MATERIAL CONTROL, INC.

"We Keep Your Conveyor Noving!"



cable operated conveyor safety pc-stop switch is the finest switch of its kind — rugged construction withstands the hardest usage.



CERTIFIED

MATERIAL CONTROL, INC.

TERIAL CONTROL, INC

P.O. BOX 308 NORTH AURORA, IL 60542-0308 800-926-0376 • 630-892-4274 • FAX 630-892-4931 WWW.MATERIALCONTROLINC.COM • EMAIL: SALES@MATERIALCONTROLINC.COM









TECHNICAL INFORMATION:

Enclosure sealed for outside applications • Standard unit meets NEMA 1,3,4,4X and 12 requirements • Housing: cast aluminum • Flag arm: steel with red epoxy paint coating.

SELECTION AND MODEL INFORMATION

1-SINGLE POLE:

double throw micro switch PCL-1SLEFT HAND PCR-1SRIGHT HAND TYPICAL USE:

Emergency shutdown of conveyors or other machinery.

AVAILABLE OPTIONS:

- Hazardous locations
- Corrosive locations

2-SINGLE POLE:

Double throw micro switch PCL-2SLEFT HAND PCR-2SRIGHT HAND TYPICAL USE:

Emergency shutdown of conveyors or other machinery — with alarm or computer interface capability.

AVAILABLE OPTIONS:

- Hazardous locations
- Corrosive locations
- Remote or dark locations



TYPICAL USE: Emergency shutdown of conveyors and other machinery. AVAILABLE OPTIONS: • Hazardous locations • Corrosive locations

double throw micro switch for

PCL-1TLEFT HAND

PCR-1T RIGHT HAND

2-TWO CIRCUIT:

1-TWO CIRCUIT:

D.C circuits

Double throw micro switch for D.C circuits PCL-2TLEFT HAND

PCR-2TRIGHT HAND TYPICAL USE:

Emergency shutdown of conveyors or other machinery — with alarm or computer interface cap. **AVAILABLE OPTIONS:**

- Hazardous locations
- Corrosive locations
- Remote or dark locations

MODELS PCL-1T PCR-1T PCL-2T PCR-2T

1-SINGLE POLE:

double throw micro switch at each end PCD-2S DOUBLE ENDED

TYPICAL USE:

Emergency shutdown of conveyors and other machinery. AVAILABLE OPTIONS:

- Hazardous locations
- Razardous location
 Corrosive locations
- Remote or dark locations
 - Remote or dark locations

1-TWO CIRCUIT: double throw micro switch at

each end for D.C circuits PCD-2T DOUBLE ENDED TYPICAL USE:

Emergency shutdown of conveyors or other machinery.

AVAILABLE OPTIONS:

- Hazardous locations
- Corrosive locations
- Remote or dark locations
- Pennsylvania B.O.T.E. approved

2-SINGLE POLE:

Double throw micro switches at each end

PCD-4S DOUBLE ENDED TYPICAL USE:

Emergency shutdown of conveyors or other machinery — with alarm or computer interface capability.

AVAILABLE OPTIONS:

- Hazardous locations
- Corrosive locations
- Remote or dark locations

MODELS PCD-2S

PCD-4S

2-TWO CIRCUIT: Double throw micro switches at each end for D.C circuits PCD-4T DOUBLE ENDED TYPICAL USE:

Emergency shutdown of conveyors or other machinery — with alarm or computer interface capability

AVAILABLE OPTIONS:

- Hazardous locations
- Corrosive locations
- Remote or dark locations

MODELS PCD-2T PCD-4T

SPECIAL APPLICATION OPTIONS:

HAZARDOUS LOCATIONS:

- Explosion proof units meet NEMA 7 class 1, Groups C and D
- NEMA 9 class II, Groups E, F and G for hazardous locations. Add
- "X" to model number, NO ADDITIONAL CHARGE.

CORROSIVE LOCATIONS:

Epoxy coated switches with standard flag arms and plated torsion springs. Please add "**EPOXY**" to model number.

REMOTE OR DARK LOCATIONS:

Use or red warning light in dark and remote areas (requires two micro switches per end of housing). 125V AC. NOTE: Available in rain tight, dust tight and explosion proof. Add prefix "L" to model number.

PENNSYLVANIA B.O.T.E. APPROVED: PCD-27-B.O.T.E.

SEE PRICE SHEET FOR PRICES

ACCESSORIES:



TORSION SPRINGS Right or left hand replacement torsion springs for all PC switches. PC-31 RH or LH



CABLE SUPPORT EYE BOLTS Plated 1/2" N.C. thread - two nuts and one lock-washer included. **PC-27**



CABLE END FITTINGS Forged steel saddle and steel U-bolt. Cadmium plated bolts and nuts. PC-28



PROTECTIVE COATING 3/32 7x7 preformed galvanized aircraft cable 3/16" O.D. Vinyl coated. PC-25 Nvlon coated. PC-26



CONDUIT PLUG 1" metal conduit plug. PC-29 PC MOUNTING Bracket. PC-30

conveyor safety pc-stop switch

for immediate positive shutdown of equipment



Our PC Stop Switch can be used for emergency or normal shutdown of conveyor systems, elevator equipment, bulk handling systems, cranes, production and assembly lines. Or any other equipment which may require immediate, positive shutdown.

SEE OUR OTHER BULLETINS FOR ADDITIONAL SWITCHES TO KEEP YOUR CONVEYOR OPERATING SMOOTHLY





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ABLE OPERATED SAFETY STOP GONTROL FOR CONVEYORS

MODEL SS

WHAT IT IS, AND WHAT IT DOES

The Model SS is a rugged safety control that provides a quick positive shut off of dangerous equipment in emergencies or normal operation. It is actuated by a cable pulled by endangered personnel. The output contacts of the Model SS can control up to two separated circuits, one for machinery shutdown and one for alarm.

WHY IS IT NECESSARY?

Safety minded operators of conveyors, production lines, elevator equipment, assembly lines, material handling systems, cranes, etc. consider it a must for employee protection. Most states have safety statutes that require these controls on conveyor and related equipment. American National Standard institute recommends their use (ANSI Standard No. ASME B20.1).

SS TECHNICAL INFORMATION

MODEL	DESCRIPTION
SS-1	General Purpose, 1 SP/DT microswitch
SS-1X	Explosion proof with 1 SP/DT microswitch, NEMA type 7 and 9
SS-2	General Purpose, 2 SP/DT microswitches
SS-2L	2 SP/DT microswitches with external signal light, includes 120V lamp, weatherproof
SS-2X	Explosion proof with 2 SP/DT microswitches, NEMA type 7 and 9
SS-5	General Purpose, 2 DP/DT microswitches
SS-5X	Explosion proof with 2 DP/DT microswitches, NEMA type 7 and 9

Note: Dual-Rated enclosures also available. Contact Sales for details.

EXCLUSIVE FEATURES

- 1. The Model SS is equipped with a positive safety lock. Having once been actuated, it cannot be accidentally reset causing dangerous equipment to restart. In order to reset the control, the actuation arm must be pushed in and turned. It takes no longer and it makes this a true "safety" control.
- 2. The Model SS is installed with cable extending in both directions from the actuating handle. There is one electrical connection inside. This simple arrangement eliminates the double electrical connections required in two ended units employing a separate microswitch for cable in each direction.
- 3. The actuation force required is simply adjusted in the field by a change in the position of the cable in holes provided in the actuation arm. One of our units will handle as much cable length as a double ended competitive unit and there is no longer a need to specify actuating force or right or left handed units.
- 4. The standard construction of the unit is a corrosion resistant aluminum housing complete with stainless steel hardware and red powder coated actuation handle. The actuation shaft is of stainless steel. Epoxy coating is also available if required.
- 5. The Model SS controls are listed by UL, Inc. and CSA Group. The general purpose models are listed for non-hazardous atmospheres. Explosion proof models are listed for use in hazardous atmospheres as defined by the National Electric Code handbook and the National Electrical Manufacturers Association Standards for NEMA type 7 and 9 hazardous locations. Specifically, they are listed for Class I, Div 1, Groups C and D; and Class II, Div. 1, Groups E, F and G.
- 6. The Model SS offers the lowest cost per foot of protection because it incorporates fewer switches and less wiring is required. Cable may be extended in either or both directions with no changes required in the internal mechanism of the unit and the wiring is still of a simple uncomplicated nature.
- 7. The unit is available with a warning light that may be wired to indicate actuation. This permits easy identification of actuated units in areas where visual identification is difficult.



