
MilkoScan™ Mars Spare Parts Manual

6006 5575 / Rev. 6



All information is liable to change without prior notice. For latest information about documentation updates for your specific instrument, please contact your local FOSS representative.

Rev.	Date of Issue	Revised Material
1	2015-03-04	First issue.
2	2016-01-04	General update.
3	2017-11-21	Major update of spare parts and drawings.
4	2019-07-22	Major update of spare parts and drawings.
5	2020-07-21	Major update of spare parts and drawings.
6	2020-09-02	Minor Corrections

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1 General

This document contains Spare Parts for MilkoScan™ Mars.



Warning

Please read Safety Precautions in the Service Manual prior to maintenance or exchange of spare parts.

The system may only be repaired by personnel certified by FOSS.

1.1 Explanation of Definitions

Explanation of definitions used in this manual:

- Drawing No. FOSS drawing number.
- Page Drawing page in FOSS database.
- Part No. Spare part number for ordering.
- Prod. No. FOSS production number.

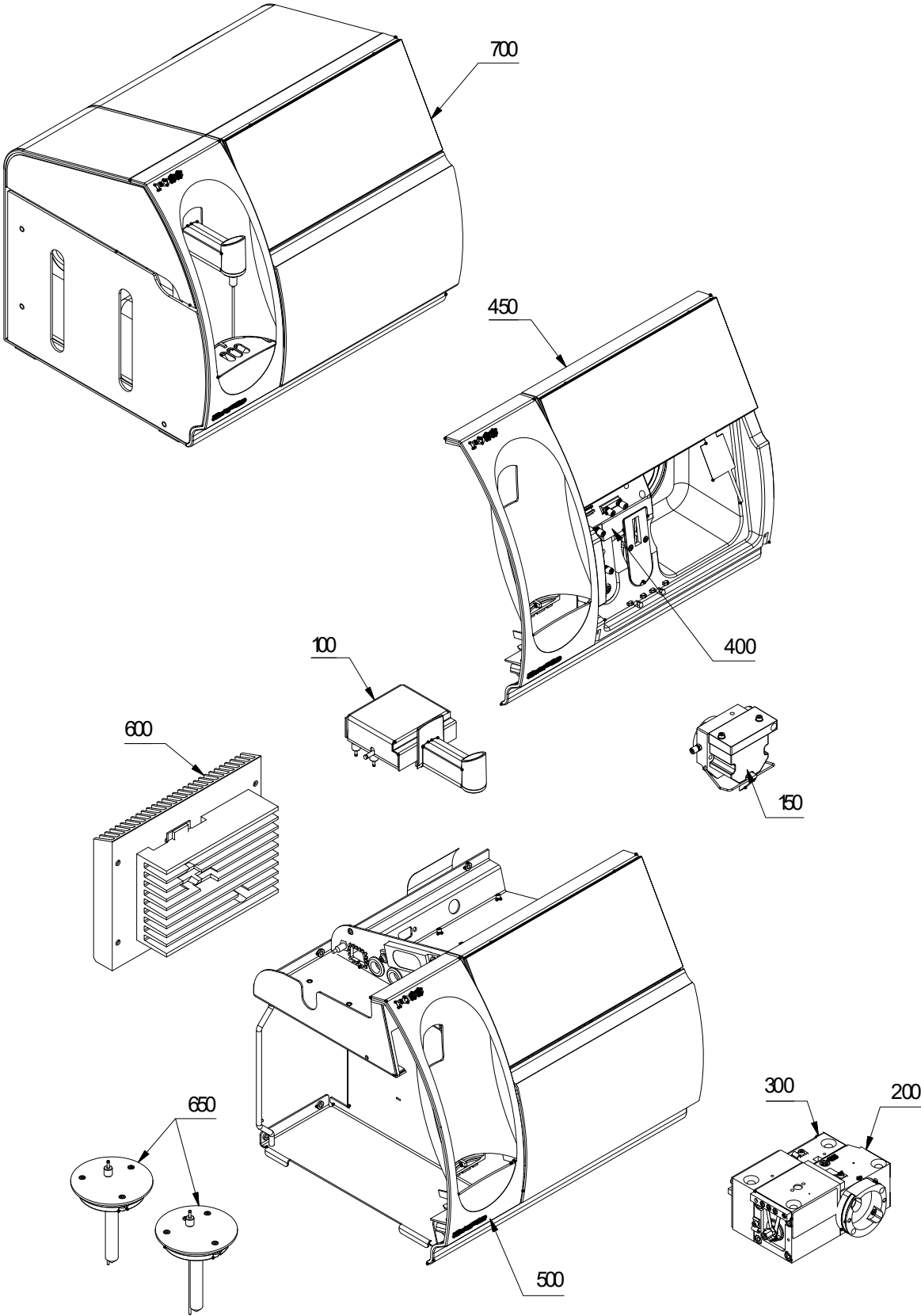
Note:

When ordering new spare parts, please use the Part No. stated in this manual for the parts in question.

2 Assembly Identification

Drawing No.: 60062098**Page: 001**

Pos.	Description
100-1	Sample Heater Assy
150-1	Flow Mainfold Assembly w. dectector
200-1	Optical housing Assy
300-1	Interferometer assy incl PCBs
300-2	Interferometer assy incl PCBs
400-1	Pump manifold Assy
420-1	Piston assy
450-1	Front Cabinet Assy
500-1	Sub Frame Assy
500-2	Sub Frame Assy
600-1	Heat Sink Assy
650-1	Sensor Stick Assy
700-1	Basic Unit
700-2	Basic Unit
700-3	Basic Unit
700-4	Basic Unit, Tubing
700-5	Basic Unit, Connection diagram
800-1	Optional accessories



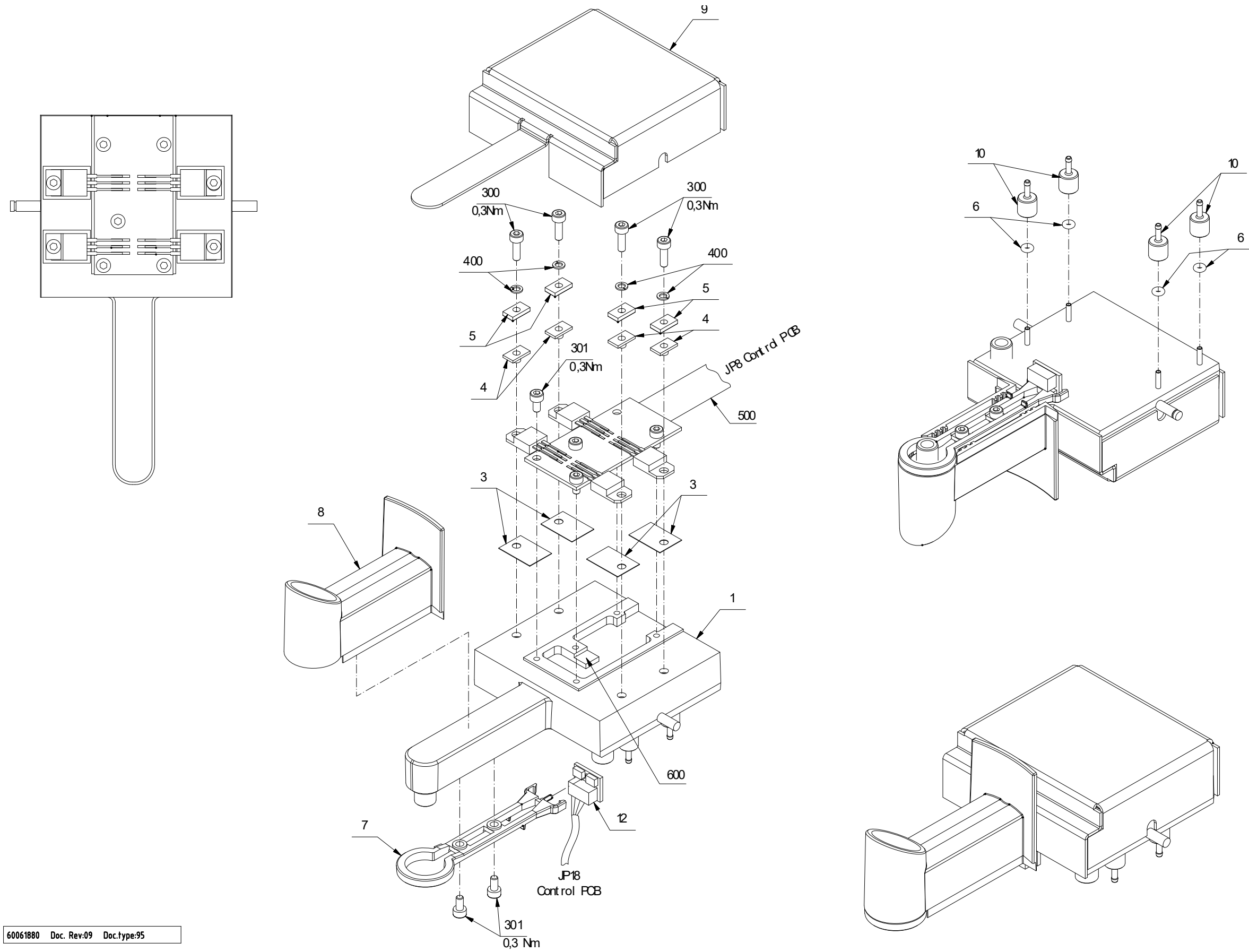
60062098 Doc. Rev:04 Doc.type:95

Fig. 1

3 Sampler Heater

Drawing No.: 60061880**Page: 100-1**

Pos.	Part No.	Description	Prod. No.
1	60070856	Sample Heater Block	60061873
2	01052207	Pcb assy Sample Heater PCB	
3	00496851	Isol. washer	
4	00282335	Insulator	
5	00188672	Washer	
6	00243667	O-ring ø001.78/ø1.78 FPM 80	
7	60065795	Pipette light guide	
8	60065713	Pipette cover	
9	60064634	Sample Heater Insulation foam	
10	60073889	Nozzle tube connection	60072808
12	01052233	Pcb assy Pipette Light PCB	
300	00201160	Allen screw M03.0x010	
301	00227348	Allen screw M03.0x006	
400	00299313	Washer	
500	60064818	Cable 10 pol.	
600	00060251	Silic. Comp.	



