

LBT
ARGOS DICHROIC MOUNT

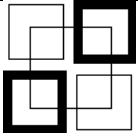
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LBT
ARGOS DICHROIC MOUNT
HANDLING INSTRUCTIONS

Doc.No. : M13.11.12

Date: November 12, 2013
Issue: 1.0

Giovanni Negrini

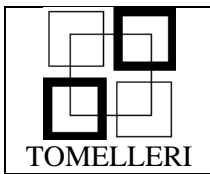
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Change Record

Issue/Rev.	Date	Section/Page affected	Reason/Remarks
1.0	2013-11-12		First Issue

Applicable documents

id.	Document code	Title	Source	Date	Issue
1	ARGOS Statement of work 102.pdf	Specification for the manufacturing of the dichroic assembly	L.Busoni L.Carbonaro M. Bonaglia	13 July 2011	3.0
2	ARGOS Technical Note 104.pdf	Telescope installation of dichroic assembly	L. Carbonaro L. Busoni	20 November 2010	1.0
3	650s002d ARGOS Dichroic Volume Deployed.pdf		INAF		
4	650s003d.pdf		INAF		
5	650s006b ARGOS Dichroic Volume Retracted.pdf		INAF		
6	E-Mail	Updated requirements	INAF	May 3, 2012	
7	M22.010.003	Test Procedures	TOMELLERI	July 30, 2013	1.0
8	652g910	Dichroic, LED & Aux. Control	J. Ziegleder	03 Oct 2013	-
9	652g917	Dichroic SX cabling	J. Ziegleder	07 Oct 2013	A
10	652g918	Dichroic DX cabling	J. Ziegleder	07 Oct 2013	A



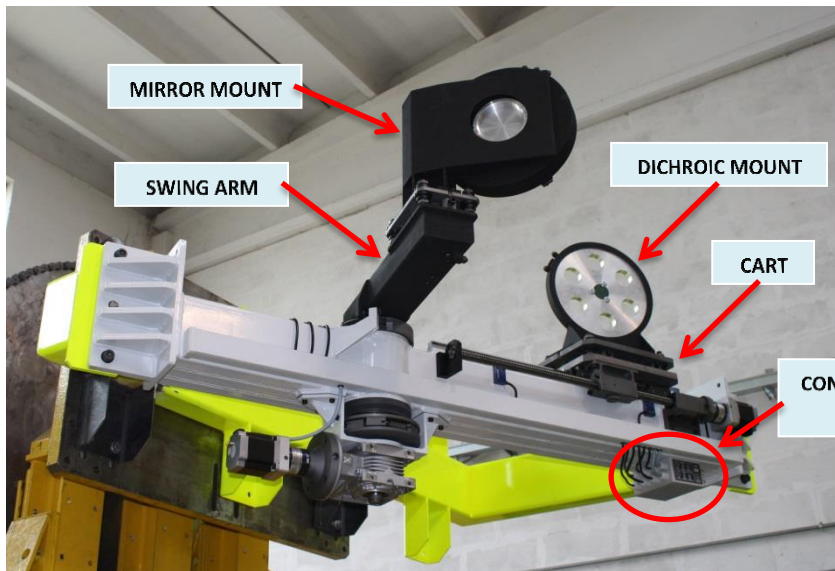
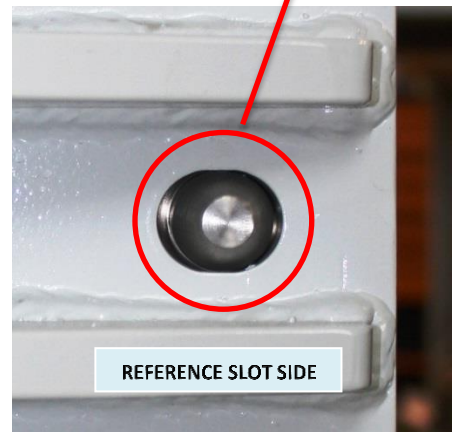
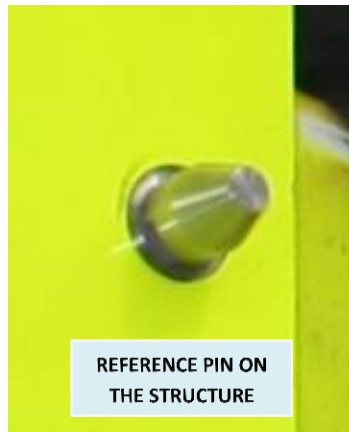
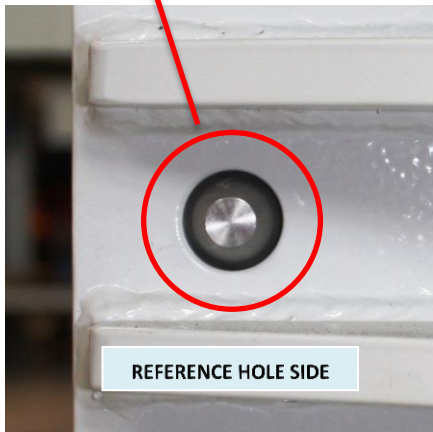
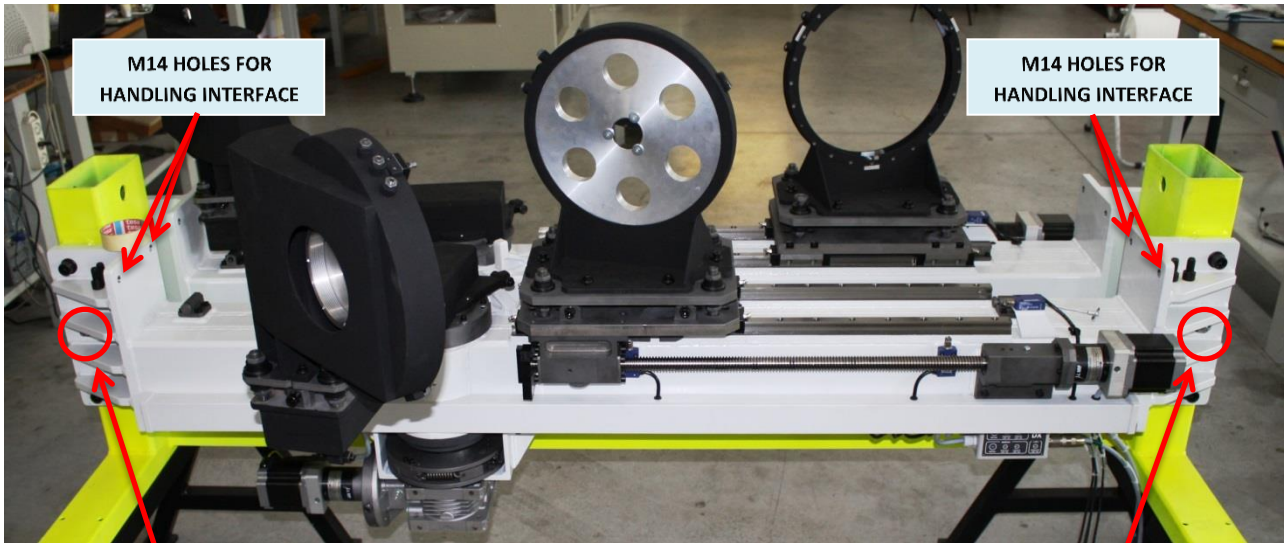
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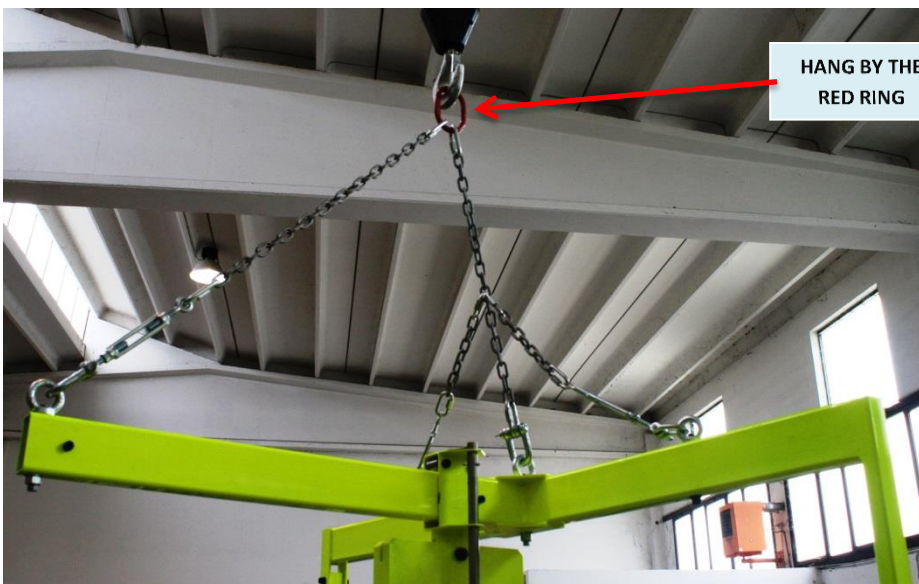
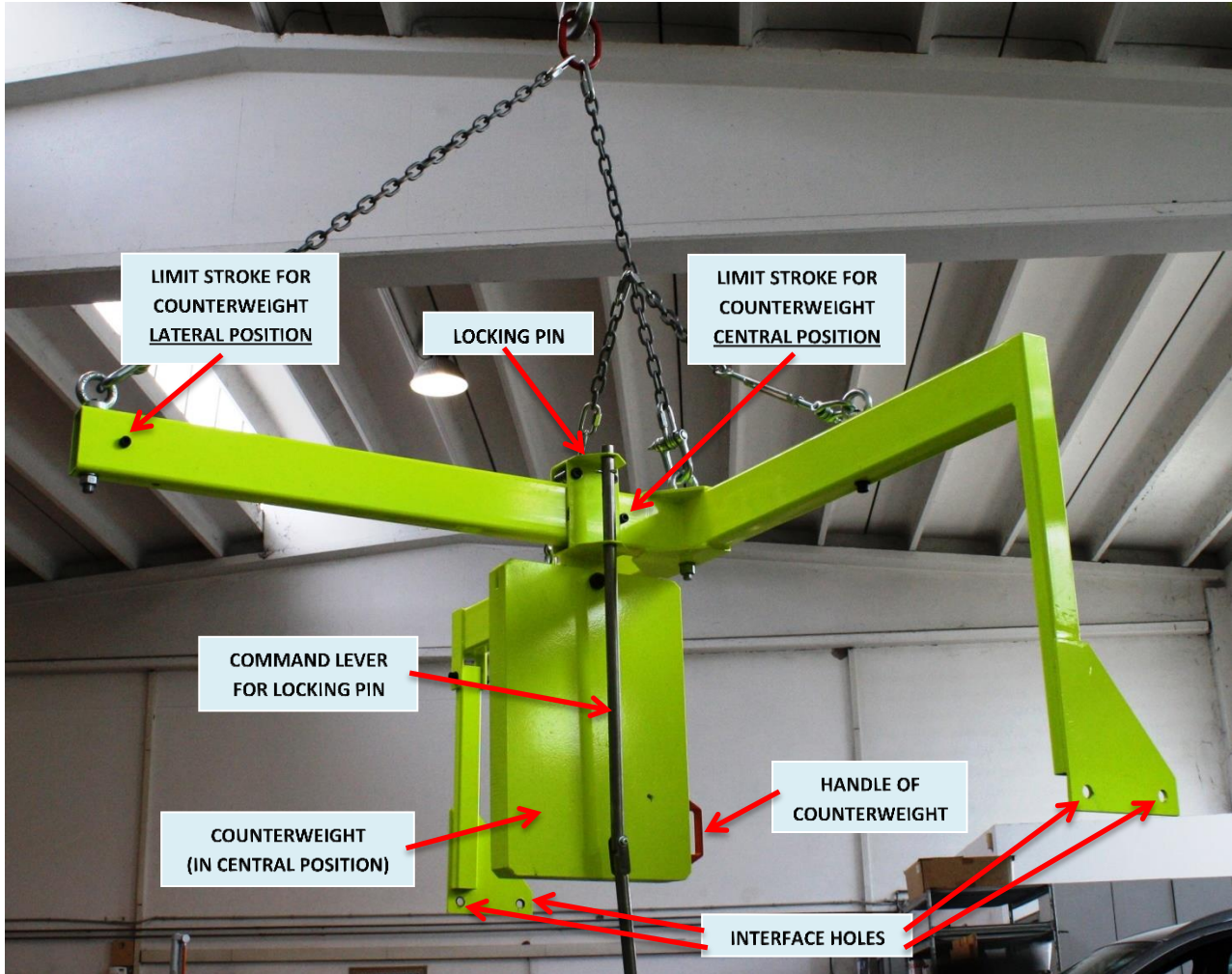
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1. DICHOIC MOUNT UNIT



