



TEREX | COMEDIL

H20-HD23 Tower

Spare Parts and **M**aintenance

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Chapter **4**

D



1

SPARE PARTS

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PARTI DI RICAMBIO - SPARE PARTS - PIECES DE RECHANGE - ERSATZTEILE				
CODICE DI GRUPPO	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
310430010	Ancoraggio di base a perdere HD23 22	Expendable foundation anchor		
310430020	Ancoraggio di base a perdere HD23 26	Expendable foundation anchor		
711631020	Elemento torre HD23 22.6-6m	Tower section		
711631030	Elemento torre HD23 26.6-6m	Tower section		
312100100	Adattatore TT HD23-HA20	Mast section adapter		
311723020	Elemento torre HA20 18.10 B-10m	Tower section		
311623010	Elemento torre HA20 18.4 S-3.75m	Tower section		

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

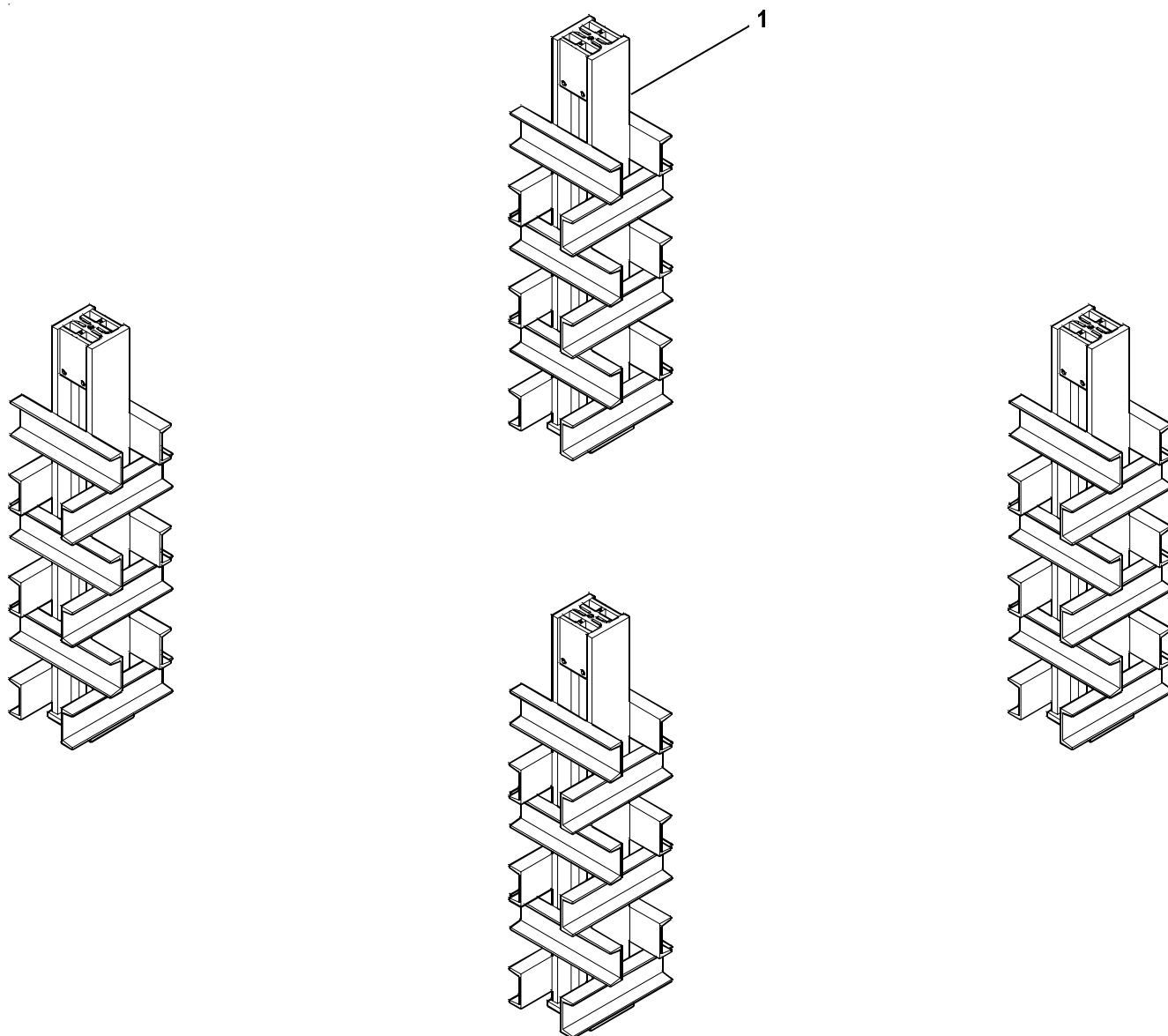
Kolonne B: Einzelheiten - Code

Kolonne C: Anzahl Einzelheiten

Kolonne D: Beschreibung in italienisch

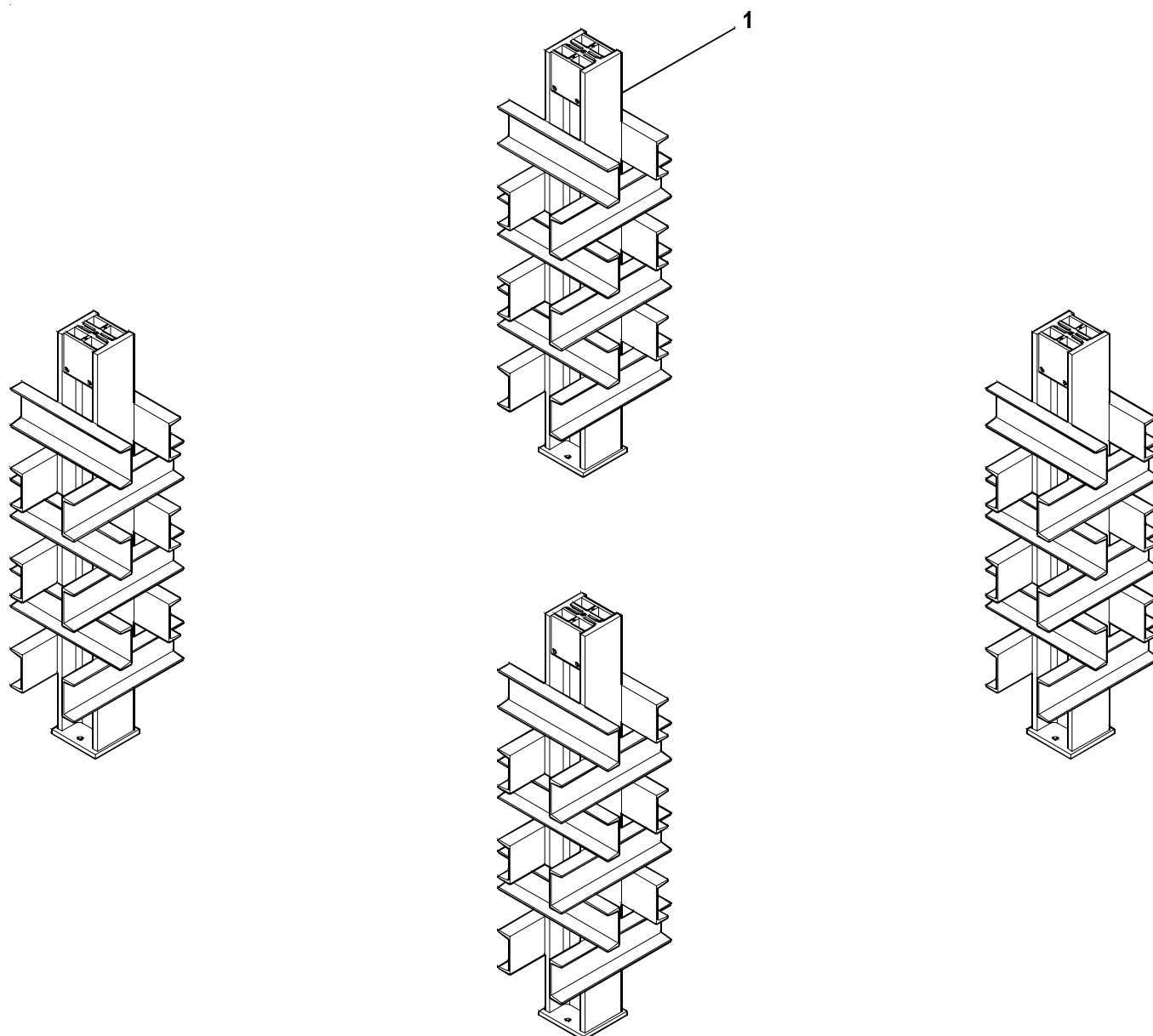
Kolonne E - F - G: Beschreibung in verschiedenen Sprachen

