



# Transport Chains



**JOHN KING** USA Inc.

## Link Materials

Standard links are molded from quality acetal engineering plastic offering optimum mechanical properties in materials handling.

The material offers a unique combination of properties, high tensile strength, excellent dynamic fatigue strength, unique resilience and practical impact strength with a low co-efficiency of friction. (0.15 against metals compared to 0.8 for steel/steel).

In operation, chains are quiet, rugged and virtually maintenance free (no need for lubrication) light in weight and low on energy requirements. They offer maximum hygiene advantage and good chemical resistance with minimal moisture absorption. The material exhibits excellent resistance to wear.

Recommended temperature range: -40 to +90°C (-40 to 194°F)

## Engineering Plastics are offered in 5 standards

- PM - Acetal copolymer with self lubricating components. Color: gray and brown
- LF - Acetal copolymer with improved self-lubricating quality. Color: brown
- SLF - Acetal copolymer with self lubricating additives to obtain the lowest possible friction resistance. Color: green
- HP - Homopolymer offering approximately 20% increase in tensile strength & hardness over standard acetal with equivalent elongation for optimum performance in more arduous applications.
- PP - Polypropylene a thermoplastic material with low density and good properties when high chemical resistance is required. The material has a very high material toughness and can resist steam sterilization. Recommended temperature range +1° to +104°C (+33° to +219°F).

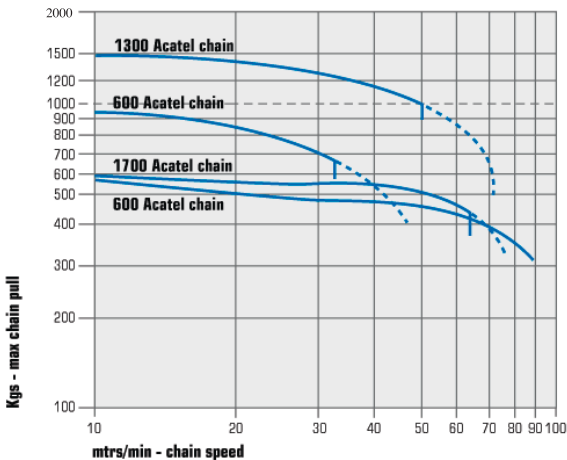
In addition special grades can also be employed including glass reinforced polypropylene and polyurethane and in addition antistatic materials, but special considerations relating to application and production batches are necessary.

## Pin Material

Standard pin material employed is from austenitic stainless steel grade AISI 304. (18/8 Cr Ni) offering a high degree of corrosion resistance and high hardness strength. Ferritics stainless steel can be offered if metal detection is necessary or standard steels with electrolytic zinc plating.



## Heavy Duty Chains



To calculate chain pull for conveyors with bends use the following table:

### PM600 and PM1400 chain

| Turn angle degrees | 30  | 45  | 90  | 180 |
|--------------------|-----|-----|-----|-----|
| $T_f$              | 1.2 | 1.4 | 1.5 | 2.0 |

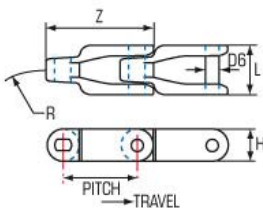
Multiply  $T_f$  by no. of bends in conveyor length. Curves should be as far away from head shaft as possible.

When using 1700 chains with turnwheels, calculate as for straight conveyor and multiply result by  $1.12^n$  when  $n$  = no. of turns.

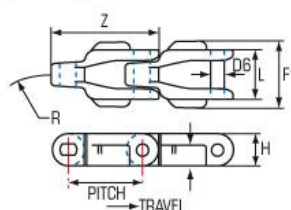
## 600 Series

The popular 600 series chains are normally employed in transportation of crates & cartons.

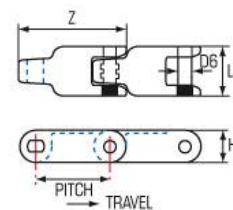
### PM600 Standard open style



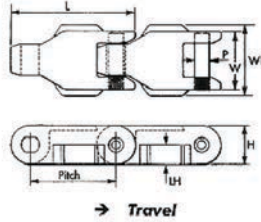
### PM600D Standard open style with hold down lug



