

As a manufacturer of safety components, Cobianchi Liffteile AG is responsible for the construction and fabrication of Cobianchi progressive safety gear. These operating instructions were prepared to make the production, commissioning and maintenance easier for the frame manufacturers

In these operating instructions, the standard configuration PC11XX with the connecting shaft and end-switch lying in the traverse is documented. If the type of installation you have deviates from the configuration described here, then contact your technical office and/or the construction department responsible for you.

In the following you will find important instructions which should be followed in all cases to assure correct installation and operation.

The following technical drawings must be included with these operating instructions:

Drawing Nr.	Progressive safety gear type	Front-, horizontal- and side-views
11DA-BA01-1	PC11DA, PC11DO, PC11UP	Assembly drawing FV with pos. No.
11GA-BA01-1	PC11GA, PC11GO, PC11GU	Assembly drawing FV with pos. No.

These instructions consist of two text pages (depending on the language) and two drawings. Customer-specific solutions can require different assembly processes. The progressive safety gears can be installed on the cabin at the top or the bottom taking into account the location of the connecting shaft. You can find detailed information in our technical documentation.

Deviations from the standard configuration described here remain reserved.

Note before installation:

The progressive safety consists of two adjusted and sealed arresters. All the performance data on the type plates refer to the paired use during breaking on elevator guide rails according in compliance with ISO 7465. The fabrication numbers are burned into the arresters on both arresters. These numbers must agree with those on the affixed or enclosed type plates and it must be possible to assign them to the plant number. If this is not the case, there has a been a mix-up and purchasing, your own warehouse or the manufacturer must be contacted directly.

The alignment and the location of the connecting shaft as well the return spring system and are built analogously alike in the safety gear types PC11DA/PC11GA – double-acting safety gear systems, PC11DO/PC11GO – downward acting safety gear systems and PC11UP/PC11GU – upward acting breaking systems. The following description can thus be used on all types named.

1. **Mounting** following the enclosed drawings
 - 1.1. The installation of arresters is done either using a mounting plate **10** or directly into the safety gear frame (after consultation with the manufacturer). It is absolutely necessary that the arrow “**Down**” is at the bottom, “**UP**” is at the top, then the adjusted braking forces in the downward and upward directions are different (see type plate). The arresters must be mounted to slide laterally. After tightening the screws **21** (M8x16, tightness class 10.9), they are to be secured at least with a moderate strength liquid screw lock, one must make sure that the base plate **9** can be pushed to the side and through the leaf spring **3** moves back into the starting position against the adjusting screw **19** (the adjusting screw **19** is aligned along the side of the fixed brake shoe, facing the leaf spring **3** along the side of the connecting shaft).
 - 1.2. The mounting plate **10** can be screwed in place using the gusset plate **5** or directly attached with the safety frames.
The evaluation of the connection between the gusset plate and the safety frames (traverse, hanging brackets, etc.) is the responsibility of the frame manufacturer.
 - 1.3. The linkage can be mounted using the support plate **11** directly to the gusset plate **5** or to the safety frames. Please note: Position of the connecting shaft must be horizontally centred with respect to the safety gear and/or the lift mechanism **1/2** must consequently come to lie horizontally.

- 1.4. The force to hold the lift mechanism **1/2** in the starting position (horizontally) must be adjustable using the threaded rod inside the compression spring (return spring system cpl. **12**). Depending on the use, the spring can also be pre-tensioned. The base setting is 10 mm pre-tension.

Note: If in the case of the configuration with external connecting shaft the holding power of a return spring systems cpl. **12** are not sufficiently large, a second return spring system cpl. **12** can be installed on the facing side after consultation with the manufacturer cpl. **12** taking into consideration the increase of the triggering force.

