lbs.
1	810 lbs.
NOTE: 1 HP Max. for this model	

*For minimum OAL, contact factory.

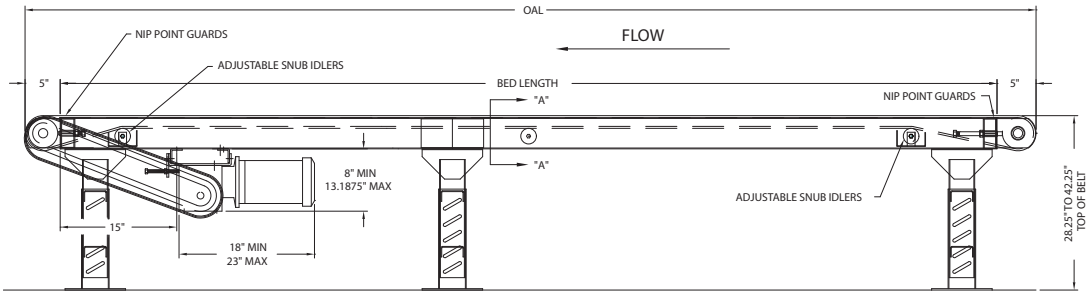
8" DIAMETER END DRIVE



VIEW A-A



8" DRIVE PULLEY



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MODEL "HPB"

Heavy Duty Slider Bed Conveyor

- **Packing**
- **Inspecting**
- **Sorting**
- **Transporting**
- **Assembling**
- **Testing**

STANDARD SPECIFICATIONS

Belt - 12", 14", 18", 24", 30" and 36" Black PVC 120 belt.

Bed - 12 gauge powder painted formed steel, 6½" deep. Bed sections are 5 feet and 10 feet long bolted together with splice plates and floor supports.

Tail Pulley - 4" diameter for belt widths through 30" wide. 6" diameter for 36" and wider belts. 4" diameter pulley has 1 3/16" diameter shaft, 6" diameter pulley has 1 7/16" diameter shaft.

Drive Pulley - 8" diameter crowned and fully lagged with 1 7/16" diameter shaft.

Snub Roller - 2½" diameter directly behind drive pulley; 2" diameter at tail pulley.

Return Roller - 1.9" diameter adjustable, on 10'0" centers.

Floor Supports - Adjustable 30¾" to 44¾" from floor to top of belt. One support supplied at each end of conveyor and at each bed joint.

Take-Up - 6" long screws located at tail pulley to tighten belt.

Bearings - Sealed-prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - Maximum load per lineal foot of conveyor - 100 lbs. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Nitrile (white or black) with smooth top cover, Black PVC rough top, Brown Nitrile rough top. Special belts on application.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher than standard. Castered supports with 4" diameter or 6" diameter rigid or swivel casters.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Gravity Conveyor Brackets - Adjustable bracket with 1⅜" diameter pop-out roller for attaching wheel or roller conveyor.

Nose-Over - Adjustable single or double nose-over provides smooth transfer from incline to horizontal. See drawing on page 96 for details.

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum elevation - 9".

Overhead Drive - End drive mounted above conveyor. Specify clearance required.

Auxiliary Take-Up - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "HPB"

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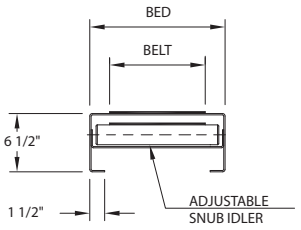
Bed Length	Overall Length	Belt Width / Bed Width	12" / 18"	14" / 20"	18" / 24"	24" / 30"	30" / 36"	36" / 42"
5'	7'	Weight (lbs.)	355	370	396	425	455	490
10'	12'		401	450	485	525	565	605
15'	17'		487	558	615	675	736	802
20'	22'		533	638	704	775	846	917
25'	27'		619	746	834	925	1017	1115
30'	32'		665	826	923	1025	1127	1230
35'	37'		751	934	1053	1175	1298	1427
40'	42'		797	1014	1142	1275	1408	1542
45'	47'		883	1122	1272	1425	1579	1740
50'	52'		929	1202	1361	1525	1689	1855
55'	57'		1015	1310	1491	1675	1860	2052
60'	62'		1061	1390	1580	1755	1970	2167
65'	67'		1147	1498	1710	1925	2141	2365
70'	72'		1193	1578	1799	2025	2251	2480
75'	77'		1279	1686	1929	2175	2422	2677
80'	82'		1325	1766	2018	2275	2532	2792
85'	87'		1411	1874	2148	2425	2703	2990
90'	92'		1457	1954	2237	2525	2813	3105
95'	97'		1543	2062	2367	2675	2984	3302
100'	102'		1589	2142	2456	2775	3094	3417
105'	107'		1675	2250	2586	2925	3265	3615
110'	112'		1721	2330	2675	3025	3375	3730
115'	117'		1807	2438	2805	3175	3546	3927
120'	122'		1853	2518	2894	3275	3656	4042
125'	127'		1939	2626	3024	3425	3777	4240
130'	132'		1985	2706	3113	3525	3937	4355

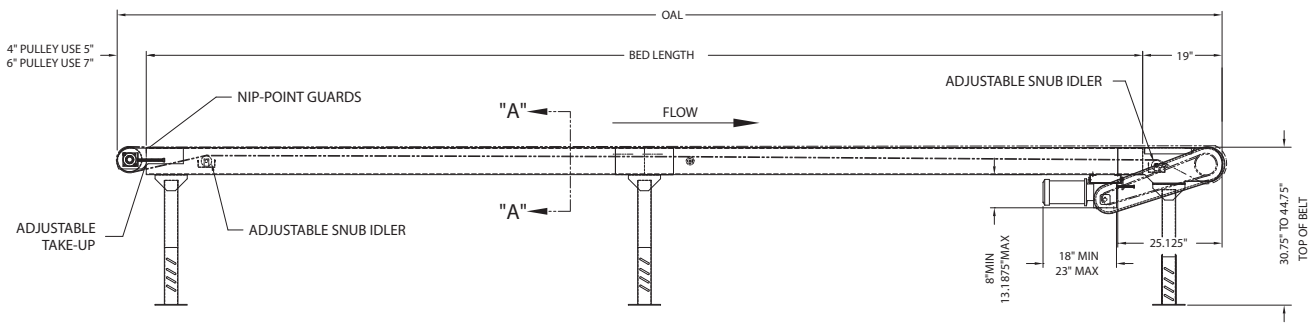
Load Capacity Chart

60 FPM	
HP	TOTAL LOAD
½	435 lbs.
¾	650 lbs.
1	810 lbs.
1½	1080 lbs.
2	1300 lbs.

*For minimum OAL, contact factory.



VIEW "A-A"



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MODEL "TSB"
Trough Bed Belt Conveyor

- **Conveys boxes, bags, cases, loose parts**
- **Built-in guard rails allow overhead conveying**

STANDARD SPECIFICATIONS

Belt - 8", 12", 18", 20", 24" and 30" Black PVC 120 belt.

Bed - 12 gauge powder painted formed steel with 2½" high vertical sides bolted to top of bed. Standard sections are 5 and 10 feet long bolted together with floor supports and splice plates.

Tail Pulley - 4" diameter crowned with 1 3/16" diameter shaft.

Drive Pulley - 4" diameter and 8" diameter crowned and fully lagged. 4" diameter pulley with 1 3/16" diameter shaft, 8" diameter pulley with 1 7/16" diameter shaft.

Snub-Roller - 2" diameter for 4" diameter pulley, 2½" diameter for 8" diameter pulley.

Return Idler - 1.9" diameter adjustable, on 10'0" centers.

Floor Supports - Adjustable 28¼" to 42¼" from floor to top of belt. One support supplied at each end of conveyor and at each bed joint.

Take-Up - 6" long screws located at tail pulley to provide belt tension.

Bearings - Sealed-prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - Maximum load per lineal foot of conveyor - 75 pounds. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Nitrile (white or black), with smooth top cover, Black PVC rough top, Brown Nitrile rough top. Special belts on application.

Guard Rail - Higher than 2½" vertical sides, 4", 6", 9", to 12" max.

Floor Supports - Lower or higher than standard. Castered supports with 4" diameter or 6" diameter rigid or swivel casters.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Gravity Conveyor Brackets - Adjustable bracket, with 1⅜" diameter pop-out roller, for attaching wheel or roller conveyor.

Nose-Over - Adjustable single or double nose-over provides smooth transfer from incline to horizontal. See drawing on page 96 for details.

Center Drive - Mounted below conveyor or bed section. Can be placed most anywhere in conveyor length.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum 6" elevation with 4" drive pulley, minimum 9" elevation with 8" drive pulley.

Overhead Drive - End drive mounted above conveyor. Specify clearance required.

Auxiliary Take-Up - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Hugging Strip - Steel bars each side bolt to guard rail to prevent material from getting under belt. Must be used with a solid guard rail.

Troughing Attachment - Steel bars each side under belt form trough for handling loose material.

MODEL "TSB"

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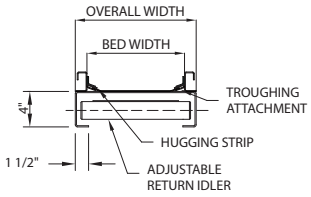
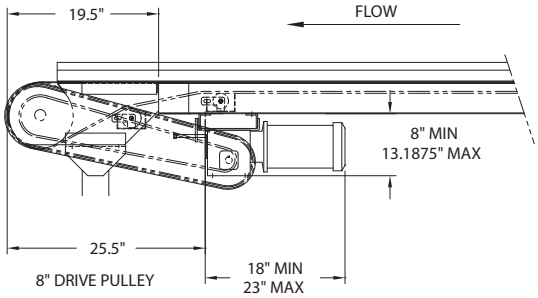
Bed Length	Overall Length	Diameter Drive Pulley	Belt Width	8"	12"	18"	20"	24"	30"
			Overall Width	12"	16"	22"	24"	28"	34"
			Bed Width	9"	13"	19"	21"	25"	31"
5'	5'10"	4"		270	290	335	360	380	410
10'	10'10"	4"		320	350	415	430	450	480
15'	15'10"	4"		390	425	520	535	570	605
20'	20'10"	4"		445	490	558	580	625	695
25'	25'10"	4"	Weight	520	570	650	680	735	820
30'	30'10"	4"	(lbs.)	570	630	730	755	820	920
35'	35'10"	4"		621	700	810	850	920	1030
40'	40'10"	4"		695	780	890	935	1020	1140
45'	45'10"	4"		750	835	980	1020	1120	1250
50'	50'10"	4"		825	920	1070	1120	1220	1370
55'	56' 2"	8"		880	995	1160	1215	1320	1480
60'	61' 2"	8"		950	1070	1248	1303	1420	1590
65'	66' 2"	8"		1000	1130	1325	1390	1520	1705
70'	71' 2"	8"		1080	1220	1420	1490	1620	1825
75'	76' 2"	8"	Weight	1130	1280	1504	1575	1720	1935
80'	81' 2"	8"	(lbs.)	1205	1360	1590	1665	1818	2048
85'	86' 2"	8"		1255	1420	1670	1752	1920	2155
90'	91' 2"	8"		1330	1500	1755	1840	2035	2325
95'	96' 2"	8"		1380	1560	1835	1925	2135	2433
100'	101' 2"	8"		1460	1640	1920	2015	2204	2485

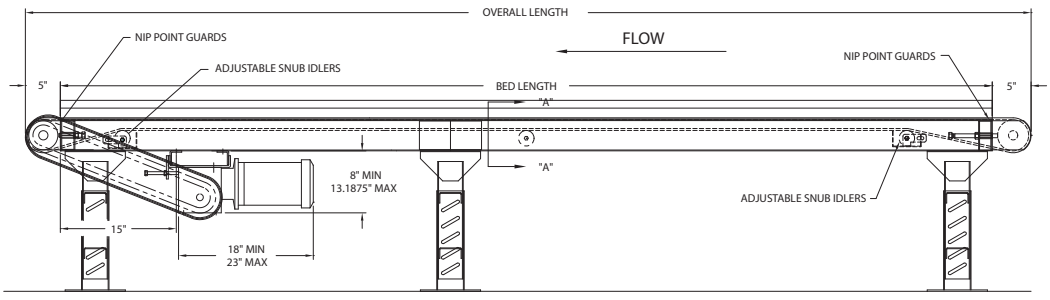
Load Capacity Chart

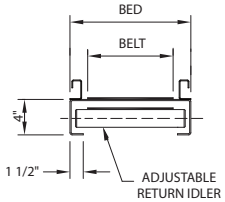
60 FPM	
HP	TOTAL LOAD
1/2	435 lbs.
3/4	650 lbs.
1	810 lbs.
NOTE: 1 HP Max. for this model	



OPTIONAL HUGGING STRIP AND TROUGHING ATTACHMENT







VIEW A-A

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MODEL "SBT"
Slider Bed Trash Conveyor

- **Adjustable floor supports**
- **Incline to 15°**
- **Guard rails**
- **Economical**

STANDARD SPECIFICATIONS

Bed - 5½" deep x 14 gauge powder painted formed steel channel frame. Bed sections are 10 feet and 5 feet long, bolted together with splice plates and floor supports.

Belt - 12", 18", 24", 30", 36", 42" and 48" wide, black PVC 120, FS top side, brushed bottom side, with clipper lacing.

Guard Rail - 6" high x 16 gauge formed, powder painted steel on both sides, full length of bed sections.

Underside Guards - Formed 16 gauge pans full length of bed sections, removable, secured with TEK screws.

Tail Pulley - 4" or 6" diameter (see chart) crowned. 4" diameter has 1 3/16" diameter shaft, 6" diameter has 1 7/16" diameter shaft.

Drive Pulley - 4", 6" and 8" diameter crowned and fully lagged. 4" diameter pulley has 1 3/16" diameter shaft, 8" and 6" diameter pulleys have 1 7/16" diameter shaft.

Snub-Roller - 2" diameter for 4" and 6" diameter pulleys, 2½" diameter for 8" diameter pulley.

Return Rollers - 1.9" diameter placed on 10' centers.

Floor Supports - Adjustable 30" to 44" from floor to top of belt. One floor support provided at each end of conveyor and at each bed joint.

Take-Up - 6" long screws located at tail pulley to provide belt tension.

Bearings - Sealed, prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM.

Capacity - 10 pounds per foot maximum live load. See Load Capacity Chart.

OPTIONAL EQUIPMENT

Guard Rails - 12", 18", or 24" high; vertical or 30 degree flare, for one or both sides.

Floor Supports - Higher than standard supports available to 121".

Ceiling Hangers - ½" diameter threaded rods, 8 feet long with locking nuts and mounting hardware.

Nose-Over - Fixed single nose-over at 10, 12½ or 15 degrees. Adjustable nose-over roller for belt tracking.

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Auxiliary Belt Take-Up - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Side Mounted End Drive - Mounted to side of conveyor bed. Minimum elevations: 4" pulley - 7½", 6" pulley - 8½", 8" pulley - 10½". Specify side.

Four Pulley Hitch - For transferring material from horizontal to incline section.

Inline Transfer Unit - For transferring material from one horizontal conveyor to another.

Belt - #120 PVC rough top belt for incline applications.

Belt Speed - 45, 75, 90 and 120 FPM. Please specify.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

MODEL "SBT"

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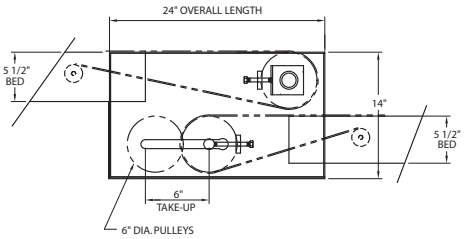
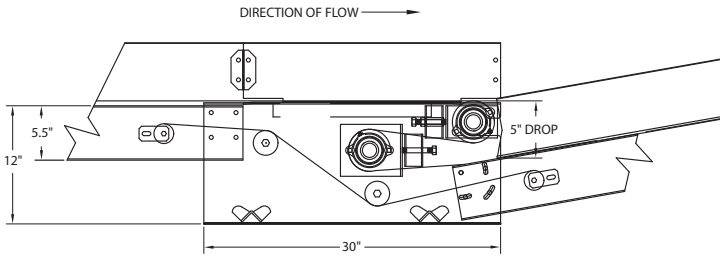
MODEL SBT - WEIGHTS							
Belt Width	**12"**	**18"**	**24"**	**30"**	**36"**	**42"**	**48"**
Bed Width	**14"**	**20"**	**26"**	**32"**	**38"**	**44"**	**50"**
Drive Pulley Dia.	**4"**	**4"**	**4"**	**6"**	**6"**	**8"**	**8"**
Tail Pulley Dia.	**4"**	**4"**	**4"**	**6"**	**6"**	**6"**	**6"**
10'0" OAL	723	858	993	1125	1260	1510	1650
Per Foot	25	28	32	37	42	47	51



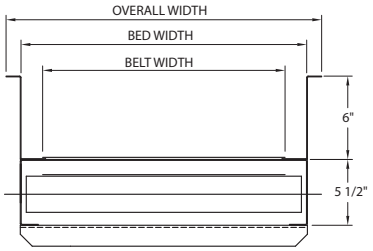
IN-LINE TRANSITION UNIT

Load Capacity Chart

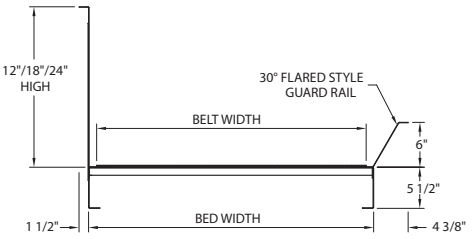
60 FPM	
HP	**TOTAL LOAD**
1/2	435 lbs.
3/4	650 lbs.
1	810 lbs.
1 1/2	1080 lbs.
2	1300 lbs.



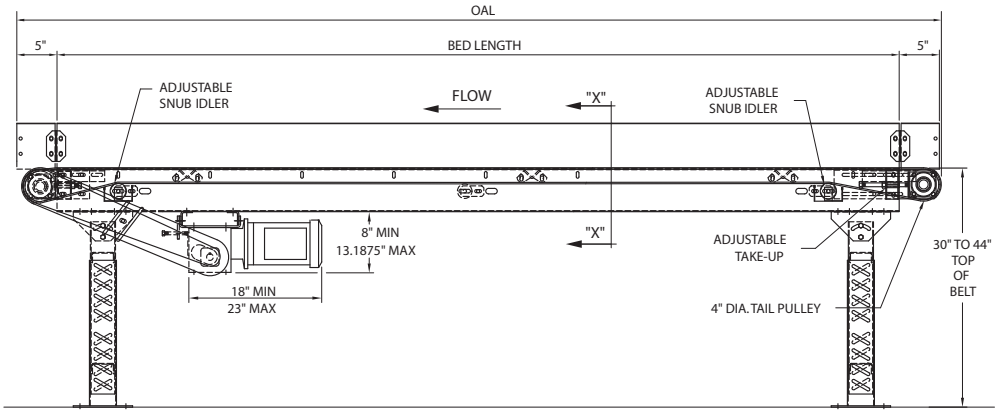
4 PULLEY INCLINE HITCH



SECTION VIEW "X-X"
STANDARD ARRANGEMENT



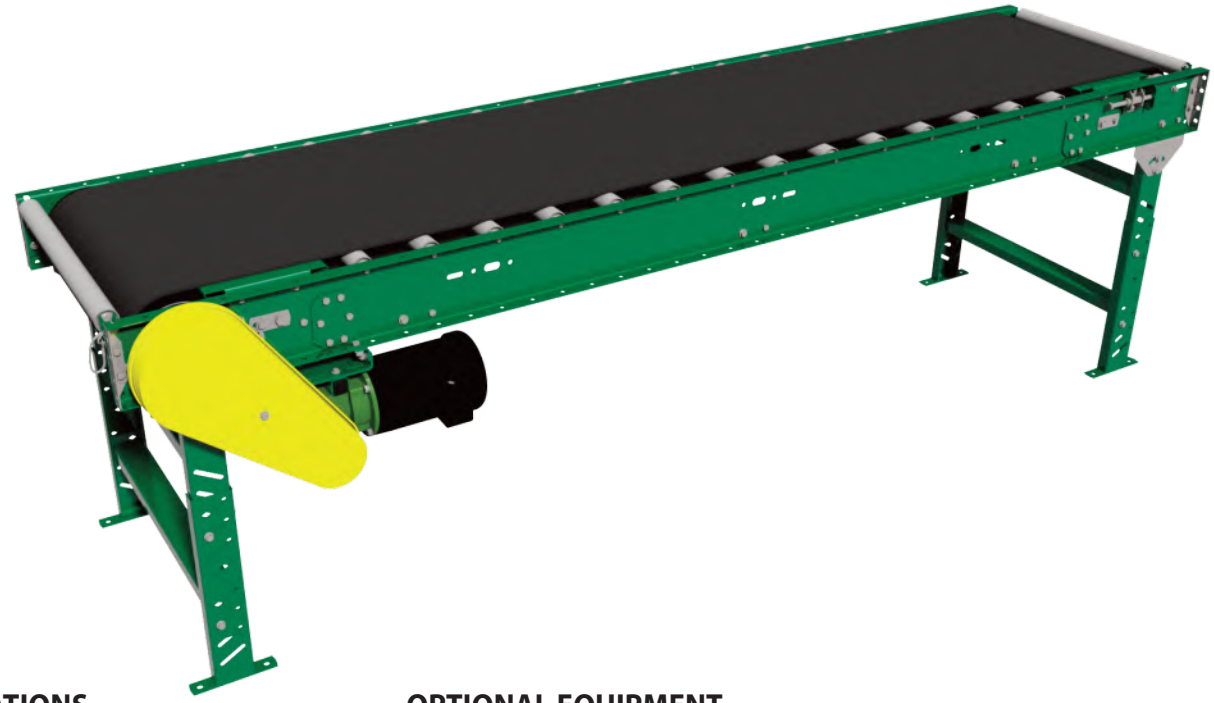
GUARD RAIL OPTIONS



CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "190RB"
Roller Bed Belt Conveyor

- **Packing**
- **Inspecting**
- **Sorting**
- **Assembling**
- **Testing**
- **Transporting horizontally or on incline**



STANDARD SPECIFICATIONS

Belt - 12", 18", 24", 30", 36", 42" and 48" Black PVC 120 belt.

Bed - Roller bed with 1.9" diameter galvanized steel rollers. Rollers spaced on 6" centers. Rollers mounted in 7" deep x 12 gauge powder painted formed steel channel frames. Frames bolted together with butt couplings and floor supports.

X-Bracing - Frame squaring device supplied on conveyors 40 feet and longer for every other bed section. X-bracing insures good product and belt tracking.

Drive Pulley - 8" diameter crowned and fully lagged, 1 7/16" shaft.

Tail Pulley - 4" diameter crowned supplied through 30" wide belts. 6" diameter crowned supplied for 36" and wider belts. 4" diameter pulley has 1 3/16" diameter shaft; 6" diameter pulley has 1 7/16" diameter shaft.

Pop-Out Roller - 1.9" diameter roller, located at both ends of unit.

Snub Roller - 2 1/2" diameter adjustable roller, located directly behind drive pulley, 2" diameter located behind tail pulley.

Return Rollers - 1.9" diameter adjustable on 10'0" centers.

Take-Up - Located at tail end, provides 12" of belt take-up.

Bearings - Sealed-prelubricated with cast iron housings.

Floor Supports - Adjustable 31 5/8" to 45 5/8" from floor to top of belt. One support supplied at each end of conveyor and at each bed joint.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - 1/2 HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 200 pounds per foot maximum. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Nitrile (white or black) with smooth top cover, Black PVC rough top, Brown Nitrile rough top. Special belts on application.

Roller Centers - 1.9" diameter galvanized steel rollers spaced on 3", 4 1/2", 9" or 12" centers.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher than standard. Castered supports with 4" diameter or 6" diameter rigid or swivel casters.

Ceiling Hangers - 1/2" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Nose-Over - Adjustable single or double nose-over provides smooth transfer from incline to horizontal. See drawing on page 96 for details.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum elevation – 10".

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Auxiliary Take-Up - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Power Feeder - Separate belt section with (2) MD-6 (28 1/2" to 42 1/2" adjustable) supports. Feeder driven by roller chain from main conveyor. Auxiliary take-up required on inclined conveyor. Integral feeder available.

MODEL "190RB"

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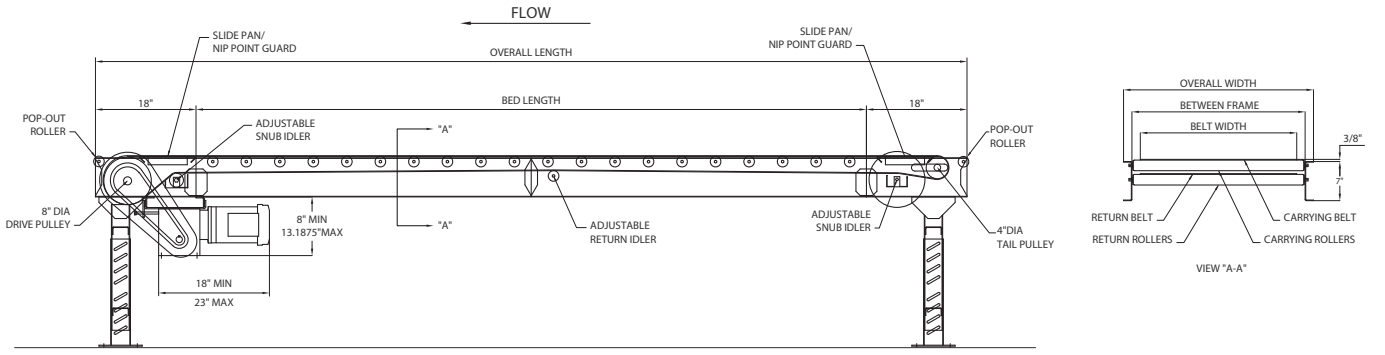
Bed Length	Overall Length	Belt Width	12"	18"	24"	30"	36"	42"	48"
		Between Frames	15"	21"	27"	33"	39"	45"	51"
		Overall Width	18"	24"	30"	36"	42"	48"	54"
			Rollers Spaced on 6" Centers						
5'	8'	Weight (lbs.)	290	330	370	410	450	500	540
10'	13'		370	440	500	560	620	670	740
15'	18'		460	540	610	690	770	870	960
20'	23'		550	660	750	850	950	1070	1190
25'	28'		650	780	890	1010	1140	1290	1420
30'	33'		750	900	1040	1180	1330	1500	1660
35'	38'		820	990	1150	1310	1490	1670	1880
40'	43'		940	1146	1320	1500	1700	1930	2140
45'	48'		1060	1280	1480	1680	1900	2160	2400
50'	53'		1150	1380	1610	1830	2070	2360	2620
55'	58'		1260	1520	1770	2020	2280	2690	2880
60'	63'		1350	1640	1900	2170	2460	2800	3110
65'	68'		1450	1770	2050	2350	2650	3020	3360
70'	73'		1550	1880	2200	2500	2830	3230	3590
75'	78'		1660	2003	2350	2680	3030	3450	3840
80'	83'		1750	2130	2480	2830	3210	3660	4070
85'	88'		1860	2270	2640	3010	3410	3892	4350
90'	93'		1950	2380	2770	3160	3590	4080	4550
95'	98'		2060	2510	2930	3340	3790	4320	4800
100'	103'		2150	2630	3663	3500	3960	4520	5040

For Weights Other Than 6" Centers, Add Or Deduct														
Roller Centers	15" B.F.		21" B.F.		27" B.F.		33" B.F.		39" B.F.		45" B.F.		51" B.F.	
	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'
3"	+30	+60	+40	+80	+50	+100	+60	+120	+70	+140	+80	+160	+90	+180
4½"	+15	+30	+20	+40	+25	+50	+30	+ 60	+35	+70	+40	+80	+45	+90
9"	-12	-13	-16	-24	-20	-30	-14	-36	-18	-42	-32	-48	-36	-54
12"	-15	-28	-20	-40	-25	-50	-30	-60	-35	-70	-40	-80	-45	-90

Load Capacity Chart
@ 60 FPM

HP	Overall Frame Width 18" to 22" Total Load (lbs.)		Overall Frame Width 24" to 30" Total Load (lbs.)		Overall Frame Width 36" to 42" Total Load (lbs.)	
	Up to 53'	Up to 103'	Up to 53'	Up to 103'	Up to 53'	Up to 103'
½	2400	1700	2100	1100	1600	250
¾	3600	3000	3400	2500	2900	1700
1	4600	4100	4300	3600	4000	2800
1½	6500	6000	6200	5500	5900	4900
2	7800	7400	7600	7000	7300	6400



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Arlington Heights, IL 60005

MODEL "190RBW"

Roller Bed Wire Mesh Belt Conveyor

- **Drying operations**
- **Wet or oily products**
- **Hot or cold parts from ovens or freezers**
- **One direction operation**

STANDARD SPECIFICATIONS

Belt Width - 12", 18", 24" and 36" wide, ½"x1" flat wire belt.

Bed - 1.9" diameter rollers mounted on 6" centers in 6½" deep x 12 gauge powder painted formed channel, bolted together with splice plates and supports.

Drive Sprockets - 6" pitch diameter cast iron sprockets machined for 1 3/16" diameter shaft.

Tail Pulley - 4" diameter with 4" pitch diameter cast iron sprockets on each end of pulley, 1 3/16" diameter shaft.

Snub Roller - Adjustable 2" diameter roller located directly behind drive sprockets and tail sprockets.

Return Idlers - 1.9" diameter, adjustable, on 10'0" centers.

Take-Up - 6" long screws located at tail pulley to tighten belt.

Bearings - Sealed and prelubricated with heavy duty housing.

Floor Supports - Adjustable 31" to 45" from floor to top of belt. One support supplied at each end of conveyor and at each bed joint.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - Maximum load per linear foot of conveyor - 75 pounds. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - ½" x ½" flat wire, galvanized, stainless steel. Others.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher supports available.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor. Specify side. Minimum elevation – 10".

Overhead Drive - End drive mounted above conveyor. Specify clearance required.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "190RBW"

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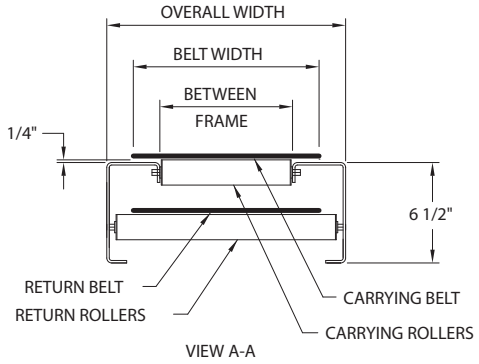
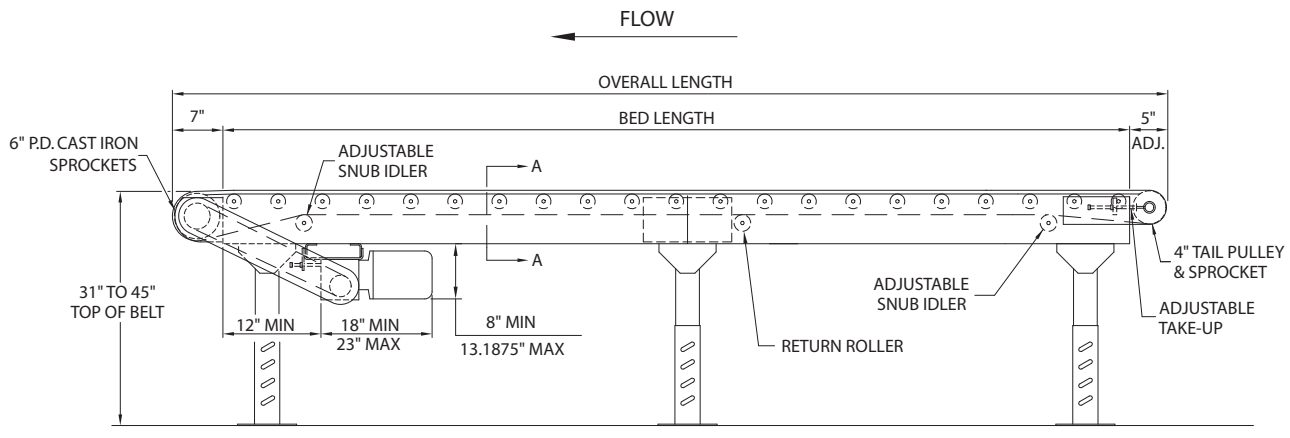
Bed Length	Overall Length	Between Frames	8"	14"	20"	32"
		Belt Width	12"	18"	24"	36"
		Bed Width	16"	22"	28"	40"
5'	6'1"	Weight (lbs.)	299	320	365	431
10'	11'1"		368	413	465	562
15'	16'1"		461	523	593	725
20'	21'1"		530	605	693	856
25'	26'1"		623	715	821	1019
30'	31'1"		692	800	921	1150
35'	36'1"		773	943	1035	1297
40'	41'1"		854	990	1149	1444
45'	46'1"		939	1045	1270	1602
50'	51'1"		1023	1195	1391	1759
55'	56'1"		1104	1290	1500	1896
60'	61'1"		1185	1385	1609	2033
65'	66'1"		1270	1487	1736	2201
70'	71'1"		1355	1590	1862	2369
75'	76'1"		1436	1685	1976	2516
80'	81'1"		1517	1785	2090	2663
85'	86'1"		1598	1880	2205	2811
90'	91'1"		1679	1975	2319	2959
95'	96'1"		1760	2072	2433	3106
100'	101'1"		1841	2170	2547	3253

Load Capacity Chart

60 FPM	
HP	TOTAL LOAD
½	1300 lbs.
¾	2000 lbs.
1	2500 lbs.





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MODEL "MPB"

Medium Duty Modular Plastic Belt Conveyor

- **Transportation**
- **Diverting**
- **Merging**
- **Low Pressure Accumulation**

STANDARD SPECIFICATIONS

Belt Width - 12", 18", 24", 30", and 48" wide, 1" grey polypropylene thermoplastic modular belt.

Bed - 7" deep x 12 gauge powder painted formed steel channel frames set low with guard. Bolt-in formed steel pan with UHMW carrying surface.

End Drive - End drive standard.

X-Bracing - Frame squaring device supplied on conveyors 40 feet and longer for every other bed section. X-bracing insures good product and belt tracking.

Sprockets - 5.8" pitch diameter x 1.5" square bore, molded polyamide thermoplastic.

Return Idlers - UHMW rollers located along overall length for proper belt tension.

Take-up - Belt take-up is done with belt (catenary) sagging.

Bearings - Sealed and prelubricated with cast iron housings.

Floor Supports - Adjustable 30¾" to 44¾" from floor to top of belt. One support supplied at each end of conveyor and at each bed joint.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ¾ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 200 pounds per foot maximum. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Various styles (colors & materials) available - contact factory.

Sprockets - Other pitch diameters available.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher than standard. Castered supports with 4" diameter or 6" diameter rigid or swivel casters.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum elevation – 10".

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "MPB"

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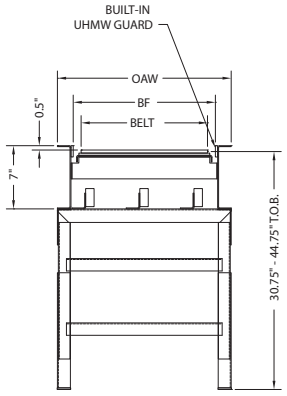
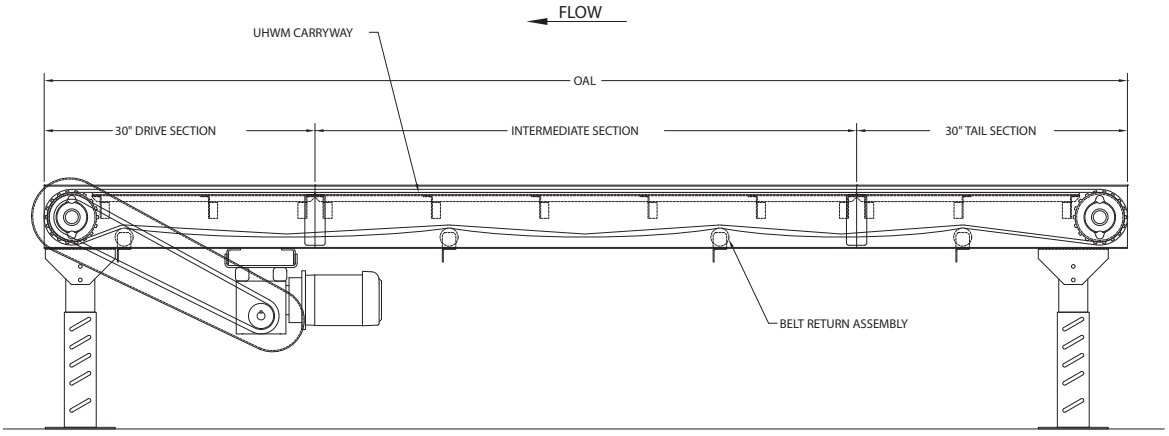
MODEL MPB - WEIGHTS					
Belt Width	**12"**	**18"**	**24"**	**30"**	**48"**
BF	**15"**	**21"**	**27"**	**33"**	**51"**
Overall Width	**18"**	**24"**	**30"**	**36"**	**54"**
10'0" OAL	299	341	384	429	458
Per Foot	21	26	30	35	40

Load Capacity Chart

60 FPM	
HP	**TOTAL LOAD**
¾	675 lbs.
1	1025 lbs.
1½	1750 lbs.
2	2450 lbs.





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MODEL "138CAP"

Belt Driven Live Roller Accumulating Conveyor

- **Accumulates light boxes, tote bins, baskets, etc.**
- **Minimum back pressure**
- **Economical**

STANDARD SPECIFICATIONS

Driving Belt - 4" wide Black PVC 120 belt.

Bed - Roller bed width between frames, 10", 13", 16" and 22". 5½" x 1½" x 12 gauge powder painted formed steel channel frame, bolted together with butt couplings and floor supports.

Tread Rollers - 1⅜" diameter x 18 gauge galvanized tread rollers with 5/16" hex shafts on 1½" or 3" centers. Safety pop-out design prevents damage to product or harm to personnel if caught between belt and tread rollers.

Pressure Rollers - 1⅜" diameter x 18 gauge galvanized pressure rollers with 5/16" hex shafts on 6" centers.

X-Bracing - Frame Squaring device supplied on conveyors 40 feet and longer on every other bed section. X-bracing insures good product and belt tracking.

Tail Pulley - 4" diameter crowned with 1 3/16" shaft.

Drive Pulley - 4" diameter crowned and fully lagged, with 1 3/16" diameter shaft. Located at infeed end of conveyor.

Snub Roller - 2" diameter adjustable, located directly behind drive and tail pulley.

Return Idler - 1.9" diameter, adjustable, on 10'0" centers.

Floor Supports - 30" to 44" adjustable from floor to top of rollers. One support supplied at each end of conveyor and at each bed joint.

Take-Up - Located at discharge end of conveyor, provides 12" of belt take-up.

Bearings - Sealed, prelubricated with cast iron housings.

Speed Reducer - Heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 100 pounds per foot. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum elevation – 8".

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher supports available.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "138CAP"

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Bed Length	Overall Length	Belt Width	4"			
		Width Between Frames	10"	13"	16"	22"
		Overall Width	13"	16"	19"	25"
			Rollers Spaced on 3" Centers			
7'	10'	Weight (lbs.)	400	425	445	480
12'	15'		535	555	580	610
17'	20'		545	650	670	710
22'	25'		750	770	790	830
27'	30'		840	870	885	925
32'	35'		950	970	990	1040
37'	40'		1055	1085	1100	1150
42'	45'		1160	1180	1205	1250
47'	50'		1265	1290	1310	1350
52'	55'		1370	1390	1415	1455
57'	60'		1480	1500	1520	1550
62'	65'		1580	1605	1625	1670
67'	70'		1690	1710	1730	1775
72'	75'		1800	1820	1835	1880
77'	80'		1910	1925	1945	1990
82'	85'		2010	2120	2130	2160
87'	90'		2170	2180	2190	2200
92'	95'		2210	2230	2250	2295
97'	100'		2320	2350	2380	2400

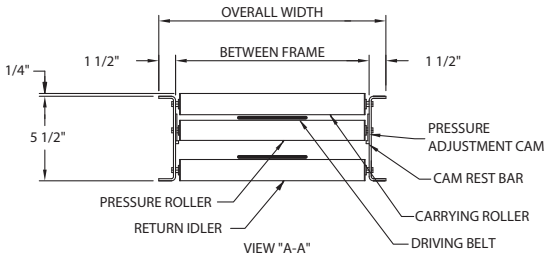
For Weights on other than 3" centers adjust as follows:								
Roller Centers	10" BF		13" BF		16" BF		22" BF	
	5'	10'	5'	10'	5'	10'	5'	10'
1½"	+30	+60	+45	+90	+45	+90	+52	+104

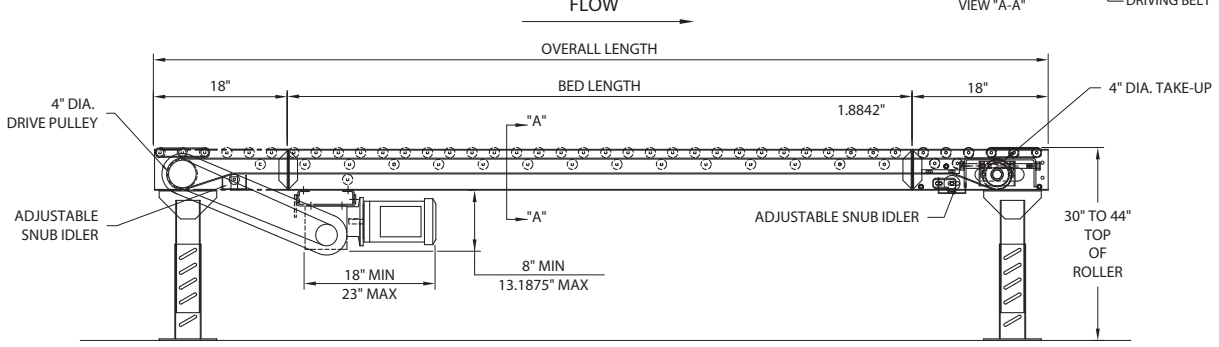
Driving force is adjustable through the use of a 9 position cam which raises and lowers each individual pressure roller. Each position of the cam is numbered so that once the desired driving force has been determined, all of the other cams can be easily set to the same driving position.

For minimum pressure accumulation, the driving force is set to convey the heaviest product. Product will then accumulate with approximately 2% back pressure depending on the footprint of the product.

Load Capacity Chart

60 FPM	
HP	TOTAL LOAD
½	1300 lbs.
¾	2000 lbs.
NOTE : ¾ H.P. Maximum. Above ¾ H.P. use Model "190 CAP"	





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Arlington Heights, IL 60005

MODEL "190CAP"

Belt Driven Live Roller Accumulating Conveyor

- **Accumulates tote pans, cartons, boxes, etc.**
- **Minimum back pressure**

STANDARD SPECIFICATIONS

Driving Belt - 8" wide for 15" and 21" between frames, 12" wide for 27" between frames, 16" wide for 33" and 39" between frames; black PVC 120 belt.

Bed - Roller bed width between rails, 15", 21", 27", 33", or 39". 7" x 1½" x 12 gauge powder painted formed steel channel frame, bolted together with butt couplings and floor supports.

Tread Rollers - 1.9" diameter x 16 gauge galvanized steel rollers spaced on 2¼", 3", 4½" or 6" centers. Safety pop-out design prevents damage to product or harm to personnel if caught between belt and tread rollers.

Pressure Rollers - 1.9" diameter x 16 gauge galvanized steel rollers spaced on 6", 9" or 12" centers, cam adjusted.

X-Bracing - Frame Squaring device supplied on conveyors 40 feet and longer on every other bed section. X-bracing insures good product and belt tracking.

Tail Pulley - 4" diameter crowned with 1 3/16" diameter shaft.

Drive Pulley - 8" diameter, crowned and fully lagged, with 1 7/16" diameter shaft.

Snub Roller - 2½" diameter adjustable, located directly behind drive pulley. 2" diameter at each end directly behind terminal pulleys.

Return Idler - 1.9" diameter, adjustable, on 10'0" centers.

Floor Supports - Adjustable 31½" to 45½" from floor to top of rollers. One support supplied at each end of conveyor and at each bed joint.

Take-Up - Located in center drive, provides 24" of belt takeup.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 150 lbs. per foot. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher supports available. Minimum elevation 20".

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor bed section. Specify side. Minimum 9" elevation with 4" drive pulley, minimum 12" elevation with 8" drive pulley.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "190CAP"

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Bed Length	Overall Length	Belt Width	6"	8"	12"	16"	16"
		Width Between Frames	15"	21"	27"	33"	39"
		Overall Width	18"	24"	30"	36"	42"
			Rollers Spaced on 3" Centers				
7'	10'	Weight (lbs.)	600	730	850	960	1070
12'	15'		790	932	1080	1200	1370
17'	20'		926	1100	1280	1420	1640
22'	25'		1090	1300	1520	1890	1950
27'	30'		1220	1470	1720	1970	2220
32'	35'		1380	1650	1940	2230	2520
37'	40'		1530	1840	2160	2480	2800
42'	45'		1680	2025	2380	2735	3070
47'	50'		1830	2210	2600	2990	3360
52'	55'		1980	2390	2820	3250	3650
57'	60'		2130	2580	3040	3500	3930
62'	65'		2290	2760	3260	3760	4220
67'	70'		2441	2950	3470	4010	4560
72'	75'		2590	3130	3690	4150	4710
77'	80'		2740	3310	3910	4500	5100
82'	85'		2890	3500	4130	4760	5360
87'	90'		3047	3680	4350	5040	5730
92'	95'		3200	3870	4570	5270	5940
97'	100′		3350	4050	4790	5530	6270

For Weights other than 3" centers add/deduct the following:

Roller Centers	15" BF		21" BF		27" BF		33" BF		39" BF	
	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'
2¼"	+16	+32	+21	+43	+26	+53	+31	+62	+37	+73
4½"	-23	-45	-30	-60	-37	-75	-45	-90	-53	-105
6"	-45	-90	-60	-120	-75	-150	-90	-180	-105	-210

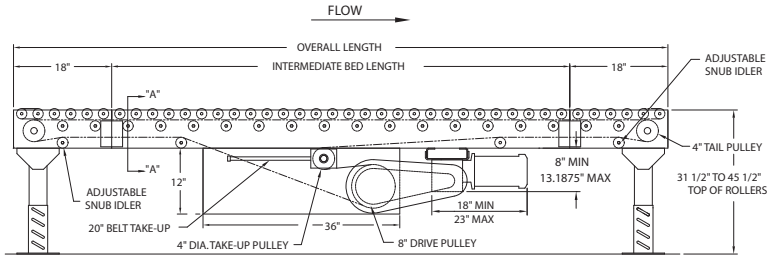
Driving force is adjustable through the use of a 7 position cam which raises and lowers each individual pressure roller. Each position of the cam is numbered so that once the desired driving force has been determined, all of the other cams can be easily set to the same driving position.

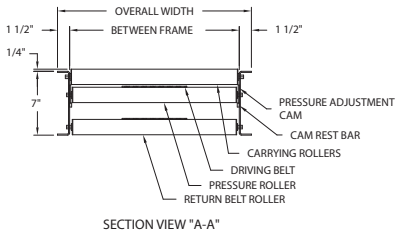
For minimum pressure accumulation, the driving force is set to convey the heaviest product. Product will then accumulate with approximately 2% back pressure depending on the footprint of the product.

Load Capacity Chart

60 FPM

HP	Overall Frame Width 18" to 22" Total Load (lbs.)		Overall Frame Width 24" to 30" Total Load (lbs.)		Overall Frame Width 36" to 42" Total Load (lbs.)	
	Up to 50'	Up to 100'	Up to 50'	Up to 100'	Up to 50'	Up to 100'
½	1100	200	600	-	-	-
¾	2200	1300	1700	500	1100	-
1	3300	2400	2800	1600	2200	-
1½	5600	4600	5000	3800	4400	1900
2	7000	6000	6400	5200	5800	3300





SECTION VIEW "A-A"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "190ZPA"

Medium Duty Belt Driven Live Roller Accumulating Conveyor

- **Zero pressure accumulation**
- **Air operated zones**
- **Easy installation and adjustment**
- **Economical**

NOTE: Shown with Optional Side Mounted Drive.

STANDARD SPECIFICATIONS

Driving Belt - Black PVC 120 belt.

Bed - Roller bed width between frames, 15", 21", 27", 33" and 39". 7" x 1½" x 12 gauge powder painted formed steel channel frame, bolted together with butt couplings and floor supports. Frame sections are l0'0" and 5'0" long.

Tread Rollers - 1.9" diameter x 16 gauge galvanized steel rollers spaced on 3" centers. Safety pop-out design prevents damage to product or harm to personnel if caught between belt and tread rollers.

Pressure Rollers - 1.9" diameter x 16 gauge galvanized steel rollers with 7/16" hex shaft spaced on 6" and 12" centers. Raised by air to drive tread rollers, lowered when sensing device is activated.

Tail Pulley - 4" diameter crowned with 1 3/16" diameter shaft.

Drive Pulley - 8" diameter crowned and fully lagged with 1 7/16" diameter shaft. Located at infeed end of conveyor.

Snub Roller - 2½" diameter adjustable mounted directly behind drive pulley, 2" diameter adjustable mounted directly behind tail pulley.

Floor Supports - Adjustable 31½" to 45½" from floor to top of roller. One support supplied at each end of conveyor and at each bed joint.

Sensing Roller - 1" diameter galvanized, mounted in counter balanced carriage, one for each zone.

Zones - Standard zones are 18", 24", 30" and 36" long.

Take-Up - Screw type take-up located at end of conveyor to maintain belt tension. 12" of belt take-up provided.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Conveyor Speed - 60 FPM constant. Some higher and lower speeds available. However, most efficient accumulation occurs at 60 FPM.

Capacity - See Load Capacity Chart. 150 pounds max. unit load. For loads less than 5 pounds, consult factory.

OPTIONAL EQUIPMENT

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Floor Supports - Higher or lower supports available. Minimum elevation with standard end drive, 25".

Sensing Devices - Limit switches, photo cells, etc.

