

Technical Manual  
2022

# *Infinity*

5409301 | Rev. 02



**Olsen**

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## WELCOME TO INFINITY TECHNICAL MANUAL

Dear technician:

> The main objective of this manual is to facilitate communication between technicians and the factory with regard to the correct identification of parts and components of dental sets.

> The main parts and their components are presented with exploded drawings, showing the smaller parts in detail.

> For correct use of this manual, observe the presentation pattern of the parts and components described in the example below.







> Additional supporting documents can be found in the download section of the website.

The main title bar has links to facilitate navigation between pages. Touch or click on the house icon to return to the table of contents and over the title to return to the main page of the section.



Return to the main page of the section  
Return to the table of contents

**Indicative symbols**

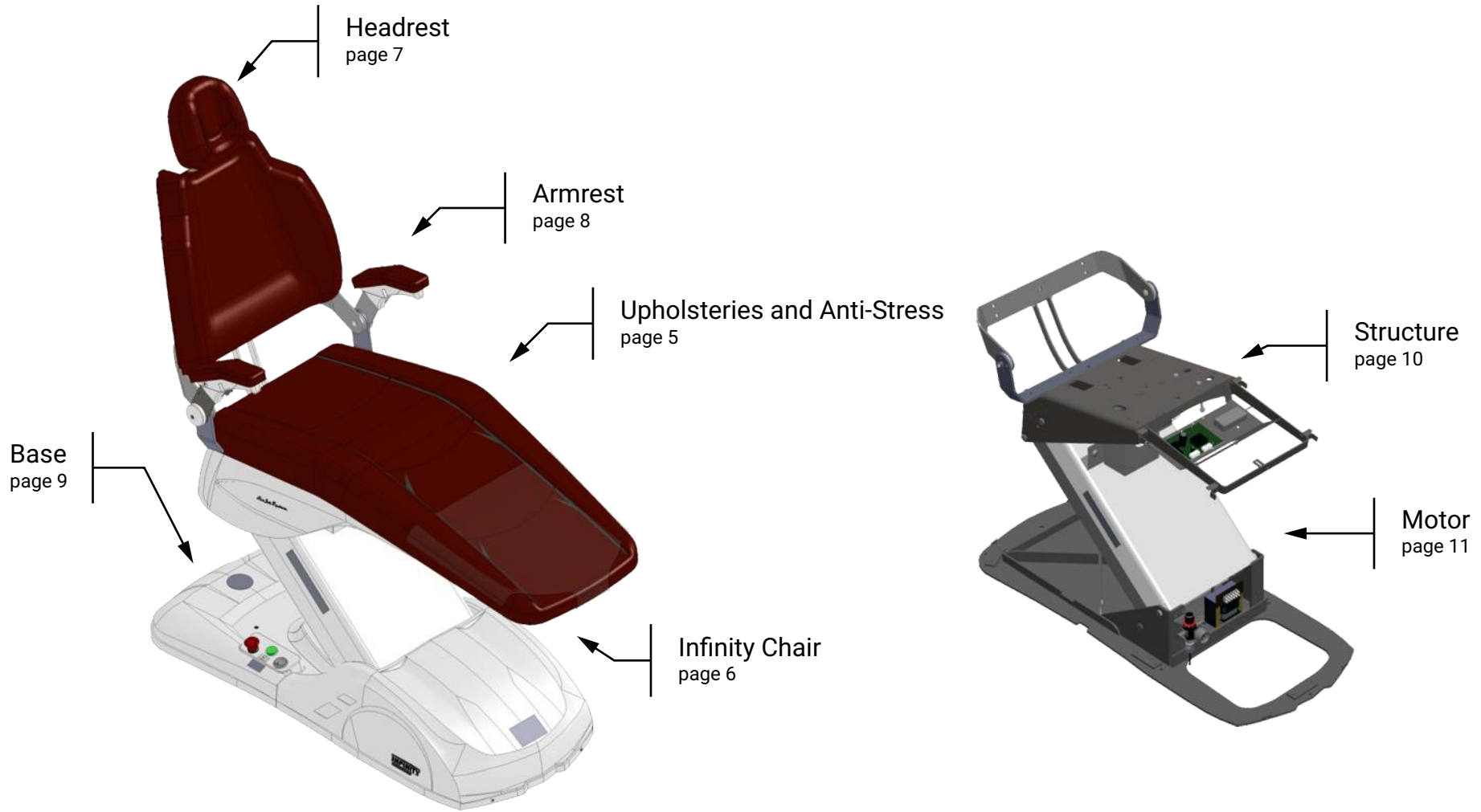
-  - Optional item
-  - Note
-  - Stainless Steel Component
-  - BLACK color component
-  - WHITE color component
-  - BLACK or WHITE color component (specify color when ordering)

Part drawing  
Exploded part drawing  
Part name  
Part code

Steady Armrest		1234567
1	Swivel Right Armrest Cover	0000000
2	Structure for Steady Armrest	0000000
3	Cover for Armrest	● 0000000   ○ 0000000
4	Upholstery for Armrest	● 0000000

Color or material variation  
Component code  
Component description  
Reference number

# INTRODUCTION TO THE PARTS PRESENTED IN THIS SECTION



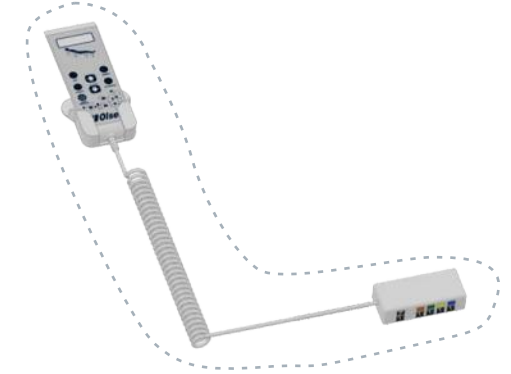
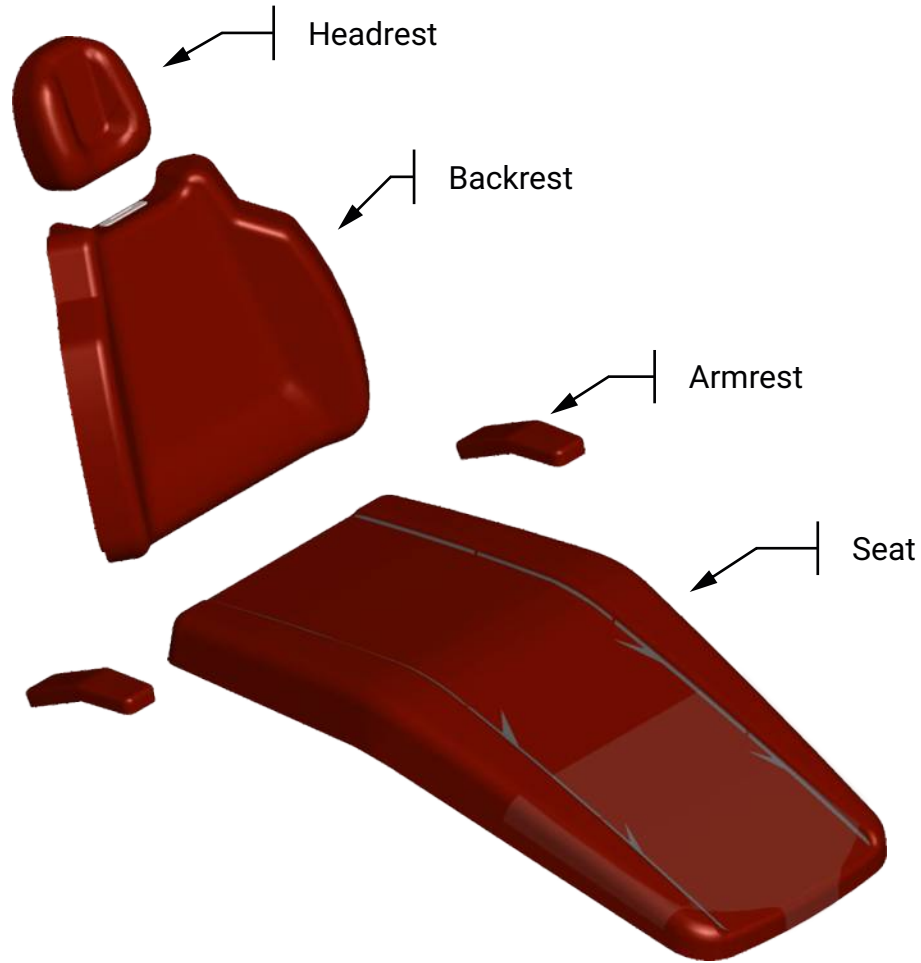
UPHOLSTERY

ANTI-STRESS

Command for Anti-Stress System 2200792

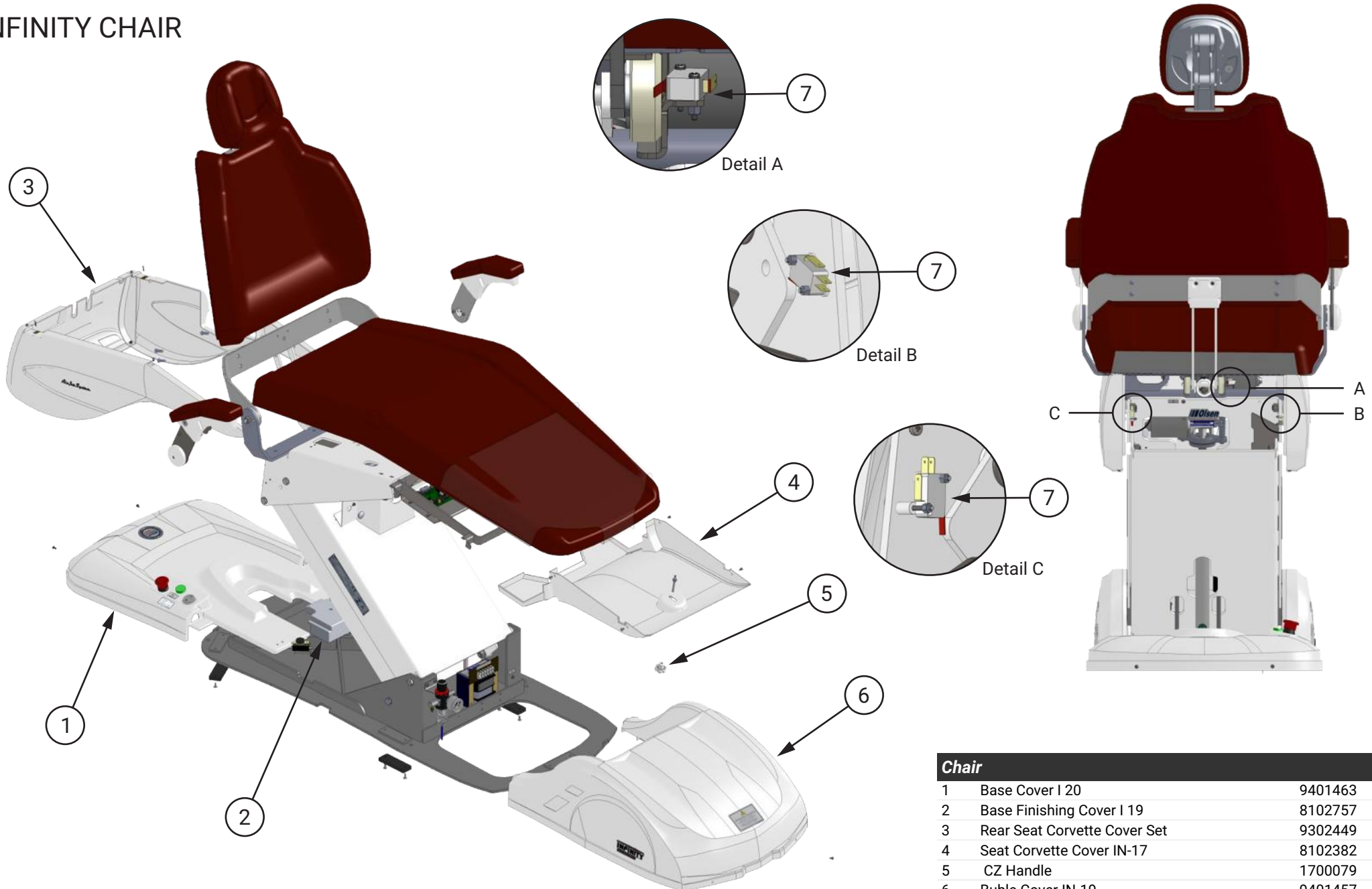
Leather Upholstery Colors		
Description	Ref	Code
Leather W Wine	CRVINHO	4100832
Leather W Black	CRPRETO	4100832
Leather W SW4 Brown	CRMARRO	4100832
Leather W Hilux Gray	CRCINZA	4100832
Ivory Beige Leather	CRBEGE	4100832
Royal Blue Leather	CRAZULR	4100832

PVC Upholstery Colors		
Description	Ref	Code
White 3D	BRAN 3D	4100699
Gray 3D	CINZ 3D	4100704
Black 3D	PRET 3D	4100708
Cappuccino 3D	CAPC 3D	4100706
Pearl 3D	PERL 3D	4100705
Wine 3D	VINHO 3	4100795
Royal Blue 3D	AZUL 3D	4100794
Royal blue	AZUL MH	4100715
Blue Fact	AZUL FC	4100713
Gray Fact	CINZ FC	4100710
Citrus Green	V 11DVC	4100756
Emerald	ESMERAL	4100711
Champagne	CHAMPAG	4100709
Sepia	SEPIA	4100776
Coffee	CAFE	4100771
Red	VERMELH	4100700
Wine	VINHO	4100701
Light green	VER 5DV	4100755
Pink 3D Mini Bling	ROSA 3D	4100838



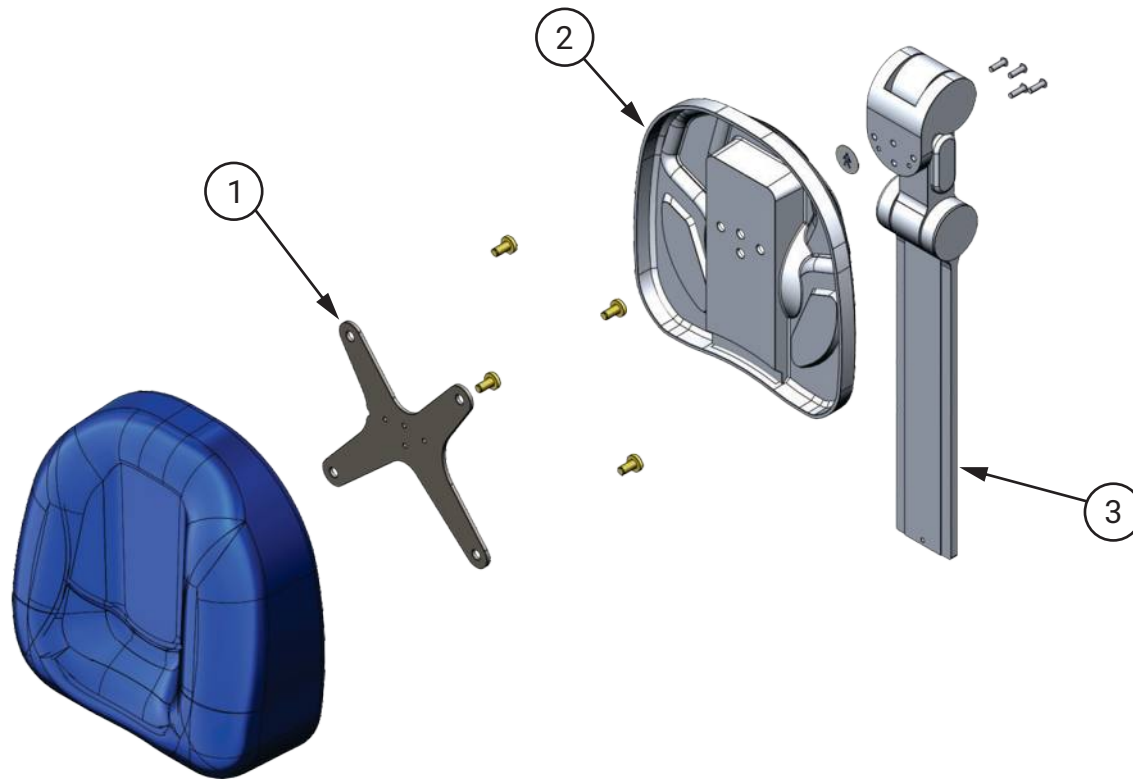
Upholstery	PVC	Leather	Anti-Stress + PVC	Anti-Stress + Leather
Headrest	4100796	9401313	-	-
Armrest	9300061	9401470	-	-
Seat	9401375	9401252	9401374	9401251
Backrest	9600682	9600684	9600681	9600683

