

# 111

## **RACCOLTA TECNICA** TECHNICAL BOOK



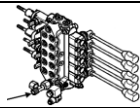
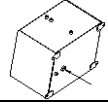
CARATTERISTICHE GENERALI  
TECHNICAL DATA

|                                                          |       |
|----------------------------------------------------------|-------|
| <b>Momento dinamico max (daNm)</b><br>Max dynamic moment | 12400 |
|----------------------------------------------------------|-------|

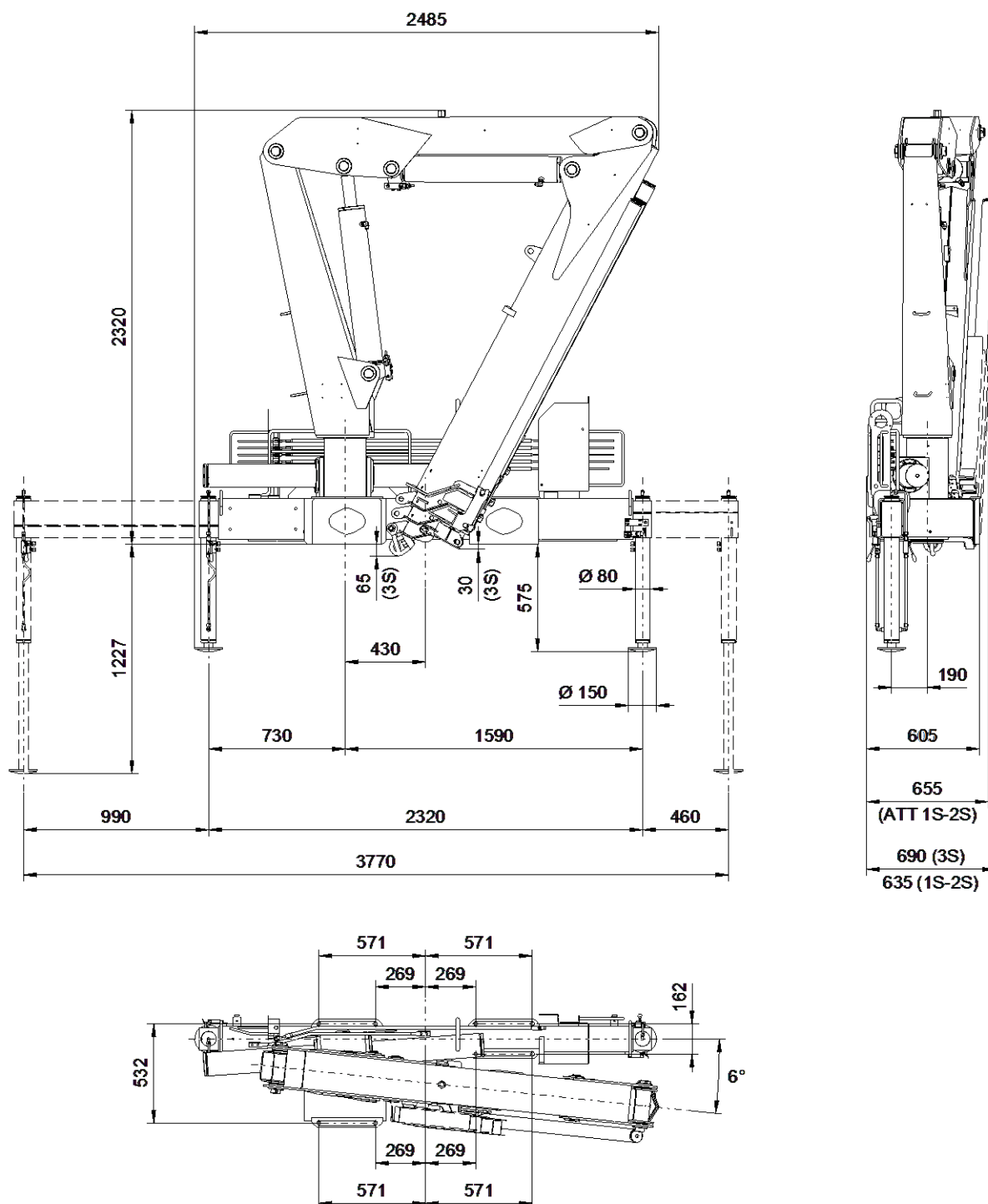
|                                     | Versione | Q <sub>max</sub> |
|-------------------------------------|----------|------------------|
| <b>Portata max (kg)</b><br>Max load | 1S       | 4000             |
|                                     | 2S       | 3850             |
|                                     | 3S       | 3750             |

|                                                       | Versione | 111 STD | 111 EX |
|-------------------------------------------------------|----------|---------|--------|
| <b>Massa in ordine di lavoro (kg)</b><br>Crane weight | 1S       | 1150    | 1205   |
|                                                       | 2S       | 1250    | 1305   |
|                                                       | 3S       | 1340    | 1395   |

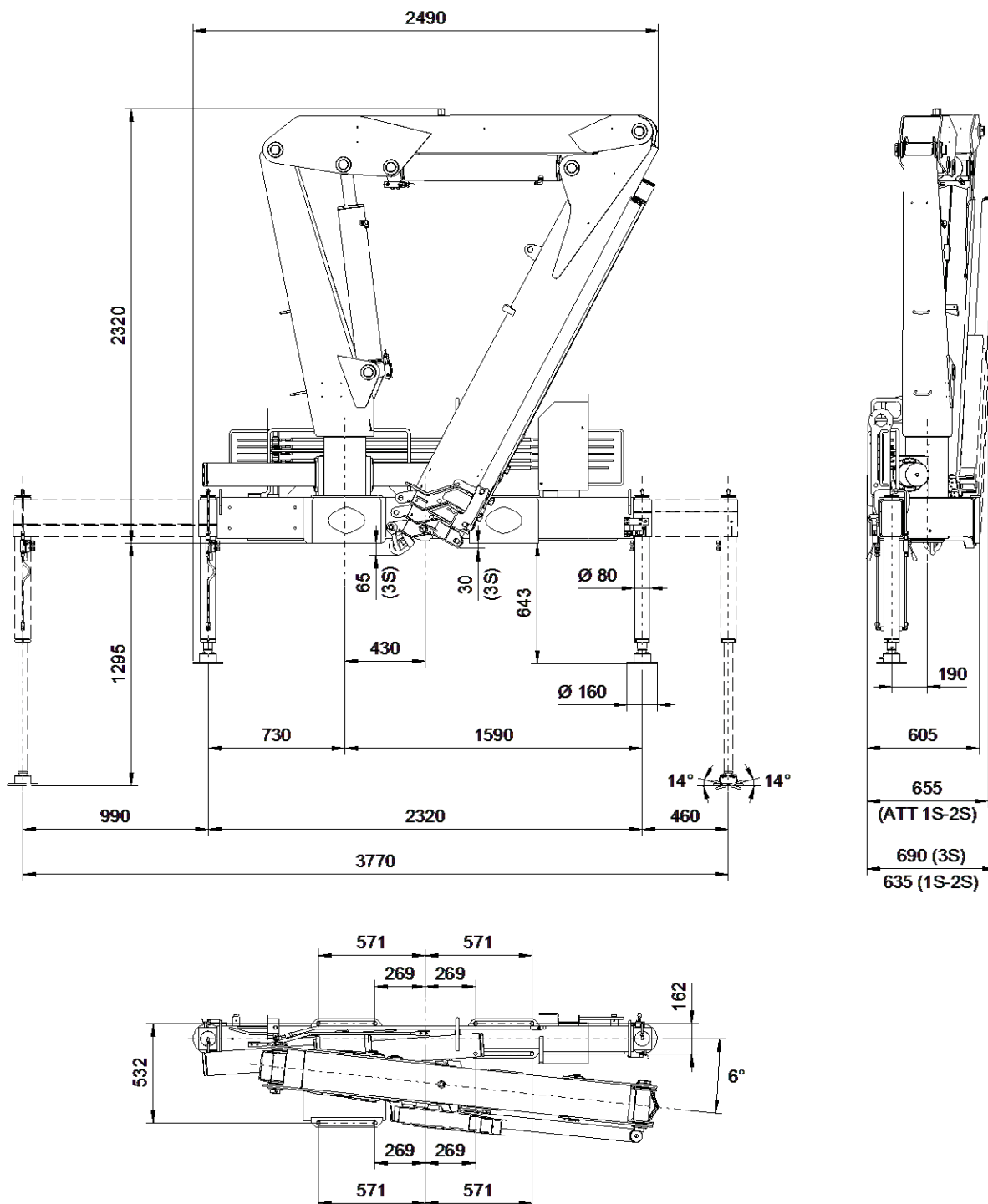
|                                                                                                                       |                                                               |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <b>Reazione massima sullo stabilizzatore</b><br>Max force on the stabilizer leg                                       | 7210 daN                                                      |
| <b>Reazione massima sullo stabilizzatore extra</b><br>Max force on the extra stabilizer leg                           | 5260 daN                                                      |
| <b>Carico massimo trasmesso al suolo da stabilizzatori standard</b><br>Max standard stabilizer pressure on the ground | 36 daN/cm <sup>2</sup> (CE)<br>41 daN/cm <sup>2</sup> (NO CE) |
| <b>Carico massimo trasmesso al suolo da stabilizzatori extra</b><br>Max extra stabilizer pressure on the ground       | 27 daN/cm <sup>2</sup> (CE)<br>30 daN/cm <sup>2</sup> (NO CE) |
| <b>Pressione massima di esercizio</b><br>Max working pressure                                                         | 275 bar                                                       |
| <b>Portata massima di olio</b><br>Max oil flow                                                                        | 25 l/min                                                      |
| <b>Capacità serbatoio olio</b><br>Oil tank capacity                                                                   | 100 l                                                         |
| <b>Coppia di rotazione</b><br>Slewing moment                                                                          | 1080 daNm                                                     |
| <b>Angolo di rotazione</b><br>Slewing angle                                                                           | 380°                                                          |
| <b>Potenza assorbita</b><br>Absorbed power                                                                            | 14.9 kW<br>20 HP                                              |
| <b>Normativa di calcolo</b><br>Design standard                                                                        | DIN 15018<br>EN 12999                                         |

