HOME

INFORMATION

Since 1959

Cranes, in all the languages of the world

BOLLETTINO TECNICO
105/02 DEL 28/01/2002

OGGETTO:
GRU PM SERIE 41 / 45

Il presente bollettino ha lo scopo di portare a conoscenza della rete commerciale ed assistenziale tutte quelle notizie tecnico/commerciali riguardanti la nuova serie di macchine citate in oggetto.
Riteniamo che ciò possa garantire una sufficiente conoscenza preliminare sulle varie problematiche legate all'installazione della macchina sull'autocarro.

Par.1 Installazione	R.00
Par.2 Impianto idraulico . . .	R.00
Par.3 Impianto elettrico	R.00
Par.4 Diagrammi portate . . .	R.00
Par.5 Notizie Tecniche	R.00
Par.6 Accessori	R.00
Par.7 Appendice	R.00

R.00 = Stato di revisione del paragrafo

NB: I dati riportati in questa pubblicazione sono a titolo indicativo. L'Autogru PM si riserva di apportare in qualunque momento modifiche ai modelli descritti, sia per ragioni di natura tecnica che commerciale, inoltre non si assume responsabilità circa eventuali errori nella pubblicazione.

- Tolleranze sulle dimensioni e sui pesi ± 5%.

TECHNICAL INFORMATION
105/02 OF 28/01/2002

SUBJECT:
PM SERIE 41 / 45

This service information sheet wants to inform our commercial/service network about all technical/commercial details concerning our new above mentioned crane.
We think this information can supply sufficient preliminary knowledge on various problems that can be linked to crane installation on truck.

Par.1 Installation.....	R.00
Par.2 Hydraulic circuits.	R.00
Par.3 Eletrical circuits...	R.00
Par.4 Load charts.....	R.00
Par.5 Technicals news..	R.00
Par.6 Accessories.....	R.00
Par.7 Appndix.....	R.00

R.00 = Paragrafh revision number

NOTE: technical details here mentioned are indicatives. All details can be modified by AUTOGRU PM SPA for technical or commercial reasons. AUTOGRU PM SPA does not takes liability for any mistake here published.

- ± 5% Tollerance on dimensions and weights.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 28.16.31 - Service fax +39 059 28.06.77

1. INSTALLAZIONE.

1.1 SENSO DI MONTAGGIO.

1. INSTALLATION

1.1 MOUNTING WAY

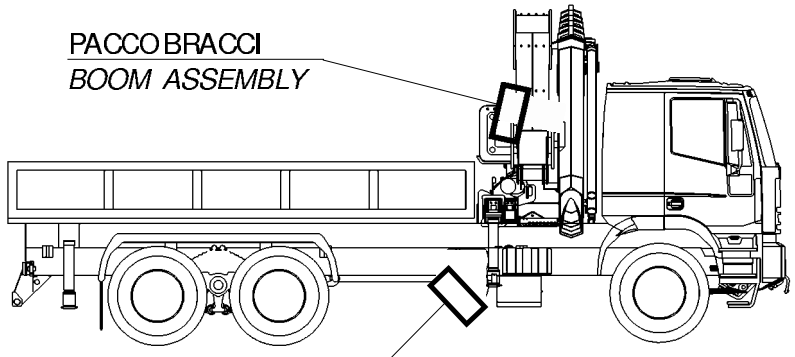
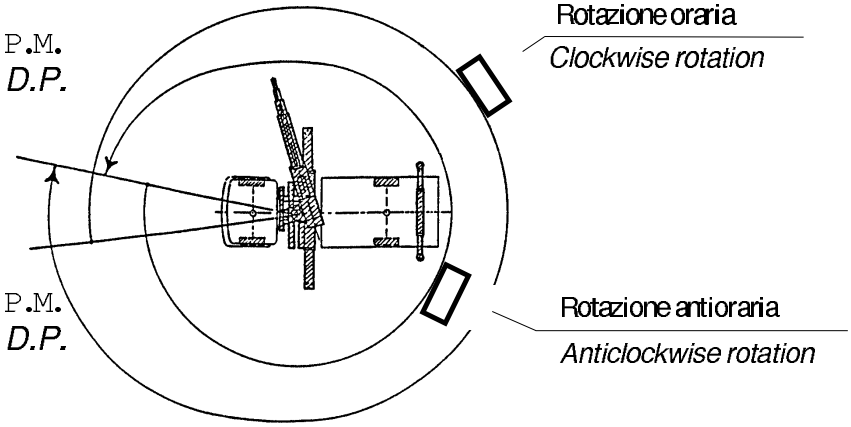


Fig.1-1

1.2 PUNTO MORTO

1.2 DEAD POINT



Angolo di rotazione= 400° o Continua
Slewing angle= 400° or Continue
Coppia di rotazione= 40 kN·m
Couple of rotation= 40 kN·m (28950 ft-lbs)

PM= Punto Morto di rotazione.
D.P= Slewing dead point.

Fig.1-2

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.3 PESI 39 - 42 (Kg) | *1.3 WEIGHTS 39 - 42 (kg-lbs)*

VERSIONE => **VERSION =>**		_22	_23	_24	_25	_26	_27	_28	
GRU STANDARD *	kg	4230	4490	4720	4940	5130	52900	5440	
*STD CRANE **	*lbs*	*9326*	*9899*	*10406*	*10891*	*11310*	*11662*	*11993*	
GRU LC*	kg	4380	4640	4870	5090	5280	5440	5590	
*LC CRANE **	*lbs*	*9656*	*10229*	*10737*	*11222*	*11640*	*11993*	*12324*	
*GRU P.L.U.S.**	kg	4250	4510	4740	4960	5150	5310	5460	
*P.L.U.S. CRANE**	*lbs*	*9370*	*9943*	*10450*	*10935*	*11354*	*11707*	*12037*	
*GRU LC P.L.U.S.**	kg	4400	4660	4890	5110	5300	5460	5610	
*P.L.U.S. LC CRANE**	*lbs*	*9700*	*10274*	*10781*	*11266*	*11684*	*12037*	*12368*	
ANCORAGGIO	kg	110	110	110	110	110	110	110	
ANCHORAGE	*lbs*	*243*	*243*	*243*	*243*	*243*	*243*	*243*	
RIFORNIMENTO OLIO SERBATOIO	kg	200	200	200	200	200	200	200	
OIL TANK REFUELLING	*lbs*	*441*	*441*	*441*	*441*	*441*	*441*	*441*	
1a PROLUNGA MANUALE	kg	155	150	135	110	100	85	65	
1st MANUAL EXTENSION	*lbs*	*342*	*331*	*298*	*243*	*220*	*187*	*143*	
2a PROLUNGA MANUALE	kg	150	135	110	100	85	65	/	
2nd MANUAL EXTENSION	*lbs*	*331*	*298*	*243*	*220*	*187*	*143*	*/*	
3a PROLUNGA MANUALE	kg	/	110	100	85	65	/	/	
3rd MANUAL EXTENSION	*lbs*	*/*	*243*	*220*	*187*	*143*	*/*	*/*	
4a PROLUNGA MANUALE	kg	/	/	85	65	/	/	/	
4th MANUAL EXTENSION	*lbs*	*/*	*/*	*187*	*143*	*/*	*/*	*/*	
5a PROLUNGA MANUALE	kg	/	/	65	/	/	/	/	
5th MANUAL EXTENSION	*lbs*	*/*	*/*	*143*	*/*	*/*	*/*	*/*	
MARTINETTI STABILIZZATORI	kg	110	110	110	110	110	110	110	
OUTRIGGER	*lbs*	*243*	*243*	*243*	*243*	*243*	*243*	*243*	
AUMENTO DI PESO PER STAB. EXTRA LARGHI	kg	135	135	135	135	135	135	135	
WEIGHT INCREASE DUE TO XL OUTRIGGER BOOM	*lbs*	*298*	*298*	*298*	*298*	*298*	*298*	*298*	
STABIL. SUPPLEM. SFILABILI 5.0 SI 100	kg	510	510	510	510	510	510	510	
EXTENSIBLE SUPPL.OUTRIGGER 5.0 SI 100	*lbs*	*1124*	*1124*	*1124*	*1124*	*1124*	*1124*	*1124*	
1a ATTIVAZIONE GRU	kg	120	120	120	120	120	120	120	
1st ACTIVATION CRANE	*lbs*	*265*	*265*	*265*	*265*	*265*	*265*	*265*	
1a+2a ATTIVAZIONE GRU	kg	160	160	160	160	160	160	160	
1st + 2nd ACTIVATION CRANE	*lbs*	*353*	*353*	*353*	*353*	*353*	*353*	*353*	
POSTO IN ALTO	kg	125	125	125	125	125	125	125	
TOP SEAT	*lbs*	*276*	*276*	*276*	*276*	*276*	*276*	*276*	
VERRICELLO P15 COMPLETO DI FUNE (65m)	kg	145	145	145	145	145	145	145	
P15 WINCH COMPLETE WITH CABLE (215' ft)	*lbs*	*320*	*320*	*320*	*320*	*320*	*320*	*320*	
BOZZELLO (1-2 TIRI)	kg	60	60	60	60	60	60	60	
PULLEY (TWO PULL LINE)	*lbs*	*132*	*132*	*132*	*132*	*132*	*132*	*132*	

* BRACCI STABILIZZ. STANDARD - SENZA OLIO NEL SERBATOIO.
* STANDARD *OUTRIGGER BOOMS - WITHOUT OIL IN THE TANK.*

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

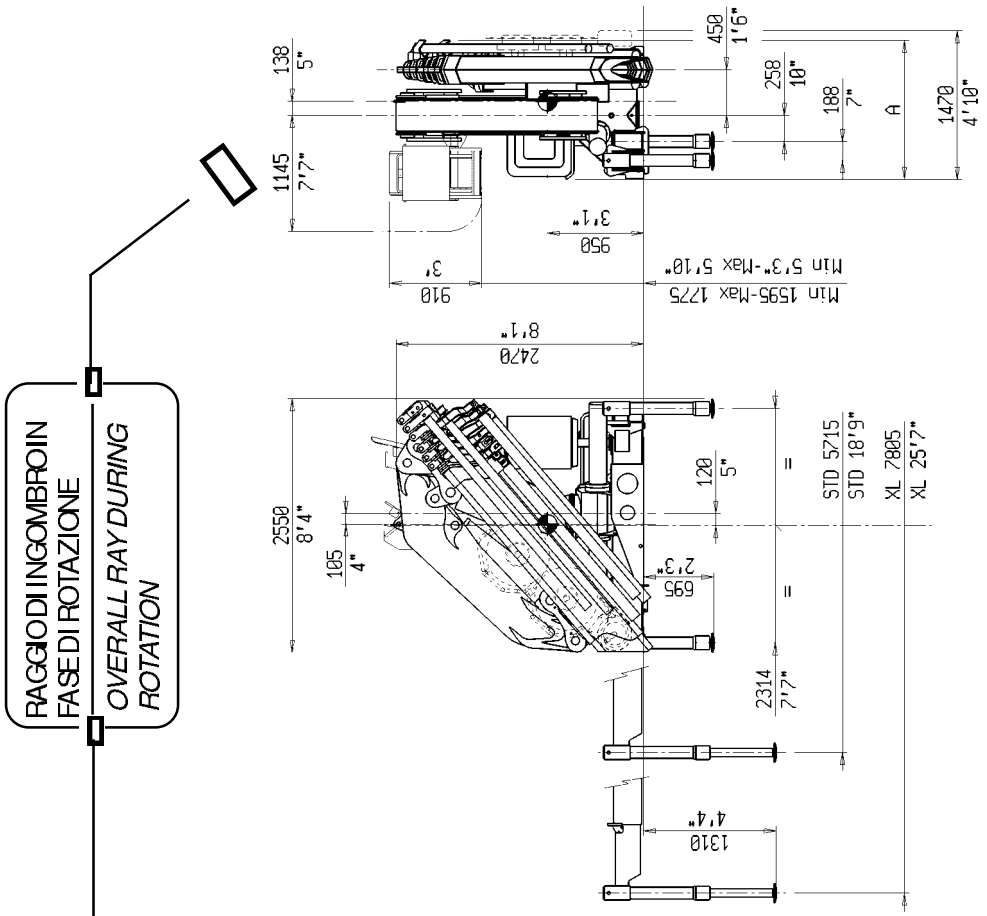
		_22	_23	_24	_25	_26	_27	_28	
ANTENNA J903	kg	/	/	670	670	/	/	/	
J 903 JIB	*lbs*	/	/	*1477*	*1477*	/	/	/	
1a PROLUNGA MANUALE J903	kg	/	/	40	40	/	/	/	
1st MANUAL EXTENSION J903	*lbs*	/	/	*88*	*88*	/	/	/	
2a PROLUNGA MANUALE J903	kg	/	/	30	30	/	/	/	
2nd MANUAL EXTENSION J 903	*lbs*	/	/	*66*	*66*	/	/	/	
3a PROLUNGA MANUALE J903	kg	/	/	25	25	/	/	/	
3rd MANUAL EXTENSION J 903	*lbs*	/	/	*55*	*55*	/	/	/	
ANTENNA J904	kg	/	/	750	750	/	/	/	
J 904 JIB	*lbs*	/	/	*1653*	*1653*	/	/	/	
1a PROLUNGA MANUALE J904	kg	/	/	30	30	/	/	/	
1st MANUAL EXTENSION J904	*lbs*	/	/	*66*	*66*	/	/	/	
2a PROLUNGA MANUALE J904	kg	/	/	25	25	/	/	/	
2nd MANUAL EXTENSION J 904	*lbs*	/	/	*55*	*55*	/	/	/	
VERRICELLO P6E COMPLETO DI FUNE (40m)-ANTENNA	kg	80	80	80	80	80	80	80	
P6E WINCH COMPLETE WITH CABLE (215' ft)-JIB	*lbs*	*176*	*176*	*176*	*176*	*176*	*176*	*176*	

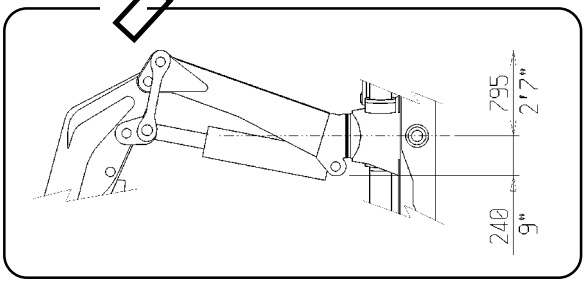
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.4 DIMENSIONI GRU SERIE 41 - 45 | *1.4 DIMENSIONS CRANE SERIE 41 - 45*

RAGGIO DI INGOMBRO IN FASE DI ROTAZIONE
OVERALL RAY DURING ROTATION





	A(mm)	A(Ft)
41022	1320	44"
41023	1320	44"
41024	1320	44"
41025	1320	44"
41026	1420	48"
41027	1420	48"
41028	1420	48"

Fig.1-3

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

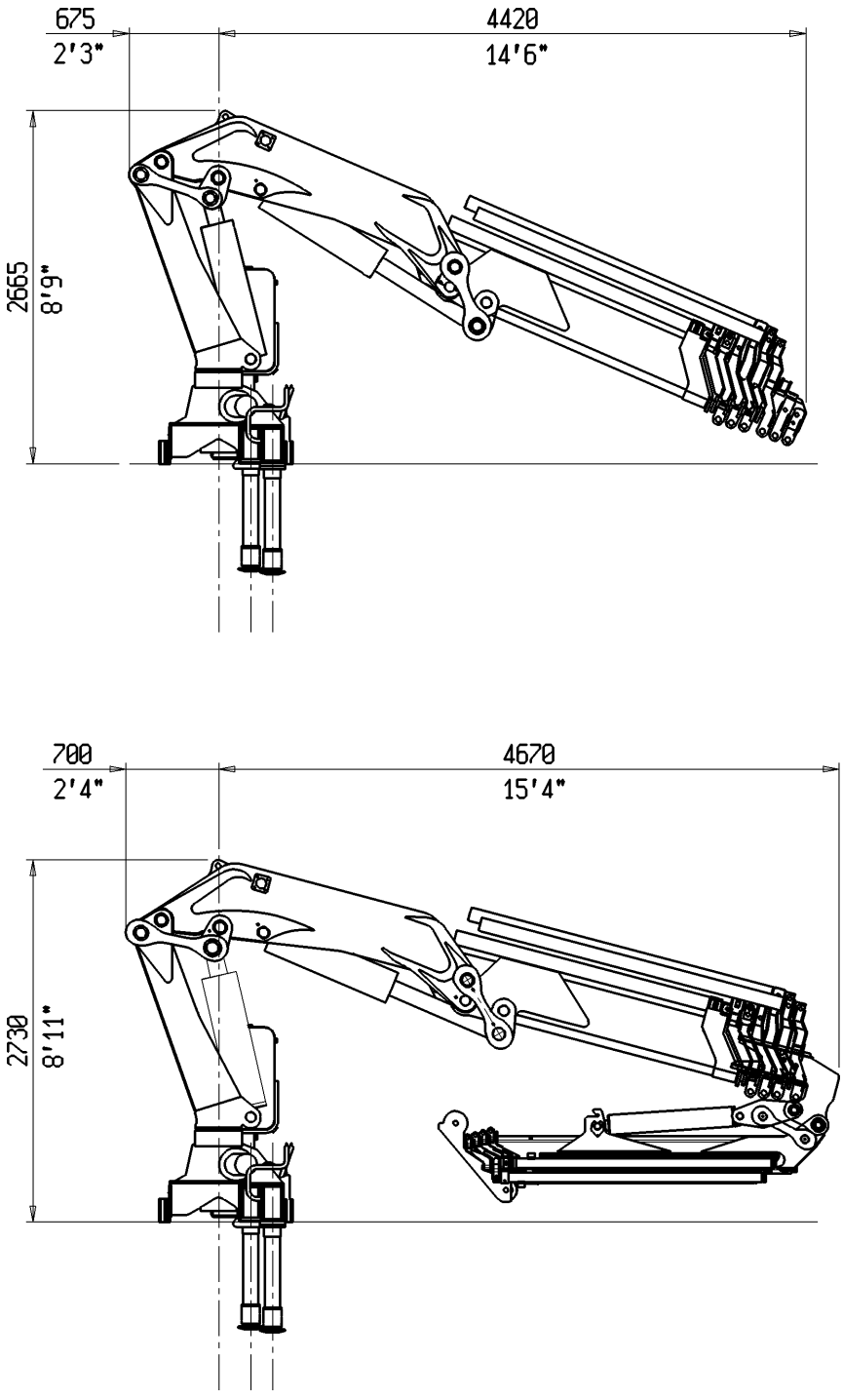


Fig.1-4

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.5 TRAIETTORIE DI SOLLEVAMENTO DEL CARICO SOTTO COLONNA

1.5 LIFTING TRAJECTORIES UNDER COLUMN

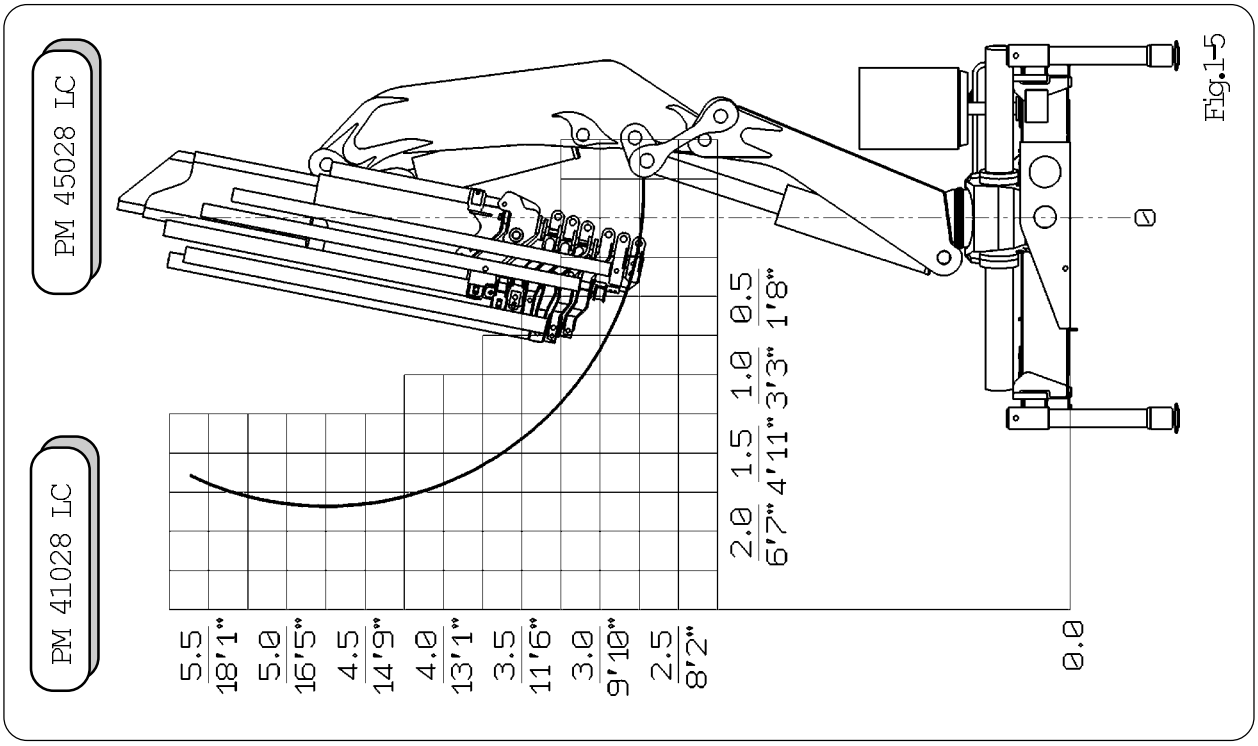


Fig.1-5

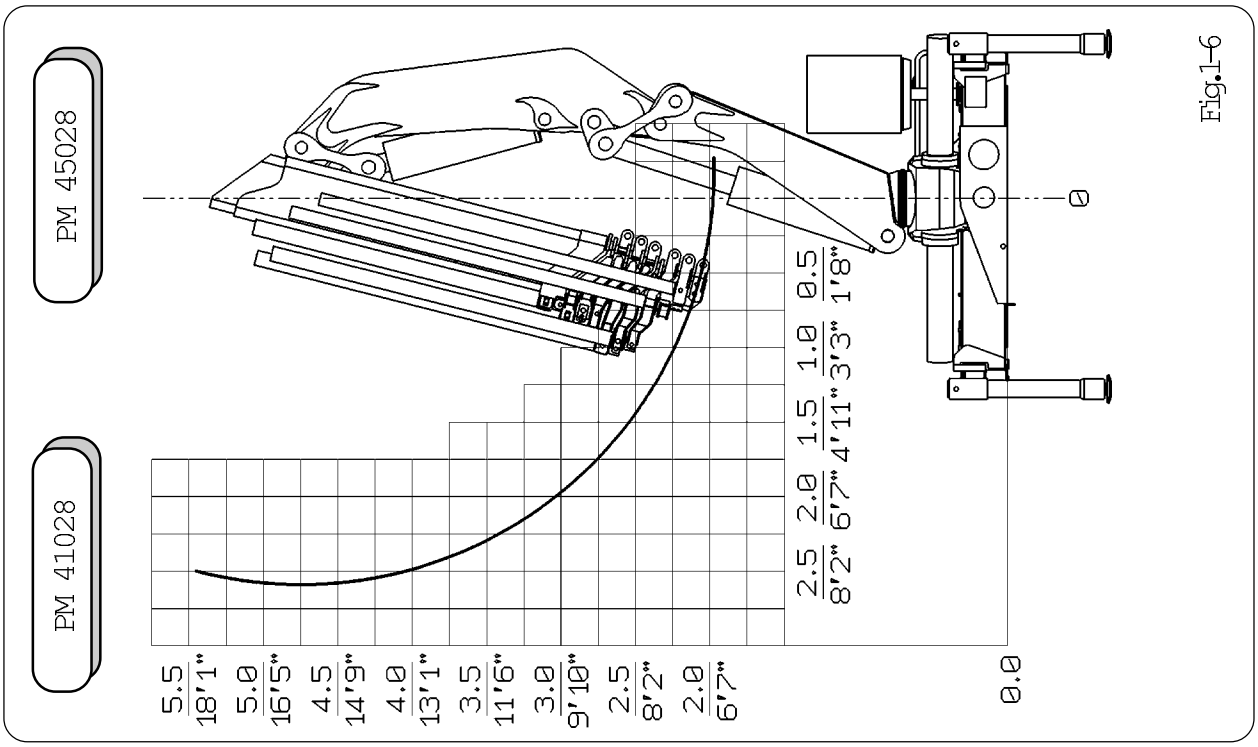


Fig.1-6

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

1.6 MODALITA' DI INSTALLAZIONE

Le seguenti modalità di installazione sono un piccolo riassunto di quanto indicato per esteso sul nostro manuale di installazione, per cui ogni dubbio o chiarimento o per ulteriori dettagli vogliate consultarlo.
In ogni caso l'installazione deve essere eseguita in conformità alle prescrizioni impartite dalla casa costruttrice del veicolo e degli organi competenti di ciascun Paese.

1.6.1 GRU MONTATA DIETRO OGNI CABINA DI GUIDA

La gru deve essere piazzata sull'autotelaio con l'interposizione di un controtelaio di sezione costante per una lunghezza non inferiore a due volte la larghezza della base di appoggio della gru sul controtelaio.
Il controtelaio deve essere interposto partendo da più possibile sotto la cabina.
La sezione del controtelaio deve essere gradualmente ridotta per una lunghezza non inferiore a 1.5 volte l'altezza massima della sezione del controtelaio stesso oppure, deve essere raccordata e solidale con il controtelaio proprio della carrozzeria o di altra sovrastruttura.
Vale la riduzione graduale sopraddetta anche per l'estremità anteriore del controtelaio.
Nel caso di impiego degli stabilizzatori supplementari la lunghezza del controtelaio deve essere prolungata agli stabilizzatori supplementari che debbono essere collegati con esso.
Occorre inoltre che gli stabilizzatori supplementari siano scelti e montati rispettando l'interasse minimo indicato nel successivo paragrafo.

1.6.2 GRU INSTALLATA SULLO SBALZO POSTERIORE DEL VEICOLO

Il controtelaio deve essere continuo fino alla zona retro cabina e deve avere sezione costante per tutta la sua lunghezza.
L'estremità anteriore del controtelaio deve essere rastremata per una lunghezza non inferiore a 1.5 volte l'altezza dei longheroni del controtelaio.

1.6 DIFFERENT TYPES OF CRANE'S INSTALLATION

The following instructions are a small summary of what indicated and explaned in the operator's manual, therefore should you have any doubt or need explanation, will you please consult the manual. At any rate, the crane installation should be effectued in accordance with the regulations of the vehicle 's manufacturer and with the competent Institutions of any Country.

1.6.1 CRANE MOUNTED BEHIND TRUCK CABIN

The crane must be placed on the truck chassis with the interposition of a subframe with constant section and for a length not lower than two times the width of the supporting base of the crane on the subframe.
Subframe must be interposed starting as much as possible under cabin.
Section of subframe shall be gradually reduced for a length not lower than 1,5 times the maximum height of subframe section, or it must be connected and integral with proper subframe of bodywork or other superstructure.
The gradual reduction above mentioned is valid also for front end of subframe.
Using supplementary outriggers the length of subframe must be extended to the supplementary outriggers that must be connected with it.
Therefore supplementary outriggers must be choosen and mounted following the minimum distance indicated in following paragraph.

1.6.2 CRANE INSTALLED ON REAR OVERHANG OF TRUCK

Subframe shall be continous up to the area behind cabin and must have constant section along its whole length.
The front end of subframe must be taperated for a length not lower than 1,5 times the subframe member height.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.6.3 MOMENTO MASSIMO DINAMICO GRU SU ASSE COLONNA

PM 41 - 45 => 524 KNm

1.6.4 FORZA MASSIMA ESERCITATA SUL TERRENO DAGLI STABILIZZATORI

PM 41-45 => Stab.STD 156 kN
=> Stab.XL 114 kN

1.6.3 MAXIMUM DYNAMIC MOMENT OF THE CRANE ON COLUMN AXIS

PM 31 - 45 => 524 KNm
(386589 ft lbs)

1.6.4 MAXIMUM FORCE EXERTED ON GROUND BY EACH OUTRIGGER

PM 41-45 => Outr.STD 156 kN
=> Outr.XL 114 kN

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.7 ANCORAGGIO (Fig. 1-7)

L'ancoraggio deve essere eseguito con l'ausilio dei tiranti, delle staffe e dei dadi che forniamo in dotazione con la macchina.

1.7.1 DATI TECNICI ANCORAGGIO DI NOSTRA FORNITURA

- Nr. 8 tiranti con filettatura M39x3
  lunghezza: 1200mm (interamente filettati)
  materiale: 39 NiCrMo3 bonificato-Pos.5
- Nr. 3 staffe superiori - spessore 20mm, materiale: C40-Pos.7
- Nr. 2 staffe superiori per bilancino spessore 15mm, materiale: C40 - Pos.6
- Nr. 4 staffe inferiori - spessore 40mm, materiale: C40-Pos.4
- Nr. 16 rondelle 40x72 - Pos. 3
- Nr. 24 dadi alti M39x3 - Pos. 2
- Nr. 8 dadi bassi M39x3 - Pos.1

COPPIA DI SERRAGGIO DEI TIRANTI DI ANCORAGGIO: 160±10 daN·m

1.7 ANCHORAGE (fig. 1-7)

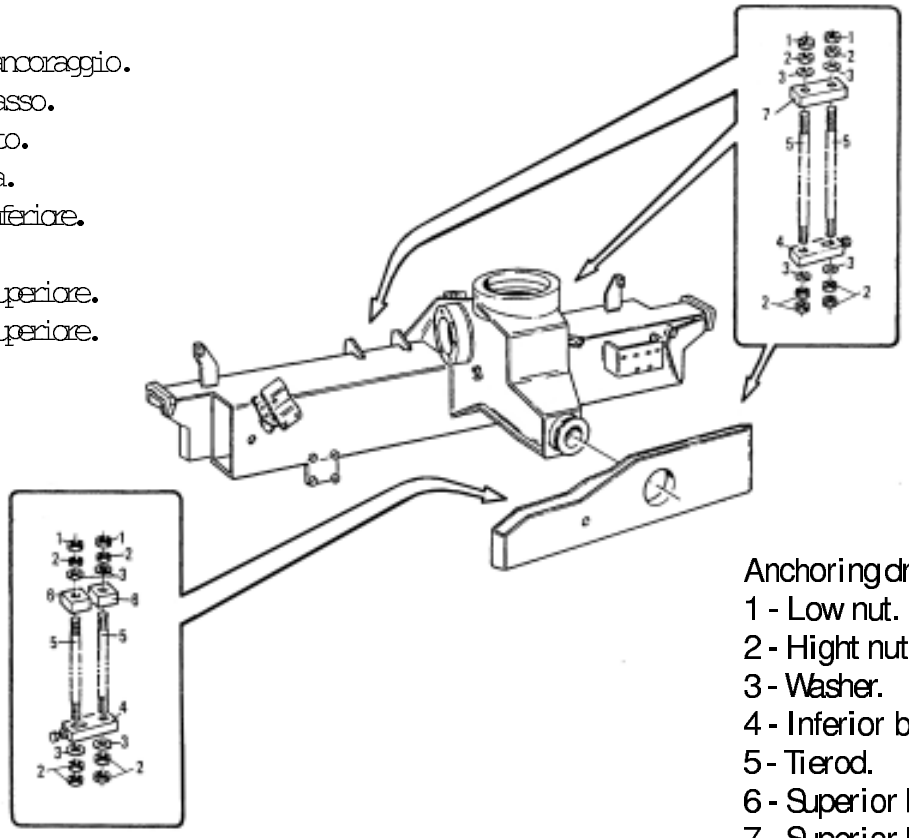
Anchorage should be done using tierods, brackets and nuts that are sent to you together with the crane.

1.7.1 TECHNICAL DATA ABOUT ANCHORAGE SUPPLIED

- *Nr. 8 tierods with thread M39 x 3, length 1200 mm (completely threaded), material: 39 NiCrMo3 hardened and tempered - Pos. 5*
- *Nr. 3 upper brackets -20 mm thickness, material: C40 - Pos. 5*
- *Nr. 2 upper brackets for support - 15mm thickness, material: C40 - Pos. 6*
- *Nr. 4 lower brackets - 40 mm thickness, material -C40 - Pos. 4*
- *Nr. 16 washer 40x72 - Pos. 3*
- *Nr. 24 high nuts M39 x 3 - Pos. 2*
- *Nr. 8 low nuts M39 x 3 - Pos. 1*

SETTING TORQUE OF ANCHORAGE TIERODS : 160±10 daN m (1160±50 ft lbs)

Schema di ancoraggio.
1 – Dado basso.
2 – Dado alto.
3 – Rondella.
4 – Staffa inferiore.
5 – Tirante.
6 – Staffa superiore.
7 – Staffa superiore.



Anchoring drawing.
1 - Low nut.
2 - Hight nut.
3 - Washer.
4 - Inferior bracket.
5 - Tierod.
6 - Superior bracket.
7 - Superior bracket.