INFINITY CHAIR



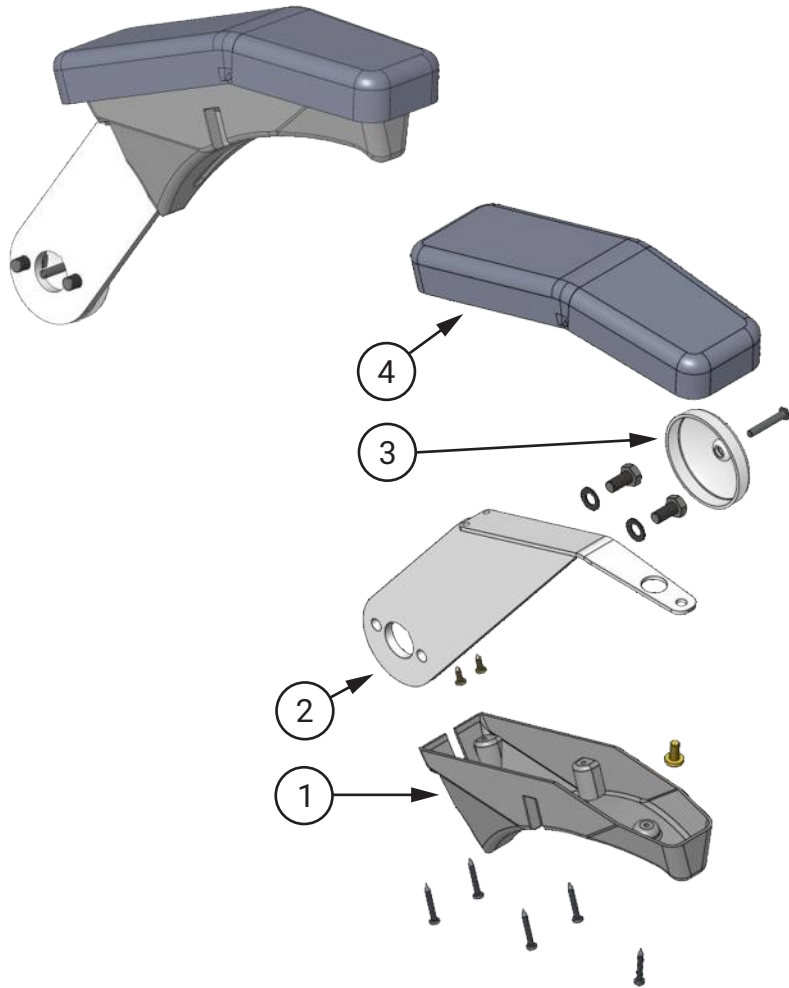
Chair		
1	Base Cover I 20	9401463
2	Base Finishing Cover I 19	8102757
3	Rear Seat Corvette Cover Set	9302449
4	Seat Corvette Cover IN-17	8102382
5	CZ Handle	1700079
6	Buble Cover IN-19	9401457
7	Micro Switch BR15IL - QACS	2200277

PRESS CLICK HEADREST



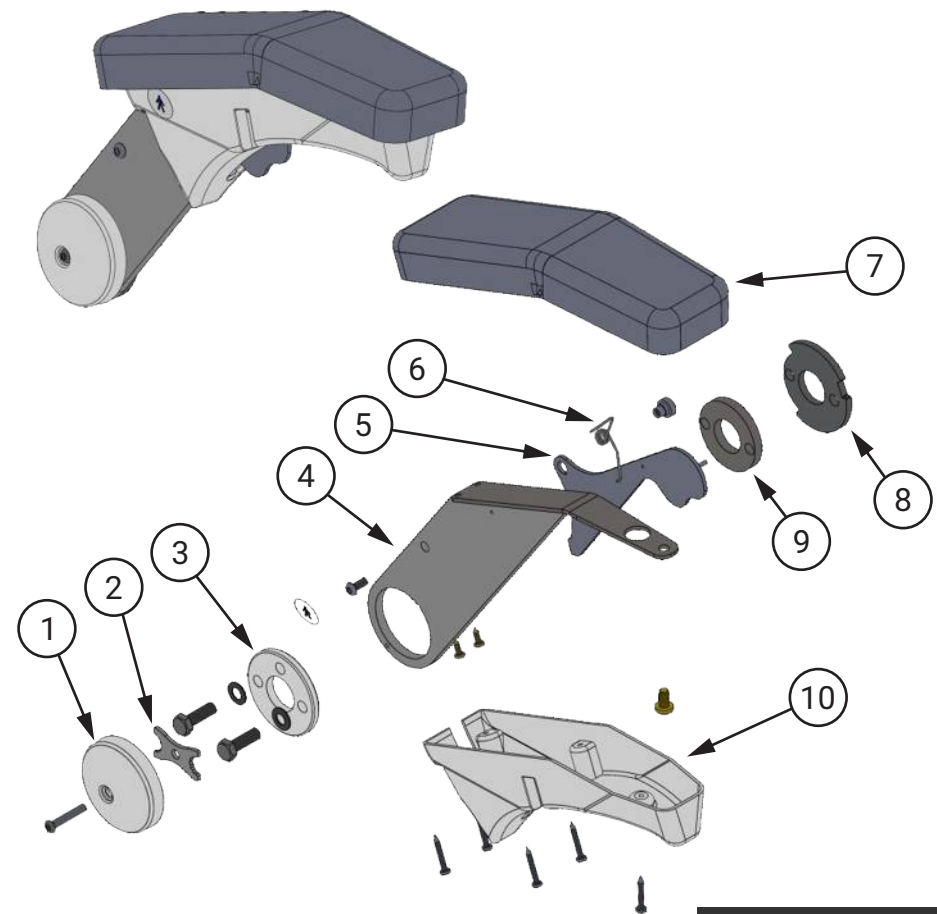
<b>Press Click Headrest</b>		970020008
1	IN 17 Headrest Reinforcement Plate	8002845
2	IN 17 Headrest Cover	8102343
3	Headrest Articulated Rod - Metal Rack	999500041

## STEADY ARMREST



	Right-handed	Left-handed	
<b>Steady Armrest</b>			
1	Steady Right Armrest Cover	8102673	8101241
2	Steady Armrest Structure	9302393	
3	Cover for Armrest	8101561	
4	Upholstery for Armrest	9300061	

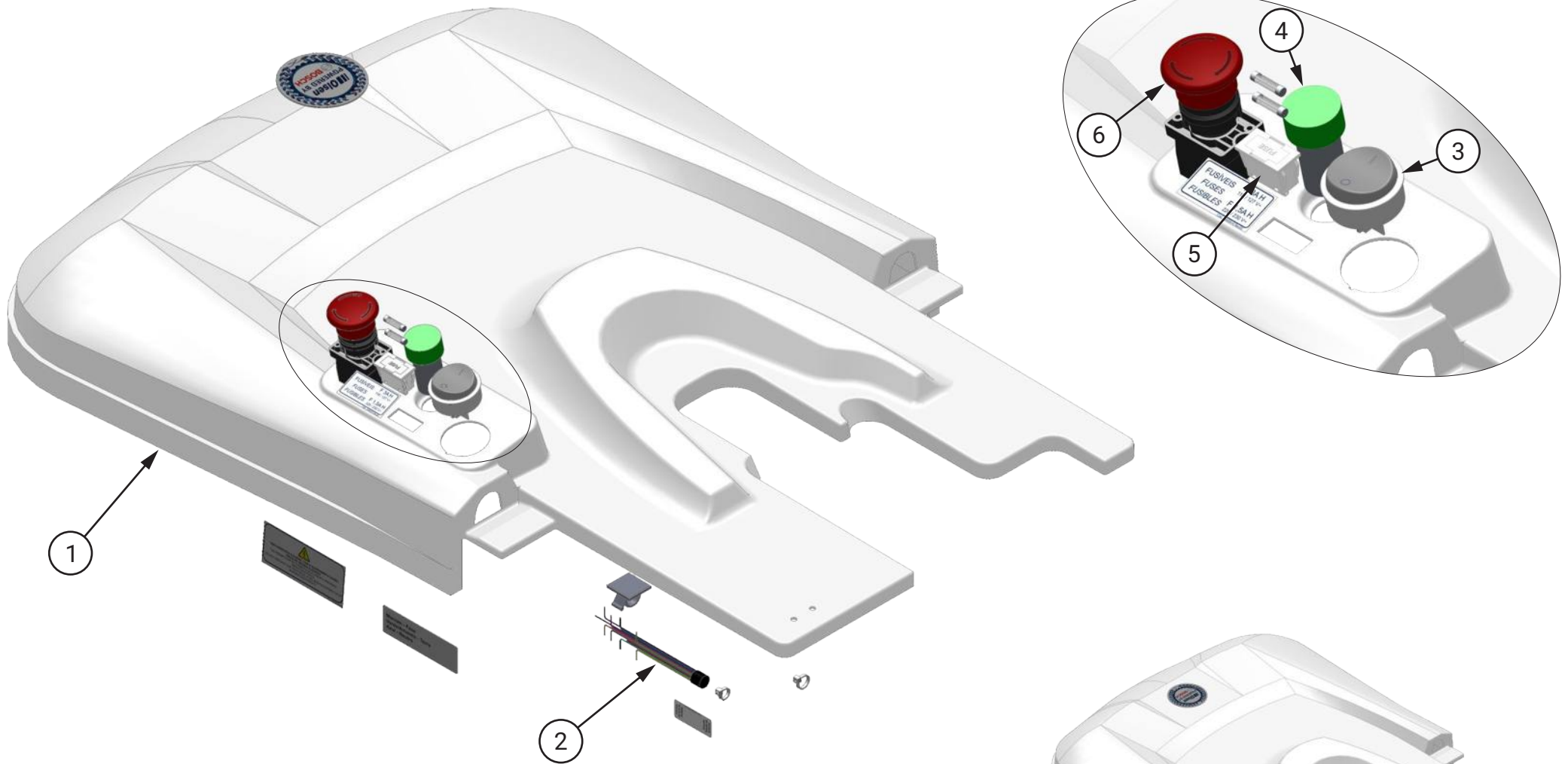
## SWIVEL ARMREST



	Right-handed	Left-handed	
<b>Swivel Armrest</b>			
1	Swivel Armrest Screw Lock	8002699	
2	Swivel Armrest Fixed Flange	8102342	
3	Swivel Armrest Structure	9302394	
4	Long Arm Trigger	8003197	
5	Trigger Spring	5200069	5201724
6	Upholstery for Armrest	9300061	
7	Swivel Armrest Flange	8002930	
8	Inner Armrest Flange	8002838	
9	Swivel Right Armrest Cover	8102672	8101147
10			

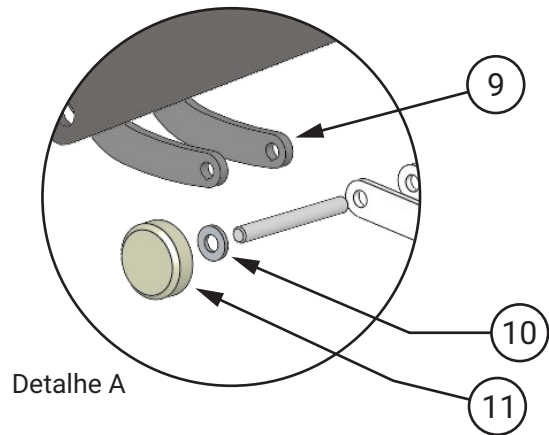
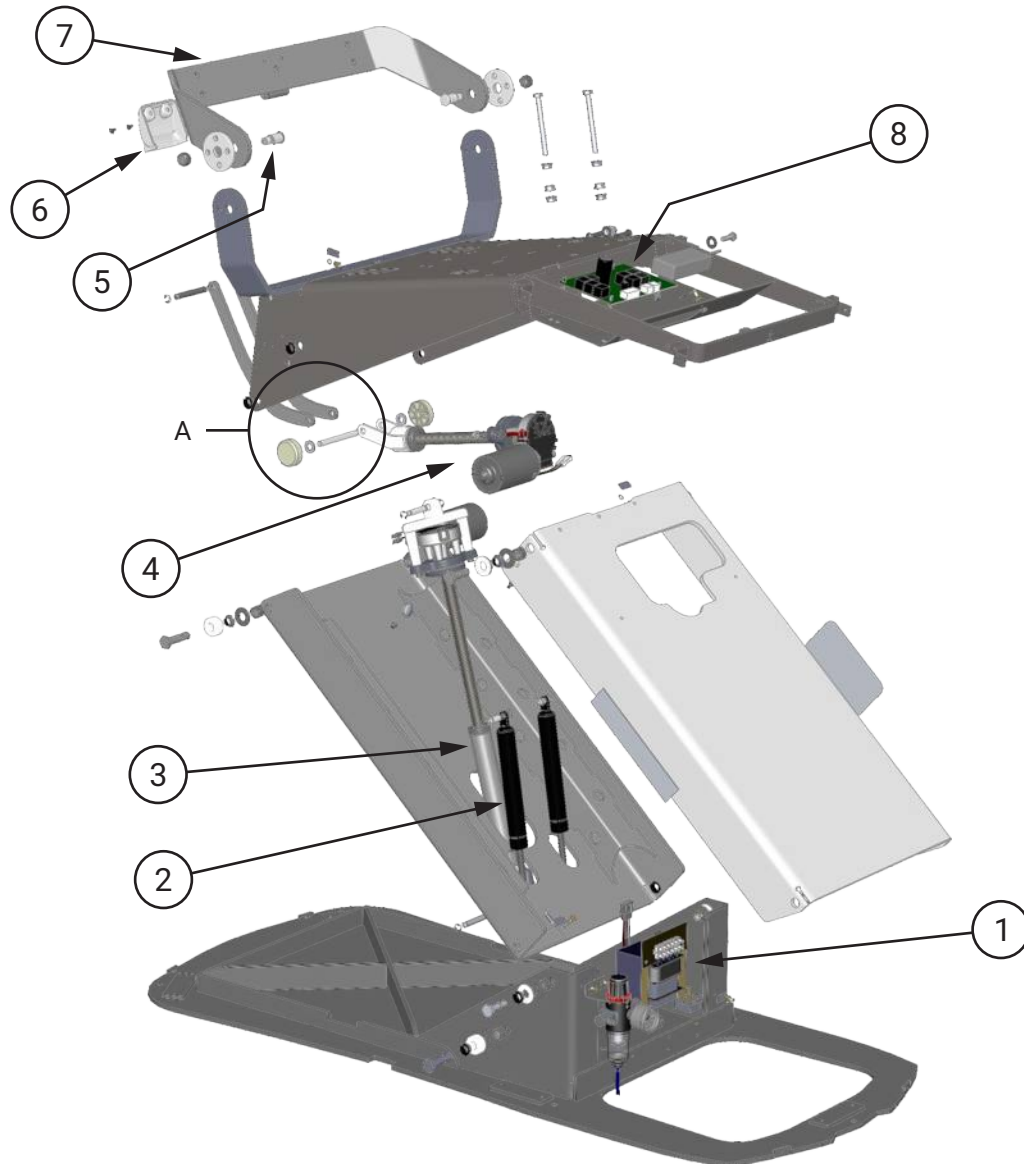


