Bollettino Tecnico
Technical information
Bulletin technique
Boletin técnico
Technisches infoblatt

SERIE 16,5 S - 18 SP

- G104 -

N°: **136 - 09/11/2012**
Ed: **11/2012**

PM 16522 S - PM 16522 S LC
PM 16523 S - PM 16523 S LC
PM 16524 S - PM 16524 S LC
PM 16525 S - PM 16525 S LC
PM 16526 S - PM 16526 S LC
PM 16527 S - PM 16527 S LC

PM 18022 SP - PM 18022 SP LC
PM 18023 SP - PM 18023 SP LC
PM 18024 SP - PM 18024 SP LC
PM 18025 SP - PM 18025 SP LC
PM 18026 SP - PM 18026 SP LC
PM 18027 SP - PM 18027 SP LC

1 Installazione - Installation - Installation - Instalacion - Installation

1.1 - Senso di montaggio - Mounting way - Sens du montage - Sentido de montaje - Montagerichtung

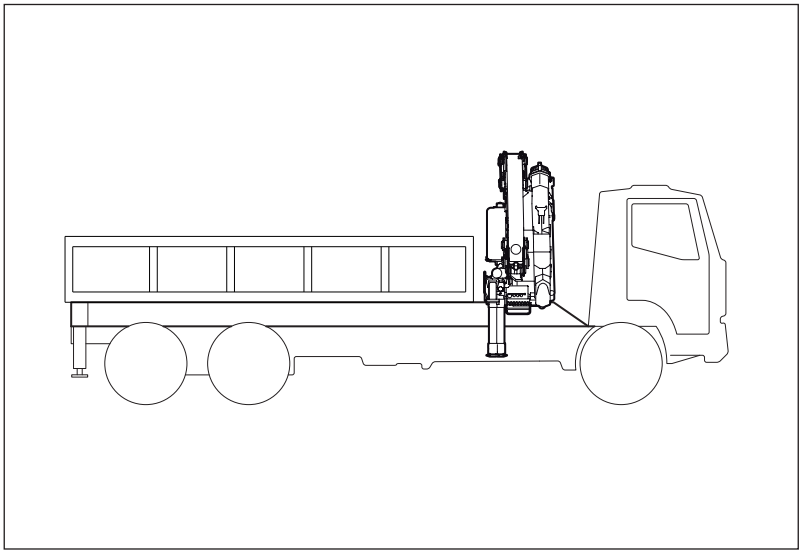
In versione standard la gru deve essere installata con gli stabilizzatori verso il cassone (il pacco bracci, quando la gru è in posizione di riposo deve essere dalla parte della cabina).

In standard version the crane shall be installed with outriggers placed towards the truck body (the booms must be by truck cabin side when the crane is in folded position).

Dans la version standard, la grue doit être installée avec les stabilisateurs vers la carrosserie (le groupe bras, lorsque la grue est en position de repos doit être du côté de la cabine).

En la versión standard, la grúa debe instalarse con los estabilizadores dirigidos hacia el cajón (con la grúa en posición de reposo, el paquete brazos debe estar posicionado del lado de la cabina)

In der Standardversion muß der Kran mit zur Pritsche zeigenden Stützen installiert werden (die Auslegergruppe muß sich bei Kran in Ruhestellung auf der Kabinenseite befinden),



1.2 - Punto morto - Dead point - Point mort - Punto muerto - Totpunkt

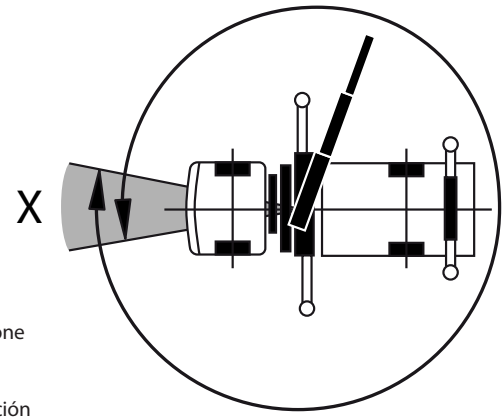
Con la gru installata come descritto dal punto 1.1 il punto morto viene a trovarsi sopra la cabina di guida.

With crane installed as described in point 1.1, dead point (center) gets placed upon the truck cabin.

Avec la grue installée comme décrit au point 1.1 le point mort se trouve sur la cabine de conduite.

Con grúa instalada según el punto 1.1, el punto muerto (centro) se encuentra sobre la cabina de conducción

Wird der Kran wie in Punkt 1.1 installiert, befindet sich der Totpunkt über der Fahrerkabine,



X = Punto morto di rotazione
Slewing dead point
Point mort de rotation
Punto muerto de rotación
Rotationstotpunkt

Angolo di rotazione Slewing angle Angle de rotation Angulo de rotación Rotationswinkel	400°
Coppia di rotazione Couple of rotation Angle de rotation Angulo de rotación Rotationswinkel	19,7 kN·m *(14530 ft-lbs)*

1.3 - **Pesi** - Weights - Poids - Pesos - Gewichte

Gru - Crane - Grue - Grua - Krane

STD	kg	*lbs*
16522 S - 18022 SP	1930	*4255*
16523 S - 18023 SP	2070	*4565*
16524 S - 18024 SP	2195	*4840*
16525 S - 18025 SP	2320	*5115*
16526 S - 18026 SP	2430	*5360*
16527 S - 18027 SP	2525	*5570*

LC	kg	*lbs*
16522 S LC - 18022 SP LC	2040	*4500*
16523 S LC - 18023 SP LC	2180	*4810*
16524 S LC - 18024 SP LC	2310	*5095*
16525 S LC - 18025 SP LC	2435	*5370*
16526 S LC - 18026 SP LC	2545	*5615*
16527 S LC - 18027 SP LC	2635	*5810*

Ancoraggio - Anchorage - Ancrage - Fijacion - Verankerung

	kg	*lbs*
4 Tiranti 4 Tierods 4 Tirants 4 Tirantes 4 Zugstangen	40	*90*
6 Tiranti 6 Tierods 6 Tirants 6 Tirantes 6 Zugstangen	-	-
8 Tiranti 8 Tierods 8 Tirants 8 Tirantes 8 Zugstangen	75	*170*

Olio - Oil - Huil - Aceite - Öl

	kg	*lbs*
Rifornimento olio Oil refuelling Ravitailment huile Llenado aceite Ölfüllung	130	*290*