60061880 Doc. Rev.09 Doc.type:95

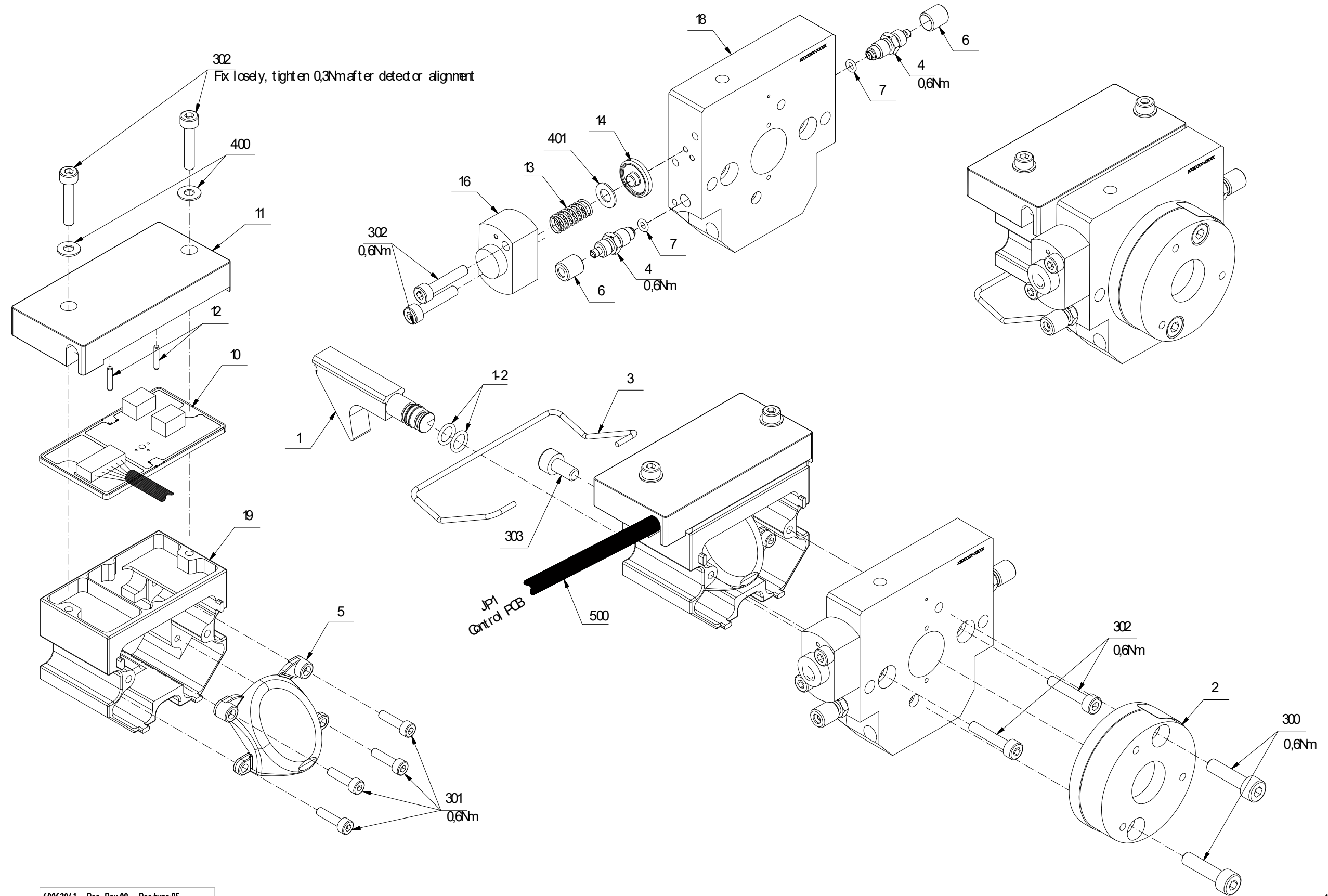
Fig. 2

4 Flow Mainfold Assembly with Detector

Drawing No.: 60062041

*Page:*150-1

Pos.	Part No.	Description	Prod. No.
1	60070860	Inline Filterstick with O-rings, assy	60058435
1-2	60015274	O-ring Ø005.00xØ1.00 FPM (Viton)	
2	60067217	Cuvette	60066595
3	60053835	Spring for filterstick	
4	00530295	Stub	
5	60070855	Detector Mirror	60056872
6	00219121	Union	
7	00349407	O-ring Ø002.30xØ0.90 NBR 70shore	
10	60070853	Pcb assy Detector PCB	01052229
13	60054130	Spring	
14	60053831	Membrane	
16	60055419	Valve housing	
300	00201152	Allen screw M04.0x016	
301	00373365	Allen Screw M02.5x010	
302	00108480	Allen screw M03.0x016	
303	00710624	Allen screw	
400	00000554	Washer ø3,2	
401	60054750	Washer ø4,3	
500	60064470	Cable Detector to Main Board UL	



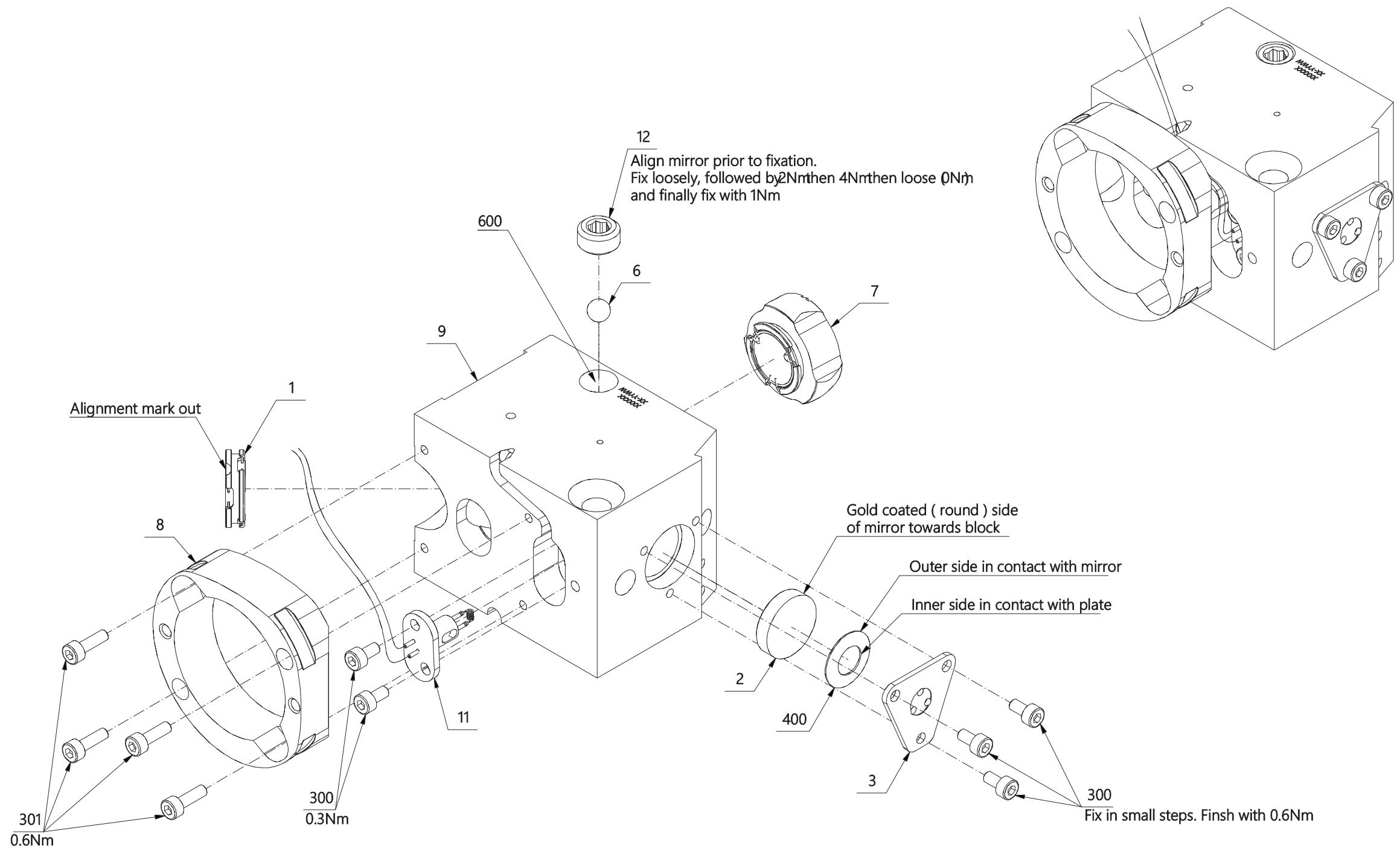
60062041 Doc. Rev:09 Doc.type:95

Fig. 3

5 Optical Housing

Drawing No.: 60065074 *Page: 200-1*

Pos.	Part No.	Description	Prod. No.
11	60065127	IR-Source, Assy	60067150
300	00227348	Allen screw M03.0x006	



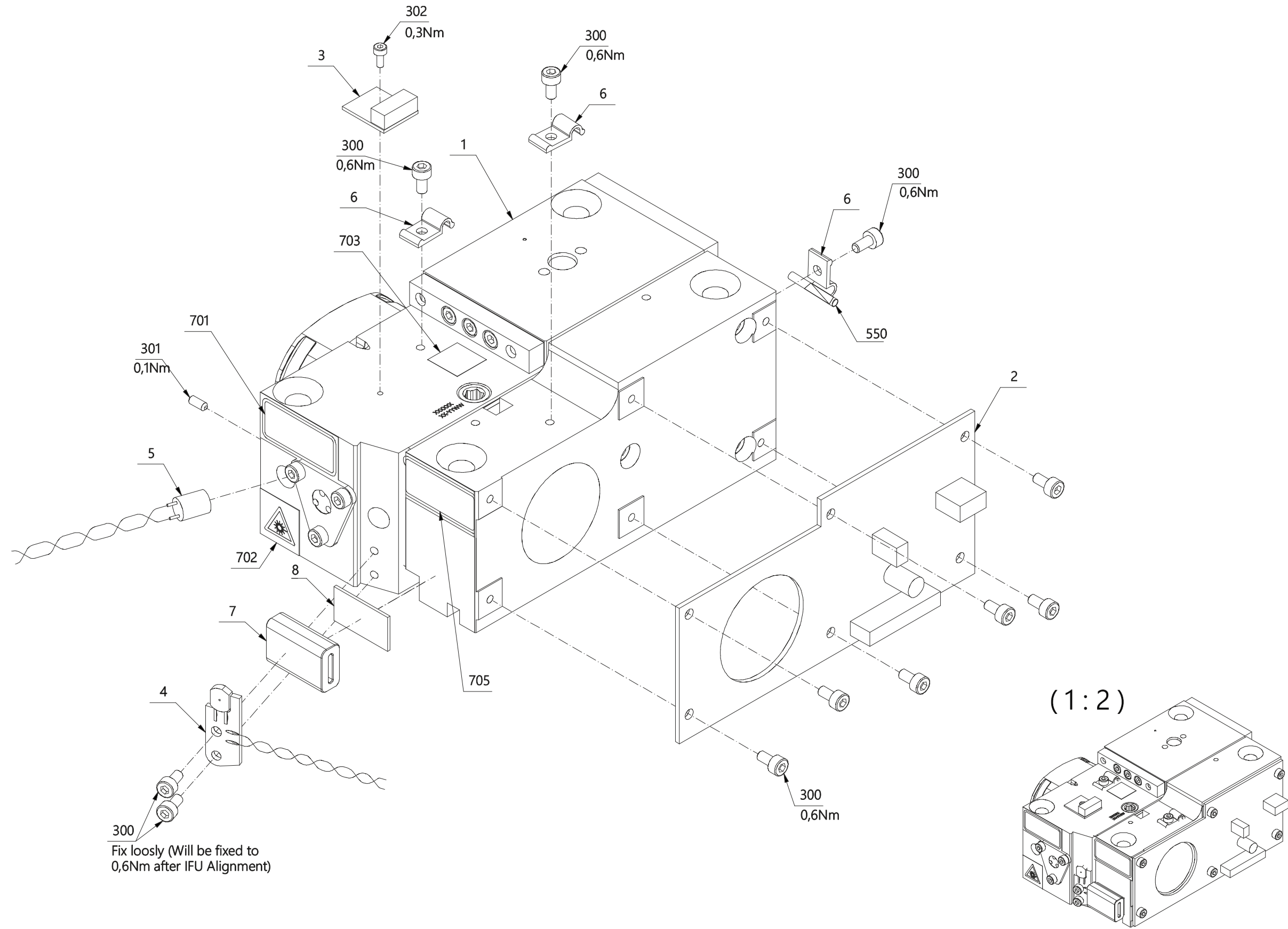
60065074 Doc. Rev:12 Doc.type:95

Fig. 4

6 Interferometer incl PCBs

Drawing No.: 60065140 Page: 300-1

Pos.	Part No.	Description	Prod. No.
2	01052257	Pcb assy IFU Control PCB	
3	01052205	Pcb assy Temp Sensor PCB	
4	60069147	Laser Detector, Assy	60055767
5	60069148	Laser Diode, Assy	60075684
300	00227348	Allen screw M03.0x006	
302	60024840	Allen screw M2x5	



