



FRAME ALIGNER

Ref 42143007

OPERATING AND MAINTENANCE MANUAL

TYPE CR61

Ref 11111002

TYPE CR57

Ref 11111006



Partners in excellence

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I - DESCRIPTION

The frame aligner is an adjustment system adapted to rail aluminothermic welding process, any other use is prohibited.



The user of the frame aligner must respect the current regulations and procedures of the railway network

1. CR57 with shoes frame aligner and fastclip

The geometrical quality of an aluminothermic weld depends mainly on the initial adjustment of the two rail ends to be welded.

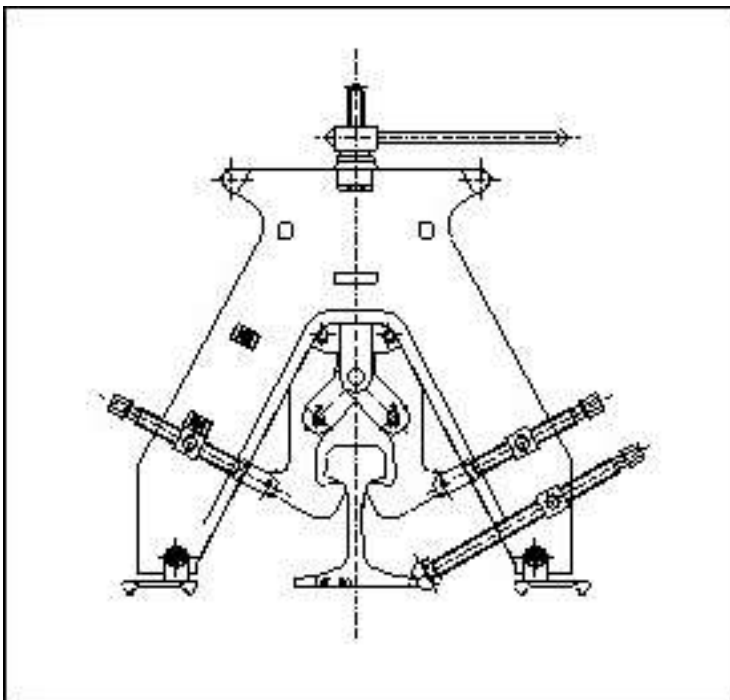
the adjustment consists of :

- A level point in the vertical plane
- The perfect alignment of the inside walls of the rails heads
- The identical cant (incline) of the two rails

The frame aligner allows to answer to these three essential requirements.

The different operating screws have the following functions :

Fig 1 :



- **Screw A** Adjustment of level point
- **Screw B** Adjustment of rail head alignment
- **Screw C** Adjustment of cant (incline)

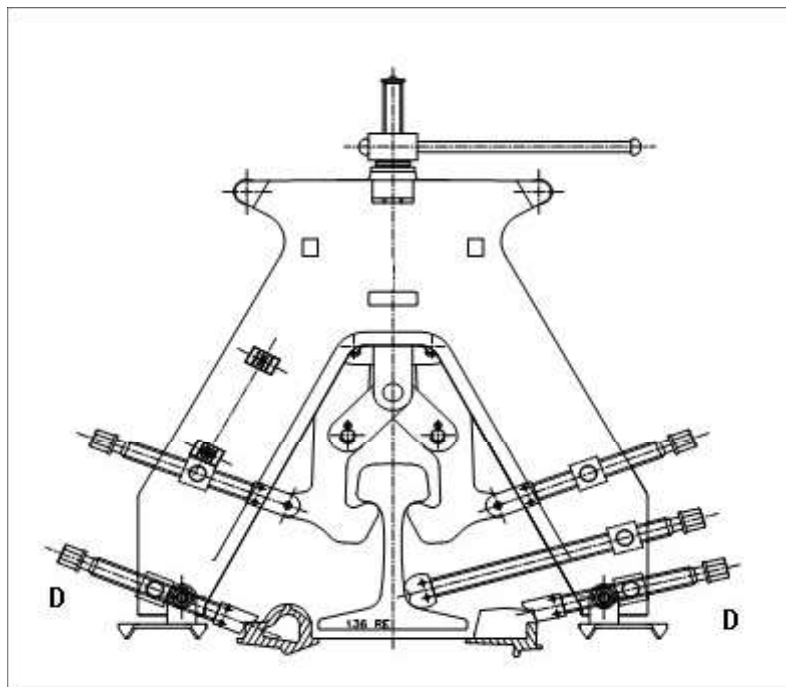
2. CR61 frame aligner

It has the same geometrical qualities as frame aligner CR57 version.