2. ACCESSORIES

2.1. Handling Device:

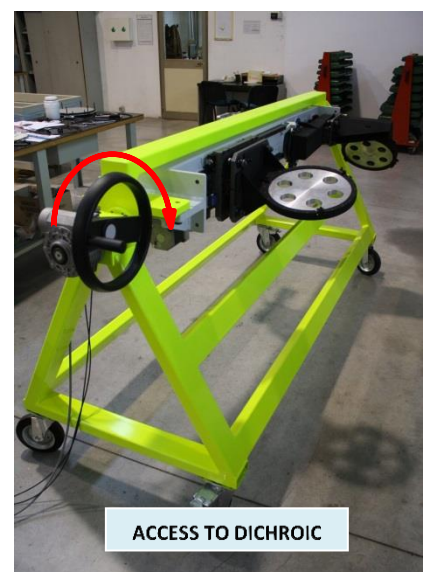
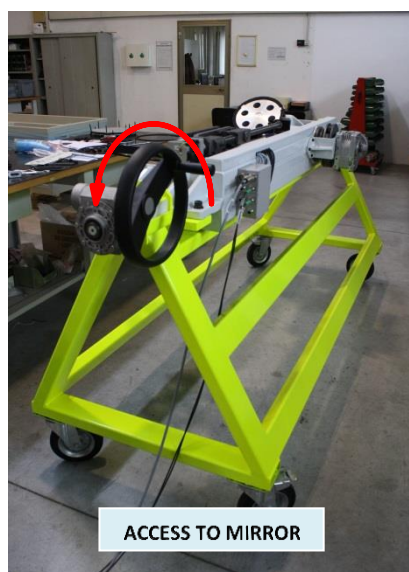
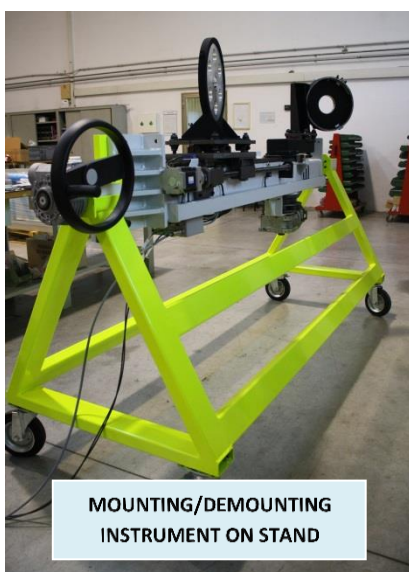
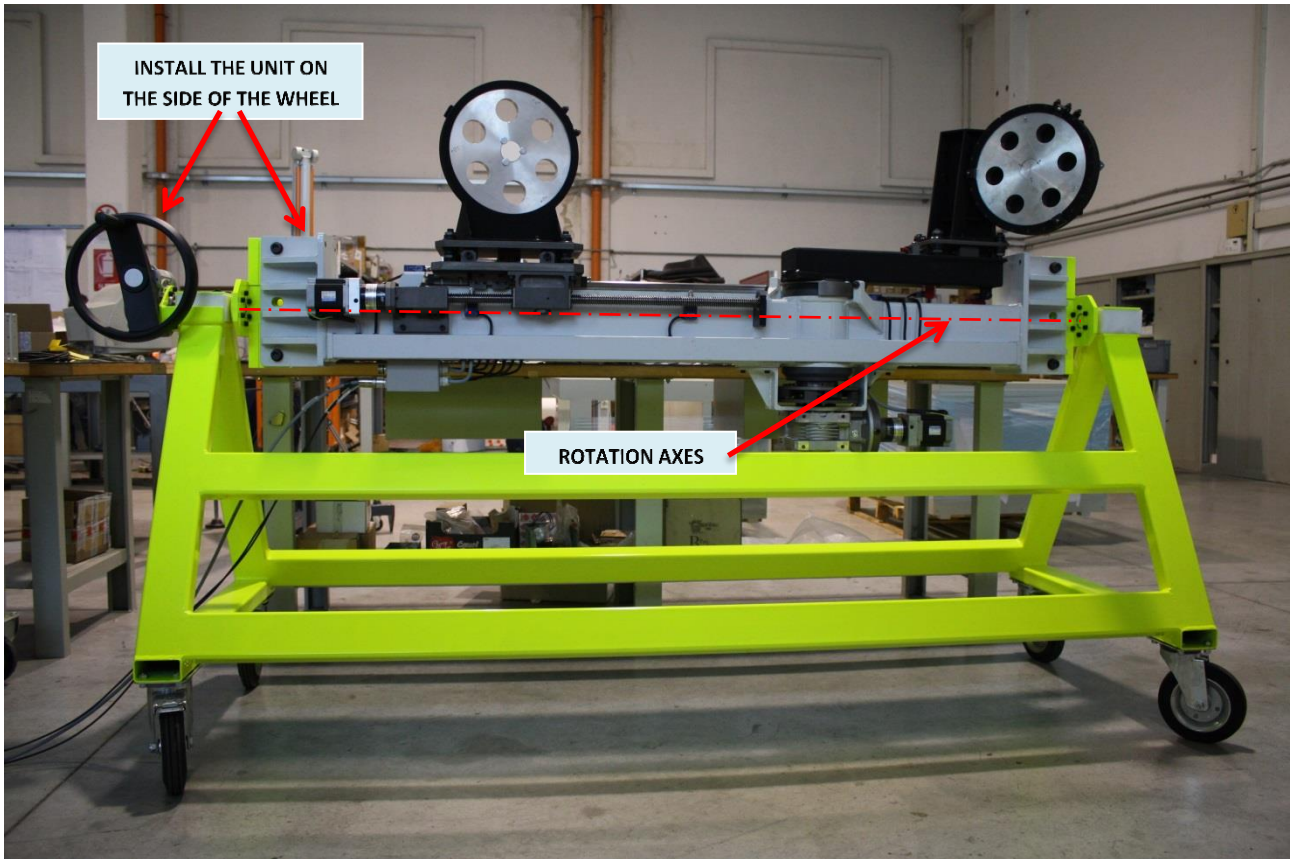


2.2. Fixed Stand

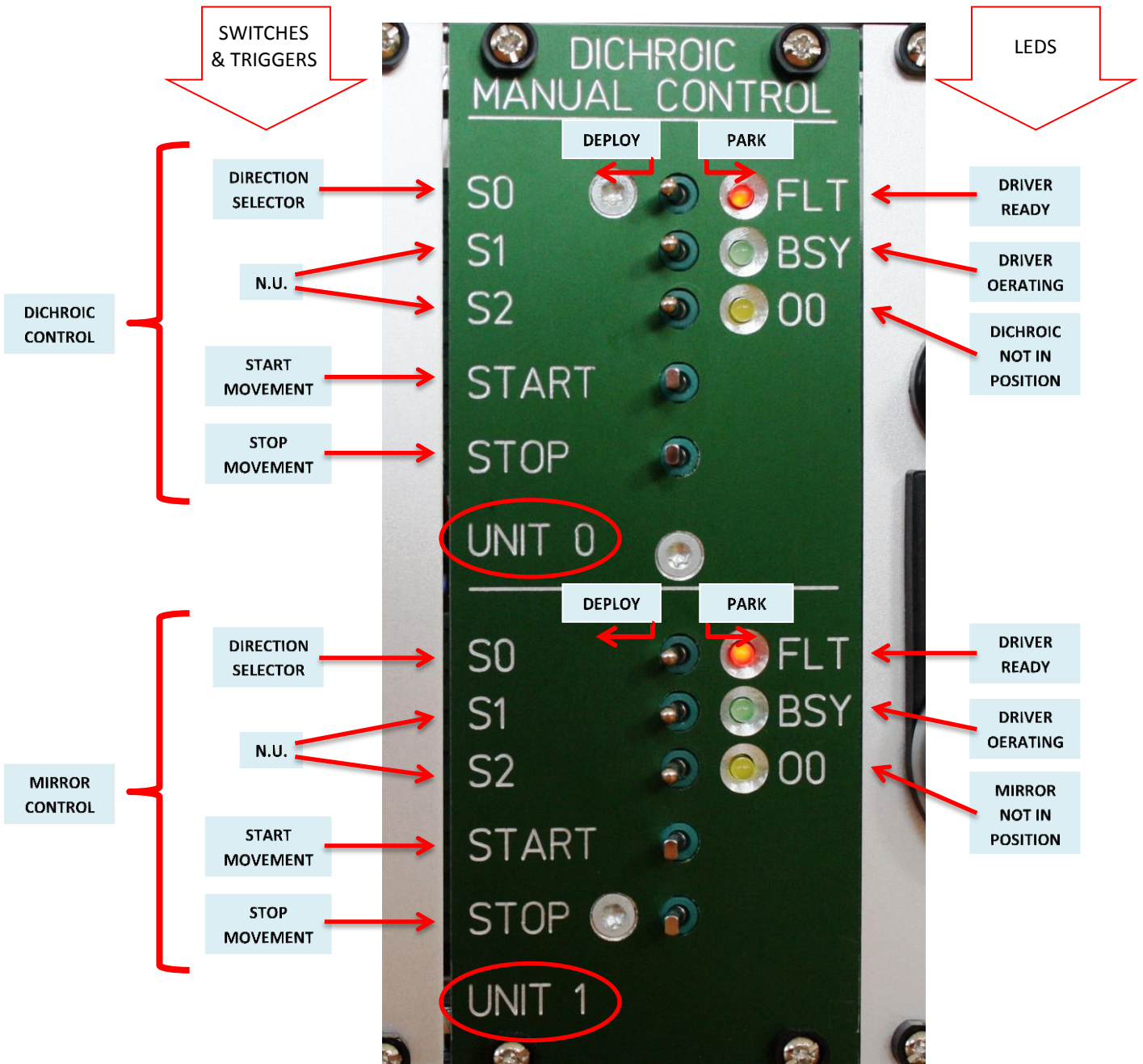
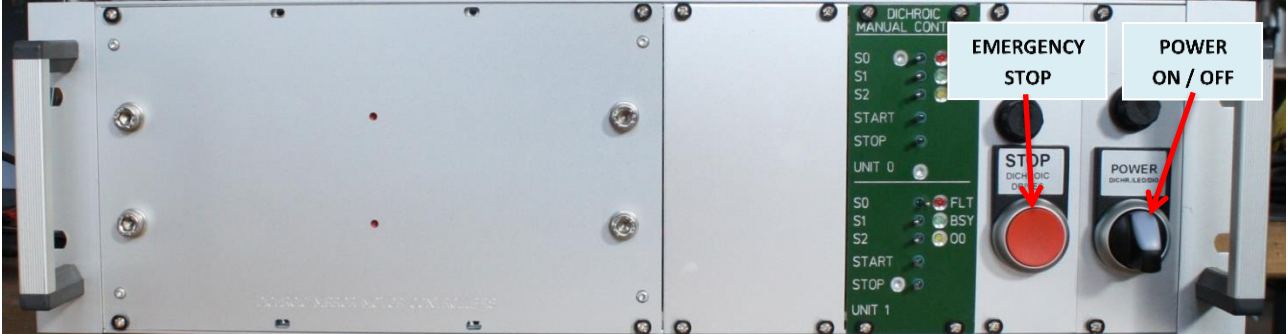


2.3. Service stand

The Service Stand is a support for the Argos Dichroic Mount unit that can rotate it along the main axe ($\pm 90^\circ$) to allow the demounting of dichroic and mirror from the instrument.