Fig.1-7

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.7.2 DIMENSIONI DI ANCORAGGIO (fig.1-8) | *1.7.2 MOUNTING DIMENSIONS (fig. 1-8)*

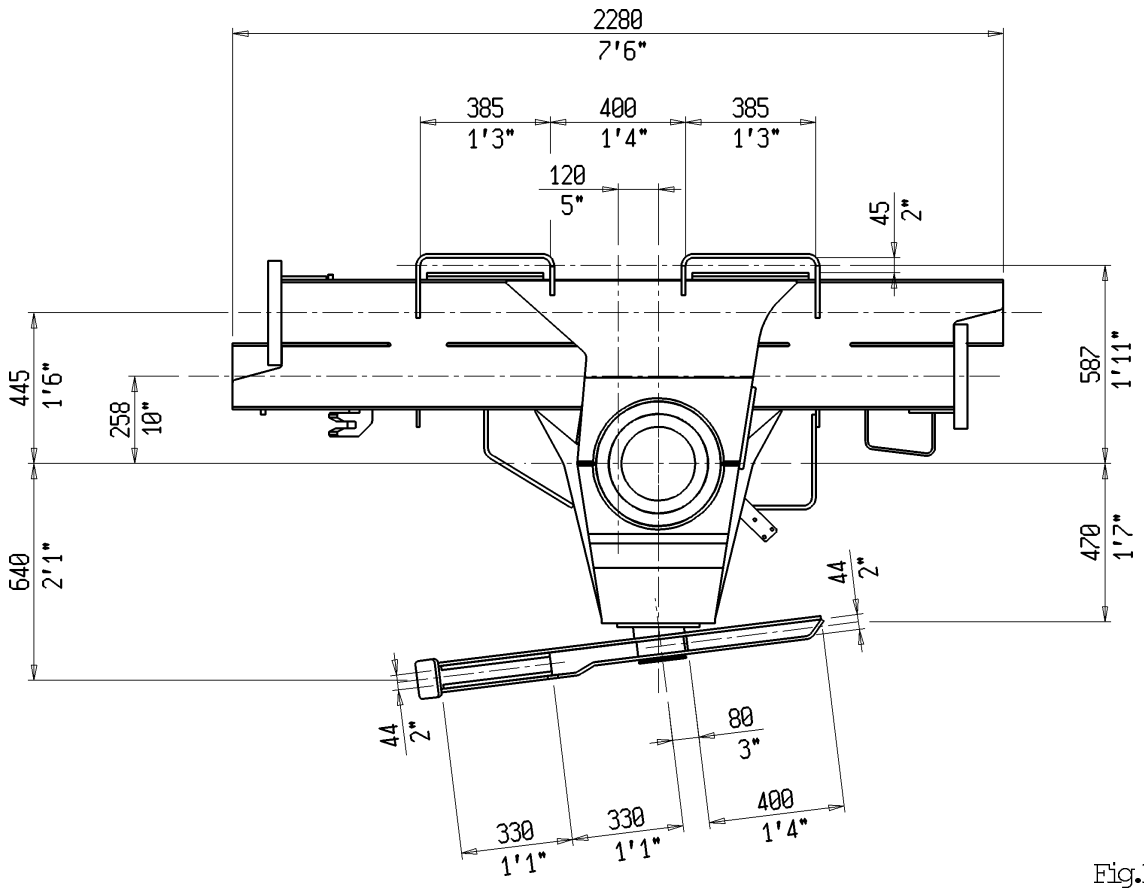


Fig.1-8

1.8 TABELLA BARICENTRI | *1.8 CENTER OF GRAVITY TABLE*

a0= -Asse colon./Stab.Dx.
-Colum axis/right outrigger
a1= -Asse colon./Stab.Sx.
-Colum axis/left outrigger
b= -Asse colon./baricentro parti sospese.
-Colum axis/centre of gravity overhung parts
L= -Sbracc.max.estensione (mensola 15°).
-Max idraulyc reach (main boom 15°)
Go= -Peso parti fisse.
-Fixed parts weight
G1= Peso parti sospese.
-Overhung parts weight
P= -Peso sollevato allo sbraccio L.
-Weight liftat the max extension L

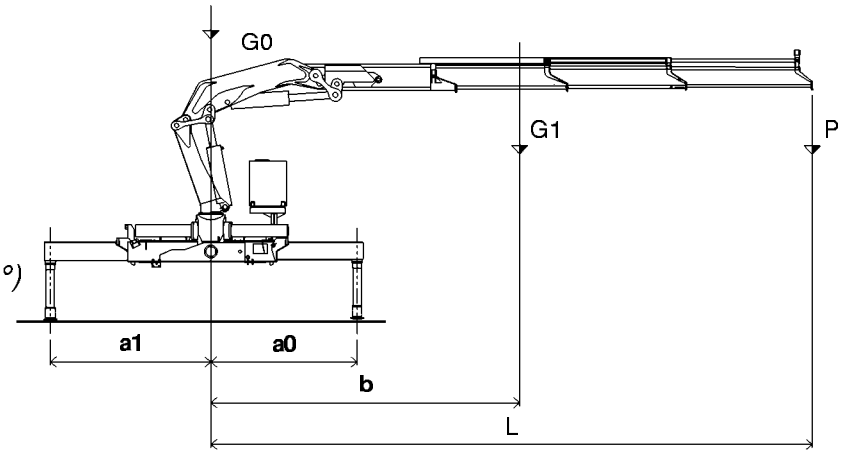


Fig.1-9

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

GRU/ *CRANE*	brac.stab/ *Outrigger*	a0 mm	*a0 ft*	a1 mm	*a1 ft*	b mm	*b ft*	L mm	*L ft*	G0 Kg	*G0 lbs*	G1 Kg	*G1 lbs*	P Kg	*P lbs*
PM 41022 STD	STD	2740	*9'*	2980	*9'9"*	2450	*8'*	7700	*25'3"*	2470	*5445*	2140	*4715*	5060	*11157*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41022 +PROL	STD	2740	*9'*	2980	*9'9"*	3730	*12'3"*	12000	*39'4"*	2470	*5445*	2445	*5390*	2800	*6170*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41023 STD	STD	2740	*9'*	2980	*9'9"*	3080	*10'1"*	9800	*32'2"*	2470	*5445*	2400	*5290*	3800	*8379*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41023 +PROL	STD	2740	*9'*	2980	*9'9"*	4435	*14'7"*	16550	*54'4"*	2470	*5445*	2795	*6160*	1600	*3530*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41024 STD	STD	2740	*9'*	2980	*9'9"*	3760	*12'4"*	12000	*39'4"*	2470	*5445*	2630	*5800*	2920	*6438*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41024 +PROL	STD	2740	*9'*	2980	*9'9"*	6150	*20'2"*	23850	*78'3"*	2470	*5445*	3125	*6860*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41024 +J903	STD	2740	*9'*	2980	*9'9"*	6160	*20'2"*	20100	*65'1"*	2530	*5579*	3440	*7585*	1020	*2248*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 41024 +J904	STD	2740	*9'*	2980	*9'9"*	6410	*21'3"*	21900	*71'1"*	2530	*5579*	3520	*7661*	800	*1763*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 41025 STD	STD	2740	*9'*	2980	*9'9"*	4425	*14'5"*	14500	*47'7"*	2470	*5445*	2850	*6285*	2170	*4785*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 39025 +PROL	STD	2740	*9'*	2980	*9'9"*	6210	*20'4"*	23850	*78'3"*	2470	*5445*	3210	*7075*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41025 +J903	STD	2740	*9'*	2980	*9'9"*	7000	*22'1"*	22350	*73'3"*	2530	*5579*	3660	*8070*	700	*1543*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 41025 +J904	STD	2740	*9'*	2980	*9'9"*	7260	*23'9"*	24150	*79'2"*	2530	*5579*	3740	*8247*	560	*1234*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 41026 STD	STD	2740	*9'*	2980	*9'9"*	5140	*16'10"*	16550	*54'4"*	2470	*5445*	3040	*6700*	1690	*3726*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41026 +PROL	STD	2740	*9'*	2980	*9'9"*	6425	*21'1"*	23850	*78'3"*	2470	*5445*	3290	*7255*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41027 STD	STD	2740	*9'*	2980	*9'9"*	5795	*19'*	19000	*62'4"*	2470	*5445*	3200	*7055*	1300	*2866*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41027 +PROL	STD	2740	*9'*	2980	*9'9"*	6510	*21'4"*	23850	*78'3"*	2470	*5445*	3350	*7385*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41028 STD	STD	2740	*9'*	2980	*9'9"*	6325	*20'9"*	21350	*70'1"*	2470	*5445*	3350	*7385*	1020	*2249*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				
PM 41028 +PROL	STD	2740	*9'*	2980	*9'9"*	6635	*21'9"*	23850	*78'3"*	2470	*5445*	3415	*7530*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2690	*5930*				

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

GRU/ *CRANE*	brac.stab/ *Outrigger*	a0 mm	*a0 ft*	a1 mm	*a1 ft*	b mm	*b ft*	L mm	*L ft*	G0 Kg	*G0 lbs*	G1 Kg	*G1 lbs*	P Kg	*P lbs*
PM 41022 LC STD	STD	2740	*9'*	2980	*9'9"*	2300	*7'7"*	7700	*25'3"*	2470	*5535*	2290	*5050*	5060	*11157*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41022 LC +PROL	STD	2740	*9'*	2980	*9'9"*	3590	*11'9"*	12000	*39'4"*	2470	*5535*	2595	*5720*	2800	*6170*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41023 LC STD	STD	2740	*9'*	2980	*9'9"*	2930	*9'7"*	9800	*32'2"*	2470	*5535*	2550	*5620*	3800	*8379*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41023 LC +PROL	STD	2740	*9'*	2980	*9'9"*	4290	*14'1"*	16550	*54'4"*	2470	*5535*	2945	*6490*	1600	*3530*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41024 LC STD	STD	2740	*9'*	2980	*9'9"*	3615	*11'10"*	12000	*39'4"*	2470	*5535*	2780	*6130*	2920	*6439*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41024 LC +PROL	STD	2740	*9'*	2980	*9'9"*	6000	*19'8"*	23850	*78'3"*	2470	*5535*	3275	*7220*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41025 LC STD	STD	2740	*9'*	2980	*9'9"*	4340	*14'3"*	14500	*47'7"*	2470	*5535*	3000	*6615*	2170	*4785*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41025 LC +PROL	STD	2740	*9'*	2980	*9'9"*	6070	*19'11"*	23850	*78'3"*	2470	*5535*	3360	*7405*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41026 LC STD	STD	2740	*9'*	2980	*9'9"*	4995	*16'5"*	16550	*54'4"*	2470	*5535*	3190	*7030*	1690	*3726*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41026 LC +PROL	STD	2740	*9'*	2980	*9'9"*	6280	*20'7"*	23850	*78'3"*	2470	*5535*	3440	*7585*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41027 LC STD	STD	2740	*9'*	2980	*9'9"*	5600	*18'4"*	19000	*62'4"*	2470	*5535*	3350	*7385*	1300	*2866*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41027 LC +PROL	STD	2740	*9'*	2980	*9'9"*	6360	*20'10"*	23850	*78'3"*	2470	*5535*	3500	*7715*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41028 LC STD	STD	2740	*9'*	2980	*9'9"*	6180	*20'3"*	21350	*70'1"*	2470	*5535*	3500	*7715*	1020	*2249*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				
PM 41028 LC +PROL	STD	2740	*9'*	2980	*9'9"*	6490	*21'4"*	23850	*78'3"*	2470	*5535*	3565	*7860*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2730	*6020*				

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

GRU/ *CRANE*	brac.stab/ *Outrigger*	a0 mm	*a0 ft*	a1 mm	*a1 ft*	b mm	*b ft*	L mm	*L ft*	G0 Kg	*G0 lbs*	G1 Kg	*G1 lbs*	P Kg	*P lbs*
PM 45022 STD	STD	2740	*9'*	2980	*9'9"*	2450	*8'03"*	7700	*25'3"*	2490	*5489*	2140	*4718*	5060	*11157*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45022 +PROL	STD	2740	*9'*	2980	*9'9"*	3730	*12'23"*	12000	*39'4"*	2490	*5489*	2445	*5391*	2800	*6170*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45023 STD	STD	2740	*9'*	2980	*9'9"*	3080	*10'10"*	9800	*32'2"*	2490	*5489*	2400	*5292*	3800	*8379*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45023 +PROL	STD	2740	*9'*	2980	*9'9"*	4435	*14'55"*	16550	*54'4"*	2490	*5489*	2795	*6163*	1600	*3530*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45024 STD	STD	2740	*9'*	2980	*9'9"*	3760	*12'3"*	12000	*39'4"*	2490	*5489*	2630	*5799*	2920	*6438*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45024 +PROL	STD	2740	*9'*	2980	*9'9"*	6150	*20'17"*	23850	*78'3"*	2490	*5489*	3125	*6890*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45025 STD	STD	2740	*9'*	2980	*9'9"*	4425	*14'51"*	14500	*47'7"*	2490	*5489*	2850	*6284*	2170	*4785*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45025 +PROL	STD	2740	*9'*	2980	*9'9"*	6210	*20'37"*	23850	*78'3"*	2490	*5489*	3210	*7078*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45026 STD	STD	2740	*9'*	2980	*9'9"*	5140	*16'8"*	16550	*54'4"*	2490	*5489*	3040	*6703*	1690	*3726*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45026 +PROL	STD	2740	*9'*	2980	*9'9"*	6425	*21'*	23850	*78'3"*	2490	*5489*	3290	*7254*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45027 STD	STD	2740	*9'*	2980	*9'9"*	5795	*19'*	19000	*62'4"*	2490	*5489*	3200	*7056*	1300	*2866*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45027 +PROL	STD	2740	*9'*	2980	*9'9"*	6510	*21'35"*	23850	*78'3"*	2490	*5489*	3350	*7387*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45028 STD	STD	2740	*9'*	2980	*9'9"*	6325	*20'75"*	21350	*70'1"*	2490	*5489*	3350	*7387*	1020	*2249*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				
PM 45028 +PROL	STD	2740	*9'*	2980	*9'9"*	6635	*21'76"*	23850	*78'3"*	2490	*5489*	3415	*7530*	650	*1430*
	XL	3785	*12'5"*	4025	*13'2"*					2710	*5974*				

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

GRU/ *CRANE*	brac.stab/ *Outrigger*	a0 mm	*a0 ft*	a1 mm	*a1 ft*	b mm	*b ft*	L mm	*L ft*	G0 Kg	*G0 lbs*	G1 Kg	*G1 lbs*	P Kg	*P lbs*
PM 45022 LC	STD	2740	*9'*	2980	*9'9"*	2300	*7'7"*	7700	*25'3"*	2530	*5579*	2140	*4719*	5060	*11157*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45022 LC	STD	2740	*9'*	2980	*9'9"*	3590	*11'9"*	12000	*39'4"*	2530	*5579*	2445	*5391*	2800	*6170*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45023 LC	STD	2740	*9'*	2980	*9'9"*	2930	*9'7"*	9800	*32'2"*	2530	*5579*	2400	*5292*	3800	*8379*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45023 LC	STD	2740	*9'*	2980	*9'9"*	4290	*14'1"*	16550	*54'4"*	2530	*5579*	2795	*6193*	1600	*3530*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45024 LC	STD	2740	*9'*	2980	*9'9"*	3615	*11'10"*	12000	*39'4"*	2530	*5579*	2630	*5799*	2920	*6439*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45024 LC	STD	2740	*9'*	2980	*9'9"*	6000	*19'8"*	23850	*78'3"*	2530	*5579*	3125	*7891*	650	*1430*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45025 LC	STD	2740	*9'*	2980	*9'9"*	4340	*14'3"*	14500	*47'7"*	2530	*5579*	2850	*6284*	2170	*4785*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45025 LC	STD	2740	*9'*	2980	*9'9"*	6070	*19'11"*	23850	*78'3"*	2530	*5579*	3210	*7078*	650	*1430*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45026 LC	STD	2740	*9'*	2980	*9'9"*	4995	*16'5"*	16550	*54'4"*	2530	*5579*	3040	*6703*	1690	*3726*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45026 LC	STD	2740	*9'*	2980	*9'9"*	6280	*20'7"*	23850	*78'3"*	2530	*5579*	3290	*7254*	650	*1430*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45027 LC	STD	2740	*9'*	2980	*9'9"*	5600	*18'4"*	19000	*62'4"*	2530	*5579*	3200	*7056*	1300	*2866*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45027 LC	STD	2740	*9'*	2980	*9'9"*	6360	*20'10"*	23850	*78'3"*	2530	*5579*	3350	*7387*	650	*1430*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45028 LC	STD	2740	*9'*	2980	*9'9"*	6180	*20'3"*	21350	*70'1"*	2530	*5579*	3350	*7387*	1020	*2249*
STD	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				
PM 45028 LC	STD	2740	*9'*	2980	*9'9"*	6490	*21'4"*	23850	*78'3"*	2530	*5579*	3415	*7530*	650	*1430*
+PROL	XL	3785	*12'5"*	4025	*13'2"*					2750	*6064*				

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

1.9 STABILIZZATORI SUPPLEMENTARI

Possono essere applicati i seguenti tipi di stabilizzatori supplementari:

VERSIONE SFILABILE 5.0 SI 100 (fig.1-10 - fig.1-11).

1.9 SUPPLEMENTARY OUTRIGGERS

It is possible to install this types of supplementary outriggers:

EXTENDED VERSION 5.0 SI 100 *(Fig. 1-10 - 1-11).*

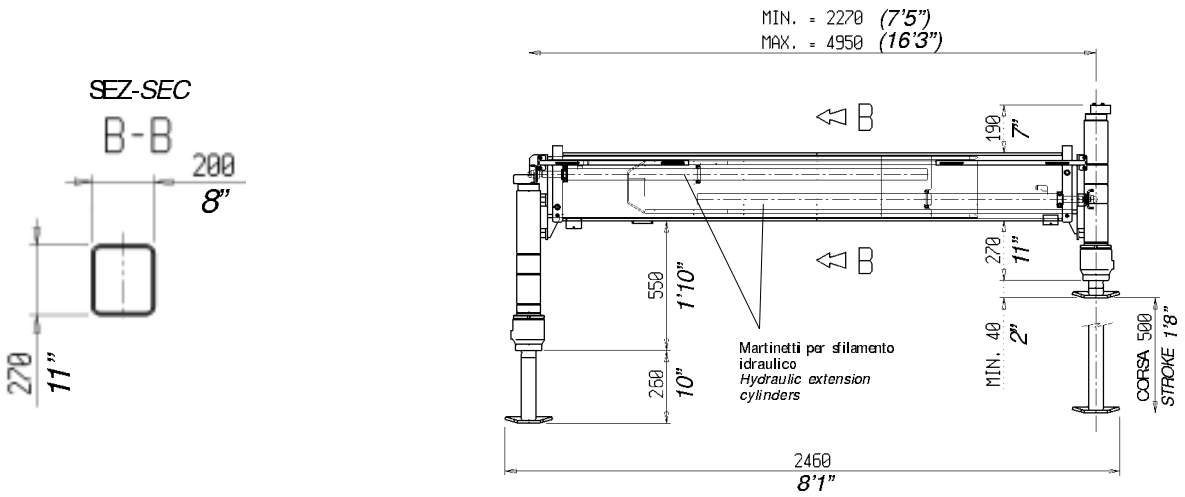


Fig.1-10

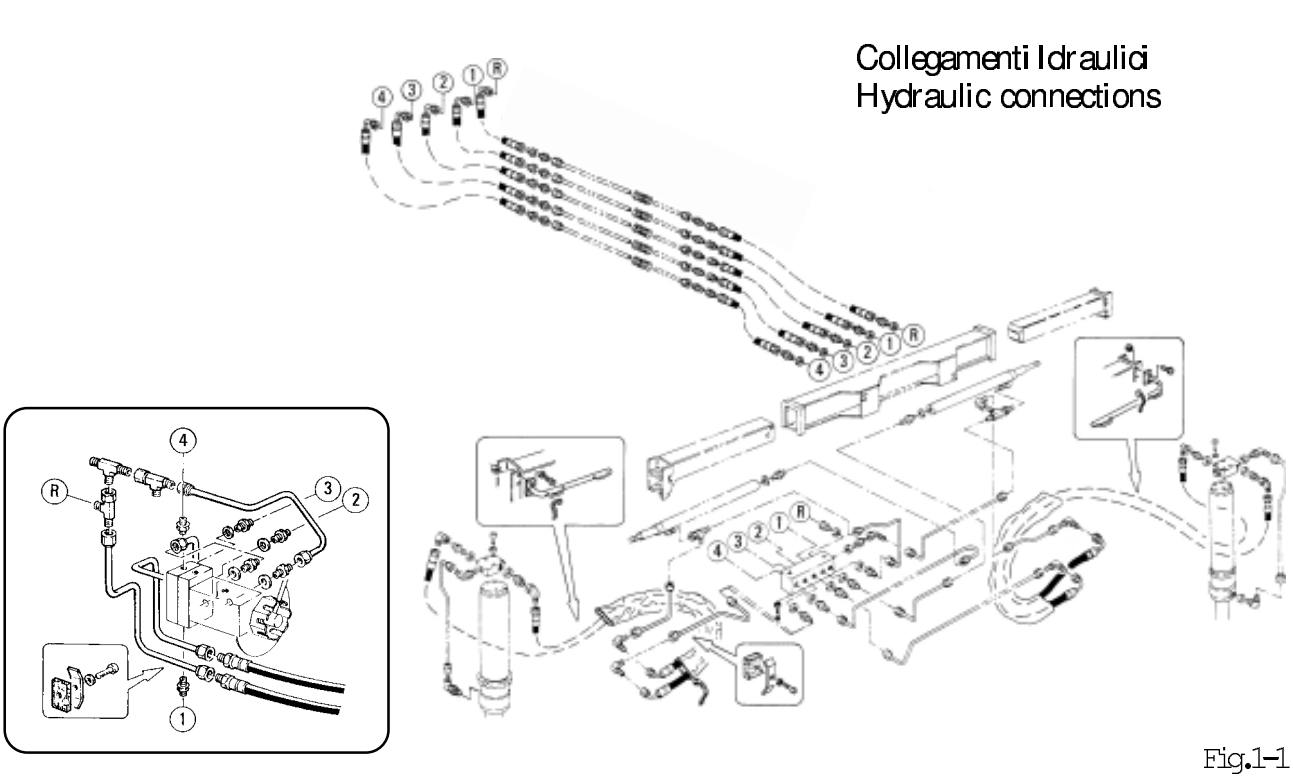


Fig.1-11

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

Since 1959

Cranes, in all the languages of the world

2: IMPIANTO IDRAULICO

2.1 LEGENDA DEL CIRCUITO IDRAULICO

A = Valvola di sovrapressione generale.
B = Valvola di scarico.
S = Valvola di blocco semplice
BD = Valvola di blocco doppia
R = Valvola di blocco con rubinetto
FR = Valvola di frenaggio
G = Motore idraulico verricello
SD = Valvola di sequenza
I = Freno idraulico verricello
LT = Tamburo del verricello
P = Valvola paracadute
F = Valvola selettrice
L = Limitatore di momento
DV = Deviatore multifunzione
PE = Pressostato elettrico
RI = Valvola di riarmo idraulico
NO = Elettrovalvola N.O.
E = Arresto di emergenza
PR = Interruttore innesto PTO
FS = Fusibile
D1 = Distributore stabilizzatori
D2 = Distributore rotazione
D3 = Distributore martinetto colonna
D4 = Distributore martinetto mensola
D5 = Distributore martinetto bracci
D6 = Distributore martinetto snodo antenna
D7 = Distributore martinetto sfilo antenna
D8 = Distributore verricello

NOTA
I valori di taratura delle valvole sono espresse in MPa. (1MPa = 10 bar = 145psi)

2: HYDRAULIC CIRCUTS

2.1 LETTERS' DESCRIPTION IN HYDRAULIC SYSTEMS

A = General overpressure valve
B = Exhaust valve
S = Simple lock valve
BD = Double lock valve
R = Check valve with taps
FR = Breaking valve
G = Hydraulic winch motor
SD = Sequence valve
I = Hydraulic winch drum
LT = Winch drum
P = Parachute valve
F = Selector valve
L = Load limiting device
DV = Multifuction lever switch
PE = Electric pressure switch
RI = Hydraulic resetting valves
NO = N.O. solenoid valve
E = Emergency stop
PR = PTO clutch switch
FS = Fuse
D1 = Outriggers control valve block
D2 = Slewing sys. control valve block
D3 = Column cyl. control valve block
D4 = Main boom cyl. control valve block
D5 = Boom cyl. control valve block
D6 = Cylinder control valve block for jib articulation
D7 = Cylinder control valve block for jib extension
D8 = Winch control valve block

NOTE
The valve settings are expressed in MPa.
(1MPa = 10bar = 145 psi)

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

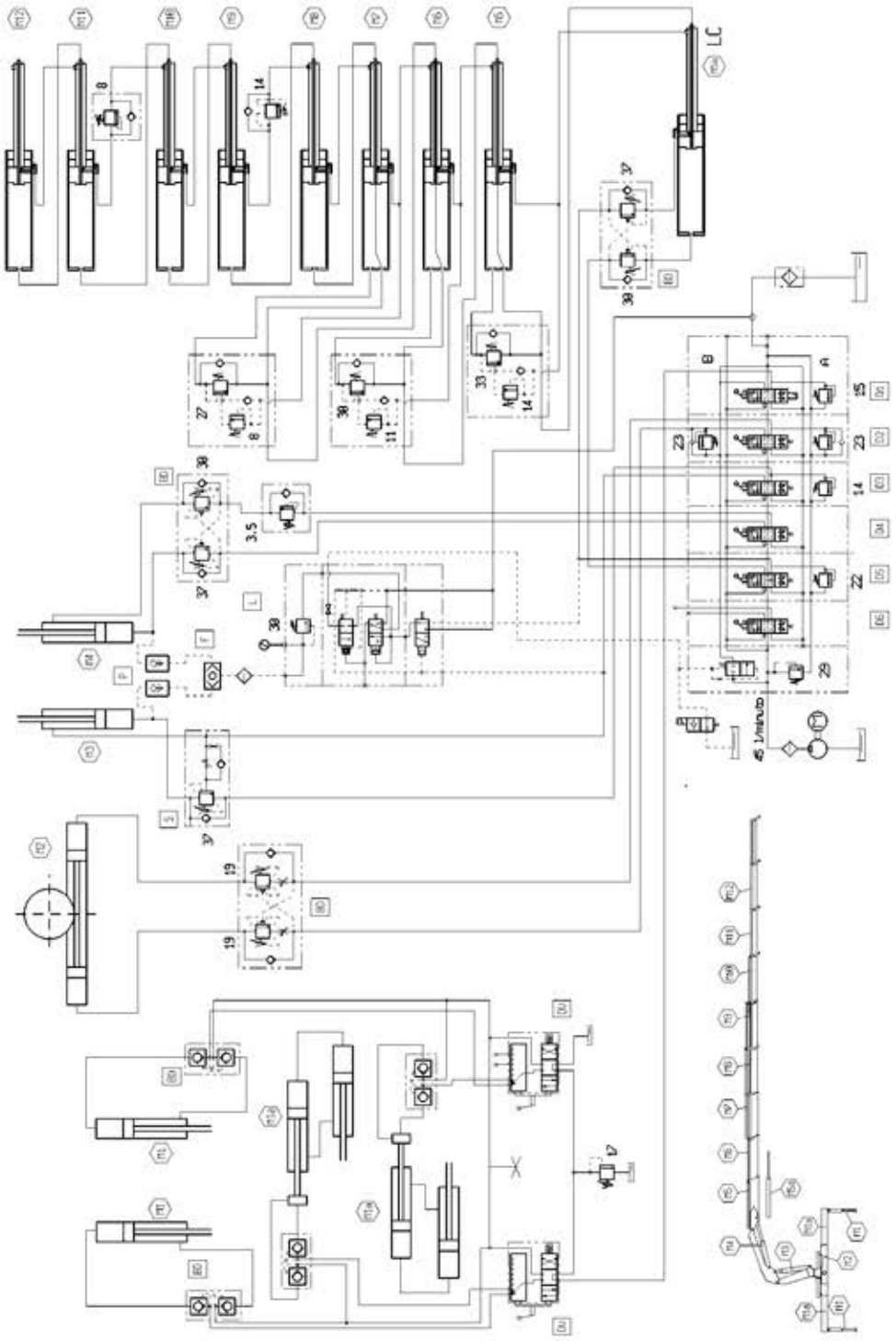


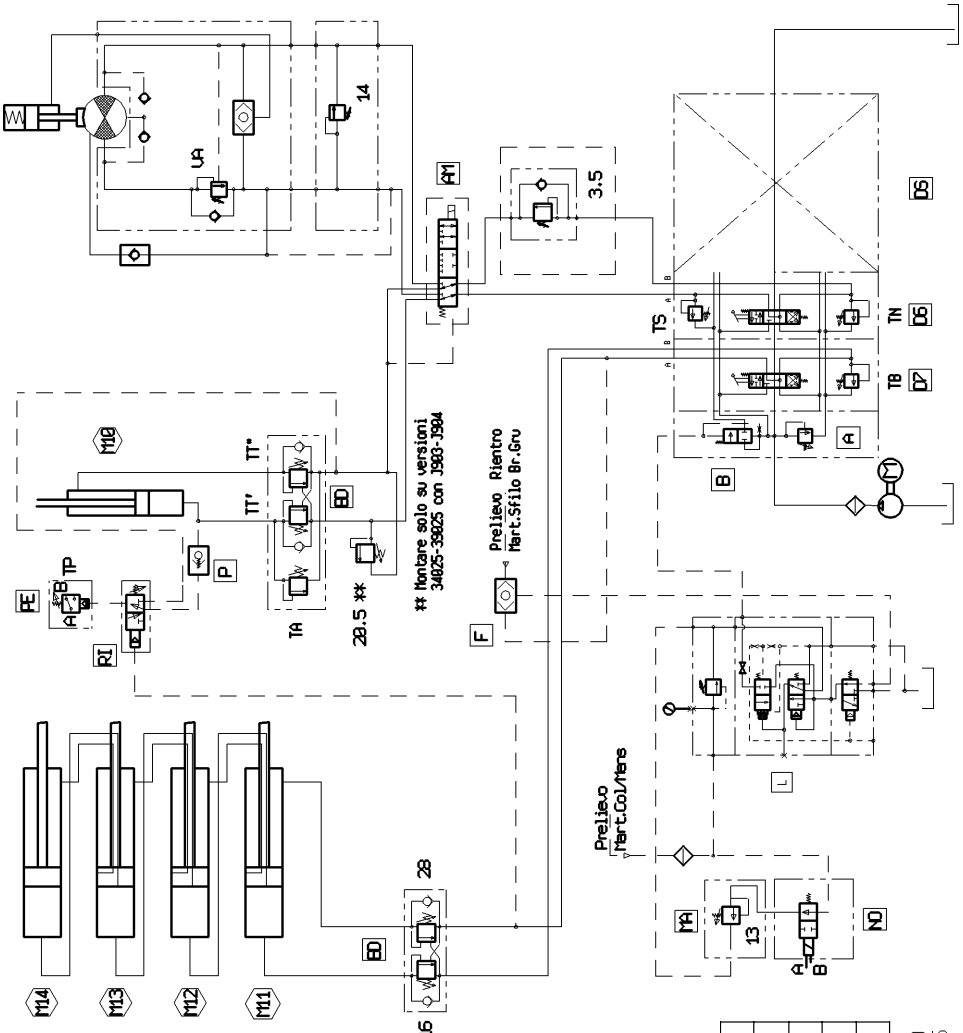
Fig.2-1

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

2.3 ANTENNA J 903 - J 904 PER GRU PM 41024 / 41025

2.3 JIB J 903 - J 904 FOR PM CRANE 41024 / 41025



	TB	TS	TN	TA	TT'	TT''	TP
41024+J903	16	27,5	15	31	33	18,5	28,5
41024+J904	16	27,5	15	33	35	18,5	28,5
41025+J903	16	24*	15	24,5	26,5	18,5	21,5
41025+J904	16	24*	15	24,5	26,5	18,5	21,5

* VALORE RIFERITO A MACCHINA CON ANTENNA E ARGANO PER LA MACCHINA CON SOLO ANTENNA ABBASSARE A 20,5

Fig.2-2

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

2.4 VARIANTE PER IMPIANTO IDRAULICO GRU SERIE 45

2.4 VARIATION FOR THE HYDRAULIC SYSTEMS SERIE 45

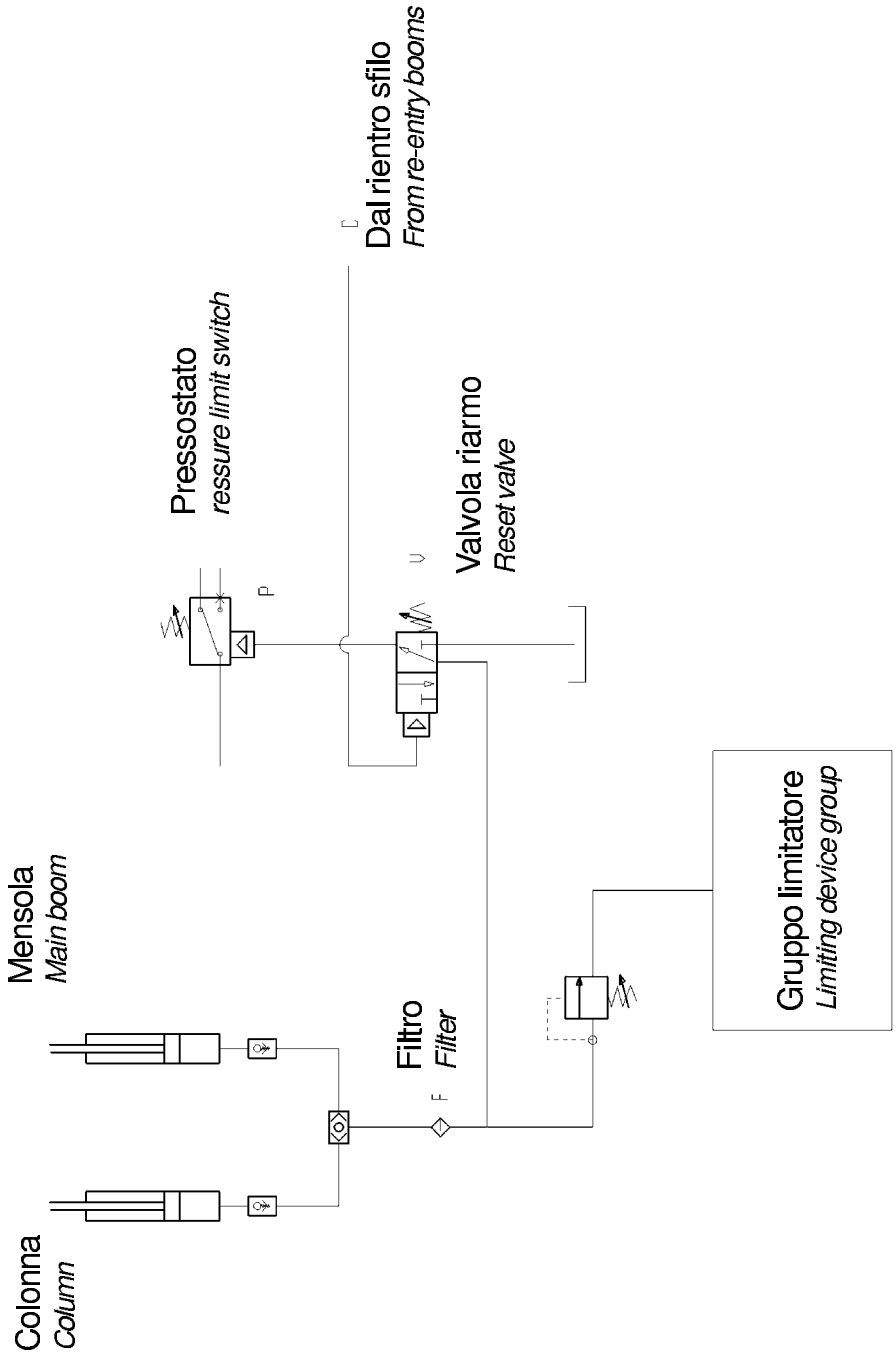


Fig.2-3

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

2.5 PM SERIE 41 CON VERRICELLO

2.5 PM SERIE 41 WITH WINCH

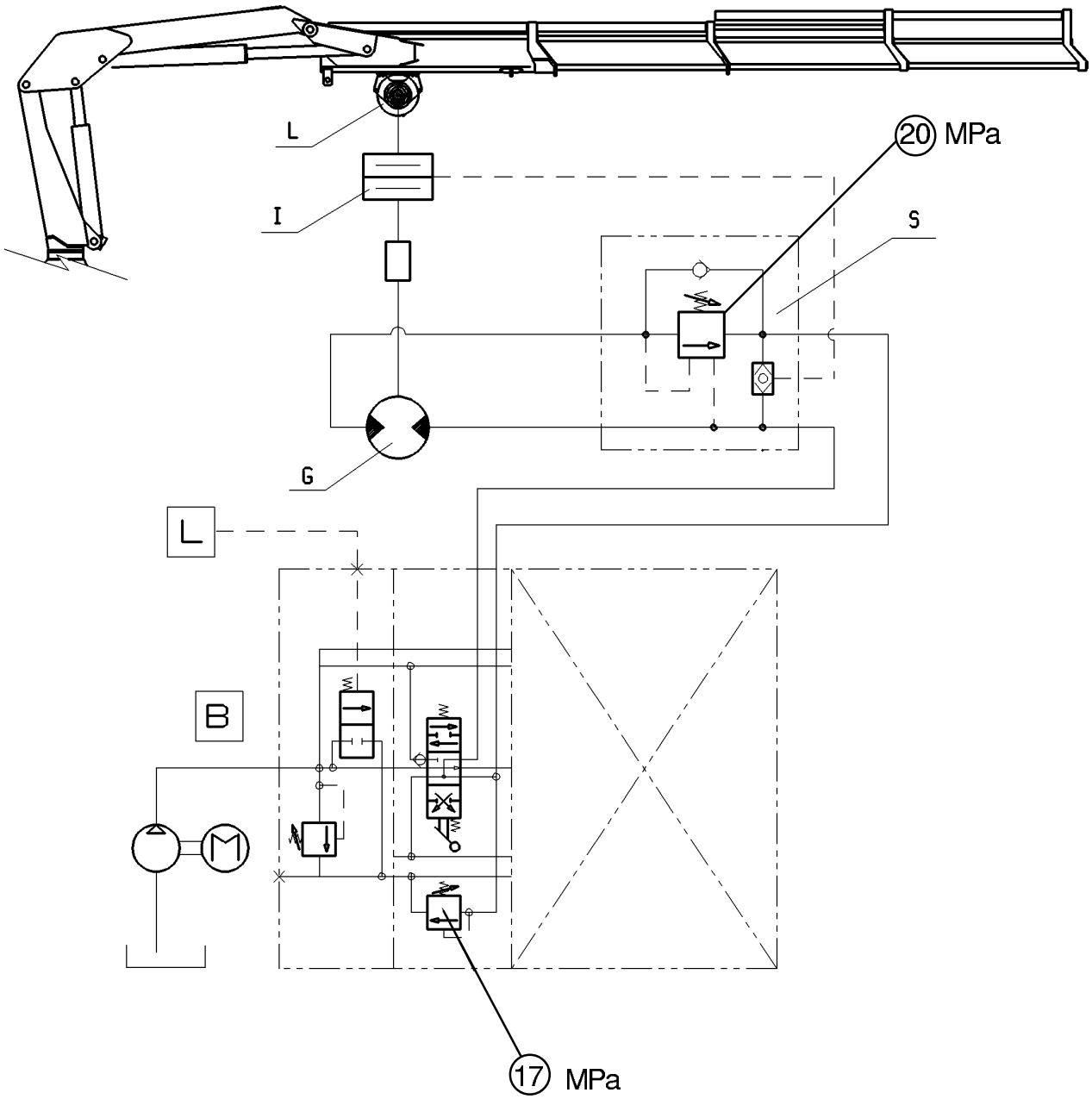


Fig.2-4

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

2.6 PROSPETTO RIEPILOGATIVO DELLE PRESSIONI DEL DISTRIBUTORE (MPa)

-Portata pompa: 45 l/min
-Temperatura OLIO 45°C
- Olio ISO VG 46
-Tolleranza: 0 ÷ +1 MPa