BASE COVER



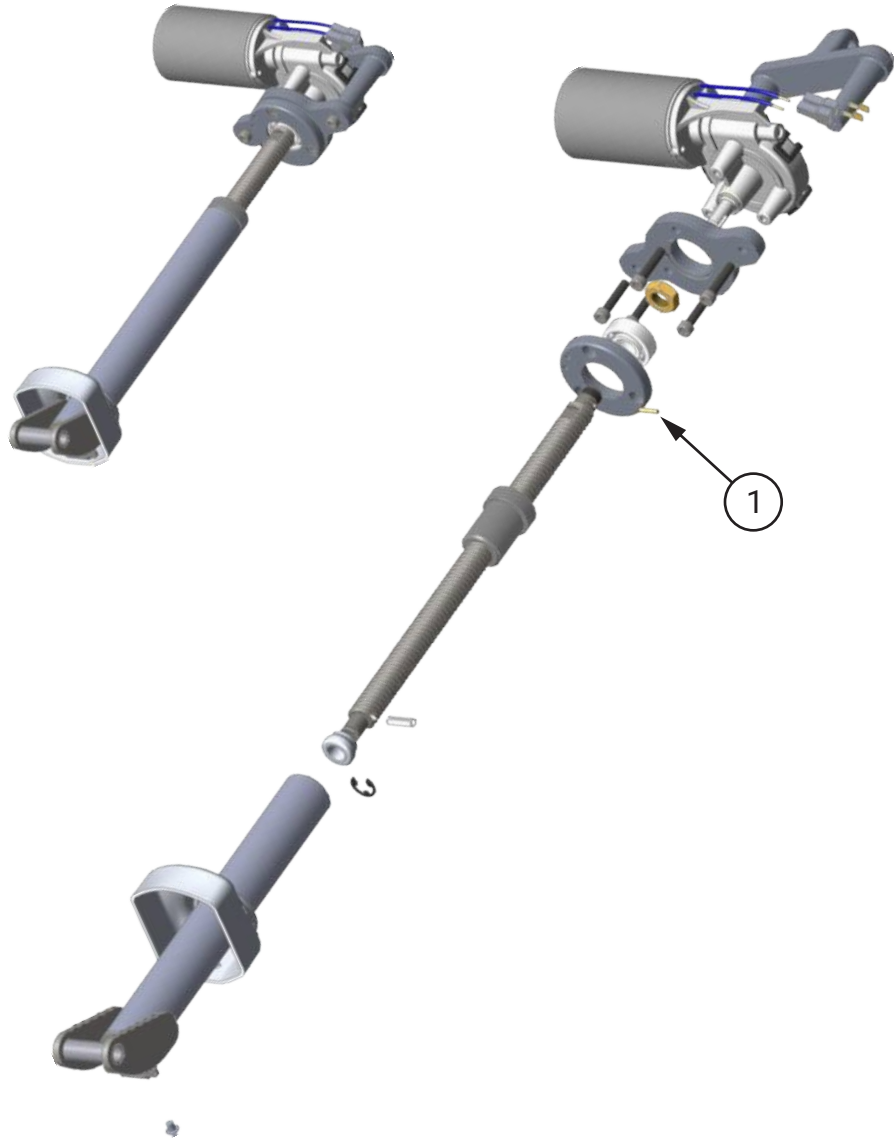
I 20 Base Cover		9401463
1	I 20 Base Cover	8102912
2	Infinity 20 Electrical Cable	9303018
3	Round Switch	● 2200971 ○ 2200737
4	Digital Voltmeter Ø22mm 110 / 220V - AD101	999500112
5	Rectangular Fuse Holder - White MBTBW1	● 2200970 ○ 2200911
6	Emergency Switch	2200396

CHAIR STRUCTURE



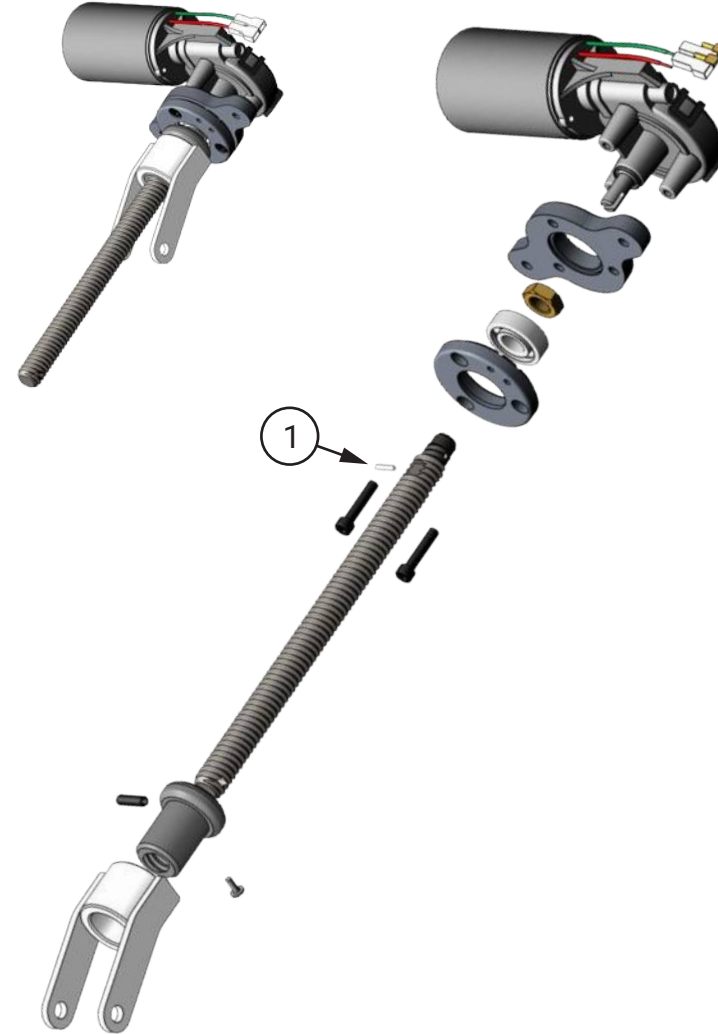
Chair Structure		
1	Transformer 168Va BA IP-00 118V-127V-220V-230V/12V(5A)-24V(7A)-50/60HZ	2200842
2	Imported Gas Spring	999500071
3	I 19 Seat Spindle Motor	9401225
4	Backrest Spindle Motor SPSLI 19	9401188
5	IN-17 Backrest Pivot Axle	● 8003697 ○ 8002839
6	Upper Joint Cover Logic/IN	8102436
7	Backrest Articulation IN-17	9302392
8	Infinity / Logic chair CPU board	2200918
9	Backrest Movement Rod 17	8002905
10	Backrest Motor Spacer	8102406
11	Pulley	8100051

### SEAT SPINDLE MOTOR



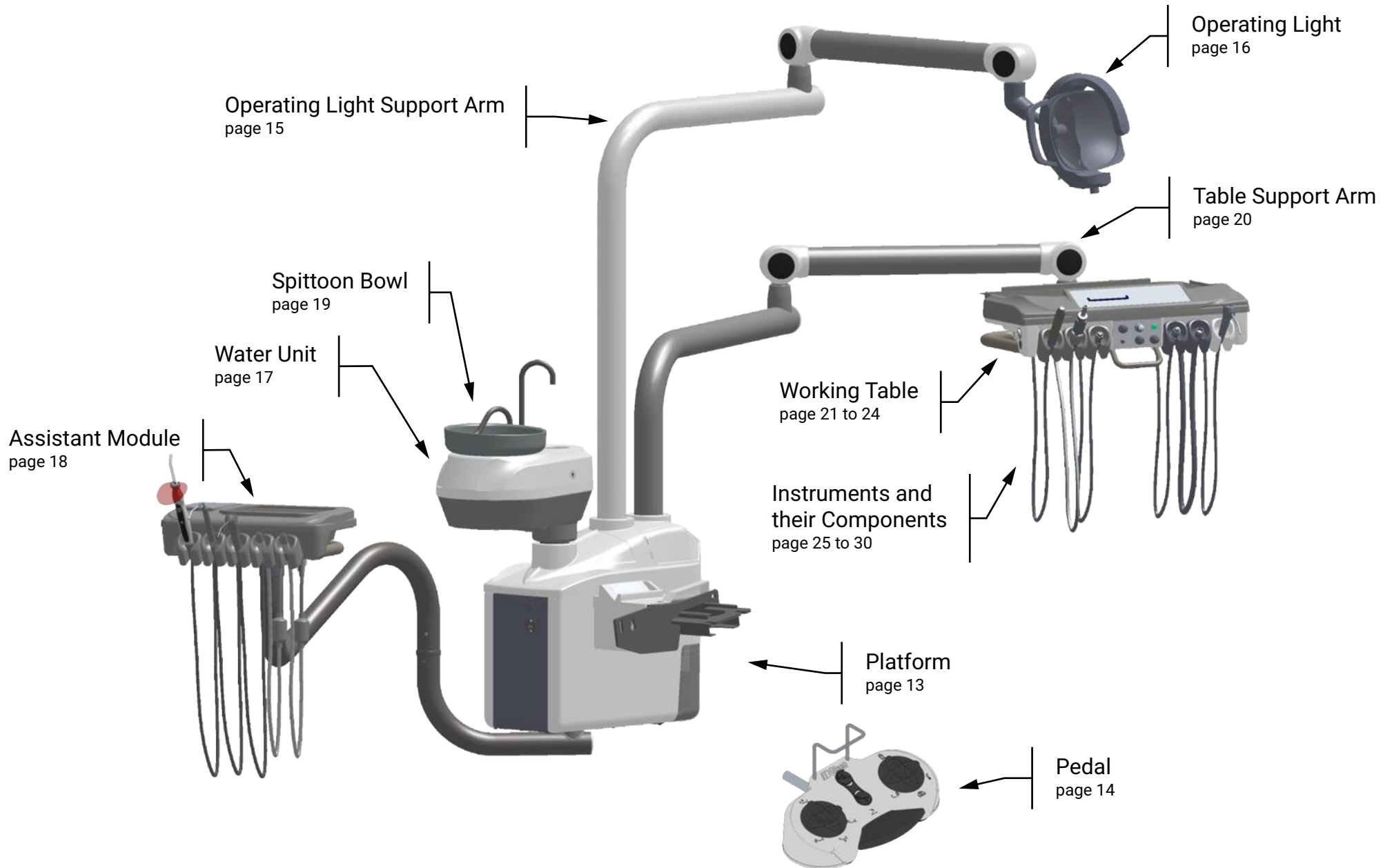
<b>Seat Spindle Motor</b>	9401225
1 Pino DIN 7	5201408

### BACKREST SPINDLE MOTOR

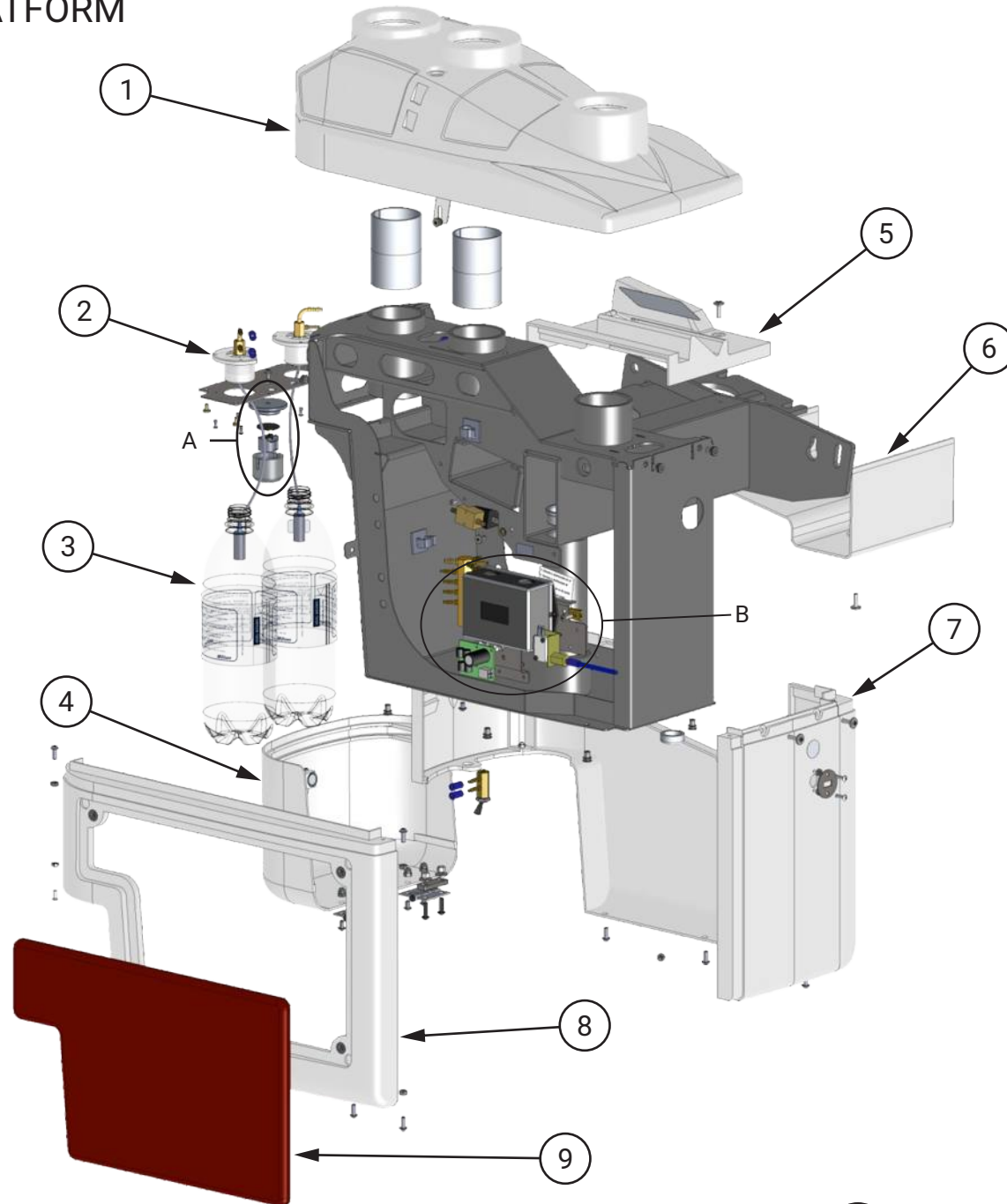


<b>Backrest Spindle Motor</b>	9401188
1 DIN Pin 7	5201408

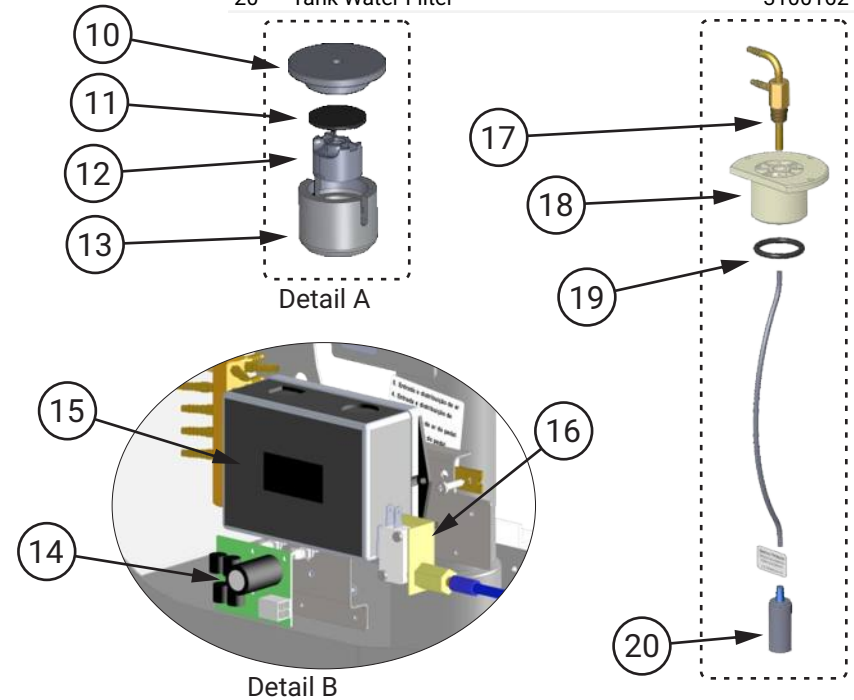
# INTRODUCTION TO THE PARTS PRESENTED IN THIS SECTION