3. RACK PANEL FOR MANUAL CONTROL

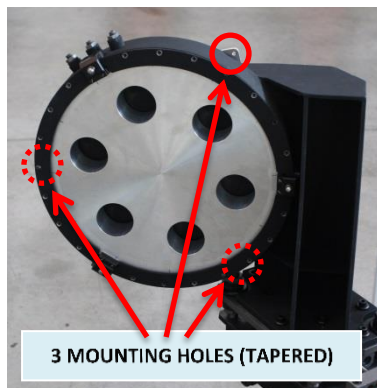


4. DEMOUNTING PROCEDURE

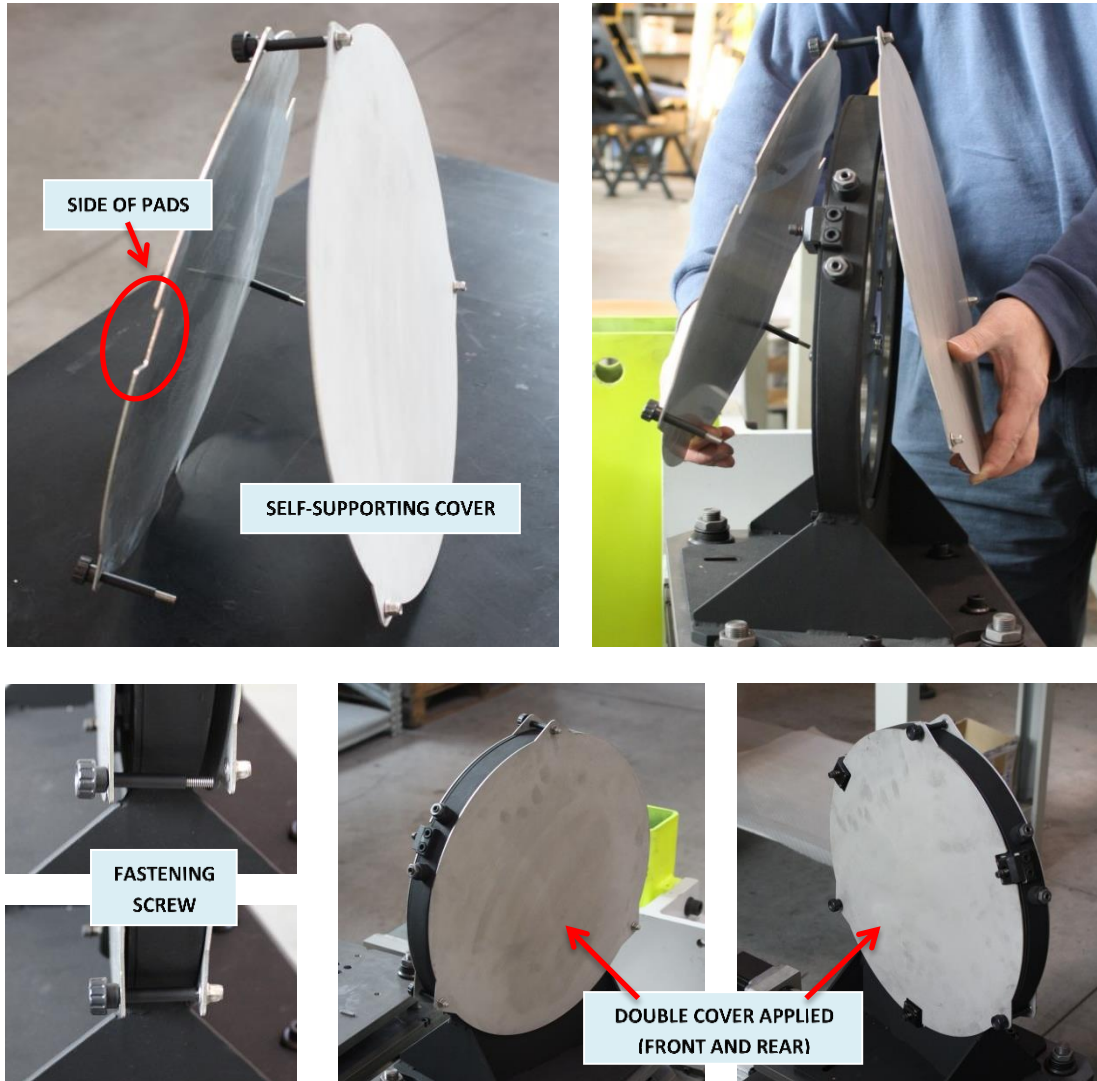


Required Tools: 12 mm Allen wrench, 14 mm Allen wrench.

1. Apply the stainless steel cover at the *Mirror Mount* with the three fastening screws.



2. Apply the stainless steel double cover at the *Dichroic Mount* with the three fastening screws

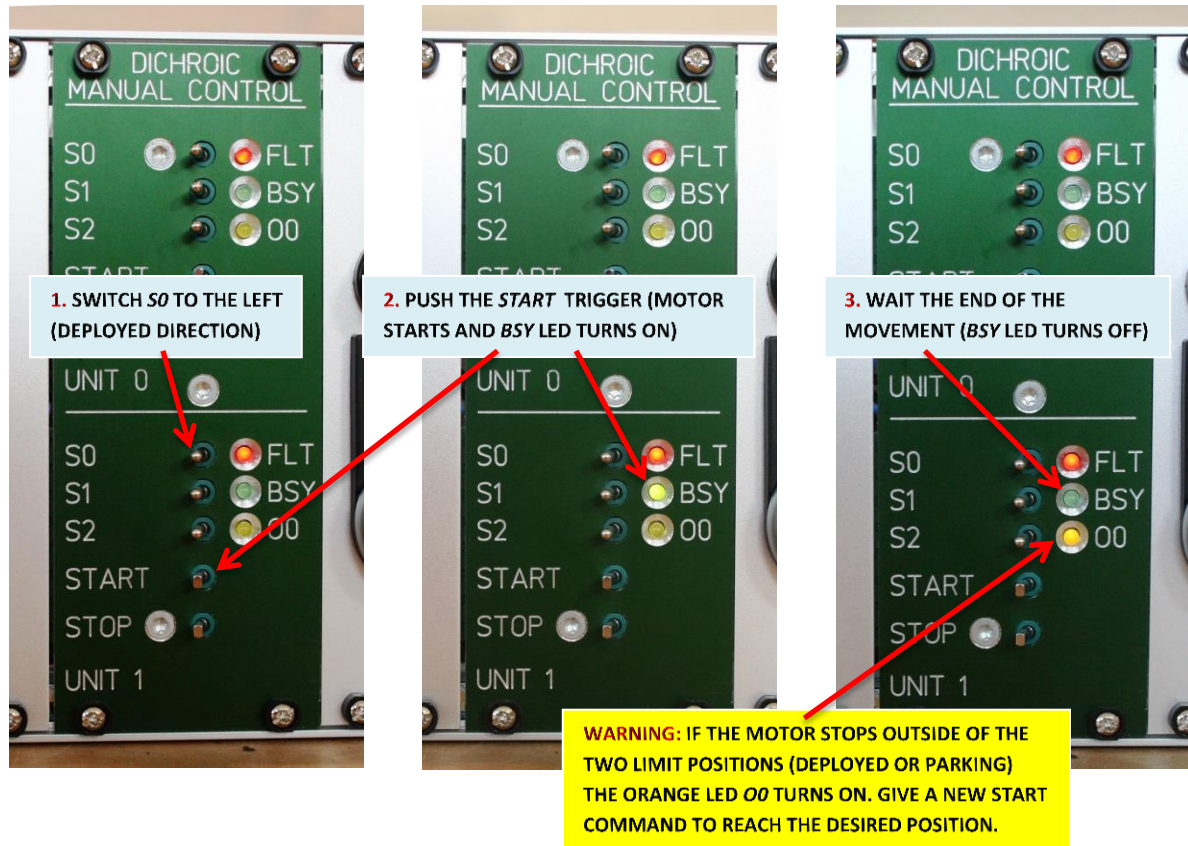


3. Ensure that the mirror is in *Deployed Position* and the dichroic is in *Parking Position*.

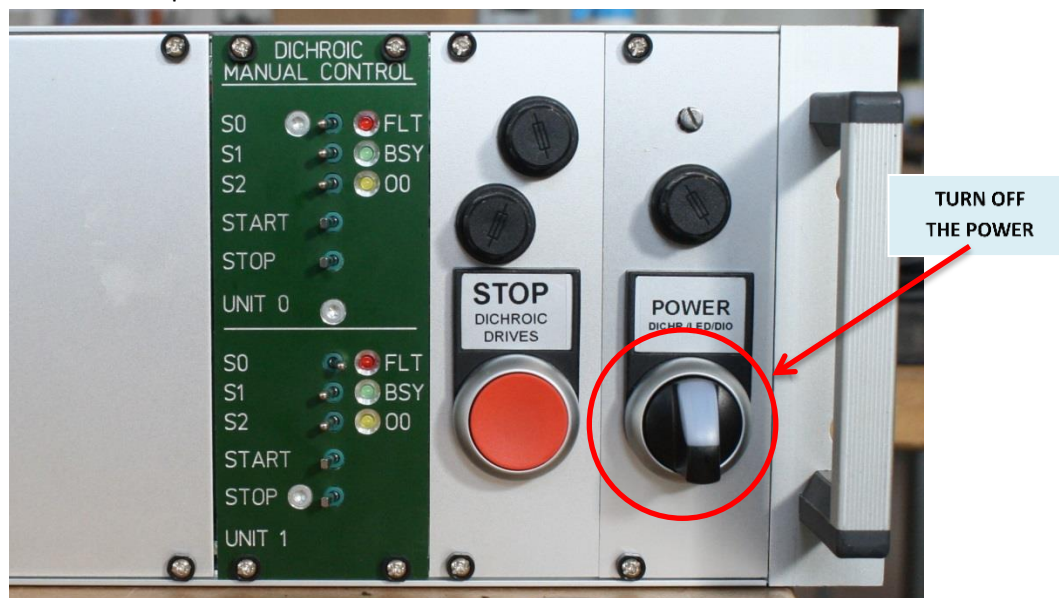


- Use the commands on the *Dichroic Manual Control* panel to move the mirror swing arm and/or the dichroic cart.