OPERATION OF THE UNIT

The Unit is usually installed with cable running in both directions from the crank type actuating arm. Each of the two sections of the cable runs to a fixed point through eyebolts spaced at regular intervals.

A pull on the cable at any point along its run will rotate the red actuation arm approximately 60°. The actuation arm will end in a position that is easily seen from a distance, thus identifying the actuated unit. Two spring loaded detents riding on a hardened steel cam provide resistance to arm rotation. When the actuation force overcomes this resistance the assembly rotates 60° and is locked in place by the detents. Affixed to the rotating shaft is a cam mechanism which actuates up to two microswitches during rotation. The microswitches are held in the actuated position by the detents.

To reset the unit and deactuate the microswitches, the actuation arm is pushed in and rotated backwards.

DETERMINATION OF NUMBER OF UNITS REQUIRED

The Model SS control is designed so that a maximum of 100 feet (30m) of cable can be used on each side of the unit. A single control can therefore cover a maximum of 200 feet of conveyor belt or other machinery. Of course, if necessary, cable can be extended in only one direction from either side of the unit. The electrical characteristics of the application will determine the numbers of microswitches to be specified in the unit: either one, or two. The environmental considerations will determine whether or not the unit is to be explosion proof or to have special paint or coatings. The possibility of a light to aid in identification or actuated units should be considered.

We recommend that high quality cable be used with the control to assure proper actuation with no stretching. We recommend our own galvanized aircraft cable which is available with either vinyl or nylon coating. It is orange in color and weighs 0.03 lbs. per foot and has an outside jacketed diameter of 3/16".

CABLE POSITIONS	A	SWITCH CTUATING ARM
The second se	POSITION	TOTAL ACTUATION Force required (LBS)
	1	40
3		28
	3	20



As shown in the chart and picture of the actuating arm, the actuation force can be varied by attaching the cable at any one of the three positions.

The cable should be supported by eyebolts every 8-10 feet (3m). These supports ensure that the weight of the cable alone will not actuate the control.

MODEL SS DIMENSIONAL INFORMATION





Standard Construction - Rubber gaskets seal unit for outside applications listed by UL for NEMA 4/4X dust-tight and rain tight construction. Applies to general purpose units.

Housing - Cast aluminum. Epoxy coating available.

Conduit Opening - 3/4" NPT standard. 1" NPT optional (non UL). All units have three conduit openings.

Actuating Arm - Red powder-coated steel handle with stainless steel shaft.

Internal Cam and Wear Plate - Hardened steel.

External Hardware - Stainless steel.

Switches - SP/DT microswitches. Rated 20A @ 120 VAC, 240VAC, and 480 VAC; 1/2 amp at 125 VDC and 1/4 amp at 250 VDC. Switches may be wired for single throw operation, either normally open or normally closed as required. DP/DT (15A) microswitches also available.

SS INSTALLATION INSTRUCTIONS

- 1. The controls should be mounted on a flat surface using the three mounting holes on the bottom half of the housing. The holes are designed for 3/8" bolts.
- 2. Each unit can cover a maximum of 200' of conveyor -100' in each direction. Safety considerations dictate that not more than 100' of cable be attached on each side. More cable might result in too much slack, delaying actuation.
- 3. The eyebolts supporting the cable should be placed at intervals from 8-10'. Care must be taken that the cable does not become too slack. However, if the cable is too tight, false actuation of the switch might occur.
- 4. The Model SS control is designed for pilot duty. The control circuit should be wired through the motor starter circuit of the conveyor or other equipment to be controlled. Do not wire the unit directly into a heavy duty motor circuit.
- 5. The unit should be tested after installation by actuation of the cable. The protected equipment should stop and alarms should sound as required with a minimum of effort on the cable. Cable tension can be adjusted if necessary by changing the location of the cable on the handle.





SS-30 BRACKET for mounting the Model SS stop switch to the conveyor stringer at an idler.

CABLE SUPPORT EYE BOLT 1/2" x 6" plated 2-1/2" long N.C. thread. 1" eye, two nuts and one lockwasher. Item # SS-27 THREADLESS CABLE SUPPORT EYE BOLT Item # SS-23 CABLE END FITTING Secures protective cable to switch hand and supports. Item # SS-28 SAFETY CABLE 3/32" x 7x7 preformed, galvanized aircraft cable. Protective coating in either orange coated vinyl or nylon. 3/16" O.D. Item # SS-25 (vinyl) SS-26 (nylon)



conveyor belt alignment switch

our model 16 conveyor belt alignment switch prevents conveyor belt run-off, decreases downtime and increases production time





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INSTALLATION INSTRUCTIONS:

Model 16 units are always used in pairs with one placed on each side of the conveyor belt, usually near the head end of the conveyor. They may also be placed at the tail pulley and at selected points along the conveyor. should not be mounted too close to the belt because false signal would result. In most applications , the units could be mounted about 1" from the belt, eliminating false signals but protecting belt against wide deviations.

The unit should be mounted on supports so that the roller is perpendicular to the conveyor belt at the mid-point. The roller is $3^{1}/2^{"}$ high. The point of interception would be at the $1^{3}/4^{"}$ point. Units

The micro switch can be wired to give warning signals or it can be connected directly into the motor starter circuit to stop a conveyor. The roller moves approximately $^{1}/_{4}$ " to actuate the micro switch.



MODEL 16 SWITCH ELECTRICAL RATINGS:

MODEL 16-1 - 20 amp @ 125, 250 OR 480 VAC • 1 hp. @ 125 VAC • 2 hp. @ 250 VAC • 1/2 amp @ 125 VDC • 1/4 amp @ 250 VDC MODEL 16-2 - 10 amp @ 125 or 250 VAC • 0.3 amp @ 125 VDC • 015 amp @ 250 VDC

 MODEL 16-2
 — 10 amp @ 125 or 250 VAC • 0.3 amp @ 125 VDC • .015 amp @ 250 VDC

 MODEL 16-1X
 — 10 amp @ 125, 250 or 480 VAC • 1/2 amp @ 125 VDC • 1/4 amp @ 250 VDC

 MODEL 16-2X
 — 10 amp @ 125 or 250 VAC • 0.3 amp @ 125 VDC • 0.15 amp @ 250 VDC

MODELS AVAILABLE - SEE PRICE SHEET FOR PRICES

MODEL 16-1

One single pole double throw dust and weather tight micro switch. USE: conveyor shut-off. WEIGHT: 18 lbs. Meets NEMA 1, 3, 4 and 13.

MODEL 16-2

One double pole double throw dust and weather tight switch. USE: conveyor shut-off and alarm or computer interface. WEIGHT: 18 lbs. Meets NEMA 1, 3, 4 and 13.

MODEL 16-1X

One single pole double throw explosion proof micro switch. USE: explosion proof conveyor shut off. WEIGHT: 21 lbs. Meets NEMA 7 class 1 group C & D, NEMA 9 class II groups E, F & G.