PLATFORM

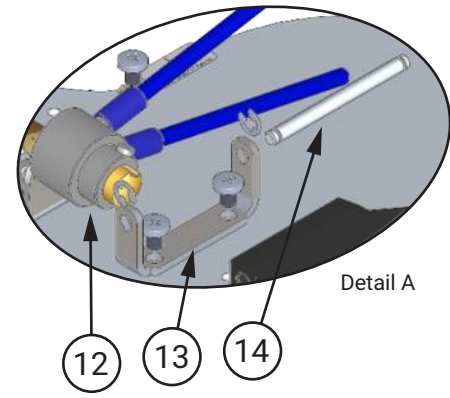
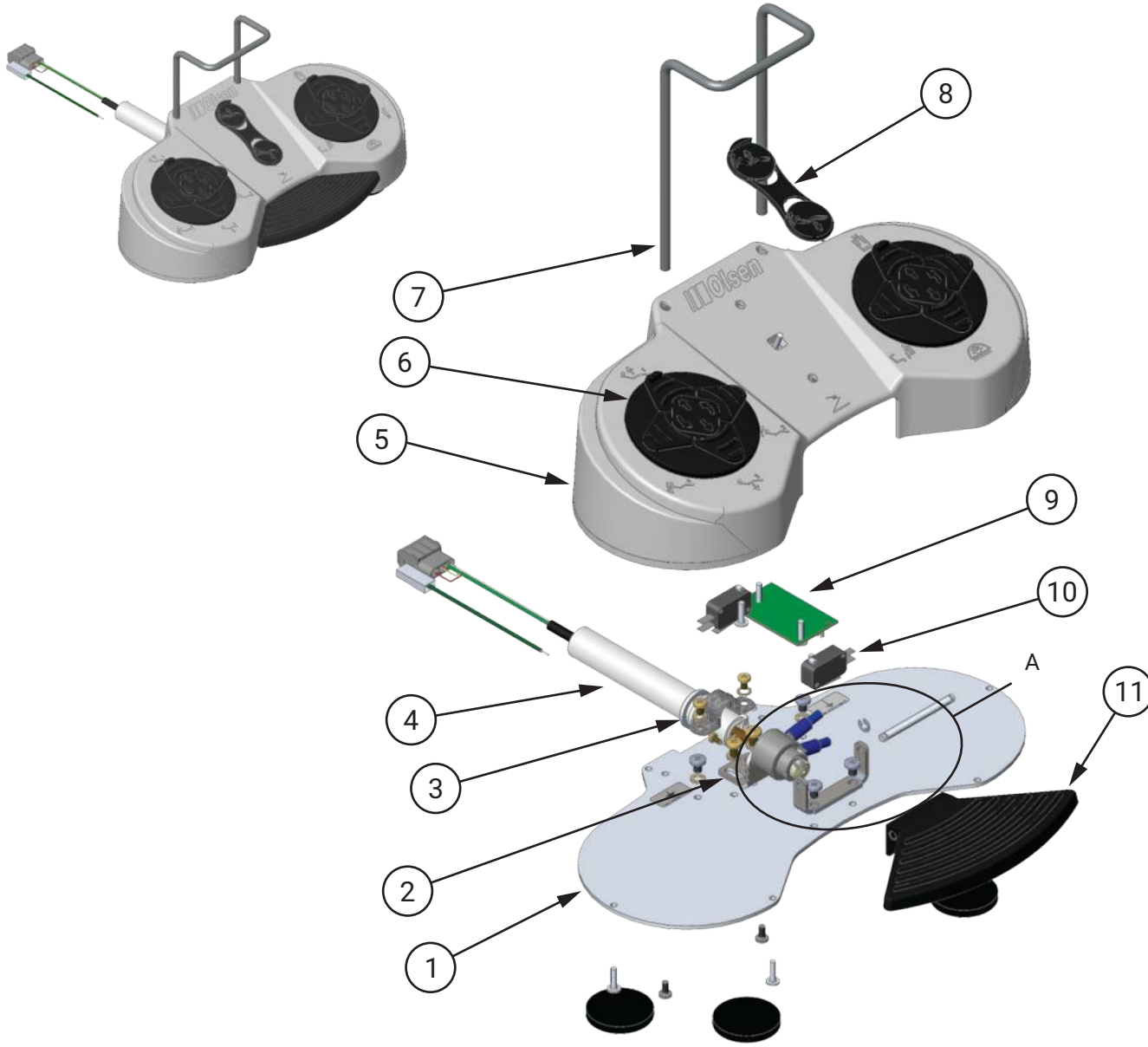


Tank Filter Kit		9400705
17	Tank Cover Connection 1.4 Kart	9300285
18	Tank Cap w / Cut	8101138
19	O'ring	3000110
20	Tank Water Filter	3100162



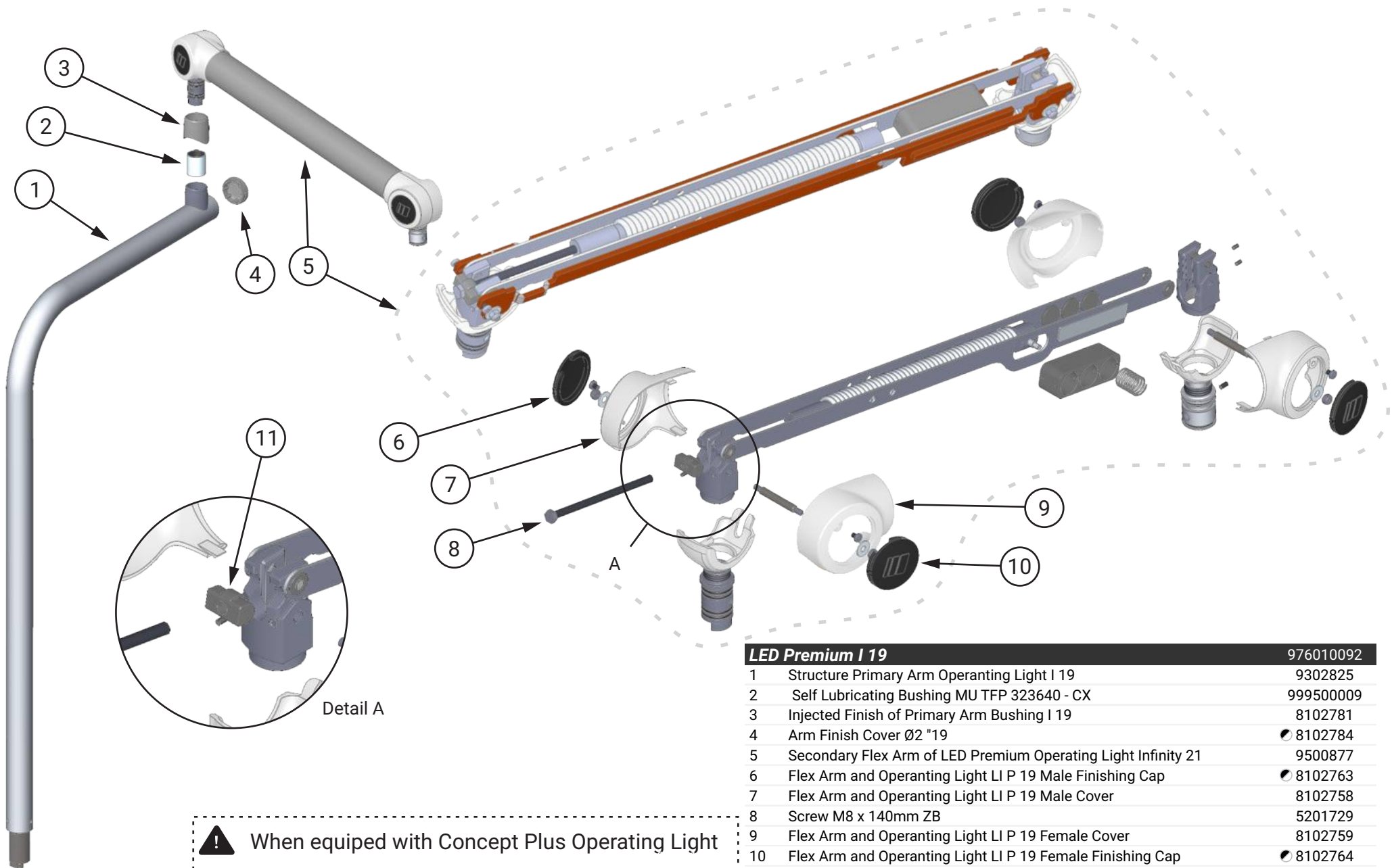
Platform		
1	Upper Cover IN 17	9302465
2	Tank Filter Kit	9400705
3	Tank with Adhesive	9300154
4	Tank Cap	9401231
5	Cell phone Holder Cover IN 17	9302468
6	Platform Cover IN 17	8102354
7	Platform Main Cover IN 17	9302405
8	Platform Magnet Cover IN-17	9302406
9	Infinity Platform Cover Cap	9401268
10	Reservoir LED heatsink	8201252
11	LED for Platform Reservoirs	2200870
12	LED Operating Light Support Lens	2200826
13	Reservoir Lens Finish	8102374
14	Rectifier PCB Board	9300728
15	USB Charger Board	2200873
16	Imported Electropneumatic Switch for Blocking System	999500073

REMOTE FOOT PEDAL



<b>Remote Foot Pedal IN-17</b>		9500730
1	Injected Pedal Base	8002686
2	Injected Pedal Valve Support	8002687
3	Pedal Finishing Ring	8102373
4	Plastic Hose Ø11 x 2.8 x 1600	8102301
5	Injected Cover Pedal	8102299
6	Electric Drive Pedal	9302557
7	Painted Handle Injected Pedal	● 8003698 ○ 8002864
8	Automatic Pedal Adjustment Actuator	8102308
9	Pedal PC Board Serial R 232	2200781
10	Micro Switch Gray CX-FL8-39	999500090
11	Injected Pedal Propulsion Driver	9302355
12	Logic Progressive Valve	9400635
13	Shaft Propulsion Support	8002688
14	Propulsion Shaft	8201240

OPERATING LIGHT SUPPORT ARM

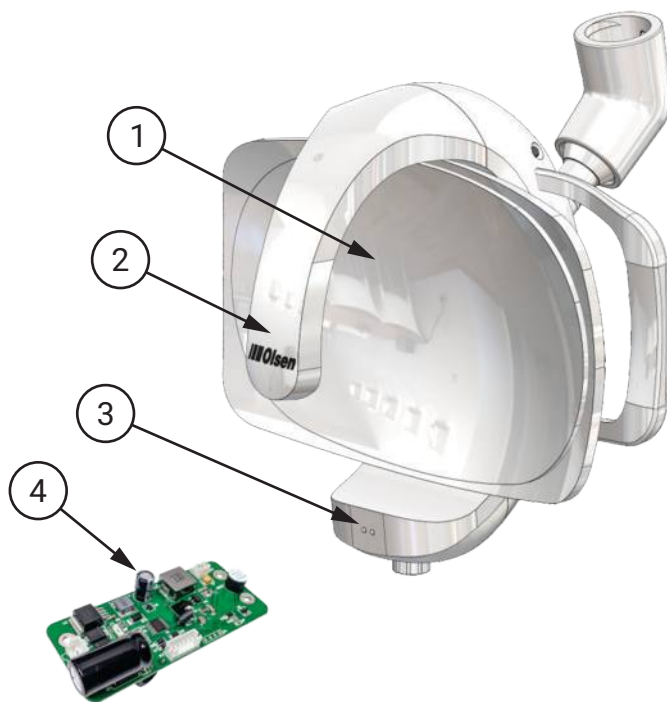


**!** When equipped with Concept Plus Operating Light

5 Secondary Flex Arm of Concept Plus Operating Light Infinity 21 9500880

<b>LED Premium I 19</b>		<b>976010092</b>
1	Structure Primary Arm Operating Light I 19	9302825
2	Self Lubricating Bushing MU TFP 323640 - CX	999500009
3	Injected Finish of Primary Arm Bushing I 19	8102781
4	Arm Finish Cover Ø2 "19	8102784
5	Secondary Flex Arm of LED Premium Operating Light Infinity 21	9500877
6	Flex Arm and Operating Light LI P 19 Male Finishing Cap	8102763
7	Flex Arm and Operating Light LI P 19 Male Cover	8102758
8	Screw M8 x 140mm ZB	5201729
9	Flex Arm and Operating Light LI P 19 Female Cover	8102759
10	Flex Arm and Operating Light LI P 19 Female Finishing Cap	8102764
11	Spring Adjuster 18	8102296

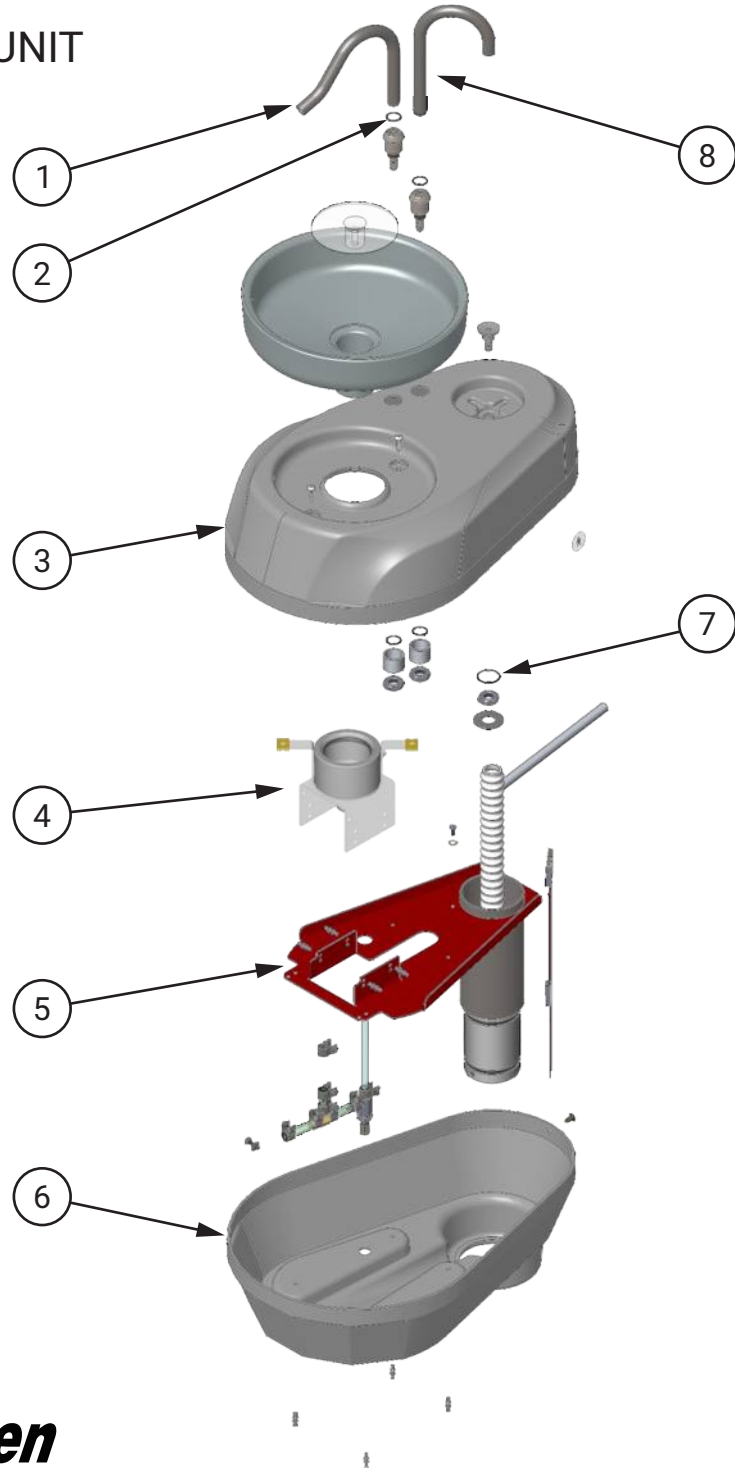
## PREMIUM OPERATING LIGHT



<b>Premium Operating Light</b>		999500039
1	Mirror for Operating Light CX-249-22	999600011
2	LED for Operating Light CX249-22	999500144
3	Premium Operating Light Sensor PC Board CX249-22	999600013
4	Operating Light PC Board CX249-22	999500023

