



TEREX | COMEDIL

HA20 Tower

Spare Parts and Maintenance

1	SPARE PARTS
2	MAINTENANCE
2.1	GENERAL
2.2	GROUPS SUBJECT TO MAINTENANCE
2.3	ROUTINE MAINTENANCE AND PERIODICAL INSPECTIONS
2.3.1	Daily inspections
2.3.2	Weekly inspections
2.3.3	Monthly inspections
2.3.4	Quarterly inspections
2.3.5	Six-monthly inspections
2.3.6	Annual inspections
2.4	SPECIAL MAINTENANCE

Chapter 4





1

SPARE PARTS

Indice - Index - Sommaire - Inhaltsangabe

PARTI DI RICAMBIO - SPARE PARTS - PIECES DE RECHANGE - ERSATZTEILE				
CODICE DI GRUPPO	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
310520010	Piastra di base	Base plate		
211023020	Carro base da 6 m (20 ft) - fisso e traslante	6 m (20 ft) undercarriage - stationary and travelling version		
	Blocchi zavorra	Ballast blocks		
311123010	Puntoni per carro base da 6 m (20 ft)	Struts for 6 m (20 ft) undercarriage		
311423010	Elemento torre HA20 18.8 TA da 7,5 m (25 ft)	7,5 m (25 ft) tower section HA20 18.8 TA		
311723020-1	Elemento torre HA20 18.10 B da 10 m (33 ft)	10 m (33 ft) tower section HA20 18.10 B		
311623010	Elemento torre HA20 18.4 da 3,75 m (12 ft)	3,75 m (12 ft) tower section HA20 18.4		



**RICAMBI
SPARE PARTS
PIECES DE RECHANGE
ERSATZTEILE**

**Istruzioni per l'uso
Instructions for use
Mode d'emploi
Gebrauchsanleitung**

A	B	C	D	E	F	G
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POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
243501010			TRASLAZIONE MOTRICE TAD 1RP 2M3	DRIVE TRAVELLING BOX		
1	346202001	1	Chiusura per scatola motrice	Cover		
2	840206005	2	Cusc. 22219 E TVPB (95 × 170 × 43)	Bearing		
3	346903040	1	Perno mot. 110 × 293	Motor pin		
4	347201010	1	Flangia attacco riduttore	Reduction gear		
5	845257001	1	Riduttore 1/51,7	Reduction gear		