Serbatoio - Tank - Réservoir - Deposito - Tank

	kg	*lbs*
Serbatoio e supporto Tank and support Réservoir et support Deposito y soporte Tank und Träger	40	*90*

Stabilizzazione - Stabilisation - Stabilisation - Estabilización - Stabilisierung

	kg	*lbs*
Martinetti stabilizzatori fissi Fixed outriggers cylinders Vérin stabilisateurs fixes Cilindro estabilizadores fijos Feststützzylindern	95	*210*
Martinetti stabilizzatori rotanti Rotating outriggers cylinders Vérin stabilisateurs tournants Cilindro estabilizadores rotatorios Drehstützzylindern	130	*290*
Aumento di peso per stabilizzatori STD Idraulici Weight increase due to STD Hydraulic outtrigger boom Augmentation du poids pour stabilisateurs STD hydraulique Aumento de peso para estabilizadores STD hidráulica Gewichtszunahme wegen STD hydraulische	30	*70*
Aumento di peso per stabilizzatori SXL Idraulici Weight increase due to SXL Hydraulic outtrigger boom Augmentation du poids pour stabilisateurs SXL hydraulique Aumento de peso para estabilizadores SXL hidráulica Gewichtszunahme wegen SXL hydraulische	130	*290*

Accessori - Accessories - Accessoires - Accesorios - Zubehör

	kg	*lbs*
Posto in alto Top seat Siege en haut Asiento en columna Hochsitz	125	*280*
Posto in piedi Standing control position Poste debout Puesto en pie Stehplatz	65	*145*

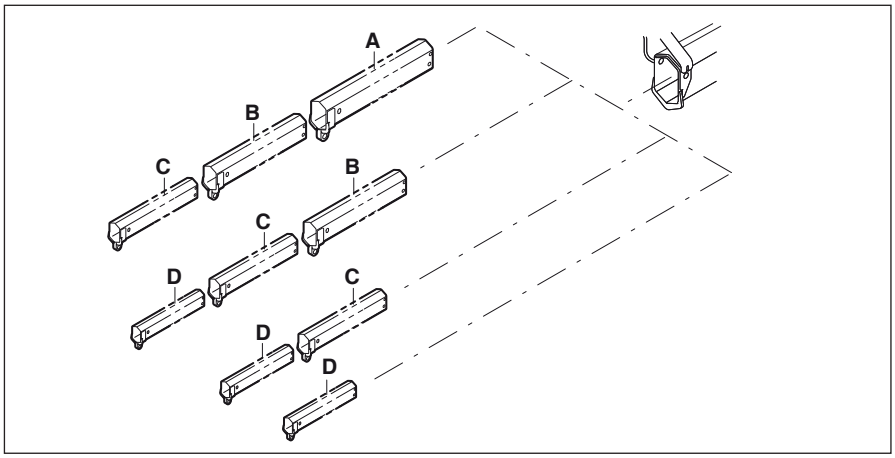
Traversa supplementare -
Supplementary crossbeam - Traverse supplementaire - Traversaño suplementario - Zusätzlicher Querträger

	kg	*lbs*
6,30 T - F 2,0	125	*280*
6,30 T - S 3,3	180	*400*
6,30 T - SI 3,3	200	*445*

Attivazioni - Activations - Activations - Activationes - Aktivierungen

	16522 S 18022 SP kg *(lbs)*	16523 S 18023 SP kg *(lbs)*	16524 S 18024 SP kg *(lbs)*	16525 S 18025 SP kg *(lbs)*	16526 S 18026 SP kg *(lbs)*	16527 S 18027 SP kg *(lbs)*
1a attivazione gru con avvolgitubo 1st crane activation with pipe winder 1ère activation grue avec enrouler 1°activation grúa con bobinador de tubo 1st aktivierunge mit ronkwickler	70 *(155)*	70 *(155)*	75 *(170)*	80 *(180)*	85 *(190)*	-
1a+2a attivazione gru con avvolgitubo 1st+2nd crane activation wiyh pipe winder 1ère+2ème activation grue avec enrouler 1st+2nd activation grúa con bobinador de tubo 1st+2nd aktivierunge mit ronkwickler	130 *(290)*	130 *(290)*	135 *(300)*	140 *(310)*	145 *(320)*	-
1a attivazione gru con raccoglitubo 1st crane activation with pipe clamp 1ère activation grue avec range-tuyaux 1° activatión grúa con recogedor de tubo 1st aktivierunge mit rohraufnahme	70 *(155)*	85 *(190)*	110 *(245)*	135 *(300)*	145 *(320)*	155 *(345)*
1a+2a attivazione gru con raccoglitubo 1st+2nd activation crane with pipe clamp 1ère+2ème activation grue avec range-tuyaux 1st+2nd activatión grúa con recogedor de tubo 1st+2nd aktivierunge mit rohraufnahme	85 *(190)*	100 *(225)*	125 *(280)*	155 *(345)*	170 *(375)*	180 *(400)*

Prolunghe manuali - Manual extensions - Rallonges manuelles - Extensiones manuales - Manuelle Verlängerungen

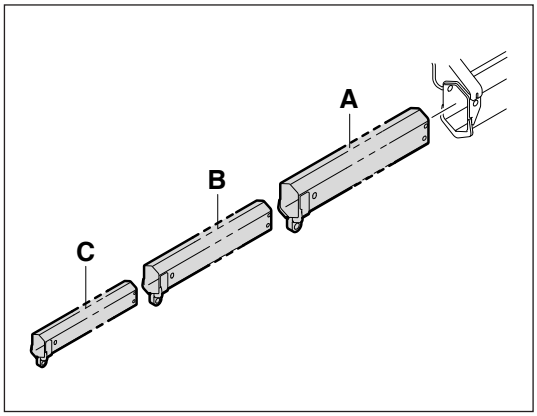


	Gru - Crane - Grue - Grua - Krane						kg	*lbs*
	16522 S 18022 SP	16523 S 18023 SP	16524 S 18024 SP	16525 S 18025 SP	16526 S 18026 SP	16527 S 18027 SP		
A	-	•	-	-	-	-	75	*170*
B	-	•	•	-	-	-	70	*155*
C	-	•	•	•	-	-	65	*145*
D	-	-	•	•	•	-	45	*100*