Slug Release - Allows for conveyor to be unloaded quickly when accumulation feature not required.

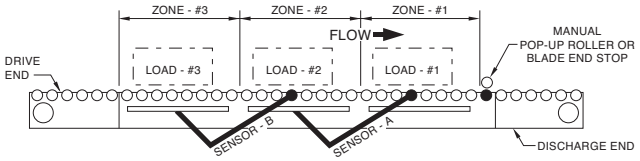
Guard Rails - Adjustable channel, continuous channel or solid steel guard rails are available.

Ceiling Hangers - ½" diameter threaded rods 8'0" long with locking nuts and mounting hardware. Other lengths are available.

Air Control Zone Stop - Pneumatic brake to stop rollers in work station area.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.



OPERATIONAL SEQUENCE

1. Model "190 ZPA" is loaded at infeed end of conveyor. First load travels to Zone #1 and comes to rest against blade or roller stop, and depresses sensor roller "A", deactivating Zone #2.
2. Second load travels into Zone #2 and comes to rest over sensor roller "B" deactivating Zone #3.
3. The Model "190 ZPA" will continue to accumulate at "Zero" pressure until conveyor is fully loaded. NOTE: Zone #1 at discharge end is supplied with low pressure accumulation feature. If "ZERO" pressure zone is required, contact factory.
4. To unload, remove end load or lower roller stop which will advance second load into first zone and third load into second, etc.

MODEL "190ZPA"

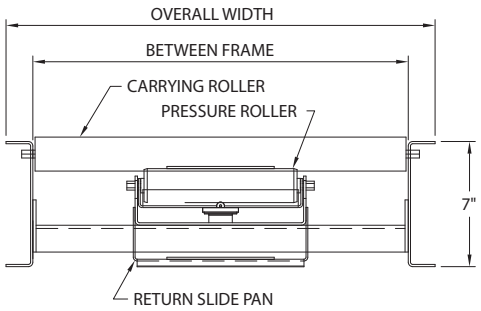
CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

Bed Length	Overall Length	Belt Width	6"	6"	6"	6"	6"
		Width Between Frames	15"	21"	27"	33"	39"
		Overall Width	18"	24"	30"	36"	42"
			Rollers on 3" Centers				
10'	13'	Weight (lbs.)	560	630	700	770	840
15'	18'		780	890	1000	1200	1310
20'	23'		960	1070	1180	1290	1400
25'	28'		1150	1270	1390	1510	1630
30'	33'		1320	1450	1580	1710	1840
35'	38'		1550	1690	1830	1970	2110
40'	43'		1720	1870	2020	2170	2320
45'	48'		1950	2100	2250	2400	2550
50'	53'		2120	2280	2440	2600	2760
55'	58'		2310	2480	2650	2820	2990
60'	63'		2480	2650	2820	2990	3160
65'	68'		2690	2870	3050	3230	3410
70'	73'		2890	3070	3250	3430	3610
75'	78'		3080	3280	3480	3680	3880
80'	83'		3250	3460	3670	3880	4090
85'	88'		3460	3680	3900	4120	4340
90'	93'		3630	3850	4070	4290	4510
95'	98'		3850	4090	4330	4570	4810

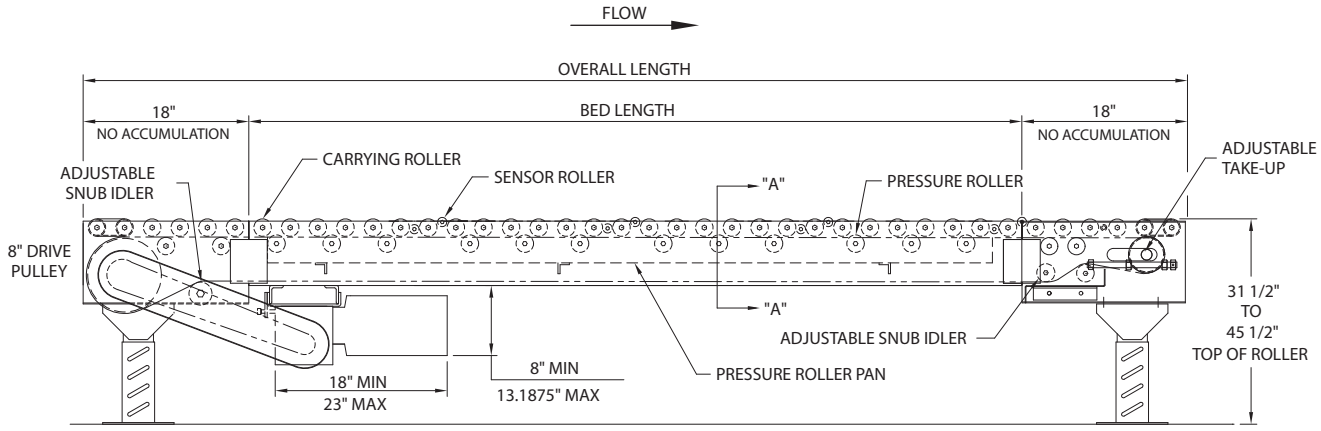
Load Capacity Chart

60 FPM

HP	Overall Frame Width 18" to 24" Total Load (lbs.)		Overall Frame Width 25" to 30" Total Load (lbs.)		Overall Frame Width 36" to 42" Total Load (lbs.)	
	Up to 50'	Up to 100'	Up to 50'	Up to 100'	Up to 50'	Up to 100'
½	1100	200	600	-	-	-
¾	2200	1300	1700	500	1100	-
1	3300	2400	2800	1600	2200	-
1½	5600	4600	5000	3800	4400	1900
2	7000	6000	6400	5200	5800	3300



SECTION VIEW "A-A"



CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "190ABE"

Medium Duty Belt Driven Live Roller Photo Eye Controlled Accumulating Conveyor

- **Zero pressure accumulation**
- **Air operated zones**
- **Easy installation**
- **Economical**
- **No mechanical sensor rollers**
- **Photo eye controlled**

NOTE: Shown with Optional Center-mounted Drive.

STANDARD SPECIFICATIONS

Driving Belt - Black PVC 120 belt.

Bed - Roller bed width between frames, 15", 21", 27", 33" and 39". 7" x 1½" x 12 gauge powder painted formed steel channel frame, bolted together with butt couplings and floor supports. Frame sections are 10'0" and 5'0" long.

Tread Rollers - 1.9" diameter x 16 gauge galvanized steel rollers spaced on 2¼" or 3" centers. Safety pop-out design prevents damage to product or harm to personnel if caught between belt and tread rollers.

Pressure Rollers - 1.9" diameter x 16 gauge galvanized steel rollers with 7/16" Hex Shaft spaced on 6" and 12" centers. Raised by air to drive tread rollers, lowered when sensing device is activated.

Sensing Device - Photoelectric sensor in each zone detects presence of product and activates accumulation feature in the trailing zone if leading zone is occupied.

Power Supply - 120 VAC power supply controls accumulation feature with 24 VDC output. Power supply will control 40 accumulation zones.

Air Requirements - Operating pressure is 20-35 psi on main trunk line.

Accumulation Zones - 24", 30", or 36" long, air operated. Conveyor frame lengths change with zone lengths. NOTE: Zone length must be evenly divisible by roller centers.

Filter/Regulator - Supplied loose for mounting to conveyor side frame, with 3/8" NPT ports. 35 to 40 psi recommended operating pressure with free air consumption of .0062 cu. ft. per sensor operation.

Guard Rails - 1½" x 1½" x 12 gauge galvanized angle guard rails, both sides. NOTE: Product contact with guard rails will affect product flow.

Tail Pulley - 4" diameter crowned with 1 3/16" diameter shaft.

Drive Pulley - 8" diameter crowned and fully lagged with 1 7/16" diameter shaft. Located at infeed end of conveyor.

Snub Roller - 2½" diameter adjustable mounted directly behind drive pulley, 2" diameter adjustable mounted directly behind tail pulley.

Floor Supports - Adjustable 31½" to 45½" from floor to top of roller. One support supplied at each end of conveyor and at each bed joint.

Take-Up - Screw type take-up located at end of conveyor to maintain belt tension. 12" of belt take-up provided.

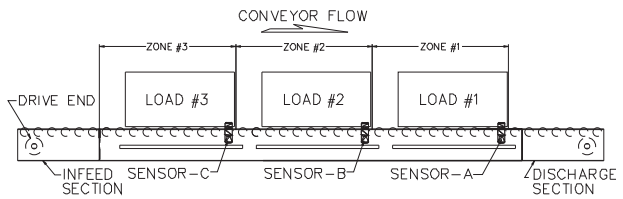
Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Conveyor Speed - 60 FPM constant. Some higher and lower speeds available. However, most efficient accumulation occurs at 60 FPM.

Capacity - See Load Capacity Chart. 150 pounds max. unit load.



OPTIONAL EQUIPMENT

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Floor Supports - Higher or lower supports available. Minimum elevation with standard end drive, 25".

Accumulation Zones - 18" long, air operated. Note: Zone length must be evenly divisible by roller centers.

Roller Brakes - (4) rollers per zone.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Slug Release - Allows for conveyor to be unloaded quickly when accumulation feature not required.

Ceiling Hangers - ½" diameter threaded rods 8'0" long with locking nuts and mounting hardware. Other lengths are available.

Air Control Zone Stop - Pneumatic brake to stop rollers in work station area.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

OPERATIONAL SEQUENCE

1) Model "190ABE" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.

2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.

3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1 until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1's photoelectric sensor for the accumulation process to continue.

MODEL "190ABE"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

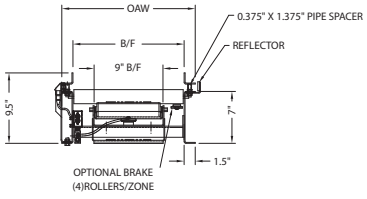
Bed Length	Overall Length	Belt Width	6"	6"	6"	6"	6"
		Width Between Frames	15"	21"	27"	33"	39"
		Overall Width	18"	24"	30"	36"	42"
			Rollers on 3" Centers				
10'	13'	Weight (lbs.)	560	630	700	770	840
15'	18'		780	890	1000	1200	1310
20'	23'		960	1070	1180	1290	1400
25'	28'		1150	1270	1390	1510	1630
30'	33'		1320	1450	1580	1710	1840
35'	38'		1550	1690	1830	1970	2110
40'	43'		1720	1870	2020	2170	2320
45'	48'		1950	2100	2250	2400	2550
50'	53'		2120	2280	2440	2600	2760
55'	58'		2310	2480	2650	2820	2990
60'	63'		2480	2650	2820	2990	3160
65'	68'		2690	2870	3050	3230	3410
70'	73'		2890	3070	3250	3430	3610
75'	78'		3080	3280	3480	3680	3880
80'	83'		3250	3460	3670	3880	4090
85'	88'		3460	3680	3900	4120	4340
90'	93'		3630	3850	4070	4290	4510
95'	98'		3850	4090	4330	4570	4810

For Weights other than 3" centers add the following:										
$2^1/_4$" Roller Centers	15" BF		21" BF		27" BF		33" BF		39" BF	
	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'
	+16	+32	+21	+43	+26	+53	+31	+62	+37	+73

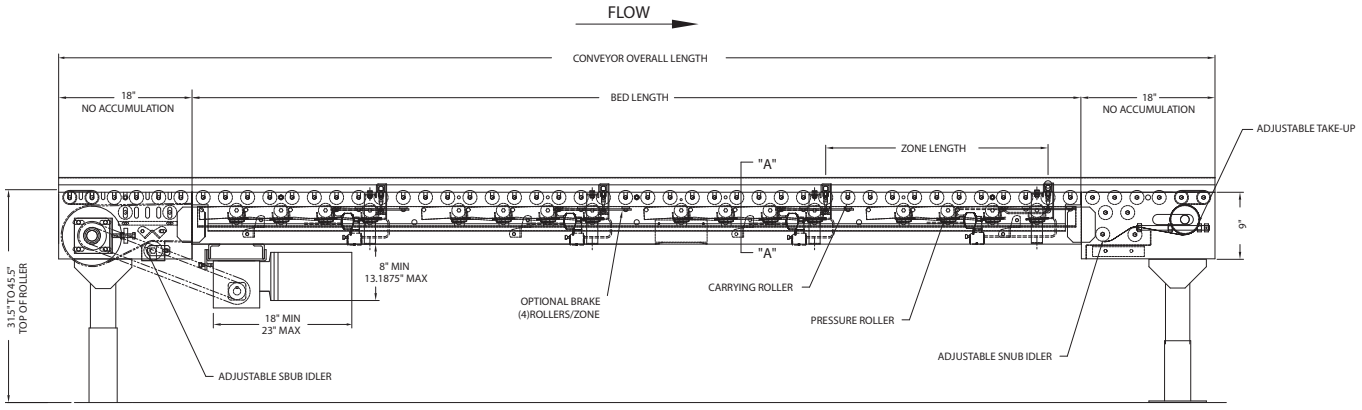
Load Capacity Chart

60 FPM

HP	Overall Frame Width 18" to 24" Total Load (lbs.)		Overall Frame Width 25" to 30" Total Load (lbs.)		Overall Frame Width 36" to 42" Total Load (lbs.)	
	Up to 50'	Up to 100'	Up to 50'	Up to 100'	Up to 50'	Up to 100'
½	1100	200	600	-	-	-
¾	2200	1300	1700	500	1100	-
1	3300	2400	2800	1600	2200	-
1½	5600	4600	5000	3800	4400	1900
2	7000	6000	6400	5200	5800	3300



SECTION VIEW "A-A"



CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "190MRA"

Medium Duty Motorized Roller
Photo Eye Controlled Accumulating Conveyor

- **Energy efficient technology**
- **Zero pressure accumulation**
- **Photo eye controlled**
- **24VDC - Brushless motorized rollers**
- **Quiet operation**
- **Easy installation and wiring**
- **Low profile design**
- **Simple maintenance**

STANDARD SPECIFICATIONS

Beds - 15", 21", 27", 33", and 39" wide between rails, 7" deep x 1½" x 12 ga. painted, formed steel channel frame, bolted together with splice plates and floor supports.

Rollers - 1.9" dia. x 16 ga. galvanized steel rollers with 7/16" hex axle and ABEC-1 bearings. Double grooved rollers spaced on 3", 4" or 6" centers are slave driven by urethane "O" rings from motor rollers. Rollers are set low in conveyor frame to provide guard rails both sides.

Motor Rollers - Motor rollers are 24VDC, brushless type for long life and high output. Each motor roller has the capability to provide accumulation, dynamic braking, slug unload, reverse and run at variable speeds as standard. Motor roller only runs when necessary and remains in sleep mode at all other times. A driver card for each motorized roller is included, but is application specific.

Sensors - Retro-reflective photo eye mounted to side of conveyor frame to detect product presence. Photo eyes operate on 24VDC.

Accumulation Zones - Standard zones are 18", 24", 30" or 36" long. Zone length must be equally divisible by roller centers.

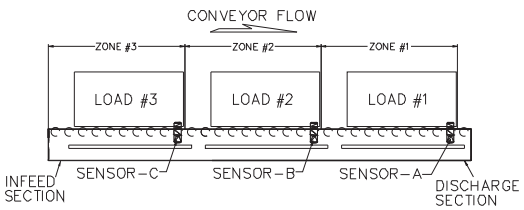
Power - A "power supply" is required to convert 120VAC to 24VDC to power the motorized rollers - power supply sold separately.

Capacity - Motor rollers can handle product weights up to 120 lbs. depending on product type and conveyor speed.

Floor Supports - 30" to 44" adjustable from floor to top of roller. One support provided for each end of conveyor and at each bed joint. Other elevations are available.

Conveyor Speed - Standard conveyor speed range is 25 to 200 FPM. Other speeds are available.

Side Covers - Easy on-off, tinted plastic side cover to protect wiring - no tools required to remove or install.



OPTIONAL EQUIPMENT

Curves - 30, 45, 60 and 90 degree curves available.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Right Angle Transfer - 90 degree right angle tranfer, driven by motor rollers provide economical means for transferring product off or onto main conveyor line.

Electrical Controls - Complete electrical control system is available to control all functions of the motor rollers capabilities.

Poly-V or Chain Driven - Designed for heavier loads.

OPERATIONAL SEQUENCE

1) Model "190MRA" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the driver card in Zone #1 has been set to accumulate, the product will stop in Zone #1.
2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.
3) To unload, an external signal to the driver card in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1 until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2.

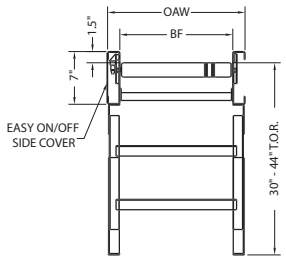
MODEL "190MRA"

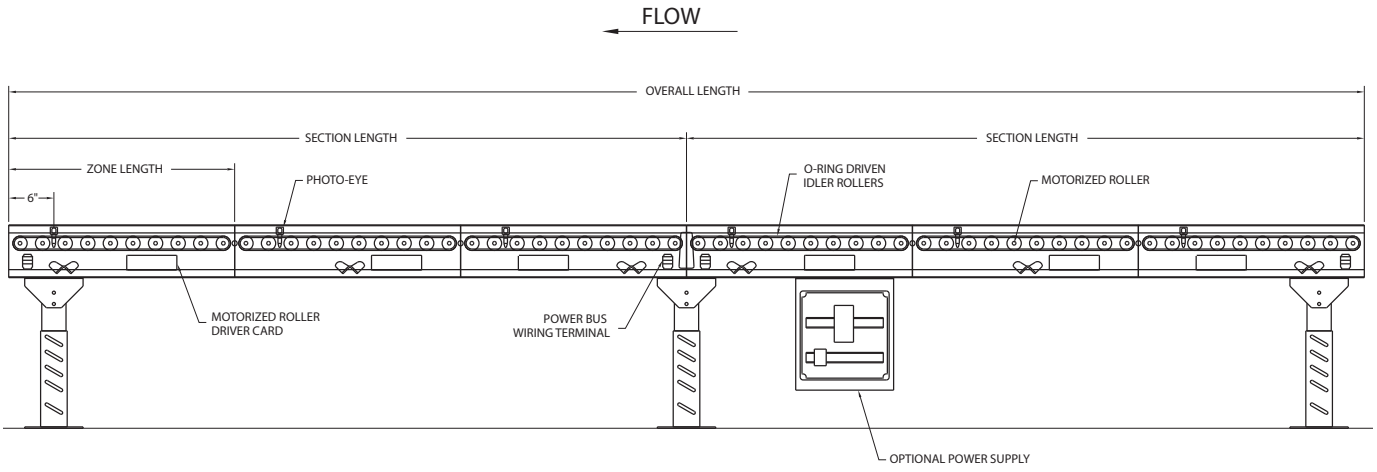
CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

Overall Length	Between Frames / Overall Frame Width	15" / 18"	21" / 24"	27" / 30"	33" / 36"	39" / 42"
5'	Weight (lbs.) Weights Based on 3" Roller Centers	208	242	274	306	339
10'		336	398	457	514	573
15'		463	553	638	722	807
20'		591	709	820	930	1042
25'		719	865	1002	1138	1275
30'		846	1020	1184	1347	1509
35'		974	1176	1365	1554	1744
40'		1101	1332	1548	1762	1978
45'		1229	1487	1729	1971	2212
50'		1357	1642	1911	2178	2447
55'		1484	1799	2093	2386	2681
60'		1612	1954	2275	2595	2916
65'		1740	2109	2456	2803	3150
70'		1867	2265	2638	3010	3384
75'		1995	2421	2820	3219	3619
80'		2122	2376	3002	3427	3853
85'		2251	2731	3183	3635	4086
90'		2378	2888	3366	3843	4321
95'		2505	3043	3548	4052	4555
100'		2633	3198	3729	4259	4790

Load Capacity Chart

~60 FPM (66 FPM)	
ZONE LENGTH	TOTAL LOAD
18"	120 lbs.
24"	100 lbs.
30"	80 lbs.
36"	60 lbs.





CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "22ACDE"

Air Operated Accumulating Conveyor
Photo Eye Controlled

- **Medium Weight Pallets**
- **Drum Filling Operations**
- **Large Carton Accumulation**
- **Handles Product on Slip Sheets**
- **Photo eye controlled**

STANDARD SPECIFICATIONS

Frame - Conveying surface width 14", 16", 18", 24", 28", and 34". 5 ½" x 1 ½" x 10 gauge powder painted formed steel channel both sides. Sections are bolted together with butt couplings and floor supports.

Tread Rollers - 2" dia. x 12 gauge steel with #40 sprockets welded to roller tube, 7/16" hex shaft. Rollers spaced on 4", or 6" centers, set low 1½". Roller to roller driven.

Drive - Located near center of conveyor length, under conveyor frame.

Drive Chain - RC #40 for roller to roller connections, RC #50 chain drive for each zone. Chains are totally enclosed by metal guards.

Floor Supports - Adjustable 28¼" to 42¼" from floor to top of rollers. One support supplied for each end of conveyor and at each bed joint.

Accumulation Zones - Standard zone lengths are 24", 30", and 36" with a maximum of 30 zones per drive. Conveyor frame lengths change with zone lengths and zone length must be divisible by roller centers. Each zone is driven by an air clutch and controlled by a photo eye sensor.

Sensing Device - Photo electric sensor in each zone detects product presence and activates accumulation feature in trailing zone if leading zone is occupied.

Power Supply - 120VAC power supply controls accumulation feature with 24VDC output. Power supply will control 40 accumulation zones.

Filter/Regulator - Mounted to conveyor side frame. 50 PSI recommended operating pressure with free air consumption of .001cu. ft. per sensor operation.

Motor - ½ HP 230/460-3-60 TE Motor.

Conveyor Speed - 60 FPM constant.

Capacity - Maximum load 250 lbs. per foot; maximum unit load 1000 lbs. Not to exceed load capacity chart.

OPTIONAL EQUIPMENT

Electrical Controls - Magnetic starters and push button stations; manual motor starters, others.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Workstation - External control of a zone or zones can be achieved with a workstation kit - contact factory for more information.

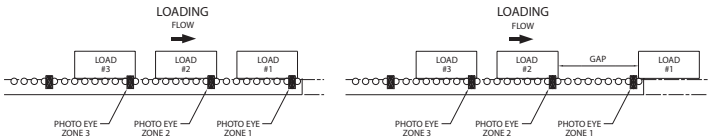
MODEL "22ACDE"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

Bed Length	Conveying Surface	14"	16"	18"	24"	28"	34"
	Between Frame Width	17"	19"	21"	27"	31"	37"
	Overall Frame Width	26.5"	28.5"	30.5"	36.5"	40.5"	46.5"
10'	Weight (lbs.) Based On 4" Roller	328	375	424	564	660	796
20'		617	703	795	1057	1237	1496
30'		925	1055	1192	1585	1854	2244
40'		1160	1322	1495	1987	2325	2814
50'		1450	1653	1868	2484	2907	3517
60'		1740	1983	2241	2981	3488	4220
70'		2030	2314	2615	3478	4069	4924
80'		2320	2645	2989	3975	4651	5627
90'		2610	2975	3362	4472	5232	6331

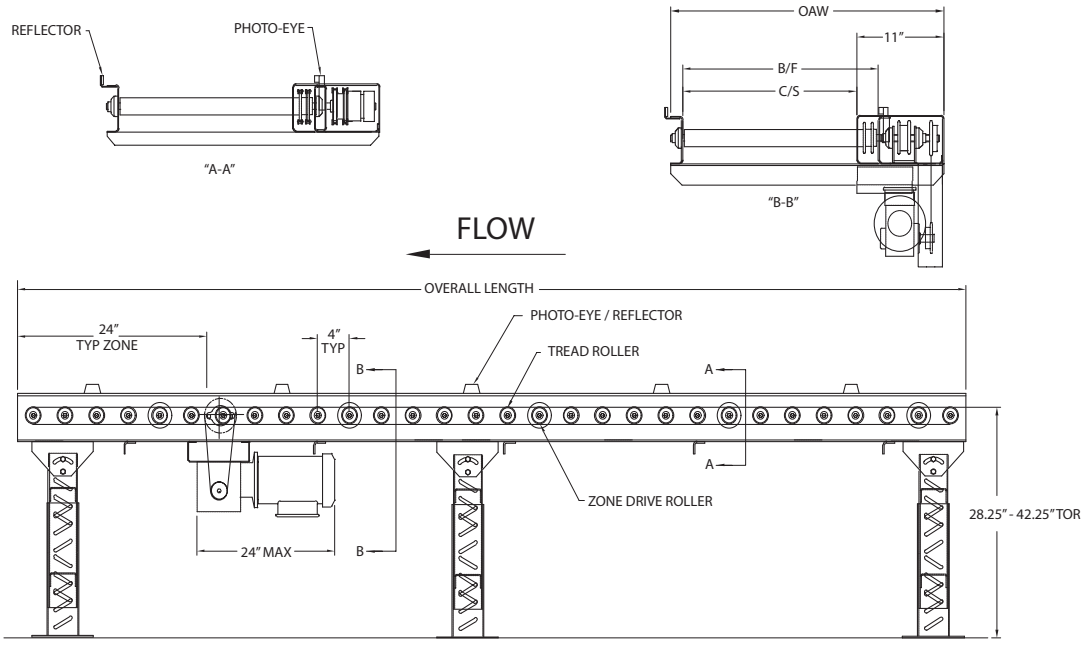
OPERATIONAL SEQUENCE

1) Model "22ACDE" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.
2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.
3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1 until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1's photoelectric sensor for the accumulation process to continue.



Load Capacity Charts

Accumulated			Moving		
Conveyor Speed @ 60 FPM			Conveyor Speed @ 60 FPM		
HP	Total Load (lbs.)		HP	Total Load (lbs.)	
	Up to 50'	Up to 100'		Up to 50'	Up to100'
½	6000	5000	½	3000	2000
¾	7500	6500	¾	4500	3500
1	9000	8000	1	6000	5000
1½	10500	9500	1½	7500	6500
2	12000	11000	2	9000	8000



CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "251CDA"

Chain Driven Pallet Accumulating Conveyor

- **Zero pressure accumulation**
- **Mechanically operated**
- **Heavy duty construction**
- **Chain driven rollers**
- **Zone connections outside frame for easy installation**

STANDARD SPECIFICATIONS

Frame - Heavy duty 12½" deep x 7 gauge powder painted formed steel channel with heavy duty cross braces. Frames are bolted together with splice plates and floor supports.

Rollers - 2½" diameter x 11 gauge steel rollers, grease packed and labyrinth sealed bearings, 11/16" hex shaft. Rollers are spaced on 4" or 6" centers, set 7/8" low.

Floor Supports - Adjustable 25⅝" to 30¼" (HD-4) from floor to top of roller, for each end of conveyor and at each bed joint along with knee braces for each support. Supports on 5 foot centers, change with zone length. Minimum elevation with standard drive location 24".

Drive - Located near center of conveyor length, underneath conveyor frame.

Drive Chain - RC 40 chain used for roller-to-roller connections, RC 60 chain drives each zone. Chains are totally enclosed by metal guards.

Accumulation Zones - Standard zones are 60" long with maximum of 30 zones per single drive.

Motor - ¾ HP 230/460-3-60 TE motor.

Conveyor Speed - 30 FPM constant roller speed.

Capacity - Minimum unit load - 50 pounds. 4000 pounds maximum unit load. Total conveyor live load not to exceed Load Capacity Chart. For loads less than 50 lbs., consult factory.

Speed Reducer - Heavy duty, sealed worm gear, C-Face.

Bearings - Sealed prelubricated with cast iron housings.

OPTIONAL EQUIPMENT

Accumulation Zones - 4" roller centers 36", 40", 44", 48", 52", 56" and 72" long. 6" roller centers 36", 42", 48", 54" and 72" long. Frame lengths change with zone lengths.

Tread Rollers - 2⅝" diameter x 7 gauge steel, 1/16" hex shaft.

Floor Supports - Higher or lower supports available, adjustable or fixed type.

Side Mounted Drive - Drive unit mounted to side of conveyor in lieu of underneath conveyor frame. 14" minimum elevation to the top of roller.

Conveyor Speed - Constant and variable speeds between 10 and 70 FPM available.

Limit Switch - To provide signal for customers infeed equipment.

Time Delay - Allows for product to be unloaded from discharge zone of conveyor without immediate movement of next load into discharge zone.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Rollers Set High - Rollers set ¼" high above side rail. Frame is 11⅜" deep x 7 gauge formed steel channel.

MODEL "251CDA"

CSE
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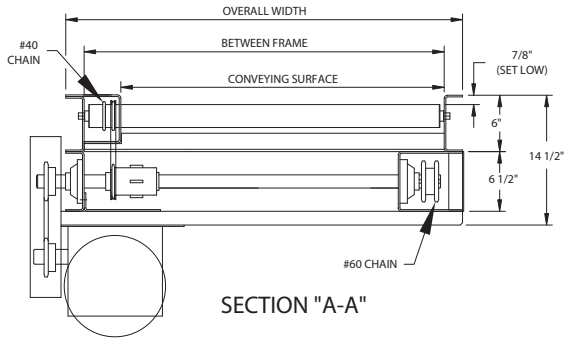
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

Bed Length	Conveying Surface	34"	40"	46"	52"	59"
	Between Frame Width	37"	43"	49"	55"	61"
	Overall Frame Width	41"	47"	53"	59"	65"
		Rollers on 4" Centers				
10'	Weights (lbs.)	1378	1483	1588	1693	1799
15'		1964	2117	2270	2423	2577
20'		2549	2570	2951	3152	3354
25'		3135	3384	3633	3882	4132
30'		3720	4017	4314	4611	4909
40'		4891	5284	5677	6070	6464
50'		6062	6551	7040	7529	8019
60'		7233	7818	8403	8988	9574
70'		8404	9085	9766	10447	11129
80'		9575	10352	11129	11906	12684
90'		10746	11619	12492	13365	14239
100'		11917	12886	13855	14824	15794

Note: Overall lengths in chart are for 60" zones. Other zone lengths will affect overall length.

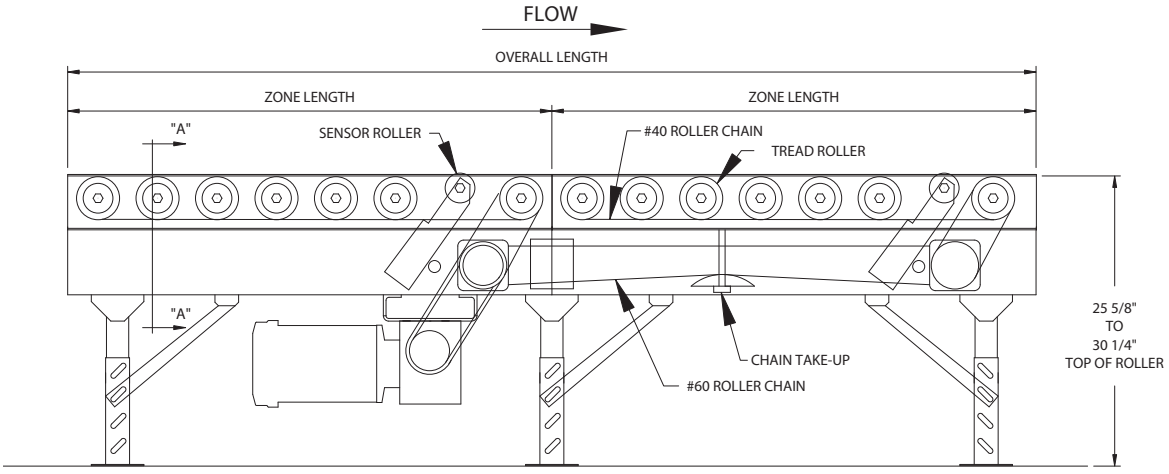
Load Capacity Charts



SECTION "A-A"

Accumulated			Moving		
Conveyor Speed @ 30 FPM			Conveyor Speed @ 30 FPM		
HP	Total Load (lbs.)		HP	Total Load (lbs.)	
	Up to 50'	Up to 100'		Up to 50'	Up to100'
¾	12000	7500	¾	6000	3750
1	18000	13000	1	9000	6500
1½	30000	25000	1½	15000	12500
2	42000	37000	2	21000	18500

NOTE- Minimum elevation with ¾ H.P. motor drive mounted underneath conveyor is 24".
Capacities based on 50% of load moving at same time.



CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "251CDE"

Chain Driven Photo Eye Controlled Pallet Accumulating Conveyor

- **Zero pressure accumulation**
- **Electrically operated**
- **Heavy duty construction**
- **Chain driven rollers**
- **Photo eye controlled with built-in time delay**
- **Zone connections outside frame for easy installation**

STANDARD SPECIFICATIONS

Frame - Heavy duty 12½" deep x 7 gauge powder painted formed steel channel with heavy duty cross braces. Frames are bolted together with splice plates and floor supports.

Rollers - 2½" diameter x 11 gauge steel rollers, grease packed and labyrinth sealed bearings, 11/16" hex shaft. Rollers are spaced on 4" or 6" centers, set 7/8" low.

Floor Supports - Adjustable 25⅝" to 30¼" (HD-4) from floor to top of roller, for each end of conveyor and at each bed joint along with knee braces for each support. Supports on 5 foot centers, change with zone length. Minimum elevation with standard drive location 24".

Drive - Located near center of conveyor length, underneath conveyor frame.

Drive Chain - RC 40 chain used for roller-to-roller connections, RC 60 chain drives each zone. Chains are totally enclosed by metal guards.

Accumulation Zones - Standard zones are 60" long with maximum of 30 zones per single drive. Each zone is controlled by photo eye.

Sensing Device - Photoelectric sensor in each zone detects presence of product and activates accumulation feature in the trailing zone if leading zone is occupied.

Motor - ¾ HP 230/460-3-60 TE motor.

Electrical Controls - 120 VAC Input to power supply. Power supply has an output of 24 VDC, 4 amp maximum

Power Supply - 120 VAC power supply controls accumulation feature with 24 VDC output. Power supply will control 30 accumulation zones.

Conveyor Speed - 30 FPM constant roller speed.

Capacity - 4000 pounds maximum unit load. Total conveyor live load not to exceed Load Capacity Chart.

Speed Reducer - Heavy duty, sealed worm gear, C-Face.

Bearings - Sealed prelubricated with cast iron housings.

Filter/Regulator - Mounted to conveyor side frame. 50 PSI recommended operating pressure with free air consumption of .001cu. ft. per sensor operation.

OPTIONAL EQUIPMENT

Accumulation Zones - 4" roller centers 36", 40", 44", 48", 52", 56" and 72" long. 6" roller centers 36", 42", 48", 54" and 72" long. Frame lengths change with zone lengths.

Tread Rollers - 2⅝" diameter x 7 gauge steel, 11/16" hex shaft.

Floor Supports - Higher or lower supports available, adjustable or fixed type.

Side Mounted Drive - Drive unit mounted to side of conveyor in lieu of underneath conveyor frame. 14" minimum elevation to the top of roller.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Conveyor Speed - Constant and variable speeds between 10 and 70 FPM available.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Rollers Set High - Rollers set ¼" high above side rail. Frame is 11⅜" deep x 7 gauge formed steel channel.

MODEL "251CDE"

CSE
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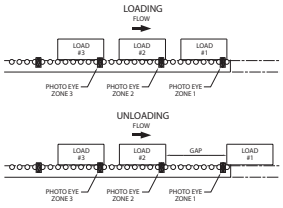
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

Bed Length	Conveying Surface	34"	40"	46"	52"	58"
	Between Frame Width	37"	43"	49"	55"	61"
	Overall Frame Width	41"	47"	53"	59"	65"
	Weights (lbs.)	Rollers on 4" Centers				
10'		1378	1483	1588	1693	1799
15'		1964	2117	2270	2423	2577
20'		2549	2570	2951	3152	3354
25'		3135	3384	3633	3882	4132
30'		3720	4017	4314	4611	4909
40'		4891	5284	5677	6070	6464
50'		6062	6551	7040	7529	8019
60'		7233	7818	8403	8988	9574
70'		8404	9085	9766	10447	11129
80'		9575	10352	11129	11906	12684
90'		10746	11619	12492	13365	14239
100'		11917	12886	13855	14824	15794

Note: Overall lengths in chart are for 60" zones. Other zone lengths will affect overall length.

OPERATIONAL SEQUENCE

1) Model "251CDE" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.
2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.



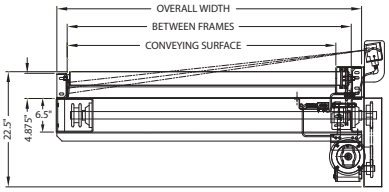
3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1 until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1's photoelectric sensor for the accumulation process to continue.

Load Capacity Charts

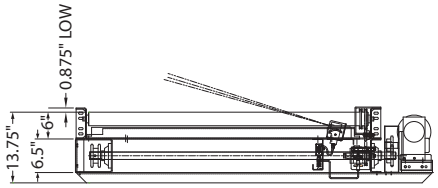
Accumulated			Moving		
Conveyor Speed @ 30 FPM			Conveyor Speed @ 30 FPM		
HP	Total Load (lbs.)		HP	Total Load (lbs.)	
	Up to 50'	Up to 100'		Up to 50'	Up to100'
¾	12000	7500	¾	6000	3750
1	18000	13000	1	9000	6500
1½	30000	25000	1½	15000	12500
2	42000	37000	2	21000	18500

NOTE- Minimum elevation with ¾ H.P. motor drive mounted underneath conveyor is 24".

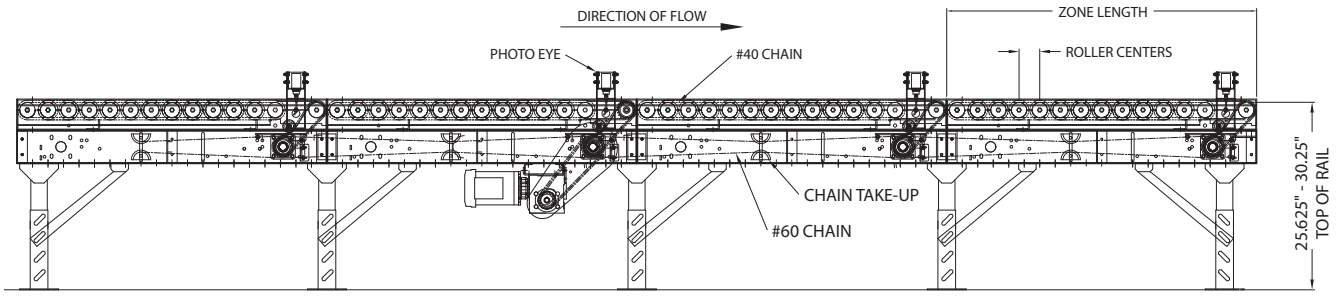
Capacities based on 50% of load moving at same time.



STANDARD: ROLLERS SET LOW, RETRO-REFLECTIVE PHOTO EYE, & UNDER MOUNT DRIVE.



OPTIONAL: ROLLERS SET HIGH, DIFFUSED PHOTO EYE, SIDE MOUNT DRIVE.



CSE
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3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "251ACDA"

Air Operated Sensor Roller Controlled Pallet Accumulator

- **Zero pressure accumulation**
- **Air operated**
- **Heavy duty construction**
- **Chain driven rollers**
- **Zone connections outside frame for easy installation**

STANDARD SPECIFICATIONS

Frame - Heavy duty 7" deep x 4 gauge powder painted formed steel channel with heavy duty cross braces. Frames are bolted together with splice plates and floor supports.

Rollers - 2½" diameter x 11 gauge steel rollers, grease packed and labyrinth sealed bearings, 11/16" hex shaft. Rollers are spaced on 4" or 6" centers, set 2¼" low.

Floor Supports - Adjustable 18¾" to 23⅜" (HD-4) from floor to top of roller, for each end of conveyor and at each bed joint along with knee braces for each support. Supports on 5 foot centers, changes with zone length.

Drive - Located near center of conveyor length, shaft mount motor and reducer.

Drive Chain - RC 40 chain used for roller-to-roller connections, RC 60 chain drive each zone. Chains are totally enclosed by metal guards.

Accumulation Zones - Standard zones are 60" long with a maximum of 30 zones per single drive. Each zone is driven by an air clutch and controlled by a sensor roller.

Motor - ¾ HP 230/460-3-60 TE motor.

Electrical Controls - 110/1/60 Electric Solenoid and Air switch for discharge zone.

Conveyor Speed - 30 FPM constant roller speed.

Capacity - Minimum unit load - 50 lbs. 4,000 lbs. Maximum unit load. Total conveyor live load not to exceed Load Capacity Chart. For loads less than 50 lbs., consult factory.

Speed Reducer - Heavy duty, sealed worm gear, C-Face.

Bearings - Sealed prelubricated with cast iron housings.

OPTIONAL EQUIPMENT

Accumulation Zones - 4" roller centers - 36", 40", 44", 48", 52", 56" and 72" long. 6" roller centers 36", 42", 48", 54" and 72" long. Frame lengths change with zone lengths.

Tread Rollers - 2⅝" diameter x 7 gauge steel, 11/16" hex shaft.

Floor Supports - Higher or lower supports available, adjustable or fixed type.

Conveyor Speed - Constant and variable speeds (Contact Factory).

Limit Switch - to provide signal for customers infeed equipment.

Time Delay - Allows for product to be unloaded from discharge zone of conveyor without movement of next load into discharge zone.

Sensing Devices - Photo cells, limit switches, etc. can be supplied for electrically operated zones in lieu of mechanical sensing devices.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; Manual motor starters with overload protection, others. 24V DC solenoid can be supplied in lieu of 110V AC solenoid in discharge zone.

Optional Loads - Larger capacity clutch is available for 6000 lb. unit loads.

Reversible - can be supplied with reversing feature to allow accumulation in both directions.

MODEL "251ACDA"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

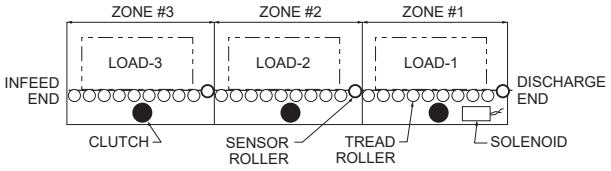
Bed Length	Conveying Surface	34"	40"	46"	52"	58"
	Between Frame Width	37"	43"	49"	55"	61"
	Overall Frame Width	48"	54"	60"	66"	72"
10'	Weight (lbs.) Based On 4" Roller Centers	1137	1227	1317	1407	1497
15'		1632	1767	1902	2037	2172
20'		2127	2307	2487	2667	2847
25'		2622	2847	3072	3297	3522
30'		3117	3387	3657	3927	4197
40'		4107	4467	4827	5187	5547
50'		5097	5547	5997	6447	6897
60'		6087	6627	7167	7707	8247
70'		7077	7707	8337	8967	9597
80'		8067	8787	9507	10227	10947
90'		9057	9867	10677	11487	12297
100'		10047	10947	11847	12747	13647

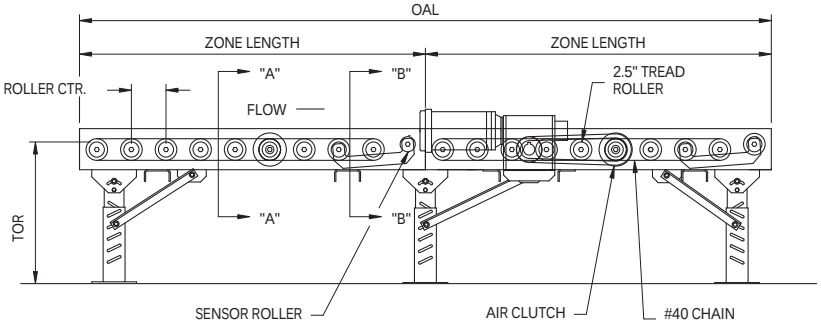
OPERATIONAL SEQUENCE

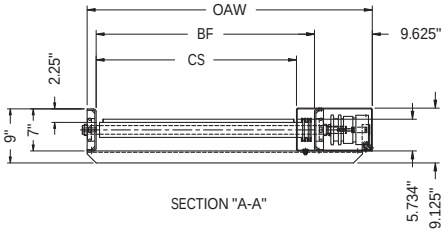
1. When a load is placed on infeed end of conveyor it will continue to travel the length of the conveyor until it reaches the last zone (at discharge end) of the conveyor (Zone #1). At this time the load will de-press sensor roller #1 which activates a pneumatic pressure switch to indicate a load is in Zone #1. This pressure switch sends a signal to external controls (not supplied by CSE). External controls will deter-mine whether or not to accumulate the load. If accumulation is desired a solenoid will be activated to stop the load in Zone #1.
2. As soon as sensor roller #1 is depressed, it sends an air signal to Zone #2 indicating Zone #1 is occupied.
3. When load #2 depresses sensor roller #2, the clutch/brake in Zone #2 is disengaged allowing load #2 to accumulate. At the same time, an air signal is sent to Zone #3 indicating Zone #2 is occupied. This se-quence of events will continue until the conveyor is fully loaded.
4. To activate Zone #1 to release load #1, an electrical signal (120VAC) must be sent to the solenoid switch controlling the clutch/brake in Zone #1. THIS EXTERNAL SIGNAL IS NOT SUPPLIED AS PART OF THE CON-VEYOR EQUIPMENT.
5. When the electrical signal is received by the solenoid switch controlling the clutch/brake in Zone #1, load #1 will be discharged from conveyor.
6. As soon as load #1 clears the sensor roller in Zone #1, load #2 will advance into Zone #1 and stop when it depresses sensor roller #1. The 120VAC external signal must again be sent to the solenoid controlling the clutch/brake in Zone #1 to discharge load #2.
7. As soon as load #2 clears sensor roller #2, load #3 will advance to Zone #2 and stop on sensor roller #2.
8. This sequence continues automatically as long as the loads in Zone #1 are removed, creating an opening for the loads to advance.

Load Capacity Charts

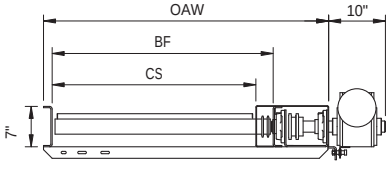
Accumulated			Moving		
Conveyor Speed @ 30 FPM			Conveyor Speed @ 30 FPM		
HP	Total Load (lbs.)		HP	Total Load (lbs.)	
	Up to 50'	Up to 100'		Up to 50'	Up to100'
3/4	12000	7500	3/4	6000	3750
1	18000	13000	1	9000	6500
1 1/2	30000	25000	1 1/2	15000	12500
2	42000	37000	2	21000	18500







SECTION "A-A"



SECTION "B-B"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "251ACDE"

Air Operated Photo Eye Controlled Pallet Accumulator

- **Zero pressure accumulation**
- **Air operated**
- **Heavy duty construction**
- **Chain driven rollers**
- **Zone connections outside frame for easy installation**
- **Photo eye controlled with built-in time delay**

STANDARD SPECIFICATIONS

Frame - Heavy duty 7" deep x 4 gauge powder painted formed steel channel with heavy duty cross braces. Frames are bolted together with splice plates and floor supports.

Rollers - 2½" diameter x 11 gauge steel rollers, grease packed and labyrinth sealed bearings, 11/16" hex shaft. Rollers are spaced on 4" or 6" centers, set 2¼" low.

Floor Supports - Adjustable 18¾" to 23⅜" (HD-4) from floor to top of roller, for each end of conveyor and at each bed joint along with knee braces for each support. Supports on 5 foot centers, changes with zone length.

Drive - Located near center of conveyor length, shaft mount motor and reducer.

Drive Chain - RC 40 chain used for roller-to-roller connections, RC 60 chain drive each zone. Chains are totally enclosed by metal guards.

Accumulation Zones - Standard zones are 60" long with a maximum of 30 zones per single drive. Each zone is driven by an air clutch and controlled by a photo eye.

Motor - ¾ HP 230/460-3-60 TE motor.

Electrical Controls - 120 VAC input to power supply.

Conveyor Speed - 30 FPM constant roller speed.

Capacity - 4,000 lbs. Maximum unit load. Total conveyor live load not to exceed Load Capacity Chart.

Speed Reducer - Heavy duty, sealed worm gear, C-Face.

Bearings - Sealed prelubricated with cast iron housings.

Sensing Device - Photoelectric sensor in each zone detects presence of product and activates accumulation feature in the trailing zone if upstream zone is occupied.

Power Supply - 120 VAC power supply controls accumulation feature with 24 VDC output. Power supply will control 30 accumulation zones.

Air Requirements - Operating pressure is 20-35 psi on main trunk line.

Filter/Regulator - Supplied loose for mounting to conveyor side frame, with ⅜"NPT ports. 35 to 40 psi recommended operating pressure with free air consumption of .0062 cu. ft. per sensor operation.

OPTIONAL EQUIPMENT

Accumulation Zones - 4" roller centers - 36", 40", 44", 48", 52", 56" and 72" long. 6" roller centers 36", 42", 48", 54" and 72" long. Frame lengths change with zone lengths.

Tread Rollers - 2⅝" diameter x 7 gauge steel, 11/16" hex shaft.

Floor Supports - Higher or lower supports available, adjustable or fixed type.

Conveyor Speed - Constant and variable speeds (Contact Factory).

Limit Switch - to provide signal for customers infeed equipment.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Electrical Controls - Magnetic starters and push button stations; Manual motor starters with overload protection, others. 24V DC solenoid can be supplied in discharge zone.

Optional Loads - Larger capacity clutch is available for 6000 lb. unit loads.

Reversible - can be supplied with reversing feature to allow accumulation in both directions.