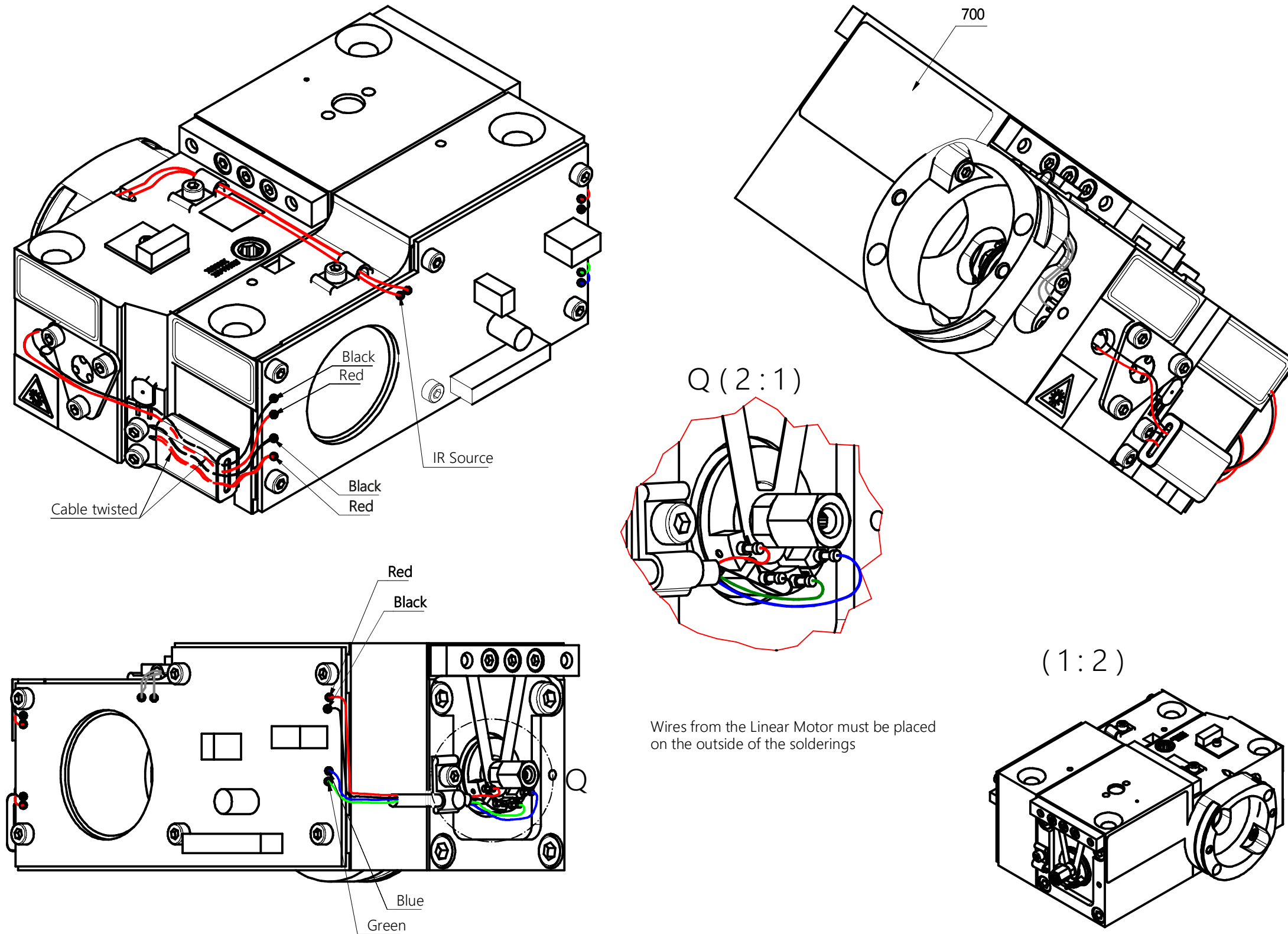
60065140 Doc. Rev:18 Doctype:95

300-1

Fig. 5

7 Interferometer incl PCBs**Drawing No.: 60065140****Page: 300-2**

Pos.	Part No.	Description	Prod. No.
551	60057408	Cable Wire Red	
552	60057409	Cable Wire Black	
553	60057410	Cable Wire Blue	
554	60057411	Cable Wire Green	



60065140 Doc. Rev:18 Doctype:95

300-2

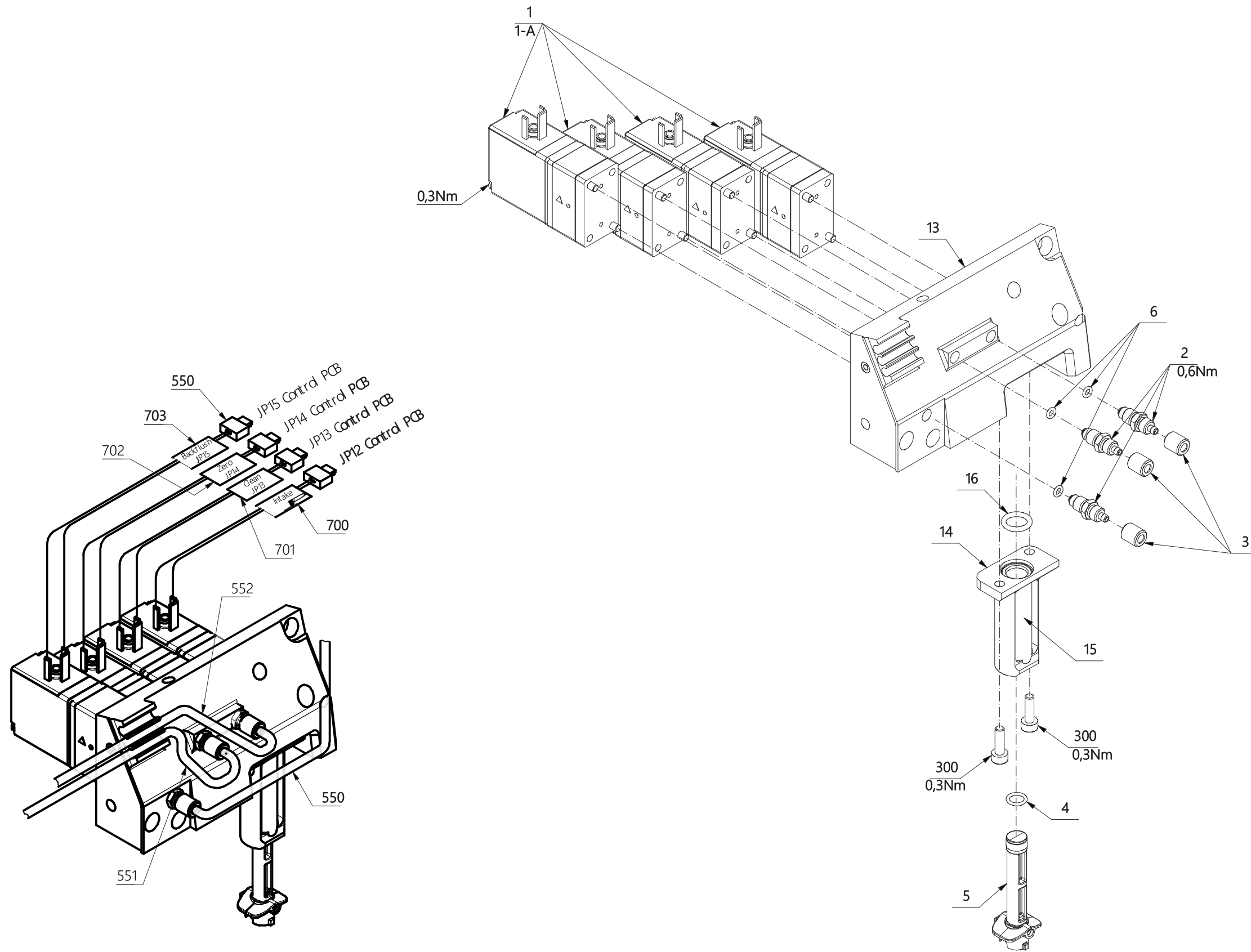
Fig. 6

8 Pump Manifold

Drawing No.: 60062507

Page: 400-1

Pos.	Part No.	Description	Prod. No.
1	60062375	Solenoid Valve 2/2	
1-A	60067553	Repair kit valve	
2	00530295	Stub	
3	00219121	Union	
4	60015274	O-ring Ø005.00xØ1.00 FPM (Viton)	
5	60069149	Piston assy	60065776
6	00349407	O-ring Ø002.30xØ0.90 NBR 70shore	
13	60070858	Pump manifold Cpl	60064208
14	60064561	Glass mount f integrated piston pump	
15	60070854	Glass cylinder Ø7.00 f pump	60052421
16	15420074	O-ring ø7.1/ø1.6 FPM 75	
300	00201160	Allen screw M03.0x010	
500	60064824	Cable valve 2/2 way UL	
550	60045808	Tube øø 01.4/03.1 Silicone	00101287
551	60045808	Tube øø 01.4/03.1 Silicone	00101287
552	60045808	Tube øø 01.4/03.1 Silicone	00101287