|                                                                                |                                                                                       |                           |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------|
| <b>Raccordi di collegamento con pompa</b><br>Fittings for connection with pump |                                                                                       | <b>NO RDC</b>             |
| <b>Linea di pressione distributore</b><br>Control valve pressure line          |  | DIN 12 L<br>M18x1.5-12-12 |
| <b>Linea di aspirazione serbatoio</b><br>Tank suction line                     |  | F1" BPS                   |

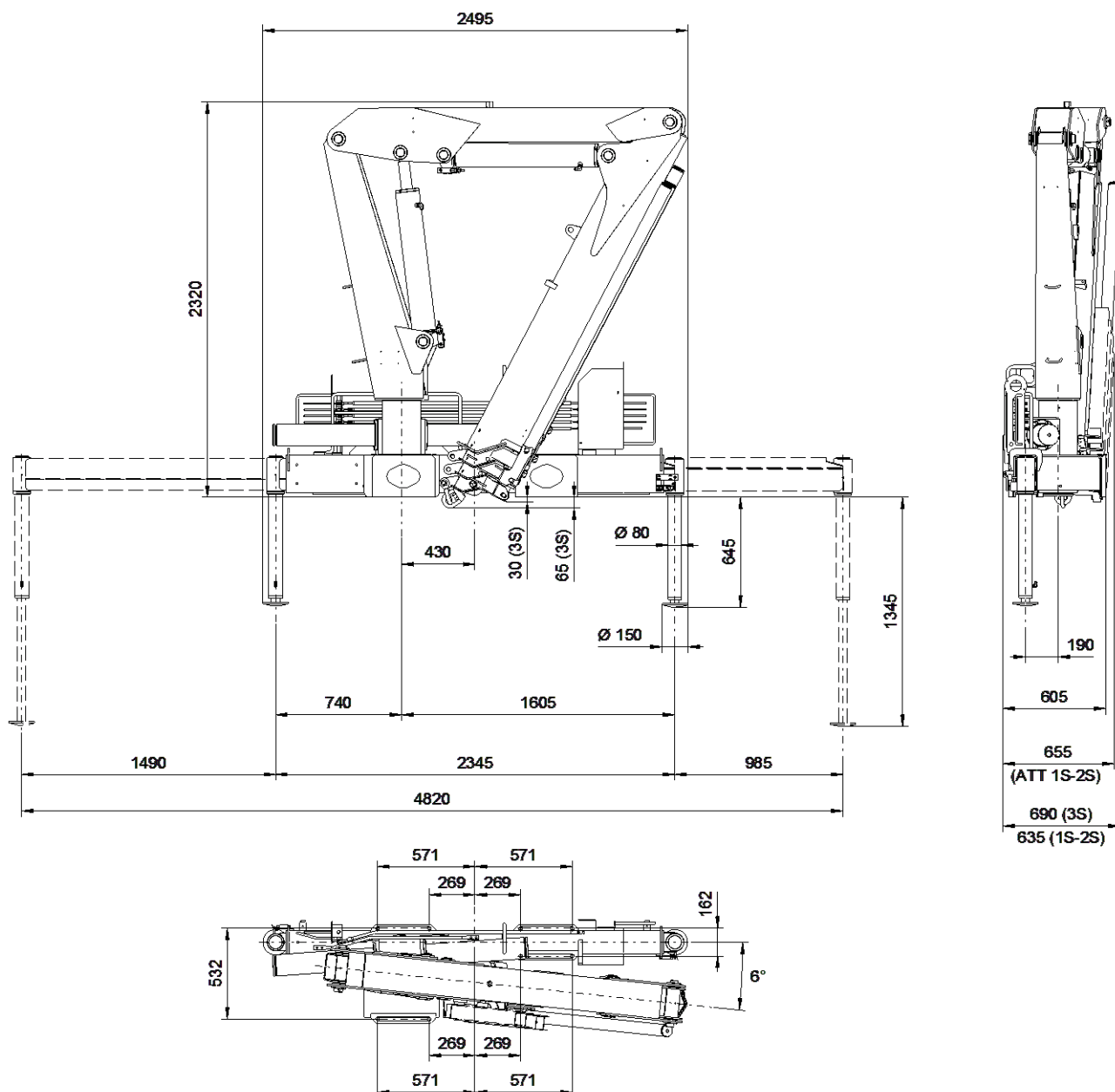
**DIMENSIONI DI INGOMBRO**  
**DIMENSIONS**  
**111 3S NO CE**