2. Connecting and calibrating

- 2.1. Connect the governor rope with the rope end connection (rope lock fittings **18**) to the lifting mechanism **1/2** with the end of the governor rope.
- 2.2. Connect the wiring for the safety switch **15** (230V, 4A) and check function.
- 2.3. Calibration: Align the lateral position of the arresters with the rail. The distance between the fixed brake shoe (PC11DA/DO/UP) or moveable brake shoe (PC11GA/GO/GU) to the rail: **1.5 - 2 mm**.
- 2.4. Checking before commissioning:
- The arresters must be pushed laterally against the leaf spring **3** and it must be possible for the spring tension to pull them back into starting position.
 - The lifting mechanism **1/2** must be pushed in the tripping direction in and be brought back into starting position by the retracting spring system cpl. **12**. Ease of movement must be assured.

3. Commissioning

3.1. What to watch for in the first stopping test:

In any case the rail must be free of all fouling, rust protectant and any traces of paint. It is best to use a cold cleaning agent or brake disk cleaner for this.

Every progressive safety gear PC11XX or braking mechanism intended for use on oiled rails comes with a green warning sticker. It must be affixed to a clearly visible location (e.g. on the rail oiler).
Recommended oil: **HLP-oils** compliant with DIN 51524, Part 2, or comparable oils, viscosity ISO VG 68-150.

3.2. Release forces (standard values) for engaging the safety gear:

These are independent of the mounting point for the governor rope on the lifting mechanism **1** or **2** and apply for installation of our return spring system cpl. **12** with tensioning spring following the installation recommendations:

	Distance Middle Rail - Middle Governor Rope		
	95 mm	117 mm	139 mm
PC11DA, PC11DO, PC11UP PC11GA, PC11GO, PC11GU			
Upward, braking	70 N	90 N	110 N
Downward, stopping	100 N	120 N	150 N

Make sure that the tension generated in the governor rope when the speed governor is tripped is at least the force required to trip the safety gear (but at least 300 N).

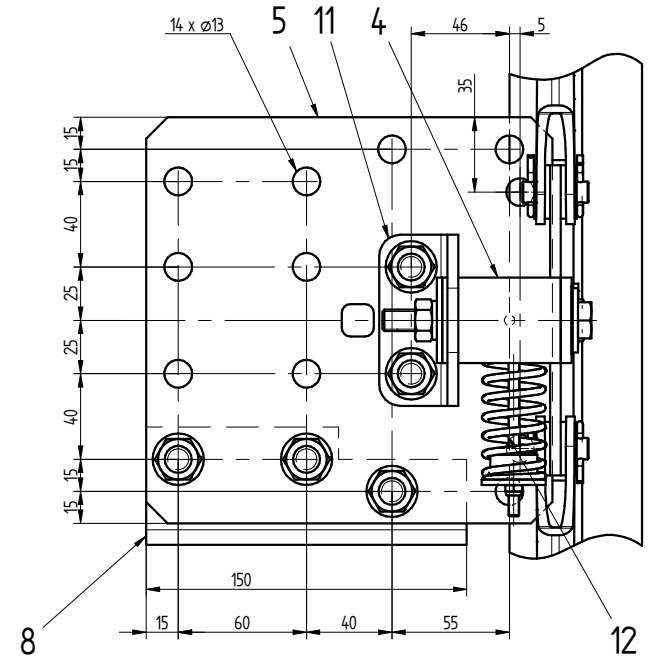
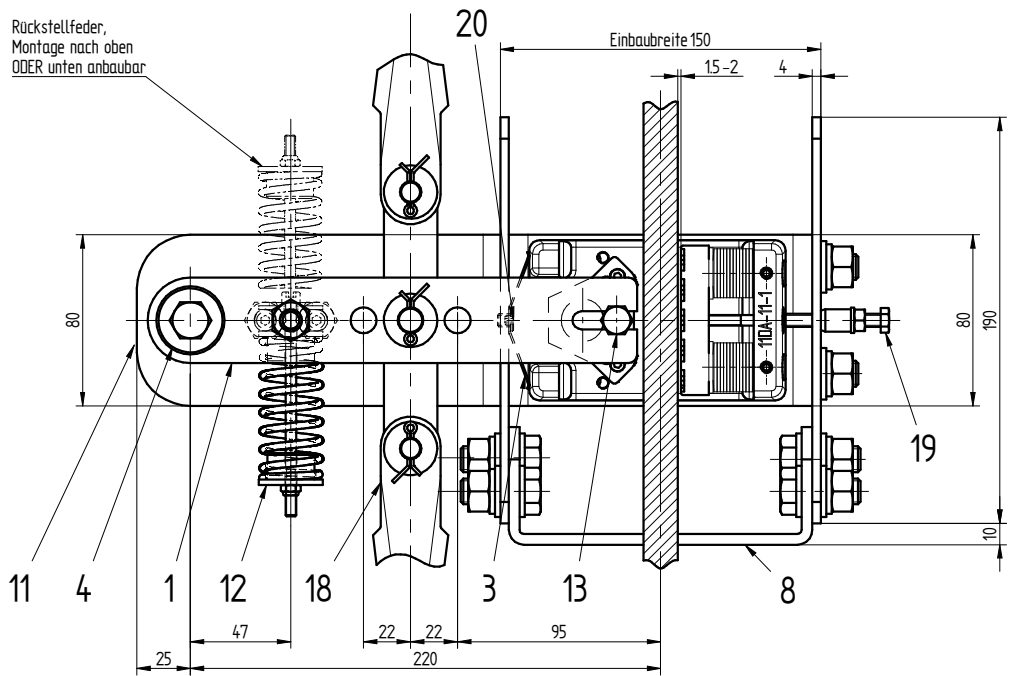
4. **Maintenance** (according to EN 13015:2001+A1:2008 (Appendix A, Points A.1 and A.2))