2.6 PRESSURE ON CONTROL VALVES BLOCK (MPa - psi)

-Pump capacity: 45 l/min (12 US-gal/min)
-Temperature OIL 45°C (113 F°)
-Oil ISO VG 46
-Tollerance: 0 ÷ +1 MPa

		41022 41022LC		41023 41023LC		41024 41024LC		41025 41025LC		41026 41026LC		41027 41027LC		41028 41028LC			
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
- MARTINETTO COLONNA	MPa	29	14	29	14	29	14	29	14	29	14	29	14	29	14		
- *COLUMN CYLINDER*	*PSI*	4210	2030	4210	2030	4210	2030	4210	2030	4210	2030	4210	2030	4210	2030		
- MARTINETTO MENSOLA	MPa	29	29	29	29	29	29	29	29	29	29	29	29	29	29		
- *MAIN BOOM CYLINDER*	*PSI*	4210	4210	4210	4210	4210	4210	4210	4210	4210	4210	4210	4210	4210	4210		
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
- MARTINETTO BRACCI	MPa	22	29	22	29	22	29	22	29	22	29	22	29	22	29		
- *BOOMS CYLINDER*	*PSI*	3195	4210	3195	4210	3195	4210	3195	4210	3195	4210	3195	4210	3195	4210		
		O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A
- ROTAZIONE	MPa	23	23	23	23	23	23	23	23	23	23	23	23	23	23		
- *SLEWING SYSTEM*	*PSI*	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340	3340		
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
- STABILIZZATORI	MPa	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
- *OUTRIGGER*	*PSI*	2175	2175	2175	2175	2175	2175	2175	2175	2175	2175	2175	2175	2175	2175		
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
- VERRICELLO	MPa	17	17	17	17	17	17	17	17	17	17	17	17	17	17		
- *WINCH*	*PSI*	2470	2470	2470	2470	2470	2470	2470	2470	2470	2470	2470	2470	2470	2470		
- SNODO ANTENNA J903	MPa	/	/	/	/	27.5	15	24.5	15	/	/	/	/	/	/		
- *J 903 ARTICULATION JIB*	*PSI*	/	/	/	/	3987	2180	2552	2180	/	/	/	/	/	/		
- SNODO ANTENNA J904	MPa	/	/	/	/	27.5	15	24.5	15	/	/	/	/	/	/		
- *J 904 ARTICULATION JIB*	*PSI*	/	/	/	/	3987	2180	2552	2180	/	/	/	/	/	/		
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
- SFILO ANTENNA J903-J904	MPa	/	/	/	/	16	25	16	25	/	/	/	/	/	/		
- *J903-J904 EXTENSIONJIB*	*PSI*	/	/	/	/	2325	3625	2325	3625	/	/	/	/	/	/		

UNITA' DI PRESSIONE / PRESSURE UNIT = Mpa (1 Mpa = 10 bar)
PRESSURE UNIT = PSI (1MPa = 145 PSI)

S=Salita
D=Discesa
U=Uscita
R=Rientro
O=Oraria
A=Antioraria

S=Lifting
D=Lowering
U=Extension
R=Retracting
O=Clockwise
A=Anticlockwise

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

2.7 PROSPETTO RIEPILOGATIVO DELLE PRESSIONI DELLE VALVOLE SUI MARTINETTI E DEL LIMITATORE DI MOMENTO (MPa)

-Temperatura OLIO 45°C
-Olio ISO VG 46
-Tolleranza: 0 ÷ +1 MPa

2.7 PRESSURE ON CYLINDERS VALVES AND LOAD LIMITING DEVICE (MPa - psi)

-Temperature OIL 45°C (113 F°)
-Oil ISO VG 46
-Tollerance: 0 ÷ +1 MPa

UNITA' DI PRESSIONE / PRESSURE UNIT = Mpa (1 Mpa = 10 bar) PRESSURE UNIT = PSI (1MPa = 145 PSI)

		41022 41022 LC		41023 41023 LC		41024 41024 LC		41025 41025 LC		41026 41026 LC		41027 41027 LC		41028 41028 LC			
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
- MARTINETTO COLONNA	MPa	37	/	37	/	37	/	37	/	37	/	37	/	37	/		
- *COLUMN CYLINDER*	*PSI*	5370	/	5370	/	5370	/	5370	/	5370	/	5370	/	5370	/		
- MARTINETTO MENSOLA	MPa	37	30	37	30	37	30	37	30	37	30	37	30	37	30		
- *MAIN BOOM CYLINDER*	*PSI*	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355		
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
- MARTINETTO BRACCI*	MPa	30	37	30	37	30	37	30	37	30	37	30	37	30	37		
- *BOOMS CYLINDER**	*PSI*	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370		
- MART. BRACCI LC*	MPa	30	37	30	37	30	37	30	37	30	37	30	37	30	37		
- *LC BOOMS CYLINDER**	*PSI*	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370	4355	5370		
		O	A	O	A	O	A	O	A	O	A	O	A	O	A	O	A
- ROTAZIONE	MPa	19	19	19	19	19	19	19	19	19	19	19	19	19	19		
- *SLEWING SYSTEM*	*PSI*	2760	2760	2760	2760	2760	2760	2760	2760	2760	2760	2760	2760	2760	2760		
		S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
- VERRICELLO	MPa	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
- *WINCH*	*PSI*	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900		
- SNODO ANTENNA J903	MPa	/	/	/	/	33	18.5	26.5	18.5	/	/	/	/	/	/		
- *J 903 ARTICULATION JIB*	*PSI*	/	/	/	/	4790	2680	3850	2680	/	/	/	/	/	/		
- SNODO ANTENNA J904	MPa	/	/	/	/	35	18.5	26.5	18.5	/	/	/	/	/	/		
- *J 904 ARTICULATION JIB*	*PSI*	/	/	/	/	5080	2680	3850	2680	/	/	/	/	/	/		
		U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R
- SFILO ANTENNA J903/904	MPa	/	/	/	/	16	28	16	28	/	/	/	/	/	/		
- *J 903/904 EXTENSION JIB*	*PSI*	/	/	/	/	2325	4060	2325	4060	/	/	/	/	/	/		
- LIM. DI MOMENTO*	MPa	30		30		30		30		30		30		30			
- *LOAD LIMIT DEVICE**	*PSI*	4355		4355		4355		4355		4355		4355		4355			
- LIM. DI MOMENTO PLUS*	MPa	32		32		32		32		32		32		32			
- *PLUS LOAD LIMIT DEVICE**	*PSI*	4640		4640		4640		4640		4640		4640		4640			
- LIM. DI MOMENTO J903*	MPa	/	/	/	/	28.5		25.5		/	/	/	/	/	/		
- *LOAD LIMIT DEVICE J903**	*PSI*	/	/	/	/	4140		3697		/	/	/	/	/	/		
- LIM. DI MOMENTO J904*	MPa	/	/	/	/	28.5		25.5		/	/	/	/	/	/		
- *LOAD LIMIT DEVICE J904**	*PSI*	/	/	/	/	4140		3697		/	/	/	/	/	/		

* Tolleranza: 0 ÷ +2 MPa ** Tollerance: 0 ÷ +2 MPa*

S=Salita
D=Discesa
U=Uscita
R=Rientro
O=Oraria
A=Antioraria
*=Vedi impianti idraulici

S=Lifting
D=Lowering
U=Extension
R=Retracting
O=Clockwise
A=Anticlockwise
*=See hydraulic system

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

2.8 TEMPI DI LAVORO

(tempi teorici minimi senza carico)

- Q= 45 l/min
- Temperatura OLIO= 45°C
- OLIO ISO VG 46
- Tolleranza: ±5%

2.8 MOUVEMENTS SPEED

(minimun teorics times - without load)

- *Q= 45 l/min (12 US-gals/min)*
- *Temperature OIL= 45°C (113 F°)*
- *OIL ISO VG 46*
- Tollerance: ±5%

		41022 41022LC		41023 41023LC		41024 41024LC		41025 41025LC		41026 41026LC		41027 41027LC		41028 41028LC			
		S	D	S	D	S	D	S	D	S	D	S	D	S	D		
- MARTINETTO COLONNA - *COLUMN CYLINDER*	sec.	49	33	49	33	49	33	49	33	49	33	49	33	49	33		
- MARTINETTO MENSOLA - *MAIN BOOM CYLINDER*	sec.	49	33	49	33	49	33	49	33	49	33	49	33	49	33		
- MARTINETTO BRACCI - *BOOMS CYLINDER*	sec.	31	17	47	26	63	36	80	45	97	55	110	64	124	73		
- MART. BRACCI LC - *LC BOOMS CYLINDER*	sec.	37	20	54	30	70	39	86	49	103	58	117	67	130	77		
- ROTAZIONE(410°) - *SLEWING SYSTEM(410°)*	sec.	60	60	60	60	60	60	60	60	60	60	60	60	60	60		
- STABILIZZATORI - *OUTRIGGER*	sec.	8	13	8	13	8	13	8	13	8	13	8	13	8	13		

S=Salita / Uscita
D=Discesa / Rientro

S=Lifting / Extension
D=Lowering / Retracting

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

Since 1959

Cranes, in all the languages of the world

3: IMPIANTI ELETTRICI

3: *ELECTRICAL CIRCUITS*

3.1 DISPOSITIVO ARRESTO IN EMERGENZA

3.1 EMERGENCY STOP DEVICE

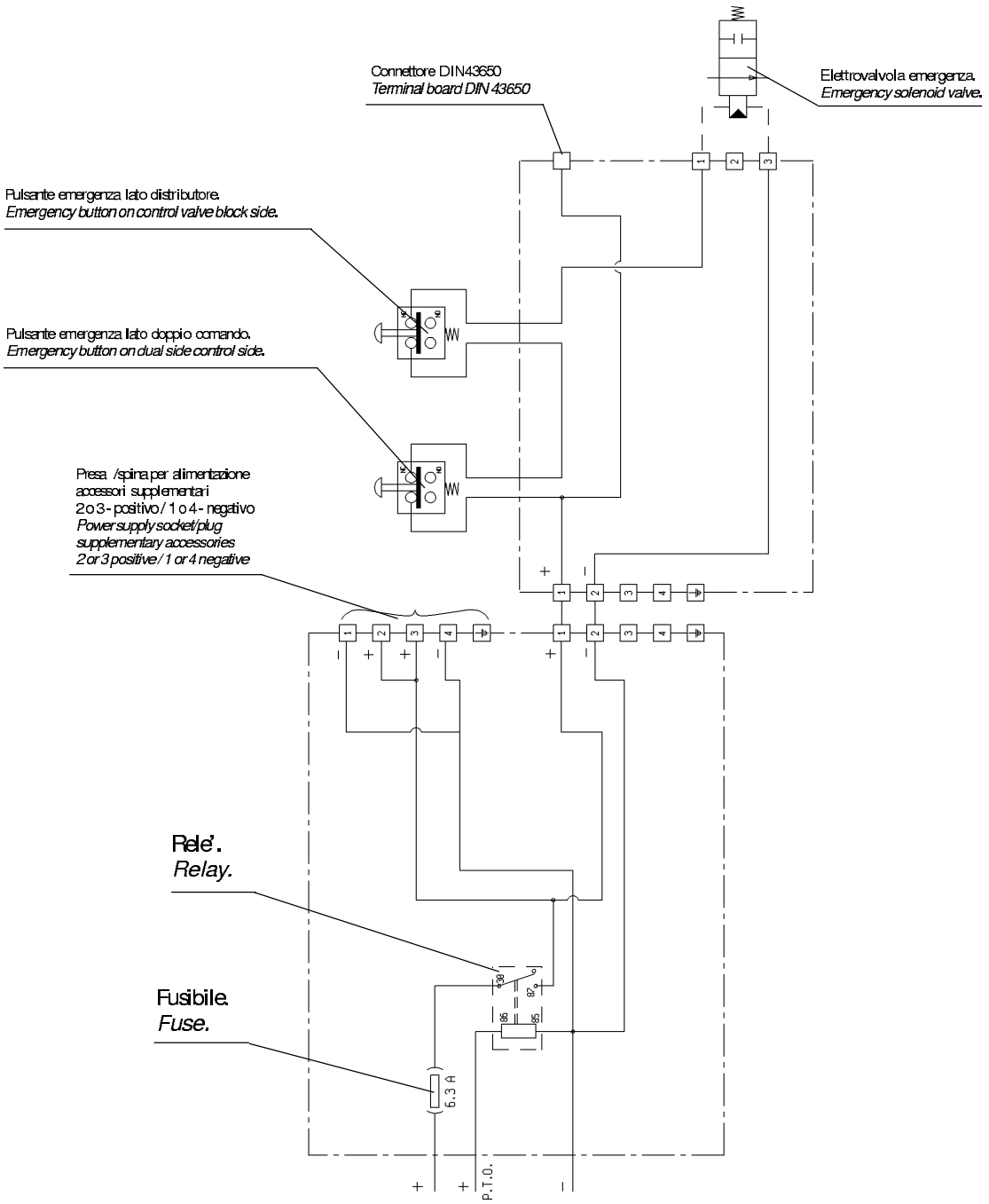


Fig.3-1

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

3.2 MACCHINA CON VERRICELLO | *3.2 MACHINE WITH WINCH*

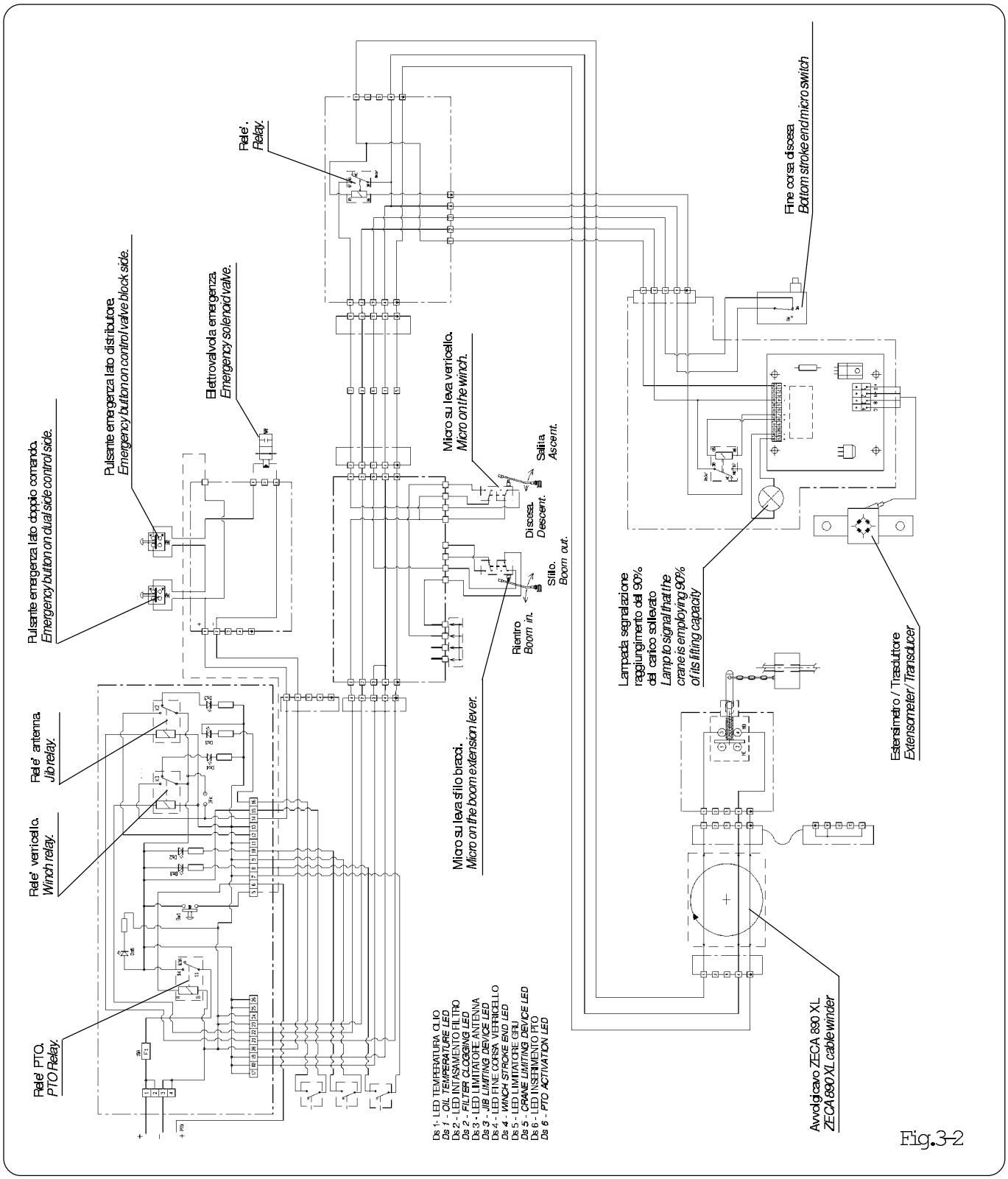


Fig.3-2

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

3.3 MACCHINA CON ANTENNA | *3.3 MACHINE WITH JIB*

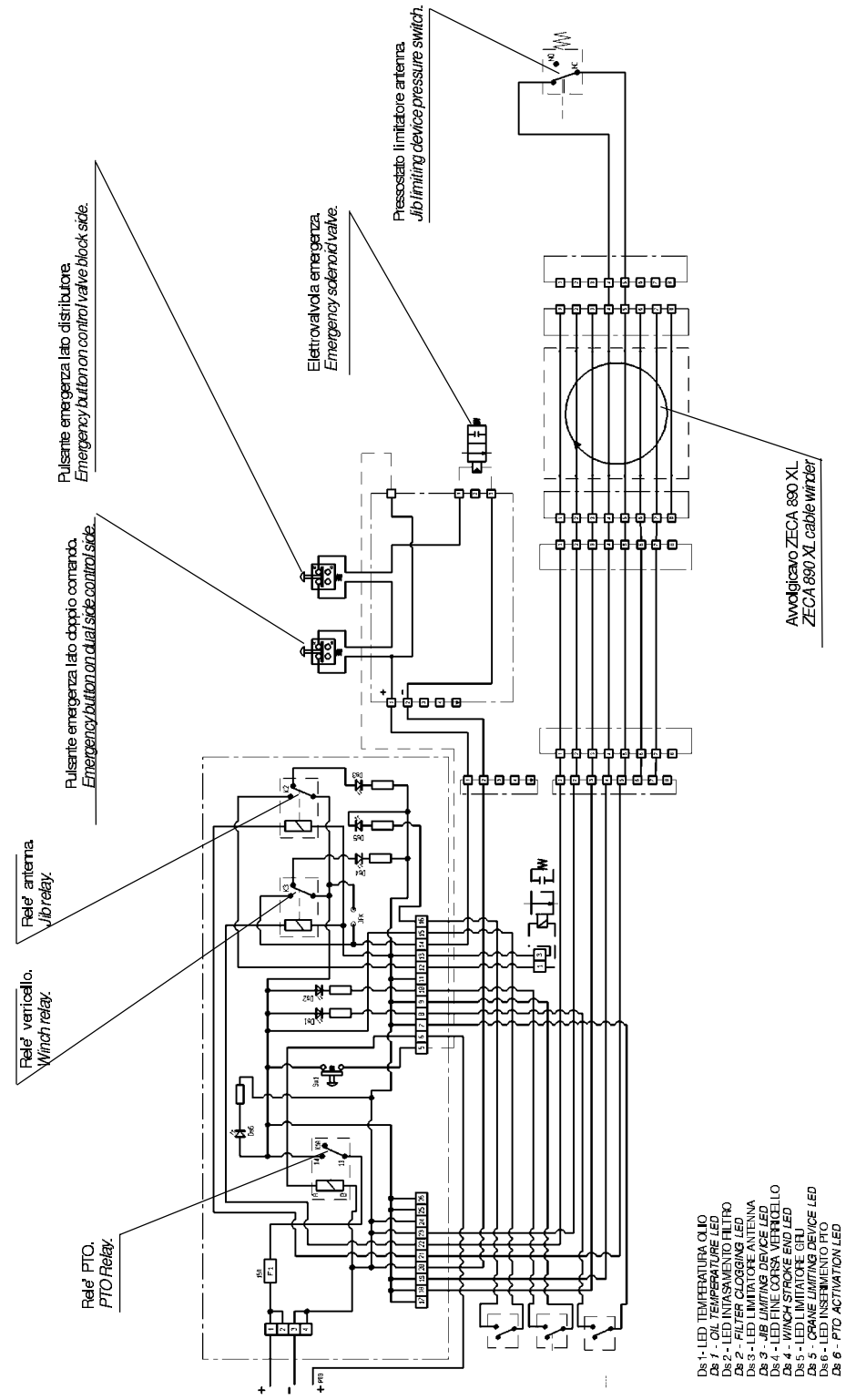


Fig.3-3

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

3.4 MACCHINA CON VERRICELLO SU ANTENNA

3.4 MACHINE WITH WINCH ON THE JIB

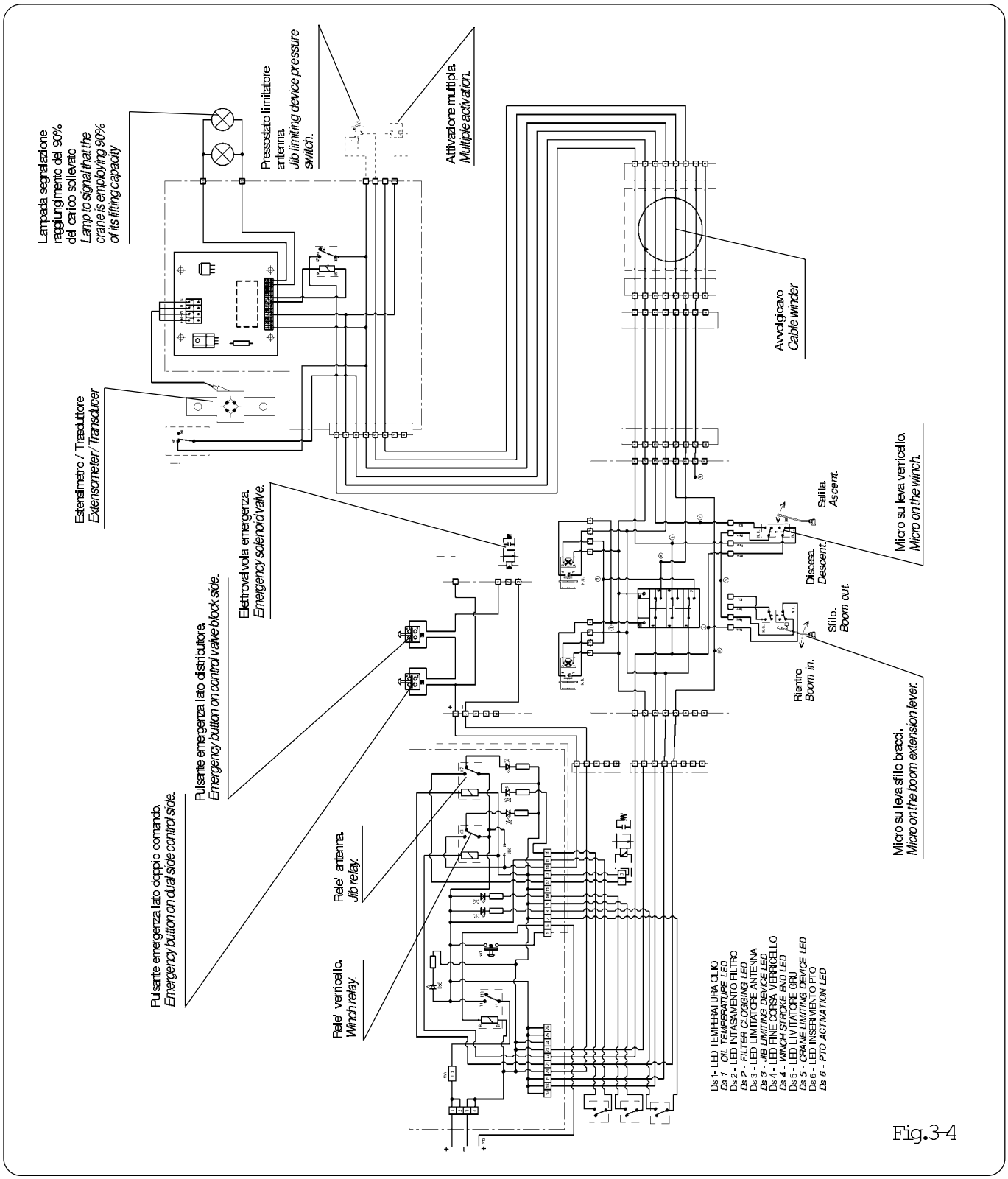


Fig.3-4

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

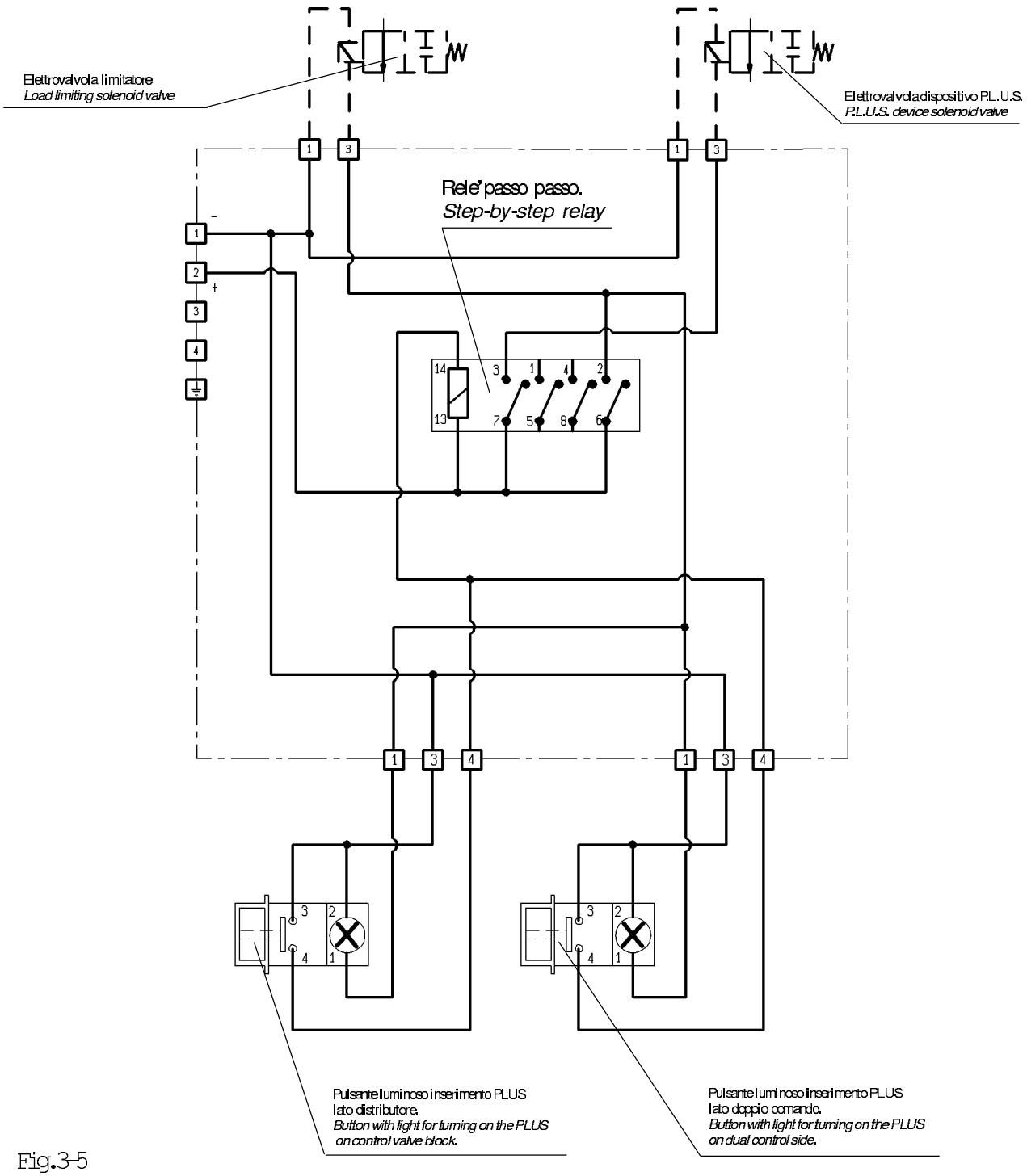


Fig.3-5

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

3.6 LIMITATORE ROTAZIONE | *3.6 ROTATION CONTROL SYSTEM*

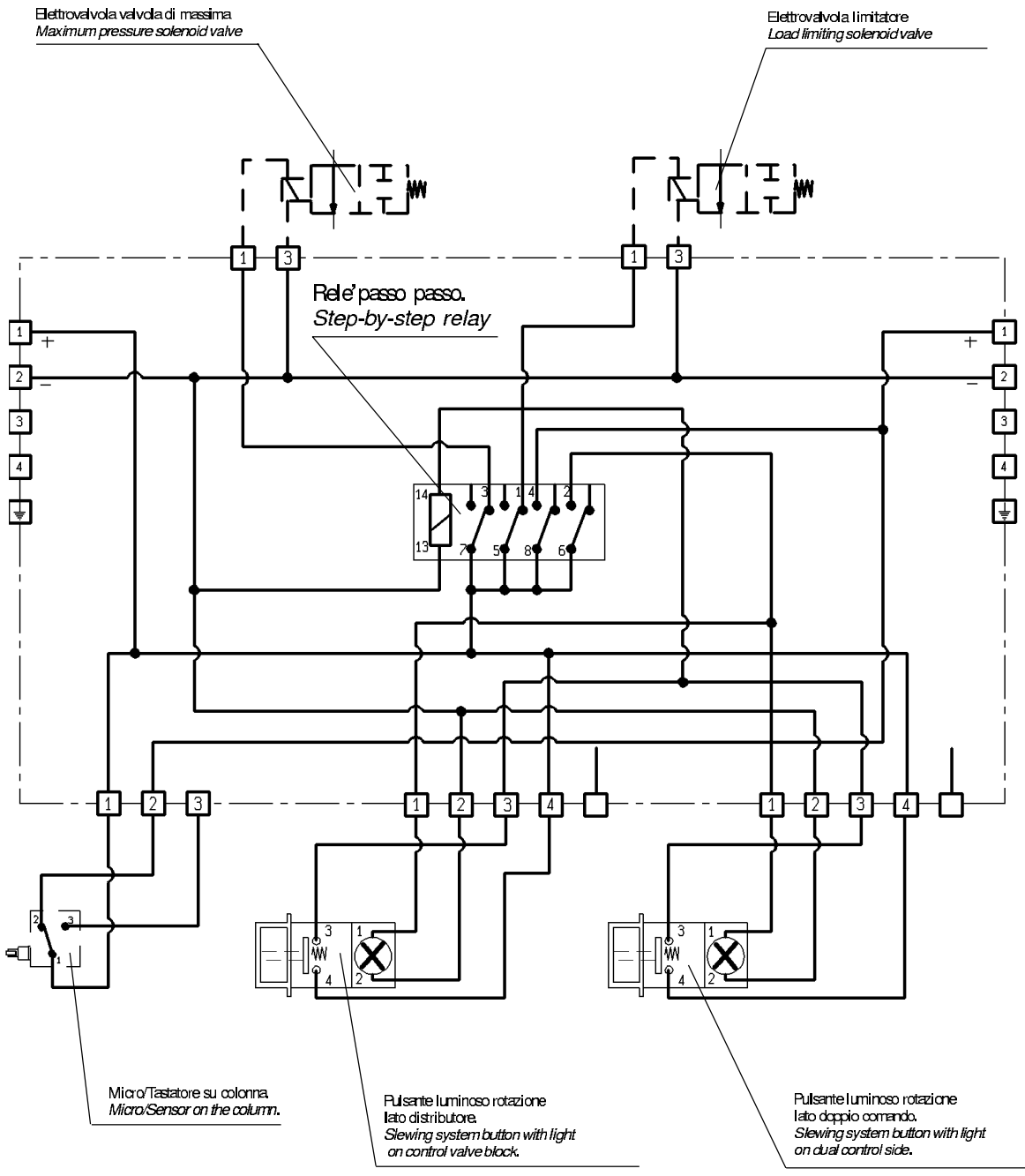


Fig.3-6

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

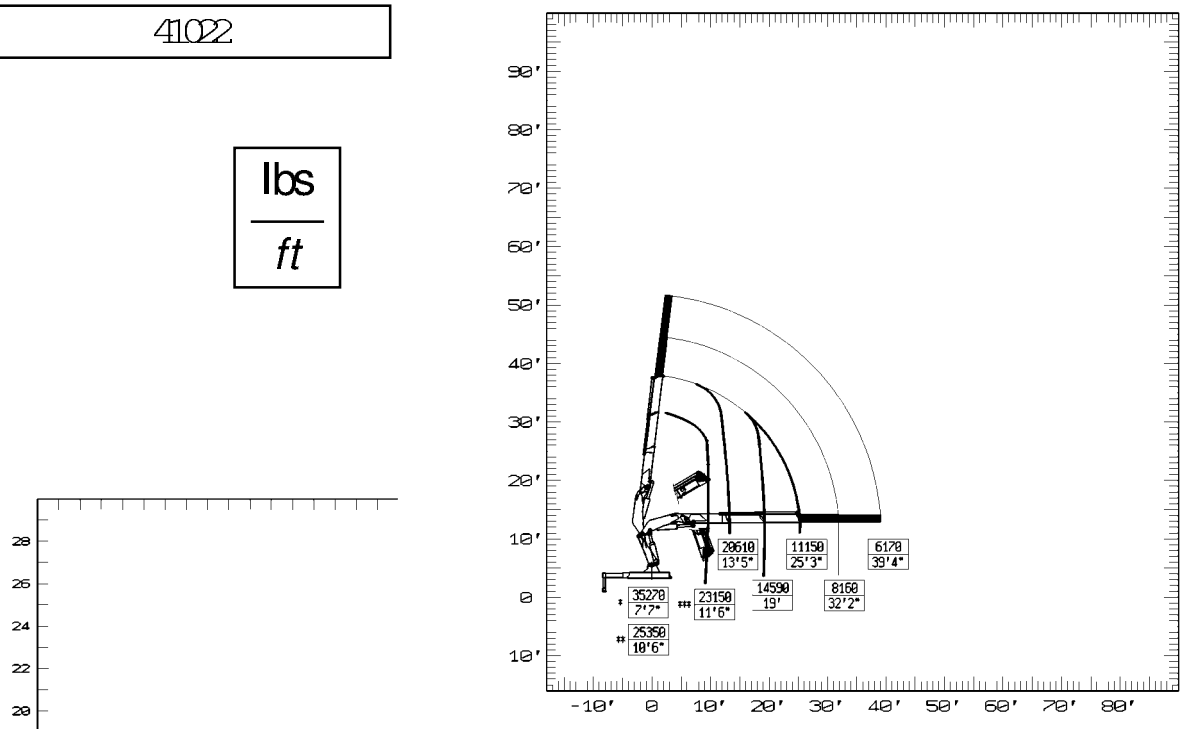
Since 1959

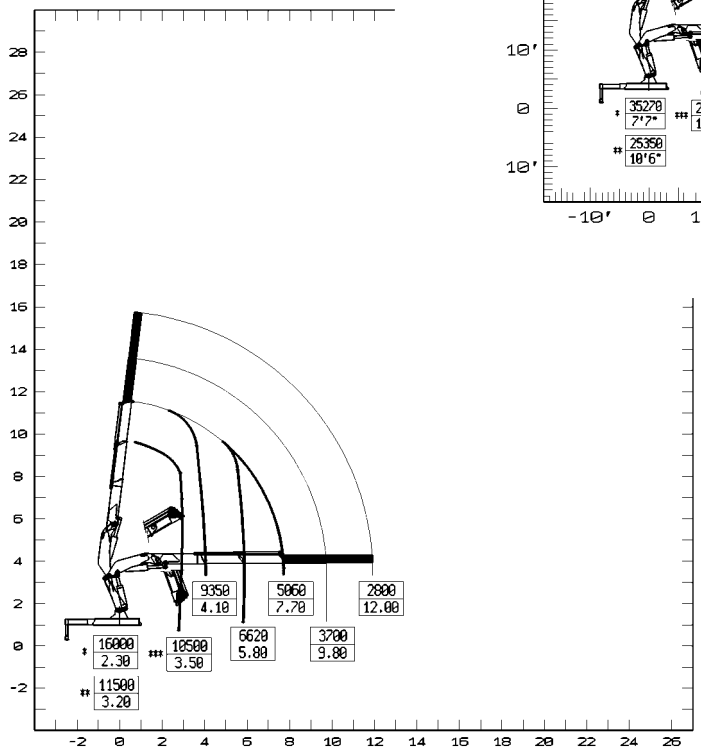
Cranes, in all the languages of the world