MODEL "251ACDE"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

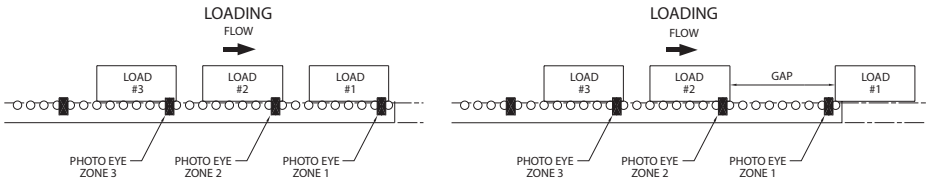
Bed Length	Conveying Surface	34"	40"	46"	52"	58"
	Between Frame Width	37"	43"	49"	55"	61"
	Overall Frame Width	48"	54"	60"	66"	72"
10'	Weight (lbs.) Based On 4" Roller Centers	1137	1227	1317	1407	1497
15'		1632	1767	1902	2037	2172
20'		2127	2307	2487	2667	2847
25'		2622	2847	3072	3297	3522
30'		3117	3387	3657	3927	4197
40'		4107	4467	4827	5187	5547
50'		5097	5547	5997	6447	6897
60'		6087	6627	7167	7707	8247
70'		7077	7707	8337	8967	9597
80'		8067	8787	9507	10227	10947
90'		9057	9867	10677	11487	12297
100'		10047	10947	11847	12747	13647

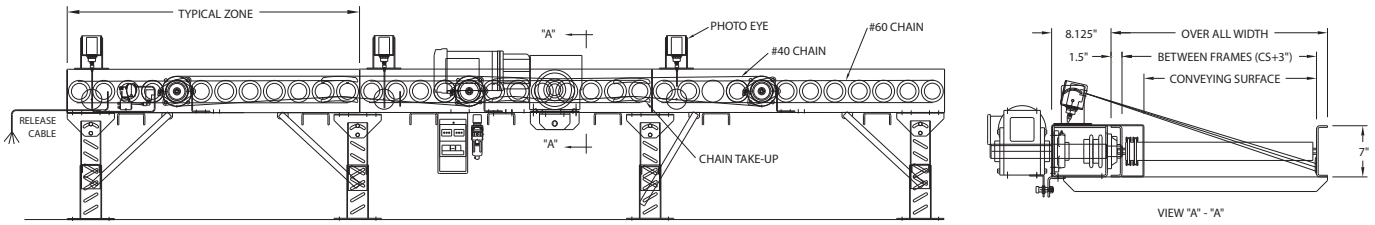
OPERATIONAL SEQUENCE

1) Model "251ACDE" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.
2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.
3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1's photoelectric sensor for the accumulation process to continue.

Load Capacity Charts

Accumulated			Moving		
Conveyor Speed @ 30 FPM			Conveyor Speed @ 30 FPM		
HP	Total Load (lbs.)		HP	Total Load (lbs.)	
	Up to 50'	Up to 100'		Up to 50'	Up to100'
¾	12000	7500	¾	6000	3750
1	18000	13000	1	9000	6500
1½	30000	25000	1½	15000	12500
2	42000	37000	2	21000	18500





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MODEL "138CLR"
V-Belt Curve

- **Transports around turns with positive drive**
- **Can be slave driven from "138CAP"**

STANDARD SPECIFICATIONS

Driving Belt - "B" section V-belt.

Bed - Roller bed width between frames, 10", 13", 16" and 22". 5½" x 1½" x 12 gauge powder painted formed steel channel frame.

Tread Rollers - 1⅜" diameter x 18 gauge galvanized steel tread rollers, 1½" centers, 5/16" hex shaft for 13"-19" OAW. 2½" to 1 11/16" tapered roller for 25" OAW conveyor, 7/16" hex shaft.

Pressure Sheaves - 3" diameter x ⅜" bore, adjustable to give required driving force.

Floor Supports - Adjustable 30" to 44" from floor to top of rollers. One support at each end, center leg on outer rail.

Tangent - 12" long, one on each end.

Take-Up - Screw take-up provided to insure proper V-belt tension. Mounted underneath conveyor.

End Drive - Mounted below bed section.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Conveying Speed - 60 FPM constant.

Capacity - 300 lbs. total distributed live load.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher supports are available. Minimum elevation 15½".

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor bed section. Minimum elevation 8". Specify side. Minimum tangent length - 18".

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Conveying Speed - Variable and other constant speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "138CLR"

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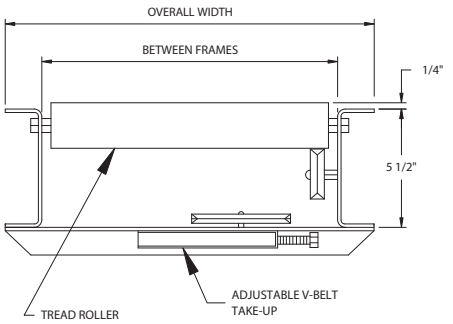
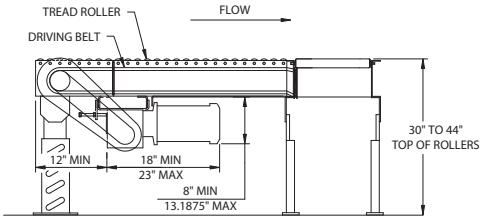
Overall Width	Width Between Frames	R	Number Of Rollers			Weight (Lbs.)		
			90°	45°	30°	90°	45°	30°
13"	10"	25"	42	29	24	280	265	245
16"	13"					295	275	255
19"	16"					315	285	265
25"	22"	32 1/2"	36	26	23	435	415	395

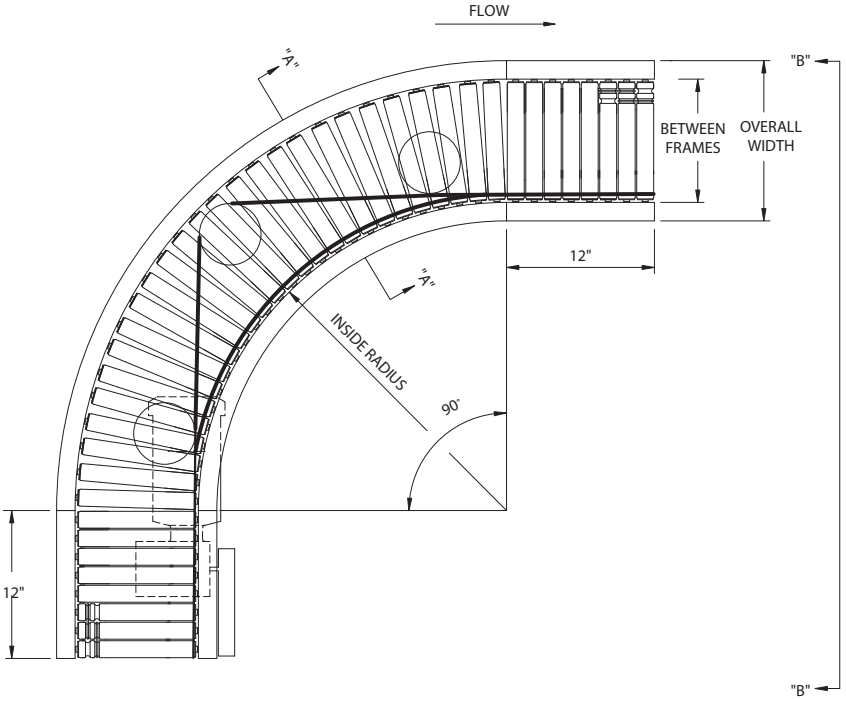
Note: 22" between rail curves are furnished with 2½" to 1¹¹⁄₁₆" diameter tapered rollers. 10", 13" and 16" between rail curves are furnished with 1⅜" diameter straight rollers.



SECTION "A-A"



SECTION "B-B"



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MODELS "138CLRS" and "138CLRSS"

V-Belt Spur

NOTE:
Model shown is 190CLRSS.

- **Used for merging or diverging**
- **Gives positive drive**
- **Can be slave driven by "138CAP"**

STANDARD SPECIFICATIONS

Driving Belt - "B" section V-belt.

Bed - Roller bed width between frames, 10", 13", 16" and 22". 5½" x 1½" x 12 gauge powder painted formed steel channel frame.

Tread Rollers - 1⅜" diameter x 18 gauge galvanized steel tread rollers, 1½" centers, 5/16" hex shaft for 13" to 19" OAW. 2½" to 1 11/16" tapered roller for 25" OAW conveyor, 7/16" hex shaft.

Pressure Sheaves - 3" diameter x ⅜" bore, adjustable to give required driving force.

Floor Supports - One support adjustable 30" to 44" from floor to top of rollers.

Tangent - 12" long, on one end of curved spur.

Take-Up - Screw take-up provided to insure proper V-belt tension. Mounted in conveyor frame.

End Drive - Mounted below bed section.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Conveying Speed - 60 FPM constant.

Capacity - 300 lbs. total distributed live load.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher supports are available. Minimum elevation 15½".

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor bed section. Minimum elevation 8". Specify side.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Conveying Speed - Variable and other constant speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODELS "138CLRS" and "138CLRSS"

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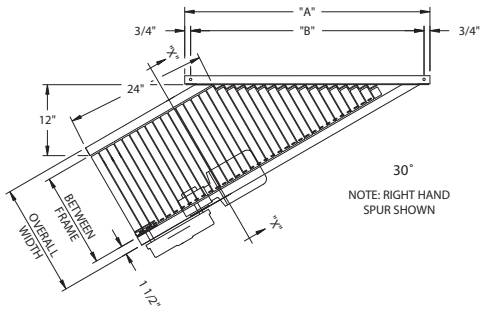
CURVE SPUR "138CLRS"

Overall Width	Width Between Frame	Radius	A		B		Weight (lbs.)	
			45°	30°	45°	30°	45°	30°
13"	10"		45 1/4"	48 3/8"	34 3/8"	49 3/8"	130	140
16"	13"	25"	47 1/4"	51"	39 1/2"	57"	135	145
19"	16"		49 1/2"	53 1/2"	44 5/8"	64 1/2"	140	150
25"	22"	32 1/2"	59"	65 1/4"	57"	83"	145	155

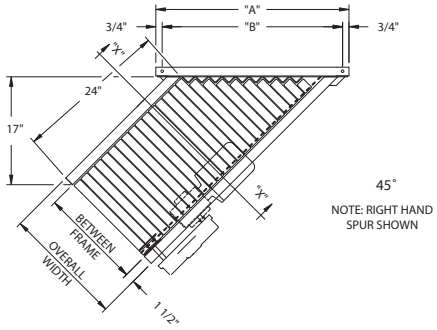
STRAIGHT SPUR "138CLRSS"

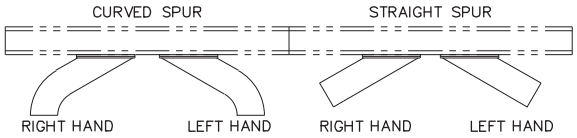
Overall Width	Width Between Frame	A		B		Weight (lbs.)	
		45°	30°	45°	30°	45°	30°
13"	10"	21 1/2"	29"	20"	27 1/2"	160	185
16"	13"	25 1/2"	35"	24"	33 1/2"	165	190
19"	16"	30"	41"	28 1/2"	39 1/2"	170	195
25"	22"	38 1/2"	53"	37"	51 1/2"	175	200

"138CLRSS" STRAIGHT SPUR - 30°

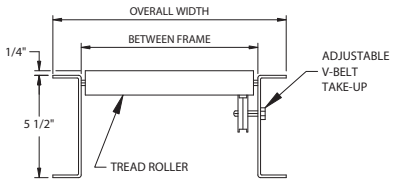


"138CLRSS" STRAIGHT SPUR - 45°



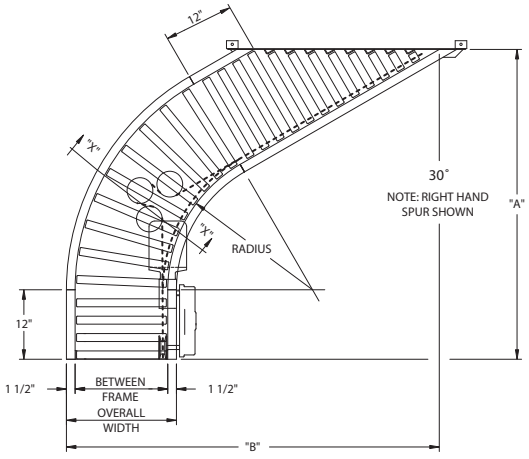


a. Specify "right" or "left" hand unit.
b. Specify direction of flow.
c. Specify conveyor to be attached to in order for proper attachment bracket to be furnished.

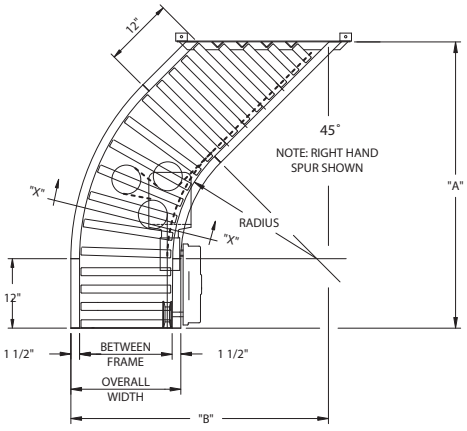


SECTION VIEW "X-X"

"138CLRS" CURVE SPUR - 30°



"138CLRS" CURVE SPUR - 45°



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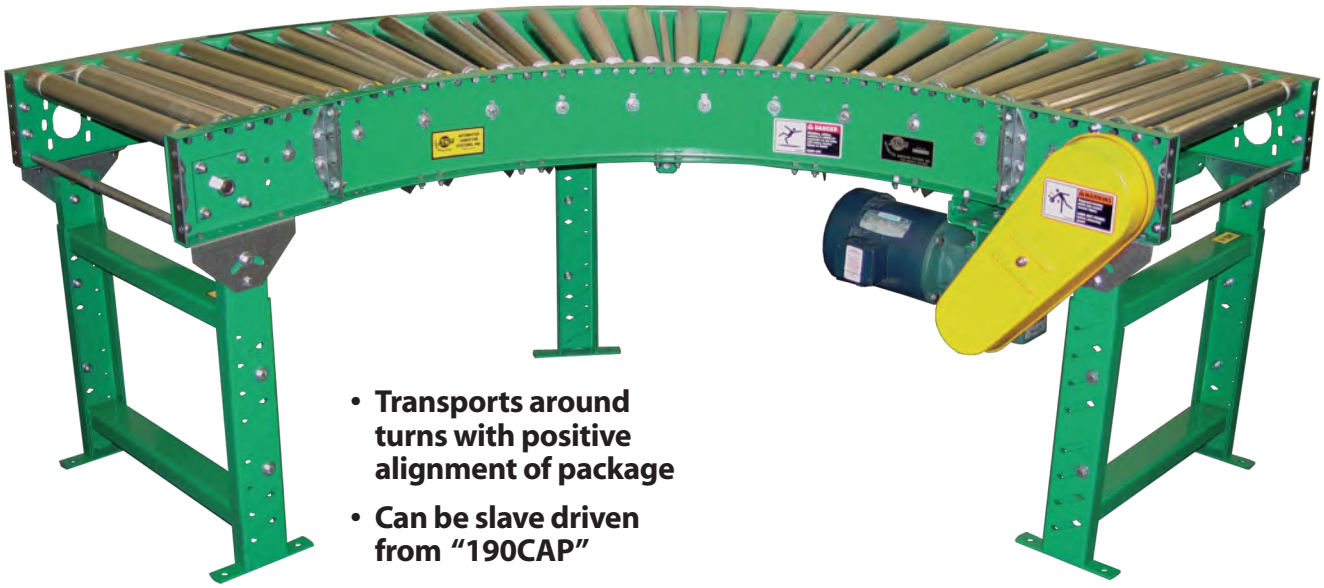
MODEL "190CLR"

V-Belt Curve



- **Transports around turns with positive alignment of package**
- **Can be slave driven from "190CAP"**

STANDARD SPECIFICATIONS

Driving Belt - "B" section V-belt.

Bed - Roller bed width between frames, 15", 21", 27", 33" and 39". 2½" diameter tapered to 1 11/16" diameter x 14 gauge wall plated tread rollers. 7/16" hex shafts. Steel pressure sheaves. Mounted in 7" x 1½" x 12 gauge powder painted formed steel channel frame.

Floor Supports - Adjustable 31½" to 45½" from floor to top of rollers. One support at each end, and center leg on outer rail.

Take-Up - Screw take-up provided to insure proper V-belt tension. Mounted underneath conveyor.

Tangent - 12" long, one on each end, rollers on 3" centers.

End Drive - Mounted below bed section.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 540 lbs. total distributed live load.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher supports are available. Minimum elevation, 17" from floor to top of rollers.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor bed section. Minimum elevation 9½". Specify side.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Tangents - Standard tangents are 12" long, located at each end of curve. Longer tangents available. Contact Factory.

MODEL "190CLR"

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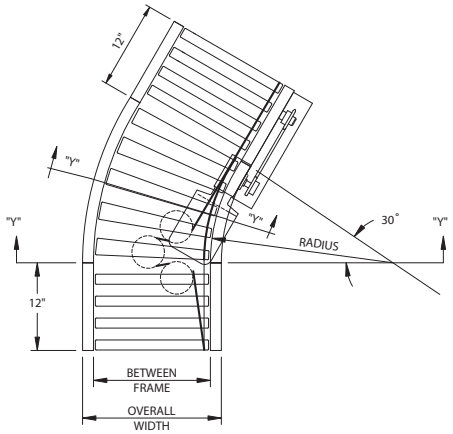
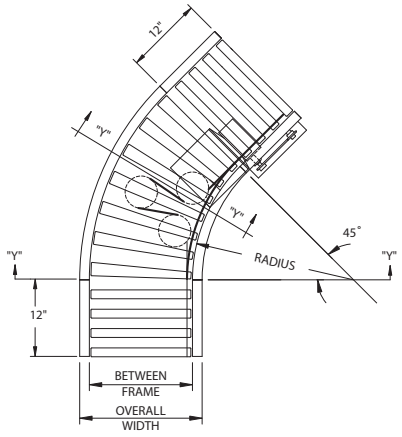
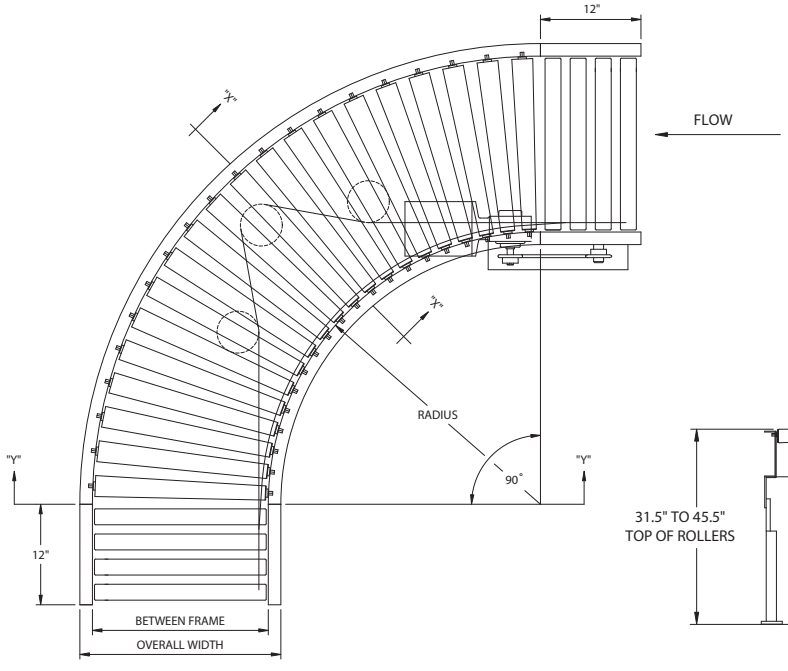
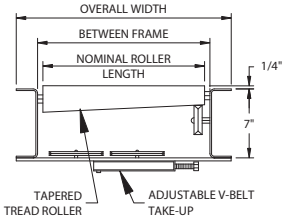
Overall Width	Width Between Frames	Radius	No. Tapered Rollers			No. Straight Rollers			Weight (lbs.)		
			90°	45°	30°	90°	45°	30°	90°	45°	30°
18"	15"	32½"	20	10	7	8	8	8	428	407	396
24"	21"		20	10	7	8	8	8	470	449	438
30"	27"		20	10	7	8	8	8	512	491	480
36"	33"	48"	30	15	10	8	8	8	540	519	508
42"	39"		30	15	10	8	8	8	568	547	526

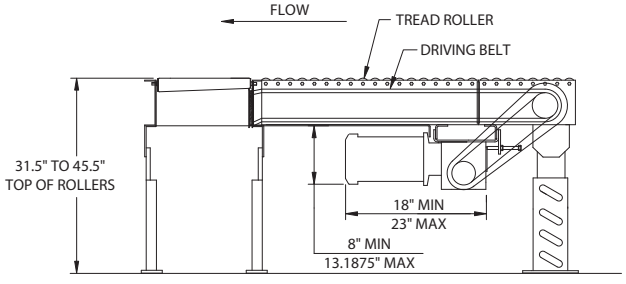








SECTION "X-X"



SECTION "Y-Y"

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MODELS "190CLRS" and "190CLRSS"

V-Belt Spurs

NOTE:
Model shown is 190CLRSS.

- **Diverging or converging applications**
- **Positive alignment of package**

STANDARD SPECIFICATIONS

Driving Belt - "B" section V-belt.

Bed - Roller bed width between rails 15", 21", 27", 33" and 39". 7½" x 1½" x 12 gauge powder painted formed steel channel frame.

Tread Rollers - 2½" diameter tapered to 1 11/16" diameter plated and 1.9" diameter x 16 gauge plated steel tread rollers, 7/16" hex shaft.

Pressure Sheaves - 3" diameter x ⅜" bore, adjustable to give required driving force.

Take-Up - Screw take-up provided to insure proper V-belt tension. Mounted underneath conveyor.

Tangent - 12" long, on one end of curved spur.

Floor Supports - Adjustable 31½" to 45½" from floor to top of rollers.

End Drive - Mounted below bed section.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 540 lbs. total distributed live load.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher supports are available. Minimum elevation, 17" from floor to top of rollers.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum elevation - 9½" from floor to top of rollers.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODELS "190CLRS" and "190CLRSS"

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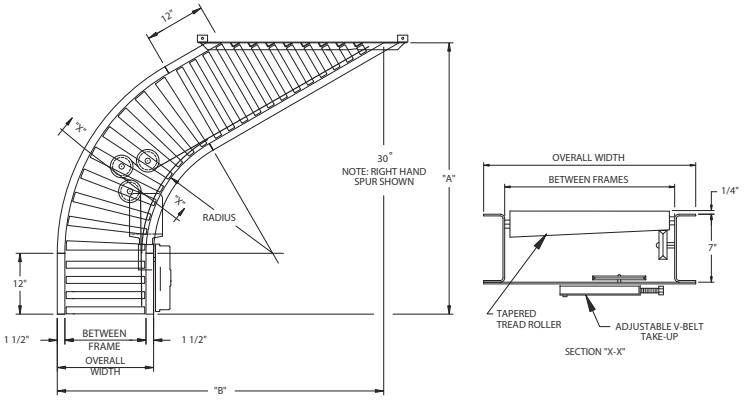
CURVE SPUR "190CLRS"

Overall Width	Width Between Frame	Radius	A		B		Weight (lbs.)	
			45°	30°	45°	30°	45°	30°
18"	15"	32 1/2"	54 1/8"	59 1/8"	45 1/8"	65 5/8"	290	310
24"	21"		58 3/8"	64 3/8"	55 3/8"	80 5/8"	335	355
30"	27"		62 1/2"	69 1/2"	65 5/8"	95 5/8"	380	405
36"	33"	48"	77 3/4"	88 1/8"	80 3/8"	118 3/8"	403	450
42"	39"		82"	93 3/8"	90 5/8"	133 3/8"	432	490

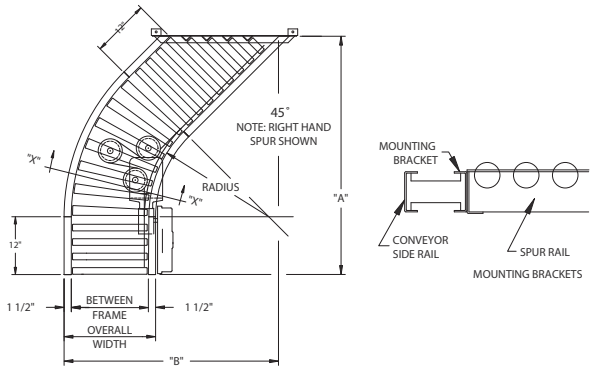
STRAIGHT SPUR "190CLRSS"

Overall Width	Width Between Frame	A		B		Weight (lbs.)	
		45°	30°	45°	30°	45°	30°
18"	15"	27"	40"	25 1/2"	38 1/2"	209	251
24"	21"	36"	52"	34 1/2"	50 1/2"	238	286
30"	27"	45"	64"	43 1/2"	62 1/2"	269	323
36"	33"	53"	76"	51 1/2"	74 1/2"	303	363
42"	39"	61"	88"	59 1/2"	86 1/2"	332	398

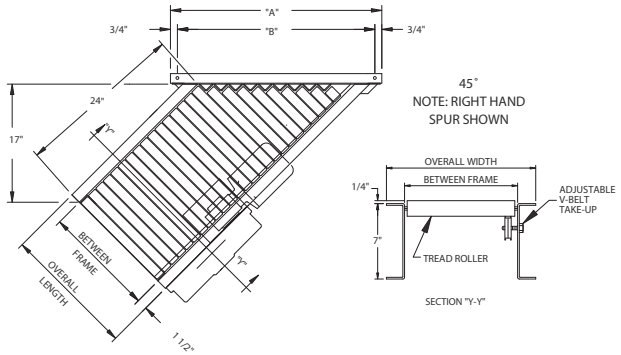
"190CLRS" 30° CURVE SPUR



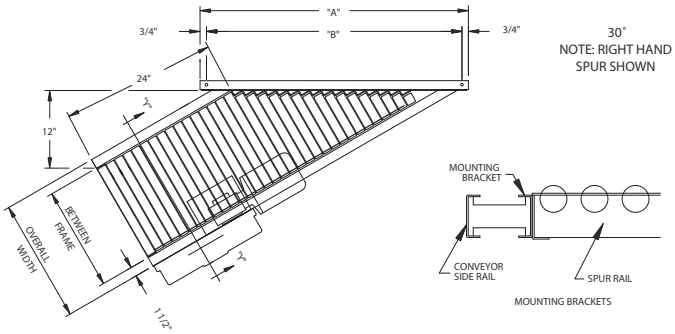
"190CLRS" 45° CURVE SPUR

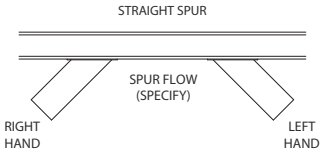


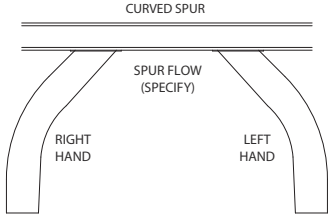
"190CLRSS" 45° STRAIGHT SPUR



"190CLRSS" 30° STRAIGHT SPUR







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MODEL "190LS"

Line Shaft Live Roller Conveyor

- **Low pressure accumulation**
- **Clean room installation**
- **Economical transportation conveyor**
- **Assembly conveyor**

STANDARD SPECIFICATIONS

Driving Belts - 3/16" diameter round urethane "O" rings from drive shaft to tread rollers.

Bed - 7" x 1 1/2" x 12 gauge powder painted formed steel channel frame with heavy duty cross braces and splice plates.

Rollers - 1.9" diameter x 16 gauge galvanized steel tread rollers with 7/16" hex shaft and sealed, greased for life bearings, spaced on 3" centers.

Floor Supports - Adjustable 31 1/2" to 45 1/2" from floor to top of tread roller. One support supplied at each end of conveyor and at each bed joint.

Drive - 2 foot module with motor and reducer. Drive module will be bolted to intermediate section.

Drive Shaft - 1" diameter steel shaft, driven by motor and reducer, runs full length of conveyor. Chain coupling (curve sections), or Delrin plastic coupling (straight sections) supplied at bed joints to couple line shaft sections together.

Drive Spools - Delrin spools located on drive shaft supplies driving power to tread rollers.

Drive Shaft Bearings - Sealed, prelubricated, self aligning, precision ball bearings on drive shaft.

Speed Reducer - C-Face mounted, heavy duty worm gear reducer.

Motor - 1/2 HP 230/460/3-60 TE motor.

Drive Guard - Perforated metal guard full length of conveyor covers drive shaft and other moving drive components.

Conveying Speed - 60 FPM constant.

Capacity - 15 lbs. per tread roller maximum. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Conveying Speed - Constant and variable speeds from 30 to 120 FPM available.

Timing Belt Drive - For speeds over 90 FPM a timing belt drive in lieu of #50 chain drive is recommended.

Roller Centers - Tread rollers can be placed on 2 1/4", 4", 6", or 8" centers. NOTE: Capacities change as roller centers change. See engineering section of price list for capacity changes.

Floor Supports - Lower or higher supports available. Minimum elevation with standard drive mounting is 18" from floor to top of rollers.

Powered Right Angle Belt Transfer - Air operated pop-up round belt transfer mounted in 32" long modular section, 75 lbs. maximum unit load.

Package Stops - Manual or air operated blade or roller stops available.

Guard Rails - Adjustable channel or solid fixed guard rails available.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Ceiling Hangers - 1/2" diameter threaded rods 8 feet long with locking nuts and mounting hardware.

Jump Chain - One-to-one chain drive moves drive shaft to opposite side for driving various optional accessories.

MODEL "190LS"

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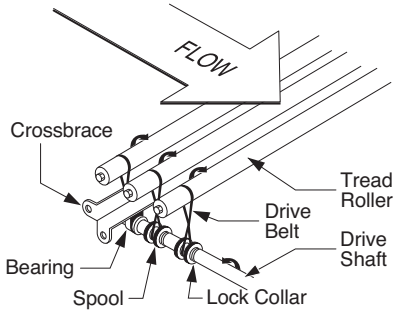
Overall Length	Intermediate Length	Between Frames / Overall Frame Width	15" / 18"	21" / 24"	27" / 30"	33" / 36"	39" / 42"
5'	3'		224	260	295	329	364
10'	8'		361	428	491	553	616
15'	13'		498	595	686	776	868
20'	18'		635	762	882	1000	1120
25'	23'		773	930	1077	1224	1371
30'	28'		910	1097	1273	1448	1623
35'	33'		1047	1264	1468	1671	1875
40'	38'	**Weight (lbs.)**	1184	1432	1664	1895	2127
45'	43'		1322	1599	1859	2119	2379
50'	48'		1459	1766	2055	2342	2631
55'	53'	**Weights Based on 3" Roller Centers**	1596	1934	2250	2566	2883
60'	58'		1733	2101	2446	2790	3135
65'	63'		1871	2268	2641	3014	3387
70'	68'		2008	2436	2837	3237	3639
75'	73'		2145	2603	3032	3461	3891
80'	78'		2282	2770	3228	3685	4143
85'	83'		2420	2937	3423	3909	4394
90'	88'		2557	3105	3619	4132	4646
95'	93'		2694	3272	3815	4357	4898
100'	98'		2831	3439	4010	4580	5150



HP	Overall Frame Width 16" to 22" Total Load (lbs.)			Overall Frame Width 24" to 30" Total Load (lbs.)			Overall Frame Width 34" to 42" Total Load (lbs.)		
	Up to 60'	Up to 90'	Up to 120'	Up to 60'	Up to 90'	Up to 120'	Up to 60'	Up to 90'	Up to 120'
½	1550	580	-	1340	250	-	1020	-	-
¾	3310	2330	1360	3090	2010	920	2770	1530	280
1	*3600	4090	3110	*3600	3770	2680	*3600	3280	2040
1½	-	*5400	6620	-	*5400	6190	-	*5400	5550
2	-	-	*7200	-	-	*7200	-	-	*7200

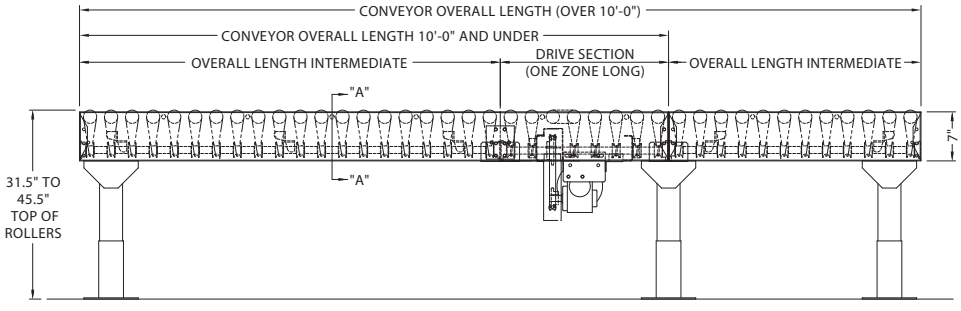
***NOTE:** Capacities based on 3" roller centers with all rollers driven. Rollers limited to 15 lbs. maximum live load per roller. See Engineering Section of Price List for capacities with other than 3" roller centers.

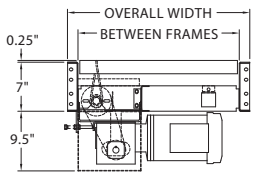
OPERATIONAL SEQUENCE

1) 1" diameter drive shaft is powered by motor reducer drive. Drive shaft is supported by bearings mounted to conveyor cross braces and coupled at bed joints with chain coupling, on curve sections, and Delrin plastic coupling on straight conveyor sections.

2) Drive spools are located on drive shaft and held in place with "snap-on" lock collars. When drive shaft turns, spools turn and by means of drive belt, transmits power to tread roller.

3) When package flow is interrupted for accumulation, drive spool will slip on drive shaft eliminating power to tread roller.





CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "190LSE"

Line Shaft Live Roller Conveyor

- **Zero pressure accumulation**
- **Clean room installation**
- **Easy installation**
- **True product singulation**
- **No mechanical sensor rollers**
- **Photo eye controlled**

STANDARD SPECIFICATIONS

Driving Belts - 3/16" diameter round urethane "O" rings from drive shaft to tread rollers.

Bed - 7" x 1½" x 12 gauge powder painted formed steel channel frame with heavy duty cross braces and splice plates.

Rollers - 1.9" diameter x 16 gauge galvanized steel tread rollers with 7/16" hex shaft and sealed, greased for life bearings, spaced on 3" centers.

Sensing Device - Photoelectric sensor in each zone detects presence of product and activates accumulation feature in the trailing zone if leading zone is occupied.

Power Supply - 120 VAC power supply controls accumulation feature with 24 VDC output. Power supply will control 40 accumulation zones.

Air Requirements - 20 to 35 psi recommended operating pressure with free air consumption of .0062 cu. ft. per sensor operation.

Accumulation Zones - 24", 30", or 36" long, air operated. Conveyor frame length changes with zone lengths. Note: Zone length must be evenly divisible by roller centers.

Filter/Regulator - Supplied loose for mounting to conveyor side frame, with 3/8" NPT ports.

Guard Rails - 1½" x 1½" x 12 guage galvanized guard rails - both sides. NOTE: Product contact with guard rails will affect product flow.

Floor Supports - Adjustable 31½" to 45½" from floor to top of tread roller. One support supplied at each end of conveyor and at each bed joint.

Drive - 2 foot module with motor and reducer. Drive module will be bolted to intermediate section.

Drive Shaft - 1" diameter steel shaft, driven by motor and reducer, runs full length of conveyor. Chain coupling supplied at bed joints to couple sections together.

Drive Spools - Delrin spools located on drive shaft supplies driving power to tread rollers.

Drive Shaft Bearings - Sealed, prelubricated, self aligning, precision ball bearings on drive shaft.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460/3-60 TE motor.

Drive Guard - Expanded metal guard full length of conveyor covers drive shaft and other moving drive components.

Conveying Speed - 60 FPM constant.

Capacity - 15 lbs. per tread roller maximum. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Conveying Speed - Constant and variable speeds from 30 to 120 FPM available.

Timing Belt Drive - For speeds 90 FPM and above a timing belt drive in lieu of #50 chain drive is recommended.

Roller Centers - 2¼", 4", 6", or 8" centers. NOTE: Capacities change as roller centers change. See engineering section of price list for capacity changes.

Accumulation Zones - 18" long, air operated. Conveyor frame lengths change with zone lengths. NOTE: Zone length must be evenly divisible by roller centers.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Floor Supports - Lower or higher supports available. Minimum elevation with standard drive mounting is 18" from floor to top of rollers.

Powered Right Angle Belt Transfer - Air operated pop-up round belt transfer mounted in 32" long modular section, 75 lbs. maximum unit load. - Reversing UBT is 39" long.

Package Stops - Manual or air operated, blade or roller stops available.

Slug Release - Allows for conveyor to be quickly unloaded when accumulation feature is not required.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware.

Jump Chain - One-to-one chain drive moves drive shaft to opposite side for driving various optional accessories.

MODEL "190LSE"

CSE
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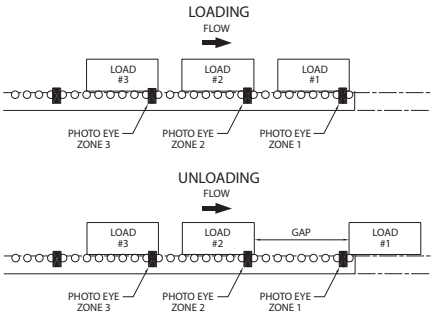
Overall Length	Intermediate Length	Between Frames / Overall Frame Width	15" / 18"	21" / 24"	27" / 30"	33" / 36"	39" / 42"
5'	3'	Weight (lbs.) Weights Based on 3" Roller Centers	336	390	443	494	546
10'	8'		542	642	737	830	924
15'	13'		747	893	1029	1164	1302
18'	20'		953	1143	1323	1500	1680
25'	23'		1160	1395	1616	1836	2057
30'	28'		1365	1646	1910	2172	2435
35'	33'		1571	1896	2202	2507	2813
40'	38'		1776	2148	2496	2843	3191
45'	43'		1983	2399	2789	3178	3569
50'	48'		2189	2649	3083	3513	3947
55'	53'		2394	2901	3375	3849	4325
58'	60'		2600	3152	3669	4185	4703
65'	63'		2807	3402	3962	4521	5081
70'	68'		3012	3654	4255	4856	5459
75'	73'		3218	3905	4548	5191	5836
80'	78'		3423	4155	4842	5528	6215
85'	83'		3630	4406	5178	5864	6591
90'	88'		3836	4658	5429	6198	6969
95'	93'		4041	4908	5723	6536	7347
100'	98'		4247	5159	6015	6870	7725

OPERATIONAL SEQUENCE

1) Model "190LSE" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.

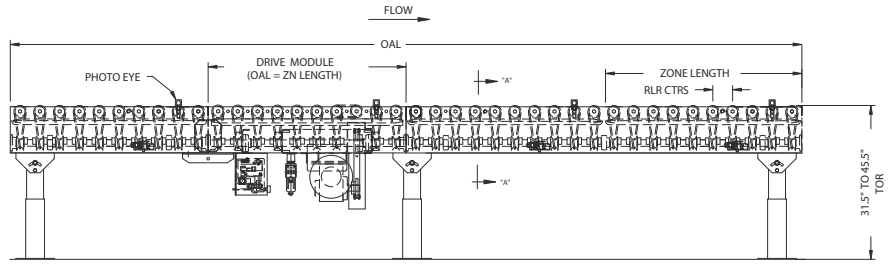
2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.

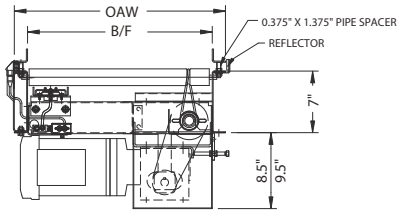


3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1 until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1's photoelectric sensor for the accumulation process to continue.

HP	Overall Frame Width 16" to 22" Total Load (lbs.)			Overall Frame Width 24" to 30" Total Load (lbs.)			Overall Frame Width 34" to 42" Total Load (lbs.)		
	Up to 60'	Up to 90'	Up to 120'	Up to 60'	Up to 90'	Up to 120'	Up to 60'	Up to 90'	Up to 120'
1/2	1550	580	-	1340	250	-	1020	-	-
3/4	3310	2330	1360	3090	2010	920	2770	1530	280
1	*3600	4090	3110	*3600	3770	2680	*3600	3280	2040
1 1/2	-	*5400	6620	-	*5400	6190	-	*5400	5550
2	-	-	*7200	-	-	*7200	-	-	*7200

***NOTE:** Capacities based on 3" roller centers with all rollers driven. Rollers limited to 15 lbs. maximum live load per roller. See Engineering Section of Price List for capacities with other than 3" roller centers.





SECTION VIEW "A-A"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "190LSC"-Curve MODEL "190LSCS"-Curve Spur MODEL "190LSS"-Straight Spur

- **5 bed widths**
- **Slave driven from Model "190LS"**
- **High speed capabilities**

MODEL "190LSC" CURVE

STANDARD SPECIFICATIONS

Bed - Roller bed with 2½" diameter tapered to 1 11/16" diameter x 14 gauge galvanized and 1.9" diameter x 16 gauge galvanized tread rollers. Mounted in 7" x 12 gauge powder painted formed steel channel frame.

Floor Supports - Adjustable 31½" to 45½" from floor to top of rollers. One support at ends of 190LSC (Curve), 190LSCS (Curve Spur) and 190LSS (Straight Spur). Single leg supplied for center of outside rail on 90° 190LSC only.

Slave Driven - Curves or spurs are slave driven from drive shaft of Model 190LS conveyor. Shafts are coupled by chain coupling at bed joints.

Drive Shaft - 1" diameter steel shaft extends full length of conveyor, coupled with universal joints ("U" joints) at necessary intervals.

Drive Spools - 2" diameter Delrin spool held in place on drive shaft with "snap-on" lock collars.

Drive Guard - Underside of drive shaft with spools and drive belts guarded full length of conveyor.

Drive Belts - 3/16" diameter urethane belt from drive spool to tread roller.

Bearings - Tread rollers, pre-lubricated ball bearings. Sealed, pre-lubricated, self-aligning ball bearings on drive shaft.

Butt Couplings - Standard for connecting to 190LS.

Capacity - See Load Capacity Chart.

OPTIONAL EQUIPMENT

Conveying Speed - Other constant and variable speeds from 30 to 120 FPM.

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher supports available. Minimum elevation with standard drive mounting is 18" to top of rollers.

Ceiling Hangers - ½" diameter x 8'0" long threaded rods with locking nuts and mounting hardware.

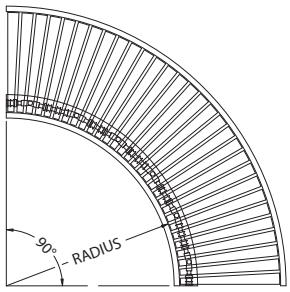
Load Capacity Chart

Between Rail Width	190LSC	190LSCS		190LSS	
	Capacity Per Curve (lbs.)	Capacity Per Spur (lbs.)		Capacity Per Straight Spur (lbs.)	
		45°	30°	45°	30°
15"	240	300	285	375	480
21"-27"	300	405	435		
33"-39"	450	540	720		

MODEL "190LSC" - CURVE

Between Rail Width	Overall Frame Width	"R"	Total Number of Rollers				Weight (lbs.)			
			90°	60°	45°	30°	90°	60°	45°	30°
15"	18"	32½"	20T	20T*	10T	10T*	208	189	170	140
21"	24"	32½"	20T	20T*	10T	10T*	244	221	198	162
27"	30"	32½"	20T	20T*	10T	10T*	283	245	227	187
33"	36"	48"	30T	20T	15T	10T	430	370	309	246
39"	42"	48"	30T	20T	15T	10T	480	382	344	271

*Available only in 48" Radius.



MODEL "190LSC"-Curve MODEL "190LSCS"-Curve Spur MODEL "190LSS"-Straight Spur

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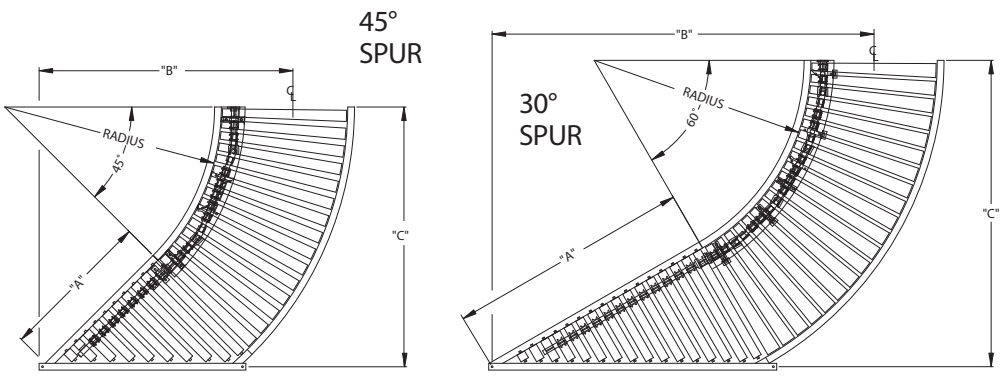
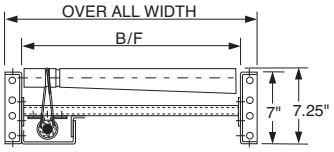


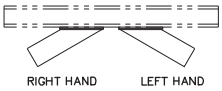


The "190LSCS" Spur, and "190LSS" Straight Spur have been designed to be slave driven from the "190LS" conveyor. Curves are used where turns in the conveyor line are necessary. Spurs are used in diverging or converging applications.

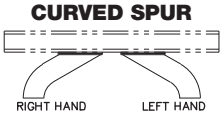
MODEL "190LSCS" - 45° & 30° CURVE SPURS

Between Frame Width	Overall Frame Width	Radius		"A"		"B"		"C"		Weight (lbs.)	
		45°	30°	45°	30°	45°	30°	45°	30°	45°	30°
15"	18"	32.5"	48"	22.1875"	33.0"	34.125"	60.3125"	37.25"	57.75"	200	230
21"	24"	32.5"	48"	28.1875"	43.5"	41.3125"	72.3125"	41.5"	63.0"	229	261
27"	30"	32.5"	48"	34.1875"	54.0"	48.5625"	84.3125"	45.75"	68.125"	259	293
33"	36"	48.0"	48"	40.1875"	64.25"	60.375"	96.3125"	61.0"	73.3125"	372	457
39"	42"	48.0"	48"	46.1875"	74.75"	67.625"	108.3125"	65.25"	78.5"	408	498

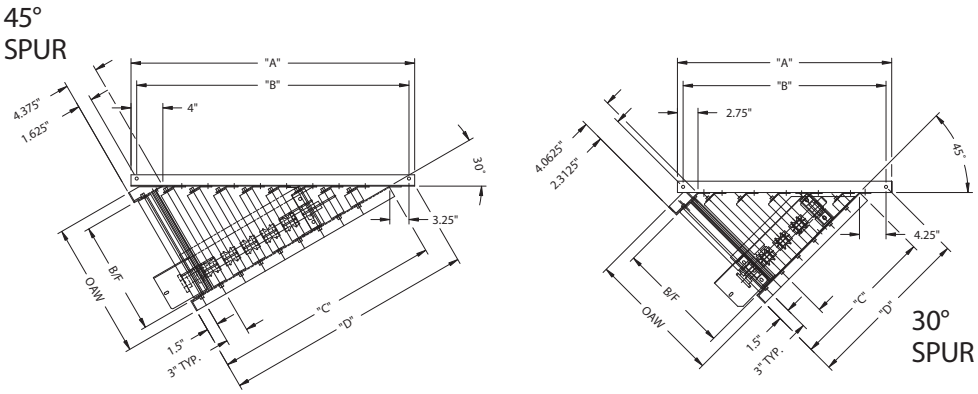
STRAIGHT SPUR



CURVED SPUR



a. Specify "right" or "left" hand unit.
b. Specify direction of flow.
c. Specify conveyor to be attached to in order for proper attachment bracket to be furnished.



MODEL "190LSS" - 45° & 30° STRAIGHT SPURS

Between Frame Width	Overall Frame Width	"A"		"B"		"C"		"D"		Weight (lbs.)	
		45°	30°	45°	30°	45°	30°	45°	30°	45°	30°
15"	18"	28.25"	37.5"	26.75"	36"	19.875"	30.25"	22.1875"	33.0"	157	198
21"	24"	36.75"	49.5"	35.25"	48"	25.1875"	40.5"	28.1875"	43.5"	178	222
27"	30"	45.25"	61.5"	43.75"	60"	31.1875"	51.0"	34.1875"	54.0"	200	245
33"	36"	53.75"	73.5"	52.25"	72"	37.1875"	61.5"	40.1875"	64.25"	218	264
39"	42"	62.25"	85.5"	60.75"	84"	43.1875"	72.0"	46.1875"	74.75"	234	280

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "22CRR"

Chain Driven Live Roller Conveyor

- **Wash down operations**
- **Oily conditions**
- **Positive drive**

STANDARD SPECIFICATIONS

Drive Chain - No. 40 roller chain on straight sections.

Bed - Conveying surface width 14", 16", 18", 24", 28", and 34". 3½" x 1½" x 10 gauge powder painted formed steel channel on one side, 5" x 1½" x 10 gauge formed steel channel on chain drive side. Sections are bolted together with butt couplings and floor supports.

Tread Rollers - 2" diameter x 12 gauge steel with #40 sprockets welded to roller tube, 7/16" hex shafts. Rollers spaced on 4", 6", 8" and 12" centers. Rollers are roller to roller driven.

Chain Guard - Chain guard is mounted to frame to totally enclose drive chain.

Center Drive - Mounted underneath conveyor, near center of section. Can be placed most anywhere in conveyor length. Specify.

Floor Supports - Adjustable 28" to 42" from floor to top of rollers. One support supplied at each end of conveyor and at each bed joint.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460/3/60 TE motor.

Roller Speed - 60 FPM constant.

Capacity - Maximum load 150 lbs. per foot; maximum unit load 500 pounds. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Floor Supports - Lower or higher supports are available. Minimum elevation 17½" from floor to top of rollers.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - Drive mounted to side of conveyor section. Specify side. Minimum elevation - 7" from floor to top of rollers.

