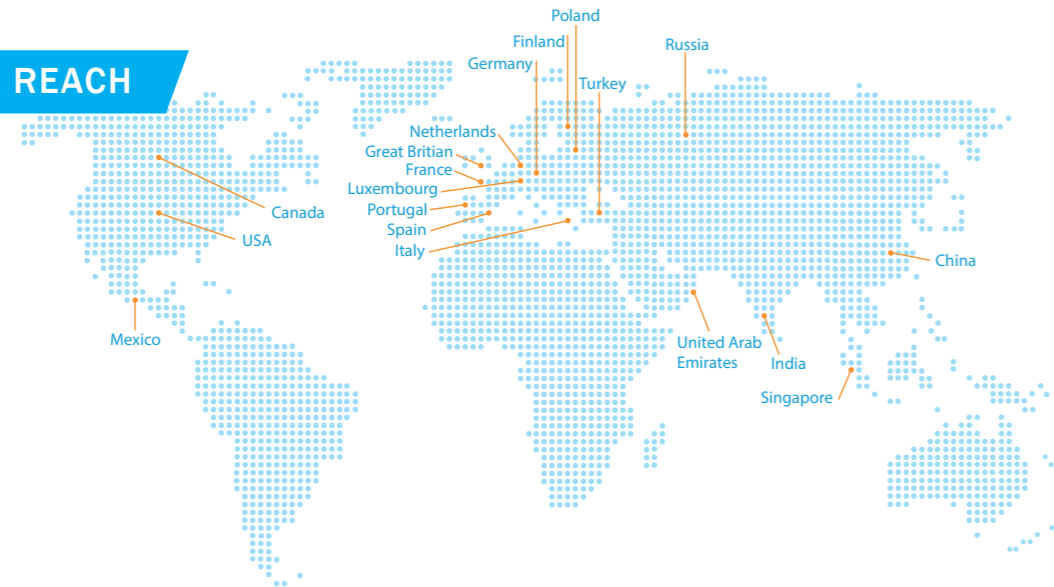


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## TRACTEL SOLUTIONS - SPECIAL PRODUCTS

Bottom blocks | Off-shore products | Sheaves and hooks | Coil handling |  
Lifting beams | Load turners | Special clamps



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TRACTEL® SPECIAL PRODUCTS CATALOGUE  
PRICE LIST - rev 3 © 2018 Tractel Solutions SAS.



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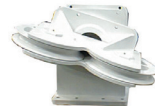
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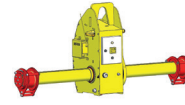


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# Introduction

For many years, TRACTEL Solutions has specialised in designing, manufacturing & selling customised lifting & handling equipment for the industry.

This catalogue is intended to provide you with an overview of our product range as well as technical details to facilitate the choice of the equipment.

For more details about our products & customised solutions, please contact our sales representatives & design department. We will be glad to design the equipment you need.

Emmanuel TRIPIER  
Operations manager



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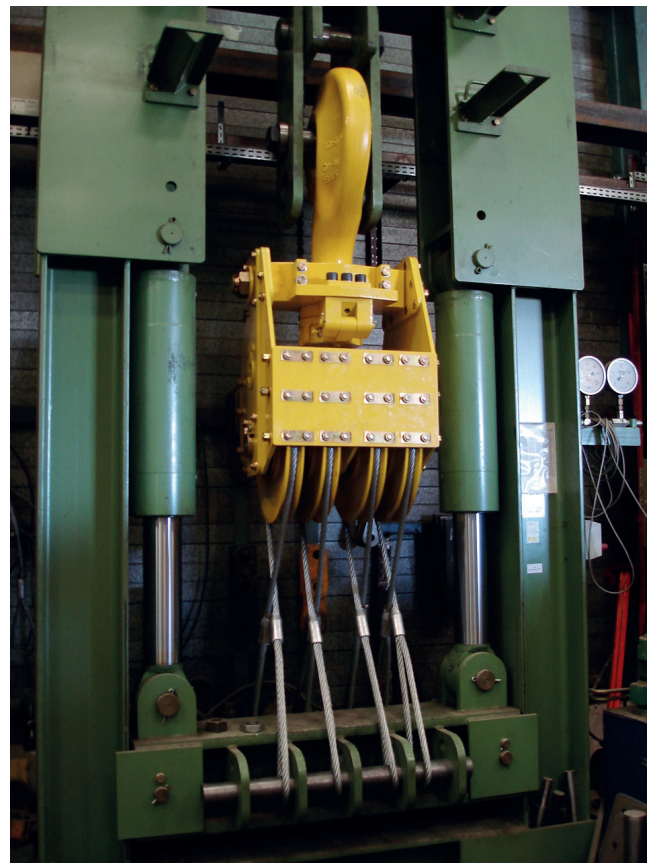


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# Crane bottom blocks

Tractel Solutions offers a wide range of custom made bottom blocks

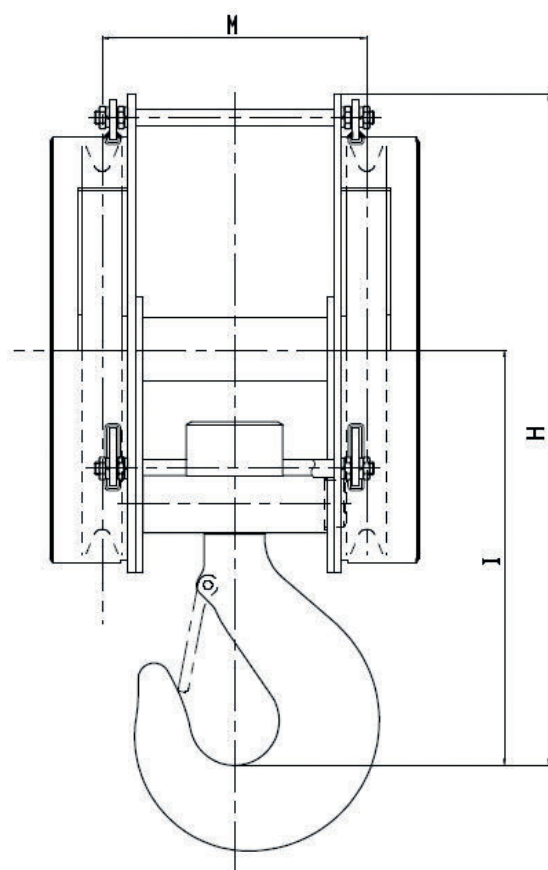
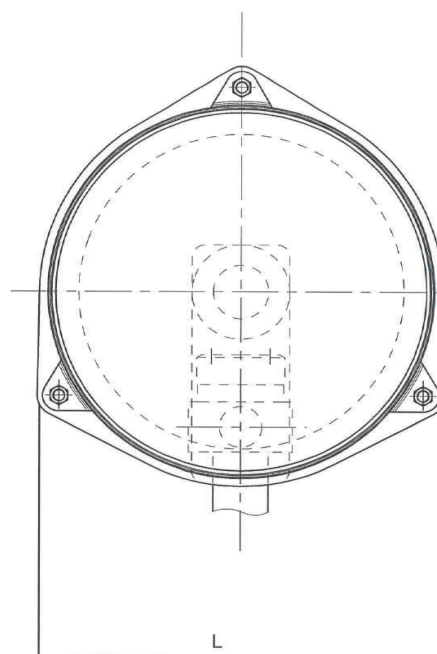
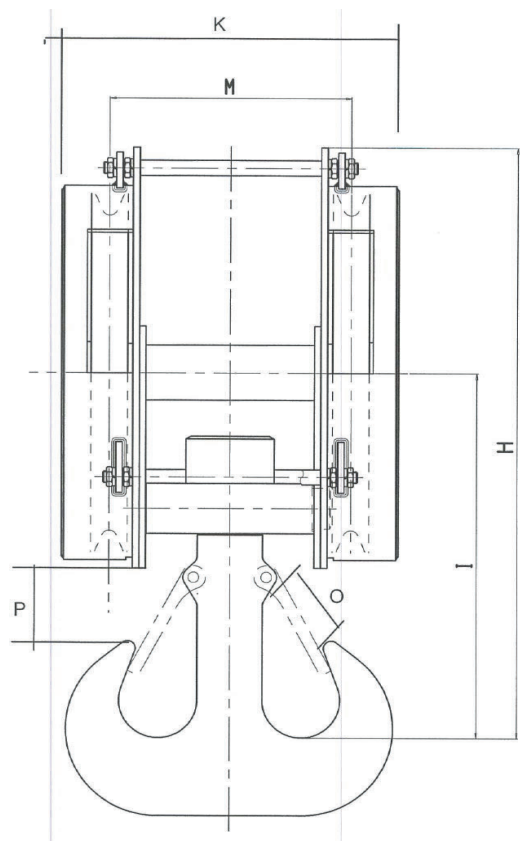


Test load bench up to 150t



# Crane bottom blocks

DP - 2-sheave bottom blocks for overhead cranes



# Crane bottom blocks

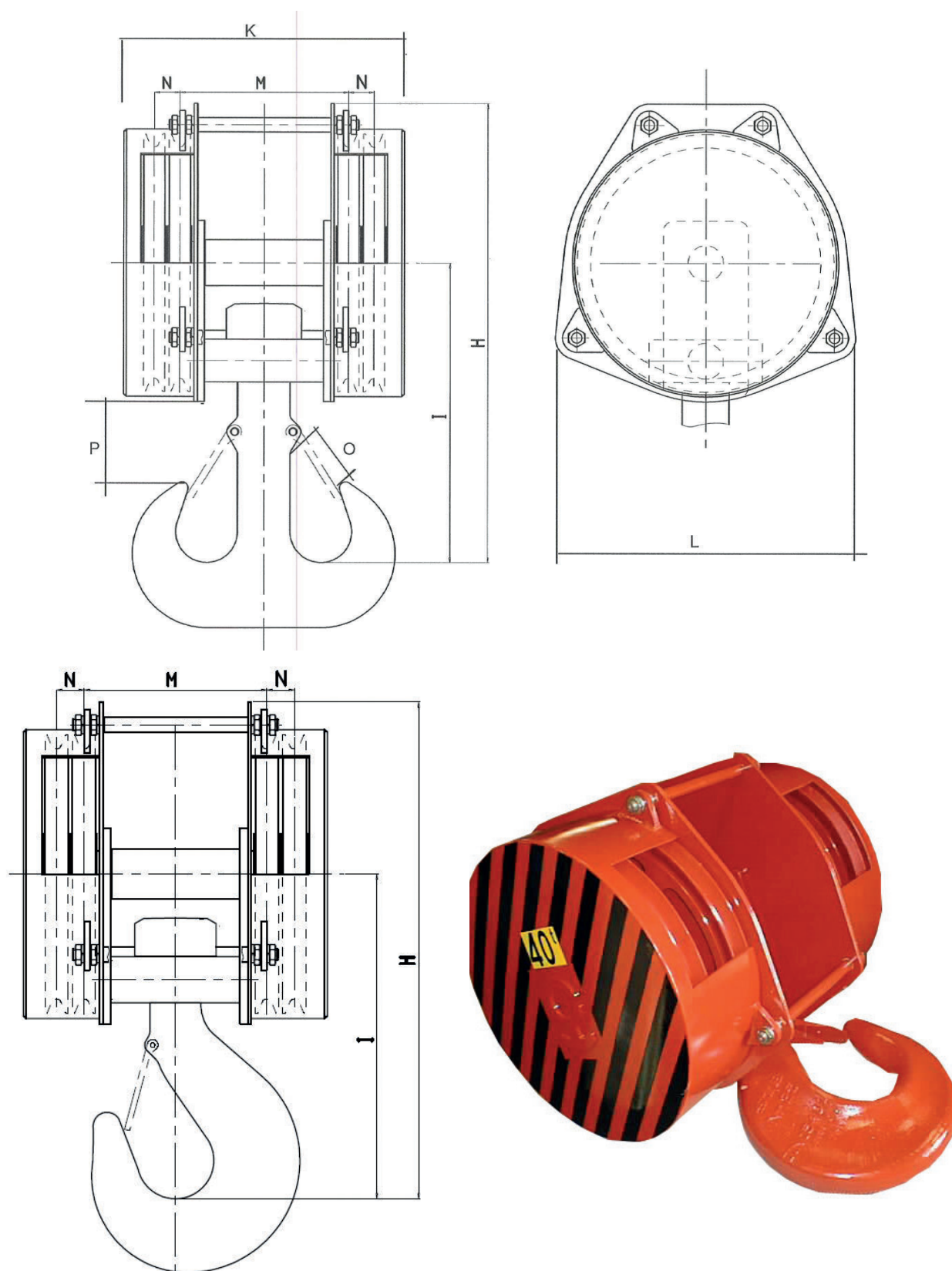
## DP - 2-sheave bottom blocks for overhead crane

WLL according to FEM duty dated 1987	M3	6.3t	8t	10t	16t	-	16t	-	25t	25t	32t	32t	40t
	M4	-	6.3t	8t	-	12t	12t	16t	20t	20t	25t	25t	32t
	M5	-	-	-	-	10t	10t	12t	16t	16t	-	20t	-
	M6	-	-	-	-	8t	-	10t	-	-	-	-	-
	M7	-	-	-	-	-	-	-	-	-	-	-	-
	M8	-	-	-	-	-	-	-	-	-	-	-	-
Tread sheave Ø		160	186	220	276	286	286	310	310	355	355	420	420
Wire rope Ø		10	11	11	16	12	14	14	16	18	20	21	23
Groove Ø		10.6	11.7	11.7	17	12.7	14.8	14.8	17	19.1	21.2	22.2	24.3
Winding ratio		16	18	18	18	22.4	20	22.4	20	20	18	20	18
DIN hook n°		4P	4P	5P	6P	6P	6P	8P	10P	10P	12P	12P	16P
Axis to axis 2 sheaves	M	149	188	215	240	244	244	270	270	293	293	320	320
Overall block thickness	K	205	265	290	325	330	330	360	360	390	390	440	440
Flange width	L	230	270	335	386	386	386	440	440	495	495	550	550
Height, inside hook to top	H	345	420	540	660	660	660	690	720	755	815	932	975
Height, inside hook to sheave spindle	I	250	290	350	435	435	435	460	485	505	535	592	635
Opening with latch	O	51	51	58	68	68	68	77	87	87	97	97	109
Clearance with single hook	P	60	73	90	128	128	128	140	160	145	160	160	180
Appr. weight with single hook		29kg	39kg	60kg	105kg	110kg	110kg	140kg	160kg	172kg	190kg	250kg	300kg
References													
With single hook		D000P	D010P	D020P	D030P	D040P	D050P	D060P	D070P	D100P	D110P	D120P	D130P
With double hook		D001P	D011P	D021P	D031P	D041P	D051P	D061P	D071P	D101P	D111P	D121P	D131P

WLL according to FEM duty dated 1987	M3	-	-	40t	-	-	-	63t	-	-	-	100t	-	-
	M4	-	32t	32t	-	-	40t	50t	-	-	63t	80t	-	-
	M5	-	25t	25t	-	-	32t	40t	-	-	50t	63t	-	-
	M6	16t	-	-	16t	20t	-	-	25t	32t	-	-	32t	40t
	M7	12.5t	-	-	12.5t	16t	-	-	20t	25t	-	-	25t	32t
	M8	-	-	-	10t	-	-	-	16t	-	-	-	20t	-
Tread sheave Ø		450	450	450	572	572	572	572	680	680	680	680	710	710
Wire rope Ø		18	20	22	20	23	25	28	25	28	30	34	28	32
Groove Ø		19.1	21.2	23.3	21.2	24.3	26.5	29.7	26.5	29.7	31.8	36	29.7	34
Winding ratio		25	22.4	20	28	25	22.4	20	28	25	22.4	20	25	22.4
DIN hook n°		12P	16P	16P	12P	16P	20P	25P	20P	25P	32P	40P	25P	32P
Axis to axis 2 sheaves	M	354	354	354	490	490	490	490	540	540	540	540	592	592
Overall block thickness	K	465	465	465	610	610	610	610	910	910	910	910	940	940
Flange width	L	595	595	595	740	740	740	740	780	780	780	780	910	910
Height, inside hook to top	H	970	1000	1000	1050	1090	1150	1185	1370	1420	1410	1450	1315	1370
Height, inside hook to sheave spindle	I	530	650	650	663	703	763	798	900	938	900	930	840	888
Opening with latch	O	87	109	109	87	97	122	137	109	122	157	170	122	137
Clearance with single hook	P	170	208	208	145	160	208	228	180	208	255	270	195	210
Appr. weight with single hook		250kg	310kg	310kg	205kg	347kg	445kg	570kg	620kg	650kg	880kg	1020kg	740kg	820kg
References														
With single hook		D140P	D150P	D160P	D200P	D210P	D220P	D230P	D240P	D250P	D260P	D270P	D280P	D290P
With double hook		D141P	D151P	D161P	D201P	D211P	D221P	D231P	D241P	D251P	D261P	D271P	D281P	D291P