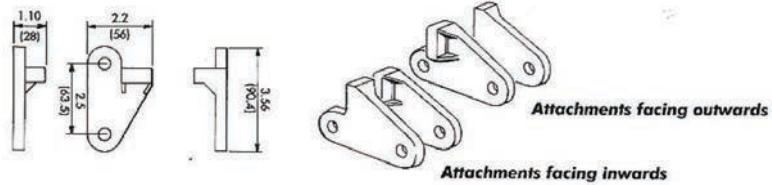
### JK600 Closed top series



**JK600D Closed top series with hold down lug**



**PM600F Standard open style with pusher attachment**

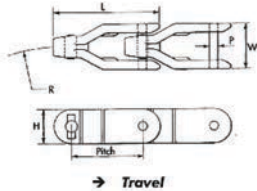


| CHAIN TYPE       | CHAIN PITCH |       | PIN DIAMETER |    | AVAILABLE PIN TYPE | OVERALL LENGTH |       | CHAIN WIDTH W |       | OVERALL WIDTH WI |       | HEIGHT |       | LUG HEIGHT |       | MIN TURN RADIUS R |     | CHAIN WT/M | UTS  | MAX LOAD |
|------------------|-------------|-------|--------------|----|--------------------|----------------|-------|---------------|-------|------------------|-------|--------|-------|------------|-------|-------------------|-----|------------|------|----------|
|                  | IN          | MM    | IN           | MM |                    | IN             | MM    | IN            | MM    | IN               | MM    | IN     | MM    | IN         | MM    | IN                | MM  |            |      |          |
| PM600            | 2.50        | 63.50 | 7/16         | 11 | S,C,R              | 3.55           | 90.20 | 1.69          | 42.90 | N/A              | N/A   | 1.12   | 28.45 | N/A        | N/A   | 30                | 762 | 1.37       | 1540 | 840      |
| PM600D           | 2.50        | 63.50 | 7/16         | 11 | S,C,R              | 3.55           | 90.20 | 1.69          | 42.90 | 2.12             | 53.85 | 1.12   | 28.45 | 0.67       | 17.02 | 30                | 762 | 1.44       | 1540 | 840      |
| JK600            | 2.50        | 63.50 | 7/16         | 11 | K                  | 3.55           | 90.20 | 1.69          | 42.90 | N/A              | N/A   | 1.12   | 28.45 | N/A        | N/A   | 30                | 762 | 1.39       | 1540 | 840      |
| JK600D           | 2.50        | 63.50 | 7/16         | 11 | K                  | 3.55           | 90.20 | 1.69          | 42.90 | 2.12             | 53.85 | 1.12   | 28.45 | 0.56       | 14.20 | 30                | 762 | 1.45       | 1540 | 840      |
| CC600 MALLEABLE  | 2.50        | 63.50 | 7/16         | 11 | R                  | 3.63           | 90.20 | 1.69          | 42.90 | N/A              | N/A   | 1.12   | 28.45 | N/A        | N/A   | 21                | 533 | 4.95       | 5670 | 680      |
| CC600D MALLEABLE | 2.50        | 63.50 | 7/16         | 11 | R                  | 3.63           | 90.20 | 1.69          | 42.90 | 2.12             | 53.85 | 1.12   | 28.45 | 0.56       | 14.20 | 21                | 533 | 5.50       | 5670 | 680      |

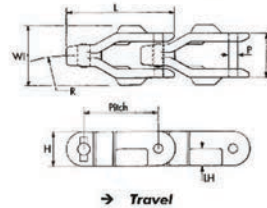
**1300 Series**

The heavy duty 1300 series, with its heavier construction and increased wearing surfaces, is particularly suitable for increased duty such as handling steel crates, kegs, gas cylinders, pallets and many other industrial applications.

