



Conveyor Chain

**ENGLISH
ISSUE 8**

www.challengept.com





Never a problem, always a...

 **CHALLENGE**  [®]





CHALLENGE
Roller Chain
10BSS-2 x 5m

ISO
9001

CHALLENGE

10BSS-2 x 5m

CHALLENGE ROLLER CHAIN
E CHALLENGE

CHA





CHALLENGE PRODUCT RANGE

PRECISION ROLLER CHAIN, IN STEEL, STAINLESS STEEL & ZINC/NICKEL PLATED

LEAF CHAIN

HEAVY DUTY DRIVE CHAIN

WELDED STEEL CHAIN (DRAG AND MILL CHAIN)

FOOD INDUSTRY CHAIN

AGRICULTURAL CHAIN

SPECIAL CHAIN AND ATTACHMENT CHAIN

CONVEYOR CHAIN

BLOCK CHAIN

ENGINEERED BUSH CHAIN

PALM OIL CHAIN

DROP FORGED CHAIN

SUGAR CHAIN

TAPER BORE & PILOT BORE V-PULLEYS

SYNCHRONOUS PULLEYS

POLY V PULLEYS

TAPER BUSHES

MI-LOCK PULLEYS AND BUSHES

WEDGE AND CLASSICAL V-BELTS

TAPER BORED SPROCKETS

PILOT BORED & PLATEWHEEL SPROCKETS

FINISH BORED SPROCKETS

WELD-ON-HUBS AND BOLT-ON-HUBS

HRC COUPLINGS

FFX TYRE COUPLINGS

JAW COUPLINGS

NPX COUPLINGS

RPX COUPLINGS

CHAIN COUPLINGS

TORQUE LIMITERS

CLAMPING ELEMENTS

MOTOR MOUNTS

ELECTRIC MOTORS

WORM GEARS

SHAFT MOUNTED SPEED REDUCERS (SMSR + TXT)

SELF LUBE BEARING UNITS

PLUMMER BLOCKS

BEARINGS

Here's a Challenge: European conveyor chain manufactured in our dedicated plant in the industrialised east coast of China supplying a global market.



China HQ and logistics centre



Challenge production plant and warehouse

100 countries buy Challenge



Customers in over 100 countries benefit from our technical expertise and competitive pricing. What's more, we are fast on our feet – designing and manufacturing chains for all your special projects with the impressive speed and precision we have become famous for.

For more information visit our website:
www.challengept.com



Challenge production plant and warehouse

In-house precision tooling for manufacturing precision chain



Tooling designed and manufactured in house



Vertical machining centre



Tool maintainance



Die sets for every pitch



Punches + die sets for any size hole



Cold drawn high grade alloy steel material held in stock in all common sizes



Holes precision punched on dedicated progression tooling
Guarantees consistently high tolerance pitch control and strong, fatigue resistant chain

Automated machinery eliminates human error



High efficiency bar fed CNC lathe



Round parts in production



Spin Riveted Induction Hardened Pins in Alloy Steel For optimum life and the strongest rivet in any standard chain



Selective induction hardening



Tempering



Shot peened to produce a strong surface and reduce fatigue



All round parts ground to size

Assembly and Spin Riveting



Cleaning + oiling line



All parts cleaned + oiled before assembly



Pins with location shoulders/flats and interference fit
Precise positioning of outer plates adds to strength whilst ensuring accuracy of attachment positioning



Before



After

As specialists in the production of spin-riveted chains, we use high-grade case-hardened alloy steel pins produced on state-of-the-art European machines, giving you the best rivet on any standard chain



Assembled chain cleaned + oiled before packing. Heavy duty chain hot dipped in propriety rust proof oil: Formula 818X + Moly®

Challenge chain boxed and ready for shipment



Automated welding machinery



World class welds



Dye pen testing of welds



Tensile strength testing



ISO 9001:2015 (UK audited) certified, Challenge employs a highly qualified team of engineers to deliver our vision for consistently high quality products at competitive prices.

The Benefits of Challenge Spin Riveted Conveyor Chain

- **Material** – High quality steels used throughout

- **Link plates cropped from high carbon cold drawn steel**

To avoid internal stresses associated with guillotined steel, Challenge produces all plates from high tolerance, on size, cold drawn steel bars resulting in a plate better able to withstand fatigue and shock loads.

- **Bushes with location shoulders and interference fit**

For precise assembly; control on inner width and prevention of bush rotation. Bush shoulder length extended to form clearance between inner and outer plates and provide uniform lubrication; increased strength and life. This reduces the possibility of chain seizure.

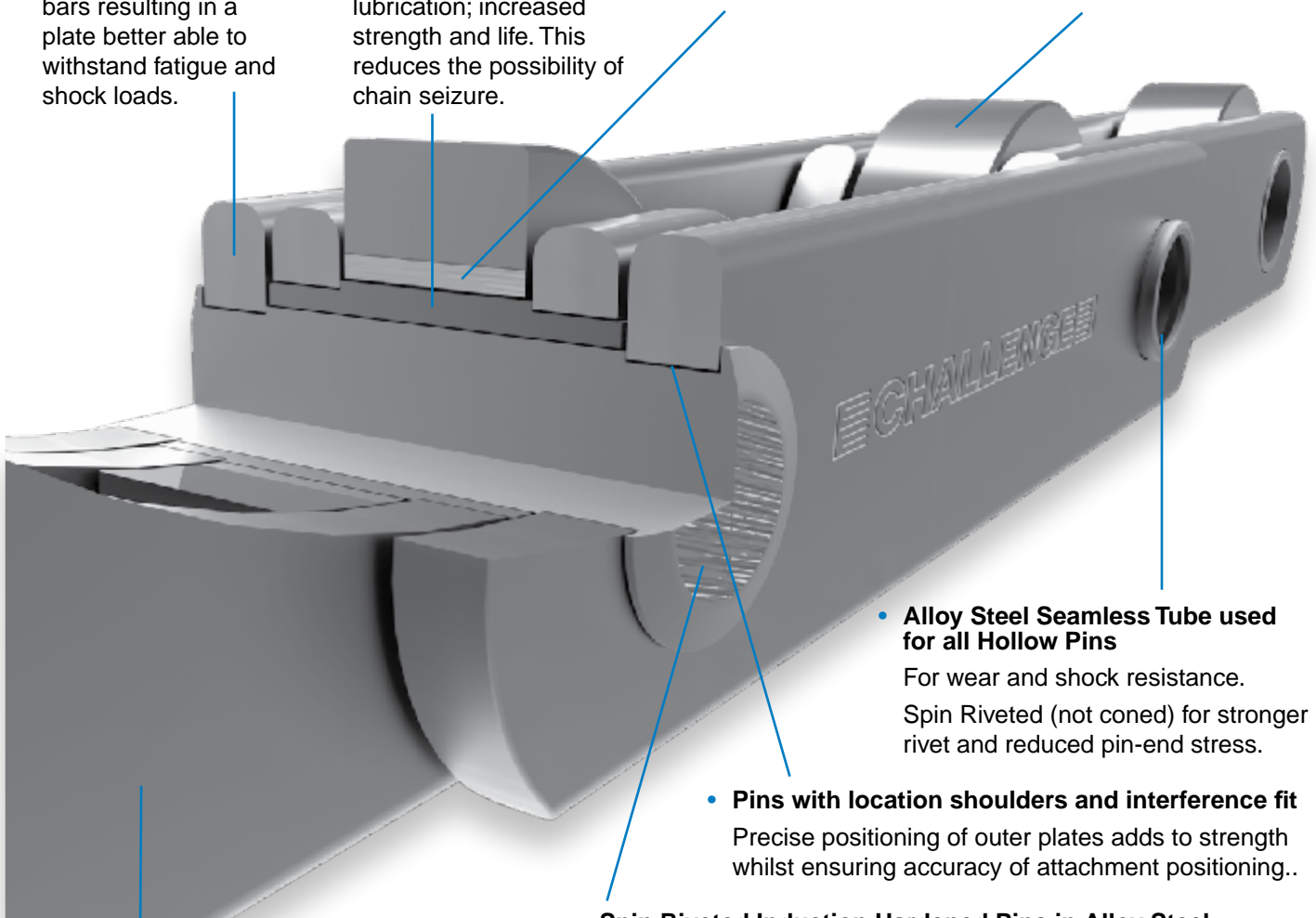
- **Case Hardened Alloy steel bushes precision machined from seamless tube**

Ensuring minimum distortion and superior concentricity.

- **Optional Stainless Steel or Nitride treated liner bushes**

- **Hardened Rollers with grinding**

Grinding the outer diameter gives excellent wear resistance and good load carrying qualities plus reduced wear on sprockets and better visual result.



- **Alloy Steel Seamless Tube used for all Hollow Pins**

For wear and shock resistance.

Spin Riveted (not coned) for stronger rivet and reduced pin-end stress.

- **Pins with location shoulders and interference fit**
Precise positioning of outer plates adds to strength whilst ensuring accuracy of attachment positioning..

- **Spin Riveted Induction Hardened Pins in Alloy Steel**

For optimum life and the strongest rivet in any standard chain..

- **Holes precision punched on dedicated progression tooling**

Guarantees consistently high tolerance pitch control and strong, fatigue resistant chain.

- **Attachment and options**

CNC welded and integral attachments, special bushes, bearings. Zinc and Nickel plated parts, molykoted pins, bushes, and rollers. Plastic rollers, flanged rollers, hardened plates, stainless parts, liner bushes etc. All specials produced in highest quality - fast turnaround.

- **Shot peened to produce a strong surface and reduce fatigue**

- **Challenge has invested heavily in CNC controlled machinery for optimum batch component conformity.**

- **Attachment plates jig assembled maintains position and squareness.**

Just a few of the limitless options available:



6" pitch 09060 Sugar Chain w/ A42 attachment



250mm pitch Clay Reclaimer Chain w/ A2 attachment



125mm pitch M112 chain with special A1 attachment and bolted plastic wear pad



160mm pitch M160 chain with special integral scraper attachment, sheradised plates and Molykote® round parts



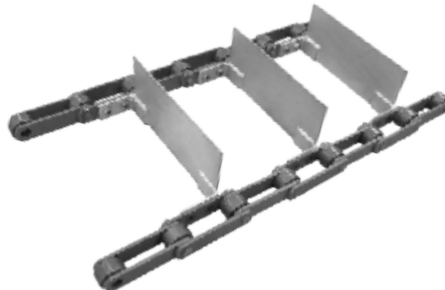
350mm pitch Sugar Chain w/ pin and bush through-lubrication



250mm pitch coal reclaimer chain w/ gusseted integral A2 attachment



160mm pitch bolted furnace chain w/ welded A2 attachment



125mm pitch twin strand bolted scraper chain, pin and bush w/ molykote®, sheradised plates and galvanised scraper plate



100mm pitch chain with A2 attachment



FV180-B-125 w/ drilled integral scraper for feed mill



315mm pitch clay reclaimer chain w/ integral A2 attachment and anti-rotation pins



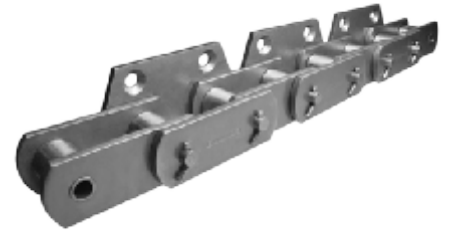
125mm pitch M224 bush chain



152.4mm pitch FU270 flow conveyor chain w/ welded scraper bars



315mm pitch clinker reclaim chain w/ SA2 attachment



125mm pitch NSE400 bucket elevator chain w/ G4 attachment



152.4mm pitch bucket elevator chain w/ G4 attachment with square holes for captive bolts



160mm pitch bucket elevator chain w/ G4 attachment for sugar refinery



315mm pitch coal supply chain w/ integral A2 attachment and bolted locking plate



250mm pitch clay supply chain w/ integral A2 attachment



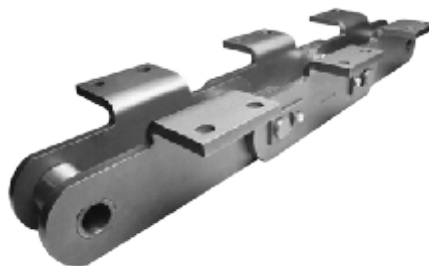
200mm pitch limestone supply chain w/ gusseted integral A2 attachment



200mm pitch clay scaling supply chain w/ integral K1 attachment



125mm pitch NSE600 bucket elevator chain w/ G4 attachment



315mm pitch clay supply chain w/ integral K2 attachment and bolted locking plate



160mm pitch self supporting clinker tray conveyor chain w/ integral A2 attachment

SPECIAL CHAIN APPLICATIONS?

CHALLENGE® HAS ALL THE OPTIONS!

Oilite® Bushes

Optional Stainless Steel or Nitride treated liner bushes

Twin Track Roller

Needle Bearing Roller

Shot peened to produce a strong surface and reduce fatigue

Flanged Rollers

Outboard Rollers

Link plates cropped from high carbon cold drawn steel

To avoid internal stresses associated with guillotined steel, Challenge produces all plates from high tolerance, on size, cold drawn steel bars resulting in a plate better able to withstand fatigue and shock loads.

Molykote® Dry Lube:- Pins, Bushes, Rollers

Case Hardened Alloy steel bushes precision machined from seamless tube

Ensuring minimum distortion and superior concentricity.

Material

High quality steels used throughout

Robotic Welding

Attachment plates jig assembled to maintain position and squareness

Special Oils

Laser Cut Attachments

Galvanised Attachments

Zinc Plated Attachments

Alloy Steel Seamless Tube used for all Hollow Pins

For wear and shock resistance. Spin Riveted (not coned) for stronger rivet and reduced pin-end stress.

IGUS® Bushes

Spin Riveted Induction Hardened Pins in Alloy Steel

For optimum life and the strongest rivet in any standard chain.

Stainless Steel Pins

Pins with location shoulders and interference fit

Holes precision punched on dedicated progression tooling

Guarantees consistently high tolerance pitch control and strong, fatigue resistant chain.

Sherardized Link Plates

Delrin® Rollers

Through Lube Chain Bush Lubrication

Bushes with location shoulders/flats and interference fit

For precise assembly; control on inner width and prevention of bush rotation. Bush shoulder length extended to form clearance between inner and outer plates and provide uniform lubrication; increased strength and life. This reduces the possibility of chain seizure.

Other Options

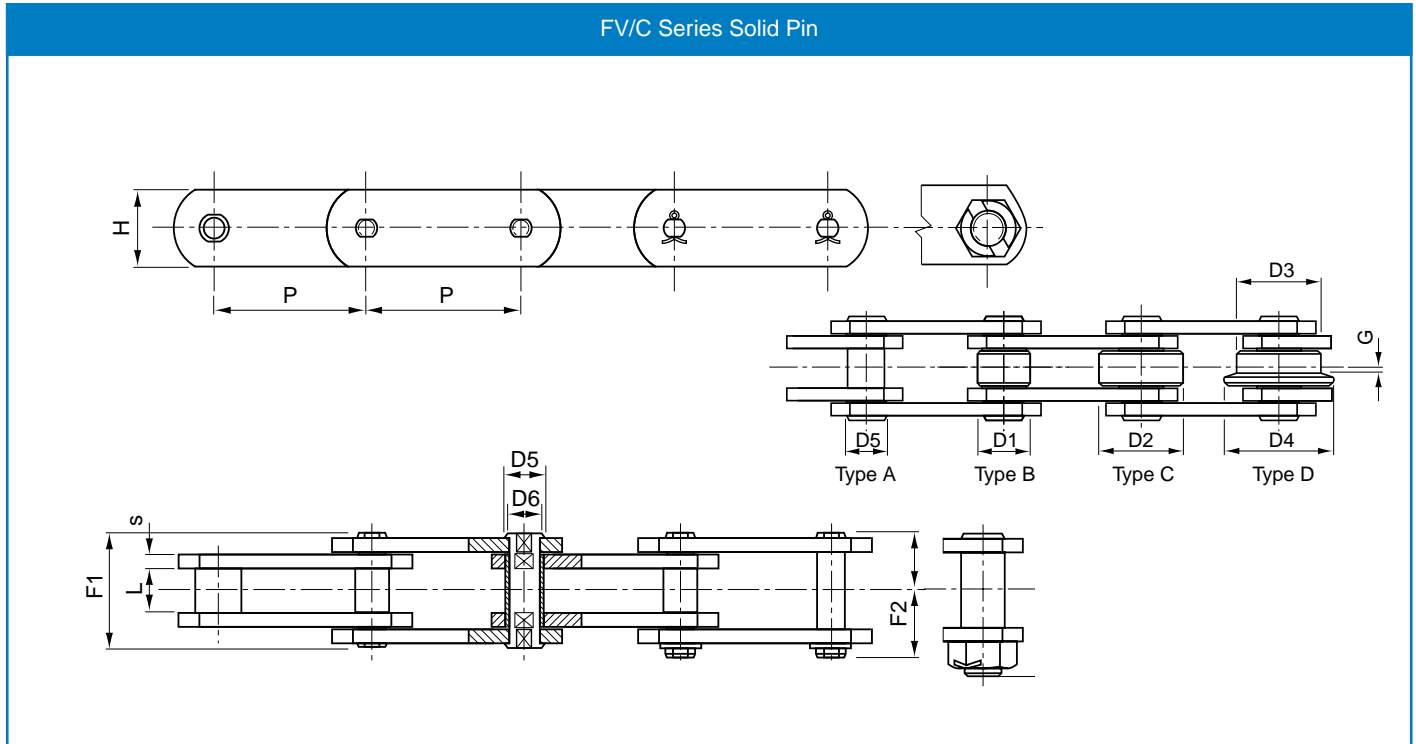
CNC welded and integral attachments, special bushes, bearings. Zinc and Nickel plated parts, molykoted pins, bushes, and rollers. Plastic rollers, flanged rollers, hardened plates, stainless parts, liner bushes etc. All specials produced in highest quality - fast turnaround.

HOT DIPPED IN
FORMULA 818X
+MOLY

Conveyor Chain

FV/C Series

Metric Conveyor Chain (DIN 8165)



Solid Pin

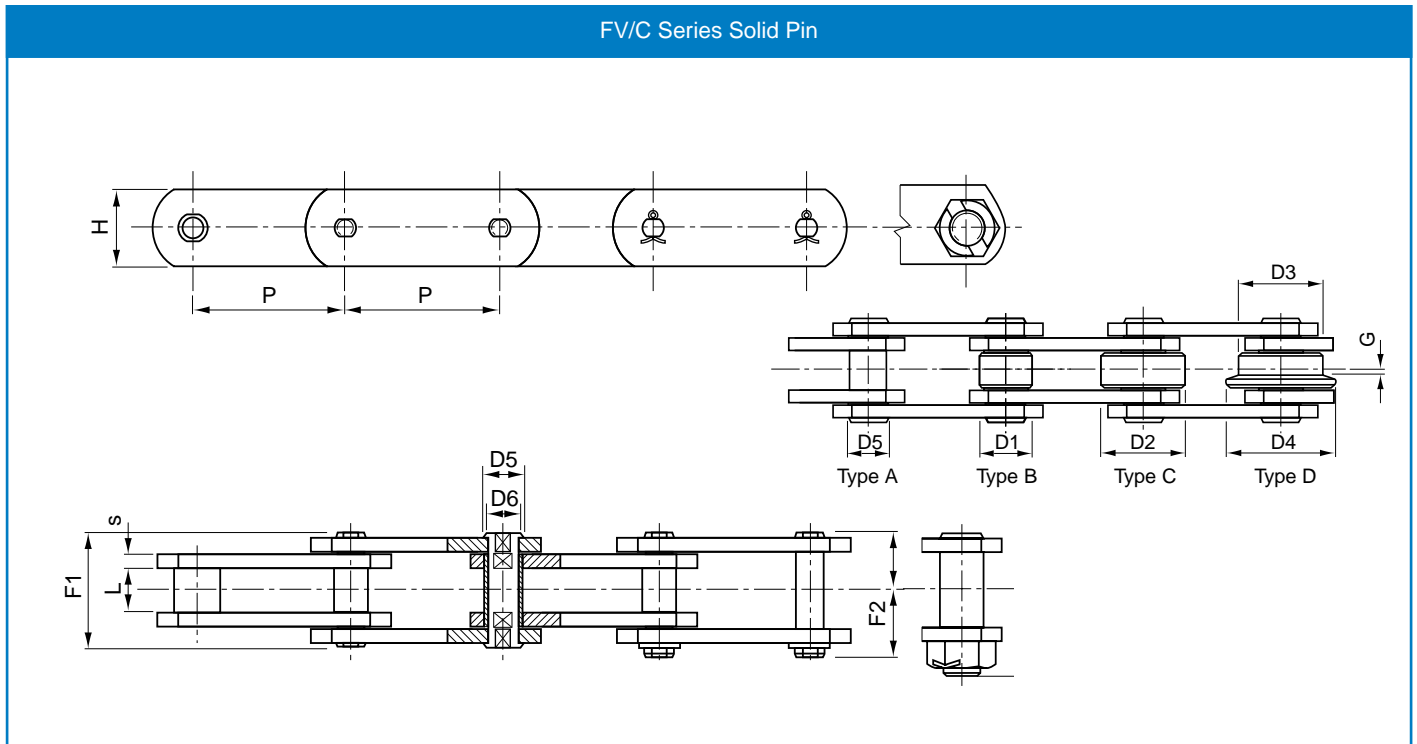
DIN Number	Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D3	D4	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
FV40	C42	50	18	4	25	3	36	21	20	32	40	50	15	10	42	47	4.0
"	"	63	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.3
"	"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.0
"	"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.6
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.3
FV63	C64	63	22	5	30	4	45	26	26	40	50	63	18	12	64	75	6.4
"	"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.3
"	"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.7
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.0
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.5
FV90	C100	63	25	6.5	35	5	53	30	30	48	63	78	20	14	100	115	10.0
"	"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.6
"	"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.3
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.5
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.8
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.8
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.6
FV112	C120	100	30	7.5	40	6	62	35	32	55	72	90	22	16	120	170	11.2
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.6
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.3
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.5
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.7

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Conveyor Chain

FV/C Series

Metric Conveyor Chain (DIN 8165)



Solid Pin

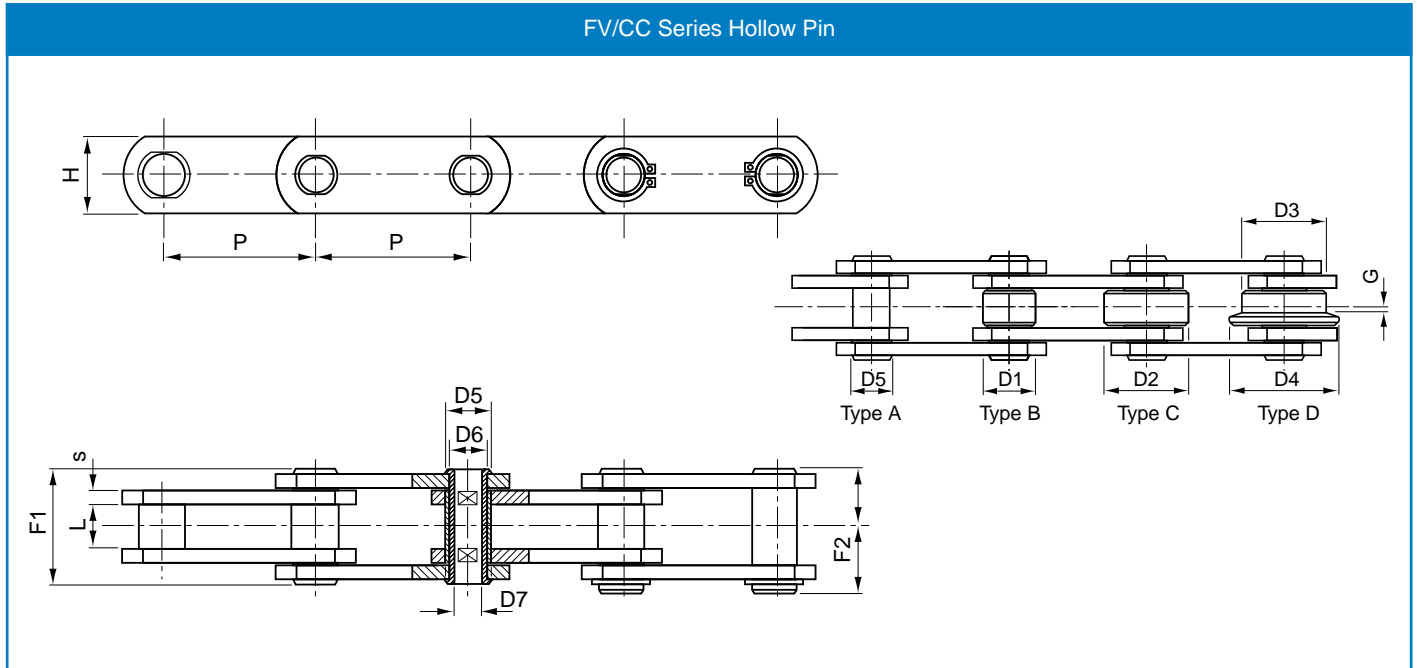
DIN Number	Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D3	D4	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
FV140	C145	100	35	9	45	6	67	38	36	60	80	100	26	18	145	180	14.3
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	12.3
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	10.5
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.0
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.3
FV180	C190	125	45	13	50	8	86	49	42	70	100	125	30	20	190	250	18.9
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	16.7
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	14.8
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	13.0
"	"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.6
FV250	C275	160	55	15	60	8	97	55	50	80	125	155	36	26	275	300	23.8
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	20.6
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	17.9
"	"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	15.8
"	"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	"	13.9
FV315	C370	160	65	18	70	10	113	70	60	90	140	175	42	30	370	480	33.3
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	28.9
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	25.3
"	"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	22.4
"	"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	"	20.2

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Conveyor Chain

FV/CC Series

Metric Conveyor Chain (DIN 8165)



Hollow Pin

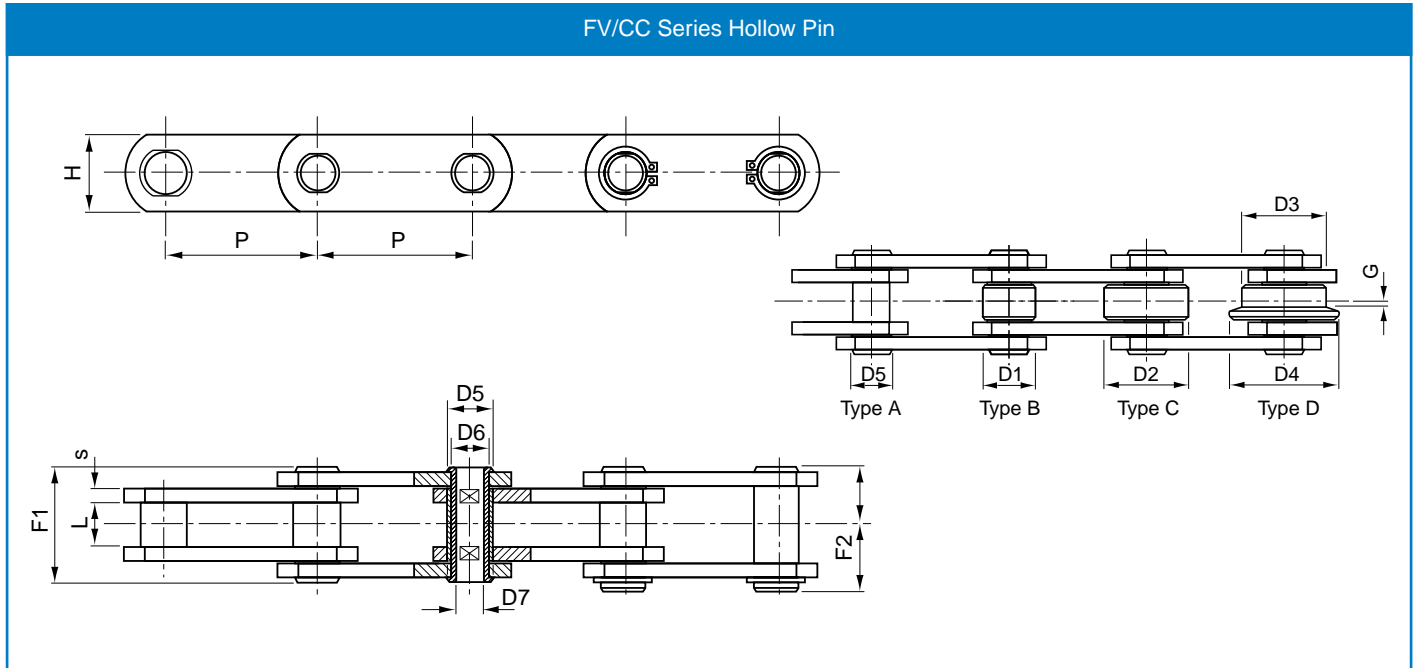
DIN Number	Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D3	D4	D5	D6	D7	Breaking Load kN	Weight (Type C) kg/m
FV63	CC46	63	22	5	30	4	45	28	26	40	50	63	18	12	8	46	5.7
"	"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.9
"	"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.3
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.8
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.4
FV90	CC73	63	25	6.5	35	5	53	30	30	48	63	78	20	14	10	73	9.1
"	"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.8
"	"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.8
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.6
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.3
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.7
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.3
FV112	CC90	100	30	7.5	40	6	62	32	32	55	72	90	22	16	11	90	10.2
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.9
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.8
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.0
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.3
FV140	CC110	100	35	9	45	6	67	35	36	60	80	100	26	18	12	110	12.9
"	"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.2
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.7
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.6
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.7

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Conveyor Chain

FV/CC Series

Metric Conveyor Chain (DIN 8165)



Hollow Pin

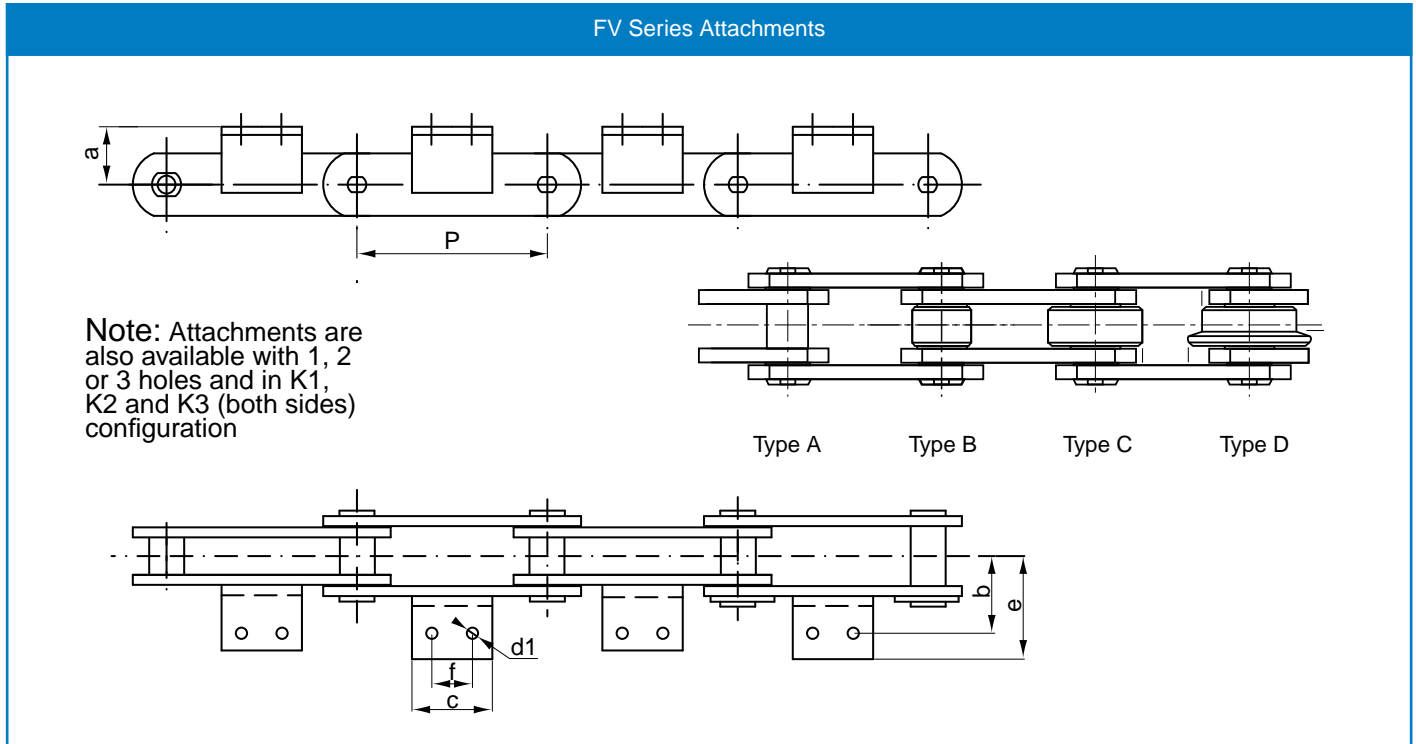
DIN Number	Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D3	D4	D5	D6	D7	Breaking Load kN	Weight (Type C) kg/m
FV180	CC145	125	45	13	50	8	86	45	42	70	100	125	30	20	14	145	18.2
"	"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	15.6
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	13.8
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	12.3
"	"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.0
FV250	CC215	160	55	15	60	8	97	55	50	80	125	155	36	26	18	215	20.5
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	18.0
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	15.9
"	"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	14.2
FV315	CC295	160	65	18	70	10	117	63	60	90	140	175	42	30	20	295	34.1
"	"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	29.5
"	"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	25.8
"	"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	22.8
"	"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	"	20.2

