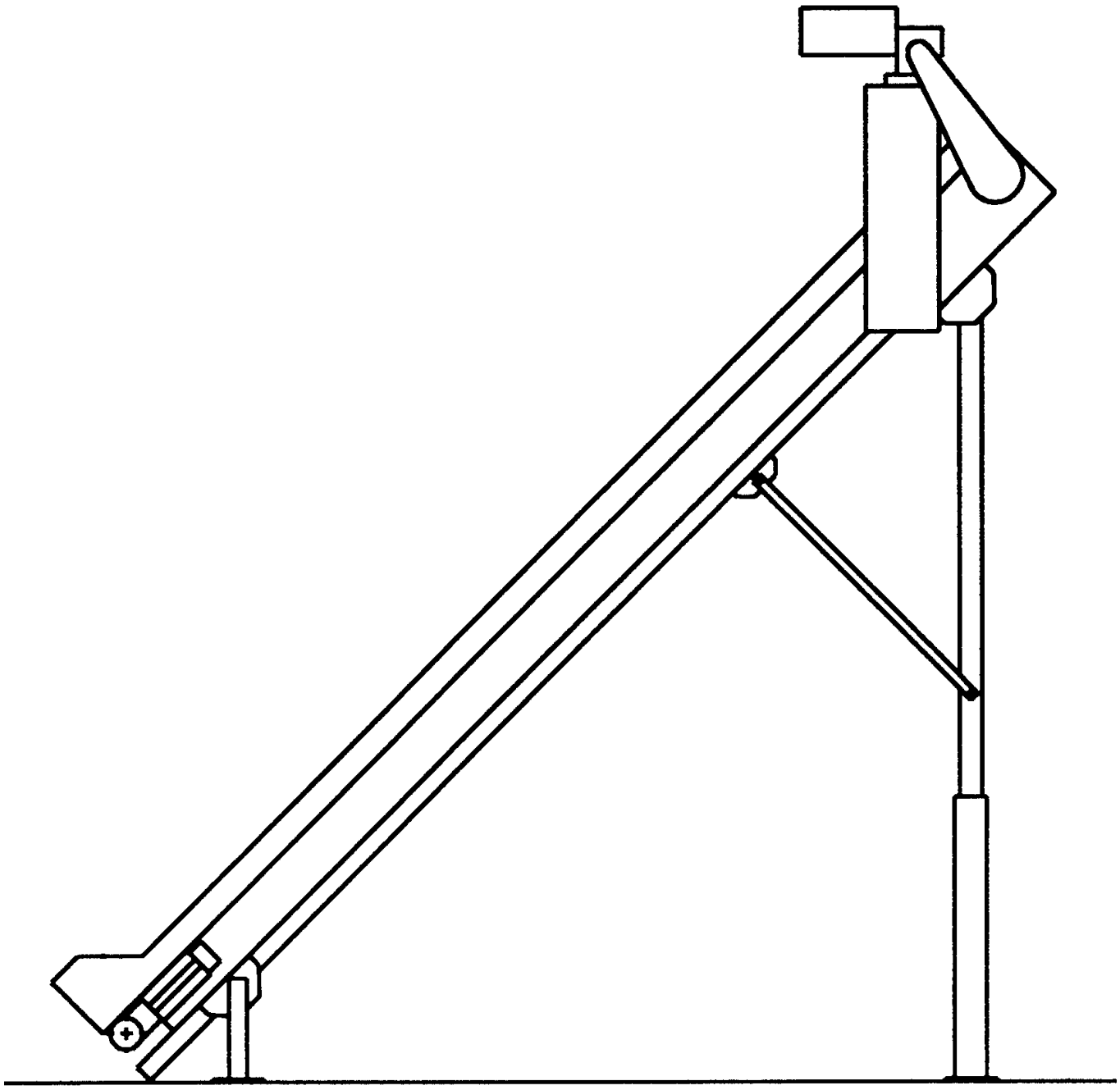
METZGAR
CONVEYORS

750 Series
Press Conveyor
Installation and Maintenance Manual



METZGAR CONVEYORS

SAFETY PRECAUTIONS

WARNING: DO NOT ATTEMPT MAINTENANCE ON ANY CONVEYORS WHILE IN OPERATION.

BEFORE STARTING MAINTENANCE:

1. Maintenance functions are to be performed while the conveyor is off. The main power switch to the conveyor should be locked in the off position. This will prevent anyone from applying power to the system while maintenance personnel are at work.
2. Never work on a conveyor while it is running, unless maintenance procedure requires operation. When a conveyor must be operating to perform the maintenance; allow only properly trained maintenance personnel to work on the conveyor.