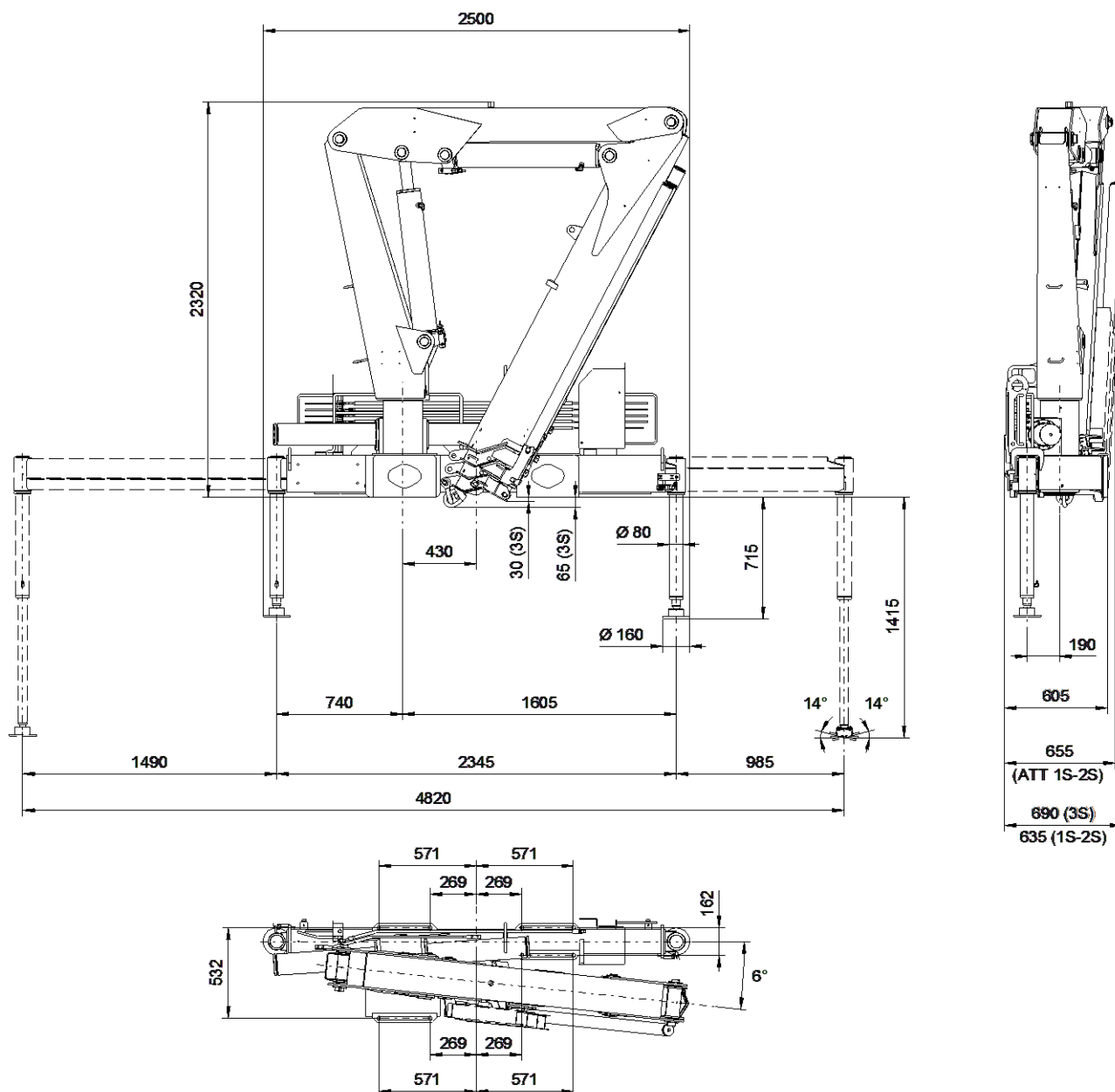
## DIMENSIONI DI INGOMBRO DIMENSIONS 111 3S CE



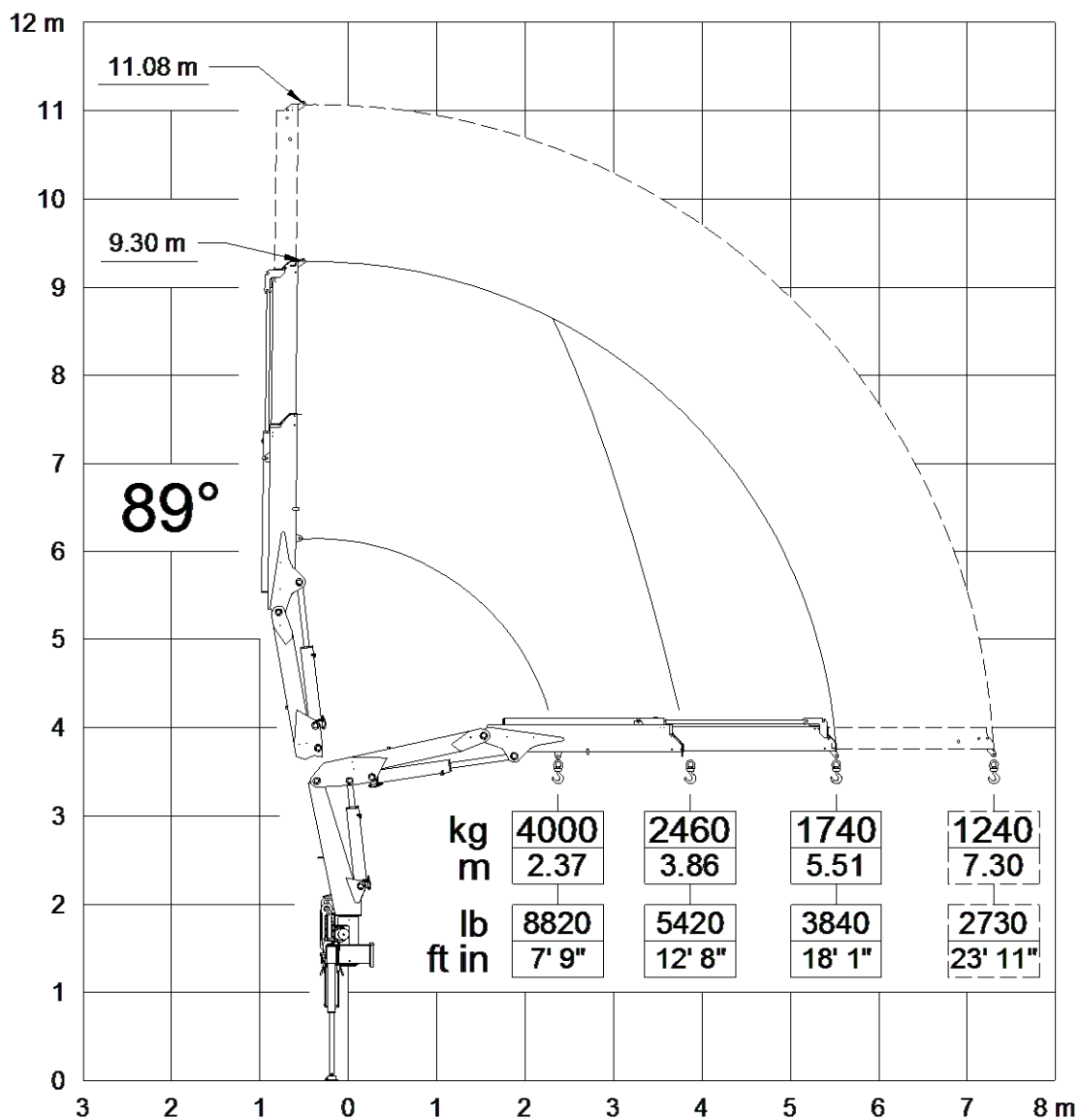
## DIMENSIONI DI INGOMBRO DIMENSIONS 111 3S EX NO CE