4: DIAGRAMMI PORTATE | *4: LOAD CHARTS*

41022

lbs / *ft*





kg / *m*

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

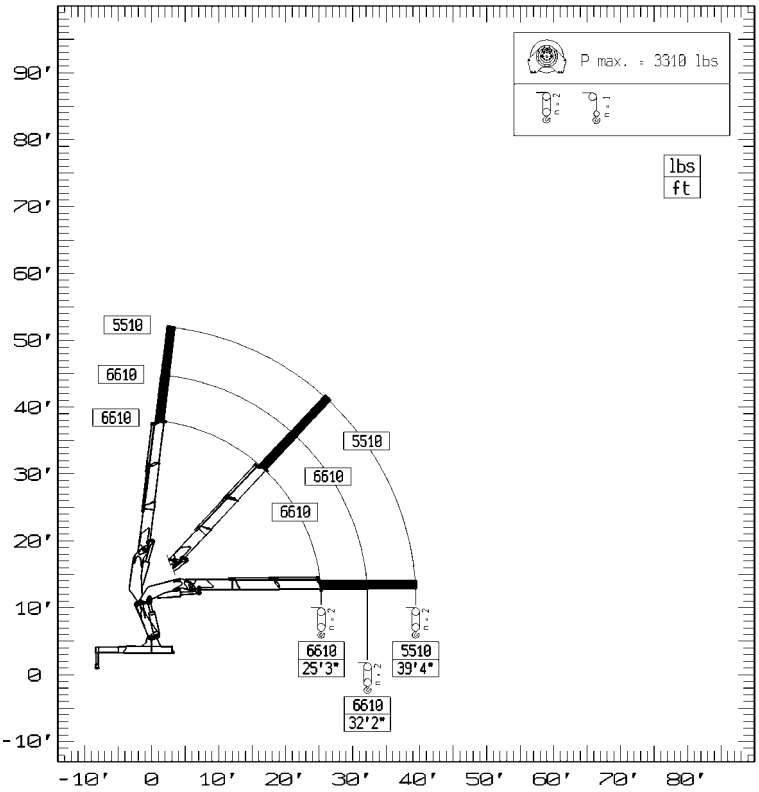
INFORMATION

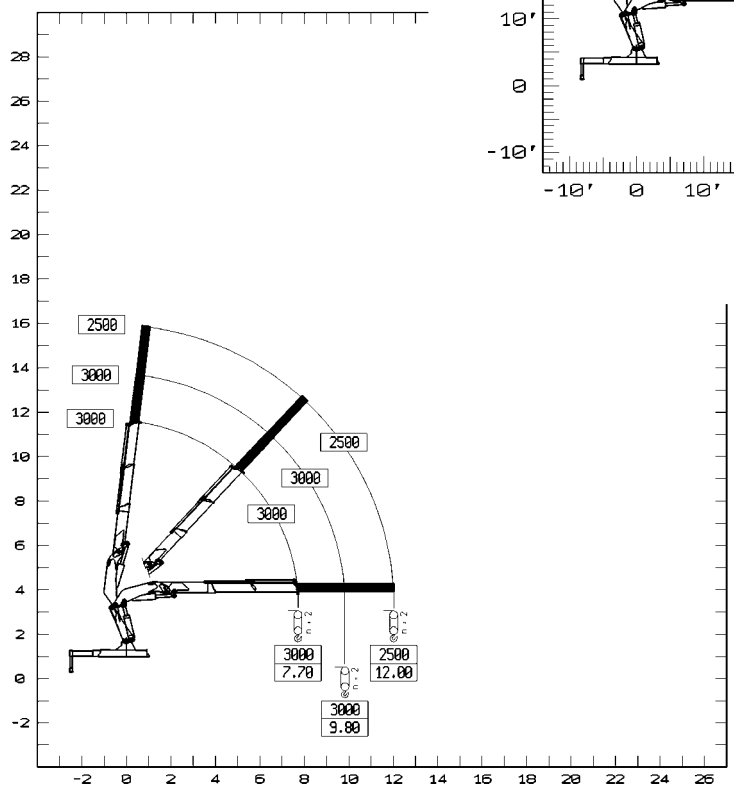
41022+VERRICELLO (WINCH)

lbs / ft

P max. = 1500Kg
P max. = 3310 lbs

n.2 n.1





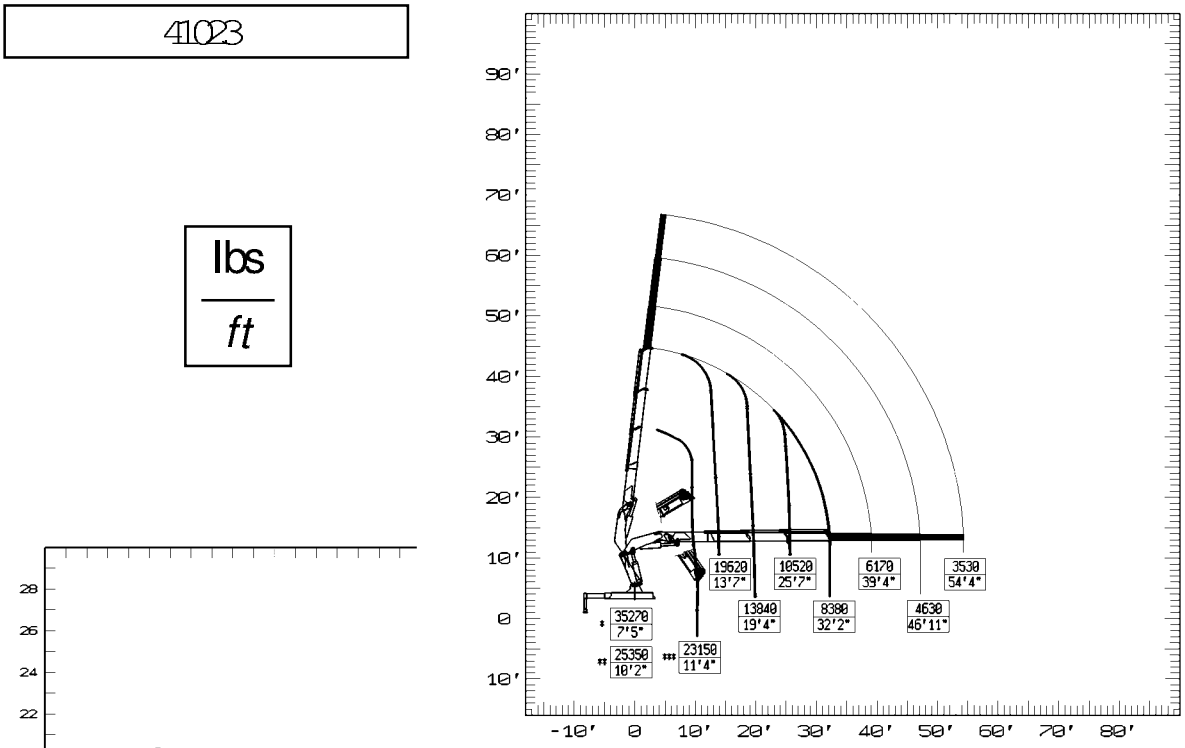
kg / m

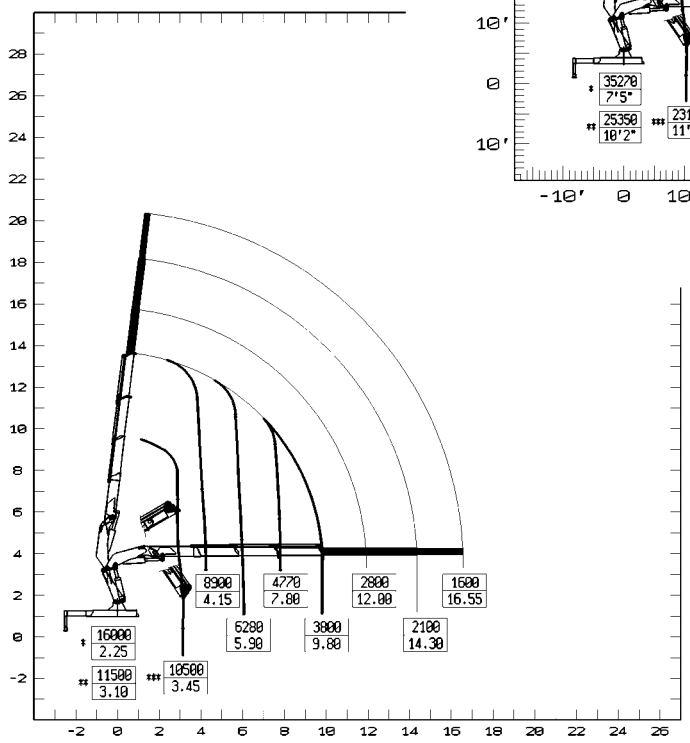
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41023

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

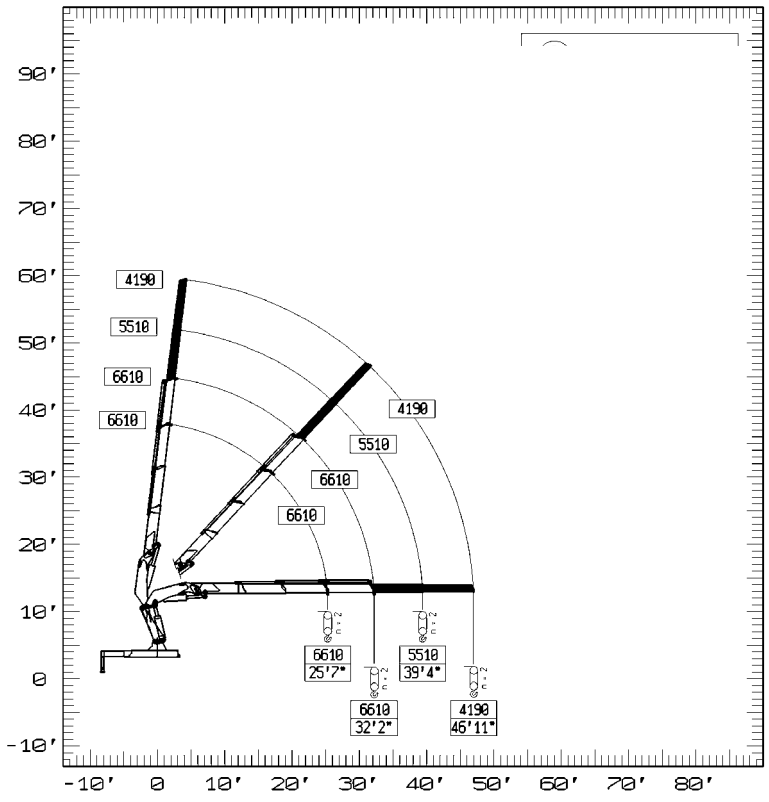
INFORMATION

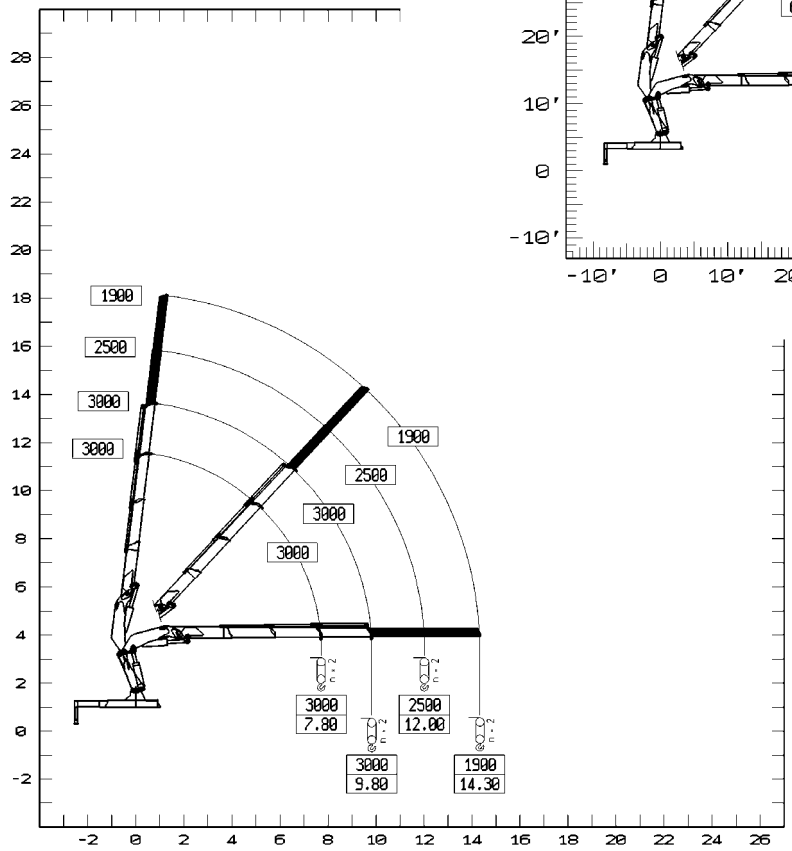
41023+VERRICELLO (WINCH)

lbs / ft

P max. = 1500Kg
P max. = 3310 Lbs

n. 2 n. 1





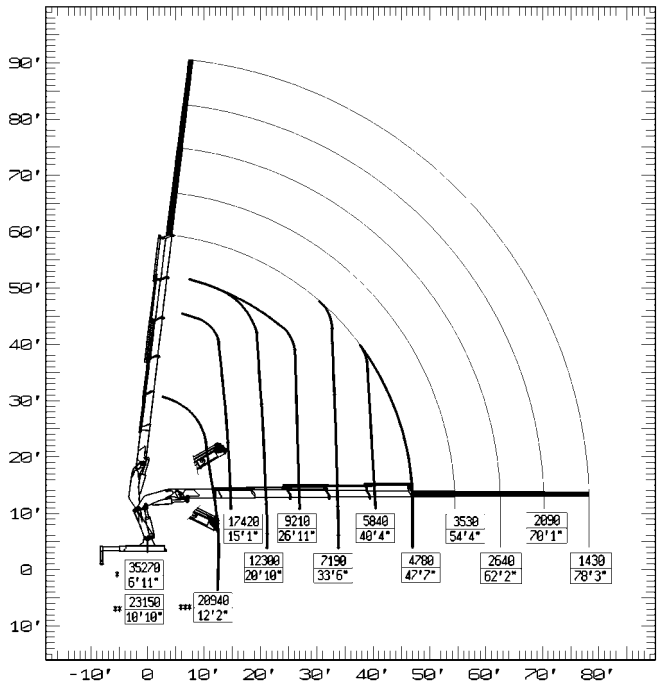
kg / m

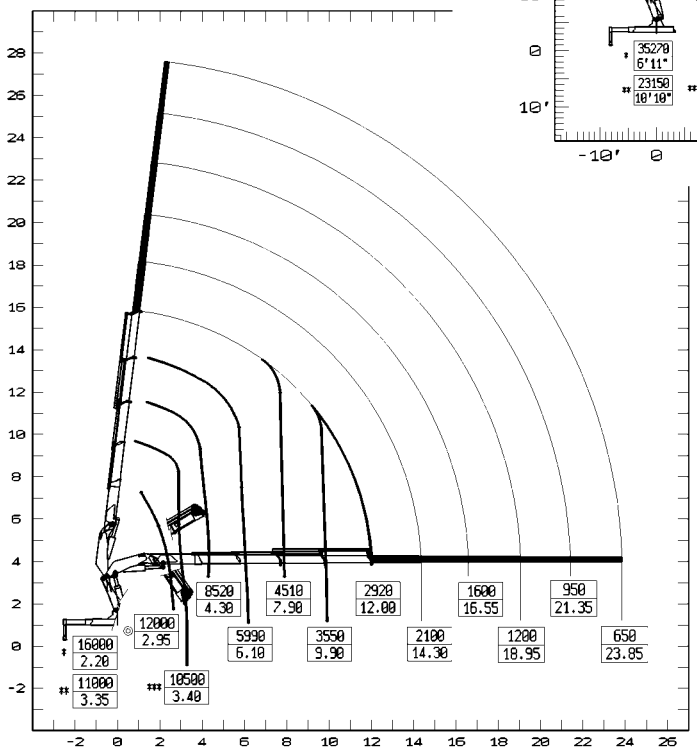
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41024

lbs / *ft*





kg / *m*

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

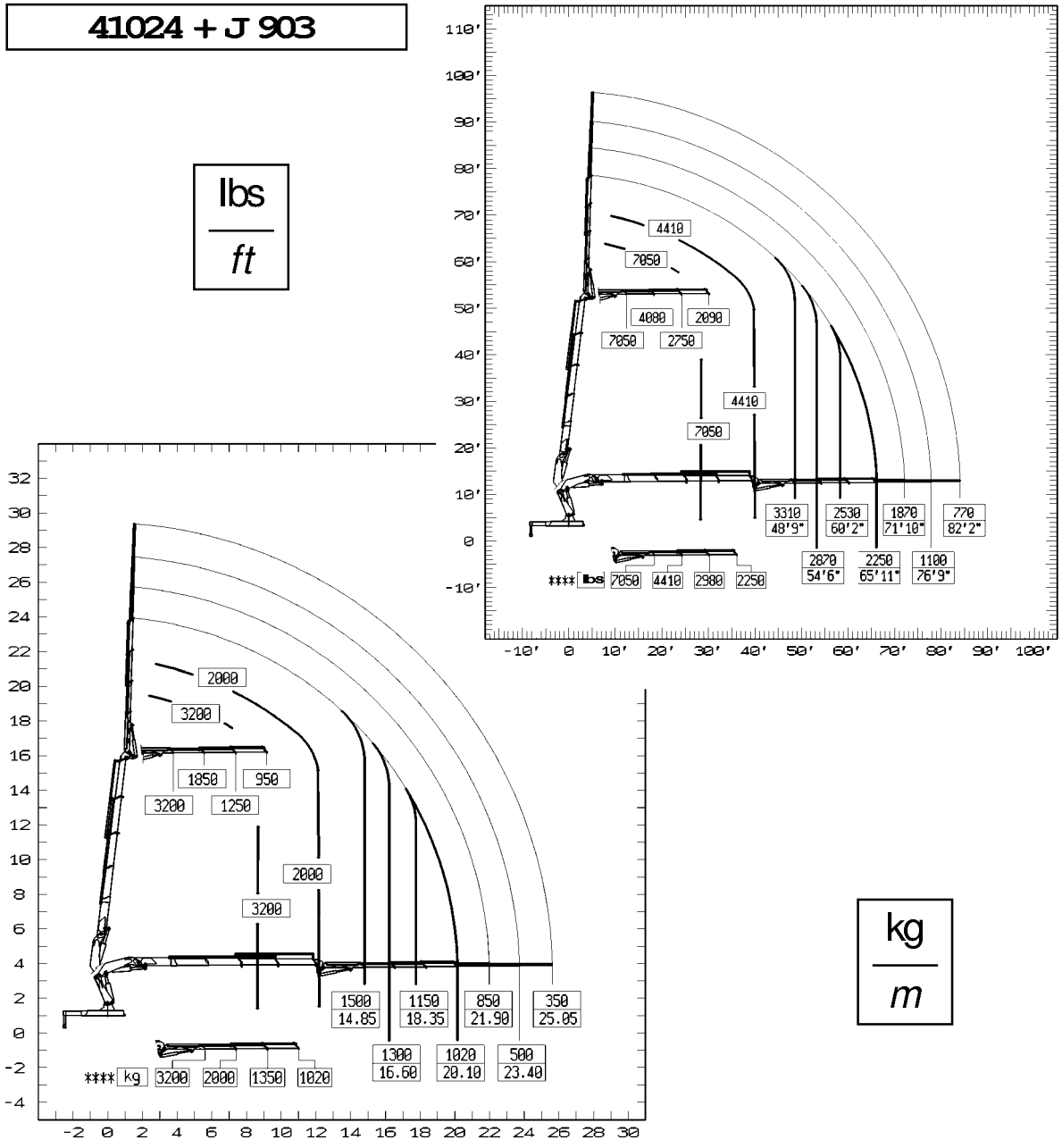
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41024 + J 903



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

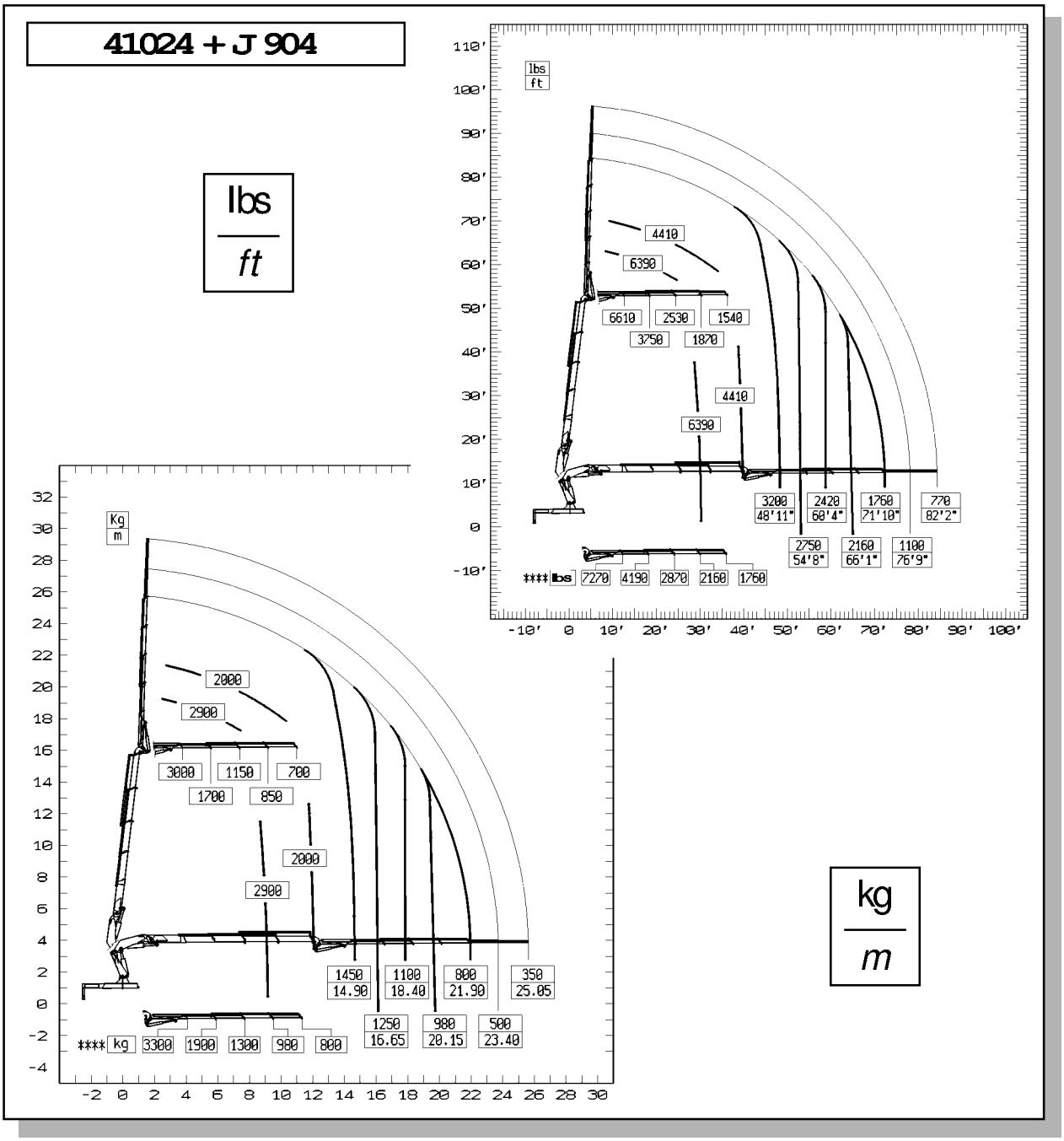
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41024 + J 904



lbs / ft

kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

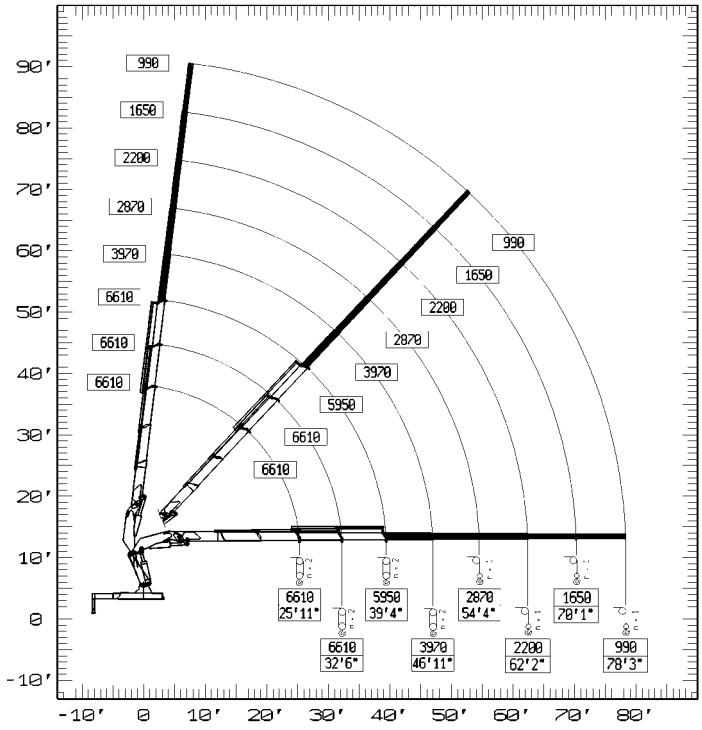
INFORMATION

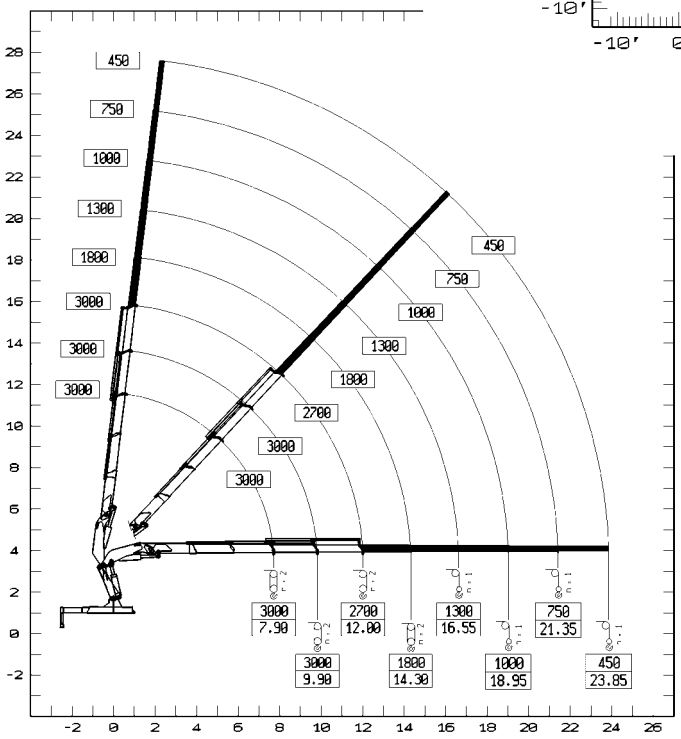
41024+VERRICELLO (WINCH)

lbs / ft

P max. = 1500Kg
P max. = 3310 Lbs

n = 2 n = 1





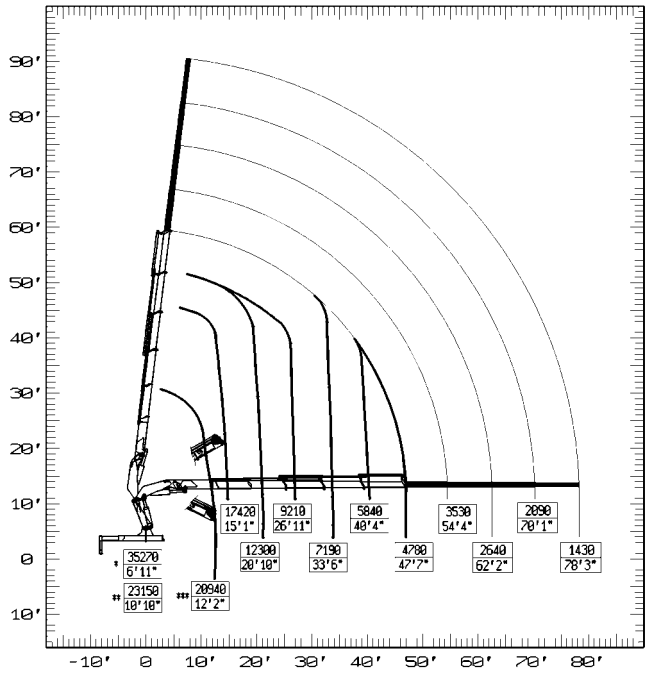
kg / m

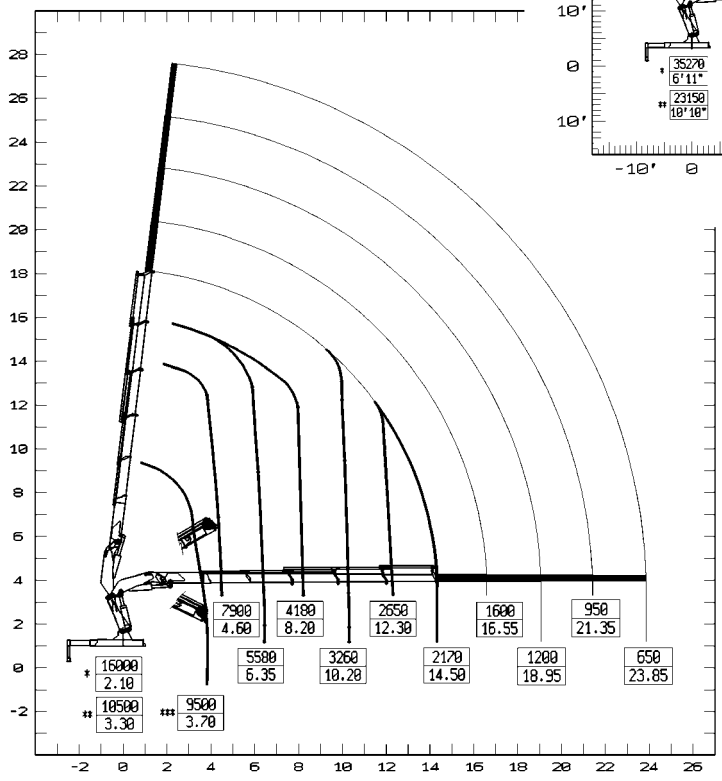
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41025