THE FRAME ADJUSTMENT HAS THE FOLLOWING ADDITIONAL ELEMENTS :

- 2 anti-shifting screws (**D**) to stabilize the frame on sleepers equipped with shoulders

Fig 2



II – GENERAL CHARACTERISTICS

- PARTICULAR CHARACTERISTIC

With a common heightened body for the three versions, it can be used on all the heights of rail.

The CR61 version	Reference 11111002	delivered with 2 anti-shifting screws
The CR57 with shoes version	Reference 11111006	delivered with stirrup shaped device

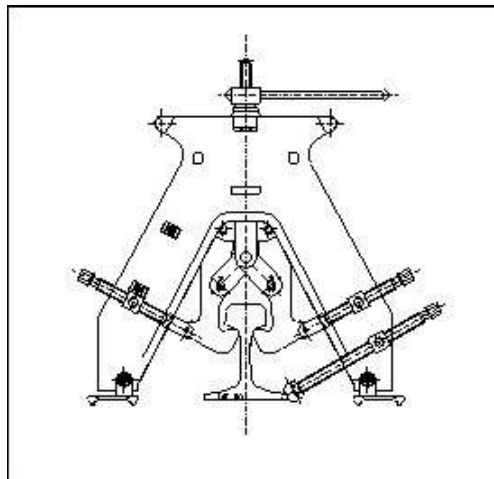
- DIMENSIONS

Height	600 mm
Width	180 mm
Spread	580 mm

Weight CR57 with shoes	19,5 Kg	Weight CR61	20,0 Kg
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III- ADJUSTEMENT PROCEDURE

- Loosen the fastenings of 4 or 5 sleepers on either side of the joint to be welded
- Position a frame aligner on the second sleeper on either side of the joint (in exceptional case, on the third sleeper if the distance is insufficient to allow the positioning of certain hydraulic shearing machine)
- The operating screws « A » « B » and « C » must imperatively be loosened to facilitate the positioning of the frame aligners



1. Adjustement of level point

This is obtained by moving screw « A » of each frame aligner.



Never move the screw of level point adjustment « A » before you have loosen the adjustment screws of rail head alignment and cant (incline) adjustment « B » and « C », because this should generate important efforts and result in frame aligner damage.

2. Adjustement of rail head alignment

Move screw « B » so that the rail can be moved in the required direction and then bring the opposite screw « B » into contact with the jaw.

WARNING : Do not force screw « B » if the opposite screw « B » prevents the rail from moving

3. Réglage de l'inclinaison

Position screw « C » on one of the places specially provided so that the required rotation is obtained when it is tightened

At the same time, move screw « B » on the opposite side to keep the rails heads lined up

Check the level point : if its adjustment is not correct, before operating a correction, it's imperatively necessary to loosen the alignment adjusting screw and the cant (incline) adjusting screw