Example sequence to deploy the mirror:



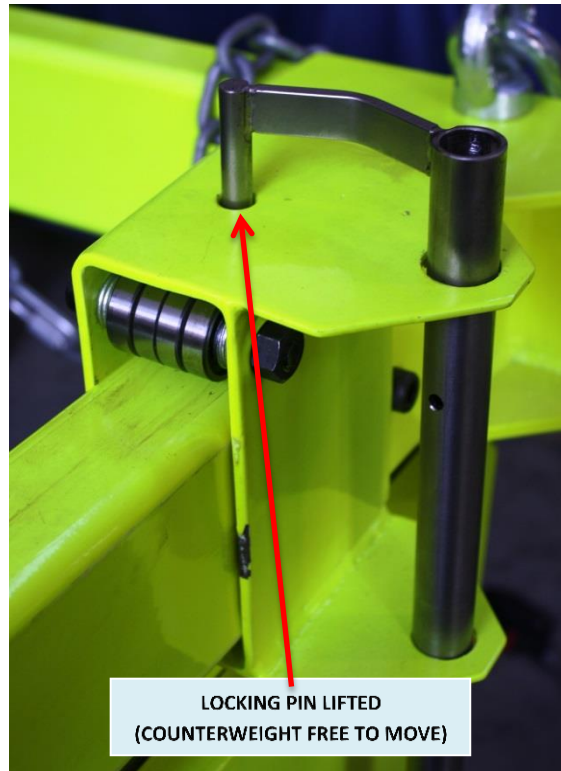
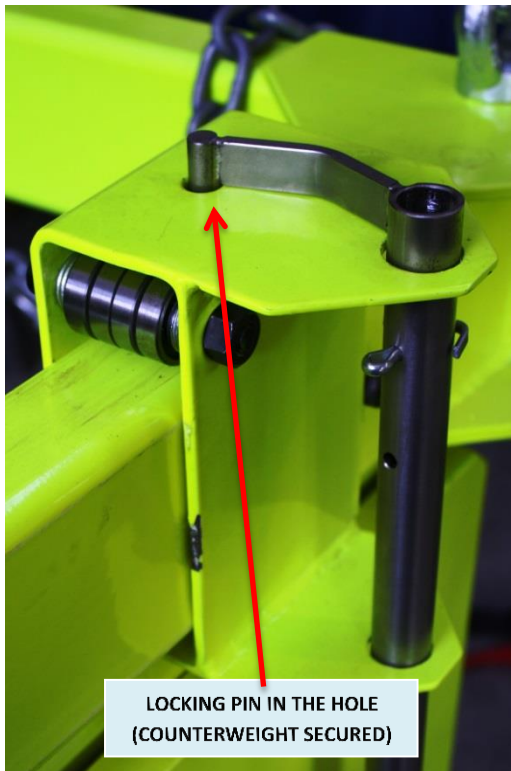
- Turn OFF the power.



6. Disconnect all the 7 cables from the *Connectors Box* of the instrument:



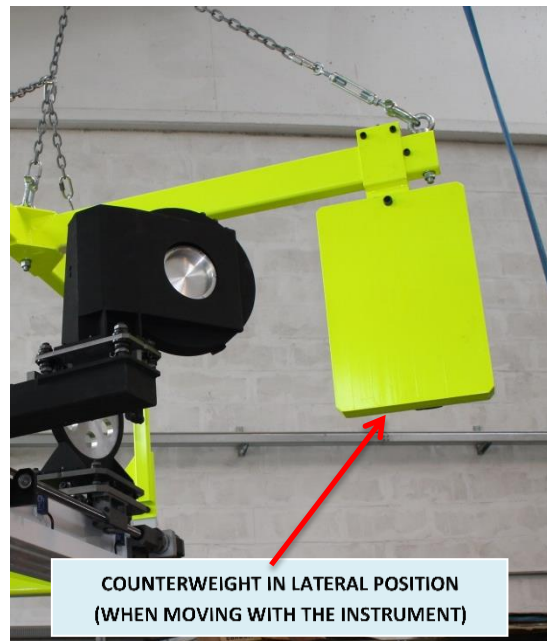
7. Ensure that the *Counterweight* of the *Handling Device* is in the central position before lifting: the *Locking Pin* must be inside the hole.



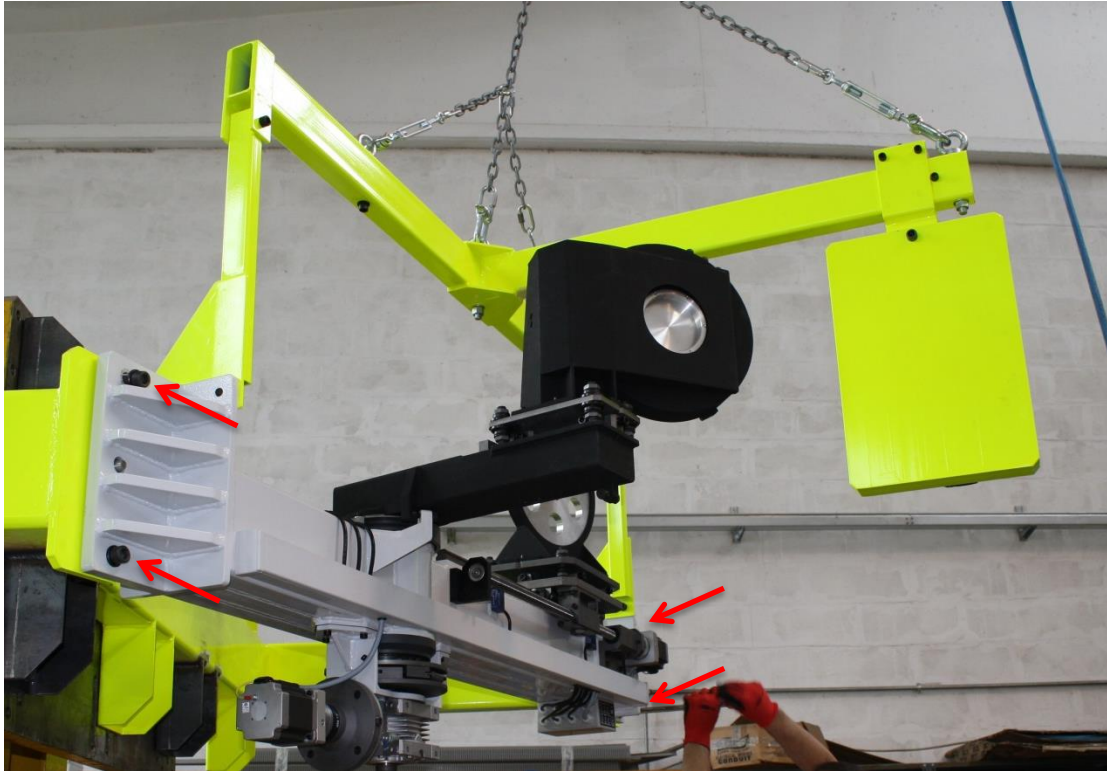
8. Approach the *Handling Device* to the *Dichroic Unit* and secure it with the four M14 Allen screws.



9. Move the *Counterweight* of the *Handling Device* in the external position: lift the *Locking Pin* and gently push the *Counterweight* by the orange *Handle*, once reached the limit stroke let the *Locking Pin* to fall in his hole securing the position.



10. Release the four M18 Allen screws.



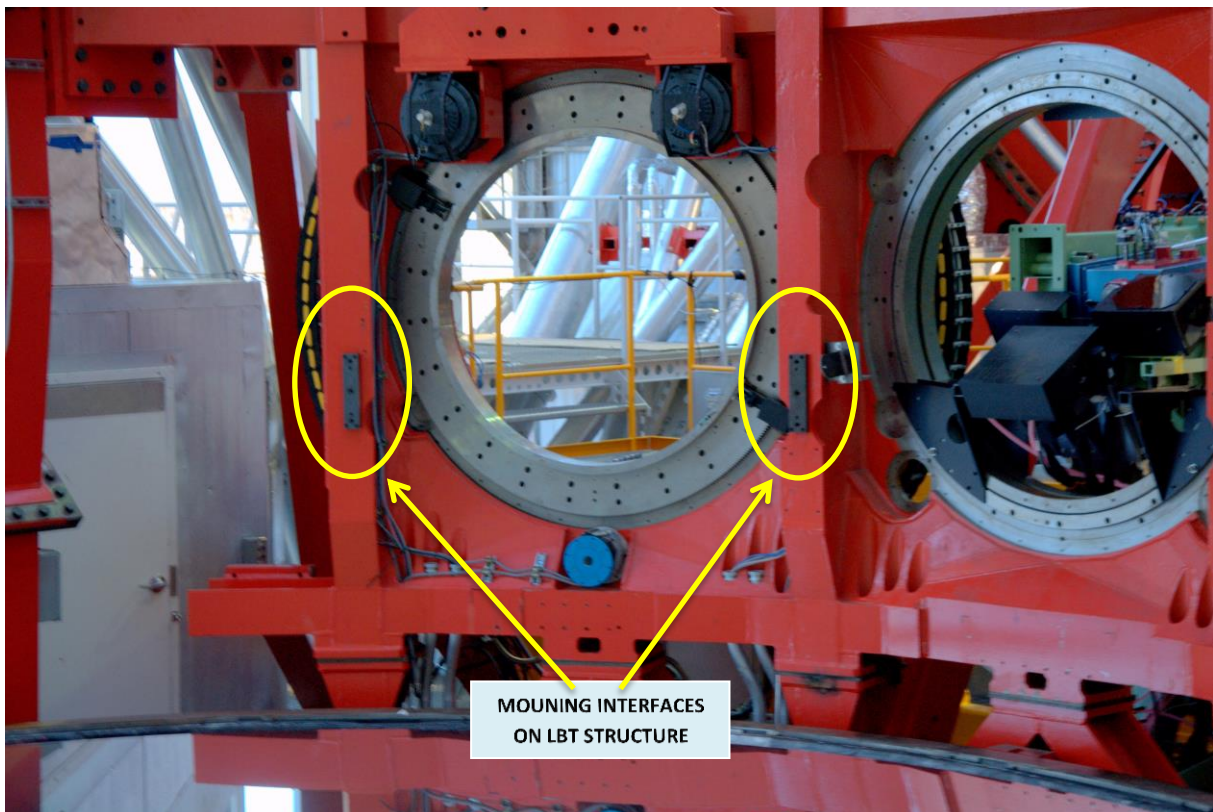
11. Remove the *Dichroic Unit*.



5. INSTALLING PROCEDURE



POINT THE **TELESCOPE TO ZENITH** BEFORE
OPERATING ON ARGOS DICHROIC MOUNT

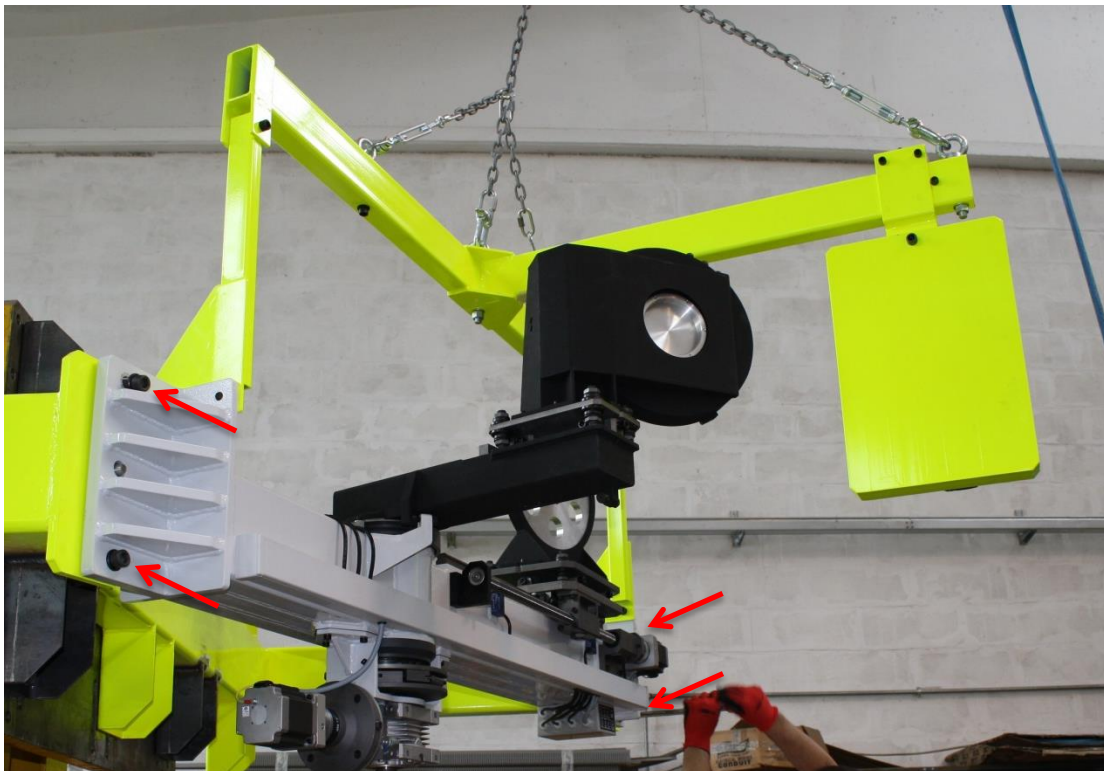


Required Tools: 12 mm Allen wrench, 14 mm Allen wrench.