Prolunghe articolate - Jibs - Rallonges articulées - Extensiones articuladas - Gelenkverlängerungen

	18022 SP	18023 SP	18024 SP	18025 SP	18026 SP	18027 SP	kg	*lbs*
J 252	-	-	-	•	-	-	305	*675*
J 512.20	-	•	•	-	-	-	390	*860*
J 513.20	-	•	•	-	-	-	445	*985*
J 514.20	-	-	•	-	-	-	490	*1085*

Prolunghe manuali su prolunga articolata - Manual extensions on jib - Rallonges manuelles sur la rallonge articulée - Extensiones manuales en la extensión articulada - Manuelle Verlängerungen an Gelenkverlängerung



	J252	J 512.20	J 513.20	J 514.20	kg	lbs
A	-	•	-	-	35	80
B	-	•	•	-	25	60
C	-	•	•	•	20	45

1.4 - **Dimensioni d'ingombro** - Overall dimensions - Dimensions d'encombrement - Dimensiones - Abmessungen

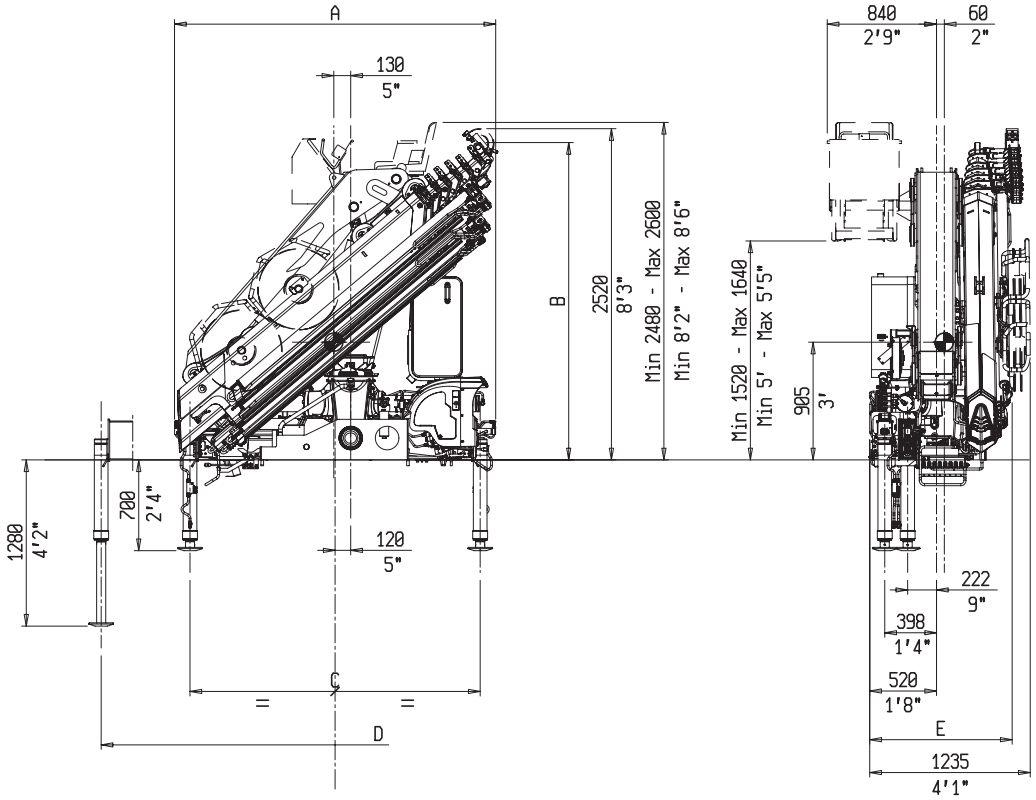
A	mm	ft
STD	2455	8'1"
STD+ROT	2490	8'2"
SXL	2480	8'2"
SXL+ROT	2495	8'2"
Ver.27+Att	2525	8'3"

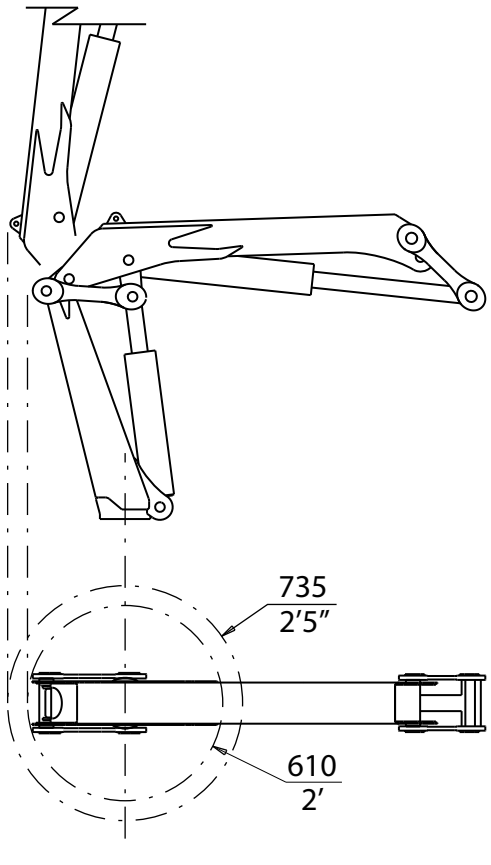
B	mm	ft
Vers.22	2250	7'5"
Vers.23	2250	7'5"
Vers.24	2250	7'5"
Vers.25	2305	7'7"
Vers.26	2365	7'9"
Vers.27	2405	7'11"

C	mm	ft
STD	2230	7'4"
STD+ROT	2300	7'7"
SXL	2230	7'4"
SXL+ROT	2300	7'7"

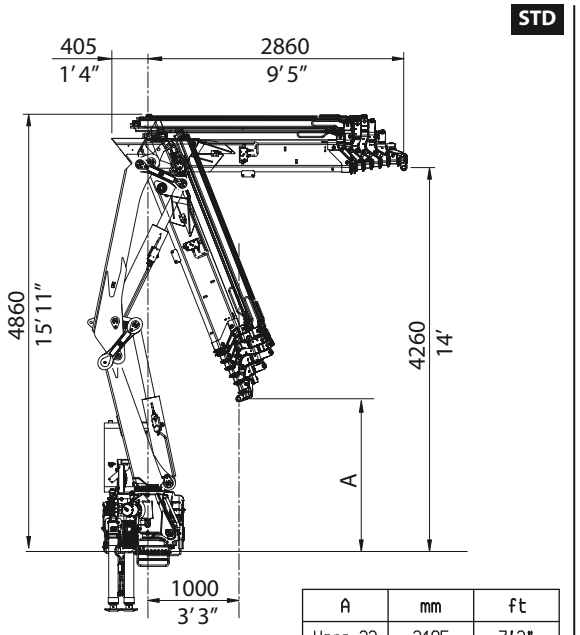
D	mm	ft
STD	5030	16'6"
STD+ROT	5100	16'9"
SXL	6550	21'6"
SXL+ROT	6620	21'9"