Colonna A: posizione di riferimento su disegno d'insieme

Colonna B: codice particolare

Colonna C: quantità particolare

Colonna D: descrizione in lingua italiana

Colonna E - F - G: descrizione nelle varie lingue

Column A: part reference number on the assembly drawing

Column B: part code

Column C: part quantity

Column D: Italian designation

Column E - F - G: designations for the various languages

Colonne A: repère sur dessin d'ensemble

Colonne B: référence particulière

Colonne C: quantité particulière

Colonne D: description en italien

Colonne E - F - G: description dans les autres langues

Kolonne A: Referenznummer auf der Gesamtzeichnung

Kolonne B: Einzelheiten - Code

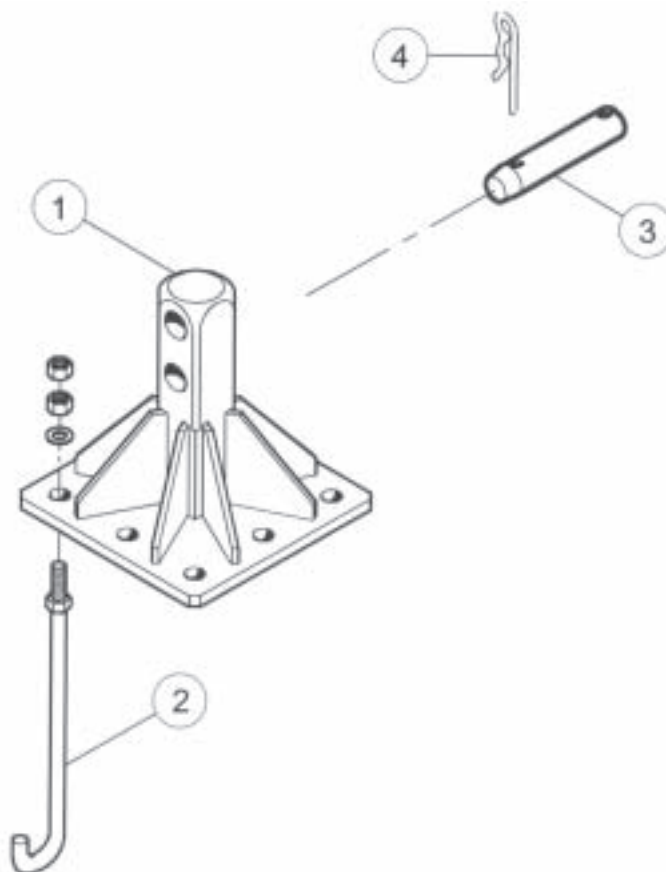
Kolonne C: Anzahl Einzelheiten

Kolonne D: Beschreibung in italienisch

Kolonne E - F - G: Beschreibung in verschiedenen Sprachen

PIASTRA DI BASE

BASE PLATE

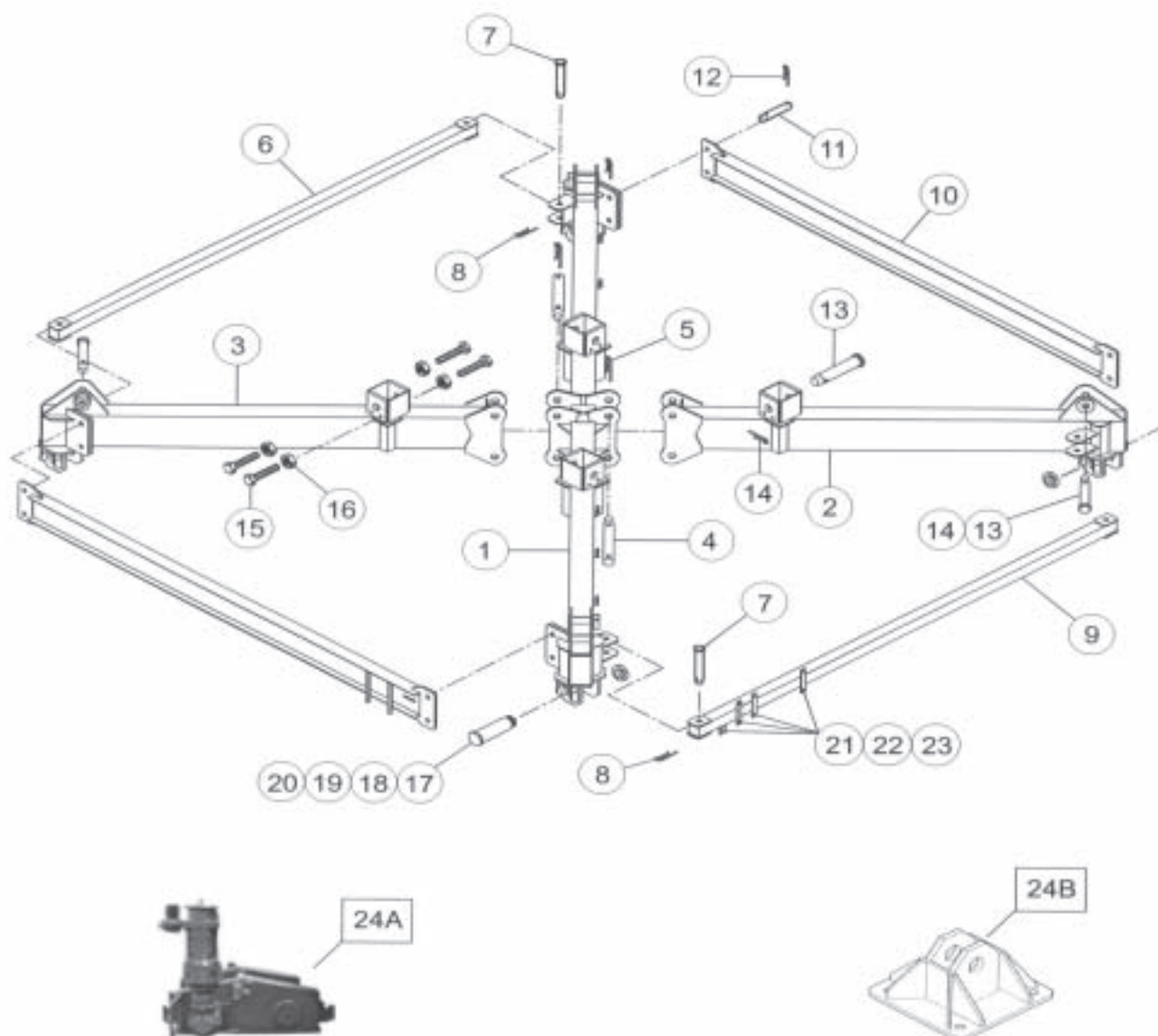


POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
310520010			PIASTRA DI BASE	BASE PLATE		
1	310520010	4	Piastra di base	Base plate		
2	310118010	(A)	Tirafondo M45 x 1380	Anchor bolt		
3	381143007	8	Perno CS 73 x 250	Pin		
4	883200005	16	Chiavistello R Ø8 Z	Spring split pin		

(A) Per la quantità dei tirafondi si rimanda al **Capitolo 3C** del manuale istruzioni che accompagna la gru

As for the anchor bolts quantity, refer to **Chapter 3C** of the crane operation manual.