MODEL 16-2X

One double pole double throw explosion proof micro switch. USE: explosion proof conveyor shutoff and alarm or computer interface. WEIGHT: 21 lbs. Meets NEMA 7 class I groups B, C & D, NEMA 9 class II groups E, F & G.

SPECIAL MODEL 16H FOR VERTICAL BELTS... A special model 16 can be furnished for sensing deviations in belts running vertically, for instance, bucket elevators, etc. For these applications model 16 has a horizontal rather that vertical roller. To order this model please add "H" to model number (16H), no additional charge.



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OUR MODEL 16 CONVEYOR BELT ALIGNMENT SWITCH PRE-VENTS CONVEYOR BELT RUN-OFF! DECREASES DOWNTIME AND INCREASES PRODUCTION

- Inexpensive protection for conveyor belts
- Ruggedly built not a light duty limit switch
- Easy to install
- Can be bolted directly to discharge chute or mounted to frame

Protect your valuable conveyor belts from severe damage from belt misalignment or run-off. the Model 16 belt alignment switch is designed especially for bulk handling conveyor applications, makes sure that belts are tracking properly, prevents costly downtime and unnecessary maintenance expenses. This rugged, heavy duty switch operates on a very simple principle. Two switches are positioned close to the belt, one on each side, so that any undesirable side-to-side motion will contact a switch roller. The roller "gives" just enough to shut down the system. Thus, conveyor damage and serious downtime are eliminated. Now available with our rugged breakaway mount as optional equipment.

We recommend two switches mounted on opposite sides near the tail pulley and near the head pulley. On conveyors 300' or more, use two more in the center. On short conveyors two switches on tail pulley are adequate.



BREAKAWAY MOUNT

Designed especially for high speed conveyors. This new feature allows the switch to perform its job of shutting down the system, but automatically gets it out of the way if a high speed belt does run off before stopping. Automatically returns to unactuated position when belt is realigned.

OPTIONAL "EXTRA" SWITCH

Use this switch when roller activated micro switch is used as an alarm and then this "extra" switch is used to shut off.



"EXTRA" SWITCH, dust and weather tight (single pole double throw) 10 AMP, NEMA 1, 3, 4, 6 and 13. PT #16-55

"EXTRA" SWITCH, explosion proof, (single pole double throw) 10 AMP explosion proof NEMA 7 & 9. PT #16-55X

SUPPORT BRACKET, not used with breakaway mount . PT #16-M

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NEW all in one speed responsive switch-model SRC

rain tight, dust tight and explosion proof models speed range .1 to 1000 R.P.M.





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OPERATION INFORMATION

USAGE:

The model SRC motion sensing control is a compact switch designed to include all mechanical and electronic components in one housing. It will produce an output signal at a predetermined speed which may be either overspeed, underspeed, or zero speed. Rugged, heavy duty construction combined with solid state electronics and photo-electric technology, make this one of the most advanced motion detectors available. Model SRC protects all valuable rotating equipment including belt conveyors, bucket elevators, rotary feeders, or screw conveyors. It operates in either a clockwise or counterclockwise direction and mounts in any position.

HOW IT OPERATES:

The model SRC senses motion by means of a precision metal disc mounted on the input shaft. This disc generates measurable light pulses by a series of slots on its periphery, which rotate past an infra-red light source. A photo-electric sensor monitors the series of light pulses and converts them to a digital electronic signal. Solid state circuitry then analyzes the digital signal and activates or deactivates the output relay at the pre-set speed.

Field adjustment of the signal set point is easily accomplished by means of an adjustment screw on the electronics. For underspeed sensing, the signal point is set below the normal operating speed of the unit. The output relay will then de-energize if the speed drops below the signal point. For overspeed sensing, the pick-up point is set above the normal operating speed. The output relay will energize if the speed exceeds the pick up point. Zero speed sensing can be accomplished by turning the adjustment screw to its minimum set-ting. The output relay will then de-energize when the shaft speed of the unit approaches zero.

SPECIFICATIONS

FLECTRICAL:

INPUT VOLTAGE: . 105-135 volts A.C., 50/60 Hz.
210-250 volts A.C., 50/60 Hz. (Special order)
OUTPUT: DPDT relay to 3 Amp. Resistive at 120 volts A.C.
DPDT relay to 3 Amp. Resistive at 240 volts A.C.
DPDT relay to 3 Amp. Resistive at 30 volts D.C.
1/10 Horse Power at 120 volts A.C.
1/10 Horse Power at 240 volts A.C.
OPERATING TEMPERATURE RANGE: -50°F to +150°F
REPEATABILITY: +2% max. at constant voltage and temperature
POWER CONSUMPTION: 3 Watts
PICK- UP POINT: . 3 speed ranges at which relay will energize
LOW: 0.1 TO 10 RPM
MEDIUM: 1 to 100 RPM

HIGH: 10 to 1000 RPM SIGNAL POINT: .. Speed at which relay will de-energize. Recommended to be 15-20% lower than pick-up point. This will eliminate shutdowns.

START UP DELAY: Adjustable up to 45 seconds

MECHANICAL



MODEL SRC ... SPEED RESPONSIVE SWITCH Please choose the model you need

- SRC-1G 120VAC NEMA 4
- SRC-1X 120VAC NEMA 4 & 7/9 SRC-2G 240VAC NEMA 4
- SRC-2X 240VAC NEMA 4 & 7/9



STUB SHAFT: 5/8" dia. 3" threaded one end, keyed other end. With jam nut and 3/16" key. Model S-1



CONVEYOR BELTS

• SRC-3G 24VAC/DC NEMA 4

• SRC-3X 24VAC/DC NEMA 4 & 7/9

FLEXIBLE COUPLING: Available for connection of the sensor to the driven shaft. Model C-1



COUPLING GUARD: Protection cover for coupling connection. Model G-1

WIRING

Remove end cap to expose terminals and pick-up speed adjustment screw. Wire input power from source to terminals L1 and L2. Be certain to use the provided ground screw. The output of the model SRC is a DP/DT relay. There are two sets of output contacts, each set includes normally open, normally closed, and common. As a result, the unit can be used to control two separate circuits such as a motor starter and a signal light.

SIGNAL SET POINT:

FOR USE AS AN UNDERSPEED SWITCH

Select the speed range required by changing the switch to LOW for 0.1 to 10 rpm., MEDIUM for 1 to 100 rpm., and HIGH for 10 to 1000 rpm. Turn the setpoint potentiometer to the counterclockwise stop. With motion present on the input shaft and at normal operating R.P.M., the yellow L.E.D. should blink. The green L.E.D. should turn on indicating that the output relay is energized. Slowly turn the setpoint adjustment screw clockwise until the output relay de-energizes. (a "click" will occur at this point.) Back up until the output relay energizes. Thus, when speed drops below the setpoint, the green L.E.D. should turn off indicating that the output relay is de-energized. If the normal operating speed of the input shaft exceeds 10 R.P.M. for the LOW or 100 R.P.M. for the MEDIUM or 1000 R.P.M. for the HIGH, the unit should be adjusted as follows. Turn the setpoint adjustment screw clockwise until it reaches the stop. When the speed drops below 10 R.P.M. for the LOW or 100 R.P.M. for the MEDIUM or 1000 R.P.M. for the HIGH, the relay will energize. NOTE: Typically, the motor contactor is wired in series with one of the N.O. output contacts; and a alarm is wired with one of the N.C. output contacts.