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

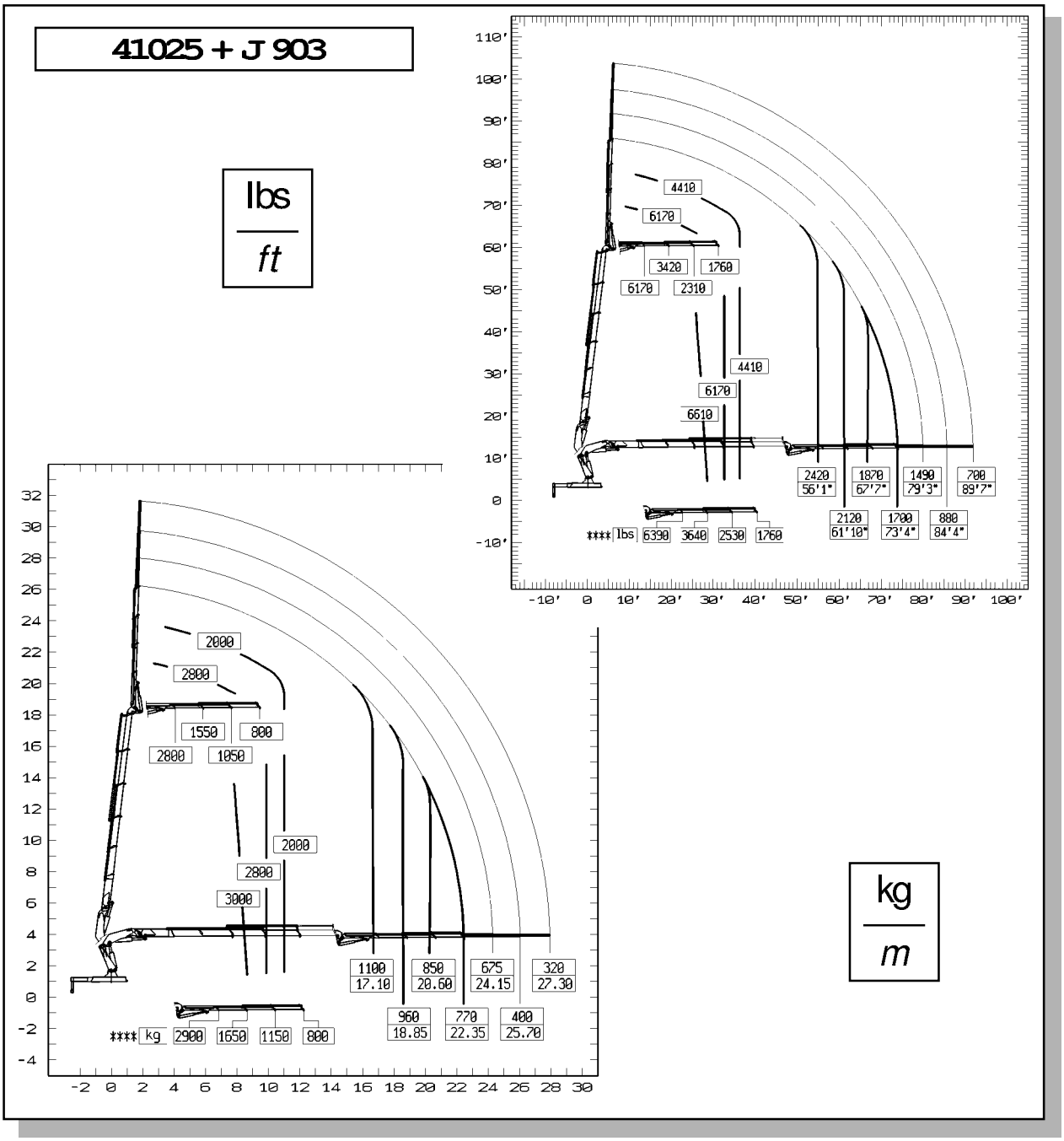
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41025 + J 903



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

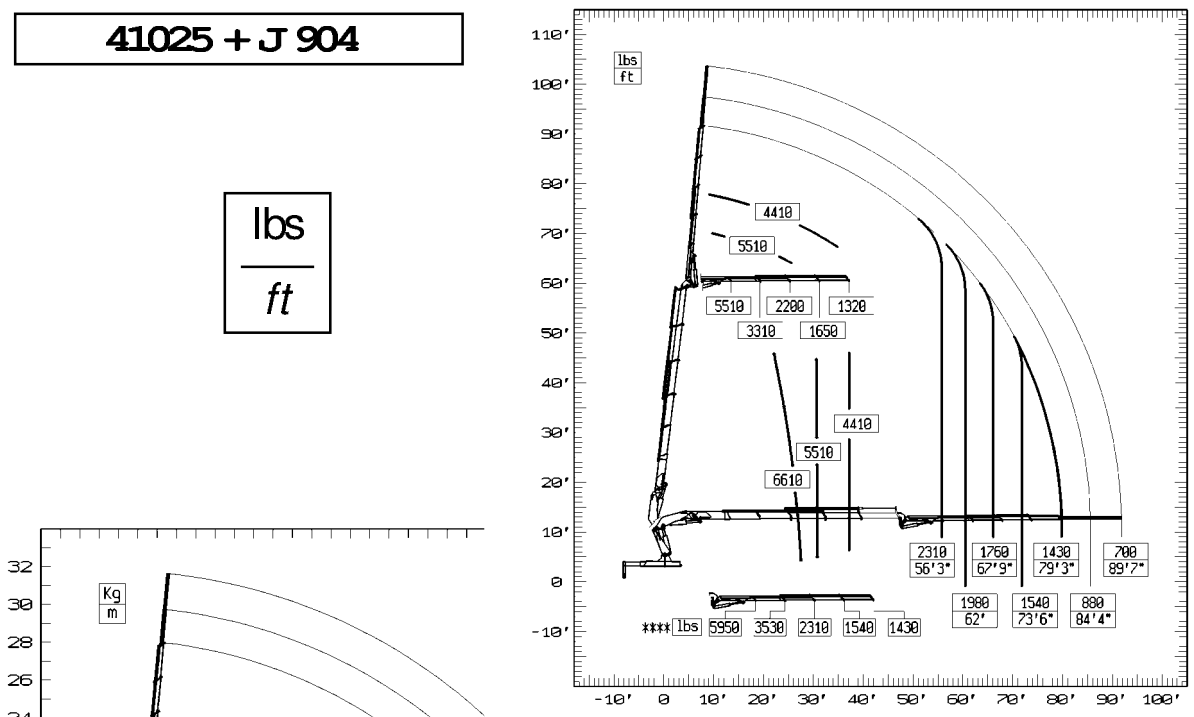
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

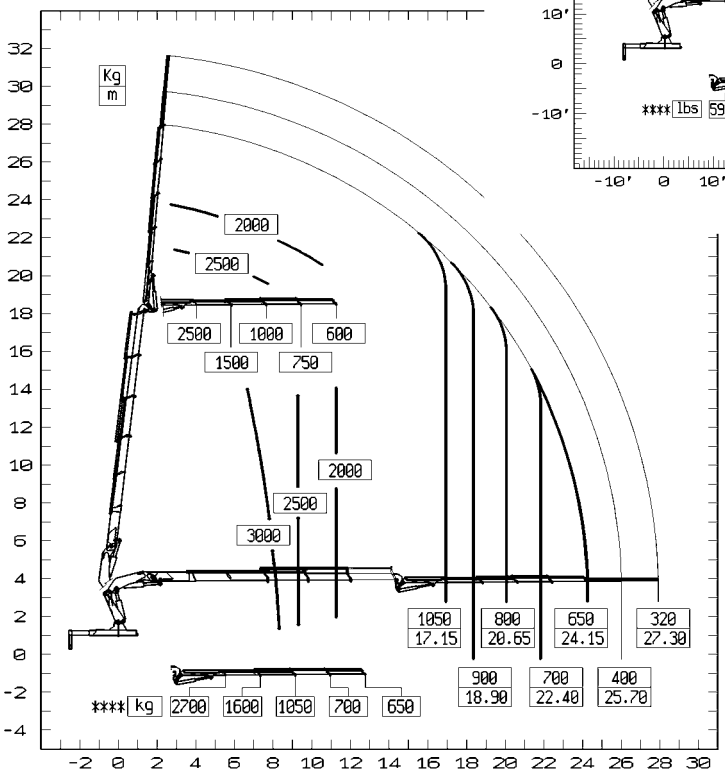
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41025 + J 904

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

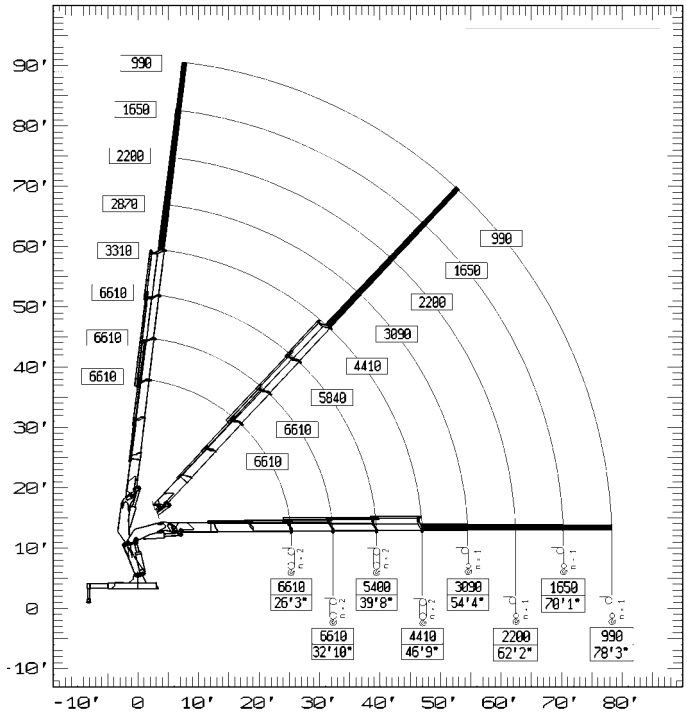
INFORMATION

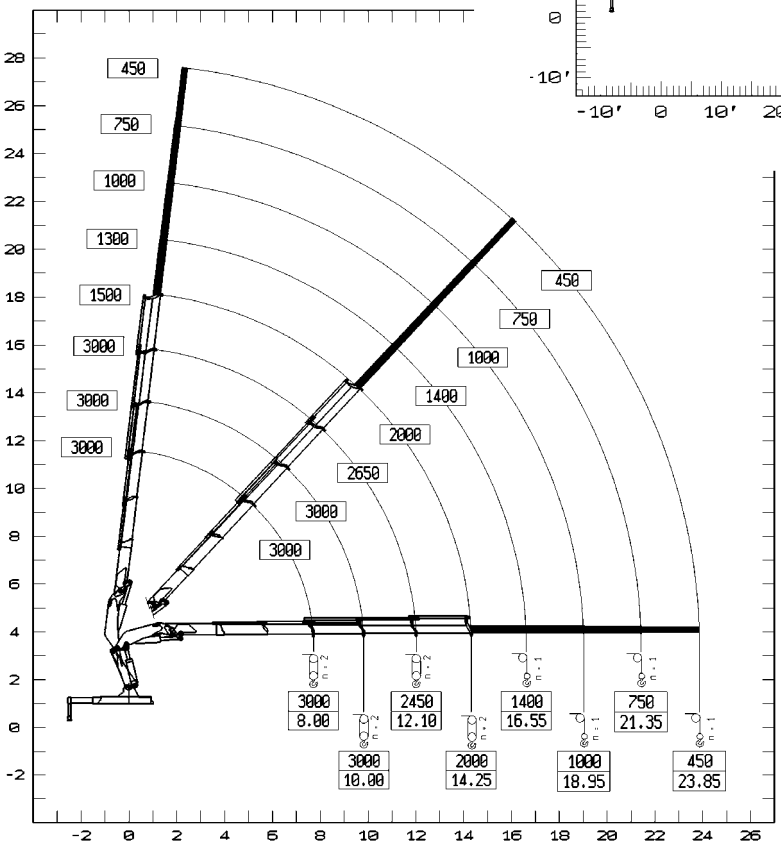
41025+VERRICELLO (WINCH)

lbs / ft

P max. = 1500Kg
P max. = 3310 Lbs

n = 2 n = 1





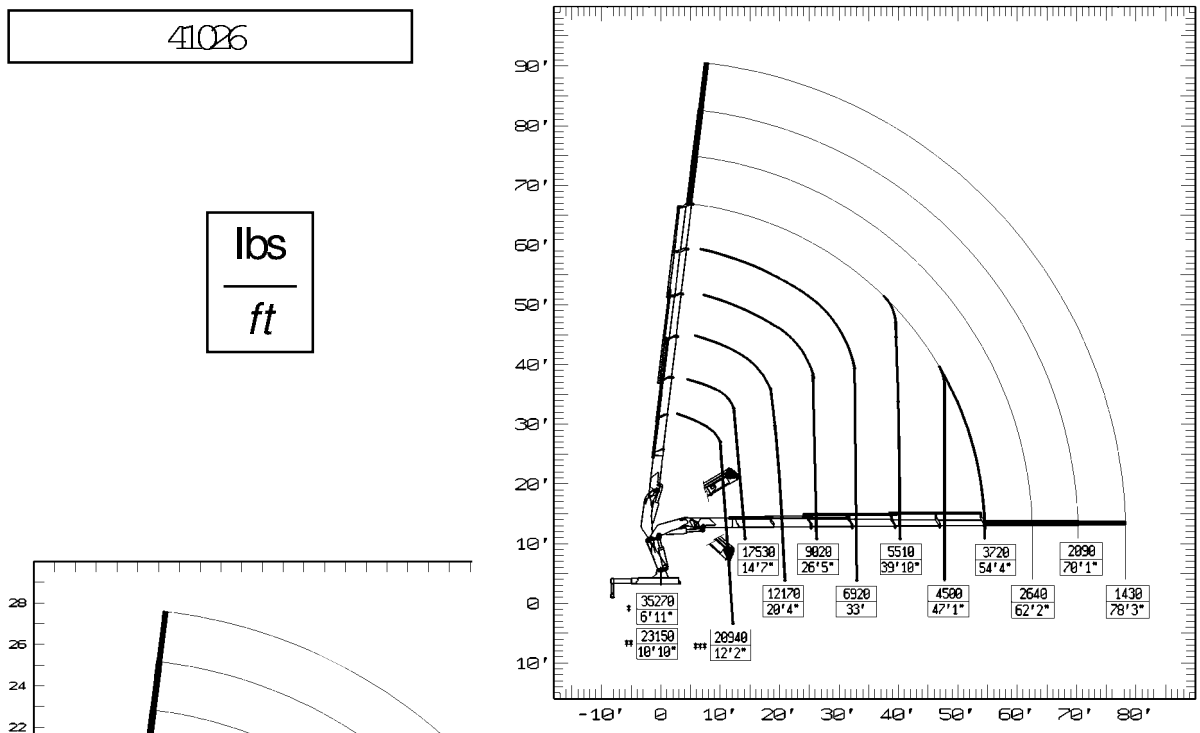
kg / m

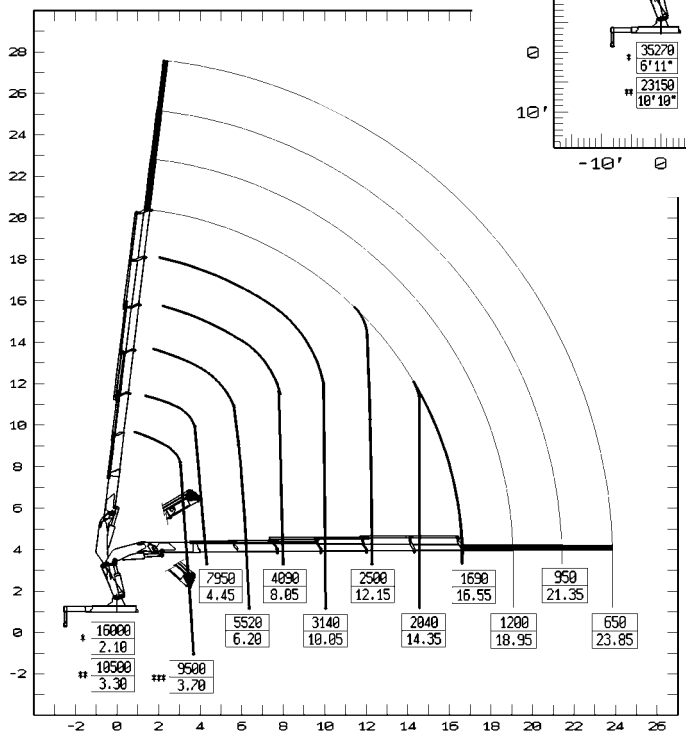
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41026

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

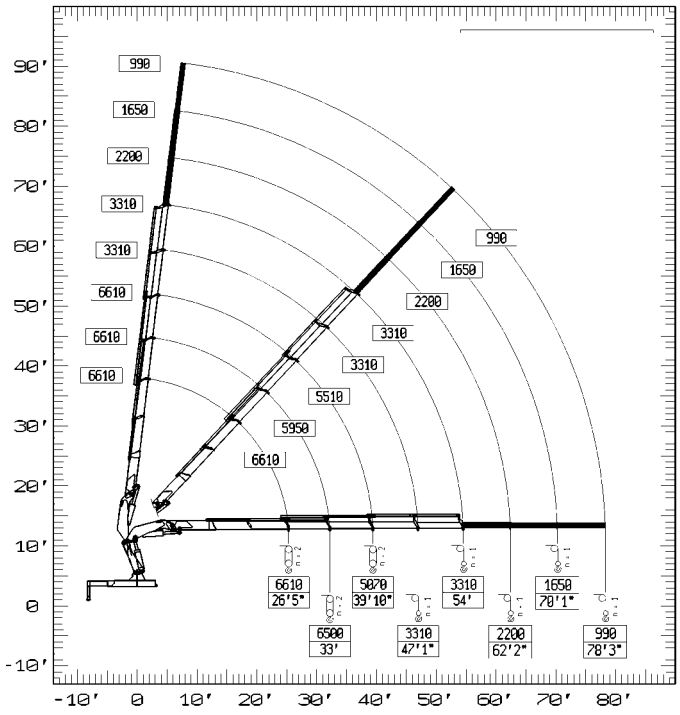
INFORMATION

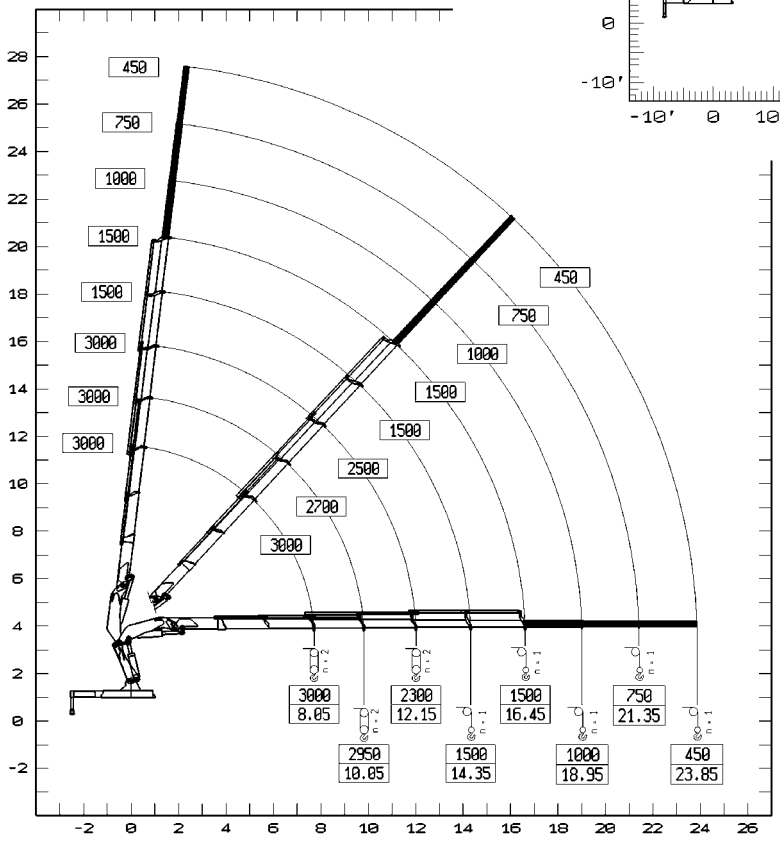
41026+VERRICELLO (WINCH)

lbs / ft

P max. = 1500Kg
P max. = 3310 Lbs

n = 2 n = 1





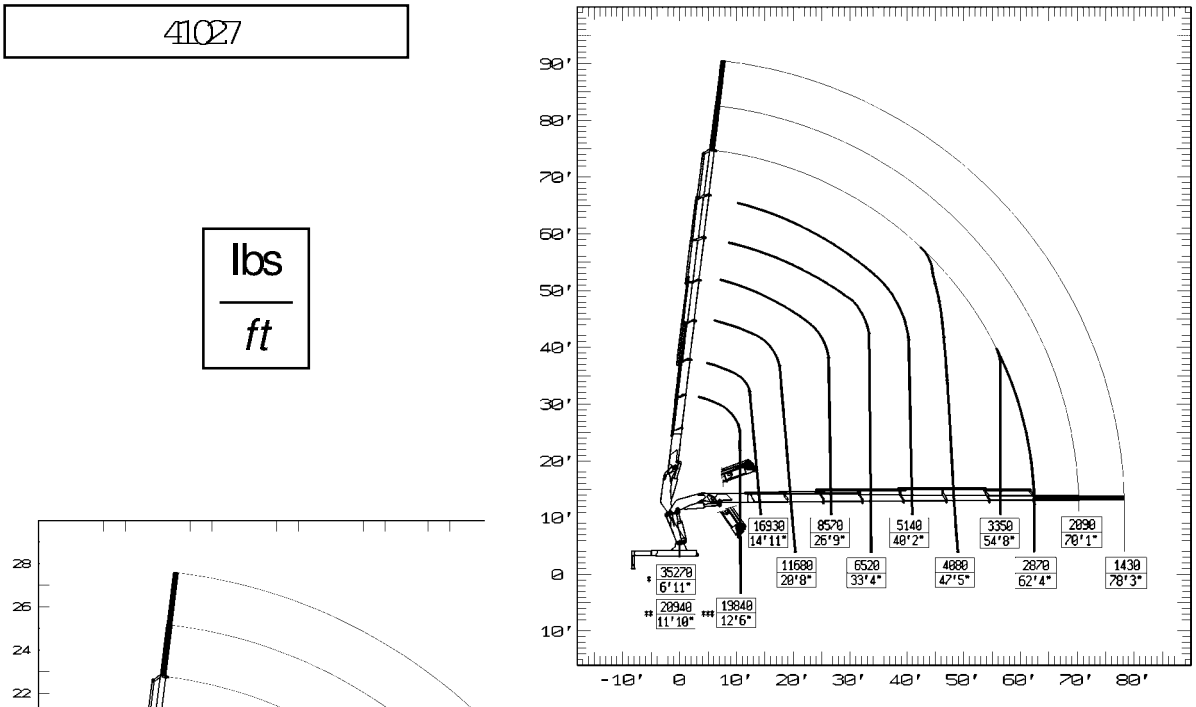
kg / m

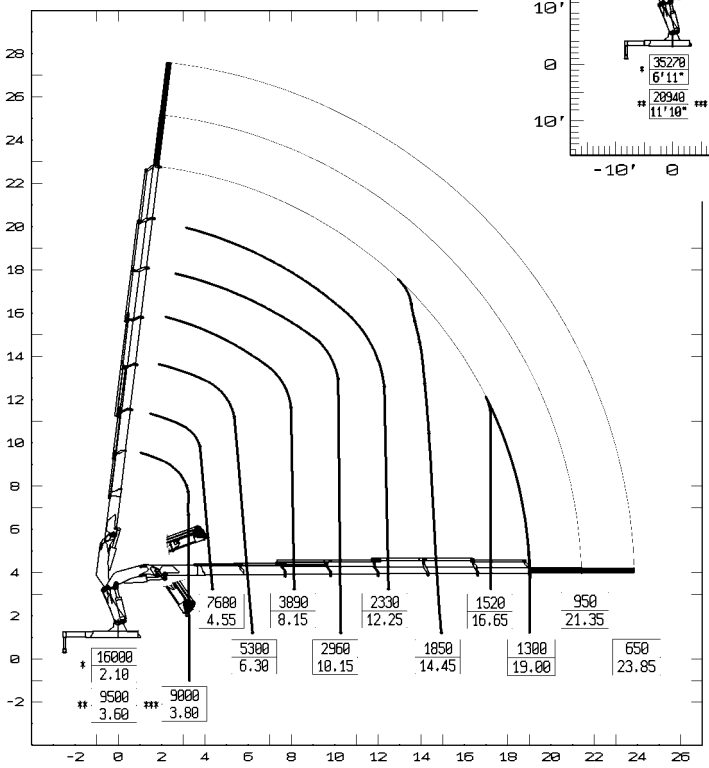
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41027

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

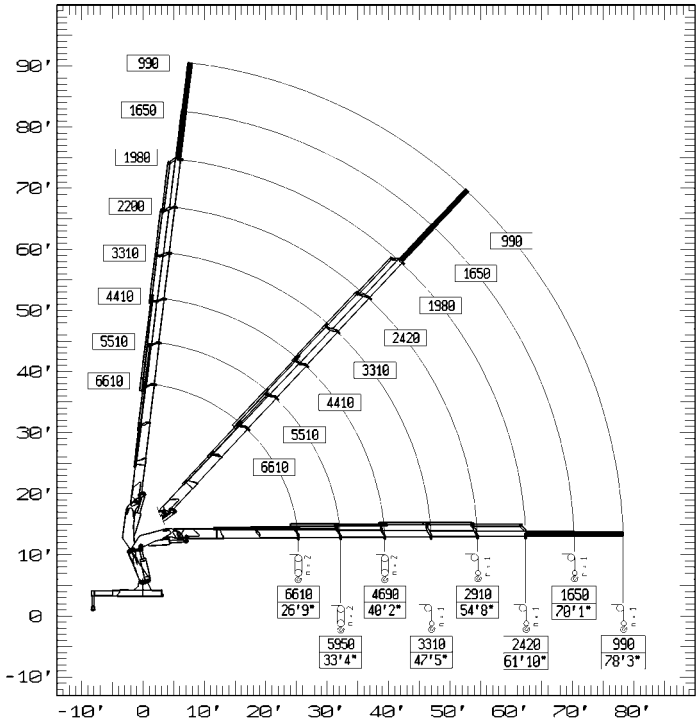
INFORMATION

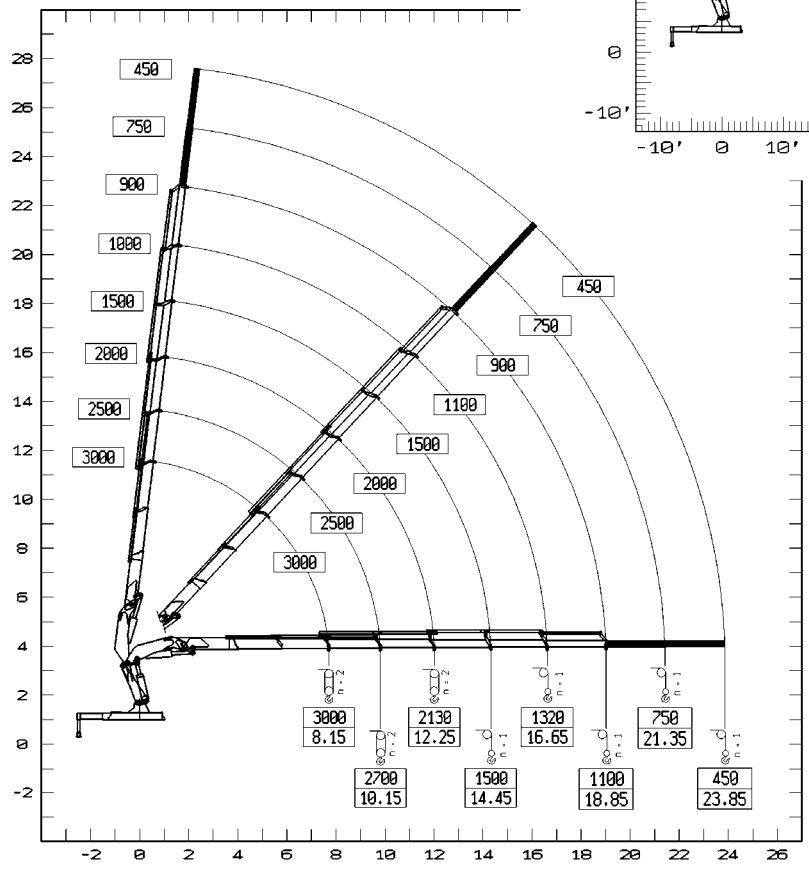
41027+VERRICELLO (WINCH)

lbs / ft

P max. = 1500Kg
P max. = 3310 Lbs

n = 2 n = 1





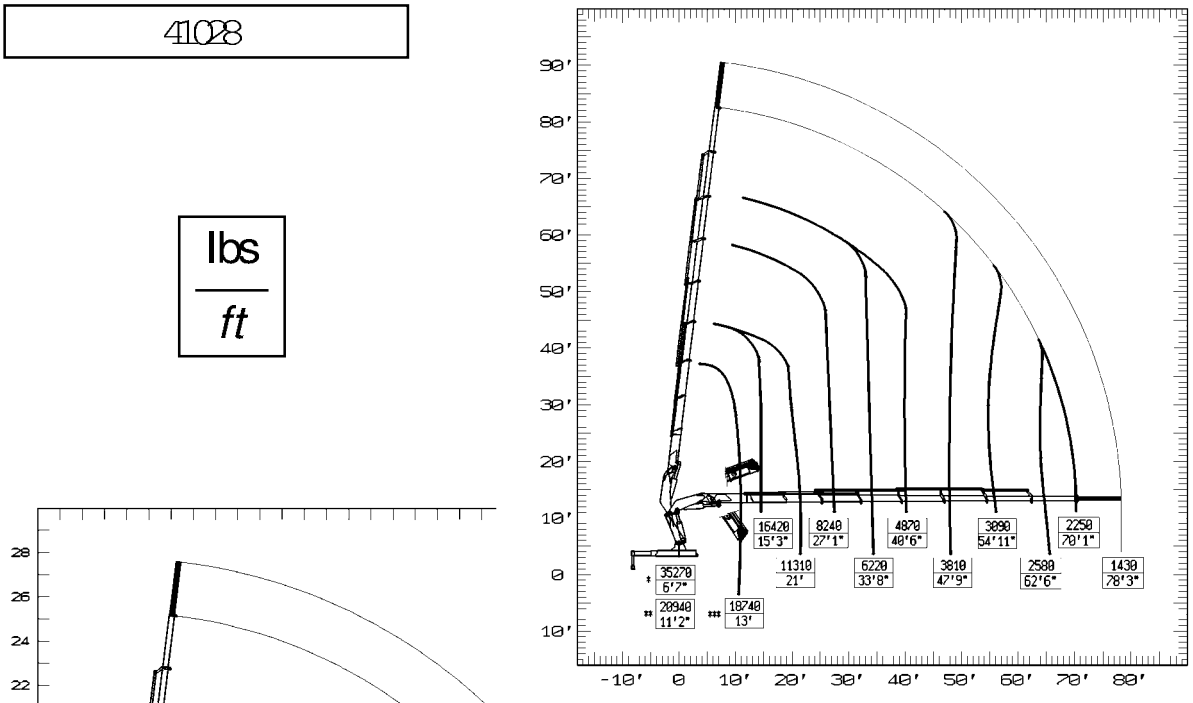
kg / m

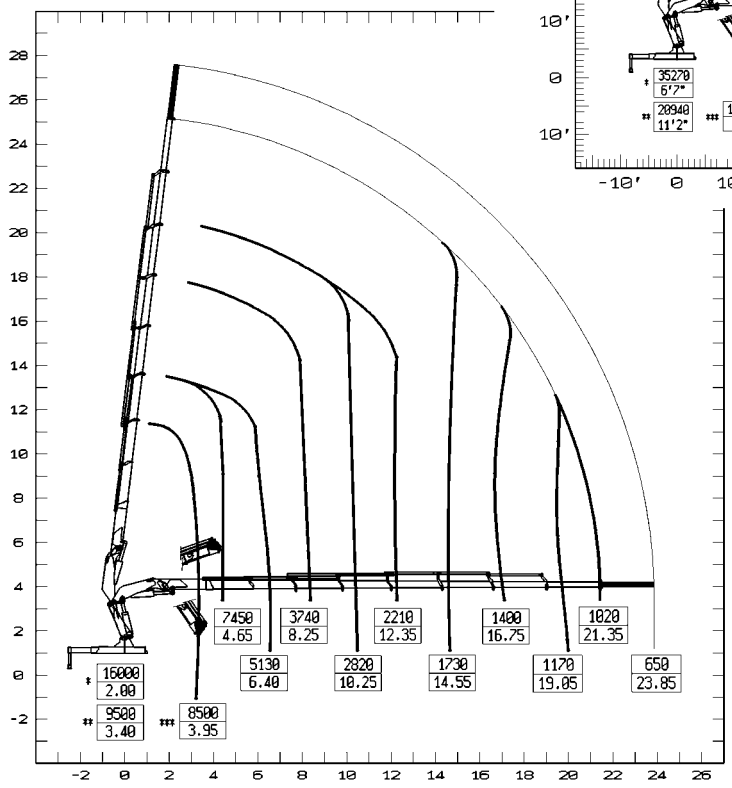
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41028

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

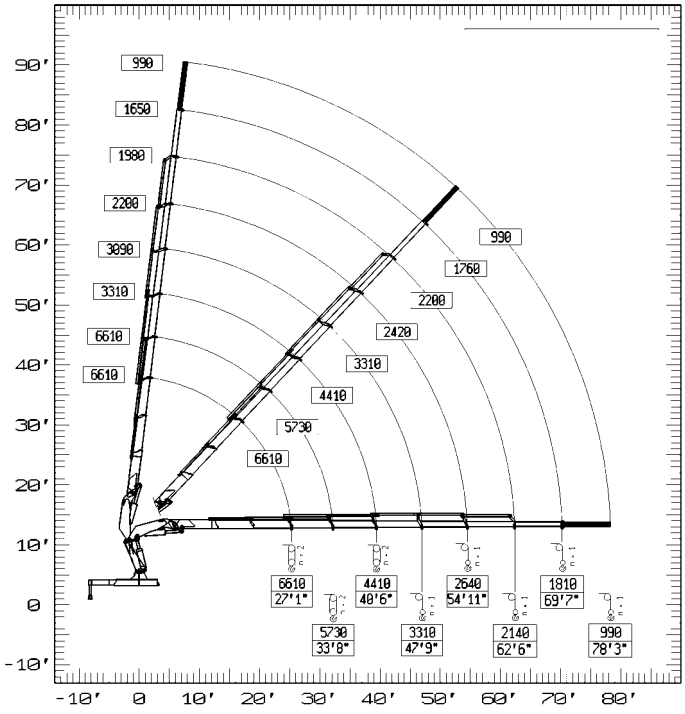
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