CARRO BASE DA 6 m (20 ft) - VERSIONE FISSA E TRASLANTE
6 m (20 ft) UNDERCARRIAGE - STATIONARY AND TRAVELLING VERSION





POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
211023020			CARRO BASE DA 6 m (20 ft) VERSIONE "TTR-FTR"	UNDERCARRIAGE		
1	-	1	Trave	Beam		
2	-	1	Trave	Beam		
3	-	1	Trave	Beam		
4	380143029	4	Spina C 80 x 350	Pin		
5	883130008	8	Copiglia 13 x 120 Z - 4.8	Split pin		
6 (A)	-	1	Traversa di collegamento	Joining crossbeam		
7 (A)	380243052	4	Spina T 50 x 210	Pin		
8 (A)	883130005	4	Copiglia 8 x 100 Z - 4.8	Split pin		
9 (A)	-	1	Traversa di collegamento	Joining crossbeam		
10	-	2	Traversa di collegamento	Joining crossbeam		
11	380143020	8	Spina C 50 x 70	Pin		
12	883130005	16	Copiglia 8 x 100 Z - 4.8	Split pin		
13	380243114	8	Spina TS 85 x 325	Pin		
14	883130008	8	Copiglia 13 x 120 Z - 4.8	Split pin		
15	880133157	16	Vite TE M30 x 90 Z - 8.8	Screw		
16	881224023	16	Dado alto M30 Z - 10	Tall nut		
17	380743019	4	Spina filettata M85 x 345	Threaded pin		
18	883917001	4	Ghiera di bloccaggio	Ring nut		
19	882329001	4	Rosetta di sicurezza	Tab washer		
20	352200002	4	Boccola di spallamento	Bush		
21 (A)	880133115	8	Vite TE M14 x 50 Z - 8.8	Screw		
22 (A)	881732006	8	Rondella piana M14 Z - 6.8	Plane washer		
23 (A)	881224014	8	Dado alto M14 Z - 6.8	Tall nut		
24 (A)	243502040-1	1	Traslazione TSR 2RG 4M8	Travelling unit		
24 (B)	310523010	4	Piastra di base	Base plate		

- (A) Solo per carro traslante: per maggiori dettagli si rimanda al **Capitolo 12 - "Motorizzazione traslazione"** del manuale istruzioni che accompagna la gru.

Only for travelling undercarriage: for more details refer to **Chapter 12 - "Travelling drive unit"** of the crane operation manual

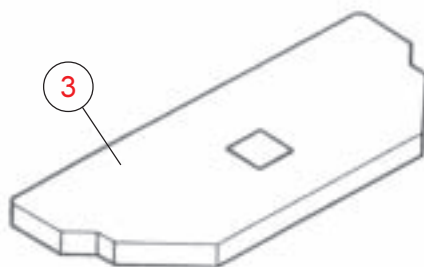
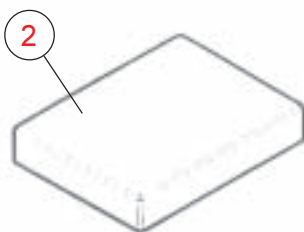
- (B) Solo per carro fisso.

Only for stationary undercarriage.

- (C) Per la quantità delle zavorre di base si rimanda al **Capitolo 3C** del manuale istruzioni che accompagna la gru.