Once the progressive safety gears have been properly installed, maintenance is limited to checking:

- 4.1. **Condition of the rails**, following the instructions for commissioning given above.
- 4.2. **Release bar**: synchronized engagement of both arresters, no play in the connection to the connection shaft, easy and free movement of the lifting mechanism in one or both directions.
- 4.3. **Return spring**: is present, pre-tensioned.
- 4.4. **End switch 15**: Function electric / mechanical, actuation assured.
- 4.5. **Arresters**: centred, clean, guides for the car: in perfect condition, not expanded.
- 4.6. **Mounting**: base plates can be easily moved **9** on the mounting plates **10** or in the safety frames.
- 4.7. **Cleanliness**: Generally, and especially for construction lifts, make sure that the arresters are protected against plaster, concrete, cement, mortar, gravel or similar construction materials. Fouled arresters must be removed and cleaned.

If these simple instructions are followed, the safety of lift users as well as the assembly operation can be increased considerably.

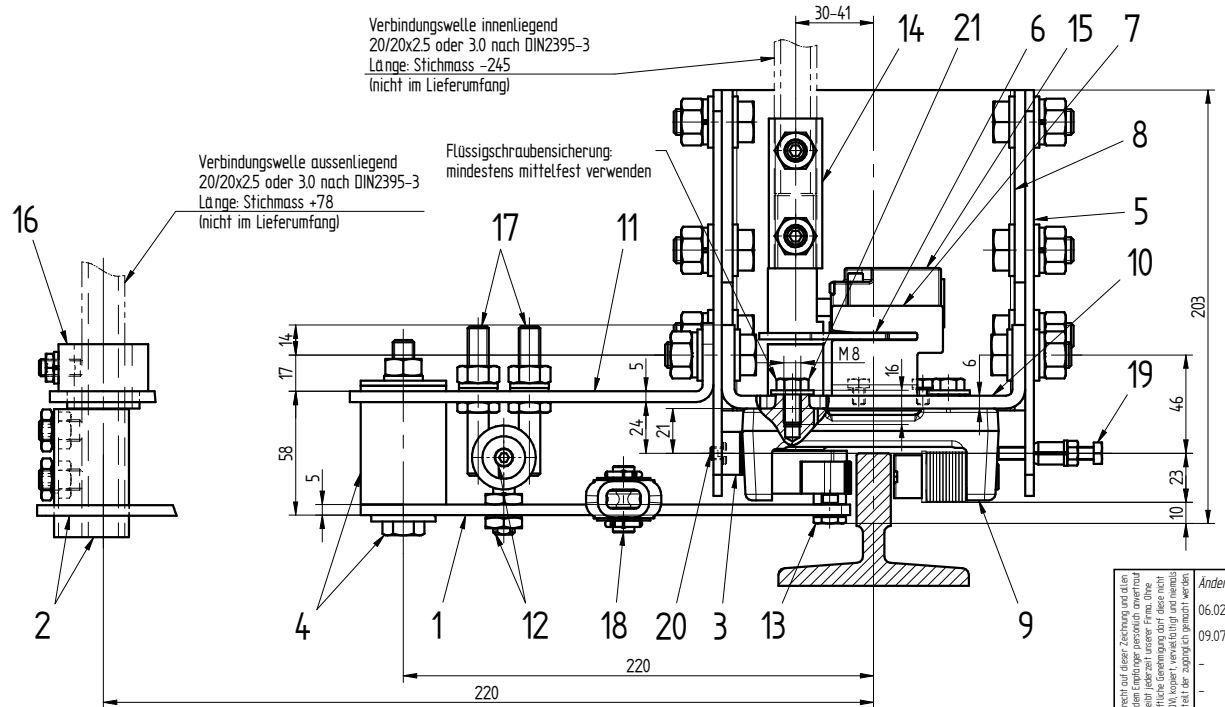
Die Bohrungen in den Knotenblechen (Pos. 5) dienen zur Befestigung der Fangvorrichtung im Rahmen.
Die Anzahl der Befestigungsschrauben, sowie die Festigkeit der Verbindung von Traverse und Hängewinkel müssen durch den Rahmenhersteller anwendungssubstantiell und konstruktionsbezogen berechnet werden.



Verbindungsstelle innenliegend
20/20x2,5 oder 3,0 nach DIN2395-3
Länge: Stichmass -245
(nicht im Lieferumfang)

Verbindungsstelle aussenliegend
20/20x2,5 oder 3,0 nach DIN2395-3
Länge: Stichmass +78
(nicht im Lieferumfang)

Flüssigschraubensicherung:
mindestens mittelfest verwenden



FWA: Verbindungsstelle aussenliegend
FWL: Verbindungsstelle innenliegend

Technische Änderungen vorbehalten

Stückzahl pro Fangvorrichtungspaar	Pos.	Werkstoff	Modell	Bemerkungen
8	8	Schr. M8x16 (10.9) mit U-Scheibe (2mm)	21	-
2	2	Schraube M6 zu Blattfeder	20	-
2	2	Einstellschraube M6	19	-
1	1	Seilsschlossgarnitur	18	FV-30-1Z
2	2	Schaftschraube	17	DA-25-1Z
2	-	Anschlaghülse	16	DA-17-1Z
1	1	Endschalter nicht rastend	15	DA-05-6
-	1	Auslösevierkant kpl.	14	DA-03-3Z
2	1	Schraube	13	44DA-03-1
1	1	Rückzugdruckfedersystem kpl.	12	14DA-25-1Z
2	1	Stützblech 150mm	11	11DA-45-1
2	2	Einbauplatte 150mm	10	11DA-44-1
2	2	Grundplatte	9	11DA-11-2
2	2	Führungsschuhplatte 150mm	8	11DA-40-1
1	1	Endschalterführung	7	11DA-38-2
1	1	Endschalteranbau	6	11DA-38-1
4	4	Knotenblech	5	11DA-19-1
-	1	Hülse kpl.	4	11DA-17-2Z
2	2	Blattfeder 150mm	3	11DA-14-1
2	-	Heber FWA	2	11DA-01-2Z
-	1	Heber FWL	1	11DA-01-1

Anderung (Datum / Index)	Pos.	Werkstoff	Modell	Bemerkungen
06.02.12 / 617	-	-	-	-
09.07.15 / 684	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