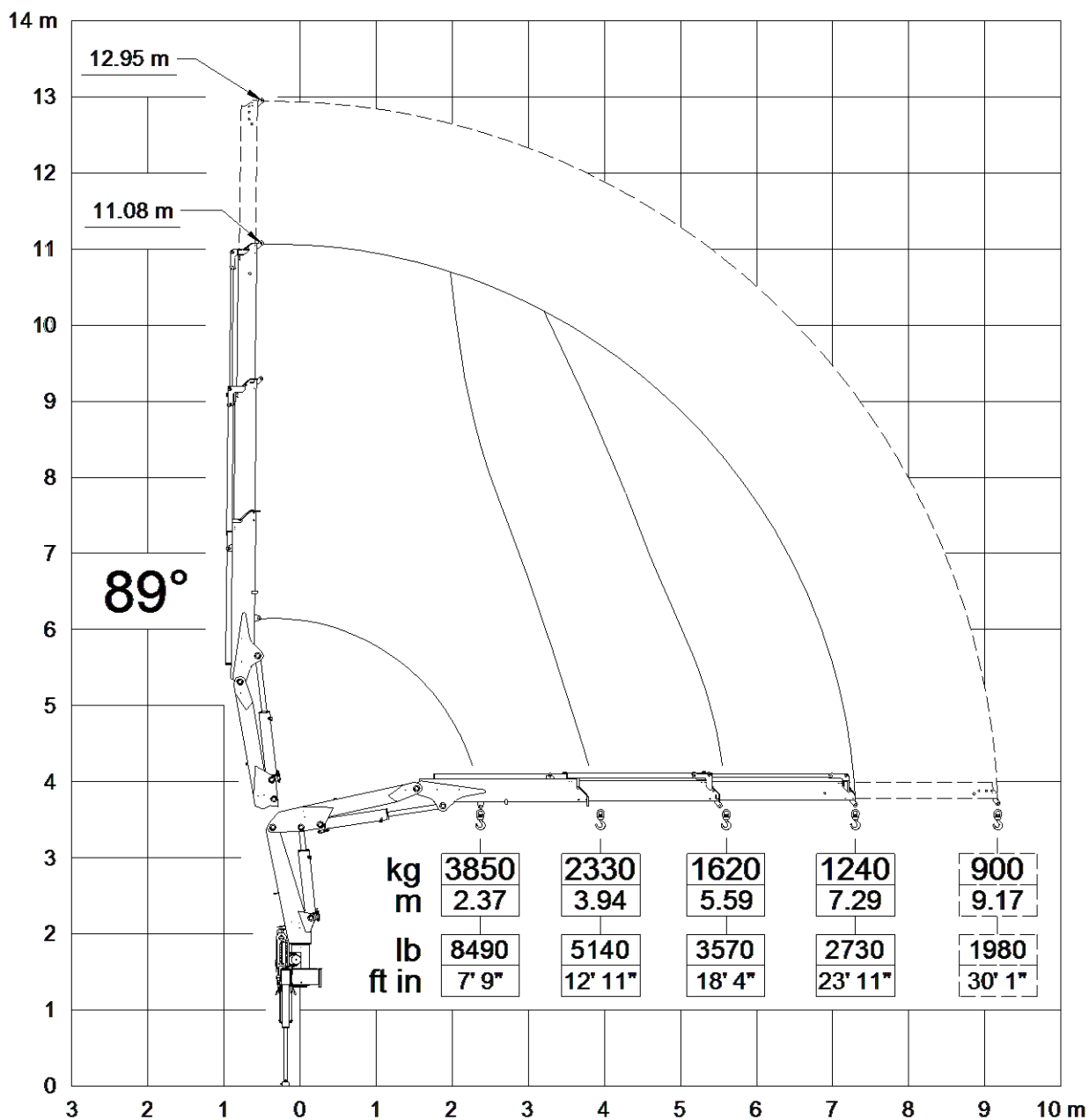
## DIMENSIONI DI INGOMBRO DIMENSIONS 111 3S EX CE