ANCORAGGIO DI BASE A PERDERE HD23 22
EXPENDABLE FOUNDATION ANCHOR



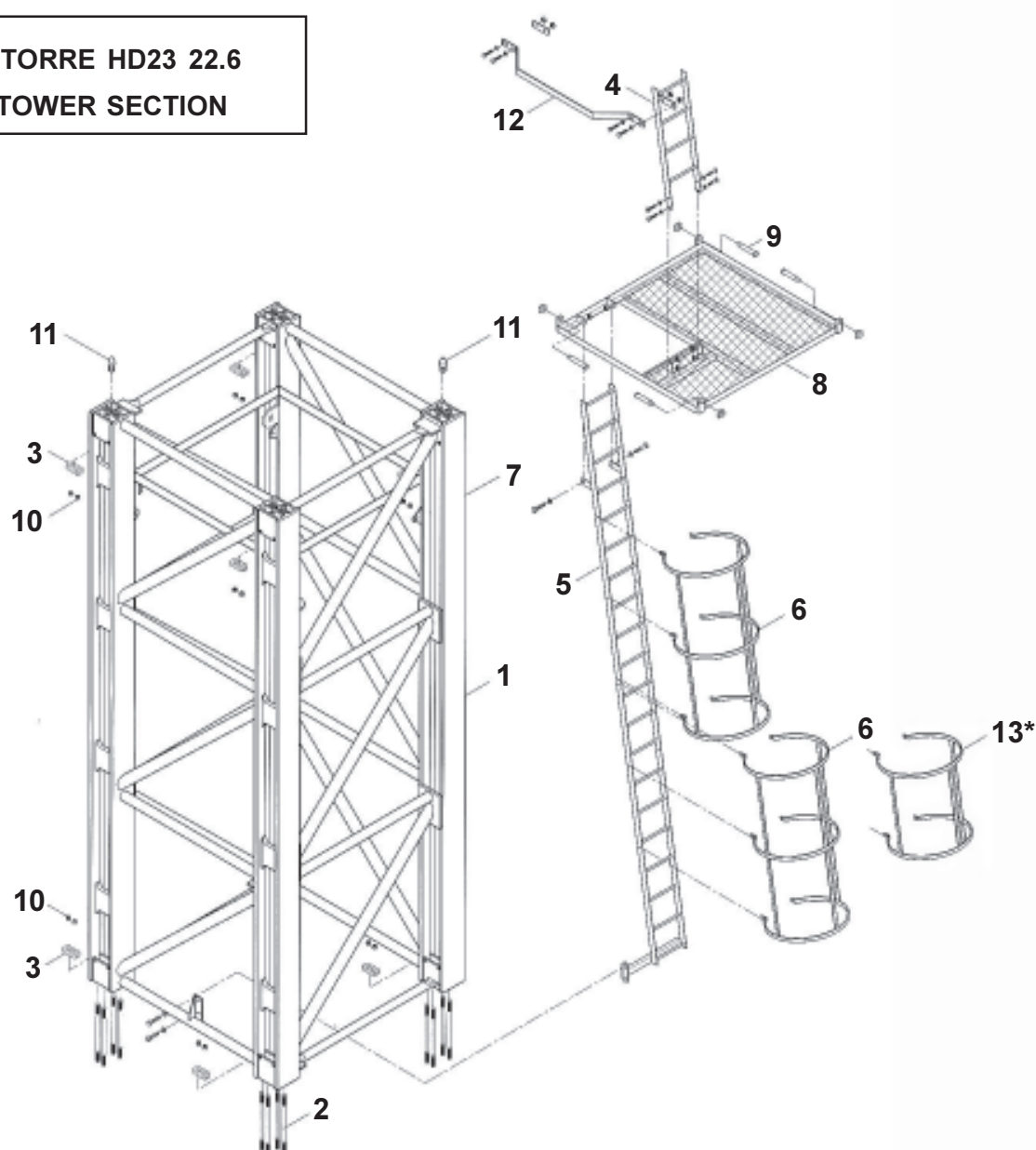
POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
	310430010		ANCORAGGIO DI BASE A PERDERE HD23 22	EXPENDABLE FOUNDATION ANCHOR		
1	310430010	4	Ancoraggio di base a perdere HD23 22	Expendable foundation anchor		