E	mm	ft
Vers.22	965	3'2"
Vers.23	965	3'2"
Vers.24	965	3'2"
Vers.25	1025	3'4"
Vers.26	1045	3'5"
Vers.27	1085	3'7"

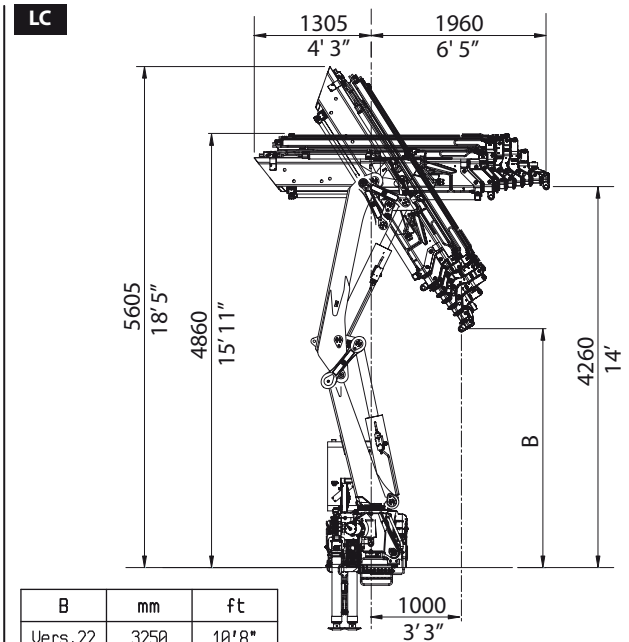




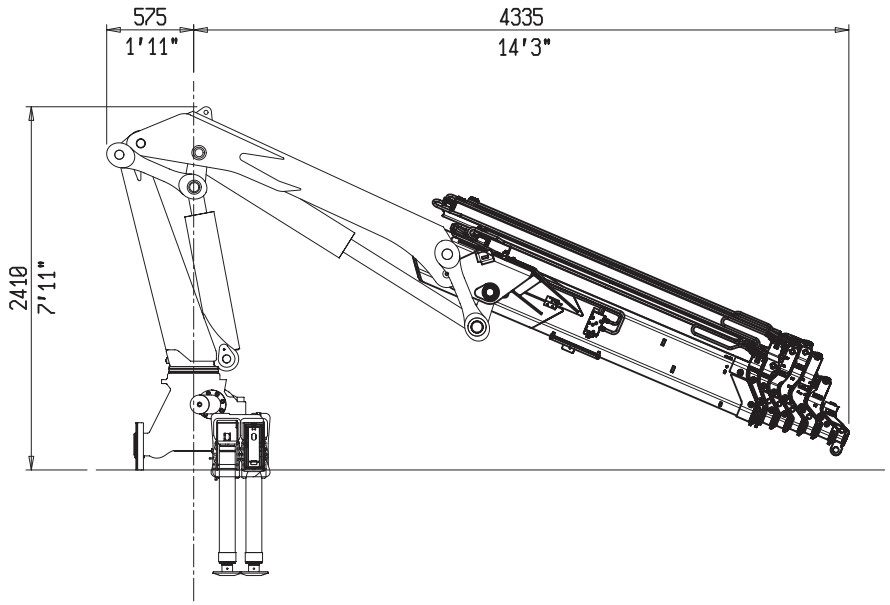
Raggio di ingombro in fase di rotazione
Overall ray during rotation
Rayon d'encombrement en phase de rotation
Radio ocupado durante la rotacion
Raumradius bei rotation



A	mm	ft
Vers.22	2185	7'2"
Vers.23	2090	6'10"
Vers.24	1990	6'6"
Vers.25	1890	6'2"
Vers.26	1765	5'9"
Vers.27	1670	5'6"



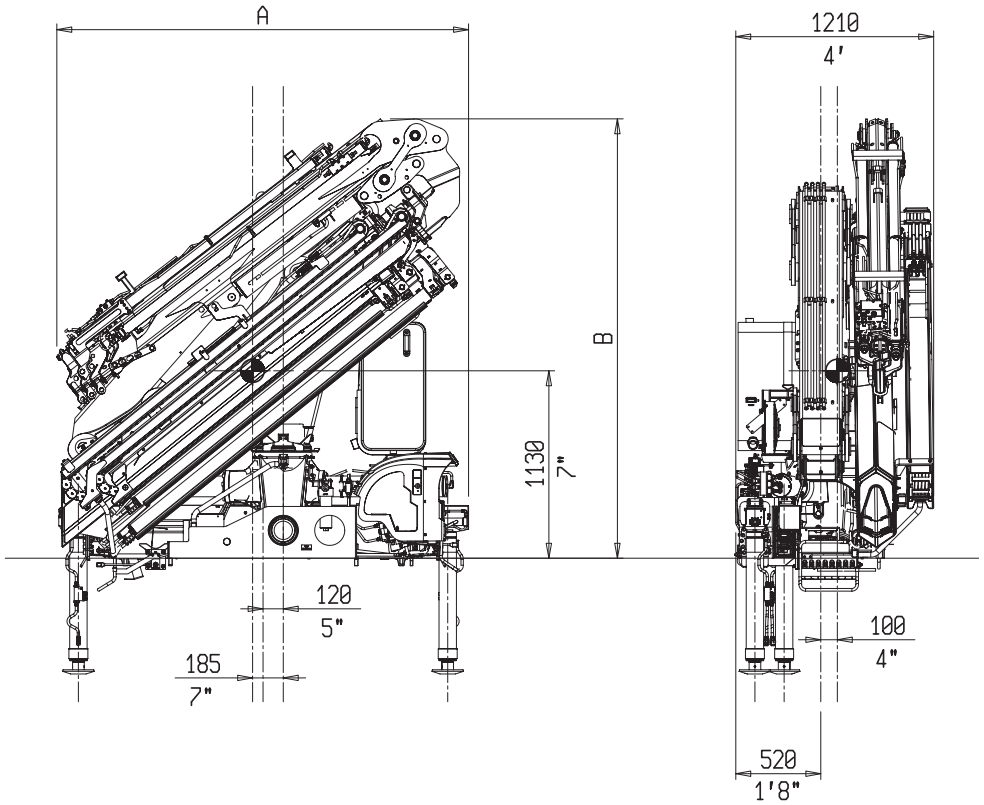
B	mm	ft
Vers.22	3250	10'8"
Vers.23	3135	10'3"
Vers.24	3015	9'11"
Vers.25	2905	9'6"
Vers.26	2770	9'1"
Vers.27	2660	8'9"