# Crane bottom blocks

DP - 4-sheave bottom blocks for overhead crane



For a design with more than 4 sheaves, please consult us



# Crane bottom blocks

## DP - 4-sheave bottom blocks for overhead crane

WLL according to FEM duty dated 1987	M3	16t	20t	-	32t	40t	-	50t	-	-	-	80t
	M4	12t	16t	20t	25t	32t	-	40t	-	-	-	63t
	M5	10t	12t	16t	20t	25t	32t	32t	-	-	40t	50t
	M6	-	12t	16t	20t	-	32t	-	32t	25t	40t	-
	M7	-	-	-	-	-	25t	-	25t	20t	32t	-
	M8	-	-	-	-	-	-	-	20t	16t	-	-

Specifications												
Tread sheave Ø		220	276	286	286	310	310	355	355	450	450	450
Wire rope Ø		10	16	12	14	14	16	18	20	18	20	22
Groove Ø		10.6	17	12.7	14.8	14.8	17	19.1	21.2	18	20	22
Winding ratio		22	18	22.4	20	22.4	20	20	18	25	22.4	20
DIN hook n°		6P	8P	10P	12P	16P	20P	20P	25P	20P	25P	32P
Axis to axis 2 sheaves	M	244	294	294	294	367	367	367	367	478	478	478
Axis to axis 2 adjacent sheaves	N	45	45	55	55	70	70	70	70	80	80	80
Overall block thickness	K	410	474	474	474	590	590	590	590	725	725	725
Flange width	L	355	386	392	392	470	470	495	495	595	595	595
Height, inside hook to top	H	636	735	745	775	850	900	970	1040	1023	1125	1175
Height, inside hook to sheave spindle	I	448	510	515	540	570	620	690	760	683	785	835
Opening with latch	O	77	87	87	97	109	122	122	122	109	137	157
Clearance with single hook	P	128	145	145	160	180	208	208	208	180	228	255
Appr. weight with single hook		115kg	172kg	183kg	195kg	250kg	300kg	325kg	325kg	380kg	515kg	590kg
References												
With single hook		D005P	D015P	D025P	0D35P	D045P	D055P	D065P	D075P	D085P	D095P	D105P
With double hook		D006P	D016P	D026P	D036P	D046P	D056P	D066P	D076P	D086P	D096P	D106P

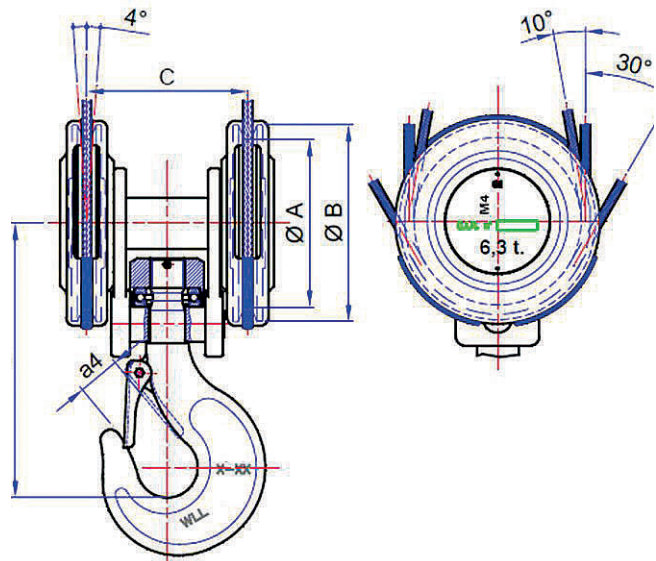
WLL according to FEM duty dated 1987	M3	-	-	-	125t	-	-	-	140t	-	200t
	M4	-	-	80t	100t	-	-	125t	125t	160t	160t
	M5	40t	50t	63t	80t	-	80t	100t	100t	125t	125t
	M6	40t	50t	63t	-	50t	80t	100t	-	125t	-
	M7	32t	40t	-	-	40t	63t	-	-	100t	-
	M8	25t	32t	-	-	32t	-	-	-	-	-

Specifications												
Tread sheave Ø		572	572	572	572	680	680	680	680	710	710	710
Wire rope Ø		20	23	25	28	25	28	30	34	36	40	40
Groove Ø		21.2	24.3	26.5	29.7	26.5	29.7	31.8	36	38.2	42.5	42.5
Winding ratio		28	25	22.4	20	28	25	22.4	20	20	18	18
DIN hook n°		25P	32P	40P	50P	40P	50P	63P	63P	80P	80P	80P
Axis to axis 2 sheaves	M	592	592	592	592	592	592	592	592	610	610	610
Axis to axis 2 adjacent sheaves	N	100	100	100	100	120	120	120	120	120	120	120
Overall block thickness	K	890	890	890	890	972	972	972	972	972	972	972
Flange width	L	740	740	740	740	900	900	900	900	910	910	910
Height, inside hook to top	H	1185	1235	1340	1415	1435	1510	1600	1600	1540	1540	1540
Height, inside hook to sheave spindle	I	798	848	953	1028	970	1050	1150	1150	1070	1070	1070
Opening with latch	O	137	157	175	195	157	195	180	180	240	240	240
Clearance with single hook	P	228	255	223	320	250	310	420	420	400	400	400
Appr. weight with single hook		712kg	800kg	950kg	1100kg	1100kg	1450kg	1800kg	1800kg	2400kg	2400kg	2400kg
References												
With single hook		D115P	D125P	D135P	D145P	D155P	D165P	D175P	D185P	D195P	D205P	D205P
With double hook		D116P	D126P	D136P	D146P	D156P	D166P	D176P	D186P	D196P	D206P	D206P

# Crane bottom blocks

CHB/CHA - 2-sheave bottom block for hoist/crane

Reference	Size	Hook Nr DIN15401	ØA/ØB (min)	Ø wire min/max (mm)	M5	M6	C mm	D mm	Weight (kg)
CHB122	02	1.6V	152/175	7 8	3.2	2.5	142	262	17
CHB132	03	2.5T	172/200	8 9	4	3.2	167	295	25
CHB142	04	2.5T	180/210	9 10	5	4	172	295	27
CHB172	07	5T	250/297	12 13	10	8	220	373	65
CHA150	05	4T	200/235	10 11	6.3	5	190	328	45
CHA162	06	4T	228/270	11 12	8	6.3	215	346	64
CHA172	07	5T	257/297	12 13	10	8	235	373	76
CHA182	08	6T	280/330	13 14	12.5	10	268	450	120
CHA192	09	8T	320/375	15 16	16	12.5	291	484	152
CHA202	10	10T	355/425	17 18	20	16	320	530	215
CHA212	11	12T	400/470	19 20	25	20	360	600	270

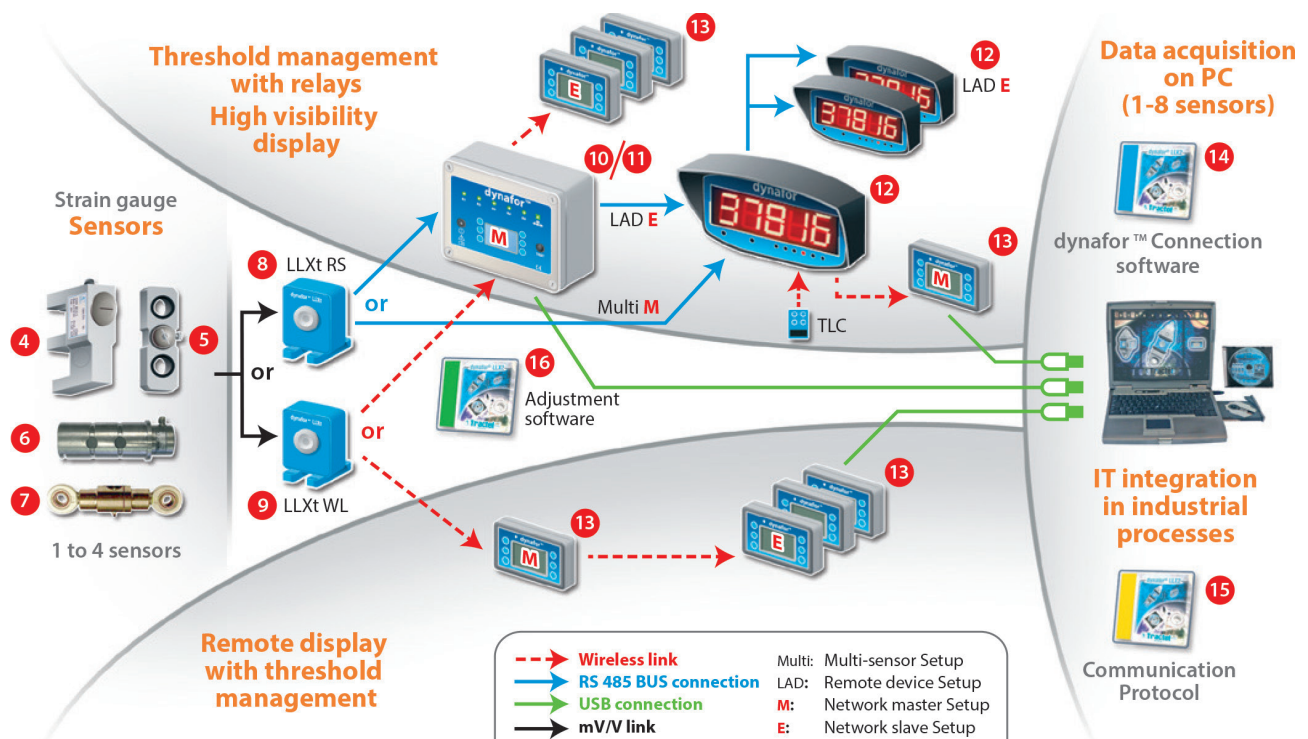


# Dynasafe™

## Electronic force and load monitoring systems

Tractel Solutions proposes a large range of electronic management assistance solutions. They comply with the Directive 2006/42/EC

### Electronic Dynasafe™: a fully modular system



For different types of use:

- Goods acceptance inspection
- Inventory management
- Protection against accidental overloads
- Industrial process management
- Overload and cable slack monitoring
- Cumulative threshold management
- Mechanical testing and quality control
- Etc...

Please contact us for more information.



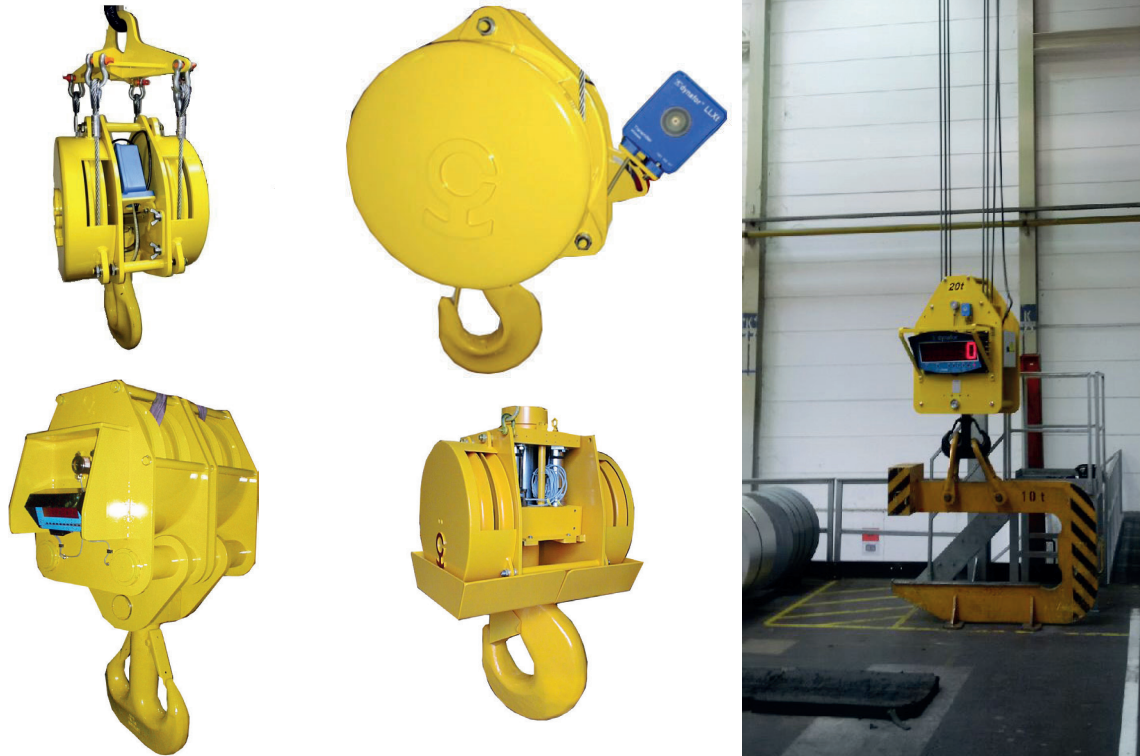
# Weighing blocks

## Bottom blocks with load weighing device

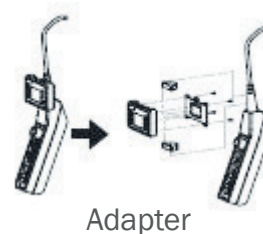
Hookblock with load indicator - For small capacities, all in hand

Flexibility, ergonomics, accuracy and autonomy are the main assets of this range.

The weighing blocks allow electronic load measurement of tensile forces (N) and determine hanging loads (kg).



- 80m range wireless connection (or more with special antenna)
- The display can be attached to the overhead crane's remote control, thanks to a special adapter.
- Wireless handheld display, integrated LCD display with backlight on request.
- Power supply :
  - Receiver : battery + charger
  - Transmitter : 3 AA batteries
  - Up to 1000h battery autonomy
- No need to have a cable drum, saves on installation.
- The weighing block can be installed to replace any standard hookblock without modification of the overhead crane.
- Simultaneous reading of several sensors on one or several displays.
- Accuracy: down to 0.2% of the WLL. (Better accuracy on request).
- Large digital display
- Available for any capacity up to FEM M8
- All capacities on request.

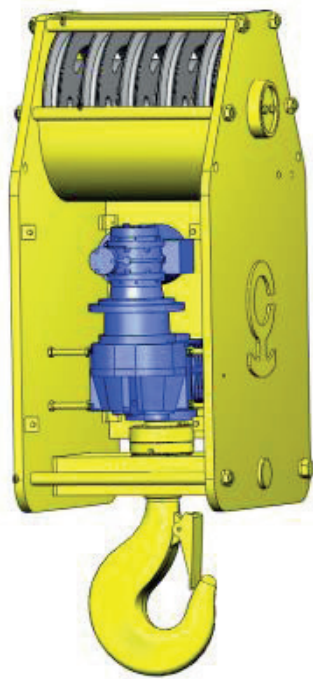


# Motorised bottom blocks

## Rotablock

Multiply the functionalities of your travelling cranes, motorise the hook!