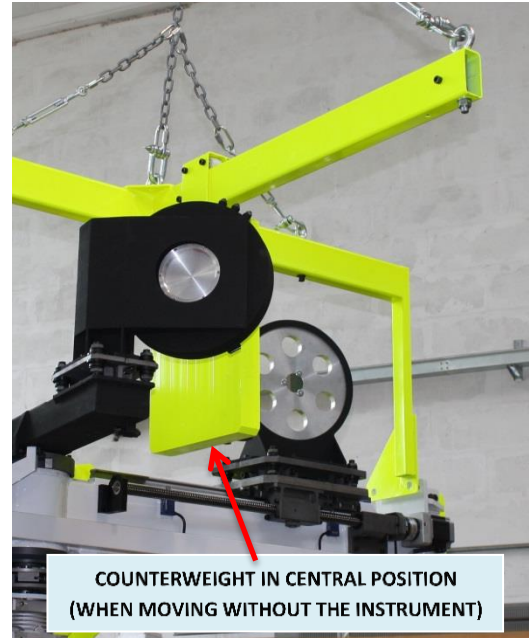
1. Reach the position for the *Dichroic Unit* and align the *Reference Hole* and *Slot* to the *Reference Pins* of the interface.



2. Slip the instrument on the *Reference Pins* and fasten the four M18 Allen screws.



3. Move the *Counterweight* of the *Handling Device* in the central position: lift the locking pin and gently pull the *Counterweight* by the orange handle, once reached the limit stroke let the locking pin to fall in his hole securing the position.



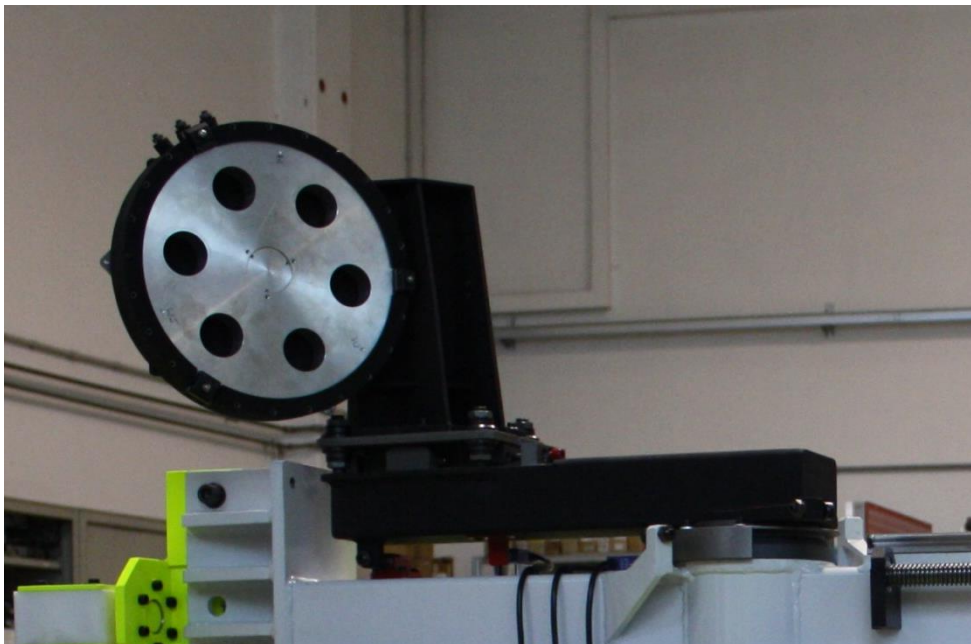
4. Remove the four M14 Allen screws to free the *Handling Device* and remove it.



12. Connect all the 7 cables to the *Connectors Box* of the instrument:



13. Move the *Swing Arm* in PARKING position

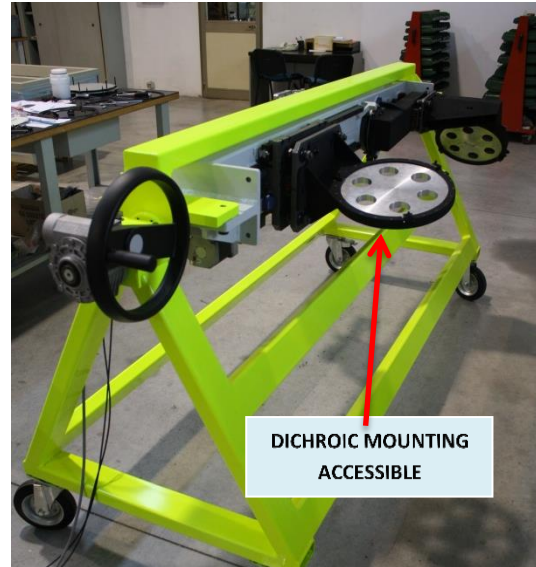


14. Remove covers from dichroic and mirror mountings

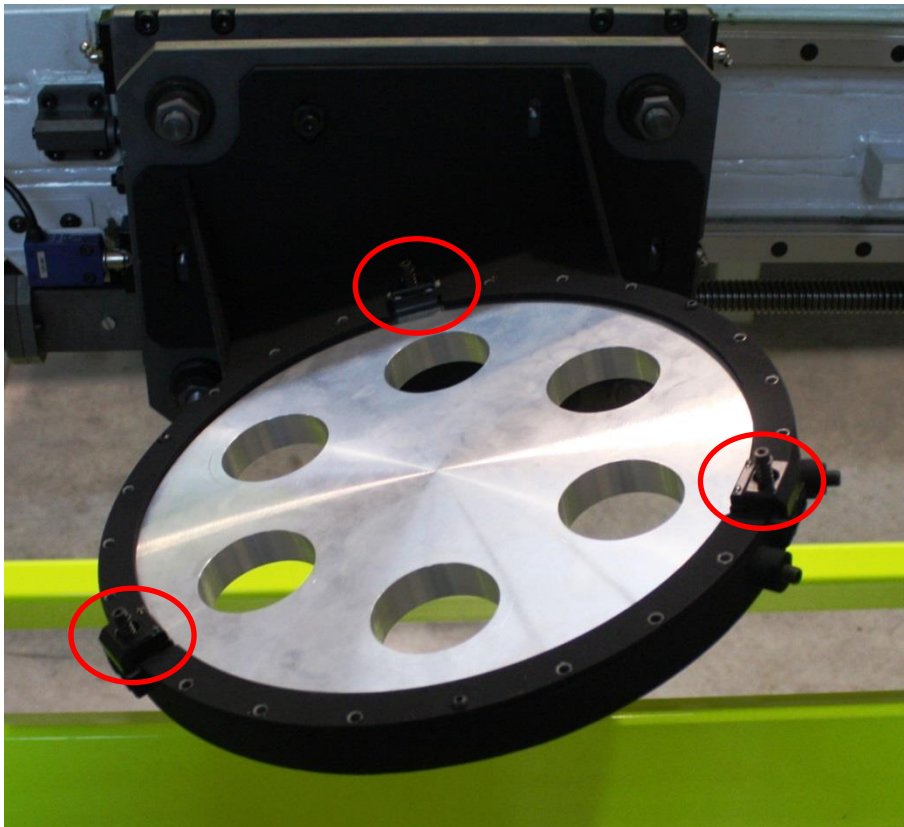


6. DICHOIC REMOVAL PROCEDURE

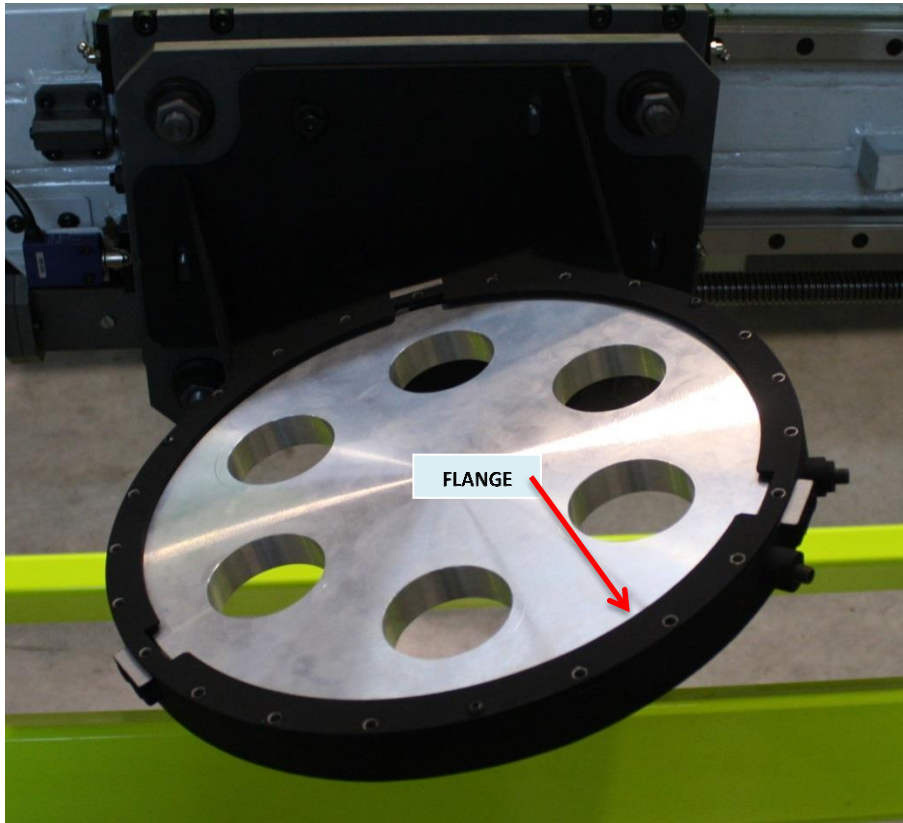
1. With the *Argos Dichroic Mount* unit on the *Service Stand* turn the wheel clockwise to make the unit roll of 90°