**PM1300 Standard open style**



**PM1300D Standard open style with hold down lug**

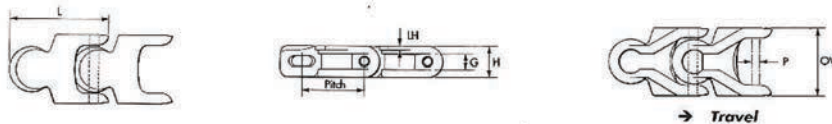


| CHAIN TYPE | CHAIN PITCH |       | PIN DIAMETER |    | AVAILABLE PIN TYPE | OVERALL LENGTH |        | CHAIN WIDTH W |       | OVERALL WIDTH WI |       | HEIGHT |       | LUG HEIGHT |       | MIN TURN RADIUS R |     | CHAIN WT/M | UTS  | MAX LOAD |
|------------|-------------|-------|--------------|----|--------------------|----------------|--------|---------------|-------|------------------|-------|--------|-------|------------|-------|-------------------|-----|------------|------|----------|
|            | IN          | MM    | IN           | MM |                    | IN             | MM     | IN            | MM    | IN               | MM    | IN     | MM    | IN         | MM    | IN                | MM  |            |      |          |
| PM1300     | 3.25        | 82.55 | 7/16         | 11 | S,C,R              | 4.65           | 118.10 | 2.00          | 50.80 | N/A              | N/A   | 1.50   | 38.10 | N/A        | N/A   | 26                | 660 | 2.08       | 2265 | 1200     |
| PM1300D    | 3.25        | 82.55 | 7/16         | 11 | S,C,R              | 4.65           | 118.10 | 2.00          | 50.80 | 2.625            | 66.68 | 1.50   | 38.10 | 0.75       | 19.05 | 26                | 660 | 2.27       | 2265 | 1200     |

\*PIN TYPES AVAILABLE: S=SNAP FIT, C=CIRCLIP, R=RIVET

**1700 Series**

This is the most versatile chain in the series being able to flex in several directions. PM1700 can be employed on very small bends with turn discs, which makes construction of very compact conveyors possible.



| CHAIN TYPE | CHAIN PITCH |    | PIN DIAMETER |      | AVAILABLE PIN TYPE | OVERALL LENGTH |       | CHAIN WIDTH W |       | OVERALL WIDTH WI |    | HEIGHT |      | LUG HEIGHT |       | MIN TURN RADIUS R |     | CHAIN WT/M | UTS | MAX LOAD |
|------------|-------------|----|--------------|------|--------------------|----------------|-------|---------------|-------|------------------|----|--------|------|------------|-------|-------------------|-----|------------|-----|----------|
|            | IN          | MM | IN           | MM   |                    | IN             | MM    | IN            | MM    | IN               | MM | IN     | MM   | IN         | MM    | IN                | MM  |            |     |          |
| PM1700     | 1.968       | 50 | 5/16         | 7.94 | K                  | 3.16           | 80.26 | 1.15          | 54.60 | 0.944            | 24 | 0.125  | 3.20 | 0.44       | 11.18 | 5.50              | 140 | 1.30       | 600 | 360      |

## Drive Sprockets

Sprocket materials include steel, cast iron, polyethylene or case nylon.

| PM600        |              |              |           |          |       |        |       |        |                 |       |
|--------------|--------------|--------------|-----------|----------|-------|--------|-------|--------|-----------------|-------|
| CAST         | PLASTIC      | NO. OF TEETH | HUB SIZES |          | PCD   |        | O/D   |        | O/D SHORT TOOTH |       |
|              |              |              | DIA       | THRO     | IN    | MM     | IN    | MM     | IN              | MM    |
| 41/CC600/6T  | 36/PM600/6T  | 6            | 3 IN      | 2 1/4 IN | 5.00  | 127.00 | 5.60  | 142.30 |                 |       |
| 41/CC600/8T  | 36/PM600/8T  | 8            | 3 1/2 IN  | 2 1/2 IN | 6.53  | 165.90 | 7.00  | 177.80 | 6.50            | 165.1 |
| 41/CC600/10T | 36/PM600/10T | 10           | 4 1/2 IN  | 2 1/2 IN | 8.09  | 205.50 | 9.20  | 234.00 | 8.25            | 210   |
| 41/CC600/12T | 36/PM600/12T | 12           | 5 IN      | 2 3/4 IN | 9.66  | 245.40 | 10.25 | 260.00 | 10.00           | 254   |
| 41/CC600/14T | 36/PM600/14T | 14           | 5 IN      | 3 IN     | 11.24 | 285.50 | 12.30 | 312.00 | 11.60           | 295   |

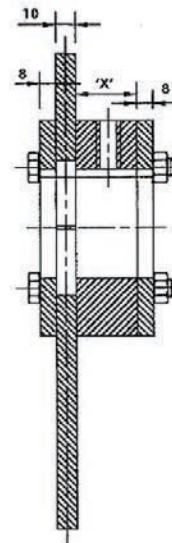
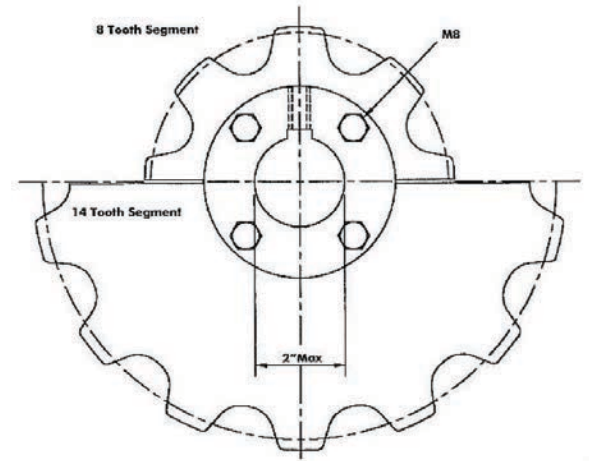
NOTE: Short tooth form available for JK600 closed top.