## DIAGRAMMA PORTATE LOAD DIAGRAM 111 1S



## DIAGRAMMA PORTATE LOAD DIAGRAM 111 2S

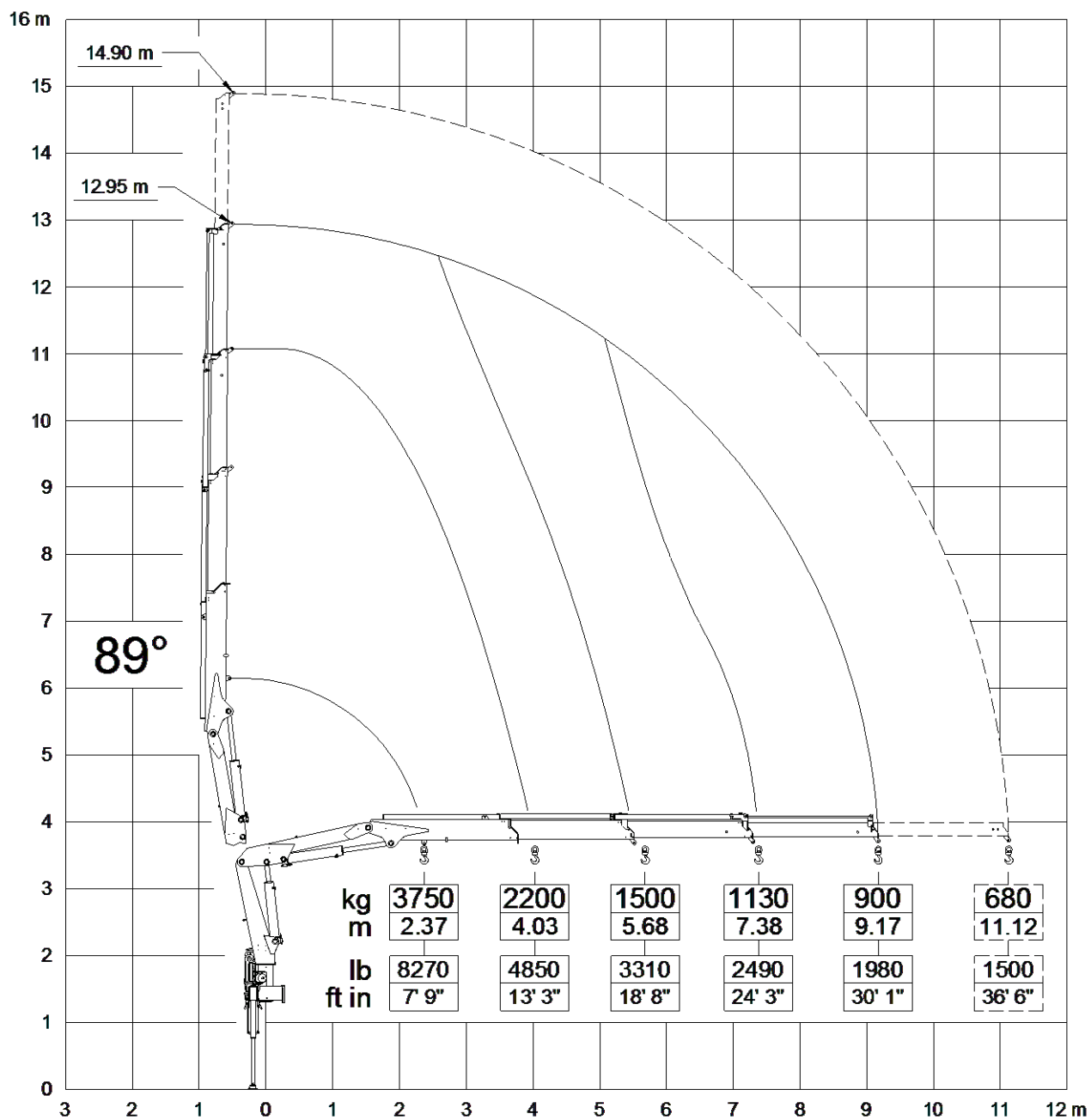


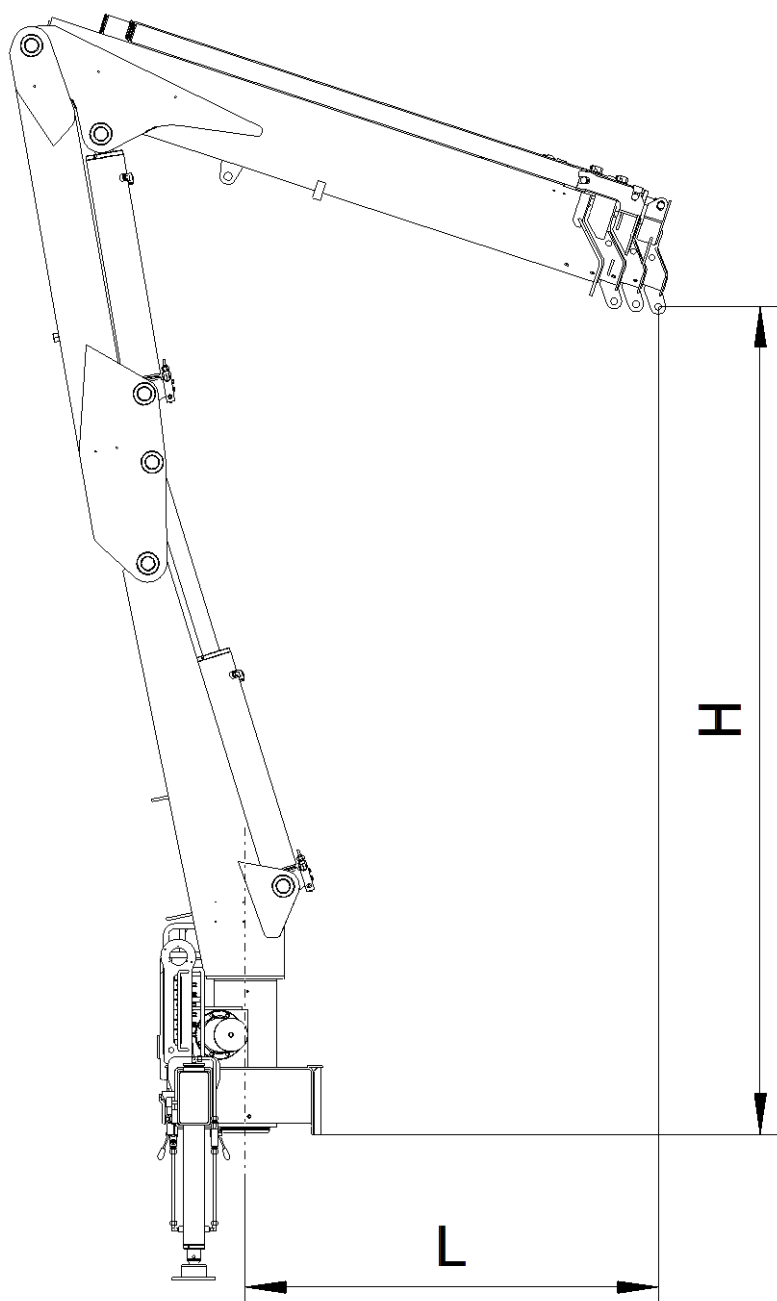
**111**

Crane - Kran  
Grue - Grua - Gru

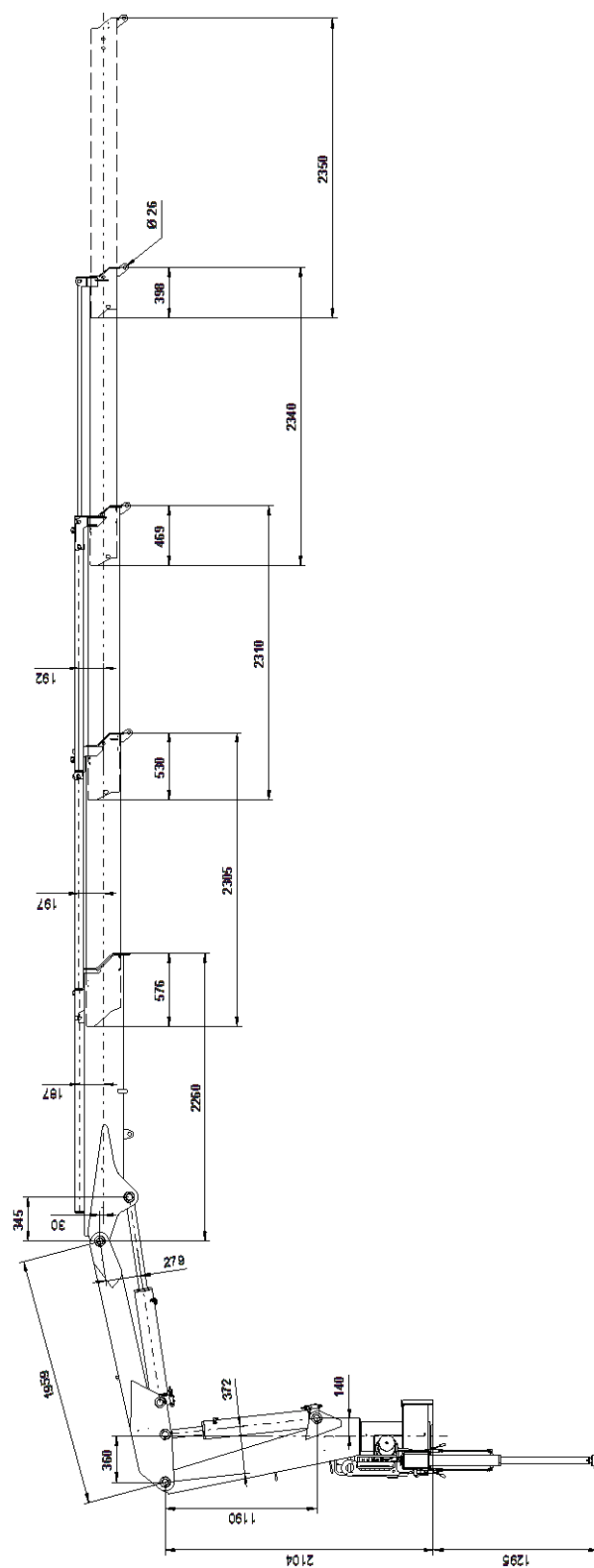
**AMCO**  **VEBA**

**DIAGRAMMA PORTATE**  
**LOAD DIAGRAM**  
**111 3S**



ALTEZZA ATTACCO GANCIO  
HOOK HEIGHT

|    | L [mm] | H [mm] |
|----|--------|--------|
| 1S | 1365   | 3070   |
| 2S | 1445   | 3060   |
| 3S | 1525   | 3050   |

DIMENSIONALE COLONNA E BRACCI  
COLUMN - BOOM - DIMENSIONS

## DIMENSIONI MARTINETTI CYLINDERS DIMENSIONS

### CILINDRO DI SOLLEVAMENTO LIFTING CYLINDER

|                                       |         |
|---------------------------------------|---------|
| Alesaggio - Cylinder bore             | 120     |
| Diametro esterno - Cyl. ext. diameter | 140     |
| Diametro stelo - Rod diameter         | 65 - 0  |
| Interasse aperto - Pitch (open)       | 1636.5  |
| Interasse chiuso - Pitch (closed)     | 971.5   |
| Corsa - Stroke                        | 665     |
| Raccordi - Fittings                   | 3/4"-16 |
| Ø perni articolazione - Artic. pin Ø  | 50      |
| Materiale perno/i - Pin steel         | C40     |

### CILINDRO DI ARTICOLAZIONE ARTICULATION CYLINDER

|                                       |         |
|---------------------------------------|---------|
| Alesaggio - Cylinder bore             | 120     |
| Diametro esterno - Cyl. ext. diameter | 140     |
| Diametro stelo - Rod diameter         | 65 - 0  |
| Interasse aperto - Pitch (open)       | 1636.5  |
| Interasse chiuso - Pitch (closed)     | 971.5   |
| Corsa - Stroke                        | 665     |
| Raccordi - Fittings                   | 3/4"-16 |
| Ø perno fissaggio - Fixing pin Ø      | 50      |
| Mat. perno/i - Pin steel              | C40     |

### CILINDRO 1° SFILO 1<sup>ST</sup> EXTENSION CYL.

|                                       |                  |
|---------------------------------------|------------------|
| Alesaggio - Cylinder bore             | 65               |
| Diametro esterno - Cyl. ext. diameter | 75               |
| Diametro stelo - Rod diameter         | 40 - 25          |
| Interasse aperto - Pitch (open)       | 2050             |
| Interasse chiuso - Pitch (closed)     | 400              |
| Corsa - Stroke                        | 1650             |
| Raccordi - Fittings                   | 7/8"-14 9/16"-18 |
| Ø perni articolazione - Artic. pin Ø  | 25               |
| Materiale perno/i - Pin steel         | C40 NORM.        |