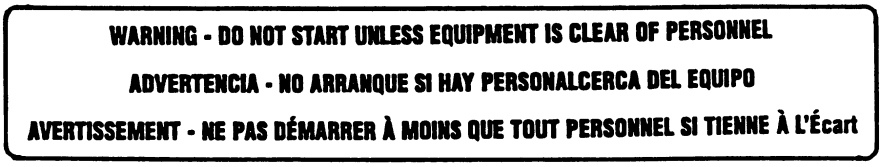
DURING MAINTENANCE:

1. Do not wear loose clothing while performing maintenance on operating equipment.
2. Be aware of hazardous conditions, such as sharp edges and protruding parts.
3. When using hoists, cables or other mechanical equipment to perform maintenance, use care to not damage conveyor components. Mis-aligned parts are dangerous as conveyor is started after maintenance is completed.
4. Keep area clean. Clean up lubricants and other materials before starting conveyor.

AFTER MAINTENANCE:

1. Before starting any conveyor after maintenance is completed, walk around the equipment and make certain all safety devices and guards are in place, pick up tools, maintenance equipment and clear any foreign objects from equipment-
2. Make certain all personnel are clear of the conveyor and made aware that the conveyor is about to be started.
3. Only authorized personnel should be allowed to start any conveyor following maintenance or emergency shut-off.

PLEASE RECOGNIZE ALL WARNING STICKERS AND OBEY ANY SAFETY INSTRUCTIONS
WARNING STICKERS ARE PLACED FOR YOUR SAFETY – PLEASE DO NOT REMOVE



CONDITIONS DO EXIST ON ANY CONVEYOR THAT CAN CAUSE INJURY TO PERSONNEL. NO MANUAL CAN COVER ALL THE HAZARDOUS CONDITIONS THAT MIGHT DEVELOP. THEREFORE, PERSONNEL INVOLVED SHOULD BE CONSTANTLY ON THE ALERT FOR UNSAFE CONDITIONS AND USE ALL POSSIBLE CARE, ALONG WITH COMMON SENSE AND STRICT ADHERENCE TO ACCCEPTED SAFETY STANDARDS TO ESCAPE INJURY.

It is hereby understood and agreed that _____

Agrees to hold Metzgar Conveyors, Employees, Leased Contractors, Affiliates, Officers, Directors, Agents and Insurance Carriers harmless against all claims, action and demands of any third persons, just or unjust, for all personal and/or bodily injuries and/or property damage due to the Customer or Customer's employees negligence/alteration of equipment.

Equipment Assemblies:

The SERIES 750 conveyors typically ship complete except for mounting of the supports, installing a breather plug in the reducer, checking the oil level in the reducer if required and wiring the unit.
Sub-assemblies are packaged for shipment using combinations of wood, corrugated cardboard and steel strapping.

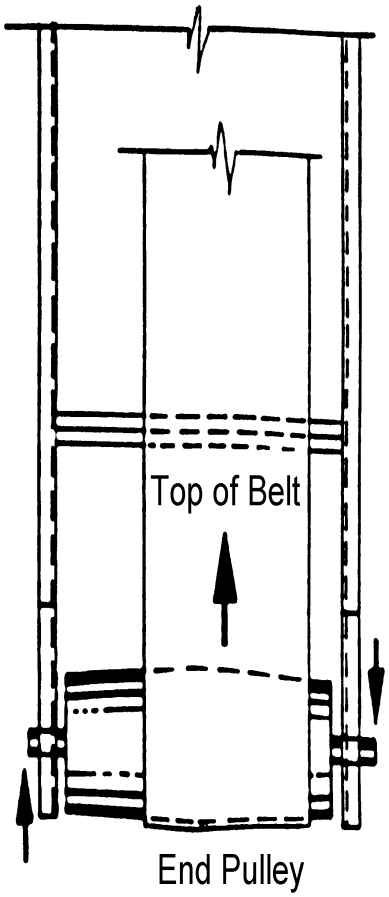
Operation And Belt Tracking:

The Conveyor should be run for a short period of time to determine if the belt is tracking properly and all moving parts are working properly. If the belt tracks to one side constantly or has a tendency to ride up on one side of the guard rail, tracking adjustments are required. A mis-tracked belt will cause excessive wear to the belt, damage the unit and require additional horsepower to move the belt.