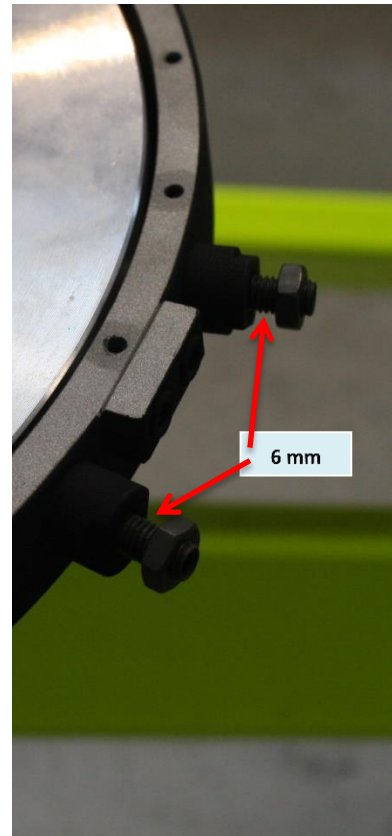
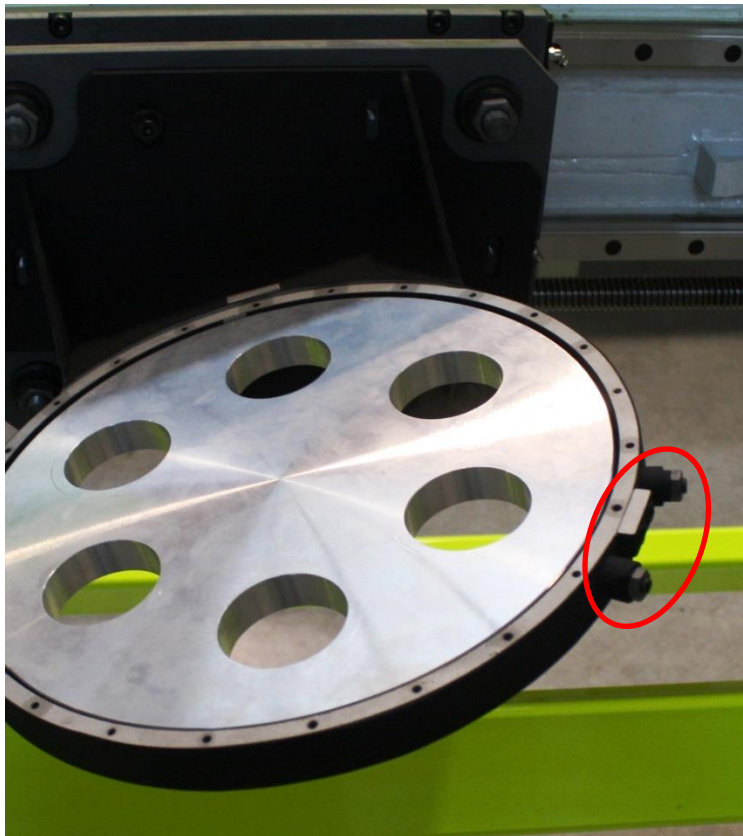
2. Remove the 3 Axial Pads



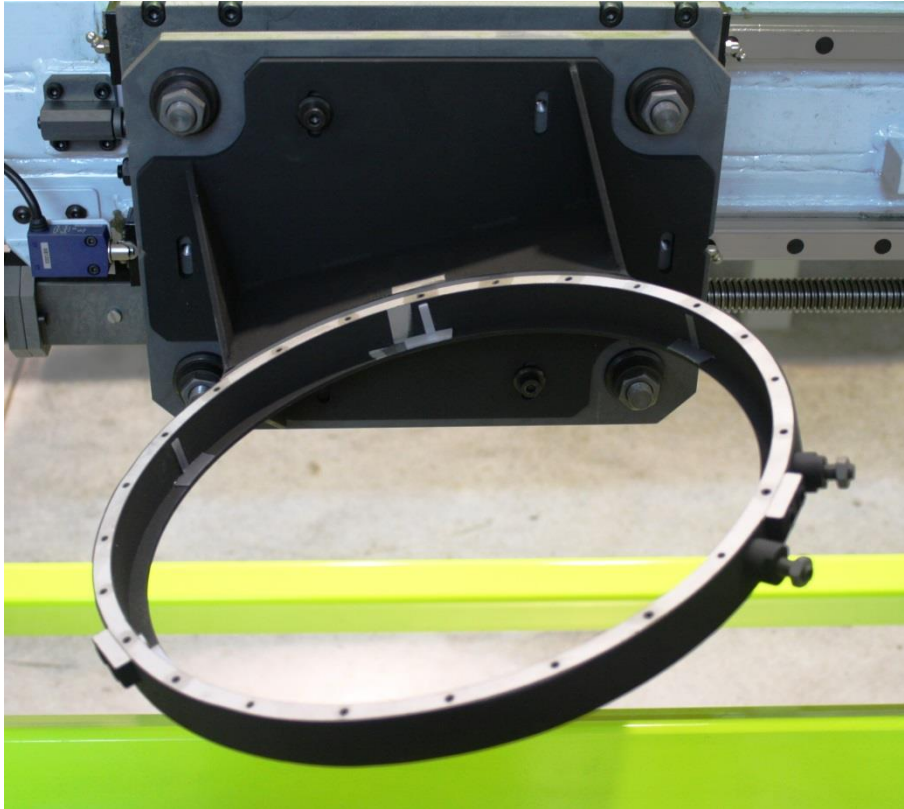
3. Remove the flange by unscrewing the 21 screws.



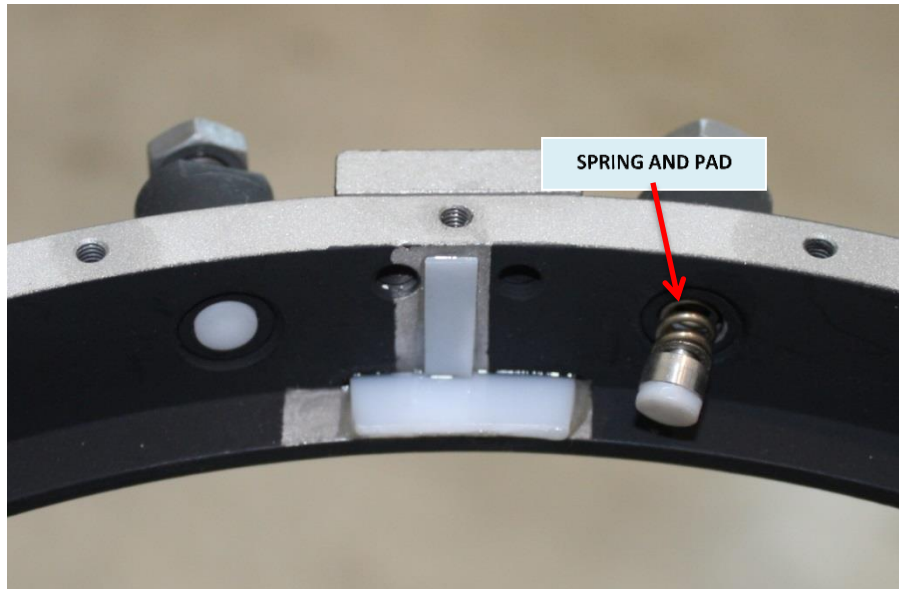
4. Release the 2 radial pads.



5. Remove the dichroic



6. Mind the Radial Pads: they can fall out and get lost.

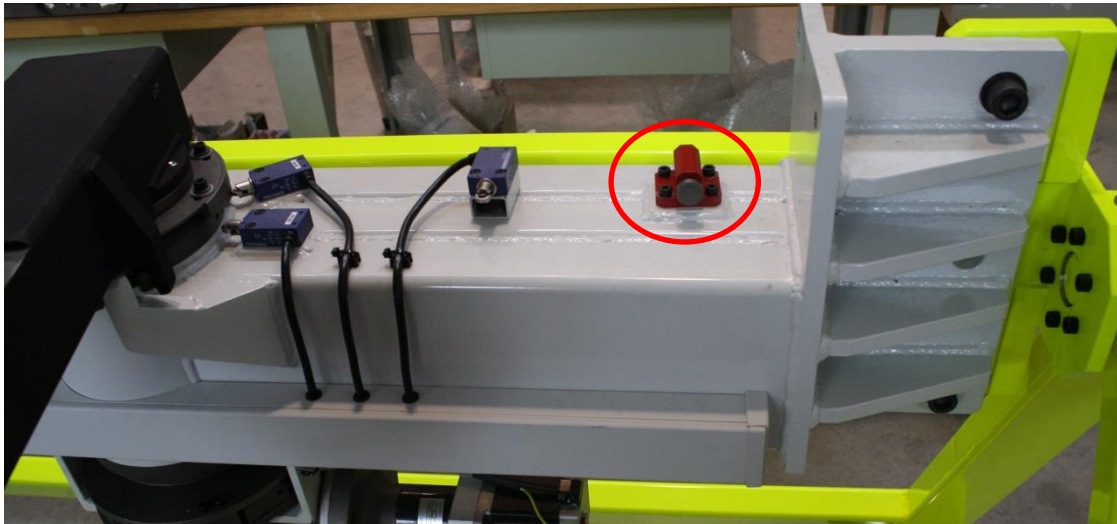


7. MIRROR REMOVAL PROCEDURE

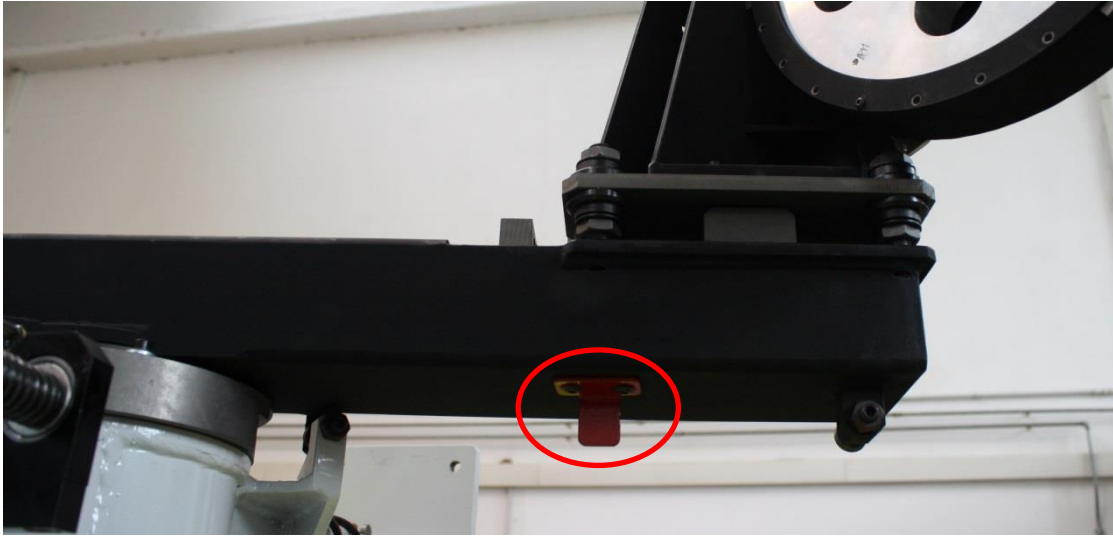
7. With the *Argos Dichroic Mount* unit on the *Service Stand* move the mirror in DEPLOYED position.