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Conveyor Chain Attachments

FV Series Attachments

Metric Conveyor Chain (DIN 8165)



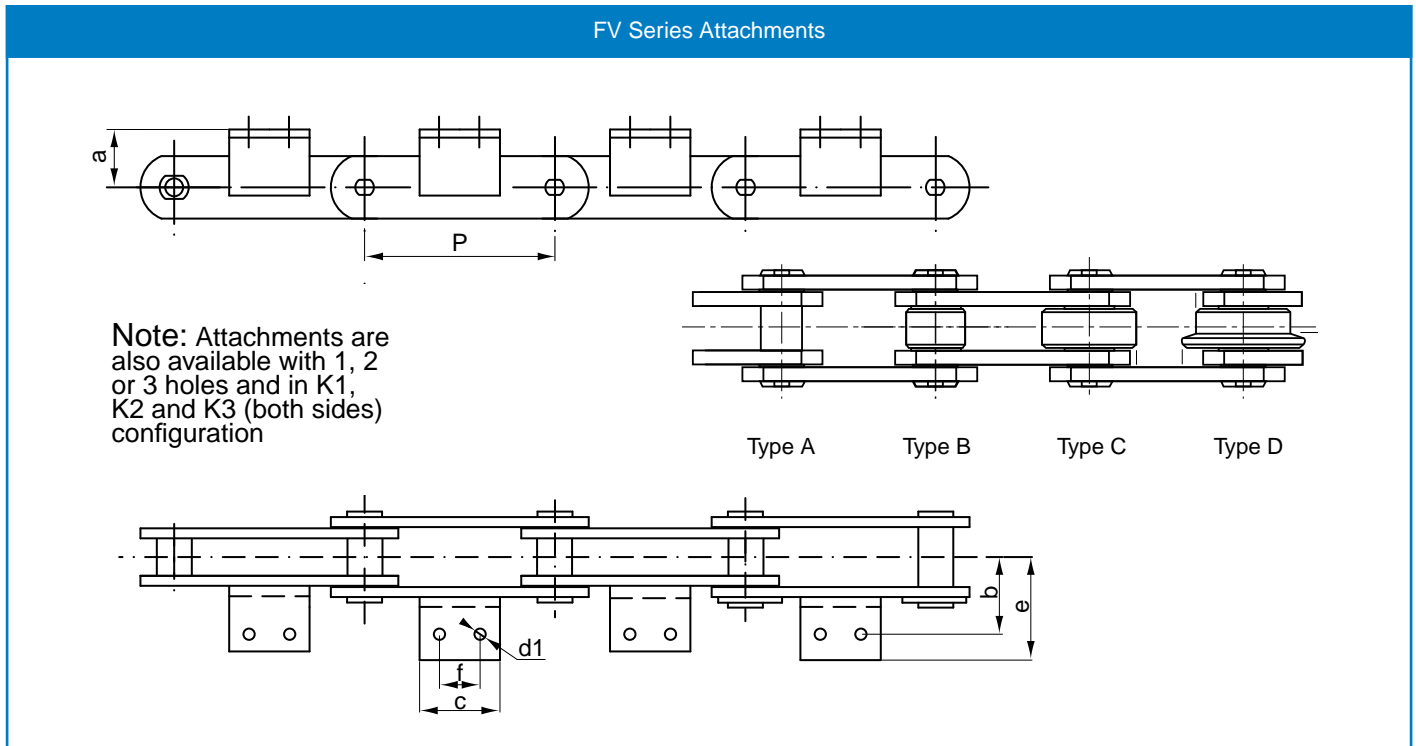
DIN Number	Chain Number	Pitch P	a	b	c	d1	e	f	Welded or Integral attachment	Chain Weight - Excluding Attachments kg/metre				Attachment Weight (A2) kg each
										Type A	Type B	Type C	Type D	
FV40	C42	50	20	25	45	6.5	64.0	*	x	2.4	2.9	4.0	5.6	0.050
"	"	63	"	"	31	"	40.5	*	x	2.0	2.4	3.3	4.5	0.036
"	"	80	"	"	45	"	"	25	25x3	1.9	2.2	3.0	3.9	0.050
"	"	100	"	"	50	"	"	30	"	1.7	2.0	2.6	3.3	0.056
"	"	125	"	"	60	"	"	30	"	1.6	1.9	2.3	3.0	0.067
FV63	C64	63	30	34	40	8.4	50.0	*	30x4	3.8	4.5	6.4	8.9	0.063
"	"	80	"	"	45	"	"	25	"	3.2	3.8	5.3	7.2	0.095
"	"	100	"	"	50	"	"	30	"	3.0	3.5	4.7	6.2	0.110
"	"	125	"	"	60	"	"	40	"	2.7	3.0	4.0	5.3	0.140
"	"	160	"	"	70	"	"	50	"	2.4	2.7	3.5	4.4	0.170
FV90	C100	63	35	40	30	8.4	64.0	*	40x4	5.6	6.8	10.0	14.7	0.072
"	"	80	"	"	45	"	"	25	"	5.1	6.0	8.6	12.3	0.110
"	"	100	"	"	50	"	"	30	"	4.5	5.3	7.3	10.3	0.130
"	"	125	"	"	60	"	"	40	"	4.2	4.8	6.5	8.8	0.160
"	"	160	"	"	70	"	"	50	"	4.0	4.5	5.8	7.6	0.200
"	"	200	"	"	80	"	"	60	"	3.5	3.8	4.8	5.8	0.240
"	"	250	"	"	85	"	"	65	"	3.4	3.7	4.6	5.4	0.210
FV112	C120	100	40	50	50	11.0	70.0	30	40x6	6.7	7.7	11.2	18.8	0.190
"	"	125	"	"	65	"	"	40	"	6.0	6.8	9.6	15.7	0.250
"	"	160	"	"	75	"	"	50	"	5.5	6.1	8.3	13.0	0.290
"	"	200	"	"	90	"	"	65	"	5.2	5.7	7.5	11.3	0.350
"	"	250	"	"	105	"	"	80	"	4.9	5.3	6.7	9.8	0.410

* Attachment With One Hole

Conveyor Chain Attachments

FV Series Attachments

Metric Conveyor Chain (DIN 8165)



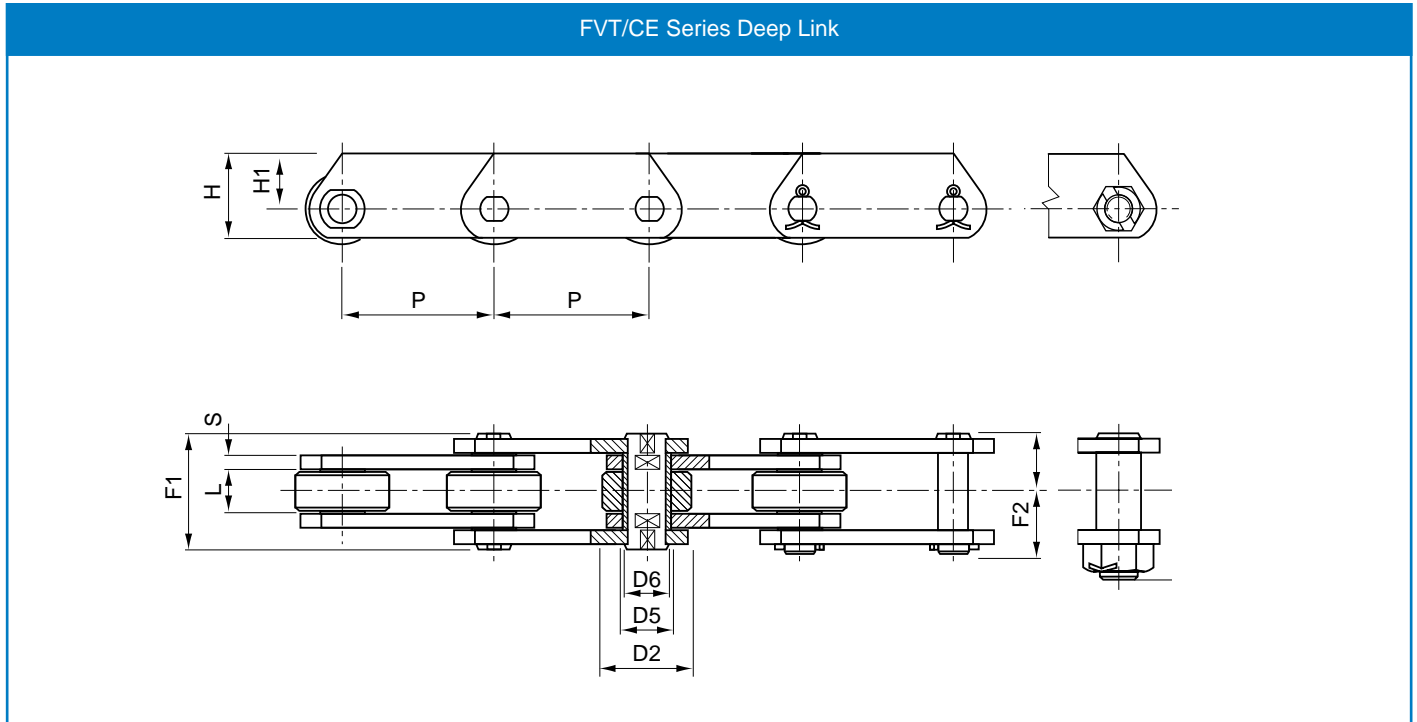
DIN Number	Chain Number	Pitch P	a	b	c	d1	e	f	Welded or Integral attachment	Chain Weight - Excluding Attachments kg/metre				Attachment Weight (A2) kg each
										Type A	Type B	Type C	Type D	
FV140	C145	100	45	50	55	11	81	30	50x6	8.2	9.5	14.3	21.4	0.23
"	"	125	"	"	65	"	"	40	"	7.4	8.5	12.3	18.0	0.30
"	"	160	"	"	75	"	"	50	"	6.7	7.5	10.5	14.9	0.36
"	"	200	"	"	90	"	"	65	"	6.0	6.7	9.0	12.8	0.45
"	"	250	"	"	105	"	"	80	"	5.8	6.3	8.3	11.0	0.54
FV180	C190	125	45	64	63	13	91	35	60x8	10.5	12.4	18.9	31.3	0.37
"	"	160	"	"	80	"	"	50	"	10.2	11.7	16.7	26.5	0.47
"	"	200	"	"	95	"	"	65	"	9.6	10.8	14.8	25.9	0.56
"	"	250	"	"	110	"	"	80	"	8.9	9.8	13.0	19.3	0.65
"	"	315	"	"	130	"	"	100	"	8.3	9.0	11.6	16.6	0.77
FV250	C275	160	55	69	80	14	106	50	60x8	13.4	16.4	23.8	45.9	0.58
"	"	200	"	"	95	"	"	65	"	12.3	14.7	20.6	38.3	0.69
"	"	250	"	"	110	"	"	80	"	11.3	13.3	17.9	32.1	0.81
"	"	315	"	"	130	"	"	100	"	10.5	12.0	15.8	27.0	0.96
"	"	400	"	"	130	"	"	100	"	9.8	10.7	13.9	23.8	0.96
FV315	C370	160	60	85	50	14	123.5	*	70x10	20.4	24.9	33.3	67.8	0.52
"	"	200	"	"	95	"	"	65	"	18.5	22.1	28.9	56.4	0.96
"	"	250	"	"	110	"	"	80	"	17.0	20.0	25.3	47.3	1.11
"	"	315	"	"	130	"	"	100	"	15.9	18.2	22.4	39.9	1.32
"	"	400	"	"	130	"	"	100	"	15.0	16.8	20.2	34.0	1.32

* Attachment With One Hole

Conveyor Chain

FVT/CE Series

Metric Conveyor Chain (DIN 8165)



Deep Link

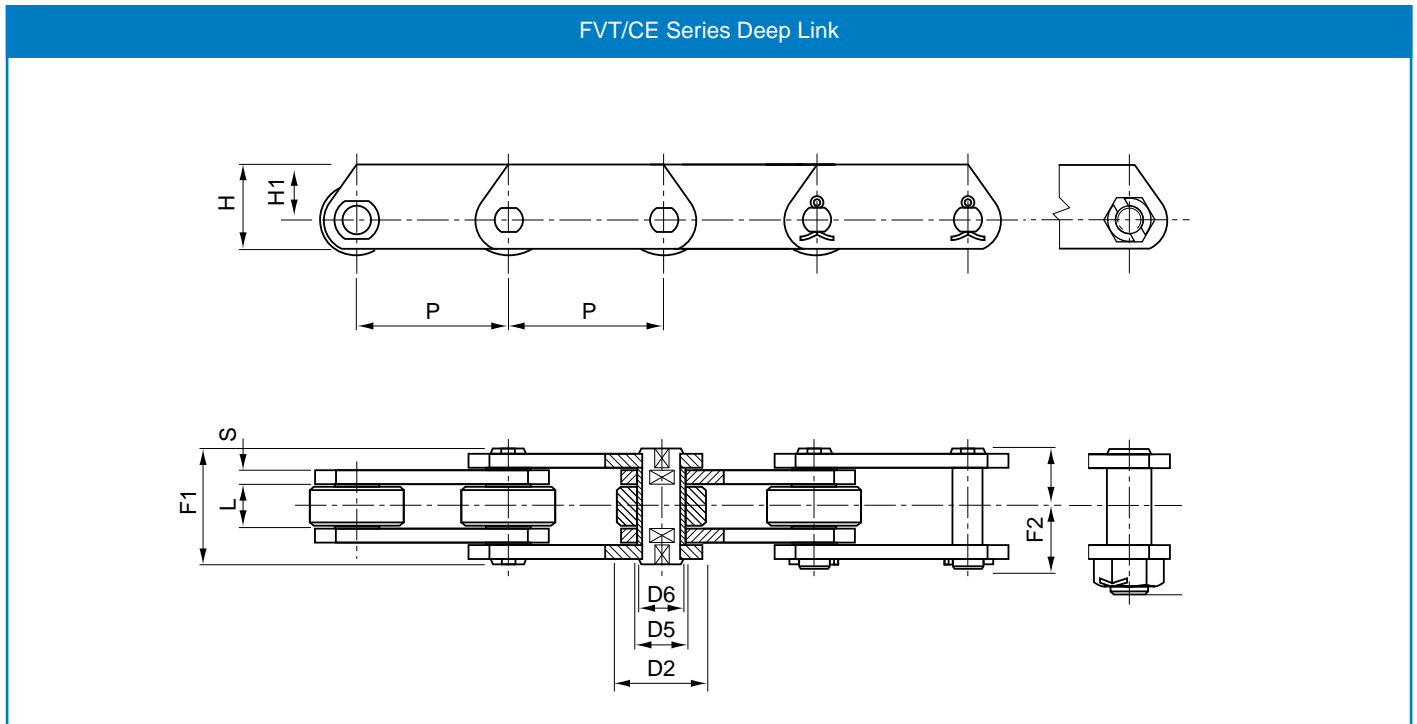
DIN Number	Chain number	P Pitch	L	H	H1	S	F1	F2	D2	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight kg/m
FVT40	CE42	50	18	35	22.5	3	36	21	32	15	10	42	47	5.0
"	"	63	"	"	"	"	"	"	"	"	"	"	"	4.3
"	"	80	"	"	"	"	"	"	"	"	"	"	"	3.8
"	"	100	"	"	"	"	"	"	"	"	"	"	"	3.4
"	"	125	"	"	"	"	"	"	"	"	"	"	"	3.0
FVT63	CE64	63	22	40	25	4	45	26	40	18	12	64	75	7.5
"	"	80	"	"	"	"	"	"	"	"	"	"	"	6.5
"	"	100	"	"	"	"	"	"	"	"	"	"	"	5.7
"	"	125	"	"	"	"	"	"	"	"	"	"	"	5.1
"	"	160	"	"	"	"	"	"	"	"	"	"	"	4.5
FVT90	CE100	63	25	45	27.5	5	53	30	48	20	14	100	115	11.7
"	"	80	"	"	"	"	"	"	"	"	"	"	"	10.0
"	"	100	"	"	"	"	"	"	"	"	"	"	"	8.7
"	"	125	"	"	"	"	"	"	"	"	"	"	"	7.7
"	"	160	"	"	"	"	"	"	"	"	"	"	"	6.8
"	"	200	"	"	"	"	"	"	"	"	"	"	"	5.8
"	"	250	"	"	"	"	"	"	"	"	"	"	"	5.4
FVT112	CE120	100	30	50	30	6	62	35	55	22	16	120	170	12.7
"	"	125	"	"	"	"	"	"	"	"	"	"	"	11.7
"	"	160	"	"	"	"	"	"	"	"	"	"	"	9.7
"	"	200	"	"	"	"	"	"	"	"	"	"	"	8.7
"	"	250	"	"	"	"	"	"	"	"	"	"	"	8.0

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Conveyor Chain

FVT/CE Series

Metric Conveyor Chain (DIN 8165)



Deep Link

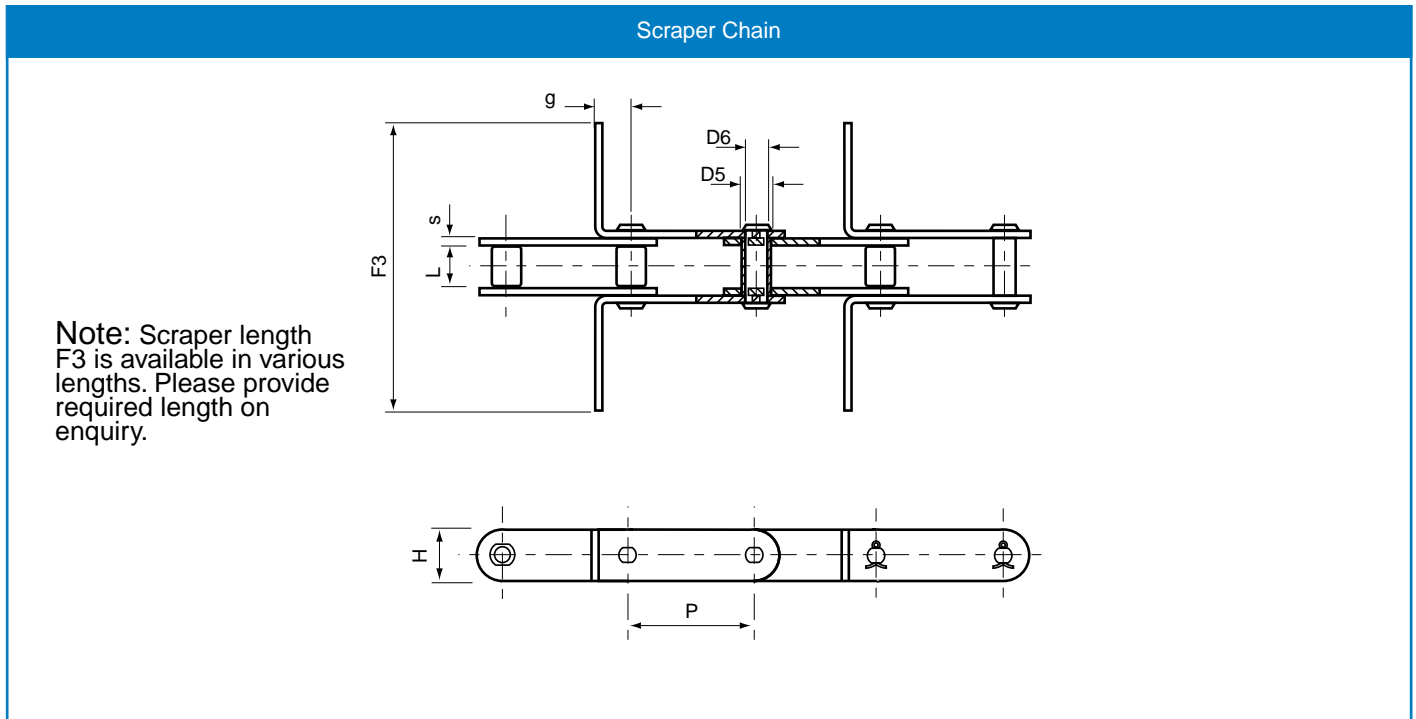
DIN Number	Chain Number	P Pitch	L	H	H1	S	F1	F2	D2	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight kg/m
FVT140	CE145	100	35	60	37.5	6	67	38	60	25	18	145	180	16.8
"	"	125	"	"	"	"	"	"	"	"	"	"	"	14.6
"	"	160	"	"	"	"	"	"	"	"	"	"	"	12.6
"	"	200	"	"	"	"	"	"	"	"	"	"	"	11.3
"	"	250	"	"	"	"	"	"	"	"	"	"	"	10.1
FVT180	CE190	125	45	70	45	8	86	49	70	30	20	190	250	24.2
"	"	160	"	"	"	"	"	"	"	"	"	"	"	20.8
"	"	200	"	"	"	"	"	"	"	"	"	"	"	18.4
"	"	250	"	"	"	"	"	"	"	"	"	"	"	16.5
"	"	315	"	"	"	"	"	"	"	"	"	"	"	14.9
FVT250	CE275	160	55	80	50	8	97	55	80	36	26	275	300	28.2
"	"	200	"	"	"	"	"	"	"	"	"	"	"	24.5
"	"	250	"	"	"	"	"	"	"	"	"	"	"	21.7
"	"	315	"	"	"	"	"	"	"	"	"	"	"	19.3
FVT315	CE295	160	65	90	55	10	26	70	90	42	30	370	480	39.9
"	"	200	"	"	"	"	"	"	"	"	"	"	"	34.8
"	"	250	"	"	"	"	"	"	"	"	"	"	"	30.6
"	"	315	"	"	"	"	"	"	"	"	"	"	"	27.3
"	"	400	"	"	"	"	"	"	"	"	"	"	"	24.5

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Conveyor Chain

FV/CR Series

Metric Conveyor Chain (DIN 8165)



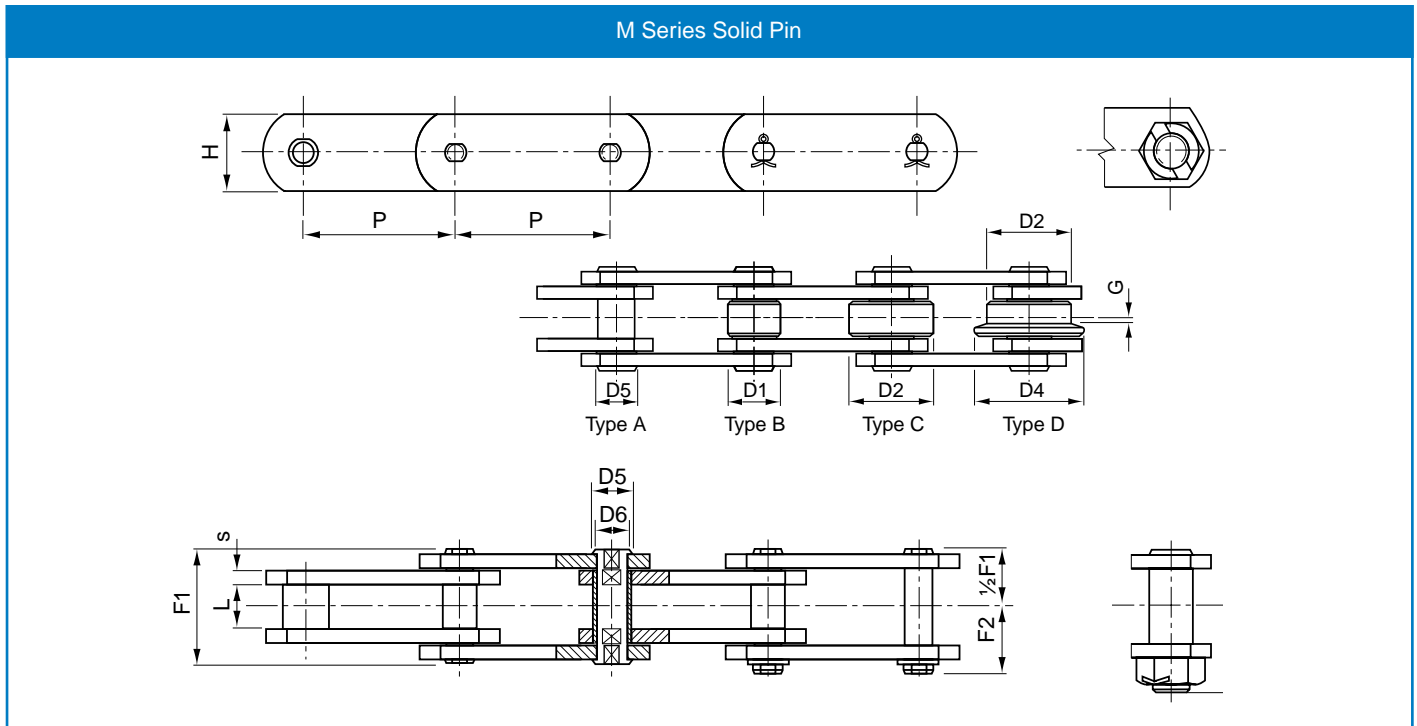
Scraper Chain

DIN Number	Chain Number	Pitch P	L	H	S	g	F3	D5	D6	Breaking Load kN	Weight kg/m
FV40	CR42	80	18	25	3	25	*	15	10	42	1.9
"	"	100	"	"	"	"	*	"	"	"	1.7
"	"	125	"	"	"	"	*	"	"	"	1.6
FV63	CR64	100	22	30	4	25	*	18	12	64	3.0
"	"	125	"	"	"	"	*	"	"	"	2.7
"	"	150	"	"	"	"	*	"	"	"	2.4
FV90	CR100	100	25	35	5	30	*	20	14	100	4.5
"	"	125	"	"	"	"	*	"	"	"	4.2
"	"	150	"	"	"	"	*	"	"	"	4.0
FV112	CR120	100	30	40	6	35	*	22	16	120	6.7
"	"	125	"	"	"	"	*	"	"	"	6.0
"	"	150	"	"	"	"	*	"	"	"	5.5
FV140	CR145	100	35	45	"	38	*	26	18	145	7.4
"	"	125	"	"	"	"	*	"	"	"	6.7
"	"	150	"	"	"	"	*	"	"	"	6.0
FV180	CR190	125	45	50	8	44	*	30	20	190	10.5
"	"	150	"	"	"	"	*	"	"	"	10.2
"	"	200	"	"	"	"	*	"	"	"	9.6
FV250	CR275	125	55	60	"	50	*	36	26	275	13.4
"	"	150	"	"	"	"	*	"	"	"	12.3
"	"	200	"	"	"	"	*	"	"	"	11.3

Conveyor Chain

M Series

Metric Conveyor Chain (DIN 8167)



Solid Pin

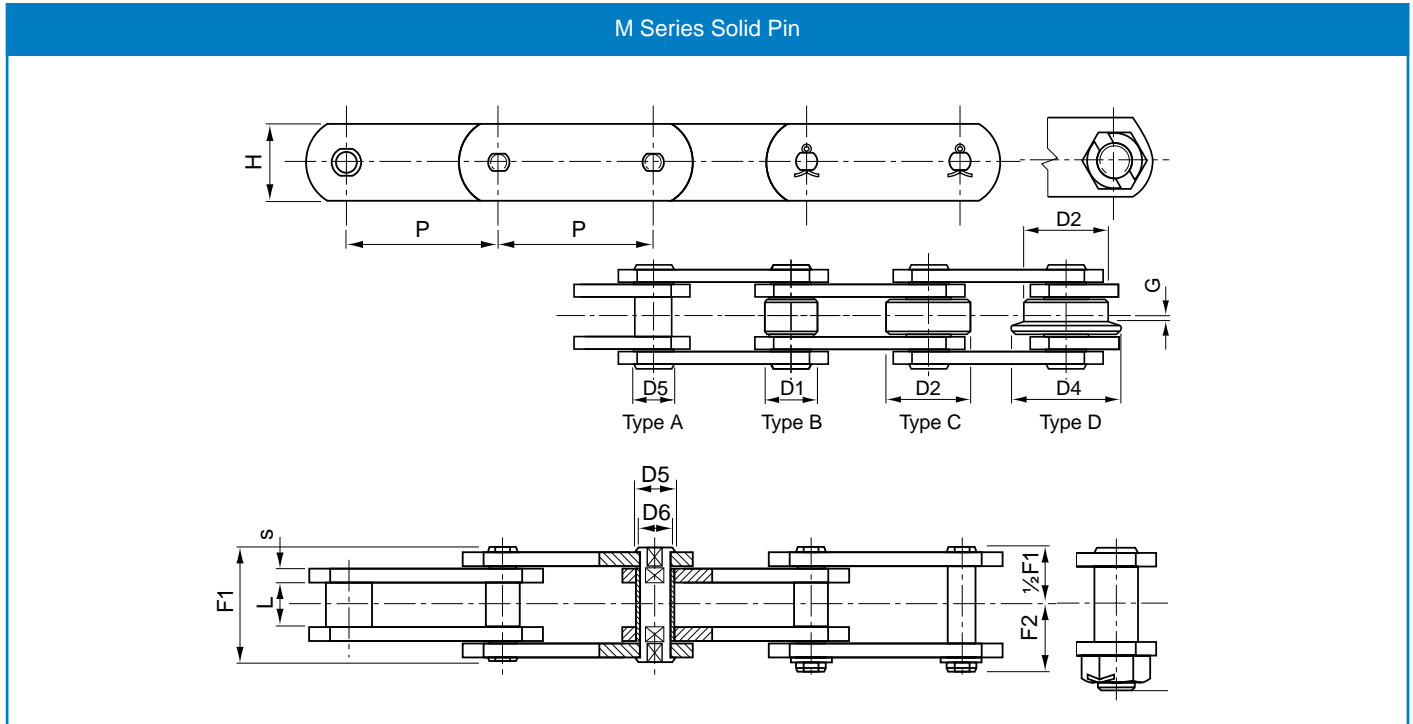
Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D4	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
M 20	40	16	3.5	18	2.5	33.0	19.0	12.5	25	32	9	6	20	32	2.4
"	50	"	"	"	"	"	"	"	"	"	"	"	"	"	2.0
"	63	"	"	"	"	"	"	"	"	"	"	"	"	"	1.8
"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	1.6
M28	50	18	4.0	20	3	36.0	20.5	15.0	30	36	10	7	28	42	3.3
"	63	"	"	"	"	"	"	"	"	"	"	"	"	"	2.8
"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	2.5
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	2.1
M 40	63	20	4.5	25	4	40.5	24.0	18.0	36	45	11	8	40	60	4.4
"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	3.7
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	3.2
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	2.9
M 56	63	24	7.0	30	4	45.0	26.0	21.0	42	50	15	10	56	85	6.8
"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	5.7
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	5.0
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	4.4
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	3.9
M 80	80	28	7.0	35	5	54.5	30.5	25.0	50	60	18	12	80	125	9.2
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	7.9
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	6.9
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	6.0
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	5.3

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Conveyor Chain

M Series

Metric Conveyor Chain (DIN 8167)



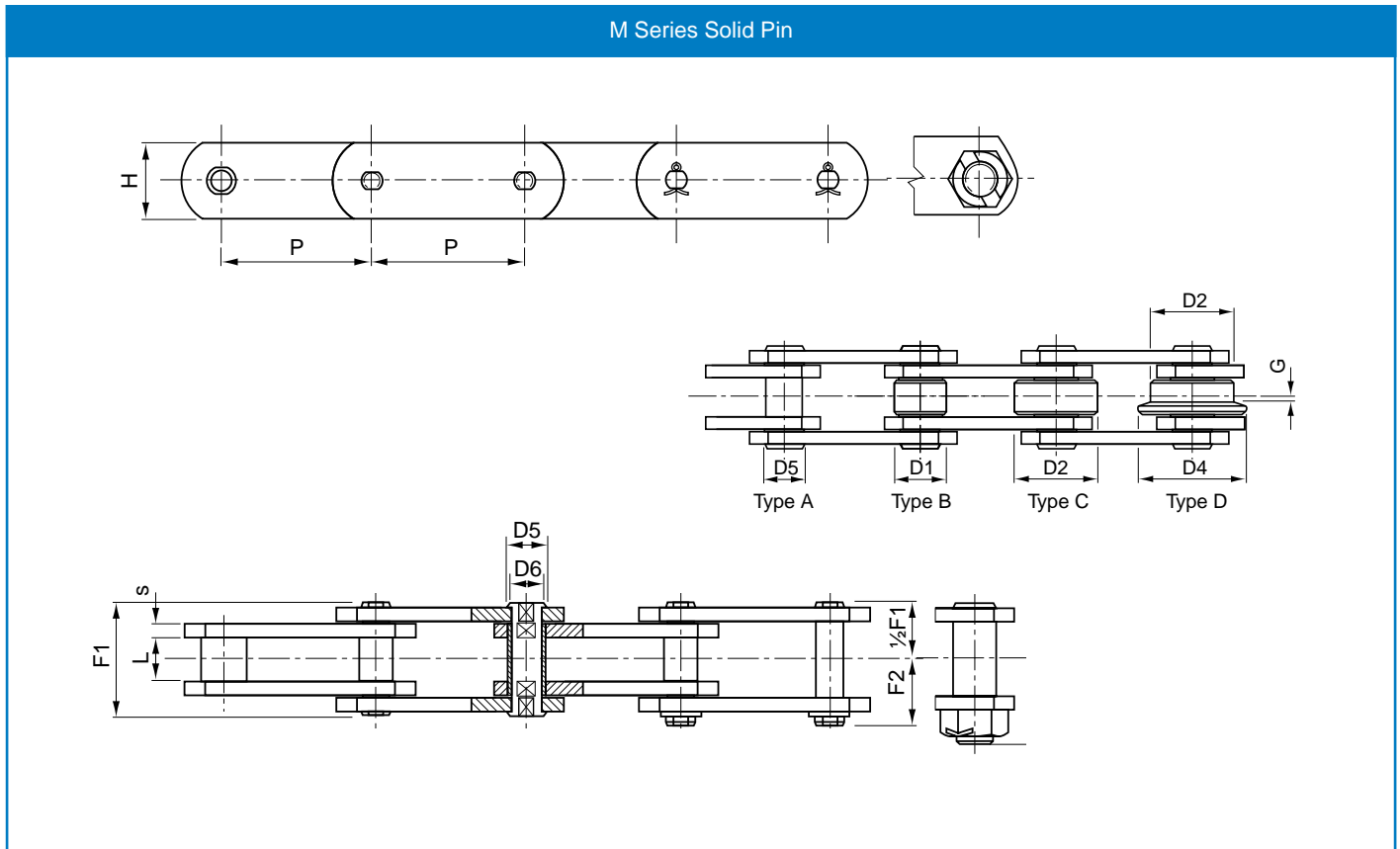
Solid Pin

Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D4	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
M 112	80	32	7.5	40	6	63	36.0	30	60	75	21	15	112	175	14.0
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	12.0
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	10.4
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	9.0
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	7.9
M 160	100	37	8.5	50	7	72	41.5	36	70	90	25	18	160	260	18.9
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	16.3
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	14.0
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	12.2
"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	11.0
M 224	125	43	10.0	60	8	84	47.0	42	85	105	30	21	224	340	25.8
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	22.0
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	19.0
"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	16.7
"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	14.9
M 315	160	48	10.5	70	10	97	55.0	50	100	124	36	25	315	520	33.3
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	28.7
"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	25.2
"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	22.3
"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	20.0