### CILINDRO 2° SFILO 2<sup>ND</sup> EXTENSION CYL.

|                                       |           |
|---------------------------------------|-----------|
| Alesaggio - Cylinder bore             | 60        |
| Diametro esterno - Cyl. ext. diameter | 70        |
| Diametro stelo - Rod diameter         | 35 - 25   |
| Interasse aperto - Pitch (open)       | 1800      |
| Interasse chiuso - Pitch (closed)     | 100       |
| Corsa - Stroke                        | 1700      |
| Raccordi - Fittings                   | 3/4"-16   |
| Ø perno fissaggio - Fixing pin Ø      | 25        |
| Mat. perno/i - Pin steel              | C40 NORM. |

### CILINDRO 3° SFILO 3<sup>RD</sup> EXTENSION CYL.

|                                       |           |
|---------------------------------------|-----------|
| Alesaggio - Cylinder bore             | 60        |
| Diametro esterno - Cyl. ext. diameter | 70        |
| Diametro stelo - Rod diameter         | 30 - 0    |
| Interasse aperto - Pitch (open)       | 1890      |
| Interasse chiuso - Pitch (closed)     | 100       |
| Corsa - Stroke                        | 1790      |
| Raccordi - Fittings                   | 3/4"-16   |
| Ø perni articolazione - Artic. pin Ø  | 25        |
| Materiale perno/i - Pin steel         | C40 NORM. |

### CILINDRO DI ROTAZIONE ROTATION CYLINDER

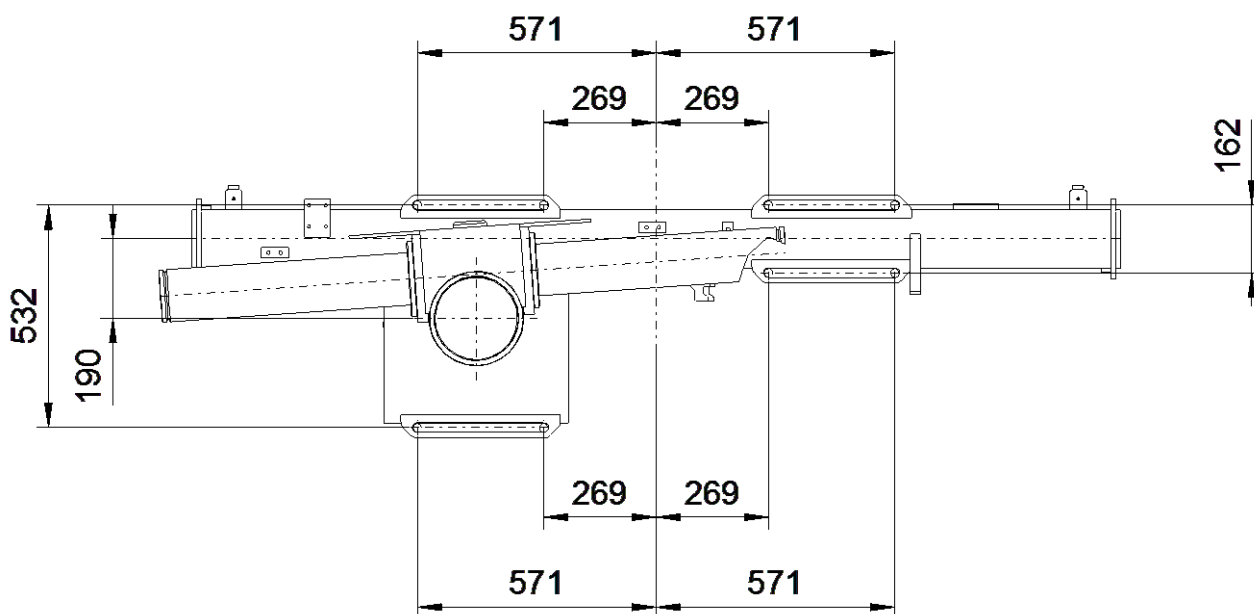
|                                       |     |
|---------------------------------------|-----|
| Alesaggio - Cylinder bore             | 110 |
| Diametro esterno - Cyl. ext. diameter | 125 |
| Diametro stelo - Rod diameter         | -   |
| Interasse aperto - Pitch (open)       | -   |
| Interasse chiuso - Pitch (closed)     | -   |
| Corsa - Stroke                        | 595 |
| Raccordi - Fittings                   | -   |
| Ø perno fissaggio - Fixing pin Ø      | -   |
| Mat. perno/i - Pin steel              | -   |

### CILINDRO STABILIZZATORE STABILIZER CYLINDER

|                                       |        |
|---------------------------------------|--------|
| Alesaggio - Cylinder bore             | 70     |
| Diametro esterno - Cyl. ext. diameter | 80     |
| Diametro stelo - Rod diameter         | 50 - 0 |
| Interasse aperto - Pitch (open)       | 1477.5 |
| Interasse chiuso - Pitch (closed)     | 825    |
| Corsa - Stroke                        | 652.5  |
| Raccordi - Fittings                   | 1/4" G |
| Ø perni articolazione - Artic. pin Ø  | -      |
| Materiale perno/i - Pin steel         | -      |

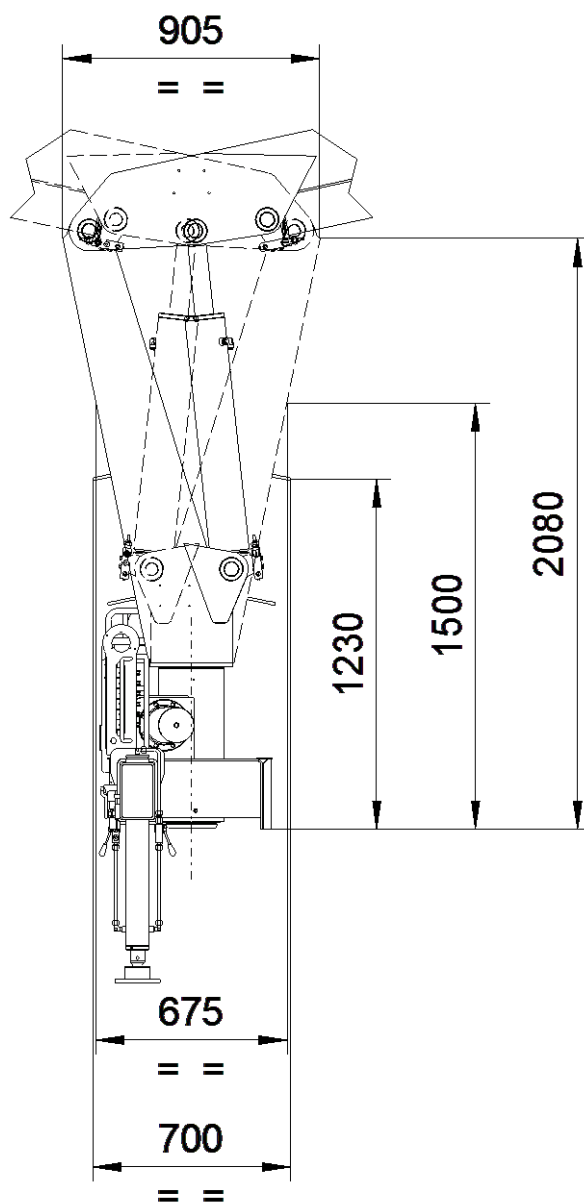
## DIMENSIONI BASAMENTO, TIRANTI E VITI ROTAZIONE