IMPORTANT RECOMMENDATIONS

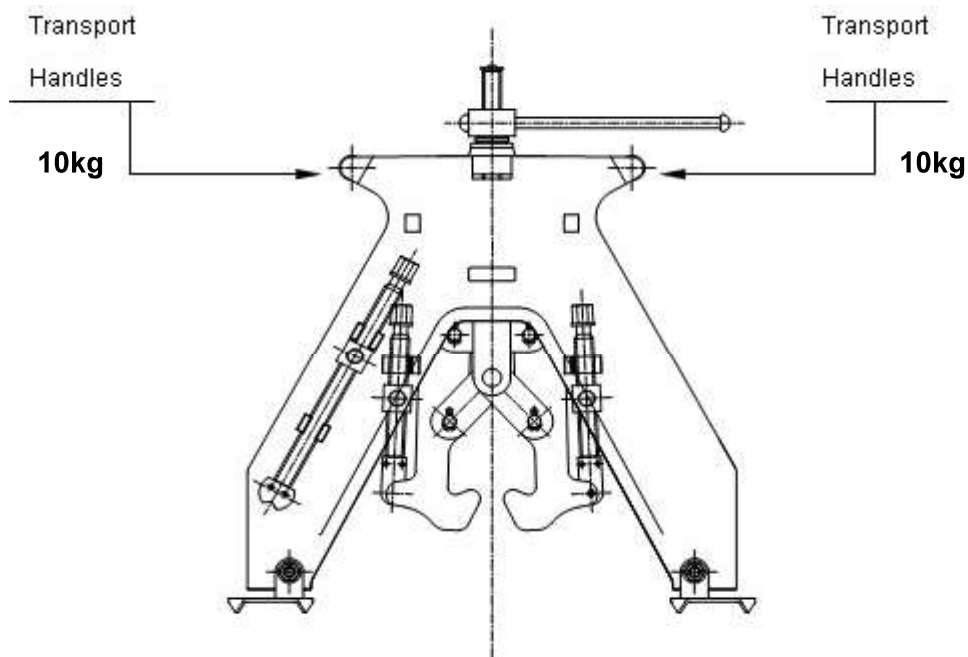
- In sharp bends, it's essential to use tie-rods when making a visual approximation of the adjustment.

NEVER FORCE THE ADJUSTMENT SCREWS :

if forcing is necessary, it means that the rail is not free (fastenings not loosened, opposite screw locked).