The drive pulley should be square with the bed prior to any tracking adjustments. Tracking adjustments should be made to the tail pulley in small increments and observed for a minimum of two rotations of the belt before making further adjustments.

Sufficient belt tension is required to move the belt without the drive pulley slipping due to the load or speed. Tension adjustments should be made in equal increments to both sides of the tail pulley.

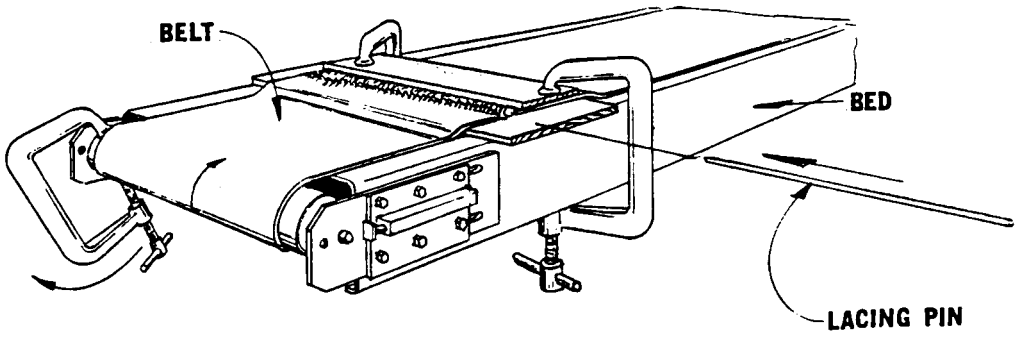
When proper belt tension and tracking is completed tighten the locking means provided to maintain the proper settings.



Belt Installation:

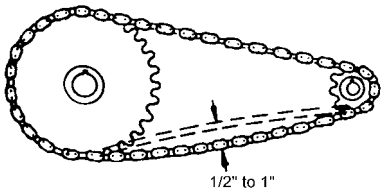
Install the belt after all the conveyor bed sections have been squared. This should eliminate the possibility of a non-square bed making belt tracking difficult.

1. Adjust the take-up pulleys inward to allow for as much slack as possible when joining belt ends.
2. The belt is cut to length, laced and rolled with the carrying surface inside for shipping. Place the belt roll on the bed and unroll, the carrying surface should be facing upward.
3. Thread the belt through the drive pulley, snubber roller, carrier rollers and end pulleys as shown in the illustrations on page 3. Take care to insure the correct belt path and when possible, join ends as close to the unit end as possible, this will ease in the installation of the lacing pin.
4. After the belt is properly installed, take up the belt slack evenly with the end pulley assemblies or additional horizontal or vertical take-ups.



Chain Tension and Alignment:

Chain Tension should be adjusted to allow ½" to 1" of movement between the sprockets.
Replace Chain Guard after adjusting chain tension.
Use a straightedge to align sprockets. Make sure the setscrews are tight when finished.



Mechanical Maintenance:

Item	Schedule	Service
Motor and Gear Reducer	At Start-up and 100 Hours	Check Oil Level
	After 100 Hours	Change Oil and Check Oil Level at Regular Intervals
	After 2000 Hours	Change Oil
Roller Chain	200 Hours	Check Tension at Regular Intervals
	2000 Hours	Clean and Lubricate with Brush or Spray
Flange Bearing	2000 Hours	Lubricate
Sealed for Life Bearing (End Take-up pulleys, Snubber and Return Rollers)	Monthly	Check for Unusual Noise or Excessive Wear, Replace as Required
Belt	Weekly	Check for Alignment and Tracking Re-track Belt as Required

Note:
Gear Reduction Drives Supplied With Metzgar Belt Units Are Filled With Lubricant Prior To Shipping.
The Lubricant Level Should Be Checked Prior To Start-Up and the Breather Plug Installed in the Proper Location (See Reducer Manual Supplied With Unit)
Only Refill Reducers With The Approved Lubricant (Synthetic Compound)
Standard Service Only - If Service Is More Severe, The Oil Should Be Changed More Frequently.
Consult The Reducer Manufacturer For A More Specific Lubrication Schedule.

Electrical Maintenance:

WARNING: DISCONNECT ALL POWER BEFORE PERFORMING THE FOLLOWING MAINTENANCE.
ONLY A QUALIFIED ELECTRICIAN OR AN ELECTRICAL TECHNICIAN SHOULD PERFORM THE FOLLOWING MAINTENANCE.