FOR USE AS AN OVERSPEED SWITCH:

Select the speed range required by changing the switch to LOW for 0.1 to 10 rpm., MEDIUM for 1 to 100 rpm., and HIGH for 10 to 1000 rpm. Turn the setpont potentiometer to the counterclockwise stop. With motion present on the input shaft and at normal operating R.P.M., the yellow L.E.D. should blink. The green L.E.D. should turn on indicating that the output relay is energized. Slowly turn the setpoint adjustment screw clockwise until the output relay is de-energized and the green L.E.D. turns off. (a "click" will occur at this point) With the potentiometer on that setting, if the speed increases the output relay will energize. NOTE: Typically, the motor contactor is wired in series with one of the N.O. output contacts; and a alarm is wired with one of the N.C. output

FOR USE AS A ZERO SPEED SWITCH:

Select the LOW speed range by changing the switch to LOW for 0.1 to 10 rpm. Turn the setpoint potentiometer to the counterclockwise stop. This will give a setpoint setting of 0.1 R.P.M. Thus, when the speed drops below 0.1 R.P.M., the output relay will de-energize. NOTE: Wiring should be the same as for underspeed applications.

TIME DELAY SETTING:

contacts.

The model SRC motion sensing control has a start up delay that is adjustable up to 45 seconds. This setting should be set, depending on the application and the length of time it takes for the conveyor to reach it's normal operating R.P.M. This time delay takes effect upon powerup of the model SRC after shutdown. AC power to the model SRC must be interrupted for timer to be reset. This delay only affects start up, avoiding nuisance start up alarms.

to

SEE PRICE SHEET FOR PRICES

MOUNTING BRACKET:

For mounting sensor

rotary machinery.

Model A-1

ACCESSORIES:



BEARING BRACKETS: Attaches mounting bracket to pillow block bearing assembly Models B-1, B-2 or B-3

3.



									เดอกแพเ	
A.	A	В	C	D	E	F	G	Н	PLATE PART NO.	(SEE NOTE) DETAIL X NOTE: When threaded stub shaft (part No. S-1 or equal) is to be used, it is repended that the leasting of the stub has in the and of the shaft
	1 ¹ /4 TO 2	1 ⁷ /8 TO 2 ¹ /8	31/8	1 ¹ /8	2 ¹¹ /16	1 ¹³ /16		⁹ /16W x ¹⁵ /16 Lg.	B1	that rotates counterclockwise. This allows the threads to continue being
⁷ /16	1 ¹ /2 TO 2 ⁹ /16	21/4 TO 3	3 ³ /4	1 ⁵ /8	311/16	1 ¹⁵ /16	¹³ / ₃₂ x 1 Lg.	¹³ / ₁₆ w x 2 Lg.	B2	under a constant fastening torque while the shaft turns. If the rotation is
15/16	3 TO 3 ³ /4	31/8 TO 41/8	41/2	2 ³ /16	4 ¹³ /16	2 ¹¹ /16		1 ¹ /16W x 2 ⁹ /16 Lg.	B3	jam nut is locked tight against the shaft.

MOUNTING INSTRUCTIONS:

SHAFT DI

1 ⁷/16

115/16 TO 2

215/16 TO 3

R

- 1. Switch can be mounted for operation in any position
- The surface to which the switch is affixed 2. should be as flat and as smooth as possible.
- 3. On installation where vibration conditions are not extreme use 1/4" diameter machine bolts with lock washers through the four mounting holes in the base of the switch. (Mounting bolts and lock washers are not furnished with

the switch.) If vibration conditions are extreme the use of doweling is recommended through the four mounting holes in the switch base.

- 4. The switch should be mounted as axially in line, and/or parallel as possible to the existing shaft which is to drive the switch.
- 5. The MODEL SRC switch can be driven by one of the following means:
 - A. Direct connection through a coupling (pre-

VISA

centric with the mating shaft. If stub is used it must be concentric with the main shaft. If a stub shaft is required we suggest the use of a 5/8" stub shaft. Use with a split or flexible type coupling.

ferred means). NOTE: Switch should be con-

B. Cog belt drive (timing): A v-belt drive is not as desirable because of possible slippage.

- C. Roller chain drive.
- D. Spur gears.

Card

"CHARGE IT"

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MODEL "AD" BIN AERATOR ENDS FLOW PROBLEMS FOREVER

FREE AERATION LAYOUT DRAWING:

If you have any questions as to number, spacing or location of aerators, supply Material Control, Inc. with your bin configuration and we will make a layout drawing with our recommendations.



AERATION SELECTION GUIDE:

For best results locate lower aerators as close to discharge outlet as possible. If material is held in bin for long periods and/or compacted in transport we recommend aerators be installed on 12" centers.

Aerators on	12" Centers	Aerators on 1	5" Centers
Length of Sloping Bin wall	Number of Aerators Per Row	Length of Sloping Bin wall	Number of Aerators Per Row
1'8" - 2'7"	2	1'11" - 3'1"	2
2'8" - 3'7"	3	3'2" - 4'4"	3
3'8" - 4'7"	4	4'5" - 5'7"	4
4'8" - 5'7"	5	5'8" - 6'10"	5
5'8" - 6'7"	6	6'11" - 8'1"	6
6'8" - 7'7"	7	8'2" - 9'4"	7
7'8" - 8'7"	8	9'5" - 10'7"	8
8'8" - 9'7"	9	10'8" - 11'10"	9
9'8" - 10'7"	10	11'11" - 13'1"	10

Generally four rows of aerators on 12" or 15" centers are recommended. On conical bins these rows are spaced equally. On pyramidal bins, rows are spaced equally on sloping sides, or in valleys if material tends to hang up in these valleys

AIR SUPPLY:

Air supply must be clean and dry. We recommend positive displacement, low pressure blowers. Plant air can be used but the pressure must be reduced to 3 to 5 P.S.I. and a filter or moisture trap used on the low pressure side. The volume of air needed is a limiting factor on the use of plant air.

Manifo Size	ld Piping Guide	Air Consumption Guide Per Aerator			
Piping Size	Number of Aerators in Row	Air Pressure P.S.I.	Cubic Feet per Minute		
3/4"	1-5	1	4.2		
1"	6-9	2 *3 4	5.7 6.5 7 1		
1 1/4"	10-12	5	7.6		

*Recommended for most applications

INSTALLATION:

Drill 7/16" holes through bin wall on predetermined centers (12" to 15" or customer's preference). Insert special tank nipple through hole and lock into place with locknut. Rubber gasket and spacer washers are furnished.

TYPICAL INSTALLATION:

PYRAMIDAL HOPPER CONICAL HOPPER



SPECIFICATIONS:







KIT INCLUDES:

A. 1/16" gasket, adhesive both sides B. Adaptor (front view)

C. ³/16" gasket, adhesive one side D. Spring steel clamp

AERATOR KIT IN PLACE ON BIN

The model ADK aerator mounting kit completely eliminates the need to enter the bin to install or service aerators. By cutting a 25/8" x 63/8" hole in the bin wall the mounting kit can be completely installed and serviced from outside the bin.



After the initial hole has been cut, the aerator is mounted on the adaptor assembly and inserted into the bin in

less than two minutes. No holes to drill, no welding or taping. The aerator is positively sealed and securely held in place in the bin. Removal is just as simple and quick. Aerator kits are also adaptable for use on round bins. Installation is made with standard gaskets, and the 3/16" adhesive gasket ("C" above), on bins with a diameter of 3' or greater. For smaller diameter a special gasket can be furnished.

MODELS AVAILABLE

MODEL	DESCRIPTION	PRICE
AD-C	Zinc plated steel body with galvanized steel mesh and cotton diffuser. brass tank nipple and locknut. Plated steel spacer washers and rubber gasket.	S
AD-F	As above but with Fibergalss diffuser. Fiberglass diffusers are recommend when material temperatures exceed 200°F.	OR PRICE
AD-SSC	T316 Stainless Steel body with stain- less steel mesh and cotton diffuser. Nickel plated spacer washers and rubber gasket. Nickel plated brass tank nipple and locknut.	JE SHEET F (
AD-SSF	Same as AD-SSC except with fiber- glass diffuser.	PRIC
AD-K	Positive seal mounting assembly includes two gaskets, adapter and clamp.For use with any of the above aerators when outside the bin mount- ing is desired.	SEE



Exclusive new heavy-duty construction features stiffeners to prevent crushing of air compartment. These stiffeners eliminate the possibility of the Aerator being crushed by a head of material or by a man stepping on it when cleaning bin. The stiffeners do not obstruct the diffusion of air.