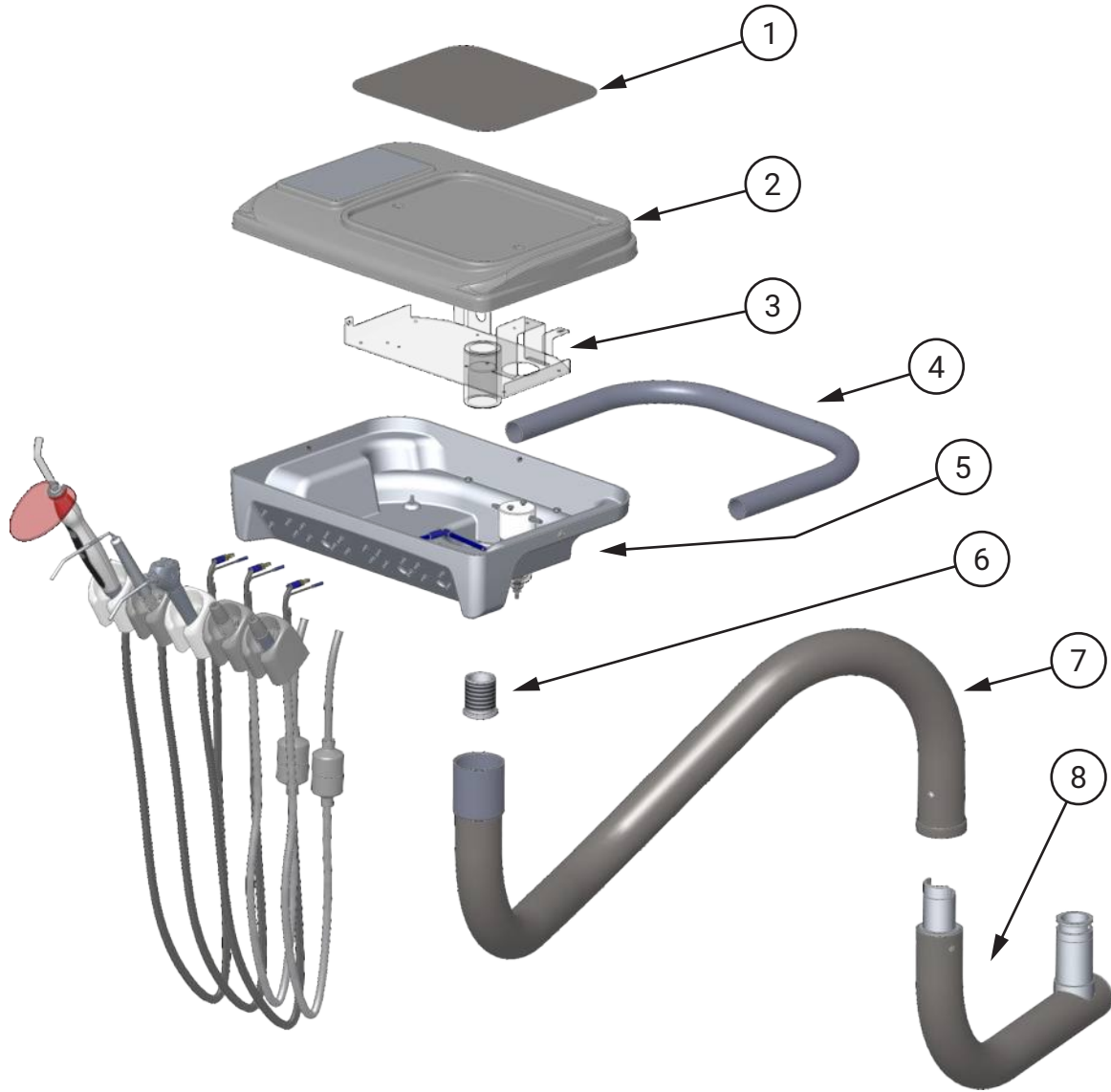


WATER UNIT



<b>INP Water Unit</b>		UNA-IN 003
1	Inox Spittoon Bowl Tube	● 8201417 ○ 8201165
2	O'ring	3000122
3	LI 19 Water Unit Upper Cover	8102775
4	Cuspidor Bowl holder IN-17	9302448
5	UNA IN-17 Structure	9302398
6	IN-17 Water Unit Lower Cover	8102381
7	O'ring	3000101
8	Cup fill spout Stainless Steel IN-17	● 8201419 ○ 8201248

ASSISTANT MODULE

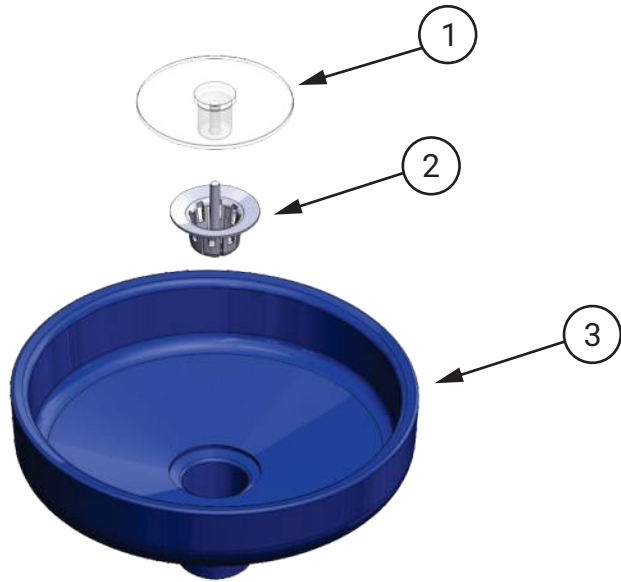


**!** When equipped with Prophylaxis on the Assistant Module (optional)

2	Assembly Upper Cover MOD I 21 With Touch	9303160
2	Assembly Upper Cover MOD I 21 Without Touch	9303161

<b>Infiny Assistant Module</b>		MOD-AX 004
1	Infiny Module Tray	8201320
2	Upper Cover Infiny Module	9302342
3	Infiny Module Structure	9302118
4	Infiny Module Handle	● 8201422 ○ 8201171
5	Lower Cover Infiny Module	8102148
6	Height Adjusting Pin Infiny Assistant Module	8002414
7	Secondary Arm Module IN-17	9401248
8	Primary Arm Module IN-17	9302399

## POLYESTER SPITTOON BOWL



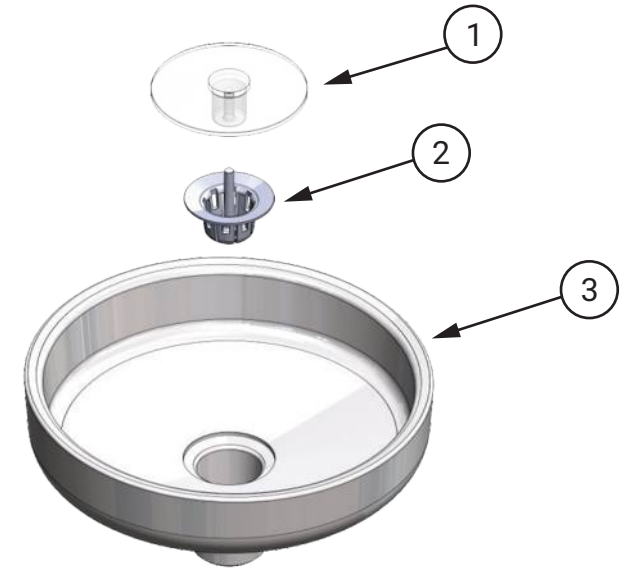
### Spittoon Bowl Components

1	Injected Bowl Finish	8102176
2	Bowl Drain 18	8102649

### Polyester Spittoon Bowl Color Code

3	Polyester Bowl Champagne Solid	1600442
	Polyester Bowl Rose Solid	1600443
	Polyester Bowl Wine Solid	1600444
	Polyester Bowl Grey Solid	1600445
	Polyester Bowl Black Solid	1600446
	Polyester Bowl Citrus Green Solid	1600447
	Polyester Bowl Champagne Solid	1600448
	Polyester Bowl Royal Blue Solid	1600449
	Polyester Bowl White Solid	1600450

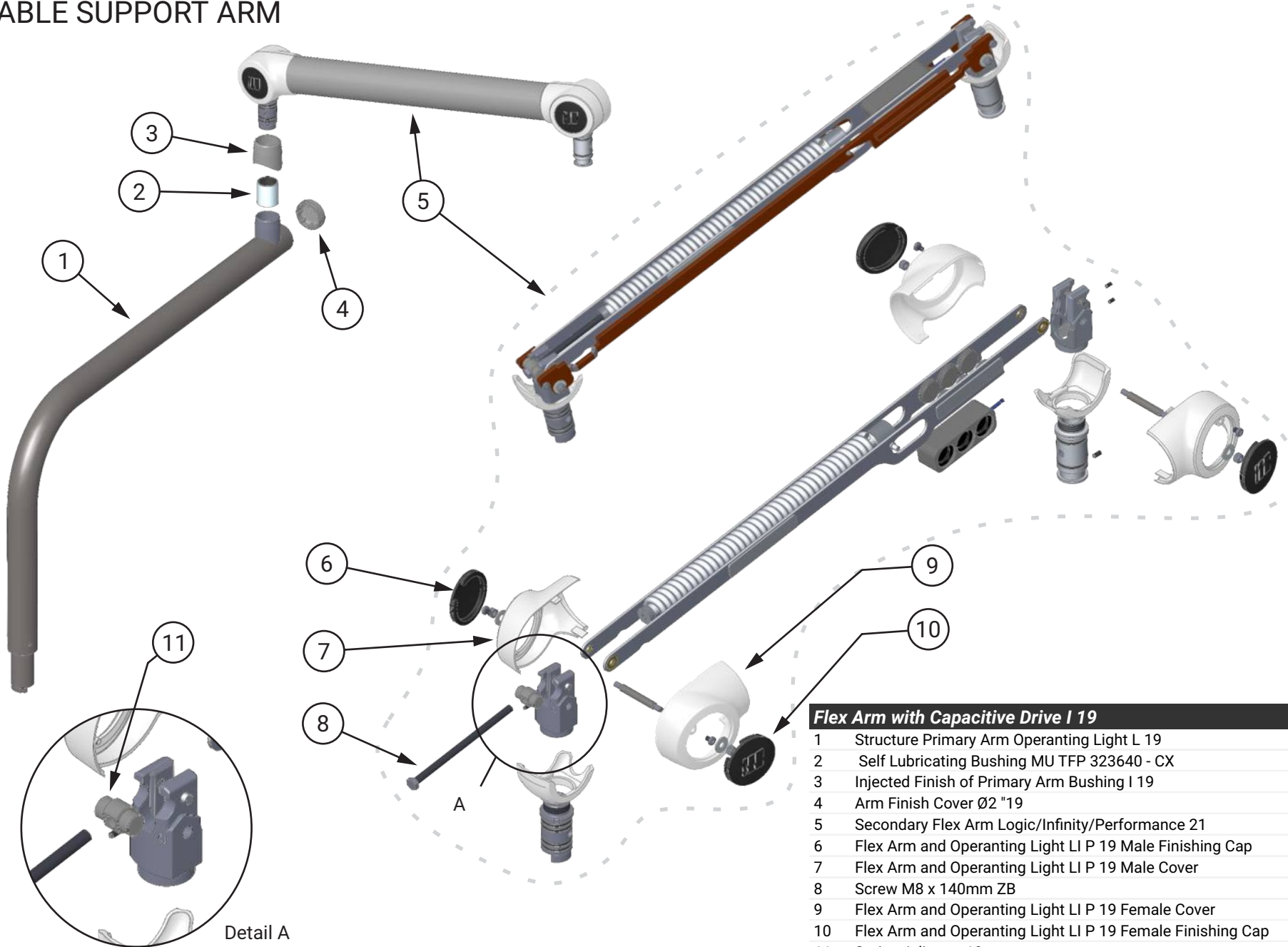
## PORCELAIN SPITTOON BOWL



### Porcelain Spittoon Bowl

1	Injected Bowl Finish	8102176
2	Drain for Porcelain Spittoon Bowl	8102853
3	Porcelain Spittoon Bowl	1600078

TABLE SUPPORT ARM



<b>Flex Arm with Capacitive Drive I 19</b>		<b>972010002</b>
1	Structure Primary Arm Operating Light L 19	9302829
2	Self Lubricating Bushing MU TFP 323640 - CX	999500009
3	Injected Finish of Primary Arm Bushing I 19	8102781
4	Arm Finish Cover Ø2 "19	8102784
5	Secondary Flex Arm Logic/Infinity/Performance 21	9500881
6	Flex Arm and Operating Light LI P 19 Male Finishing Cap	8102763
7	Flex Arm and Operating Light LI P 19 Male Cover	8102758
8	Screw M8 x 140mm ZB	5201729
9	Flex Arm and Operating Light LI P 19 Female Cover	8102759
10	Flex Arm and Operating Light LI P 19 Female Finishing Cap	8102764
11	Spring Adjuster 18	8201326