Conveyor Chain

M Series

Metric Conveyor Chain (DIN 8167)



Solid Pin

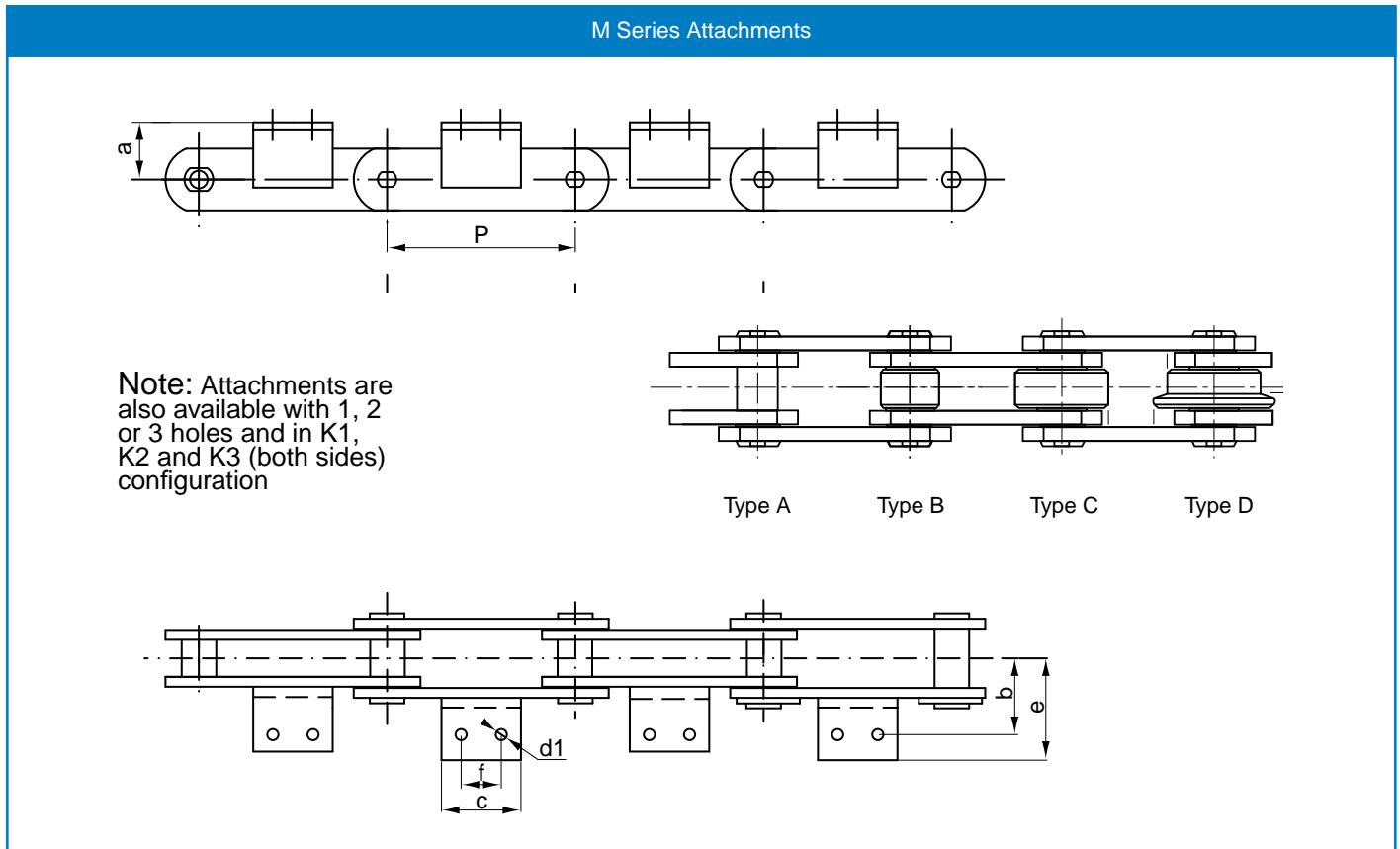
Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D4	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
M 450	200	56	11.5	80	12	114	67.0	60	120	149	42	30	450	700	40.5
"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	39.5
"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	34.5
"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	30.5
M 630	250	67	15.0	100	14	137	87.5	70	140	170	50	36	630	900	64.0
"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	55.5
"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	49.0
"	500	"	"	"	"	"	"	"	"	"	"	"	"	"	43.6
M 900	250	78	17.0	120	16	153	95.0	85	170	210	60	44	900	1250	98.3
"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	84.2
"	400	"	"	"	"	"	"	"	"	"	"	"	"	"	72.5
"	500	"	"	"	"	"	"	"	"	"	"	"	"	"	63.8
"	600	"	"	"	"	"	"	"	"	"	"	"	"	"	56.6

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Conveyor Chain Attachments

M Series Attachments

Metric Conveyor Chain (DIN 8167)



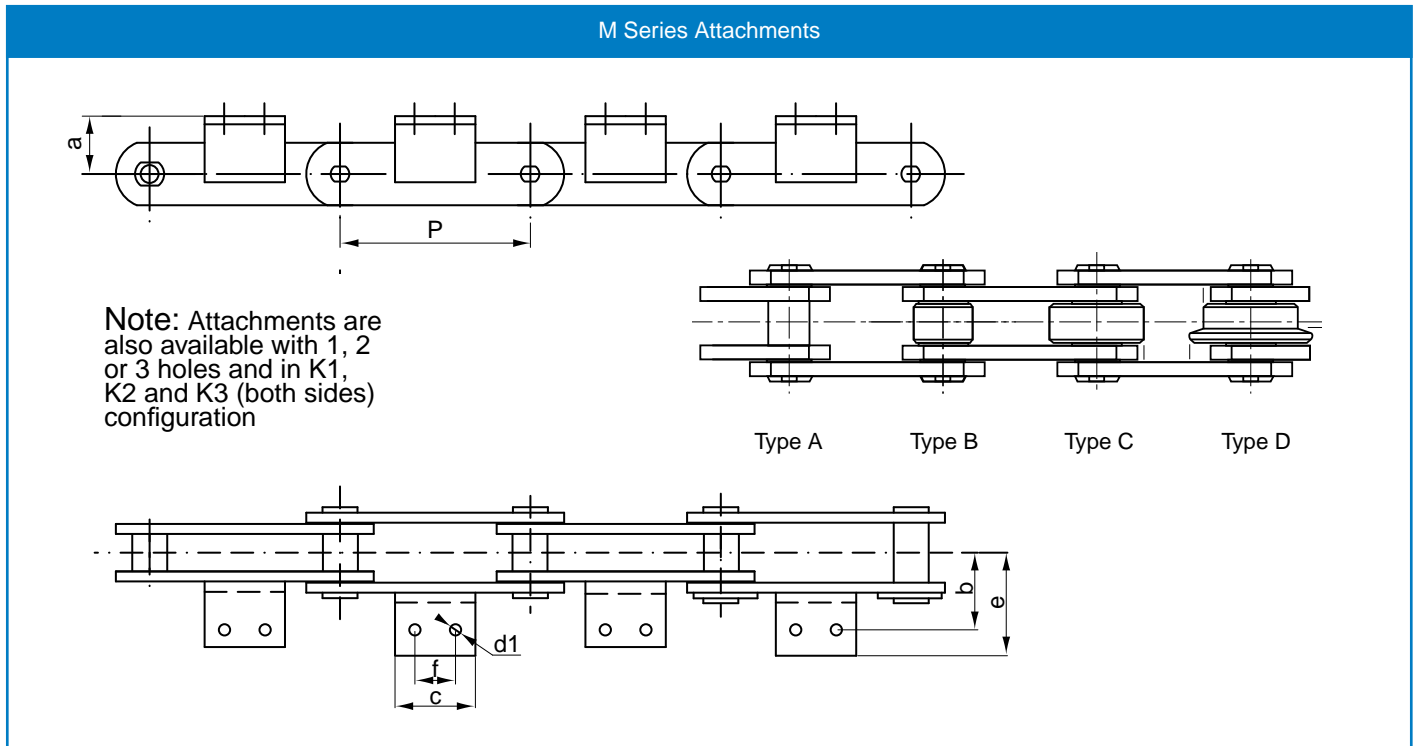
Chain Number	Pitch P	a	b	c	d1	e	f	Welded or Integral attachment	Chain Weight - Excluding Attachments kg/metre				Attachment Weight (A2) kg each
									Type A	Type B	Type C	Type D	
M 20	40	16	27	14	6.6	40	*	•	1.10	1.3	2.4	2.5	0.02
"	50	"	"	14	"	"	*	•	1.01	1.3	2.0	2.1	0.02
"	63	"	"	35	"	"	20	25x3	0.99	1.2	1.8	1.9	0.04
"	80	"	"	50	"	"	35	"	0.90	1.1	1.6	1.6	0.06
M 28	50	20	32	20	9	47	*	20x3	1.60	1.9	3.3	3.4	0.02
"	63	"	"	20	"	"	*	30x3	1.50	1.7	2.8	2.9	0.02
"	80	"	"	45	"	"	25	"	1.40	1.6	2.5	2.6	0.05
"	100	"	"	60	"	"	40	"	1.30	1.5	2.1	2.2	0.08
M 40	63	25	35	31	9	50	*	30x4	2.25	2.6	4.4	4.6	0.04
"	80	"	"	45	"	"	20	"	2.00	2.3	3.7	3.9	0.07
"	100	"	"	60	"	"	40	"	1.90	2.1	3.2	3.4	0.10
"	125	"	"	85	"	"	65	"	1.80	2.0	2.9	3.0	0.15
M 56	63	30	44	22	11	61	*	40x4	3.40	3.9	6.8	7.2	0.05
"	80	"	"	30	"	"	*	"	3.00	3.4	5.7	6.0	0.07
"	100	"	"	50	"	"	25	"	2.80	3.1	5.0	5.2	0.12
"	125	"	"	75	"	"	50	"	2.60	2.9	4.4	4.5	0.18
"	160	"	"	110	"	"	85	"	2.54	2.7	3.9	4.1	0.27
M 80	80	35	48	30	11	65	*	40x4	4.70	5.4	9.2	9.4	0.07
"	100	"	"	50	"	"	25	"	4.30	4.8	7.9	8.0	0.12
"	125	"	"	75	"	"	50	"	4.00	4.4	6.9	7.0	0.18
"	160	"	"	110	"	"	85	"	3.70	4.0	6.0	6.1	0.27
"	200	"	"	150	"	"	125	"	3.50	3.8	5.3	5.4	0.36

* Attachment With One Hole

Conveyor Chain Attachments

M Series Attachments

Metric Conveyor Chain (DIN 8167)



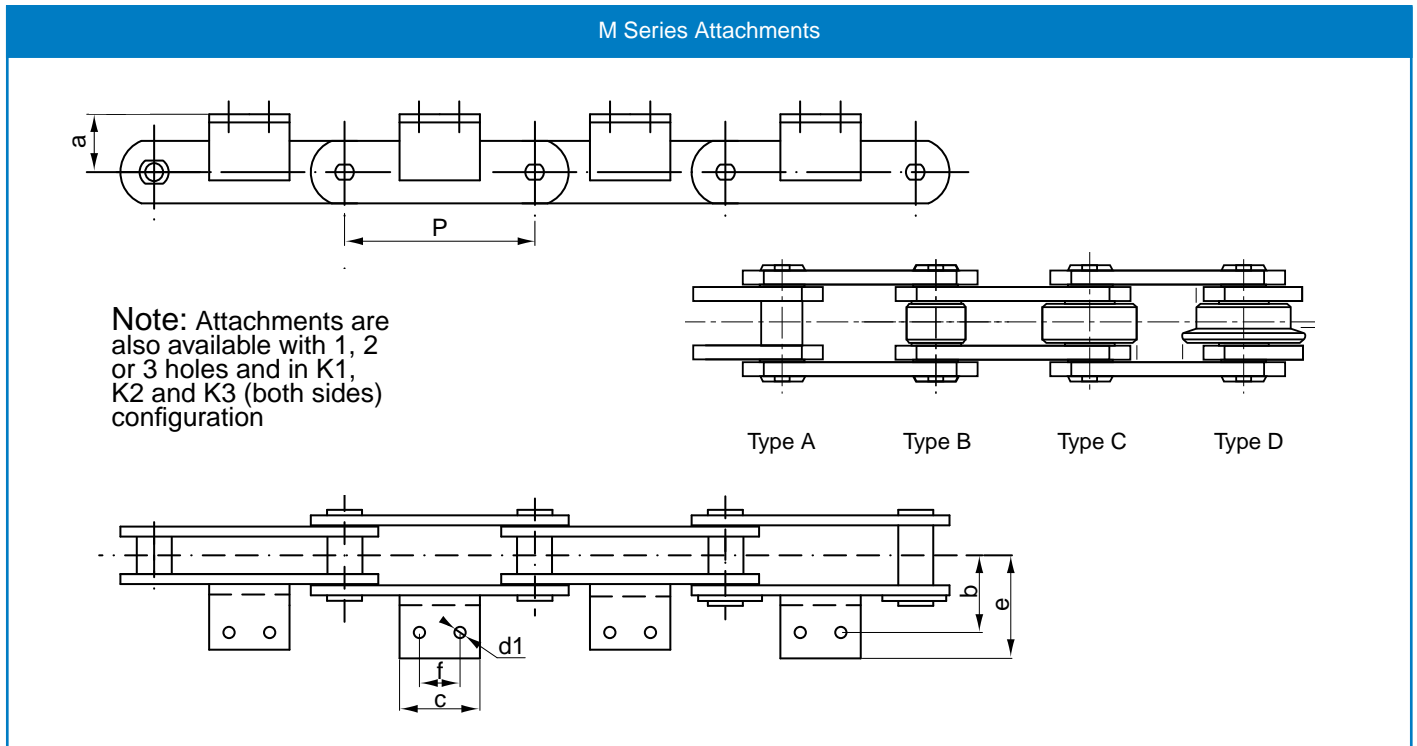
Chain Number	Pitch P	a	b	c	d1	e	f	Welded or Integral attachment	Chain Weight - Excluding Attachments kg/metre				Attachment Weight (A2) kg each
									Type A	Type B	Type C	Type D	
M 112	80	40	55	28	14	80	*	50x6	6.8	8.0	14.0	14.7	0.13
"	100	"	"	40	"	"	*	"	6.2	7.2	12.0	12.5	0.18
"	125	"	"	65	"	"	35	"	5.7	6.5	10.4	10.8	0.30
"	160	"	"	95	"	"	65	"	5.3	5.9	9.0	9.3	0.44
"	200	"	"	130	"	"	100	"	5.0	5.5	7.9	8.2	0.59
M 160	100	45	62	30	14	85	*	50x6	9.7	11.2	18.9	20.2	0.13
"	125	"	"	50	"	"	25	"	8.9	10.0	16.3	18.1	0.23
"	160	"	"	80	"	"	50	"	8.2	9.1	14.0	15.4	0.37
"	200	"	"	115	"	"	85	"	7.6	8.4	12.2	13.4	0.53
"	250	"	"	175	"	"	145	"	7.3	7.9	11.0	12.0	0.80
M 224	125	55	70	35	18	100	*	63x8	13.0	14.8	25.8	26.6	0.30
"	160	"	"	60	"	"	*	"	12.0	13.4	22.0	22.7	0.43
"	200	"	"	100	"	"	65	"	11.0	12.1	19.0	19.5	0.71
"	250	"	"	160	"	"	125	"	10.3	11.2	16.7	17.1	1.13
"	315	"	"	230	"	"	190	"	9.8	10.5	14.9	15.2	1.60
M 315	160	65	80	35	18	115	*	70x10	18.3	20.4	33.3	34.6	0.36
"	200	"	"	85	"	"	50	"	16.7	18.4	28.7	29.7	0.84
"	250	"	"	140	"	"	100	"	15.6	17.0	25.2	26.0	1.41
"	315	"	"	190	"	"	155	"	14.6	15.7	22.3	22.9	1.93
"	400	"	"	205	"	"	155	"	13.9	14.8	20.0	20.5	2.08

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Conveyor Chain Attachments

M Series Attachments

Metric Conveyor Chain (DIN 8167)



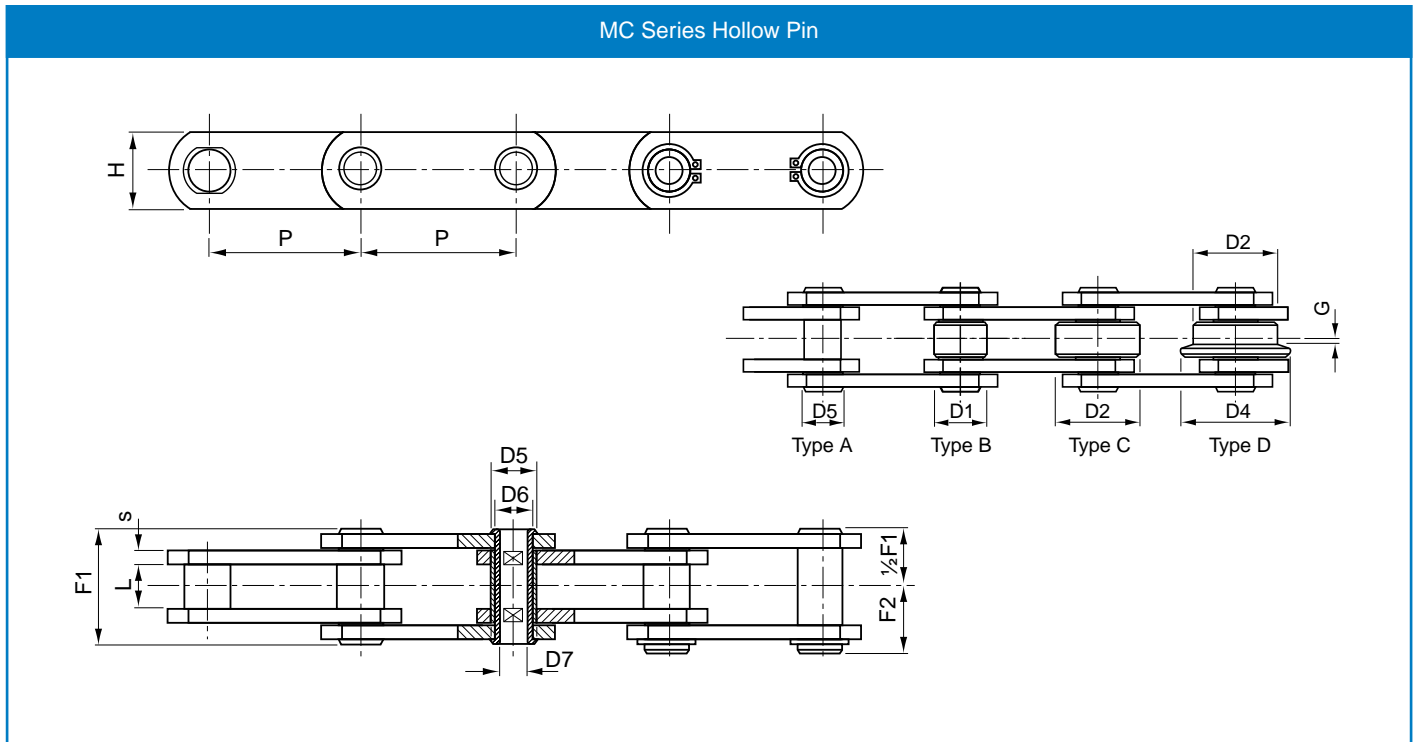
Chain Number	Pitch P	a	b	c	d1	e	f	Welded or Integral attachment	Chain Weight - Excluding Attachments kg/metre				Attachment Weight (A2) kg each
									Type A	Type B	Type C	Type D	
M 450	200	75	90	50	18	125	*	70x10	24.0	27.0	40.5	47.0	0.56
"	250	"	"	125	"	"	85	"	22.0	24.9	39.5	41.0	1.35
"	315	"	"	195	"	"	155	"	21.0	23.0	34.5	36.0	2.12
"	400	"	"	280	"	"	240	"	19.6	21.2	30.5	31.4	3.06
M 630	250	90	115	50	24	165	*	100x12	36.0	40.8	64.0	66.9	0.90
"	315	"	"	150	"	"	100	"	33.4	36.6	55.5	57.7	2.70
"	400	"	"	240	"	"	190	"	31.5	33.9	49.0	50.7	4.30
"	500	"	"	350	"	"	300	"	29.6	31.6	43.6	45.0	6.20
M 900	250	110	140	60	30	195	*	120x15	49.7	56.5	98.3	104.5	1.60
"	315	"	"	125	"	"	65	"	45.5	51.8	84.2	89.7	3.30
"	400	"	"	215	"	"	155	"	42.0	46.2	72.5	76.9	5.70
"	500	"	"	300	"	"	240	"	39.3	42.7	63.8	67.6	8.00
"	600	"	"	350	"	"	300	"	37.3	39.9	56.6	58.9	8.00

* Attachment With One Hole

Conveyor Chain

MC Series Hollow Pin

Metric Conveyor Chain (DIN 8167)



Hollow Pin

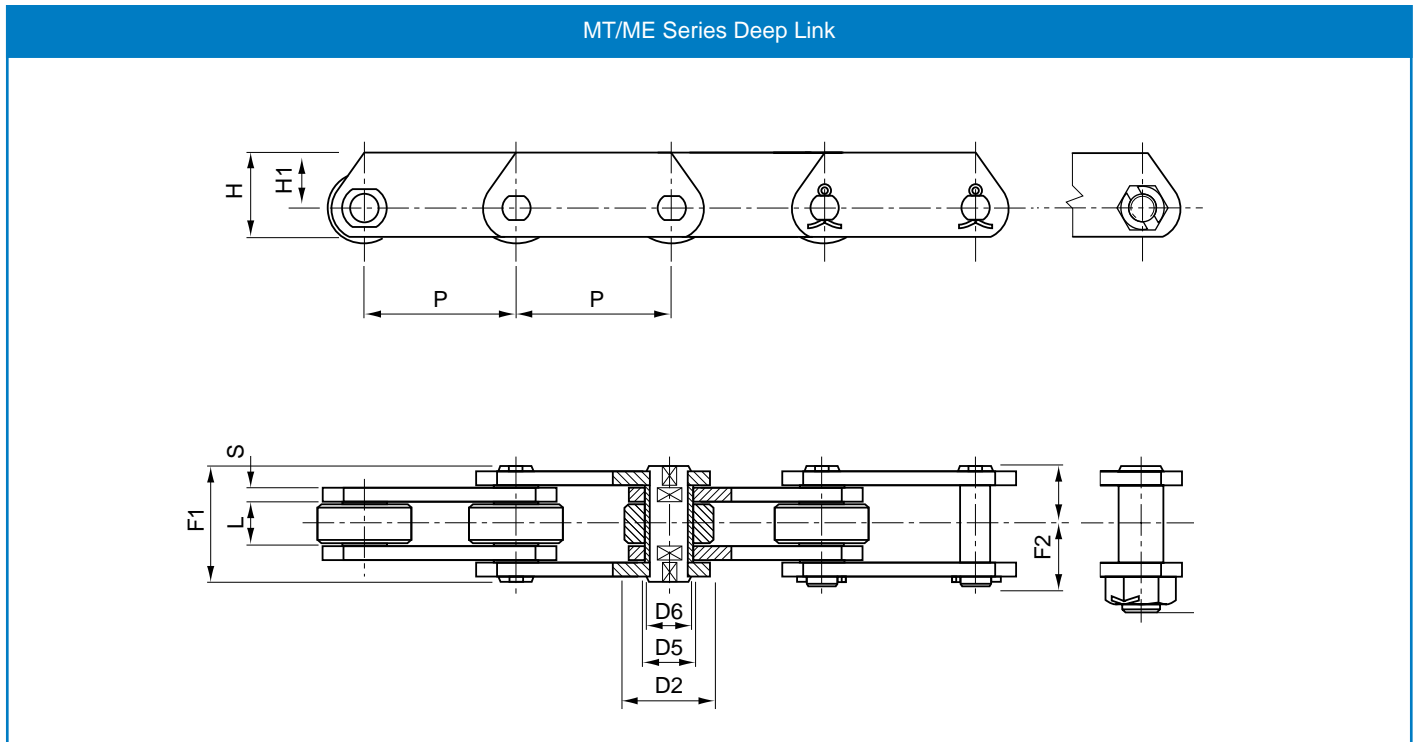
Chain number	Pitch P	L	G	H	S	F1	F2	D1	D2	D4	D5	D6	D7	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
MC 28	50	20	4.5	25	3	36.0	20.5	25	36	45	17	13.0	8.2	28	40	4.3
"	63	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.8
"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.2
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.8
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.5
MC 56	63	24	7.0	35	4	45.0	25.0	30	50	60	21	15.5	10.2	56	90	8.5
"	80	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.2
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.2
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.4
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.7
MC 112	80	32	8.5	50	6	62.5	33.0	42	70	85	29	22.0	14.3	112	180	16.6
"	100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	14.0
"	125	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.2
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	10.2
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.9
"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7.9
MC 224	125	43	10.5	70	8	83.0	44.0	60	100	120	42	30.0	20.3	224	350	32.3
"	160	"	"	"	"	"	"	"	"	"	"	"	"	"	"	27.1
"	200	"	"	"	"	"	"	"	"	"	"	"	"	"	"	23.5
"	250	"	"	"	"	"	"	"	"	"	"	"	"	"	"	20.6
"	315	"	"	"	"	"	"	"	"	"	"	"	"	"	"	17.2

All dimensions in millimetres unless otherwise stated. Every effort has been taken to ensure that the data listed in this catalogue is correct. Challenge accepts no liability for any inaccuracies or damage caused.

Conveyor Chain

MT/ME Series Deep Link

Metric Conveyor Chain (DIN 8167)



Deep Link

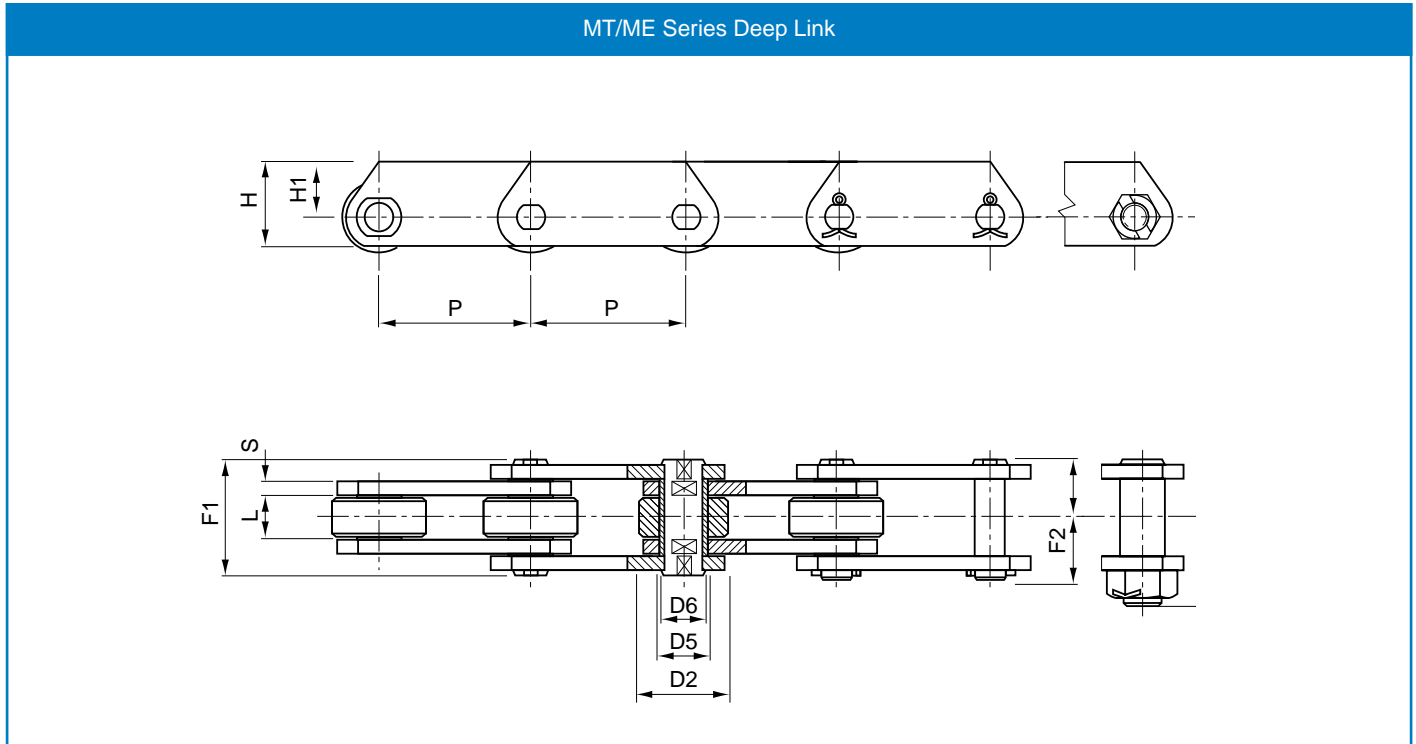
Chain Number	Pitch P	L	S	H	H1	F1	F2	D2	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
ME 20	40	16	2.5	25	16.0	33.0	19.0	25	9	6	20	32	3.0
"	50	"	"	"	"	"	"	"	"	"	"	"	2.6
"	63	"	"	"	"	"	"	"	"	"	"	"	2.3
"	80	"	"	"	"	"	"	"	"	"	"	"	2.0
ME 28	50	18	3.0	30	20.0	36.0	20.5	30	10	7	28	42	4.1
"	63	"	"	"	"	"	"	"	"	"	"	"	3.5
"	80	"	"	"	"	"	"	"	"	"	"	"	3.1
"	100	"	"	"	"	"	"	"	"	"	"	"	2.8
ME 40	63	20	4.0	35	22.5	40.5	24.0	36	11	8	40	60	5.5
"	80	"	"	"	"	"	"	"	"	"	"	"	4.8
"	100	"	"	"	"	"	"	"	"	"	"	"	4.2
"	125	"	"	"	"	"	"	"	"	"	"	"	3.7
ME 56	63	24	4.0	45	30.0	45.0	26.0	42	15	10	56	85	8.3
"	80	"	"	"	"	"	"	"	"	"	"	"	7.0
"	100	"	"	"	"	"	"	"	"	"	"	"	6.1
"	125	"	"	"	"	"	"	"	"	"	"	"	5.4
ME 80	80	28	5.0	50	32.5	54.5	30.5	50	18	12	80	125	11.0
"	100	"	"	"	"	"	"	"	"	"	"	"	9.5
"	125	"	"	"	"	"	"	"	"	"	"	"	8.5
"	160	"	"	"	"	"	"	"	"	"	"	"	7.2
"	200	"	"	"	"	"	"	"	"	"	"	"	6.0

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Conveyor Chain

MT/ME Series

Metric Conveyor Chain (DIN 8167)