ADVANTAGES OF AERATION:

STURDY STEEL

BODY

STEEL MESH

 Positive, uniform and easily controlled flow • Quiet operation
 Low power requirements • First in/first out flow • Adapts to
 any bin configuration • Inexpensive — low initial cost and almost no maintenance

Model AD Aerators provide positive flow of dry finely ground materials from any bin using the principle of aeration.

Low pressure air is introduced into the product, restoring its natural ability to flow. In this way congestion, bridging and rat holeing are overcome without resorting to brute force. Almost all flow problems inherent to dry, fine materials are caused by compaction. When low pressure air is introduced to a finely ground material it will flow like water - uniformly and quickly.

Model AD Aerators are non-clogging and provide equal distribution and consumption of air. They feature simple and quick installation. Simply drill a 7/16" hole in the bin wall, insert special tank nipple through hole and secure with lock nut.

MATERIALS RESPONDING TO AERATION:

Aeration gives the best results on materials with a 60 mesh size or smaller and with a 3% or less moisture content. Specific materials that respond well to aeration are as follows: Lime, Portland Cement, Carbon Black, Diatomaceous Earth, Flour, Soda Ash, Pigments, Soap Powders, Bentonite, Bran, Clay, Cereals, Fullers Earth, Detergents and many others. For questionable materials, please contact our sales department.



FLOW SWITCH





"CHARGE IT"

(UL) LISTED

The Model 27 Flow Switch is designed to produce a signal if the flow of material at any critical point is interrupted. This signal can then be used to correct the difficulty and/or warn the operator.

Several switches can be used, each one placed at critical points along the conveying system. A continuous flow of material past the switch holds the paddle-shaft-counterweight assembly out of the actuated position. If flow stops, the paddle is allowed to pivot and actuate the switch. When it occurs a signal is generated to start or stop supporting machinery, or to activate visual or audible alarm systems.

Model 27 is also fully adjustable. The paddle and counterweight assemblies can be positioned at various points along the shaft and rotated to any angular position. The shaft itself will adjust laterally. Inside, the actuating cams can be rotated so that switch actuation will occur at predetermined points.

This versatile switch can be mounted on all types of conveyors and feeders; in discharge openings of bins, bunkers, or hoppers; in angled and vertical chutes; or in discharge chutes of any configuration. It is available with either a aluminum or epoxy coated housing, and in standard or explosion proof models. The paddle and shaft are both of stainless steel.

MODELS AVAILABLE

MODEL	DESCRIPTION	PRICE			
27-1	One sp/dt micro switch				
27-2	Two sp/dt micro switches	រី ភ្លូ ច			
27-1X	Explosion proof with one sp/dt micro switch	E PR EET F RICIN			
27-2X	SHI SHI PI				
PRICES SUBJECT TO CHANGE WITH-					



OUT NOTICE • TAX NOT INCLUDED • TERMS: NET 30 DAYS • F.O.B. FACTORY



CAL INFORMATION

• Housing — Aluminum, Epoxy Coated (optional) • Conduit opening — one, 3/4" • Shaft and Paddle — Stainless Steel • Switch Specifications: 20 amp @ 125, 250 or 480 VAC — 10 amp @ 125 VAC "L" — 1 hp @ 125 VAC, 2 hp @ 250 VAC — 1/2 amp @ 125 VDC, 1/4 amp @ 250 VDC • Enclosures: 27-1 and 27-2 — NEMA 3 and 4, dust and weathertight — 27-1X and 27-2X — NEMA 7, class I groups C & D and NEMA 9 class II groups E, F, and G. Explosion Proof. NOTE: Switches may be wired for single throw operation, either normally open or normally closed as required.



INSTALLATION INSTRUCTIONS:

1. A cam on the shaft actuates the switch. Loosening the cam (or cams on the two switch unit) and the shaft locking collars permits the shaft to be moved laterally in the casting. The paddle sensor and counterweight can be positioned anywhere on the shaft. Use the 3/32" dia allen wrench furnished.

2. Housing can be mounted in any position. Counterweight permits paddle operation in any position from vertical to horizontal.

3. After mounting the unit the cover should be removed to adjust the cam on the shaft to give switch actuation at the desired point. Both the paddle and

the counterweight may have to be loosened, rotated, and retightened on the shaft to achieve proper actuation.

4. The paddle or counterweight may be easily field altered to suit application.

brush type conveyor belt cleaner





BRUSH WEAR ADJUSTMENT — Take-up style rod assembly provides easy, positive brush adjustment. Proper brushing pressure usually has bristle ends just touching belt. Heavy duty construction.

complete model 99 cleaner

no need to purchase extra parts

BRUSH SPEED ADJUSTMENT — Multiple sheave arrangement furnished. As a rule brush should have peripheral speed of two times belt speed. If material is tacky periphel speed should be three times belt speed. Adjust to 230, 415 or 600 RPM.

N HANGER BRACKET— Heavy Duty — Mounts on conveyor frame.

> SHAFT—Furnished extra long to fit any width conveyor frame. From 17/16" diameter on 6" cleaner to 1¹⁵/16" on 72" cleaner.

PILLOW BLOCK BEARINGS— High quality sealed bearings. Lubrication required only periodically.

MOTOR—

Totally enclosed, fan cooled, three phase, 60 cycles, 230/460 volts, 1200 R.P.M. Has high starting torque. For operation in atmospheric conditions of extreme dust and dirt. Motor rides up and down with the brush. Assures proper drive tension at all times, no need to adjust after initial setting.

BRUSH WIDTH	HORSEPOWER	SHAFT DIA.
6" - 42"	1 H.P.	1 ^{7/} 16"
48" - 108"	2 H.P.	1 ^{15/} 16"

ELIMINATE COSTLY DOWNTIME AND CLEAN-UP EXPENSES, STOP WEAR ON BELTS AND RETURN ROLLS CAUSED BY CARYOVER!

- Open brush construction self cleaning, will NOT load.
- Helically formed, ruggedly built brush withstands hardest usage.
- Disposable brush housing is quickly and easily changed when brush replacement is required.
- Standard attaching assembly adjusts to fit any size conveyor. Drive can be mounted on either side for servicing.
- Helix design assures constant belt contact smoothest, quietest, most positive cleaning action possible.
- Flexible cleaning action of bristles provides most thorough cleaning possible.
- Variable speed sheave arrangement allows for brush speed adjustment to your requirements.
- Available for ANY belt width. Shipments made quickly from stock.
- The Model 99 brush cleaner is shipped complete no need to purchase extra parts.

CROSS MEMBERS— Add stability to unit. Furnished extra long to suit any conveyor frame. Cut off in field by customer after installation.

BELT GUARD—Detachable belt guard covers belt, drive sheave and driven sheave. (not shown)

NOTE:

Drive assembly can be mounted on either side of unit. Brush rotates against, or in opposition to, conveyor belt travel.

