PERFORMANCE IN MOTION

MAGNETIC CURVES
The REGINA magnetic system consists of mainly three parts:

1. Machined upper plastic track with magnets integrated underneath the track in order to create a magnetic attraction with stainless steel chains or steel pins of plastic chains running in the curve.

2. Machined lower plastic track to support the chain in the conveyor return part, jointed with the upper part by stainless steel self-tapping screws. Threaded brass inserts (supplied separately) can be inserted laterally to fix the curve to the conveyor.

3. Return shoe guide.

Dimensions, field strength and position of the magnets have been carefully studied in order to get the ideal distribution and strength of the magnetic field for steel or plastic chains.

### Magnetic field comparison.

Example: Curve with 500 mm radius, N° 4 tracks, 90° layout.

<table>
<thead>
<tr>
<th>Angle $\alpha$ (°)</th>
<th>Magnetic field (m Tesla)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regina magnetic curves</td>
</tr>
<tr>
<td></td>
<td>mean value 20.8</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The oscillation amplitude “A” of the magnetic field keeps around the average value and the period “L” is reduced. The result is a magnetic field of the REGINA curves much more uniform than the other magnetic curves.

### BENEFITS

- Very smooth chain running, thanks to the optimized magnetic field which ensures that all the chains keep perfectly flat in curve without lifting or pulsation effect.
- Reliable system due to the constant magnetic field during the curve life.
- Curves easy to install, maintain and clean, just lift the chain when the conveyor is not running.
- Same magnetic curves for steel and plastic chains, allowing parts standardization with consequent costs reduction.
The curve MF01AX/100 has the following features: suitable for 981M/880M K 3 1/4 or K 83.8 chains, N°1 track, 500 mm radius, 90° section, 82 mm height, 100 mm basic width, no infeed length. To identify the requested curve, see the REFERENCE TABLE for each chain series and select the reference in the “single track” or “multi track” columns.

To complete the coding, insert the correct number and letter in the proper space (“”) according to “TABLE 1” below.

Example 1:
Single track curve for 981M K 3 1/4 chain, 500 mm radius, 100 mm basic width, 100 mm infeed length.
Reference in the table: MF01A_X/101. For a 90° section, the corresponding letter is “A” (TABLE 1) and the complete reference of the curve will be MF01A_A_X/101

Example 2:
Multi track curve for 981M K 3 1/4 chain, 500 mm radius, 85 mm transversal pitch, 111 mm basic width, 100 mm infeed length.
Reference in the table: MF__A_Y/311. For a 45° section, the corresponding letter is “C” (TABLE 1). Selecting N°4 tracks, the complete reference of the curve will be: MF04ACY/311
<table>
<thead>
<tr>
<th>CHAIN TYPE</th>
<th>Width</th>
<th>Radius R (mm)</th>
<th>Transversal Pitch P (mm)</th>
<th>Basic Width B (mm)</th>
<th>Infeed Length L (mm)</th>
<th>Upper Part Height (mm)</th>
<th>Total Height H for single track (mm)</th>
<th>Reference for single track curve</th>
<th>Total Height H for multi track (mm)</th>
<th>Reference for multi track curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD 9657M</td>
<td>7 1/2”</td>
<td>610</td>
<td>195</td>
<td>200</td>
<td>100</td>
<td>32</td>
<td>87</td>
<td>MH01C W/501</td>
<td>95</td>
<td>MH C Z/561</td>
</tr>
<tr>
<td>HDG 9857M</td>
<td>610</td>
<td>750</td>
<td>195</td>
<td>200</td>
<td>100</td>
<td>32</td>
<td>87</td>
<td>MH01E W/501</td>
<td>95</td>
<td>MH E Z/561</td>
</tr>
<tr>
<td>882M</td>
<td>10”</td>
<td>860</td>
<td>214</td>
<td>0</td>
<td>32</td>
<td>87</td>
<td>MH01F W/600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFX 882M</td>
<td>12”</td>
<td>860</td>
<td>214</td>
<td>0</td>
<td>32</td>
<td>87</td>
<td>MH01G W/800</td>
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<td>LBP 882M</td>
<td>7 1/2”</td>
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<td>290</td>
<td>0</td>
<td>32</td>
<td>95</td>
<td>ML01F Z/600</td>
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<td></td>
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<tr>
<td></td>
<td>10”</td>
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<td></td>
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<tr>
<td></td>
<td>12”</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>782M</td>
<td>83,8 mm</td>
<td>500</td>
<td>85</td>
<td>100</td>
<td>0</td>
<td>27</td>
<td>82</td>
<td>MM01A X/100</td>
<td>90</td>
<td>MM A Y/110</td>
</tr>
<tr>
<td>783M</td>
<td></td>
<td>750</td>
<td>85</td>
<td>100</td>
<td>0</td>
<td>27</td>
<td>90</td>
<td>MM01A Y/101</td>
<td>90</td>
<td>MM A Y/111</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>85</td>
<td>100</td>
<td>0</td>
<td>27</td>
<td>90</td>
<td>MM01E Y/101</td>
<td>90</td>
<td>MM E Y/111</td>
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<td></td>
<td></td>
<td></td>
<td>MM01E Y/301</td>
<td>90</td>
<td>MM E Y/311</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>MM01G Y/100</td>
<td>90</td>
<td>MM G Y/110</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MM01A Y/402</td>
<td>90</td>
<td>MM A Y/442</td>
</tr>
</tbody>
</table>