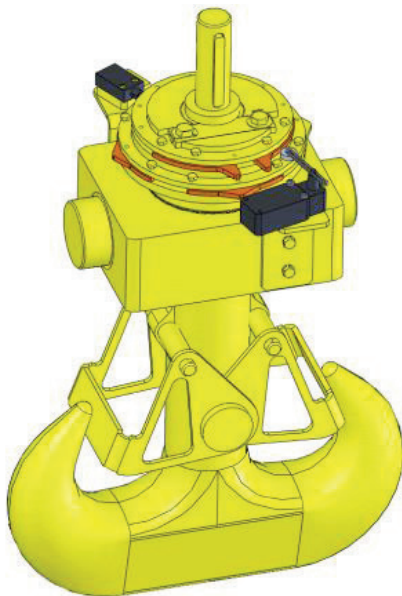
For lifting, turning and positioning of the load at distance. Designed to handle all capacities up to FEM group 8



Standard design



Compact design



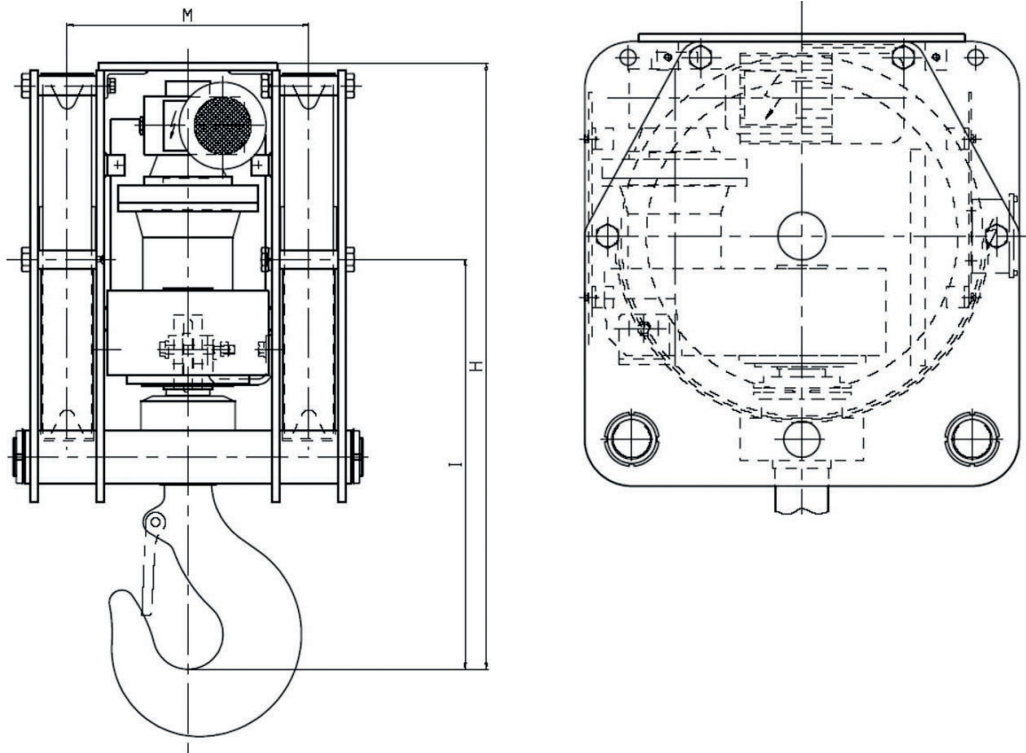
Electric stop



Special design

# Motorised bottom blocks

## 2-sheave bottom blocks with motorised suspension



- To lift and position the load without manual operation
- Compact design
- Designed with single hook according to DIN 15401/ ramshorn hook according to DIN 15402
- Rotation means of motor gear unit
- Integrated weighing device on request

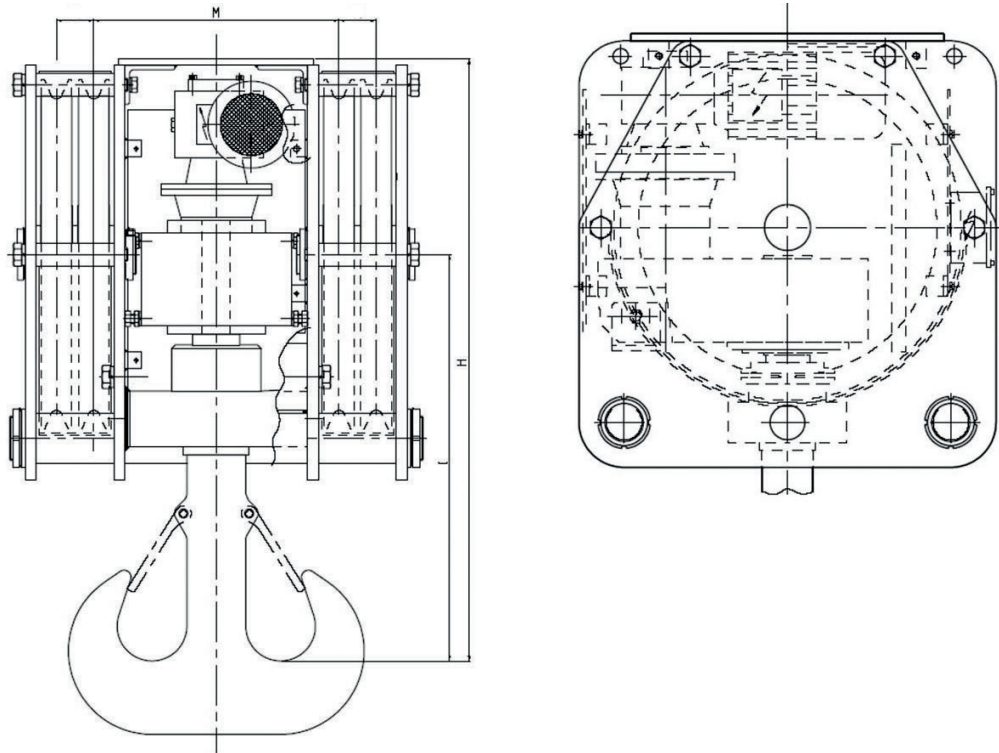
2 sheave bottom blocks										
	M3	10t	12t	16t	20t	25t	32t	40t	50t	50t
Capacity according to FEM duty dated 1987	M4	8t	10t	12t	16t	20t	25t	32t	40t	40t
	M5	6.3t	8t	10t	12t	16t	20t	25t	32t	32t
	M6	5t	6.3t	8t	10t	12t	16t	20t	25t	25t
	M7	4t	5t	6.3t	8t	10t	12t	16t	20t	20t
Sheave bottom of groove Ø	220	286	310	355	420	450	572	572	680	
Sheave center (mm)	M	270	290	290	310	310	370	390	410	410
Wire rope Ø according to winding ratio (mm)	16	14	18	20	22	26	28	36	36	44
	18	12	16	218	20	23	25	32	32	40
	20	11	14	16	18	21	22	28	28	36
	22.4	10	12	14	16	18	20	25	25	32
	25	9	11	13	14	17	18	23	23	28
DIN hook size		4P	5P	6P	8P	10P	12P	16P	20P	20P
Reference with single hook		H211R	H212R	H213R	H214R	H215R	H216R	H217R	H218R	H219R
Reference with double hook		H221R	H222R	H223R	H224R	H225R	H226R	H227R	H228R	H229R

Dimensions in mm



# Motorised bottom blocks

## 4-sheave bottom blocks with motorised suspension



4 sheave bottom blocks										
	M3	20t	25t	32t	40t	50t	63t	80t	100t	125t
Capacity according to FEM duty dated 1987	M4	16t	20t	25t	32t	40t	50t	63t	80t	100t
	M5	12t	16t	20t	25t	32t	40t	50t	63t	80t
	M6	10t	12t	16t	20t	25t	32t	40t	50t	63t
	M7	8t	10t	12t	16t	20t	25t	32t	40t	50t
	Sheave bottom of groove $\varnothing$	220	286	310	355	420	450	572	572	680
Sheave center (mm)	M	340	390	390	390	410	410	470	470	515
Wire rope $\varnothing$ according to winding ratio (mm)	16	12	16	18	20	23	25	32	40	40
	18	11	14	16	18	21	22	28	36	36
	20	10	12	14	16	18	20	25	32	32
	22.4	9	11	13	14	17	18	23	28	28
	25	8	10	11	13	15	16	20	25	25
DIN hook size		8P	10P	12P	16P	20P	25P	32P	40P	50P
Reference with single hook	H411R	H412R	H413R	H414R	H415R	H416R	H417R	H418R	H419R	
Reference with double hook	H421R	H422R	H423R	H424R	H425R	H426R	H427R	H428R	H429R	

Dimensions in mm

For a design with more than 4 sheaves, please consult us



# Special bottom blocks

## Special features

- Groove hardness from 300 up to 450 HB
- Thermic shield
- Special lubrication
- Suspension such as single hook, double hook, female jaw, pin,
- Mechanical stop in rotation of suspension
- Redundancy in design for sheave axis, crosshead and hook threads
- Sheaves positioned at 45° for special reeving
- Electrical slip-rings
- Electrical insulation
- Painted in RAL 1004 as regular finishing
- Marine paint
- Zinc coating
- Decontaminate coating
- Bronze coating



# Special bottom blocks

Bottom block with shock absorber

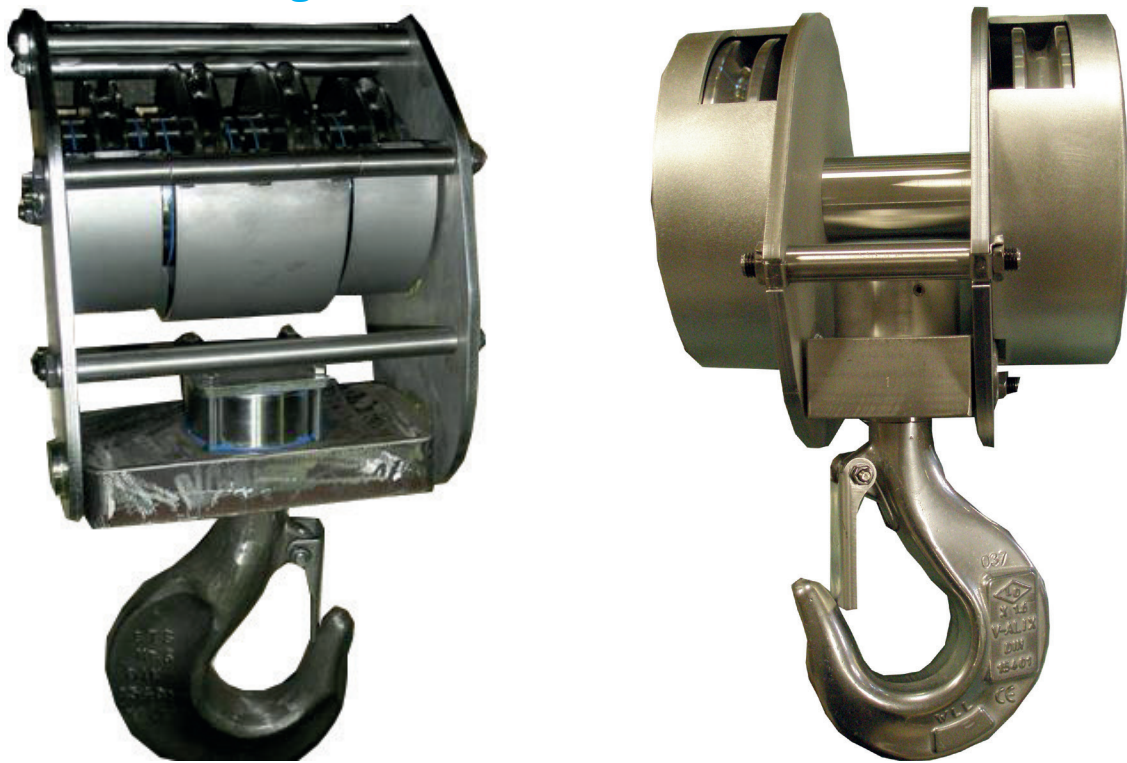


Bottom block with automatic hook



# Special bottom blocks

Stainless steel and galvanised bottom blocks



Bronze coated bottom block, for explosive atmosphere





# Mobile crane blocks

## For safe working conditions

Removable outer casing enables easy modification of rope falls and visual maintenance of the sheaves.

Outer casing is closed for hand protection.

Lifting handles are flame cut into flanges.

Axle ends and nuts are sunk into flanges to prevent any risk of fouling.

## On request

Other types of suspensions.

Different flange weights to increase the block load for free fall application.

Other winding ratio in accordance with other standards.

- Block for mobile crane
- SWL: 8t – 200t
- From 1 to 9 sheaves
- Other items on request.
- Designed with standards sub-assembly to comply with safety rules (DIN, NF, FEM, SO, BS, UNI...)

## A reliable product

No load bearing weld.

Stamped hook according to DIN 15401 or 15402.

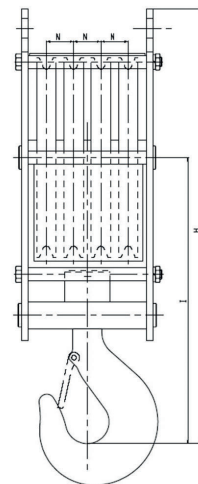
Steel class N, P, T, V with safety latch.

Winding ratio in accordance with local rules and wire rope quality.

## Design is adapted to:

- Transportation
- Storage: can be stored on its bottom when folding on the hook
- Safety: high end run of the hook, axle ends and nuts are sunk into flanges, sign painting, hand holds are flame cut into flanges for easy handling.

These crane blocks have been designed in accordance with the M3 group of the FEM 1987 and with the winding ratio = 22 according to the French decree of 1965.





# Mobile crane blocks

## Range

WLL	1-sheave block						2-sheave blocks					
	8t	12.5t	16t	18t	20t	25t	32t	10t	16t	20t	25t	
Specifications												
External sheave Ø	354	420	480	480	530	654	654	336	354	420	480	
Bottom of groove Ø	310	355	420	420	450	572	572	286	310	355	420	
Wire rope Ø	14	16	19	19	20	25	25	13	14	16	19	
Hook size	4P	4T	4T	5T	5T	6T	8T	4P	8P	5T	8T	
Height (hook to top)	H	712	850	945	966	980	1200	1240	730	890	992	1090
Height (hook to sheave spindle)	I	456	500	580	615	610	760	800	500	630	633	730
Overall block thickness	K	180	200	218	244	234	260	280	200	237	250	277
Overall width	L	425	500	560	560	590	750	750	410	424	515	560
Total sheave distance	M	-	-	-	-	-	-	-	60	69	66	60
Sheave distance	N	-	-	-	-	-	-	-	-	-	-	-
Opening with latch	O	51	51	51	58	58	66	76	51	76	58	76
Clearance with single hook	P	45	45	45	60	60	78	78	94	103	97	108
Approx weight with single hook		100kg	140kg	150kg	275kg	320kg	450kg	500kg	100kg	200kg	310kg	400kg
Ref GM		G903M	G906M	G965M	G963M	G970M	G977M	G957M	G978M	G975M	G979M	G976M

WLL	3-sheave blocks				4-sheave blocks			5-sheave blocks			
	18t	32/40t	45/50t	63/70t	18/20t	37/40t	57/60t	32t	50t	63t	
Specifications											
External sheave Ø	354	480	530	654	354	480	530	354	40	572	
Bottom of groove Ø	310	420	450	572	310	420	450	310	420	450	
Wire rope Ø	13	19	20	25	13	19	20	14	18	25	
Hook size	5T	10T	12T	16V	5T	10T	12V	8T	12T	16T	
Height (hook to top)	H	786	1087	1180	1420	786	1087	1180	885	1175	1420
Height (hook to sheave spindle)	I	530	735	808	980	530	736	808	620	812	980
Overall block thickness	K	300	357	345	352	330	356	350	410	412	420
Overall width	L	425	560	590	750	425	560	590	425	560	750
Total sheave distance	M	50	58	60	80	-	-	-	340	400	540
Sheave distance	N	-	-	-	-	50	58	60	50	58	60
Opening with latch	O	57	85	95	105	57	85	95	76	95	105
Clearance with single hook	P	60	80	105	128	60	80	105	82	103	130
Approx weight with single hook		200kg	415kg	575kg	750kg	250kg	425kg	600kg	350kg	525kg	840kg
Ref GM		G961M	G956M	G967M	G952M	G962M	G968M	G974M	G958M	G954M	G980M

WLL	6-sheave block		7-sheave block		9-sheave block	
	60t	100t	70t	140t	200t	
Specifications						
External sheave Ø	480	654	480	654	775	
Bottom of groove Ø	420	572	420	572	680	
Wire rope Ø	19	25	19	25	30	
Hook size	12V	20V	16V	32V	40V	
Height (hook to top)	H	1165	1506	1236	1644	1820
Height (hook to sheave spindle)	I	812	1066	885	1204	1400
Overall block thickness	K	485	587	558	743	810
Overall width	L	560	750	560	750	880
Total sheave distance	M	360	400	360	560	630
Sheave distance	N	52	74	52	92	74
Opening with latch	O	95	120	105	150	170
Clearance with single hook	P	92	130	125	175	190
Approx weight with single hook		700kg	975kg	825kg	1200kg	1500kg
Ref GM		G969M	G951M	G953M	G950M	G981M

Dimensions in mm

# Mobile crane blocks

## Suspension system for mobile crane

GM Swivel overhaul ball

WLL: 4 to 12.5t

Lifting fitting for one part line applications on a mobile crane

Made of GS 400-12 cast iron, different weights for overhauling when free fall.