	ORDERING INFORMATION									
C	LETE MODEL 99 SH CLEANER	BRUSH ONLY (shipped assembled). Includes bored cast- ings, precision extruded, corrosion resist- ant brush sections, socked head screws.				cast- sist- sist- ws. REPLACEMENT BRUSH HOUSING Includes: Precision extruded corro- sion resistant brush sections, socket head screws.			FUF OR CAL	
BELT WIDTH	NET WT. LBS.	WITH NYLON OR Poly-propylene Bristles	BELT WIDTH	NET WT. LBS.	CASTING Bore Size	WITH NYLON OR Poly-propylene Bristles	BELT WIDTH	NET WT. LBS.	WITH NYLON OR Poly-propylene Bristles	
6"	115		6"	14	1 ⁷ /16"		6"	8		
8"	125		8"	15	1//16"		8"	9		• Whe
12"	140		12"	1/	1//16"	F	12"	11	-	diame
10	1/5		10	19	17/16	Щ	10	13	Ш	• Stai
10	102	<u> </u>	10	20	17/16 17/16	ЩS	10	14	ЩS	brush
20	201		20	23	17/16	上王	20	17	上王	• Star
30"	225		30"	26	1 ⁷ /16"	<u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	30"	20		longt
36"	244		36"	29	1 ⁷ /16"	ЩС	36"	23	ЩЩ	Ieliyii Diar
42"	280		42"	35	1 ⁷ /16"		42"	28		nrice
48"	307	н Н	48"	38	1 ¹⁵ /16"	щщ	48"	31	Щщ	p11000
54"	333		54"	41	1 ¹⁵ /16"	щÕ	54"	33	щO	
60"	434		60"	44	1 ¹⁵ /16"	шш	60"	35	ШШ	
72"	501	- O	72"	50	1 ¹⁵ /16"	Ш	72"	41	Ш	
83"	529		83"	54	1 ¹⁵ /16"	0)	83"	43	0)	
96"	623		96"	66	1 ¹⁵ /16"		96"	53		
108"	690		108"	/3	1 ¹⁵ /16"		108"	60		

BRUSH—Finest conveyor belt cleaning brush available. 10" diameter.

face construction prevents loading. Disposable type brush. Precision

Helically formed channels ensure continuous bristle/belt contact. Open

extruded, corrosion resistant, aluminum brush sections, 3" standard bris-

tle trim length. Brush end hubs set screw to shaft. No keying required.

When ordering please note bristle diameter required. 014, .028 or .040. Stainless steel, wire, or other orushes available. Prices on request. Standard brush has twelve bristle rows, 10" diameter, 3" bristle trim ength, helical design. Diameters other than 10" call for prices

CONVEYOR BELT CLEANER CYLINDER BRUSH heavy duty construction • easy to install

HELICAL DESIGN

HELICAL DESIGN - OUR FINEST

Our helical design assures a smooth, virtually noiseless brushing action due to constant brush contact with the cleaning surface. It is the only disposable type brush featuring a helical, totally enclosed aluminum solid face housing. If required, we can also supply brushes in straight face construction.

HIGH QUALITY - HEAVY DUTY CONSTRUCTION

Self cleaning - brush will NOT load due to open faced construction.

- Brush castings set screw to shaft. No need to key shaft.
- Precision extruded, corrosion resistant, aluminum brush sections.
- High quality polypropylene or nylon bristles in .014, .028 or .040 diameter.
 Brush available in 10" O.D. (standard) and in other optional bristle lengths up to 16" O.D.
- Ruggedly built, helically formed, heavy duty yet lightweight construction.

WHEN ORDERING OUR BRUSH, PLEASE SPECIFY BRISTLE SIZE AND BELT WIDTH

Our standard bristles come in three diameters: .014, .028 and .040. Bristles are made of polypropylene or nylon, extremely long wearing, chemically resistant synthetic materials.

- In general, two factors determine the size bristle to be used.
- 1. The condition of the carryover dry, wet or tacky.
- 2. The weight of the carryover light, medium or heavy.

A wet tacky carryover requires a heavier bristle than a dry carryover.

A heavy carryover, such as iron ore, would require the .040 bristle.

A light carryover, such as cereal, would require the .014 bristle.

The following bristle section guide will help you select the proper bristle size for your application. Cleaning action will be better with a bristle slightly heavier than needed, rather than lighter. If you have any questions after reviewing the guide contact us for assistance.

Material Carried on Belt	Carryover	Bristle Size		Material Carried on Belt	Carryover	Bristle Size			
Aggregate	wet heavy	.040		Iron ore	dry or wet heavy	.040			
Cement – raw material	wet heavy	.040		Lead ore	dry or wet heavy	.040			
Cement-dust	dry light	.014		Limestone	wet heavy	.040			
Cereal	dry light	.014		Metal chips	wet heavy	.040			
Coal	wet medium	.040		Phosphate	slurry heavy	.040			
Coke	dry heavy	.040		Plywood (dusting)	dry light	.014			
Copper ore	dry or wet heavy	.040		Pulp chips	tacky medium	.040			
Feed	dry medium	.028		Salt	dry medium	.040			
Fertilizer	dry heavy	.040		Sand	wet medium	.040			
Foods	wet medium	.028		Sinter	wet heavy	.040			
Foundry sand	wet medium	.028		Sugar	tacky medium	.040			
Glass particles	dry medium	.028		Taconite ore	dry or wet heavy	.040			

BRISTLE SELECTION CHART



A QUICK CHANGE DISPOSABLE BRUSH HOUSING:

No more spending hours of valuable time trying to drive worn bristle strips out of a reusable housing. Through experience we have found that after a brush has been in service, not only is it extremely difficult to drive out the worm strip, many times the housing itself is severely damaged in the process. Difficulty also arises in trying to drive in the new replacement strips. (Even if the housing is undamaged.) Our disposable housing cuts replacement time, and costs much less.

Our brush comes completely assembled. Replacing worn bristles is easy. Heavy duty yet lightweight disposable brush housings are affixed to the reusable castings by six socket head screws. A 30" brush takes no more than 10 minutes to replace.



SPECIFICATIONS:

Two precision extruded, corrosion resistant, aluminum brush sections are securely mounted to castings by socket head screws. Each complete brush unit contains twelve helical brush strips permanently mounted to the aluminum housing. Our standard brush has a 3" bristle tim length for a 10" O.D. brush. Brushes can be supplied in an 8" O.D. and up to 16" O.D. Bristle diameters are: .014, .028 and .040 for light, medium and heavy carryover. Grey iron castings have a 4" O.D. with 1⁷/16" and 1¹⁵/16" bore sizes.

Two set screws on each casting securely hold brush housing to the shaft. (No special lock collars or keying required.)



INSTALLATION INFORMATION

The MODEL 99 Brush Cleaner adjusts to fit any mounting condition. The "B" width shown adjusts to shit conveyor frame. Hanger Brackets (each side) are bolted or welded to the conveyor frame. IMPORTANT — For maximum cleaning effectiveness, mount hanger assembly so that the Brush Shaft will be located on the center line of the Pulley Shaft.

The best cleaning action can be obtained if care is taken to see that the Brush contacts the belt at a point where the belt is free from vibration. For this reason, we recommend the head pulley centerline. If this is not practical, a return idler or back-up plate should be used. Brush should contact belt with the least amount of pressure required to clean the belt.

After mounting the "Take-Up" style side assemblies to conveyor



frame, measure distance between the lower mounting brackets. Tube and rod cross members are furnished extra long and are cut to proper length by customer at the job-side. Cross members are then secured by locking the threaded tightening rods in place. The lower mounting brackets could also be bolted or welded to a plate or conveyor frame attachment. The assembly is now securely mounted and needs only the simple installation of the Brush/Shaft assembly on the Pillow Block Bearings, and the Motor Drive assembly. The Motor Drive Assembly can be mounted on either side for servicing. The belt guard mounts to the side frame to complete the Brush assembly.

IMPORTANT: The MODEL 99 Brush Cleaner should be wired so that it will stop when the conveyor stops. Brush must not operate when belt is not in operation. Brush rotates against, or in opposition to, conveyor belt travel.