Rollers Set Low - Tread rollers mounted low in 4½" x 10 gauge formed steel channel frame to form ¾" high guard rails.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Roller Speed - Constant and variable roller speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "22CRR"

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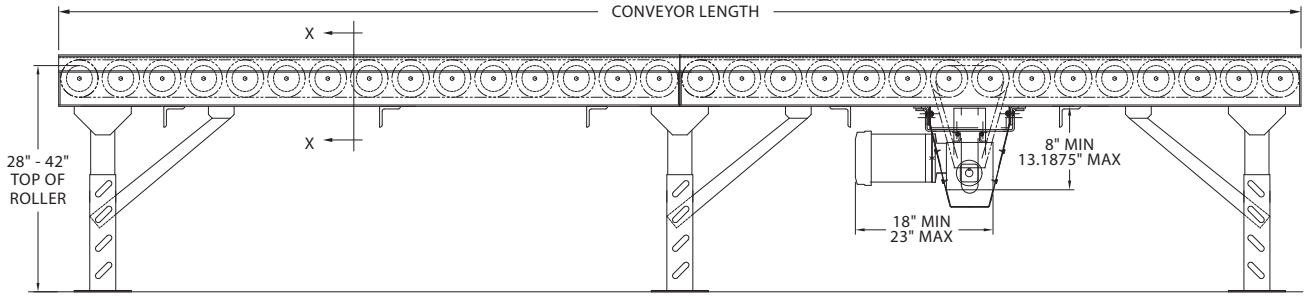
Arlington Heights, IL 60005

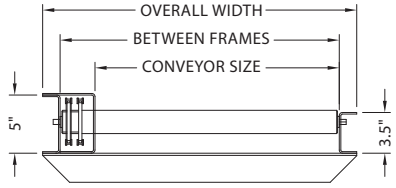
Conveyor Length Size"A"	Conveying Surface	14"	16"	18"	24"	28"	34"
	Width Between Frames	17"	19"	21"	27"	31"	37"
	Overall Width	20"	22"	24"	30"	34"	40"
5'	Weight (lbs.) Based On 4" Roller Centers	393	406	418	454	477	507
10'		526	557	576	633	671	718
15'		692	740	759	840	894	960
20'		825	883	917	1019	1088	1171
25'		991	1058	1100	1226	1311	1413
30'		1124	1209	1258	1405	1505	1624
40'		1423	1535	1599	1791	1922	2077
50'		1722	1861	1940	2177	2339	2530
60'		2021	2187	2280	2563	2756	2983
70'		2320	2513	2622	2949	3173	3436
80'		2619	2839	2963	3335	3590	3389
90'		2918	3165	3304	3721	4007	4342
100'		3217	3491	3645	4107	4424	4795

FOR 6", 8" OR 12" CENTERS DEDUCT THE WEIGHTS BELOW													
Roller Centers	Between Frames	17" B.F.		19" B.F.		21" B.F.		27" B.F.		31" B.F.		37" B.F.	
	Bed Length	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'	5'	10'
6"	Weight Deduction (lbs.)	-25	-50	-28	-55	-30	-59	-36	-72	-40	-80	-45	-89
8"		-37	-74	-41	-81	-44	-87	-53	-105	-59	-118	-66	-132
12"		-49	-98	-55	-108	-59	-116	-71	-142	-79	-158	-89	-176

Load Capacity Chart

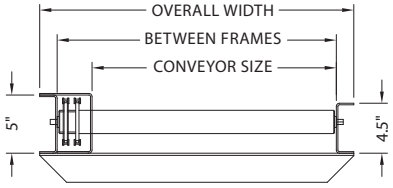
60 FPM	
H.P.	TOTAL LOAD
1/2	1625 Lbs.
3/4	2375 Lbs.
1	3025 Lbs.
1 1/2	3900 Lbs.





SET HIGH

SECTION "X-X"



SET LOW

SECTION "X-X"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "22CRRCT"

Chain Driven Live Roller Curve

- **Wash down operations**
- **Oily conditions**
- **Positive drive**

STANDARD SPECIFICATIONS

Drive Chain - No. 40 circular roller chain.

Bed - Conveying surface width 14", 16", 18", 24", 28", and 34". 2½" diameter to 1 11/16" diameter tapered rollers, 7/16" hex shafts. Mounted in 10 gauge powder painted formed steel channel frame. Roller to roller driven.

Chain Guard - Chain guard is mounted above frame to totally enclose drive chain.

Center Drive - Mounted underneath conveyor in center of curve.

Floor Supports - Adjustable 28" to 42" from floor to top of rollers. One support at each end and center leg on outer rail.

Motor - ½ HP 230/460/3-60 TE Motor.

Speed Reducer - C-Face heavy duty worm gear.

Roller Speed - 60 FPM.

Capacity - 850 pounds distributed live load.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher are available. Minimum elevation, 18" from floor to top of rollers.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - Drive mounted to side of conveyor bed. Minimum elevation to top of rollers is 6". Specify side.

Rollers Set Low - Tread rollers mounted low in 4½" x 10 gauge formed steel channel frame to form ¾" high guard rails.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP are available.

Roller Speed - Constant and variable roller speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

22CRRCT - Can be slave driven.

MODEL "22CRRCT"

CONVEYOR SYSTEMS & ENGINEERING, INC.
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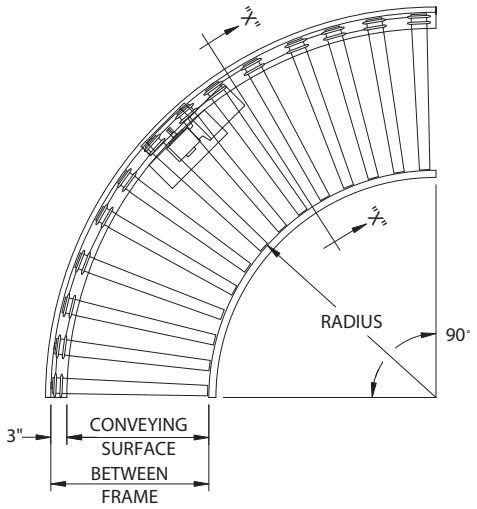
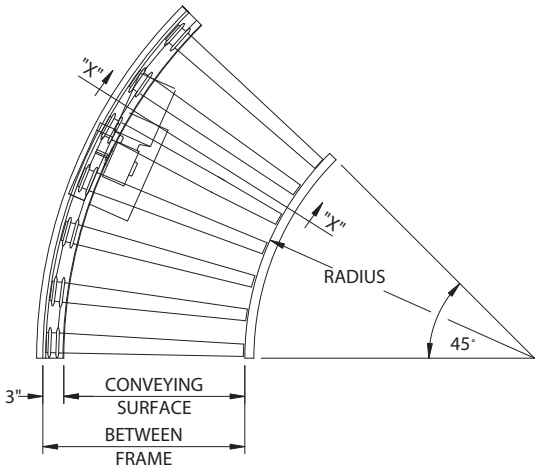
Conveying Surface	Width Between Frames	Overall Width	"R"	Number of Rollers			Weight (lbs.)		
				90°	45°	30°	90°	45°	30°
14"	17"	20"	32½"	14	7	6	325	335	300
16"	19"	22"					333	343	308
18"	21"	24"					341	351	316
24"	27"	30"					365	375	340
28"	31"	34"	48"	21	14	9	395	405	375
34"	37"	40"					419	429	399

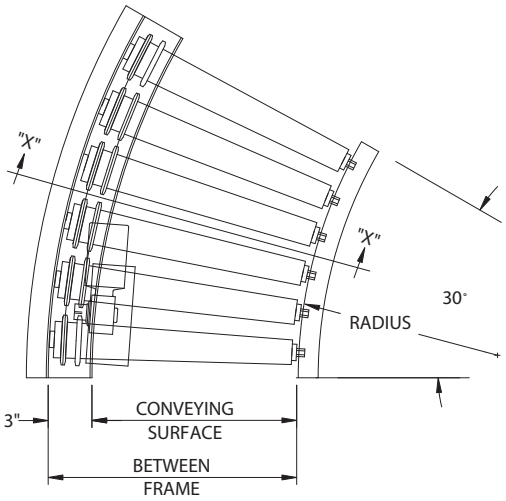
MODEL "22CRRCT" - 90° CURVE

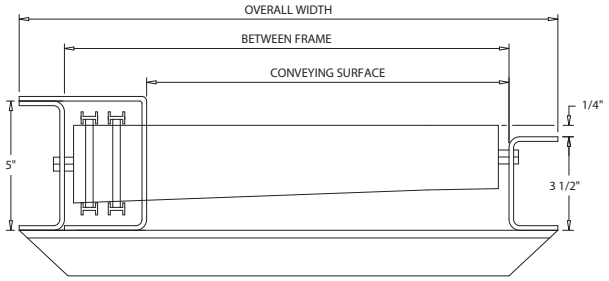


MODEL "22CRRCT" - 45° CURVE



MODEL "22CRRCT" -30° CURVE





SECTION VIEW "X-X"

CSE
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Arlington Heights, IL 60005

MODEL "22CRRCTS"

Chain Driven Live Roller Spur

- **Wash down operations**
- **Oily conditions**
- **Positive drive**

STANDARD SPECIFICATIONS

Drive Chain - No. 40 circular roller chain.

Bed - Conveying surface width 14", 16", 18", 24", 28" and 34". 2½" diameter to 1 11/16" diameter tapered rollers, 7/16" hex shafts. Mounted in 10 gauge powder painted formed steel channel frame. Rollers are roller to roller driven.

Rollers - Tapered rollers in curve sections; Straight rollers in straight sections.

Chain Guard - Chain guard is mounted above frame to totally enclose drive chain.

Center Drive - Mounted underneath conveyor in center of curve.

Floor Supports - Adjustable 28" to 42" from floor to top of rollers. One support at each end and center leg on outer rail.

Motor - ½ HP 230/460-3-60 TE motor.

Speed Reducer - C-Face heavy duty worm gear.

Roller Speed - 60 FPM.

Capacity - 850 lbs. total distributed live load.

OPTIONAL EQUIPMENT

Guard Rails - Adjustable channel, continuous channel, steel guard rails available.

Floor Supports - Lower or higher are available. Minimum elevation, 18" from floor to top of rollers.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Side Mounted Drive - Drive mounted to side of conveyor bed. Minimum elevation 6". Specify which side drive is to be located.

Rollers Set Low - Tread rollers mounted low in 4½" x 10 gauge formed steel channel frame to form ¾" high guard rails.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP are available.

Roller Speed - Constant and variable roller speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "22CRRCTS"

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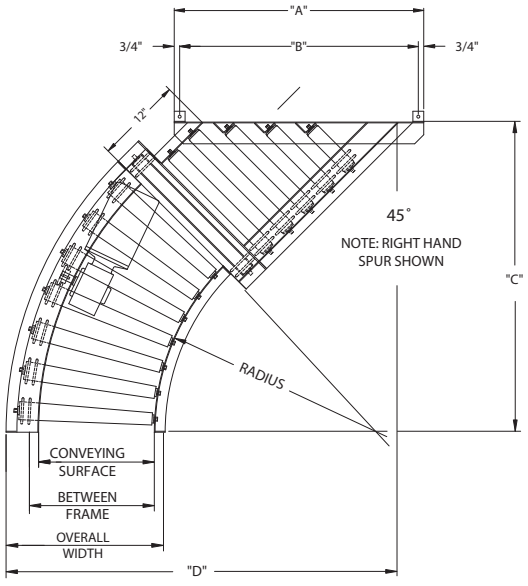
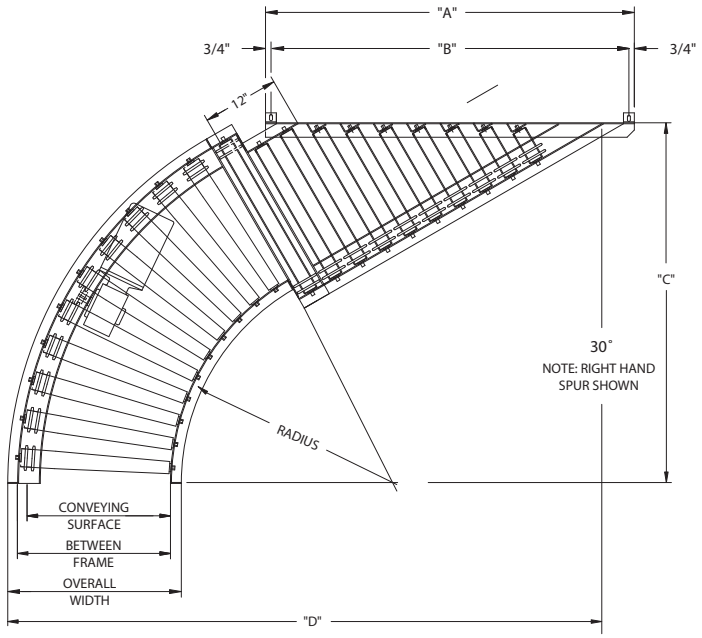
Conveying Surface	Width Between Frames	Overall Width	"R"	"A"		"B"		"C"		"D"		Number of Rollers*		Weight (lbs.)	
				45°	30°	45°	30°	45°	30°	45°	30°	45°	30°	45°	30°
14"	17"	20"	32 1/2"	31 1/2"	43"	30"	41 1/2"	43 9/16"	49"	48 9/16"	68 11/16"	6S-7T	9S-9T	275	325
16"	19"	22"		34 1/2"	47"	33"	45 1/2"	44 15/16"	50 11/16"	51 15/16"	75 11/16"	7S-7T	9S-9T	285	335
18"	21"	24"		37"	51"	35 1/2"	49 1/2"	46 3/8"	52 7/16"	55 3/8"	80 11/16"	8S-7T	10S-9T	310	360
24"	27"	30"		45 1/2"	63"	44"	61 1/2"	50 5/8"	57 5/8"	65 5/8"	95 11/16"	9S-7T	11S-9T	355	405
28"	31"	34"	48"	51"	71"	49 1/2"	69 1/2"	64 3/8"	68 1/2"	77"	113 3/8"	10S-10T	12S-14T	380	430
34"	37"	40"		59 1/2"	83"	58"	81 1/2"	68 5/8"	73 3/4"	87 1/4"	128 3/8"	11S-10T	13S-14T	415	465

*** S = Straight Roller T = Tapered Roller**

MODEL "22CRRCTS" - 45° CURVE SPUR



MODEL "22CRRCTS" - 30° CURVE SPUR



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MODEL "251CRR" and MODEL "267CRR"

Chain Driven Live Roller Conveyor

- **Oily conditions**
- **Pallets**
- **Drums**
- **Positive drive**

STANDARD SPECIFICATIONS

Bed - Conveying surface width 28", 34", 40", 46", 52", 58", and 64". 2½" diameter x 11 gauge and 2⅝" x 7 gauge steel tread rollers, 11/16" hex shafts. No. 50 chain is used on 5", 7½", 10" roller centers only. No. 60 chain is used on 6", 7½", and 12" centers only. Tread rollers mounted in 4" and 6" x 4 gauge powder painted formed steel channel frame. Sections are bolted together with butt couplings and floor supports.

Drive Chain - No. 50 roller chain or No. 60 roller chain can be used with either the 251CRR or 267CRR as above.

Floor Supports - Heavy duty supports are adjustable 30¼" to 40" (HD-7) from floor to top of roller. One support at every bed joint and each end of conveyor.

Center Drive - Mounted underneath conveyor, center of section. Can be placed most any where in conveyor length.

Bearings - Sealed, prelubricated ball bearings.

Chain Guard - Lower chain guard is mounted on bottom of roller frame, and upper chain guard is mounted above roller frame to totally enclose drive chain.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ¾ HP 230/460-3-60 TE motor.

Speed - 30 FPM.

Capacity - Maximum load per linear foot of conveyor; 300 lbs. with supports on 10' centers, 1000 lbs. with supports on 5'0" centers.

OPTIONAL EQUIPMENT

Floor Supports - Lower or higher supports are available. Minimum elevation, 18" from floor to top of rollers.

Side Mounted Drive - Motor-reducer unit can be mounted to side of conveyor frame. Drive is higher than conveyor frame. Minimum elevation to top of rollers is 7".

Roller Set Low - 5" deep x 4 gauge non-driven side rail to provide ¾" high guard rail.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Roller Speed - Constant and variable speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "251CRR" and MODEL "267CRR"

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MODEL "251CRR" & "267CRR" WEIGHTS

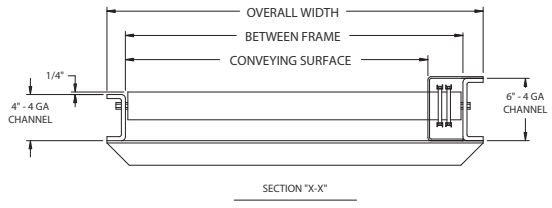
Conveyor Length	Conveying Surface	28"		34"		40"		46"		52"		58"		64"	
	Width Between Frames	31"		37"		43"		49"		55"		61"		67"	
	Overall Width	34"		40"		46"		52"		58"		64"		70"	
	Model	251	267	251	267	251	267	251	267	251	267	251	267	251	267
5'	Weight Based on 5" Roller Centers (lbs.)	392	458	430	501	463	544	496	587	529	630	562	673	595	716
10'		679	804	744	886	806	967	868	1048	930	1130	992	1212	1054	1294
15'		964	1152	1059	1272	1149	1391	1239	1510	1329	1629	1419	1748	1509	1867
20'		1498	1533	1567	1688	1814	1835	2061	2182	2308	2429	2555	2676	2755	2923
25'		1818	1846	2003	2043	2178	2238	2353	2433	2468	2628	2583	2823	2988	3018
30'		2102	2192	2317	2428	2521	2661	2725	2894	2929	3127	3133	3366	3337	3599
40'		2671	2886	2946	3199	3207	3508	3468	3817	3729	4126	3990	4435	4251	4744
50'		3240	3580	3575	3970	3893	4355	4211	4740	4529	5125	4847	5510	5165	5895
60'		3809	4274	4204	4741	4579	5202	5040	5663	5502	6124	5964	6585	6426	7046
70'		4378	4968	4833	5512	5265	6049	5697	6586	6129	7123	6561	7660	6993	8197
80'		4947	5652	5462	6283	6294	6896	7126	7509	7958	8122	7590	8735	9622	9348
90'		5516	6376	6091	7054	6673	7743	7255	8432	7837	9121	8419	9810	9001	10399
100'		6085	7070	6720	7825	7359	8590	7998	9355	8637	10120	9276	10885	9915	11650

FOR 6", 7½", 10", 12" CENTERS DEDUCT WEIGHT LISTED BELOW – 5'0" OAL BED SECTION

Roller Centers	Width Between Frames	31"		37"		43"		49"		55"		61"		67"	
	Model	251	267	251	267	251	267	251	267	251	267	251	267	251	267
6"	Weight Deduction (lbs.)	55	74	64	85	72	98	80	111	88	124	96	137	104	150
7½"		55	74	64	85	72	98	80	111	88	124	96	137	104	150
10"		82	109	96	127	109	145	122	163	135	181	148	199	161	217
12"		94	116	110	130	134	152	158	174	182	196	206	218	230	240

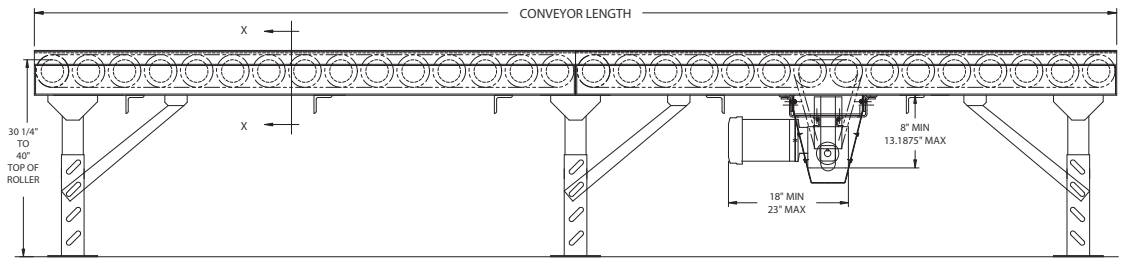
FOR 6", 7½", 10", 12" CENTERS DEDUCT WEIGHT LISTED BELOW – 10'0" OAL BED SECTION

Roller Centers	Width Between Frames	31"		37"		43"		49"		55"		61"		67"	
	Model	251	267	251	267	251	267	251	267	251	267	251	267	251	267
6"	Weight Deduction (lbs.)	108	146	127	170	145	194	163	218	181	242	199	266	217	290
7½"		108	146	127	170	145	194	163	218	181	242	199	266	217	290
10"		168	184	190	214	212	244	234	274	256	304	278	334	300	364
12"		189	218	220	254	251	290	282	336	313	376	344	416	375	456



Load Capacity Chart
30 FPM

Total Distributed Live Load		
HP	Up to 40' Long	Up to 100' Long
¾	6000 lbs.	2800 lbs.
1	9000 lbs.	6000 lbs.
1½	15000 lbs.	12000 lbs.
2	22000 lbs.	18000 lbs.



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Arlington Heights, IL 60005

MODEL "251CRR-3"

Chain Driven Live Roller - 3" Centers

- **Ideal for slip sheet applications**
- **3" roller centers**
- **Handles pallets the "Hard Way"**
- **4,000 lbs. capacity**

STANDARD SPECIFICATIONS

Bed - Conveying surface width 16", 20", 24", 28", 30", 34", 36", 40", 44", 48", 52", and 56". Heavy duty 4" and 4¾" deep x 4 gauge powder painted formed steel channel frame with heavy duty cross braces. Frames are bolted together with butt couplings and floor supports.

Rollers - 2½" diameter x 11 gauge steel rollers, grease packed and labyrinth sealed bearing, 11/16" hex shaft. Rollers are spaced on 3" centers and set ¼" high on side rail opposite chain drive.

Drive Chain - RC40 chain is used for roller connections.

Floor Supports - Heavy duty supports are adjustable 24¼" to 34" (HD-6) from floor to top of roller. One support at every bed joint and end of conveyor. Formed angle knee braces are supplied for each support.

Center Drive - Mounted underneath conveyor near center of conveyor length. Minimum elevation with standard drive mounting is 18" to top of roller.

Bearings - Sealed prelubricated ball bearings.

Chain Guard - Chain guard is on one side only, extends ⅞" above top of rollers. Lower chain guard is mounted on bottom of conveyor frame. Upper chain guard is mounted to top of conveyor frame to totally enclose drive chains.

Speed Reducer - Heavy duty, sealed worm gear reducer.

Motor - ¾ HP 230/460-3-60 TE motor.

Speed - 30 FPM.

Capacity - 4,000 lbs. maximum distributed live load on any conveyor length.

Maximum Conveyor Length - Maximum conveyor length with one drive not to exceed 40 feet.

OPTIONAL EQUIPMENT

Floor Supports - Lower or higher floor supports are available.

Side Mounted Drive - Motor-reducer unit can be mounted to side of conveyor frame. Drive is higher than conveyor frame. Minimum elevation to top of roller is 7".

Conveyor Speed - Other constant and variable speeds available. Contact factory.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Rollers Set Low - Rollers mounted in 4¾" deep channel both sides. Rollers set low ⅝".

MODEL "251CRR-3"

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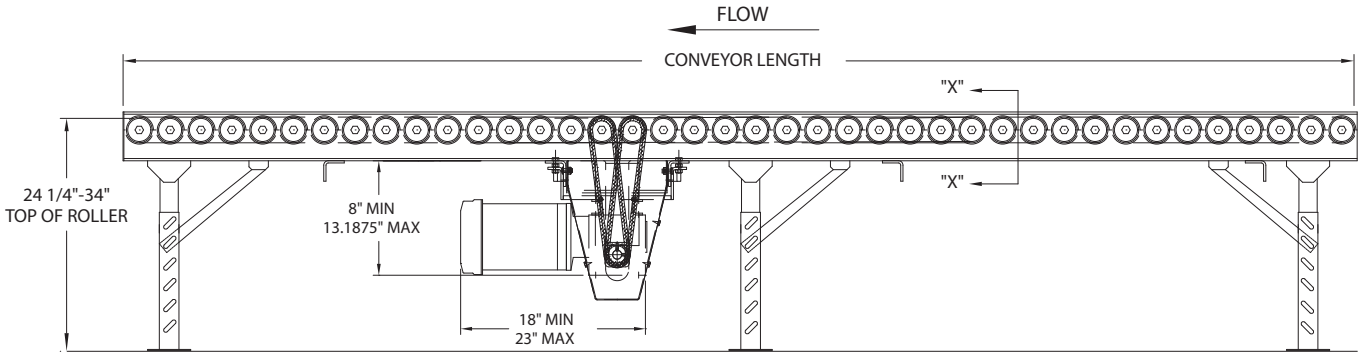
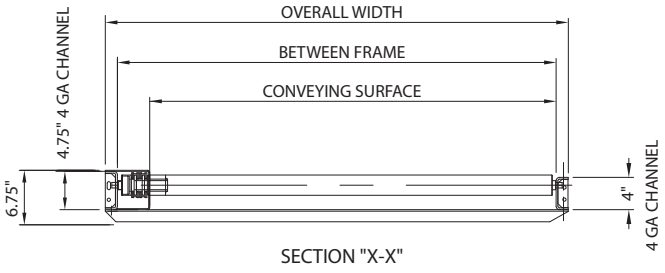
Bed Length	Conveying Surface	16"	20"	24"	28"	30"	34"	36"	40"	44"	48"	52"	56"
	Between Frames	20"	24"	28"	32"	34"	38"	40"	44"	48"	52"	56"	60"
	Overall Width	23"	27"	31"	35"	37"	41"	43"	47"	51"	55"	59"	63"
5'	Weights (lbs.)	446	480	516	551	568	604	623	656	691	727	763	799
10'		742	810	882	952	986	1058	1096	1162	1232	1304	1376	1448
15'		1038	1140	1248	1353	1404	1512	1569	1668	1773	1881	1989	2097
20'		1334	1470	1614	1754	1822	1966	2042	2174	2314	2458	2602	2746
25'		1630	1800	1980	2155	2240	2420	2515	2680	2855	3035	3215	3395
30'		1926	2130	2346	2556	2658	2874	2988	3186	3396	3612	3828	4044
35'		2222	2460	2712	2957	3076	3328	3461	3692	3937	4189	4441	4693
40'		2518	2790	3078	3358	3494	3782	3934	4198	4478	4766	5054	5342





SECTION "X-X"

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "251CRRC"

Chain Driven Live Roller Conveyor

- **Oily conditions**
- **Pallets**
- **Drums**
- **Positive drive**

NOTE: Photo shows pqtional tapered rollers driven on outside rail.

STANDARD SPECIFICATIONS

Bed - Conveying surface width 28", 34", 40", 46", 52", 58" and 64". 2½" diameter x 11 gauge steel tread rollers, 11/16" hex shaft. Tread rollers mounted in 4" and 6" x 4 gauge powder painted formed steel channel frame. Sections are bolted together with butt couplings and floor supports.

Drive Chain - No. 50 circular roller chain.

Floor Supports - Heavy duty supports are adjustable 30¼" to 40" (HD-7) from floor to top of roller. One support at each end of conveyor and one center leg with knee brace.

Center Drive - Mounted underneath conveyor.

Bearings - Sealed, prelubricated ball bearings.

Chain Guard - Lower chain guard is mounted on bottom of roller frame, and upper chain guard is mounted above roller frame to totally enclose drive chain.

Speed Reducer - Heavy duty worm gear C-Face mounted.

Motor - ¾ HP 230/460-3-60 TE motor.

Speed - 30 FPM.

Capacity - 4,000 pounds distributed live load.

OPTIONAL EQUIPMENT

Floor Supports - Lower or higher supports are available. Minimum elevation, 18" from floor to top of rollers.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Side Mounted Drive - Motor reducer unit can be mounted to side of conveyor frame. Drive is higher than conveyor frame. Minimum elevation to top of rollers is 7".

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Roller Speed - Constant and variable speeds available.

Rollers Set Low - 5" deep x 4 gauge non-driven side rail to provide ¾" high guard rail.

Rollers - Tapered rollers available. Requires different size frame.

MODEL "251CRRC"

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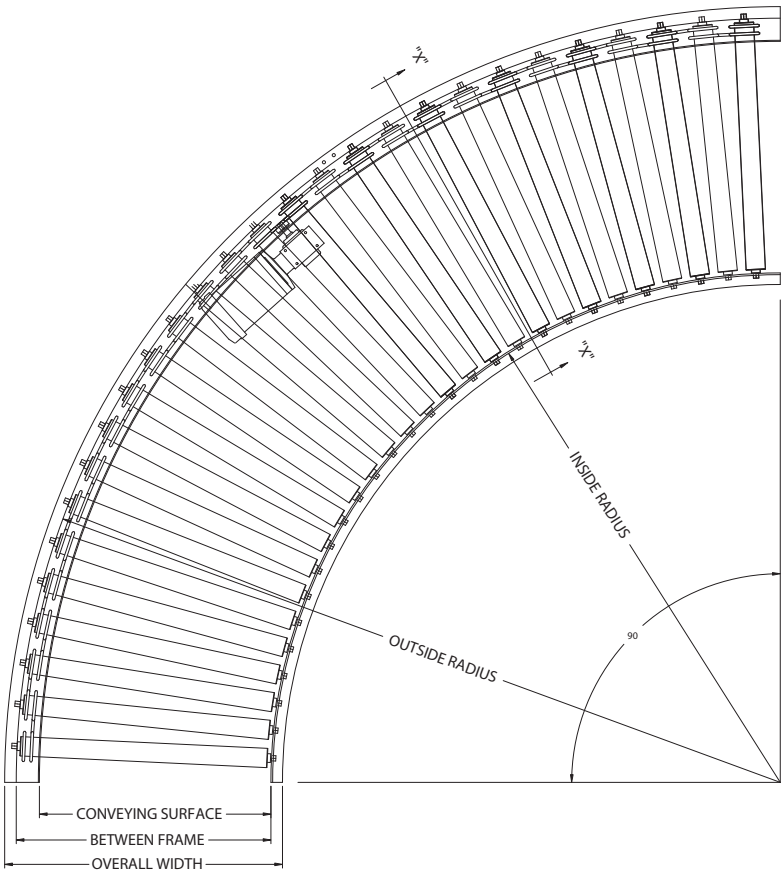
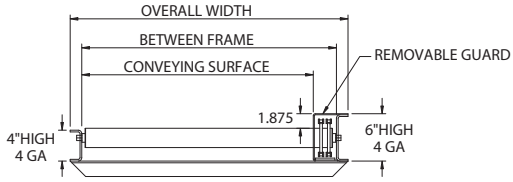
Conveying Surface Width	Between Rail Width	Overall Bed Width	Outside Radius "OR"	Inside Radius "IR"	Number of Rollers	Weight (lbs.)
28"	31"	34"	99"	68"	27	809
34"	37"	40"		62"		903
40"	43"	46"		56"		968
46"	49"	52"		50"	21	1033
52"	55"	58"		44"	27	1098
58"	61"	64"		38"	19	1163
64"	67"	70"		32"		1228





SECTION VIEW "X"-"X'

CSE
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Arlington Heights, IL 60005

MODEL "251CRRCT"

Chain Driven Live Roller Conveyor

- **Pallets**
- **Drums**
- **Positive drive**
- **Oily conditions**

STANDARD SPECIFICATIONS

Bed - Conveying surface width 28", 34", 40", 46", 52", 58" and 64". Tapered tread rollers mounted in 4" and 6" x 4 gauge powder painted formed steel channel frame. Sections are bolted together with butt couplings and floor supports.

Drive Chain - No. 50 roller chain.

Floor Supports - Heavy duty supports are adjustable 30¼" to 40" (HD-7) from floor to top of roller. One support at each end of conveyor and one center leg with knee brace.

Center Drive - Mounted underneath conveyor.

Bearings - Sealed, prelubricated ball bearings.

Chain Guard - Lower chain guard is mounted on bottom of roller frame, and upper chain guard is mounted above roller frame to totally enclose drive chain.

Speed Reducer - Heavy duty worm gear C-Face mounted.

Motor - ¾ HP 230/460/3-60 TE motor.

Capacity - 4000 lbs. distributed live load.

Speed - 30 FPM.

OPTIONAL EQUIPMENT

Floor Supports - Lower or higher supports are available. Minimum elevation, 18" from floor to top of rollers.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Roller Speed - Constant and variable speeds available.

Rollers Set Low - 5" deep x 4 gauge non-driven side rail to provide ¾" high guard rail.

MODEL "251CRRCT"

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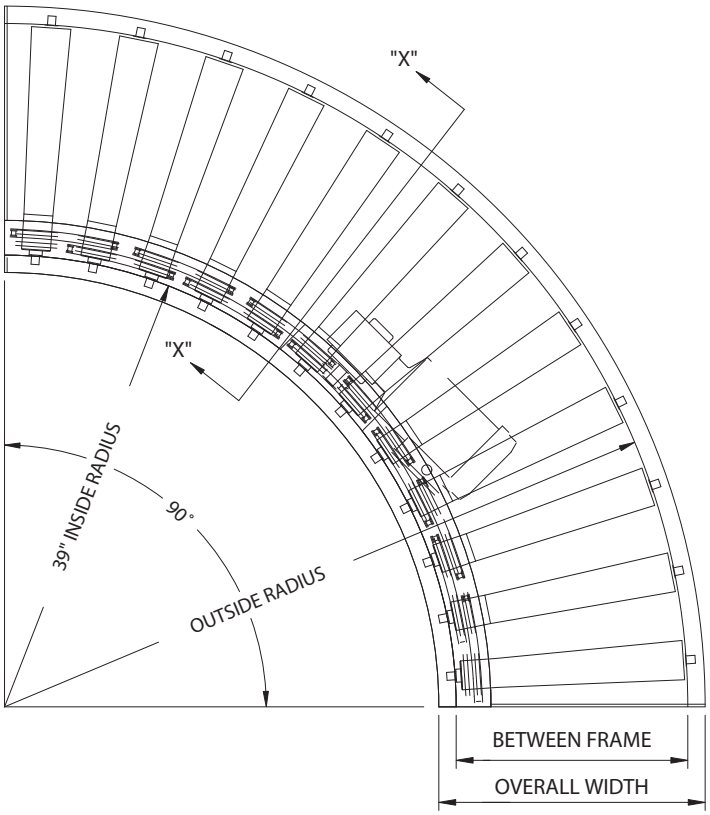
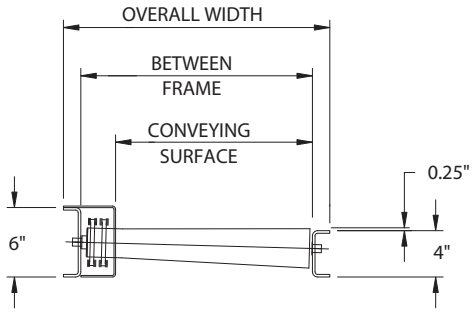
Arlington Heights, IL 60005

Conveyor Surface	Between Frames	Overall Width	Outside Radius	Weights (lbs.)		Tread Roller Taper Dimensions (Nominal)
				90°	45°	
28"	31"	34"	70"	732	600	2½" to 4"
34"	37"	40"	76"	796	648	2½" to 4½"
40"	43"	46"	82"	860	696	2½" to 4¾"
46"	49"	52"	88"	924	744	2½" to 5"
52"	55"	58"	94"	988	792	2½" to 5"
58"	61"	64"	100"	1052	840	2½" to 5"
64"	67"	70"	106"	1116	888	2½" to 5"





SECTION VIEW "X-X"

CSE
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Arlington Heights, IL 60005

MODEL "350CRR"

Heavy Duty Chain Driven Live Roller Conveyor

NOTE: Shown with optional 8"x 11.5# structural steel channel non-driven rail with rollers set low.

- **Heavy duty conveying**
- **Positive drive**
- **Pallets**
- **Heavy drums**
- **Reversible drums**

STANDARD SPECIFICATIONS

Bed - Conveying surface width 19", 27", 29", 33", 41", 47", 53" and 55". 6" x 8.2 lb. and 8" x 11.5 lb. powder painted structural channel frame with powder painted structural channel cross braces in each section. Sections are 5 feet long and bolted together with butt couplings and floor supports.

Tread Rollers - 3½" diameter x .30 wall steel tread rollers spaced on 6" or 12" centers, No. 80 sprockets, 1 1/16" hex shaft.

Drive Chain - No. 80 roller chain.

Floor Supports - Heavy duty structural supports are fixed at 18" elevation from floor to top of roller. One support at each end of conveyor and at each bed joint.

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Bearings - Removable, sealed, prelubricated ball bearings.

Chain Guard - Lower chain guard is mounted on bottom of roller frame, and upper chain guard is mounted above roller frame to totally enclose drive chain.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - 2 HP 230/460-3-60 TE motor.

Capacity - 2000 lbs. per foot maximum. Not to exceed Load Capacity Chart.

Speed - 30 FPM constant.

OPTIONAL EQUIPMENT

Floor Supports - Lower or higher supports are available.

Side Mounted Drive - Center drive mounted to side of conveyor frame. Drive is higher than conveyor frame. Minimum elevation to top of rollers is 10 3/8". Specify which side.

Rollers Set Low - Tread rollers set low in 8" x 11.5 pound structural steel channel frame to form 1 5/8" high guards.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starter and push button stations; manual motor starters with overload protection, others.

Speed - Constant and variable speeds available.

MODEL "350CRR"

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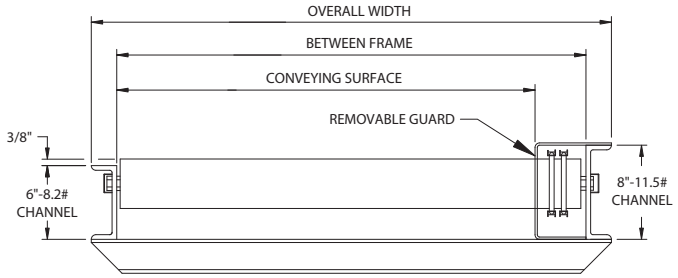
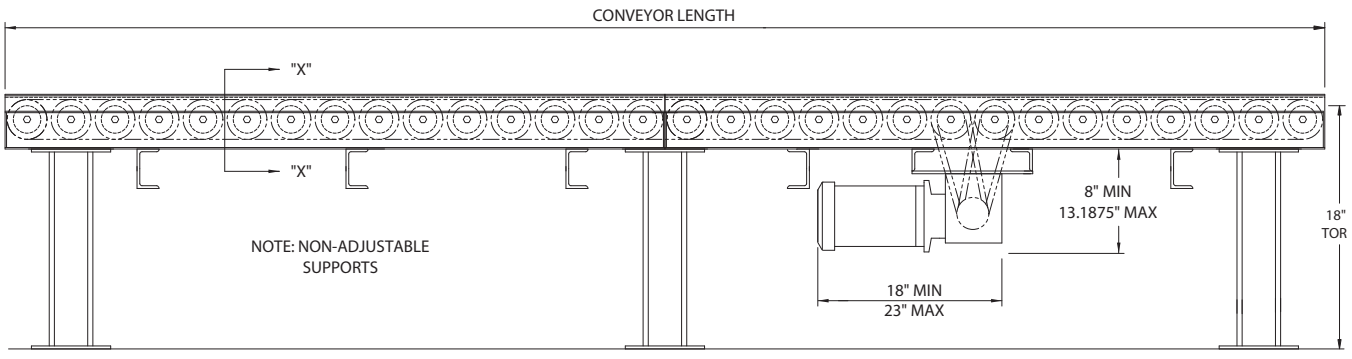
Conveyor Length	Conveying Surface	19"	27"	29"	33"	41"	47"	53"	55"
	Between Rail Width	23"	31"	33"	37"	45"	51"	57"	59"
	Overall Frame Width	27"	35"	37"	41"	49"	55"	61"	63"
5'	WEIGHTS (Lbs.)	792	900	927	981	1089	1170	1251	1278
10'		1284	1490	1541	1644	1849	2003	2157	2208
15'		1776	2079	2155	2306	2609	2836	3063	3138
20'		2268	2668	2768	2968	3368	3668	3968	4068
25'		2760	3258	3382	3631	4128	4501	4873	4998
30'	Weights Based on 6" Roller Centers	3252	3863	4015	4320	4931	5388	5846	5998
40'		4236	5026	5223	5617	6407	6999	7590	7788
50'		5220	6204	6450	6942	7926	8664	9402	9648
60'		6204	7383	7678	8267	9446	10330	11214	11508
70'		7188	8562	8905	9592	10965	11995	13025	13368
80'		8172	9740	10132	10916	12484	13660	14836	15228
90'		9156	10918	11360	12241	14004	15236	16648	17088
100'		10140	12096	12588	13566	15524	16812	18460	18948

Load Capacity Chart

HP	HORIZONTAL CONVEYOR ROLLER BED @ 30 FPM								
	27"- 38" OAW			40"- 52" OAW			58"- 66" OAW		
	TOTAL LOAD			TOTAL LOAD			TOTAL LOAD		
	30'	60'	90'	30'	60'	90'	30'	60'	90'
2	21000	19200	17400	20400	18000	15600	19400	16000	12500
3	27000	25200	23400	26400	24000	21600	25400	22000	18500



SECTION VIEW "X-X"



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MODEL "FTC"

Inclined Floor-to-Floor Conveyor

- **Booster conveyor for gravity flow systems**
- **Transporting between floors**
- **Center drive**

STANDARD SPECIFICATIONS

Belt - 14", 18", 24", 30" and 36" wide black PVC 120 rough-top belt.

Bed - 20", 24", 30", 30", 36" and 42" wide 12 gauge powder painted formed steel slider bed. Bed is 6½" deep x 6 feet, 8 feet or 10 feet long spliced together with splice plates.

Under-Trussed Bed - Extra reinforcement to prevent sag in longer bed sections in addition to reinforcing angles, 24 feet and longer.

Double Nose-Over - Two 16" long adjustable bed sections provide a two step transition from incline to horizontal with 15° to 35° adjustment.

Tail Pulley - 4" diameter, crowned with 1 3/16" diameter shaft through 30" wide belt. 6" diameter tail pulley with 1 7/16" diameter shaft for wider than 30" belt.

Drive Pulley - 8" diameter crowned and lagged. 1 7/16" diameter.

Snub Roller - 2½" diameter at drive pulley and 2" diameter at tail pulley.

Return Idlers -1.9" diameter, adjustable.

Take-Up - Located in center drive assembly, provides 24" of belt take-up.

Pop-Out Roller - Free floating, 1⅜" diameter rollers located at tail pulleys with gravity connector rods. Will lift out if anything is caught between pulleys and rollers.

Floor Supports - Adjustable stands to give 30¾" to 44¾" height at each end; with knee braces.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ¾ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - 100 lbs. per foot maximum. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Neoprene ruff-top and other types and styles - contact factory.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Ceiling Hangers - ½" diameter threaded rods of 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Floor Stands - Lower or higher than standard.

Lower Powered Feeder Section - Separate belt section with (2) supports, adjustable from 28½" to 42½". Driven by roller chain from tail pulley of inclined section. Integral feeder available.

Single Nose-Over - A straight section 23½" from tail pulley to center of nose-over roller provides for smooth transition from 0° to 15° incline.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "FTC"

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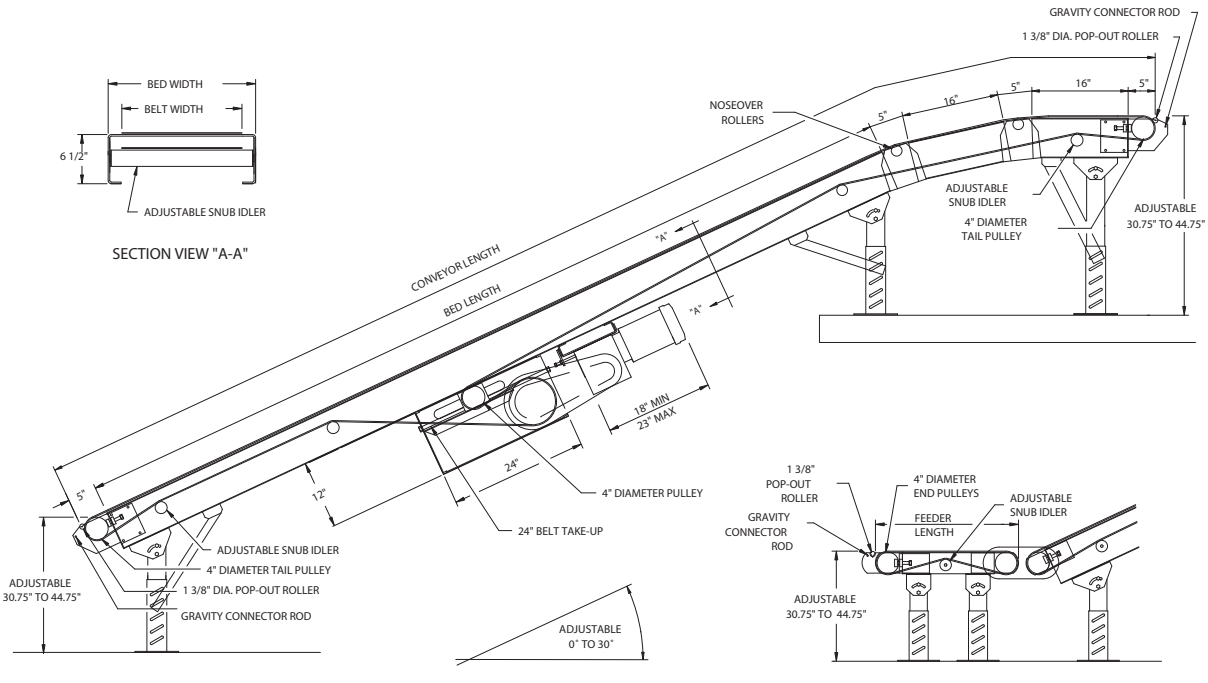
Overall Length	Bed Length	Net Lift 25°	Horizontal Floor Space @ 25°	Belt Width / Bed Width	14" / 20"	18" / 24"	24" / 30"	30" / 36"
14'4"	10'	4'8"	13'2"	Weight (lbs.)	650	720	825	925
18'4"	14'	6'4"	16'10"		730	815	935	1050
20'4"	16'	7'2"	18'7"		760	850	980	1100
22'4"	18'	8'0"	20'5"		800	895	1030	1165
24'4"	20'	8'10"	22'3"		825	930	1070	1210
26'4"	22'	9'8"	24'1"		970	1085	1240	1390
28'4"	24'	10'7"	25'10"		1005	1125	1295	1460
30'4"	26'	11'5"	27'8"		1040	1160	1330	1500
32'4"	28'	12'3"	29'6"		1070	1200	1380	1560
34'4"	30'	13'1"	31'4"		1110	1240	1430	1610
36'4"	32'	13'11"	33'1"		1190	1330	1530	1720
38'4"	34'	14'9"	34'11"		1220	1370	1580	1780
40'4"	36'	15'7"	36'9"		1250	1410	1620	1830
42'4"	38'	16'6"	38'7"		1290	1450	1670	1890
44'4"	40'	17'4"	40'4"		1320	1490	1715	1940

Load Capacity Chart

60 FPM	
HP	TOTAL LOAD
¾	430 lbs.
1	540 lbs.
1½	810 lbs.
2	1080 lbs.

POWER FEEDER - OPTIONAL



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MODEL "190RBI"

Incline Roller Bed Conveyor

- **Transporting between floors**
- **Booster conveyor for gravity flow systems**
- **Heavier loads can be conveyed because of less friction build-up**

STANDARD SPECIFICATIONS

Belt - 12", 16", 18", 20", 24" and 30" wide black PVC 120 rough-top belt.

Bed - Roller bed with 1.9" diameter x 16 gauge galvanized rollers spaced on 6" centers. Rollers mounted in 7" x 1½" x 12 gauge powder painted formed steel channel frames. Frames bolted together with butt couplings.

Under-Trussed Bed - Extra reinforcement to prevent sag in longer bed sections in addition to reinforcing angles, 20 feet and longer.

X-Bracing - Supplied on conveyors 40 feet and longer. Used to square bed sections to insure proper product and belt tracking.

Double Nose-Over - Adjustable from 0° to 30°.

Center Drive - Mounted below conveyor bed section. Can be placed most anywhere in conveyor length.

Tail Pulley - 4" diameter, crowned with 1 3/16" diameter shaft through 30" wide belt. 6" diameter tail pulley with 1 7/16" diameter shaft for wider than 30" belt.

Drive Pulley - 8" diameter and fully lagged, 1 7/16" diameter shaft.

Snub Roller - 2½" diameter at drive pulley, 2" diameter at terminal pulleys.

Return Roller - 1.9" diameter.

Take-Up - Located in center drive, provides 24" of belt take-up.

Gravity Brackets - Adjustable rod with 1⅜" diameter pop-out transfer roller to attach wheel or 1⅜" diameter roller conveyor.

Bearings - Sealed prelubricated with cast iron housings.

Floor Supports - Adjustable 31½" to 45½" from floor to top of belt. One support supplied at each end of conveyor and at nose-over, with knee braces.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ¾ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - See Load Capacity Chart.

OPTIONAL EQUIPMENT

Belt - Neoprene ruff-top and other types and styles - contact factory.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Ceiling Hangers - ½" diameter threaded rods 8 feet long with locking nuts and mounting hardware. Other lengths are available.

Floor Supports - Lower or higher than standard.

Lower Powered Feeder Section - Separate belt section with (2) supports, adjustable from 28½" to 42½". Driven by roller chain from tail pulley of inclined section. Integral feeders available.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP are available.

Belt Speed - Constant and variable belt speeds available.

Electrical Controls - Magnetic starters, push button stations; manual motor starters with overload protection, others.

Single Noseover - Available.