Equipped with a swivel single hook to prevent wire rope from spinning.

Wire rope can be fixed with a wedge socket or a shackle.

WLL	Type -> GM			
	4t	6.3t	10t	12.5t
Hook size	1.6P	2.5P	4P	6P
Opening with latch	O 41	16	52	67
Clearance with single hook	P 90	100	110	130
Height (from hook to sheave spindle)	H 440	475	702	850
Overall width	L 356	356	325	400
100kg/220kg/500kg/ndling eye Ø	D 32	42	51	60
Approx weight	80kg	100kg	220kg	500kg
Ref GM	G971M	G972M	G973M	G990M

Dimensions in mm

Other ball on request



# Off-shore



Double sheave snatch block



Triple sheaves snatch block



Single sheave snatch block with polyamide sheave



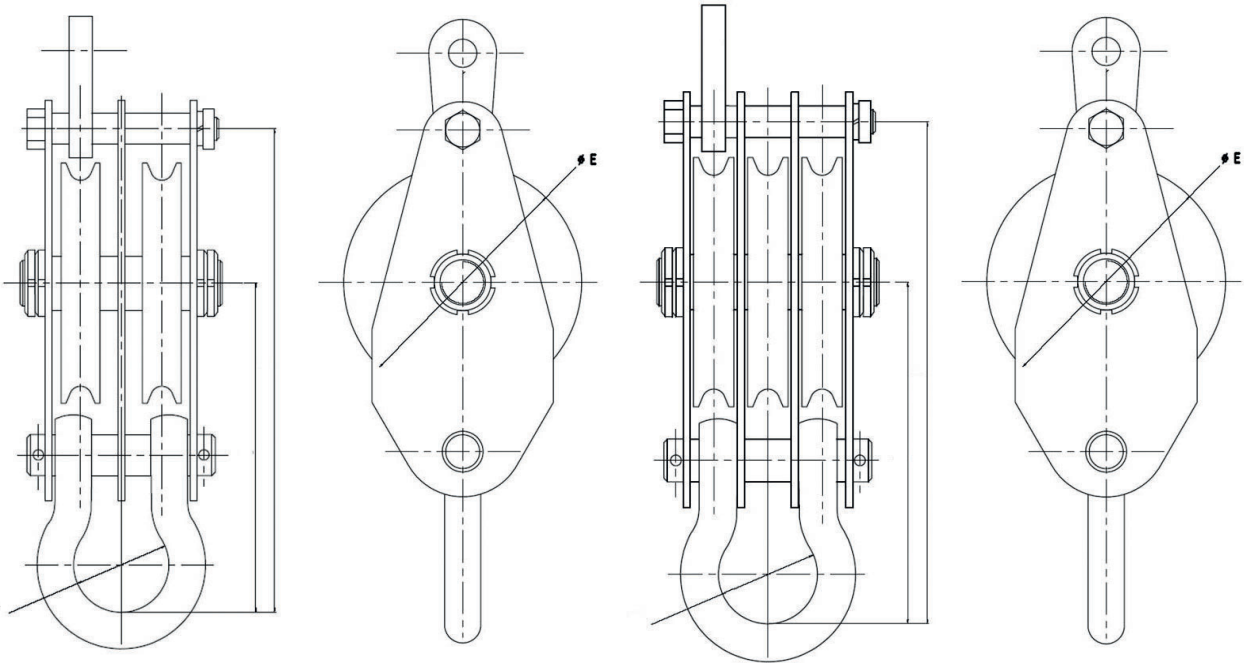
Stainless steel snatch block



Single sheave snatch block with polyamide on side plates

# Off-shore

## Hauling blocks



- Multi sheave blocks
- Purpose = pulling only
- Can be used with a Tirfor machine
- Designed with a becket for rope anchorage.
- Safety factor 2.5

	Outside sheave Ø	Nb of sheaves	Wire rope Ø (mm)	WLL (t)	Weight (kg)
F403Y	262	3	16.3	20	55
F404Y	262	4	16.3	25/30	60
F405Y	262	5	16.3	35	70
F406Y	262	6	16.3	40	80
F407Y	262	7	16.3	45	90

Other capacities on request



# Off-shore

Single or multi sheaves snatch blocks - from 1 to 250 tons



Single sheave snatch block

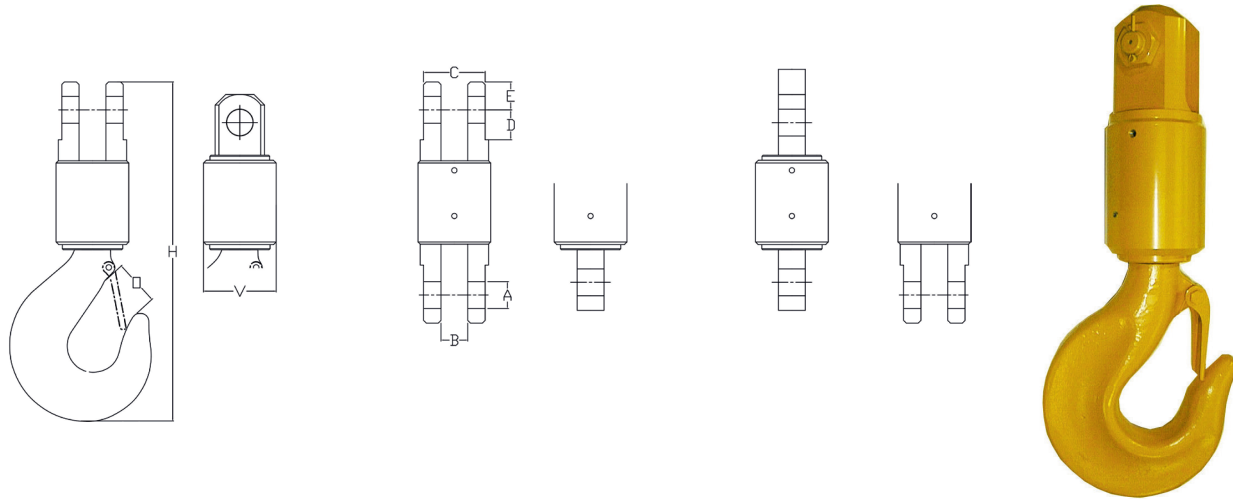
WLL (t)	Wire rope $\varnothing$ (mm)	Outside sheave $\varnothing$ (mm)
35	32-38	500
50	38-42	605
85	44-48	750
100	50-55	860
150	60-70	910
200	75-85	1060
250	88-93	1170



# Off-shore

## Swivels

- The CF range swivels are designed to swivel under load and they are equipped with tapered roller thrust ball bearings.
- All hooks are DIN and completed with assembled latches
- All jaws are equipped with bolts, nuts and cotter pins
- Available from 10 to 100t
- Pressure lube fitting provided.
- Ultimate load is 5 times the Working Load Limit



Dimensions (mm)	WLL (t)								
	10	15	25	35	45	60	75	100	
Ø A	38	38	51	51	57	65	77	102	
B	45	45	51	51	58	70	80	95	
C	86	86	117	117	127	152	178	205	
D	89	89	94	94	102	114	127	171	
E	45	45	61	61	76	76	89	103	
F	43	50	57	57	64	89	89	114	
G	410	430	550	550	66	710	813	1115	
H	500	560	690	770	900	1010	1145	1398	
Ø K	43	52	59	59	65	65	77	103	
L	70	70	99	99	102	114	127	171	
M	48	54	61	61	76	88	102	139	
O	49	55	69	84	97	110	132	137	
Ø V	114	127	152	165	178	178	204	254	
Hook n° to DIN	4V	5V	8V	12V	16V	20V	25V	32V	

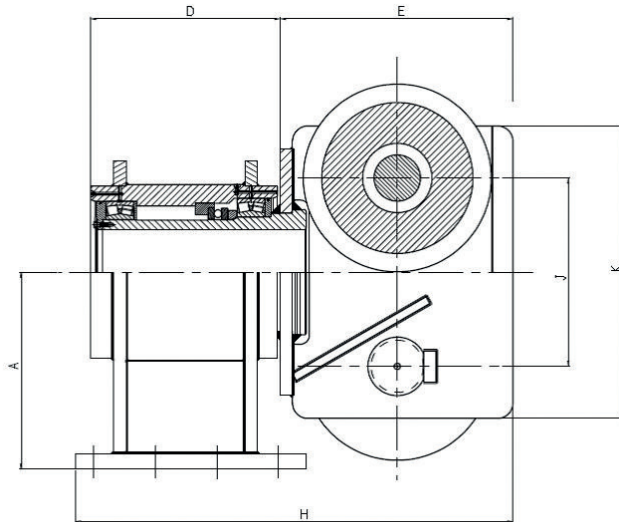
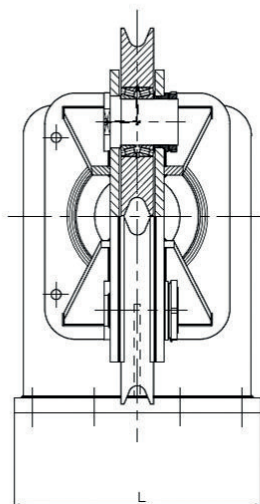
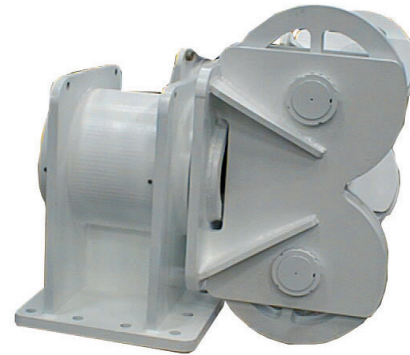
Other dimensions and capacities on request

Type	References							
Jaw/Hook	C110F	C115F	C125F	C135F	C145F	C160F	C175F	C100F
Eye/Hook	C210F	C215F	C225F	C235F	C245F	C260F	C275F	C200F
Jaw/Jaw	C310F	C315F	C325F	C335F	C345F	C360F	C375F	C300F
Jaw/Eye	C410F	C415F	C425F	C435F	C445F	C460F	C475F	C400F
Eye/Eye	C510F	C515F	C525F	C535F	C545F	C560F	C575F	C500F
Eye/Jaw	C610F	C615F	C625F	C635F	C645F	C660F	C675F	C600F

# Off-shore

## Wire rope fairleads

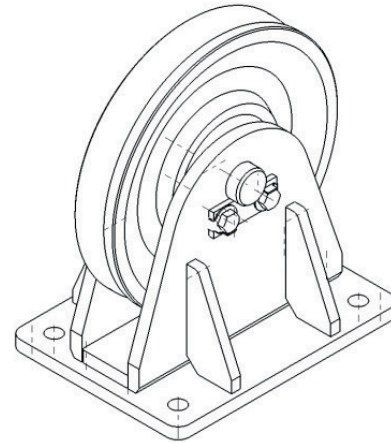
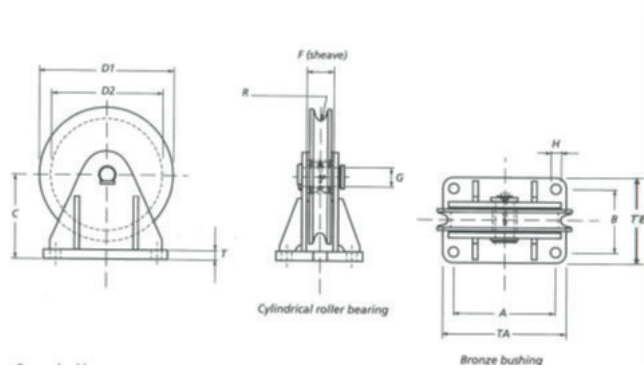
- A large range of single or double sheave fairleads
- Extra heavy construction, built to withstand breaking strength of indicated rope at 90°
- Wearing guide plates or rollers to prevent chaffing, even under rapid, severe changes of wire rope lead
- Built to withstand at 120° breaking strength of indicated rope at 90° without deformation



Model with 2 sheaves	F226D	F232D	F238D	F245D	F252D
Model with 1 sheave	F126D	F132D	F138D	F145D	F152D
Br load (t)	43.5	65.9	92.9	131	167
Wire rope Ø (mm)	26	32	38	45	52
Sheave ext Ø (mm)	254	305	406	508	610
Sheave BOG Ø (mm)	190	230	315	400	490
A	273	324	432	533	640
D	312	370	443	582	615
E	335	405	530	650	755
F	172	203	273	324	375
H	672	805	1025	1282	1420
J	258	308	410	512	612
K	440	510	650	800	950
L	360	440	520	680	800
Weight (kg)	300	440	750	1500	1950

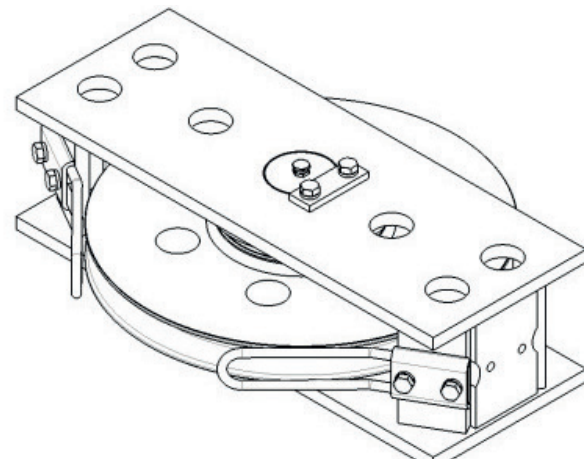
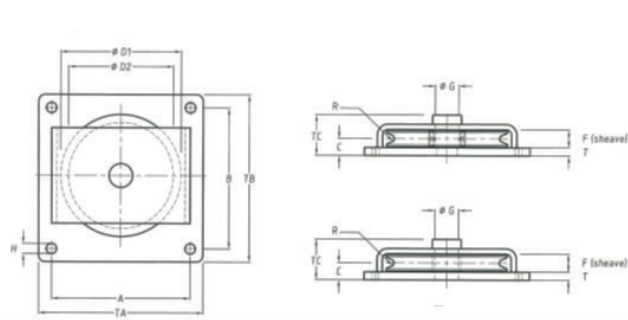
# Off-shore

## Vertical deck sheave



Type	WLL (t)	Wire rope Ø	Bearing	Dimensions (mm)												Weight (kg)
				D1	D2	A	B	C	F	G	H	T	R	TA	TB	
PV1	1	10	Ball	125	105	90	70	83	27	22	9	8	5.5	115	95	3
PV2	2	12	Ball	150	120	115	85	95	40	30	11	10	6.5	140	110	5
PV3	3	14	Ball	200	165	150	95	122	40	30	13.5	12	7.5	180	125	8
PV4	4	18	Roller	250	210	190	120	155	45	35	17.5	15	9.5	230	160	17
PV6	6	20	Roller	300	255	220	150	185	50	40	22	20	11	270	200	26
PV8	8	22	Roller	350	305	270	160	220	50	45	26	25	12	330	220	41
PV10	10	24	Roller	400	345	300	190	255	60	50	32	30	13	370	260	64

## Horizontal deck sheave



Type	WLL (t)	Wire rope Ø	Bearing	Dimensions (mm)												Weight (kg)	
				D1	D2	A	B	C	F	G	H	T	R	TA	TB		TC
PH1	1	10	Ball	125	105	180	150	22.5	27	22	9	8	5.5	200	170	54	5
PH2	2	12	Ball	150	120	220	190	31	40	30	11	10	6.5	250	220	72	10
PH3	3	14	Ball	200	165	290	240	33	40	30	13.5	12	7.5	320	270	76	17
PH4	4	18	Roller	250	210	360	310	38.5	45	35	17.5	15	9.5	400	350	86	32
PH6	6	20	Roller	300	255	400	360	46	50	40	22	20	11	450	410	99	50
PH8	8	22	Roller	350	305	460	420	46	50	45	26	20	12	520	480	99	70
PH10	10	24	Roller	400	345	530	480	51	60	50	32	20	13	600	550	113	100