8. Remove the red end stroke of the *Swing Arm*.



9. Remove from the *Swing Arm* the red cam of the LUCI Interlock Switch.



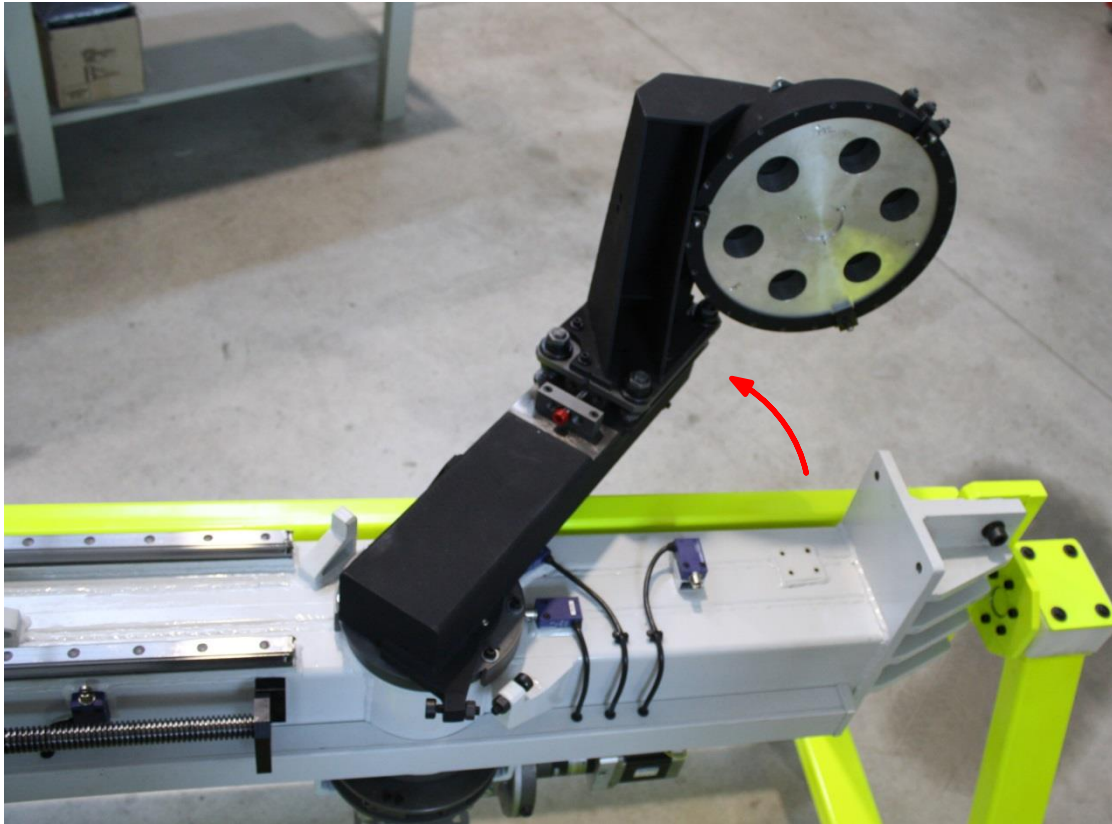
10. Move the *Swing Arm* in PARKING position.



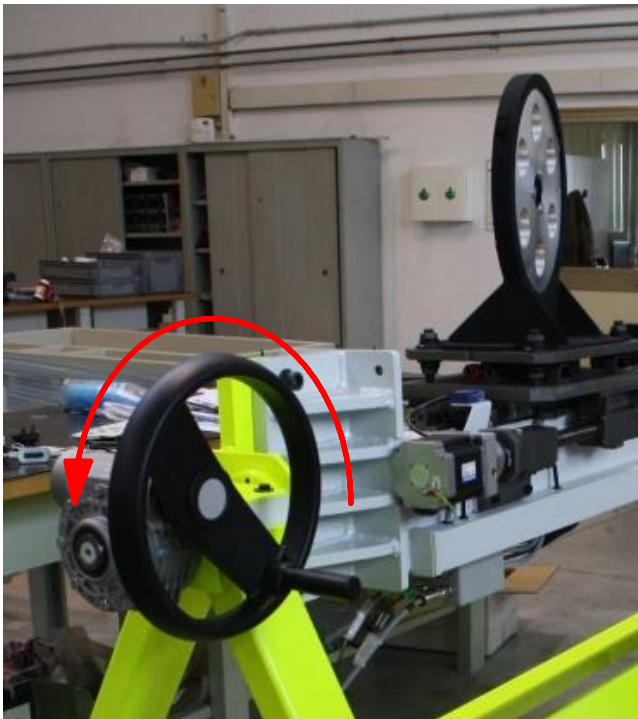
11. Load into the RTA controller #01 the program file *rta_Mir_01_Removal Position.txt*.

```
01WN,100,00,120
01WN,101,00,130
01WN,120,58,00,0,121
01WN,121,70,1,122
01WN,122,31,070,42,+113000,x1,159
01WN,130,58,00,0,131
01WN,131,70,1,132
01WN,132,31,070,42,-113000,x1,159
01WN,159,70,0,000
```

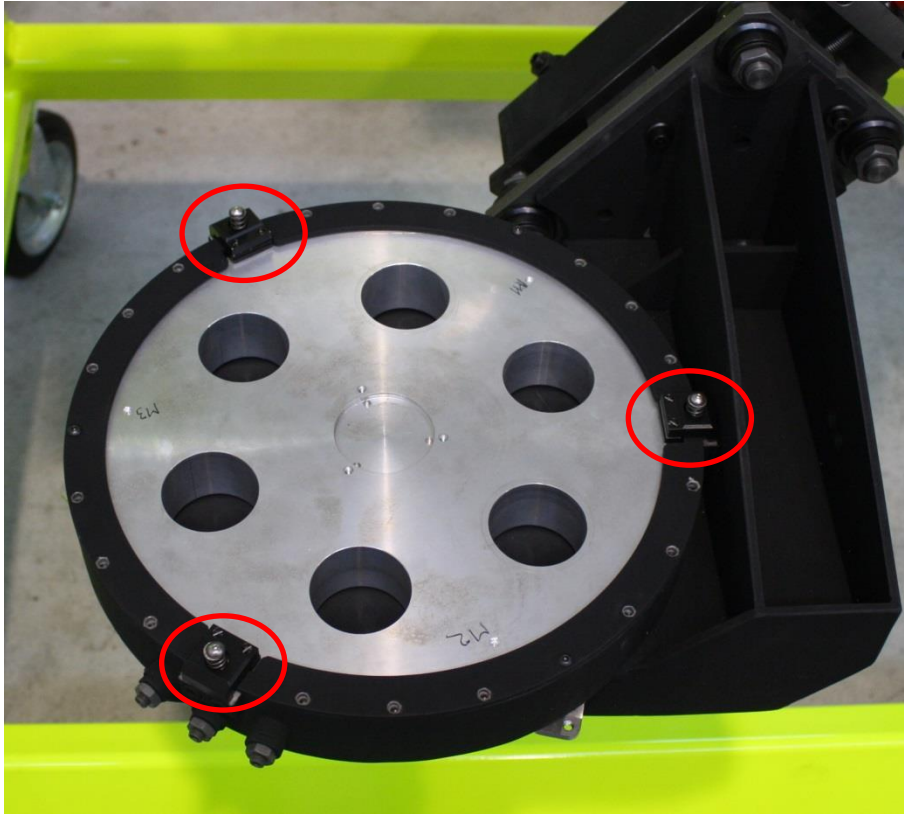
12. Move the *Swing Arm* backwards with the Direction Selector switch S0 on the LEFT (parking direction, see cap. 3. *Rack panel for manual control*).



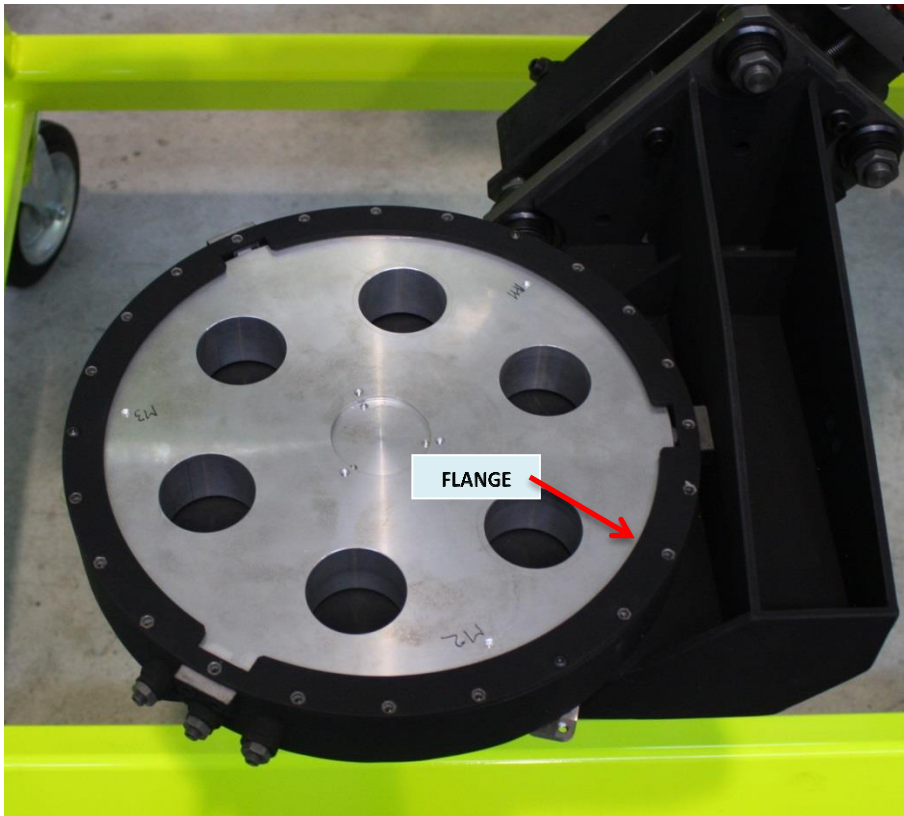
13. Turn the wheel of the Service Stand counterclockwise to make the unit roll of 90°



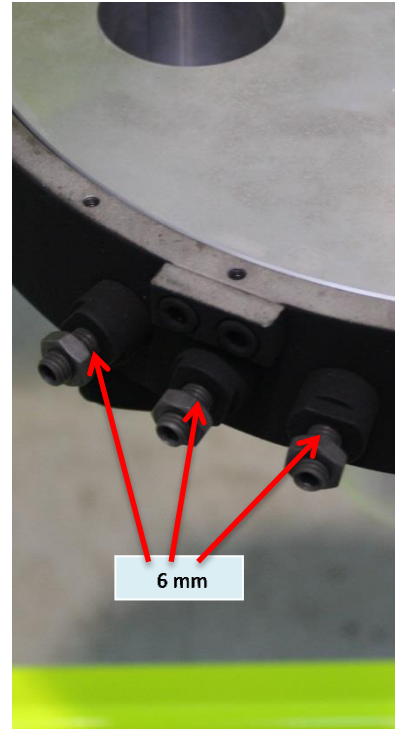
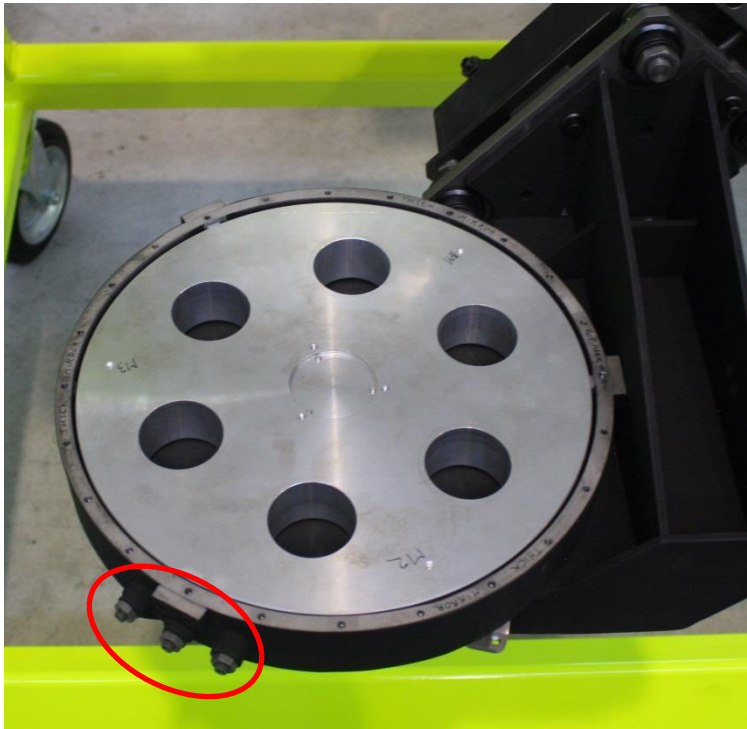
14. Remove the 3 Axial Pads