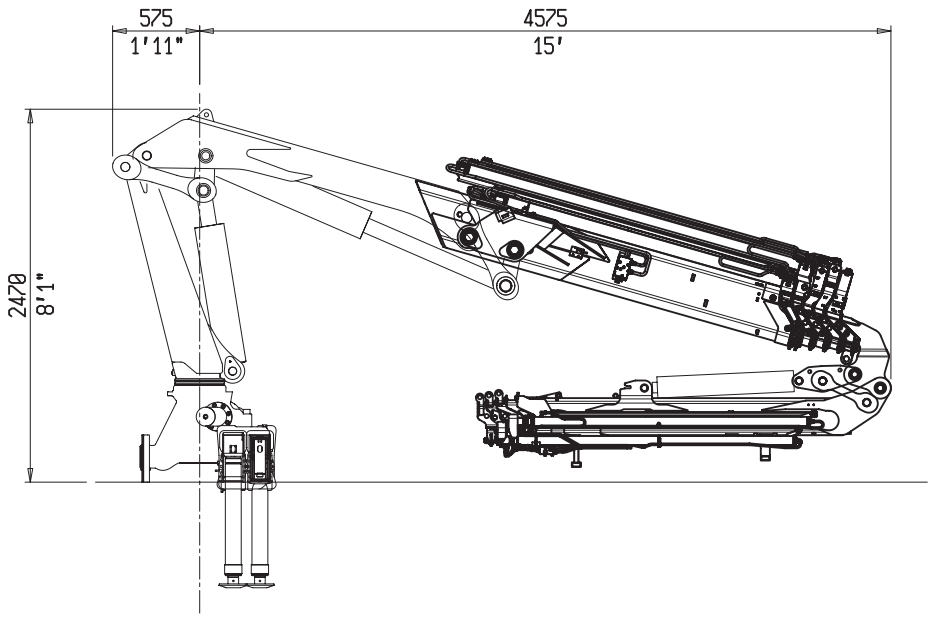


Dimensioni d'ingombro macchina base con prolunga articolata
Overall dimensions of standard basic machine with jib
Dimensions d'encombrement de la machine de base avec la flèche de rallonge articulée
Dimensiones de máquina base con alargador articulado
Abmessungen der Basismaschine mit Gelenkverlängerung

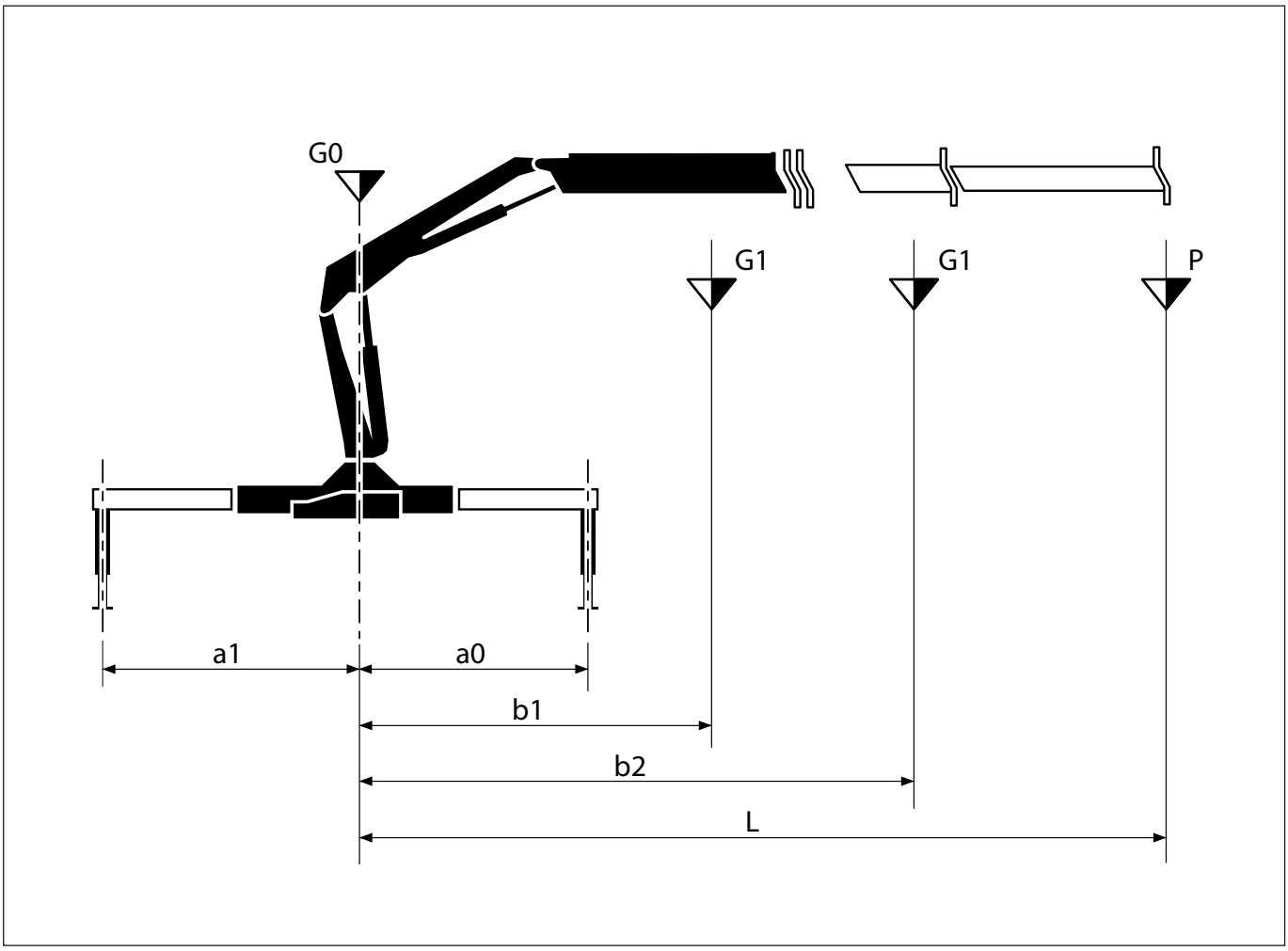
A	mm	ft
18023 + J 512.20	2500	8'2"
18023 + J 513.20	2500	8'2"
18024 + J 512.20	2500	8'2"
18024 + J 513.20	2500	8'2"
18024 + J 514.20	2500	8'2"
18025 + J 252	2500	8'2"