Other WLL on request

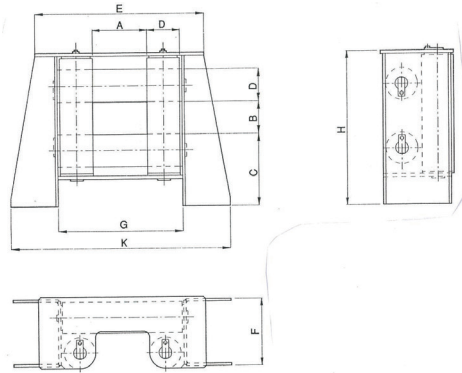
These deck sheaves are blue



# Off-shore

## Multi angle fairleads

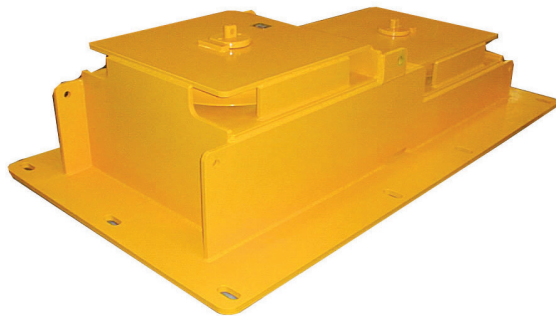
- 2 vertical rollers
- 2 horizontal rollers



Type	WLL	Rope Ø	A	B	C	D	E	F	G	H	K
BA100	4	16	200	100	310	100	580	210	420	575	830
BA120	6	20	230	130	335	120	650	250	490	650	920
BA140	8	24	250	150	360	140	750	290	550	725	1030
BA160	12	28	250	150	385	160	810	335	590	775	1150
BA180	16	32	300	180	410	180	920	370	680	860	1220
BA200	20	36	300	200	450	200	1000	415	730	950	1310
BA250	30	44	320	200	505	250	1140	515	850	1060	1430

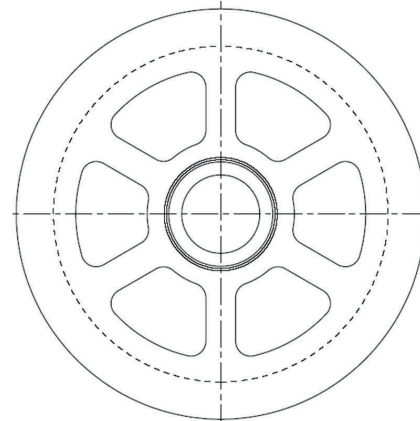
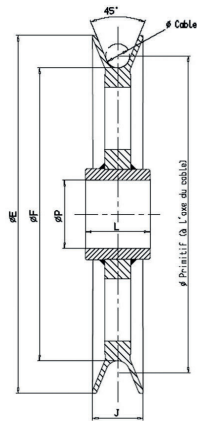
Dimensions in mm

## Miscellaneous blocks and sheaves



# Sheaves

Tractel Solutions offers a wide range of custom made sheaves  
 Pitch diameter ( $\emptyset dp$ ) = Wire rope  $\emptyset \times R$

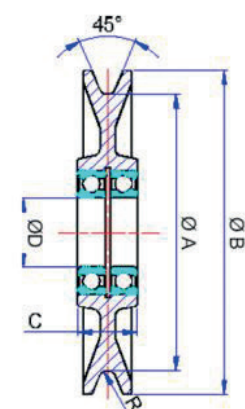


Determination of a sheave according to the FEM rules dated 1987								
FEM rules dated 1970	1Dm	1Cm	1Mb	1Am	2m	3m	4m	5m
FEM rules dated 1987	M1	M2	M3	M4	M5	M6	M7	M8
Minimum winding ratio of sheave	12	14	16	18	20	22.4	25	28

## CSB – Sheaves with ball bearings

- Electrogalvanized
- 6200-2RS series bearings
- Other dimensions available upon request
- Other materials available upon request

	Group code	$\emptyset B / \emptyset A$ sheave (mm)	Cable $\emptyset$ (mm)	C	D	Bearings	WLL (t)	Weight (kg)
CSB012	104359	133/150	6-7	32	25	6205-2RS	1,6	1,75
CSB014	105639	125/150	7,5-8					
CSB022	104389	152/175	7-8	34	30	6206-2RS	2	2,7
CSB024	105649	150/178	9-10					
CSB032	104419	172/200	8-9	36.5	35	6207-2RS	2,5	4,1
CSB034	105659	165/200	10-11					
CSB042	104449	180/210	9-10	38.5	40	6208-2RS	3,2	5,1
CSB044	105669	180/210	11-12					
CSB052	104479	200/235	10-11	43	50	6210-2RS	4	6,9
CSB054	105679	195/235	12-13					
CSB062	104509	228/270	11-12	48	60			10,2
CSB064	105689	225/270	13-14			6212-2RS	6.3	
CSB072	104539	257/297	12-13	48	60			12,3
CSB074	105699	257/297	14-15					
CSB082	104569	280/330	13-14	56	80			23,1
CSB084	105709	280/330	15-16			6216-2RS	10	
CSB092	104599	320/375	15-16	56	80			24,5
CSB094	105719	306/370	17-18					
CSB102	104629	355/425	17-18	64	90	6218-2RS	12,5	34
CSB104	105729	355/425	19-20					
CSB112	104659	400/470	19-20	72	100	6220-2RS	16	45
CSB114	105739	400/470	22-24					
CSB122	105759	440/510	20-22	80	110	6222-2RS	20	65
CSB124	105779	430/510	24-26					
CSB132	105799	500/570	22-24	85	120	6224-2Z	25	115
CSB142	105829	550/630	24-26		130	6226-2Z	32	140

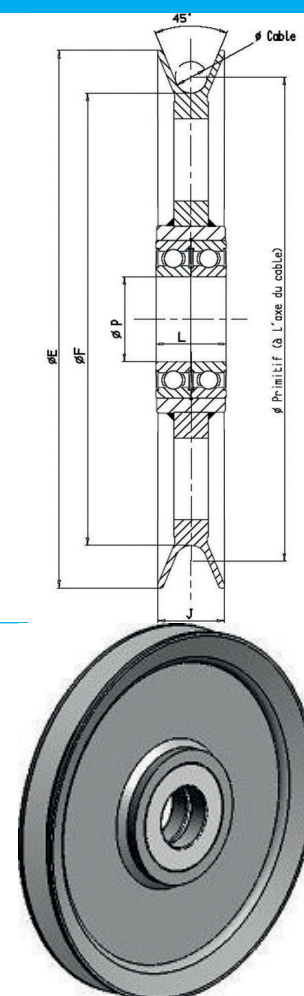


# Sheaves

## CBB - Welded sheaves with ball bearings

- Painted in RAL 1004
- 6200-2RS series bearings
- Made of steel S355J2
- Groove hardness up to 330HB on request
- Other dimensions available upon request

	Wire rope (mm)	F (mm)	R (mm)	E (mm)	J (mm)	P (mm)	L (mm)	Ball bearings
CBB100	10		5.3	315	33			
CBB110	11		6	320	38			
CBB120	12	280	6.5	325	40	55	42	6211 ZZ
CBB130	13		7	330	45			
CBB140	14		7.5	365	45			
CBB141	14	315	7.5	370	50	70	48	6214 ZZ
CBB160	16		8.5	405	50			
CBB142	14		7.5	410	50			
CBB161	16	355	8.5	415	53	85	56	6217 ZZ
CBB180	18		9	420	55			
CBB190	19		10	450	55			
CBB143	14		7.5	455	50			
CBB162	16		8.5	465	56			
CBB191	19	400	10	515	56	100	68	6220 ZZ
CBB200	20		11	520	61			
CBB220	22		12	565	61			
CBB163	16		8.5	570	62			
CBB192	19		10	580	66			
CBB201	20	450	11	580	62	120	56	6024 ZZ
CBB221	22		12	580	62			
CBB240	24		13	580	62			
CBB193	19		10	580	62			
CBB202	20		11	580	62			
CBB222	22	500	12	580	62	120	80	6224 ZZ
CBB241	24		13	580	62			
CBB260	26		14	580	66			

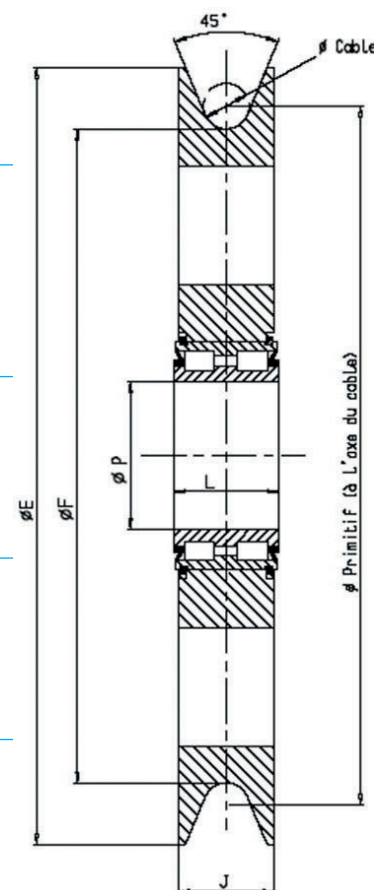


Bespoke dimensions on request

# Sheaves

CBR - cold formed laminated steel sheave with cylindrical roller bearing

	Cable Ø (mm)	d1 (mm)	R (mm)	d2 (mm)	b1 (mm)	d3 (mm)	b2 (mm)	d4 (mm)	d5 (mm)	Ring (mm)	Bearing type SL04 PPX
CBR001	14		7.5	450	45						
CBR002	16		8.5	455	50						
CBR003	18	400	10	465	55	100	67	150	194	150	5020
CBR004	20		11	465	56						
CBR005	22		12	470	61						
CBR006	16		8.5	505	50						
CBR007	18		10	515	55						
CBR008	20	450	11	515	56	110		170	219	170	5022
CBR009	22		12	520	61						
CBR010	24		13	520	62		80				
CBR011	19		10	565	55						
CBR012	20		11	565	56						
CBR013	22	500	12	570	61	120		180	245	180	5024
CBR014	24		13	570	62						
CBR015	26		14	580	66						
CBR016	20		11	625	56						
CBR017	22	560	12	630	61	130		200		200	5026
CBR018	24		13	630	62						
CBR019	26		14	640	66						
CBR020	20		11	695	53						
CBR021	22		12	700	61		95		273		
CBR022	24		13	700	62						
CBR023	26	630	14	715	66	140		210		210	5028
CBR024	28		15	705	68						
CBR025	30		16	710	75						
CBR026	32		17	720	79						
CBR027	20		11	775	53						
CBR028	22		12	780	61						
CBR029	24		13	780	62						
CBR030	26	710	14	785	66	150	100	225		225	5030
CBR031	28		15	785	68						
CBR032	30		16	790	75						
CBR033	32		17	800	79				299		
CBR034	24		13	870	62						
CBR035	26		14	875	66						
CBR036	28	800	15	875	68	160	109	240		240	5032
CBR037	30		16	880	75						
CBR038	32		17	890	79						
CBR039	36		19.5	910	89						
CBR040	26		14	975	66						
CBR041	28		15	975	68						
CBR042	30	900	16	980	75	170	122	260		260	5034
CBR043	32		17	990	79						
CBR044	36		19.5	1010	89						
CBR045	40		21.5	1015	98				324		
CBR046	30		16	1080	75						
CBR047	32		17	1090	79						
CBR048	36	1000	19.5	1110	89	180	136	280		280	5036
CBR049	40		21.5	1115	98						
CBR050	43		23	11125	104						
CBR051	47		25	1130	110						
CBR052	36		19.5	1230	89						
CBR053	40	1120	21.5	1235	98	200	150	310	380	310	5040
CBR054	43		23	1245	104						
CBR055	47		25	1250	110						
CBR056	40	1250	21.5	1365	98	220	160	340	406	340	5044



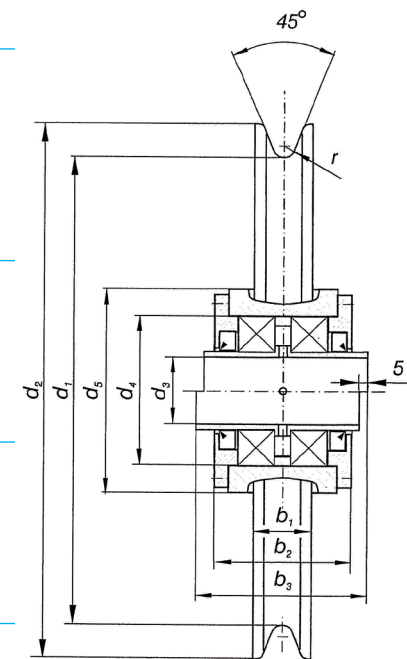
On request: Hardened groove at 300-350HB (steel S355K2G0) / Hardened groove at 450HB (steel 42CrNiMo4) / Other dimensions



# Sheaves

CBR - cold formed laminated steel sheave with ball bearings, seals, covers and sleeves


	Cable Ø (mm)	d1 (mm)	R (mm)	d2 (mm)	b1 (mm)	d3 (mm)	b2 (mm)	d4 (mm)	d5 (mm)	Ball bearing
CBR101	14		7.5	450	45					
CBR102	16		8.5	455	50					
CBR103	18	400	10	465	55	75	107	160	508219	6218
CBR104	20		11	465	56					
CBR105	22		12	470	61					
CBR106	16		8.5	505	50					
CBR107	18		10	515	55					
CBR108	20	450	11	515	56	100		215	273	6224
CBR109	22		12	520	61					
CBR110	24		13	520	62		127			
CBR111	19		10	565	55					
CBR112	20		11	565	56					
CBR113	22	500	12	570	61	120		250	324	6228
CBR114	24		13	570	62					
CBR115	26		14	580	66					
CBR116	20		11	625	56					
CBR117	22	560	12	630	61	140		290		6232
CBR118	24		13	630	62					
CBR119	26		14	640	66					
CBR120	20		11	695	53					
CBR121	22		12	700	61		131	356		
CBR122	24		13	700	62					
CBR123	26	630	14	715	66	150		260		6034
CBR124	28		15	705	68					
CBR125	30		16	710	75					
CBR126	32		17	720	79					
CBR127	20		11	775	53					
CBR128	22		12	780	61					
CBR129	24		13	780	62					
CBR130	26	710	14	785	66	170	146	290		6038
CBR131	28		15	785	68					
CBR132	30		16	790	75					
CBR133	32		17	800	79			324		
CBR134	24		13	870	62					
CBR135	26		14	875	66					
CBR136	28	800	15	875	68	180	131	310		6040
CBR137	30		16	880	75					
CBR138	32		17	890	79					
CBR139	36		19.5	910	89					
CBR140	26		14	975	66					
CBR141	28		15	975	68					
CBR142	30	900	16	980	75	200	141	340		6044
CBR143	32		17	990	79					
CBR144	36		19.5	1010	89					
CBR145	40		21.5	1015	98			356		
CBR146	30		16	1080	75					
CBR147	32		17	1090	79					
CBR148	36	1000	19.5	1110	89	220	151	360		6048
CBR149	40		21.5	1115	98					
CBR150	43		23	1125	104					
CBR151	47		25	1130	110					
CBR152	36		19.5	1230	89					
CBR153	40	1120	21.5	1235	98	240	161	400	390	6052
CBR154	43		23	1245	104					
CBR155	47		25	1250	110					
CBR156	40	1250	21.5	1365	98	260	161	420	406	6056



On request: Hardened groove at 300-350HB (steel S355K2G0) /Hardened groove at 450HB (steel 42CrNiMo4) / Other dimensions

# Hooks and suspensions

## Hooks with non-machined shank

Class	Strength (kg/mm <sup>2</sup> )	DIN	AFNOR	DIN 15401	DIN15402
(M)	40	AST 41	XC18		
P	50	AST 52	E36.4/20M5		
(S)	63	34CrMo4	34CD4		
T	80	34CrMo4	34CD4		
V	100	34CrNiMo6	35NCD6		