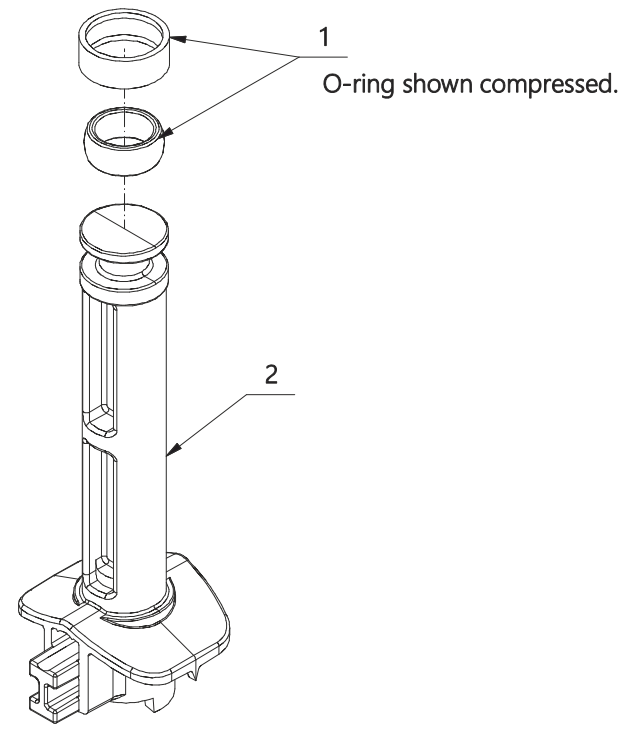


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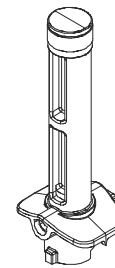
Fig. 7

9 Piston**Drawing No.:****Page: 420-1**

Pos.	Part No.	Description	Prod. No.
1	60052443	O-ring Zurcon double	



(1:1)



Always use special mounting tool to assemble

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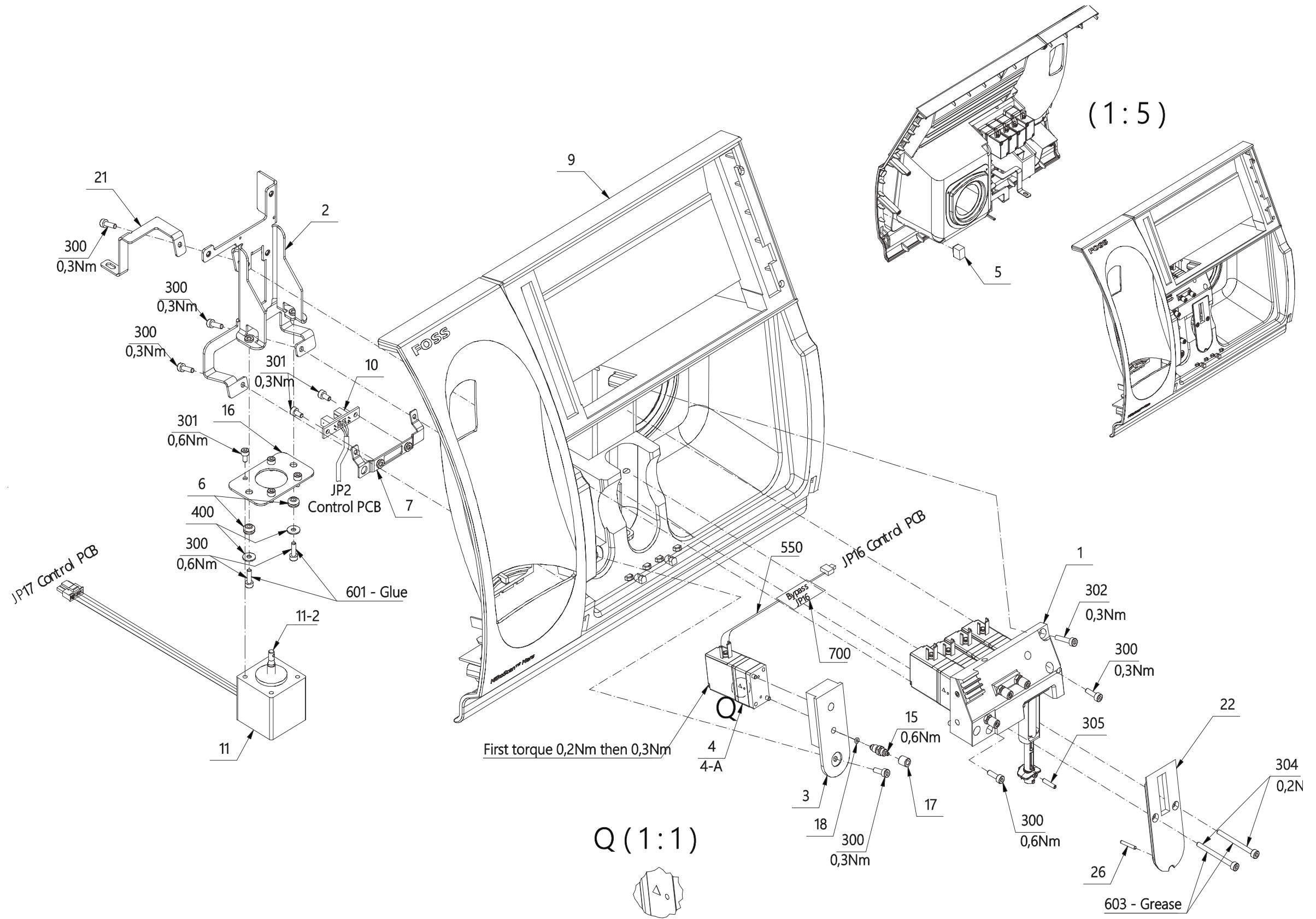
420

Fig. 8

10 Front Cabinet

Drawing No.: 60064302 **Page:** 450-1

Pos.	Part No.	Description	Prod. No.
4	60062375	Solenoid Valve 2/2	
4-A	60067553	Repair kit valve	
9	60067475	Front Cover complete	
10	01052259	Pcb assy Opto Sensor PCB	
11	60066591	Motor with cable	
11-2	60067340	Spindel with connection piece	
15	00530295	Stub	
17	00219121	Union	
18	00349407	O-ring Ø002.30xØ0.90 NBR 70shore	
300	00201160	Allen screw M03.0x010	
301	00227348	Allen screw M03.0x006	
302	00108480	Allen screw M03.0x016	
304	60026664	Allen screw M03.0x035 MC-SS.	
305	60055561	Allen screw M02.5x012 MSP-A4.	
500	60064824	Cable valve 2/2 way UL	



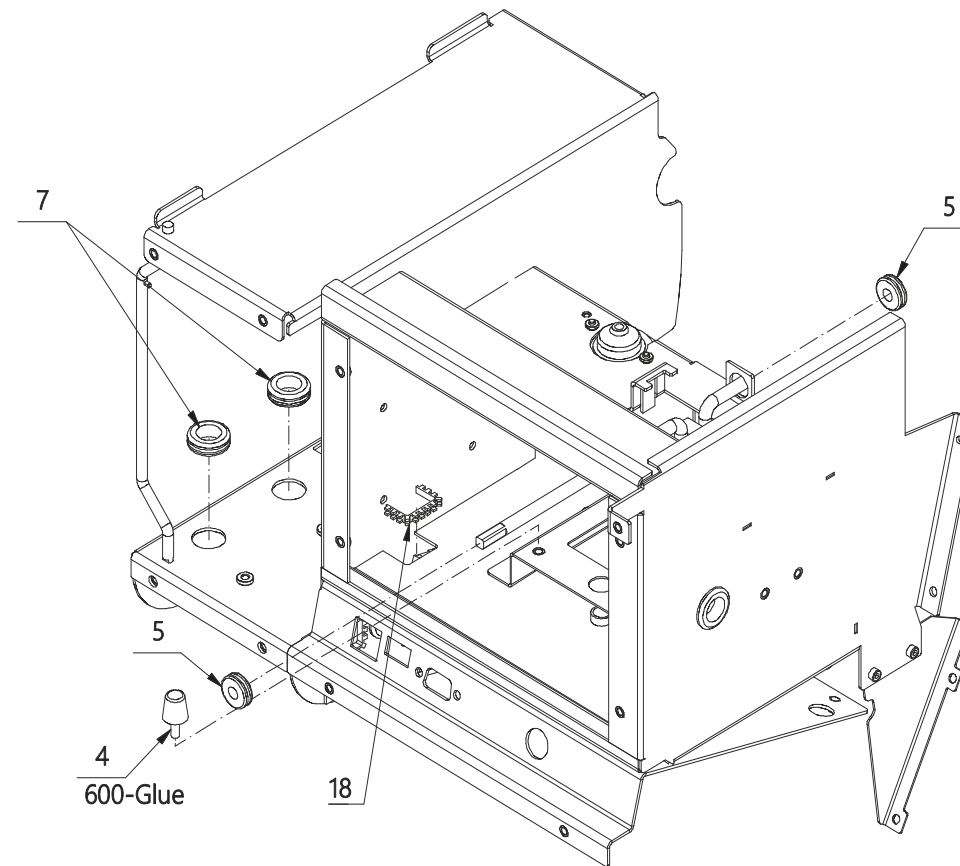
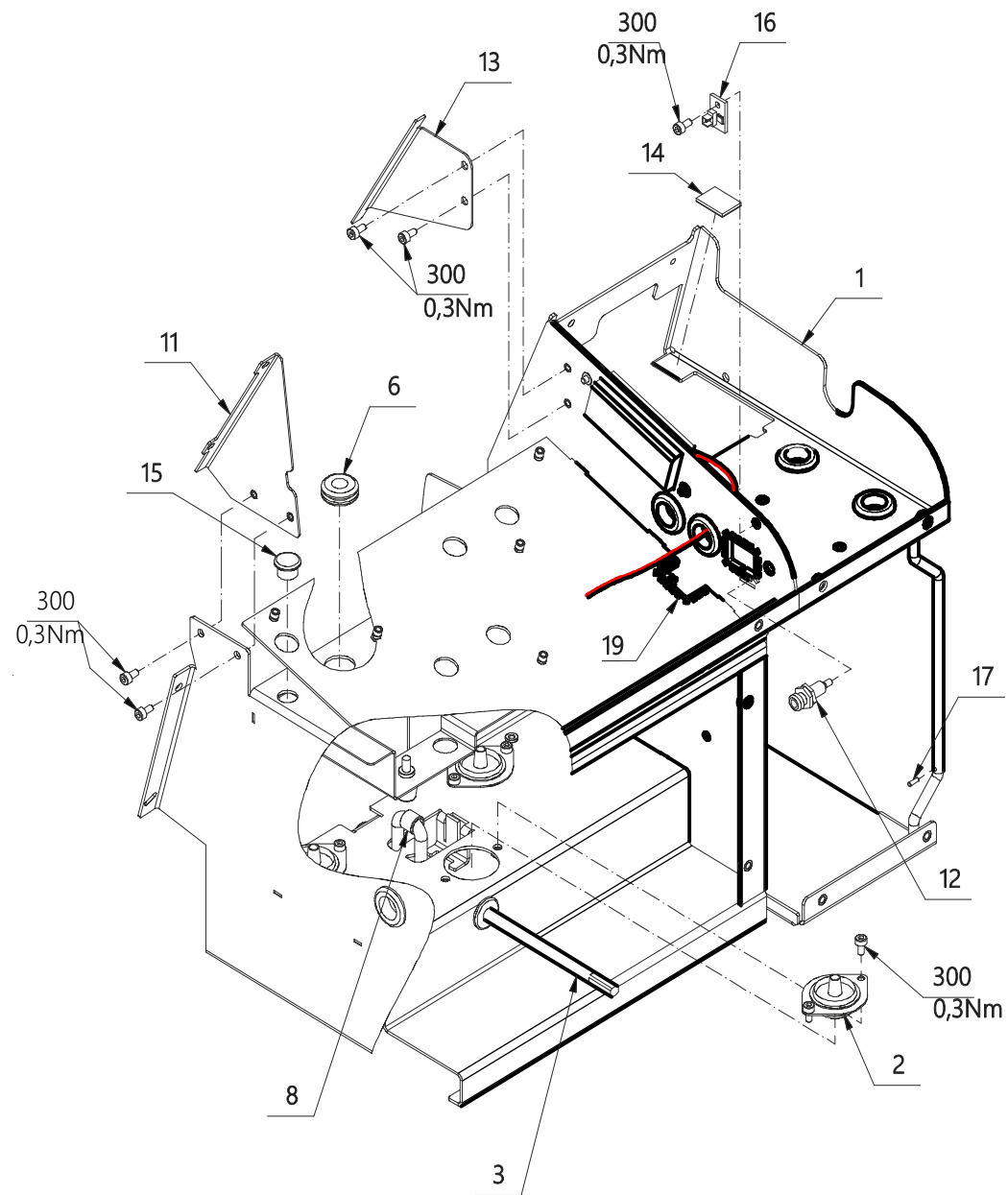
60064302 Doc. Rev:13 Doc.type:95