Item	Schedule	Service
Control Panels and Pushbutton Enclosures	Always	Enclosures should be Clean and Dry
	100 Hours and 2000 Hours	Check if components have Vibrated Loose Check Door/Power interlocks and Latches
	At Start-up, Monthly or if any problems Occur.	Check for Loose or Discolored Wires (Discolored Wires Indicate an Excessive Current Draw)
Photoeyes	At Start-up and 2000 Hours	Dust, Oil and Foreign Objects should be wiped from lens and Reflectors
Limit Switches	100 Hours and 2000 Hours	Check Arms for Adjustment and Tightness
Pushbuttons	100 Hours and 2000 Hours	Check Wires and Terminals for Tightness
Emergency Stop Devices	100 Hours and 2000 Hours	Check for Proper Operation
Conduit and Conduit Hangers	2000 Hours	Check for alignment and Damage, Exposed Wiring
Wiring	At Start-up, Monthly or if any problems Occur.	Check for Exposed Cords and Wires for Damage, Replace as Necessary

Note:
A Qualified Electrician Or Electrical Technician Should Keep A Log Book Of The Following Readings with any Excessive Deviation from Normal, Signals a Problem Area.

1. Measure Voltages And Current Of Incoming Power To Enclosure
2. Measure Current Readings Of All Motors
3. Measure Current Readings On Primary And Secondary of Control Transformer To Insure Proper Voltage.

Review Spare Parts:
Review Usage - Excessive Use of Fuses Or Replacing The Same Part Several Times Indicates an Excessive Current Draw, Faulty Components, or Exceeding The Capacity of the Conveyor Unit.

Trouble Shooting Guide:

Belting :

Problem	Possible Cause	Remedy
Belt Slips On Drive Pulley	Take-Up Pulley Not Adjusted Properly	Adjust Each Take-Up Screw In Small Increments
	Face of Drive Pulley or Pulley Side of the Belt Is Slippery	Replace Lagging If Worn Smooth. If Objects In The Lagging Cause Slippage, Clean By Scraping With A Wire Brush. Do Not Use Belt Dressing, Thinners, Oils, Gasoline Or Solvents. These Items Could Impregnate a Belt or Pulley Lagging And Cause Pre-Mature Wear.
	Snubber Roller Is Misaligned	Realign Snubber To Increase Wrap on the Drive Pulley
Belt Lace Pulling Out	Belt Tension To Great	Reduce Belt Tension by Adjusting the Take-Up
Wear On Pulley Side of Belt	Belt Slipping On Drive Pulley	Adjust Each Take-Up Screw In Small Increments
	Pulley Or Roller Bearings Sticking	Check Alignment, Damage and Lubrication
	Misaligned Or Damaged Beds	Check Slider Bed For Smoothness and Alignment
Top Surface Of Belt Damaged	Obstruction	Inspect Conveyor For Obstructions And Remove
	Damaged Idler Or Snubber Roller	Check Return Idlers And Snubbers for Foreign Material
Belt Travels To One Side Of Unit	Rollers Upstream Not Square	Adjust Roller On Side Shifted, To Belt Travel Direction
	Bed Frame Structure Not Square	Check Bed With Level And Adjust To Proper Elevation
	Foreign Material On Roller Or Pulley Face	Clean Material Off Rollers And Pulleys And Check For Freeness And Alignment
	Belt Travels Off Drive Or Tail Pulley	Check Alignment Of Drive Pulley, Snubber Roller, Return Rollers Or The Slider Bed. Adjust Tail Pulley To Increase Tension On The Side Of The Belt Which Has Traveled “Don’t Adjust Drive Pulley Except To Square It To Bed” The Snubber Roller Is Used To Track The Belt At The Drive Pulley

Pulleys:

Frozen or Stuck Pulley	Damaged Bearings	Replace Bearings with same Type
	Bent Shaft	Replace Shaft with Same Material, Diameter and Length
Pulley Travels or Slips on Shaft	Pulley Not Locked to Shaft	Tighten Set-Screws in Pulley Hubs
	Conveyor Not Installed Square	Square Conveyor Frames
	Conveyor Not Level	Adjust to Proper Elevation
	Belt Not Square to Center Line	Re-Cut Belt, Square Ends and Re-Lace
Noise	Lack of Lubrication	Lubricate Bearings
	Obstruction	Remove Obstruction
	Pulley Moved To One Side Of Unit	Center Pulley And Tighten Set Screws
Eccentric Pulley Or Wobble	Damaged Pulley Or Pulley Hub	Replace the Pulley
	Bent Shaft	Replace Shaft with Same Material, Diameter and Length
	Loose Bearings	Tighten or Replace Bearings
	Foreign Material On Pulley Face	Remove Foreign Material