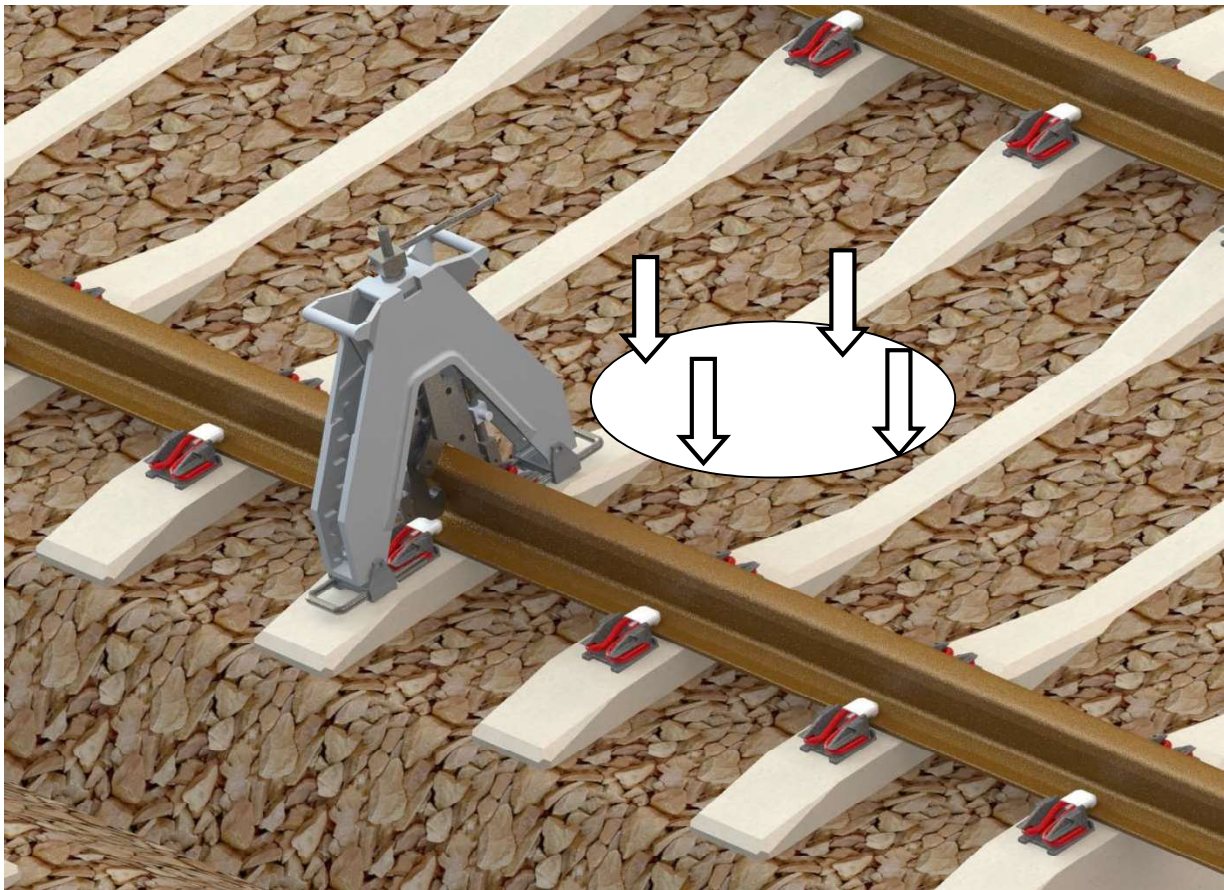
IV - TRANSPORT

- During transport make sure that all the adjusting screws are placed in the appropriate storage housing
- Every time the frame aligners are carried on the