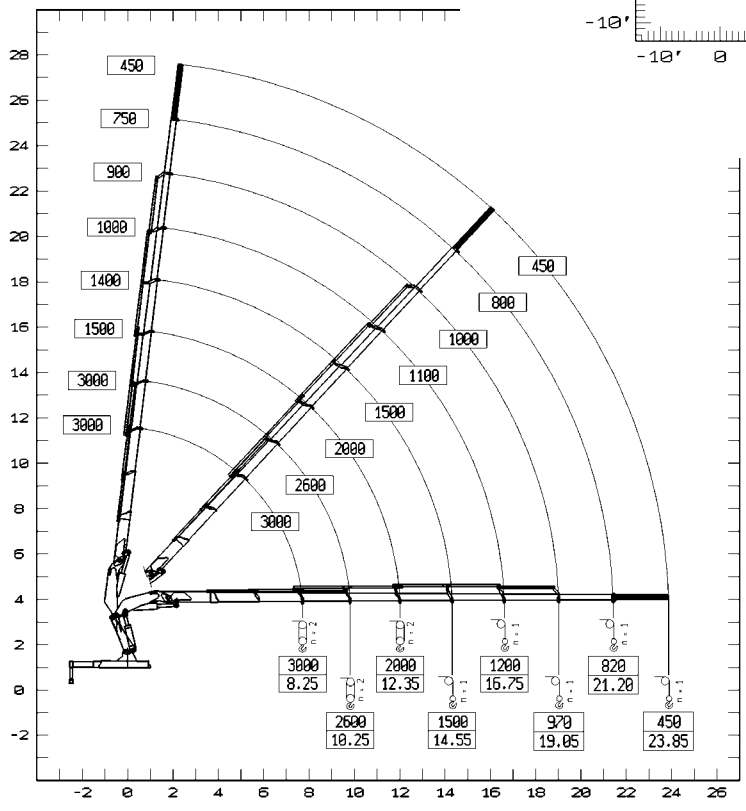
41028+VERRICELLO (WINCH)

lbs / ft



P max. = 1500Kg
P max. = 3310 Lbs

n = 2 n = 1



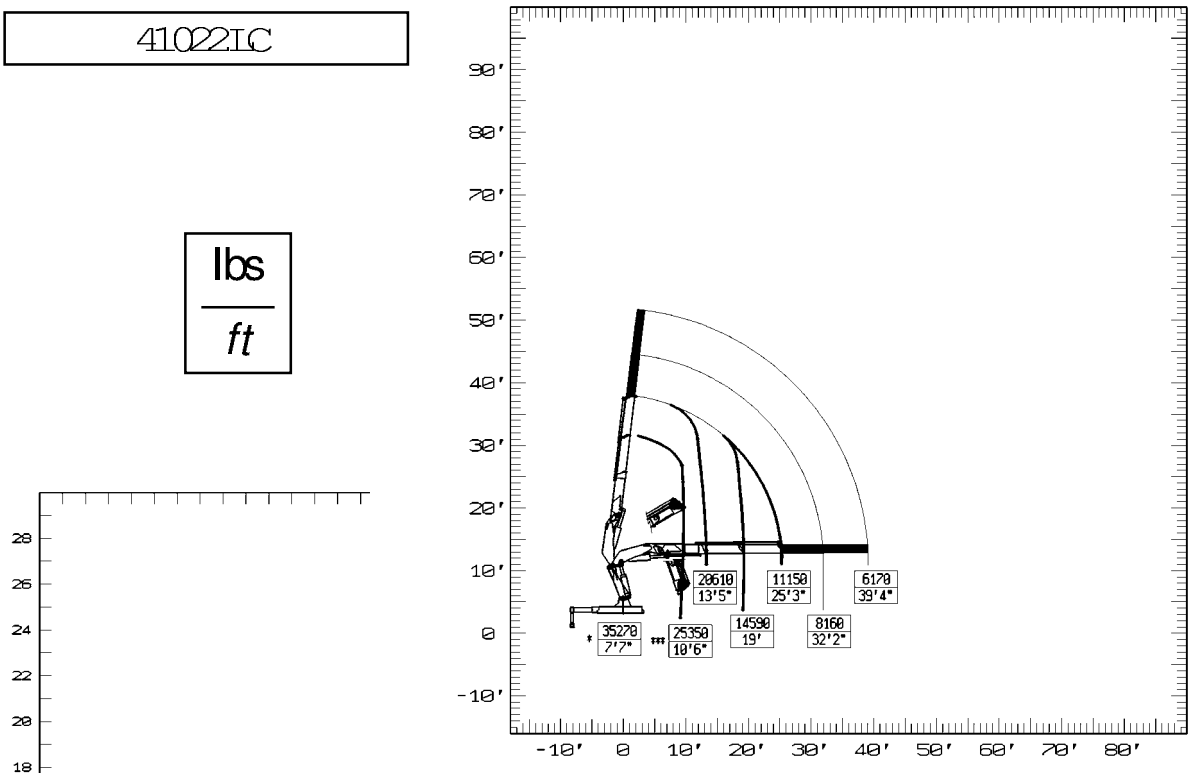
kg / m

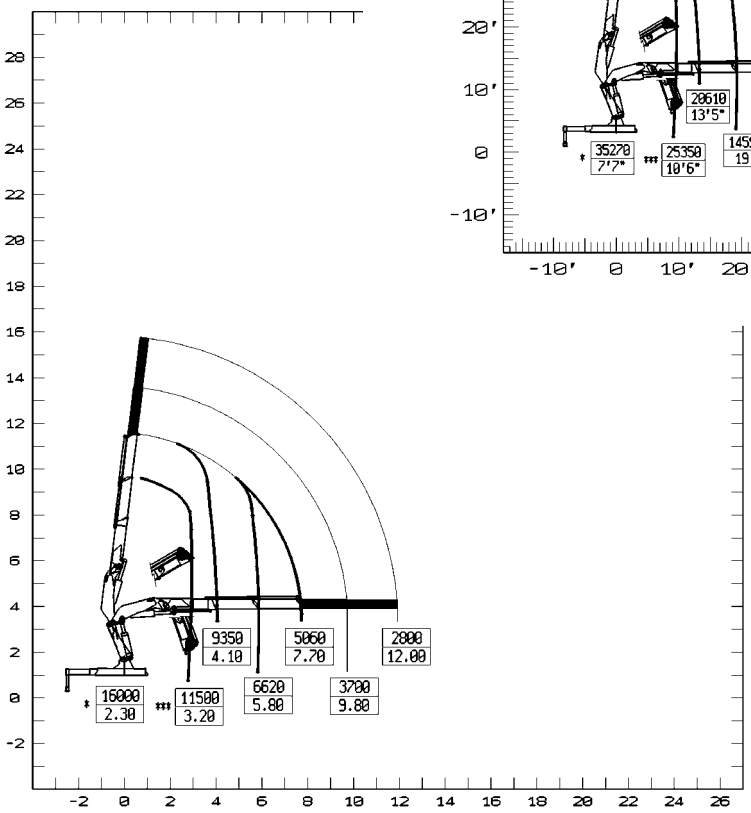
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41022LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

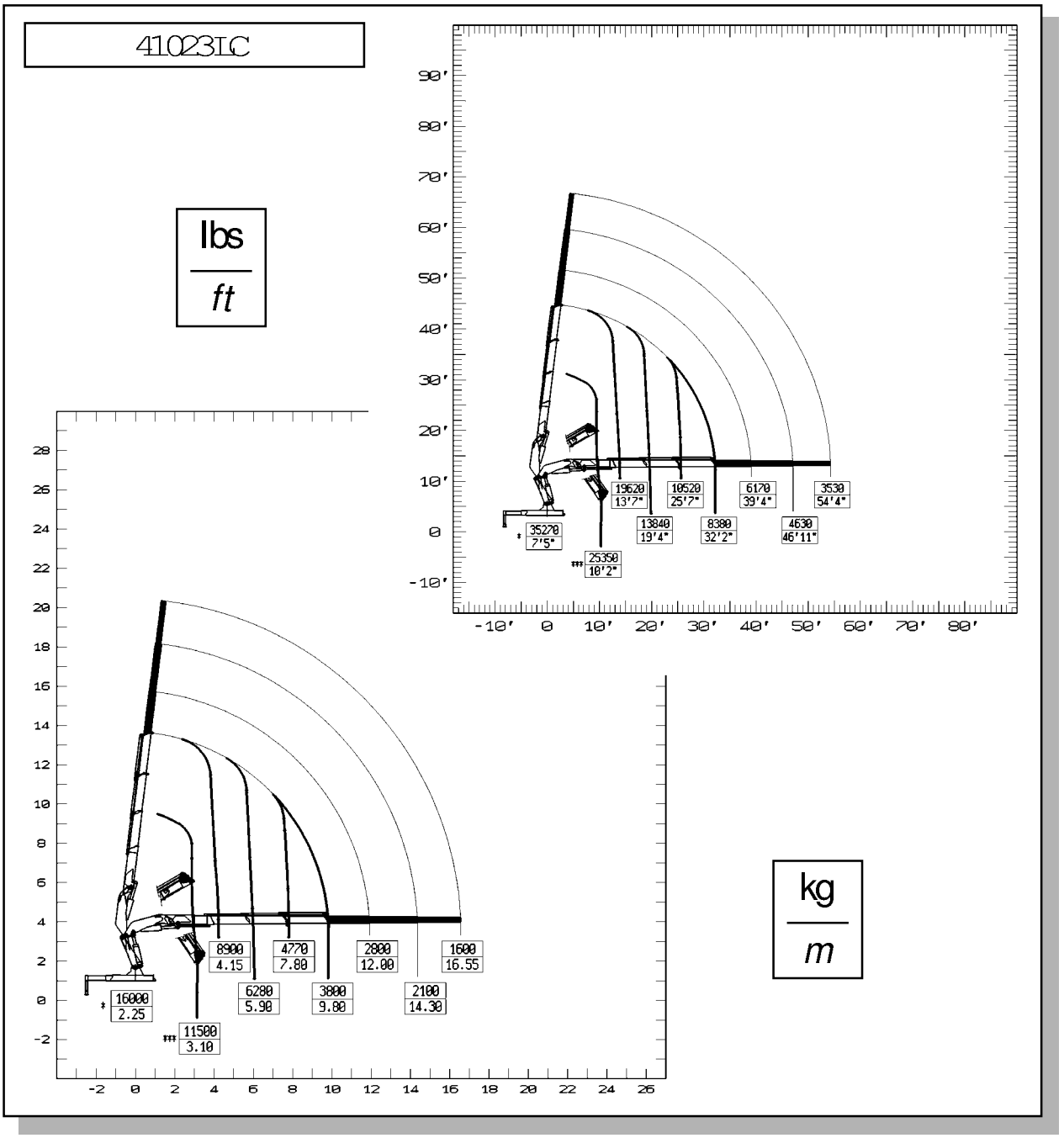
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41023LC



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

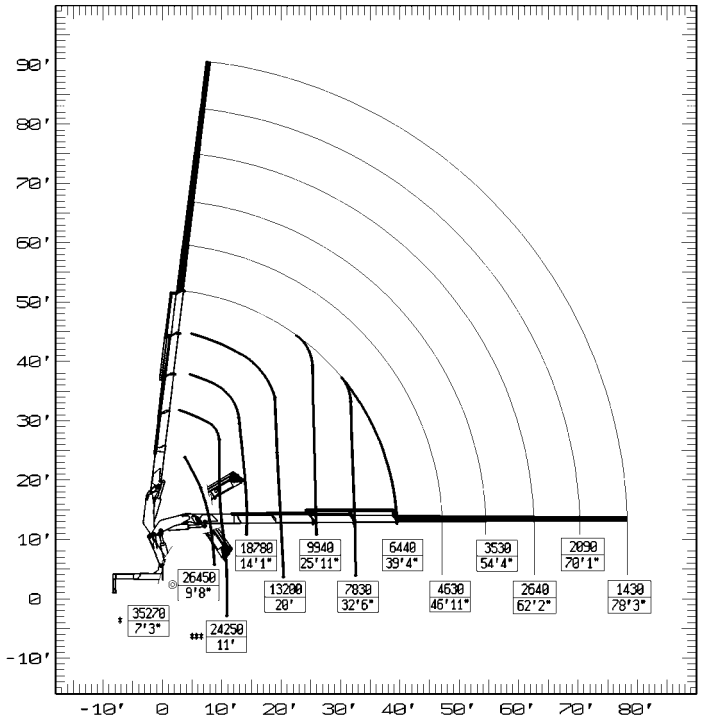
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

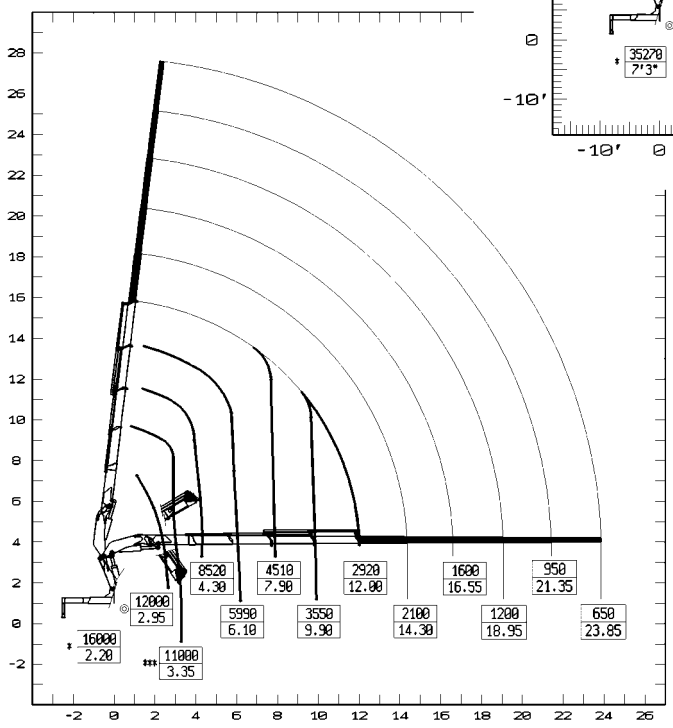
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41024IC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

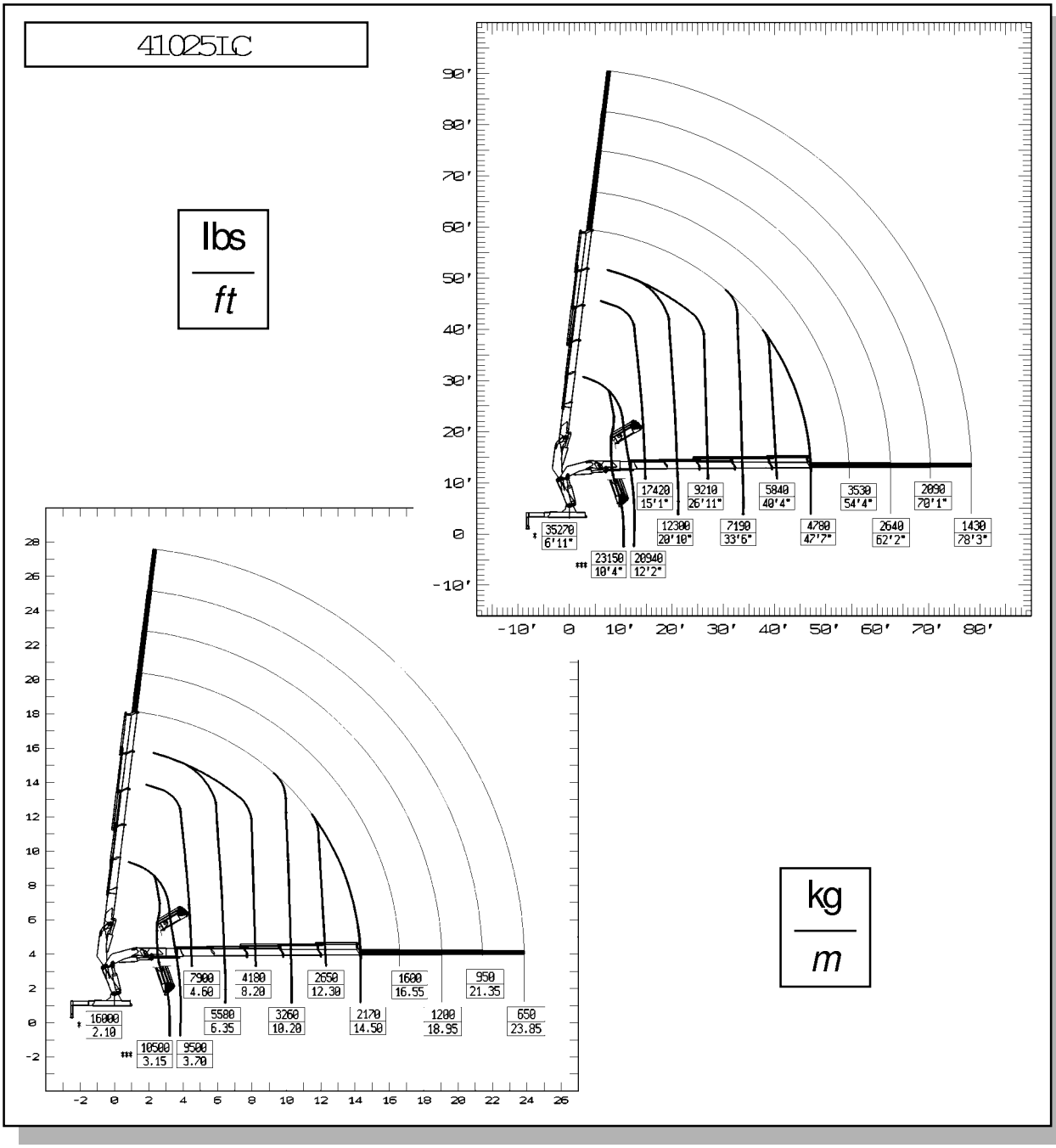
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41025LC



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

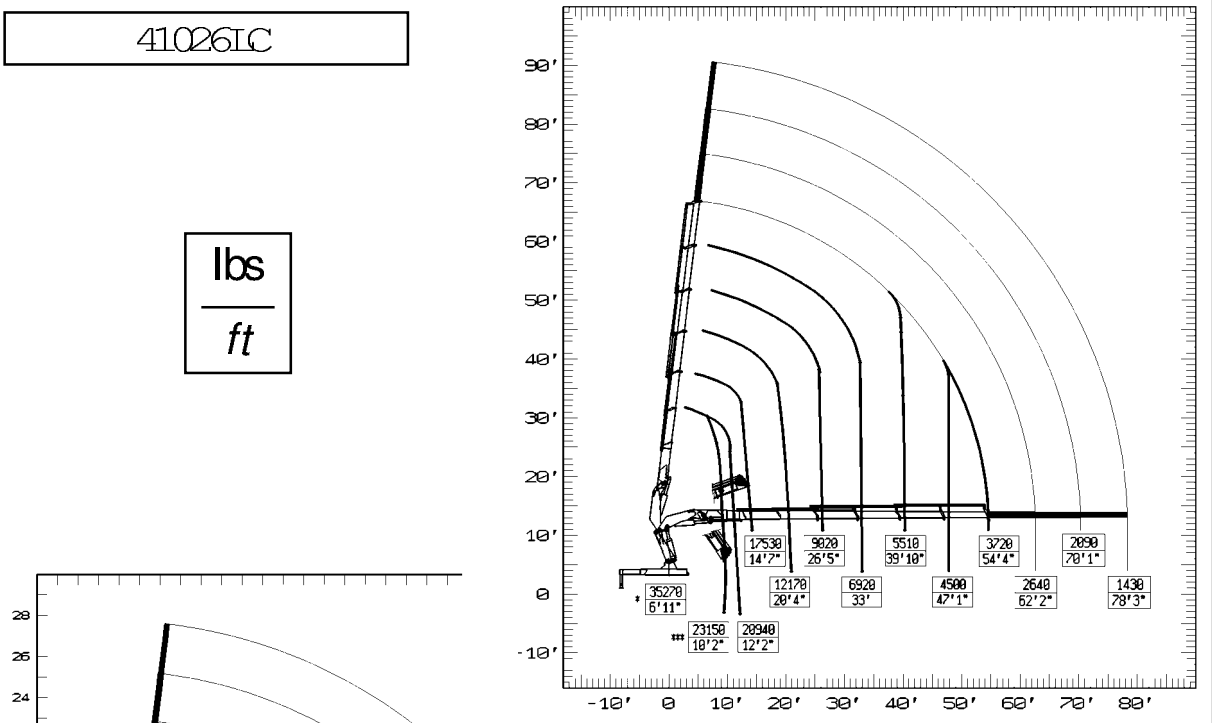
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

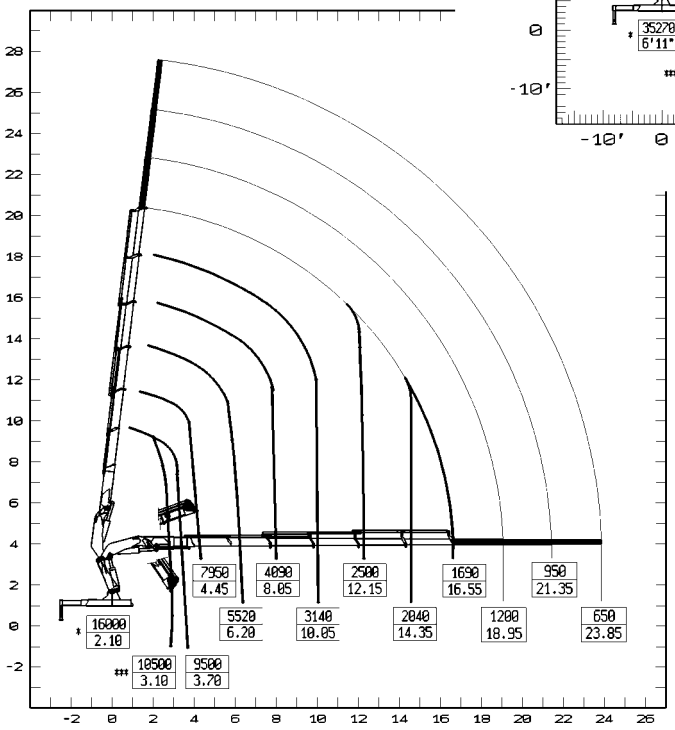
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41026LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

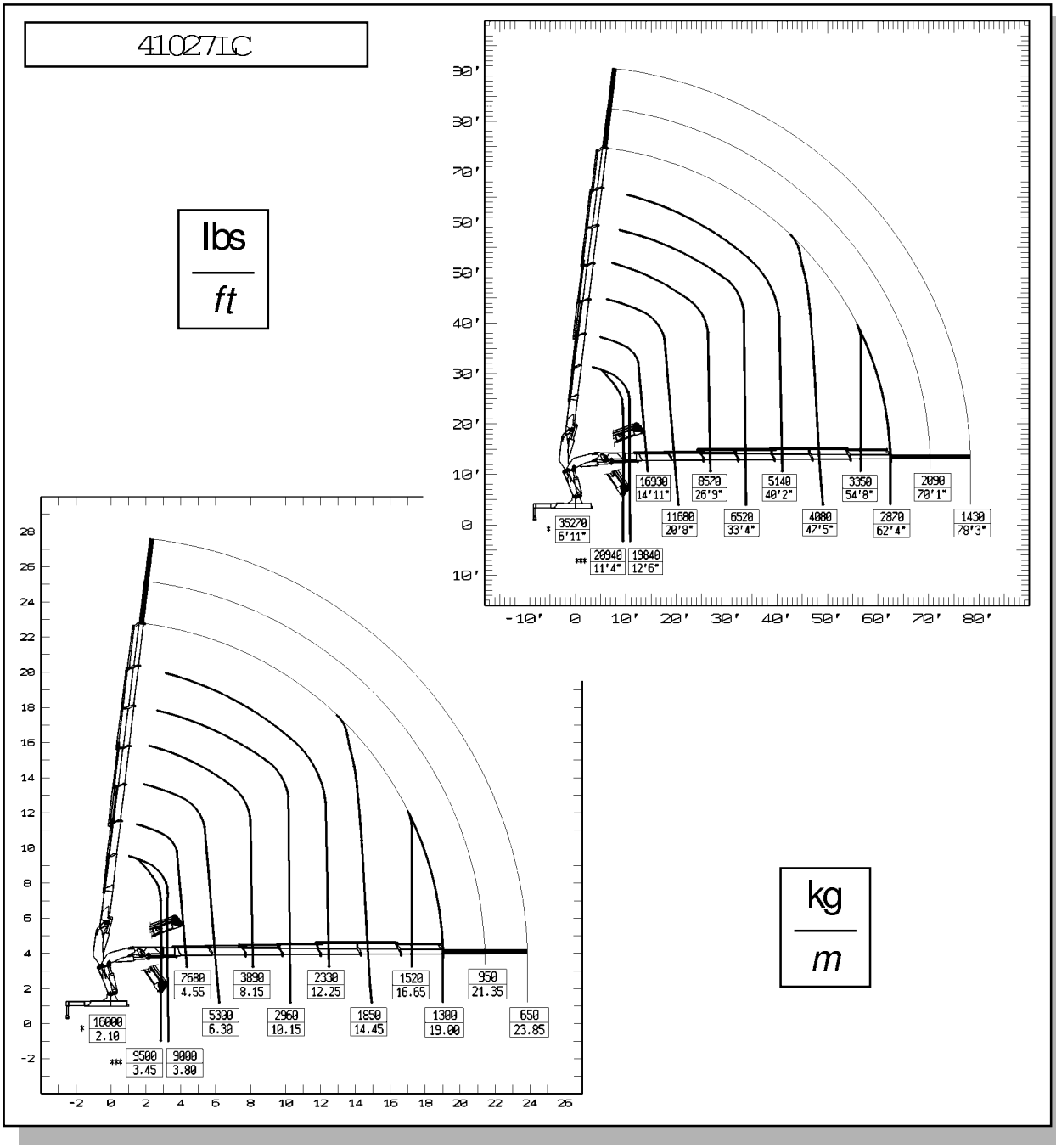
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41027LC

lbs / ft



kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

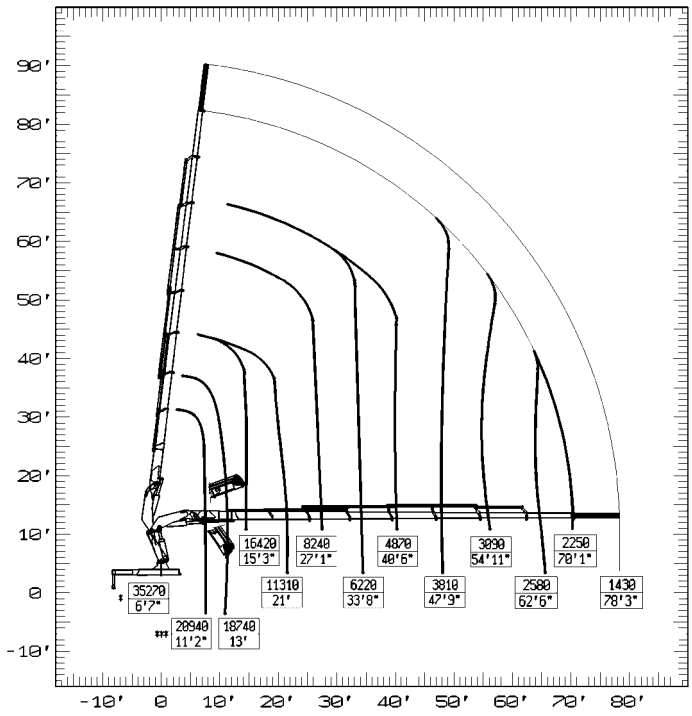
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

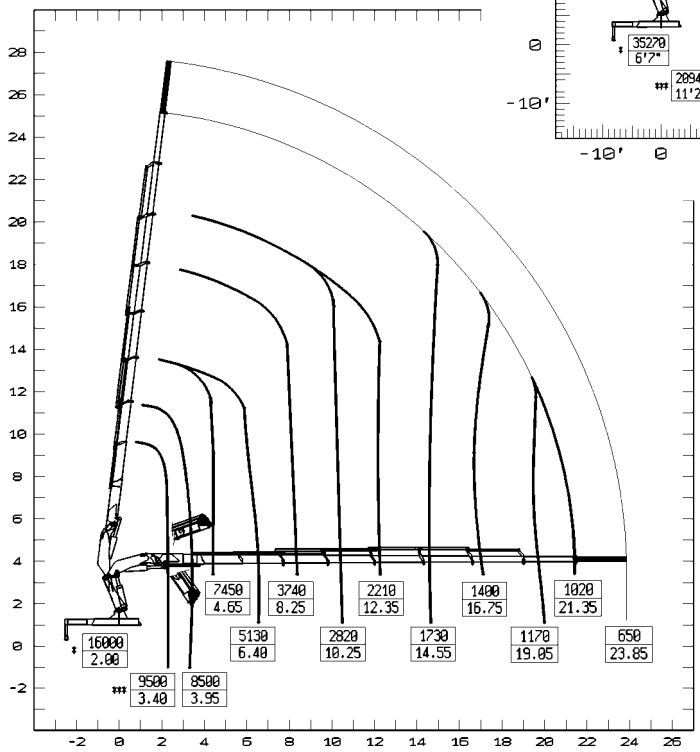
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

41028LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

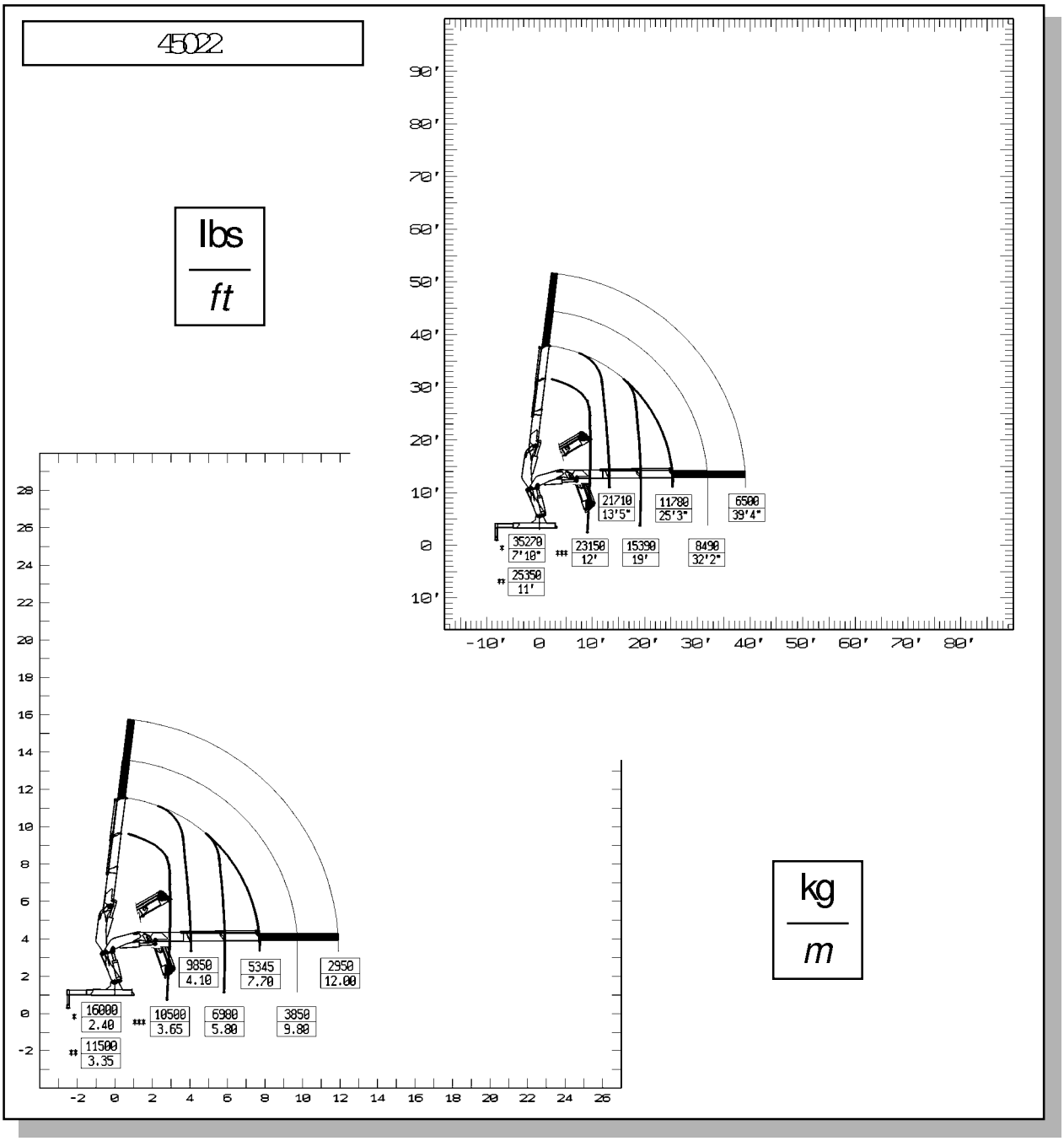
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45022



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

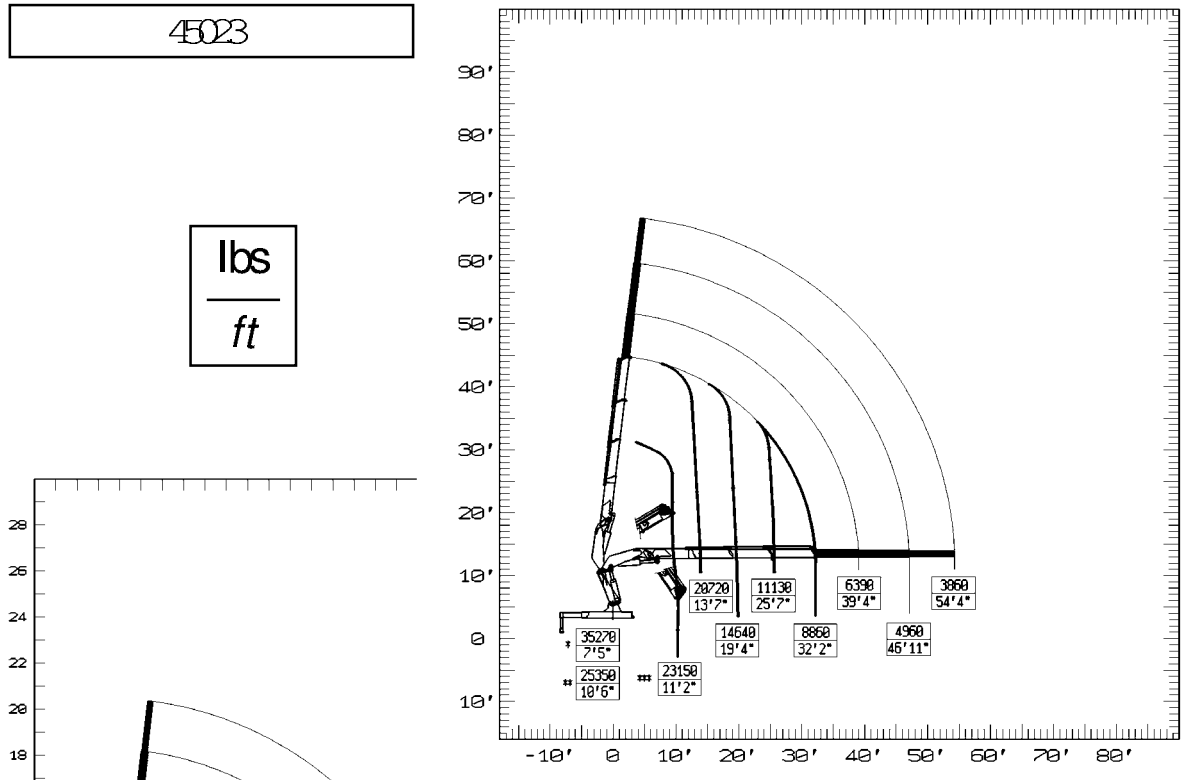
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