Deep Link

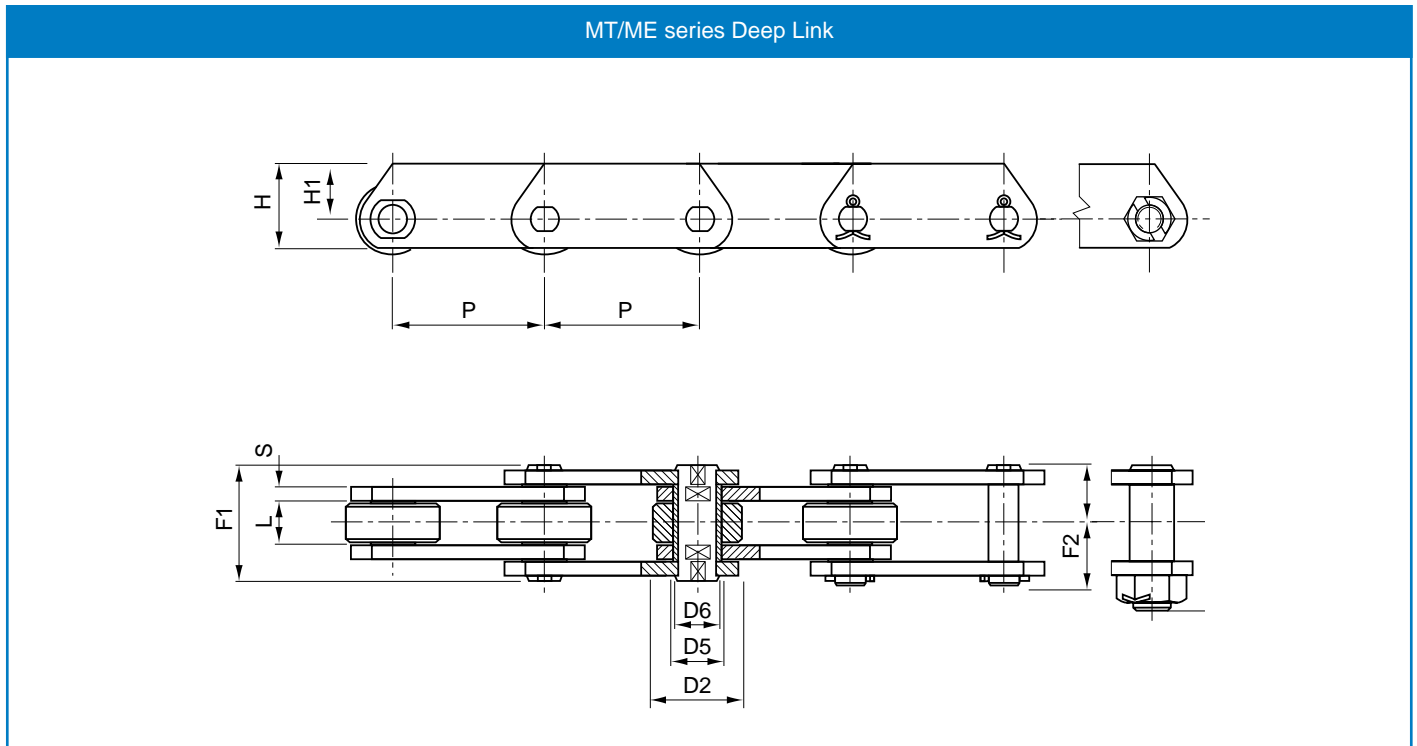
Chain Number	Pitch P	L	S	H	H1	F1	F2	D2	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight kg/m
ME 112	80	32	6	60	40	63	36.0	60	21	15	112	175	17.0
"	100	"	"	"	"	"	"	"	"	"	"	"	14.5
"	125	"	"	"	"	"	"	"	"	"	"	"	13.0
"	160	"	"	"	"	"	"	"	"	"	"	"	11.0
"	200	"	"	"	"	"	"	"	"	"	"	"	10.0
ME 160	100	37	7	70	45	72	41.5	70	25	18	160	260	21.5
"	125	"	"	"	"	"	"	"	"	"	"	"	19.0
"	160	"	"	"	"	"	"	"	"	"	"	"	17.0
"	200	"	"	"	"	"	"	"	"	"	"	"	15.0
"	250	"	"	"	"	"	"	"	"	"	"	"	13.5
ME 224	125	43	8	90	60	84	47.0	85	30	21	224	340	32.5
"	160	"	"	"	"	"	"	"	"	"	"	"	27.5
"	200	"	"	"	"	"	"	"	"	"	"	"	23.0
"	250	"	"	"	"	"	"	"	"	"	"	"	21.0
"	315	"	"	"	"	"	"	"	"	"	"	"	19.0
ME 315	160	48	10	100	65	97	55.0	100	36	25	315	520	43.0
"	200	"	"	"	"	"	"	"	"	"	"	"	37.0
"	250	"	"	"	"	"	"	"	"	"	"	"	32.0
"	315	"	"	"	"	"	"	"	"	"	"	"	28.6
"	400	"	"	"	"	"	"	"	"	"	"	"	25.5

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Conveyor Chain

MT/ME Series

Metric Conveyor Chain (DIN 8167)



Deep Link

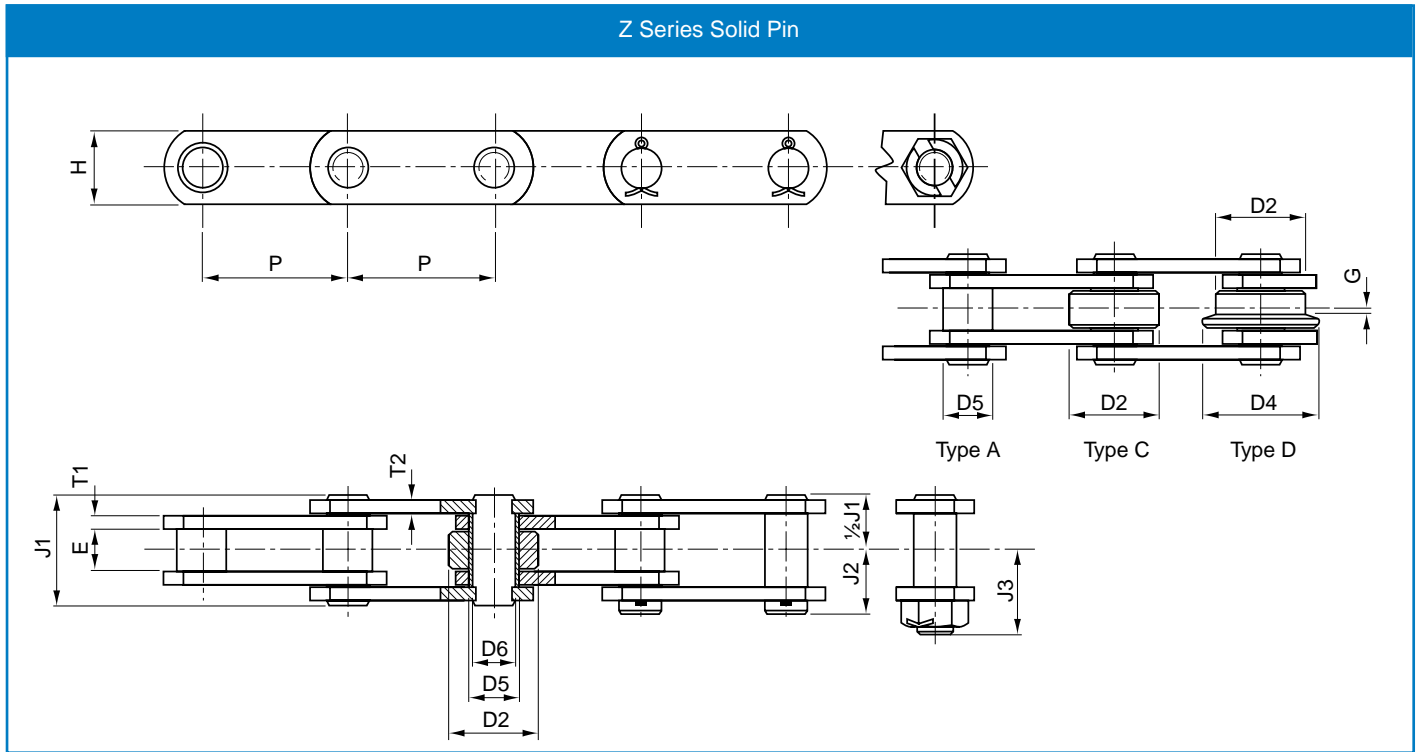
Chain Number	Pitch P	L	S	H	H1	F1	F2	D2	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight kg/m
ME 450	200	56	12	120	80	114	67.0	120	42	30	450	700	47
"	250	"	"	"	"	"	"	"	"	"	"	"	41
"	315	"	"	"	"	"	"	"	"	"	"	"	36
"	400	"	"	"	"	"	"	"	"	"	"	"	32
ME 630	250	66	14	140	90	137	87.5	140	50	36	630	900	71
"	315	"	"	"	"	"	"	"	"	"	"	"	62.5
"	400	"	"	"	"	"	"	"	"	"	"	"	56
"	500	"	"	"	"	"	"	"	"	"	"	"	50.6
"	600	"	"	"	"	"	"	"	"	"	"	"	46.5
ME 900	250	78	16	180	120	153	95.0	170	60	44	900	1,250	108.5
"	315	"	"	"	"	"	"	"	"	"	"	"	94.5
"	400	"	"	"	"	"	"	"	"	"	"	"	82.5
"	500	"	"	"	"	"	"	"	"	"	"	"	73.8
"	600	"	"	"	"	"	"	"	"	"	"	"	66.7

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Conveyor Chain

Z Series

BS Conveyor Chain (BS 4116 Part 4)



Solid Pin

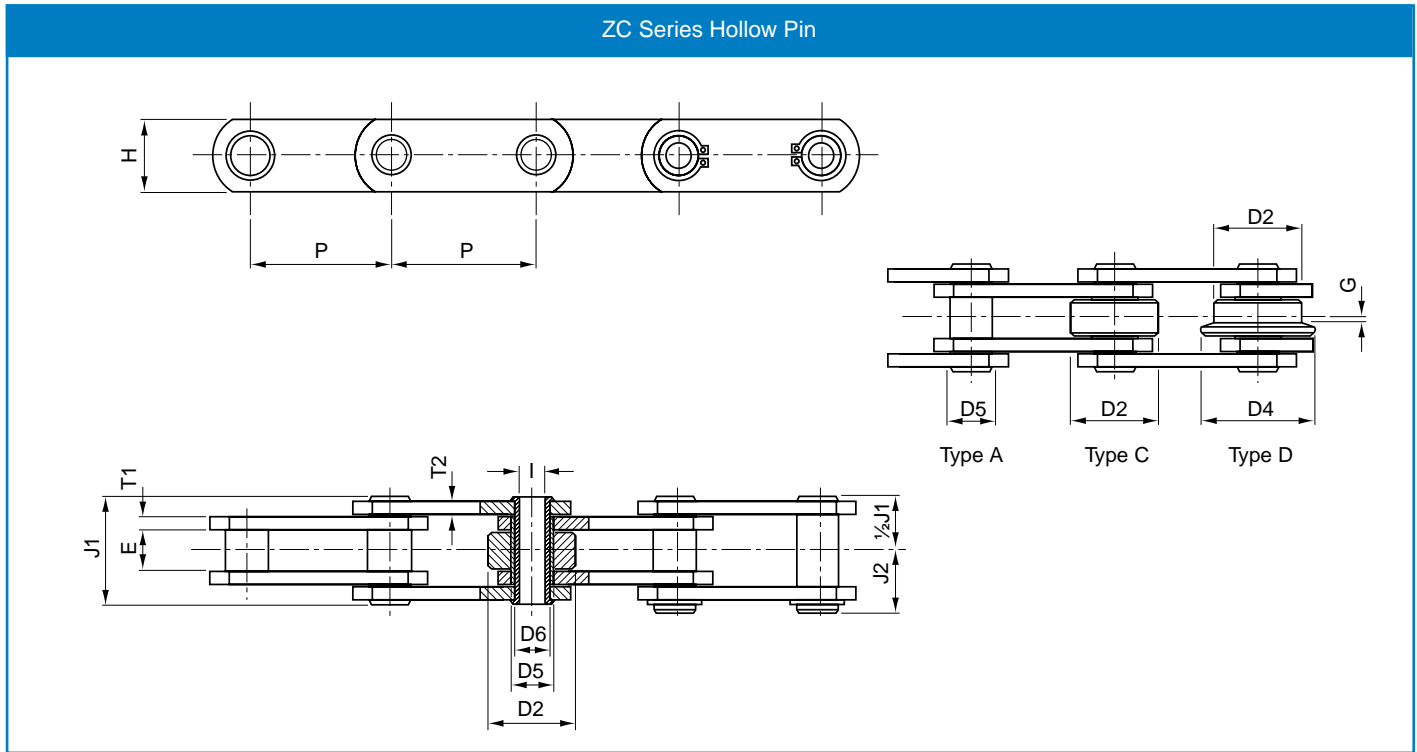
Chain number	Minimum Breaking Load, lbf	Pitch Inches P	Pitch mm P	E	H	T1	T2	J1	J2	J3	D2	D4	D5	D6	G	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
Z40	7500	2.0	50.8	15.2	25.4	3.8	3.8	37	22	29	31.75	40	19	14	2.5	40	50	4
"	"	2.5	63.5	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.5
"	"	3.0	76.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.2
"	"	3.5	88.9	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3
"	"	4.0	101.6	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.8
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.6
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.4
Z100	15000	3.0	76.2	19	38.1	5.1	3.8	46	28	38	47.63	60	25.4	19	3.5	100	130	7.7
"	"	3.5	88.9	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7
"	"	4.0	101.6	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.5
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.8
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.3
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.7
Z160	30000	4.0	101.6	25.4	50.8	7.1	5.1	59	34.5	49	66.7	82	34.9	26.97	3.5	156	200	14.3
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	12.5
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.3
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	10.5
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.8
"	"	9.0	228.6	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.3
"	"	10.0	254.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9
Z300	45000	6.0	152.4	38	65	10	8	82.5	47	65	88.9	107.9	41.3	31.75	8.5	300	380	24.3
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	22
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	21
"	"	10.0	254.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	18
"	"	12.0	304.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	16.5

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Conveyor Chain

ZC Series

BS Conveyor Chain (BS 4116 Part 4)



Hollow Pin

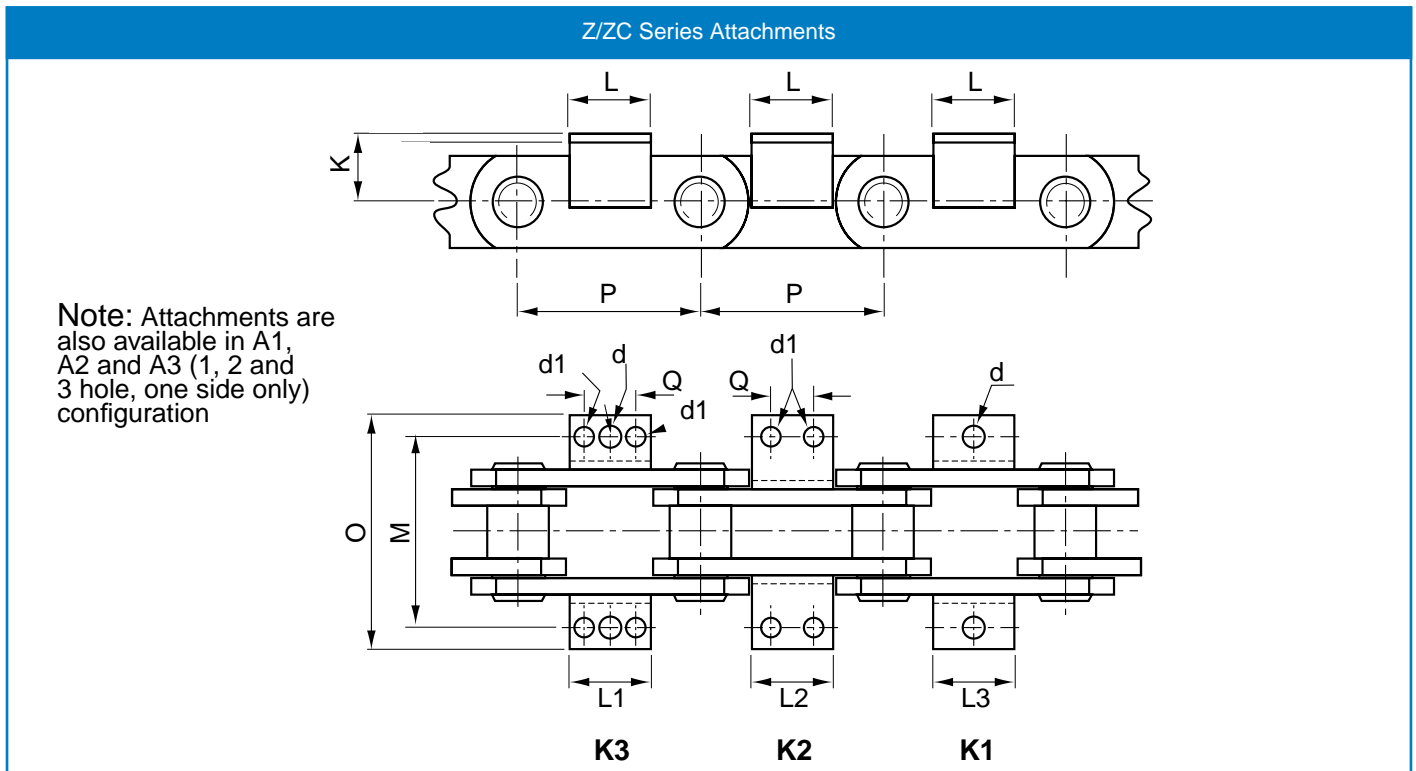
Chain number	Minimum Breaking Load, lbf	Pitch Inches P	Pitch mm P	E	I	H	T1	T2	J1	J2	D2	D4	D5	D6	G	Breaking Load, kN	HT Breaking Load, kN	Weight (Type C) kg/m
ZC21	4500	1.5	38.1	12.7	6.5	18	2.5	2.5	26	14.5	25.4	/	11	9	/	21	/	2.2
"	"	2.0	50.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1.7
"	"	2.5	63.5	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1.6
"	"	3.0	76.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1.4
ZC40	6000	2.0	50.8	15.2	10.3	25.4	3.8	3.8	37.2	21.5	31.75	40	19	14	2.5	40	50	3.6
"	"	2.5	63.5	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.2
"	"	3.0	76.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3.0
"	"	3.5	88.9	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.8
"	"	4.0	101.6	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.6
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.4
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2.3
ZC60	12000	3.0	76.2	19	13.2	38.1	5.1	3.8	44	24.5	47.63	60	25.4	19	3.5	60	120	7.0
"	"	3.5	88.9	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.4
"	"	4.0	101.6	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6.0
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5.3
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.9
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.6
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	4.4
ZC150	24000	4.0	101.6	25.4	19.6	50.8	7.1	5.1	57	32	66.7	82	34.9	26.97	3.5	150	190	12.8
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.3
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	11.0
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.5
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9.0
"	"	9.0	228.6	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.6
"	"	10.0	254.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	8.2
ZC300	36000	6.0	152.4	38	23	65	10	8	82.5	44	88.9	107.9	41.3	31.75	8.5	300	380	22.3
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	20.2
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	18.8
"	"	10.0	254.0	"	"	"	"	"	"	"	"	"	"	"	"	"	"	16.4
"	"	12.0	304.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	15.2

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Conveyor Chain Attachments

Z/ZC Series Attachments

BS Conveyor Chain (BS 4116 Part 4)



Conveyor Attachments

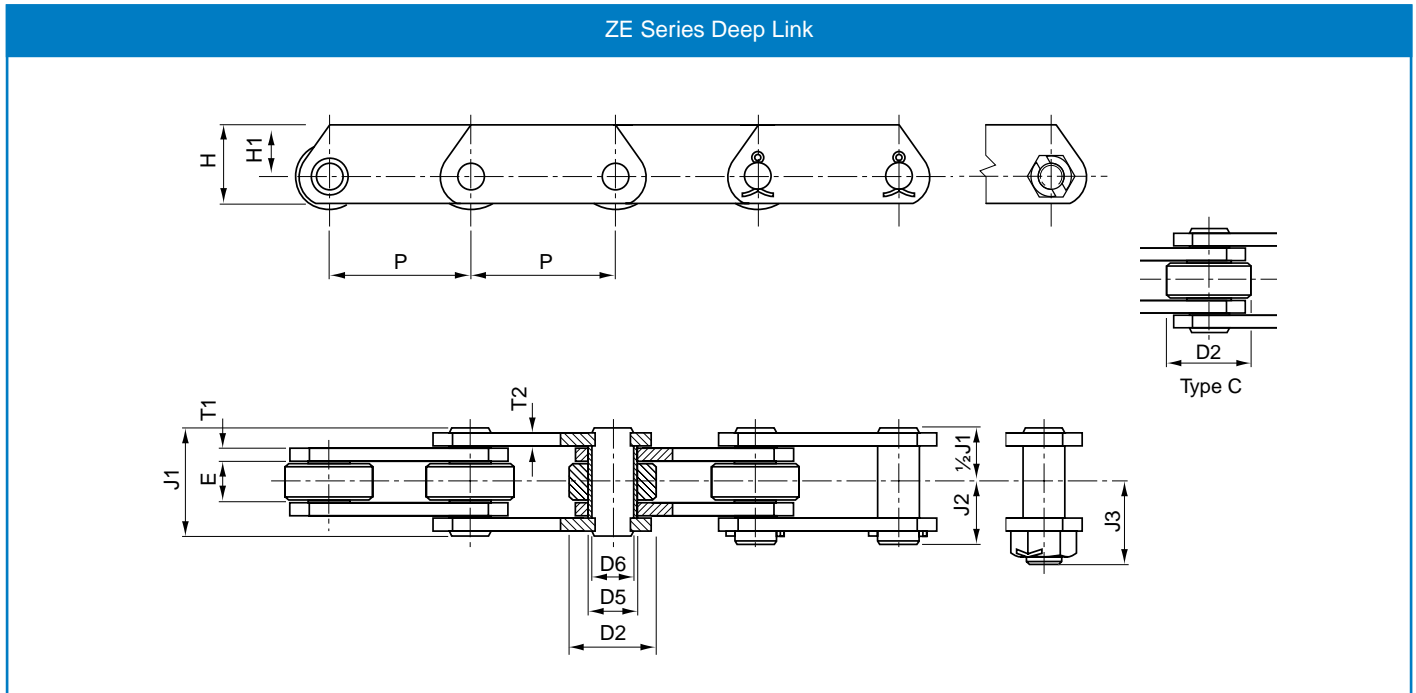
Chain Number	Pitch Inches P	Pitch mm P	Attachment Type	K	M	L1	L2	L3	d	d1	O	Q	Average Weight (Each) kg
Z40	2.0	50.8	K1	19	76.2	19.0	-	-	10.6	-	129	-	0.10
"	2.5	63.5	"	"	"	19.0	-	-	"	-	112	-	0.10
"	3.0	76.2	"	"	"	28.0	-	-	"	-	136	-	0.10
"	3.5	88.9	"	"	"	28.0	-	-	"	-	112	-	0.10
"	4.0	101.6	K1,K2,K3	"	"	56.0	56.0	64.0	"	9.2	110	31.8	0.10
"	5.0	127.0	"	"	"	56.0	56.0	85.0	"	"	112	31.8	0.20
"	6.0	152.4	"	"	"	83.8	83.8	88.0	"	"	112	57.2	0.20
Z100	3.0	76.2	K1	31.8	88.9	35.0	-	-	14	-	130	-	0.12
"	3.5	88.9	"	"	"	35.0	-	-	"	-	"	-	0.12
"	4.0	101.6	K1,K2,K3	"	"	35.0	56.0	64.0	"	11	"	31.8	0.10
"	5.0	127.0	"	"	"	56.0	56.0	64.0	"	"	"	31.8	0.30
"	6.0	152.4	"	"	"	56.0	84.0	90.0	"	"	"	57.2	0.32
"	7.0	177.8	"	"	"	56.0	127.0	130.0	"	"	"	89	0.40
"	8.0	203.2	"	"	"	56.0	127.0	130.0	"	"	"	89	0.40
Z160	5.0	127.0	K1,K2	38.1	108	56.0	56.0	-	-	12.7	-	31.7	0.30
"	6.0	152.4	"	"	"	"	84.0	-	-	"	154	57.2	0.38
"	7.0	177.8	"	"	"	"	108.0	-	-	"	"	69.85	0.38
"	8.0	203.2	"	"	"	"	127.0	-	-	"	"	88.9	0.60
"	9.0	228.6	"	"	"	"	168.0	-	-	"	"	133.35	0.69
"	10.0	254.0	"	"	"	"	168.0	-	-	"	"	133.35	0.75
Z300	6.0	152.4	K1	65	146	70.0			17.0	/	200	38.1	0.50
"	7.0	177.8	"	"	"	70.0			"	/	"	38.1	0.50
"	8.0	203.2	K1,K2	"	"	100.0			"	14	"	76.2	0.70
"	10.0	254.0	"	"	"	152.4			"	"	"	90	0.90
"	12.0	304.8	"	"	"	225.0			"	"	"	190	1.60

All dimensions in millimetres unless otherwise stated. Every effort has been taken to ensure that the data listed in this catalogue is correct. Challenge accepts no liability for any inaccuracies or damage caused.

Conveyor Chain

ZE Series

BS Conveyor Chain (BS 4116 Part 4)



Deep Link

Chain Number	Minimum Breaking Load, lbf	Pitch Inches	Pitch mm	E	H	H1	T1	T2	J1	J2	J3	D2	D5	D6	Breaking Load kN	HT Breaking Load, kN	Weight (Type C) kg/m
ZE40	7500	2.0	50.8	15.2	38.1	25.4	3.8	3.8	37	22	29	31.75	19	14	40	60	5.0
"	"	2.5	63.5	"	"	"	"	"	"	"	"	"	"	"	"	"	4.6
"	"	3.0	76.2	"	"	"	"	"	"	"	"	"	"	"	"	"	4.2
"	"	3.5	88.9	"	"	"	"	"	"	"	"	"	"	"	"	"	4.0
"	"	4.0	101.6	"	"	"	"	"	"	"	"	"	"	"	"	"	3.8
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	3.5
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	3.3
ZE100	15000	3.0	76.2	19	50.8	30	5.1	5.1	48	28	38	47.63	25.4	19	100	160	8.9
"	"	3.5	88.9	"	"	"	"	"	"	"	"	"	"	"	"	"	8.4
"	"	4.0	101.6	"	"	"	"	"	"	"	"	"	"	"	"	"	7.6
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	6.8
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	6.3
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	5.9
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	5.7
ZE160	30000	4.0	101.6	25.4	70	45	7.1	5.1	59	34.5	49	66.7	34.9	26.97	156	200	17.5
"	"	5.0	127.0	"	"	"	"	"	"	"	"	"	"	"	"	"	15.4
"	"	6.0	152.4	"	"	"	"	"	"	"	"	"	"	"	"	"	13.8
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	12.8
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	12.0
"	"	9.0	228.6	"	"	"	"	"	"	"	"	"	"	"	"	"	11.3
"	"	10.0	254.0	"	"	"	"	"	"	"	"	"	"	"	"	"	10.5
ZE300	45000	6.0	152.4	38	90	60	10	8	82.5	47	65	88.9	41.3	31.75	300	380	32.0
"	"	7.0	177.8	"	"	"	"	"	"	"	"	"	"	"	"	"	29.5
"	"	8.0	203.2	"	"	"	"	"	"	"	"	"	"	"	"	"	27.0
"	"	10.0	254.0	"	"	"	"	"	"	"	"	"	"	"	"	"	24.5
"	"	12.0	304.8	"	"	"	"	"	"	"	"	"	"	"	"	"	23.0

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Conveyor Chain Attachments

Attachment Chain Designations




Attachment Chain Designations

M1-01

Attachment Orientation

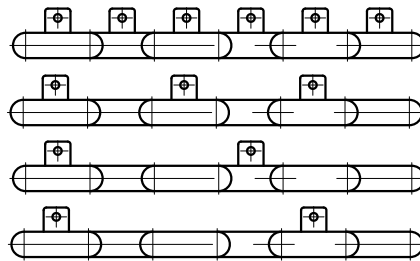
- M = Vertical one side 
- MK = Vertical both sides 
- A = Horizontal one side 
- K = Horizontal both sides 

Mounting Holes

- 1 = Single Hole 
- 2 = Double 
- 3 = Triple 

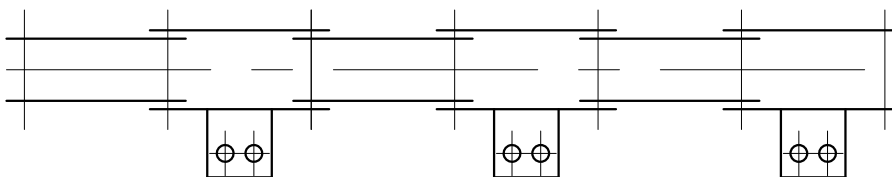
Frequency

- 01 = Every side plate
- 02 = Every other side plate
- 03 = Every third side plate
- 04 = Every fourth side plate

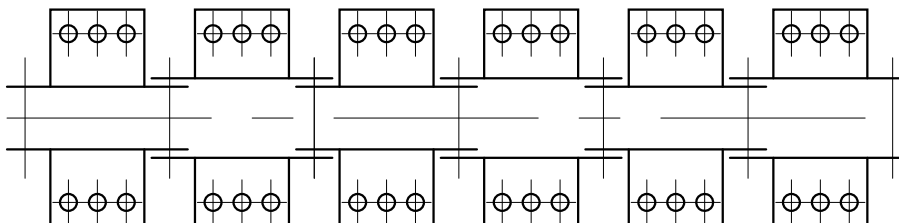


Examples

A2-02

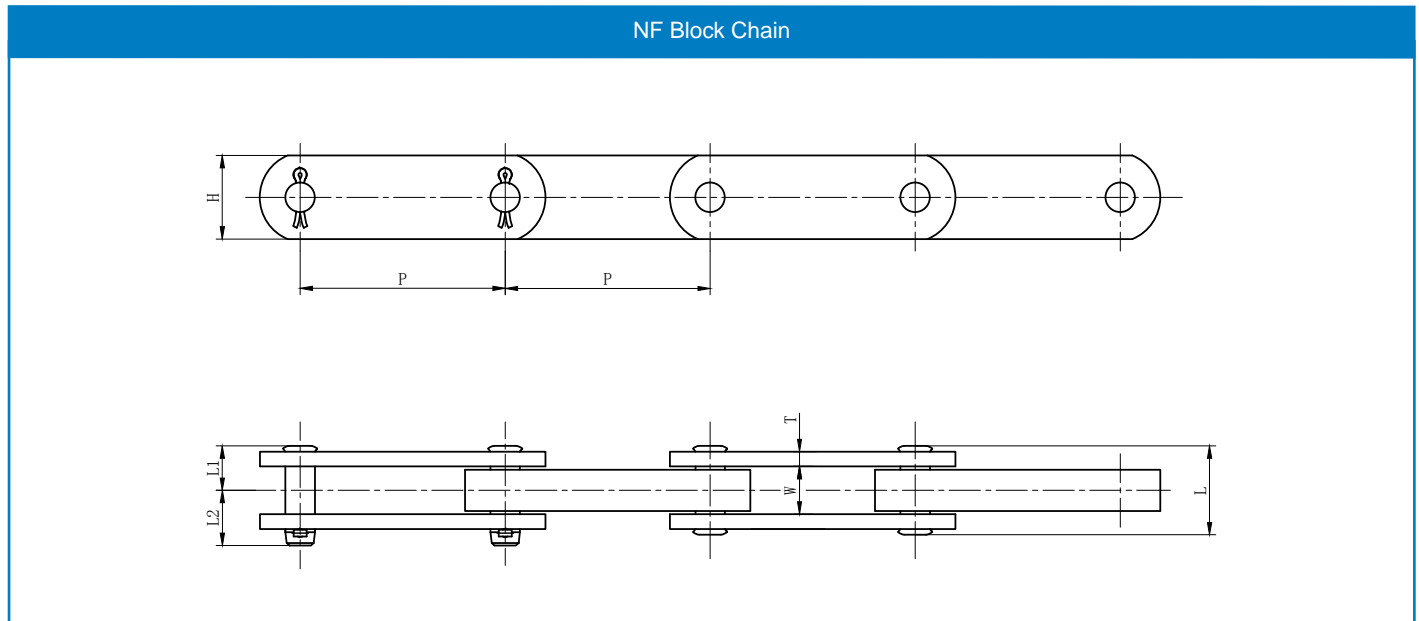


K3-01



Block Chain

NF Block Chain

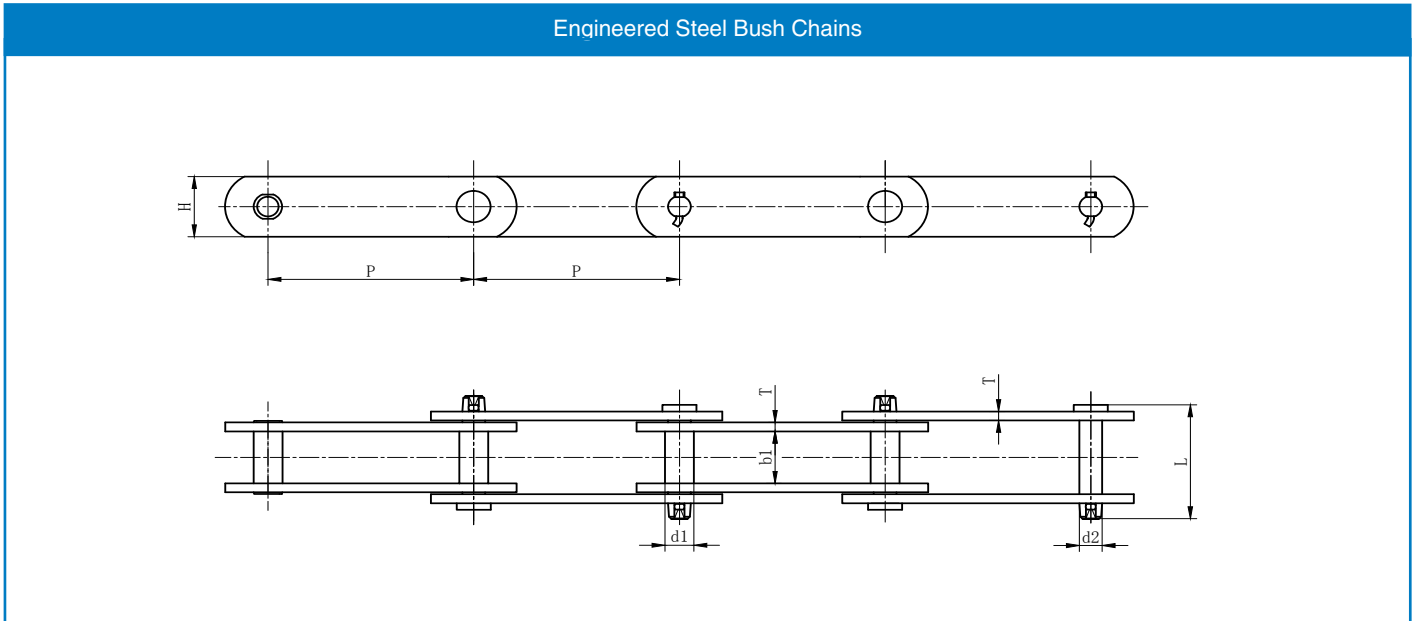


Chain number	Chain pitch	Roller diameter	Width between inner plates	Bearing pin diameter	Pin length			Side plate height	Plate thickness	Tensile strength	Approx weight
	P	R	W	D	L	L1	L2	H	T	kN(kgf)	kg/m
NF 30150	150.00	/	23.3	/	47.0	24.00	32.00	38.1	7.9	309(31500)	7.0
NF 30200	200.00	/	23.3	/	47.0	24.00	32.00	38.1	7.9	309(31500)	6.6
NF 40150	150.00	/	26.5	/	50.0	25.50	33.50	44.5	7.9	397(40500)	9.0
NF 40200	200.00	/	26.5	/	50.0	25.50	33.50	44.5	7.9	397(40500)	8.5
NF 56200	200.00	/	29.5	/	57.0	29.50	40.50	54	9.5	554(56500)	12.3
NF 56250	250.00	/	29.5	/	57.0	29.50	40.50	54	9.5	554(56500)	12.0
NF 63200	200.00	/	31.5	/	59.0	30.50	41.50	57	9.5	618(63000)	13.7
NF 63250	250.00	/	31.5	/	59.0	30.50	41.50	57	9.5	618(63000)	13.0
NF 70200	200.00	/	33.5	/	61.0	31.50	42.50	63.5	9.5	721(73500)	16.2
NF 70250	250.00	/	33.5	/	61.0	31.50	42.50	63.5	9.5	721(73500)	15.5
NF 90200	200.00	/	38	/	68.0	34.50	45.50	72	10.5	907(92500)	21.0
NF 90250	250.00	/	38	/	68.0	34.50	45.50	72	10.5	907(92500)	20.0
NF115250	250.00	/	40	/	76.0	38.00	49.00	76.2	12.7	1120(114000)	25.0
NF115300	300.00	/	40	/	76.0	38.00	49.00	76.2	12.7	1120(114000)	24.0
NF140250	250.00	/	47.5	/	84.0	44.00	54.00	85	14	1400(143000)	32.0
NF140300	300.00	/	47.5	/	84.0	44.00	54.00	85	14	1400(143000)	31.0
NF180300	300.00	/	52.5	/	94.0	48.50	58.50	95	16	1740(177500)	39.0
NF180350	350.00	/	52.5	/	94.0	48.50	58.50	95	16	1740(177500)	37.8
NF210300	300.00	/	59	/	101.0	51.50	61.50	110	16	2150(219500)	50.0
NF210350	350.00	/	59	/	101.0	51.50	61.50	110	16	2150(219500)	48.3
NF250300	300.00	/	66	/	114.0	58.50	68.50	112	19	2440(248500)	58.8
NF250350	350.00	/	66	/	114.0	58.50	68.50	112	19	2440(248500)	56.7
NF280300	300.00	/	67	/	115.0	58.50	68.50	122	19	2720(277500)	66.0
NF280350	350.00	/	67	/	115.0	58.50	68.50	122	19	2720(277500)	62.3

These chains consist of outer link plates, inner block links and pins.