B	mm	ft
18023 + J 512.20	2645	8'8"
18023 + J 513.20	2645	8'8"
18024 + J 512.20	2660	8'9"
18024 + J 513.20	2660	8'9"
18024 + J 514.20	2660	8'9"
18025 + J 252	2580	8'6"





1.5 - Tabella baricentri - Center of gravity table - Planche barycentres - Tabla de centros de gravedad - Tabelle der schwerpunkte



a0 = Asse colon./ Stab.Dx.
Colum axis/right outrigger
Axe bras/ Stab.Droi.
Eje columna/estab. der.
Säulenachse/Rechte Stütze

a1 = Asse colon./ Stab.Sx.
Colum axis/left outrigger
Axe bras/ Stab.Gauche.
Eje columna/estab. izq.
Säulenachse/LinkeStütze

b1 - b2 = Asse colon./baricentro parti sospese.
Colum axis/centre of gravity overhung parts
Axe bras/barycentre pièces suspendues.
Eje columna/centro de gr. partes susp.
Säulenachse/Schwerp. hängende Teile

L = Sbracc.max.estensione (mensola 15°).
Max idraulyc reach (main boom 15°)
Extension max. (flèche 15°).
Ext. máx. alarg. (1º brazo art. 15°)
Max. Ausladung (Hubrahmen 15°)

G0 = Peso parti fisse.
Fixed parts weight
Poids pièces fixes.
Peso partes fijas.
Gewicht feste Teile

G1 = Peso parti sospese.
Overhung parts weight
Poids pièces suspendues.
Peso partes suspendidas.
Gewicht hängende Teile

P = Peso sollevato allo sbraccio L.
Weight liftat the max extension L
Poids levage à l'extension L.
Peso levantado en extensión L.
Gehobene Last bei Ausladung L

PM 16.5 S - 18 SP (G104)

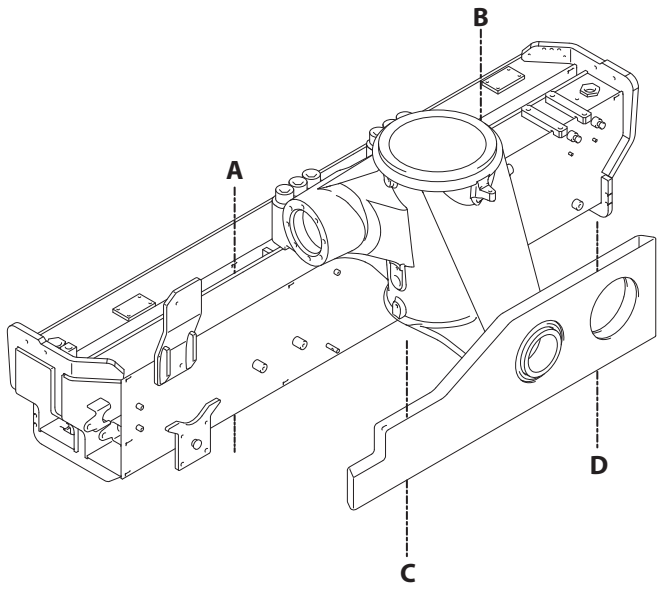
Gru Crane Grue Grua Kran	Br.Stab Outtrigers Booms Bras Stabilisateur Brazos Estabilizadores Stabilisators	a0 mm *(ft)*	a1 mm *(ft)*	b1 (CR) mm *(ft)*	b2 (WA2) mm *(ft)*	L (CL) mm *(ft)*	G0 (WC) kg *(lbs)*	G1 (WA) kg *(lbs)*	P (CL2) kg *(lbs)*
PM 16522 S	STD	2395 *(7' 10")*	2635 *(8' 8")*	2380 *(7' 10")*	3590 *(11' 9")*	7700 *(25' 3")*	1390 *(3065)*	845 *(1865)*	1910 *(4215)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 16523 S	STD	2395 *(7' 10")*	2635 *(8' 8")*	2475 *(8' 1")*	4400 *(14' 5")*	9900 *(32' 6")*	1390 *(3065)*	985 *(2175)*	1380 *(3045)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 16524 S	STD	2395 *(7' 10")*	2635 *(8' 8")*	2550 *(8' 4")*	5220 *(17' 2")*	12200 *(40')*	1390 *(3065)*	1110 *(2450)*	1010 *(2230)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 16525 S	STD	2395 *(7' 10")*	2635 *(8' 8")*	2605 *(8' 7")*	6070 *(19' 11")*	14450 *(47' 5")*	1390 *(3065)*	1235 *(2725)*	740 *(1635)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 16526 S	STD	2395 *(7' 10")*	2635 *(8' 8")*	2650 *(8' 8")*	6870 *(22' 6")*	16750 *(54' 11")*	1390 *(3065)*	1345 *(2970)*	550 *(1215)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 16527 S	STD	2395 *(7' 10")*	2635 *(8' 8")*	2675 *(8' 9")*	7425 *(24' 4")*	19000 *(62' 4")*	1390 *(3065)*	1440 *(3175)*	410 *(905)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		