MODEL "190RBI"

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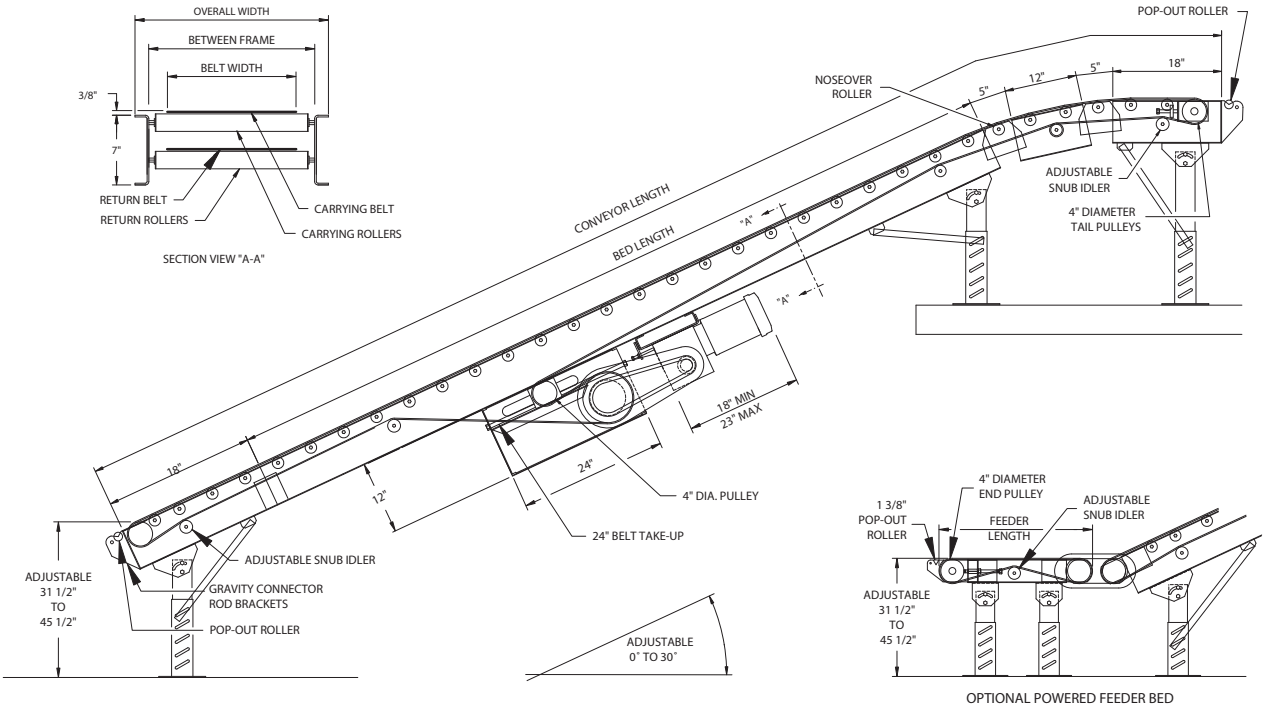
Conveyor Length	Bed Length	Net Lift 25°	Horizontal Floor Space 25°	Between Frames	15"	19"	21"	23"	27"	33"
				Belt Width	12"	16"	18"	20"	24"	30"
				Overall Frame Width	18"	22"	24"	26"	30"	36"
14'10"	10'	4'8"	11'9"		900	1040	1120	1190	1330	1470
16'10"	12'	6'5"	15'5"		1050	1230	1305	1385	1570	1740
18'10"	14'	7'3"	17'3"		1130	1320	1410	1500	1695	1890
20'10"	16'	8'1"	19'0"		1200	1400	1510	1610	1810	2020
22'10"	18'	8'11"	20'10"		1280	1508	1615	1730	1950	2170
24'10"	20'	9'9"	22'8"		1450	1690	1800	1925	2160	2300
26'10"	22'	10'7"	24'6"	Weight	1530	1780	1910	2040	2300	2570
28'10"	24'	11'6"	26'4"	(lbs.)	1600	1880	2010	2150	2420	2690
30'10"	26'	12'4"	28'1"		1680	1960	2112	2250	2540	2820
32'10"	28'	13'2"	29'11"		1760	2070	2220	2370	2680	2990
34'10"	30'	14'0"	31'9"		1860	2180	2340	2500	2820	3140
36'10"	32'	14'10"	33'7"		1940	2280	2450	2620	2960	3300
38'10"	34'	15'8"	35'4"		2020	2370	2550	2730	3080	3430
40'10"	36'	16'6"	37'2"		2090	2460	2650	2830	3200	3570
42'10"	38′	17'5"	39'0"		2180	2560	2760	2950	3340	3730

Load Capacity Chart

60 FPM - 25° Incline	
HP	50' OAL Max. Total Live Load
¾	450 lbs.
1	675 lbs.
1½	1125 lbs.
2	1345 lbs.

POWER FEEDER - OPTIONAL



OPTIONAL POWERED FEEDER BED

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MODEL "SPC"
Portable Belt Conveyor

- **Stamping operations**
- **Small parts**
- **Portable or permanent**

STANDARD SPECIFICATIONS

Belt - 3 ply PVG (Oil resistant PVC) with 1½" high molded cleats on 12" centers. Available in widths of 4", 6", 8", 10", 12", 16", 18" and 24".

Bed - 6½" deep x 12 gauge powder painted formed steel with 3½" high solid guard rails both sides.

Tail Pulley - 4" diameter crowned with 1 3/16" diameter shaft.

Overhead Drive - 10" clearance over belt, standard.

Drive Pulley - 4" diameter crowned and fully lagged with 1 3/16" diameter shaft.

Belt Return - Belt is returned on smooth sheet metal slide.

Take-Up - 6" long screws located at tail pulley to tighten belt.

Portable Supports - Heavy duty pipe support with 4" diameter casters permit easy mobility of conveyor.

Bearings - Sealed prelubricated with cast iron housings.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½ HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - Total distributed live load not to exceed Capacity Chart.

OPTIONAL EQUIPMENT

Belt - ½" x 1" flat wire mesh with 1½" high angle cleats bolted on 12" centers. Others.

Bed - Special bed sizes and special material such as stainless steel, galvanized, etc.

Supports - Permanent type with adjustment.

Hopper - Infeed hopper located on tail pulley end. Sized to suit application.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

Belt Speed - Constant and variable belt speeds available.

MODEL "SPC"

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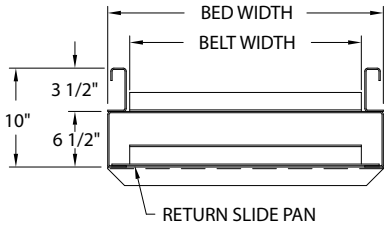
Conveyor Length	Belt Width	4"	6"	8"	10"	12"	16"	18"	24"
	Bed Width	8"	12"	12"	16"	16"	20"	24"	30"
	Bed Thickness	12 Gauge Steel							
5′	Weight (lbs.)	348	416	420	473	477	530	583	635
7′		379	447	451	504	508	563	620	675
9′		410	478	482	535	539	596	657	714
11′		441	509	513	566	570	629	694	753
13′		472	540	544	597	601	662	731	792

Portable Base Adjustment Chart (5' to 13' Lengths)

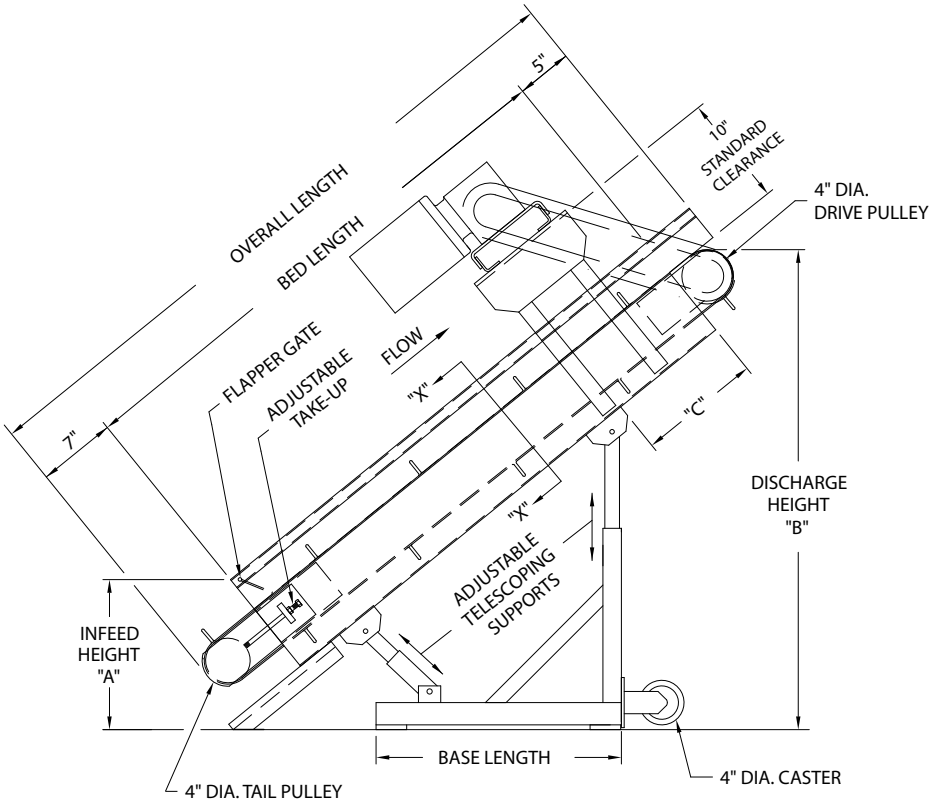
Overall Length	Bed Length	Base Length	Min. Tail Min. Drive		Min. Tail Max. Drive		Max. Tail Min. Drive		Max. Tail Max. Drive		
			"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	"C"
5'	4'	22"	11"	41½"	10"	56"	25½"	37½"	26"	54½"	11"
7'	6'	34"	11 "	51½"	10"	76½"	44½"	44½"	45"	73½"	11"
9'	8'	46"	11"	64½"	10"	97½"	57½"	57½"	48"	95½"	11"
11'	10'	58"	11"	74½"	10"	118"	67½"	67½"	55½"	116"	11"
13'	12'	58"	11"	86½"	10"	139"	67½"	67½"	55½"	128"	35"

Load Capacity Chart

60 FPM	
HP	TOTAL LOAD
½	300 lbs.
¾	380 lbs.



SECTION "X-X"



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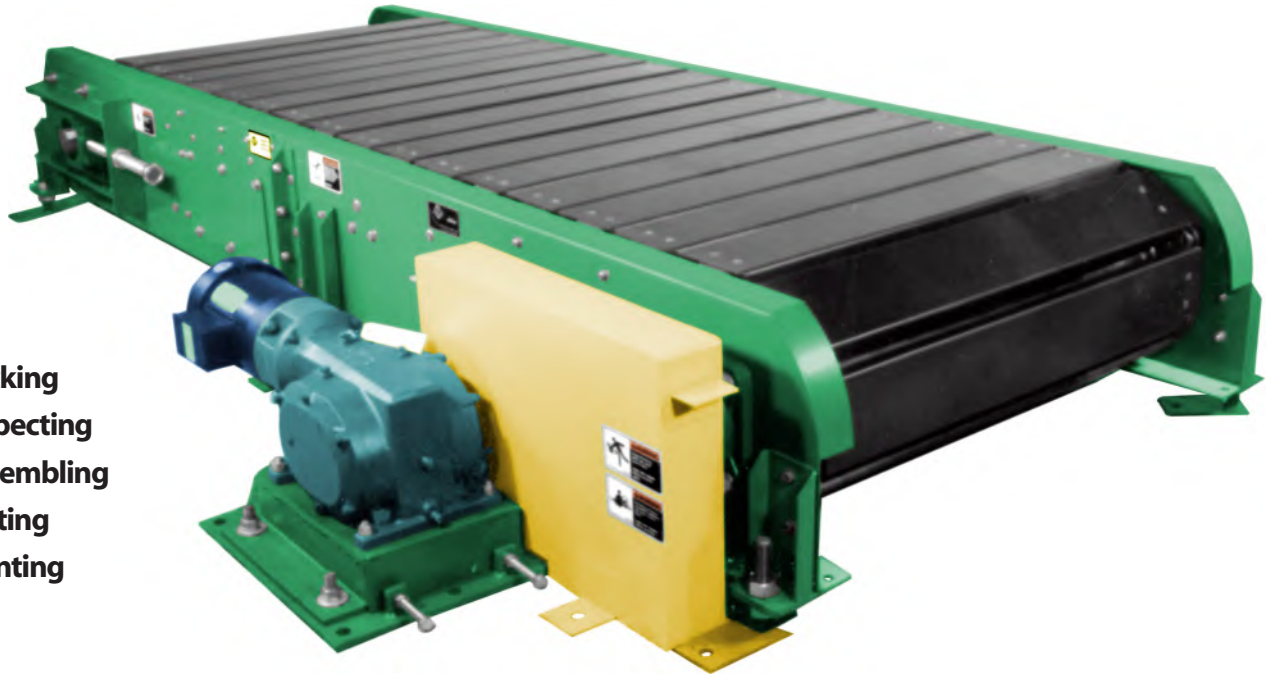
MODEL "SL"
Slat Conveyor



- **Packing**
- **Inspecting**
- **Assembling**
- **Testing**
- **Painting**

STANDARD SPECIFICATIONS

Slats - 5¾" x 10 gauge formed slat standard, bolted to A-2 attachments on chain. Slat length is effective conveying surface.

Conveyor Frame - Heavy duty, powder painted 7 gauge, bolted construction.

Chain & Slat Return - Returns on angle track, supplied as part of conveyor framework.

Chain - Heavy duty 6" pitch with A-2 attachments on each pitch.

Driving Sprockets - 6 Tooth SR 196 12" pitch diameter.

Floor Supports - Supplied as part of conveyor framework, not adjustable. Specify height. 24" min. elevation.

Drive Shaft - 2 15/16" diameter CRS.

Tail Shaft - 2 7/16" diameter CRS.

Take-Up - Mounted at tail end of conveyor for adjustment of chain tension.

Drive - Floor mounted at discharge end of conveyor.

Speed - 30 FPM constant.

Reducer - Heavy duty worm gear reducer.

Motor - 2 HP 230/460-3-60 TE motor.

Capacity - 400 lbs. per foot maximum. Not to exceed Load Capacity Chart.

OPTIONAL EQUIPMENT

Slats - Heavier gauge and hardwood slats available.

Chain - 4" pitch heavier duty chain available; inquire.

Dwell Station - Gravity section mounted level with slat surface. Allows product to be inspected, tested, etc., while conveyor remains running.

Speed - Other constant speeds and variable speeds available.

Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.

Electrical Controls - Magnetic starters, push button stations; manual motor starters with overload protection, others.

MODEL "SL"

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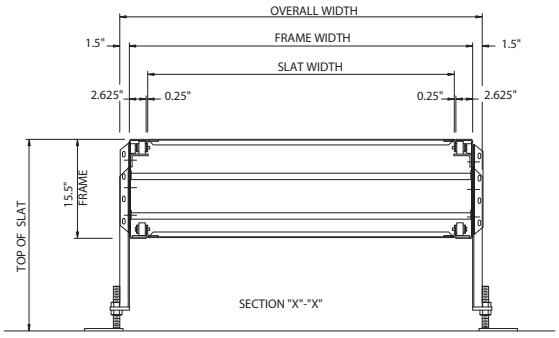
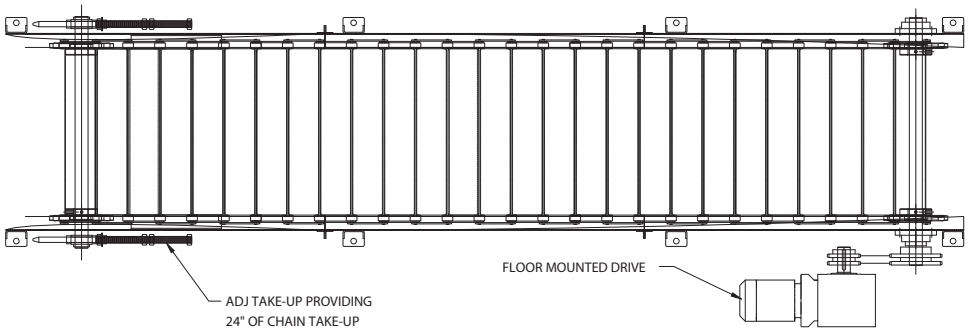
Conveyor Length	Slat Width	24"	30"	36"	42"	48"
	Overall Width	33"	39"	45"	51"	57"
10'	Weights Based On Standard 5 3/4" Wide 10 Gauge Formed Slats	2225	2471	2717	2963	3209
20'		3821	4313	4805	5297	5789
30'		5417	6155	6893	7631	8369
40'		7013	7997	8981	9965	10949
50'		8582	9812	11042	12272	13502
60'		10178	11654	13130	14606	16082
70'		11774	13496	15218	16940	18662
80'		13370	15338	17306	19274	21242
90'		14966	17180	19394	21608	23822
100'		16562	19022	21482	23942	26402

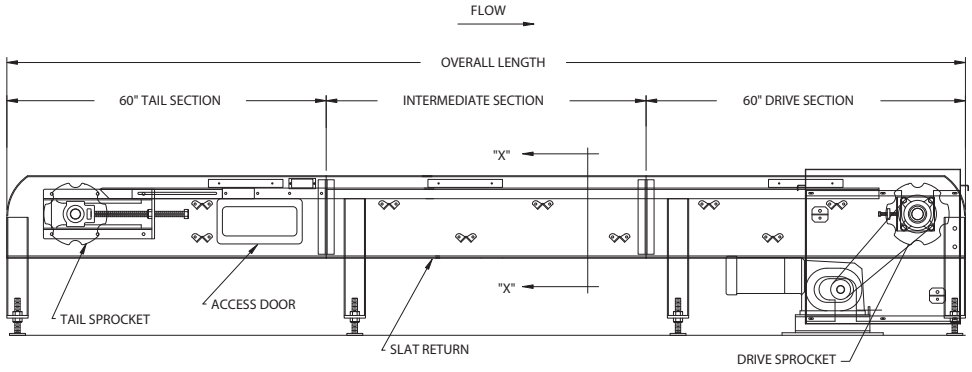
NOTE: Elevation changes are critical on this model. Please contact factory.



Load Capacity Chart

HP	30 FPM	
	Up to 40 ft.	Up to 100 ft.
2	6500 lbs.	2100 lbs.
3	11000 lbs.	6800 lbs.





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MODEL "DC"

Drag Chain Conveyor

- **Handles pallets the hard way**
- **Quiet operation**
- **Low profile - 12" elevation optional**
- **Available with zero pressure accumulation feature**

STANDARD SPECIFICATIONS

Frame - 9" x 7 gauge powder painted formed steel channel frames. Sections are bolted together with splice plates and floor supports.

Chain - (2) 60F single pitch conveyor chains, straight side bar, on 36" centers.

Chain Guide - UHMW

Floor Supports - 24" to top of chain. One support supplied at each end of conveyor and at each bed joint.

Motor - 1 HP 230/460-3-60 TE motor, C-Face. Motor and speed reducer are located underneath conveyor frame.

Speed Reducer - Heavy duty worm gear for C-Faced mounted motor.

Sprockets - Hardened sprockets with $1^{15}/_{16}$" diameter CRS drive shaft.

Bearings - Sealed, pre-lubricated with cast iron housing.

Speed - 30 FPM constant speed.

Capacity - 10,000 lbs. maximum distributed live load at 30 FPM. Maximum motor size 3 HP.

OPTIONAL EQUIPMENT

Elevation - 12" minimum (with adjustment to 13") to top of chain, made available by modification. Contact factory.

Motors - Single phase, energy efficient.

Chain Centers - Other chain centers and multiple chains available, 18" minimum chain centers. Contact factory.

Speeds - For speeds greater than 30 FPM, contact factory.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "DC"

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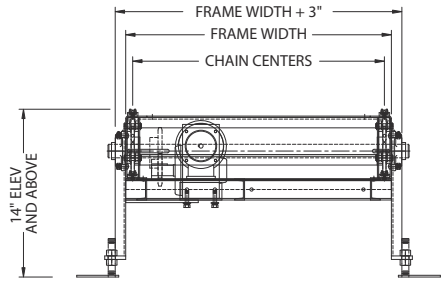
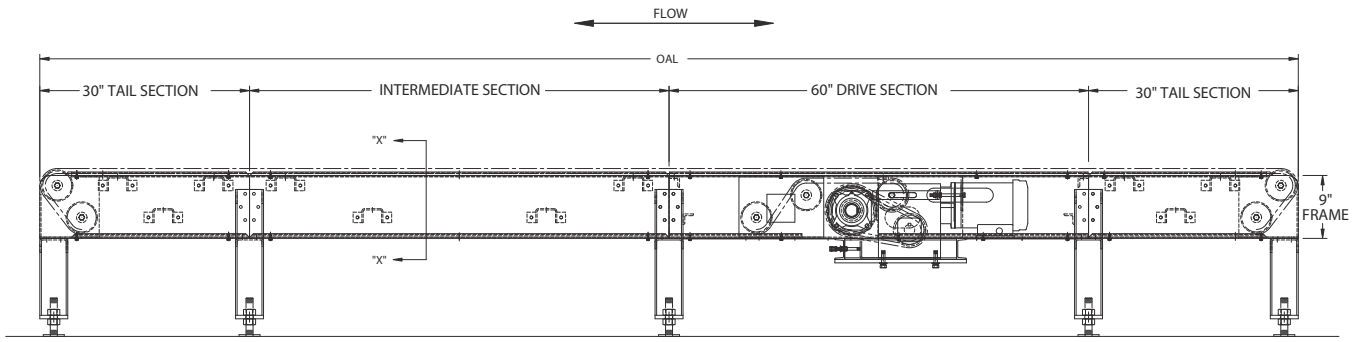
Overall Length	Frame Width	20"	26"	32"	38"	44"	50"
	Chain Center	18"	24"	30"	36"	42"	48"
10'	Weights (in lbs.)	540	585	630	678	723	768
15'		726	790	855	918	983	1048
20'		911	995	1080	1158	1243	1328
25'		1096	1200	1305	1398	1503	1608
30'		1281	1405	1530	1638	1763	1888
35'		1466	1610	1755	1878	2023	2168
40'		1651	1815	1980	2118	2283	2446
45'		1836	2020	2205	2358	2543	2728
50'		2021	2225	2430	2598	2803	3008
55'		2206	2430	2655	2838	3063	3288
65'		2576	2840	3105	3318	3583	3848
75'		2946	3250	3555	3798	4103	4408
85'		3316	3660	4005	4248	4623	4968
95'		3686	4070	4455	4698	5143	5528
105'		4056	4480	4905	5148	5663	6088

Load Capacity Chart

30 FPM WITH 2 STRANDS		
HP	TOTAL LIVE LOAD (lbs.)	
	Up to 50'	Up to 100'
1	4,000	3,000
2	6,500	6,000
3	10,000	9,500



SECTION VIEW "X-X"



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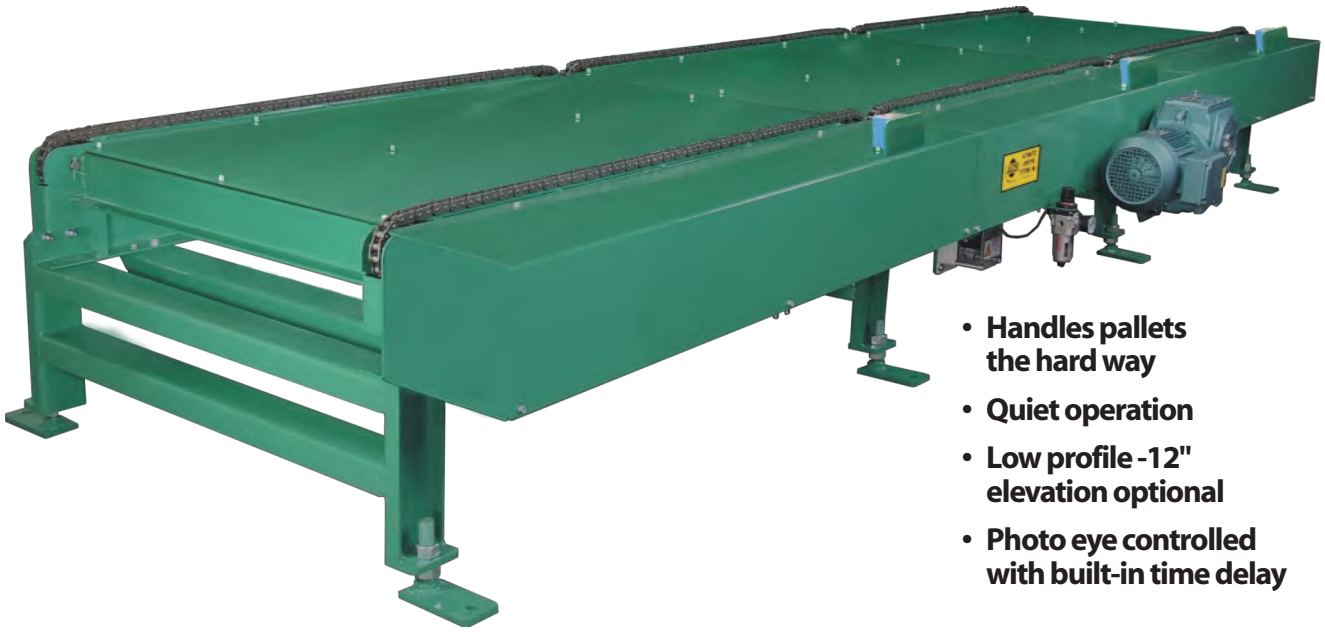
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "DCE"

Drag Chain Photo Eye Controlled Accumulating Conveyor



- **Handles pallets the hard way**
- **Quiet operation**
- **Low profile -12" elevation optional**
- **Photo eye controlled with built-in time delay**

STANDARD SPECIFICATIONS

Frame - 9" x 7 gauge powder painted formed steel channel frames. Sections are bolted together with splice plates and floor supports.

Chain - (2) 60F single pitch conveyor chains, straight side bar, on 36" centers.

Chain Guide - UHMW

Floor Supports - 24" to top of chain. One support supplied at each end of conveyor and at each bed joint.

Motor - 1 HP 230/460-3-60 TE motor, C-Face. Motor and speed reducer are located underneath conveyor frame.

Speed Reducer - Heavy duty worm gear for C-Faced mounted motor.

Sprockets - Hardened sprockets with $1^{15}/_{16}$" diameter CRS drive shaft.

Bearings - Sealed, pre-lubricated with cast iron housing.

Accumulation Zones - Standard zones are 60" long with a maximum of 20 zones per single drive. Each zone is driven by an air clutch and controlled by a photo eye.

Power Supply - 120VAC power supply controls accumulation feature with 24VDC output. Power supply will control 50 accumulation zones.

Sensing Device - Photo electric sensor in each zone. Detects product presence and activates accumulation feature if downstream zone is occupied.

Speed - 30 FPM constant speed.

Capacity - 15,000 lbs. maximum distributed live load at 30 FPM. Unit (pallet / product) load maximum is 3,000 lbs. for 5' lg. zone. Maximum motor size 3 HP.

OPTIONAL EQUIPMENT

Elevation - 12" minimum (with adjustment to 13") to top of chain, made available by modification. Contact factory.

Accumulation Zones - 48", 54", and 72" long. Frame lengths change with zone lengths. For other zone lengths, contact factory.

Diffused Photo Eyes - To be used when retro-reflective photo eyes can't be used due to product interference.

Motors - Single phase, energy efficient.

Chain Centers - Other chain centers and multiple chains available, 18" minimum chain centers. Contact factory.

Speeds - For speeds greater than 30 FPM, contact factory.

Electrical Controls - Magnetic starters and push button stations; manual motor starters with overload protection, others.

MODEL "DCE"

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Overall Length	Frame Width	20"	26"	32"	38"	44"	50"
	Chain Center	18"	24"	30"	36"	42"	48"
10'	Weights (in lbs.)	540	585	630	678	723	768
15'		726	790	855	918	983	1048
20'		911	995	1080	1158	1243	1328
25'		1096	1200	1305	1398	1503	1608
30'		1281	1405	1530	1638	1763	1888
35'		1466	1610	1755	1878	2023	2168
40'		1651	1815	1980	2118	2283	2446
45'		1836	2020	2205	2358	2543	2728
50'		2021	2225	2430	2598	2803	3008
55'		2206	2430	2655	2838	3063	3288
65'		2576	2840	3105	3318	3583	3848
75'		2946	3250	3555	3798	4103	4408
85'		3316	3660	4005	4248	4623	4968
95'		3686	4070	4455	4698	5143	5528
105'		4056	4480	4905	5148	5663	6088

OPERATIONAL SEQUENCE

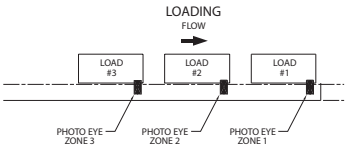
1) Model "DCE" is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.

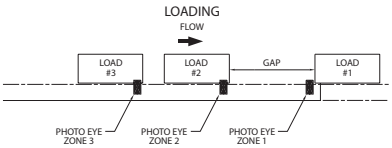
2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at "zero pressure" until fully loaded.

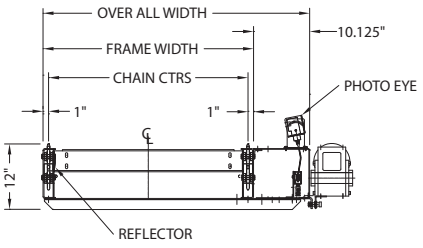
3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1until the load in Zone #1 has completely cleared Zone #1's photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1's photoelectric sensor for the accumulation process to continue.

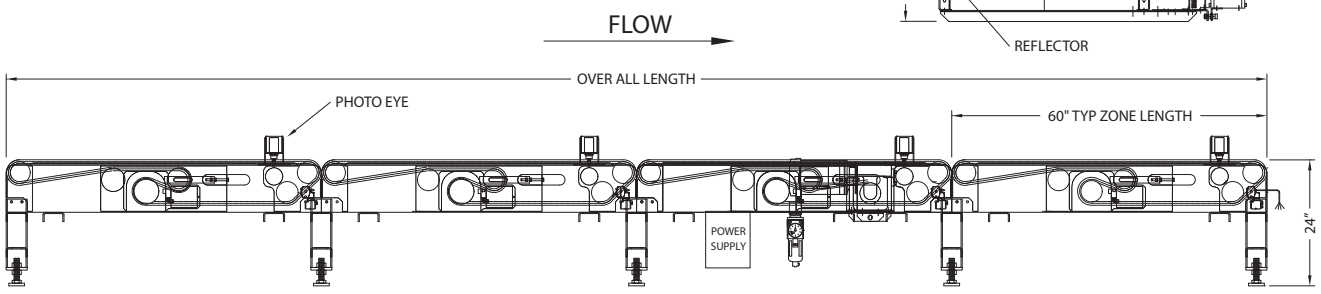
Load Capacity Chart

HP	30 FPM WITH 2 STRANDS TOTAL LIVE LOAD (lbs.)	
	Up to 50'	Up to 100'
1	6,000	4,000
2	10,000	8,000
3	14,000	12,000









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MODEL "SBS"

Medium Duty High Speed Split Belt Sorter Conveyor

- **Conveys & diverts packages with min. size of 8" long x 6" wide**
- **Divert packages at right angle up to (50) per minute**
- **Divert packages at 30 degrees up to (80) per minute**
- **(4) to (8) split belts, depending on product size**
- **UHMW belt tracks for positive belt tracking**
- **Flange mounted gear motor for ease of maintenance & efficiency**
- **Automatic pneumatic belt take-up**
- **Handles packages up to 75 lbs**
- **Belt speed up to 300 FPM**
- **60 PSI air requirement**

STANDARD SPECIFICATIONS:

Beds - 15", 18", 21", 24" and 27" wide between rails, 7" deep x 1½" x 12 ga. powder painted, formed steel channel frame, bolted together with butt couplings and floor supports.

Belts - APH150 HTS x 15/16" wide.

Drive - End Drive with 8" dia. drive pulley.

Filter Regulator - mounted (60 psi air required).

Capacity - Conveys product weighing up to 75 lbs. depending on product type and conveyor speed.

Floor Supports - 31½" to 45½" adjustable from floor to top of roller. One support provided for each end of conveyor and at each bed joint. Other elevations are available.

Conveyor Speed - Standard conveyor speed range is up to 300 FPM.

OPTIONAL EQUIPMENT:

Right Angle Transfer:

- 90 degree roller transfer.
- 18" BF rollers with ⅛" thick orange plastisol covering.
- Rollers to raise & lower by supplied air cylinder.
- 4-way single solenoid.
- ½ HP 230/460/3/60 gearmotor.

OPTIONAL EQUIPMENT (cont'd):

- Transfer speed: 300 FPM.
- Drive can be reversed to enable bi-directional transfer.
- Max rate: (50) cpm in one direction.

Wheel Diverters:

- 30 degree divert.
- 1.5" O.D. wheels raise & lower by supplied air cylinder.
- 60 psi air required.
- 4-way single solenoid supplied.
- "Diverter" to be powered by main SBS conveyor drive.
- Diverts in one-direction only: "Left Hand" or "Right Hand".
- Multiple diverts can be used in the SBS and each divert can be designated for either "Left Hand" or "Right Hand" operation.
- Max rate: (80) cpm.

MODEL "SBS"

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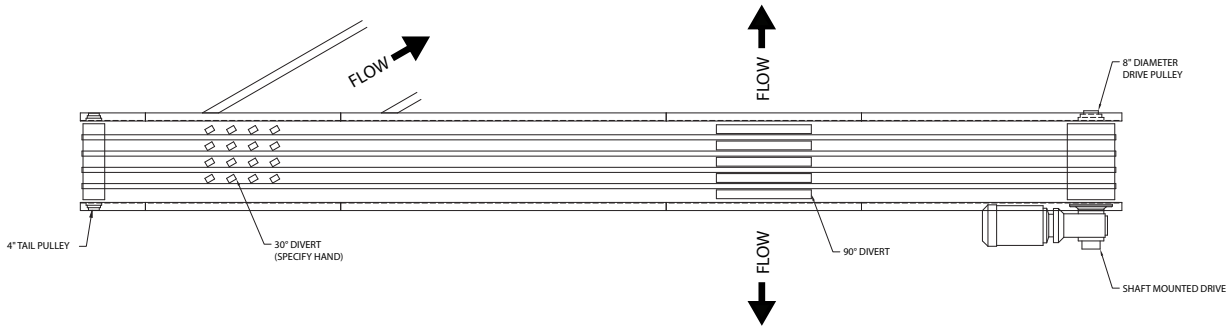
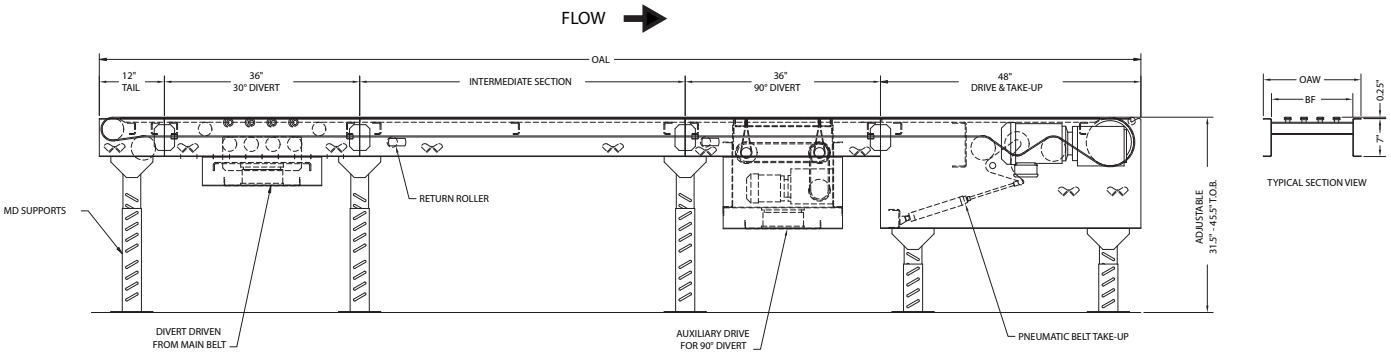
MODEL SBS - WEIGHTS						
Bed Width	**15"**	**18"**	**21"**	**24"**	**27"**	**30"**
Overall Width	**18"**	**21"**	**24"**	**27"**	**30"**	**33"**
10'0" OAL	547	600	655	710	765	820
Per Foot	28	33	37	41	45	49
90° Divert	203	219	235	250	266	282
30° Divert	146	161	176	191	206	221

Load Capacity Chart
300 FPM

Total Distributed Live Load (Max Length is 150')			
BF	**OAW**	**Belts**	**Live Load**
15"	**18"**	4	1200 lbs.
18"	**21"**	5	1500 lbs.
21"	**24"**	6	1800 lbs.
24"	**27"**	7	2100 lbs.
27"	**30"**	8	2400 lbs.





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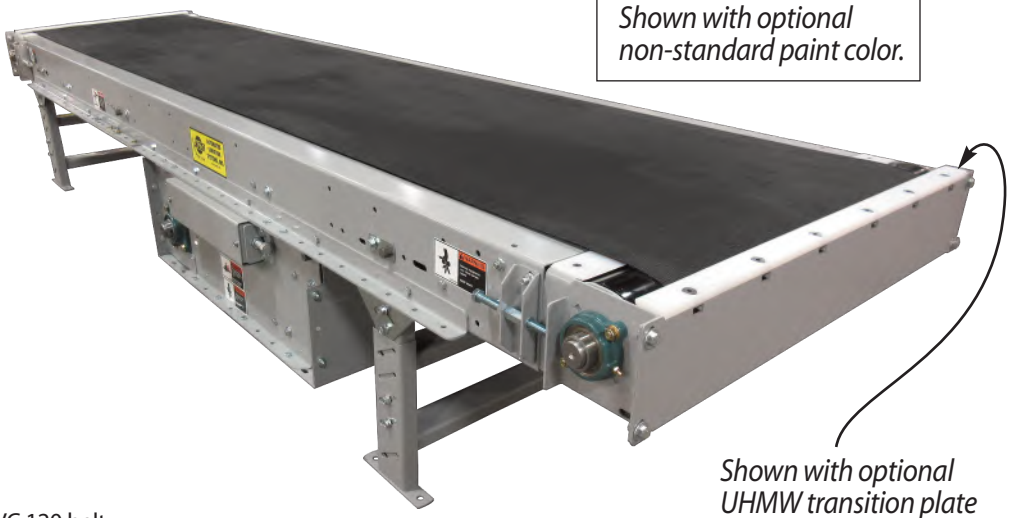
MODEL "190RBW-S"

Medium Duty Belt Over Roller Conveyor

- **Ideal for the Parcel Industry**
- **Transporting**
- **Packing**
- **Inspecting**

Note:
Shown with optional non-standard paint color.



Shown with optional UHMW transition plate and end cover.

STANDARD SPECIFICATIONS:

Belt - 12", 18", 24", 36", and 42" wide, black PVC 120 belt.

Bed - 1.9" diameter x 16 ga. galvanized steel rollers with 7/16" hex axle mounted on 6" centers in 6½" deep x 12 gauge powder painted formed channel, bolted together with splice plates and supports. Bed formed so that the belt edges rest on the slider pan and completely cover the carrying rollers beneath.

Center Drive - Mounted below conveyor bed section.

Drive Pulley - 8" diameter and fully lagged, 1 7/16" diameter shaft.

Tail Pulley - 6" diameter crowned.

Snub Roller - 2½" diameter at drive pulley and terminal pulleys.

Return Idlers - 1.9" diameter, adjustable, on 10'0" centers.

Take-Up - Located in center drive, provides 20" of belt take-up.

Pulley Bearings - Sealed, pre-lubricated with heavy duty cast iron housings.

Floor Supports - 31" to 45" adjustable from floor to top of belt. One support provided for each end of conveyor and at each bed joint. Other elevations are available.

Speed Reducer - C-Face mounted heavy duty worm gear reducer.

Motor - ½" HP 230/460-3-60 TE motor.

Belt Speed - 60 FPM constant.

Capacity - Maximum load per linear foot of conveyor - 150 pounds.

OPTIONAL EQUIPMENT:

End Drive - Underslung with chain guard on right or left hand side at discharge end.

Guard Rails - Adjustable channel, continuous channel, or solid steel guard rails available.

Side Mounted Drive - End drive mounted to side of conveyor section. Specify side. Minimum elevation – 10".

Belt Speeds - Constant and variable belt speeds available.

MODEL "190RBW-S"

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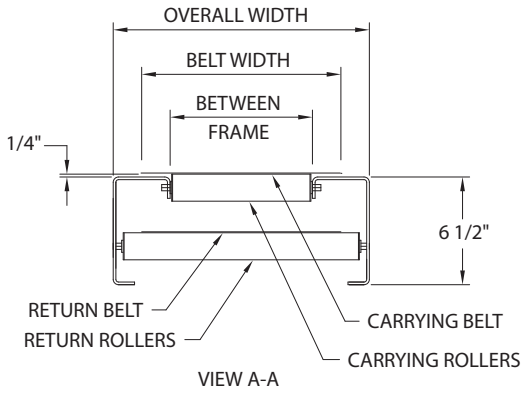
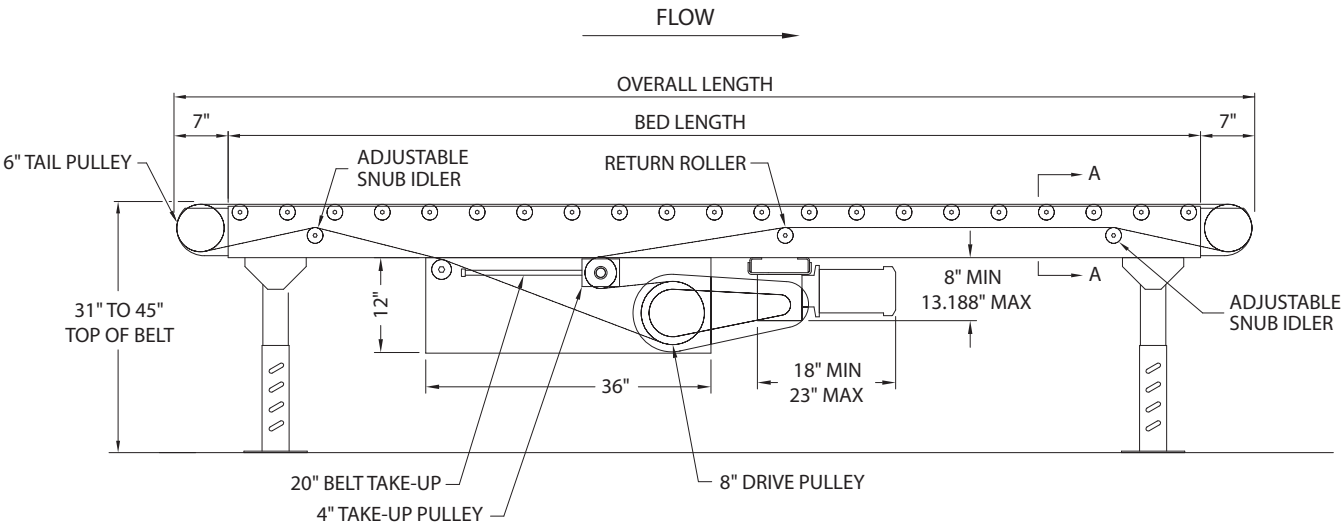
MODEL 190RBW-S - WEIGHTS					
Belt Width	**12"**	**18"**	**24"**	**36"**	**42"**
Overall Width	**18"**	**24"**	**30"**	**42"**	**48"**
10'0" OAL	741	1056	1444	2437	3042
Per Foot	10	13	17	23	26

Load Capacity Chart

Load Capacity (lbs) @ 60 FPM						
HP	**Overall Frame Width**					
	18" - 24"		**30" - 36"**		**42" - 48"**	
	50'	**100'**	**50'**	**100'**	**50'**	**100'**
½	2400	1700	2100	1100	1600	250
¾	3600	3000	3400	2500	2900	1700
1	4600	4100	4300	3600	4000	2800
1½	6500	6000	6200	5500	5900	4900
2	7800	7400	7600	7000	7300	6400





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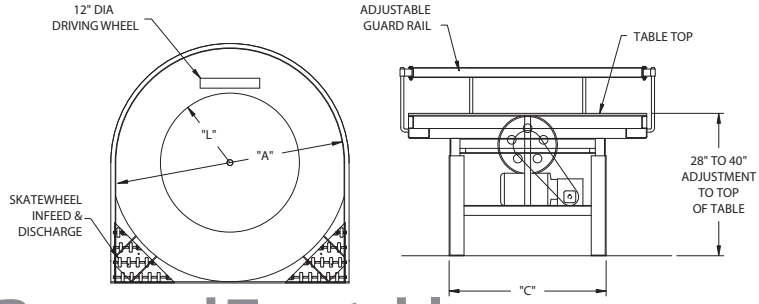
Powered Accessories



Weight (Lbs.)	"A"	"B"	"C"	Speed L of Plate
655	4'	51"	31½"	90 FPM
825	5'	63"		
960	6'	75"		

Powered Turntable

The Powered Turntable is used when two parallel conveyor lines must be close together with a 180° turn at one (or both) ends. The turning radius is held to a minimum, less than would be available with gravity or powered curve sections. Turntable Plow and Guard Rails ensure product safety while negotiating 180° turn. Unit is reversible and all bearings are sealed. Table top mean speed is 90 FPM.

Motor - ½ HP 230/460V-3-60 TE motor.

Capacity - 500 lbs. total distributed load - maximum unit load - 150 lbs.

Adjustment - 28" to 40" adjustable top of table.

Optional Powered Faced Plow - Rotates with turntable ensuring proper product movement for products that need the extra help negotiating the 180° turn.

251CRR - Powered Turntable

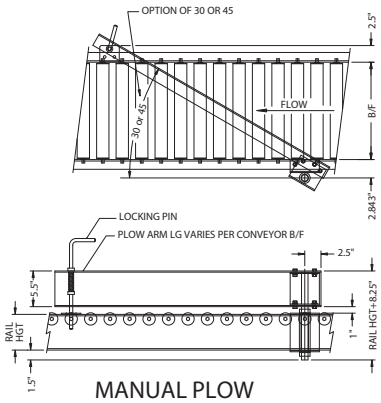
Motor - ¾ HP 230/460-3-60 TE motor.

Capacity - Model 251CRR chain driven live roller mounted to the top of the table, designed for handling up to 4,000 lb. pallets

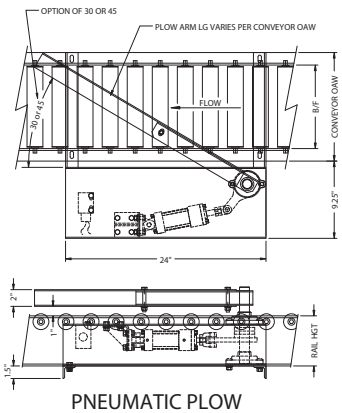
Normal Operation - 90 degree or 180 degree indexing

Turntable - Motor driven.

Floor Supports - Heavy duty supports, with minimum elevation of 20" to top of roller



MANUAL PLOW



PNEUMATIC PLOW

Plows - Manual and Pneumatic

MANUAL AND PNEUMATIC

Plow Arm - 5½" x 2" x 7 gauge

Plow Angle - 30° or 45°

PNEUMATIC ONLY

Air Cylinder - 2" bore double acting 2" stroke for 30° 3" stroke for 45°

Air Requirements - Minimum pressure 60 PSI - max. 100 PSI

Valve - Single solenoid 4 way valve, ¼" NPT valve ports. Electrical Requirements: 120V, single phase, 60 Hertz, current draw .07 amps, or 24VDC.

Powered Face Pnuematic - Available - contact factory.

Powered Accessories

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Air Operated Chain Transfer

STANDARD SPECIFICATIONS

Capacity - 2,000 lbs. unit load. (Higher capacities available.)

Chain - Two strands of #60 high single pitch straight side bar roller chain; min. 10" chain centers.

Mounting - Designed to install in standard "251CRR" frames.

Speed - 30 FPM constant.

Cycles - Up to 4 cycles per minute.

Air Requirements - Min. pressure 60 PSI, max. pressure 125 PSI. Free air consumption @ 60 PSI .035 cu. ft. per cycle.

Electrical requirements – 120V, single phase, 60 Hz. Current draw - .07 amps, or 24VDC.

Motor - ¾ HP 230/460-3-60 TEFC motor.

Electrical Controls - None furnished as standard.

INSTALLATION NOTE: To eliminate contaminants in air supply line, a filter regulator, (FR) should be installed prior to valve.

Auto-Sort Air Operated Wheel Diverter

STANDARD SPECIFICATIONS

Capacity - 75 lbs. max. package weight.

Package Size - Min. 6" wide x 9" long, max. 25" wide x 36" long.

Cycles - Up to 40 times per minute.

Speeds - Wheel speed is function of (3 times) conveyor speed. Normally this will be 180 FPM for the wheels, for a 60 FPM standard conveyor speed.

Mounting - Mounts in "190LS" conveyor. Being modular in design, it can be located almost anywhere in length of conveyor. Specify right hand or left hand operation.

Diverting Wheels - Consists of a double row of 3" diameter wheels spaced proportionately across conveyor width. Driven by high capacity poly belts by it's own drive. May also be slave driven- consult factory.

Supports - Minimum elevation 21". Specify height conveyor will be installed.

Air Cylinder - 1½" bore x 3" stroke double acting.

Air Requirements - Min. pressure 60 PSI, maximum 125 PSI. Free air consumption @ 60 PSI - .018 cu. ft. per cycle.

Valve - Double solenoid 4 way valve. ⅛" NPT valve ports.

Electrical requirements -120V, single phase, 60 Hertz, current draw .07 amps, or 24VDC.

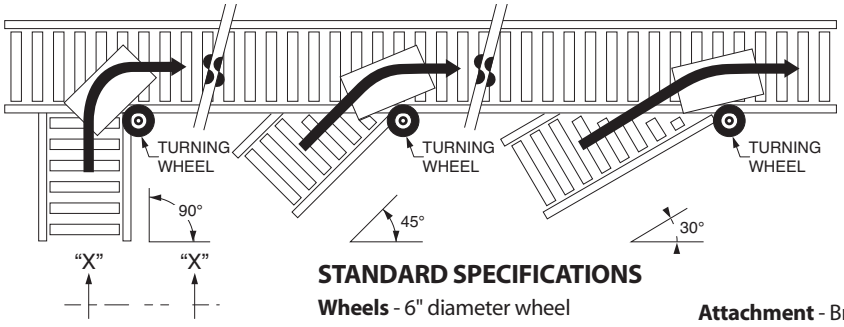
Motor - ½ HP 230/460-3-60 TE motor.

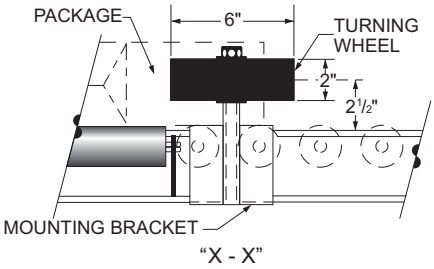
Speed Reducer - Heavy duty worm gear, C-Face.