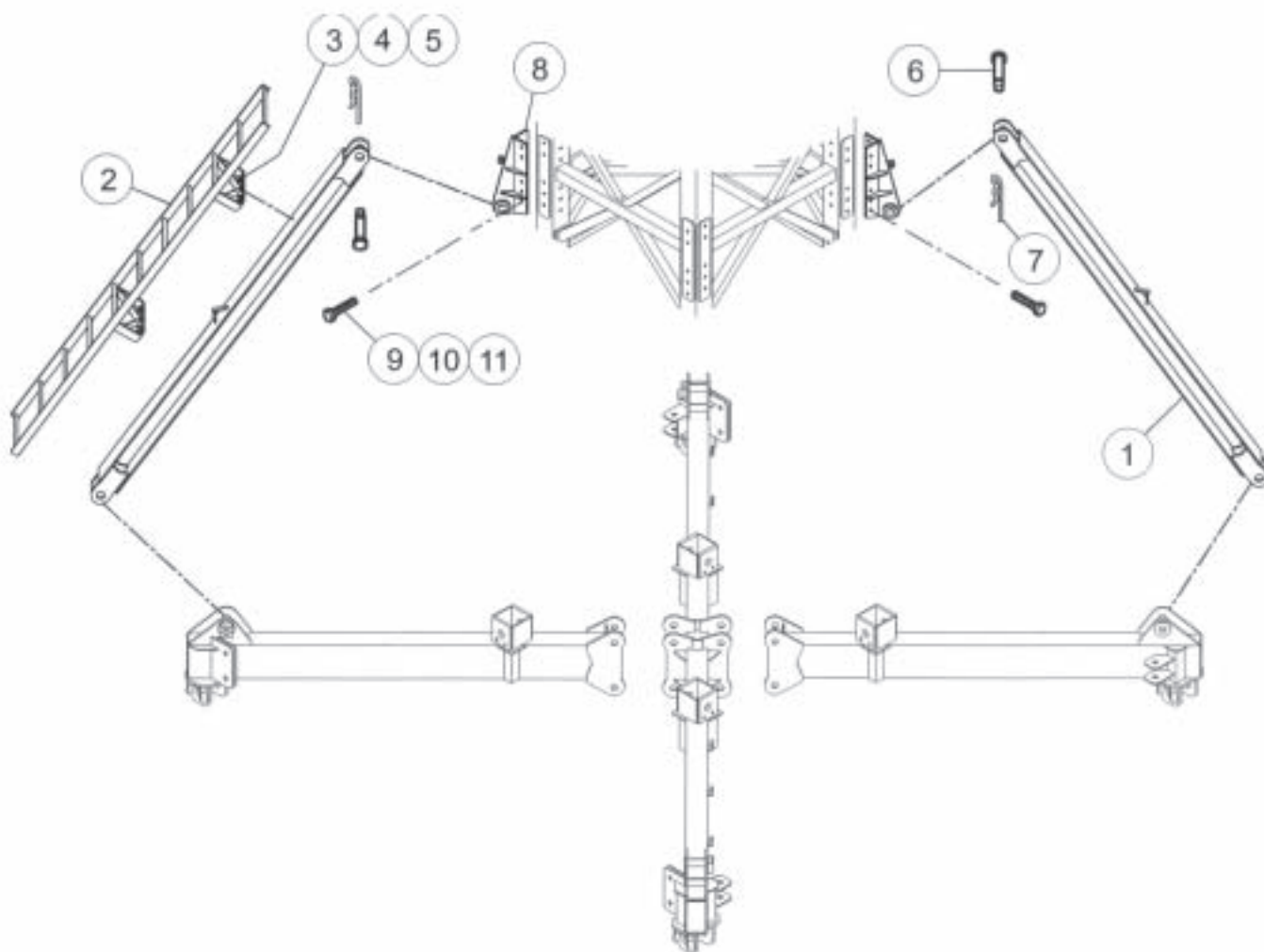
As for the base ballast configuration and quantity, refer to **Capitolo 3C** of the crane operation manual.

BLOCCHI ZAVORRA
BALLAST BLOCKS



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
			BLOCCHI ZAVORRA	BALLAST BLOCKS		
1	390105007	(C)	Zavorra di base 7250 A1	A1 Ballast block		
2	390106005	(C)	Zavorra di base 4400 B2	B2 Ballast block		
3	390105008	(C)	Zavorra di base 2500 C1	C1 Ballast block		