ANCORAGGIO DI BASE A PERDERE HD23 26
EXPENDABLE FOUNDATION ANCHOR



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
	310430020		ANCORAGGIO DI BASE A PERDERE HD23 26	EXPENDABLE FOUNDATION ANCHOR		
1	310430020	4	Ancoraggio di base a perdere HD23 26	Expendable foundation anchor		

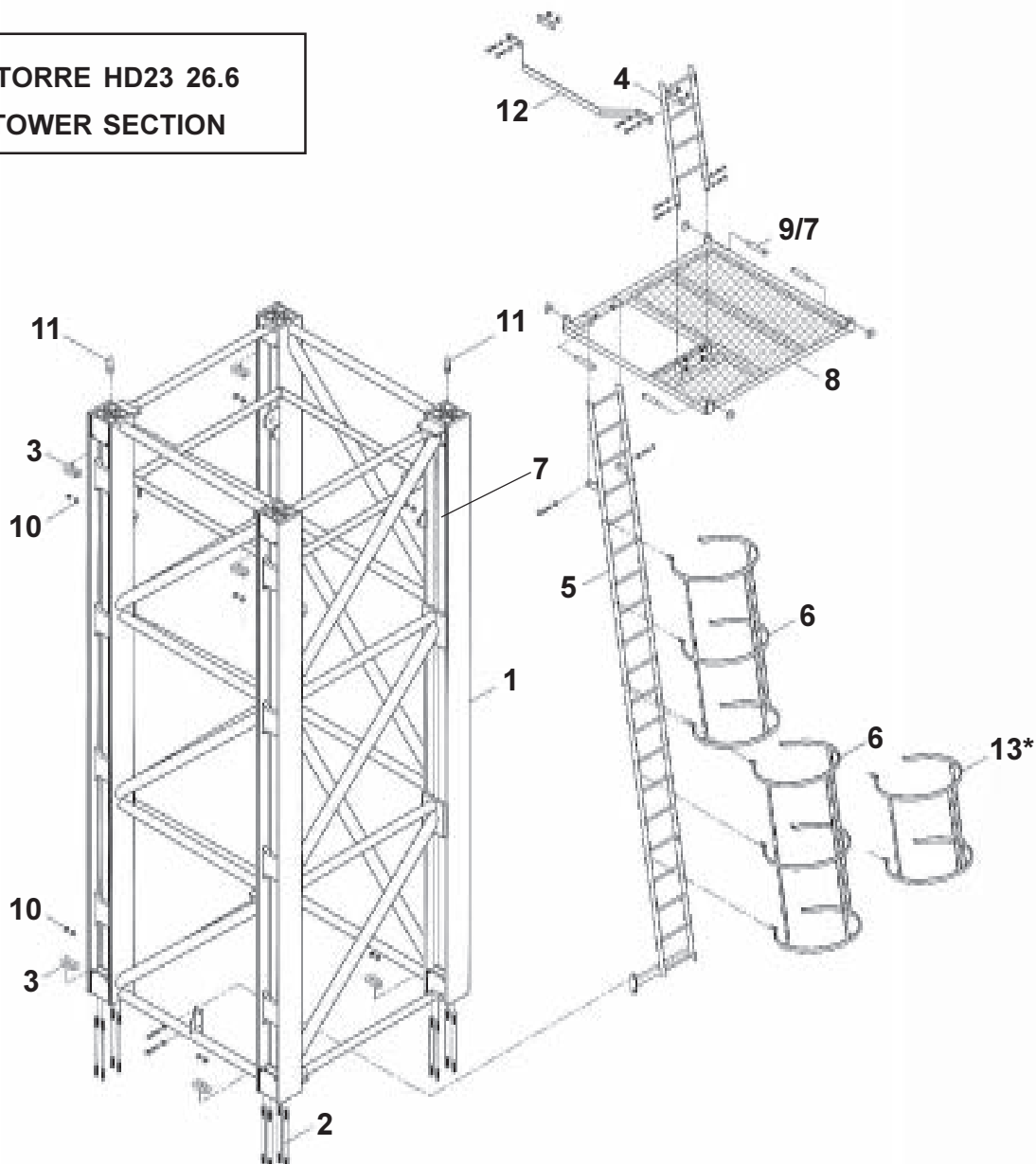
ELEMENTO TORRE HD23 22.6
HD23 22.6 TOWER SECTION