track, it's recommended to hold them by the superior handles (see drawing hereafter)



V - WORKSTATION

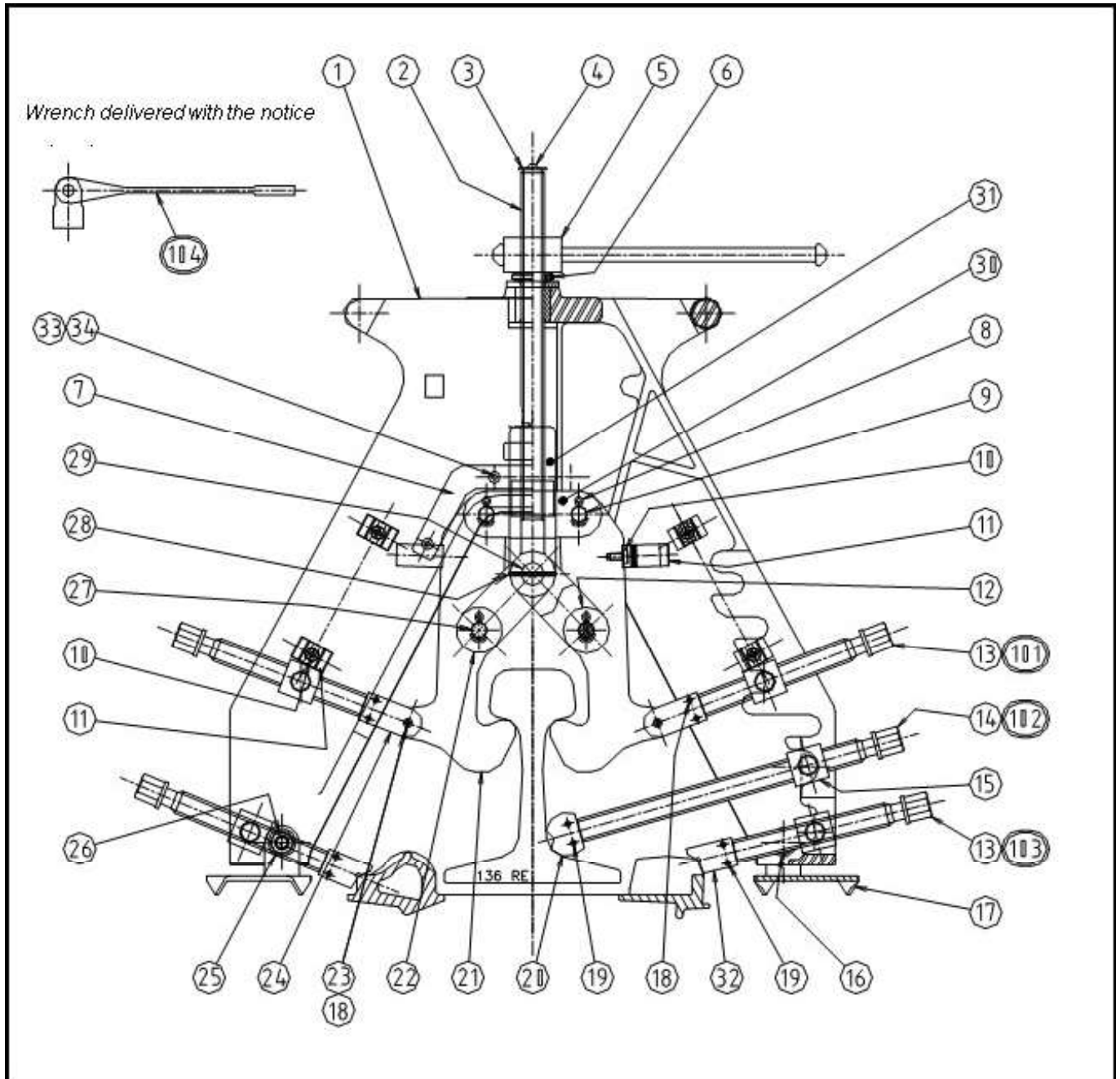
The user's workstation is represented by a white perimeter and 4 arrows