Engineered Bush Chains

Engineered Steel Bush Chains

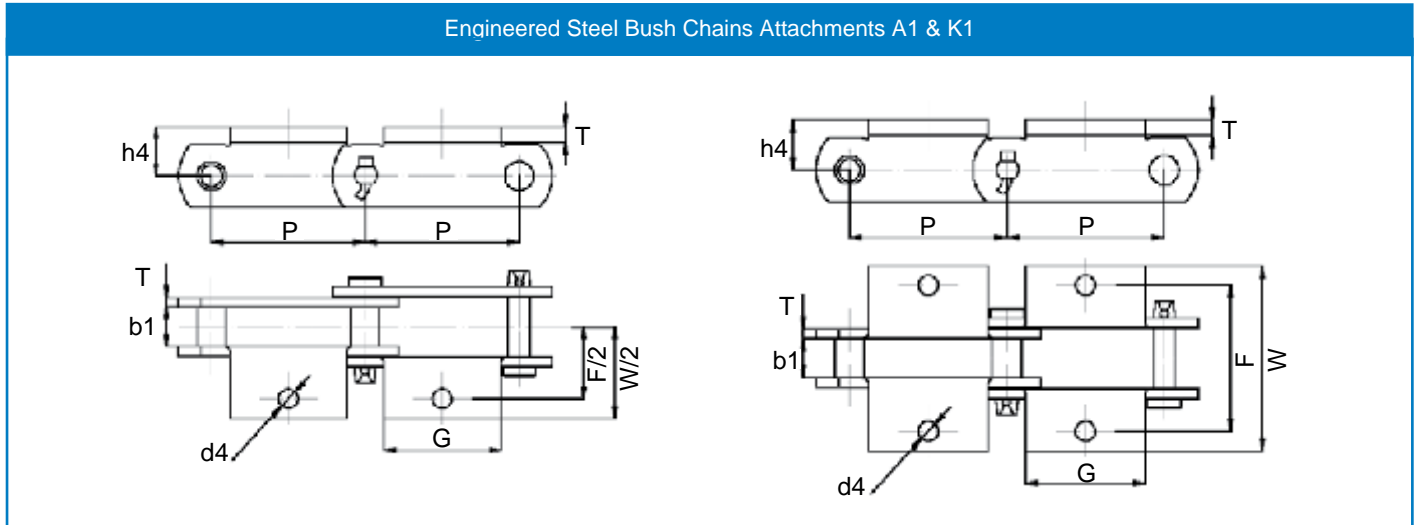


ANSI chain number	Challenge chain number	Pitch inches	Pitch mm	Bush diameter	Width between inner plates	Pin diameter	Pin length	Side plate height	Plate thickness	Average Tensile strength	Approx weight
		P	P	d1 max	b1 min	d2	L max	H	T	kN/bf	kg/m
S102B	S102B	4.00	101.60	25.4	54.1	15.88	111.3	38.10	9.70	176.00	10.40
S120B	S102B-C	6.00	152.40	32	54.1	15.88	111.3	38.10	9.70	176.00	9.80
S111	S111	4.76	120.90	36.6	66.8	19.05	131.2	50.80	9.70	235.40	15.90
S131	S131	3.08	78.11	32	33.5	15.88	90.5	38.10	9.70	176.00	11.60
S150	S150	6.05	153.67	44.7	84.3	25.4	164.6	63.50	12.70	416.00	25.70
S188	S188	2.61	66.27	22.4	26.9	12.7	68.6	28.40	6.40	112.20	5.60
S856	S856	6.00	152.40	44.4	76.2	25.4	154.9	63.50	12.70	401.50	25.00
S857	S857	6.00	152.40	44.4	76.2	25.4	154.9	82.60	12.70	475.20	32.00
S859	S859	6.00	152.40	60.4	95.3	31.75	188.5	101.60	16.00	759.00	55.90
S864	S864	7.00	177.80	60.4	95.3	31.75	188.5	101.60	16.00	759.00	51.80

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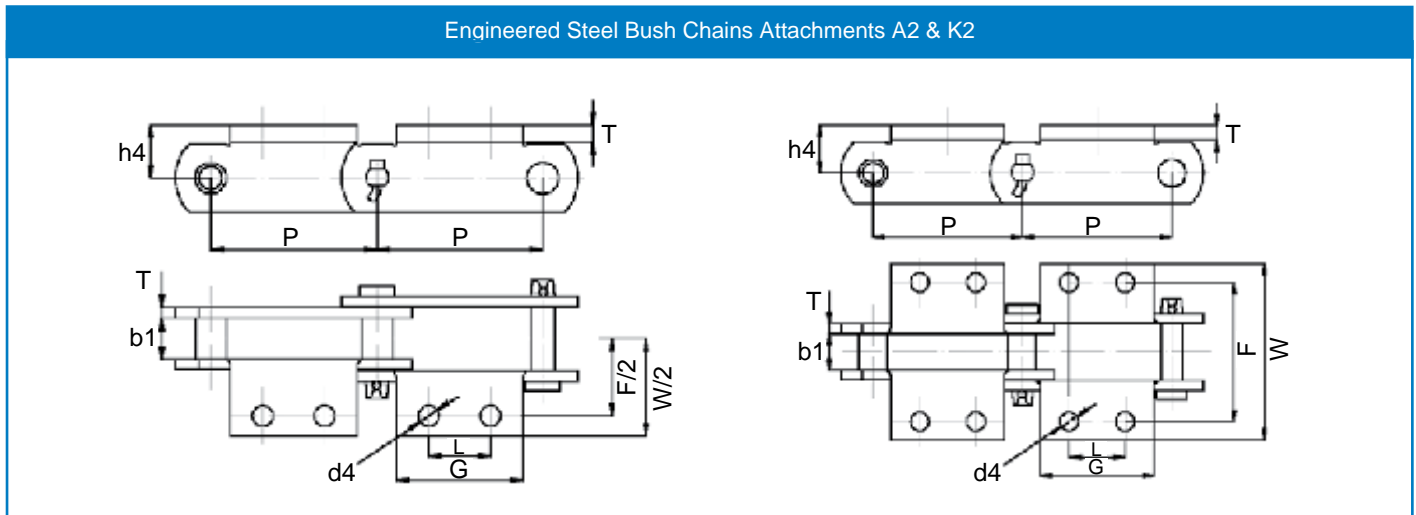
Engineered Bush Chains

Engineered Steel Bush Chains Attachments A1 & K1



ANSI chain number	Challenge chain number	Pitch inches	Pitch mm	Attachment diameter					Plate thickness
		P	P	G	F	W	h4	d4	T
S102B	S102B	4.00	101.60	77.0	121.0	180.8	25.4	10.20	9.70
S131	S131	3.08	78.11	73.9	104.6	157	25.4	13.50	9.70
S188	S188	2.61	66.27	54.6	95.2	131.6	20.6	10.20	6.40

Engineered Steel Bush Chains Attachments A2 & K2

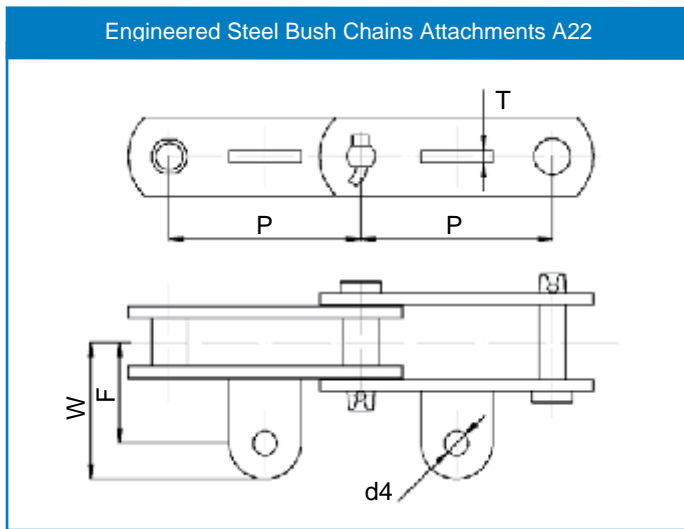


ANSI chain number	Challenge chain number	Pitch inches	Hole distance	Attachment diameter					Plate thickness
		P	L	G max	F	W max	h4	d4 min	T
S102B	S102B	101.60	44.50	69.9	134.9	180.8	25.4	10.20	9.70
S110	S110	152.40	44.50	89.6	134.9	180.8	25.4	10.20	9.70
S111	S111	120.90	58.70	92.7	158.8	210.8	38.1	13.50	9.70
S131	S131	78.11	38.10	73.9	104.6	157	25.4	13.50	9.70
S150	S150	153.67	69.90	108.7	190.5	249.4	47.8	13.50	12.70
S188	S188	66.27	31.80	54.6	106.4	131.6	20.6	8.60	6.40
S856	S856	152.40	63.50	103.1	184.2	241.3	47.8	16.80	12.70

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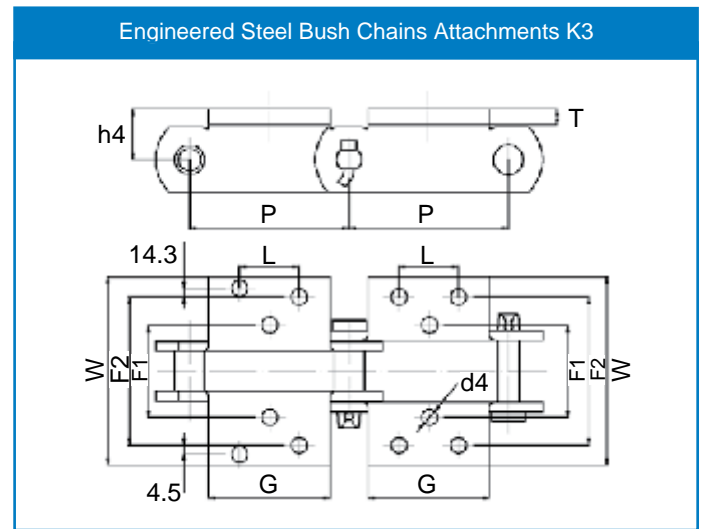
Engineered Bush Chains

Engineered Steel Bush Chains Attachments A22



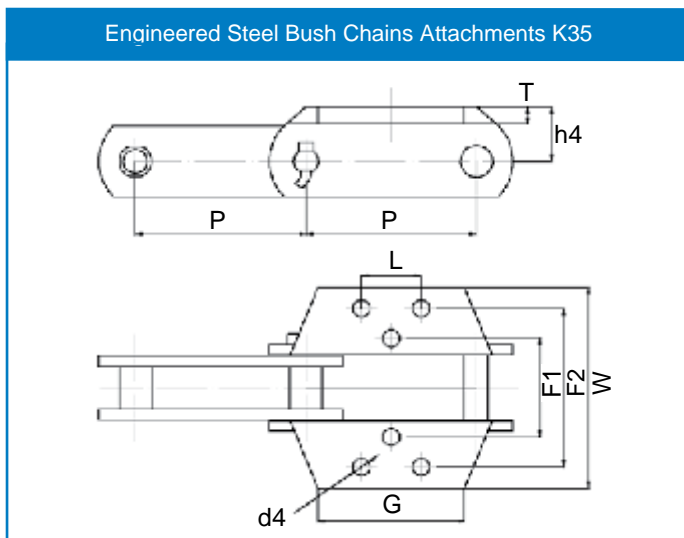
ANSI chain number	Challenge chain number	Pitch		Attachment diameter				Plate thickness	
		P inches	P mm	G	F	W	h4	d4	T
S188	S188	2.61	66.27	49.2	45.2	61.2	/	10.20	10.40
/	S188A22F1	2.61	66.27	32.0	45.2	61.2	/	12.00	6.40

Engineered Steel Bush Chains Attachments K3



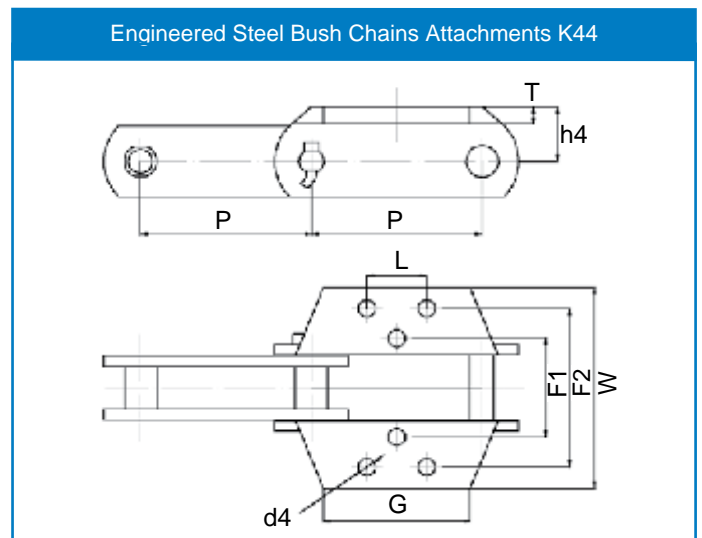
ANSI chain number	Challenge chain number	Pitch		Attachment diameter				Plate thickness		
		P inches	P mm	G	L	F1	F2	W	h4	d4
S150	S150	153.67	109.5	69.9	190.5	292.1	347.5	47.80	13.50	13.5
S856	S856	152.40	152.4	69.9	166.6	277.9	349.3	47.80	13.50	13.5

Engineered Steel Bush Chains Attachments K35



ANSI chain number	Challenge chain number	Pitch		Attachment diameter				Plate thickness		
		P inches	P mm	G	L	F1	F2	W	h4	d4
S856	S856	152.40	146.1	63.5	184.2	298.5	349.3	47.80	16.80	13.5

Engineered Steel Bush Chains Attachments K44

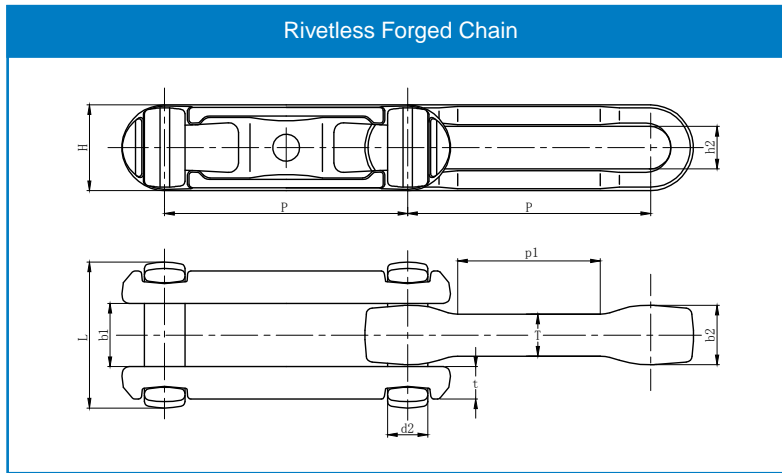


ANSI chain number	Challenge chain number	Pitch		Attachment diameter				Plate thickness			
		P inches	P mm	G	L1	L2	F1	F2	W	h4	d4
S857	S857	152.40	146.1	88.9	88.9	177.8	304.8	355.60	63.50	13.5	13.5
S859	S859	152.40	146.1	114.3	69.9	228.6	330.2	381.00	76.20	16.8	13.5
S864	S864	177.80	146.1	139.7	95.3	228.6	330.2	381.00	76.20	16.8	13.5

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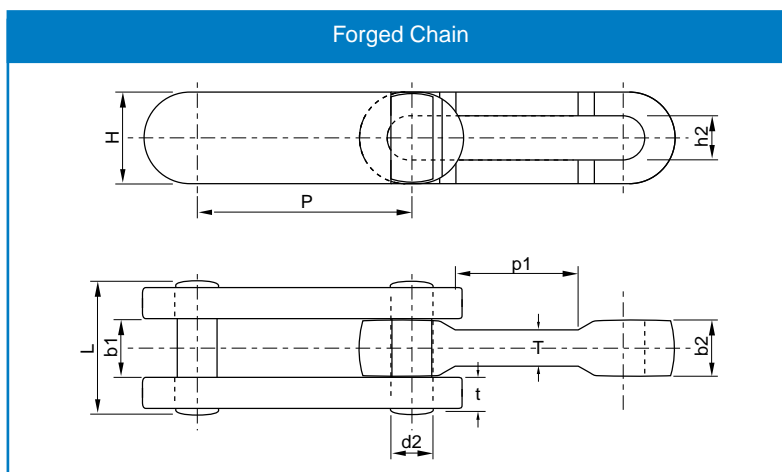
Drop Forged Chain

Rivetless Forged Chain



Chain number	Pitch mm P	Pin diameter d2	Pin length L	Center link gap		Chain height		Plate thickness		Center link width b1	Ultimate tensile strength / kN Q min
				h2 min	H max	t	T				
X228	50.80	6.40	27.70	7.90	18.00	6.40	9.40	13.00	26.70		
X348	76.20	12.40	43.90	13.50	27.90	10.20	13.00	20.10	97.90		
X458	101.60	16.00	57.20	16.80	36.60	12.20	16.30	27.20	210.00		
X458XP	101.60	16.00	57.20	16.80	36.60	12.20	16.30	27.20	255.00		
468	102.40	19.05	84.10	22.35	47.80	10.40	28.70	42.93	391.00		
X678	152.40	22.10	77.00	24.10	51.60	17.80	21.10	34.30	380.00		
X678XP	152.40	22.10	77.00	24.10	51.60	17.80	21.10	34.30	450.00		
698	152.40	28.70	95.25	31.75	65.00	14.20	25.40	41.40	650.00		
698XP	152.40	28.70	95.25	31.75	65.00	14.20	25.40	41.40	720.00		
998	229.40	28.70	95.30	31.75	67.60	14.20	25.40	42.93	578.00		
9118	229.40	35.00	124.00	38.10	76.20	19.80	33.30	51.10	979.00		

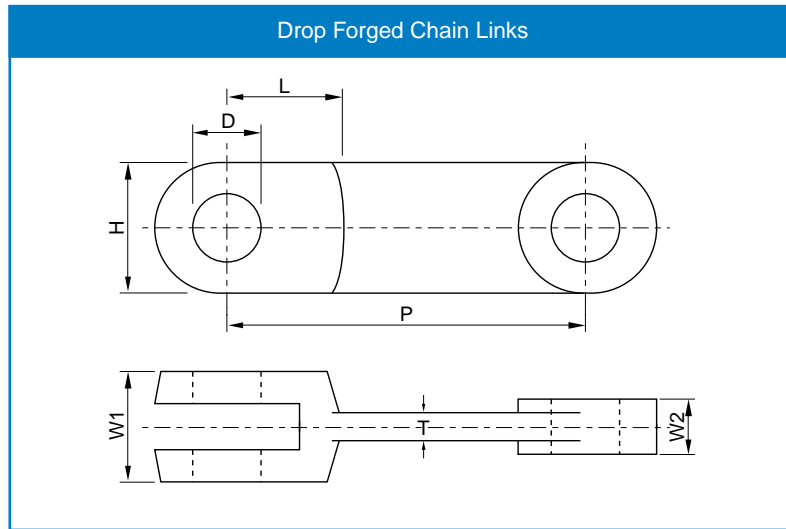
Forged Chain



Chain number	Pitch mm P	Pin diameter d2	Pin length L	Center link gap		Chain height		Plate thickness		Center link width b1	Ultimate tensile strength / kN Q min
				h2 min	H max	t	T				
S348	76.68	12.70	44.45	20.57	28.70	12.70	14.22	8.89	3.58		
S458	102.39	16.00	52.32	26.92	35.05	16.00	17.53	17.78	5.22		
S468	102.39	19.05	74.68	42.93	50.80	28.70	22.35	29.78	11.78		
S678	153.19	22.35	76.20	36.58	50.80	20.57	25.40	34.22	12.83		
S698	153.19	28.70	82.55	41.40	63.50	25.40	31.75	48.00	17.45		
S998	229.39	28.70	82.55	42.93	63.50	25.40	31.75	48.00	18.05		
S9118	229.39	35.05	111.25	54.10	76.20	33.27	38.10	81.33	34.75		

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Drop Forged Chain



Chain number	Pitch mm P	H	W1	W2	T	L	D	*Weight kg	Min. UTS kN
102	102	36	28	12	7.6	32	14	0.44	150
142	142	50	42	20	11	46	25	1.26	300
142H	142	50	62	30	16.5	55	25	2.1	450
142T	142	50	62	30	16.5	55	25	2.1	600
200	200	60	62	28	20	58	25	3.2	500
216	216	72	58	25	18	60	35	4.6	582
260	260	75	70	31	20	79	32	5.65	700

* Weight including Pin and Circlip.

Nylon and welded steel flights available, eg:

Square Bar Flight

U Flight

OO Flight

Flat Bar Flight

Closed U Flight

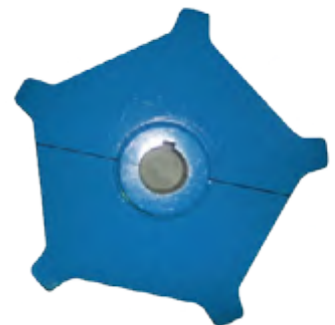
OO Flight with Filler Plates

Paddle Flight

Close U Flight with Filler Plates

Return Cup Flights

All types of sprocket available



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The Benefits Spin Riveted Palm Oil Chain

Challenge Palm Oil conveyor chains are designed to withstand the harsh environments found in today's modern Palm Oil mills. Shock loads, heat and lubricating issues demand a tough, high quality solution.

Material – High quality alloy steels used throughout.

Case Hardened alloy steel precision machined bushes

– Ensuring minimum distortion and superior concentricity.

Bushes from seamless tube with location shoulders and interference fit

– For precise assembly; control on inner width and prevention of pin rotation. Bush shoulder length extended to form clearance between inner and outer plates providing uniform lubrication, increased strength and life and greatly minimises possibility of chain seizure.

Spin Riveted Induction Hardened Pins in alloy steel – For optimum life.

Pins with location shoulders and interference fit – For precise positioning of outer plate.

Hardened Rollers with outer diameter finished by grinding

– Gives excellent wear resistance and good load carrying qualities plus reduced wear on sprockets and a better visual result.

Link plates cropped from cold drawn steel

– Ensures internal stresses are minimised resulting in a plate able to withstand fatigue and shock loads.

Holes precision punched on dedicated progression tooling – consistently high tolerance pitch control guaranteed.

Links manufactured from high carbon steel – Giving increased breaking load.

Shot peened – Produces strong surface and reduced fatigue.

Attachments and options

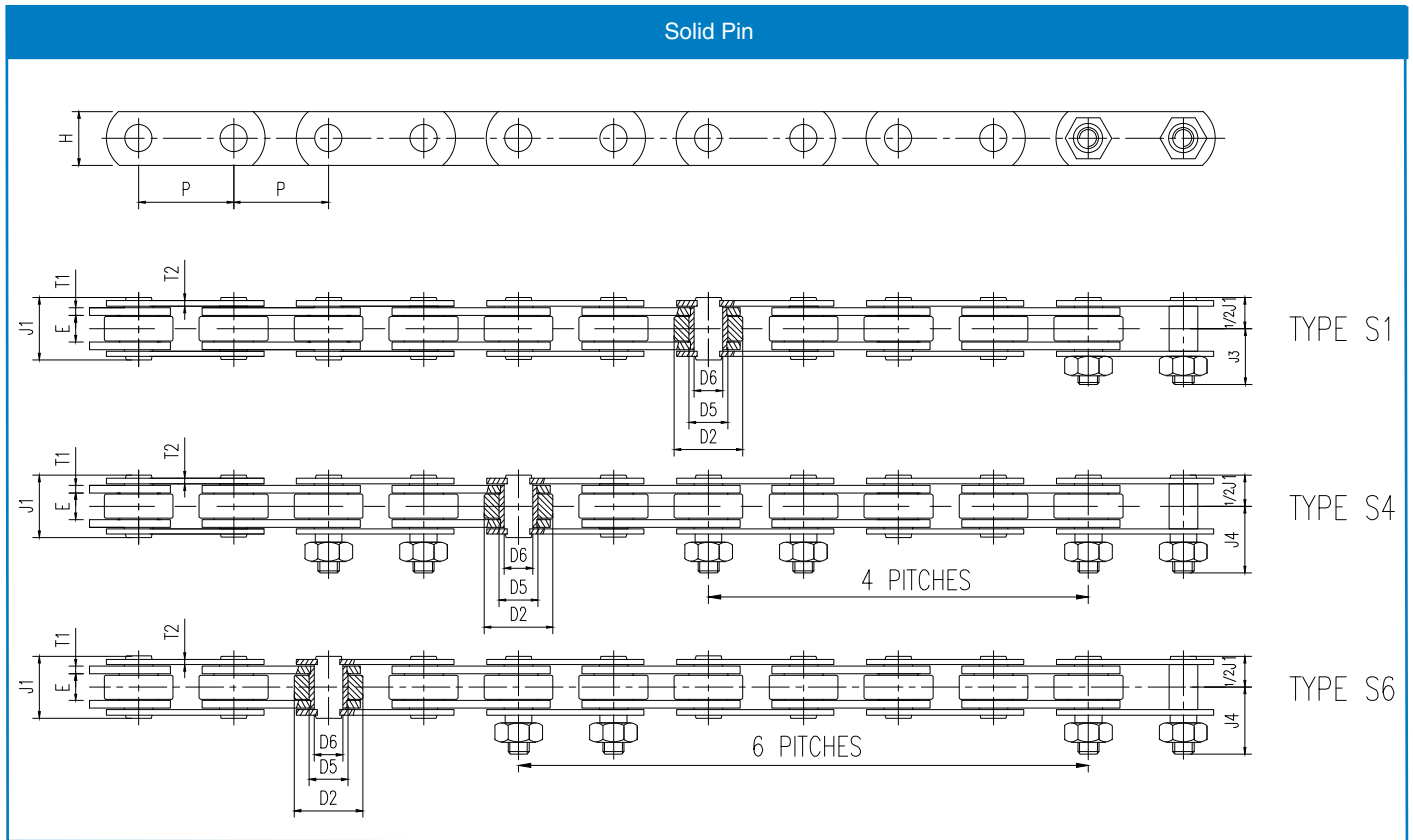
– Zinc and Nickel plated parts, molykoted pins, bushes and rollers. Flanged rollers, hardened plates, Stainless parts, liner bushes etc.

Connecting links – Use zinc plated steel locking nuts (Nyloc).