Electrical Controls - Not furnished as standard equipment.

INSTALLATION NOTE: To eliminate contaminants in air supply line, a filter regulator, (FR) should be installed prior to valve.

Turning Wheel





STANDARD SPECIFICATIONS

Wheels - 6" diameter wheel

Shaft - ⅝" diameter

Attachment - Brackets for attaching to all conveyors, specify model.

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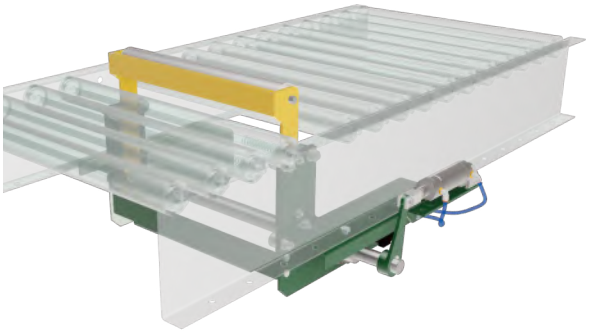
Powered Accessories

Air Operated Blade/Roller Stop



Air Operated Stops are used where automatic line control is required such as assembly work stations, shipping areas, etc. Can be mounted to underside of models 138SR, 190SR, 20SR, 190CAP, 138CAP, 190ZPA.

STANDARD SPECIFICATIONS

Capacity - Blade -150 lbs., 1⅜" roller - 50 lbs., 1.9" diameter roller -150 lbs. All are live load capacities @ 60 FPM.

Bearings - High capacity (2) bolt flange bearings.

Stop - 1⅜" diameter x 18 gauge unplated steel roller for 1⅜" conveyors. 1.9" diameter x 16 gauge galvanized steel roller for 1.9" x 2.0" conveyors.

Blade - ¼" steel plate.

Position - Supplied normally down. Can be supplied normally up- specify.

Air Cylinder - 1½" bore x 2" stroke double acting air cylinder to raise or lower stop.

Air Requirements - Minimum pressure 60 PSI, maximum 100 PSI. Free air consumption @ 60 PSI - .014 cu. ft. per cycle, @ 100 PSI - .022 cu.ft.

Valve - Single solenoid 4 way valve, spring return, ⅛" NPT valve ports.

Electrical requirements - 120V, single phase, 60 Hertz. Current draw - .068 amps, or 24VDC.

INSTALLATION NOTE: To eliminate contaminants in air supply line, a filter regulator (FR) should be installed prior to valve.

Hand Operated Blade/Roller Stop

Hand Operated Stops are used where manual line control is required such as assembly work stations, shipping areas, etc. Can be mounted to underside of Models 138SR, 190SR, 20SR, 190CAP, 138CAP and 190ZPA.

STANDARD SPECIFICATIONS

Capacity - Blade -150 lbs., 1⅜" diameter roller - 50 lbs., 1.9" diameter roller -150 lbs. All are live load capacities @ 60 FPM.

Bearings - High capacity (2) bolt flange bearings.

Operation - Hand operated lever to raise or lower stop can be used in normally up or down positions.

Blade - 7 gauge formed angle 1" x 1½" for 1⅜" conveyors - 1½" for 1.9" and 2.0" conveyors.

Roller - 1⅜" diameter x 18 gauge galvanized steel roller for 1⅜" conveyors. 1.9" diameter x 16 gauge galvanized steel roller for 1.9" and 2.0" conveyors.

Stroke - 2" above rollers.

Foot Operated Blade/Roller Stop

Foot Operated Stops are used where "hands free" manual line control is required such as assembly work stations, shipping areas, etc. Can be mounted to underside of models 138SR, 190SR, 20SR, 190CAP, 138CAP and 190ZPA.

STANDARD SPECIFICATIONS

Capacity - Blade - 75 lbs., 1⅜" diameter roller - 50 lbs., 1.9" diameter roller - 150 lbs. All are live load capacities @ 60 FPM

Operation - Foot operated lever to lower stop. Spring return to up position.

Stop - Blade - ¼" steel plate - roller 1⅜" diameter x 18 gauge galvanized steel roller for 1⅜" conveyors. 1.9" diameter x 16 gauge galvanized steel roller for 1.9" and 2.0" conveyors.

Position - Supplied normally up. Can be supplied normally down - specify.

Stroke - 1½" above roller.

Powered Accessories

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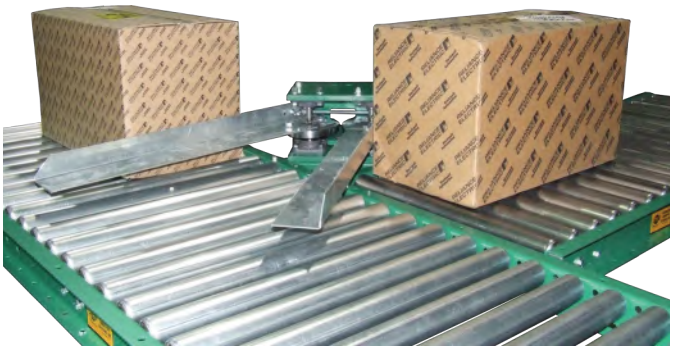
Traffic Controller

Used to control product flow from two conveyor lines into a converging point. It prevents both lines from feeding into the converging point at the same time. When an item contacts one arm it immediately locks out the opposite arm. When the product is clear, the arm returns to its normal position.

Arm Length	Conveyor O.A.W.	Model No.
12"	12"	12-TC
15"	15"	15-TC
18"	18"	18-TC
22"	22"	22-TC
24"	24"	24-TC
28"	28"	28-TC
30"	30"	30-TC
36"	36"	36-TC
42"	42"	42-TC



STANDARD SPECIFICATIONS

Capacity - 75 lbs. impact capacity at 60 FPM; 250 lbs. accumulated capacity.

Minimum Weight - 10 lbs. minimum package weight required to operate arms.

Application - Available for 30°, 45°, 90° or 180° operation - specify.

High Speed Push-Off - "MPO-40"

Used for 90° transfers when package specifications allow product to be pushed from side. Can also be used to divert packages from one lane to another in parallel conveyor lanes.

STANDARD SPECIFICATIONS

Capacity - 75 lbs. maximum package weight.

Pusher Face - 24" long.

Pusher Stroke - 20" to 30"

Cycles - Up to 40 times per minute, up to 24" stroke only, @ 80 PSI

Air Cylinder - 2" bore double acting, automatic return, with jam protection

Air Requirements - Minimum pressure 60 PSI; maximum 125 PSI. Free air consumption @ 60 PSI - .235 cu. ft. per cycle for 20" stroke, .355 cu. ft. for 30" stroke.

Valve - Double solenoid 4 way, automatic return valve, 3/8" NPT valve ports; filter-regulator included.

Electrical requirements - 120V, single phase, 60 Hertz. Current draw, .07 amps.

Electrical Controls - PLC included

Guard Rails

SOLID STEEL GUARDS

Mounts to side of conveyor bed sections. Guard heights above belt: 2.5", 3.5", 4.5", 6.125", 9.125", 10", and 12.5", 12 gauge galvanized or powder painted steel.

ANGLE GUARDS

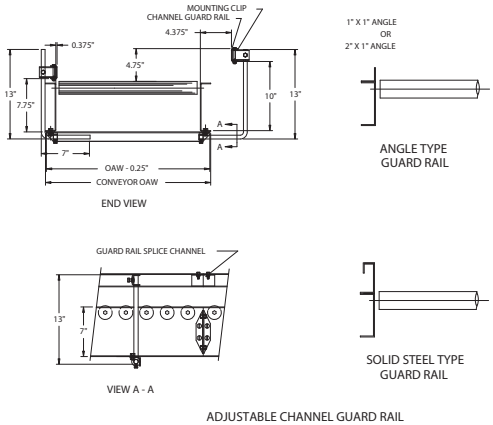
Sizes - 1" x 1" or 2" x 1". Mounts easily to top flange of conveyor frame.

Applications - Available for gravity or powered conveyors with 1" or 1 1/2" wide channel flanges.

Angle guards - 12 gauge galvanized steel.

ADJUSTABLE CHANNEL

Aluminum or steel. Use with powered and gravity conveyors. 5/8" steel rods provide vertical and horizontal adjustment. Available for straight conveyors, curves and spurs. Continuous (system type) or standard flared ends available. (Specify)



Powered Belt Curve - Now available. Contact factory for more information.

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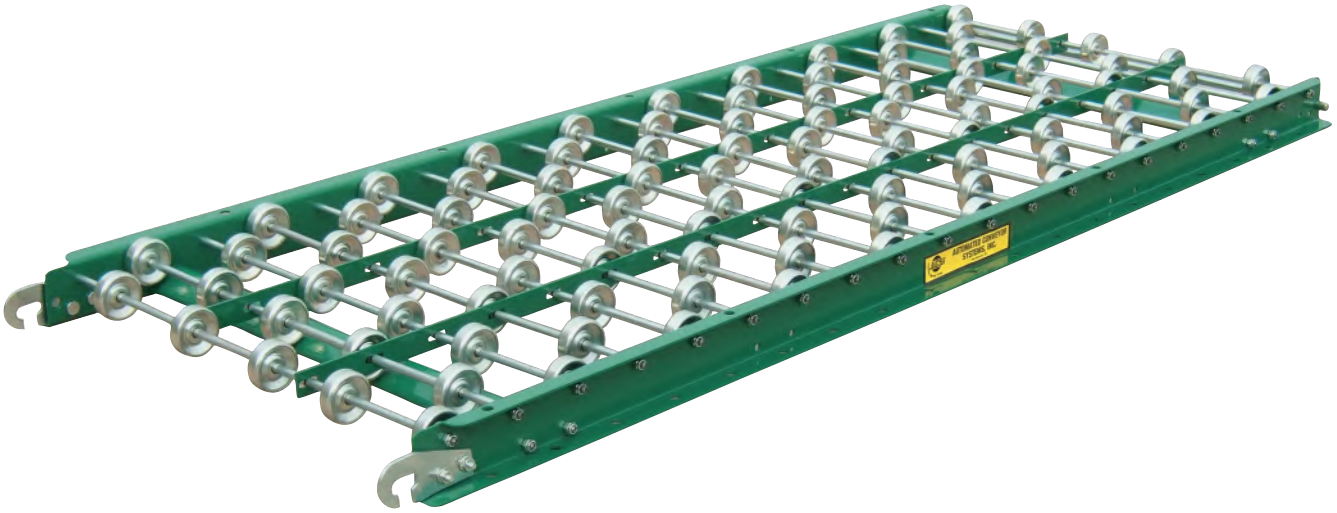
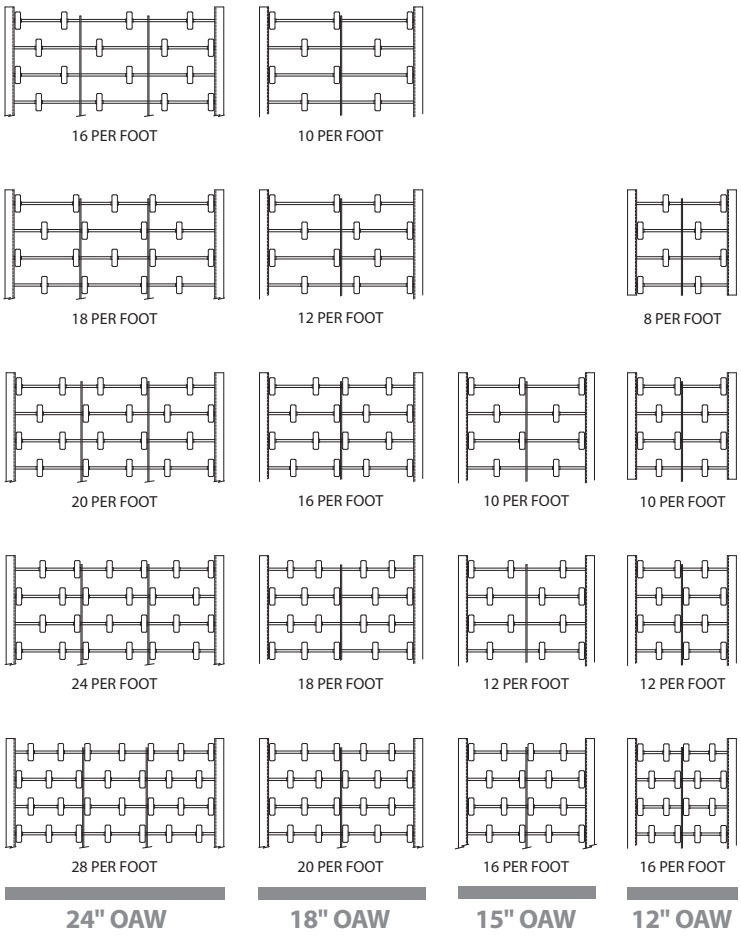
Gravity Skatewheel Conveyor



Typical Wheel Patterns



STANDARD SPECIFICATIONS

Frame - Frames are 2½" X 1" x 12 gauge powder painted formed steel or 2½" x 1" x ⅛" aluminum formed channels. The 12", 15" and 18" wide sections have one ⅛" x 1" axle supports and the 24" wide has two ⅛" x 1" axle supports.

Wheels - Zinc plated steel or aluminum wheels are 1 15/16" diameter x ⅝" face with a steel hardened raceway and a 13/16" wide cone. Each wheel contains (7) ¼" hardened and ground steel balls. The lightly oiled baffled construction is designed to keep dirt out.

Cross Braces - 5 ft. long sections have (2) bolted cross members and 10 ft. long sections have (3) bolted cross members.

Axles - All axles are ¼" diameter cold drawn steel, set on 3" centers and secured with a ¼" - 20 stop nut.

Wheel Capacity - Steel, 50 lbs; aluminum, 45 lbs.

Wheels Per Foot - Standard patterns include 8, 10, 12, 16, 18, 20, 24 and 28 wheels per foot.

Couplings - Each 5' and 10' section is equipped with a hook and rod connector. The slotted hook permits minor lateral movement. No tools are necessary for assembly, just hook together.

Widths - Standard widths are 12", 15", 18" and 24".

Lengths - Standard lengths are 5' and 10'.

Curves - Standard curves are 45° and 90°. The outside radius is 4 feet. Capacity same as straight sections.

Conveyor Capacity - See Capacity Chart.

Gravity Skatewheel Conveyor

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GALVANIZED STEEL STRAIGHT SECTIONS

12" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
12G8-25	8	65	35
12G10-25	10	68	37
12G12-25	12	72	38
12G16-25	16	80	43

15" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
-	-	-	-
15G10-25	10	73	40
15G12-25	12	78	43
15G16-25	16	87	48

18" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
18G10-25	10	72	38
18G12-25	12	77	41
18G16-25	16	87	46
18G18-25	18	92	49
18G20-25	20	98	53

24" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
24G16-25	16	95	52
24G18-25	18	100	55
24G20-25	20	103	57
24G24-25	24	112	62
24G28-25	28	118	65

ALUMINUM STRAIGHT SECTIONS

12" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
12A8-25	8	35	19
12A10-25	10	36	20
12A12-25	12	39	21
12A16-25	16	43	23

15" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
-	-	-	-
15A10-25	10	39	22
15A12-25	12	42	23
15A16-25	16	44	26

18" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
18A10-25	10	40	20
18A12-25	12	41	22
18A16-25	16	46	25
18A18-25	18	49	27
18A20-25	20	52	28

24" OAW			
Model	Wheels Per Foot	Weight 10'	Weight 5'
24A16-25	16	51	28
24A18-25	18	53	29
24A20-25	20	55	30
24A24-25	24	59	32
24A28-25	28	63	34

GALVANIZED STEEL CURVE SECTIONS

12" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
12G90-25	12	72	-
12G45-25	12	-	35

15" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
15G90-25	12	77	-
15G45-25	12	-	40

18" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
18G90-25	18	82	-
18G45-25	18	-	46

24" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
24G90-25	24	112	-
24G45-25	24	-	60

ALUMINUM CURVE SECTIONS

12" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
12A90-25	12	45	-
12A45-25	12	-	23

15" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
15A90-25	12	48	-
15A45-25	12	-	25

18" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
18A90-25	18	51	-
18A45-25	18	-	27

24" OAW			
Model	Wheels Per Foot	Weight 90°	Weight 45°
24A90-25	24	65	-
24A45-25	24	-	34

Frame Capacity Chart

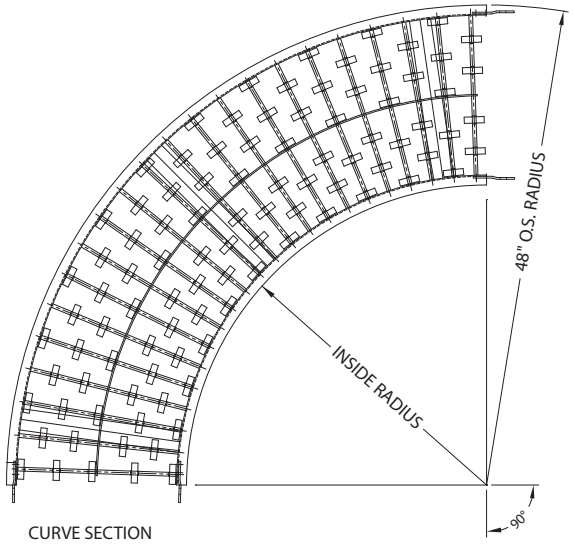
Frame Material	Support Centers	Distributed Live Load Per Foot	Maximum Load Per Wheel
Galvanized Steel	10'	38 lbs.	50 lbs.
	5'	270 lbs.	

NOTE: All capacities are based on distributed loads with a maximum deflection of 7/8" over 10'. Section capacities are subject to the total capacity of all wheels in a section but should not exceed above listed frame capacities.

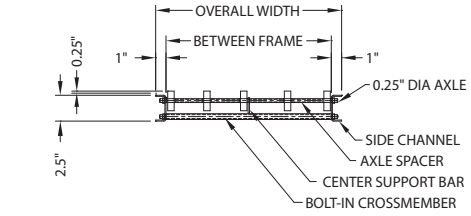
Frame Capacity Chart

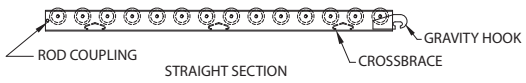
Frame Material	Support Centers	Distributed Live Load Per Foot	Maximum Load Per Wheel
Aluminum	10'	18 lbs.	45 lbs.
	5'	150 lbs.	

NOTE: All capacities are based on distributed loads with a maximum deflection of 1¼" over 10'. Section capacities are subject to the total capacity of all wheels in a section but should not exceed above listed frame capacities.



CURVE SECTION





STRAIGHT SECTION

INSIDE RADIUS

Overall Width	Inside Radius
12"	36"
15"	33"
18"	30"
24"	24"

OUTSIDE RADIUS

Overall Width	Outside Radius
12"	48"
15"	48"
18"	48"
24"	48"

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MODELS "138SR, 138AR, 138SRH, 138SRC, and 138SRCH

Gravity Roller Conveyor

- **Cartons**
- **Tote pans**
- **Assembly lines**
- **Shipping departments**

Steel, Model 138SR and Model 138SRH

STANDARD SPECIFICATIONS

Frames - 2½" deep x 1" flange x 12 gauge powder painted formed steel. Rugged cross members bolted between channels.

Rollers - 1⅜" diameter x 18 gauge galvanized steel tubing with swaged ends for a firm bearing seat. Rollers have spring loaded axle for easy removal or insertion.

Axles - ¼" diameter cold rolled steel for Model 138SR; 5/16" hex for Model 138SRH.

Couplings - Hook and rod.

Widths - 12", 15", 18" and 24" overall width.

Length - 5' and 10' long straight sections.

Capacity - See Frame Capacity Chart.

Aluminum, Model 138AR

STANDARD SPECIFICATIONS

Frames - 2½" deep x 1" flange x ⅛" heat treated aluminum. Rugged aluminum cross members bolted between channels.

Rollers - 1⅜" diameter heat treated aluminum tubing with swaged ends for a firm bearing seat. Rollers have spring loaded axle for easy removal or insertion.

Axles - ¼" diameter cold rolled steel.

Couplings - Hook and rod.

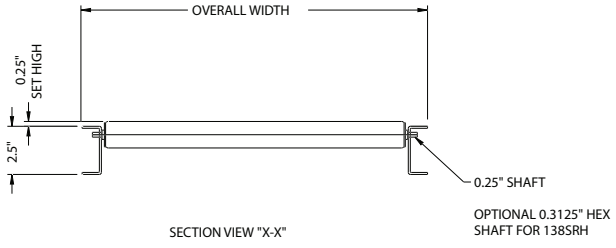
Widths - 12", 15", 18" and 24" overall width.

Length - 5' and 10' long straight sections.

Capacity - See Frame Capacity Chart.

Frame Capacity Chart

Frame Material	Support Centers	Frame Capacity (lbs.) Maximum Distributed Live Load Per Foot	Roller Capacity (lbs.) Maximum Load Per Roller
Galvanized Steel	5'	270	50
	10'	38	
Aluminum	5'	150	35
	10'	18	



SECTION VIEW "X-X"

MODELS "138SR, 138AR, 138SRH, 138SRC & 138SRCH"

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12" OAW				15" OAW				18" OAW				24" OAW			
Model	Roller Centers	Weight 10'	Weight 5'	Model	Roller Centers	Weight 10'	Weight 5'	Model	Roller Centers	Weight 10'	Weight 5'	Model	Roller Centers	Weight 10'	Weight 5'
ALUMINUM (Model 138AR) STRAIGHT SECTIONS - WEIGHTS															
138AR-12-1½	1½"	53	29	138AR-15-1½	1½"	56	33	138AR-18-1½	1½"	70	38	138AR-24-1½	1½"	88	48
138AR-12-3	3"	36	20	138AR-15-3	3"	41	23	138AR-18-3	3"	51	27	138AR-24-3	3"	56	30
138AR-12-4½	4½"	30	17	138AR-15-4½	4½"	32	18	138AR-18-4½	4½"	38	20	138AR-24-4½	4½"	46	25
138AR-12-6	6"	27	15	138AR-15-6	6"	29	16	138AR-18-6	6"	33	18	138AR-24-6	6"	41	22
138AR-12-9	9"	24	14	138AR-15-9	9"	26	14	138AR-18-9	9"	30	16	138AR-24-9	9"	36	19
138AR-12-12	12"	23	12	138AR-15-12	12"	24	13	138AR-18-12	12"	27	14	138AR-24-12	12"	33	18
STEEL (Model 138SR) STRAIGHT SECTIONS - WEIGHTS															
138SR-12-1½	1½"	101	55	138SR-15-1½	1½"	122	62	138SR-18-1½	1½"	135	72	138SR-24-1½	1½"	168	91
138SR-12-3	3"	68	37	138SR-15-3	3"	78	42	138SR-18-3	3"	97	47	138SR-24-3	3"	108	58
138SR-12-4½	4½"	58	32	138SR-15-4½	4½"	61	33	138SR-18-4½	4½"	73	40	138SR-24-4½	4½"	88	47
138SR-12-6	6"	52	29	138SR-15-6	6"	55	30	138SR-18-6	6"	63	32	138SR-24-6	6"	78	42
138SR-12-9	9"	47	26	138SR-15-9	9"	50	27	138SR-18-9	9"	57	29	138SR-24-9	9"	69	37
138SR-12-12	12"	44	24	138SR-15-12	12"	46	26	138SR-18-12	12"	52	27	138SR-24-12	12"	63	34
STEEL (Model 138SRH) STRAIGHT SECTIONS - WEIGHTS															
138SRH-12-1½	1½"	111	61	138SRH-15-1½	1½"	134	68	138SRH-18-1½	1½"	148	79	138SRH-24-1½	1½"	184	100
138SRH-12-3	3"	75	41	138SRH-15-3	3"	86	46	138SRH-18-3	3"	106	51	138SRH-24-3	3"	118	64
138SRH-12-4½	4½"	64	35	138SRH-15-4½	4½"	67	36	138SRH-18-4½	4½"	80	44	138SRH-24-4½	4½"	97	52
138SRH-12-6	6"	57	32	138SRH-15-6	6"	60	33	138SRH-18-6	6"	69	35	138SRH-24-6	6"	85	46
138SRH-12-9	9"	52	28	138SRH-15-9	9"	55	30	138SRH-18-9	9"	62	32	138SRH-24-9	9"	76	40
138SRH-12-12	12"	48	26	138SRH-15-12	12"	50	28	138SRH-18-12	12"	57	29	138SRH-24-12	12"	69	37

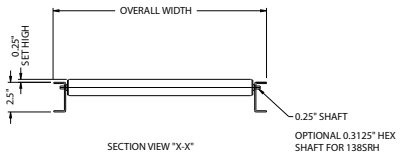
WEIGHTS - CURVE SECTION

12" OAW - 3'0" O/R*			15" OAW - 3'3" O/R*			18" OAW - 3'6" O/R*			24" OAW - 4'0" O/R*		
Model	Weight 90°	Weight 45°	Model	Weight 90°	Weight 45°	Model	Weight 90°	Weight 45°	Model	Weight 90°	Weight 45°
ALUMINUM (Model 138ARC) CURVED SECTIONS - WEIGHTS											
138ARC-12-90	28	–	138ARC-15-90	31	–	138ARC-18-90	35	–	138ARC-24-90	50	–
138ARC-12-45	–	12	138ARC-15-45	–	17	138ARC-18-45	–	19	138ARC-24-45	–	26
STEEL (Model 138SRC) CURVED SECTIONS - WEIGHTS											
138SRC-12-90	70	–	138SRC-15-90	75	–	138SRC-18-90	80	–	138SRC-24-90	141	–
138SRC-12-45	–	35	138SRC-15-45	–	40	138SRC-18-45	–	45	138SRC-24-45	–	66
STEEL (Model 138SRCH) CURVED SECTIONS - WEIGHTS											
138SRCH-12-90	77	–	138SRCH-15-90	82	–	138SRCH-18-90	88	–	138SRCH-24-90	155	–
138SRCH-12-45	–	38	138SRCH-15-45	–	44	138SRCH-18-45	–	49	138SRCH-24-45	–	72

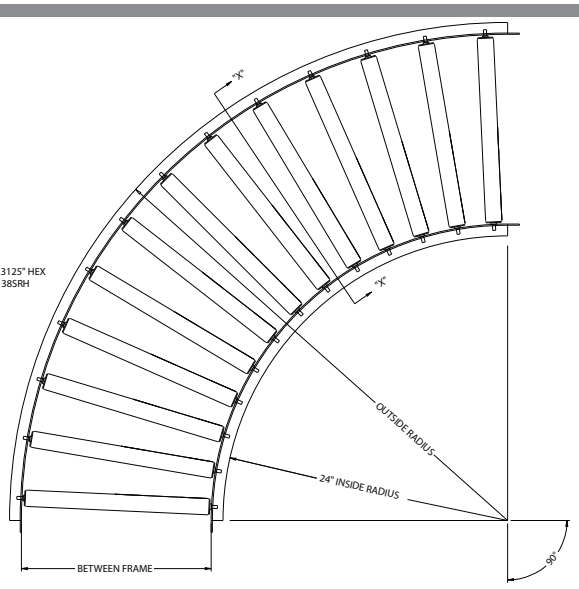
***Outside radius**

RADIUS CHART	
Overall Width	**Inside Radius**
12"	24"
15"	24"
18"	24"
24"	24"

Note: Double rollers are standard on 24" OAW for 138SRC.



NOTE: DOUBLE ROLLERS ARE STANDARD ON 138SRC 24"OVERALL WIDTH



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3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODELS "190SR, 190SRC, 190HSR and 190HSRC"

Gravity Roller Conveyor

STANDARD SPECIFICATIONS

Frames - 3½" deep x 1½" flange x 10 gauge powder painted formed steel with bolt-in cross members, rollers set ¼" high. Galvanized channels optional.

Rollers - 1.9" diameter x 16 gauge steel tubing with swaged ends to provide a firm bearing seat and rounded ends. Tapered rollers in curve are 2½" to 1 11/16" taper.

Bearings - Labyrinth sealed, lightly oiled.

Axles - 7/16" hex shaft, spring-loaded.

Couplings - Butt type, for bolting sections together.

Widths - From 13" between frames (B/F) and wider in two inch increments up to 27"; also 31", 33", 37" and 39" between rails.

Lengths - 5' and 10' long straight sections.

Capacity - 240 pounds per roller with 1,350 pounds maximum distributed live load over 10 foot length; 3,100 pounds maximum distributed live load over 5 foot length.

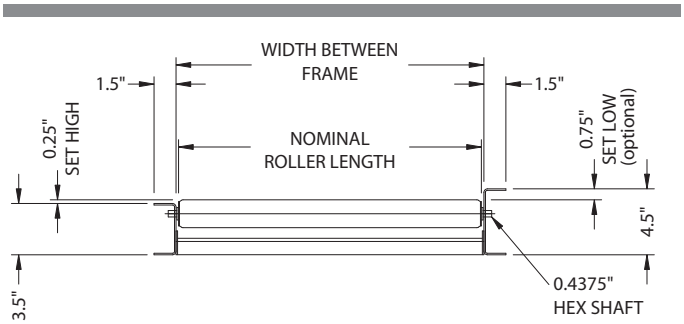
Curve Degree - 45° and 90° with 2' 8½" inside radius for widths up to 27" between frames. 4'0" inside radius for 31", 33", 37", and 39" between frames.

CURVED SECTIONS - WEIGHTS

TAPERED ROLLERS ARE UNPLATED (2 1/2" to 1 11/16" taper)

	Nominal Roller Length (Inches)	Width Between Frames (Inches)	Model No. (For 90°)	(Unplated) Model No. (For 90°)	90° Weight (lbs.)	45° Weight (lbs.)
20 Rollers Per Curve	12	13	190SRC-13-90T	190HSRC-13-90T	94	52
	14	15	190SRC-15-90T	190HSRC-15-90T	126	68
	16	17	190SRC-17-90T	190HSRC-17-90T	137	74
	18	19	190SRC-19-90T	190HSRC-19-90T	152	91
	20	21	190SRC-21-90T	190HSRC-21-90T	167	89
	22	23	190SRC-23-90T	190HSRC-23-90T	178	94
	24	25	190SRC 25-90T	190HSRC-25-90T	204	107
	26	27	190SRC-27-90T	190HSRC-27-90T	235	120
32 Rollers Per Curve	30*	31	190SRC-31-90T	190HSRC-31-90T	338	174
	32*	33	190SRC-33-90T	190HSRC-33-90T	349	180
	36*	37	190SRC-37-90T	190HSRC-37-90T	371	191
	38*	39	190SRC-39-90T	190HSRC 39-90T	410	210
STRAIGHT ROLLERS						
Single Rollers 22 Per 90° Curve	12	13	190SRC-13-90S	190HSRC-13-90S	97	50
	14	15	190SRC-15-90S	190HSRC-15-90S	105	53
	16	17	190SRC-17-90S	190HSRC-17-90S	114	58
	18	19	190SRC-19-90S	190HSRC-19-90S	122	63
	20	21	190SRC-21-90S	190HSRC-21-90S	131	67
Double Rollers 42 Per 90° Curve	22	23	190SRC-23-90D	190HSRC-23-90D	161	82
	24	25	190SRC-25-90D	190HSRC-25-90D	169	85
	26	27	190SRC-27-90D	190HSRC-27-90D	177	89
	30*	31	190SRC-31-90D	190HSRC-31-90D	211	108
	32*	33	190SRC-33-90D	190HSRC-33-90D	220	112
	36*	37	190SRC-37-90D	190HSRC-37-90D	238	120
	38*	39	190SRC-39-90D	190HSRC-39-90D	247	124

*4'0" inside radius. All others 2'8 1/2" inside radius.



STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No. Galvanized	Model No. (Unplated)	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
12"	13"	190SR-13-2 1/4	190HSR-13-2 1/4	2 1/4	202	135
		190SR-13-3	190HSR-13-3	3	167	85
		190SR-13-4 1/2	190HSR-13-4 1/2	4 1/2	137	70
		190SR-13-6	190HSR-13-6	6	119	60
		190SR-13-9	190HSR-13-9	9	104	53
		190SR-13-12	190HSR-13-12	12	94	48
14"	15"	190SR-15-2 1/4	190HSR-15-2 1/4	2 1/4	219	145
		190SR-15-3	190HSR-15-3	3	180	91
		190SR-15-4 1/2	190HSR-15-4 1/2	4 1/2	145	74
		190SR-15-6	190HSR-15-6	6	125	64
		190SR-15-9	190HSR-15-9	9	108	55
		190SR-15-12	190HSR-15-12	12	97	50
16"	17"	190SR-17-2 1/4	190HSR-17-2 1/4	2 1/4	237	155
		190SR-17-3	190HSR-17-3	3	192	97
		190SR-17-4 1/2	190HSR 17-4 1/2	4 1/2	153	78
		190SR-17-6	190HSR-17-6	6	131	66
		190SR-17-9	190HSR-17-9	9	112	57
		190SR-17 12	190HSR-17-12	12	100	51
18"	19"	190SR-19-2 1/4	190HSR-19-2 1/4	2 1/4	255	165
		190SR-19-3	190HSR-19-3	3	204	103
		190SR-19-4 1/2	190HSR-19-4 1/2	4 1/2	161	82
		190SR-19-6	190HSR-19-6	6	137	70
		190SR-19-9	190HSR-19-9	9	117	60
		190SR-19-12	190HSR-19-12	12	103	53
20"	21"	190SR-21-2 1/4	190HSR-21-2 1/4	2 1/4	273	175
		190SR-21-3	190HSR-21-3	3	217	110
		190SR-21-4 1/2	190HSR-21-4 1/2	4 1/2	170	86
		190SR-21-6	190HSR-21-6	6	143	73
		190SR-21-9	190HSR-21-9	9	121	62
		190SR-21-12	190HSR-21-12	12	106	54
22"	23"	190SR-23-2 1/4	190HSR-23-2 1/4	2 1/4	291	185
		190SR-23-3	190HSR-23-3	3	229	116
		190SR-23-4 1/2	190HSR-23-4 1/2	4 1/2	178	90
		190SR-23-6	190HSR-23-6	6	150	76
		190SR-23-9	190HSR-23-9	9	125	64
		190SR-23-12	190HSR-23-12	12	109	56
24"	25"	190SR-25-2 1/4	190HSR-25-2 1/4	2 1/4	309	194
		190SR-25-3	190HSR-25-3	3	241	122
		190SR-25-4 1/2	190HSR-25-4 1/2	4 1/2	186	99
		190SR-25-6	190HSR-25-6	6	156	79
		190SR-25-9	190HSR-25-9	9	129	66
		190SR-25-12	190HSR-25-12	12	112	57
26"	27"	190SR-27-2 1/4	190HSR-27-2 1/4	2 1/4	327	204
		190SR-27-3	190HSR-27-3	3	254	128
		190SR-27-4 1/2	190HSR-27-4 1/2	4 1/2	194	98
		190SR-27-6	190HSR-27-6	6	162	82
		190SR-27-9	190HSR-27-9	9	134	68
		190SR-27-12	190HSR-27-12	12	I15	58
30"	31"	190SR-31-2 1/4	190HSR-31-2 1/4	2 1/4	363	224
		190SR-31-3	190HSR-31-3	3	279	141
		190SR-31-4 1/2	190HSR-31-4 1/2	4 1/2	211	107
		190SR-31-6	190HSR-31-6	6	174	88
		190SR-31-9	190HSR-31-9	9	142	72
		190SR-31-12	190HSR-31-12	12	122	62
32"	33"	190SR-33-2 1/4	190HSR-33-2 1/4	2 1/4	381	234
		190SR-33-3	190HSR-33-3	3	291	147
		190SR-33-4 1/2	190HSR-33-4 1/2	4 1/2	180	111
		190SR-33-6	190HSR-33-6	6	147	91
		190SR-33-9	190HSR-33-9	9	125	75
		190SR-33-12	190HSR-33-12	12	128	64
36"	37"	190SR-37-2 1/4	190HSR-37-2 1/4	2 1/4	417	253
		190SR-37-3	190HSR-37-3	3	316	159
		190SR-37-4 1/2	190HSR-37-4 1/2	4 1/2	236	119
		190SR-37-6	190HSR-37-6	6	193	96
		190SR-37-9	190HSR-37-9	9	155	79
		190SR-37-12	190HSR-37-12	12	131	67
38"	39"	190SR-39-2 1/4	190HSR-39-2 1/4	2 1/4	435	263
		190SR-39-3	190HSR-39-3	3	328	165
		190SR-39-4 1/2	190HSR-39-4 1/2	4 1/2	244	123
		190SR-39-6	190HSR-39-6	6	199	101
		190SR-39-9	190HSR-39-9	9	159	81
		190SR-39-12	190HSR-39-12	12	134	68

MODELS "20SR & 20SRC"

Gravity Roller Conveyor

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

STANDARD SPECIFICATIONS

Frames - 3½" deep x 1½" flange x 10 gauge powder painted formed steel with bolt-in cross members, rollers set ¼" high.

Rollers - 2" diameter x 12 gauge unplated steel tubing with swaged ends to provide a firm bearing seat and rounded ends. Tapered rollers in curve are 2½" to 1 11/16" taper, unplated.

Bearings - Labyrinth sealed, lightly oiled.

Axles - 7/16" hex shaft, spring-loaded.

Couplings - Butt type, for bolting sections together.

Widths - From 13" between frames (B/F) and wider in two inch increments up to 27"; also 31", 33", 37" and 39" between rails.

Lengths - 10' and 5' long straight sections.

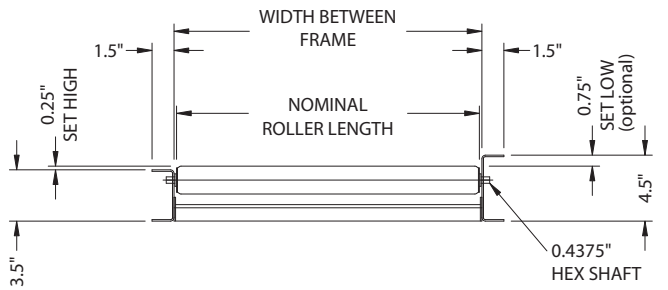
Capacity - 300 pounds per roller with 1,350 pounds maximum distributed live load over 10 foot length; 3,100 pounds maximum distributed live load over 5 foot length.

Curve Degree - 45° and 90° with 2' 8½" inside radius for widths up to 27" between frames. 4'0" inside radius for 31", 33", 37", and 39" between frames.

CURVED SECTIONS - WEIGHTS

	Nominal Roller Length (Inches)	Width Between Frames (Inches)	Model No.	90° Weight (lbs.)	45° Weight (lbs.)
TAPERED ROLLERS					
20 Rollers Per Curve	12	13	20SRC-13-90T	104	58
	14	15	20SRC-15-90T	115	63
	16	17	20SRC-17-90T	126	68
	18	19	20SRC-19-90T	139	75
	20	21	20SRC-21-90T	171	91
	22	23	20SRC-23-90T	182	96
	24	25	20SRC-25-90T	208	109
	26	27	20SRC-27-90T	234	122
32 Rollers Per Curve	30*	31	20SRC-31-90T	348	179
	32*	33	20SRC-33-90T	359	185
	36*	37	20SRC-37-90T	381	197
	38*	39	20SRC-39-90T	420	215
STRAIGHT ROLLERS					
Single Rollers 22 Per 90° Curve	12	13	20SRC-13-90S	119	61
	14	15	20SRC-15-90S	131	68
	16	17	20SRC-17-90S	144	73
	18	19	20SRC-19-90S	155	80
	20	21	20SRC-21-90S	166	84
Double Rollers 42 Per 90° Curve	22	23	20SRC-23-90D	199	101
	24	25	20SRC-25-90D	211	106
	26	27	20SRC-27-90D	223	112
	30*	31	20SRC-31-90D	262	134
	32*	33	20SRC-33-90D	275	140
	36*	37	20SRC-37-90D	301	152
	38*	39	20SRC-39-90D	314	158

*4'0" inside radius. All others 2' 8½" inside radius.



STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No.	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
12"	13"	20SR-13-2¼	2¼	253	162
		20SR-13-3	3	207	105
		20SR-13-4½	4½	164	84
		20SR-13-6	6	139	70
		20SR-13-9	9	118	60
		20SR-13-12	12	104	53
14"	15"	20SR-15-2¼	2¼	279	176
		20SR-15-3	3	227	115
		20SR-15-4½	4½	177	85
		20SR-15-6	6	148	76
		20SR-15-9	9	124	63
		20SR-15-12	12	109	56
16"	17"	20SR-17-2¼	2¼	305	190
		20SR-17-3	3	245	124
		20SR-17-4½	4½	189	96
		20SR-17 6	6	158	80
		20SR-17-9	9	131	67
		20SR-17-12	12	113	58
18"	19"	20SR-19-2¼	2¼	331	204
		20SR-19-3	3	284	133
		20SR-19-4½	4½	202	103
		20SR-19-6	6	167	85
		20SR-19-9	9	138	71
		20SR-19-12	12	118	61
20"	21"	20SR-21-2¼	2¼	357	218
		20SR-21-3	3	284	144
		20SR-21-4½	4½	215	109
		20SR 21-6	6	176	90
		20SR-21-9	9	144	74
		20SR-21-12	12	123	63
22"	23"	20SR-23-2¼	2¼	384	232
		20SR-23-3	3	302	153
		20SR-23-4½	4½	227	115
		20SR-23-6	6	187	95
		20SR-23-9	9	151	77
		20SR-23-12	12	127	65
24"	25"	20SR-25-2¼	2¼	410	246
		20SR-25-3	3	321	162
		20SR 25-4½	4½	240	126
		20SR-25-6	6	196	99
		20SR-25-9	9	157	80
		20SR-25-12	12	132	67
26"	27"	20SR-27-2¼	2¼	436	260
		20SR-27-3	3	341	172
		20SR-27-4½	4½	253	128
		20SR-27-6	6	205	104
		20SR-27-9	9	164	83
		20SR-27-12	12	137	69
30"	31"	20SR-31-2¼	2¼	488	288
		20SR-31-3	3	379	191
		20SR-31-4½	4½	279	141
		20SR-31-6	6	224	113
		20SR-31-9	9	117	90
		20SR-31-12	12	147	75
32"	33"	20SR-33-2¼	2¼	514	302
		20SR-33-3	3	389	201
		20SR-33-4½	4½	291	147
		20SR 33-6	6	233	118
		20SR-33-9	9	184	94
		20SR-33-12	12	152	78
36"	37"	20SR-37-2¼	2¼	566	329
		20SR-37-3	3	436	219
		20SR-37-4½	4½	350	175
		20SR-37-6	6	317	160
		20SR-37-9	9	253	128
		20SR-37-12	12	161	82
38"	39"	20SR-39-2¼	2¼	592	343
		20SR-39-3	3	455	229
		20SR-39-4½	4½	330	166
		20SR-39-6	6	262	133
		20SR-39-9	9	203	103
		20SR-39-12	12	166	84

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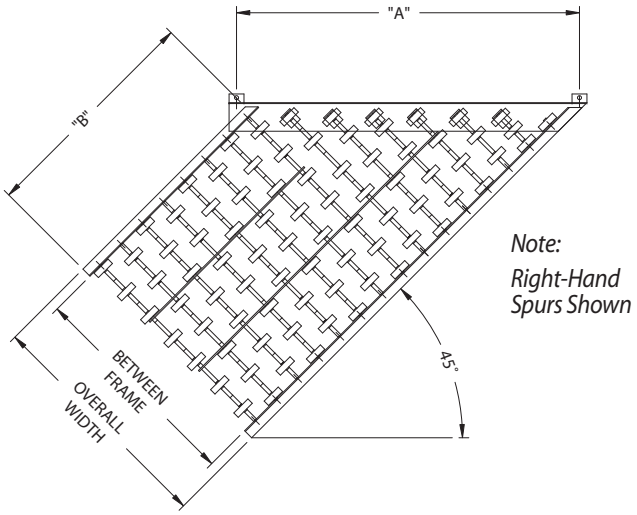
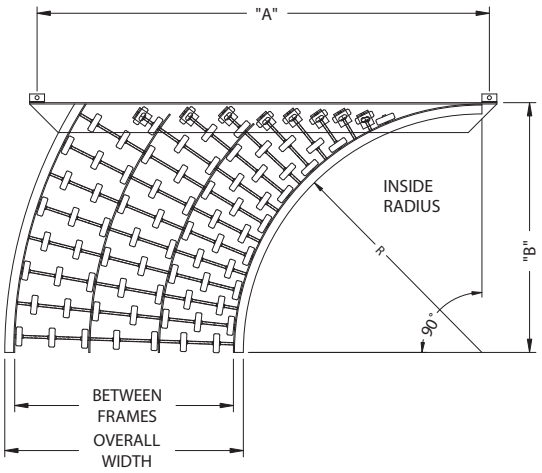
MODEL "GS"

Gravity Skatewheel Spur Conveyor



Note:
Right-Hand Spurs Shown



SPECIFICATIONS

Widths - 12", 15", 18" and 24"
Bolt in cross members
Couplings - Bar or hooks on one end
Right and left hand units
Spurs - 45° and 90°

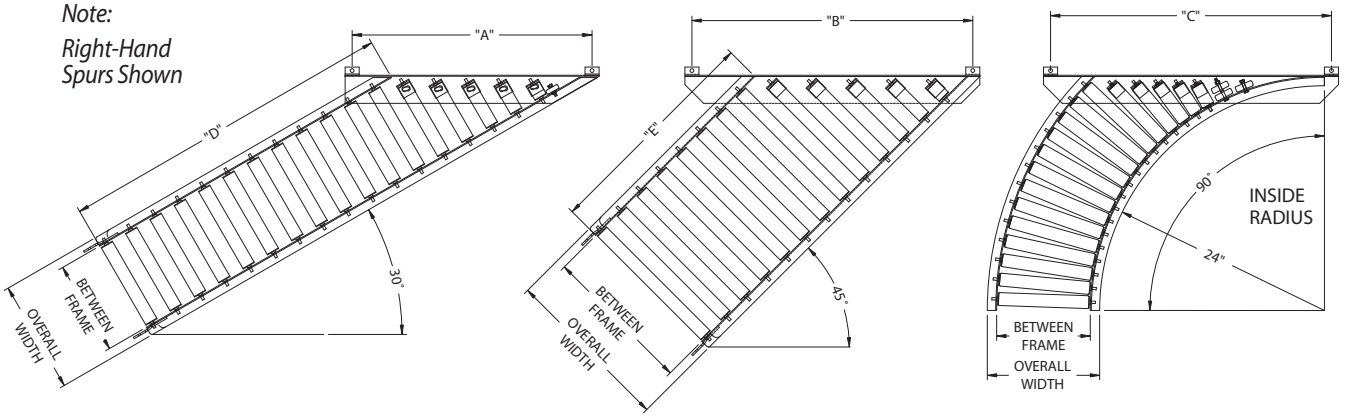
Overall Frame Width	Model No.	45° SPUR "A"	45° SPUR WPF	45° SPUR "B" Weights (lbs.) 2'	3'	5'	Model No.	90° SPUR "A"	"B"	"R"	WPF	Weights (lbs.)
12"	12GS-45-25	21"	16	31	39	56	12GS-90-25	39"	37½"	36"	16	67
15"	15GS-45-25	30"	16	34	43	62	15GS-90-25	39"	34½"	33"	16	72
18"	18GS-45-25	30"	20	38	47	66	18GS-90-25	39"	31½"	30"	20	77
24"	24GS-45-25	39"	28	44	57	83	24GS-90-25	51"	37½"	24"	28	107

NOTE: Same per foot capacities as straight sections shown on page 83.

MODEL "138SRS"

Gravity Roller Spur Conveyor

Note:
Right-Hand Spurs Shown



SPECIFICATIONS

Widths - 12", 15", 18" and 24"
Spurs - 30°, 45° and 90°
Couplings - Bar or hooks on one end
Right and left hand units
Bolt in cross members
Rollers - 1⅜" diameter x 18 gauge galvanized rollers

Overall Frame Width	Model No.	30° SPUR "A"	30° SPUR "D" Weights (lbs.) 2'	3'	5'	Model No.	45° SPUR "B"	45° SPUR "E" Weights (lbs.) 2'	3'	5'	Model No.	90° SPUR "C"	Weights (lbs.)
12"	138SRS-12-30	30"	35	43	64	138SRS-12-45	21"	31	39	60	138SRS-12-90	30"	29
15"	138SRS-15-30	39"	42	54	79	138SRS-15-45	30"	38	50	75	138SRS-15-90	39"	36
18"	138SRS-18-30	39"	48	62	91	138SRS-18-45	30"	44	58	87	138SRS-18-90	39"	42
24"	138SRS-24-30	51"	59	77	113	138SRS-24-45	39"	55	73	109	138SRS-24-90	51"	53

NOTE: Same per foot capacities as straight sections shown on page 84.

