

Pin Oven Chains for can industry



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Pin Oven Chains for the production of beverage cans

For more than 30 years Regina has been manufacturing high quality Pin Oven Chains for the beverage two-piece can industry.

Closely cooperating with leading can manufacturers, Regina has developed a specific know-how for this highly demanding application.

Developed from ANSI60/ISO12A roller chain, the Regina Pin Oven Chains are offered in standard (A60F) and O-Ring versions (A60FOR).

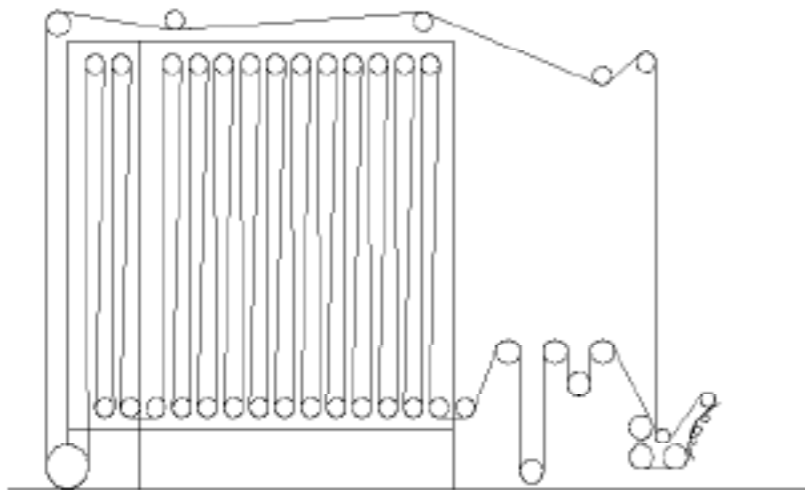
Different tip geometries and pin extensions are available to adapt to the specific can size.



TWO-PIECE CAN DECORATION OVEN

Pin Oven Chains are used to convey decorated and base coated cans through high speed & high heat ovens for the curing process.