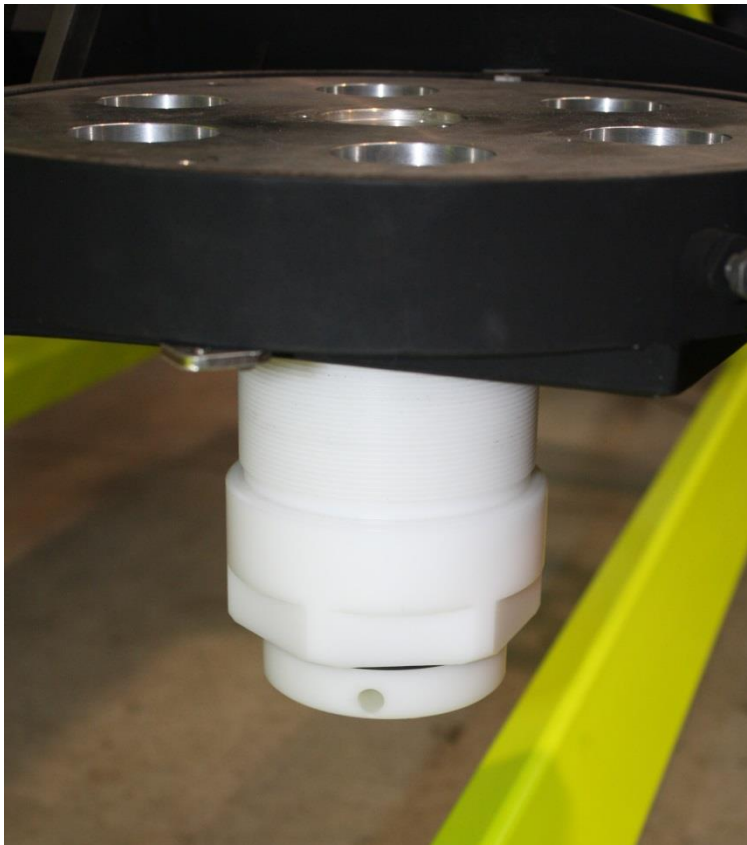
15. Remove the flange by unscrewing the 21 screws.



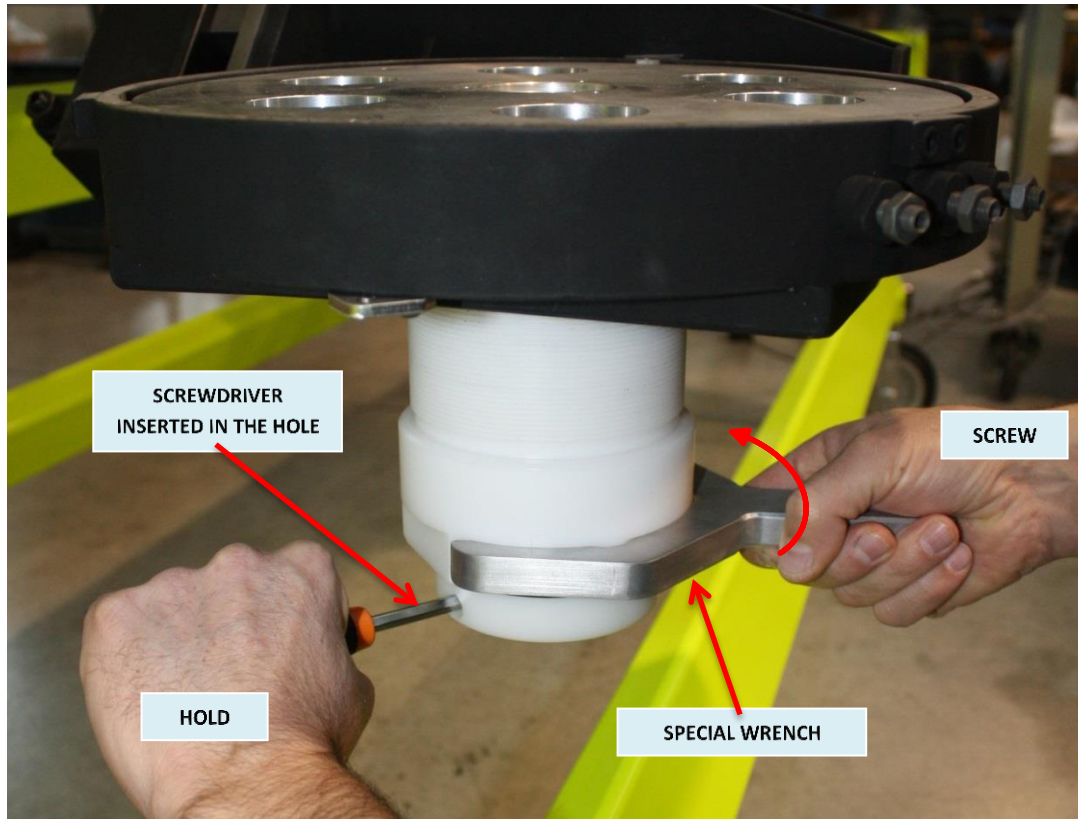
16. Release the 3 Radial Pads.



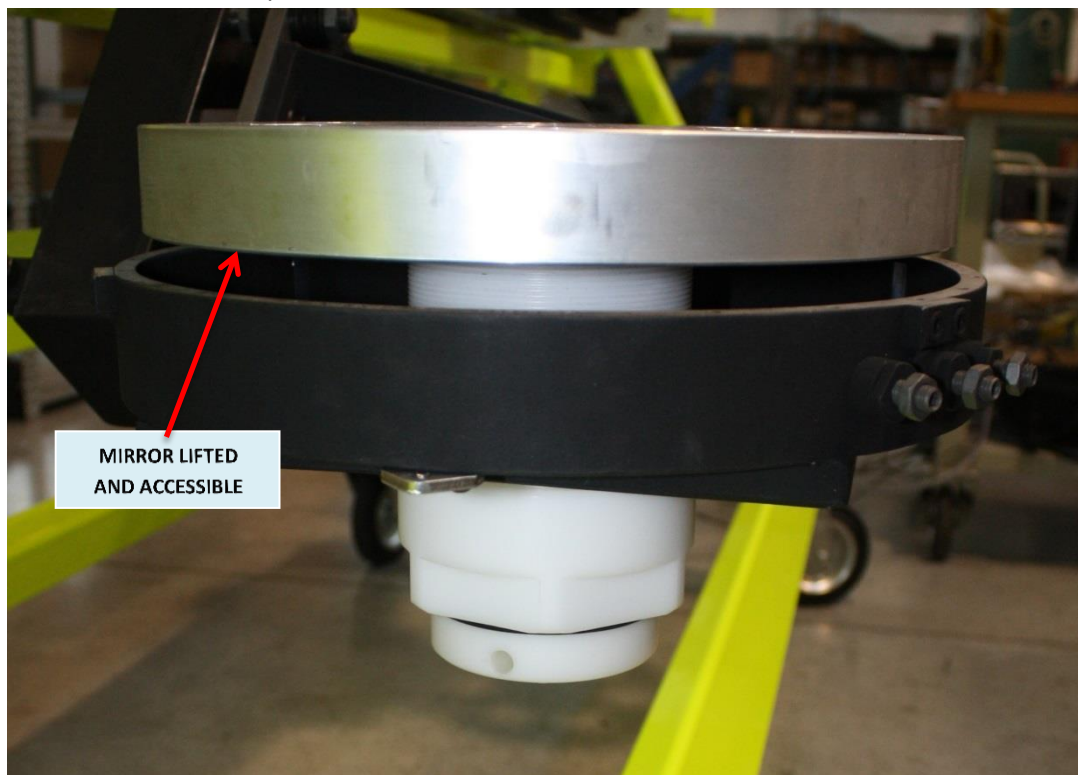
17. Insert from the back of the mounting the Mirror-Lifting tool and screw it about 6 turns



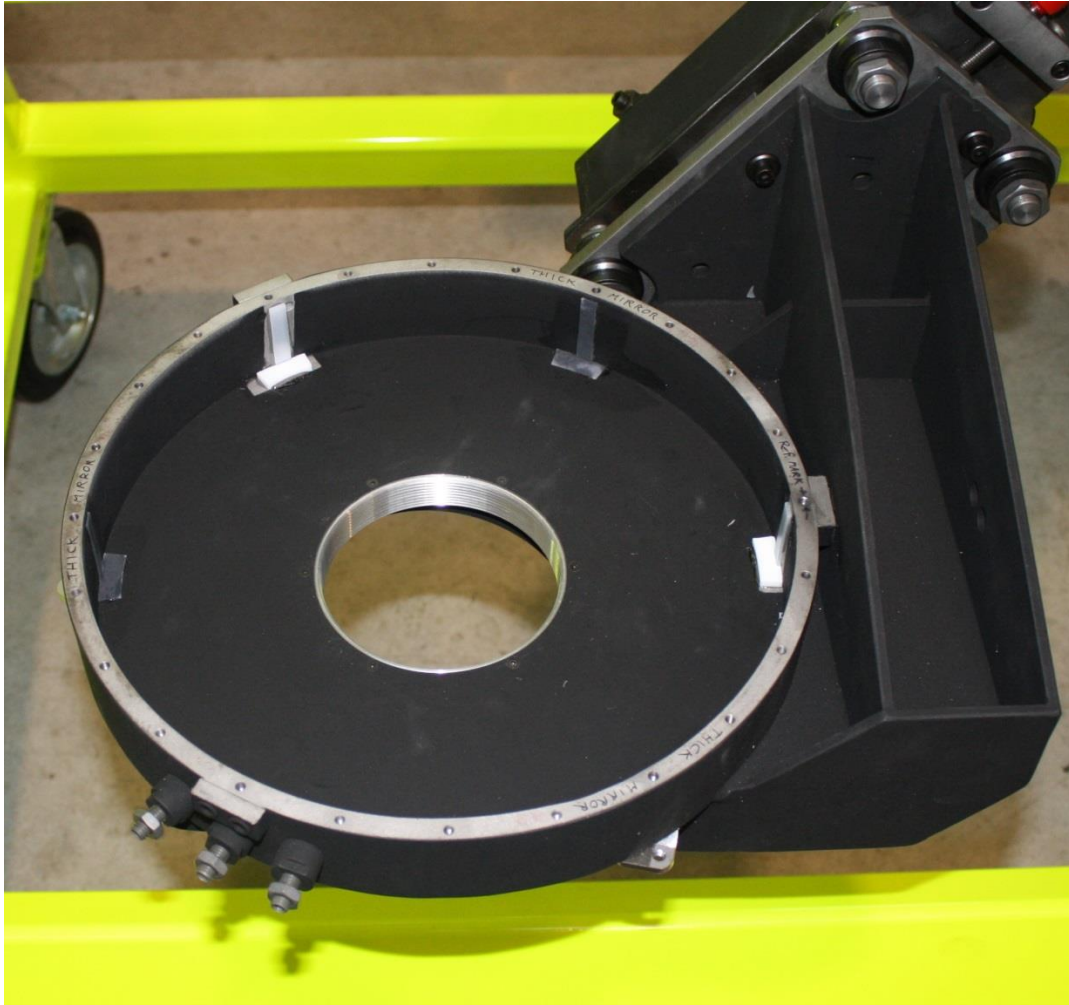
18. Use a common screwdriver to maintain in position the inner part of the Mirror-Lifter while screwing the outer part of the Mirror-Lifter with the given special wrench.



19. Lift the mirror until is possible to take it with hands.



20. Remove the mirror and the Mirror-Lifting tool.



21. Mind the Radial Pads: they can fall out and get lost.