On request, Magnetic curves with different dimensions than standard can be supplied. Please specify all the requested parameters filling the form below and contact the Regina sales offices.

### CHAIN SERIES

**CHAIN WIDTH:**

**FIRST RADIUS R:**

**CURVE ANGLE α:**

**N° OF TRACKS:**

**TRANSVERSAL PITCH P:**

**BASIC WIDTH B:**

**TOTAL WIDTH W:**

**INFEED LENGTH L:**

### REQUESTED CURVE PARAMETERS

<table>
<thead>
<tr>
<th>mm</th>
<th>inches</th>
<th>°</th>
</tr>
</thead>
<tbody>
<tr>
<td>82</td>
<td>MM01A X/100</td>
<td>90</td>
</tr>
<tr>
<td>90</td>
<td>MM01A Y/101</td>
<td>90</td>
</tr>
<tr>
<td>90</td>
<td>MM01E Y/101</td>
<td>90</td>
</tr>
<tr>
<td>82</td>
<td>MM01G Y/100</td>
<td>90</td>
</tr>
<tr>
<td>90</td>
<td>MM01A Y/402</td>
<td>90</td>
</tr>
</tbody>
</table>
The REGINA magnetic curves (upper part) are available in the following materials, according to any application need:

<table>
<thead>
<tr>
<th>CURVE MATERIAL</th>
<th>FEATURES</th>
<th>CHAIN TYPE</th>
<th>APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPREME - A</td>
<td>Ultra high molecular weight polyethylene (about 7 million gr/mole) with good wear resistance and low coefficient of friction</td>
<td>For steel and plastic chains</td>
<td>Ideal for low/medium speed applications in dry or lubricated conditions</td>
</tr>
<tr>
<td>SUPREME - L</td>
<td>High grade of ultra high molecular weight polyethylene (about 7 - 9 million gr/mole) with optimum wear and abrasion resistance, combined with advanced lubricant for excellent gliding properties</td>
<td>For steel and plastic chains</td>
<td>Suitable for medium/high speed applications in dry or reduced lubricated conditions</td>
</tr>
<tr>
<td>SUPREME - S</td>
<td>Special high grade and oil-filled polyamide, with superior abrasion resistance and extremely high PV limit. Dry running only</td>
<td>For plastic chains</td>
<td>Suitable for high speed applications in dry running conditions</td>
</tr>
</tbody>
</table>

**PV LIMIT**

![PV Limit Chart](chart.png)

Test condition: 70 m/min chain speed, dry running

The return part of the curve and the shoe guide are made of UHMWPE with 4 milions gr/mole, that exceeds the most demanding applications.
REGINA CHAIN

PERFORMANCE IN MOTION

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