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
	711631020		TORRE HD23 22.6	HD 23 22.6 TOWER		
1	711631020	1	Elemento torre	Tower section		
2	882534003	16	Barra M45 per giunzione torre	High strength bolt		
3	383730020	16	Piastra di contrasto tipo HD 22	Joint plate		
4	14711350	1	Scala per ballatoio di riposo torre	Ladder		
5	721300110	1	Scala per elemento di prolunga	Ladder		
6	722003010	2	Protezione per scala L=1620	Ladder protection		
7	883200003	4	Chiavistello "R" Ø 6	Spring split pin		
8	720101150	1	Ballatoio di riposo torre 22	Tower rest platform		
9	380241019	4	Spina "T" 25x60	Pin		
10	384024003	16	Dado M45	Nut		
11	381717001	4	Perno di centraggio M24	Dowel		
12	14710270	1	Elemento di collegamento scale	Ladder connection element		
13 *	322002010	1	Protezione scala L=810	Ladder protection		

(*): solo nel caso di prolunga di base.
only for base tower section.

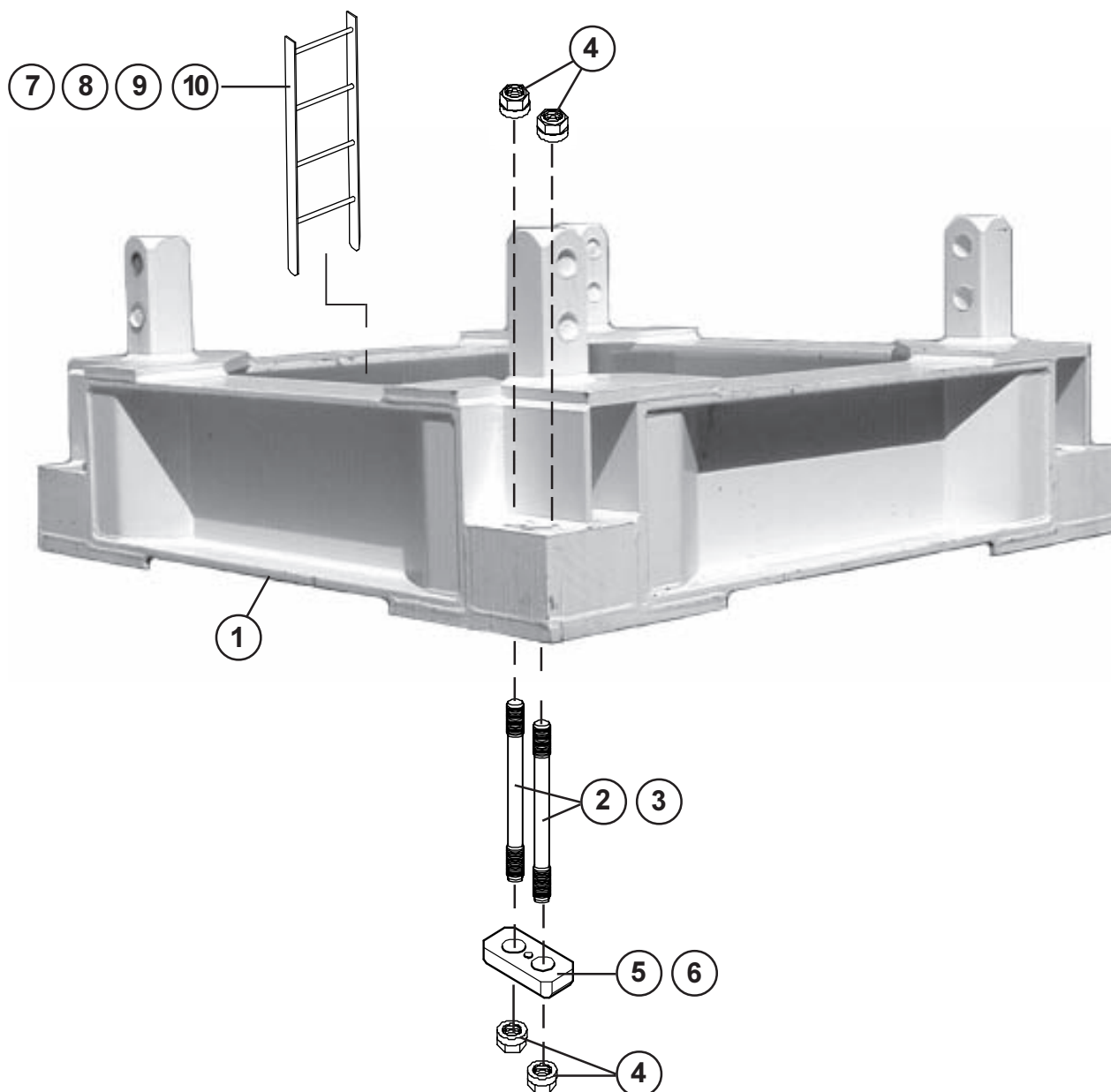
ELEMENTO TORRE HD23 26.6
HD23 26.6 TOWER SECTION