Strength class	Drive group									
		M1 (1Dm)	M2 (1Cm)	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)	M8 (5m)	
(M)	-	-	M1 (1Dm)	M2 (1Cm)	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)	M8 (5m)
P	-	M1 (1Dm)	M2 (1Cm)	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)	M8 (5m)	-
(S)	M1 (1Dm)	M2 (1Cm)	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)	M8 (5m)	-	-
T	M2 (1Cm)	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)	M8 (5m)	-	-	-
V	M3 (1Bm)	M4 (1Am)	M5 (2m)	M6 (3m)	M7 (4m)	M8 (5m)	-	-	-	-

Hook #	Lifting capacity									
1	5	4	3.2	2.5	2	1.6	1.25	1	0.8	0.63
1.6	8	6.3	4	4	3.2	2.5	2	1.6	1.25	1
2.5	12.5	10	8	6.3	5	4	3.2	2.5	2	1.6
4	20	16	12.5	10	8	6.3	5	4	3.2	2.5
5	25	20	16	12.5	10	8	6.3	5	4	3.2
6	32	25	20	16	12.5	10	8	6.3	5	4
8	40	32	25	20	16	12.5	10	8	6.3	5
10	50	40	32	25	20	16	12.5	10	8	6.3
12	63	50	40	32	25	20	16	12.5	10	8
16	80	63	50	40	32	25	20	16	12.5	10
20	100	80	63	50	40	32	25	20	16	12.5
25	125	100	80	63	50	40	32	25	20	16
32	160	125	100	80	63	50	40	32	25	20
40	200	160	125	100	80	63	50	40	32	25
50	250	200	160	125	100	80	63	50	40	32
63	320	250	200	160	125	100	80	63	50	40
80	400	320	250	200	160	125	100	80	63	50
100	500	400	320	250	200	160	125	100	80	63
125	-	500	400	320	250	200	160	125	100	80
160	-	-	500	400	320	250	200	160	125	100
200	-	-	-	500	400	320	250	200	160	125
250	-	-	-	-	500	400	320	250	200	160

Note : these hooks exist in 2 moulds :

- RS : forged in a mould
- RF : free forged

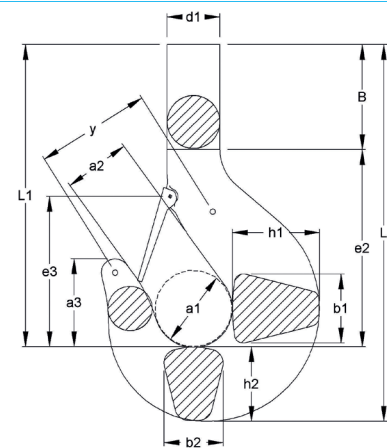
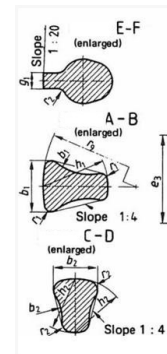
If customer requires a sample of proof test, a longer shank will be necessary

# Hooks and suspensions

## Hooks dimensions

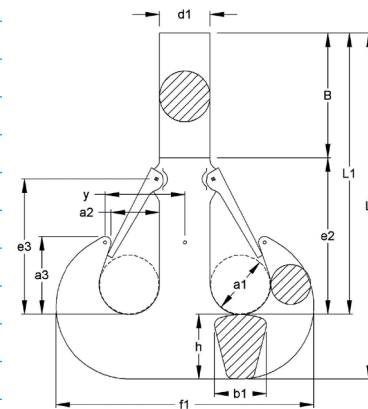
Single hook with non-machined shank according to DIN 15401

N° hook	A1	A2	A3	B1	B2	D1	E1	E2	E3	F1	H1	H2	L1	Weight (kg)
006	25	20	28	13	11	14	60	60	52	14.5	17	14	100	0.2
010	28	22	32	16	13	16	67	68	60	16.5	20	17	109	0.3
012	30	24	34	19	15	16	71	73	63	18	22	19	115	0.4
020	34	27	39	21	18	20	81	82	70	20	26	22	138	0.6
025	36	28	41	22	19	20	85	88	74	22	28	24	144	0.8
04	40	32	45	27	22	24	96	100	83	25	34	29	155	1.1
05	43	34	49	29	24	24	102	108	89	26	37	31	167	1.6
08	48	38	54	35	29	30	115	120	100	29	44	37	186	2.3
1	50	40	57	38	32	30	120	128	105	31	48	40	197	3.2
1.6	56	45	64	45	38	36	135	146	118	35	56	48	224	4.5
2.5	63	50	72	53	45	42	152	167	132	40	67	58	253	6.3
4	71	56	80	63	53	48	172	190	148	45	80	67	285	8.8
5	80	63	90	71	60	53	194	215	165	51	90	75	318	12.3
6	90	71	101	80	67	60	218	240	185	57	100	85	380	17.1
8	100	80	113	90	75	67	242	268	210	64	112	95	418	24
10	112	90	127	100	85	75	256	286	221	-	125	106	452	40
12	125	100	143	112	95	85	292	316	252	-	140	118	510	55
16	140	112	160	125	106	95	325	357	280	-	160	132	582	77
20	160	125	180	140	118	106	370	405	330	-	180	150	653	112
25	180	140	202	160	132	118	415	455	360	-	200	170	724	160
32	200	160	225	180	150	132	465	510	400	-	224	190	796	220
40	224	180	252	200	170	150	517	567	447	-	250	212	893	310



Double hook with non-machined shank according to DIN 15402

N° hook	A1	A2	A3	B1	D1	F1	h	L1	R1	R2	R3	Weight
05	34	27	44	22	24	130	27	165	3	3	36	1.9
08	28	30	49	26	30	150	33	183	4	3	41	2.6
1	40	32	52	28	30	158	36	195	4	3.5	44	3.8
1.6	45	36	59	34	36	183	43	222	5	4	51	5.3
2.5	50	40	65	40	42	208	50	250	6	4.5	58	6.9
4	56	45	73	48	48	238	60	280	7	5.5	67	9.7
5	63	50	82	53	53	266	67	312	8	6.5	75	13.4
6	71	56	92	60	60	301	75	375	9	7	85	16.8
8	80	63	103	67	67	337	85	415	10	8	95	25.3
10	90	71	116	75	75	377	95	450	11	9	106	35.5
12	100	80	130	85	85	421	106	510	12.5	10	118	49.5
16	112	90	146	95	95	471	118	580	14	11	132	69.7
20	125	100	163	106	106	531	132	650	16	12.5	150	97.5
25	140	112	182	118	118	598	150	715	18	14	170	135
32	160	125	205	132	132	672	170	790	20	16	190	193
40	180	140	230	150	150	754	190	885	22	18	212	280

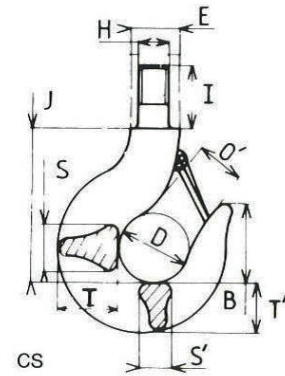


Dimensions in mm

# Hooks and suspensions

## CS - Single hooks according to DIN 15401

High quality range of CHARLET hooks.  
Designed and shaped in accordance with DIN 15401 and 15402.  
Systematically inspected.  
Samples on request.  
The shanks of the hooks are machined in accordance with customers standards and specification: half round thread in accordance with ATS 42883-A or round thread with DIN 15403.



WLL steel class P M4	10t	-	16t	20t	25t	32t	40t	50t	63t	80t	100t	
WLL steel class V M4	16/20t	25t	32t	40t	50t	63t	80t	100t	125t	-	-	
General specifications												
Hook #	5	6	8	10	12	16	20	25	32	40	50	
Beak height	B	90	101	113	127	143	160	180	202	225	252	285
Seat Ø	D	80	90	100	112	125	140	160	180	200	224	250
opening without/with latch	O'	63/55	71/60	80/70	90/75	100/83	112/87	125/90	140/115	160/135	180/150	200/170
Horizontal section thickness	S	61	80	90	100	112	125	140	160	180	200	224
Horizontal section height	T	95	100	112	125	140	160	180	200	224	250	280
Vertical section thickness	S'	52	67	75	85	95	106	118	132	150	170	190
Vertical section height	T'	75	85	95	106	118	132	150	170	190	212	236
Approx. weight, machined (kg)		12.5	20	29	42	60	85	120	175	250	365	530
With non-machined shank												
Non-machined shank Ø	E	60	60	67	75	85	95	106	118	132	150	170
Ref steel class P	C322S	-	C328S	C332S	C336S	C340S	C344S	C348S	C352S	C356S	C360S	
Ref steel class V	C373S	C374S	C378S	C382S	C386S	C390S	C394S	C398S	C402S	-	-	
With machined shank and bearing nut												
Machined shank Ø cl P	H	48	-	64	64	72	80	90	100	110	125	140
Machined shank Ø cl V	H	45	52	64	64	72	80	90	100	110	-	-
Machined shank length cl P	I	107	-	114	134	147	167	172	202	213	280	285
Machined shank length cl V	I	114/134	155	172	180	210	213	273	298	318	-	-
Height inside seat to shoulder cl P	J	211	-	266	286	313	363	408	468	518	580	650
Height inside seat to shoulder cl V	J	203/211	225	251	277	305	369	380	426	478	-	-
Ref steel class P	C323S	-	C329S	C333S	C337S	C341S	C345S	C349S	C353S	C357S	C361S	
Ref steel class V	C377S	C375S	C379S	C383S	C378S	C391S	C395S	C399S	C403S	-	-	

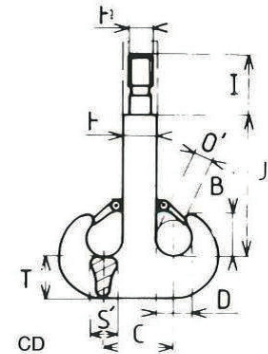
Dimensions in mm



# Hooks and suspensions

## CD - double hooks according to DIN 15402

High quality range of CHARLET hooks.  
Designed and shaped in accordance with DIN 15401 and 15402.  
Systematically inspected.  
Samples on request.  
The shanks of the hooks are machined in accordance with customers standards and specification: half round thread in accordance with ATS or with DIN.



WLL steel class P M4	6.3/8t	10t	-	16t	20t	25t	32t	40t	50t	63t	80t	100t	
WLL steel class V M4	-	16/20t	25t	32t	40t	50t	63t	80t	100t	125t	-	-	
General specifications													
Hook #	4	5	6	8	10	12	16	20	25	32	40	50	
Beak height	B	73	82	92	103	116	130	146	163	182	205	230	260
Seat Ø	D	56	63	71	80	90	100	112	125	140	160	180	200
Axis to axis of 2 seats	C	104	116	131	147	165	185	207	231	258	292	330	370
opening without/ with latch	O'	45/35	50/45	56/44	63/51	71/55	80/65	90/76	100/86	112/91	125/99	140/110	150/120
Vertical section thickness	S'	48	53	60	67	75	85	95	106	118	132	150	170
Vertical section height	T'	60	67	75	85	95	106	118	132	150	170	190	212
Approx. weight, machined (kg)		8	11	16	24	33	43	62	82	115	160	218	300
With non-machined shank													
Non-machined shank Ø	E	48	53	60	67	75	85	95	106	118	132	150	170
Ref steel class P	C426D	C430D	-	C438D	C442D	C446D	C450D	C454D	C458D	C462D	C466D	C470D	
Ref steel class V	-	C480D	C484D	C488D	C492D	C496D	C500D	C504D	C508D	C512D	-	-	
With machined shank and nut													
Machined shank Ø cl P	H	42	48	-	64	64	72	80	90	100	110	125	140
Machined shank Ø cl V	H	-	45	52	64	64	72	80	90	100	110	-	-
Machined shank length cl P	I	87.5	107	-	115	135	147	167	175	205	213	260	274
Machined shank length cl V	I	-	114/134	155	172	180	210	213	273	298	318	-	-
Height inside seat to shoulder cl P	J	157	173	-	220	243	273	306	341	388	433	485	545
Height inside seat to shoulder cl V	J	-	170	188	210	220	283	303	320	350	413	-	-
Ref steel class P	C427D	C431D	-	C439D	C443D	C447D	C451D	C455D	C459D	C463D	C467D	C471D	
Ref steel class V	-	C481D	C485D	C489D	C493D	C497D	C501D	C505D	C509D	C513D	-	-	

Dimensions in mm

# Hooks and suspensions

## CZ - suspension system with thrust ball bearing crosshead

The CHARLET CZ range covers a wide range of suspension system and lifting applications including spreader bars, designed for use in buildings, public works, nuclear and offshore industries. Especially designed for easy maintenance on your equipment.

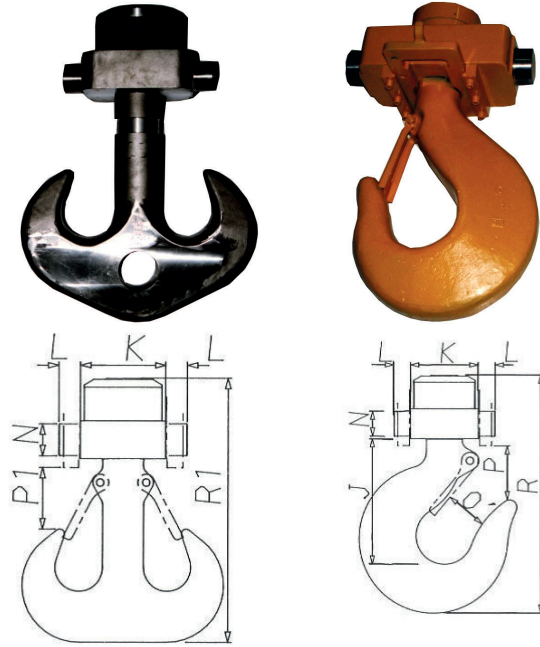
The thrust crosshead is engineered in accordance with high standards for the maximum efficiency.

The thrust bearing is protected by a side plate and equipped with a lubricator.

CHARLET proposes standard type of crosshead.

On request:

- Configuration to DIN 15411
- Larger hook number up to number 250
- Double hook with hole to DIN 15402B



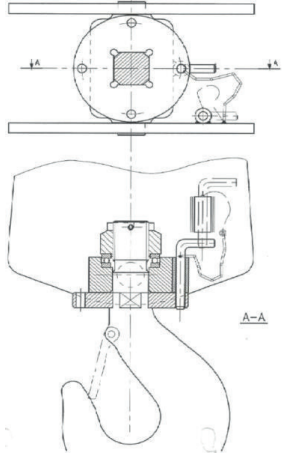
Lifting WLL M4		4t	6.3t	10t	16t	20t	25t	32t	40t	50t	63t	80t	100t
General specifications													
Crosshead length mini CI P	K	75	95	113	152	152	188	188	205	223	250	286	350
crosshead length mini CI V	K	-	-	-	152	152	188	188	205	233	250	-	-
trunnion length	L	19	23	28	34	34	34	40	40	45	45	56	56
trunnion Ø	N	27	33	42	50	55	65	80	80	100	100	125	125
Hook # CI P		2.5	4	5	8	10	12	16	20	25	32	40	50
Hook # CI V		-	-	-	4	5	6	8	10	12	16	-	-
With single hook													
Clearance with single hook CI P	P	60	73	75	128	145	160	180	208	228	255	283	320
Clearance with single hook CI V	P	-	-	-	97	97	110	110	120	147	160	-	-
Total height CI P	R	255	347	385	475	526	578	662	730	840	920	1052	1160
Total height CI V	R	-	-	-	392	420	465	518	563	633	714	-	-
Weight with single hook CI P		5.4kg	9.3kg	17kg	39kg	59kg	77kg	115kg	150kg	233kg	310kg	420kg	550kg
Weight with single hook CI V		-	-	-	25kg	25kg	38kg	61kg	74kg	121kg	147kg	-	-
Ref single hook CI P		C530Z	C532Z	C537Z	C536Z	C538Z	C540Z	C542Z	C544Z	C546Z	C548Z	C550Z	C552Z
Ref single hook CI V		-	-	-	C566Z	C568Z	C570Z	C572Z	C574Z	C576Z	C578Z	-	-
With double hook													
Clearance with double hook CI P	P1	-	75	75	98	106	122	134	152	168	190	210	240
Clearance with double hook CI V	P1	-	-	-	80	80	90	90	90	130	130	-	-
Total height CI P	R1	-	305	344	420	473	526	591	648	743	816	935	1031
Total height CI V	R1	-	-	-	351	371	418	467	495	599	634	-	-
Weight with double hook CI P		-	15kg	17.5kg	34kg	50kg	60kg	92kg	112kg	173kg	220kg	285kg	370kg
Weight with double hook CI V		-	-	-	21kg	21kg	45kg	75kg	85kg	145kg	165kg	-	-
Ref double hook CI P		-	C592Z	C594Z	C596Z	C598Z	C600Z	C602Z	C604Z	C606Z	C608Z	C610Z	C612Z
Ref double hook CI V		-	-	-	C626Z	C628Z	C630Z	C632Z	C634Z	C636Z	C638Z	-	-

