ISO 9001
PACLINE™
OVERHEAD CONVEYORS
www.pacline.com

System S-60
CONVEYOR SPECIFICATION

1.0 CHAIN

- 1.1 Capacities
- 1.2 Construction
- 1.3 Assembly
- 1.4 Chain Roller Bearings
- 1.5 Chain Side Links
- 1.6 Spindles
- 1.7 Cruciform Block

2.0 TRACK

- 2.1 Construction
- 2.2 Assembly

3.0 TRACK COMPONENTS

- 3.1 Drive
- 3.2 Take-Up
- 3.3 Horizontal & Vertical Curves
- 3.4 Expansion
- 3.5 Inspection Section
- 3.6 Lubricator (Shot Type)
- 3.7 Switches (Hand Pushed Manual System)

4.0 CONVEYOR PERIPHERALS

- 4.1 Underguarding
- 4.2 Support Steel

10 Falconer Drive ● Mississauga ● Ontario ● L5N 3L8
Tel: 905.858.2330 ● Fax: 905.858.2333
July 31, 2001
email: sales@pacline.com
155 Great Arrow Ave. ● Buffalo ● New York ● 14207
Tel: 716.876.9250 ● Fax: 716.876.9287

SYSTEM S-60
CONVEYOR SPECIFICATION

1. CHAIN

1.1 CAPACITIES

Maximum Pendant Capacity	200 lbs
Maximum Chain Pull capacity	2,000 lbs
Breaking Load – Ultimate Strength	15,000 lbs
Chain Pitch (multiples that pendants can attach to)	16 inches
Maximum Operation Temperature	Metal 180 deg C/356 deg F
	Air 240 deg C/464 deg F
Minimum Radius Horizontal Curve	30 inches
Minimum Radius Vertical Curve	48 inches
Maximum Operating Speed	50 F.P.M.

1.2 CONSTRUCTION

E8 type, Bi-Planar Chain with the following parts per pitch:

- 4 Side Links
- 4 Bearing Pins
- 8 Circlips
- 2 Sintered Blocks
- 8 Bearing Wheels

1.3 ASSEMBLY

Hardened steel spindles pass through cruciform sintered iron blocks in both the vertical and horizontal planes. Side links are press fitted over the steel spindles and bearings are secured to these spindles using heavy-duty circlips.

1.4 CHAIN ROLLER BEARINGS

Open semi-precision type bearing. Case hardened inner and outer raceways complete with full compliment of case hardened carbon steel balls. With a maximum static load capacity of 325 lbs.

1.5 CHAIN SIDE LINKS

The conveyor side links are punched from EN8 medium tensile steel strip and have a thickness of 3/16 inch.

System 60 chains are *Anti Short Pitching* (the horizontal and vertical side links are the same length, which eliminates incorrect assembly)

10 Falconer Drive ● Mississauga ● Ontario ● L5N 3L8
Tel: 905.858.2330 ● Fax: 905.858.2333
July 31, 2001
email: sales@pacline.com
155 Great Arrow Ave. ● Buffalo ● New York ● 14207
Tel: 716.876.9250 ● Fax: 716.876.9287

SYSTEM S-60
CONVEYOR SPECIFICATION

1.6 SPINDLES

The spindles are machined from EN 32M carbon case-hardening semi-free cutting bright steel. One end of the spindle is knurled to captivate the side link once pressed into position, and therefore eliminating the possibility of it rotating in the link.

1.7 CRUCIFORM BLOCK

The cruciform block is manufactured from sintered iron and vacuum impregnated in Castrol Cresta FC, which is suitable for applications of up to 180 degree C (356 degree F). The cruciform block acts as a universal joint allowing the spindles to articulate in both the horizontal and vertical planes.

10 Falconer Drive ● Mississauga ● Ontario ● L5N 3L8
Tel: 905.858.2330 ● Fax: 905.858.2333
July 31, 2001
email: sales@pacline.com
155 Great Arrow Ave. ● Buffalo ● New York ● 14207
Tel: 716.876.9250 ● Fax: 716.876.9287

SYSTEM S-60
CONVEYOR SPECIFICATION

2.0 TRACK

2.1 CONSTRUCTION

Manufactured from two (2) accurately cold rolled “cruciform” sections. The two (2) sections are spaced apart by bolted end plates at a pitch of 750 mm (29 ½ inch) centers. Track sections are bolted together using (8) # 10 mm bolts and locknuts.

Standard Paint Finish: 1 coat primer and 1 coat Poppy Red RAL 3000

Standard Lengths: 3000 mm (9’-10 1/8”)

2.2 ASSEMBLY

Pressed 3/16” thick intermediate yokes are welded at 750 mm (29 ½ inch) centers to form modular sections for bolted construction track sections.

SYSTEM S-60
CONVEYOR SPECIFICATION

3.0 TRACK COMPONENTS

3.1 DRIVE UNITS

IN-LINE DRIVE UNIT with provision for speed variation up to a maximum of 15 M/min. (50 F.P.M.) The unit is supplied complete with a 2 H.P. A.C. motor and worm reducing gearbox and a friction type (mechanical) torque limiter. The overall length of the drive unit is 1640 mm (64 ½ inch). The drive configuration is either standard (down) or inverted positions.