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
711631030			TORRE HD23 26.6	HD 23 26.6 TOWER		
1	711631030	1	Elemento torre	Tower section		
2	882534004	16	Barra M52 per giunzione torre	High strength bolt M52		
3	383730030	16	Piastra di contrasto tipo HD 26	Joint plate		
4	14711350	1	Scala per ballatoio di riposo torre	Ladder		
5	721300110	1	Scala per elemento di prolunga	Ladder		
6	722003010	2	Protezione per scala L=1620	Ladder protection		
7	883200003	4	Chiavistello "R" Ø 6	Spring split pin		
8	720101220	1	Ballatoio di riposo torre 26	Tower rest platform		
9	380241017	4	Spina "T" 25x50	Pin		
10	384024004	32	Dado M52	Nut		
11	381717001	4	Perno di centraggio M24	Dowel		
12	14710270	1	Elemento di collegamento scale	Ladder connection element		
13 *	322002010	1	Protezione per scala L=810	Ladder protection		

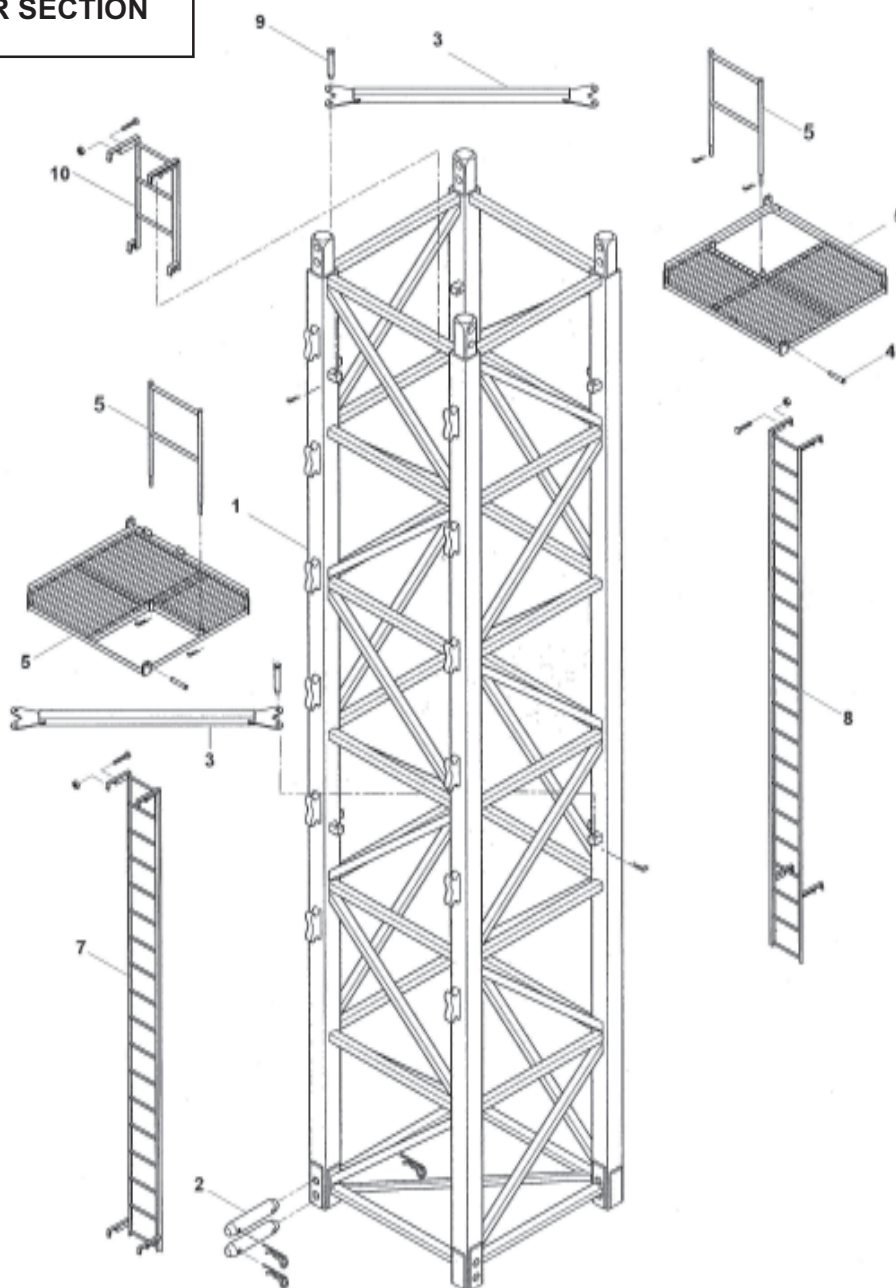
(*): solo nel caso di prolunga di base.
only for base tower section.