BASIC LAYOUT



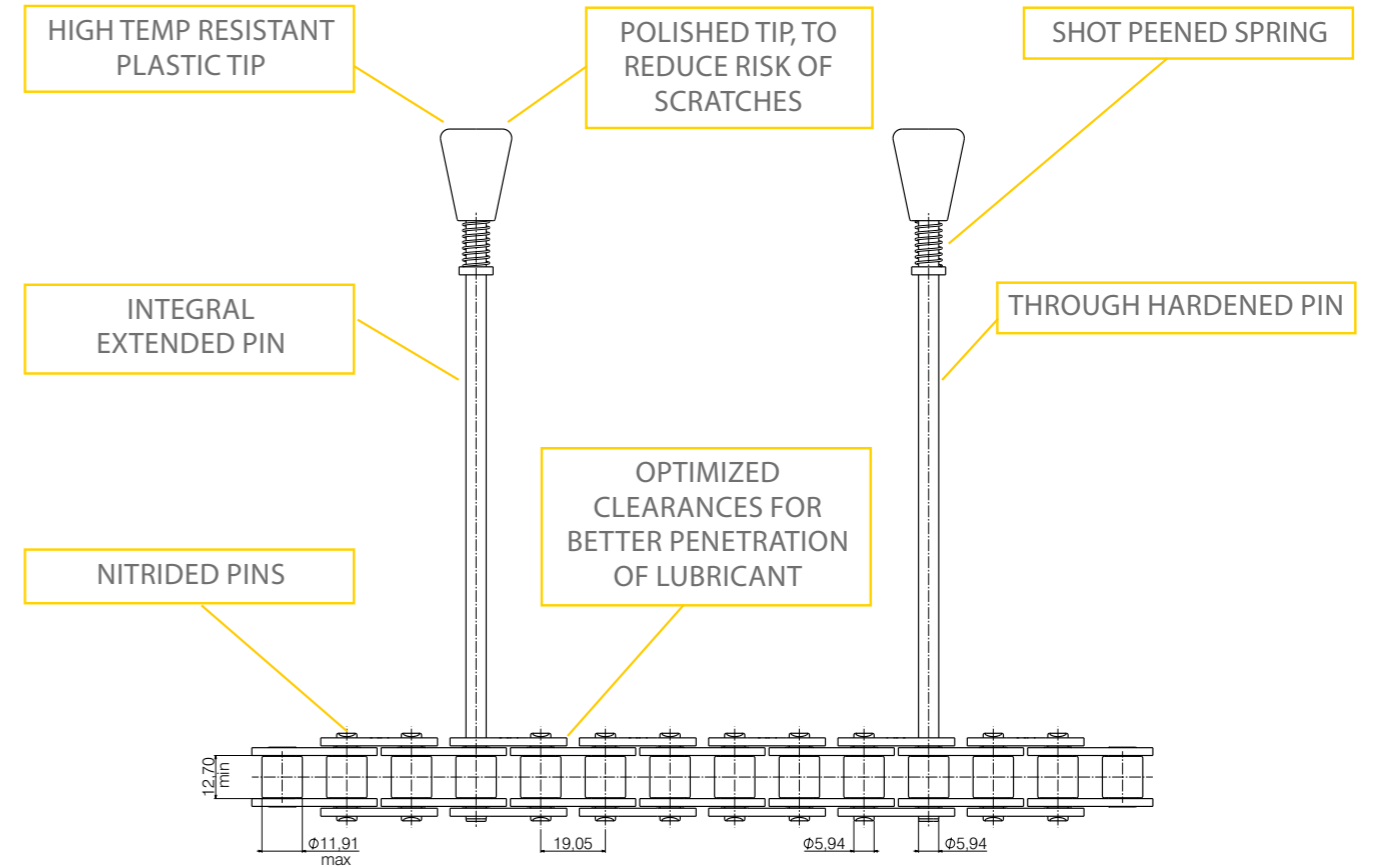
APPLICATION LIMITS

- Max speed: → **up to 5 m/s (i.e. 2'250 cans/min)**
- Max working temperature: → **standard chain: 220° C / 428° F**
- **O-Ring chain: 200° C / 392° F**

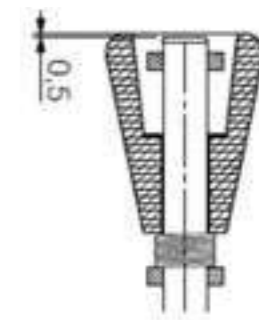
CHAIN CONSTRUCTION

A60F - STANDARD PIN OVEN

REGINA Pin Oven Chains are built with integrated extended pins, always located every 7th pitch



When spring is fully compressed, the pin does not extend, preventing damage of the can dome.