### BASE DIMENSIONS, TIE RODS & ROTATION SCREWS

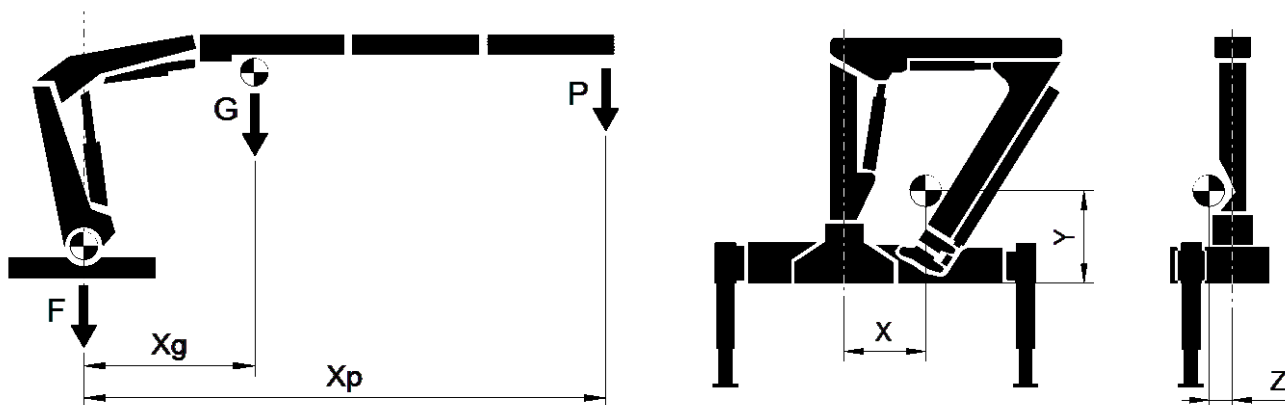


|                                                                                    |                                                                                                        |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Tiranti di staffaggio</b><br>Tie mounting rods                                  | N°8 M20x1.5 42CrMo4 BNF<br><b>Coppia di serraggio (Tightening torque)</b><br>Min. 240 Nm – Max. 250 Nm |
| <b>Viti fissaggio 1 canna di rotazione</b><br>Fixing bolts for 1 rotation cylinder | N°8 M14x35 8.8 UNI 5931<br><b>Coppia di serraggio (Tightening torque) 80 Nm</b>                        |

## INGOMBRO IN ROTAZIONE ROTATION RADIUS



## PESI – BARICENTRI WEIGHTS – CENTER OF GRAVITY

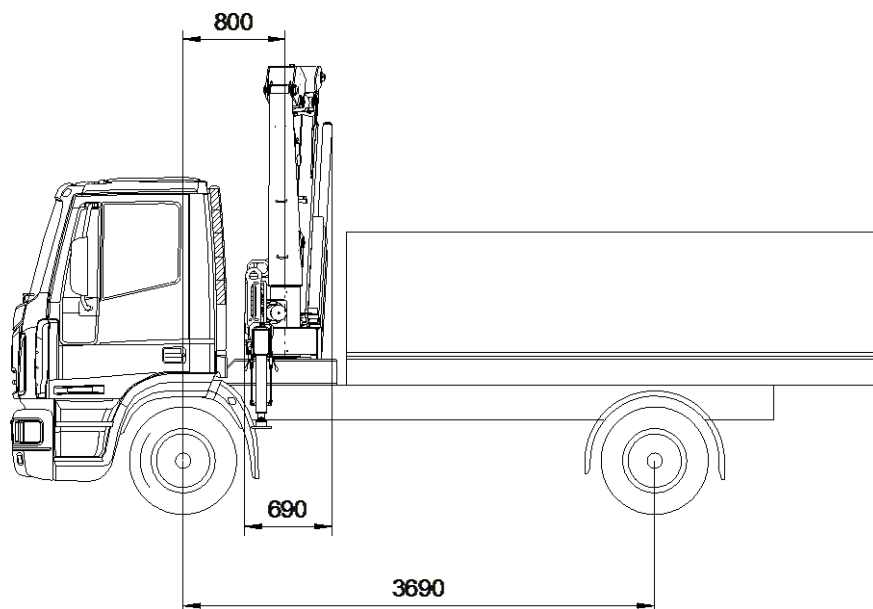


| 111                                                                                    | F<br>[kg]         | G<br>[kg] | Xg<br>[m] | P<br>[kg] | Xp<br>[m] | TL<br>[kg] | X<br>[mm] | Y<br>[mm] | Z<br>[mm] |
|----------------------------------------------------------------------------------------|-------------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
| 1S  | 735 STD<br>790 EX | 415       | 2.00      | 1740      | 5.51      | 2175       | 440       | 960       | 25        |
| 2S  |                   | 515       | 2.70      | 1240      | 7.29      | 1550       | 480       | 960       | 10        |
| 3S  |                   | 605       | 3.40      | 900       | 9.17      | 1125       | 520       | 960       | -5        |

F = peso parti fisse  
G = peso bracci a sbalzo  
Xg = distanza di G da asse colonna  
P = carico nominale  
Xp = distanza di P da asse colonna  
TL = carico per prova di stabilità  
X, Y, Z = coordinate baricentro (gru chiusa)

F = weight of fixed parts  
G = weight of extension booms  
Xg = distance of G from column axis  
P = nominal load  
Xp = distance of P from column axis  
TL = stability test load  
X, Y, Z = center of gravity coordinates (closed crane)

## AUTOCARRO MINIMO SENZA STABILIZZATORI SUPPLEMENTARI MIN TRUCK WITHOUT SUPPLEMENTARY STABILIZERS



**PTT (GVW) = 130 q**

### DATI AUTOCARRO A VUOTO

#### Asse anteriore

Tara asse anteriore = 2900 kg

Carico ammissibile asse anteriore = 4800 kg

#### Asse posteriore

Tara asse posteriore = 1370 kg

### PESI ALLESTIMENTO

Peso cassone = 600 kg

Peso gru = 1395 kg (111-3S EX)

Peso controtelaio = 50 kg

### CHASSIS DATA

#### Front axle

Front axle tare weight = 2900 kg

Allowable front axle weight = 4800 kg

#### Rear axle

Rear axle tare weight = 1370 kg

### OUTFIT WEIGHTS

Body weight = 600 kg

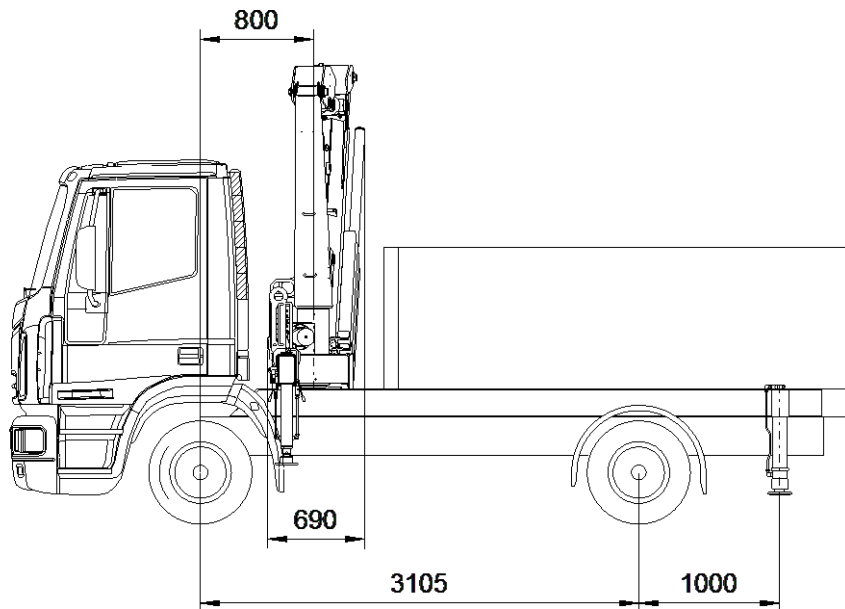
Crane weight = 1395 kg (111-3S EX)