ADATTATORE TT HD23-HA20
TT HD23-HA20 MAST SECTION ADAPTER



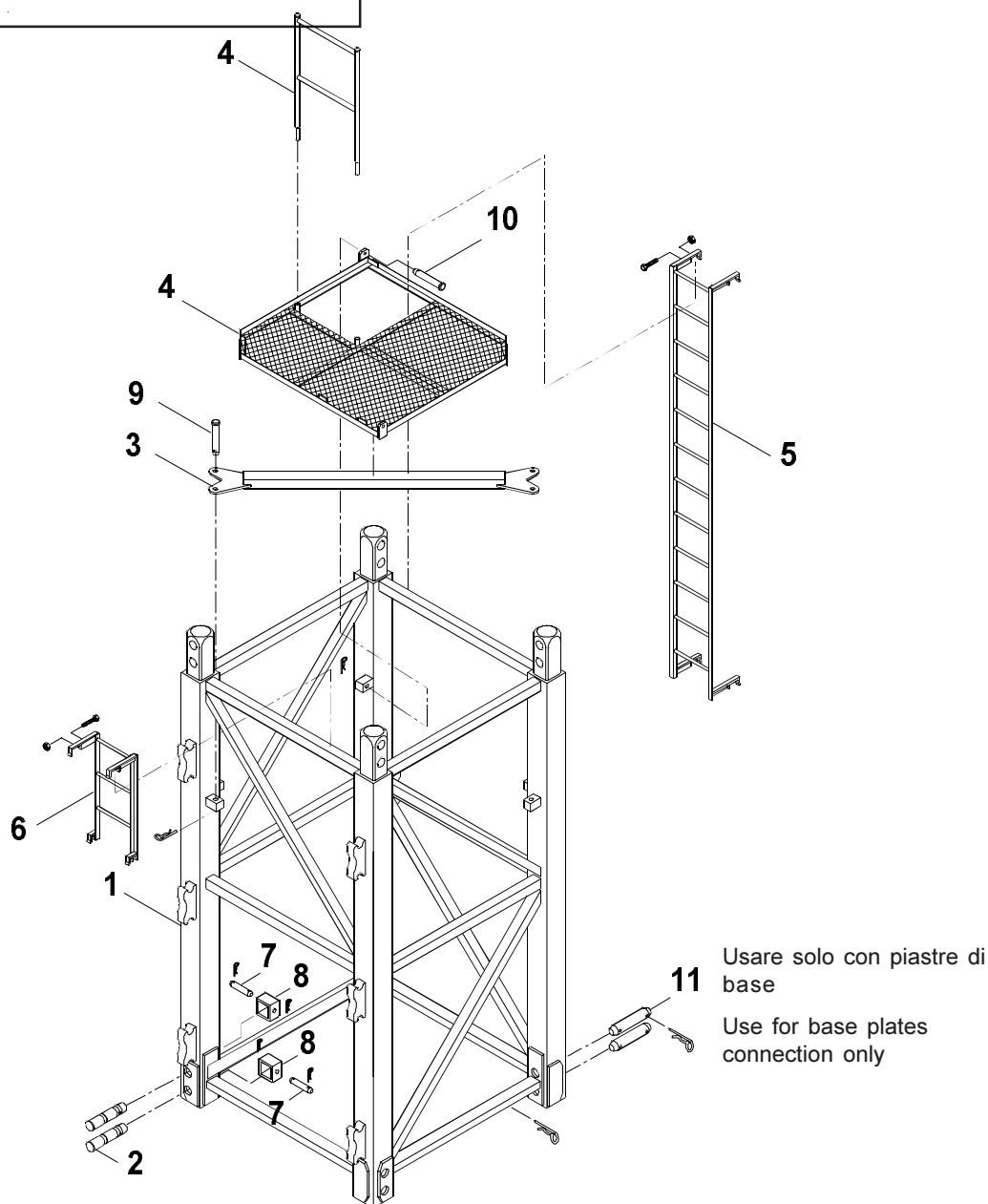
POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
312100100			ADATTATORE TT HD23-HA20	MAST SECTION ADAPTER		
1	312100100	1	Adattatore TT HD23-HA20	Mast section adapter		
2	882534020	16	Barra fil. M45 L=645 mm	High strength bolt		
3	882534016	16	Barra fil. M45 L=608 mm	High strength bolt		
4	384024008	32	Dado M45 (PEINER 6KT-MUTTER)	Nut		
5	383730020-1	8	Piastra contrasto 22 (179x95x35) 22.6	Joint plate		
6	383730050-1	8	Piastra contrasto 22/26 (210x110x40) 26.6	Joint plate		
7	321021020	1	Scala mobile collegamento HA20-HD23	Ladder		
8	880133103	4	Vite TEIF M12x40 zinc.(fissaggio scala)	Screw		
9	881224013	4	Dado es. alto M12 zinc.	Hexagonal tall nut		
10	881732005	4	Rondella piana M12 zinc.	Plane washer		