VI - MAINTENANCE

Check the screwing-in movement of the adjusting screw is performed without forcing. If not, clean screws and nuts and lubricate the components. The use of calcium-lithium mineral grease is recommended.

VII – PLAN D'ENSEMBLES ET NOMANCLATURES GENERAL LAYOUT AND PARTS LIST

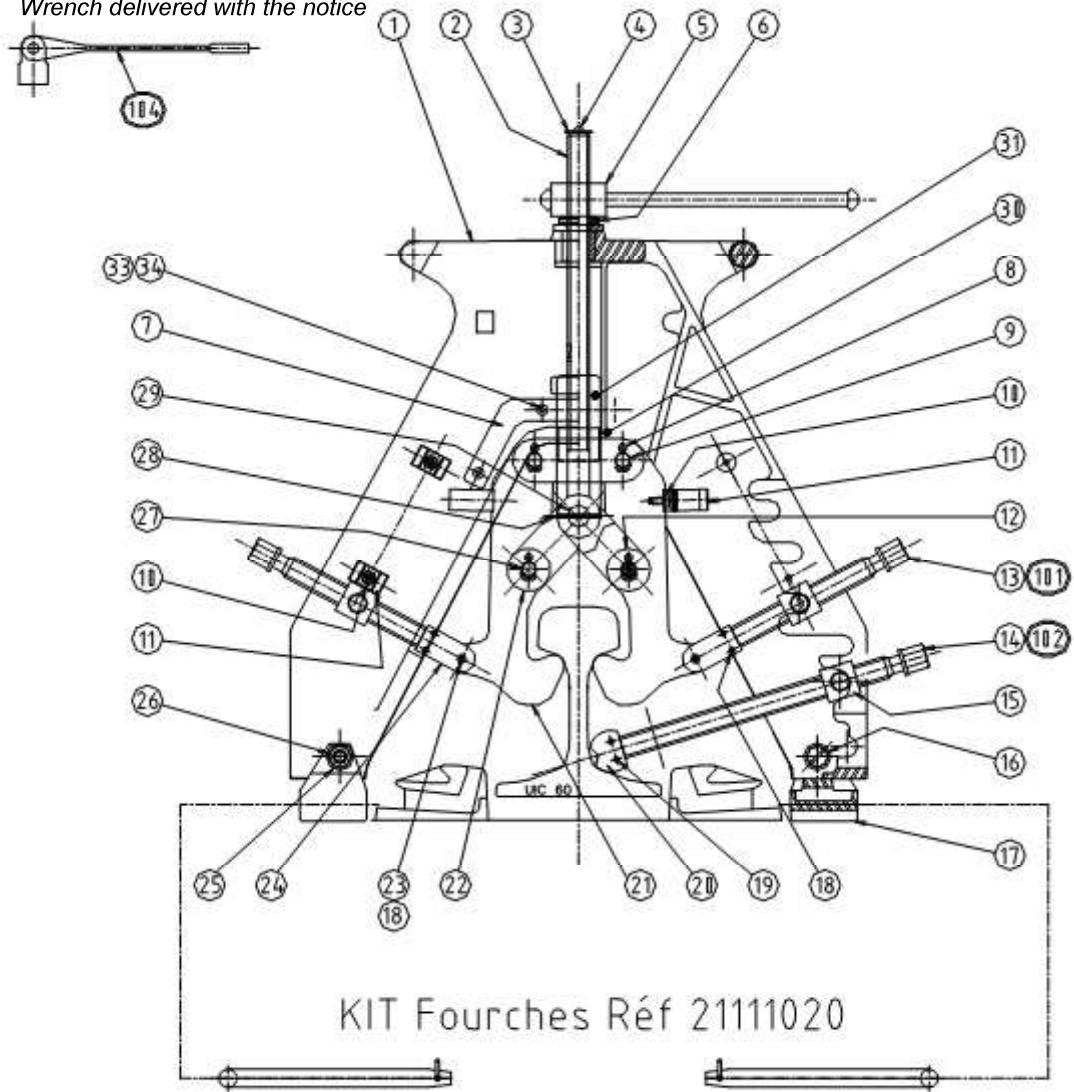


FRAME NOMANCLATURE
CR61 version REF 11111002

Rep	Qté.	Réf.	Désignation	Description
1	1	32930048	Corps de chevalet	Frame aligner body
2	1	33910004	Chape male	Male cap
3	1	41106003	Rondelle plate LL6	Washer LL6
4	1	41505001	Rivet 12 x 12.7	Rivet 12 x 12.7
5	1	21111001	Ensemble écrou de manoeuvre	Shunting nut set
6	1	44020001	Butée à aiguilles AXZ 8x20x35,4	Bearing stud AXZ 8x20x35.4
7	2	31410060	Renfort	Reinforcement
8	8	41303002	Goupille fendue V 4 x 35	V 4 x 35 pin
9	2	31110033	Axe de bielle de maintien	Maintaining connecting rod axel
10	4	41006005	Vis auto taraudeuse "TAPTITE" M6x12	"TAPTITE" Self-cutting screw M6x12
11	4	47203002	Clip à embase n° 8	Fastening clip n° 8
12	2	31230027	Rondelle	Washer
13	2	=> rep. 101-103	Vis de réglage mâchoire et anti-ripage	Jaw adjusting screw and anti-shifting screw
14	1	=> rep. 102	Vis de réglage inclinaison	Inclining adjustment screw
15	3	=> rep. 101-102-103	Entretoise à 2 tenons	Spacer with 2 tenons
16	4	31110133	Axe épaulé	Shouldered axel
17	2	35910025	Semelle articulée	Jointed flange