MODEL "190SRS, 190HSRS and 20SRS"

Gravity Skatewheel Spur Conveyor

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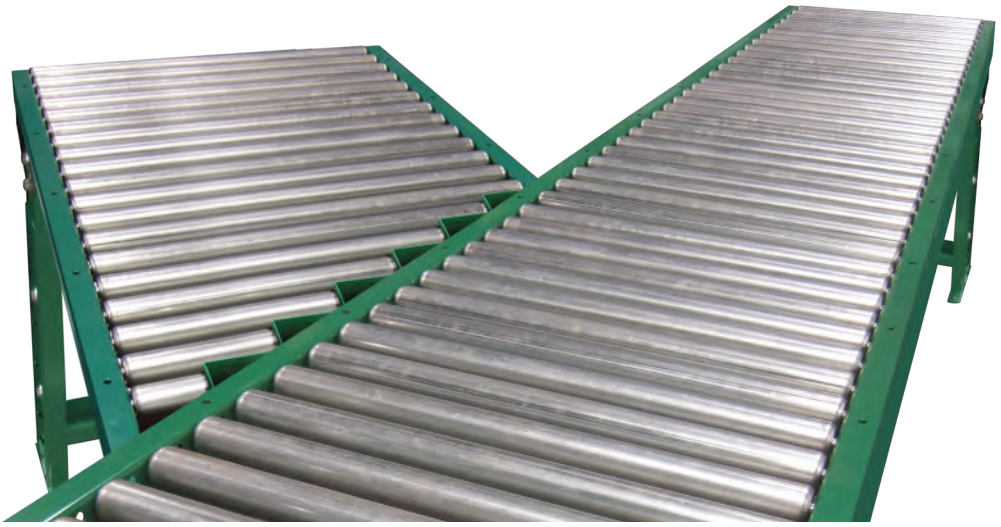


SPECIFICATIONS

Spurs - 30°, 45° and 90° models available

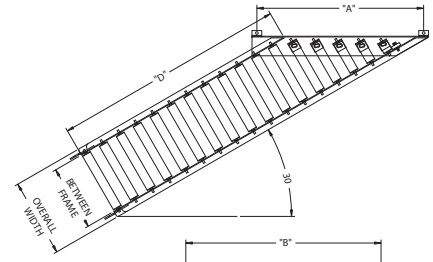
Right or left hand units

Couplings - Butt couplings one end

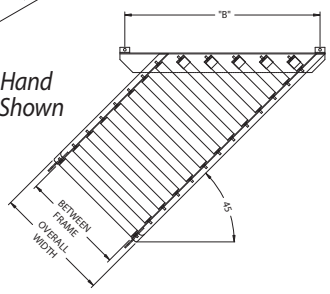
12 available Widths

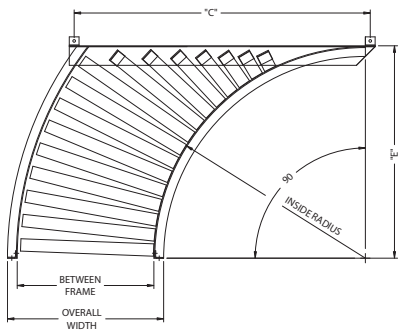
Set high or low - set high is standard

Rollers - 1.9" diameter x 16 gauge unplated or galvanized steel; 2" diameter x 12 gauge unplated



Note:
Right-Hand Spurs Shown





NOTE: Same per foot capacities as straight sections shown on pages 86 and 87.

Between Rail Width	Nominal Roller Length	30° SPUR: Model No. 1.9" Roller	1.9" Roller	2" Roller	"A"	Weights (lbs.) "D" 1.9" Roller 2'	3'	5'	"D" 2" Roller 2'	3'	5'
13"	12"	190SRS-13-30	190HSRS-13-30	20SRS-13-30	42"	56	73	107	68	89	131
15"	14"	190SRS-15-30	190HSRS-15-30	20SRS-15-30	42"	59	77	113	74	97	143
17"	16"	190SRS-17-30	190HSRS-17 30	20SRS-17-30	42"	62	81	119	77	101	149
19"	18"	190SRS-19-30	190HSRS-19-30	20SRS-19-30	54"	65	85	125	83	IO9	161
21"	20"	190SRS-21-30	190HSRS-21-30	20SRS-21-30	54"	71	93	137	89	117	173
23"	22"	190SRS-23-30	190HSRS-23-30	20SRS-23-30	54"	74	97	143	95	125	185
25"	24"	190SRS-25-30	190HSRS-25-30	20SRS-25-30	66"	77	101	149	101	133	197
27"	26"	190SRS-27-30	190HSRS-27-30	20SRS-27-30	66"	80	105	155	107	141	209
31"	30"	190SRS-31-30	190HSRS-31-30	20SRS-31-30	78"	89	117	173	119	157	223
33"	32"	190SRS-33-30	190HSRS-33-30	20SRS-33-30	78"	92	121	179	131	173	257
37"	36"	190SRS-37-30	190HSRS-37-30	20SRS-37-30	87"	95	125	185	134	177	263
39"	38"	190SRS-39-30	190HSRS-39-30	20SRS-39-30	87"	104	137	203	139	180	275
		45° SPUR:			"B"						
13"	12"	190SRS-13-45	190HSRS-13-45	20SRS-13-45	33"	51	67	100	63	83	124
15"	14"	190SRS-15-45	190HSRS-15-45	20SRS-15-45	33"	54	71	112	72	95	142
17"	16"	190SRS-17-45	190HSRS-17-45	20SRS-17-45	33"	58	75	112	72	95	142
19"	18"	190SRS-19-45	190HSRS-19-45	20SRS-19-45	42"	60	79	119	78	103	154
21"	20"	190SRS-21-45	190HSRS-21-45	20SRS-21-45	42"	66	88	130	84	111	166
23"	22"	190SRS-23-45	190HSRS-23-45	20SRS-23-45	42"	69	91	136	90	119	179
25"	24"	190SRS-25-45	190HSRS-25-45	20SRS-25-45	48"	72	95	142	96	127	190
27"	26"	190SRS-27-45	190HSRS-27-45	20SRS-27-45	48"	75	99	148	102	135	202
31"	30"	190SRS-31-45	190HSRS-31-45	20SRS-31-45	54"	84	111	166	114	151	216
33"	32"	190SRS-33-45	190HSRS-33-45	20SRS-33-45	54"	84	115	172	126	166	250
37"	36"	190SRS-37-45	190HSRS-37-45	20SRS-37-45	66"	90	119	178	129	171	256
39"	38"	190SRS-39-45	190HSRS-39-45	20SRS-39-45	66"	99	131	196	134	174	269

90° SPUR:

	Between Rail Width	Nominal Roller Length	Model No. 1.9" Roller	1.9" Roller	2" Roller	"C"	"E"	Inside Radius	Weights (lbs.)
SINGLE ROLLER	13"	12"	190SRS-13-90	190HSRS-13-90	20SRS-13-90	42"			92
	15"	14"	190SRS-15-90	190HSRS-15-90	20SRS-15-90	42"			100
	17"	16"	190SRS-17-90	190HSRS-17-90	20SRS-17-90	48"			109
	19"	18"	190SRS-19-90	190HSRS-19-90	20SRS-19-90	48"	33"	32½"	117
	21"	20"	190SRS-21-90	190HSRS-21-90	20SRS-21-90	48"			126
DOUBLE ROLLER	23"	22"	190SRS-23-90	190HSRS-23-90	20SRS-23-90	54"			156
	25"	24"	190SRS-25-90	190HSRS-25-90	20SRS-25-90	54"			164
	27"	26"	190SRS-27-90	190HSRS-27-90	20SRS-27-90	54"			172
	31"*	30"	190SRS-31-90	190HSRS-31-90	20SRS-31-90	66"			206
	33"*	32"	190SRS-33-90	190HSRS-33-90	20SRS-33-90	78"	48½"	48"	215
	37"*	36"	190SRS-37-90	190HSRS-37-90	20SRS-37-90	78"			233
	39"*	38"	190SRS-39-90	190HSRS-39-90	20SRS-39-90	78"			242

*4'0" inside radius. All others 2'8½" inside radius.

CSE
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MODEL "199SR & 199SRC"

Gravity Roller Conveyor

STANDARD SPECIFICATIONS

Frames - 3½" deep x 1½" x 10 gauge powder painted formed steel; powder painted bolt-in cross members; rollers set ¼" high.

Rollers - 1.9" diameter x 9 gauge steel tubing. 2½" to 1 11/16" tapered rollers available for curves.

Bearings - Labyrinth sealed and lightly oiled.

Axles - 7/16" hex shaft, spring-loaded.

Couplings - Butt type, for bolting sections together.

Widths - From 13" between frames (B/F) and wider in two inch increments up to 27" between frames. Also 31", 33", 37" and 39" between frames.

Lengths - 10' and 5' straight sections.

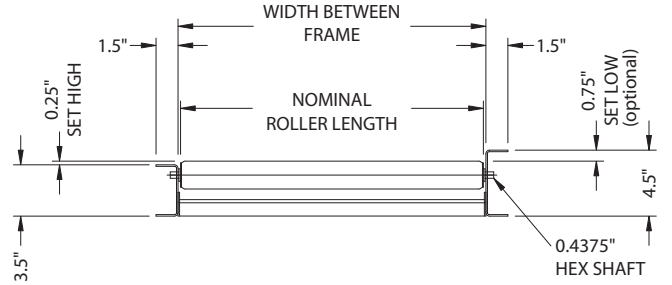
Curve Degree - 45° and 90° with 2' 8½" inside radius for widths up to 27" between frames. 4'0" inside radius for 31", 33", 37", and 39" between frames.

Capacity - 300 pounds per roller with 1,350 pounds maximum distributed live load over 10' length; 3,150 pounds maximum distributed live load over 5' length.

CURVED SECTIONS - WEIGHTS
TAPERED ROLLER CURVE

	Nominal Roller Length (Inches)	Width Between Frames (Inches)	Model No.	90° Weight (lbs.)	45° Weight (lbs.)
20 Rollers Per Curve	12	13	199SRC-13-90T	94	52
	14	15	199SRC-15-90T	126	68
	16	17	199SRC-17-90T	137	74
	18	19	199SRC-19-90T	152	81
	20	21	199SRC-21-90T	167	89
	22	23	199SRC-23-90T	178	94
	24	25	199SRC 25-90T	204	107
	26	27	199SRC-27-90T	230	120
32 Rollers Per Curve	30*	31	199SRC-31-90T	338	174
	32*	33	199SRC-33-90T	349	180
	36*	37	199SRC-37-90T	371	191
	38*	39	199SRC-39-90T	410	210
STRAIGHT ROLLER CURVE					
Single Rollers 22 Per 90° Curve	12	13	199SRC-13-90S	97	50
	14	15	199SRC-15-90S	105	53
	16	17	199SRC-17-90S	114	58
	18	19	199SRC-19-90S	122	63
	20	21	199SRC-21-90S	131	67
Double Rollers 43 Per 90° Curve	22	23	199SRC-23-90D	161	82
	24	25	199SRC-25-90D	169	85
	26	27	199SRC-27-90D	177	89
	30*	31	199SRC-31-90D	211	108
	32*	33	199SRC-33-90D	220	112
	36*	37	199SRC-37-90D	238	120
	38*	39	199SRC-39-90D	247	124

*4'0" inside radius. All others 2' 8½" inside radius.



STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No.	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
12"	13"	199SR-13-2¼	2¼	281	175
		199SR-13-3	3	233	119
		199SR-13-4½	4½	180	92
		199SR-13-6	6	152	78
		199SR-13-9	9	125	65
		199SR-13-12	12	110	57
14"	15"	199SR-15-2¼	2¼	311	192
		199SR-15-3	3	255	130
		199SR-15-4½	4½	194	113
		199SR-15-6	6	163	84
		199SR-15-9	9	132	69
		199SR-15-12	12	116	60
16"	17"	199SR-17-2¼	2¼	342	208
		199SR-17-3	3	276	141
		199SR-17-4½	4½	208	107
		199SR-17-6	6	173	89
		199SR-17-9	9	140	73
		199SR-17 12	12	121	62
18"	19"	199SR-19-2¼	2¼	373	225
		199SR-19-3	3	299	152
		199SR-19-4½	4½	223	114
		199SR-19-6	6	185	95
		199SR-19-9	9	148	78
		199SR-19-12	12	127	66
20"	21"	199SR-21-2¼	2¼	404	242
		199SR-21-3	3	322	164
		199SR-21-4½	4½	238	121
		199SR-21-6	6	196	100
		199SR-21-9	9	155	73
		199SR-21-12	12	132	68
22"	23"	199SR-23-2¼	2¼	435	258
		199SR-23-3	3	344	175
		199SR-23-4½	4½	253	128
		199SR-23-6	6	208	106
		199SR-23-9	9	162	85
		199SR-23-12	12	138	71
24"	25"	199SR-25-2¼	2¼	466	274
		199SR-25-3	3	366	186
		199SR-25-4½	4½	267	136
		199SR-25-6	6	219	111
		199SR-25-9	9	170	89
		199SR-25-12	12	143	74
26"	27"	199SR-27-2¼	2¼	497	291
		199SR-27-3	3	389	196
		199SR-27-4½	4½	282	143
		199SR-27-6	6	230	117
		199SR-27-9	9	178	103
		199SR-27-12	12	149	77
30"	31"	199SR-31-2¼	2¼	559	324
		199SR-31-3	3	434	219
		199SR-31-4½	4½	312	157
		199SR-31-6	6	252	128
		199SR-31-9	9	192	100
		199SR-31-12	12	101	82
32"	33"	199SR-33-2¼	2¼	590	340
		199SR-33-3	3	456	230
		199SR-33-4½	4½	326	166
		199SR-33-6	6	263	133
		199SR-33-9	9	201	105
		199SR-33-12	12	166	86
36"	37"	199SR-37-2¼	2¼	652	373
		199SR-37-3	3	501	252
		199SR-37-4½	4½	356	180
		199SR-37-6	6	286	145
		199SR-37-9	9	215	112
		199SR-37-12	12	177	91
38"	39"	199SR-39-2¼	2¼	683	389
		199SR-39-3	3	523	263
		199SR-39-4½	4½	371	187
		199SR-39-6	6	297	151
		199SR-39-9	9	222	116
		199SR-39-12	12	183	93

MODEL "254SR & 254SRC"

Gravity Roller Conveyor

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

STANDARD SPECIFICATIONS

Frames - 3½" deep x 1½" x 10 gauge powder painted formed steel with bolted cross members. Rollers set ¼" high.

Rollers - 2½" diameter x 14 gauge steel tubing with swaged ends to provide firm bearing seat. 2½" to 1 11/16" tapered rollers available for curves.

Bearings - Labyrinth sealed and lightly oiled.

Axles - 7/16" hex shaft, spring-loaded.

Couplings - Butt type, for bolting sections together.

Widths - From 13" between frames (B/F) and wider in two inch increments up to 27" between frames. Also 31", 33", 37", 39", 45", 51" and 55" between frames.

Lengths - 10' and 5' straight sections.

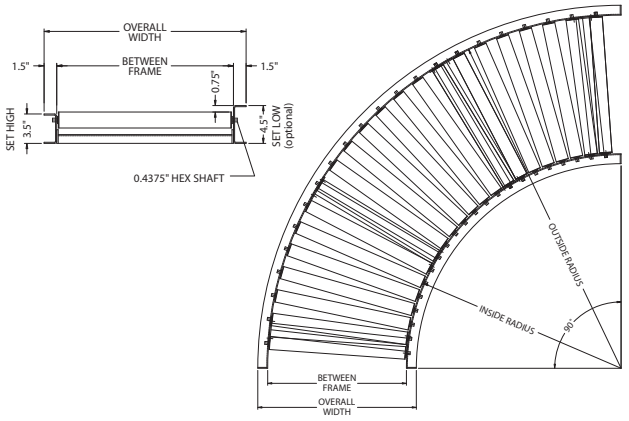
Curve Degree - 45° and 90° with 2' 8½" inside radius for widths up to 27" between frames. 4'0" inside radius for 31", 33", 37", and 39" between frames.

Capacity - 300 pounds per roller with 1,350 pounds distributed live load over 10' length. 3,100 pounds max. distributed live load over 5' length.

CURVED SECTIONS - WEIGHTS

	Nominal Roller Length (Inches)	Width Between Frames (Inches)	Model No.	90° Weight (lbs.)	45° Weight (lbs.)
Single Rollers 18 Per 90° Curve	12	13	254SRC-13-90S	119	61
	14	15	254SRC-15-90S	131	68
	16	17	254SRC-17-90S	144	73
	18	19	254SRC-19-90S	155	80
	20	21	254SRC-21-90S	166	84
Double Rollers 37 Per 90° Curve	22	23	254SRC-23-90D	199	101
	24	25	254SRC 25-90D	211	106
	26	27	254SRC-27-90D	223	112
	30*	31	254SRC-31-90D	262	134
	32*	33	254SRC-33-90D	275	140
	36*	37	254SRC-37-90D	301	152
	38*	39	254SRC-39-90D	314	158
20T Rollers Per Curve	12	13	254SRC-13-90T	104	58
	14	15	254SRC-15-90T	115	63
	16	17	254SRC-17-90T	126	68
	18	19	254SRC-19-90T	139	75
	20	21	254SRC-21-90T	171	91
	22	23	254SRC-23-90T	182	96
	24	25	254SRC-25-90T	208	109
	26	27	254SRC-27-90T	210	110
32T Rollers Per Curve	30*	31	254SRC-31-90T	348	179
	32*	33	254SRC-33-90T	359	185
	36*	37	254SRC-37-90T	381	197
	38*	39	254SRC-39-90T	420	215

*4'0" inside radius. All others 2' 8½" inside radius.



STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No.	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
12"	13"	254SR-13-3	3	230	128
		254SR-13-4½	4½	178	98
		254SR-13-6	6	134	83
		254SR-13-9	9	125	69
		254SR-13-12	12	110	59
14"	15"	254SR-15-3	3	250	137
		254SR-15-4½	4½	190	104
		254SR-15-6	6	160	87
		254SR-15-9	9	131	72
		254SR-15-12	12	114	62
16"	17"	254SR-17-3	3	268	146
		254SR-17-4½	4½	203	110
		254SR-17-6	6	169	92
		254SR-17-9	9	137	78
		254SR-17 12	12	119	64
18"	19"	254SR-19-3	3	287	156
		254SR-19-4½	4½	215	117
		254SR-19-6	6	178	97
		254SR-19-9	9	145	79
		254SR-19-12	12	124	67
20"	21"	254SR-21-3	3	307	166
		254SR-21-4½	4½	228	123
		254SR-21-6	6	178	101
		254SR-21-9	9	151	82
		254SR-21-12	12	128	69
22"	23"	254SR-23-3	3	325	175
		254SR-23-4½	4½	241	129
		254SR-23-6	6	198	106
		254SR-23-9	9	157	85
		254SR-23-12	12	133	72
24"	25"	254SR-25-3	3	344	184
		254SR-25-4½	4½	253	135
		254SR-25-6	6	208	111
		254SR-25-9	9	163	89
		254SR-25-12	12	138	73
26"	27"	254SR-27-3	3	364	190
		254SR-27-4½	4½	265	141
		254SR-27-6	6	217	115
		254SR-27-9	9	170	92
		254SR-27-12	12	142	76
30"	31"	254SR-31-3	3	402	213
		254SR-31-4½	4½	291	153
		254SR-31-6	6	233	125
		254SR-31-9	9	182	92
		254SR-31 12	12	153	81
32"	33"	254SR-33-3	3	421	223
		254SR-33-4½	4½	303	161
		254SR-33-6	6	245	129
		254SR-33-9	9	223	102
		254SR-33-12	12	157	84
36"	37"	254SR-37-3	3	459	241
		254SR-37-4½	4½	329	173
		254SR-37-6	6	264	140
		254SR-37-9	9	202	108
		254SR-37-12	12	167	88
38"	39"	254SR-39-3	3	477	251
		254SR-39-4½	4½	341	179
		254SR-39-6	6	274	143
		254SR-39-9	9	208	112
		254SR-39-12	12	171	90
44"	45"	254SR-45-3	3	534	278
		254SR-45-4½	4½	380	197
		254SR-45-6	6	303	160
		254SR-45-9	9	226	121
		254SR-45-12	12	186	96
50"	51"	254SR-51-3	3	591	305
		254SR-51-4½	4½	419	215
		254SR-51-6	6	331	176
		254SR-51-9	9	244	130
		254SR-51-12	12	201	102
54"	55"	254SR-55-3	3	629	323
		254SR-55-4½	4½	445	227
		254SR-55-6	6	350	187
		254SR-55-9	9	256	136
		254SR-55-12	12	211	106

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODEL "251SR & 251SRC"

Gravity Roller Conveyor

STANDARD SPECIFICATIONS

Frames - 4" x 4 gauge steel channel with bolted cross members, powder painted. Rollers set ¼" high.

Rollers - 2½" x 11 gauge steel tubing with swaged bearings.

Bearings - Labyrinth sealed and grease packed.

Axles - 11/16" hex shaft, spring-loaded.

Couplings - Splice plates, for bolting sections together.

Widths - 13" between frames (B/F) and wider in two inch increments up to 27" between frames. Also 31", 33", 37", 39", 45", 51", 55" and 59" between frames.

Lengths - 10' and 5' straight sections.

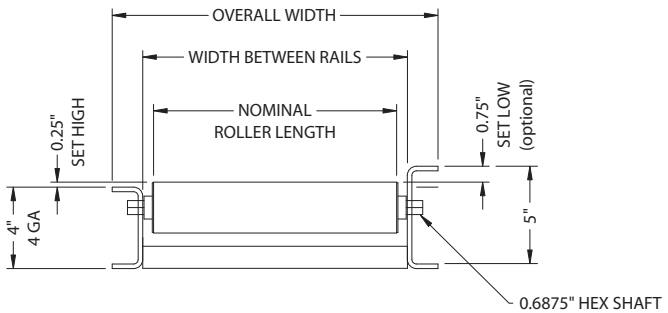
Curve - 45° and 90° with 2' 8½" inside radius for widths up to 27" between frames. 4'0" inside radius for 31", 33", 37", and 39" between frames. Note: tapered roller curves standard, with a 39" inside radius and 5" deep set high frame.

Capacity - 650 pounds per roller with 3,750 pounds maximum distributed live load over 10 feet for 12" nominal roll to 3,500 pounds on widest sizes; 8,000 pounds maximum distributed live load over 5' lengths. Curve sections same as 10'. All capacities based on 3" centers.

CURVED SECTIONS - WEIGHTS

	Nominal Roller Length (Inches)	Width Between Frames (Inches)	Model No. (For 90°)	90° Weight (lbs.)	45° Weight (lbs.)
Single Roller 16 Per 90° Curve	12	13	251SRC-13-90S	165	84
	14	15	251SRC-15-90S	180	91
	16	17	251SRC-17-90S	195	99
	18	19	251SRC-19-90S	210	106
	22	23	251SRC-23-90S	240	121
	26	27	251SRC-27-90S	270	136
Double Rollers 37 Per 90°Curve	30*	31	251SRC-31-90D	400	216
	32*	33	251SRC-33-90D	418	236
	36*	37	251SRC-37-90D	453	245
	38*	39	251SRC-39-90D	471	255

*4'0" inside radius. All others 2' 8½" inside radius.



STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No.	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
12"	13"	251SR-13-3	3	364	185
		251SR-13-4	4	303	155
		251SR-13-6	6	242	125
		251SR-13-9	9	212	113
		251SR-13-12	12	182	95
14"	15"	251SR-15-3	3	395	202
		251SR-15-4	4	327	168
		251SR-15-6	6	259	134
		251SR-15-9	9	225	120
		251SR-15-12	12	191	100
16"	17"	251SR-17-3	3	427	218
		251SR-17-4	4	351	180
		251SR-17-6	6	276	142
		251SR-17-9	9	238	127
		251SR-17 12	12	200	104
18"	19"	251SR-19-3	3	458	234
		251SR-19-4	4	375	192
		251SR-19-6	6	292	151
		251SR-19-9	9	251	134
		251SR-19-12	12	209	110
22"	23"	251SR-23-3	3	521	266
		251SR-23-4	4	423	217
		251SR-23-6	6	325	168
		251SR-23-9	9	276	149
		251SR-23-12	12	227	120
26"	27"	251SR-27-3	3	583	289
		251SR-27-4	4	471	242
		251SR-27-6	6	358	186
		251SR-27-9	9	302	163
		251SR-27-12	12	246	129
30"	31"	251SR-31-3	3	646	331
		251SR-31-4	4	519	267
		251SR-31-6	6	391	203
		251SR-31-9	9	328	178
		251SR-31 12	12	264	139
32"	33"	251SR-33-3	3	679	347
		251SR-33-4	4	544	280
		251SR-33-6	6	409	213
		251SR-33-9	9	341	185
		251SR-33-12	12	273	145
36"	37"	251SR-37-3	3	740	379
		251SR-37-4	4	590	304
		251SR-37-6	6	441	229
		251SR-37-9	9	366	199
		251SR-37-12	12	291	154
38"	39"	251SR-39-3	3	771	395
		251SR-39-4	4	614	316
		251SR-39-6	6	457	238
		251SR-39-9	9	379	207
		251SR-39-12	12	300	159
44"	45"	251SR-45-3	3	863	443
		251SR-45-4	4	694	352
		251SR-45-6	6	473	291
		251SR-45-9	9	417	229
		251SR-45-12	12	327	173
50"	51"	251SR-51-3	3	955	491
		251SR-51-4	4	754	388
		251SR-51-6	6	489	344
		251SR-51-9	9	455	251
		251SR-51-12	12	354	187
54"	55"	251SR-55-3	3	1016	523
		251SR-55-4	4	800	412
		251SR-55-6	6	521	360
		251SR-55-9	9	480	265
		251SR-55-12	12	372	196
58"	59"	251SR-59-3	3	1077	555
		251SR-59-4	4	846	436
		251SR-59-6	6	553	376
		251SR-59-9	9	505	279
		251SR-59-12	12	309	205

MODEL "267SR & 267SRC"

Gravity Roller Conveyor

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

STANDARD SPECIFICATIONS

Frames - 4" deep x 4 gauge channel with bolted cross members, powder painted. Rollers set 1/4" high.

Rollers - 2 5/8" diameter x 7 gauge steel tubing with swaged bearings.

Bearings - Labyrinth sealed and grease packed.

Axles - 11/16" hex shaft, spring-loaded.

Couplings - Splice plates, for bolting sections together.

Widths - From 13" between frames (B/F) and wider in two inch increments up to 27" between frames. Also 31", 33", 37", 39", 45", 51", 55" and 59" between rails.

Lengths - 10' and 5' straight sections.

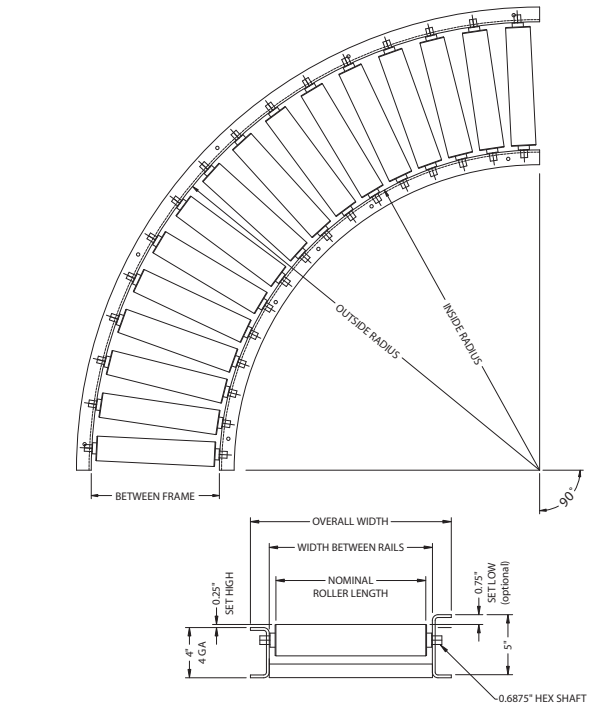
Curve - 45° and 90° with 2' 8 1/2" inside radius for widths up to 27" between frames. 4' 0" inside radius for 31", 33", 37" and 39" between frames. Note: tapered roller curves standard, with a 39" inside radius and 5" deep set high frame.

Capacity - 650 pounds per roller with 3,750 pounds maximum distributed live load over 10'; 8,000 pounds maximum distributed live load over 5' lengths. Curve sections same as 10'. All capacities based on 3" centers.

CURVED SECTIONS - WEIGHTS

	Nominal Roller Length (Inches)	Width Between Rails (Inches)	Model No. (For 90°)	90° Weight (lbs.)	45° Weight (lbs.)
Single Rollers 16 Per 90°Curve	12	13	267SRC-13-90S	190	96
	14	15	267SRC-15-90S	209	106
	16	17	267SRC-17-90S	229	116
	18	19	267SRC-19-90S	248	125
	22	23	267SRC-23-90S	286	144
	26	27	267SRC-27-90S	325	164
Double Rollers 37 Per 90°Curve	30*	31	267SRC-31-90D	451	247
	32*	33	267SRC-33-90D	493	268
	36*	37	267SRC-37-90D	538	292
	38*	39	267SRC-39-90D	561	305

*4'0" inside radius. All others 2' 8 1/2" inside radius.



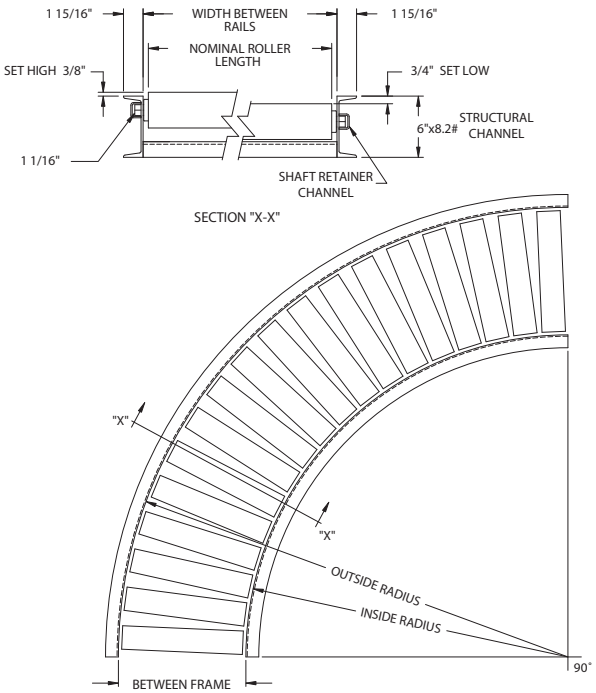
STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No.	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
12"	13"	267SR-13-3	3	427	217
		267SR-13-4	4	351	179
		267SR-13-6	6	274	141
		267SR-13-9	9	236	125
		267SR-13-12	12	198	102
14"	15"	267SR-15-3	3	469	239
		267SR-15-4	4	383	195
		267SR-15-6	6	296	152
		267SR-15-9	9	253	135
		267SR-15-12	12	209	109
16"	17"	267SR-17-3	3	511	260
		267SR-17-4	4	415	212
		267SR-17-6	6	318	163
		267SR-17-9	9	269	144
		267SR-17 12	12	221	115
18"	19"	267SR-19-3	3	553	282
		267SR-19-4	4	446	228
		267SR-19-6	6	340	175
		267SR-19-9	9	286	153
		267SR-19-12	12	233	212
22"	23"	267SR-23-3	3	637	324
		267SR-23-4	4	510	261
		267SR-23-6	6	383	198
		267SR-23-9	9	320	172
		267SR-23-12	12	256	134
26"	27"	267SR-27-3	3	721	367
		267SR-27-4	4	574	294
		267SR-27-6	6	427	220
		267SR-27-9	9	353	191
		267SR-27-12	12	280	147
30"	31"	267SR-31-3	3	805	410
		267SR-31-4	4	638	326
		267SR-31-6	6	471	243
		267SR-31-9	9	387	209
		267SR-31 12	12	304	159
32"	33"	267SR-33-3	3	847	431
		267SR-33-4	4	670	343
		267SR-33-6	6	492	254
		267SR-33-9	9	404	219
		267SR-33-12	12	315	166
36"	37"	267SR-37-3	3	931	474
		267SR-37-4	4	733	376
		267SR-37-6	6	536	277
		267SR-37-9	9	438	237
		267SR-37-12	12	339	178
38"	39"	267SR-39-3	3	973	496
		267SR-39-4	4	765	392
		267SR-39-6	6	558	288
		267SR-39-9	9	455	247
		267SR-39-12	12	351	185
44"	45"	267SR-45-3	3	1099	561
		267SR-45-4	4	860	441
		267SR-45-6	6	624	322
		267SR-45-9	9	506	275
		267SR-45-12	12	387	204
50"	51"	267SR-51-3	3	1225	626
		267SR-51-4	4	955	490
		267SR-51-6	6	690	356
		267SR-51-9	9	557	303
		267SR-51-12	12	423	223
54"	55"	267SR-55-3	3	1309	669
		267SR-55-4	4	1018	523
		267SR-55-6	6	734	379
		267SR-55-9	9	591	321
		267SR-55-12	12	447	235
58"	59"	267SR-59-3	3	1393	712
		267SR-59-4	4	1081	556
		267SR-59-6	6	778	402
		267SR-59-9	9	625	339
		267SR-59-12	12	471	247

CSE
Conveyor Systems & Engineering, Inc.
3030 Salt Creek Lane, Suite 230
Arlington Heights, IL 60005

MODELS "350SR & 350SRC"

Gravity Roller Conveyor



STANDARD SPECIFICATIONS

Frames - 6" x 8.2 pound structural steel channel with welded cross members powder painted. Rollers set ⅜" high.

Rollers - 3½" diameter x .30 wall with machined ends for press fit bearings.

Bearings - Labyrinth sealed and grease packed.

Axles - 1 1/16" hex shaft, pinned in curved conveyor, retainer panels in straight conveyor.

Couplings - Butt type, for bolting frames together.

Widths - 7" between frames (B/F) and wider up to 51" between frames.

Length - 5' and 10' straight sections.

Capacity - 1200 pounds per roller, with 8400 pounds maximum distributed live load over 10 feet; 16,700 pounds maximum distributed live load over 5 feet lengths. All capacities are based on 4" centers.

Curve Degree - 45° and 90° with 4'0" inside radius only. Tapered rollers not available.

STRAIGHT SECTIONS - WEIGHTS

Nominal Roller Length	Width Between Frames	Model No.	Roller Centers (Inches)	10' Weight (lbs.)	5' Weight (lbs.)
6"	7"	350SR-7-4	4	468	236
		350SR-7-6	6	366	185
		350SR-7-8	8	315	160
		350SR-7-12	12	264	134
10"	11"	350SR-11-4	4	611	315
		350SR-11-6	6	464	234
		350SR-11-8	8	390	204
		350SR-11-12	12	317	168
14"	15"	350SR-15-4	4	755	387
		350SR-15-6	6	563	291
		350SR-15-8	8	466	242
		350SR-15-12	12	370	194
18"	19"	350SR-19-4	4	899	454
		350SR-19-6	6	661	332
		350SR-19-8	8	542	273
		350SR-19-12	12	423	214
22"	23"	350SR-23-4	4	1042	523
		350SR 23-6	6	759	383
		350SR-23-8	8	617	311
		350SR-23-12	12	476	240
26"	27"	350SR-27-4	4	1185	595
		350SR-27-6	6	857	431
		350SR-27-8	8	693	349
		350SR-27-12	12	529	267
30"	31"	350SR-31-4	4	1329	677
		350SR-31-6	6	955	480
		350SR-31-8	8	769	397
		350SR-31-12	12	582	293
34"	35"	350SR-35-4	4	1472	736
		350SR-35-6	6	1053	529
		350SR-35-8	8	844	424
		350SR-35-12	12	634	319
38"	39"	350SR-39-4	4	1615	810
		350SR-39-6	6	1151	578
		350SR-39-8	8	919	462
		350SR-39-12	12	687	346
42"	43"	350SR-43-4	4	1759	892
		350SR-43-6	6	1250	627
		350SR-43-8	8	994	500
		350SR-43-12	12	741	373
46"	47"	350SR-47-4	4	1903	954
		350SR-47-6	6	1348	676
		350SR-47-8	8	1071	538
		350SR-47-12	12	795	399
50"	51"	350SR-51-4	4	2045	1025
		350SR-51-6	6	1446	727
		350SR-51-8	8	1147	575
		350SR-51-12	12	846	425

CURVED SECTIONS - WEIGHTS

	Nominal Roller Length*	Width Between Frames	Model No. (for 90°)	90° Weight (lbs.)	45° Weight (lbs.)
18 Rollers per 90° Curve	6"	7"	350SRC-7-90S	328	165
	10"	11"	350SRC-11-90S	428	220
	14"	15"	350SRC-15-90S	529	270
	18"	19"	350SRC-19-90S	630	318
	22"	23"	350SRC-23-90S	729	366
33 Rollers per 90° Curve	26"	27"	350SRC-27-90D	1066	535
	30"	31"	350SRC-31-90D	1196	609
	34"	35"	350SRC-35-90D	1324	662
	38"	39"	350SRC-39-90D	1453	802
	42"	43"	350SRC-43-90D	1583	858
	46"	47"	350SRC-47-90D	1712	948
	50"	51"	350SRC-51-90D	1840	1264

*4'0" Inside Radius only.

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Arlington Heights, IL 60005

Spring Balanced / Manual Gate

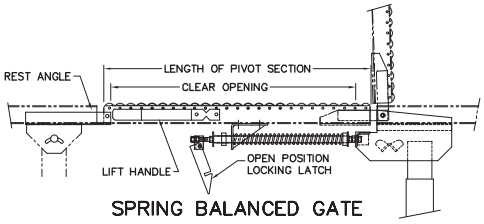
Skatewheel & 1⅜" Roller

Width - 12", 15", 18" and 24"
Length - 3', 4' and 5' lengths
Wheels/Rollers - Steel or aluminum, skatewheels or rollers
Construction - 2½" x 1" channels - 12 gauge powder painted steel or .125" aluminum
Latching - Safety gate latch

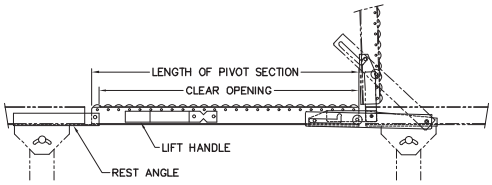
1.9" and 2.0" Roller

Width -12 widths (13" to 39" BR)*
Length -3' and 4' lengths
Rollers -1.9" galvanized or 2.0" unplated rollers
Construction -10 gauge powder painted steel channels - 3½" x 1½" (set high) or 4½" x 1½" (set low)
Latching - Safety gate latch

***NOTE:** Maximum width and length determined by roller centers and type of roller. Inquire. Minimum length of spring balanced gate is 3' 0".



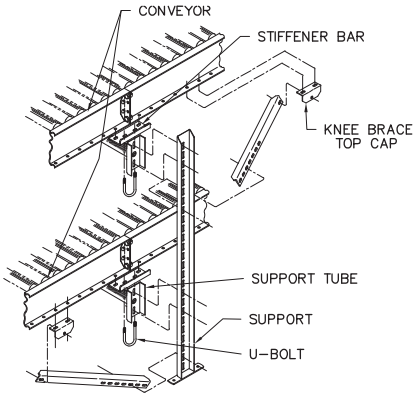
SPRING BALANCED GATE

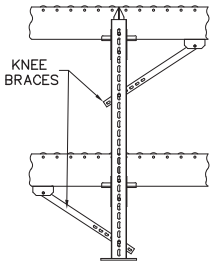


MANUAL GATE

Multi-Poly Tier Support

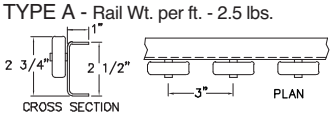
Application - Use with skate-wheel, 1⅜", 1.9", 2" and most powered conveyors
Widths - Conveyor widths to 42" wide
Capacity - 4,500 pounds capacity per set of uprights,1,500 pounds per cross supports
Braces - Knee braces
Height - 36" to 120" support height in 6" increments
Versatility - Infinite adjustability



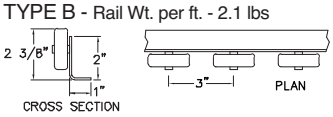


Wheel Rails

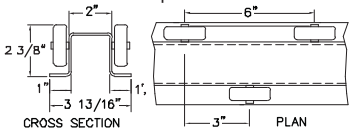
TYPE A - Rail Wt. per ft. - 2.5 lbs.



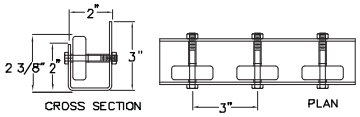
TYPE B - Rail Wt. per ft. - 2.1 lbs



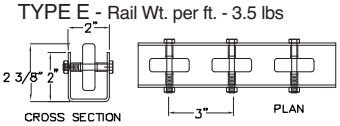
TYPE C - Rail Wt. per ft. - 3.5 lbs.



TYPE D - Rail Wt. per ft. - 3.0 lbs.



TYPE E - Rail Wt. per ft. - 3.5 lbs



STANDARD SPECIFICATIONS

Frame - 12 Ga. powder painted formed HRS steel.

Load Capacity Chart

Support Centers	Maximum Load Per Foot (lbs.)				
	Type A	Type B	Type C	Type D	Type E
3'	260*	223	260*	260*	260*
4'	260*	92	233	260*	210
5'	146	50	125	198	113
6'	83	28	71	112	64
7'	51	17	44	69	50
8'	35	12	38	49	27
10'	18	6	15	24	14

*Wheel Capacity

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Manually Operated Turntable

Capacity - 2000 lbs.

Rollers - 1.9" or 2.0" diameter spaced on 3" centers

Adjustment - Spring-loaded foot pedal to position and lock table at 90° intervals

Length - 36" or 48" long

Elevation - 8½" minimum elevation

Ball Transfer Tables

STANDARD SPECIFICATIONS

Frames - 3½" x 1½" x 10 gauge powder painted formed steel channel with powder painted, formed channel ball mounting plates bolted in frame; or 2½" x 1" x 12 gauge powder painted formed steel channel frame with same ball mounting plates (Model BT). Also available in "drop-in" type (Model BTD) that replaces rollers in gravity conveyors. Bolts into existing roller axle holes for easy field mounting.

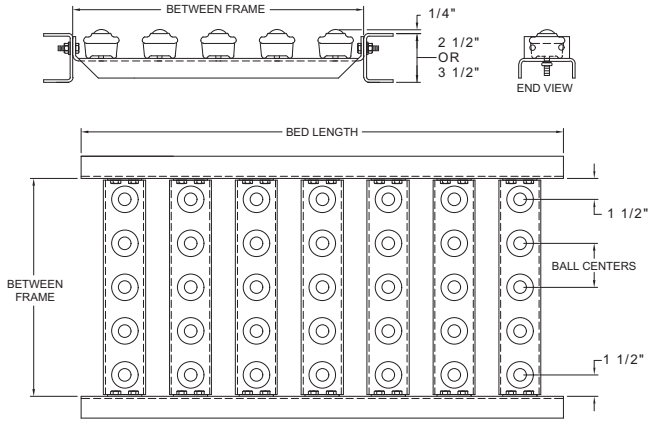
Balls - 1" diameter stud mounted.

Widths - From 13" between frames (B/F) and wider in two inch increments up to 27"; also 31", 33", 37" and 39" between frames.

Lengths - Available 1 foot to 10 feet.

Couplings - Butt type for bolting sections together. Matches gravity conveyor.

Capacity - 50 pounds per ball transfer, 1,300 pounds maximum load with supports on 10 feet centers; 3,200 pounds maximum load with supports on 5 feet centers.



WEIGHTS

B/F Dimension	Ball Centers	Model Number	Wt. per Foot	Model Number	Weight Per Strip
13"	2*	BT-13-2	21	BTD-13-2	10
	3	BT-13-3	12	BTD-13-3	4
	4½	BT-13-4½	10	BTD-13-4½	3
	6	BT-13-6	9	BTD-13-6	2
15"	2*	BT-15-2	24	BTD-15-2	12
	3	BT-15-3	13	BTD-15-3	4.5
	4½	BT-15-4½	12	BTD-15-4½	3.5
	6	BT-15-6	10	BTD-15-6	2.5
17"	2*	BT-17-2	28	BTD-17-2	14
	3	BT-17-3	15	BTD-17-3	5
	4½	BT-17-4½	13	BTD-17-4½	4
	6	BT-17-6	11	BTD-17-6	3
19"	2*	BT-19-2	31	BTD-19-2	16
	3	BT-19-3	16	BTD-19-3	5.5
	4½	BT-19-4½	14	BTD-19-4½	4.5
	6	BT-19-6	12	BTD-19-6	3.5
21"	2*	BT-21-2	35	BTD-21-2	17
	3	BT-21-3	18	BTD-21-3	6
	4½	BT-21-4½	15	BTD-21-4½	5
	6	BT-21-6	12	BTD-21-6	4
23"	2*	BT-23-2	38	BTD-23-2	19
	3	BT-23-3	20	BTD-23-3	6.5
	4½	BT-23-4½	16	BTD-23-4½	5.5
	6	BT-23-6	13	BTD-23-6	4.5
25"	2*	BT-25-2	41	BTD-25-2	21
	3	BT-25-3	21	BTD-25-3	7
	4½	BT-25-4½	18	BTD-25-4½	6
	6	BT-25-6	14	BTD-25-6	5
27"	2*	BT-27-2	45	BTD-27-2	22
	3	BT-27-3	23	BTD-27-3	7.5
	4½	BT-27-4½	19	BTD-27-4½	6.5
	6	BT-27-6	15	BTD-27-6	5.5
31"	2*	BT-31-2	52	BTD-31-2	26
	3	BT-31-3	26	BTD-31-3	8
	4½	BT-31-4½	21	BTD-31-4½	7
	6	BT-31-6	17	BTD-31-6	6
33"	2*	BT-33-2	55	BTD-33-2	27
	3	BT-33-3	29	BTD-33-3	8.5
	4½	BT-33-4½	23	BTD-33-4½	7.5
	6	BT-33-6	19	BTD-33-6	6.5
37"	2*	BT-37-2	62	BTD-37-2	31
	3	BT-37-3	32	BTD-37-3	9.5
	4½	BT-37-4½	25	BTD-37-4½	8.5
	6	BT-37-6	21	BTD-37-6	7.5
39"	2*	BT-39-2	65	BTD-39-2	33
	3	BT-39-3	35	BTD-39-3	11.5
	4½	BT-39-4½	27	BTD-39-4½	10.5
	6	BT-39-6	23	BTD-39-6	9.5

*With balls on 2" centers, mounting strips have three(3) rows of balls.

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Stationary Supports

Finish - Welded and powder painted H.R.S.
Height - Adjustable feet with lagging holes.
Capacity - **LD, MD** = 1,500 lbs., 12 gauge.
HD = 3,000 lbs., 10 gauge.

HD SUPPORT						
Model Number	251SR 267SR 251CRR 267CRR 251CRRC/T 267CRRC 251CRR-3	350CRR	251CDA 251CDE 267CDA	251ACDA 251ACDE	Weight (lbs.)	"H" Frame Only Height
HD-1*	13 1/4"-14 1/8"	15 3/8"-16 1/4"	20 5/8"-21 1/2"	13 3/4"-14 5/8"	16	9"-9 7/8"
HD-2*	14 1/8"-16 1/8"	16 1/4"-18 1/4"	21 1/2"-23 1/2"	14 5/8"-16 5/8"	18	9 7/8"-11 7/8"
HD-3*	16"-18 7/8"	17 1/4"-21"	23 3/8"-26 1/4"	16 1/2"-19 3/8"	19 1/2	11 3/4"-14 5/8"
HD-4*	18 1/4"-22 7/8"	20 3/8"-25"	25 5/8"-30 1/4"	18 3/4"-23 3/8"	27	14"-18 5/8"
HD-5*	21 1/4"-24 1/4"	23 3/8"-26 3/8"	28 3/8"-31 5/8"	21 3/4"-24 3/4"	28 1/2	17"-20"
HD-6*	24 1/4"-34"	26 3/8"-36 1/8"	31 5/8"-41 3/8"	24 3/4"-34 1/2"	31 1/2	20"-29 3/4"
HD-7*	30 1/4"-40"	32 3/8"-42 1/8"	37 5/8"-47 3/8"	30 3/4"-40 1/2"	35	26"-35 3/4"
HD-8*	36 1/4"-57 3/8"	38 3/8"-59 1/2"	43 5/8"-64 3/4"	36 3/4"-57 7/8"	43	32"-53 1/8"
HD-9*	48 1/4"-69 3/8"	50 3/8"-71 1/2"	55 5/8"-76 3/4"	48 3/4"-69 7/8"	49 1/2	44"-65 1/8"
HD-10*	60 1/4"-81 3/8"	62 3/8"-83 1/2"	67 5/8"-88 3/4"	60 3/4"-81 7/8"	56	56"-77 1/8"
HD-11*	72 1/4"-93 3/8"	74 3/8"-95 1/2"	79 5/8"-100 3/4"	72 3/4"-93 7/8"	62	68"-89 1/8"
HD-12*	84 1/4"-105 3/8"	86 3/8"-107 1/2"	91 5/8"-112 3/4"	84 3/4"-105 7/8"	68	80"-101 1/8"

	LD SUPPORT				MD SUPPORT						
Model Number	138AR 138SRH 138SR Wheel	Weight (lbs.)	"H" Frame Only Height	Model Number	22ACDE LPB TSB	HPB FTC 190RBW 190RBW-S MPB SPC	190ABE 190CAP 190CLR/S/SS 190LS/LSC/LSS 190LSCS 190LSE 190RB 190RBI 190ZPA SBS	190SRH 190SR 199SR 20SR 254SR 22CRR/CRRC 22CRRCS 22CRRCSS 22CRRCT	138CAP 138CLR 138CLRS 138CLRSS 190MRA SBT	Weight (lbs.)	"H" Frame Only Height
LD-1	10"-12 1/8"	8	7 1/2"-9 3/8"	MD-1	11 1/2"-13 3/8"	14"-15 7/8"	14 1/2"-16 3/8"	11 1/4"-13 1/8"	13 1/4"-15 1/8"	8	7 1/2"-9 3/8"
LD-2	12"-13 1/2"	8 1/2	9 1/4"-10 1/4"	MD-2	13 1/4"-14 3/4"	15 3/4"-17 1/4"	16 1/2"-18"	13"-14"	15"-16"	8 1/2	9 1/4"-10 1/4"
LD-3	13 1/4"-16"	11	10 1/2"-13 1/4"	MD-3	14"-17 1/4"	17"-19 3/4"	17 3/4"-20 1/2"	14 1/4"-17"	16 1/4"-19"	11	10 1/2"-13 1/4"
LD-4	15 3/4"-21"	13 1/2	13"-18 1/4"	MD-4	17"-22 1/4"	19 1/2"-24 3/4"	20 1/4"-25 1/2"	16 3/4"-22"	18 3/4"-24"	13 1/2	13"-18 1/4"
LD-5	19 3/4"-29"	19 1/2	17"-26 1/4"	MD-5	21"-30 1/4"	23 1/2"-32 3/4"	24 1/4"-33 1/2"	20 3/4"-30"	22 3/4"-32"	19 1/2	17"-26 1/4"
LD-6	27"-41"	22 1/2	24 1/4"-38 1/4"	MD-6	28 1/4"-42 1/4"	30 3/4"-44 3/4"	31 1/2"-45 1/2"	28"-42"	30"-44"	22 1/2	24 1/4"-38 1/4"
LD-7	37"-61"	24	34 1/4"-58 1/4"	MD-7	38 1/4"-62 1/4"	40 3/4"-64 3/4"	41 1/2"-65 1/2"	38"-62"	40"-64"	24	34 1/4"-58 1/4"
LD-8*	49"-72"	26 1/2	46 1/4"-69 1/4"	MD-8*	50 1/4"-73 1/4"	52 3/4"-75 3/4"	53 1/2"-76 1/2"	50"-73"	52"-75"	26 1/2	46 1/4"-69 1/4"
LD-9*	61"-84"	29 1/2	58 1/4"-81 1/4"	MD-9*	62 1/4"-85 1/4"	64 3/4"-87 3/4"	65 1/2"-88 1/2"	62"-85"	64"-87"	29 1/2	58 1/4"-81 1/4"
LD-10*	73"-96"	35 1/2	70 1/4"-93 1/4"	MD-10*	74 1/4"-97 1/4"	76 3/4"-99 3/4"	77 1/2"-100 1/2"	74"-97"	76"-99"	35 1/2	70 1/4"-93 1/4"
LD-11*	83"-106"	39 1/2	80 1/4"-103 1/4"	MD-11*	84 1/4"-107 1/4"	86 3/4"-109 3/4"	87 1/2"-110 1/2"	84"-107"	86"-109"	39 1/2	80 1/4"-103 1/4"
LD-12*	95"-118"	42	92 1/4"-115 1/4"	MD-12*	96 1/4"-119 1/4"	98 3/4"-121 3/4"	99 1/2"-122 1/2"	96"-119"	98"-121"	42	92 1/4"-115 1/4"

*(1) Pair knee braces included with each support.