Dimensions in mm

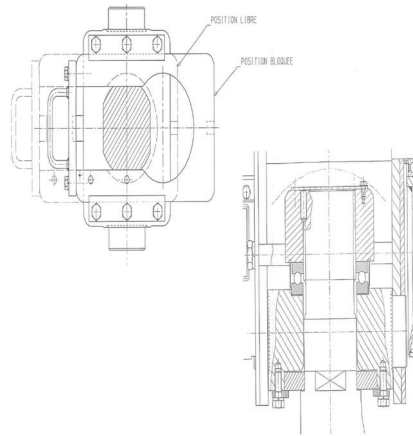
# Hooks and suspensions

Suspension fittings - device for rotation locking

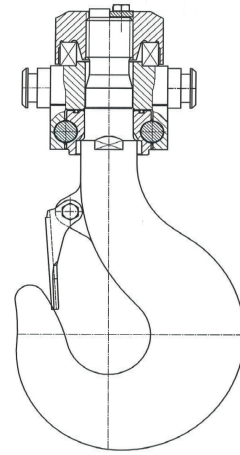
Type A : 4 positions at 90°



Type B : built-in rotation locking

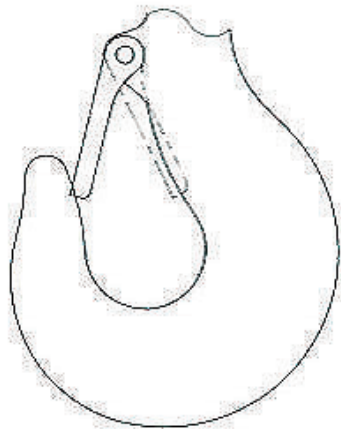


Type C : rotation locking with double plug bolts

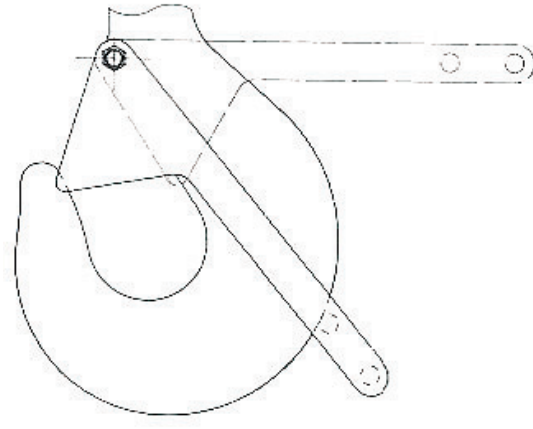


## Safety latches

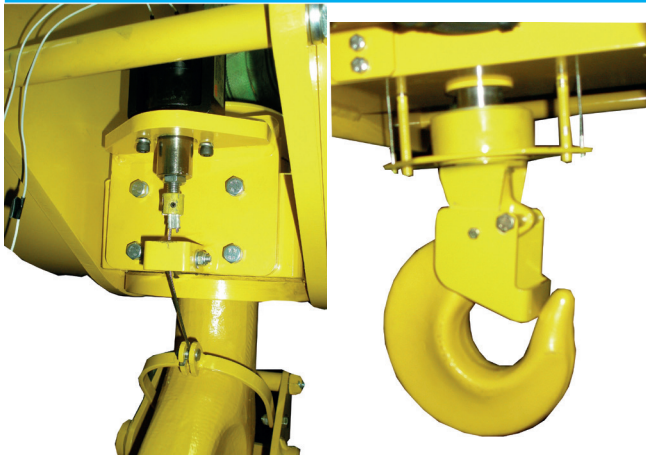
Regular safety latch



Safety latch with handle



Safety latch with automatic configuration

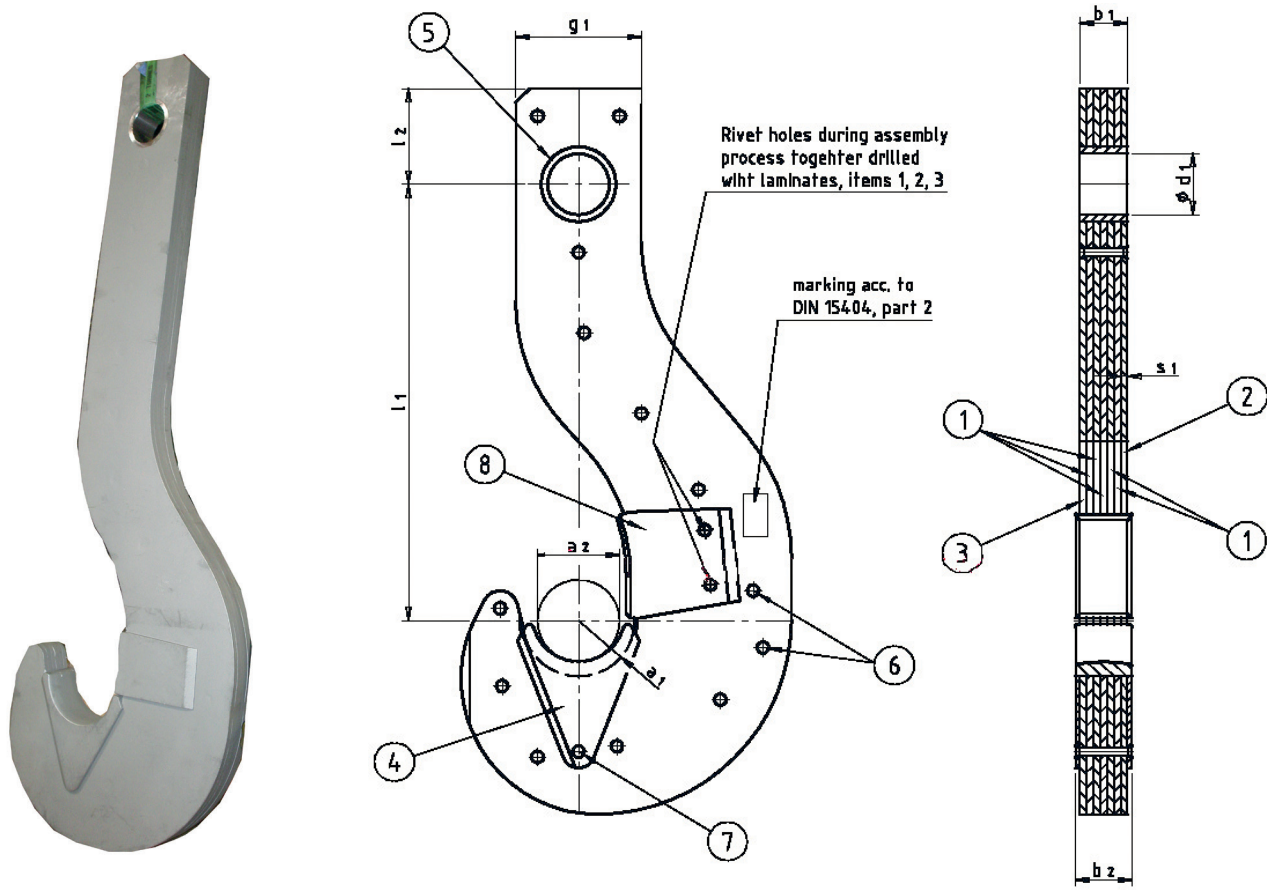


Automatic hook



# Hooks and suspensions

## Laminated point hooks



Load capacity (t) laminated hooks	A1	A2	B1	B2	D1	G1	L1	L2	S1	Number of pieces for item 1	Load capacity of related ladle cranes (t)
16		130	64	96						2	32
20	110	145	64	96	100	220	1000	170		2	40
25		160	80	112					16	3	50
			64	96						2	
32	130	180	80	112	125	280	1120	200		3	63
40		200	112	144						5	80
			80	112						2	
50	150		100	132	160	340	1250	250	20	3	100
63		225	140	172						5	125
			125	157						3	
80	170		150	182	180	380	1400	300		4	160
100		250	175	207						5	200
			175							5	
125	205	280	200	232	225	460	1600	350	25	6	250
160		320	250	282						8	320
			225	265						7	
200	250	360	275	315	250	550	1800	420		9	400
250		400	325	365						11	500
			315	355						7	
320	300	500	385	425	290	620	2000	470	35	9	630



# Coil handling

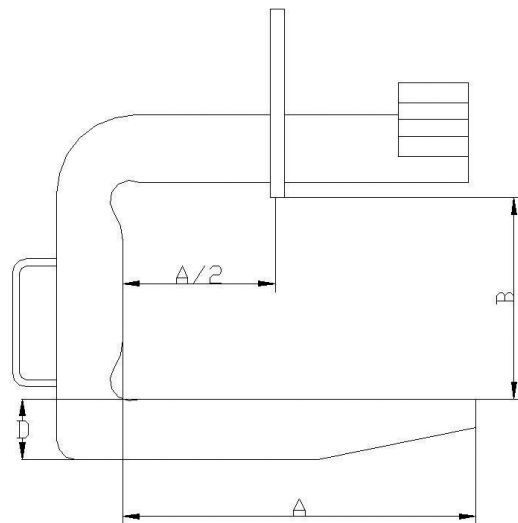
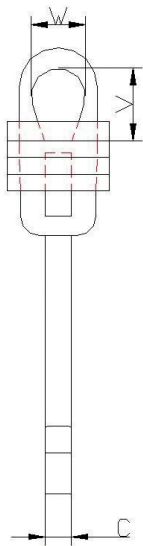
## C-hooks

From 5000 up to 32 000 kg – All measures in mm  
For other capacities, please consult us

Ref	WLL (t)	A	B	C	D	V	W	Weight (kg)
SCT5 700 600	5	700	600	136	50	165	100	350
SCT7.5 800 700	7.5	800	700	165	60	170	115	515
SCT10 1000 700	10	1000	700	195	70	180	150	745
SCT16 1200 700	16	1200	700	250	80	250	170	1230
SCT20 1500 900	20	1500	900	300	90	250	170	2050
SCT25 1600 900	25	1600	900	325	100	250	170	2605
SCT32 2000 900	32	2000	900	375	120	250	170	3850

On request

- Adjustable suspension
- Secutex coating
- Handle
- Stabilisation feet
- Safety end peak



# Coil handling

## Telescopic coil grab



Head-fitting and length of gripping legs manufactured to suit your application

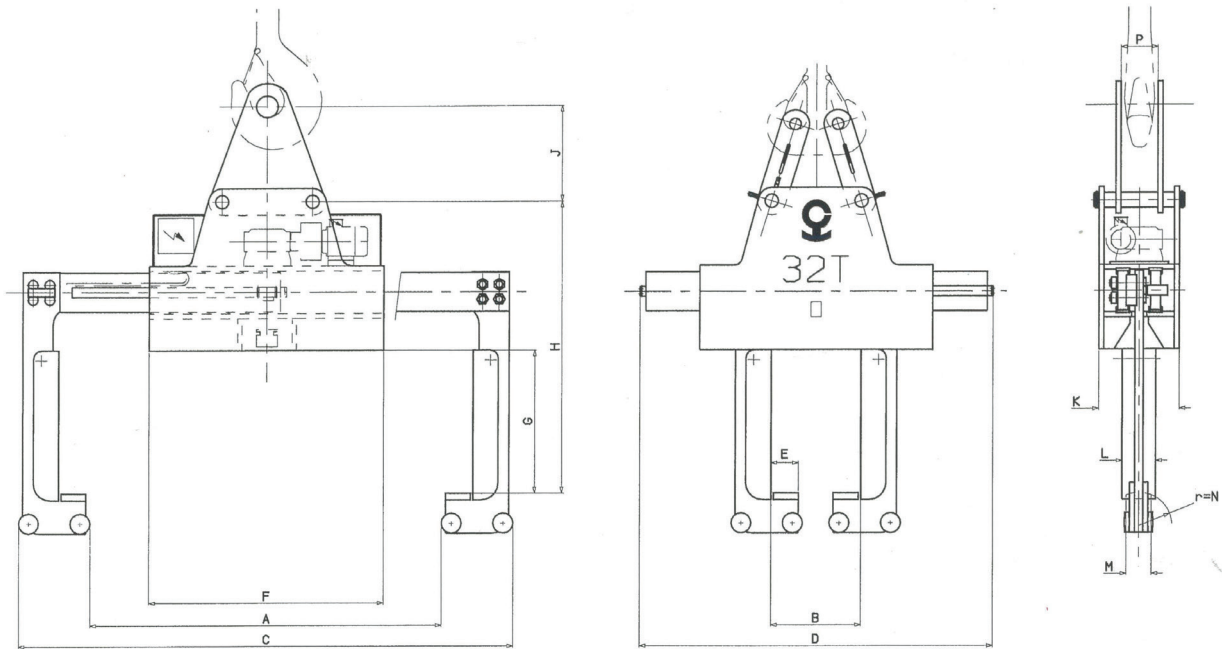


To comply with your specific quality and safety specifications, optional equipment is available on request

## Bundles grab



# Coil handling



Type	M4	M6	M8	A	B	C	D	E	F	G	H	J CS/CD	K	L	M	N	P CS/CD	Weight (kg)
T010B	16t	12.5t	10t	1900	510	2690	1935	150	1300	835	1650	385/365	452	210	140	200	145/120	1100
T020B	32t	25t	20t	2100	250	2920	2135	165	1400	835	1725	520/480	460	210	160	250	195/155	1600
T030B	50t	40t	32t	2100	540	2960	2135	165	1400	835	1725	630/590	480	210	160	250	240/190	1900

- For the transportation of coils, rolls and bodies with horizontal axes.
- Manufactured with full quality assurance.
- Grab manufactured in high quality welded steel and both grab legs operated by means of rack and pinion.
- Grab legs operate within sliding guides utilising both gearing and a torque limiting coupling.
- Wiring system with cabling protected in plastic metallic conduits or alternatively in guide chains supplied complete with electric control panel.
- Documentation: CE certificate of conformity / full technical data supplied.

## Options:

- Safety device, sensor controlled to avoid opening of gripping legs whilst under load.
- Indicator to confirm gripping legs are locked in position
- Sliding protection device to ensure against load damage.
- Protective wheels on gripping legs.
- Gripping legs fitted with "SECUTEX" protection.
- Illuminated light signal confirming grabs are under load.



LIFTING BEAMS ..... p.46  
LOADS TURNER PAL-TURN™ ..... p.50  
SPECIAL CLAMPS ..... p.54



# Lifting beams

Tractel Solutions SAS develops all types of custom-made lifting beam for handling loads such as containers, long loads, cylinders, crates, boats, big-bags, rings, concrete slabs and many more.