18	6	41301006	Goupille Mécanindus 5 x 40	Mécanindus 5 x 40
19	2	=> rep. 102	Goupille Mécanindus 5 x 25	Mécanindus 5 x 25
20	1	=> rep. 102	Cale pour inclinaison	Inclining block
21	2	32930001	Mâchoire	Clamping jaw
22	4	31930003	Bielle de manoeuvre	Shunting connecting rod
23	2	41301024	Goupille Mécanindus 8 x 40	Mécanindus pin 8 x 40
24	2	=> rep. 101	Chape pour mâchoire	Clamping jaw cap
25	4	41112002	Rondelle ressort dia. 12,2	Single coil spring lock washer dia. 12.2
26	4	40912001	Ecrou Nylstop M12	Nylstop nut M12
27	2	31110032	Axe de bielle de manoeuvre	Shunting connecting rod axel
28	2	41301004	Goupille Mécanindus 3 x 40	Mécanindus pin . 3 x 40
29	1	31110031	Axe central de bielle	Connecting rod central axel
30	2	31930002	Bielle de maintien	Maintaining connecting rod
31	2	35910026	Guide de descente	Descent guide
32	2	=> rep 103	Cale anti-ripage	Anti-shifting block
33	8	41006003	Vis CHc M6x16	Screw CHc M6x16
34	8	41106001	Rondelle W6	Washer W6
101	2	21111003 Ensemble	Vis de réglage latéral composé des repères 13-15-18-24	Adjusting screw set composed of rep. 13-15-18-24
102	1	21111004 Ensemble	Vis de réglage du dévers composé des repères 14-15-19-20	Inclining screw set composed of rep. 14-15-19-20
103	2	21111011	Vis anti-ripage composée des repères 13-15-19-32	Anti-shifting screw composed of rep. 13-15-18-32
104	1	48401001	Clé à douille articulée	Flex head socket wrench