ELEMENTO TORRE HA20 18.10 B DA 10 m
HA20 18.10 B 10 m-TOWER SECTION



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
	311723020		ELEMENTO TORRE HA20 18.10 B-10 m	HA20 18.10 B 10 m TOWER SECTION		
1	311723020	1	Elemento torre HA20 18.10 B	Tower section		
2	381143007	8	Spina "CS" Ø 73 x 250 38NCM4T	Pin		
3	312223010	2	Diagonale antitorsione HA20 2264	Antitorsional diagonal		
4	380241013	4	Spina "T" Ø 25 x 110 C40BP	Pin		
5	320101240	2	Ballatoio di riposo	Rest platform		
6	321323010	1	Scala inferiore 5655 TR HA20	Lower Ladder		
7	321323020	1	Scala superiore 5655 TR HA20	Upper Ladder		
8	380241033	8	Spina "T" Ø 30 x 95 C40 B P	Pin		
9	321100240	8	Scala 1050 HA20	Ladder		

ELEMENTO TORRE HA20 18.4 S DA 3.75 m
HA20 18.4 S 3.75 m-TOWER SECTION



POS.	CODICE	Q.TA'	DESCRIZIONE	DESCRIPTION	DESIGNATION	BEZEICHNUNG
311623010			ELEMENTO TORRE HA20 18.4 S-3.75m	HA20 18.4 S 3.75 m TOWER SECTION		
1	311623010	1	Elemento torre HA20 18.4 S	Tower section		
2	381243003	8	Spina "TS" Ø 73 x 265 38NCM4T	Pin		
3	312223010	1	Diagonale antitorsione	Antitorsional diagonal		
4	320101240	1	Ballatoio con parapetto	Platform		
5	321100260	1	Scala 3580 CTL 100/202	Ladder		
6	321100240	1	Scala 1050	Ladder		
7	380141020	8	Spina "CS" 18x100 C40 B P	Pin		
8	352216010	8	Boccola TFQ 90x7 IL 60 Fe 510 B	Bush		
9	380241033	4	Spina "T" 30x95 C40 B P	Pin		
10	380241013	2	Spina "T" 25x110 C 40 B P	Pin		
11	381143007	8	Spina "CS" 73x250 38 NCM4T	Pin		

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 high strength bolts are placed in the special housings, that they are secured with the relevant nuts and properly tensioned as per Manufacturer's recommended setting torque.
- B) Inspect the supply cable for the right phase connection or visible signs of damage .

2.3.3 Monthly inspections

- A) With great accuracy visually examine all the welding of the base plates 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, platforms and protections.

2.3.6 Annual inspections

- A) Perform non-destructive tests on structural welds located on the base plates and on the tower.
- B) With the crane unloaded and perfectly balanced, remove the high strength bolts connecting the expensable foundation anchors to the bottom tower section one at a time (installation "R")
Remove deposits and oxidations (operation required only in presence of particularly dirty and critical working environments).
- C) Carry out anti-corrosion treatment and repaint all oxidized parts of the crane.
- D) Check the conditions of all the tower connecting systems: any corroded, worn out or damaged bolts and nuts shall be replaced by Comedil's technicians.
- E) 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 structural parts.