Fig. 9

11 Sub Frame

Drawing No.: 60062040**Page: 500-1**

Pos.	Part No.	Description	Prod. No.
2	60084805	Damper Lord mount 106PDL1556-2	
16	60048004	Chassis ID	00584698
300	00227348	Allen screw M03.0x006	
400	60057373	Flat washer ø03.2	



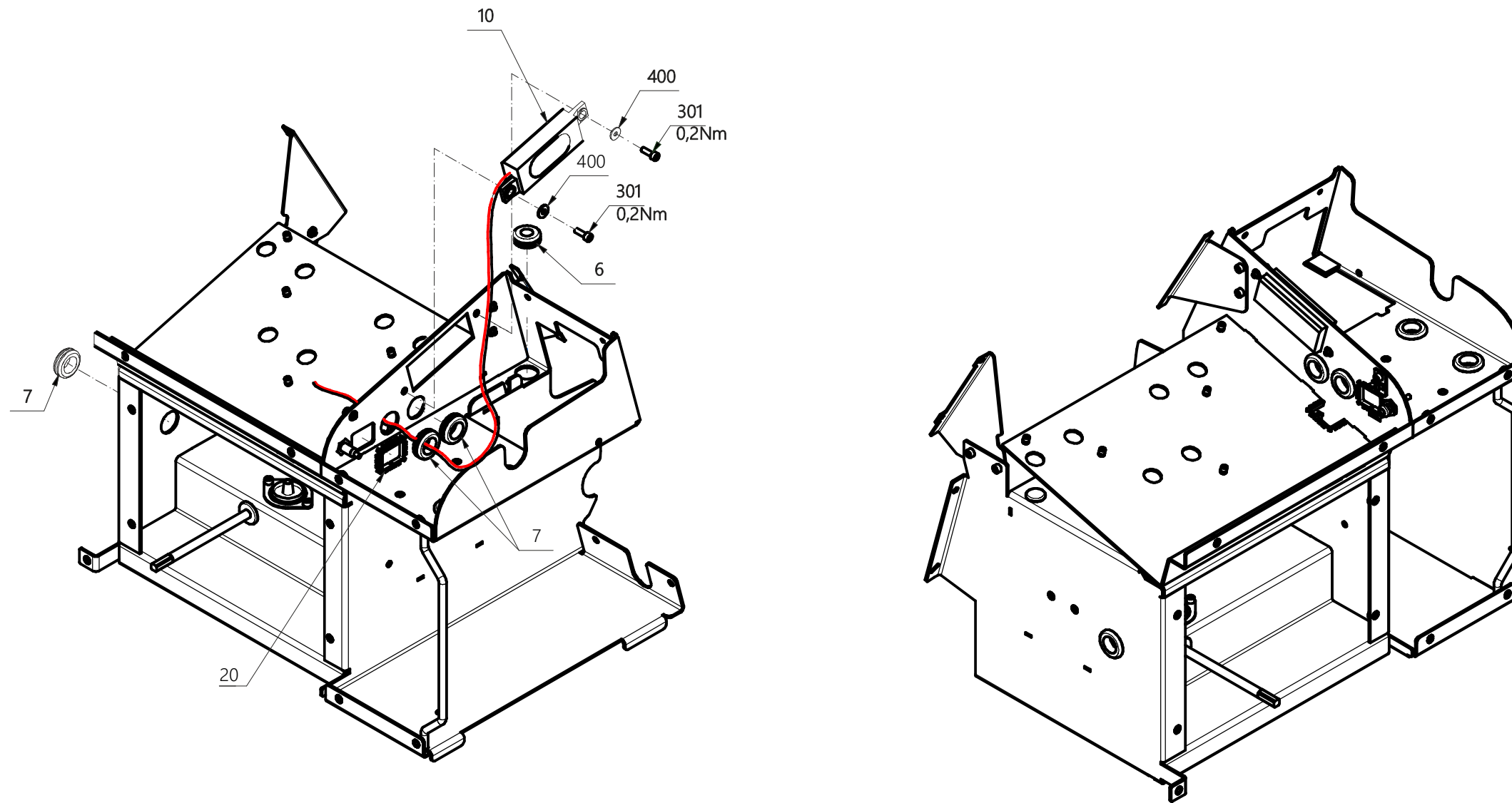
60062040 Doc. Rev:09 Doc.type:95

500-1

Fig. 10

12 Sub Frame**Drawing No.: 60062040** **Page: 500-2**

Pos.	Part No.	Description	Prod. No.
10	60064537	Miniature Speaker	
301	00201160	Allen screw M03.0x010	



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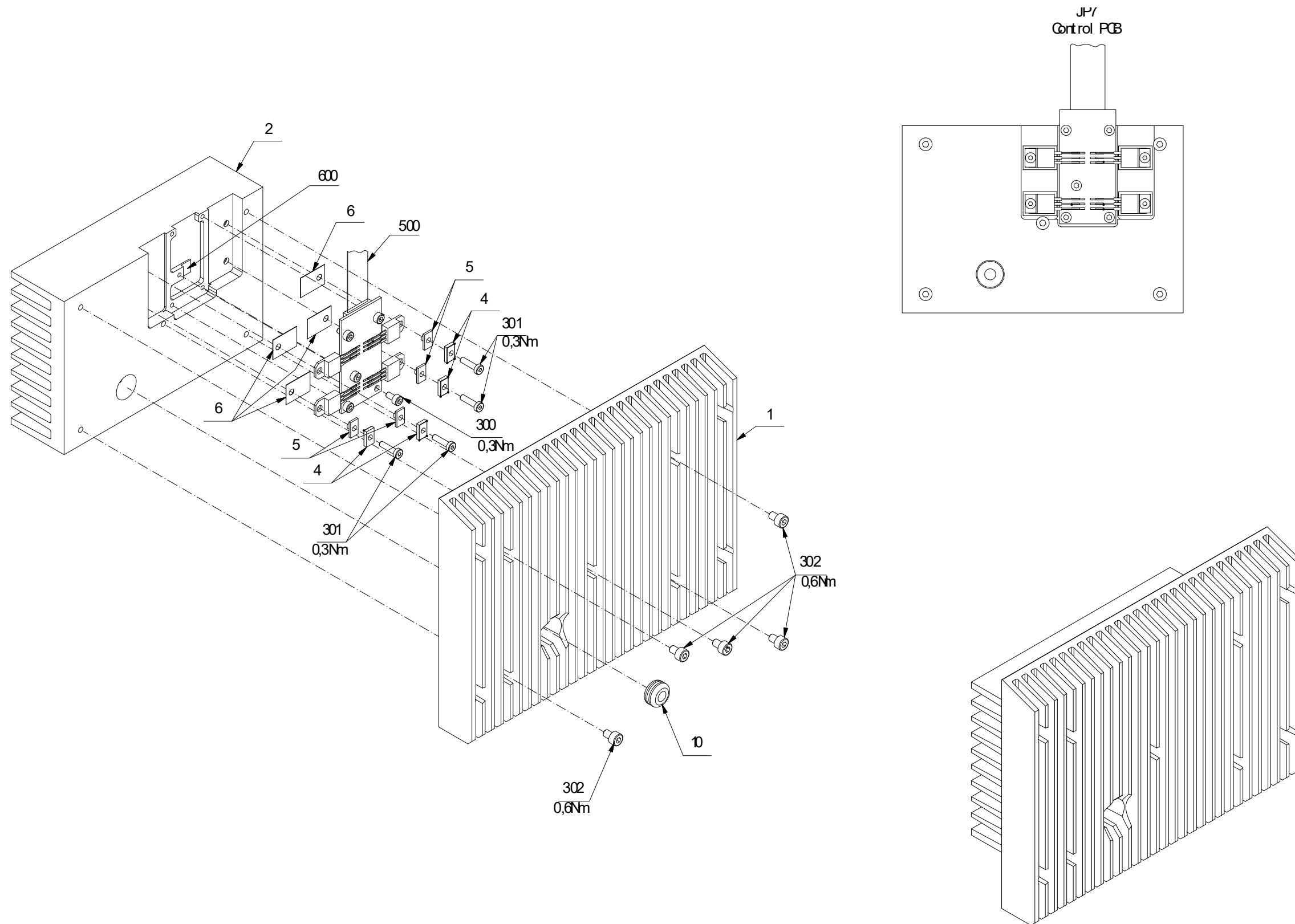
500-2

Fig. 11

13 Heat Sink

Drawing No.: 60063925**Page: 600-1**

Pos.	Part No.	Description	Prod. No.
2	60062096	Heat sink inner	
3	01052207	Pcb assy Sample Heater PCB	
4	00188672	Washer	
5	00282335	Insulator	
6	00496851	Isol. washer	
300	00227348	Allen screw M03.0x006	
301	60029506	Allen Screw w.low head M3x12 MC-ST.	
302	00256701	Allen screw M04.0x006	
500	60064818	Cable 10 pol.	