Ausgabe: 23.09.15 / DH

Zusammenstellung
zu Betriebsanleitung
FV-Typ: PC11DA, PC11DO, PC11UP

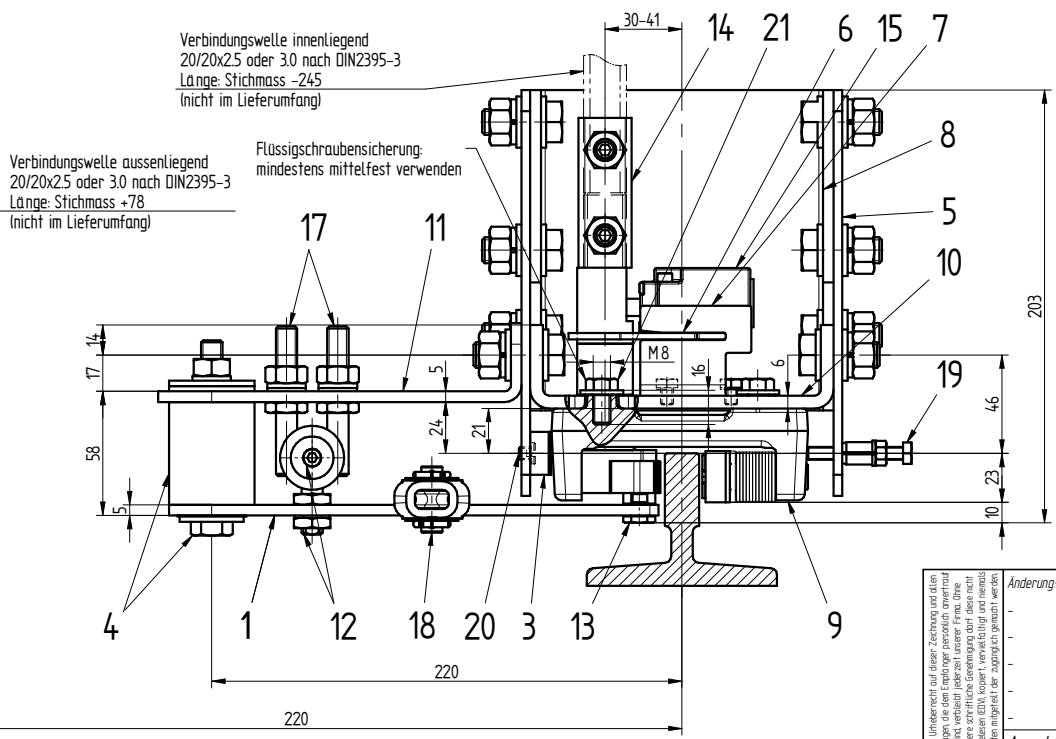