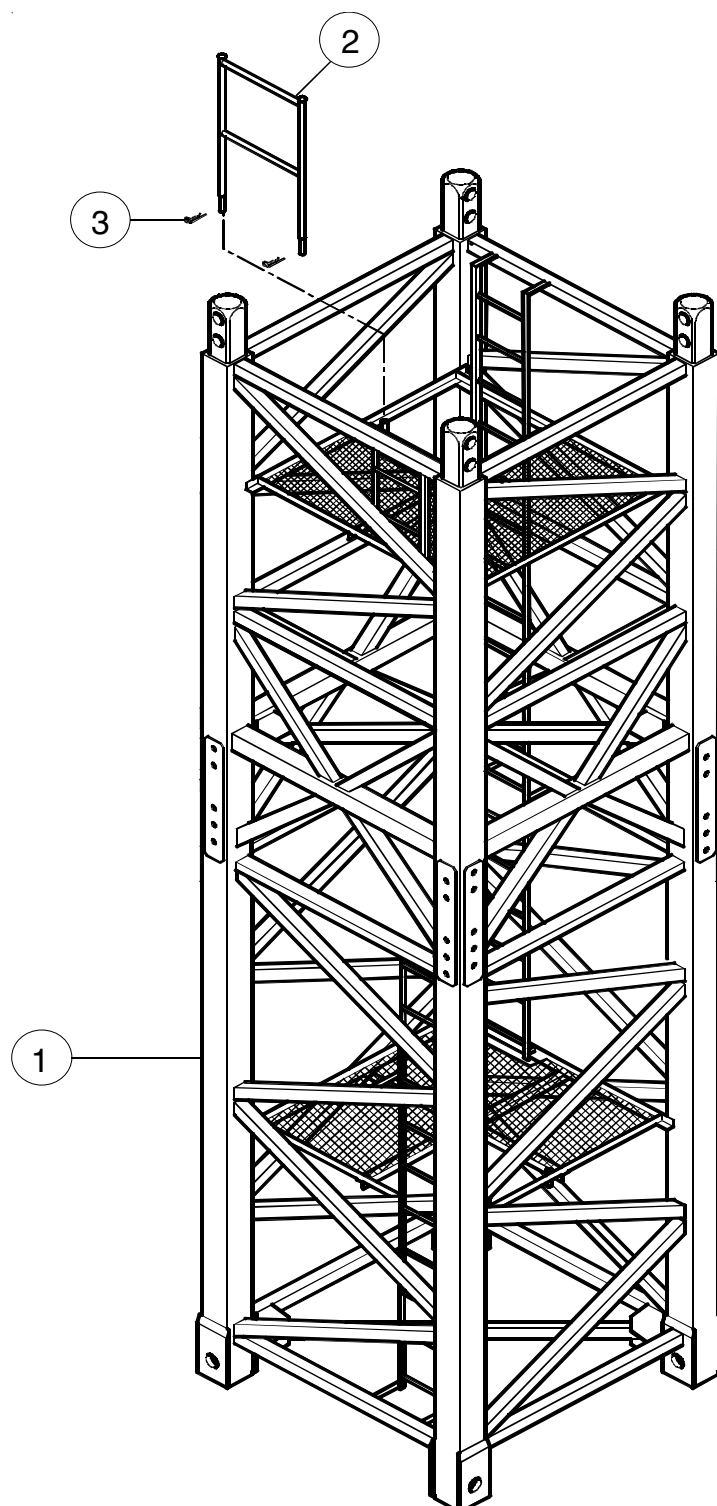
As for the base ballast configuration and quantity, refer to **Capitolo 3C** of the crane operation manual.