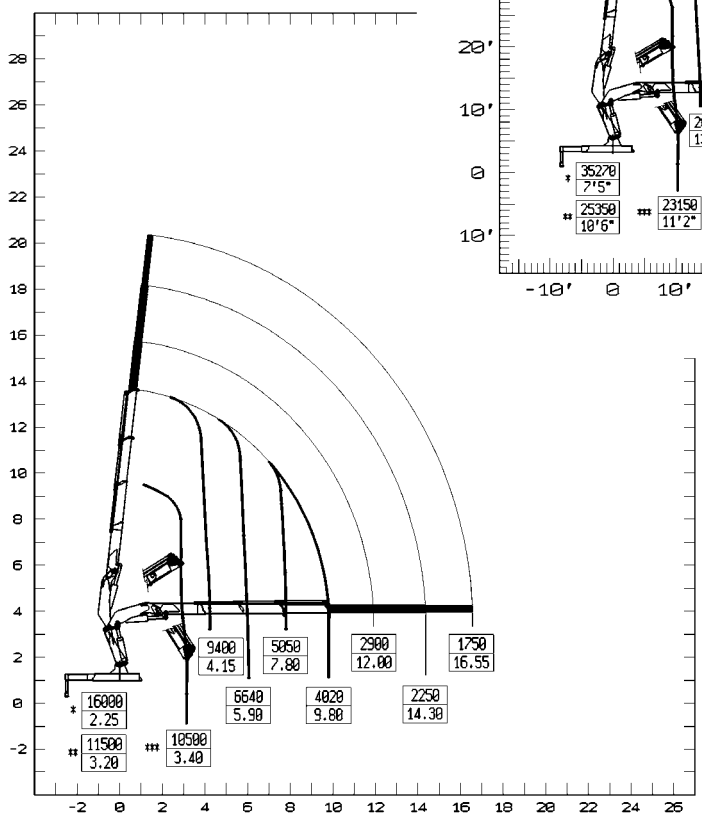
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45023

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

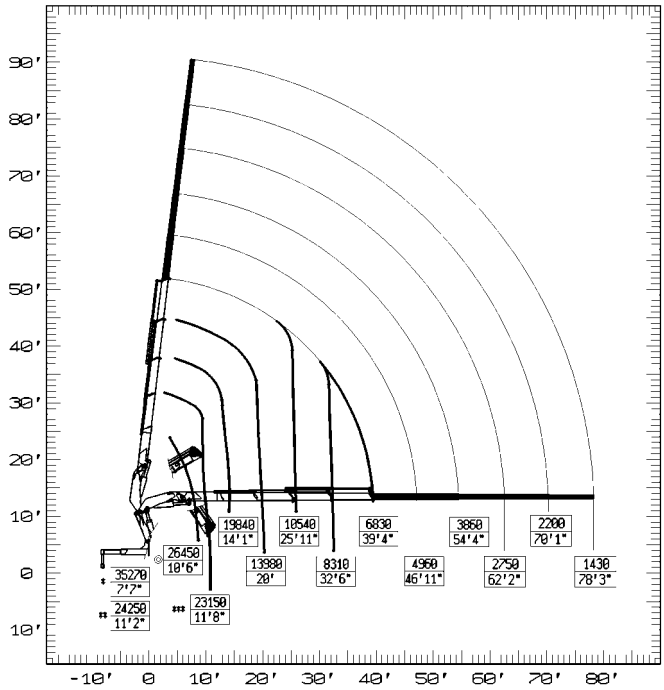
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

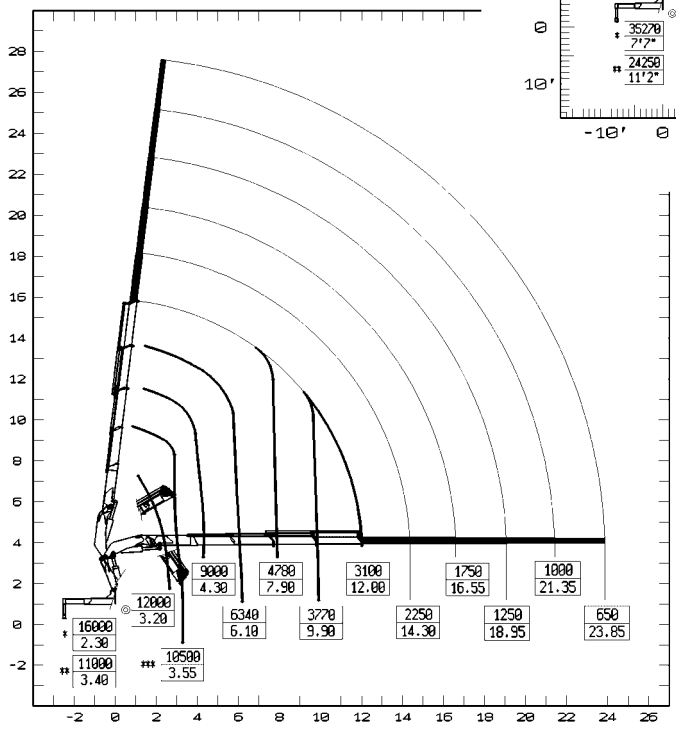
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45024

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

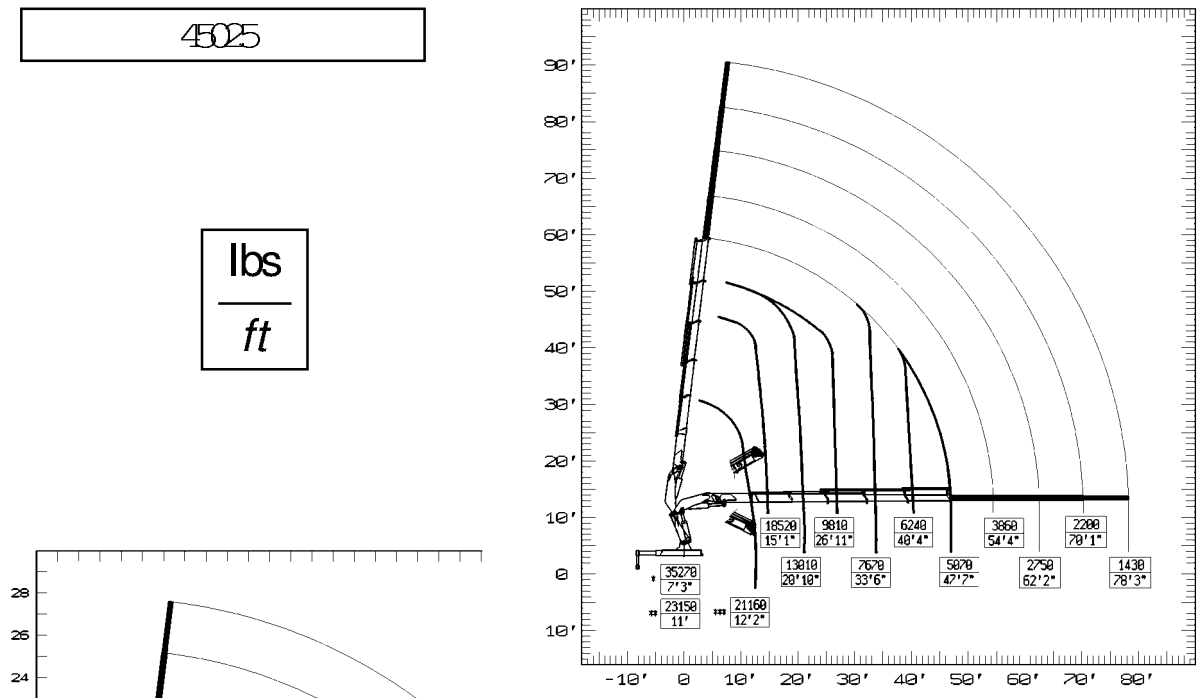
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

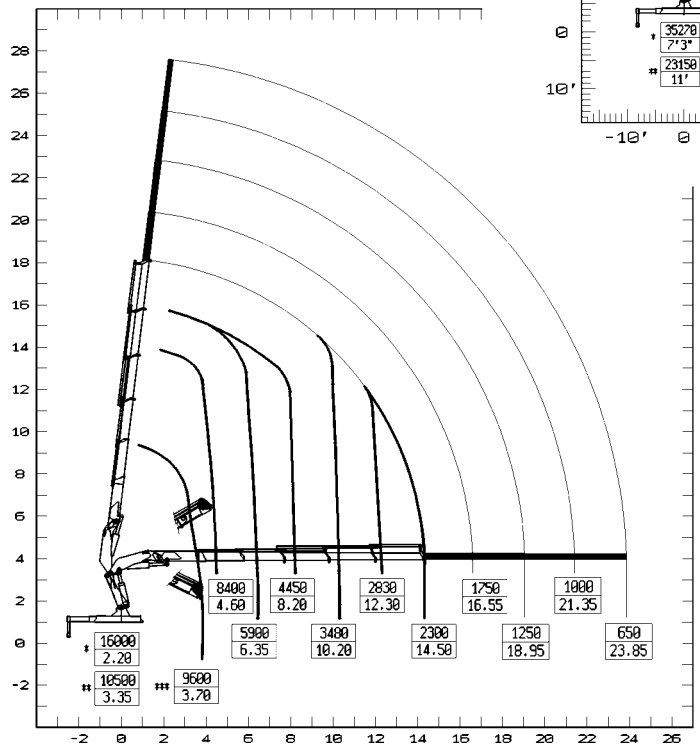
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45025

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

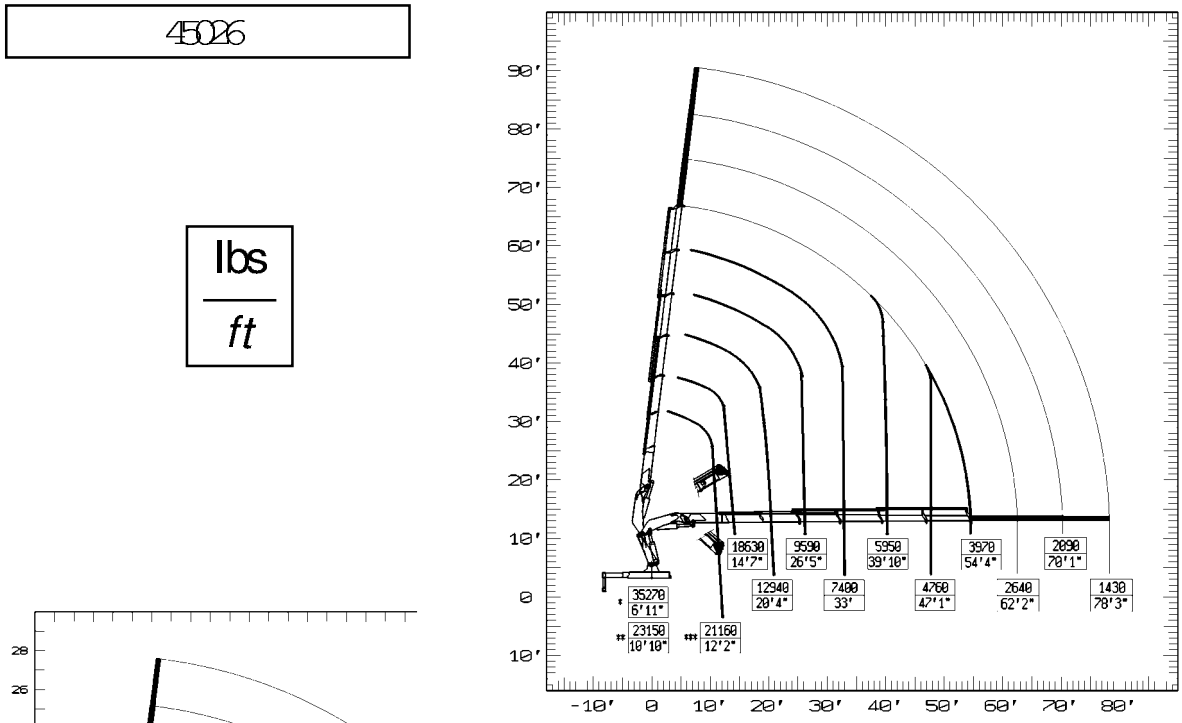
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

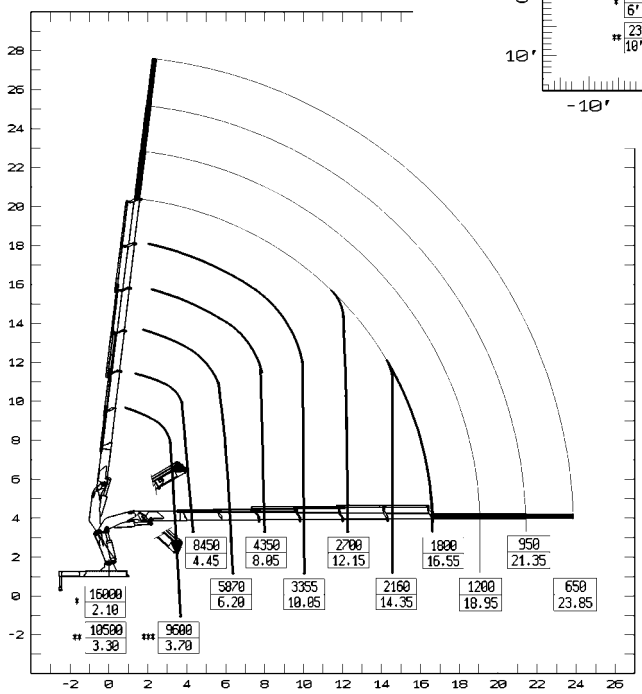
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45026

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

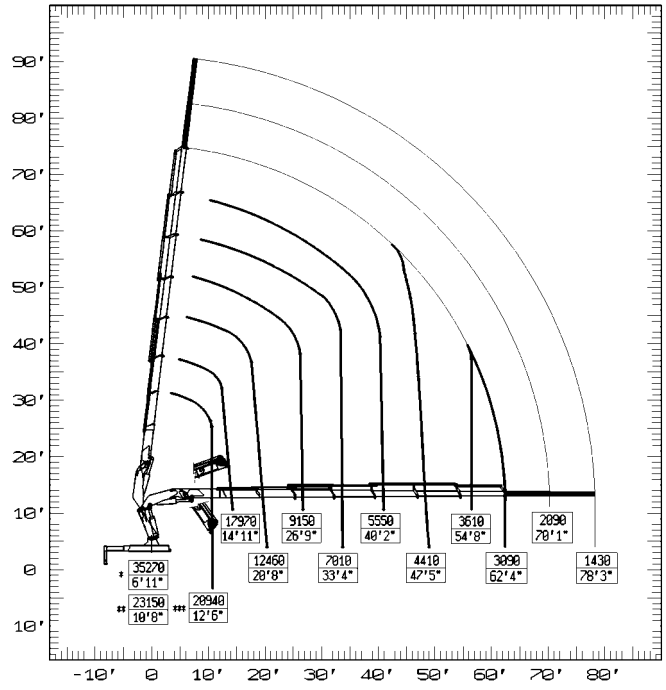
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

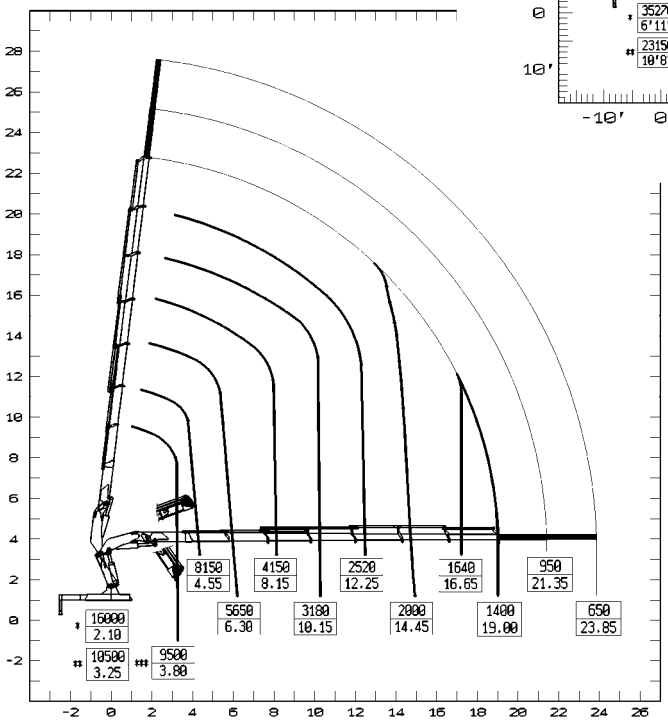
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45027

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

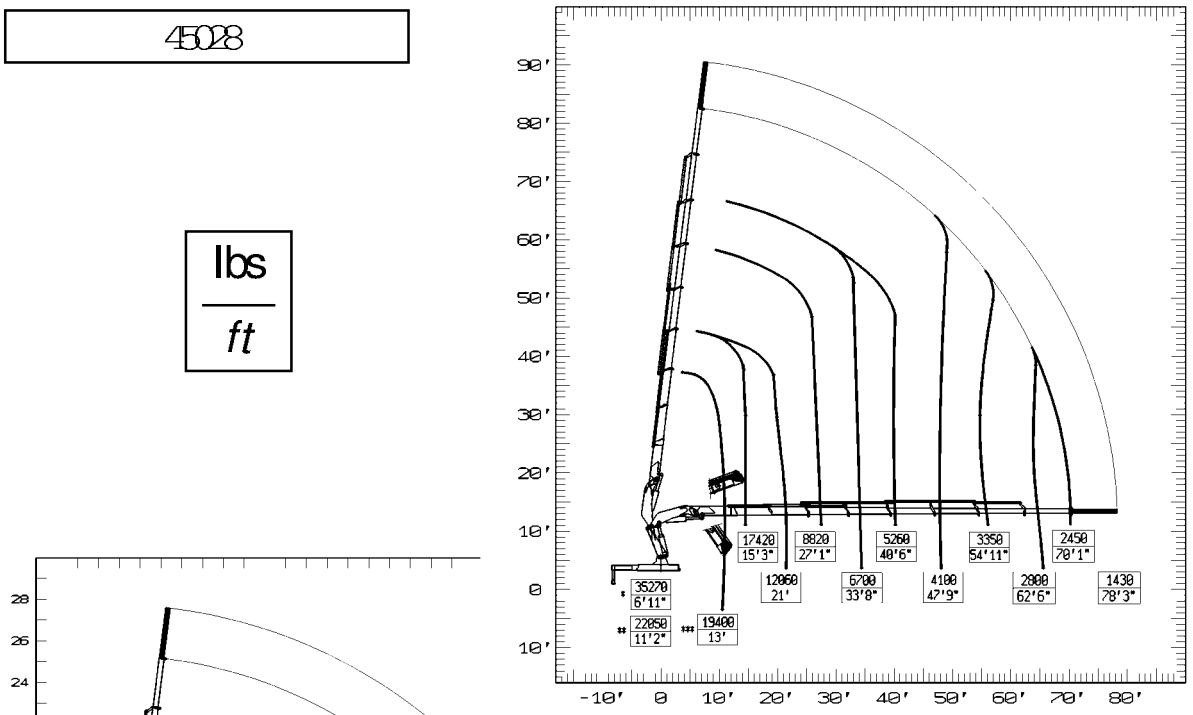
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

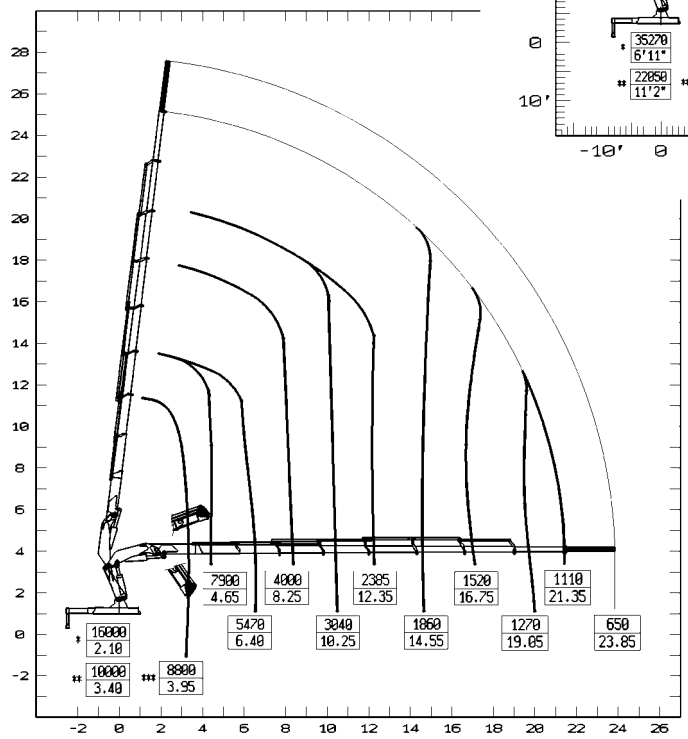
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45028

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

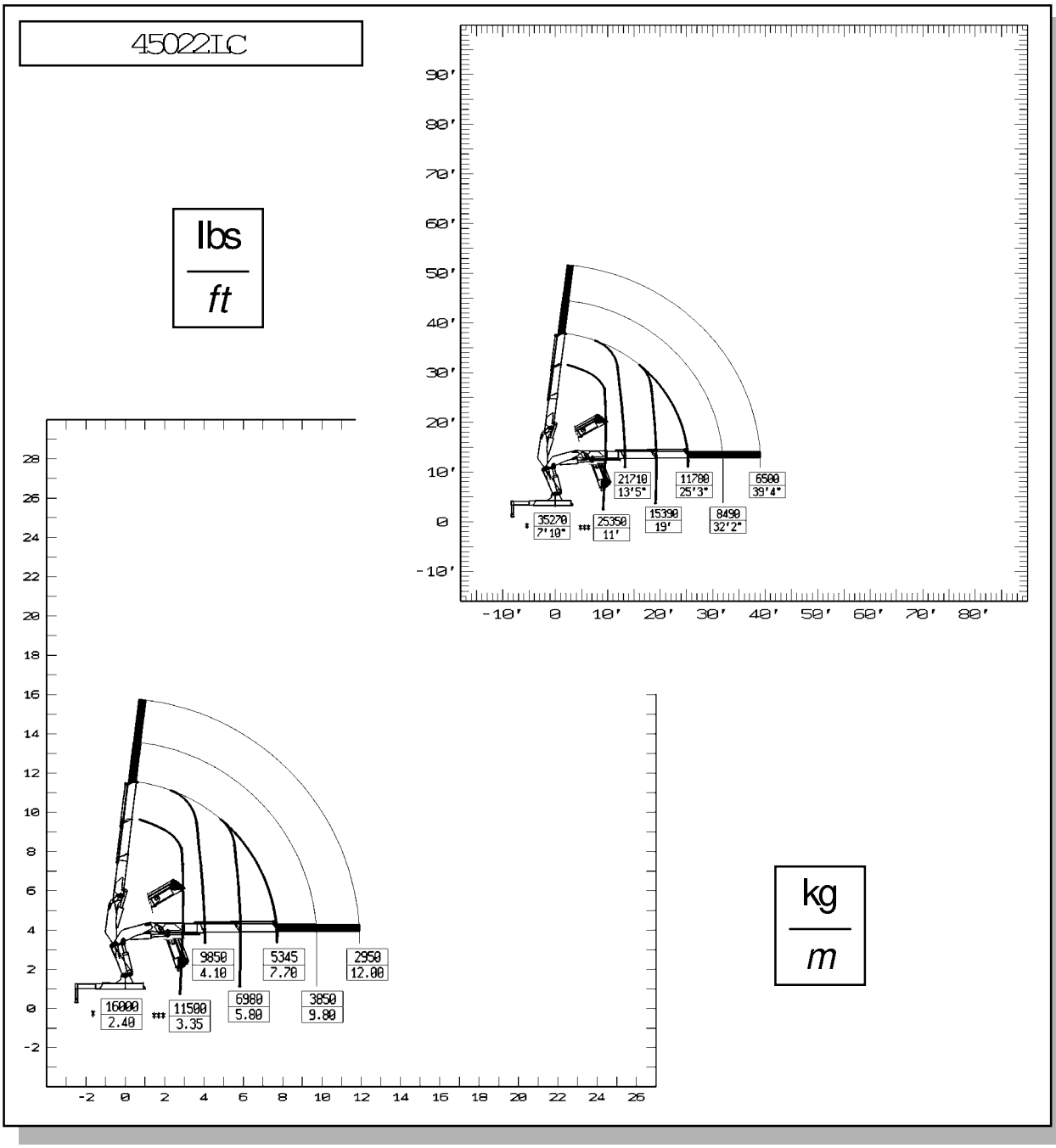
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45022.LC



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

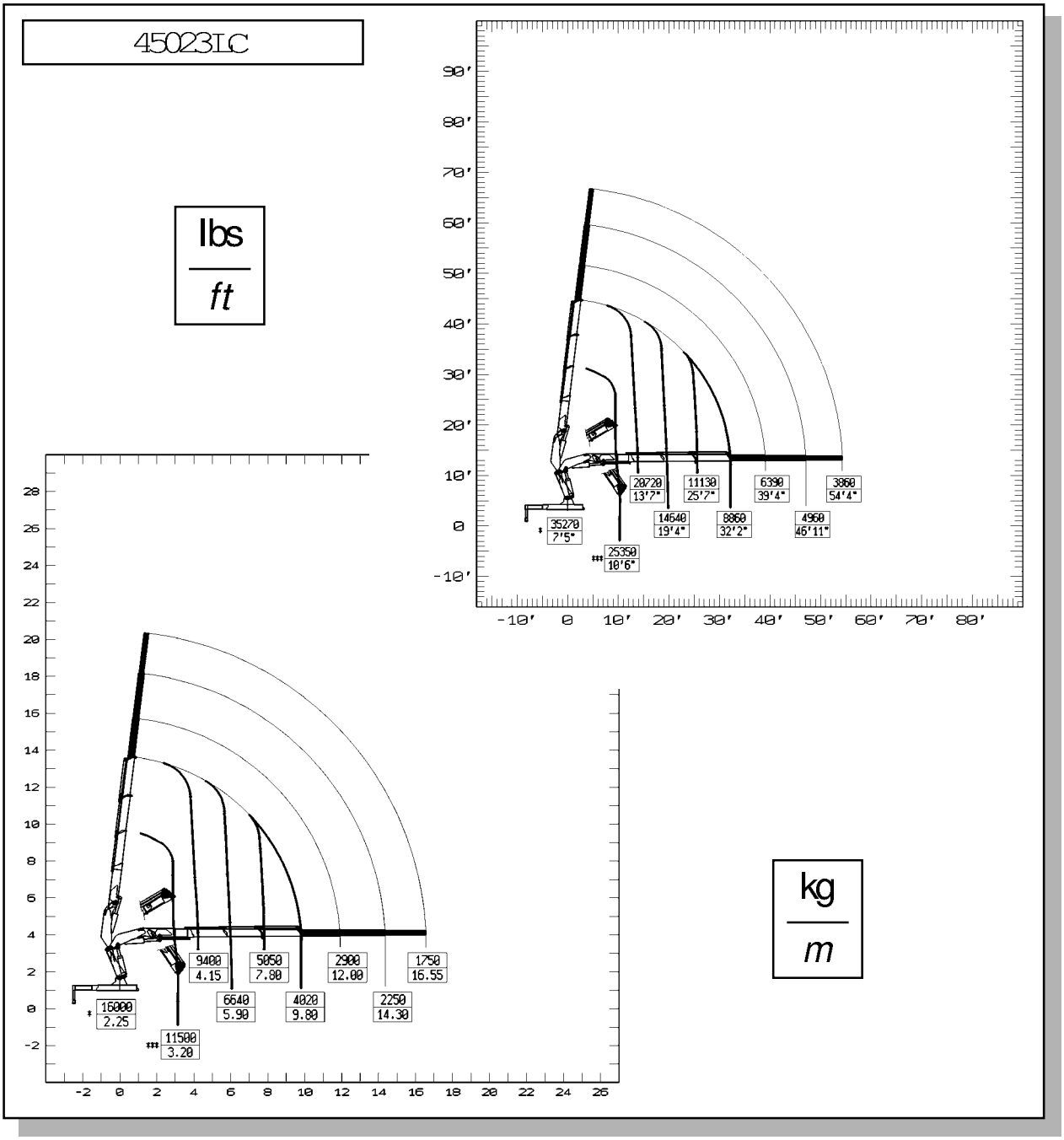
*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45023LC



* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

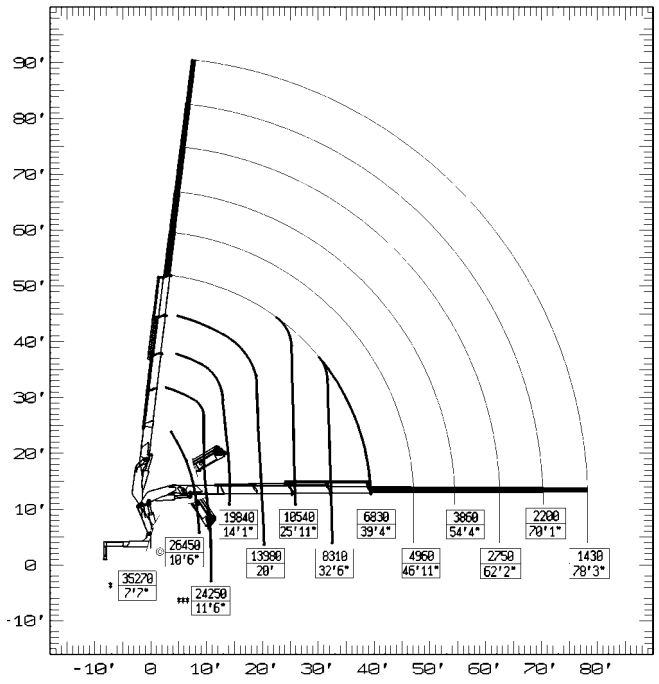
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

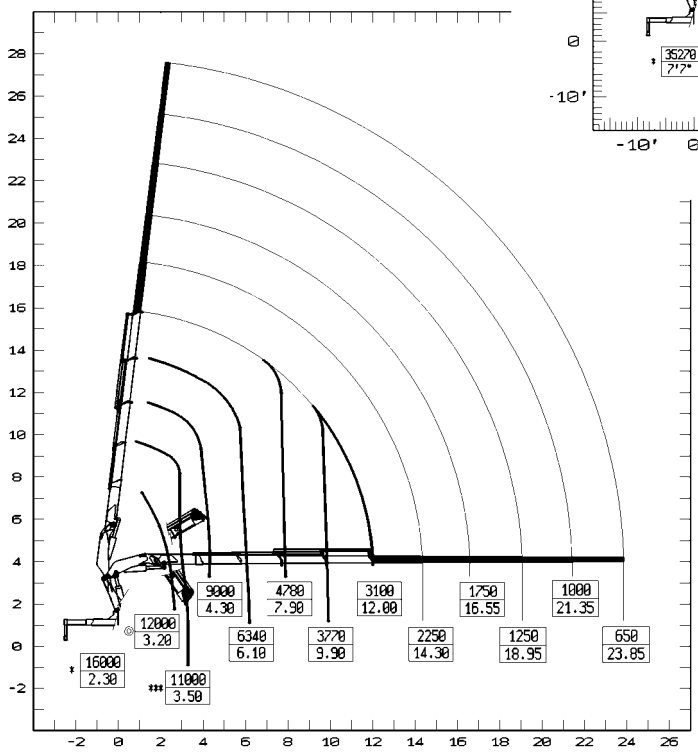
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45024LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

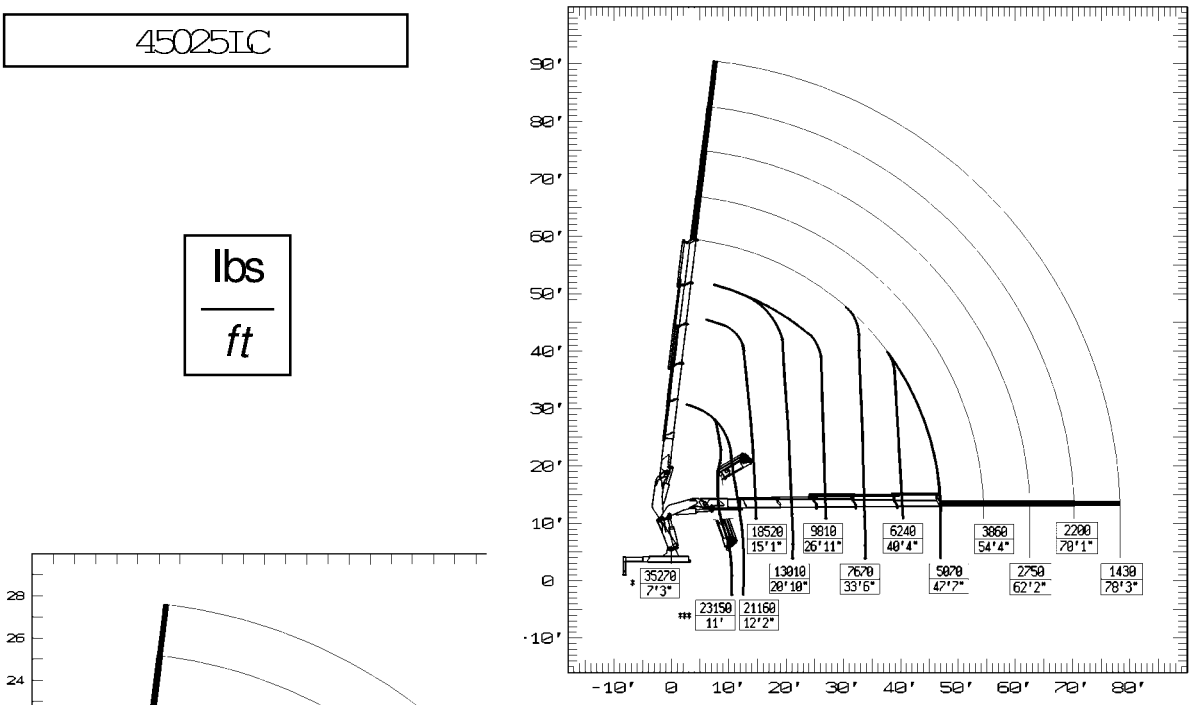
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

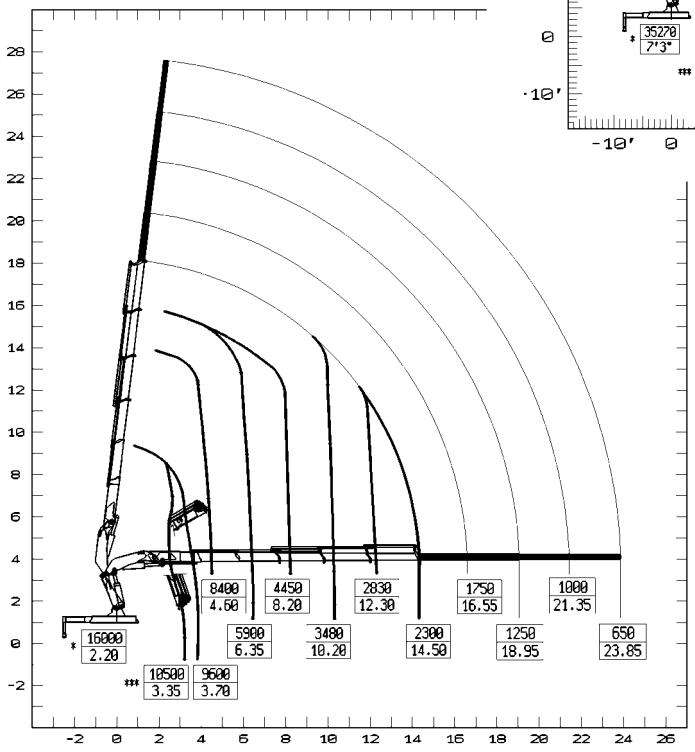
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45025LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