3.2 TAKE-UP UNITS

Take-up units are a 180° horizontal with track fitted onto a spring-tensioned frame, used for tensioning the slack conveyor chain, which is exiting the drive. The take-up is also utilized to make up the chain expansion due to heat in a paint system oven. The width or spread can be manufactured at various widths, the standard width being 1524 mm (60 inches). The take-up can also be a manual screw type or an automatic pneumatic air type adjustment.

3.3 CURVES

Horizontal curves are fabricated from flanged channel rollings in a standard radius of 762 mm (30 inches).

Vertical curves are fabricated from flanged channel rollings in a standard radius of 1219 mm (48 inches).

Both the vertical and horizontal curves have pressed, bolted assembly yokes at each end. The track section lead-ins are hardened. The segments are in 30° and 15° increments

3.4 EXPANSION UNITS

Manufactured as take-up sections but without the threaded rods fitted. These are located in ovens and allow for expansion and contraction of track as the oven heats and cools. Manufactured from laser cut profiles giving no change of height to the track running face. The track section can extend 500 mm (19 5/8 inch) the standard unit to a larger unit of 750 mm (29 ½ inch)

3.5 INSPECTION SECTIONS

Removable safety cover fitted centrally on a 500 mm (19 5/8 inch) length of track, which allows visual inspection of the chain, installation or removal of the chain and also connecting the conveyor chain. Constructed from rolled steel angles connected by a split end plate at each end. For ease of identification the inspection sections are paint finished in safety yellow.

SYSTEM S-60
CONVEYOR SPECIFICATION

3.6 LUBRICATOR UNITS (SHOT TYPE)

This solid shot lubricator is an electro-pneumatic type unit, which is operated by an air cylinder. The piston rod of which forms the ram of a displacement-type oil pump mounted on a 750 mm (29 ½ inch) track section.

When the onward movement of the conveyor allows the actuating valve to close, the piston rod retracts and draws in a fresh charge of oil while the air exhausting from the cylinder passes back through the valve and ejects the stored oil charge onto the conveyor chain.

For recommended lubricants, see lubrication recommendation chart in the S310 Power & Free section.

3.7 SWITCH UNITS – PULL CORD OPERATED DIVERGE & TROLLEY OPERATED MERGE

The switches are for a non-powered manually operated (hand pushed) system. Manufactured from track bend segments, track switches are configured to give diverge or merge conditions from the left or right hand side.

Diverge switches are pull cord manually activated.

Merge switches are trolley activated.

10 Falconer Drive ● Mississauga ● Ontario ● L5N 3L8
Tel: 905.858.2330 ● Fax: 905.858.2333
July 31, 2001
email: sales@pacline.com
155 Great Arrow Ave. ● Buffalo ● New York ● 14207
Tel: 716.876.9250 ● Fax: 716.876.9287

SYSTEM S-60
CONVEYOR SPECIFICATION

4.0 CONVEYOR PERIHERALS

4.1 UNDERGUARDING

Conveyor guards are recommended where loaded conveyor paths are over work areas, aisles, and machinery, to prevent injury or damage from falling parts or hooks. The silhouette of the guarding should allow 6" to 12" clearance around the largest parts. The vertical height should permit loaded carriers to pass a fallen part lying on the bottom of the guarding. The vertical height of the guarding should be 2/3 of the tallest part. Underguarding is generally positioned at elevations 7'-0" or higher.

Sheet Metal Type: Utilized after dip tanks or washes, where dripping may be a problem or where small parts or dirt cannot be contained in mesh style guarding.

Wire Mesh Guarding: Utilized in most applications, so as to have a good view of the parts passing overhead. There are 2 basic sizes:
-2" x 2" x 10ga (rated for up to 50 lbs parts)
-2" x 4" x ¼" (rated high enough for maintenance personnel foot traffic)

Netting: Utilized in light part applications or soft goods (clothing) The netting is rated to the part weight.

4.2 SUPPORT STEEL

The support steel is custom designed to suit the loading and the spans when attaching to the building roof trusses. Traditionally 1 ½ " x 1 ½ " x 3/16" angle iron is used for the hangers and cross bracing. The header steel is a channel sized to suit the spans. Whenever possible, avoid welding the overhead steel superstructure and hanger steel to the building steel. Bolted style connections are used because welding will tend to weaken the strength of the building steel. Also the bolted connections make future changes easier. Higher point loading (drive and take-up assemblies) requires heavier hanger and header steel.

10 Falconer Drive ● Mississauga ● Ontario ● L5N 3L8
Tel: 905.858.2330 ● Fax: 905.858.2333
July 31, 2001
email: sales@pacline.com
155 Great Arrow Ave. ● Buffalo ● New York ● 14207
Tel: 716.876.9250 ● Fax: 716.876.9287