PUNTONI PER CARRO BASE DA 6 m (20 ft)**STRUTS FOR 6 m (20 ft) UNDERCARRIAGE**

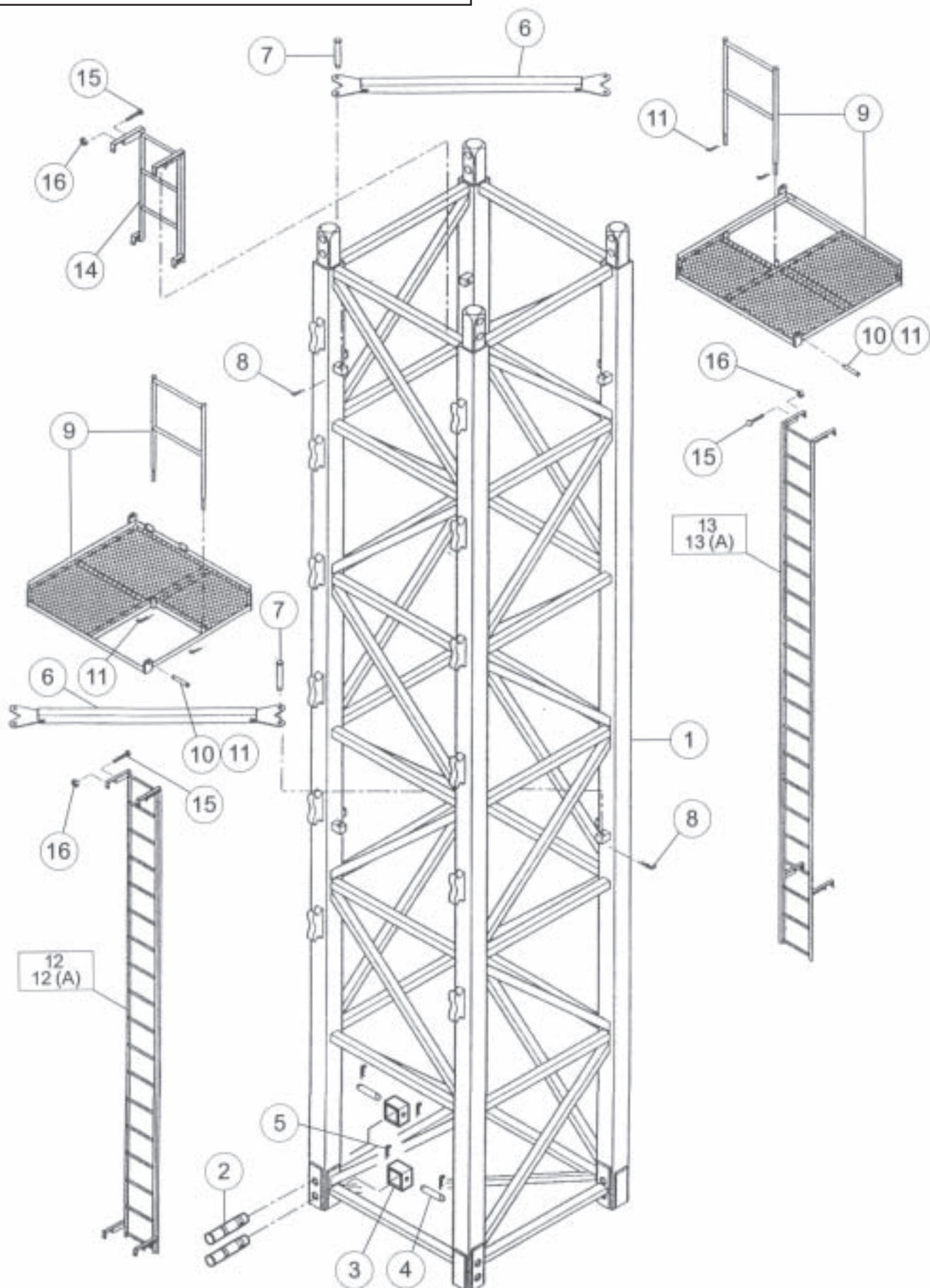
POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
3 11123010			PUNTONI PER CARRO BASE DA 6 m (20 ft)	STRUTS FOR 6 m (20 ft) UNDERCARRIAGE		
1	311123010	4	Puntone	Struts		
2	321100010	1	Scala attacco puntoni	Struts mounting ladder		
3	880133106	4	Vite TE M12 x 60 Z - 8.8	Screw		
4	881224013	4	Dado alto M12 Z - 10	Tall nut		
5	881732005	8	Rondella piana M12 Z - 6.8	Plane washer		
6	380243109	4	Spina T 85 x 185	Pin		
7	883130007	4	Copiglia 13 x 110 Z - 4.8	Split pin		
8	385109020	4	Staffa attacco puntone	Strut mounting bracket		
9	880134029	40	Vite TE M33 x 300 Z - 10.9	Screw		
10	881736009	40	Rondella piana M33 Z	Plane washer		
11	881224009	40	Dado alto M33 Z - 10	Tall nut		

ELEMENTO TORRE HA20 18.8 TA DA 7,5 m (25 ft)