Palm Oil Chain

BS Conveyor Chain (BS 4116 Part 4)



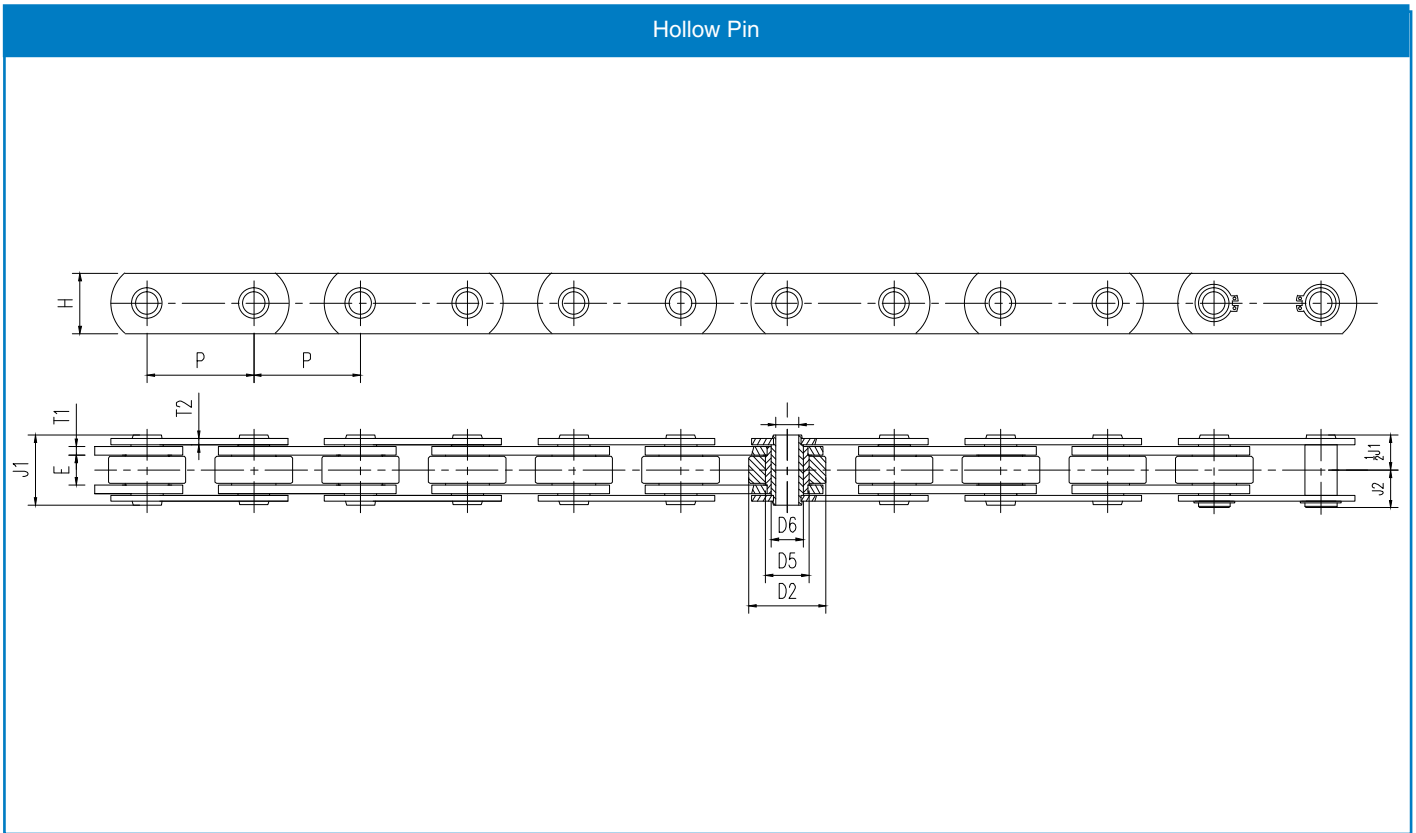
Solid Pin

BS Chain Range	Chain number	Series	Chain type	Pitch	Pitch											Minimum breaking load lbf	Minimum breaking load kN	Weight kg/m
				Inches	mm	P	P	E	H	T1	T2	J1	J3	J4	D2			
Z100	RCC-Z100C101.6	Standard	S1	4.0	101.6	19.16	38.1	5.1	3.8	46.1	38.3	-	47.63	25.4	19	20,000	89	6.5
"	RCC-Z100C101.6*	Extra	"	"	"	"	"	"	"	"	"	-	"	"	"	27,000	120	"
"	RCC-Z120C101.6	Extra Plus	"	"	"	"	"	"	5.1	48.5	"	-	"	"	"	32,000	142	7.0
Z100	RCC-Z100C101.6-EP4	Standard	S4	4.0	101.6	19.16	38.1	5.1	3.8	46.1	38.3	47	25.4	25.4	19	20,000	89	6.7
"	RCC-Z100C101.6-EP4*	Extra	"	"	"	"	"	"	"	"	"	"	"	"	"	27,000	120	"
"	RCC-Z120C101.6-EP4	Extra Plus	"	"	"	"	"	"	5.1	48.5	"	48	"	"	"	32,000	142	7.2
Z100	RCC-Z100C101.6-EP6	Standard	S6	4.0	101.6	19.16	38.1	5.1	3.8	46.1	38.3	47	25.4	25.4	19	20,000	89	6.6
"	RCC-Z100C101.6-EP6*	Extra	"	"	"	"	"	"	"	"	"	"	"	"	"	27,000	120	"
"	RCC-Z120C101.6-EP6	Extra Plus	"	"	"	"	"	"	5.1	48.5	"	"	"	"	"	32,000	142	7.1
Z100	RCC-Z100C152.4	Standard	S1	6.0	152.4	19.16	38.1	5.1	3.8	46.1	38.3	-	25.4	25.4	19	20,000	89	5.3
"	RCC-Z100C152.4*	Extra	"	"	"	"	"	"	"	"	"	-	"	"	"	27,000	120	"
"	RCC-Z120C152.4	Extra Plus	"	"	"	"	"	"	5.1	48.5	"	-	"	"	"	32,000	142	5.6
Z160	RCC-Z160C101.6	Standard	S1	4.0	101.6	25.5	50.8	7.1	5.1	59.13	48.9	-	66.7	34.9	26.9	38,000	169	14.3
"	RCC-Z260C101.6	Extra	"	"	"	"	"	"	"	"	"	-	"	"	"	60,000	266	"
"	RCC-Z460C101.6	Extra Plus	"	"	"	"	"	10	10	"	"	-	"	"	"	100,000	445	18.7
Z160	RCC-Z160C152.4	Standard	S1	6.0	152.4	25.5	50.8	7.1	5.1	59.13	48.9	-	66.7	34.9	26.9	38,000	169	11.3
"	RCC-Z260C152.4	Extra	"	"	"	"	"	"	"	"	"	-	"	"	"	60,000	266	"
"	RCC-Z460C152.4	Extra Plus	"	"	"	"	"	10	10	"	"	-	"	"	"	100,000	445	15.4
Z160	RCC-Z160C152.4-EP4	Standard	S4	6.0	152.4	25.5	50.8	7.1	5.1	59.13	48.9	63	66.7	34.9	26.9	38,000	169	11.7
"	RCC-Z260C152.4-EP4	Extra	"	"	"	"	"	"	"	"	"	"	"	"	"	60,000	266	"
"	RCC-Z460C152.4-EP4	Extra Plus	"	"	"	"	"	10	10	"	"	"	"	"	"	100,000	445	15.6
Z160	RCC-Z160C152.4-EP6	Standard	S6	6.0	152.4	25.5	50.8	7.1	5.1	59.13	48.9	63	66.7	34.9	26.9	38,000	169	11.5
"	RCC-Z260C152.4-EP6	Extra	"	"	"	"	"	"	"	"	"	"	"	"	"	60,000	266	"
"	RCC-Z460C152.4-EP6	Extra Plus	"	"	"	"	"	10	10	"	"	"	"	"	"	100,000	445	15.6
Z300	RCC-Z300C152.4	Standard	S1	6.0	152.4	38	65	10	8	82.5	60.3	-	88.9	41.3	31.75	75,000	334	24.3
"	RCC-Z500C152.4	Extra	"	"	"	"	"	"	"	"	"	-	"	"	"	90,000	400	"
"	RCC-Z500C152.4*	Extra Plus	"	"	"	"	"	"	"	"	"	-	"	"	"	120,000	534	"

All dimensions in millimetres unless otherwise stated. Every effort has been taken to ensure that the data listed in this catalogue is correct. Challenge accepts no liability for any inaccuracies or damage caused.

Palm Oil Chain

BS Conveyor Chain (BS 4116 Part 4)



Hollow Pin

BS Chain Range	Chain number	Series	Pitch Inches P	Pitch mm P	E	I	H	T1	T2	J1	J2	D2	D5	D6	Minimum breaking load lbf	Minimum breaking load kN	Weight kg/m
ZC60	RCC-ZC60C101.6	Standard	4.0	101.6	19.16	13.2	38.1	5.1	3.8	44.1	24.7	47.63	25.4	19	20,000	89	6.0
"	RCC-ZC60C101.6*	Extra Plus	"	"	"	"	"	"	"	"	"	"	"	"	27,000	120	"
ZC60	RCC-ZC60C152.4	Standard	6.0	152.4	19.16	13.2	38.1	5.1	3.8	44.1	24.7	47.63	25.4	19	20,000	89	4.9
"	RCC-ZC60C152.4*	Extra Plus	"	"	"	"	"	"	"	"	"	"	"	"	27,000	120	"
ZC150	RCC-ZC150C101.6	Standard	4.0	101.6	25.5	19.6	50.8	7.1	5.1	57.1	31.9	66.7	34.9	26.9	35,000	156	12.8
ZC220	RCC-ZC220C101.6	Extra	"	"	"	"	"	"	"	"	"	"	"	"	46,000	205	"
ZC220	RCC-ZC220C101.6*	Extra Plus	"	"	"	"	"	"	"	"	"	"	"	"	50,000	222	"
ZC150	RCC-ZC150C152.4	Standard	6.0	152.4	25.5	19.6	50.8	7.1	5.1	57.1	31.9	66.7	34.9	26.9	35,000	156	11.0
ZC220	RCC-ZC220C152.4	Extra	"	"	"	"	"	"	"	"	"	"	"	"	46,000	205	"
ZC220	RCC-ZC220C152.4*	Extra Plus	"	"	"	"	"	"	"	"	"	"	"	"	50,000	222	"

Notes

Sugar Chain



1 in this catalogue is correct. Challenge accepts no liability for any inaccuracies or damage caused. All dimensions in millimetres unless otherwise stated.

Sugar Chain

The Benefits of Challenge Sugar Chain

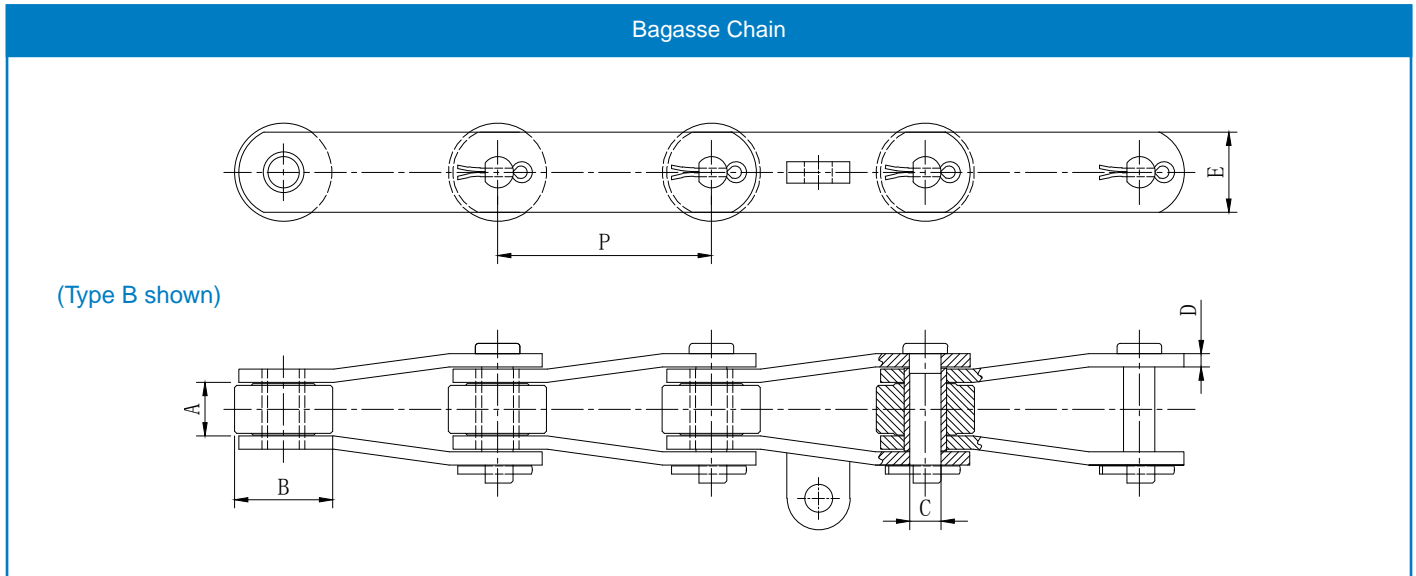
- Material** – High quality steels used throughout
- Link plates cropped from high carbon cold drawn steel**
 To avoid internal stresses associated with guillotined steel, Challenge produces all plates from high tolerance, on size, cold drawn steel bars resulting in a plate better able to withstand fatigue and shock loads.
- Case Hardened Alloy steel bushes precision machined from seamless tube**
 Ensuring minimum distortion and superior concentricity. Interference fit extends wear life by preventing bush rotation. Surface grinding minimises wear between bush and roller
- Induction Hardened Pins in High Chrome Alloy Steel**
 Pins headed and flatted to ensure location and prevent rotation. Challenge EasyFit® pins designed with long lead in to aid on-site maintenance and assembly.
- Hardened Rollers with grinding**
 Grinding the outer diameter gives excellent wear resistance and good load carrying qualities plus reduced wear on sprockets and better visual result. Stepped down to help prevent seizure.
- Flatted bush on 2184 Hyper Chain** for increased breaking load.
- Shot peened to produce a strong surface and reduce fatigue**
- Challenge has invested heavily in CNC controlled machinery for optimum batch component conformity.**
- Attachment plates jig assembled maintains position and squareness.**
- Holes precision punched on dedicated progression tooling**
 Guarantees consistently high tolerance pitch control and strong, fatigue resistant chain.
- Robotic welding of attachment**
 All industry standard attachments available.

In-house design team for all special requirements.

All dimensions in millimetres unless otherwise stated. Every effort has been taken to ensure that the data listed in this catalogue is correct. Challenge ac

Sugar Chain

Bagasse Chain



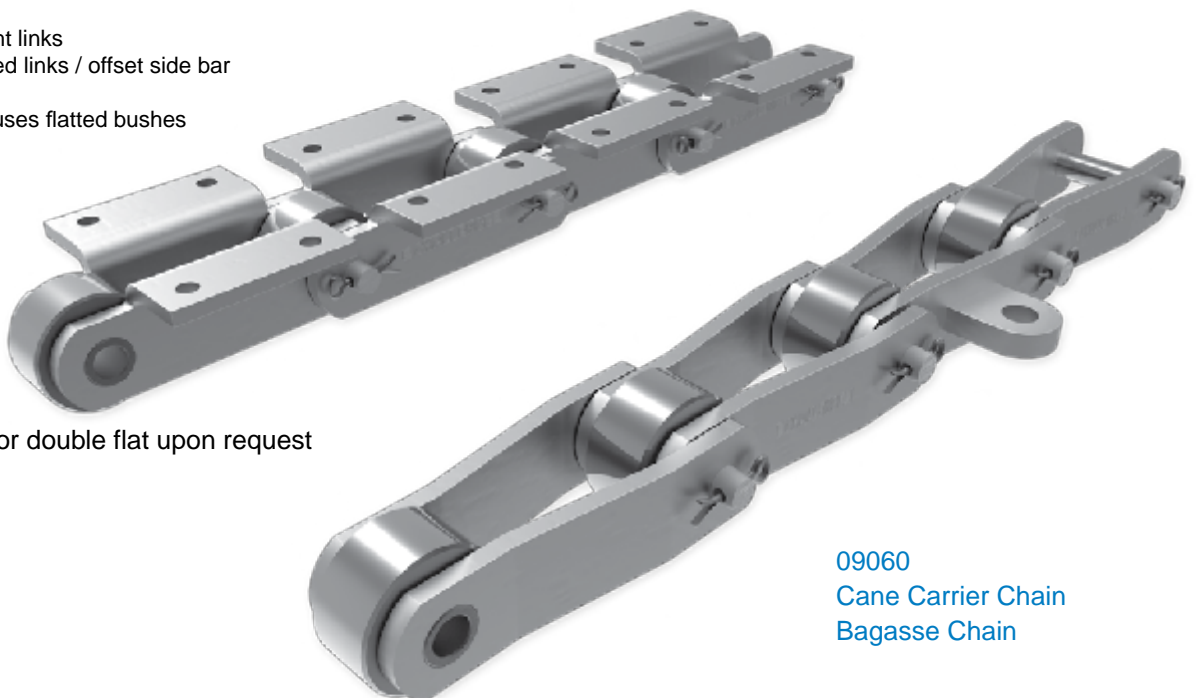
Chain number	Type	Pitch P	Inside width A	Roller diameter B	Pin diameter C	Plate thickness D	Plate height E	Attachment hole diameter F	Attachment hole centres G	Attachment length H	Attachment face J	Transverse pitch K	Breaking load(kN)	Weight (kg/m)
CH1796	A	152.4	38.1	69.85	22.2	9.52	57.15	12.7	82.5	114.3	115.8	88.9	445	22
CH1796	B	"	"	"	"	"	"	"	"	"	"	"	"	22.9
CH2184	B	152.4	34.93	76.2	22.2	9.52	50.8	14.3	88.9	127	143	88.9	356	21
* CH2184 HYPER	"	"	"	"	"	"	"	"	"	"	"	"	380	"
CH9060	A	152.4	38.1	69.85	18.9	9.52	50.8	12.7	82.5	114.3	115.8	88.9	272	18.5
CH9060	B	"	"	"	"	"	"	"	"	"	"	"	"	"
CH9061	A	152.4	38.1	69.85	18.9	9.52	57.15	12.7	82.5	114.3	115.8	88.9	386	19.85
CH9061	B	"	"	"	"	"	"	"	"	"	"	"	"	20.3
CH9063	A	152.4	38.1	76.2	23.82	10.28	63.5	14.3	88.9	127.9	142.9	100	620	25.1
CH9063	B	"	"	"	"	"	"	"	"	"	"	"	"	"

Stainless steel versions available upon request.

TYPE A with straight links

TYPE B with cranked links / offset side bar

* CH2184 HYPER uses flatted bushes

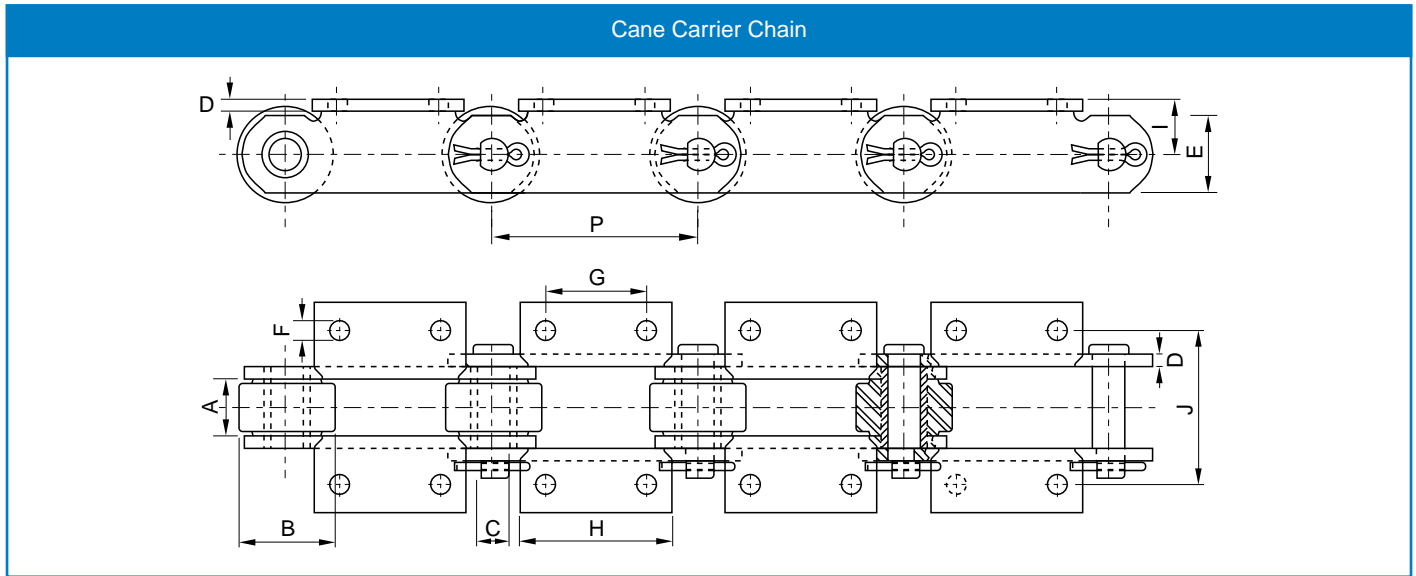


Pins with single or double flat upon request

09060
Cane Carrier Chain
Bagasse Chain

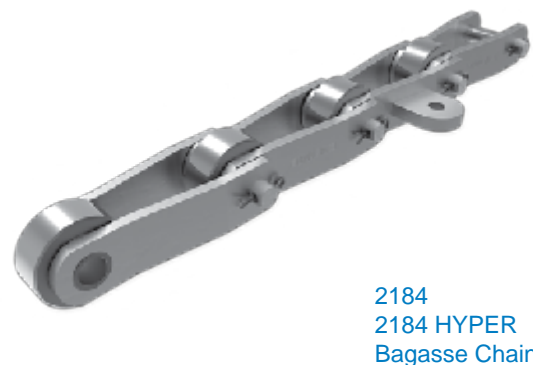
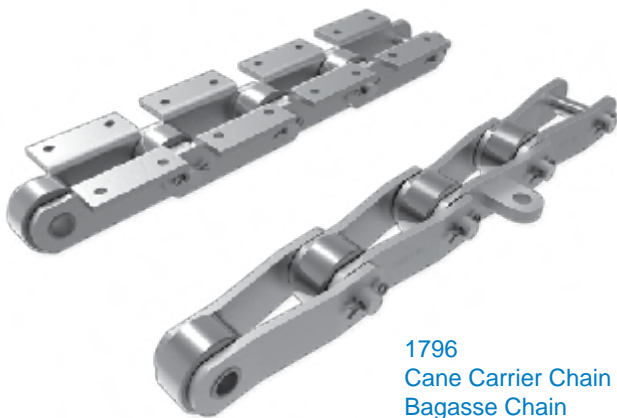
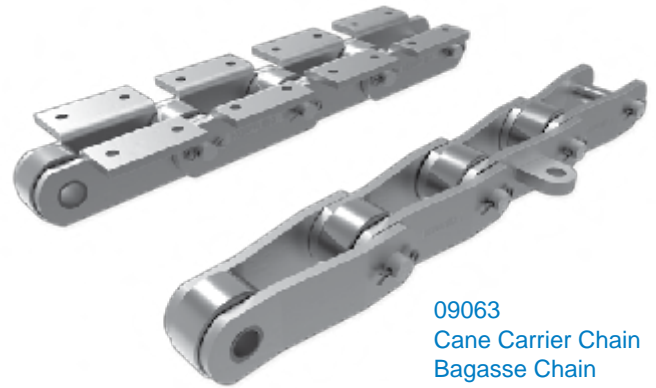
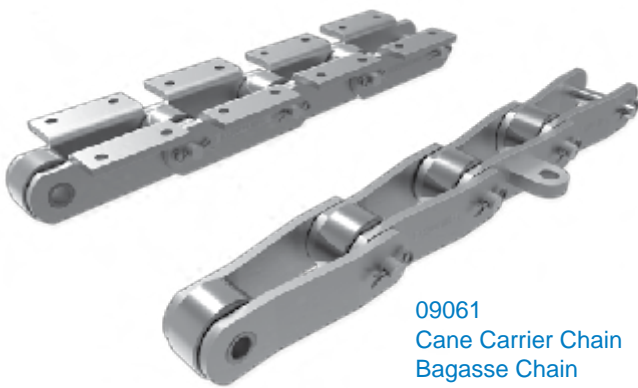
Sugar Chain

Cane Carrier Chain



Chain number	Pitch P	Inside width A	Roller diameter B	Pin diameter C	Plate thick D	Plate height E	Attachent hole diameter F	Attachment hole centres G	Attachment length H	Platform height I	Transverse pitch J	Breaking Load (kN)	Weight (kg/m)
CH9060	152.40	36.50	69.85	18.90	9.52	50.80	12.70	76.20	114.30	41.30	111.20	272	24.70
CH9061	152.40	36.50	69.85	18.90	9.52	57.15	12.70	76.20	114.30	41.30	111.20	386	25.30
CH9063	152.40	36.50	76.20	23.80	10.30	63.50	12.70	76.20	114.30	44.45	111.20	620	27.50
CH1796	152.40	38.10	69.85	22.23	9.52	57.15	12.70	76.20	114.30	41.30	111.20	445	26.20

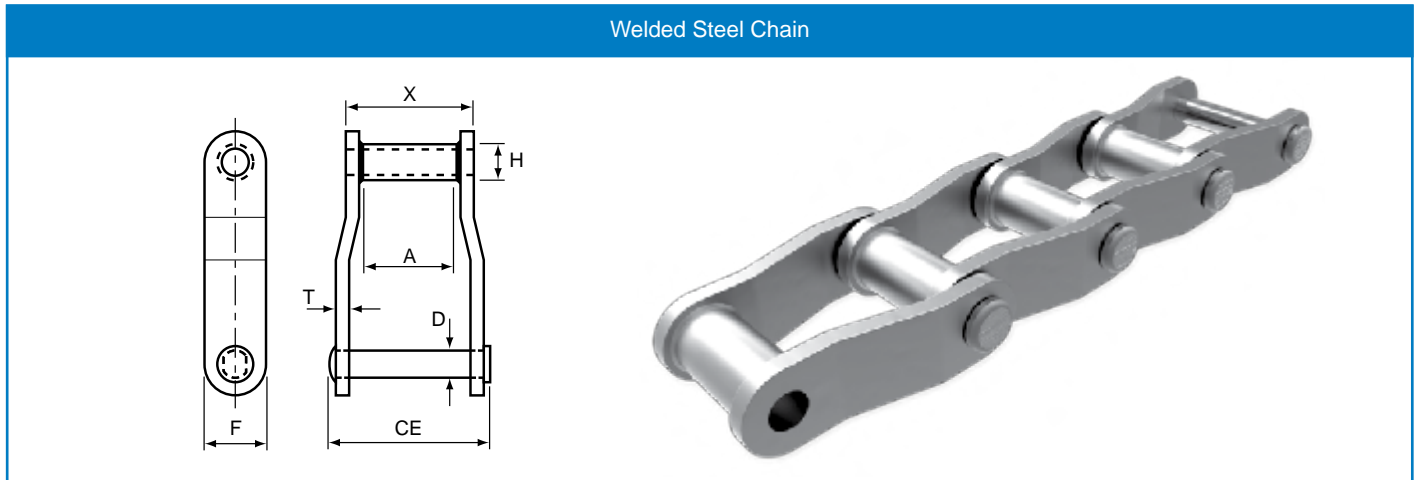
Heat treated stainless steel versions available upon request.



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Sugar Chain

Welded Steel Chain

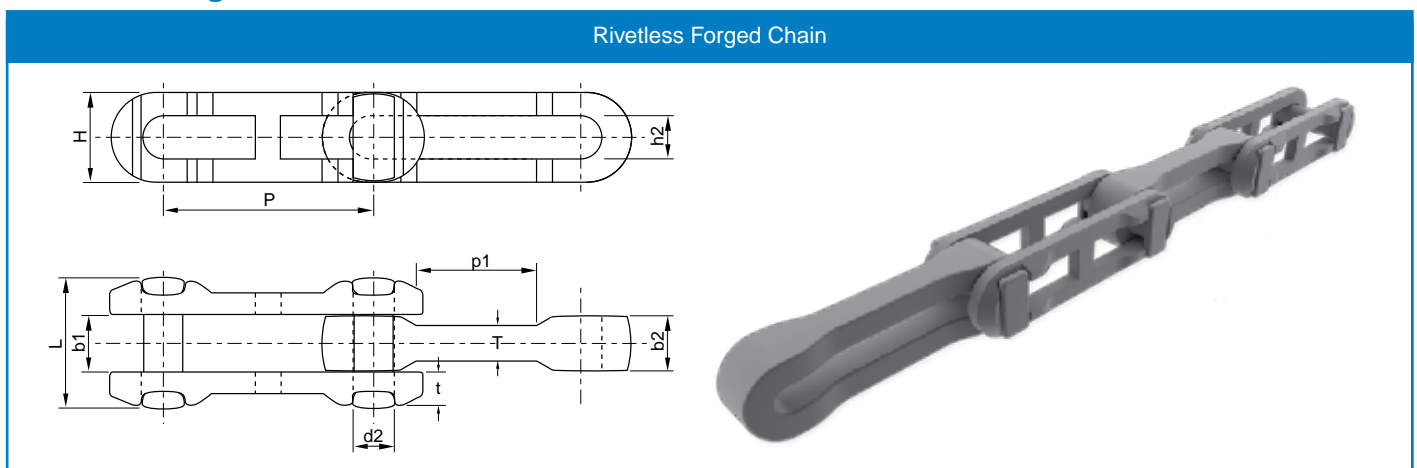


Welded Steel Chain (Offset Side Bar)

Chain Number	Pitch		Average Ultimate Strength lbf	Max. Working Load lbf	Approx. Links Per Foot	Average Weight lbf/ft	Dimensions						
	mm	Inches					CE	X	D	T	F	H	A
WR78	66.26	2.609	24000	3000	4.6	4.0	76.20	50.80	12.70	6.35	28.58	22.23	28.58
WH78	66.26	2.609	36000	3500	4.6	4.0	76.20	50.80	12.70	6.35	28.58	22.23	28.58
WR82	78.10	3.074	30000	5000	3.9	5.0	79.50	57.00	14.29	6.40	31.80	25.40	32.00
WH82	78.10	3.074	40000	6650	3.9	5.2	79.50	57.00	14.29	6.40	31.80	27.00	32.00
WR124	101.60	4.000	46000	6300	3.0	8.3	107.95	69.85	19.05	9.53	38.10	31.75	38.10
WH124	101.60	4.000	60000	7350	3.0	8.3	107.95	69.85	19.05	9.53	38.10	31.75	38.10
WR132	153.67	6.050	84000	13100	2.0	14.2	158.75	111.00	25.40	12.70	50.80	41.28	73.03
WH132	153.67	6.050	110000	15000	2.0	14.2	158.75	111.00	25.40	12.70	50.80	41.28	73.03

WR - Welded steel chain - through hardened pins and case hardened bushes.
 WH - Welded steel chain - all components fully heat treated

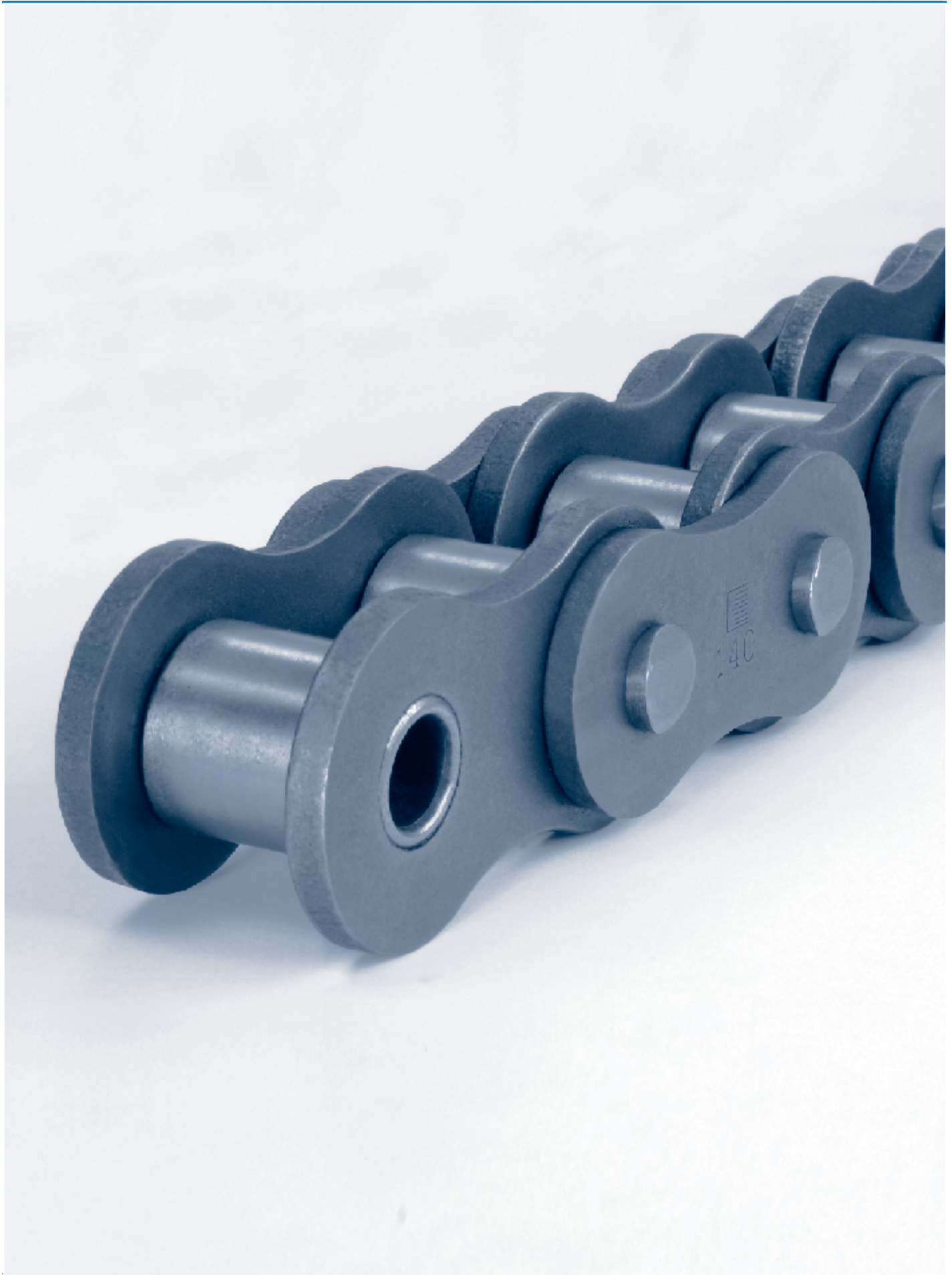
Rivetless Forged Chain



Chain number	Pitch mm P	Pin diameter d2	Pin length L	Center link gap		Plate thickness		Center link width b1	Ultimate tensile strength / kN Q min
				h2 min	Chain height H max	t	T		
X348	76.20	12.40	43.90	13.50	27.90	10.20	13.00	20.10	97.90
X678	152.40	22.10	77.00	24.10	51.60	17.80	21.10	34.30	380.00
698	152.40	28.70	95.25	31.75	65.00	14.20	25.40	41.40	650.00

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Roller Chain





Features

Challenge offer a large range of various types of chain including – Transmission, Conveyor, Agricultural, Leaf and many types of special chains

Challenge Transmission Roller chain

Challenge roller chain is supplied in five meter boxes including one connecting link. Some sizes are available on reels or in 10ft boxes.