Counterframe weight = 50 kg

**Coefficiente di stabilità = 1,44**

**Stability index = 1,44**

## **AUTOCARRO MINIMO CON STABILIZZATORI SUPPLEMENTARI** **MIN TRUCK WITH SUPPLEMENTARY STABILIZERS**



**PTT (GVW) = 120 q**

### **DATI AUTOCARRO A VUOTO**

#### **Asse anteriore**

Tara asse anteriore = 2570 kg

Carico ammissibile asse anteriore = 4480 kg

#### **Asse posteriore**

Tara asse posteriore = 1190 kg

### **PESI ALLESTIMENTO**

Massa cassone = 650 kg

Peso gru = 1395 kg (111-3S EX)

Massa controtelaio = 200 kg

### **Stabilizzatori supplementari**

Apertura minima = 3000 mm

Peso stabilizzatori supplementari = 130 kg

**Coefficiente di stabilità = 1,73**

### **CHASSIS DATA**

#### **Front axle**

Front axle tare weight = 2570 kg

Allowable front axle weight = 4480 kg

#### **Rear axle**

Rear axle tare weight = 1190 kg

### **OUTFIT WEIGHTS**

Body weight = 650 kg

Crane weight = 1395 kg (111-3S EX)

Counterframe weight = 200 kg

### **Rear beam stabilizers**

Min. width = 3000 mm

Rear stabilizer weight = 130 kg

**Stability index = 1,73**

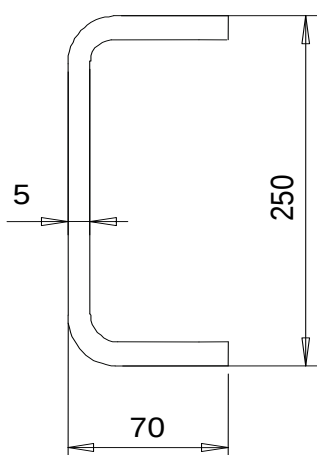
**CONTROTELAIO MINIMO**  
MIN COUNTERFRAME**Momento dinamico max (daNm)**

Max dynamic moment

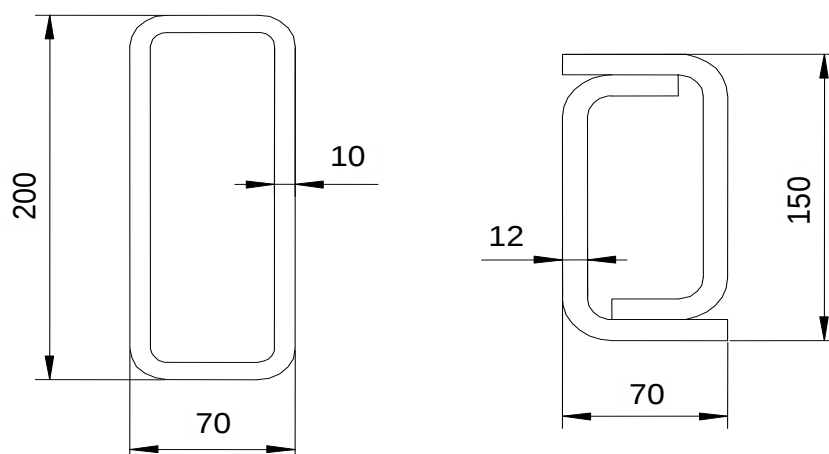
12400

**Sezione telaio minima (autocarro PTT=120 q)**

Min frame section (truck GVW 12 ton)

**Sezione minima contro telaio (materiale Fe510 - S355)**

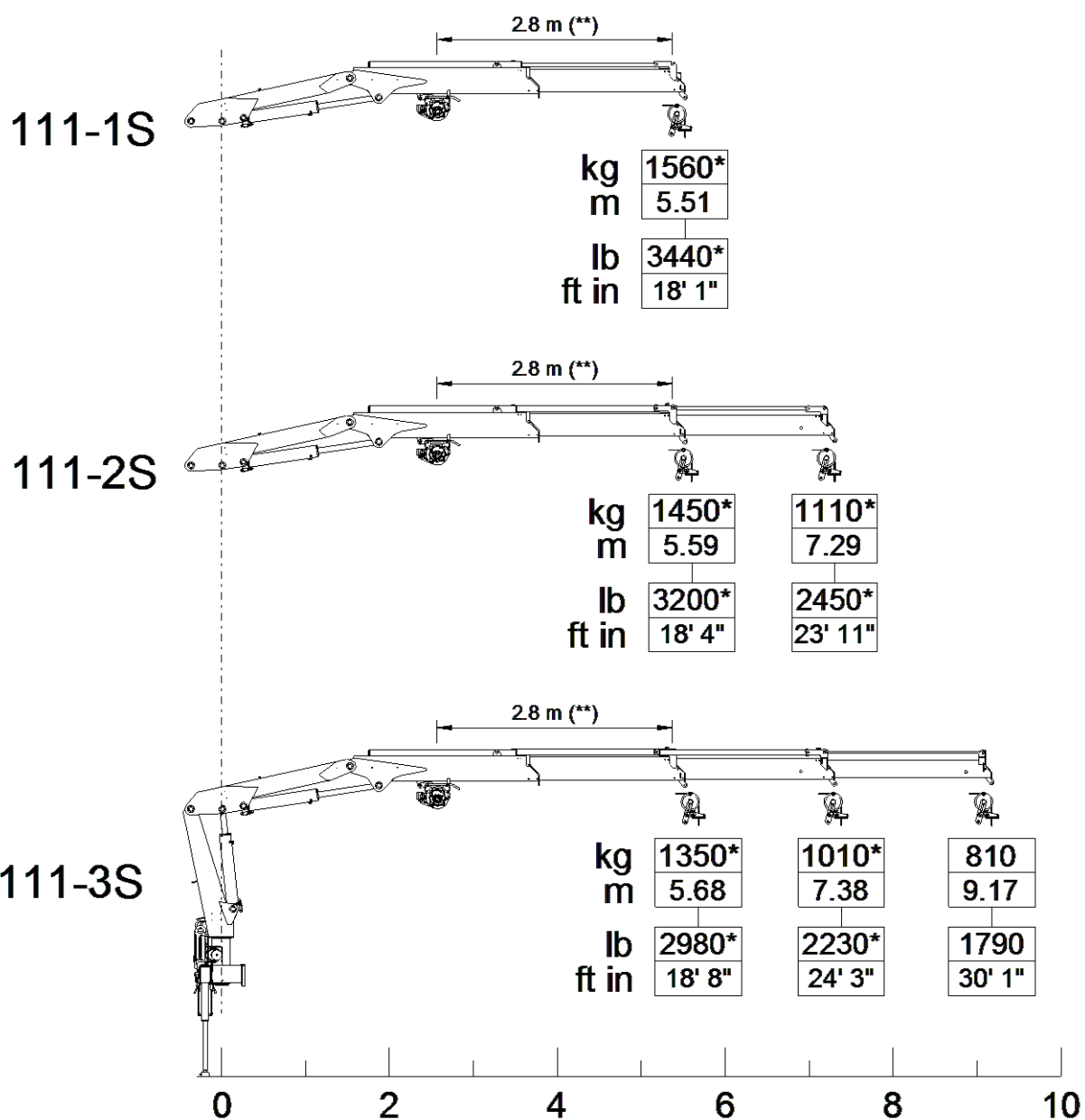
Min counterframe section (steel S355)



## CARATTERISTICHE VERRICELLO IDRAULICO HYDRAULIC WINCH DATA

Max tiro diretto (kg)  
Max winch direct pull (kg)

1000 kg



(\*) = Puleggia argano con tiro doppio  
(\*) = Winch pulley with double line pull

(\*\*) = Distanza minima di utilizzo argano  
(\*\*) = Min distance for using the winch

## CARATTERISTICHE ACCESSORI BENNA-POLIPO GRAB - BUCKET DATA

|                                                            |         |
|------------------------------------------------------------|---------|
| <b>Peso massimo ammissibile</b><br>Max allowable weight    | 350 kg  |
| <b>Pressione max. di esercizio</b><br>Max working pressure | 200 bar |