| PM1300        |               |              |           |          |       |        |       |        |  |  |
|---------------|---------------|--------------|-----------|----------|-------|--------|-------|--------|--|--|
| CAST          | PLASTIC       | NO. OF TEETH | HUB SIZES |          | PCD   |        | O/D   |        |  |  |
|               |               |              | DIA       | THRO     | IN    | MM     | IN    | MM     |  |  |
| 41/CC1400/8T  | 36/PM1300/8T  | 8            | 3 1/2 IN  | 2 1/4 IN | 8.49  | 215.65 | 9.40  | 239.00 |  |  |
| 41/CC1400/10T | 36/PM1300/10T | 10           | 4 IN      | 3 IN     | 10.52 | 267.20 | 11.63 | 295.00 |  |  |
| 41/CC1400/12T | 36/PM1300/12T | 12           | 5 1/2 IN  | 3 IN     | 12.56 | 319.00 | 13.75 | 349.00 |  |  |
| 41/CC1400/14T | 36/PM1300/14T | 14           | 5 1/2 IN  | 3 1/2 IN | 14.61 | 371.10 | 15.80 | 401.00 |  |  |

| PM1700        |               |              |           |      |      |        |      |        |  |  |
|---------------|---------------|--------------|-----------|------|------|--------|------|--------|--|--|
| CAST          | PLASTIC       | NO. OF TEETH | HUB SIZES |      | PCD  |        | O/D  |        |  |  |
|               |               |              | DIA       | THRO | IN   | MM     | IN   | MM     |  |  |
| 41/CC1700/8T  | 36/PM1700/8T  | 8            | 50MM      | 40MM | 5.14 | 130.60 | 5.24 | 133.00 |  |  |
| 41/CC1700/10T | 36/PM1700/10T | 10           | 60MM      | 50MM | 6.37 | 161.80 | 6.54 | 166.00 |  |  |
| 41/CC1700/12T | 36/PM1700/12T | 12           | 60MM      | 50MM | 7.60 | 193.00 | 7.72 | 196.00 |  |  |

| Split Construction Sprockets with Polyethylene Tooth Rings |              |           |     |       |       |       |        |  |  |  |
|--|--------------|-----------|-----|-------|-------|-------|--------|--|--|--|
| PLASTIC  | NO. OF TEETH | HUB SIZES |     |       |       | PCD   |        |  |  |  |
|  |              | IN        | MM  | IN    | MM    | IN    | MM     |  |  |  |
| 36/PM600/6TS   | 6            | 4         | 100 | 2     | 50.00 | 5.00  | 127.00 |  |  |  |
| 36/PM600/8TS   | 8            | 4         | 100 | 2     | 50.00 | 6.53  | 165.90 |  |  |  |
| 36/PM600/10TS  | 10           | 4         | 100 | 2     | 50.00 | 8.09  | 205.50 |  |  |  |
| 36/PM600/12TS  | 12           | 4         | 100 | 2     | 50.00 | 9.66  | 245.40 |  |  |  |
| 36/PM600/14TS  | 14           | 4         | 100 | 2     | 50.00 | 11.24 | 285.50 |  |  |  |
| 36/PM1300/8TS  | 8            | 4         | 100 | 2 1/2 | 63.50 | 8.49  | 215.65 |  |  |  |
| 36/PM1300/10TS   | 10           | 4         | 100 | 2 1/2 | 63.50 | 10.52 | 267.20 |  |  |  |
| 36/PM1300/12TS   | 12           | 4         | 100 | 2 1/2 | 63.50 | 12.56 | 319.00 |  |  |  |
| 36/PM1300/14TS   | 14           | 4         | 100 | 2 1/2 | 63.50 | 14.61 | 371.10 |  |  |  |

Other diameters available on request



Other plate wheel options including carbon, stainless and hardened steel can be manufactured to order.