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coil spring type conveyor belt cleaner

no matter what the load, this heavy duty cleaner keeps right on working ...





MATERIAL CONTROL, INC

P.O. BOX 308 NORTH AURORA, IL 60542-0308 800-926-0376 • 630-892-4274 • FAX 630-892-4931 WWW.MATERIALCONTROLINC.COM • EMAIL: SALES@MATERIALCONTROLINC.COM

ready to install model 33 cleaner

LOCK COLLARS: Collars on each end lock frame assembly in place and prevent frame from sliding.

BELT WIDTH IN INCHE

NUMBER OF WIPER B

HEAVY DUTY COIL SPRING ARM MC 660 -The patented spring arm is forged from highest quality 3/8" round spring steel. This prevents arm bending or breakage, thus increasing spring arm life. Rounded shape inhibits material build up and specially engineered "angle" delivers maximum cleaning effectiveness. Arms are also available in stainless steel, if so desired.

FRAME ASSEMBLY:

Main frame of heavy gauge square steel tubing for maximum strength and support. Pipe acts as coil spring arm holder and can easily be slid out of main frame retainers for servicing of arms.

MOUNTING:

Equipped with hanger mounts (mount to conveyor frame or flange mounts (for mounting on chutes). Loosen set screws in collar, remove lock plate cap screw, and unit will lift out for quick and easy maintenance.

LARGE STURDY HANDLE:

Can be adjusted to four mounting positions on either side of the cleaner. Units 42" and larger are supplied with a handle on both sides to aid in applying proper pressure. Hole in handle end allows for use of turnbuckle or counterweight if desired

BLADES:

Six types available to clean any material - wet, dry, or sticky. Standard blade is of spring steel with urethane, stainless steel, tungsten carbide, long life nickel alloy, and ceramic wiper blades also available. Blade angle fixed for maximum cleaning effectiveness.

COIL SPRING:

The patented "heart" of our unit. So durable they're guaranteed not to break - some have been in use over five years without failures. Fabricated from tempered steel for maximum life and top field performance. Spring steel assures firm pressure on belt without bending or breakage. Also available in stainless steel.



PART NO. 210 – STANDARD WIPER BLADE High quality painted spring steel. Reversible for double life. For belt speeds up to 350 feet peer minute



PART NO. 230 -STAINLESS STEEL WIPER BLADE Particularly useful for highly corrosive material. For belt speeds up to 350 feet per minute.



STAINLESS STEEL HOLDER Top quality ceramic blade for extra wear. 850 feet per minute.



NO MATTER WHAT THE LOAD, THIS CLEANER KEEPS RIGHT ON WORKING. . .

Here's the cleaner that's been engineered for the toughest conditions. Even under the most severe conditions this cleaner will give a year or more of the best possible belt cleaning with little or no maintenance.

MODELS AND ORDERING INFORMATION:

	NO. OF		BLADE STYLE							
BELT		NET WEIGHT		STAINLESS		STAINLESS STEEL WITH		TUNGSTEN		
WIDTH	BLADES	LBS.	STANDARD	STEEL	URETHANE	NICKEL ALLOY	CERAMIC	CARBIDE	21	
6"	1	32							22	
12"	3	41							23	
18"	4	46							24	
20"	5	52								
24"	5	57							25	
30"	8	69							0	
36"	9	78							20	
42"	11	85							SPF	
48"	13	94							0.00	
54"	14	101							600	
60"	16	106							083	
72"	20	126							MO	

Vhen ordering complete Belt Cleaner please specify Model Number, Belt Width, Blade Type and **mounting type desired**. nts are not included in above prices or weights



SEE PRICE SHEET FOR PRICES

CLEANER PARTS SELECTION



S	6	12	18	20	24	30	36	42	48	54	60	72
LADES	1	3	4	5	6	8	9	11	13	14	16	20

This is the finest, most durable belt scraper arm on the market. We'll match the MC-660 with any other type for performance and durability





HANGER MOUNT For mounting off of conveyor frames.

CHOOSE FROM SIX BLADE TYPES

A wide variety of blade styles to fit your particular needs. Effectively clean any material - wet, dry, or sticky. All have been field tested and proven through years of service in all types of industries.

PART NO. 225 - CERAMIC WIPER BLADE IN

Stainless steel holder protects ceramic from belt fastener chipping, resists impact. Use on high speed continuous duty conveyor. Gives 12-15 times standard blade life. For belt speeds of 350-



PART NO. 220 – URETHANE WIPER BLADE Compounded to correct hardness for most effective belt cleaning. Inexpensive and long lasting. For belt speeds up to 450 feet per minute.



PART NO. 240 - STAINLESS STEEL WIPER BLADE WITH LONG LIFE NICKEL ALLOY WEARING SURFACE

Special long life alloy applied to heavy duty stainless steel wiper blade. recommended for high speed, heavily used conveyors. Gives 6-8 times standard blade life. For belt speeds of 350-750 feet per minute



PART NO. 260 -TUNGSTEN CARBIDE WIPER BLADE

Tungsten carbide strip encased and brazed in steel offers MAXIMUM life and cleaning life and cleaning effectiveness. Use on high speed continuous duty conveyors carrying abrasive sticky material. Gives 12-15 times standard blade life. For belt speeds of 350-850 feet per minute. May be used with mechanical belt fasteners.

INSTALLATION INSTRUCTIONS

1. For maximum cleaning effectiveness position cleaner at a point where the belt is flat and free from vibration. The best mounting position is several inches behind the head pulley at a point where the belt leaves the pulley. If this is not practical, the cleaner will clean effectively at any point where the belt is flat and free from vibration. To best assure this, mount a return idler on top of the belt, several inches in front of the point of blade/belt contact. This will both flatten the belt and prevent vibration. The spring arm holder (8) should be positioned so that it is parallel to the head pulley (if located under head pulley) and centered $4^{1}/2^{"}$ to $5^{1}/2^{"}$ below the belt.

2. We suggest you provide a generous access door for both inspection and service should the unit be installed in the area of a bin or discharge chute. This will permit inspection and service without belt shut-down. (see sketch A)

3. Install either flange mounts (3A) or hanger mount (1,2 and 3), as you prefer, to locate the spring arm holder (8) in its correct position. Important. The blades (10) must be behind the spring arm holder. If properly positioned, the blades will lean back towards the direction of belt travel.

> INSPECTION DOOR

4. Make certain the drilled side of the spring arm holder faces the round hole in assembly retainers (5). The assembly retainers will vary depending on the conveyor belt width. For example - A 24" conveyor belt uses three arm assembly retainers and six spring arms (9) and six wiper blades.

5. Place short straight end of spring arms in holes located along length of spring arm holder. Slide tube (6) through arm assembly retainers and coils of spring arms. Spring arms are locked in place by putting hex head cap screws (16) through end holes in tube and tightening two hex nuts (18) to each.

9

(16)

Ф

6. Place collar (45) on each end of spring arm holder with smallest O.D. toward end of the tube. The spring arm assembly may now be placed into either the flange mounts or the hanger mount plates.

7. CAUTION - Do not allow wiper blades to extend beyond belt edges, as belt damage may eventually occur. Also, do not use Model 33 Belt Cleaner on reversing belts as it may cause possible spring and belt damage.

8. Make certain collars are in place in either flange mounts or hanger mount plates. Tighten set screws (10) in collars. Place locking plate (21) on spring arm holder, and up against the flange mount or hanger mount plate. Insert cap screw with lockwasher (17) through arc in locking plate and screw into flange mount or hanger mount plate.

9. Pressure handle (7) may now be positioned on the spring arm holder. Tighten set screw in pressure handle after selecting desired position.