CHEVALET TYPE CR57 AVEC SABOTS ET FASTCLIP REF 111110006
FRAME ALIGNER WITH SHOES AND FASTCLIP VERSION

Clé livrée avec la notice
Wrench delivered with the notice



NOMANCLATURE POUR CHEVALET

Version CR57 avec sabots/fastclip

REF 111110006

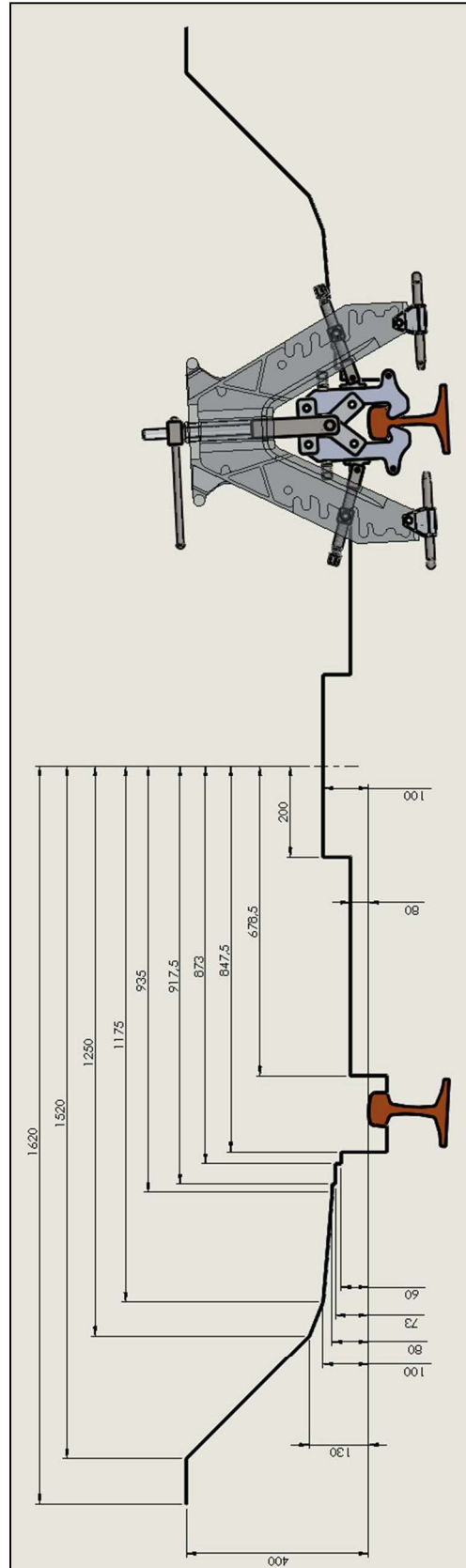
FRAME NOMANCLATURE

CR57 with shoes and fastclip version

REF 111110006

Rep.	Qté.	Réf.	Désignation	Description
1	1	32930048	Corps de chevalet	Frame aligner body
2	1	33910004	Chape male	Male cap
3	1	41106003	Rondelle plate LL6	Washer LL6
4	1	41505001	Rivet 12 x 12.7	Rivet 12 x 12.7
5	1	21111001	Ensemble écrou de manoeuvre	Shunting nut set
6	1	44020001	Butée à aiguilles AXZ 8x20x35,4	Bearing stud AXZ 8x20x35.4
7	2	31410060	Renfort	Reinforcement
8	8	41303002	Goupille fendue V 4 x 35	V 4 x 35 pin
9	2	31110033	Axe de bielle de maintien	Maintaining connecting rod axel
10	4	41006005	Vis auto taraudeuse "TAPTITE" M6x12	"TAPTITE" Self-cutting screw M6x12
11	4	47203002	Clip à embase n° 8	Fastening clip n° 8
12	2	31230027	Rondelle	Washer
13	2	=> rep. 101	Vis de réglage mâchoire	Jaw adjusting screw
14	1	=> rep 102	Vis de réglage inclinaison	Inclining adjustment screw
15	3	=> rep. 101-102	Entretois à 2 tenons	Spacer with 2 tenons
16	4	31110133	Axe épaulé	Shouldered axel
17	2	21111021	Sabot avec patin	Jointed flange
18	6	41301006	Goupille Mécanindus 5 x 40	Mecanindus 5 x 40
19	2	=> rep 102	Goupille Mécanindus 5 x 25	Mecanindus 5 x 25
20	1	=> rep 102	Cale pour inclinaison	Inclining block
21	2	32930001	Machoire	Clamping jaw
22	4	31930003	Bielle de manoeuvre	Shunting connecting rod
23	2	41301024	Goupille Mécanindus 8 x 40	Mecanindus pin 8 x 40
24	2	=> rep. 101	Chape pour machoire	Clamping jaw cap
25	4	41112002	Rondelle ressort dia. 12,2	Single coil spring lock washer dia. 12.2
26	4	40912001	Ecrou Nylstop M12	Nylstop nut M12
27	2	31110032	Axe de bielle de manoeuvre	Shunting connecting rod axel
28	2	41301004	Goupille m"canindus 3 x 40	Mecanindus pin . 3 x 40
29	1	31110031	Axe central de bielle	Connecting rod central axel
30	2	31930002	Bielle de maintien	Maintaining connecting rod
31	2	35910026	Guide de descente	Descent guide
33	8	41006003	Vis CHc M6x16	Screw CHc M6x16
34	8	41106001	Rondelle W6	Washer W6
101	2	21111003 Ensemble	Vis de réglage latéral composé des repères 13-15-18-24	Adjusting screw set composed of rep. 13-15-18-24
102	1	21111004 Ensemble	Vis de réglage du dévers composé des repères 14-15-19-20	Inclining screw set composed of rep. 14-15-19-20
104	1	48401001	Clé à douille articulée	Flex head socket wrench

VIII – PLAN DE CONTROLE SUIVANT EN13977



SAV / Commercial

Contacter votre représentant commercial / Contact your local representative

Ou / Or +33 (0) 1 46 88 17 00

Ou / Or Infos.pandrol-fr@pandrol.com

IV - ATTESTATION DE CONFORMITE

CERTIFICATE OF CONFORMITY

Le constructeur soussigné (the undersigned manufacturer)

PANDROL (DIVISION MATERIEL)

Z.I DU BAS PRE

59590 RAISMES



Certifie que le matériel neuf désigné ci-après (certify that the under described products)

CHEVALET DE REGLAGE		FRAMA ALIGNER
TYPE CR61	REF 11111002	CR61 type
TYPE CR57 SABOTS	REF 11111006	CR57 with shoes type

N° de machine (machine number) :

Est conforme (comply with)

- **A LA CONFORME EUROPEENE NF EN 13977**
(THE EUROPEENE NORM NF EN 13977)
- **AUX DISPOSITIONS REGLEMENTAIRES DEFINIES PAR LA DIRECTIVE 2006/42/CE**
(THE INFORMATION STATED IN THE LEGAL DOCUMENTATION OF THE DIRECTIVE 2006/42/CE)
- **Aux prescriptions de l'article R4313-20 (procedure d'auto certification)**
(the regulations of R4313-20 article – self certification procedure)
- **M. LISINSKI Aurélien est le détenteur du dossier technique**
-

Raismes, 05/2019
Bruno JOIRIS
Directeur Industriel

Aurélien LISINSKI
Responsable division matériel et équipement

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