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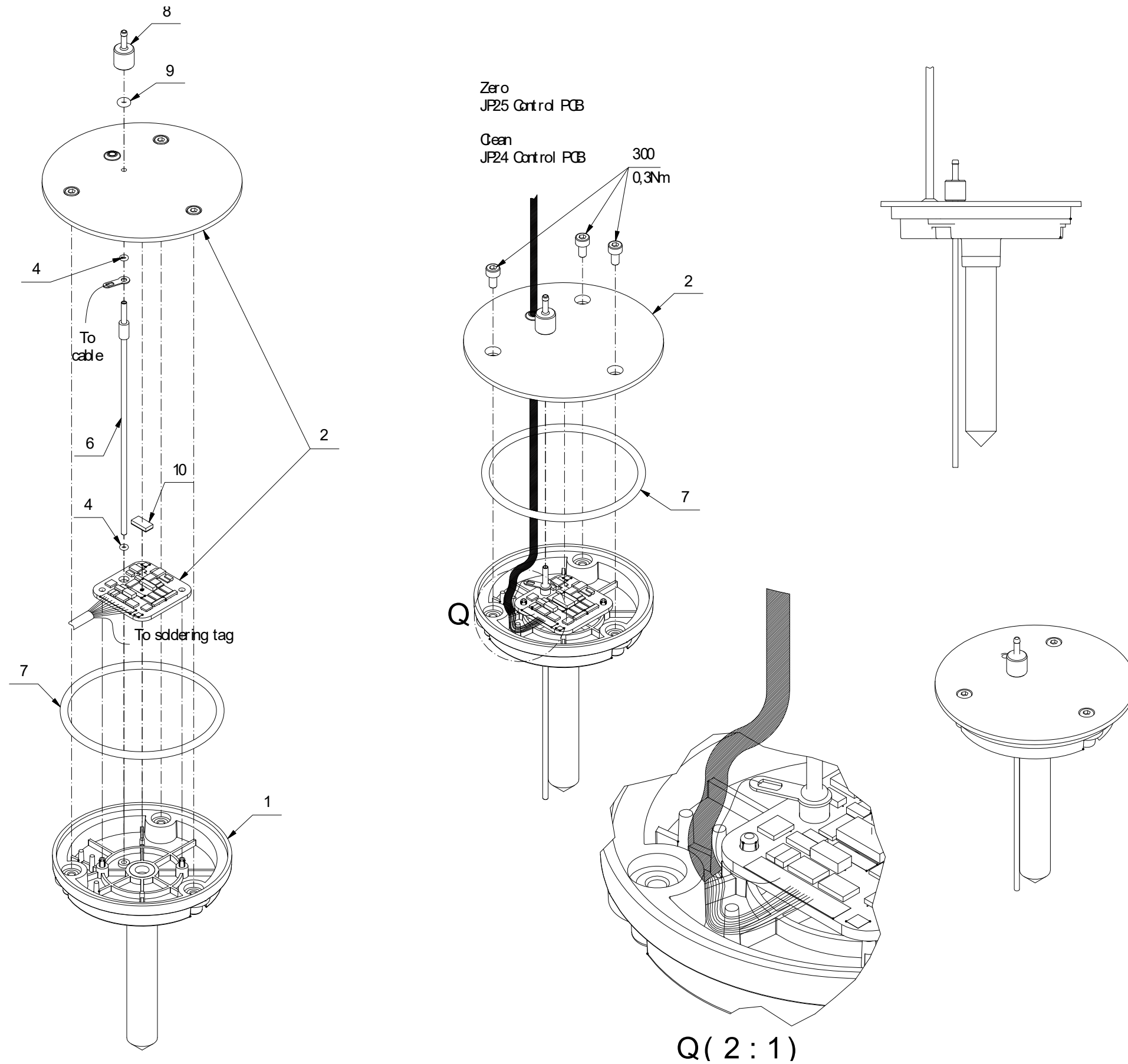
600

Fig. 12

14 Sensor Stick

Drawing No.: 60067622 **Page:** 650-1

Pos.	Part No.	Description	Prod. No.
1	60069595	PCB Box Cpl.	
2	01052379	Pcb assy Liquid Sensor PCB	
7	60073466	O-ring ø058.00xø3.00 NBR 70 shore	



60067622 Doc. Rev:02 Doc.type:95

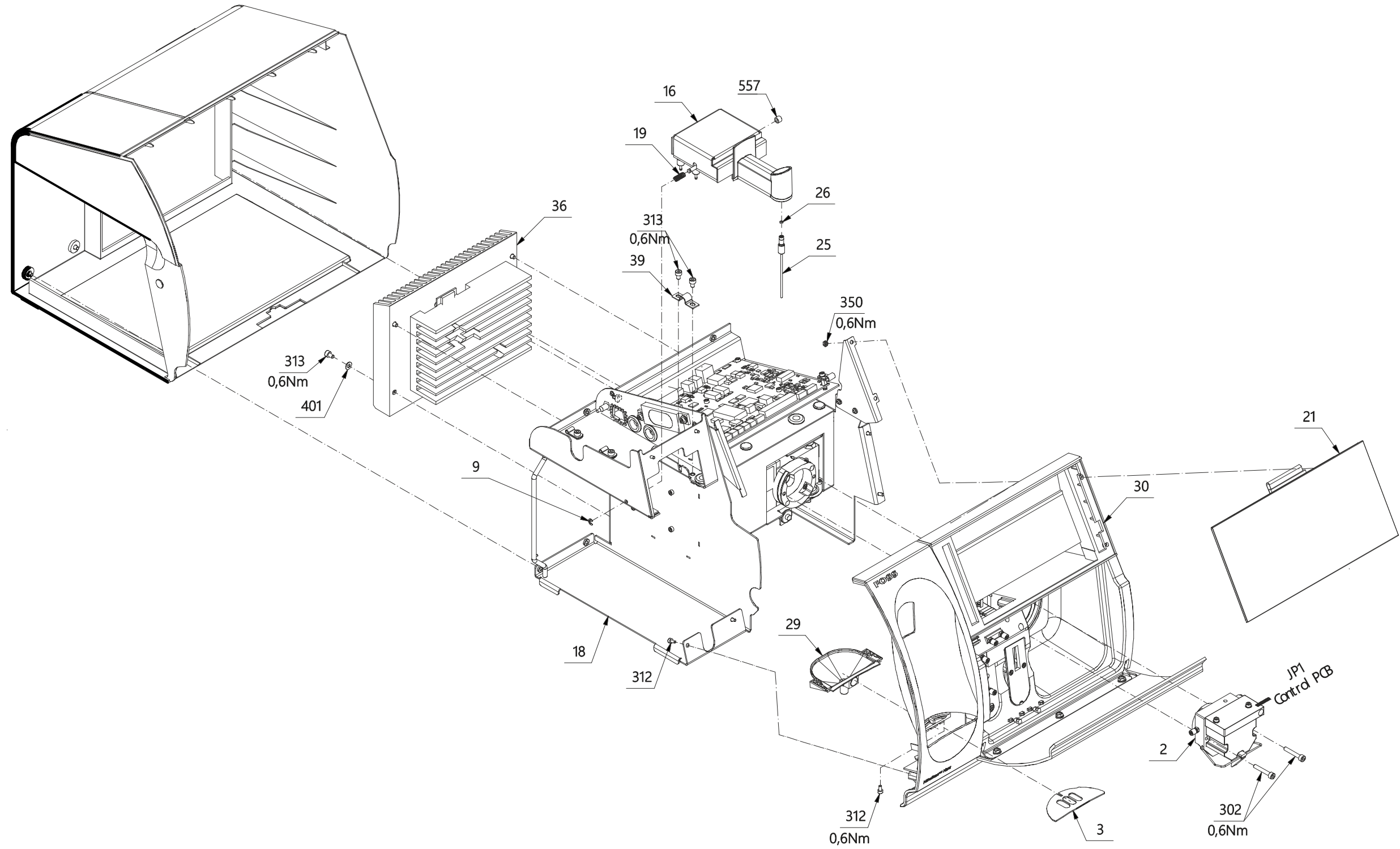
650

Fig. 13

15 Basic Unit

Drawing No.: 60062098**Page: 700-1**

Pos.	Part No.	Description	Prod. No.
3	60086262	Waste grid	
9	00041467	Retaining ring	
21	60067216	Touch and display module PCB/short cable	60076691
25	60080594	Pipette no filter, Cpl.	60080608
26	00451443	O-ring	
29	60086301	Waste Funnel Cpl	
37	60058010	Cable clamp	
312	00227348	Allen screw M03.0x006	



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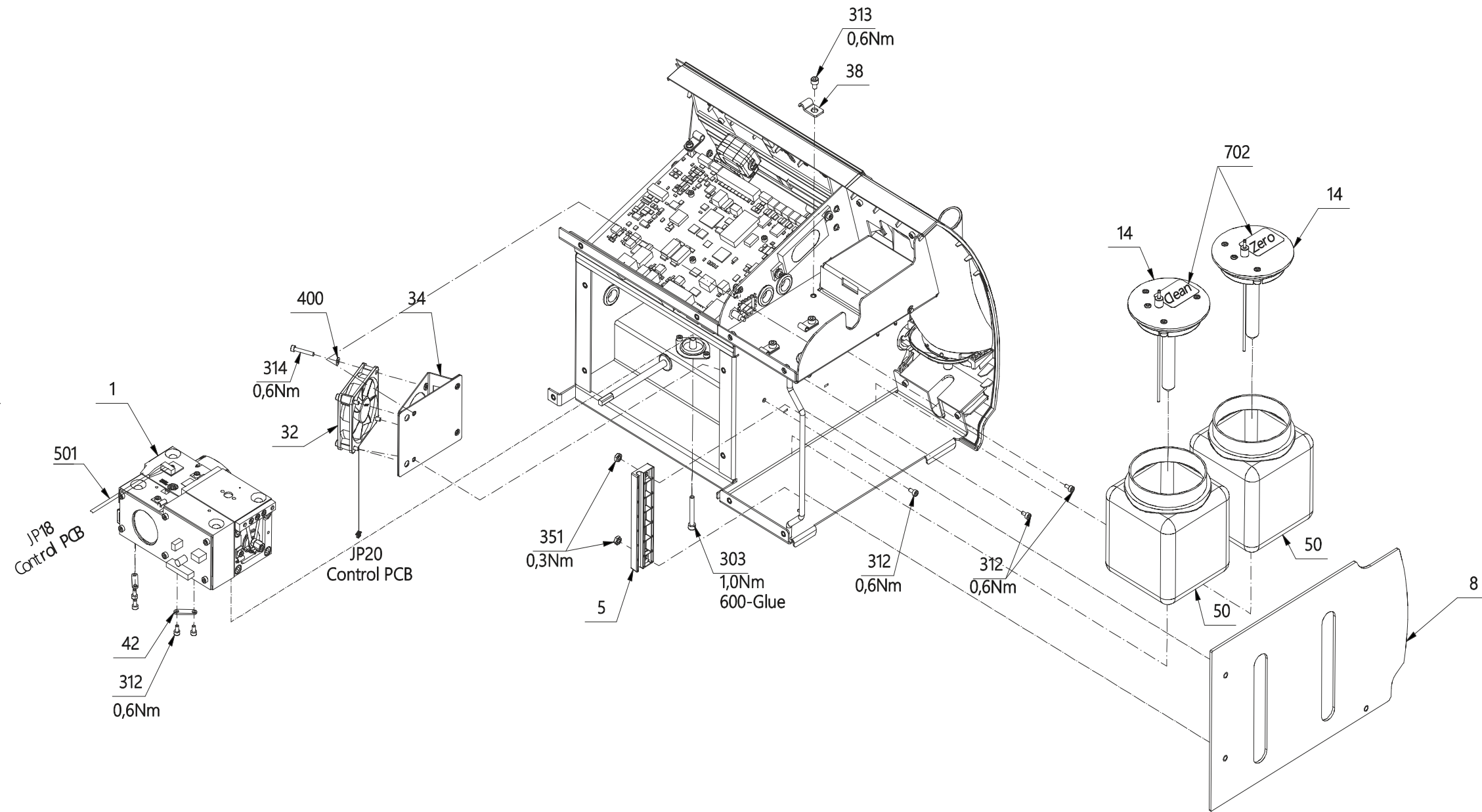
700-1