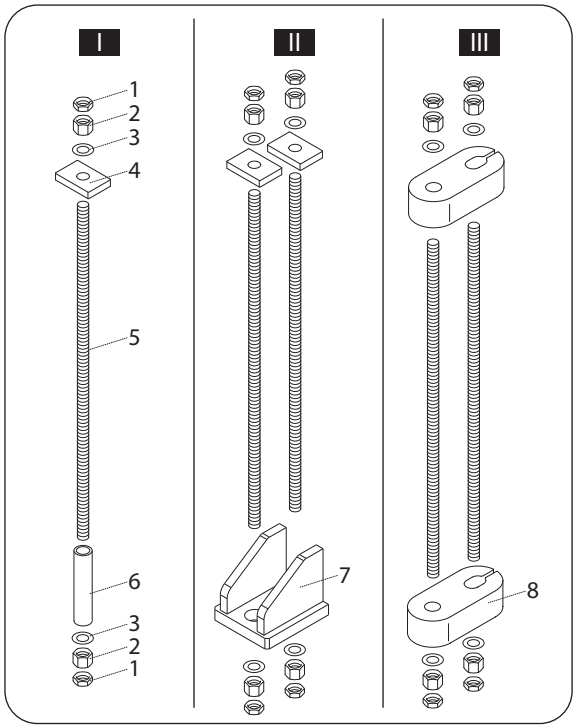
Gru Crane Grue Grua Kran	Br.Stab Outtrigers Booms Bras Stabilisateur Brazos Estabilizadores Stabilisators	a0 mm *(ft)*	a1 mm *(ft)*	b1 (CR) mm *(ft)*	b2 (WA2) mm *(ft)*	L (CL) mm *(ft)*	G0 (WC) kg *(lbs)*	G1 (WA) kg *(lbs)*	P (CL2) kg *(lbs)*
PM 18022 SP	STD	2395 *(7' 10")*	2635 *(8' 8")*	2380 *(7' 10")*	3590 *(11' 9")*	7700 *(25' 3")*	1390 *(3065)*	845 *(1865)*	2060 *(4545)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 18023 SP	STD	2395 *(7' 10")*	2635 *(8' 8")*	2475 *(8' 1")*	4400 *(14' 5")*	9900 *(32' 6")*	1390 *(3065)*	985 *(2175)*	1490 *(3285)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 18024 SP	STD	2395 *(7' 10")*	2635 *(8' 8")*	2550 *(8' 4")*	5220 *(17' 2")*	12200 *(40')*	1390 *(3065)*	1110 *(2450)*	1060 *(2340)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 18025 SP	STD	2395 *(7' 10")*	2635 *(8' 8")*	2605 *(8' 7")*	6070 *(19' 11")*	14450 *(47' 5")*	1390 *(3065)*	1235 *(2725)*	800 *(1765)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 18026 SP	STD	2395 *(7' 10")*	2635 *(8' 8")*	2650 *(8' 8")*	6870 *(22' 6")*	16750 *(54' 11")*	1390 *(3065)*	1345 *(2970)*	600 *(1325)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		
PM 18027 SP	STD	2395 *(7' 10")*	2635 *(8' 8")*	2675 *(8' 9")*	7425 *(24' 4")*	19000 *(62' 4")*	1390 *(3065)*	1440 *(3175)*	440 *(975)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1515 *(3345)*		

Gru Crane Grue Grua Kran	Br.Stab Outtrigers Booms Bras Stabilisateur Brazos Estabilizadores Stabilisators	a0 mm *(ft)*	a1 mm *(ft)*	b1 (CR) mm *(ft)*	b2 (WA2) mm *(ft)*	L (CL) mm *(ft)*	G0 (WC) kg *(lbs)*	G1 (WA) kg *(lbs)*	P (CL2) kg *(lbs)*
PM 18023 SP + J 512.20	STD	2395 *(7' 10")*	2635 *(8' 8")*	3210 *(10' 6")*	6390 *(20' 12")*	16000 *(52' 6")*	1405 *(3100)*	1475 *(3255)*	900 *(1985)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1530 *(3375)*		
PM 18023 SP + J 513.20	STD	2395 *(7' 10")*	2635 *(8' 8")*	3330 *(10' 11")*	6870 *(22' 6")*	17700 *(58' 1")*	1405 *(3100)*	1530 *(3375)*	510 *(1125)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1530 *(3375)*		
PM 18024 SP + J 512.20	STD	2395 *(7' 10")*	2635 *(8' 8")*	3200 *(10' 6")*	7345 *(24' 1")*	18300 *(60')*	1405 *(3100)*	1620 *(3575)*	440 *(975)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1530 *(3375)*		
PM 18024 SP + J 513.20	STD	2395 *(7' 10")*	2635 *(8' 8")*	3320 *(10' 11")*	7835 *(25' 8")*	20000 *(65' 7")*	1405 *(3100)*	1675 *(3695)*	330 *(730)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1530 *(3375)*		
PM 18024 SP + J 514.20	STD	2395 *(7' 10")*	2635 *(8' 8")*	3385 *(11' 1")*	8150 *(26' 9")*	21700 *(71' 2")*	1405 *(3100)*	1725 *(3805)*	270 *(600)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1530 *(3375)*		
PM 18025 SP + J 252	STD	2395 *(7' 10")*	2635 *(8' 8")*	3185 *(10' 5")*	8255 *(27' 1")*	20000 *(65' 7")*	1405 *(3100)*	1720 *(3795)*	280 *(620)*
	SXL	3155 *(10' 4")*	3395 *(11' 2")*				1530 *(3375)*		

1.6 - **Ancoraggio** - Anchorage - Ancrage - Fijacion - Verankerung

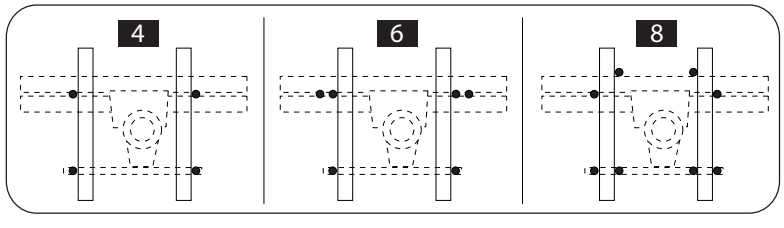
Schema di ancoraggio - Anchoring drawing - Schéma d'ancrage - Esquema de fijación - Verankerungsschema						
1	Dado basso	Low nut	Ecrou bas	Tuerca baja	Untermutter	M 30 x2
2	Dado alto	Hight nut	Ecrou haut	Tuerca alta	Abdeckmutter	M 30 x2
3	Rondella	Washer	Rondelle	Arandella	Scheibe	31 x 58
4	Staffa	Bracket	Etrier	Estribo	Bügel	
5	Tirante	Tierod	Tirant	Tirante	Zugstange	M 30 x 2 L=1100 mm
6	Boccola	Bushing	Douille	Casquillo	Buchse	
7	Staffa	Bracket	Etrier	Estribo	Bügel	
8	Staffa	Bracket	Etrier	Estribo	Bügel	