7,5 m (25 ft) TOWER SECTION HA20 18.8 TA



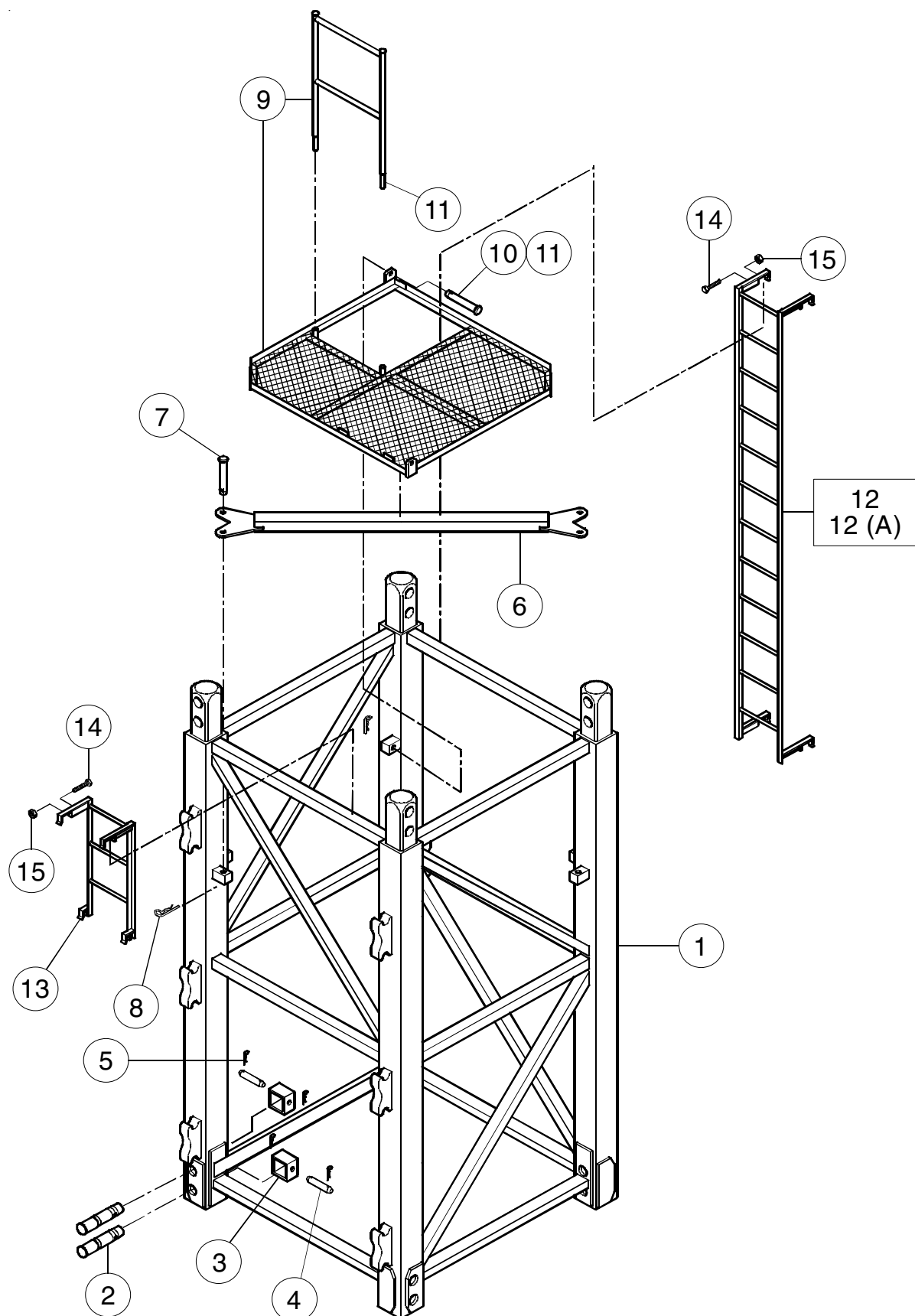
POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
311423010			ELEMENTO TORRE HA20 18.8 TA DA 7,5 m (25 ft)	7,5 m (25 ft) TOWER SECTION HA20 18.8 TA		
1	311423010	1	Elemento torre HA20 18.8 TA da 7,5 m	7,5 m (25 ft) tower section HA20 18.8 TA		
2	320602570	2	Parapetto 1100 x 606	Handrail		
3	883200003	4	Chivistello R Ø6 Z	Spring split pin		

ELEMENTO TORRE HA20 18.10 B DA 10 m (33 ft)**10 m (33 ft) TOWER SECTION HA20 18.10 B**



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
311723020-1			ELEMENTO TORRE HA20 18.10 B DA 10 m (33 ft)	10 m (33 ft) TOWER SECTION HA20 18.10 B		
1	311723020-1	1	Elemento torre HA20 18.10 B da 10 m (33 ft)	10 m (33 ft) tower section HA20 18.10 B		
2	381243003	8	Perno TS 73 x 265	Pin		
3	352216010	8	Boccola 90 x 7	Bush		
4	380141020	8	Spina CS 18 x 100	Pin		
5	883200003	16	Chiavistello R Ø6 Z	Spring split pin		
6	312223010	2	Diagonale antitorsione	Antitorsion diagonal		
7	380241033	8	Spina T 30 x 95	Pin		
8	883200003	8	Chiavistello R Ø6 Z	Spring split pin		
9	320101240	2	Ballatoio di riposo con parapetto	Rest platform with handrail		
10	380241013	4	Spina T 25 x 110	Pin		
11	883200003	8	Chiavistello R Ø6 Z	Spring split pin		
12	321323010	1	Scala inferiore	Lower ladder		
12 (A)	321200070	1	Scala inferiore con protezioni	Lower ladder with protections		
13	321323020	1	Scala superiore	Upper ladder		
13 (A)	321200100	1	Scala superiore con protezioni	Upper ladder with protections		
14	321100240	1	Scala per ballatoio di riposo	Ladder for rest platform		
15	880133115	12	Vite TE M14 x 50 Z - 8.8	Screw		
16	881224014	12	Dado alto M14 Z - 10	Tall nut		

(A) Optional.