# WORKING TABLE - PART I

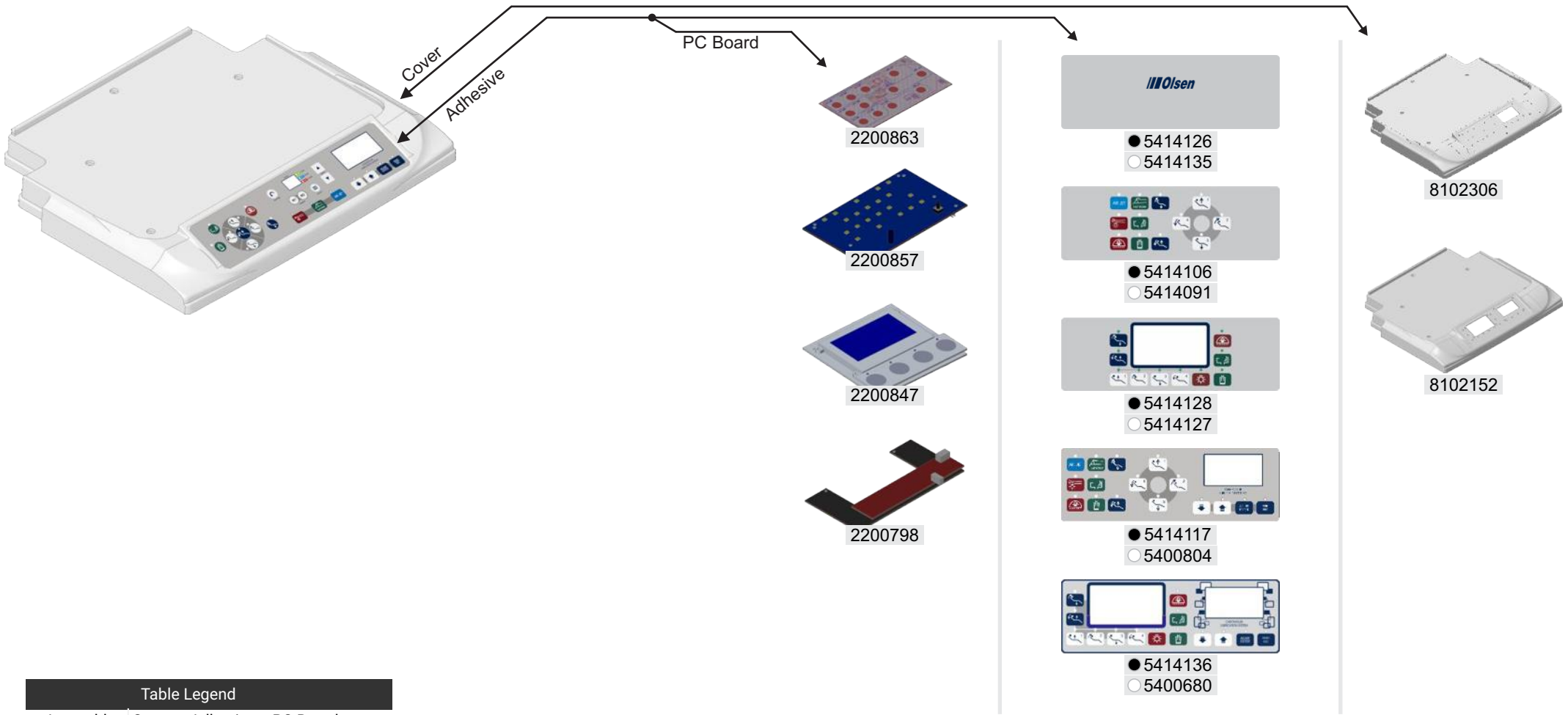
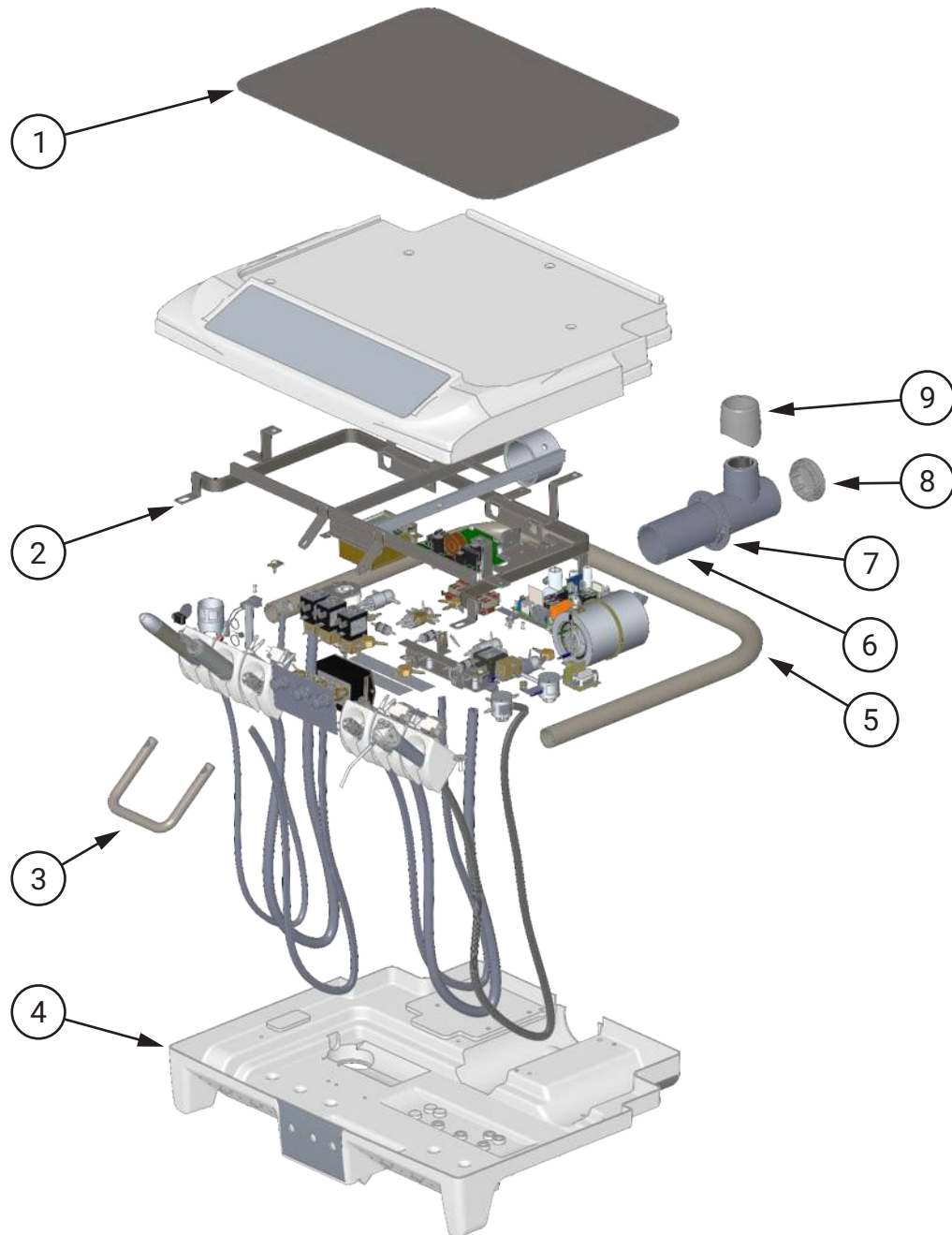


Table Legend	
Assembly	Cover + Adhesive + PC Board
T	Touch
X	X-Ray Viewer
C	Chronolub

T	X	C	Cover	Adhesive	PC Board
-	-	-	8102306	● 5414126 ○ 5414135	-
✓	-	-	8102306	● 5414106 ○ 5414091	2200863
✓	✓	-	8102306	● 5414128 ○ 5414127	2200798 + 2200857
✓	-	✓	8102152	● 5414117 ○ 5400804	2200863 + 2200847
✓	✓	✓	8102152	● 5414136 ○ 5400680	2200798 + 2200857 + 2200847

WORKING TABLE - PART II



**!** When equipped with BienAir panel

2	Table Structure with Bienair Infinity 22	9303278
---	--	---------

Infinity Working Table		MAS-IN 002
1	Infinity Tray 18	8201319
2	Infinity Working Table Structure	9401121
3	Infinity Working Table Central Handle	8201166
4	Infinity Working Table Lower Cover	8102069
5	Infinity Working Table Handle	8201170
6	Cross Flex Adjustable Arm	9400929
7	White Machined Finish Flange	8101251
8	Arm End Cap Ø2" 19	8102783
9	Arm Finishing Cover Ø2"	8101750

# CROSS FLEX WORKING TABLE - PART I

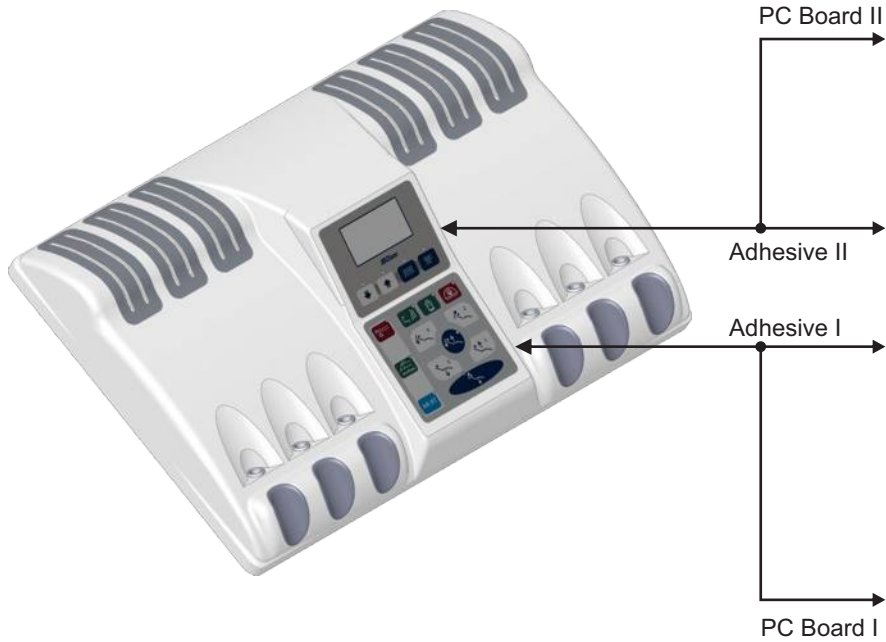
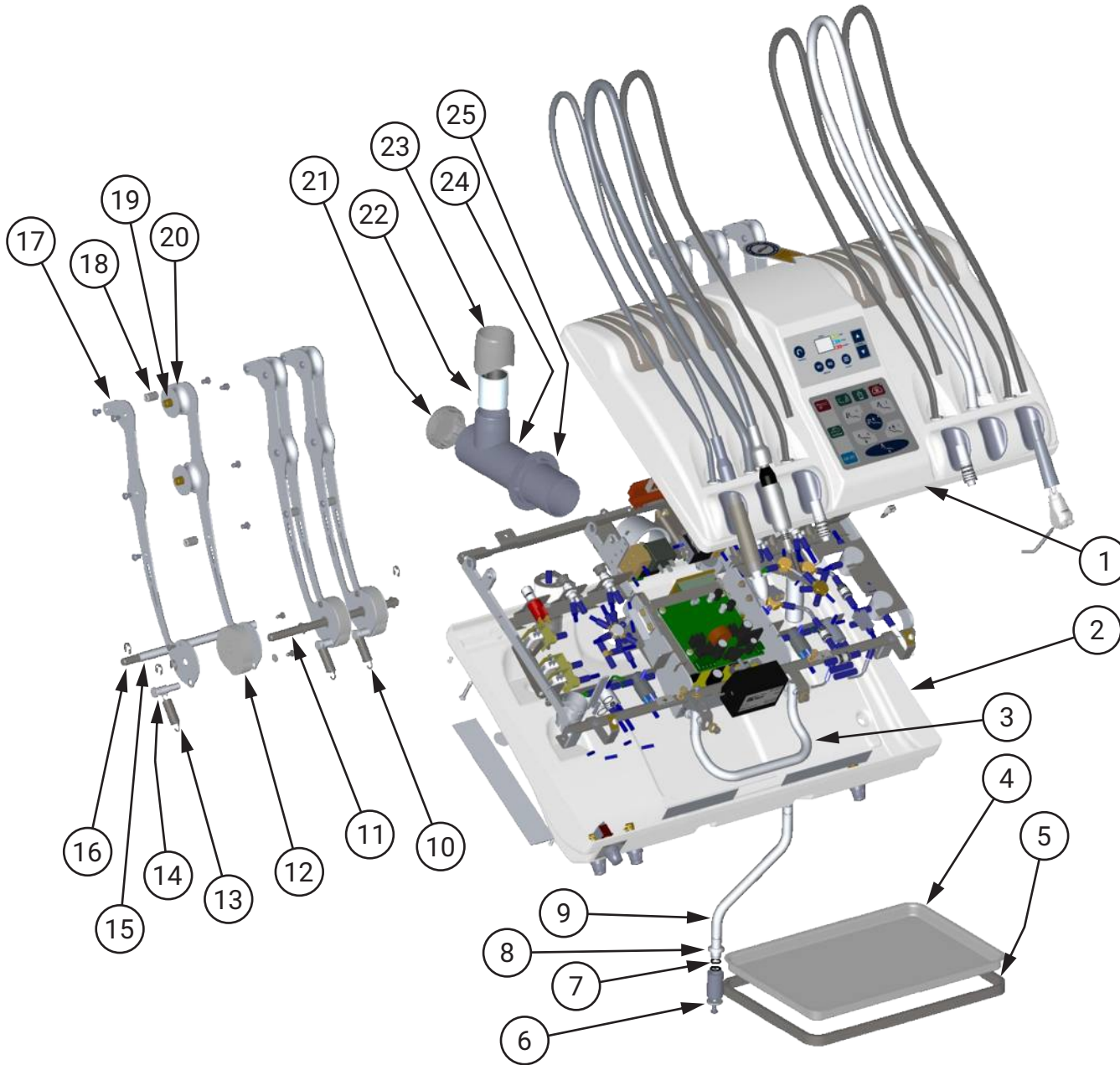


Table Legend	
Assembly	Cover + Adhesive + PC Board
T	Touch
X	X-Ray Viewer
C	Chronolub
AT	Auxiliary Touch

Assembly	T	X	C	AT	Adhesive I		Adhesive II		PC Board I	PC Board II
9303095	-	-	-	-	● 5414132	○ 5400820	-	-	-	-
9303096	✓	-	-	-	● 5414132	○ 5400820	● 5414129	○ 5400809	-	2200784
9303097	✓	-	-	✓	● 5414132	○ 5400820	● 5414130	○ 5400808	-	2200784 + 2200846
9303098	-	✓	-	-	● 5414133	○ 5400459	● 5414116	○ 5400774	2200857	-
9303100	-	-	✓	-	● 5414134	○ 5400810	● 5414116	○ 5400774	2200847	-
9303101	✓	✓	-	-	● 5414133	○ 5400459	● 5414129	○ 5400809	2200857	2200784
9303103	✓	-	✓	-	● 5414134	○ 5400810	● 5414129	○ 5400809	2200847	2200784
9303105	✓	-	✓	✓	● 5414134	○ 5400810	● 5414130	○ 5400808	2200847	2200784 + 2200846

## CROSS FLEX WORKING TABLE - PART II



**Cross Flex Working Table 19** MAS-CF 004

1	MSA-CF 18 Top Cover with Touch / Auxiliary Touch / Brushless	8102512
2	Lower Cover MSA-CF 18	8102504
3	Cross Flex Logic Table Handle	● 8003702 ○ 8002612
4	Stainless steel tray 296 x 196.5 x 15.6	1100406
5	Auxiliary tray structure of the MSA CF 19	9302839
6	Lower Arm Finish	8102807
7	O'ring Ref. 2012	3100157
8	Upper Arm Finishing	8102808
9	Auxiliary Tray MSA CF 19	8201342
10	Stem Return Spring	5201777
11	Cross Flex Table and Mini Cross	8002592
12	Cross Flex Bearing Shaft	8102227
13	Cross Flex and Mini Cross Articulator Cam	5201781
14	4Kg Cross Table Traction Spring	8102226
15	Pin Came Cross Flex and Mini Tables	8102235
16	Cross Flex Rod Stop Hose	8002593
17	Cross Flex Stop Shaft	8002591
18	Cross Flex and Mini Cross Nut Shaft	8102228
19	Cross Flex and Mini Cross Pulley Shaft	8201199
20	Cross Flex Pulley and Mini Cross	● 8103075 ○ 8102229
21	Arm Finish Fairing Ø2 "19	● 8102783
22	Self Lubricating Bushing MU TFP 323640 - CX	999500009
23	Injected Finish of Bushing Primary Arm SPSP P 19	8102782
24	Adjustable Cross Flex Arm	9301297
25	White Machined Finish Flange	8101251



## INSTRUMENTS AND THEIR COMPONENTS - PART I

**Vacuum Pump Ejector**

1	Sleeve for Ejector - ODO - 22	8201415
2	Ejector Valve 22	8201416
3	Plastic Part for Strong Ejector Valve	999500180
4	Vacuum Pump Ejector Adapter	999500232
5	Sewer Cap	8102818
6	Double Spike	8200895
7	Union Terminal	8201272
8	Vacuum Pump Adapter 1 Ejector	9301466
9	Vacuum Pump Adapter 2 Ejectors	9301467
10	Scaler and Vacuum Pump Instrument Holder	9401291

**Venturi Ejector**

1	Venturi Suction Connector	9301670
2	Venturi Suction Connector (High Power)	9301669
3	Ejector Canula Connector Ø6,3mm	8101776
4	Ejector Canula Connector Ø9,5mm	8101775
5	Instrument Holder with Reed	9302573
6	Double Spike	8200895
7	Venturi 18 Suction Set	9401334
8	Air Valve Click	9302478
9	Tip Support Valve	3200121
10	Venturi Suction Filter Cover	8102854
11	Oring	3100221
12	Filter Body	8100001
13	Venturi Suction Filter Cover	8102778
14	Venturi Suction Filter	9300339

**Vórtice Ejector**

1	Vórtice Ejector Instrument Holder	8102992
2	Vórtice Drive 21	9303159
3	Ejector Female Body	8201232
4	Ejector Male Body	8201233
5	Ejector Canula Connector	8101775
6	Pneumatic Vórtice Ejector Kit	9500885
7	1 x 3 Way Distributor	9300111
8	HVE post	8201229
9	Vórtice Ejector Suction Set 18	9401335
10	3 Way Distributor - 3/16 "	9302704
11	Injected Vórtice Ejector Filter Cover 19	8102855
12	Oring ring	3100221
13	Filter Body	8100001
14	Injected Vórtice Suction Filter Cover 19	8102779
15	Vórtice Suction Filter	9302298