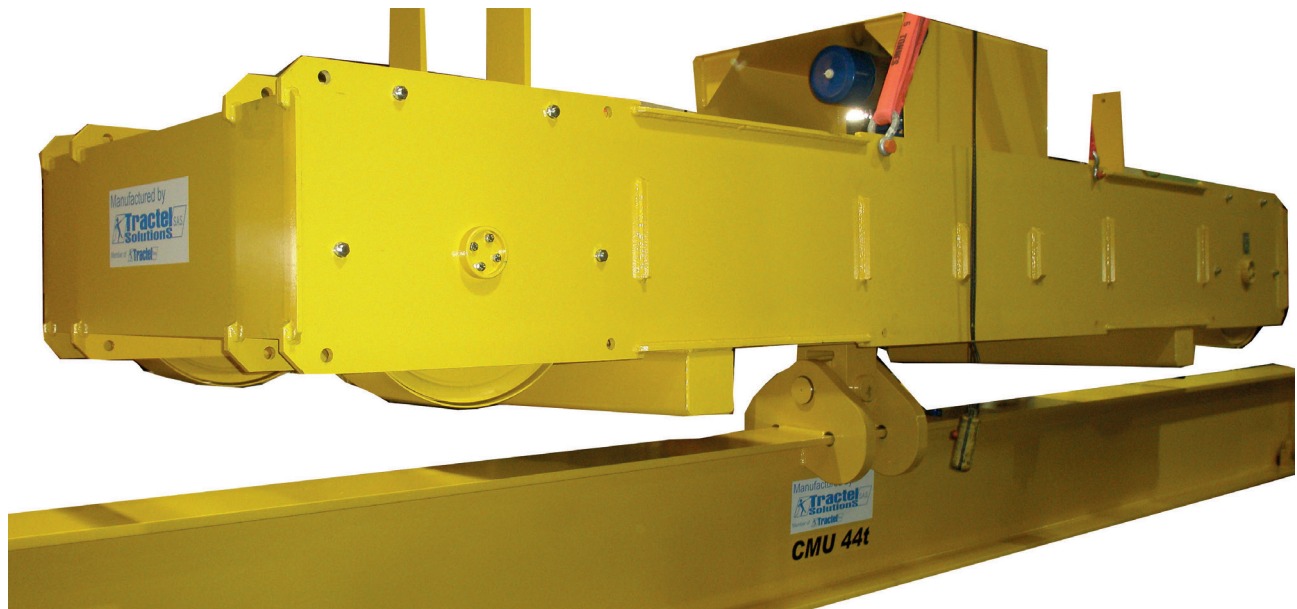
H shaped lifting beam adjustable on request





# Lifting beams

44t lifting beam for paper rolls with motorised rotation



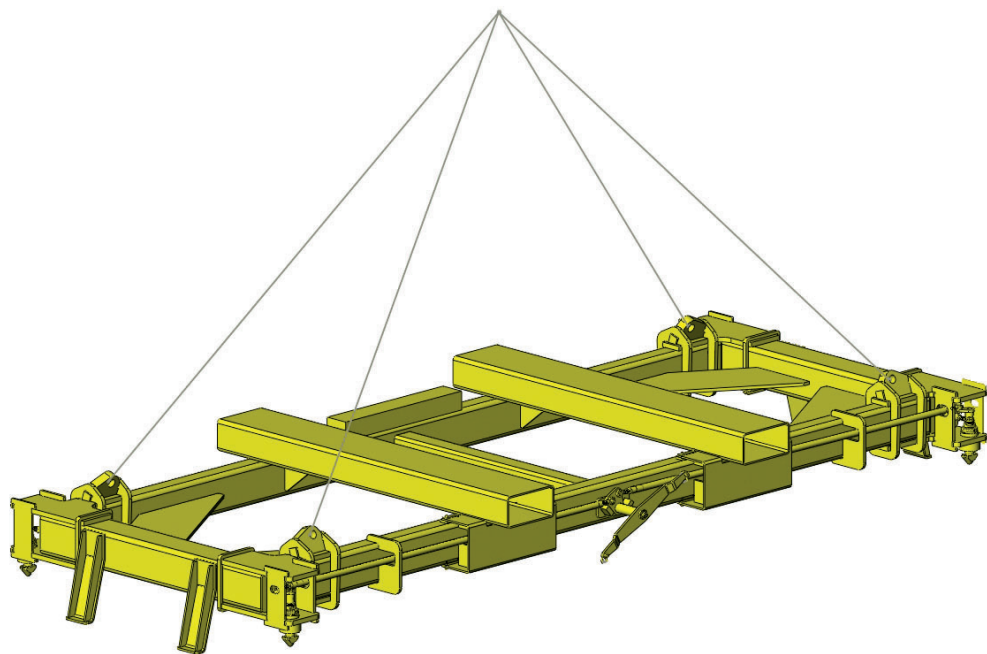
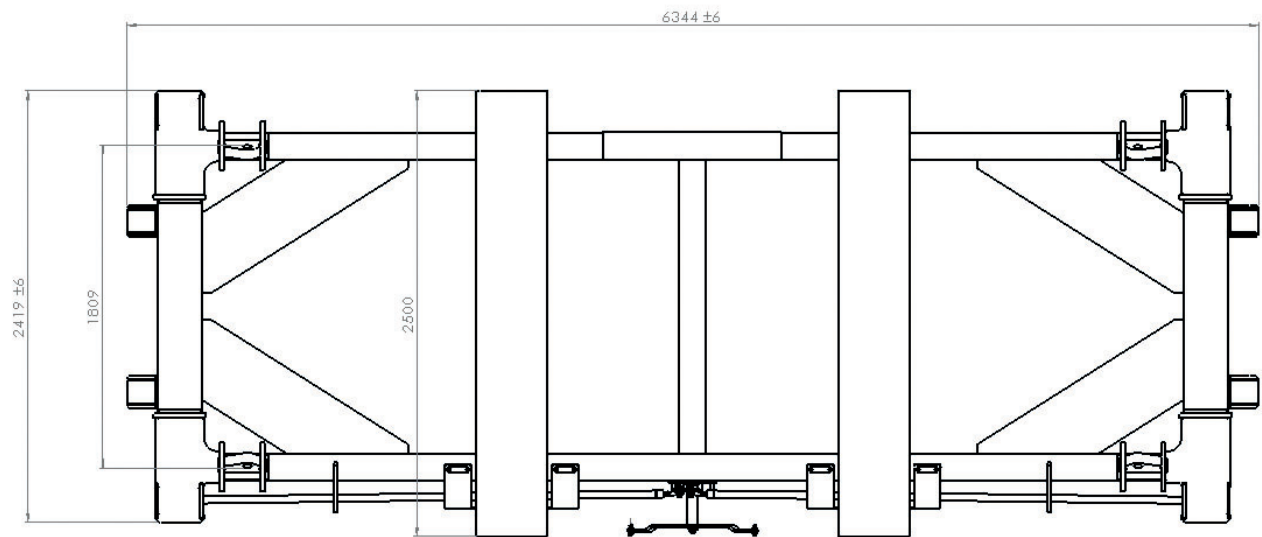
160t lifting beam with integrated sheaves and motorised hook





# Lifting beams

20/40 feet spreader





# Lifting beams

Special beam



Lifting beam with adjustable lifting points





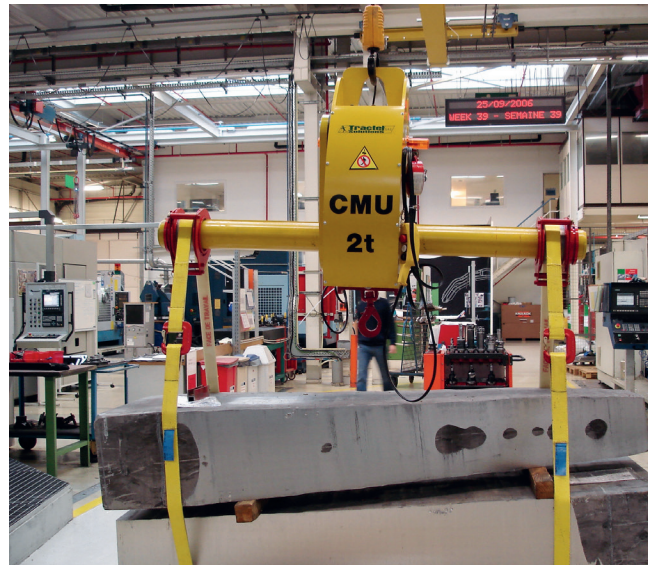
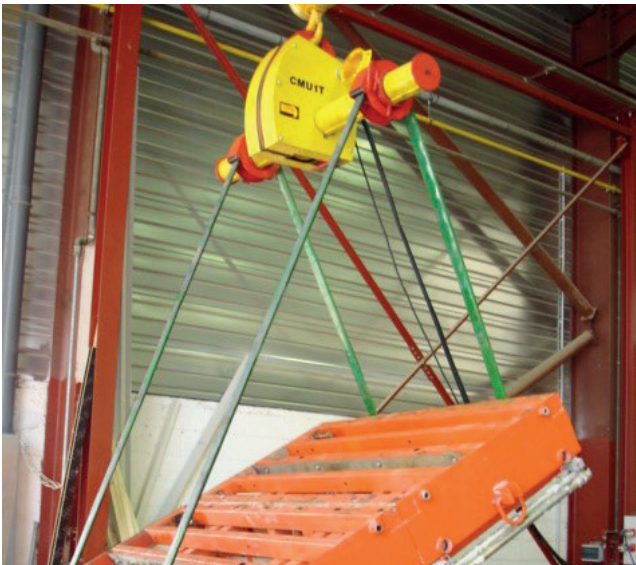
# Load turner pal-turn™

Turning heavy and/or bulky loads can often be difficult and dangerous. These operations often need a lot of space and people. To perform these operations in good conditions, Tractel® offers several solutions using our pal-turn™ load turners. Tractel® Solutions offers the pal-turn™ solution: Easy to use, reliable and with very little maintenance, the Pal-turn™ meets today's handling needs.





# Load turner pal-turn™



# Load turner pal-turn™

## Standard load turner device

### Advantages

- Productivity : 1 single operator instead of 3
- Time : reduced turning time
- Security : reduction of sliding/slipping risks and/or falling risks
- Space : less floor space required
- Efficiency : only one lifting point is necessary and one machine can be used for several applications
- Quality : no marking or damage of the load
- Maintenance : no jolting of the lifting system

## Return on investment in a few months!

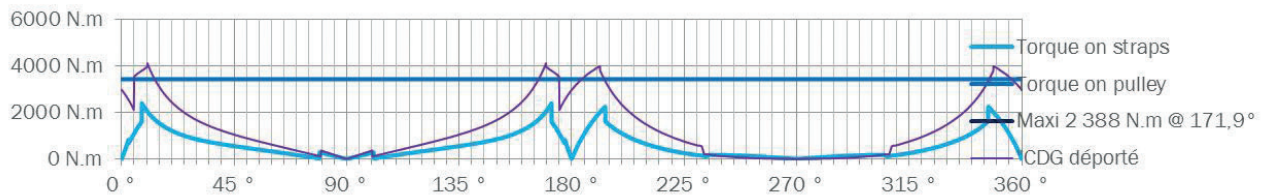
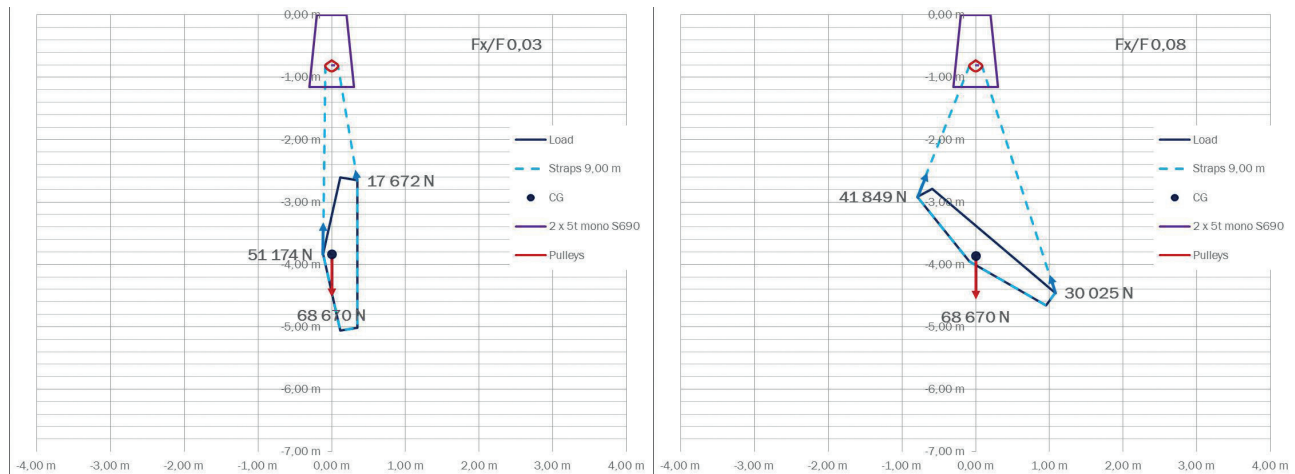
	1 lifting mode: pal-turn™ tube	Multiple lifting means : mono-pulley pal-tum™
	pal-turn™ tube	pal-turn™ mono-pulley
Capacity	Standard Special	1t/2t/5t/10t/20t/40t 250kg to 30t and more
TUBE LENGTH	1 to 6 mètres	/
LENGTH OF LOAD	Approximately 1 to 15 meters according to the load's rigidity	According to the number of mono-pulleys, the lifting means and the load's rigidity
STANDARD CONFIGURATION	Wire remote control, Mono-speed motorisation IP54 electrical protection index Design according to FEM A5 lifting speed 30 m/min	
OPTIONS	Chains pulleys for high temperature loads (> 80 °C) Autonomous model (with batteries) Remote control with or without infra-red Double speed motor Frequency inverter Supplementary lifting points, Retractable lower hook. This hook avoids putting down the pal-turn™ in order to perform lifting operations between 2 turnings Chains or straps with length adjusted to the loads' dimensions, polyurethane protection, coated or impregnated, open or endless Electrical protection index IP55 or higher Design according to another FEM class	
	Fixed or adjustable load-centre straps Light and/or sound warning signal when tilting Handling Framework	



# Load turner pal-turn™

## Optimised design

- Every turning application is unique
- According to the detail supplied in the specification sheet, we simulate the turning and determine the necessary motor power dependent on the length of the straps.
- We can then offer you the correct system from the standard range or design a bespoke pal-turn™ system in order to optimize the weight, dimensions, power and price for your application.



## Try it !

Tractel has pal-turns™ available to trial. Please do not hesitate to contact us



# Special clamps

Tractel Solutions SAS manufactures on request a wide range of lifting clamps, either derived standard clamps or designed for a special application.

From a simple polyurethane coating on an existing clamp up to a completely new design, Tractel Solutions SAS offers you a solution for your lifting problem!

## Clamp for loads with parallel sides

Special clamp for lifting, without marking the load, with parallel faces and for all type of material.

Manual operation, semi-automatic or fully automatic.

Jaws can be adapted to the geometry of the load.

Can also be mounted for cylindrical loads or other size constraints.

Designed following specifications.

Customised capacity and dimensions.

Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.



## Semi-automatic clamp for handling rounds or cylinders

Special clamp for lifting cylinders or rounds on a horizontal axis.

Clamp with manual grip and automatic release.

Jaws equipped with curved plates that can be fitted with additional protection to avoid marks and damage to the load.

Designed following specifications.

Customised capacity and dimensions.

Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.



## Automatic clamp for handling rounds or cylinders

Special clamp for lifting cylinders or rounds on a horizontal axis.

Clamp with a fully automatic grip and release.

Jaws equipped with curved plates that can be fitted with additional protections to avoid marks and damage to the load.

Designed following specifications.

Customised capacity and dimensions.

Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.



# Special clamps

## Semi-automatic clamp for tubes and pipes

Special clamp for lifting tubes and pipes on a horizontal axis.  
Clamp with manual grip and automatic release.  
Jaws equipped with curved plates to fix interchangeable polyurethane protections (adhesive or screwed) to avoid marks and damages on the load.  
Designed following specifications.  
Customised capacity and dimensions.  
Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.



## Clamp for lifting and turning steel drums

Special clamp for lifting and turning steel drums or other rigid cylindrical products.  
Vertical gripping then turning the load at 90° or 180° manually. Indexing at all 90° positions.  
Clamp with manual grip and automatic release.  
Jaws are equipped with curved plates with protection, ensuring a good grip on the load while leaving no marks.  
Designed following specifications.  
Customised capacity and dimensions.  
Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.



## Automatic clamp for lifting and turning steel drums

Special clamp for lifting and turning steel drums or other rigid cylindrical products.  
Vertical gripping then turning the load at 180° by means of a reduction gear.  
Clamp with a fully automatic grip and release.  
Jaws are equipped with curved plates with protection, ensuring a good grip on the load while leaving no marks.  
Designed following specifications.  
Customised capacity and dimensions.  
Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.



## Automatic clamp for lifting and turning cylindrical loads

Special clamp for lifting and turning cylindrical loads with different sizes (diameter and height).  
Parallel arm translation.  
Vertical gripping then turning the load at 180° by means of a reduction gear.  
Clamp with a fully automatic grip and release.  
"V" jaws equipped with protection ensuring a good grip on the load while leaving no marks.  
Designed following specifications.  
Customised capacity and dimensions.  
Designed without bearing welds, according to FEM rules and machine directive 2006/42/CE.