Fig. 14

16 Basic Unit

Drawing No.: 60062098**Page: 700-2**

Pos.	Part No.	Description	Prod. No.
1	60067218	Interferometer assy incl PCBs	60065140
8	60070852	Side Door Assy	60064541
14	60067622	Sensor Stick for IM assy	
32	60062725	Fan complete	
38	60066816	Cable clamp, 1 leg	
50	60062999	Bottle Square 500mL	
314	00293662	Allen screw M03.0x020	
351	00051433	Nut M4	



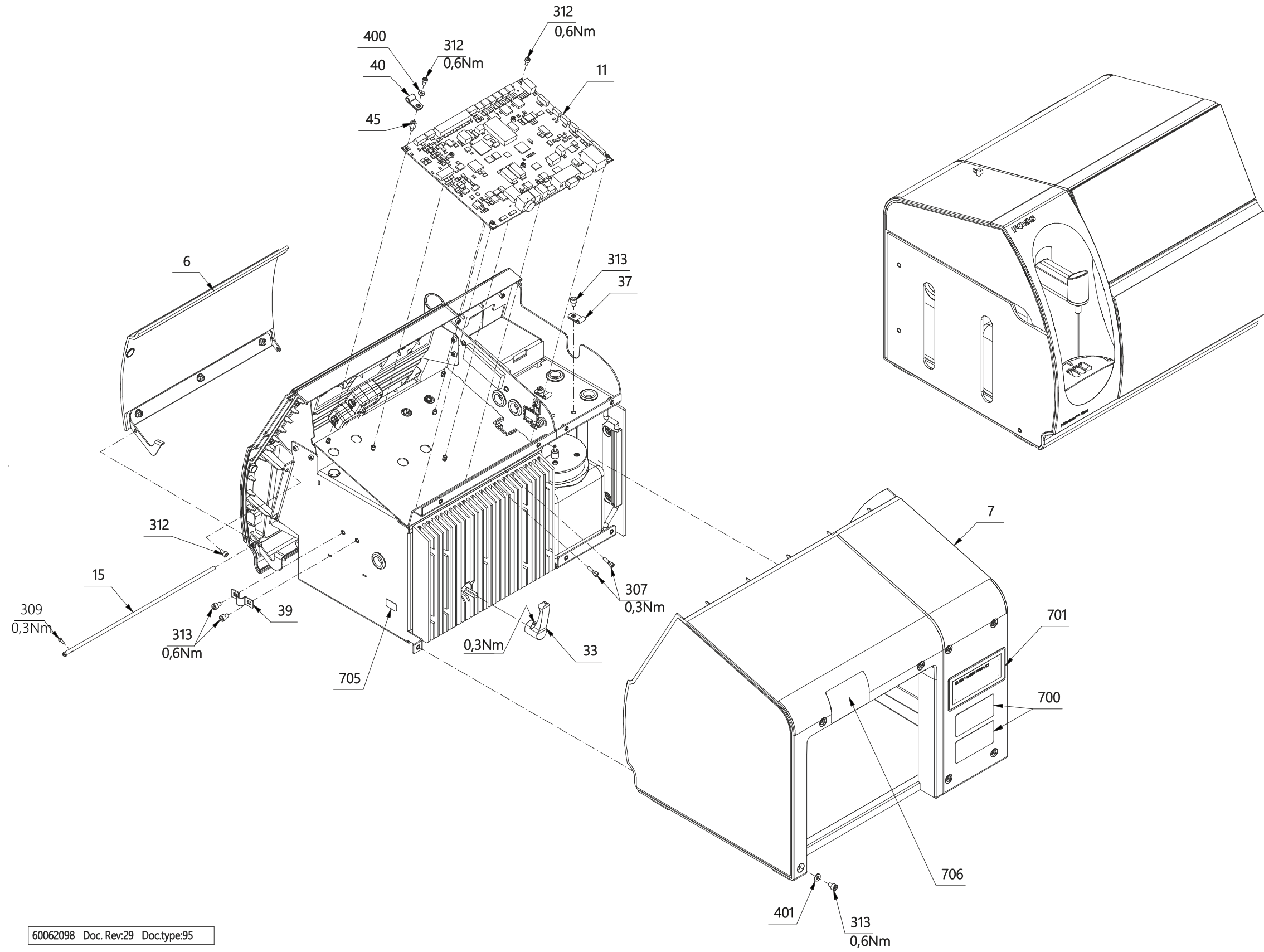
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700-2

Fig. 15

17 Basic Unit**Drawing No.: 60062098****Page: 700-3**

Pos.	Part No.	Description	Prod. No.
6	60070850	Front Lid assy	60062396
7	60070851	Back Cabinet Assy	60062486
11	60080996	Pcb assy Control PCB	01052265
33	60064612	Lever handle	
39	60066908	Cable clamp, 2 legs	
45	60066985	Distance stay	
313	00256701	Allen screw M04.0x006	
400	00296640	Washer	
401	00109397	Washer	



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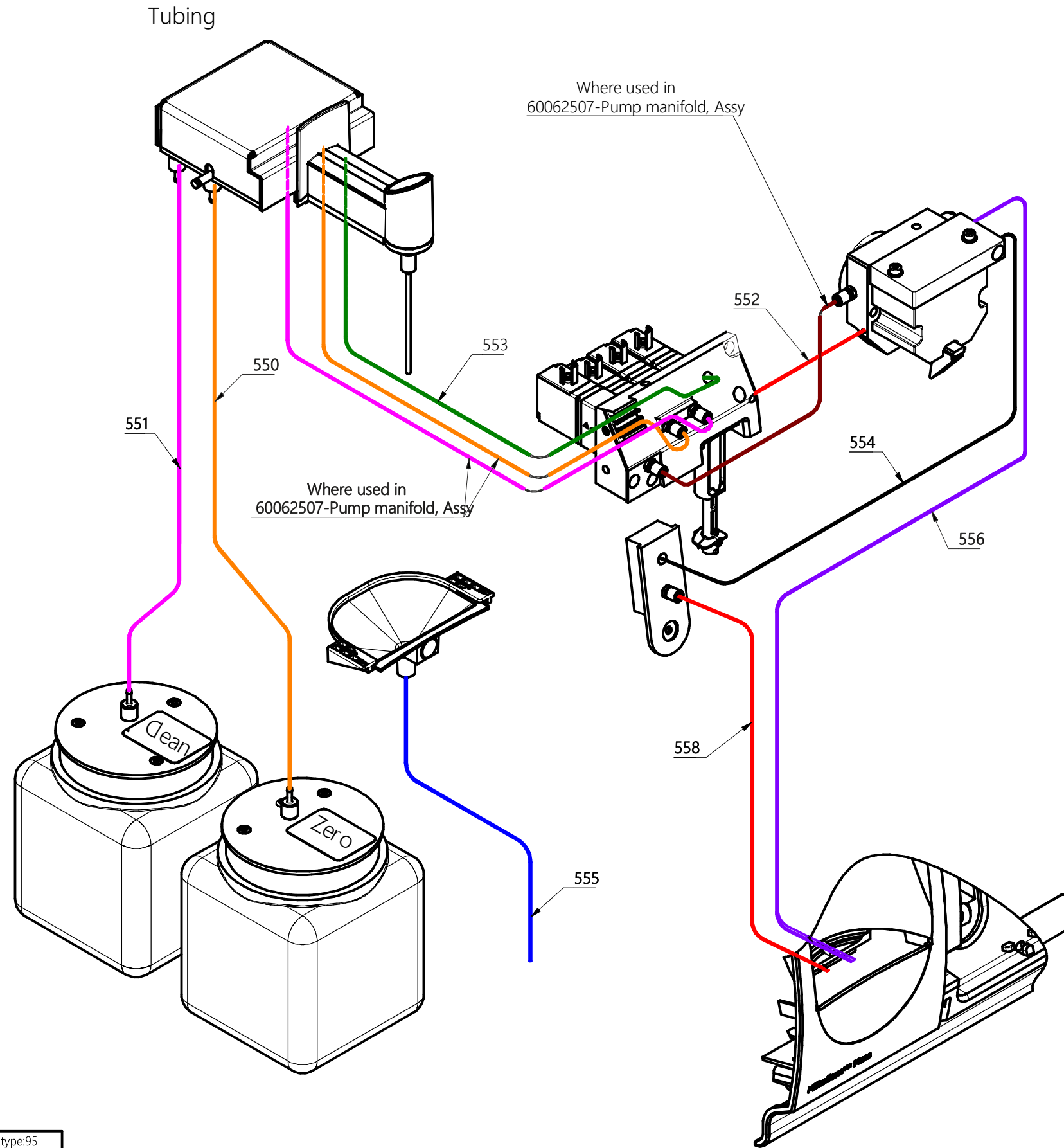
Fig. 16

18 Basic Unit - Tubing

Drawing No.: 60062098

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Pos.	Part No.	Description	Prod. No.
550	60045808	Tube ∅∅ 01.4/03.1 Silicone	00101287
551	60045808	Tube ∅∅ 01.4/03.1 Silicone	00101287
552	60064453	Tube ∅1/8"/∅1,6 PTFE L=130mm, assy	
553	60064457	Tube ∅1/8"/∅1,6 PTFE L=210mm. assy.	
554	60064458	Tube ∅1/8"/∅1,6 PTFE L=300mm. assy.	
555	60068014	Tube ∅∅ 06.0/09.0 Silicone	00115543
556	60045808	Tube ∅∅ 01.4/03.1 Silicone	00101287