ELEMENTO TORRE HA20 18.4 DA 3,75 m (12 ft)**3,75 m (12 ft) TOWER SECTION HA20 18.4**



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
311623010			ELEMENTO TORRE HA20 18.4 DA 3.75 m (12 ft)	3.75 m (12 ft) TOWER SECTION HA20 18.4		
1	311623010	1	Elemento torre HA20 18.4 da 3,75 m (12 ft)	3,75 m (12 ft) tower section HA20 18.4		
2	381243003	8	Perno TS 73 x 265	Pin		
3	352216010	8	Boccola 90 x 7	Bush		
4	380141020	8	Spina CS 18 x 100	Pin		
5	883200003	16	Chiavistello R Ø6 Z	Spring split pin		
6	312223010	1	Diagonale antitorsione	Antitorsion diagonal		
7	380241033	4	Spina T 30 x 95	Pin		
8	883200003	4	Chiavistello R Ø6 Z	Spring split pin		
9	320101240	1	Ballatoio di riposo con parapetto	Rest platform with handrail		
10	380241013	2	Spina T 30 x 95	Pin		
11	883200003	4	Chiavistello R Ø6 Z	Spring split pin		
12	321100260	1	Scala	Ladder		
12 (A)	321200080	1	Scala con protezioni	Ladder with protections		
13	321100240	1	Scala per ballatoio di riposo	Ladder for rest platform		
14	880133115	8	Vite TE M14 x 50 Z - 8.8	Screw		
15	881224014	8	Dado alto M14 Z - 10	Tall nut		

(A) Optional.

2 MAINTENANCE

2.1 GENERAL

Maintenance of the tower is an on going process divided in two main phases: inspection and repair. Inspection consists of all the appropriate operations required to locate, identify and assess problems which might weaken the safety and functionality of the crane.

Repair is directly related to the inspection carried out and, resolving each detected deficiency, restores the crane to its original configuration and state of operation.

For detailed information on the maintenance programme recommended by the manufacturer, refer to **Chapter 8 “General Maintenance”** of the crane operation manual.

2.2 GROUPS SUBJECT TO MAINTENANCE

To facilitate the routine maintenance operations, the systems/components have been shared into main groups of intervention.

For detailed information, refer to **Chapter 8 “General Maintenance”** of the crane operation manual.



Detail of the tower groups subject to maintenance:

- 1) *Structures (tower sections)*
- 2) *Electrical components*

2.3 ROUTINE MAINTENANCE AND PERIODICAL INSPECTIONS

Maintenance procedures consist of two phases:

INSPECTION

REPAIR

This system guarantees that all potential tower deficiencies are identified and repaired.

Defects which cannot be solved during this phase will become part of the ‘SPECIAL MAINTENANCE’.

For detailed information on the criterion to be used when carrying out routine maintenance, refer to **Chapter 8 “General Maintenance”** of the crane operation manual.



**2.3.1 Daily inspections**

- A) The operator, a qualified and trained person, is responsible for monitoring the crane. The daily inspection of the tower gives an assessment of its general conditions and the possibility to find possible problems regarding structural, mechanical, electrical and accessory parts;
- B) Check for proper connections of ladders, platforms, general protections and special devices provided for the operator's safety.

2.3.2 Weekly inspections

- A) Make sure that all structural pin-connections are placed in the special housings and secured with the relative bushes and spring split pins.
- B) Check the integrity and the correct connection of the power supply cable (make sure that the phases are connected correctly).

2.3.3 Monthly inspections

- A) With great accuracy visually examine all the welding of the base plates, of the undercarriage and of the tower.
Carefully check all oxidized welding because some might be cracked.
- B) Open the electrical box (QEL) and visually inspect the relays, the fuses, the connections and the other electrical devices to eliminate any dampness, any short circuit, any burns and other damages that might arise. Check that every component is properly assembled. When the inspection is finished close the electrical box.
- C) Check the presence and the integrity of all the displayed plates.

2.3.4 Quarterly inspections

Check the earthing connections.

2.3.5 Six-monthly inspections

Visually and accurately check all weldings of ladders, of landings and of protections.

2.3.6 Yearly inspections

- A) Perform non-destructive tests on structural welds located on the base plates, on the undercarriage and on the tower.
- B) Carry out anti-corrosion treatment and repaint all oxidized.
- C) Check the conditions of all the tower connecting systems: any corroded, worn out or damaged pins, split pins, screws and nuts shall be replaced by Comedil's technicians.
- D) Treat any corrosion of the electrical components.

Important notice



Should extraordinary events happen, such as long periods of driving rain with lightening striking near the crane, protracted work in a corroding environment or in particularly foul areas, etc. CAREFULLY AND INSPECT MORE FREQUENTLY the electrical equipment for evident signs of wear. In particular, check the ropes running up the tower and possible leakages of water into the electrical boxes

2.4 SPECIAL MAINTENANCE



Special maintenance must be carried out by highly qualified and specially trained technicians.



Only specially trained technicians can carry out the following operations:

- A) Tower erection and dismantling;
- B) Repairs of the electrical equipment;
- C) Non-destructive testing for structural damage;
- D) Repairs and replacement of the tower's structural parts.