The range includes – ISO, BS, ANSI and many bespoke chains.

ISO roller chain – standard, straight side plate, extended pin, hollow pin, stainless steel, nickel plated, zinc plated, double pitch and specials.

ANSI roller chain – standard, heavy duty, cottered, cottered heavy duty, straight side plate, extended pin, stainless steel, nickel plated, zinc plated, double pitch (including extended pin, hollow pin) and specials.

Roller chain attachments – cover a large range for both ISO and ANSI chain, Timber, Agricultural and Conveyor chain.

Challenge transmission chains have a longer life because:

- **Pins** – manufactured from case hardened chrome manganese molybdenum steel. This increases wear resistance with more shock absorption ability.
- **Pre-stretched** – “fit and forget”.
- **Ball swaged holes** – combats fatigue failure.
- **Shot peened rollers and side plates** – reduces fatigue failure.
- **Deep waisted side plates** – increases breaking load and reduces stress.
- **Solid rollers** – prolongs wear life.

HERE'S A CHALLENGE ...

Who's got the Perfect Spin to bowl your customers over?

CHALLENGE X Series Spin Riveted Transmission Chain

Never a
problem
always a ...



**Spin Riveted For
Added Strength**



Lock in to:

Secure source of supply • Superior service
Product quality and reliability • Manufacturers prices
Securing more than just your profits

Never a problem always a ...

CHALLENGE®

www.challengept.com



Roller Chain



The Benefits...

CHALLENGE X Series Transmission Chain

- **Spin Riveted Case Hardened Pins in Alloy Steel**
- For optimum life
- **Pre-stretched** - Fit and forget
- **Ball swaged holes** - Combats fatigue
- **Shot peened**
- Produces strong surface and reduced fatigue
- **Deep waisted side plates** - Reduces stress
- **Rollers from seamless tube**
- For strength and long life

The X Series Range...

British standard		American standard	
20B-1X	32B-2X	100-1X	180-1X
20B-1GLX	32B-3X	100-2X	180-2X
20B-2X	40B-1X	100-3X	180-3X
20B-2GLX	40B-1GLX	120-1X	200-1X
20B-3X	40B-2X	120-1X	200-2X
20B-3GLX	40B-3X	120-1X	200-3X
24B-1X	48B-1X	140-1X	240-1X
24B-1GLX	48B-1GLX	140-2X	240-2X
24B-2X	48B-2X	140-3X	240-3X
24B-3X	48B-3X	160-1X	
28B-1X	56B-1X	160-2X	
28B-1GLX	56B-2X	160-2X	
28B-2X	56B-3X		
28B-3X	64B-1X		
32B-1X	64B-2X		
32B-1GLX	64B-3X		

Also in the Roller Chain range

Roller Chain

- British Standard Roller Chain
- ANSI Standard Roller Chain
- ANSI Heavy Duty Roller Chain
- ANSI Cottered Series Roller Chain
- ANSI Cottered Heavy Duty Series Roller Chain
- ANSI Straight Side Plate Roller Chain
- British Standard Straight Side Plate Roller Chain
- Chain Breakers
- Timing Chain
- Bush Chain
- Bicycle Chain
- Bicycle Chain/Connecting Links
- Roller Chain with Extended Pins
- Special Transmission Roller Chain
- Hollow Pin Roller Chain
- Special Chain with "U" Elements
- Special Chain with "U" and Rubber Elements
- Transport Chain
- Special Chain with Driver
- Stainless Steel Transmission Roller Chain
- Side Bow Chain
- Nickel & Zinc Plated Transmission Roller Chain
- Roller Chain Attachments

Double Pitch Chain

- Double Pitch Transmission Chain
- Double Pitch Conveyor Chain
- Double Pitch Attachments
- Double Pitch Special Chain
- Double Pitch Extended Pin Chain
- Double Pitch Hollow Pin Chain

Leaf Chain

- LH / BL Series Leaf Chain
- LL Series Leaf Chain
- AL Series Leaf Chain
- FL Series Leaf Chain
- Clevis Pins
- Special Leaf Chain with Hollow Pin

Timber Chain

- Welded Steel Chain
- Welded Steel Chain Attachments (offset sidebar)
- Welded Steel Chain (offset side bar)
- Offset Sidebar Roller Chain
- Straight Sidebar Roller Chain
- Welded Steel Drag Chain
- Drag Chain Attachments

Agricultural Chain

- Steel Agricultural Chain
- Agricultural Chain Attachments

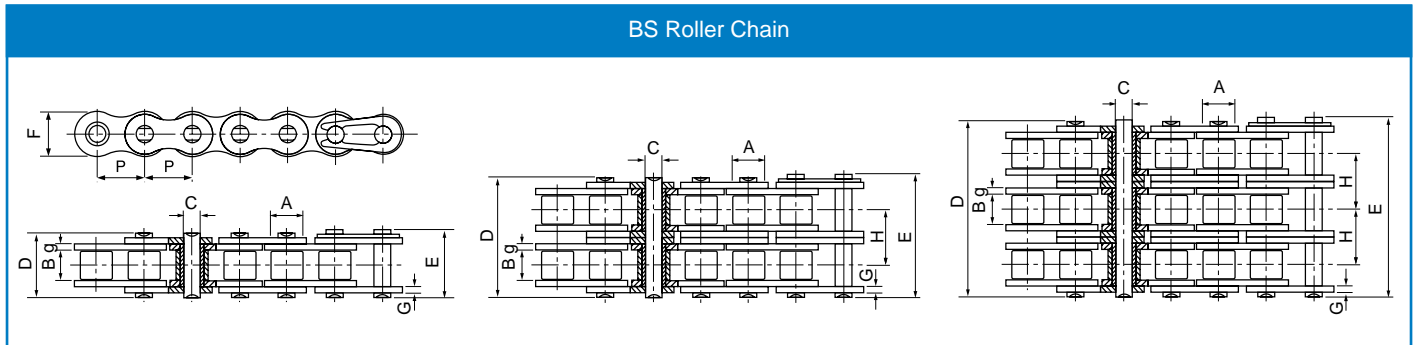
Conveyor Chain

- BS Z Series with Solid Pin Chain
- BS ZC Series with Hollow Pin Chain
- BS Z/ZC Series Attachments Chain
- BS ZE Series Deep Link Chain
- M Series Metric Solid Pin Chain
- M Series Chain Attachments
- MC Series Hollow Pin Chain
- MT/ME Series Deep Link Chain
- FV/C Series Metric Solid Pin Chain
- FV/C Series Metric Hollow Pin Chain
- FV/C Series Chain Attachments
- FVT/CE Series Metric Deep Link Chain
- FV/CR Series Metric Scraper Chain
- Special Conveyor Chain
- Special Conveyor Chain
- Conveyor Chain Attachment Chain Designations

Roller Chain

British Standard Roller Chain

BS228, ISO R606, DIN 8187



ISO Chain number	Pitch	Roller diameter	Width between inner plates	Pin diameter	Pin length		Inner plate height	Plate thickness	Transverse pitch	Minimum tensile strength	Average tensile strength	Weight
	P	A	B	C	D	E	F	g/G	H	kN	kN	kg/m
SIMPLEX												
04B-1	6.000	4.00	2.80	1.85	6.80	7.80	5.00	0.60	-	3.00	3.20	0.11
05B-1	8.000	5.00	3.00	2.31	8.20	8.90	7.10	0.80	-	5.00	5.90	0.20
06B-1 SSP	9.525	6.35	5.72	3.28	13.15	14.10	8.20	1.30	-	9.00	10.40	0.41
08B-1	12.700	8.51	7.75	4.45	16.70	18.20	11.80	1.60	-	18.00	19.40	0.69
10B-1	15.875	10.16	9.65	5.08	19.50	20.90	14.70	1.70	-	22.40	27.50	0.93
12B-1	19.050	12.07	11.68	5.72	22.50	24.20	16.00	1.85	-	29.00	32.20	1.15
16B-1	25.400	15.88	17.02	8.28	36.10	37.40	21.00	4.15/3.1	-	60.00	72.80	2.71
20B-1X	31.750	19.05	19.56	10.19	41.30	45.00	26.40	4.5/3.5	-	95.00	106.70	3.70
24B-1X	38.100	25.40	25.40	14.63	53.40	57.80	33.20	6.0/4.8	-	160.00	178.00	7.10
28B-1X	44.450	27.94	30.99	15.90	65.10	69.50	36.70	7.5/6.0	-	200.00	222.00	8.50
32B-1X	50.800	29.21	30.99	17.81	66.00	71.00	42.00	7.0/6.0	-	250.00	277.50	10.25
40B-1X	63.500	39.37	38.10	22.89	82.20	89.20	52.96	8.5/8.0	-	355.00	394.00	16.35
48B-1X	76.200	48.26	45.72	29.24	99.10	107.00	63.80	12.0/10.0	-	560.00	621.60	25.00
56B-1X	88.900	53.98	53.34	34.32	114.60	123.00	77.80	13.5/12.0	-	850.00	940.00	35.88
64B-1X	101.600	63.50	60.96	39.40	130.00	138.50	90.17	15.0/13.0	-	1120.00	1240.00	46.50
DUPLEX												
04B-2	6.000	4.00	2.80	1.85	12.00	13.00	5.00	0.60	-	4.68	5.50	0.18
05B-2	8.000	5.00	3.00	2.31	13.90	14.50	7.10	0.80	5.64	7.80	10.20	0.33
06B-2 SSP	9.525	6.35	5.72	3.28	23.40	24.40	8.20	1.30	10.24	16.90	18.70	0.77
08B-2	12.700	8.51	7.75	4.45	31.20	32.20	11.80	1.60	13.92	32.00	38.70	1.34
10B-2	15.875	10.16	9.65	5.08	36.10	37.50	14.70	1.70	16.59	44.50	56.20	1.84
12B-2	19.050	12.07	11.68	5.72	42.00	43.60	16.00	1.85	19.46	57.80	66.10	2.31
16B-2	25.400	15.88	17.02	8.28	68.00	69.30	21.00	4.15/3.1	31.88	106.00	133.00	5.42
20B-2X	31.750	19.05	19.56	10.19	77.80	81.50	26.40	4.5/3.5	36.45	170.00	211.20	7.20
24B-2X	38.100	25.40	25.40	14.63	101.70	106.20	33.20	6.0/4.8	48.36	280.00	319.20	13.40
28B-2X	44.450	27.94	30.99	15.90	124.60	129.10	36.70	7.5/6.0	59.56	360.00	406.80	16.60
32B-2X	50.800	29.21	30.99	17.81	124.60	129.60	42.00	7.0/6.0	58.55	450.00	508.50	21.00
40B-2X	63.500	39.37	38.10	22.89	154.50	161.50	52.96	8.5/8.0	72.29	630.00	711.90	32.00
48B-2X	76.200	48.26	45.72	29.24	190.40	198.20	63.80	12.0/10.0	91.21	1000.00	1130.00	50.00
56B-2X	88.900	53.98	53.34	34.32	221.20	229.60	77.80	13.5/12.0	106.60	1600.00	1760.00	71.76
64B-2X	101.600	63.50	60.96	39.40	249.90	258.40	90.17	15.0/13.0	119.89	2000.00	2200.00	93.00
TRIPLEX												
05B-3	8.000	5.00	3.00	2.31	19.50	20.20	7.10	0.80	5.64	11.10	13.80	0.48
06B-3 SSP	9.525	6.35	5.72	3.28	33.50	34.60	8.20	1.30	10.24	24.90	30.10	1.16
08B-3	12.700	8.51	7.75	4.45	45.10	46.10	11.80	1.60	13.92	47.50	57.80	2.03
10B-3	15.875	10.16	9.65	5.08	52.70	54.10	14.70	1.70	16.59	66.70	84.50	2.77
12B-3	19.050	12.07	11.68	5.72	61.50	63.10	16.00	1.85	19.46	86.70	101.80	3.46
16B-3	25.400	15.88	17.02	8.28	99.80	101.20	21.00	4.15/3.1	31.88	160.00	203.70	8.13
20B-3X	31.750	19.05	19.56	10.19	114.20	117.90	26.40	4.5/3.5	36.45	250.00	290.00	10.82
24B-3X	38.100	25.40	25.40	14.63	150.10	154.60	33.20	6.0/4.8	48.36	425.00	493.00	20.10
28B-3X	44.450	27.94	30.99	15.90	184.20	188.70	36.70	7.5/6.0	59.56	530.00	609.50	24.92
32B-3X	50.800	29.21	30.99	17.81	183.20	188.20	42.00	7.0/6.0	58.55	670.00	770.50	31.56
40B-3X	63.500	39.37	38.10	22.89	226.80	233.80	52.96	8.5/8.0	72.29	950.00	1092.50	48.10
48B-3X	76.200	48.26	45.72	29.24	281.60	289.40	63.80	12.0/10.0	91.21	1500.00	1710.00	75.00
56B-3X	88.900	53.98	53.34	34.32	327.80	336.20	77.80	13.5/12.0	106.60	2240.00	2240.00	107.64
64B-3X	101.600	63.50	60.96	39.40	369.80	378.30	90.17	15.0/13.0	119.89	3000.00	3300.00	139.50

* SSP =Straight Side Plate Chain

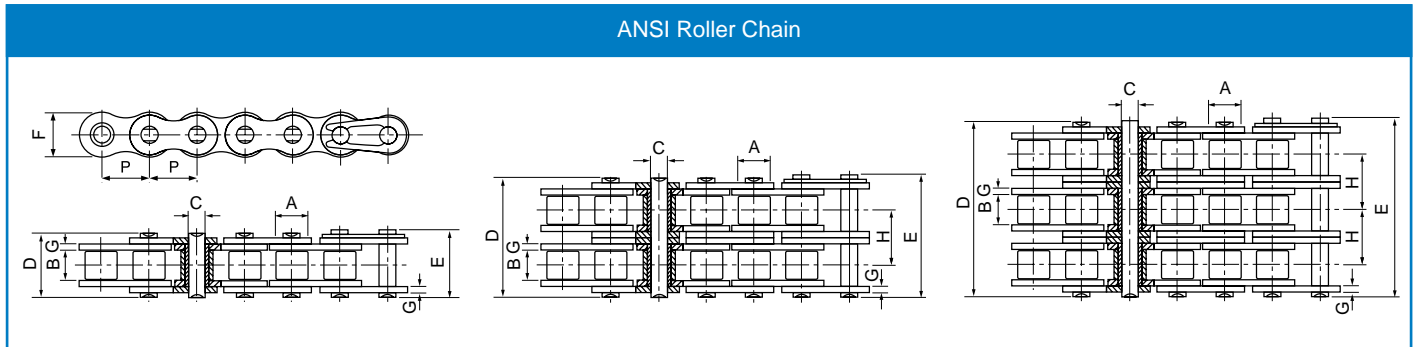
Standard boxed lengths are 5 metres or 10 feet. Each box contains one CL. Special lengths available.

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Roller Chain

ANSI Standard Roller Chain

ANSI B29.1, ISO R606, DIN 8188



ANSI Chain number	Pitch	Roller diameter	Width between inner plates	Pin diameter	Pin length		Inner plate height	Plate thickness	Transverse pitch	Minimum tensile strength	Average tensile strength	Weight
	P	A	B	C	D	E	F	g/G	H	kN	kN	kg/m
SIMPLEX												
*15-1R	4.763	2.48	2.38	1.62	6.10	6.90	4.30	0.60	-	1.8	2.0	0.08
*25-1R	6.350	3.30	3.18	2.31	7.90	8.40	6.00	0.80	-	3.5	4.6	0.15
*35-1R	9.525	5.08	4.77	3.58	12.40	13.17	9.00	1.30	-	7.9	10.8	0.33
41-1R	12.700	7.77	6.25	3.58	13.75	15.00	9.91	1.30	-	6.7	12.6	0.41
40-1R	12.700	7.95	7.85	3.96	16.60	17.80	12.00	1.50	-	14.1	17.5	0.62
50-1R	15.875	10.16	9.40	5.08	20.70	22.20	15.09	2.03	-	22.2	29.4	1.02
60-1R	19.050	11.91	12.57	5.94	25.90	27.70	18.00	2.42	-	31.8	41.5	1.50
80-1R	25.400	15.88	15.75	7.92	32.70	35.00	24.00	3.25	-	56.7	69.4	2.60
100-1XR	31.750	19.05	18.90	9.53	40.40	44.70	30.00	4.00	-	88.5	109.2	3.91
120-1XR	38.100	22.23	25.22	11.10	50.30	54.30	35.70	4.80	-	127.0	156.3	5.62
140-1XR	44.450	25.40	25.22	12.70	54.40	59.00	41.00	5.60	-	172.4	212.0	7.50
160-1XR	50.800	28.58	31.55	14.27	64.80	69.60	47.80	6.40	-	226.8	278.9	10.10
180-1XR	57.150	35.71	35.48	17.46	72.80	78.60	53.60	7.20	-	280.2	341.8	13.45
200-1XR	63.500	39.68	37.85	19.85	80.30	87.20	60.00	8.00	-	353.8	431.6	16.15
240-1XR	76.200	47.63	47.35	23.81	95.50	103.00	72.39	9.50	-	510.3	622.5	23.20
DUPLEX												
*25-2R	6.350	3.30	3.18	2.31	14.50	15.00	6.00	0.80	6.40	7.0	8.6	0.28
*35-2R	9.525	5.08	4.77	3.58	22.50	23.30	9.00	1.30	10.13	15.8	19.7	0.63
41-2R	12.700	7.77	6.25	3.58	25.70	26.90	9.91	1.30	11.95	13.3	16.9	0.81
40-2R	12.700	7.95	7.85	3.96	31.00	32.20	12.00	1.50	14.38	28.2	35.9	1.12
50-2R	15.875	10.16	9.40	5.08	38.90	40.40	15.09	2.03	18.11	44.4	58.1	2.00
60-2R	19.050	11.91	12.57	5.94	48.80	50.50	18.00	2.42	22.78	63.6	82.1	2.92
80-2R	25.400	15.88	15.75	7.92	62.70	64.30	24.00	3.25	29.29	113.4	141.8	5.15
100-2XR	31.750	19.05	18.90	9.53	76.40	80.50	30.00	4.00	35.76	177.0	219.4	7.80
120-2XR	38.100	22.23	25.22	11.10	95.80	99.70	35.70	4.80	45.44	254.0	314.9	11.70
140-2XR	44.450	25.40	25.22	12.70	103.30	107.90	41.00	5.60	48.87	344.8	427.5	15.14
160-2XR	50.800	28.58	31.55	14.27	123.30	128.10	47.80	6.40	58.55	453.6	562.4	20.14
180-2XR	57.150	35.71	35.48	17.46	138.60	144.40	53.60	7.20	65.84	560.5	695.0	29.22
200-2XR	63.500	39.68	37.85	19.85	151.90	158.80	60.00	8.00	71.55	707.6	877.4	32.24
240-2XR	76.200	47.63	47.35	23.81	183.40	190.80	72.39	9.50	87.83	1020.6	1255.3	45.23
TRIPLEX												
*25-3R	6.350	3.30	3.18	2.31	21.00	21.50	6.00	0.80	6.40	10.5	12.6	0.44
*35-3R	9.525	5.08	4.77	3.58	32.70	33.50	9.00	1.30	10.13	23.7	28.6	1.05
40-3R	12.700	7.95	7.85	3.96	45.40	46.60	12.00	1.50	14.38	42.3	50.0	1.90
50-3R	15.875	10.16	9.40	5.08	57.00	58.50	15.09	2.03	18.11	66.6	77.8	3.09
60-3R	19.050	11.91	12.57	5.94	71.50	73.30	18.00	2.42	22.78	95.4	111.1	4.54
80-3R	25.400	15.88	15.75	7.92	91.70	93.60	24.00	3.25	29.29	170.1	198.4	7.89
100-3XR	31.750	19.05	18.90	9.53	112.20	116.30	30.00	4.00	35.76	265.5	309.6	11.77
120-3XR	38.100	22.23	25.22	11.10	141.40	145.20	35.70	4.80	45.44	381.0	437.2	17.53
140-3XR	44.450	25.40	25.22	12.70	152.20	156.80	41.00	5.60	48.87	517.2	593.3	22.20
160-3XR	50.800	28.58	31.55	14.27	181.80	186.60	47.80	6.40	58.55	680.4	780.6	30.02
180-3XR	57.150	35.71	35.48	17.46	204.40	210.20	53.60	7.20	65.84	840.7	983.6	38.22
200-3XR	63.500	39.68	37.85	19.85	223.50	230.40	60.00	8.00	71.55	1061.4	1217.8	49.03
240-3XR	76.200	47.63	47.35	23.81	271.30	278.60	72.39	9.50	87.83	1530.9	1756.5	71.60

* Bush chain: A in the table indicates the external diameter of the bush

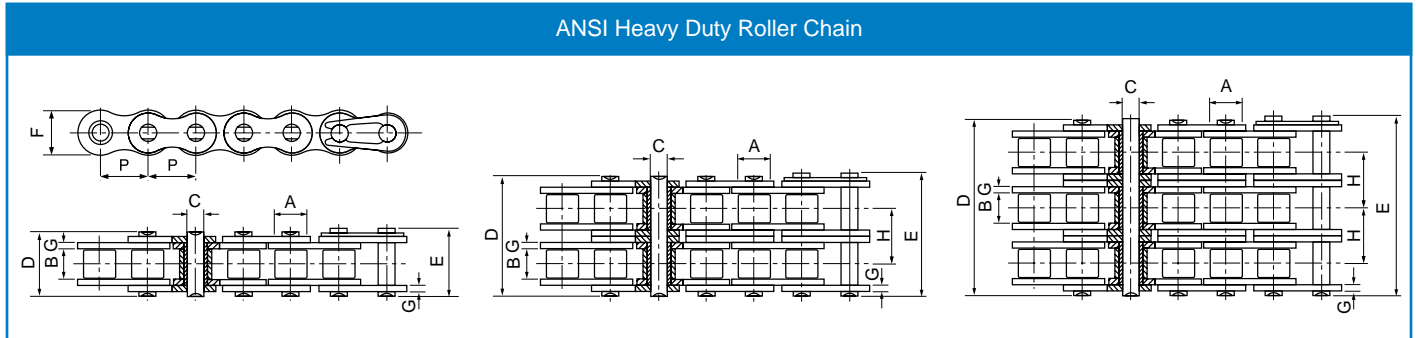
Standard boxed lengths are 5 metres or 10 feet. Each box contains one CL. Special lengths available.

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Roller Chain

ANSI Heavy Duty Roller Chain

ANSI B29.1, ISO R606, DIN 8188



ANSI Chain number	Pitch	Roller diameter	Width between inner plates	Pin diameter	Pin length		Inner plate height	Plate thickness	Transverse pitch	Minimum tensile strength kN	Average tensile strength kN	Weight kg/m
	P	A	B		C	D						
SIMPLEX												
40H-1R	12.700	7.95	7.85	3.96	18.80	19.90	12.00	2.03	-	14.10	19.10	0.82
50H-1R	15.875	10.16	9.40	5.08	22.10	23.40	15.09	2.42	-	22.20	30.20	1.25
60H-1R	19.050	11.91	12.57	5.94	29.20	31.00	18.00	3.25	-	31.80	42.70	1.87
80H-1R	25.400	15.88	15.75	7.92	36.20	37.70	24.00	4.00	-	56.70	71.40	3.10
100H-1XR	31.750	19.05	18.90	9.53	43.60	46.90	30.00	4.80	-	88.50	112.40	4.52
120H-1XR	38.100	22.23	25.22	11.10	53.50	57.50	35.70	5.60	-	127.00	160.90	6.60
140H-1XR	44.450	25.40	25.22	12.70	57.60	62.20	41.00	6.40	-	172.40	217.30	8.30
160H-1XR	50.800	28.58	31.55	14.27	68.20	73.00	47.80	7.20	-	226.80	285.80	10.30
200H-1XR	63.500	39.68	37.85	19.85	86.60	93.50	60.00	9.50	-	353.80	444.50	19.16
DUPLEX												
60H-2R	19.050	11.91	12.57	5.94	55.30	57.10	18.00	3.25	26.11	63.60	84.50	3.71
80H-2R	25.400	15.88	15.75	7.92	68.80	70.30	24.00	4.00	32.59	113.40	145.30	6.15
100H-2R	31.750	19.05	18.90	9.53	82.70	86.00	30.00	4.80	39.09	177.00	225.90	9.03
120H-2XR	38.100	22.23	25.22	11.10	102.40	106.40	35.70	5.60	48.87	254.00	322.70	13.13
140H-2XR	44.450	25.40	25.22	12.70	109.80	114.40	41.00	6.40	52.20	344.80	437.70	16.60
160H-2XR	50.800	28.58	31.55	14.27	130.10	134.90	47.80	7.20	61.90	453.60	571.60	20.20
200H-2XR	63.500	39.68	37.85	19.85	164.90	171.80	60.00	9.50	78.31	707.60	894.90	38.11
TRIPLEX												
60H-3R	19.050	11.91	12.57	5.94	81.40	83.20	18.00	3.25	26.11	95.40	113.90	5.54
80H-3R	25.400	15.88	15.75	7.92	101.40	102.90	24.00	4.00	32.59	170.10	203.50	9.42
100H-3XR	31.750	19.05	18.90	9.53	121.80	125.10	30.00	4.80	39.09	265.50	314.80	12.96
120H-3XR	38.100	22.23	25.22	11.10	151.20	155.20	35.70	5.60	48.87	381.00	444.70	19.64
140H-3XR	44.450	25.40	25.22	12.70	162.00	166.60	41.00	6.40	52.20	517.20	598.40	24.90
160H-3XR	50.800	28.58	31.55	14.27	192.00	196.80	47.80	7.20	61.90	680.40	787.30	30.10
200H-3XR	63.500	39.68	37.85	19.85	243.20	250.10	60.00	9.50	78.31	1061.40	1228.20	57.06

Standard boxed lengths are 5 metres or 10 feet. Each box contains one CL. Special lengths available.

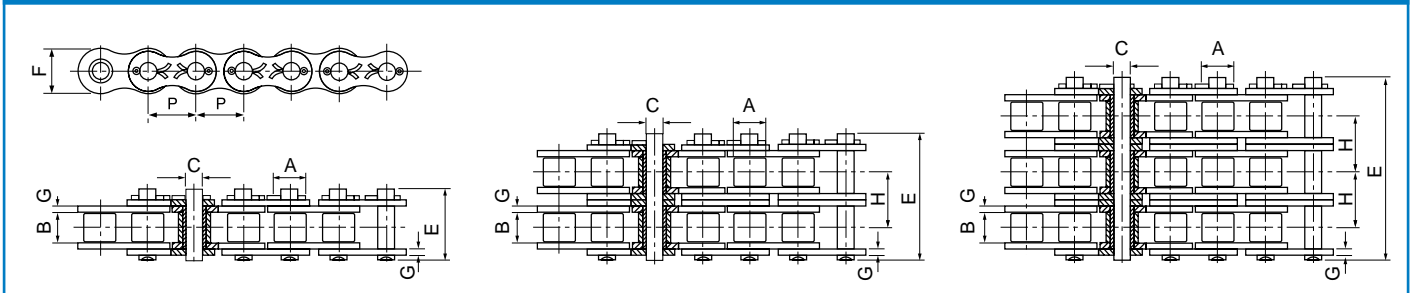
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Roller Chain

ANSI Cottered Series Roller Chain

ANSI B29.1, ISO R606, DIN 8188

ANSI Cottered A Series Roller Chain



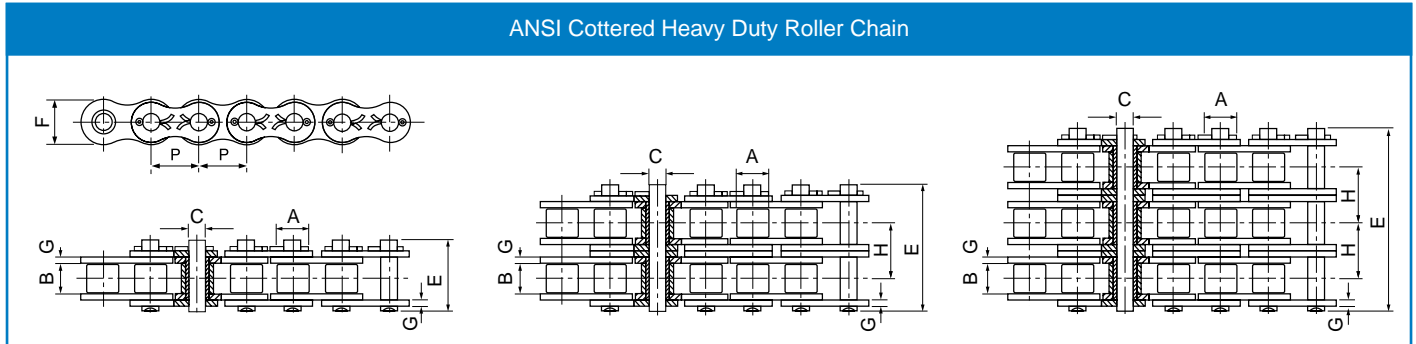
ANSI Chain number	Pitch P	Roller diameter A	Width between inner plates B	Pin diameter C	Pin length E	Inner plate height F	Plate thickness G	Transverse pitch H	Minimum tensile strength kN	Average tensile strength kN	Weight kg/m
SIMPLEX											
50-1C	15.875	10.16	9.40	5.08	23.00	15.09	2.03	-	22.20	29.40	1.02
60-1C	19.050	11.91	12.57	5.94	28.30	18.00	2.42	-	31.80	41.50	1.50
80-1C	25.400	15.88	15.75	7.92	36.50	24.00	3.25	-	56.70	69.40	2.60
100-1C	31.750	19.05	18.90	9.53	44.70	30.00	4.00	-	88.50	109.20	3.91
120-1C	38.100	22.23	25.22	11.10	54.30	35.70	4.80	-	127.00	156.30	5.62
140-1C	44.450	25.40	25.22	12.70	59.00	41.00	5.60	-	172.40	212.00	7.50
160-1C	50.800	28.58	31.55	14.27	69.60	47.80	6.40	-	226.80	278.90	10.10
180-1C	57.150	35.71	35.48	17.46	78.60	53.60	7.20	-	280.20	341.80	13.45
200-1C	63.500	39.68	37.85	19.85	87.20	60.00	8.00	-	353.80	431.60	16.15
240-1C	76.200	47.63	47.35	23.81	103.00	72.39	9.50	-	510.30	622.50	23.20
DUPLEX											
50-2C	15.875	10.16	9.40	5.08	41.20	15.09	2.03	18.11	44.40	58.10	2.00
60-2C	19.050	11.91	12.57	5.94	51.10	18.00	2.42	22.78	63.60	82.10	2.92
80-2C	25.400	15.88	15.75	7.92	65.80	24.00	3.25	29.29	113.40	141.80	5.15
100-2C	31.750	19.05	18.90	9.53	80.50	30.00	4.00	35.76	177.00	219.40	7.80
120-2C	38.100	22.23	25.22	11.10	99.70	35.70	4.80	45.44	254.00	314.90	11.70
140-2C	44.450	25.40	25.22	12.70	107.90	41.00	5.60	48.87	344.80	427.50	15.14
160-2C	50.800	28.58	31.55	14.27	128.10	47.80	6.40	58.55	453.60	562.40	20.14
180-2C	57.150	35.71	35.48	17.46	144.40	53.60	7.20	65.84	560.50	695.00	29.22
200-2C	63.500	39.68	37.85	19.85	158.80	60.00	8.00	71.55	707.60	877.40	32.24
240-2C	76.200	47.63	47.35	23.81	190.80	72.39	9.50	87.83	1020.60	1255.30	45.23
TRIPLEX											
50-3C	15.875	10.16	9.40	5.08	59.30	15.09	2.03	18.11	66.60	77.80	3.09
60-3C	19.050	11.91	12.57	5.94	73.90	18.00	2.42	22.78	95.40	111.10	4.54
80-3C	25.400	15.88	15.75	7.92	93.60	24.00	3.25	29.29	170.10	198.40	7.89
100-3C	31.750	19.05	18.90	9.53	116.30	30.00	4.00	35.76	265.50	309.60	11.77
120-3C	38.100	22.23	25.22	11.10	145.20	35.70	4.80	45.44	381.00	437.20	17.53
140-3C	44.450	25.40	25.22	12.70	156.80	41.00	5.60	48.87	517.20	593.30	22.20
160-3C	50.800	28.58	31.55	14.27	186.60	47.80	6.40	58.55	680.40	780.60	30.02
180-3C	57.150	35.71	35.48	17.46	210.20	53.60	7.20	65.84	840.70	983.60	38.22
200-3C	63.500	39.68	37.85	19.85	230.40	60.00	8.00	71.55	1061.40	1217.80	49.03
240-3C	76.200	47.63	47.35	23.81	278.60	72.39	9.50	87.83	1530.90	1756.50	71.60

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Roller Chain

ANSI Cottered Heavy Duty Roller Chain

ANSI B29.1, ISO R606, DIN 8188

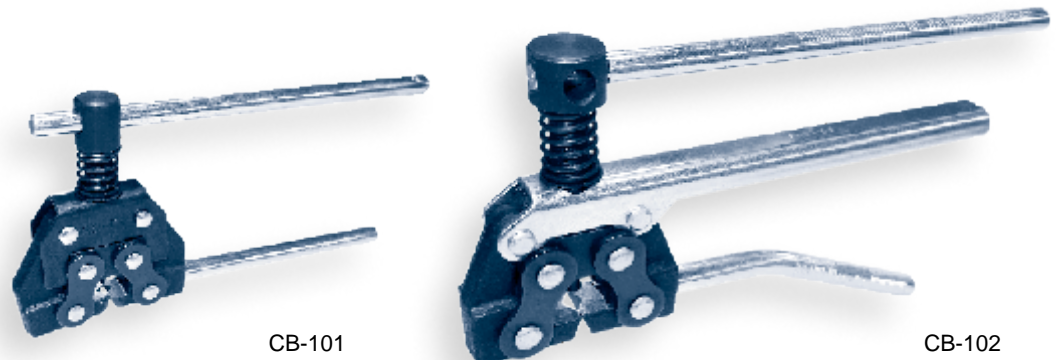


ANSI Chain number	Pitch P	Roller diameter A	Width between inner plates B	Pin diameter C	Pin length E	Inner plate height F	Plate thickness G	Transverse pitch H	Minimum tensile strength kN	Average tensile strength kN	Weight kg/m
SIMPLEX											
50H-1C	15.875	10.16	9.40	5.08	24.40	15.09	2.42	-	22.20	30.20	1.25
60H-1C	19.050	11.91	12.57	5.94	31.60	18.00	3.25	-	31.80	42.70	1.87
80H-1C	25.400	15.88	15.75	7.92	39.40	24.00	4.00	-	56.70	71.40	3.10
100H-1C	31.750	19.05	18.90	9.53	46.90	30.00	4.80	-	88.50	112.40	4.52
120H-1C	38.100	22.23	25.22	11.10	57.50	35.70	5.60	-	127.00	160.90	6.60
140H-1C	44.450	25.40	25.22	12.70	62.20	41.00	6.40	-	172.40	217.30	8.30
160H-1C	50.800	28.58	31.55	14.27	73.00	47.80	7.20	-	226.80	285.80	10.30
200H-1C	63.500	39.68	37.85	19.85	93.50	60.00	9.50	-	353.80	444.50	19.16
DUPLEX											
60H-2C	19.050	11.91	12.57	5.94	57.70	18.00	3.25	26.11	63.60	84.50	3.71
80H-2C	25.400	15.88	15.75	7.92	72.00	24.00	4.00	32.59	113.40	145.30	6.15
100H-2C	31.750	19.05	18.90	9.53	86.00	30.00	4.80	39.09	177.00	225.90	9.03
120H-2C	38.100	22.23	25.22	11.10	106.40	35.70	5.60	48.87	254.00	322.70	13.13
140H-2C	44.450	25.40	25.22	12.70	114.40	41.00	6.40	52.20	344.80	437.70	16.60
160H-2C	50.800	28.58	31.55	14.27	134.90	47.80	7.20	61.90	453.60	571.60	20.20
200H-2C	63.500	39.68	37.85	19.85	171.80	60.00	9.50	78.31	707.60	894.90	31.11
TRIPLEX											
60H-3C	19.050	11.91	12.57	5.94	83.80	18.00	3.25	26.11	95.40	113.90	5.54
80H-3C	25.400	15.88	15.75	7.92	104.60	24.00	4.00	32.59	170.10	203.50	9.42
100H-3C	31.750	19.05	18.90	9.53	125.10	30.00	4.80	39.09	265.50	314.80	12.96
120H-3C	38.100	22.23	25.22	11.10	155.20	35.70	5.60	48.87	381.00	444.70	19.64
140H-3C	44.450	25.40	25.22	12.70	166.60	41.00	6.40	52.20	517.20	598.40	24.90
160H-3C	50.800	28.58	31.55	14.27	196.80	47.80	7.20	61.90	680.40	787.30	30.10
200H-3C	63.500	39.68	37.85	19.85	250.10	60.00	9.50	78.31	1061.40	1228.20	57.06

Standard boxed lengths are 5 metres or 10 feet. Each box contains one CL. Special lengths available.