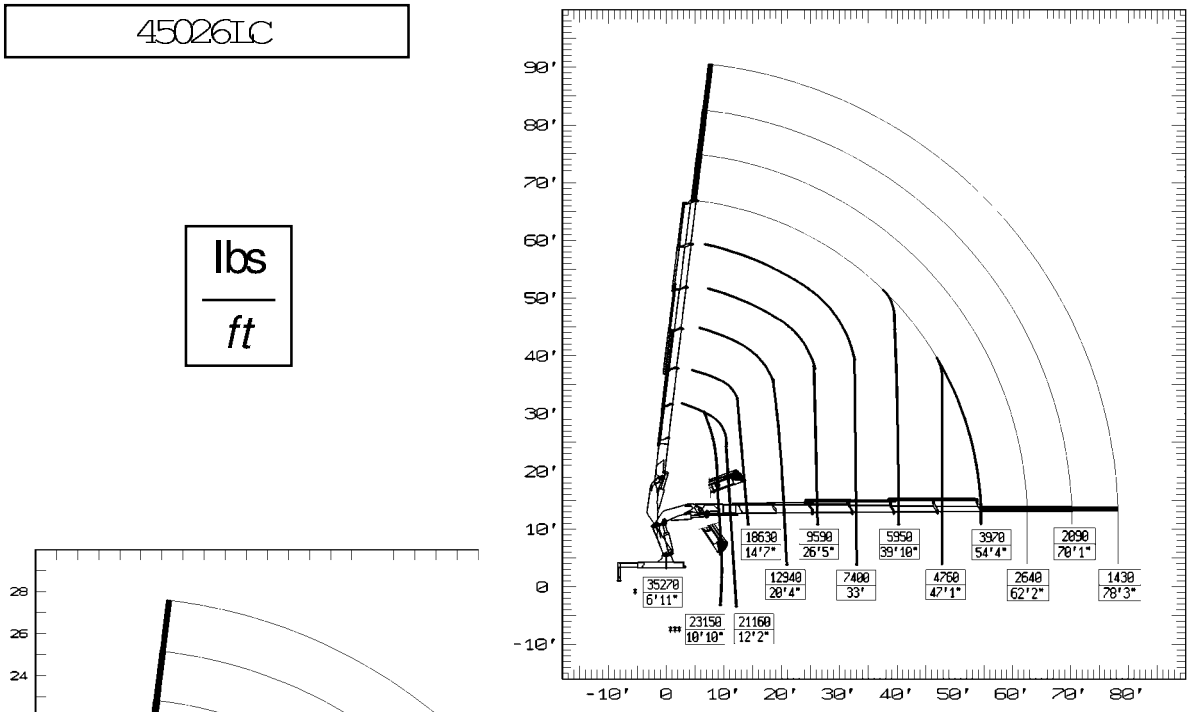
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

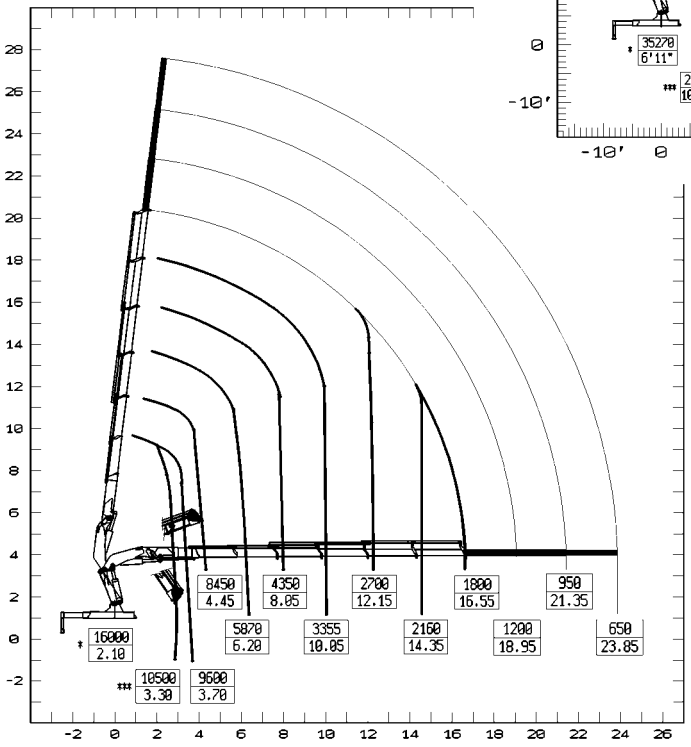
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45026LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

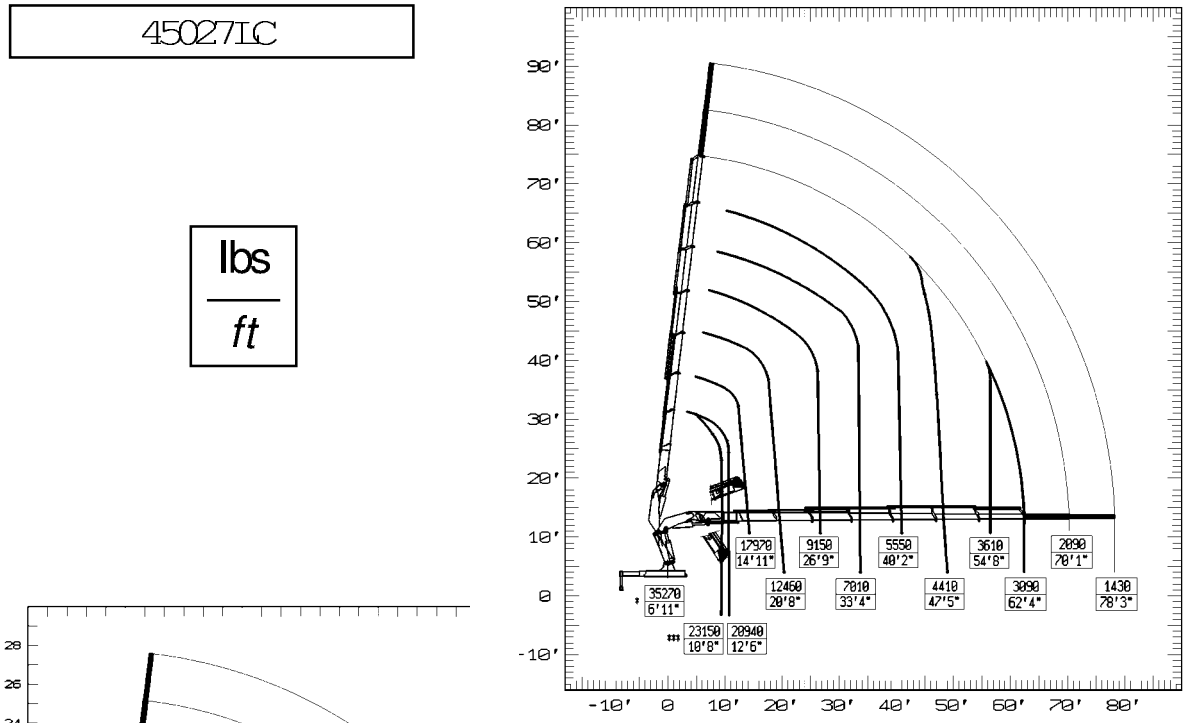
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

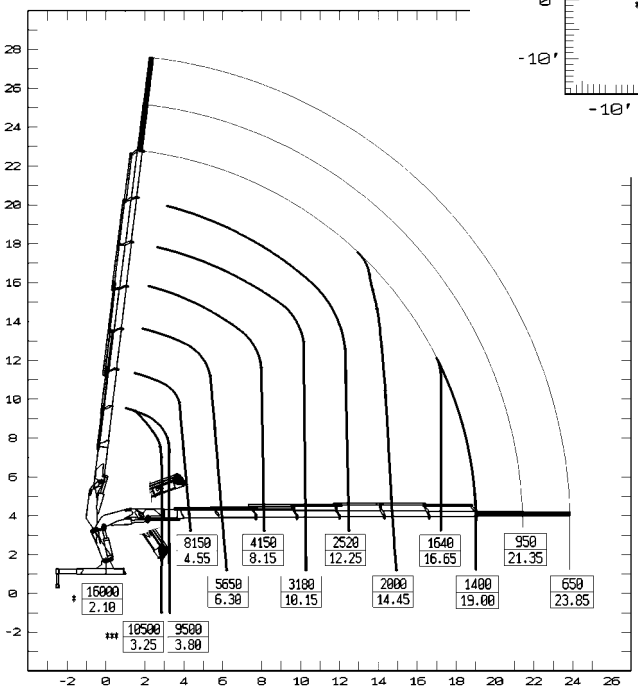
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45027LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

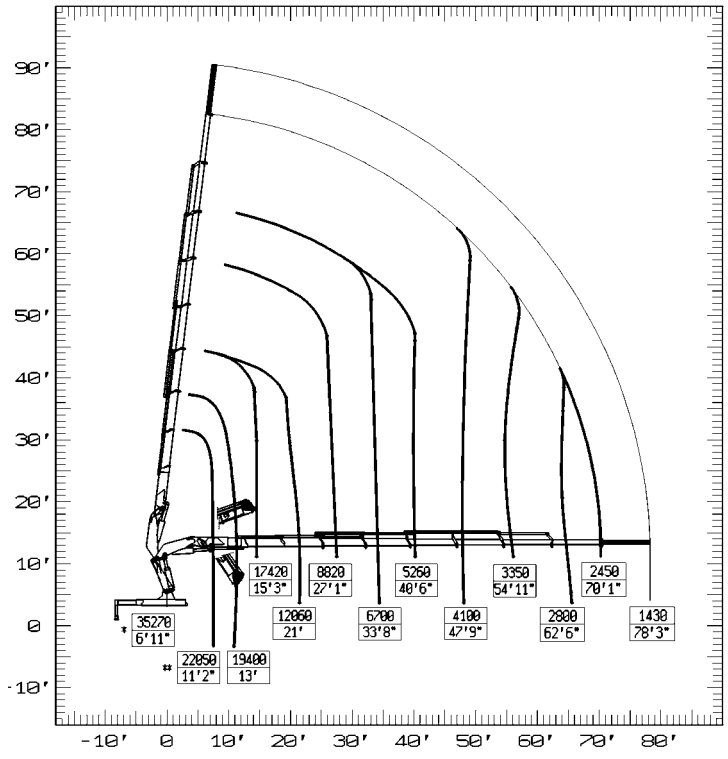
NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

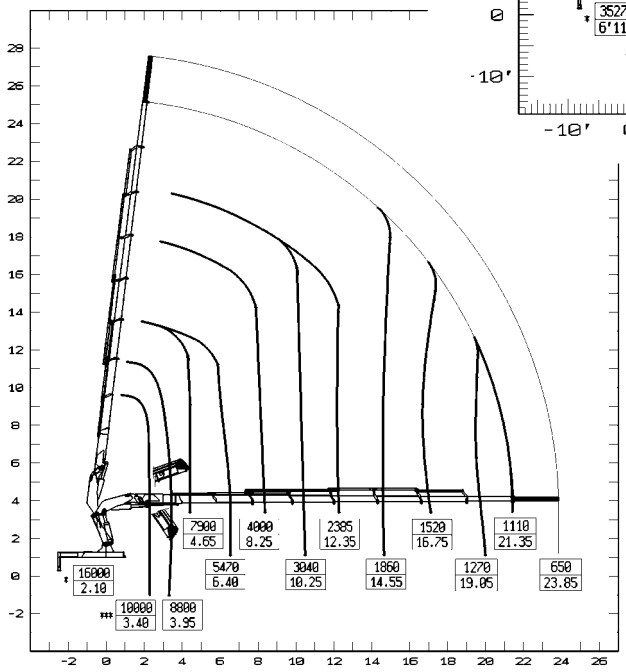
Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

45028LC

lbs / ft





kg / m

* PORTATA MAX NOMINALE AL GANCIO FISSO
MAX CAPACITY AT FIXED HOOK

** PORTATA MAX AL GANCIO MOBILE
MAX CAPACITY AT MOBILE HOOK

*** PORTATA MASSIMA PASSANTE PER L'ORIZZONTALE
MAX CAPACITY FROM HORIZONTAL TO VERTICAL

NB: LE PRESTAZIONI INDICATE SI OTTENGONO CON BRACCIO PRINCIPALE A 15°
NOTE: THE STATED PERFORMANCES CAN BE OBTAINED WITH 15° INCLINATED MAIN BOOM.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

Since 1959

Cranes, in all the languages of the world

5: NOTIZIE TECNICHE

Vedi appendice.

5: TECHNICAL NEWS

To see appendix.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

6: ACCESSORI

6.1 PROLUNGHE MANUALI

6 : ACCESSORIES

6.1 MANUAL EXTENSION

VERSIONE *VERSION*	1°	2°	3°	4°	5°
41022	X	X			
41022LC	X	X			
41023	X	X	X		
41023LC	X	X	X		
41024	X	X	X	X	X
41024LC	X	X	X	X	X
41025	X	X	X	X	
41025LC	X	X	X	X	
41026	X	X	X		
41026LC	X	X	X		
41027	X	X			
41027LC	X	X			
41028	X				
41028LC	X				

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

6.2 LIMITATORE DI MOMENTO IDRAULICO

Su questo modello di macchina, abbiamo adottato il limitatore di momento di tipo idraulico con un gruppo integrato che contiene la quasi totalità dei componenti, riducendo sensibilmente il numero delle tubazioni esterne.
In tale modo oltre a semplificare notevolmente il lavoro di montaggio ed a ridurre le possibilità di perdite di olio abbiamo ottenuto anche un funzionamento sicuro ed affidabile.
E' dotato del nuovo dispositivo di esclusione "doppia manovra", per evitare il movimento contemporaneo di riarmo e discesa del martinetto colonna.

6.2 MOMENT CONTROL DEVICE

On this model of the crane we have installed the hydraulic moment control device.
It consist of the group containing nearly all the components, this reducing the amount of external hoses.
With this system assembling is much easier and possibility of the oil loss is considerably reduced.

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

6.3 VERRICELLO (Fig. 6.1)

Verricello idraulico tipo P15 con capacità di tiro massimo sul tratto di fune (al 4° strato) di 1500 daN posizionato sotto il 1° braccio della gru (PM 41).

Caratteristiche:

-Tiro max sul tratto di fune (4° strato): 1500daN
-Peso proprio totale: 80 kg
-Tamburo liscio, diametro primitivo: 244.5mm
-Fune: diametro 10 mm / lunghezza: 65m
-Motore idraulico orbitale: cilindrata 249 cm^3/giro
-Riduttore epicicloidale: rapporto di riduzione 1:5,8
-Freno a dischi multipli con molle di richiamo in chiusura e comando oleodinamico in apertura.
-Valvola idropilotata contro il trascinamento del motore e di blocco in caso di rottura delle tubazioni.
-Velocità (con fune a tiro diretto) al 4° strato: 30 m/min con portata di 45 l/min

6.3 WINCH (Fig, 6.1)

Hydraulic winch with maximum pulling on cable section (4th layer) of 1500 daN (3300 lbs) placed under the first boom of the crane (PM 41)

Characteristics :

-Maximum draw capacity on cable section (at 4th layer): 1500 daN(3300lbs)
-Total weight(without rope): 80 kg (176lbs)
-Smooth drum,original diam.: 244.5 mm (10")
-Cable diameter: 10 mm(3/8") ength: 65m(213')
-Orbital hydraulic motor with a 249 cm^3/rev.
-Epicicloidal reduction gear with reduction radio 1:5,8
-Multiple disk brake with closing return spring and opening hydraulic control
-Hydropiloted lock valve to avoid motoring over and to block in case of breaking hoses
-Speed (with cable at direct pull) at 4th layer: 30 m/min with capacity of 45 l/min (98'/min with capacity of 12 US gals/min)

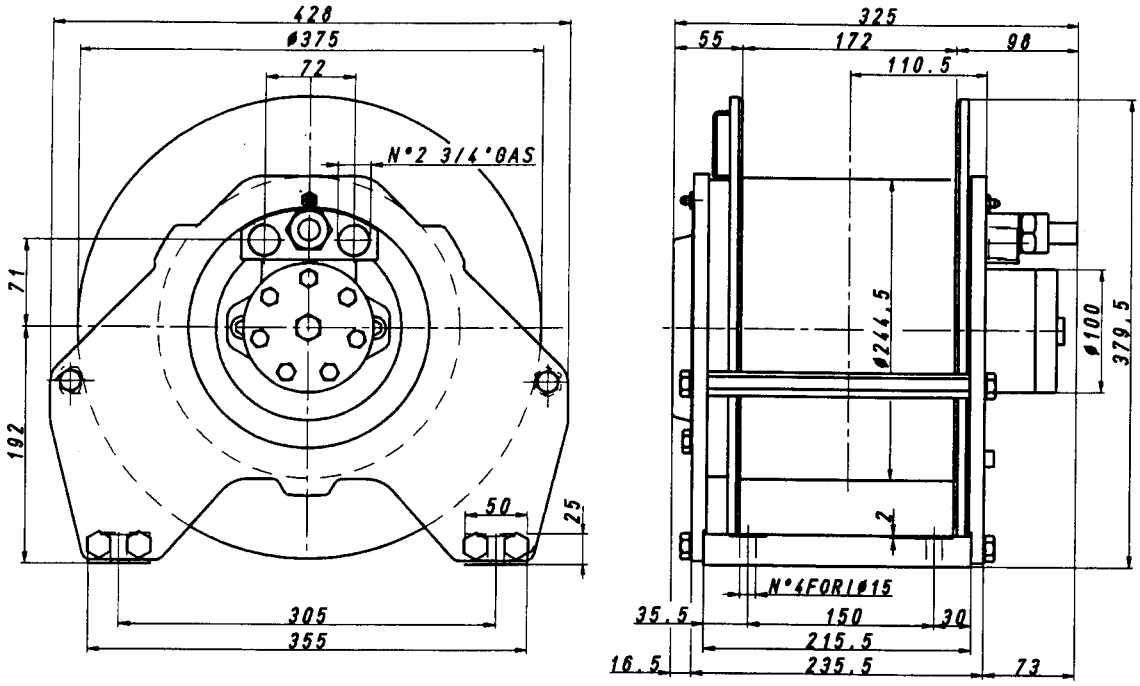


Fig.6-1

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

6.4 VERRICELLO SU ANTENNA J 903/904 (Fig. 6.2)

Verricello idraulico tipo P6E con capacità di tiro massimo sul tratto di fune (al 4° strato) di 800 daN posizionato sull' antenna.

Caratteristiche:
-Tiro max sul tratto di fune (4°strato): 800 daN
-Peso proprio totale: 33 kg
-Tamburo liscio, diametro primitivo: 178 mm
-Fune: diametro 7 mm / lunghezza: 40 m
-Motore idraulico orbitale: cilindrata 165 cm^3/giro
-Riduttore epicicloidale: rapporto di riduzione 1:6
-Freno a dischi multipli con molle di richiamo in chiusura e comando oleodinamico in apertura.
-Valvola idropilotata contro il trascinamento del motore e di blocco in caso di rottura delle tubazioni.
-Velocità (con fune a tiro diretto) al 4° strato: 29 m/min con portata di 30 l/min.

6.4 WINCH ON JIB J 903/904 (Fig, 6.2)

Hydraulic winch with maximum pulling on cable section (4th layer) of 800 daN placed on the jib.

Characteristics :
-Maximum draw capacity on cable section (at 4th layer): 800 daN (1763 bs)
-Total weight(without rope): 33 kg (72 lbs)
-Smooth drum,original diam.: 178 mm (7")
-Cable diameter: 7 mm /length: 40 m (131')
-Orbital hydraulic motor with a 165 cm^3/rev.
-Epicicloidal reduction gear with reduction radio 1:6
-Multiple disk brake with closing return spring and opening hydraulic control
-Hydropiloted lock valve to avoid motoring over and to block in case of breaking hoses
-Speed (with cable at direct pull) at 4th layer: 29 m/min with capacity of 30 l/min (95'/min with capacity of 7,9 US gals/min)

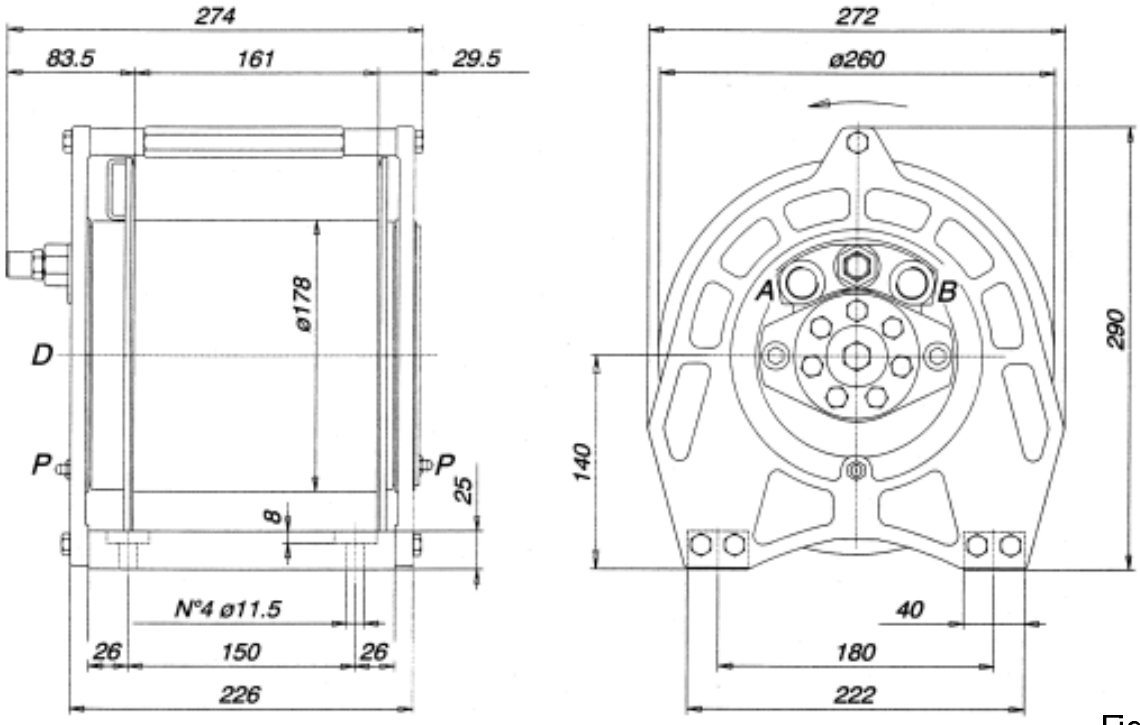


Fig.6-2

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

6.5 BRACCI STABILIZZATORI EXTRALARGHI (Fig. 6.3)

Interasse.....7805mm

6.5 OUTRIGGERS BOOMS IN EXTRA LARGE VERSION (Fig. 6.3)

Between centers.....25' 7"

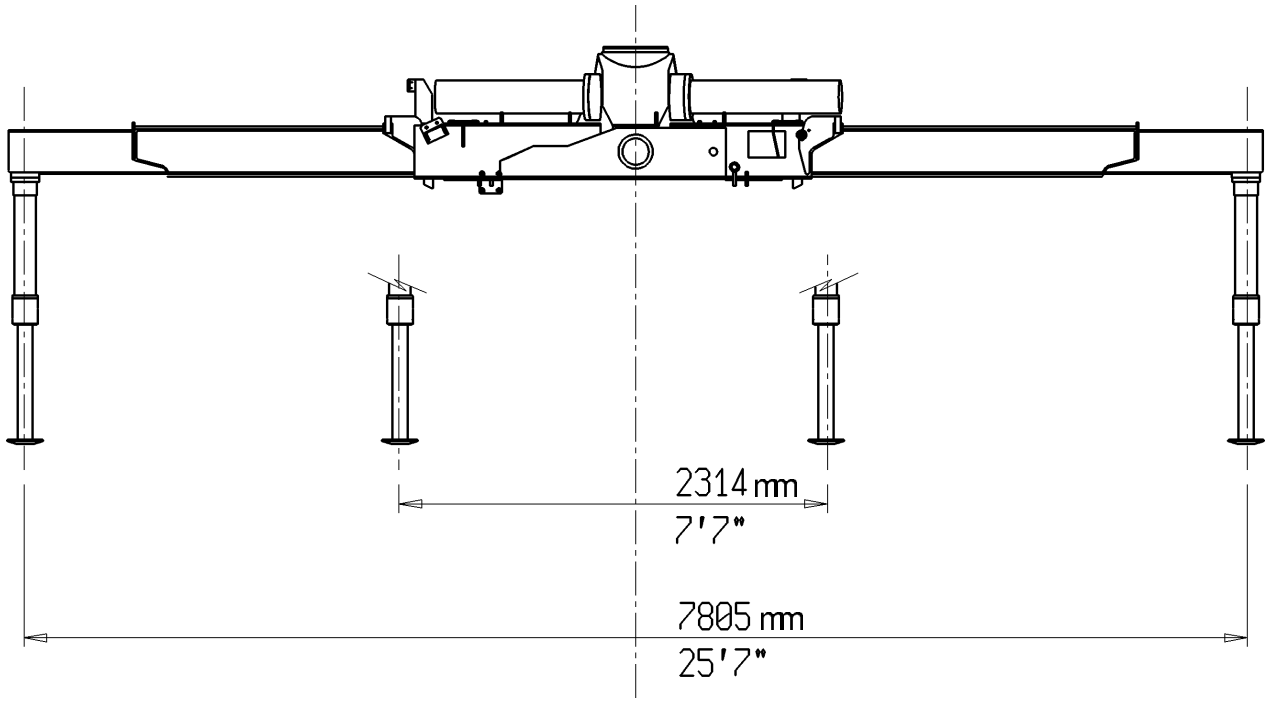


Fig.6-3

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

6.6 SITUAZIONE MACCHINA BASE - ANTENNA - ARGANI

6.6 SITUATION STANDARD MACHINE - JIB - WINCH

VERSIONE *VERSION*	J903	J904	P6E* *	P15E*
41022				X
41022LC				X
41023				X
41023LC				X
41024	X	X	X	X
41024LC	X	X	X	X
41025	X	X	X	X
41025LC	X	X	X	X
41026				X
41026LC				X
41027				X
41027LC				X
41028				X
41028LC				X

* Su macchina standard senza antenna
** Argano su antenna

** On standard machine without jib*
*** Winch on the jib*

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

INFORMATION

	41022	41023	41024	41025	41026	41027	41028
A (mm)	1320	1320	1320	1320	1420	1420	1420
A (Ft)	*4'4"*	*4'4"*	*4'4"*	*4'4"*	*4'8"*	*4'8"*	*4'8"*

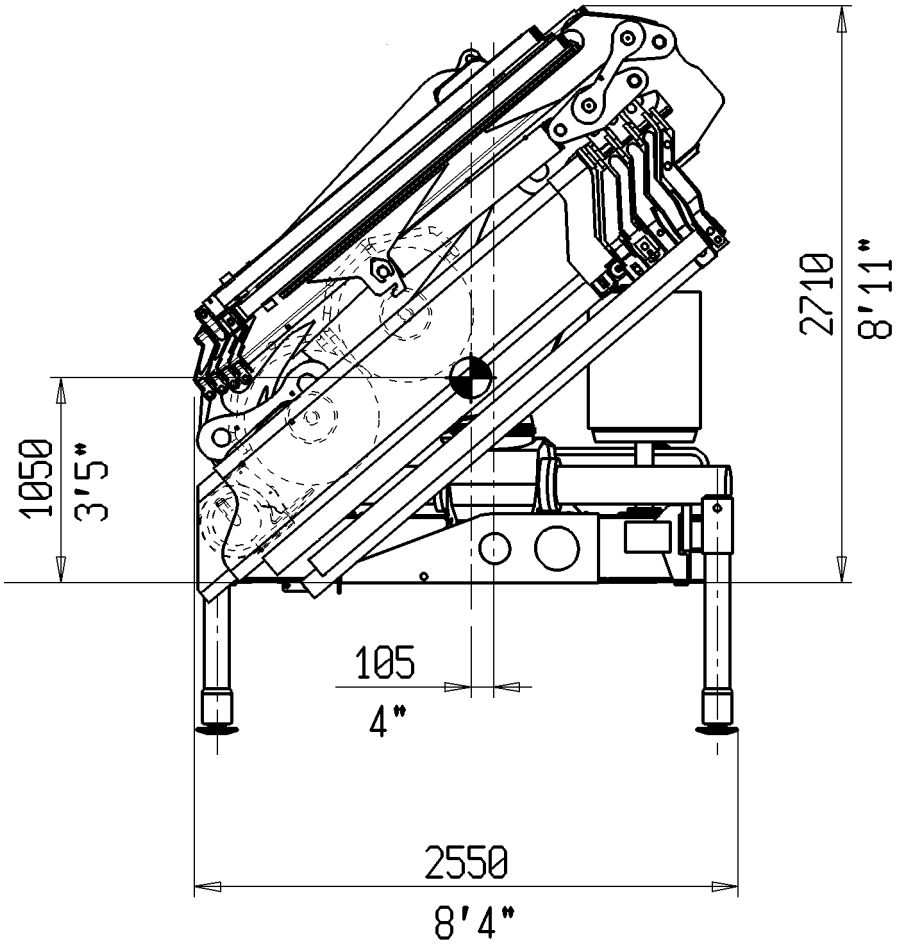


Fig.6-4

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

Since 1959

Cranes, in all the languages of the world

APPENDICE: NOTIZIE TECNICHE

Qui di seguito elenchiamo, con breve commento tecnico, le nuove soluzioni e le migliorie che abbiamo introdotto sulle gru della serie 41.

DISTRIBUTORE DI COMANDO, ad elementi componibili (che consente l'aggiunta di elementi supplementari per l'azionamento di accessori). E' dotato di cursori speciali che consentono una sensibilità ed una gradualità dei movimenti quasi assoluta.

IL POSIZIONAMENTO DEL DISTRIBUTORE (ORIZZONTALE SUL BASAMENTO) fa si che le leve di manovra si vengano a trovare ad un'altezza da terra di circa 1.40 - 1.60 m consentendo un comodo utilizzo da parte dell'operatore.

IL SERBATOIO DELL'OLIO IDRAULICO con capacità massima di 150 litri è stato ubicato in posizione alta in modo da agevolare l'alimentazione del condotto di aspirazione della pompa. Inoltre, in tale posizione risulta accessibile per le operazioni di manutenzione/pulizia filtro ed ha le superfici esterne esposte all'aria in modo da migliorarne la capacità di scambio termico verso l'esterno per il raffreddamento dell'olio idraulico.

VALVOLE DI BLOCCO FLANGIATE DIRETTAMENTE SUI MARTINETTI COLONNA E MENSOLA allo scopo di ridurre gli ingombri, di semplificare gli interventi di manutenzione e sopratutto per una maggiore sicurezza.

SISTEMA DI SFILAMENTO DEI BRACCI GRU realizzato con martinetti ad un solo stadio accoppiati tra di loro per le varie versioni e consentono la sequenza di uscita. Questo sistema oltre a ridurre gli ingombri esterni consente di ottenere delle velocità di sfilamento apprezzabili in quanto le dimensioni dei martinetti sono molto ridotte. I collegamenti tra i vari martinetti sono realizzati in parte internamente al martinetto stesso ed in parte esternamente con tubi metallici, ubicati in posizioni protette da eventuali urti esterni.

APPENDIX: TECHNICAL NEWS

We inform you about new solutions and improvements adopted on crane serie 41.

CONTROL VALVE BLOCK *with elements to which it is possible add other supplementary elements for accessories activation. It is equipped with special cursors (spools) that let to have gradual movements.*

CONTROL VALVE BLOCK POSITION. *Its position , horizontal on the basement, let to have the control levers at 1,40 - 1,60 m (4'7"-5'3") from the floor, in this way the operator has a confortable use of them.*

HYDRAULIC OIL TANK *with 150 liters (53 US gals) capacity situated in high position in order to facilitate the feeding of the pump intake duct. In this position, the oil tank is easier to reach therefore any maintenance operation can be carried out with less inconveniences. Further more the oil tank's outer surfaces are exposed to outside air thus improving the thermal exchange and allowing the hydraulic oil to cool.*

LOCK VALVES FASTENED DIRECTLY ON THE BOTTOM OF COLUMN AND MAIN BOOM CYLINDERS *to reduce all possibles obstructions, to make maintenance operations easier and most of all for safety reasons.*

EXTENSION SYSTEM FOR CRANE BOOMS *consisting of cylinders at one stage coupled between them in different versions and they concur the extension sequence. This system reduce esternal overall and let to obtain good extension speed due to the reduced dimentions of the cylinders. Connections between cylinders have been made both inside the cylinder itself and on the external side by metallic pipes, positionned in such a way as to be repaired from eventual collisions.*

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77

TUBI IN GOMMA DI COLLEGAMENTO tra il distributore di comando ed i martinetti sono stati inseriti quasi totalmente all'interno della carpenteria (colonna/mensola) allo scopo di migliorare estetica della macchina e per proteggere le tubazioni da possibili urti interni. Sull'estremità inferiore, dove vengono collegati con il distributore, sono stati inseriti i raccordi rotanti allo scopo di evitare l'attorcigliamento dei tubi durante le manovre di rotazione.

DOPPIO SISTEMA DI FILTRAZIONE DELL'OLIO IDRAULICO realizzato con un filtro sul ritorno immerso, con grado di filtrazione nominale di 125 micron e con un filtro in mandata, con grado di filtrazione assoluta di 15 micron.

INDICATORE DEL GRADO DI INTASAMENTO DEL FILTRO, posto sul filtro stesso.

PACCO BRACCI CON PROFILI DI SEZIONE ESAGONALE, realizzati con un'unica saldatura effettuata sul lato inferiore.

POMELLI DELLE LEVE DI MANOVRA con sagomatura "anatomica" per una comoda e sicura impugnatura ed utilizzo da parte dell'operatore.

CONSOLLE/CARTER DI PROTEZIONE dei comandi sono state sistemate le targhette (in materiale plastico) per la corretta individuazione dei comandi.

BIELLE posizionate sulle articolazioni della macchina permettono di raggiungere prestazioni elevate durante la fase di sollevamento.

FERMA PATTINI anteriori e posteriori al pacco bracci, consentono la manutenzione dei pattini senza smontare i singoli bracci.

CONNECTION HOSES *between control valve block and cylinders have been inserted inside the structual work (column/main boom) to improve the general aspect of the crane and to protect hoses from eventual collisions. On the end side, where hoses are connected with the control valve block, there are rotating fittings with the aim of avoiding any hose kink during slewing movements.*

DOUBLE SYSTEM OF HYDRAULIC OIL FILTERING *made with a filter positioned on the return with 125 micron filtering degree and in delivery whit high pressure filter (15 micron).*

FILTER OBSTRUCTION INDICATOR, *as a manometer, fitted on the cover of the deliver filter itself*

BOOMS WITH PROFILES OF ESAGONAL SECTION, *made by a single welding on the inferior side.*

CRANE MANOEUVRE CONTROL LEVER KNOB *with ergonomic antislip handgrip.*

PLASTIC INSTRUCTION PLATE, *for the use of the crane, are placed near each crane control lever:*

CONNECTING RODS: *these are installed on the machine articulations to obtain a high performance during lifting.*

FIRM ICE-SKATES *front and posterior to the package booms, concur the maintenance of the ice-skates without to take apart the single booms.*

Autogru PM spa, via Emilia Est 1058 - 41100 modena MO (Italy)
e-mail: servicedept@autogrupm.com
tel. +39 059 20.54.711 - Service fax +39 059 28.06.77