Motor and Gear Reducer:

Hard To Start, Stalling Out Or Running Hot	Drag On Conveyor	Inspect For Obstruction Causing Drag And Remove
	Lack Of Lubricant	Check Oil Level In Gear box, Verify Vent Plug Is Open
	Frozen Pulley	Inspect All Pulleys And Bearings, Replace If Faulty
	Frozen Roller	Inspect All Rollers, Replace If Faulty
	Overloaded	Remove Load And Possibly Increase Horsepower
	Electrical	Check Wiring, Circuits And Take Amp Readings
Excessive Noise	Lack Of Lubricant	Check Oil Level In Gearbox & Add If Needed
	Damaged Gears	Replace Unit
	Faulty Bearing	Replace Bearings

Chain and Sprockets:

Abnormal Wear	Excessive Chain Tension	Reduce the Chain Tension
	Mis-Aligned Sprockets	Align Sprocket Faces with Straight Edge
	Chain not Lubricated	Lubricate with Proper Lubricant
	Damaged Chain or Sprocket	Replace Damaged Component
	Mis-Aligned Chain Guard	Adjust as Required
Excessive Noise	Loose Chain	Adjust Chain Tension
	Chain not Lubricated	Lubricate with Proper Lubricant
	Mis-Aligned Sprockets	Align Sprocket Faces with Straight Edge
Pulsating Chain	Improper Chain Tension	Adjust Chain Tension
	Overload	Inspect for obstruction causing drag and remove
Broken Chain	Frozen Pulley, Sprocket or Shaft	Inspect and Replace Damaged Items
	Worn or Damaged Chain	Replace Damaged Chain
	Obstruction	Inspect Conveyor for Obstruction and Remove
Sprocket Loose on Shaft	Loose Set Screws	Align Sprocket Faces with Straight Edge and Tighten Set Screws
	Worn or Damaged Key	Replace Key and Inspect Shaft Keyway for Damage
Chain Slack	Normal Wear	Adjust Chain to Proper Tension

Electrical:

Motor Not Operating	Emergency Stop Activated	Reset Pull Cord, Air Pressure Switch or Pushbuttons
	Blown Fuses	If Resistance From Hot To Ground Is Ok Replace Fuse
	Overload Relay Tripped	Reset Relay, Measure Current Draw Amprobe
	Check For Wiring Problems	Check Wiring Diagram For Correct Connections
Belt Running Wrong Direction	3 Phase Motor – Switch 2 wires	Check Proper Voltage Wiring Diagram
	1 Phase Motor Wired Incorrectly	Check Proper Voltage Wiring Diagram
	DC Motor Wired Incorrectly	Check Proper Voltage Wiring Diagram
Overload Relay Trips	Check Setting On Overload Relay WithFull Load Amps On Motor Nameplate	If Incorrect Reset Overload Relay To Motor Full Load Amps
	Check For Mechanical Binding Or Jams	Remove Item Creating Drag Load On Unit **-** Check Belt
	Additional Load Is Too Much For Motor	Decrease The Amount Of Product Load On Unit
	Check If Motor Current Draw Is High	Drive May Require More Horsepower-Consult Factory
Unit Operates Sporadically	Check Photoeyes	Clean Lens and Check for Proper Alignment
	Check Reflectors	Clean and Check for Proper Alignment
	Limit Switches	Check Arm Location and Tightness
	Solenoids	Check Pressure at the Valve
	Loose Connections	Check Wire Nuts and Terminal Strip

DO NOT ATTEMPT MAINTENANCE ON ANY CONVEYOR WHILE IT IS IN OPERATION

Belt Conveyor Replacement Parts:

6" Drive Pulleys (5" Diameter plus Lagging) Includes 1 3/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 3/16" Bore
12 ½"	6"	7"	**706-126Dpulley**
18 ½"	12"	13"	**706-1812Dpulley**
24 ½"	18"	19"	**706-2418Dpulley**
30 ½"	24"	25"	**706-3024Dpulley**
* 36 ½"	30"	31"	**706-3630Dpulley**
* 42 ½"	36"	37"	**706-4236Dpulley**
* 48 ½"	42"	43"	**706-4842Dpulley**

