

# Product News

## C3200 Knuckle Chain 2" Straight C3210 Knuckle Chain 2" Radius



Habasit's HabaCHAIN® C3200 and C3210 knuckle chains are ideal for crate and tote handling as well as any abusive application where product and/or container contamination with lubricants required by metal chains is a concern. The Habasit polyamide knuckle chains enable operating temperatures up to 130°C (266°F). The chains are molded in food-approved material. HabaCHAIN® C3200 and C3210 knuckle chains are compatible with most 2" heavy duty chains on the market.

### Product features

- Strong, impact-resistant 2" pitch chain
- C3210: 15.7" (400mm) center line turning radius
- Heavy duty transport at high speeds
- Quiet running, requires no lubrication

- Long service life
- Assembly and disassembly is fast and easy
- Compatible with similar 2" pitch chains
- Bi-directional drive possible
- Extended pin versions available

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The image is a composite of three main elements:

- FEA Simulation:** A 3D model of a knuckle chain link with a color-coded stress distribution, showing higher stress (yellow/red) at the pin and lower stress (blue) in the body.
- Software Interface:** A screenshot of a design software window titled "Program". It shows various parameters for a "Stacked Cardboard" application, including:
  - Clear selections: Pin Top, M2520, POM, Rod material: PP
  - Location: Bell width: 1300 mm, Elevation: 0.0 mm, Conveying length: 6.0 m, Conveyed load: 500 kg/h<sup>2</sup>, Speed: 18.0 m/min
  - Friction: Friction bell-slider: 0.22, Friction belt-product: 0.30
  - Accumulation: Accumulation length: 0.0 m, Accumulation load: 0.0 kg/h<sup>2</sup>, Temperature: 50.0 °C
  - Drive: Standard head drive, Center drive, Pusher drive
  - Material: M25518600, Feeds: 18, Pitch: 146.3 mm, Diameter: 60 mm, Shaft type: Carbon Steel
  - Results for straight run: Bell weight: 3.40 kg/h<sup>2</sup>, Strength-Fn: 10000 N/m
  - Other parameters: Service factor, Temperature factor, Speed factor, Adjusted tensile force, Admissible tensile force, Admissible tensile force utilized, Deflection / Bearings (drive shaft: 2.5 mm, idling shaft: 6.1 mm), Torison angle of drive shaft, Number of sprockets on drive shaft, Number of sprockets on idle shaft, Torque: 1308 N·m, Driving power: 5436 W
- Meeting:** A circular inset showing three people in business attire (two men and one woman) in a meeting room, with one man pointing at a whiteboard.

# Product Data Series C3200

## C3200 Knuckle Chain 2" Straight



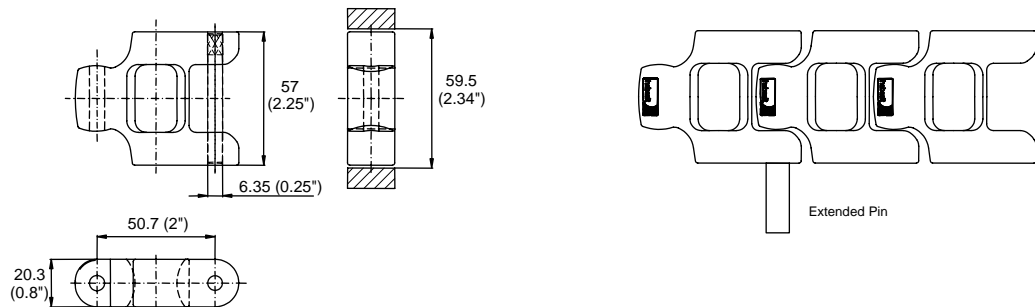
### Description

- Strong impact resistance chain
- Pin stainless steel with diameter 6.35 mm (0.25")
- Heavy duty transport at high speed
- Quiet run, needs no lubrication
- Long service life
- Design according to USDA standard
- Food approved materials
- Standard color Dark Grey, Light Grey  
other colors: Blue, White
- Available assembled in 3 m (10 feet) lengths



### Available accessories

- Extended pin stainless steel  
(size to customer request)