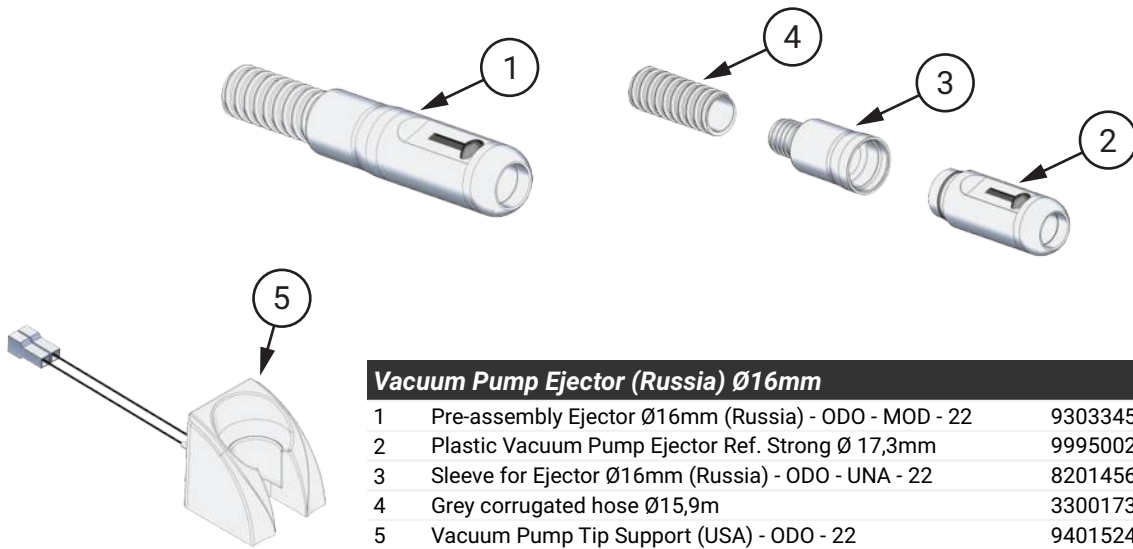
**Sewer Connector**

1	Sewer Connector Cover 18	8102645
2	Oring	3100220
3	Sewer Connector Body 18	8102647

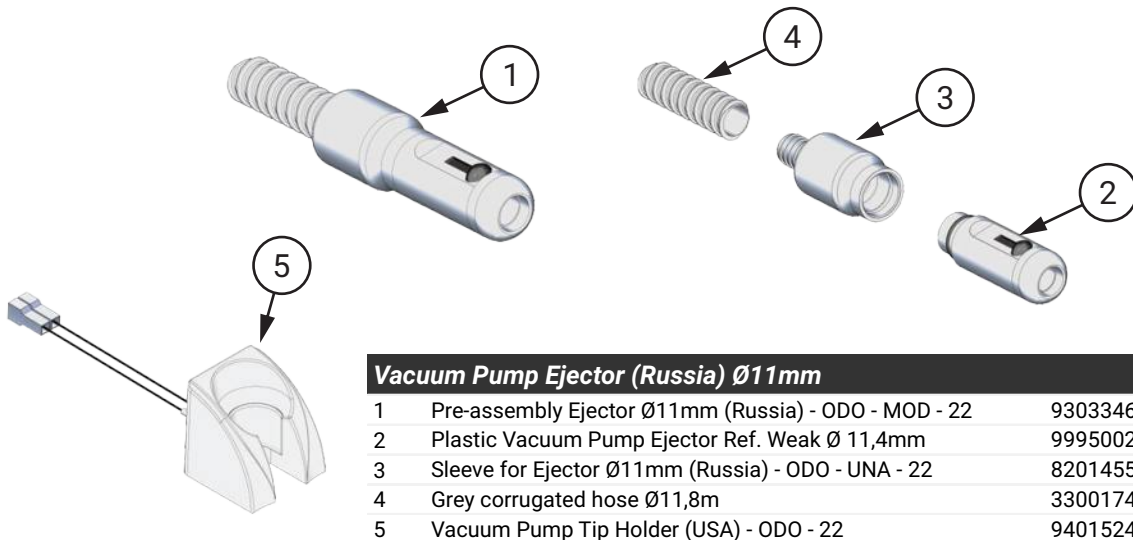
**Sewer Connector**

1	Sewer Connector Cover 18	8102645
2	Oring	3100220
3	Sewer Connector Body 18	8102647

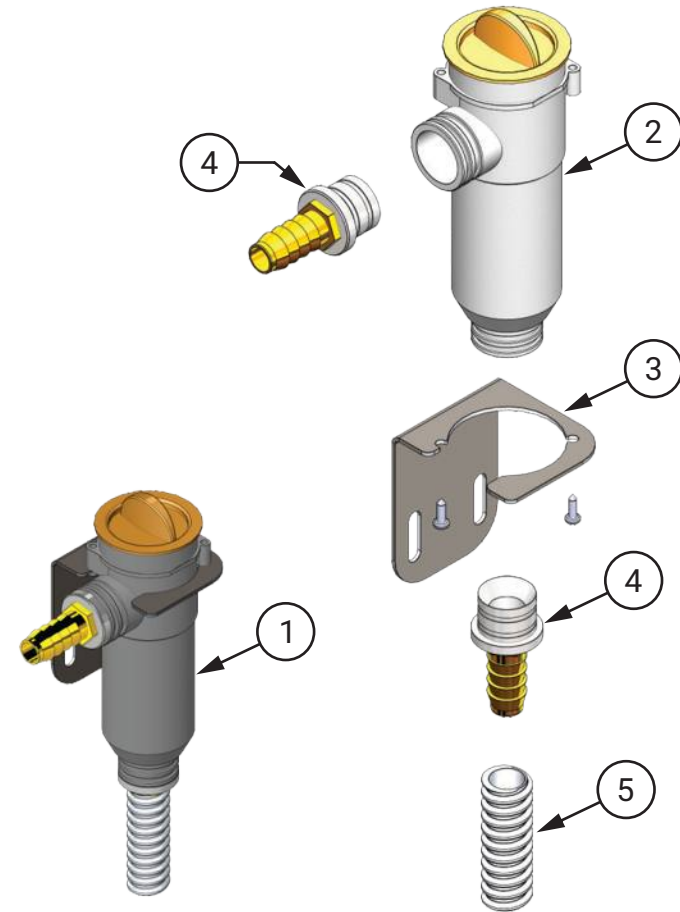
## INSTRUMENTS AND THEIR COMPONENTS - PART II



<b>Vacuum Pump Ejector (Russia) Ø16mm</b>		
1	Pre-assembly Ejector Ø16mm (Russia) - ODO - MOD - 22	9303345
2	Plastic Vacuum Pump Ejector Ref. Strong Ø 17,3mm	999500233
3	Sleeve for Ejector Ø16mm (Russia) - ODO - UNA - 22	8201456
4	Grey corrugated hose Ø15,9m	3300173
5	Vacuum Pump Tip Support (USA) - ODO - 22	9401524

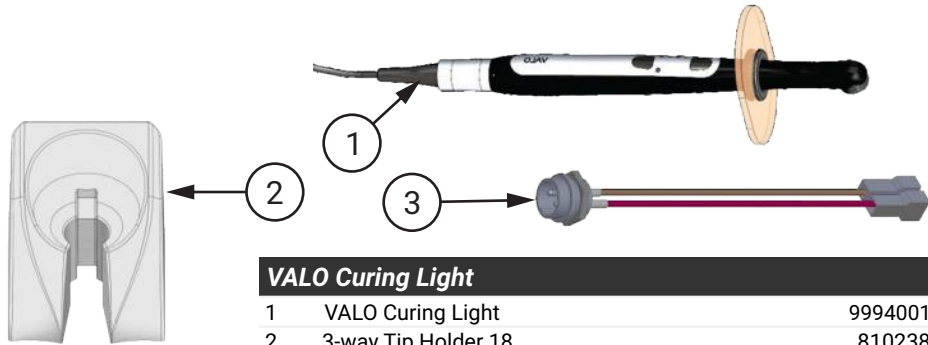


<b>Vacuum Pump Ejector (Russia) Ø11mm</b>		
1	Pre-assembly Ejector Ø11mm (Russia) - ODO - MOD - 22	9303346
2	Plastic Vacuum Pump Ejector Ref. Weak Ø 11,4mm	999500234
3	Sleeve for Ejector Ø11mm (Russia) - ODO - UNA - 22	8201455
4	Grey corrugated hose Ø11,8m	3300174
5	Vacuum Pump Tip Holder (USA) - ODO - 22	9401524



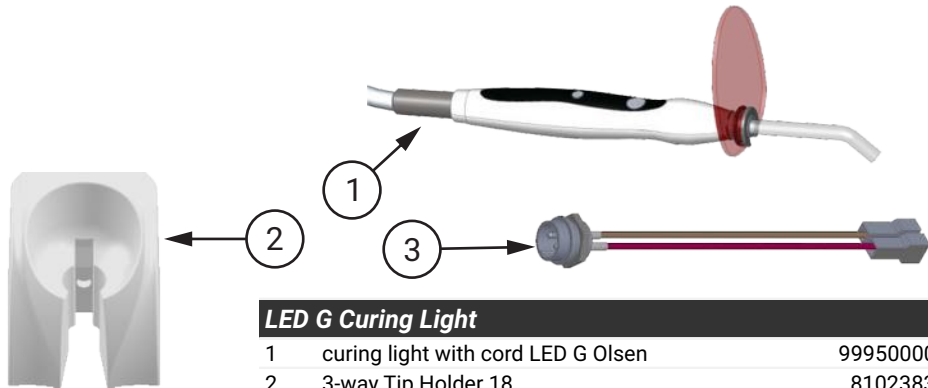
<b>Filtro Bomba a Vácuo (Rússia)</b>		
1	Pre-assembly Vacuum Pump Filter (RUSSIA) - ODO - SP SI - BAS - 22	9401539
2	Ejector Filter	999500179
3	Holder for 1 Vacuum Pump Filter (RUSSIA) - ODO - SP SI - BAS - 22	8003738
4	Vacuum Pump Filter Connection (USA)	9303343
5	Beige Corrugated Hose Ø 12,7mm	3300131

## INSTRUMENTS AND THEIR COMPONENTS - PART III



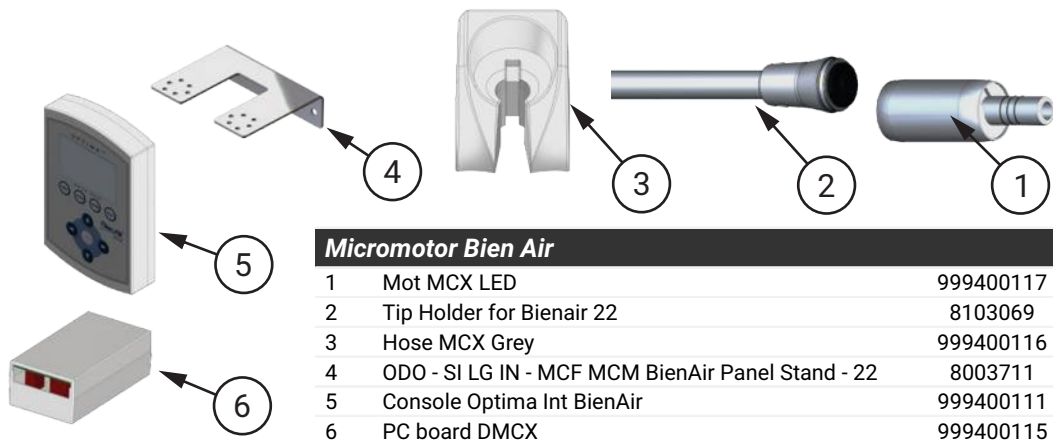
### VALO Curing Light

1	VALO Curing Light	999400121
2	3-way Tip Holder 18	8102383
3	Preassembled Connector	9301477



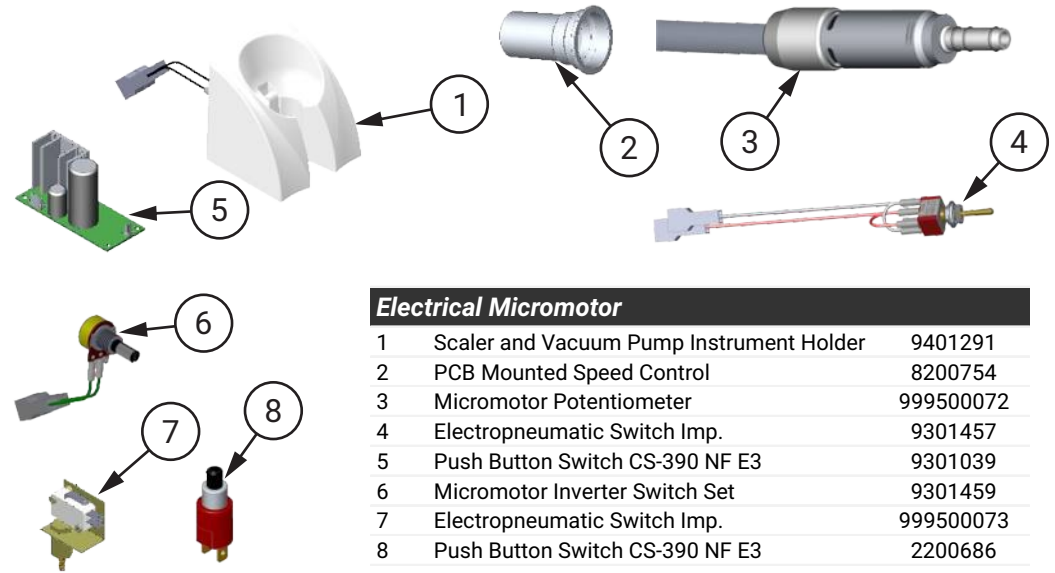
### LED G Curing Light

1	curing light with cord LED G Olsen	999500006
2	3-way Tip Holder 18	8102383
3	Preassembled Connector	9301477



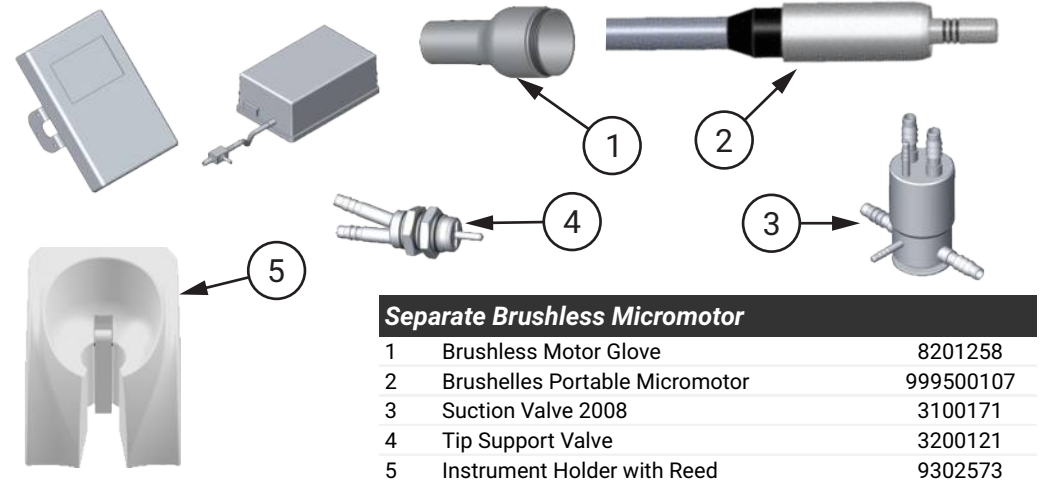
### Micromotor Bien Air

1	Mot MCX LED	999400117
2	Tip Holder for Bienair 22	8103069
3	Hose MCX Grey	999400116
4	ODO - SI LG IN - MCF MCM BienAir Panel Stand - 22	8003711
5	Console Optima Int BienAir	999400111
6	PC board DMCX	999400115



### Electrical Micromotor

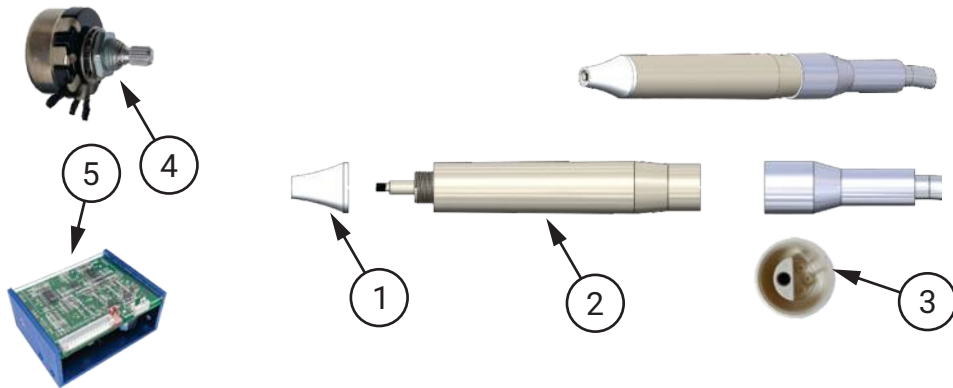
1	Scaler and Vacuum Pump Instrument Holder	9401291
2	PCB Mounted Speed Control	8200754
3	Micromotor Potentiometer	999500072
4	Electropneumatic Switch Imp.	9301457
5	Push Button Switch CS-390 NF E3	9301039
6	Micromotor Inverter Switch Set	9301459
7	Electropneumatic Switch Imp.	999500073
8	Push Button Switch CS-390 NF E3	2200686