PIN TIP WITH COMPRESSED SPRING

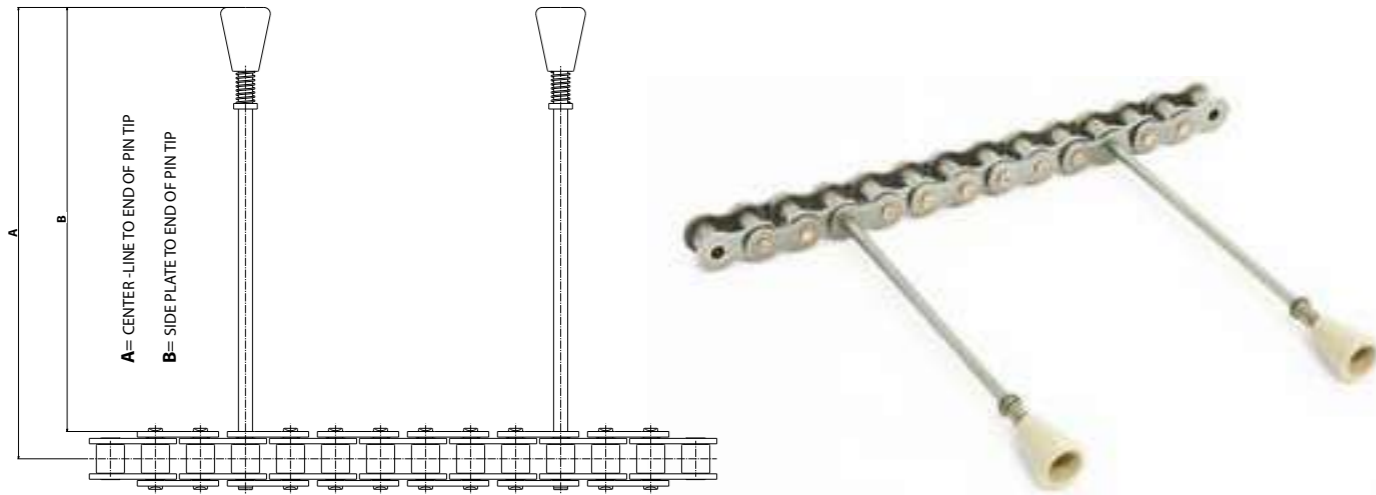
PRODUCT FEATURES

Regina Pin Oven Chains are designed to withstand the highly demanding conditions of can decoration ovens.

- Each extended pin is fitted with a spring-loaded tip, manufactured in PEEK thermoplastic
- Chain pin surface is nitrided for higher wear resistance
- Chain clearances are optimized to allow steel expansion under high temperature and facilitate oil penetration
- Chain is supplied prelubricated with synthetic oil, suitable for high temperature

PRODUCT RANGE

STANDARD PIN OVEN CHAIN



STANDARD A60F PIN OVEN CHAIN - 7" PIN EXTENSION

REGINA Ref.	ISO Ref base chain	PITCH		A = CENTER-LINE TO END OF PIN TIP		B = SIDE PLATE TO END OF PIN TIP		PIN TIP diameter	PIN TIP geometry*	PIN TIP material	SPRING
		Inch	mm	Inch	mm	Inch	mm				
A60F/1011	12A-1	3/4"	19,05	7,52	190,95	7,06	179,40	Ø 21	Conical	PEEK	yes
A60F/1026	12A-1	3/4"	19,05	7,52	190,95	7,06	179,40	Ø 18	Conical	PEEK	yes
A60F/1018	12A-1	3/4"	19,05	7,52	190,95	7,06	179,40	Ø 24	Tulip	PEEK	yes