Ceiling Hangers

Size - 1/2" diameter x 8' long threaded galvanized rods.
Sturdy - 1 1/2" diameter crosspipe mounts to underside of bed section.

Ceiling hangers provide an economical and safe means of utilizing valuable floor space when higher conveyor elevations are required. 1/2" diameter x 8' long galvanized all thread rods (with locking nuts) attach to 1 1/2" diameter standard pipe which bolts to underside of conveyor frame with pipe collars. Ceiling hangers can be used with gravity or powered conveyors. Also, guard rails are required on ceiling hung conveyors.

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Tripod Supports

- For portable applications
- Easily adjusted with locking "L" rod
- Heavy steel pipe construction
- Capacity - 350 lbs.

Model No.	Width	Height Min.	Height Max.	Weight (lbs.)
T-12-18	12"	12"	18"	6
T-12-30	12"	18"	30"	9
T-12-40	12"	24"	40"	11
T-12-52	12"	30"	52"	14
T-12-72	12"	40"	72"	20
T-15-18	15"	12"	18"	7
T-15-30	15"	18"	30"	10
T-15-40	15"	24"	40"	12
T-15-52	15"	30"	52"	15
T-15-72	15"	40"	72"	21
T-15-110	15"	60"	110"	25

Model No.	Width	Height Min.	Height Max.	Weight (lbs.)
T-18-18	18"	12"	18"	8
T-18-30	18"	18"	30"	10
T-18-40	18"	24"	40"	12
T-18-52	18"	30"	52"	15
T-18-72	18"	40"	72"	21
T-18-110	18"	60"	110"	25
T-24-18	24"	12"	18"	9
T-24-30	24"	18"	30"	11
T-24-40	24"	24"	40"	13
T-24-52	24"	30"	52"	16
T-24-72	24"	40"	72"	22
T-24-110	24"	60"	110"	26

Adjustable Tripod Supports are used with straight or curved sections of gravity skatewheel and 1⅜" diameter roller conveyor only.

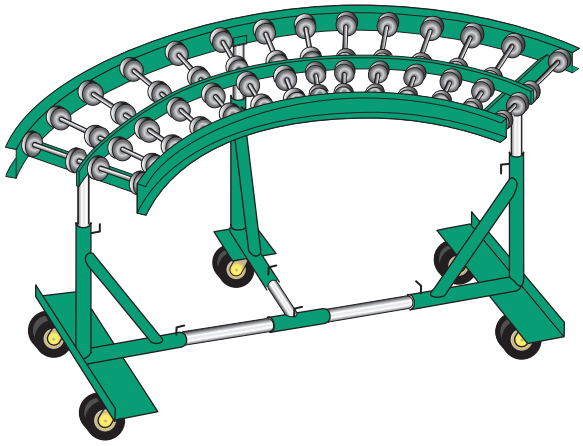
Portable Castered Support

Portable Castered Support allows straight sections of gravity skatewheel or 1⅜" diameter roller conveyor to be easily moved from one area to another. 4" diameter hard rubber swivel casters with brake.

NOTE: Floor locks optional.

12" Wide	15" Wide	18" Wide	24" Wide	Height to top of Conveyor	Weight (lbs.)
PSC-12-28	PSC-15-28	PSC-18-28	PSC-24-28	18" - 28"	53
PSC-12-40	PSC-15-40	PSC-18-40	PSC-24-40	24" - 40"	55
PSC-12-52	PSC-15-52	PSC-18-52	PSC-24-52	30" - 52"	57
PSC-12-72	PSC-15-72	PSC-18-72	PSC-24-72	40" - 72"	62

Portable Castered Curve Support



Portable Castered Curve Support allows curved sections of gravity skatewheel or 1⅜" roller curves to be easily moved. 4" diameter hard rubber swivel casters with brake.

NOTE: Floor locks optional.

12" Wide	15" Wide	18" Wide	24" Wide	Height to top of Conveyor	Weight (lbs.)
PSCC-12-28	PSCC-15-28	PSCC-18-28	PSCC-24-28	18" - 28"	75
PSCC-12-40	PSCC-15-40	PSCC-18-40	PSCC-24-40	24" - 40"	77
PSCC-12-52	PSCC-15-52	PSCC-18-52	PSCC-24-52	30" - 52"	79
PSCC-12-72	PSCC-15-72	PSCC-18-72	PSCC-24-72	40" - 72"	84

Skatewheel Switches

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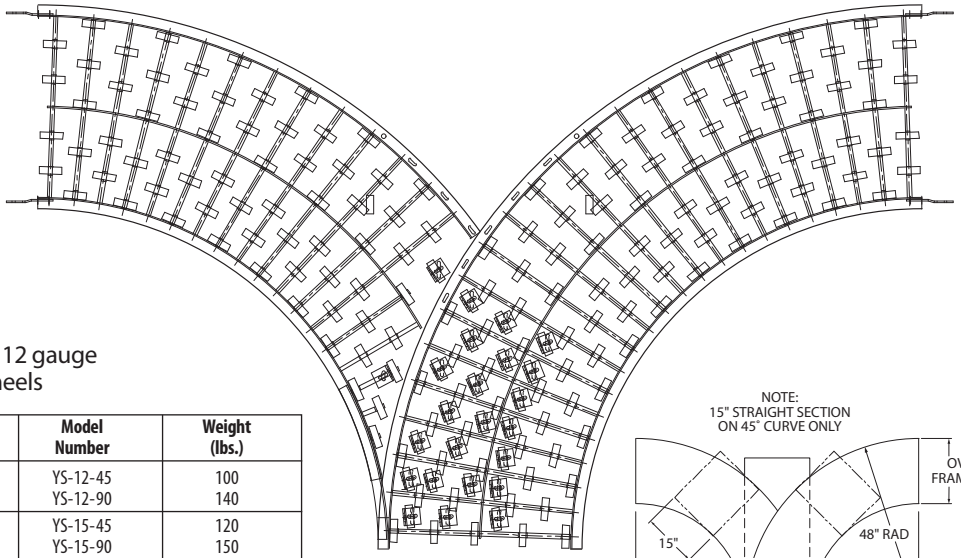
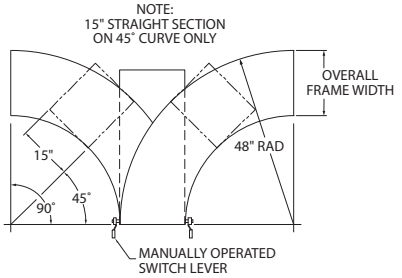
Skatewheel "Y" Switch



- **4 widths**
- **Manually operated**
- **45° and 90° curves available**
- **Sturdy construction -** 2½" x 1" x 12 gauge powder painted frames - steel wheels

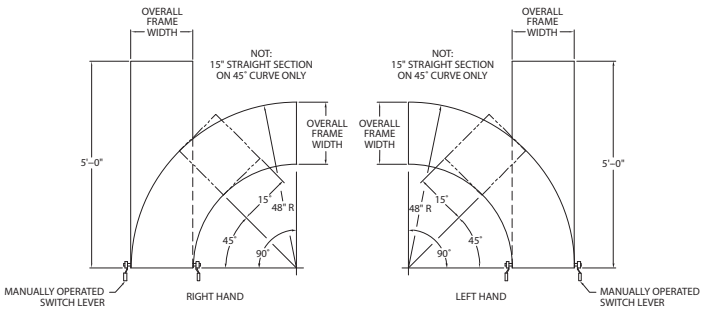
"R"	Overall Width	Degree	Model Number	Weight (lbs.)
4'0"	12"	45° 90°	YS-12-45 YS-12-90	100 140
	15"	45° 90°	YS-15-45 YS-15-90	120 150
	18"	45° 90°	YS-18-45 YS-18-90	130 165
	24"	45° 90°	YS-24-45 YS-24-90	145 180

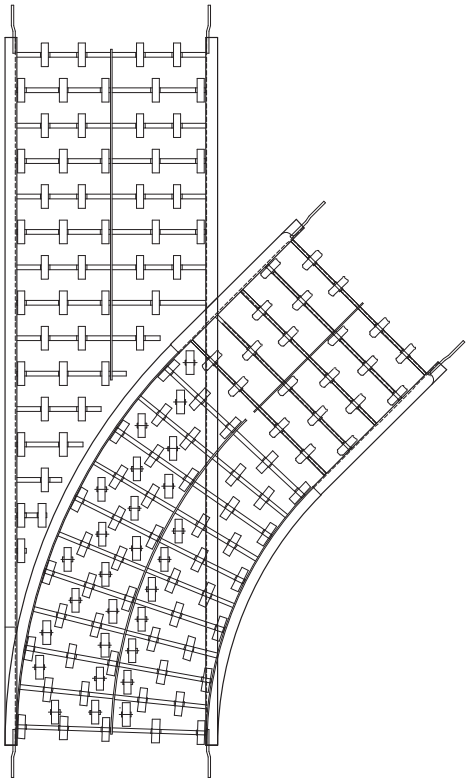


Skatewheel Spur Curve Switch

- **4 widths**
- **Manually operated**
- **45° and 90° curves available**
- **Sturdy construction -** 2½" x 1" x 12 gauge powder painted frames - steel wheels
- **Right and left hand units**

"R"	Overall Width	Degree	Model Number	Weight (lbs.)
4'0"	12"	45° 90°	CS-12-45-R or L CS-12-90-R or L	145 160
	15"	45° 90°	CS-15-45-R or L CS-15-90-R or L	155 170
	18"	45° 90°	CS-18-45-R or L CS-18-90-R or L	170 190
	24"	45° 90°	CS-24-45-R or L CS-24-90-R or L	195 210





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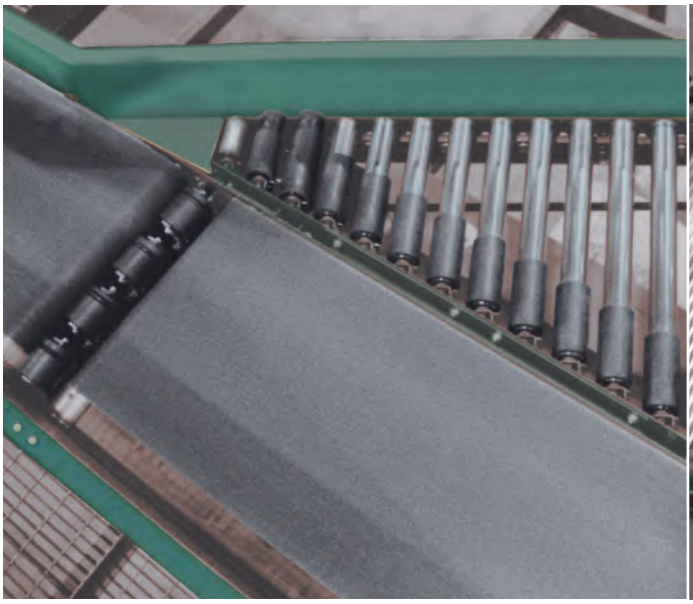
MODEL "HSS"

High Speed Sortation Conveyor



LOOK AT THE FEATURES AND CAPABILITIES OF THIS CONVEYOR:

FACTS ABOUT THE SORTER

There is virtually no limit to the length of the sorter. Units up to 500 feet long with as many as 30 diverts have been successfully built and installed. By using multiple "helper drives", the sort system becomes very flexible and can meet most user requirements. It can either sort "left" or "right" or it can be designed to sort both "left" and "right" (both sides). Recommended conveyor speeds are 200 FPM minimum to 300 FPM maximum. At 300 FPM, 16" long packages can be sorted at a rate of 80 per minute.

MINIMAL PRODUCT LIMITATIONS

Package weights can range from a minimum of 3 pounds up to a maximum of 100 pounds. Package weight distribution (center of gravity) is more critical to a successful divert than the total weight of the product. Package sizes can be as short as 10" up to a maximum length of 72". Maximum product length is determined by the divert spur width and the divert spur radius. Minimum gap between products is 9", depending upon the response time of the sortation control system.

ABOUT THE DIVERTER

The diverter is modular in design and can be installed at desired intervals as close as 3 feet centers minimum, up to any desired spacing. It utilizes a 3" long driven urethane coated roller, that on demand, rises 1/4" to 3/8" and skews 30 degrees to divert the package. When in the down position, these rollers act as a bridge to stabilize small packages. Required air pressure is 40 PSI minimum, to 60 PSI maximum.

BELT TAKE-UP

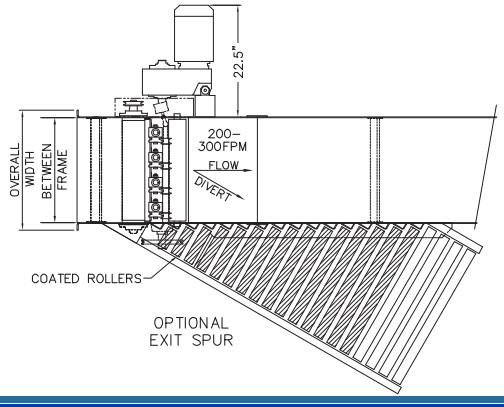
A mechanical (screw type) take-up is supplied when no more than two diverters are required. With three or more diverters, an air take-up is supplied to automatically maintain proper belt tension.

INDUCTION SYSTEM

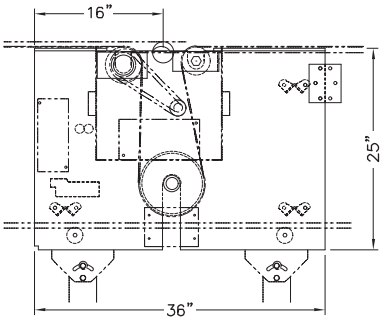
Although it's not necessarily a part of the sortation conveyor, the induc-tion conveyor plays a key roll in the success of the diverting system. CSF can supply the right equipment to ensure products are merged properly to traverse the sortation line.

HORSEPOWER REQUIREMENTS

In determining horsepower, product live load and diverter horsepower requirements are the deciding factors. Each diverter requires 1/2 HP.



- **Standard belt widths: 15", 21", 27", 33" and 39"**
- **Spur discharge conveyor with urethane covered rollers is slave driven by sorter**
- **Maximum motor: 5 HP for every 6 sorts**
- **Gentle sort based on dynamics of design**
- **Standard sort module is 36" OAL**
- **Alignment rollers at induction end**
- **All pulleys are machine crowned**
- **All rollers have precision bearings**



Bed & Undertrussing Chart

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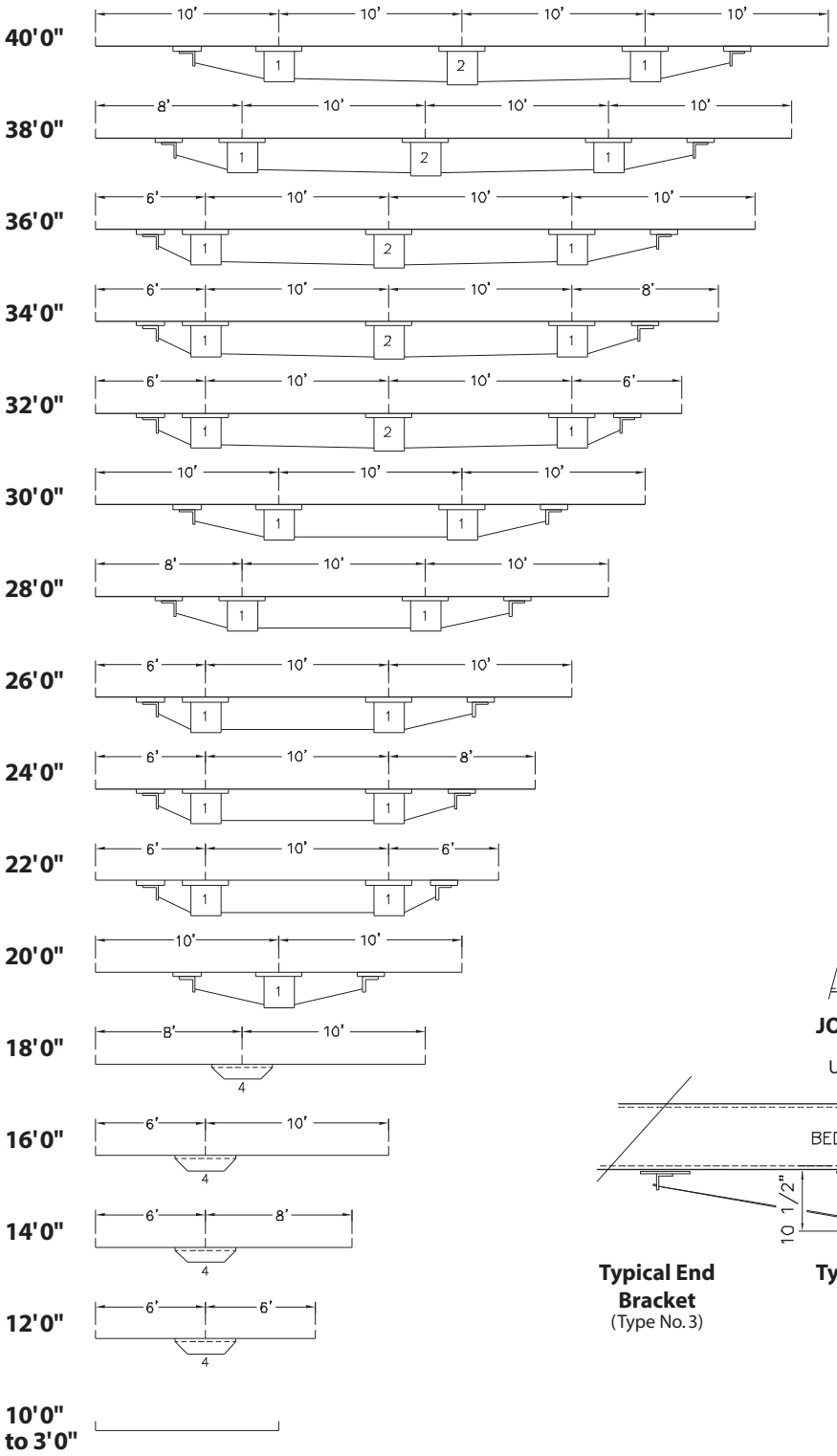
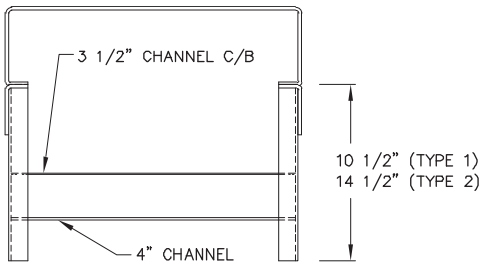
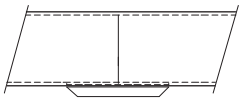
BED LENGTH



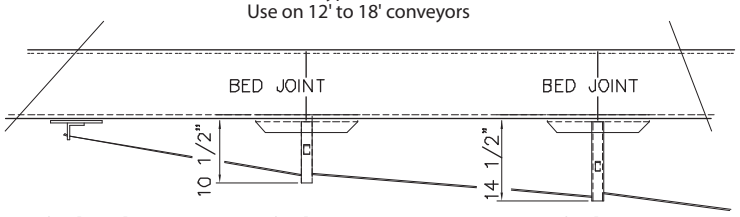
ROD SIZES
Type "A" - 50" long - 5/8" diameter
Type "B" - 62" long - 5/8" diameter
Type "C" -119" long - 5/8" diameter

NOTE: For center drive use Type No. 2 Center Bracket on both sides of drive.





JOINT SUPPORT ANGLE
(Type No. 4)
Use on 12' to 18' conveyors



Typical End Bracket
(Type No. 3)

Typical Center Bracket
(Type No. 1)

Typical Center Bracket
(Type No. 2)

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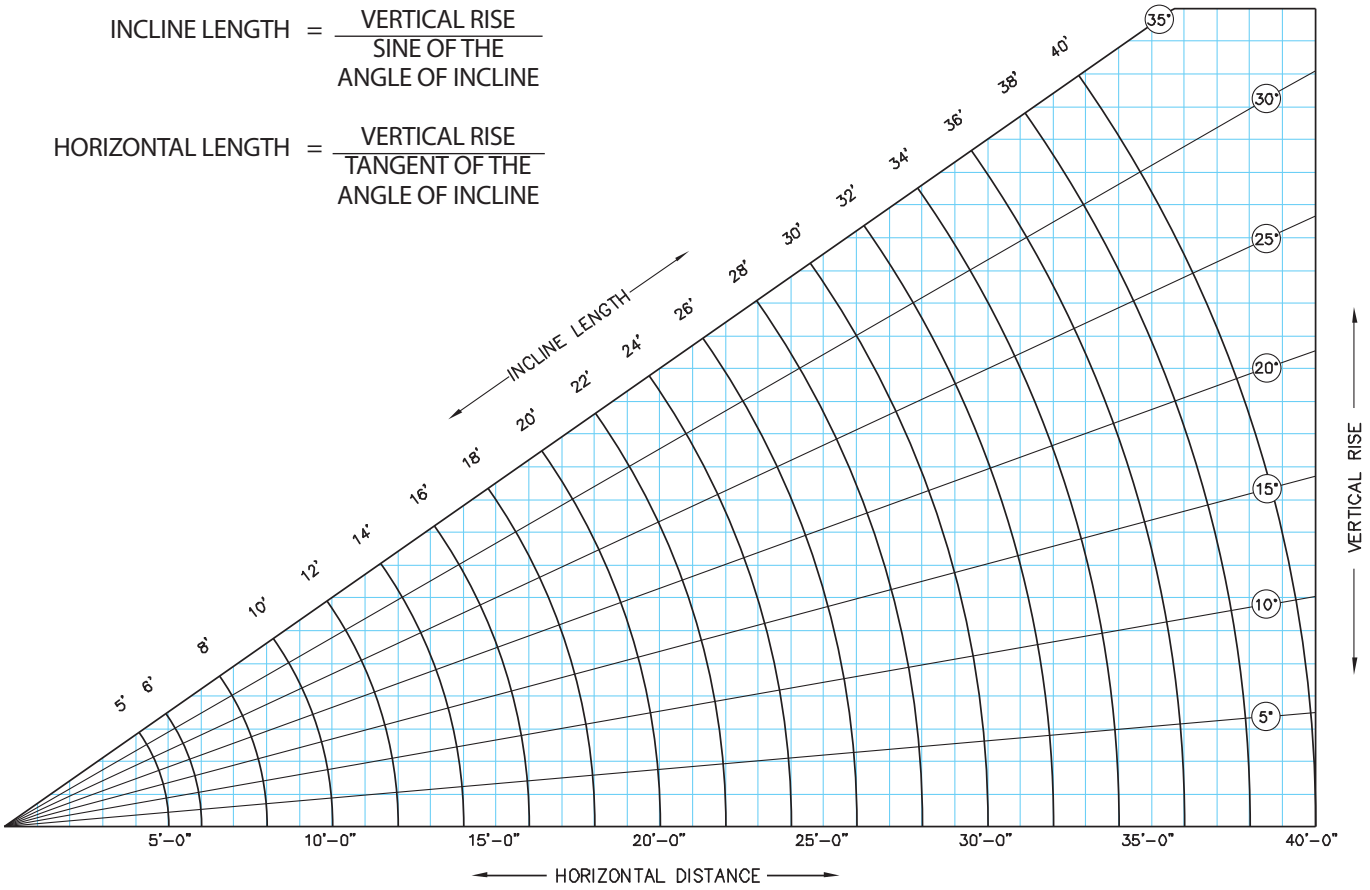
Net Lift Chart

$$\text{INCLINE LENGTH} = \frac{\text{VERTICAL RISE}}{\text{SINE OF THE ANGLE OF INCLINE}}$$

$$\text{HORIZONTAL LENGTH} = \frac{\text{VERTICAL RISE}}{\text{TANGENT OF THE ANGLE OF INCLINE}}$$



Angle	Sine	Tangent	Angle	Sine	Tangent	Angle	Sine	Tangent
1°	.02	.02	11°	.19	.20	21°	.36	.38
2°	.03	.03	12°	.21	.21	22°	.37	.40
3°	.05	.05	13°	.23	.23	23°	.39	.42
4°	.07	.07	14°	.24	.25	24°	.41	.45
5°	.09	.09	15°	.26	.27	25°	.42	.47
6°	.10	.11	16°	.28	.29	26°	.44	.49
7°	.12	.12	17°	.29	.31	27°	.45	.51
8°	.14	.14	18°	.31	.32	28°	.47	.53
9°	.16	.16	19°	.33	.34	29°	.48	.55
10°	.17	.17	20°	.34	.36	30°	.50	.58

Horsepower Calculation

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BELT PULL AND HORSEPOWER CALCULATIONS

I. LIVE LOAD ON THE CONVEYOR:

A. Horizontal Conveyor: Summation of total load being conveyed.

B. Incline Conveyor: Live load on incline portion multiplied by the sine of the angle of incline. (See "Net Lift Chart").

II. BELT OR CHAIN WEIGHT:

A. Belt Driven Conveyor: Belt weight from chart below multiplied by the width of the belt multiplied by the length of the conveyor for the weight of both the carrying belt and the return belt.

Type of Belt	Weight per Lineal Foot of Conveyor per Inch of Belt Width
3 Ply FS x FS	.1 Pound
3 Ply Ruff Top	.25 Pounds
3 Ply Neoprene	.125 Pounds

B. Chain Driven Conveyor: Chain weight from chart below multiplied by conveyor length.

Conveyor Model	Chain Type	Weight per Lineal Foot of Conveyor
22CRR	#50	1.38 Pounds
251-267CRR	#50	3.0 Pounds
251-267CRR	#60	3.52 Pounds
Slat Conveyor	SR196	26.4 Pounds

III.

A. **Roller Weight**: See Chart below

B. **Slat Weight**: 1.95 pounds per lineal foot of conveyor per inch of slat width.

IV. ADDITIONAL FACTORS:

A. Feeder Beds: 10% of the live load on the feeder bed.

B. Stopped product on running conveyor (case stop, traffic controller, etc.): 10% of the stopped product.

C. Deflectors and Plows: 33% of the heaviest unit load.

V. COEFFICIENT OF FRICTION:

Slider Bed	.30
Belt on Roller	.05
Belt Driven Live Roller	.10
Chain Driven Live Roller	.075
Slat Conveyor	.15

Belt Pull Calculation: Summation of items I thru IV multiplied by item V.

Belt Pull = [(1A + II + III + IV) x V] + 1B

VI. EFFECTIVE BELT PULL:

Belt pull from item V multiplied by 1.25 equals effective belt pull.

VII. DRIVE TRAIN EFFICIENCY FACTORS:

A. Gear Reduction: 100 minus one half of the ratio of each step of reduction.

Example: Single Reduction 30: 1 Reduction
100 - 30/2 = 85% efficient.

Double Reduction 800: 1 Reduction
100 - 40/2 - 20/2 = 70% efficient.

B. Chain Reduction: 95% efficient.

Horsepower Calculation: Effective belt pull times speed in feet per minute divided by 33,000 divided by the gear reduction efficiency factor divided by the chain reduction efficiency factor.

$$\text{Horsepower} = \frac{\text{Effective Belt Pull x Speed in F.P.M.}}{33{,}000 \text{ x (VII.A) x } .95}$$

ROLLER WEIGHT CHART

ROLLER DESCRIPTION			WEIGHT PER BETWEEN FRAME DIMENSION								
Cat. No.	Diameter	Gage	11"	15"	19"	21"	23"	27"	31"	33"	39"
190SR	1.9	16	2.2	2.7	3.3	3.6	3.8	4.4	4.9	5.2	6.1
20SR	2.0	12	3.4	4.5	5.6	6.1	6.6	7.7	8.8	9.4	11.0
199SR	1.9	9	3.4	4.5	5.6	6.1	6.6	7.7	8.8	9.4	11.0
254SR	2.5	14	3.0	3.9	4.8	5.3	5.7	6.6	7.5	8.0	9.3
251SR	2.5	11	5.6	7.1	8.5	8.9	9.3	11.5	12.9	13.6	15.7
267SR	2.63	7	6.7	8.7	10.8	11.8	12.8	14.9	16.9	17.9	21.0
350SR	3.5	.30"	14.9	19.6	24.3	26.7	29.0	33.7	38.4	40.8	47.8

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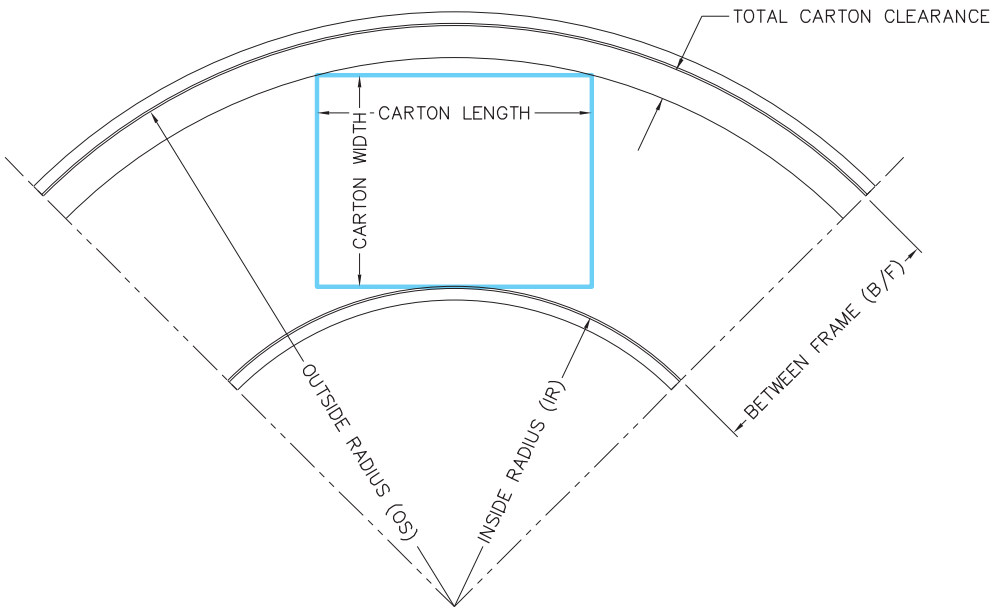
Curve Sizing Diagram



CURVE SIZING FORMULA AND CHART

Use of the Pythagorean Theorem to determine the between frame (BF) dimension of curved conveyor sections relative to carton size:

$$BF = \sqrt{\left[\frac{\text{carton length}}{2}\right]^2 + \left[\text{carton width} + \text{inside radius}\right]^2} + \text{carton clearance} - \text{inside radius}$$

BF REQUIRED FOR CURVES HAVING 2'8½" RADIUS & SMALLER

Package Length	Package Width											
	4"	8"	12"	16"	20"	24"	28"	32"	36"	40"	44"	48"
4"	6	10	14	18	22	26	30	34	38	42	46	50
8"	6	10	14	18	22	26	30	34	38	42	46	50
12"	6	10	14	18	22	26	30	34	38	42	46	50
16"	7	11	15	19	22	26	30	34	38	42	46	50
20"	8	12	15	19	23	27	31	35	38	42	46	50
24"	9	12	16	20	23	27	31	35	39	43	47	51
28"	10	13	17	20	24	28	32	36	39	43	47	51
32"	11	14	18	21	25	29	32	36	40	44	48	51

BF REQUIRED FOR CURVES HAVING 3'7 9/16" RADIUS & LARGER

Package Length	Package Width											
	4"	8"	12"	16"	20"	24"	28"	32"	36"	40"	44"	48"
4"	6	10	14	18	22	26	30	34	38	42	46	50
8"	6	10	14	18	22	26	30	34	38	42	46	50
12"	6	10	14	18	22	26	30	34	38	42	46	50
16"	6	10	14	18	22	26	30	34	38	42	46	50
20"	7	10	14	18	22	26	30	34	38	42	46	50
24"	7	11	15	19	23	27	31	34	38	42	46	50
28"	8	11	15	19	23	27	31	35	39	43	47	51
32"	8	12	16	20	24	27	31	35	39	43	47	51
36"	9	13	16	20	24	28	32	36	40	43	47	51
40"	10	13	17	21	25	28	32	36	40	44	48	52
44"	10	14	18	22	25	29	33	37	41	44	48	52
48"	11	15	19	22	26	30	33	37	41	45	49	53
52"	12	16	19	23	27	30	34	38	42	46	49	53
56"	13	17	20	24	27	31	35	39	42	46	50	54
60"	14	18	21	25	28	32	36	39	43	47	51	54
64"	15	19	22	26	29	33	36	40	44	47	51	55

Box Tumbling Diagram

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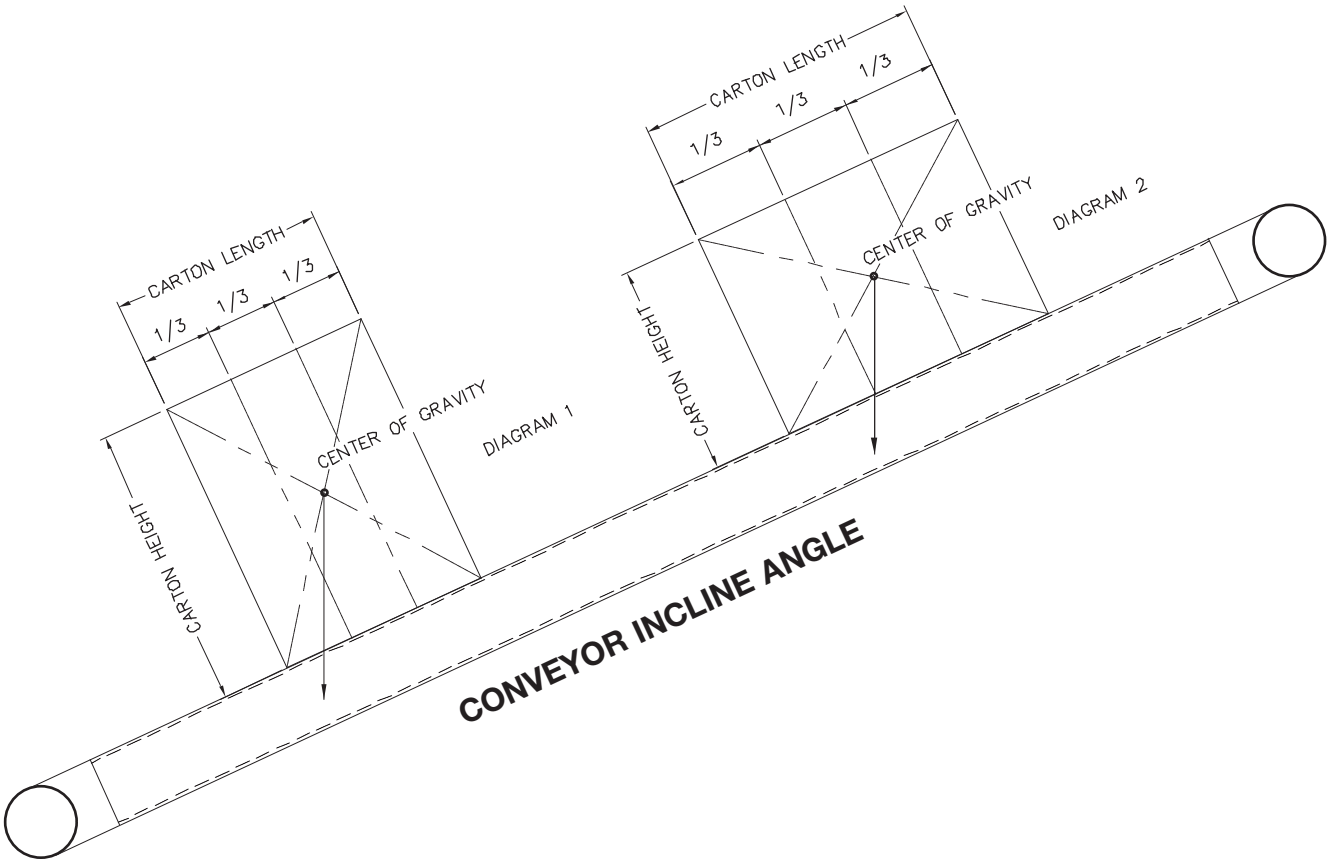

DETERMINING FACTORS ON BOX TUMBLING:

1. Draw conveyor angle of incline.
2. Draw box size on conveyor.
3. Draw diagonal lines to find center of box.
4. Divide lower portion of box into thirds.
5. Draw vertical line as shown
6. If vertical line falls within the lower third (See Diagram #1) the box may tumble depending on weight distribution.
7. If vertical line falls within the upper two thirds (See Diagram #2) the box will not tumble.

General guideline rate of fall chart for flow on gravity roller conveyor. Exact rate of fall should be determined at time of installation with actual product to be conveyed.

GRAVITY ROLLER RATE OF FALL CHART

Product with Conveyable Underside Surface	Weight Range in Pounds	Fall in 10'0"
Cartons	1 to 5	8" to 9"
Cartons	5 to 15	7" to 8"
Cartons	15 to 50	6" to 7"
Cartons	50 to 75	5" to 6"
Wood Boxes	20 to 50	5" to 6"
Wood Boxes	50 to 150	4" to 5"
Wood Boxes	150 to 200	3" to 4"
Steel Tote Bins	15 to 50	3" to 4"

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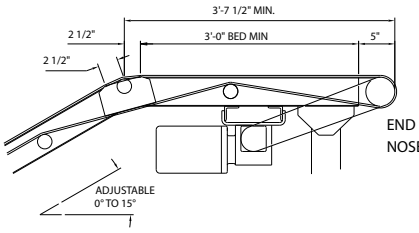
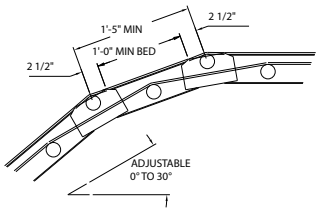
Noseover Arrangements

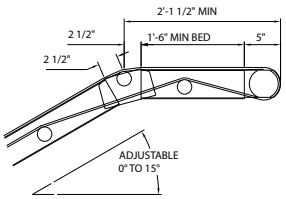
190RB NOSEOVER



END DRIVE NOSEOVER

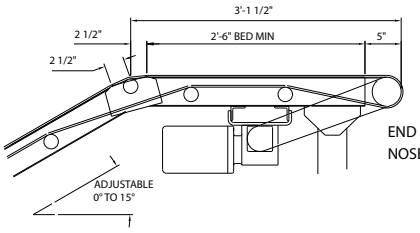


DOUBLE NOSEOVER



TAIL END NOSEOVER

LPB NOSEOVER



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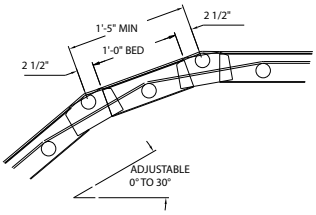

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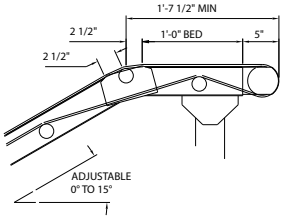
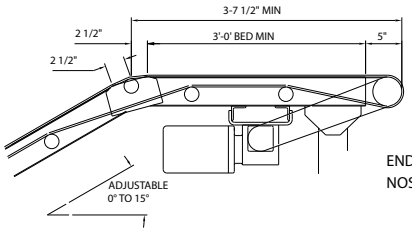
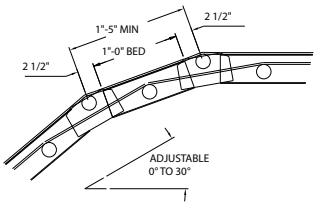


TAIL END NOSEOVER

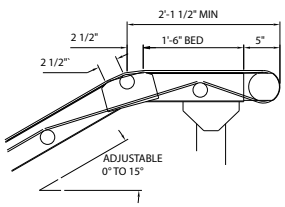
TSB NOSEOVER



END DRIVE NOSEOVER

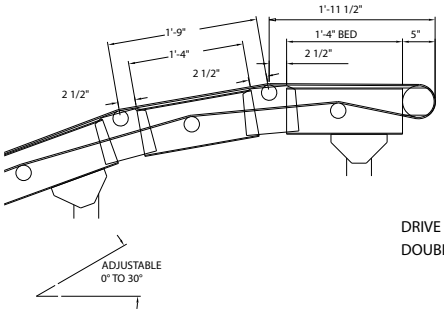


DOUBLE NOSEOVER



TAIL END NOSEOVER

FTC & HPB NOSEOVER



DRIVE END DOUBLE NOSEOVER

Application Data Sheet

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OPERATIONAL DATA

PO# _____

Environment: ❑ Normal ❑ Dirty/Dusty
❑ Washdown ❑ Oily
❑ Clean Room Class
❑ Other

Hours of Operation:

Hrs./Day _____ Days/Week _____

Average Rate: per Minute: _____

per Hour: _____

Maximum Rate: per Minute: _____

per Hour: _____

Conveyor Speed: _____ FPM
❑ Constant ❑ Variable speed
❑ Reversing

Total live load on conveyor: lbs.: _____
or lbs./ft: _____

Electric Motor Voltage & Enclosure:
Volts/Ph/Cycles: _____
❑ TEFC ❑ Washdown ❑ DC
❑ Inverter Duty ❑ EX. PR.

Control Operating Voltage:
❑ AC ❑ DC Volts: _____

Control Class of Service: ❑ Gen Purpose NEMA1
❑ Other: _____

Special Brand Equipment:
(Customer Specification - No Substitutes)
❑ Motors _____ Describe
❑ Reducers _____
❑ Solenoids _____
❑ Bearings _____
❑ Belt _____
❑ Paint _____
❑ Other _____

Plant Air Available ❑ No ❑ Yes _____ PSI

Date: _____
Distributor: _____
Salesman: _____
Phone: _____

PRODUCT INFORMATION

Product to be Conveyed: ❑ Box ❑ Pallet ❑ Drum
❑ Wire Basket
❑ Other

Product Size: Min Max Avg
Length: _____
Width: _____
Height: _____
Weight: _____

Description of Product:
Product Bottom: ❑ Smooth ❑ Hard ❑ Firm
❑ Soft ❑ Flat ❑ Solid ❑ Picture frame
❑ Slats ❑ Wood ❑ Corrugated ❑ Metal
❑ Plastic
❑ Other:
Product Sides: ❑ Vertical ❑ Tapered
❑ Lip at top (Protrusions) (Supply sketch)
Product Orientation In Direction of Travel:
❑ Length ❑ Width

ENGINEERING INFORMATION

Are layout drawings available? ❑ Yes ❑ No
Are they being provided to CSE? ❑ Yes ❑ No
Are **Approval Drawings** required? ❑ Yes ❑ No
Is product testing required? ❑ Yes ❑ No
If so, is customer supplying test product? ❑ Yes ❑ No

Testing Requirements: _____

Special Notes: _____

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Arlington Heights, IL 60005

CSE Order Entry Form

To avoid delays and changes when processing your order, this order form should be filled out completely.

Distributor Name: _____ Ship to: _____

P.O. Number: _____

Conveyor Mark: _____ Routing: _____

CSE Quote #: _____

Today's Date: _____ Collect ❑ Prepaid ❑ UPS ❑ Third Party ❑

Qty.	Model	Length (OAL)	BF	C/S	OAW	Roller Ctrs.	Belt Width/Type	Speed FPM	Base Price

Motor_____ **HP** _____/_____/_____ **TE** _____ **INV. DUTY** _____ **EXPR** _____

Elevation: Infeed _____ Discharge _____ Casters _____ Knee Braces _____

Drive Type:
❑ Center ❑ End ❑ Overhead ❑ Side Mount ❑ Floor Mount
❑ Timing Belt Drive ❑ Chain Drive

DrivePulley:
❑ 4" Diameter
❑ 6" Diameter
❑ 8" Diameter
❑ 12" Diameter

Tail Pulley:
❑ 4" Diameter
❑ 6" Diameter
❑ 8" Diameter

Drive Shaft:
❑ 1 3/16" Diameter
❑ 1 7/16" Diameter
❑ 1 15/16" Diameter

Tail Shaft:
❑ 1 3/16" Diameter
❑ 1 7/16" Diameter
❑ 1 15/16" Diameter

Guard Rails:
❑ Adj. Channel ❑ One Side ❑ For Bed Length Only
❑ Solid Type ❑ Both Sides ❑ To Extend Over Pulleys
❑ Channel Type ❑ Angle Height of Non-Adj. Guard Rail:_____

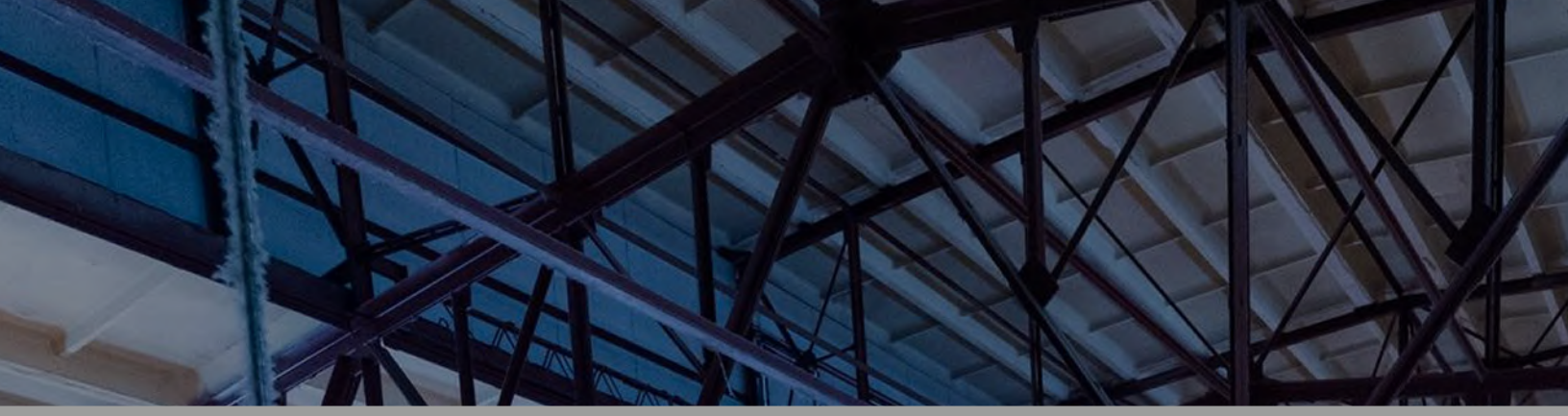
Feeder:
❑ Integral Feeder Length _____
❑ Chain Elevations _____

❑ **Double Noseover** ❑ **Single Noseover** ❑ **Located as standard**
Other Location: _____

Motor Starters:
❑ Manual (Start/Stop Only) ❑ Mounted/Wired
❑ One Direction (Magnetic) ❑ Not Mounted/Wired
❑ Reversing (Magnetic)
Motor Voltage: _____ Control Operating Voltage: _____

Push Buttons: (For Magnetic Starters)
❑ Start/Stop
❑ Up/Down/Stop
❑ For/Rev/Stop

Paint (standard powder coat colors):
❑ CSE Green ❑ CSE Gray ❑ CSE White ❑ CSE Dark Blue ❑ CSE Tan ❑ CSE Black
Special Paint:
_____



Warranty

Conveyor Systems & Engineering, Inc. (CSE) warrants its products to be free of defects in materials and workmanship for a period of one year from the date of shipment or 2,080 operating hours, whichever occurs first.

CSE will repair or replace, at its option, F.O.B. Arlington Heights, IL, any part proving defective according to the terms of this warranty. CSE must be notified in writing of the claimed defect, including a description of the part, a description of the defect, and the date the defect was discovered. CSE reserves the right to inspect said defect at the purchaser's installation site or to have the defective part or parts returned to CSE via commercial freight carrier for inspection. Installation expense and any other expenses associated with the removal of the claimed defective part shall be borne by the purchaser, and CSE's liability is extended only to furnishing said part or parts.

CSE is not liable for incidental or consequential damages, such as loss of profit, delays, or expenses incurred by failure of said part or parts or for failure of equipment to comply with any federal, state, or local laws. Failure due to abuse, negligence, accident, improper repair, improper maintenance, incorrect adjustments, exposure to a corrosive or abrasive environment, operation under any degree of moisture, or alteration/modification to the equipment without CSE's written authorization does not constitute failure due to defects in workmanship or materials.

Component parts not manufactured by CSE (e.g., motors, gear reducers, etc.) will be repaired or replaced at the option of the manufacturer. Contact the nearest authorized service center for those warranty claims. The warranty as specifically set forth herein shall be the purchaser's exclusive warranty and is hereby provided by CSE in lieu of any and all other warranties, actual or implied.

Note: Any component part (or parts) not manufactured by CSE that has (have) been tampered with prior to inspection by the manufacturer's authorized representative shall be deemed free of all warranty claims.

Conveyor Systems & Engineering, Inc.
Arlington Heights, IL

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