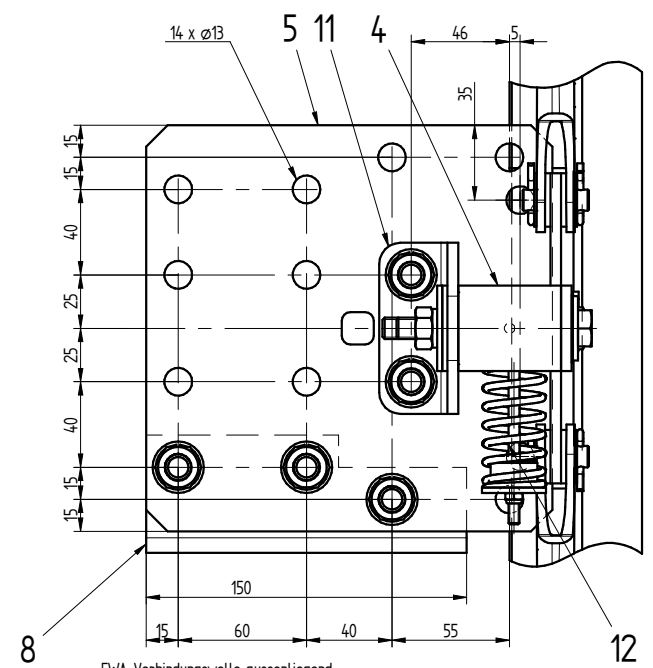
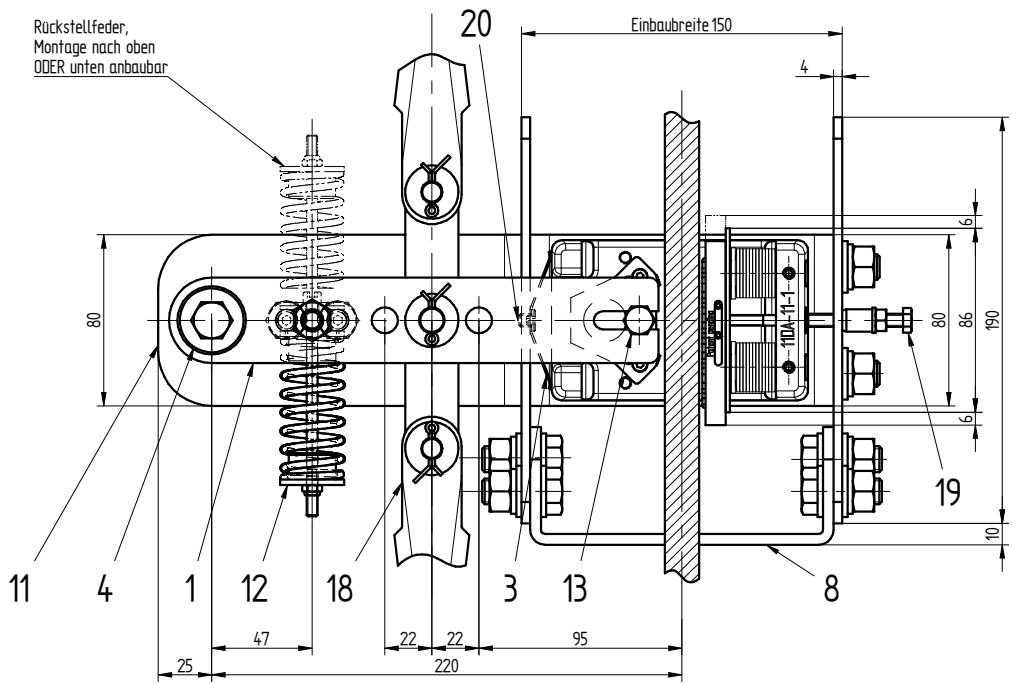
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info@cobianchi.ch - www.cobianchi.ch