STANDARD A60F PIN OVEN CHAIN - SPECIAL PIN EXTENSIONS

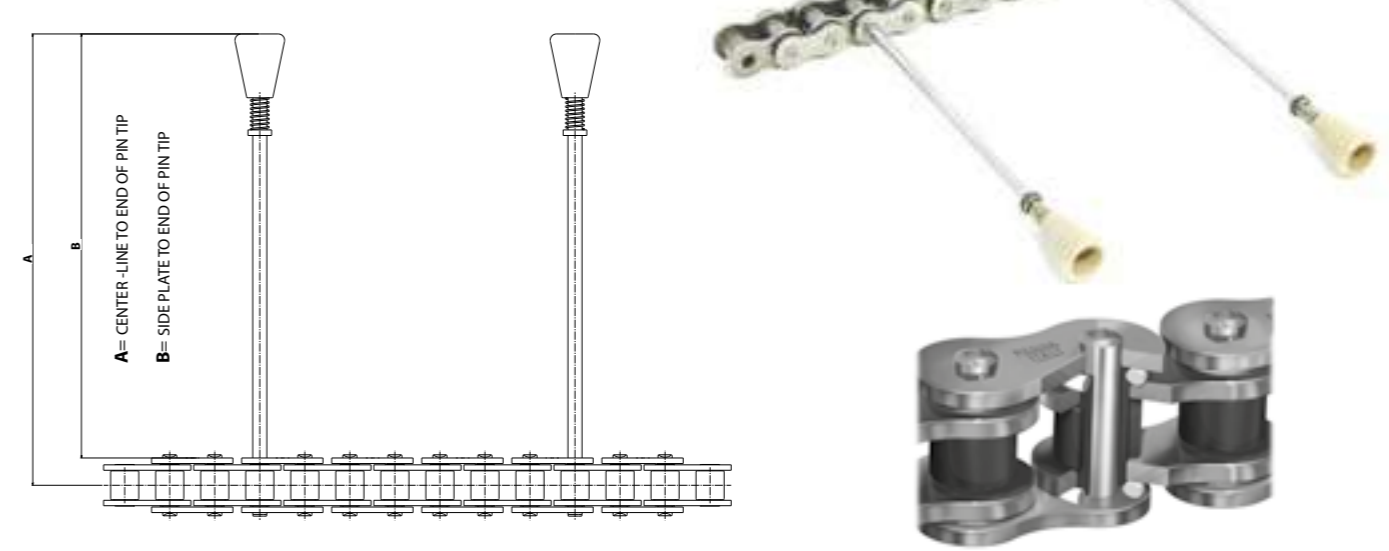
REGINA Ref.	ISO Ref base chain	PITCH		A = CENTER-LINE TO END OF PIN TIP		B = SIDE PLATE TO END OF PIN TIP		PIN TIP diameter	PIN TIP geometry*	PIN TIP material	SPRING
		Inch	mm	Inch	mm	Inch	mm				
A60F/1017	12A-1	3/4"	19,05	6,20	157,60	5,75	146,05	Ø 21	Conical	PEEK	yes
A60F/1020	12A-1	3/4"	19,05	6,83	173,45	6,37	161,90	Ø 21	Conical	PEEK	yes
A60F/1021	12A-1	3/4"	19,05	6,95	176,65	6,50	165,10	Ø 21	Conical	PEEK	yes
A60F/1016	12A-1	3/4"	19,05	7,70	195,70	7,25	184,15	Ø 21	Conical	PEEK	yes
A60F/1023	12A-1	3/4"	19,05	7,95	202,05	7,50	190,50	Ø 21	Conical	PEEK	yes
A60F/1025	12A-1	3/4"	19,05	8,08	205,25	7,63	193,70	Ø 21	Conical	PEEK	yes
A60F/1022	12A-1	3/4"	19,05	8,20	208,40	7,75	196,85	Ø 21	Conical	PEEK	yes
A60F/1013	12A-1	3/4"	19,05	8,45	214,75	8,00	203,20	Ø 21	Conical	PEEK	yes
A60F/1024	12A-1	3/4"	19,05	8,70	221,05	8,25	209,50	Ø 21	Conical	PEEK	yes

* Refer to page 6 for details on Pin Tip geometry

- PIN EXTENSIONS THAT ARE NOT LISTED HERE ABOVE CAN BE SUPPLIED ON REQUEST
- MANY DIFFERENT STYLES OF SPECIAL TIPS ARE AVAILABLE UPON REQUEST- REFER TO PAGE 6 FOR DETAILS

PRODUCT RANGE

O-RING PIN OVEN CHAIN



O-RING A60FOR PIN OVEN CHAIN - 7" EXTENSION

REGINA Ref.	ISO Ref base chain	PITCH		A = CENTER-LINE TO END OF PIN TIP		B = SIDE PLATE TO END OF PIN TIP		PIN TIP diameter	PIN TIP geometry*	PIN TIP material	SPRING
		Inch	mm	Inch	mm	Inch	mm				
A60FOR/1019	12A-1 O-Ring	3/4"	19,05	7,47	189,85	6,98	177,30	Ø 21	Conical	PEEK	yes