### Chain data

Chain material		Polyacetal	Polyamide	Polyamide +US
Nominal tensile strength [N]	N	3'200	3'200	3'200
	lb	720	720	720
Temperature range	°C	-40 – 90	-46 – 130	-46 – 116
	short-term °F	-40 – 195	+160	+135
	short-term °F		-50 – 266	-50 – 240
Belt weight [mB]	kg/m	1.31	1.11	1.11
	lb/ft	0.88	0.74	0.74
Coefficient of friction belt to support [ $\mu$ G]	• UHMW	0.10	0.14	0.14
	• HDPE	0.08	0.14	0.14
	• PA6, PA66	0.20	-	-
	• Lubricated PA	0.11	0.13	0.13
	• Steel	0.14	0.19	0.19
Coefficient of friction belt to goods [ $\mu$ P]	• Glass	0.15	0.17	0.17
	• Steel	0.20	0.19	0.19
	• Plastic (PET)	0.18	0.12	0.12
	• Cardboard	0.20	0.17	0.17

For other materials contact Habasit representative.

**Coefficient of friction:** The indicated values are valid for dry and clean conditions only. Under dirty conditions this factor may be 2 to 3 times higher.

**The nominal tensile strength** is valid for 23 °C (73 °F). The admissible tensile force is dependent on the operating temperature near the drive sprockets. Within the temperature range allowed, the admissible tensile force may vary from 100 % to 20 % of the nominal tensile strength. For detailed information and correct calculation of effective tensile force refer to the Engineering Guidelines.

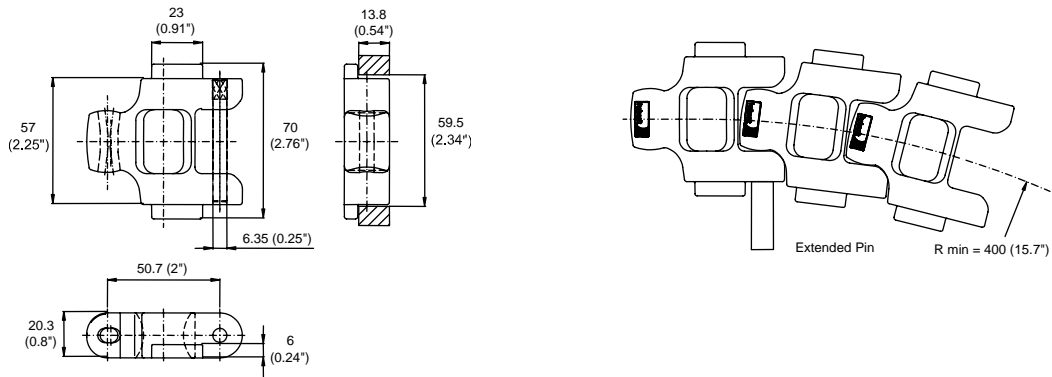
# Product Data Series C3200

## C3210 Knuckle Chain 2" Radius



### Description

- Strong impact resistance chain with tabs
- Minimal center radius 400 mm (15.7 inches)
- Pin stainless steel with diameter 6.35 mm (0.25")
- Heavy duty transport at high speed
- Quiet run, needs no lubrication
- Long service life
- Design according USDA standard
- Food approved materials
- Standard colors: Dark Grey, Light Grey  
other colors: Blue, White
- Available assembled in 3 m (10 feet) lengths
- **Available accessories**  
Extended pin stainless steel  
(size to customer request)



### Chain data

Chain material		Polyacetal	Polyamide	Polyamide +US
Nominal tensile strength [N]	N	2'500	2'500	2'500
	lb	562	562	562
Temperature range	°C	-40 – 90	-46 – 130	-46 – 116
	short term		+160	+135
	°F	-40 – 195	-50 – 266	-50-240
Belt weight [mB]	kg/m	1.34	1.14	1.11
	lb/ft	0.90	0.76	0.74
Coefficient of friction belt to support [ $\mu$ G]	• UHMW	0.10	0.14	0.14
	• HDPE	0.08	0.14	0.14
	• PA6, PA66	0.20	-	-
	• Lubricated PA	0.11	0.13	0.13
	• Steel	0.14	0.19	0.19
Coefficient of friction belt to goods [ $\mu$ P]	• Glass	0.15	0.17	0.17
	• Steel	0.20	0.19	0.19
	• Plastic (PET)	0.18	0.12	0.12
	• Cardboard	0.20	0.17	0.17

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