Chain Breakers

Model	Range	
	From inch	To inch
CB-101 (Small)	3/8"	3/4"
CB-102 (Large)	3/4"	1.1/4"

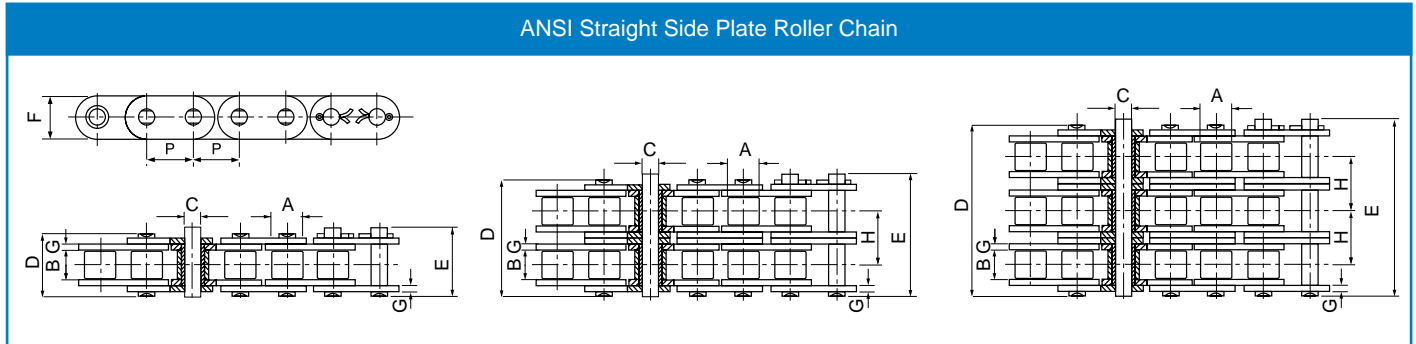


All dimensions in millimetres unless otherwise stated. Every effort has been taken to ensure that the data listed in this catalogue is correct. Challenge accepts no liability for any inaccuracies or damage caused.

Roller Chain

ANSI Straight Side Plate Roller Chain

ANSI B29.1, ISO R606, DIN 8188



ANSI Chain number	Pitch	Roller diameter	Width between inner plates		Pin diameter	Pin length		Inner plate height	Plate thickness	Transverse pitch	Minimum tensile strength kN	Average tensile strength kN	Weight kg/m
	P		A	B		C	D						
SIMPLEX													
C40-1R	12.700	7.95	7.85	3.96	16.60	18.80	12.00	1.50	-	-	14.10	17.50	0.73
C50-1R	15.875	10.16	9.40	5.08	20.70	23.30	15.09	2.03	-	-	22.20	29.40	1.23
C60-1R	19.050	11.91	12.57	5.94	25.90	28.30	18.0/18.2	2.42	-	-	31.80	41.50	1.81/1.83
C80-1R	25.400	15.88	15.75	7.92	32.70	36.50	24.00	3.25	-	-	56.70	69.40	3.09
C100-1XR	31.750	19.05	18.90	9.53	40.40	44.70	30.00	4.00	-	-	88.50	109.20	4.56
C120-1XR	38.100	22.23	25.22	11.10	50.30	54.30	35.70	4.80	-	-	127.00	156.30	6.86
C140-1XR	44.450	25.40	25.22	12.70	54.40	59.00	41.00	5.60	-	-	172.40	212.00	8.49
C160-1XR	50.800	28.58	31.55	14.27	64.80	69.60	47.80	6.40	-	-	226.80	278.90	11.50
DUPLEX													
C40-2R	12.700	7.95	7.85	3.96	31.00	33.20	12.00	1.50	14.38	28.20	35.90	1.43	
C50-2R	15.875	10.16	9.40	5.08	38.90	41.40	15.09	2.03	18.11	44.40	58.10	2.42	
C60-2R	19.050	11.91	12.57	5.94	48.80	51.10	18.0/18.2	2.42	22.78	63.60	82.10	3.58/3.62	
C80-2R	25.400	15.88	15.75	7.92	62.70	65.80	24.00	3.25	29.29	113.40	141.80	6.12	
C100-2XR	31.750	19.05	18.90	9.53	76.40	80.50	30.00	4.00	35.76	177.00	219.40	9.08	
C120-2XR	38.100	22.23	25.22	11.10	95.80	99.70	35.70	4.80	45.44	254.00	314.90	13.60	
C140-2XR	44.450	25.40	25.22	12.70	103.30	107.90	41.00	5.60	48.87	344.80	427.50	16.86	
C160-2XR	50.800	28.58	31.55	14.27	123.30	128.10	47.80	6.40	58.55	453.60	562.40	22.90	
TRIPLEX													
C40-3R	12.700	7.95	7.85	3.96	45.40	47.60	12.00	1.50	14.38	42.30	50.00	2.14	
C50-3R	15.875	10.16	9.40	5.08	57.00	59.50	15.09	2.03	18.11	66.60	77.80	3.62	
C60-3R	19.050	11.91	12.57	5.94	71.50	73.90	18.0/18.2	2.42	22.78	95.40	111.10	5.36/5.41	
C80-3R	25.400	15.88	15.75	7.92	91.70	95.10	24.00	3.25	29.29	170.10	198.40	9.10	
C100-3XR	31.750	19.05	18.90	9.53	112.20	116.30	30.00	4.00	35.76	265.50	309.60	13.60	
C120-3XR	38.100	22.23	25.22	11.10	141.40	145.20	35.70	4.80	45.44	381.00	437.20	20.43	
C140-3XR	44.450	25.40	25.22	12.70	152.20	156.80	41.00	5.60	48.87	517.20	593.30	25.23	
C160-3XR	50.800	28.58	31.55	14.27	181.80	186.60	47.80	6.40	58.55	680.40	780.60	34.19	

Standard boxed lengths are 5 metres or 10 feet. Each box contains one CL. Special lengths available.

Chain Pullers

Model	Range	
	From inch	To inch
CB-105 (Small)	1/4"	3/4"
CB-106 (Large)	3/4"	1.1/4"

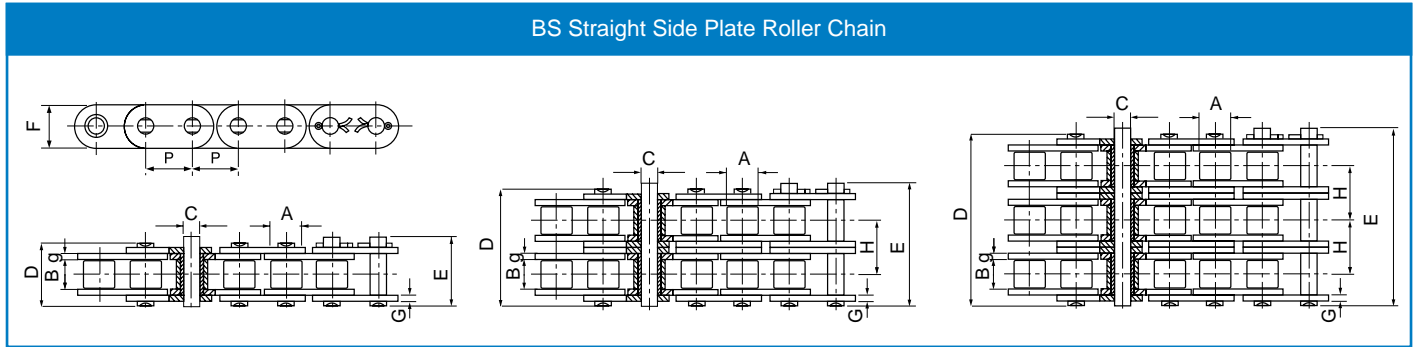


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Roller Chain

BS Straight Side Plate Roller Chain

ANSI B29.1, ISO R606, DIN 8187



ISO Chain number	Pitch	Roller diameter	Width between inner plates	Pin diameter	Pin length		Inner plate height	Plate thickness	Transverse pitch	Minimum tensile strength	Average tensile strength	Weight
	P	A	B	C	D	E	F	g/G	H	kN	kN	kg/m
SIMPLEX												
08B-1 GL	12.700	8.51	7.75	4.45	16.70	18.20	11.80	1.60	-	18.00	19.50	0.80
10B-1 GL	15.875	10.16	9.65	5.08	19.50	20.90	14.70	1.70	-	22.40	27.90	1.06
12B-1 GL	19.050	12.07	11.68	5.72	22.50	25.20	16.00	1.85	-	29.00	32.20	1.32
16B-1 GL	25.400	15.88	17.02	8.28	36.10	39.10	21.0/24.0	4.15/3.1	-	60.00	72.80	3.08/3.49
20B-1 GLX	31.750	19.05	19.56	10.19	41.30	45.00	26.40	4.5/3.5	-	95.00	106.70	4.16
24B-1 GLX	38.100	25.40	25.40	14.63	53.40	57.80	33.20	6.0/4.8	-	160.00	178.00	7.47
28B-1 GLX	44.450	27.94	30.99	15.90	65.10	69.50	36.70	7.5/6.0	-	200.00	222.00	9.90
32B-1 GLX	50.800	29.21	30.99	17.81	66.00	71.00	42.00	7.0/6.0	-	250.00	277.50	10.45
DUPLEX												
08B-2 GL	12.700	8.51	7.75	4.45	31.20	32.20	11.80	1.60	13.92	32.00	38.70	1.45
10B-2 GL	15.875	10.16	9.65	5.08	36.10	37.50	14.70	1.70	16.59	44.50	57.80	2.00
12B-2 GL	19.050	12.07	11.68	5.72	42.00	44.70	16.00	1.85	19.46	57.80	66.10	2.62
16B-2 GL	25.400	15.88	17.02	8.28	68.00	71.00	21.0/24.0	4.15/3.1	31.88	106.00	133.00	6.10/6.92
20B-2 GLX	31.750	19.05	19.56	10.19	77.80	81.50	26.40	4.5/3.5	36.45	170.00	211.20	8.23
24B-2 GLX	38.100	25.40	25.40	14.63	101.70	106.20	33.20	6.0/4.8	48.36	280.00	319.20	14.77
28B-2 GLX	44.450	27.94	30.99	15.90	124.60	129.10	36.70	7.5/6.0	59.56	360.00	406.80	19.82
32B-2 GLX	50.800	29.21	30.99	17.81	124.60	129.60	42.00	7.0/6.0	58.55	450.00	508.50	20.94
TRIPLEX												
08B-3 GL	12.700	8.51	7.75	4.45	45.10	46.10	11.80	1.60	13.92	47.50	57.80	2.10
10B-3 GL	15.875	10.16	9.65	5.08	52.70	54.10	14.70	1.70	16.59	66.70	84.50	2.87
12B-3 GL	19.050	12.07	11.68	5.72	61.50	64.20	16.00	1.85	19.46	86.70	101.80	3.89
16B-3 GL	25.400	15.88	17.02	8.28	99.80	102.90	21.0/24.0	4.15/3.1	31.88	160.00	203.70	9.12/10.34
20B-3 GLX	31.750	19.05	19.56	10.19	114.20	117.90	26.40	4.5/3.5	36.45	250.00	290.00	11.34
24B-3 GLX	38.100	25.40	25.40	14.63	150.10	154.60	33.20	6.0/4.8	48.36	425.00	493.00	22.10
28B-3 GLX	44.450	27.94	30.99	15.90	184.20	188.70	36.70	7.5/6.0	59.56	530.00	609.50	29.64
32B-3 GLX	50.800	29.21	30.99	17.81	183.20	188.20	42.00	7.0/6.0	58.55	670.00	770.50	31.27

Standard boxed lengths are 5 metres or 10 feet. Each box contains one CL. Special lengths available.

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CHALLENGE GROUP OF COMPANIES TERMS OF SALE

These Terms do not apply if you deal as a Consumer Your statutory rights are not affected by these conditions

1. DEFINITIONS

In these Terms of Sale the following meanings shall apply:

"We" and "Us"	means	CHALLENGE WORLDWIDE Plc
"You"	means	the person seeking to purchase Goods from Us.
"the Goods"	means	the goods or where the context permits the services to be supplied by Us.
"Company Signatory"	means	a person authorised by Us.
"the Terms"	means	the terms set out in this document and special terms agreed in writing between a Company Signatory and You or on Buyer's order.
"the Contract"	means	the contract for the supply of Goods incorporating these Terms.
"Consumer"	means	any natural person acting for purposes outside their trade, business or profession.
"the Defect"	means	the condition and/or any attribute of the Goods and/or any other circumstances which but for the effect of these Terms would have entitled You to damages.

2. THE CONTRACT

- All orders are accepted by Us only under these Terms and they may not be altered other than with the written agreement of a Company Signatory. Any contrary or additional terms unless so agreed are excluded.
- Quotations are invitations to treat only.
- Orders may be cancelled only with the written agreement of a Company Signatory and You will indemnify Us against all costs claims losses or expenses incurred as a result of that cancellation.
- You shall be responsible to Us for ensuring the accuracy of the terms of any order including any applicable design drawing or specification provided to Us by You and for giving Us any necessary information relating to the Goods within a sufficient time to enable Us to perform the Contract in accordance with its Terms.
- It is Your responsibility to be fully conversant with the nature and performance of the Goods, including any harmful effects their use may have.
- Without prejudice to Clause 2.5.4 of these Terms while We take every precaution in the preparation of our catalogues technical circulars price lists and other literature these documents are for your general guidance only and statements included in these documents (in the absence of fraud on our part) shall not constitute representations by Us and We shall not be bound by them.
- We undertake to comply with the Safety Legislation including, but not limited to the provision of any available information relating to the safety of the Goods to secure so far as reasonable practicable the health and safety of the users of the Goods.
- You will comply with the Safety Legislation and agrees to indemnify and keep indemnified Us against Your failure to comply with the Safety Legislation. In particular, You shall indemnify Us against any and all claims or proceedings resulting from any injury, loss or damage caused by a failure to use the Goods in accordance with Our instructions whether such failure is on the part of the Your employees, contractors or agents or a third party to whom You have supplied the Goods.
- We shall not be liable in respect of any misrepresentation made by Us our employees or agents to You your employees or agents as to the condition of the Goods their fitness for any purpose or as to quantity or measurements unless the representation is:
 - made or confirmed in writing by a Company Signatory; and/or
 - fraudulent
- For the avoidance of doubt our liability for damages for misrepresentation (other than fraudulent) is excluded or limited by Clause 8 of these Terms.

3. PRICE

- The price of the Goods shall be as published in our price list current at the date of delivery of the Goods. The price is exclusive of VAT which shall be due at the rate ruling on the date of a VAT invoice.
- Prices listed or quoted are based on costs prevailing at the time when they are given or agreed. We shall be entitled to adjust the price of the Goods at the time of delivery by such amount as may be necessary to cover any increase sustained by Us after the date of acceptance of your order and any direct or indirect costs of making obtaining handling or supplying the Goods.
- Prices listed or quoted are applicable to the quantity specified and on the information provided by You at the time of order. In the event of orders being placed for lesser quantities or if there is any change in specifications, delivery dates, or delay is caused by our instructions or lack of instructions we shall be entitled to adjust the price of the Goods as ordered to take account of the variations.
- We shall have the option of supplying any Goods ordered by You in imperial measurements in the nearest equivalent metric measurements and the Goods may be charged in metric measure allowing for conversions.

4. PAYMENT

- Unless other credit terms have been agreed in writing with a Company Signatory all accounts are due for payment on the last day of the month following the month in which the Goods are delivered.
- Late payments will incur interest at the rate of 5% per annum above the base rate of Barclays Bank Plc in force from time to time from the due date until the date of payment after as well as before judgement.
- Credit facilities may be withdrawn or reduced at any time in our sole discretion.
- Even if We have previously agreed to give You credit we reserve the right to refuse to execute any order or contract if the arrangements for payment or your credit rating is not satisfactory to Us. In our discretion We may require security satisfactory to Us or payment for each consignment when it is available and before it is despatched in which case delivery will not be effected until We are in receipt of security or cleared funds as requested by Us.
- In the case of short delivery You will remain liable to pay the full invoice price of all goods delivered or available for delivery.
- You may not withhold payment of any invoice or other amount due to Us by reason of any right of set off or counterclaim which You may have or allege to have for any reason whatever.
- We shall be entitled at all times to set off any debt or claim of whatever nature which We may have against You against any sums due from Us to You.

5. DELIVERY

- Delivery will be effected when the Goods leave our premises whether carried by Us or an independent carrier or the premises of our suppliers when the Goods are delivered direct from suppliers.
- Delivery dates are given in good faith but are estimates only.**
- Time for delivery shall not be of the essence of the Contract.
- For the avoidance of doubt and without detracting from any other provisions of these Terms We shall not be liable for any damages whatsoever whether direct or indirect (including for the avoidance of doubt any liability to any third party) resulting from any delay in delivery of the Goods or failure to deliver the Goods in a reasonable time whether such delay or failure is caused by our negligence or otherwise howsoever.**
- We reserve the right to make delivery by instalments and tender a separate invoice in respect of each instalment. Our failure to deliver any one or more instalments or any claim by You in respect of any one or more instalments shall not entitle You to treat the Contract as a whole as repudiated.
- The price agreed includes our normal delivery charges but We may make an additional charge if We incur further costs or expense such as (but not limited to) those caused by delivery of less than a full load; complying with your request for delivery outside our normal delivery pattern or trading hours or by instalments; orders of small value which are not economical for us to deliver free.
- You must provide the necessary labour for unloading the Goods and unloading is to be completed with reasonable speed. If our delivery vehicle is kept waiting for an unreasonable time or is obliged to return without completing delivery or if We provide additional staff to unload Goods an additional charge will be made.
- You may collect Goods from Us during our trading hours. If they are not collected within 14 days from when We notify You that they are available a storage charge will be payable before the Goods are released.
- If you fail to take delivery accept or collect the Goods within the agreed time in our discretion We may make an additional charge, invoice You for the Goods or treat the contract as repudiated and in any case recover our losses from You.
- If You collect Goods from Us You are solely responsible for the size weight and positioning of the load on the vehicle and shall indemnify Us in respect of all costs claims losses or expenses We may incur as a result of your collecting the Goods including any resulting from our negligence.

6. INSPECTION

- You shall inspect the Goods at the place and time of unloading or collection but nothing in these Terms shall require You to break packaging and/or unpack Goods which are intended to be stored before use.
- You must advise Us by telephone immediately and give Us written notice within three working days of unloading of any claim for short delivery.**
- If you do not give Us that notice within that time the Goods will be deemed to have been delivered in the quantities shown in the delivery documents.
- You shall not be entitled and irrevocably and unconditionally waive any right to reject the Goods or claim any damages whatsoever for short delivery howsoever caused.
- Our liability for short delivery is limited to make good the shortage.
- Where it is or would have been apparent on a reasonable inspection that the goods are not in conformity with the Contract or (where the Contract is a contract for sale by sample) that the bulk does not compare with the sample You must advise Us by telephone immediately and give us written notice within three working days of inspection.
- If you fail to give Us that notice within that time the Goods will be deemed to have been accepted and You shall not be entitled and irrevocably and unconditionally waive any right to reject the Goods.
- If you fail to give Us that notice within that time Clause 8 shall have effect.

7. TITLE AND RISK

- Risk in the Goods shall pass to You when the Goods are delivered.
- The property in the Goods shall remain with Us until You pay all sums due to Us whether in respect of this Contract or otherwise.
- Until title passes:-
 - You shall hold the Goods as our fiduciary agent and bailee.
 - The Goods shall be stored separately from any other goods and You shall not interfere with any identification marks labels batch numbers or serial numbers on the Goods.
- We agree that You may use or agree to sell the Goods as principal and not as our agents in the ordinary course of your business subject to the express condition that at our direction the entire proceeds of any sale or insurance proceeds received in respect of the goods are held in trust for Us and not mixed with any other monies or paid into an overdraft bank account and shall at all times be identifiable as our money.
- We shall be entitled at any time to recover any or all of the Goods in your possession to which We have title and for that purpose We our employees or agents may with such transport as is necessary enter upon any premises occupied by You or to which You have access and where the Goods may be or are believed to be situated.

8. LIABILITIES

- Nothing in these Terms shall exclude or restrict our liability for death or personal injury resulting from our negligence or our liability for fraudulent misrepresentation.
- Subject to Clause 8.1 these Terms shall not be liable by reason of any misrepresentation (unless fraudulent) or any breach of warranty condition or other term express or implied or any breach of duty (common law or statutory) or negligence for any damages whatsoever. Instead of liability in damages We undertake liability under Clause 8.3 below.
- Where but for the effect of Clause 8.2 of these Terms You would have been entitled to damages against Us We shall not be liable to pay damages but subject to the conditions set out in Clause 8.4 below shall in our sole discretion either repair the Goods at our own expense or supply replacement Goods free of charge or refund all (or where appropriate part) of the price paid for the relevant Goods.
- We will not be liable under Clause 8.3:
 - If the Defect arises from fair wear and tear.
 - If the Defect arises from wilful damage negligence abnormal working conditions mis-use alteration or repair of the Goods failure to follow British Standard or industry instructions relevant to the

Goods or storage of the Goods in unsuitable conditions (but this sub-clause shall not apply to any act or omission on our part)

- Unless after discovery of the Defect we are given a reasonable opportunity to inspect the Goods before they are used or in any way interfered with. For the avoidance of doubt We acknowledge that the costs of suspending works are relevant to the determination of what is a reasonable opportunity and this sub-clause shall not apply to any works affecting the Goods which it may be reasonably necessary to carry out in the interests of safety and/or as emergency measures.
- If the Defect would have been apparent on a reasonable inspection under Clause 6.1 of these Terms at the time of unloading unless You advise Us by telephone immediately and written notice of any claim is given to Us within three working days of the time of unloading; or in any other case.**
- The Defect is discovered within four months from the date of delivery and We are given written notice of the Defect within three working days of it being discovered.
- If the Goods are manufactured processed or milled by Us to the design quantity measure or specification of You or your agents then;
 - Subject to Clause 8.1 of these Terms We shall not be under any liability for damages whatsoever or under Clause 8.3 of these Terms as the case may be except in the event of:
 - Fraudulent misrepresentation.
 - Misrepresentation where the representation was made or confirmed in writing by a Company Signatory.
 - Non-compliance with such design quantity measurement or specification.
 - Breach of a written warranty signed by a Company Signatory that the Goods are fit for that purpose; or
 - Claim maintainable against Us pursuant to Clause 8.1 of these Terms.
- You will unconditionally fully and effectively indemnify Us against all loss damages costs on an indemnity basis and expenses awarded against or incurred by Us in connection with or paid or agreed to be paid by Us in settlement of any claim for infringement of any patents copyright design trademark or any other industrial or intellectual property rights of any other person.

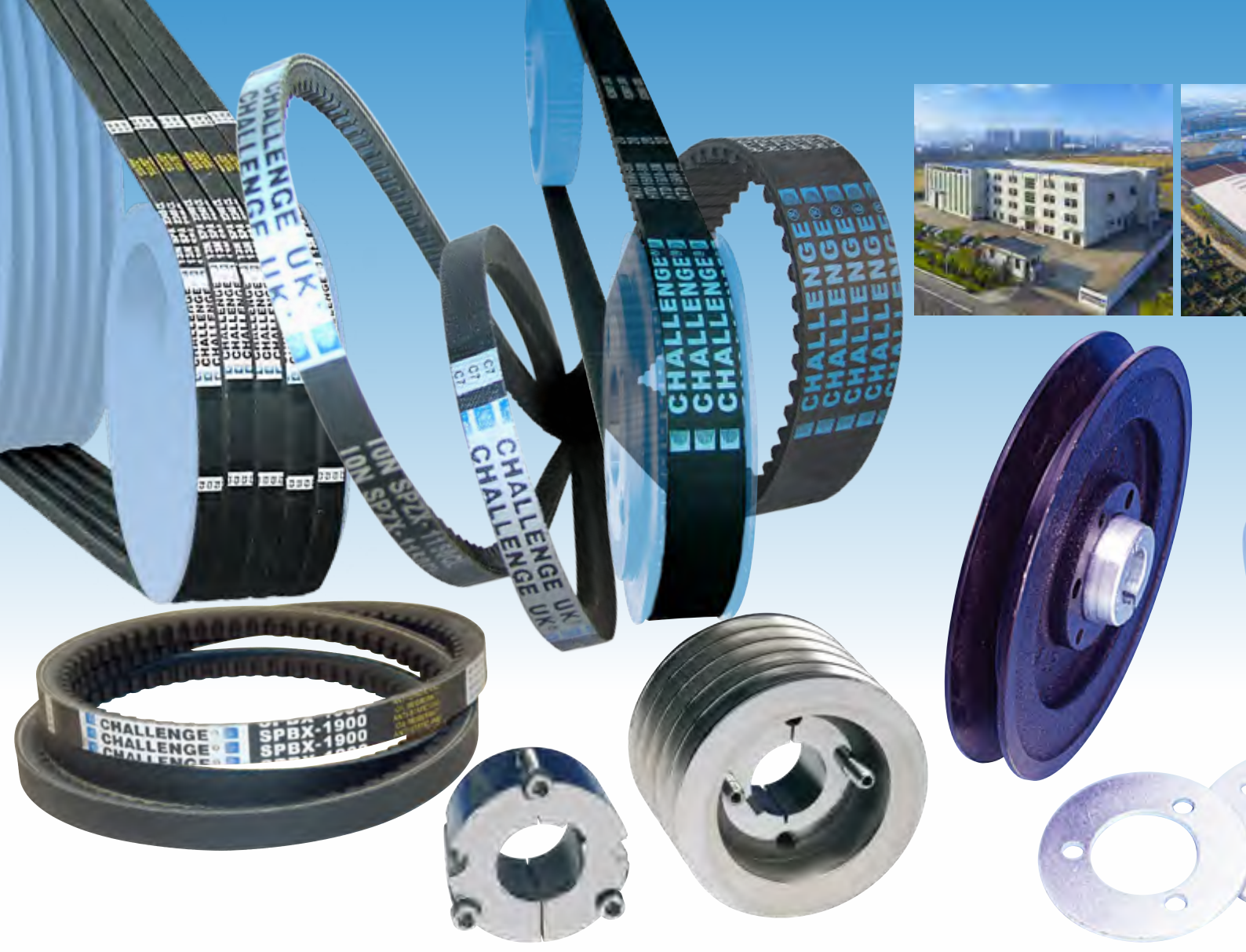
- You will further unconditionally fully and effectively indemnify Us against all loss damages costs on an indemnity basis and expenses awarded against or incurred by Us in connection with or paid or agreed to be paid by Us in settlement of any other claim arising from any such manufacturing processing or milling including but not limited to any Defect in the Goods. This indemnity will be reduced in proportion to the extent that such loss damage costs and expenses are due to our negligence.
- You will unconditionally fully and effectively indemnify Us against all loss damages costs on an indemnity basis and expenses awarded against or incurred by Us in connection with or paid or agreed to be paid by Us in settlement of any claim by any third party arising from the supply or use of the Goods. This indemnity will be reduced in proportion to the extent that such loss damage costs and expenses are due to our negligence.
- Without prejudice to any other provisions in these Terms in any event our total liability for any one claim or for the total of all claims arising from any one act of default on our part (whether arising from our negligence or otherwise) shall not exceed the purpose price of the goods the subject matter of any claim.**

- NON PAYMENT/INSOLVENCY**
 - "Insolvent" means You becoming unable to pay your debts within the meaning of Section 123 of the Insolvency Act 1986; the levying or the threat of execution or distress on any of your property; the appointment of a receiver or administrative receiver over all or any part of your property; a proposal for a voluntary arrangement or compromise between You and your creditors whether pursuant to the Insolvency Act 1986 or otherwise; the passing of a resolution for voluntary winding-up or summoning a meeting to pass such a resolution otherwise than for the purposes of a bona fide amalgamation or reconstruction; the presentation of a petition for your winding-up or for an administration order in relation to You; if You suffer any analogous step or proceedings under foreign law or You ceasing or threatening to cease to carry on your business.

- If you fail to pay the price for any Goods on the due date or fail to pay any sum due to Us under any contract on the due date or You become insolvent or if You are a Limited Company or partnership and there is a material change in your constitution or You commit a material breach of this Contract and fail to remedy that breach all sums outstanding between You and Us shall become immediately payable and We shall be entitled to do any one or more of the following (without prejudice to any other right or remedy We may have)
 - Require payment in cleared funds in advance of further deliveries.
 - Cancel or suspend any further deliveries to You under any contract without liability on our part.
 - Without prejudice to the generality of Clause 7 of these Terms exercise any of our rights pursuant to that clause.
 - If we reasonably incur third party costs such as tracing or debt collection agency costs or seek legal advice or take legal proceedings to enforce our rights as a result of your breach of this Contract including but not limited to recovery of any sums due, you will reimburse us such reasonable agency costs or legal costs incurred on an indemnity basis.

10. GENERAL

- The Contract shall be governed and interpreted according to the law of England and Wales and You agree to submit to the non-exclusive jurisdiction of the English Courts.
- We shall not be liable for any delay or failure to perform any of our obligations in relation to the Goods due to any cause beyond our reasonable control including industrial action.
- The waiver by Us of any breach or default of these Terms shall not be construed as a continued waiver of that breach nor as a waiver of any subsequent breach of the same or any other provision.
- If any clause or sub-clause of these Terms is held by a competent authority to be invalid or unenforceable the validity of the other clauses and sub-clauses of these Terms shall not be affected and they shall remain in full force and effect.
- We may assign novate or sub-contract all or part of this Contract and You shall be deemed to consent to any novation. This Contract is personal to You and it may not be assigned.
- Nothing in this Contract is intended to or will grant any right to any third party to enforce any terms of this contract whether express or implied.



Never a problem, always a...

 **CHALLENGE**  [®]





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 **CHALLENGE** 