O-RING A60FOR PIN OVEN CHAIN - SPECIAL PIN EXTENSIONS

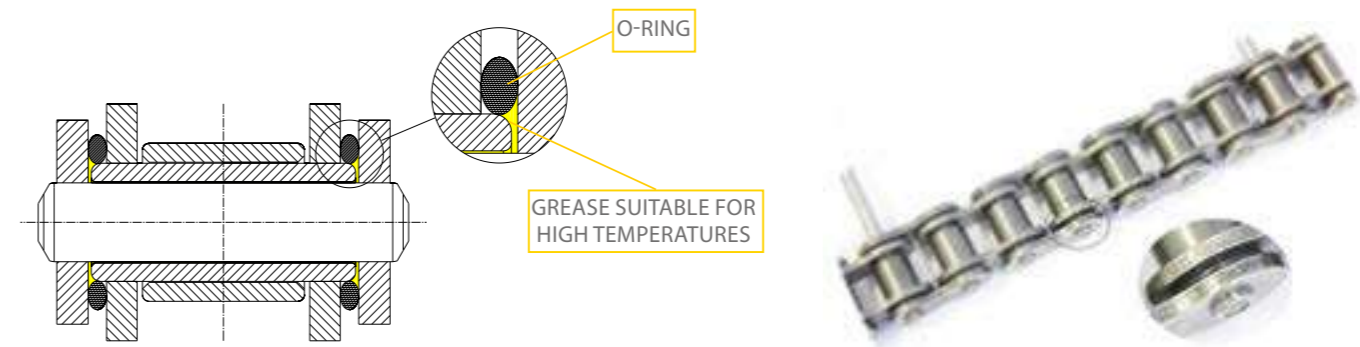
REGINA Ref.	ISO Ref base chain	PITCH		A = CENTER-LINE TO END OF PIN TIP		B = SIDE PLATE TO END OF PIN TIP		PIN TIP diameter	PIN TIP geometry*	PIN TIP material	SPRING
		Inch	mm	Inch	mm	Inch	mm				
A60FOR/1021	12A-1 O-Ring	3/4"	19,05	8,45	214,75	7,96	202,2	Ø 21	Conical	PEEK	yes

* Refer to page 6 for details on Pin Tip geometry

O-RING TECHNOLOGY

REGINA O-Ring Pin Oven Chains are built with O-Ring technology to seal the lubricant in the articulating joint and keep out contaminants.

O-Ring technology reduces the amount of chain lubrication, resulting in less chance of can contamination. A minimal lubrication is still required to avoid varnish build up.



CONICAL PIN TIPS



Standard PIN TIP is conical shaped with $\varnothing 21$ mm diameter x 27mm length.


It is made of PEEK thermoplastic, suitable for the high temperatures of curing ovens.

All contact edges with the can are rounded and the surface is polished to reduce the risk of scratches of the can's inside walls.

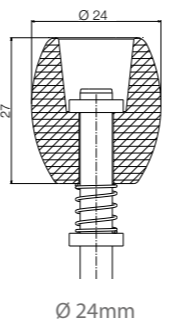


TULIP PIN TIPS

NEW



The special rounded geometry of the tulip tip design reduces the specific pressure in the contact point between tip and can wall and dome.



SPECIAL PIN TIPS



On request, Regina can supply pin tips with special geometry to match the specific requirements of narrow or large cans.

Here below are some examples of special pin tip designs that can be supplied by Regina.



$\varnothing 18$ mm Conical $\varnothing 34,5$ mm Conical $\varnothing 54$ mm Conical

PIN OVEN CHAINS PACKAGING

Regina Pin Oven Chains are packed in dedicated boxes that protect the chains and the extended pins and guarantee deliveries in good condition. Regina Pin Oven Chains are supplied in lengths of 6,4m/21ft (that means 336 links) containing 48 extended pins. Each chain starts and finishes with a 3 pitches section and is supplied with a spring clip connecting link.



6,4 / 21 ft section



Plastic bag



Cardboard box



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