> 10. Any excess tube extending beyond the pressure handle may be cut off. Do not cut until positive belt cleaner is properly positioned.

11. Proper blade pressure against belt is applied by pushing down on pressure handle



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MODEL 76 RUBBER WIPER BLADE CONVEYOR BELT CLEANER AND MODEL 74 PLOW TYPE CONVEYOR BELT CLEANER

MODEL 76 RUBBER WIPER BLADE TYPE CONVEYOR BELT CLEANER

Eliminates wear by removing abrasive materials
Saves clean-up expenses, cuts maintenance costs
Available from stock for belts 12" thru 72" • Can be left in contact with belt even when belt is reversed
Built-in safety feature: rubber blade can only be returned to extent springs are compressed. Features mechanically adjustable safety stop • Economicallow initial cost, easy to install and no moving parts
Highest quality 1"x6" rubber wiper material furnished as standard. Blade is reversible for double wear.



APPLICATION AND INSTALLATION INSTRUCTIONS:

GENERAL: The Model 76 cleaner is designed for easy installation and servicing. Belt size determines size of cleaner to be ordered. The support bar is long enough to adjust to fit any normal width conveyor frame. Hangers offer ample vertical height adjustment. On reversing conveyors we suggest the use of two Model 76 cleaners. One to be located under each end pulley.

KEEP THESE POINTS IN MIND WHEN INSTALLING:

 Standard unit adjusts to conveyor frame width as follows: MINIMUM width "A" is 5³/a" wider than specified belt size. MAXIMUM width "A" is 24³/4" wider than specified belt size.

 Make sure discharge chute is large enough to catch droppings.
 File down any extreme projections on metal splice.

4. For best results position cleaners directly on head pulley.

18" 43 20" 44

BELT

WIDTH

12"

16"

20"	44	213.00
24"	47	231.00
30"	50	265.00
36"	54	290.00
42"	57	315.00
48"	61	344.00
54"	64	368.00
60"	68	395.00
72"	75	447.00

ORDERING

INFORMATION

PRICE

\$181.00

197.00

206.00

NET WT.

LBS

40

42

Complete Cleaner has 1"x6" D-80 Rubber Blade. Stainless steel construction available upon quotation.

REPLACEMENT BI ADES

-						
PRICE	NET WT. LBS.	Belt Width				
\$20.07	3.2	12"				
26.75	4.3	16"				
30.11	4.8	18"				
33.45	5.3	20"				
40.14	6.4	24"				
50.18	8.0	30"				
60.21	9.6	36"				
70.25	11.2	42"				
80.27	12.8	48"				
90.31	14.4	54"				
100.34	16.0	60"				
120.41	19.2	72"				

Made from our own 1"x6" D-80 solid Rubber. Can be used on any rubber wiper type belt cleaner. Blades are cut to length but not drilled or slotted.

"D-80" CONVEYOR BELT WIPER RUBBER

ABSOLUTELY THE FINEST BELT CLEANER MATERIAL AVAILABLE

(used as standard wiper material on our model 74 and 76 cleaners)

Our D-30 belt wiper rubber is an 80 durometr solid rubber compounded especially for belt cleaning applications. It has the proper stiffness, and probably just as important, it is highly abrasive resistant. We guarantee it to improve the cleaning effectiveness of your belt cleaners.

There is no extra chagre to cut your order into individual lengths if desired. All our rubber is sold on a per foot basis with no extra charge for cutting. We do have a minimum order quantity of \$15.00 on D-80 rubber material.



MATERIAL CONTROL, INC. 197 POPLAR PL. • UNIT 3 P.O. BOX 308 NORTH AURORA, IL 60542-0308 e

PART NO.	GAUGE	WIDTH	NET LBS. PER FT.	PRICE PER Lineal FT.
0124	1/2"	4"	1.0 lbs.	\$ 7.29
0126	1/2"	6"	1.6 lbs.	10.22
1006	1"	6"	3.2 lbs.	20.07
1009	1"	9"	4.7 lbs.	31.70

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www.materialcontrolinc.com email: sales@materialcontrolinc.com Now at prices competitive with ineffective substitutes such as skirtboard rubber and chute lining. We will cut into desired blade lengths at no extra charge.

•Straight, smooth edge. •80 Durometer "D-80" gives proper stiffness for belt cleaning • Available in 4 sizes from stock.

Makes ideal plow blade material. Available in rolls up to 50' long, or cut into length desired at no extra charge.

800-926-0376 • 630-892-4274 • FAX 630-892-4931 SUBJECT TO CHANGE WITHOUT NOTICE • TERMS: NET 30 DAYS F.O.B. FACTORY • TAX NOT INCLUDED PRICES EFFECTIVE 2/1/06



Inexpensive, easy to install, effective and vir-

tually maintenance free. You cannot afford to

SEE MODEL 76 RUBBER WIPER BLADE CONVEYOR BELT CLEANER ON OTHER SIDE

MODEL 74 PLOW TYPE CONVEYOR BELT CLEANER WITH SAFETY CHAIN



Designed to clean and protect the INSIDE of your conveyor belt

The Model 74 is normally mounted in front of the tail pulley. Material, tools, and foreign objects are swept from belt by the "V" design, thus preventing belt or pulley damage, and possible belt misalignment.

Plow blade pressure to the belt is adjustable. Blade may be set close to the belt (for larger material) or, put in contact with the belt in order to clean away smaller particles. Three adjustment nuts control arrangement of the unit.

The Model 74 plow cleaner is easily installed and will adjust to any type conveyor frame. Our long life 80 durometer (D-80) rubber is used as standard wiper material. When ordering, please specify belt width.

PLOW CLEANER	TYPE INSID MODEL 74 (a	E BELT ssembled)	EXTRA HEAVY DUTY MODEL 74 PLOW TYPE (assembled)				
BELT WD.	SHPG. WT.	PRICE	BELT WD.	SHPG. WT.	PRICE		
12" 16" 18" 20" 24" 30" 36" 42"	35 lbs. 39 lbs. 45 lbs. 47 lbs. 49 lbs. 54 lbs. 61 lbs. 70 lbs.	\$146.00 158.00 162.00 170.00 182.00 207.00 224.00 242.00	12" 16" 20" 24" 30" 36" 42" 48" 54"	95 lbs. 101 lbs. 105 lbs. 109 lbs. 115 lbs. 125 lbs. 135 lbs. 145 lbs. 165 lbs. 175 lbs.	\$253.00 279.00 294.00 306.00 334.00 384.00 422.00 464.00 528.00 564.00 595.00		
Abovo with	1/2"v/" Dubł	or Plow	Above v	with 1"v6" Pu	hhar Plow		

Above with 1/2"x4" Rubber Plow

Above with 1"x6" Rubber Plow. Extra Heavy Steel Fabrication.

INSTALLATION AND ADJUSTMENT

- 1. Install cleaner near to the tail pulley with plow against direction of travel.
- 2. Cross member supports must be positioned to permit easy movement of the plow in vertical direction. Cross members are furnished extra long and excess material can be trimmed off. Weld or bolt cross members to conveyor frame.
- **3.** Stop nuts at top of 3 threaded rods must be adjusted to permit approximately 2¹/2" of downward movement as the rubber wipe wears. These nuts prevent the metal plow frame from touching the belt when the rubber wiper is used up.
- 4. The springs on the threaded rods can be adjusted by the 2 jam nuts under each. Spring pressure should be adjusted to assure that the plow "rides" smoothly on the belt at all times.
- 5. The plow is shipped assembled fro small units. Large units must be assembled. The 2 sides are bolted to the 2 cross pieces with the screws and lock nuts furnished. The plow is then installed on the cross members.

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SPECIAL MODELS of both plow cleaners are available for use on reversing

conveyor belts. A diagonal plow with single blade is also available

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