*** = For power tail drive pulleys only**

9" Drive Pulleys (8" Diameter plus Lagging) Includes 1 7/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 7/16" Bore
12 ½"	6"	7"	**709-126Dpulley**
18 ½"	12"	13"	**709-1812Dpulley**
24 ½"	18"	19"	**709-2418Dpulley**
30 ½"	24"	25"	**709-3024Dpulley**
36 ½"	30"	31"	**709-3630Dpulley**
42 ½"	36"	37"	**709-4236Dpulley**
48 ½"	42"	43"	**709-4842Dpulley**

12" Drive Pulleys (12" Diameter plus Lagging) Includes 1 15/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 15/16" Bore
18 ½"	12"	13"	**712-1812Dpulley**
24 ½"	18"	19"	**712-2418Dpulley**
30 ½"	24"	25"	**712-3024Dpulley**
36 ½"	30"	31"	**712-3630Dpulley**
42 ½"	36"	37"	**712-4236Dpulley**
48 ½"	42"	43"	**712-4842Dpulley**

4" End Pulley (4" Diameter with Internal Bearings) Includes 1 3/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 3/16" Bore
12 ½"	6"	7"	**701-126-419Epulley**
18 ½"	12"	13"	**701-1812-419Epulley**
24 ½"	18"	19"	**701-2418-419Epulley**
30 ½"	24"	25"	**701-3024-419Epulley**
36 ½"	30"	31"	**701-3630-419Epulley**
42 ½"	36"	37"	**701-4236-419Epulley**
48 ½"	42"	43"	**701-4842-419Epulley**

5" End Pulley (5" Diameter with Internal Bearings) Includes 1 7/16" Diameter Shaft

Overall Width	Belt Width	Face Width	Pulley with 1 3/16" Bore
12 ½"	6"	7"	**701-126-523Epulley**
18 ½"	12"	13"	**701-1812-523Epulley**
24 ½"	18"	19"	**701-2418-523Epulley**
30 ½"	24"	25"	**701-3024-523Epulley**
36 ½"	30"	31"	**701-3630-523Epulley**
42 ½"	36"	37"	**701-4236-523Epulley**
48 ½"	42"	43"	**701-4842-523Epulley**

701/801 Snubber Roller

Overall Width	Belt Width	Snubber Rollers Steel
12 ½"	6"	**701-126SRS**
18 ½"	12"	**701-1812SRS**
24 ½"	18"	**701-2418SRS**
30 ½"	24"	**701-3024SRS**
36 ½"	30"	**701-3630SRS**
42 ½"	36"	**701-4236SRS**
48 ½"	42"	**701-4842SRS**

701/801 Return Rollers with 7/16" Hex Shaft

Overall Width	Belt Width	Return Rollers Steel
12 ½"	6"	**701-126RRS**
18 ½"	12"	**701-1812RRS**
24 ½"	18"	**701-2418RRS**
30 ½"	24"	**701-3024RRS**
36 ½"	30"	**701-3630RRS**
42 ½"	36"	**701-4236RRS**
48 ½"	42"	**701-4842RRS**

801 Carrier Rollers with 7/16" Hex Shaft

Overall Width	Belt Width	Carrier Rollers Steel
12 ½"	6"	**801-126CRS**
18 ½"	12"	**801-1812CRS**
24 ½"	18"	**801-2418CRS**
30 ½"	24"	**801-3024CRS**
36 ½"	30"	**801-3630CRS**
42 ½"	36"	**801-4236CRS**
48 ½"	42"	**801-4842CRS**

Four Hole Flange Bearings

ID of Bearing	Part Number
1 3/16"	**706-4hole19**
1 7/16"	**709-4hole23**
1 15/16"	**712-4hole31**

Plastic Chain Guards

Drive	Part Number
706	**706-PCG**
709 & 712	**709-PCG**
Power Tail	**701-PT-PCG**

Chain Parts:

50B12T to 50B35T	Standard Sprockets for #50 Chain
50-Chain	Feet of #50 Roller Chain
60B11T to 60B36T	Standard Sprockets for #60 Chain
60-Chain	Feet of #60 Roller Chain
80B12T to 80B30T	Standard Sprockets for #80 Chain
80-Chain	Feet of #80 Roller Chain

Touch-Up Paint

MB-SPaint	Spray Can of Metzgar Blue Touch-up Paint
MB-1gCPaint	One Gallon Can of Metzgar Blue Touch-up Paint
VG-SPaint	Spray Can of Vista Green Touch-up Paint
VG-1gCPaint	One Gallon Can of Vista Green Touch-up Paint