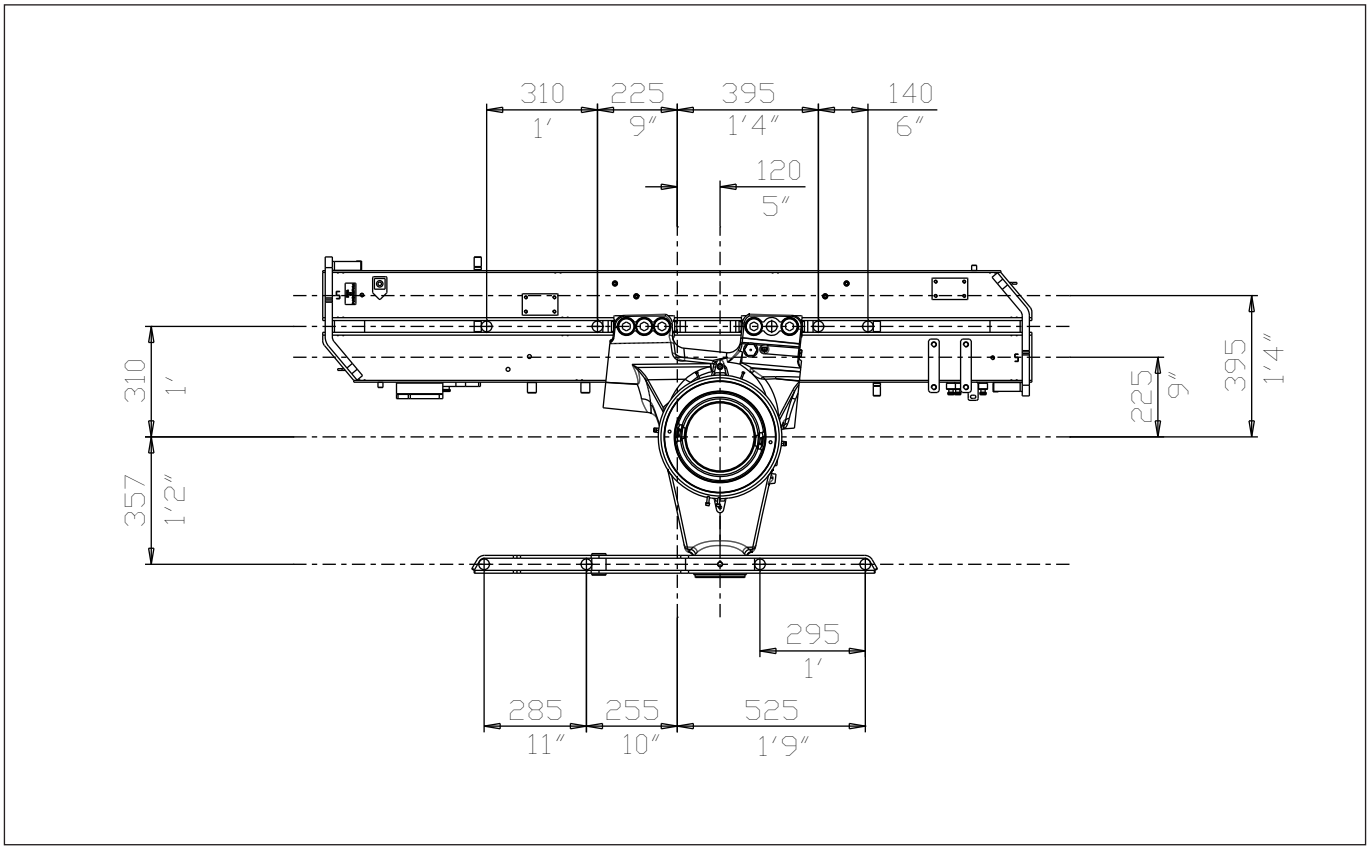




Tiranti Tierods Tirants Tirantes Zugstangen	A	B	C	D
4	**I**	**I**	**I**	**I**
6	-	-	-	-
8	**III**	**III**	**III**	**III**

	daN·m *(ft lbs)*
Coppia di serraggio dei tiranti di ancoraggio Setting torque of anchorage tierods Couple de serrage des tirants d'ancrage Par de ajuste de los tirantes de fijacion Anzugsmoment der ankerzugstangen	70 *(515)*





1.7 - Momento massimo dinamico gru - Maximum dynamic moment of the crane - Moment maximum dynamique grue Maximo momento dinamico de la grua - Maximaler dynamikmonemt des krans

	kN·m *(ft lbs)*
PM 16,5 S	209 *(154150)*
PM 18 SP	209 *(154150)*

1.8 - Forza massima esercitata sul terreno dagli stabilizzatori - Maximum force exerted on ground by each outrigger - Force maximum exercèe sur le terrain par chaque stabilisateur - Fuerza máxima ejercitada sobre el terreno por cada estabilizador - Max. übertragene kraft der stützen auf den boden

Bracci Stabilizzatori Outtrigers Booms Bras Stabilisateur Brazos Estabilizadores Stabilisators	kN *(lbs)*
STD	80 *(17985)*
SXL	60 *(13490)*

2 Impianto idraulico - Hydraulic circuts - Installation hydraulique - Circuitos hidraulicos - Hydraulikanlage

			16.5 S	16.5 S LC	18 SP	18 SP LC
Portata pompa Pump capacity Capacité de la pompe Capacidad de la bomba Pumpenleistung	Danfoss	l/min	80	80	80	80
		gals/min	*21*	*21*	*21*	*21*
	Hydrocontrol	l/min	40	40	/	/
		gals/min	*11*	*11*	/	/
Pressione massima Maximum pressure Pression maximum Présion máxima Max. Druck		MPa	30.5	30.5	30.5	30.5
		psi	*4420*	*4420*	*4420*	*4420*
Limitatore di momento Load limit Limiteur de moment Limitador de momento Momente begrenzer		MPa	28.5	29	30	30.5
		psi	*4180*	*4210*	*4350*	*4420*