Massstab	Gezeichnet	21.09.11	HG
1:25	Kontrolliert	23.09.15	DH
-	Geprüft	23.09.15	HG
-	Ersatz für:	-	-

Zeichnungsnummer
11DA-BA01-1

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Die Bohrungen in den Knotenblechen (Pos. 5) dienen zur Befestigung der Fangvorrichtung im Rahmen.
Die Anzahl der Befestigungsschrauben, sowie die Festigkeit der Verbindung von Traverse und Hängewinkel müssen durch den Rahmenhersteller anwendungssubstantiell und konstruktionsbezogen berechnet werden.



FWA: Verbindungswelle aussenliegend
FWI: Verbindungswelle innenliegend

Technische Änderungen vorbehalten

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2	2	Blattfeder 150mm	3	11DA-14-1		
2	-	Heber FWA	2	11DA-01-2Z		
-	-	Heber FWI	1	11DA-01-1		
FWA	FWI	Gegenstand	Pos.	Werkstoff	Modell	Bemerkungen

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Änderung (Datum / Index)

Ausgabe: 25.09.15 / DH

Zusammenstellung
zu Betriebsanleitung
FV-Typ: PC11GA, PC11GO, PC11GU

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Gezeichnet	09.10.14	HG
Kontrolliert	09.10.14	HG
Geprüft	09.10.14	DH
Ersatz für	-	-
Zeichnungsnummer	11GA-BA01-1	