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Fig. 17

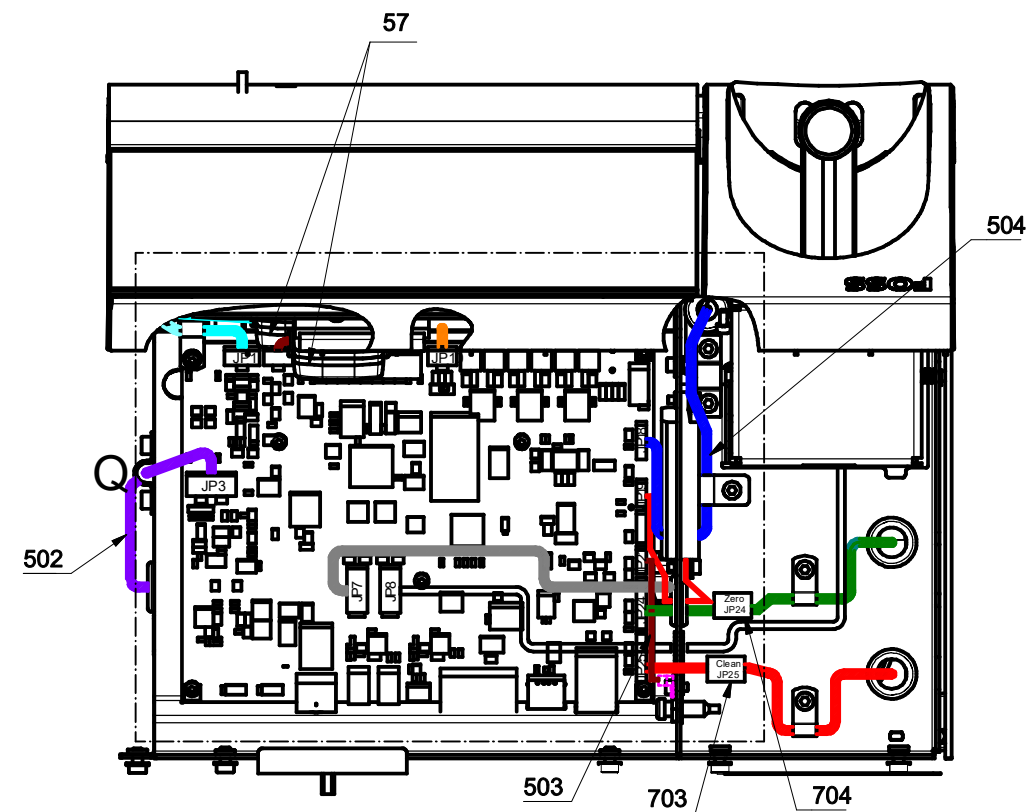
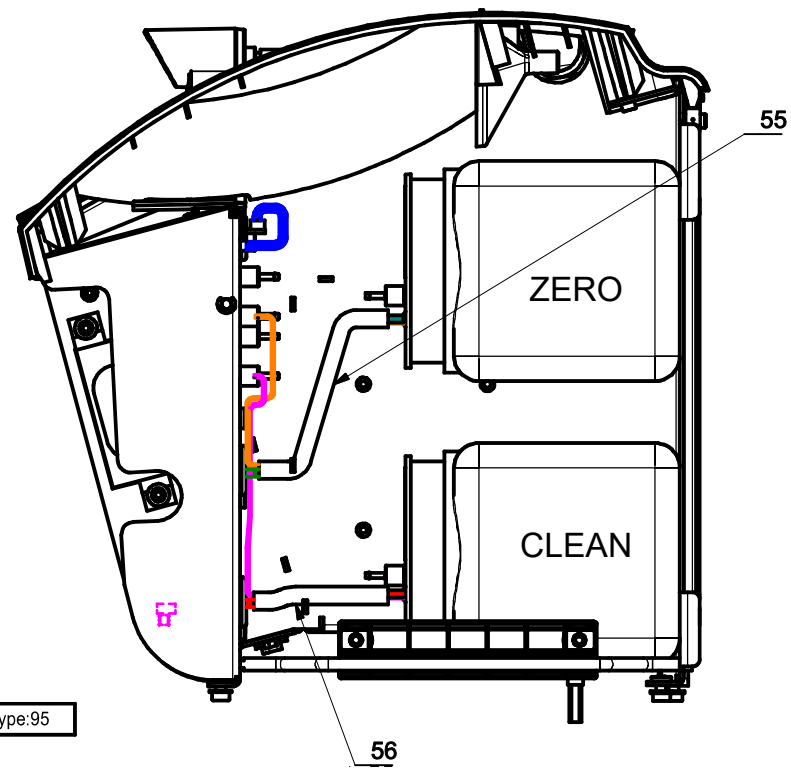
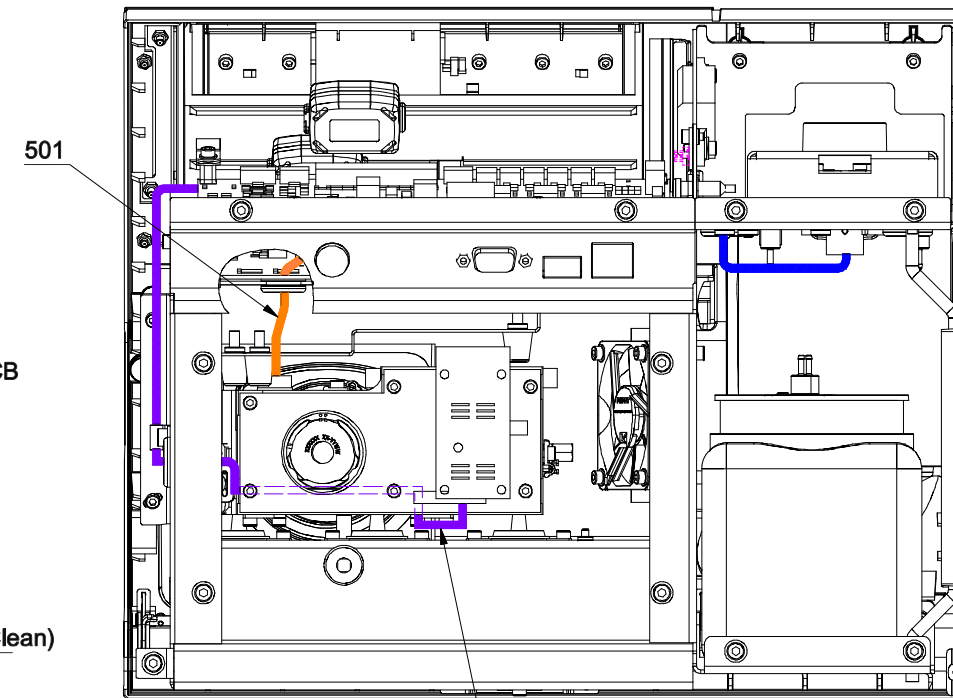
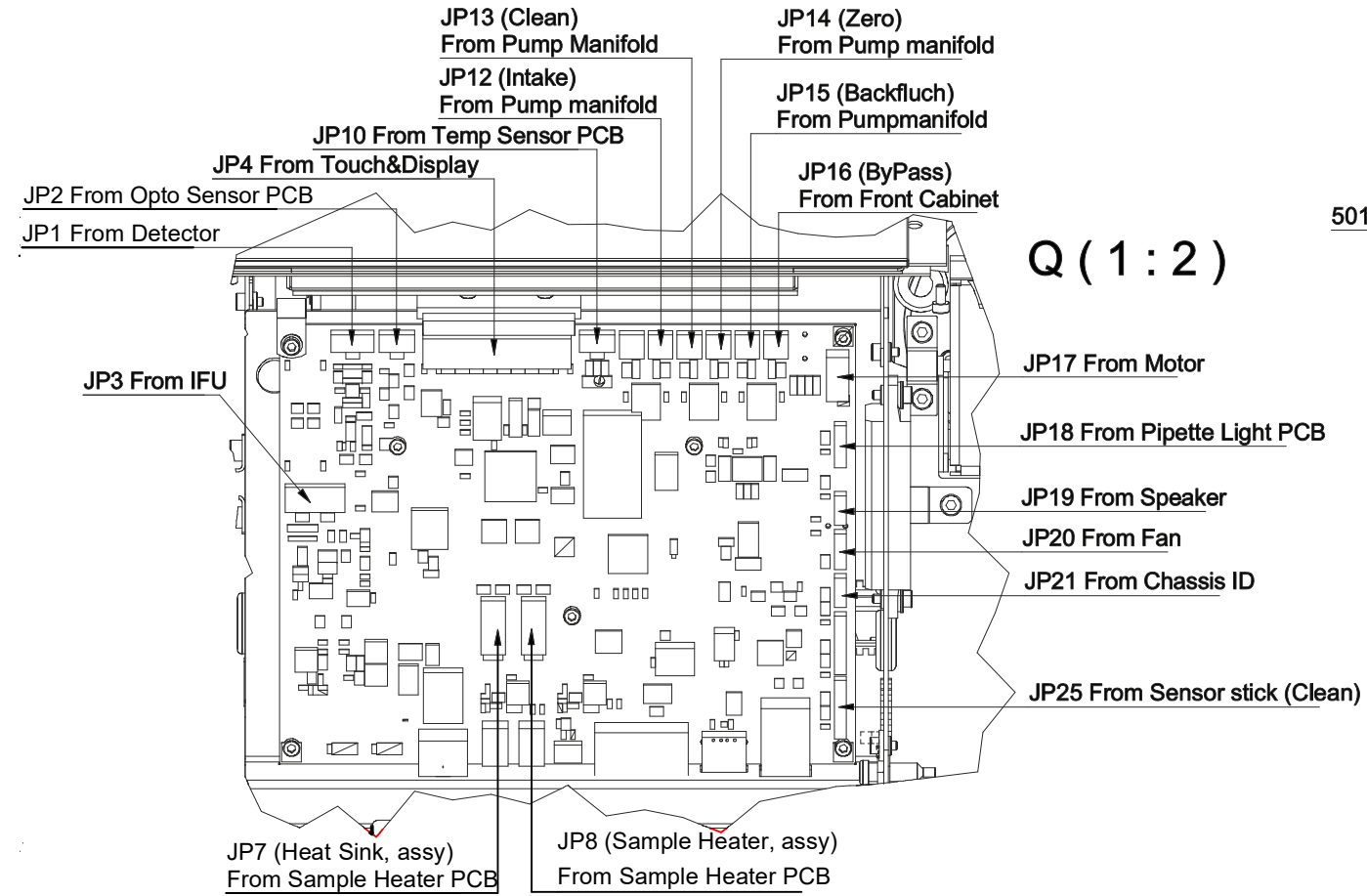
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19 Basic Unit - Connection Diagram

Drawing No.: 60062098**Page: 700-5**

501	60064438	Cable, IFU Temperature UL	
502	60064471	Cable, Main Board to IFU UL	
503	60048020	Cable Chassis ID PCB	60023887
504	60064770	Cable Pip./LED UL	

Connection Diagram



60062098 Doc.Rev:29 Doc.type:95

Fig. 18

700-5

20 Optional Accessories

Drawing No.:**Page: 800-1**

Pos.	Part No.	Description	Prod. No.
1	60066211	Power Supply 12V	
2	00399436	Sample Cups, 30 ml, with caps,	
3	60077183	Milk Filter Bag 50 micron	
4	60079482	Milk Filter Bag 250 micron	

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