### Separate Brushless Micromotor

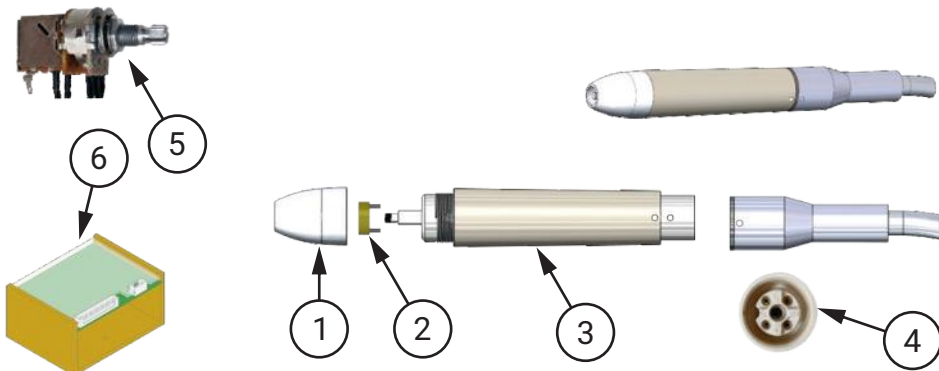
1	Brushless Motor Glove	8201258
2	Brushelles Portable Micromotor	999500107
3	Suction Valve 2008	3100171
4	Tip Support Valve	3200121
5	Instrument Holder with Reed	9302573

## INSTRUMENTS AND THEIR COMPONENTS - PART IV



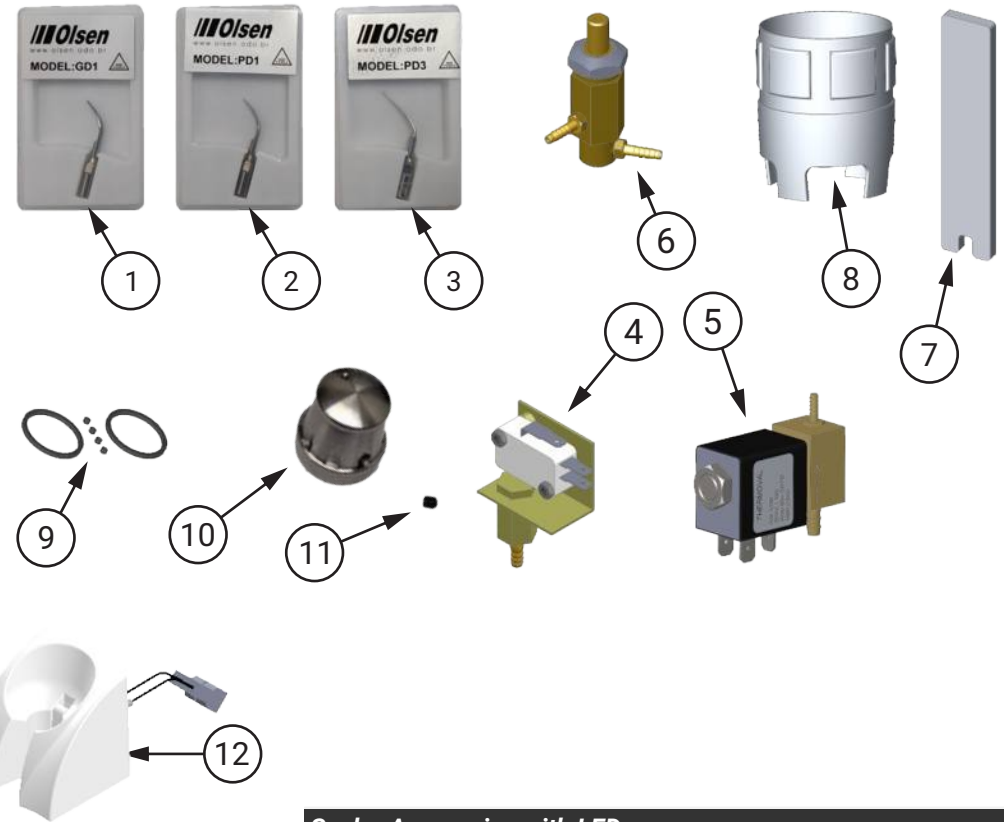
### Scaler without LED

1	Finishing Tip (Hand Piece For V2 Led)	999500129
2	Main Body V2 (Handi piece For V2)	999500127
3	Plastic water passage pipe (Water Pipe For V2)	999500126
4	Potentiometer for V2 (Power Wrench For V2)	9303008
5	Olsen Scaler V2 LED Electronic Board	999500111



### Scaler with LED

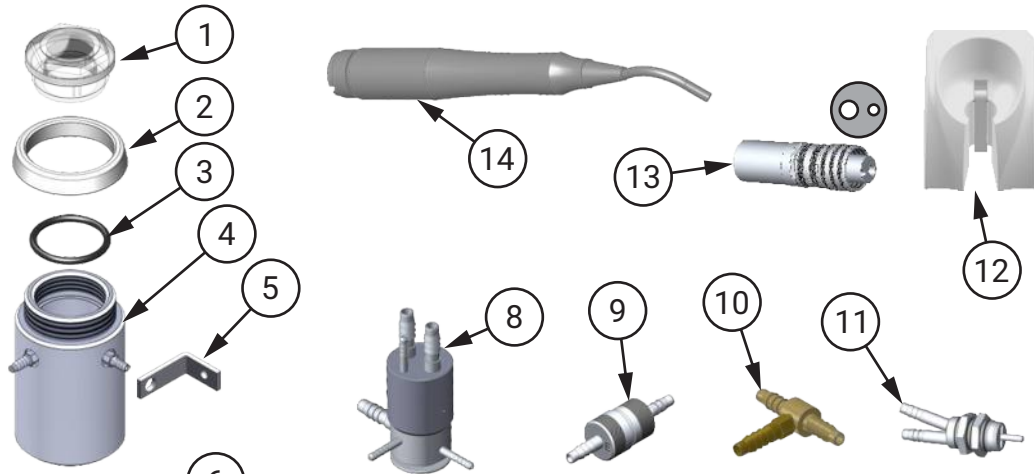
1	Finishing Tip (Hand Piece For V3 Led)	999500026
2	Main Body LED - Woodpecker Scaler Transducer	999500135
3	Main Body (Hand Piece For V3 Led)	999500021
4	Plastic Pipe for Water Passage (Water Pipe For V3 and V2)	999500020
5	Scaler Pot	9302153
6	Printed Circuit with Led (PCB For V3 Led)	999500025



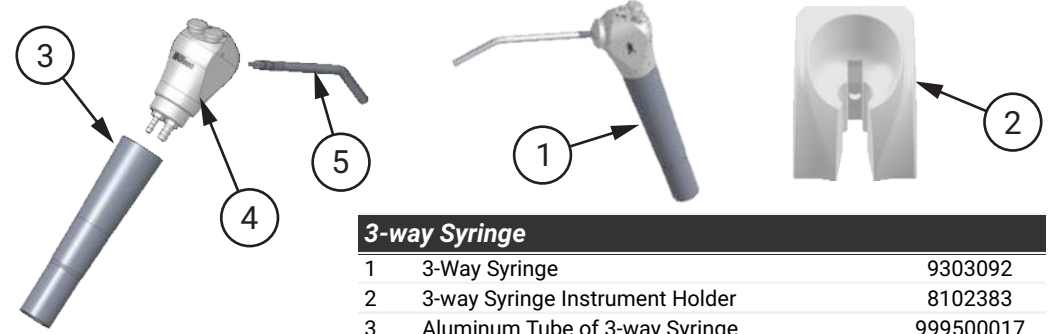
### Scaler Accessories with LED

1	Tip for Piezo TIP GD1 - (US1)	999400009
2	PD1 Chiseling Tip for Piezo Light	999400013
3	PD3 Chiseling Tip for Piezo Light	999400024
4	Electro-Pneumatic Switch Imp.	999500073
5	Solenoid Valve 10W 32Vdc - Thermoval (12,100)	3100212
6	Ultrasonic Water Regulator Record / Logic Table	9401118
7	Nut Tight Hand Tool (Endo Wrench For V3 Led)	999500022
8	Screw Grip Hand Tool (Torque Wrench For V3 Led)	999500097
9	V3 Led Repair Kit	999500027
10	Water Adjustment Valve Button	8201160
11	Hexagon screw	5200729
12	Scaler and Vacuum Pump Instrument Holder	9401291

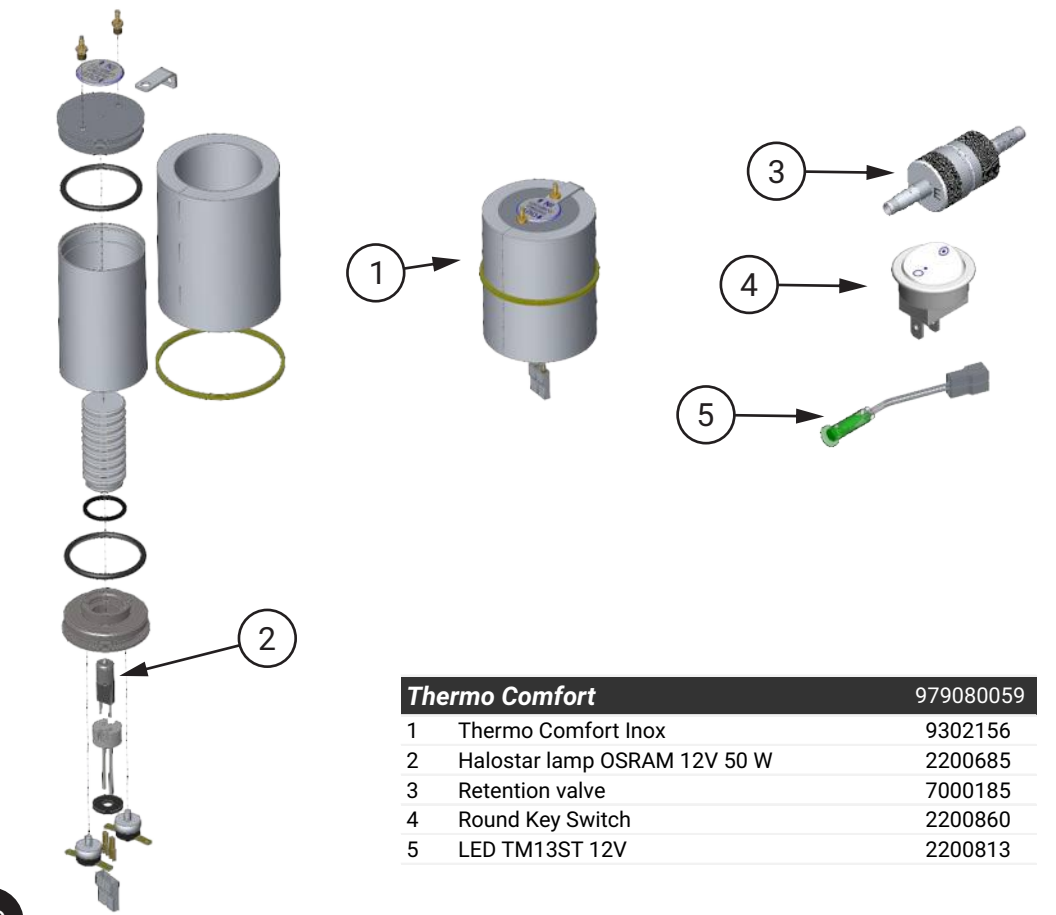
## INSTRUMENTS AND THEIR COMPONENTS - PART V



<b>Prophylaxis Kit</b>		9500552
1	Prophylaxis Cover / Oil Visor	1600278
2	Tank Support Prophylaxis	8200858
3	Prophylaxis Cover Ring	3100194
4	Powder Cup Level	8101387
5	Support for Reservoir Prophylaxis	8001605
6	Tank with Adhesive Siena / Sprint	9302295
7	Prophylaxis Filter 20	9303124
8	Suction Valve	3100172
9	Retention Valve	7000185
10	3 Way Distributor - 3/16 "	9302704
11	Tip Support Valve	3200121
12	Instrument Holder with Reed	9302573
13	Borden Terminal with Refrigeration	7000122
14	Olsen Prophylaxis Pen	7000334



<b>3-way Syringe</b>		
1	3-Way Syringe	9303092
2	3-way Syringe Instrument Holder	8102383
3	Aluminum Tube of 3-way Syringe	999500017
4	Hydropneumatic Metal Valve	999500019
5	Hydropneumatic Metal Tube	999500018

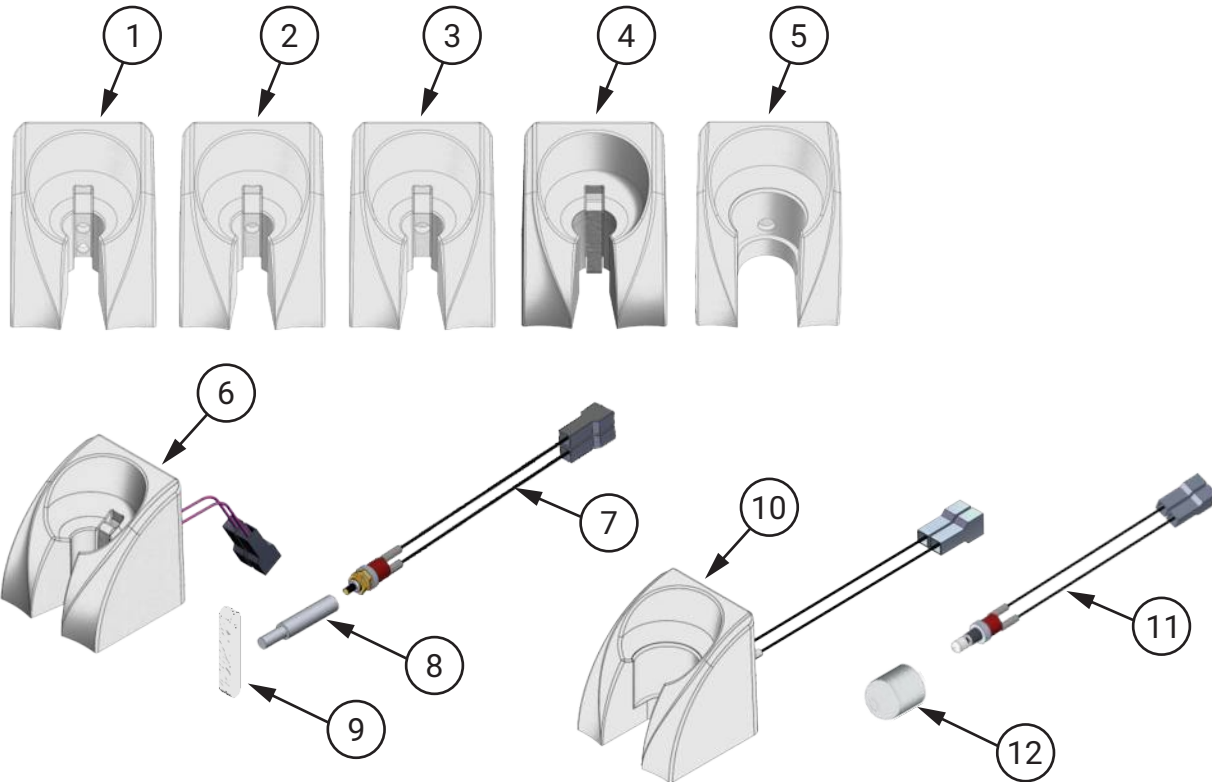


<b>Thermo Comfort</b>		
1	Thermo Comfort Inox	9302156
2	Halostar lamp OSRAM 12V 50 W	2200685
3	Retention valve	7000185
4	Round Key Switch	2200860
5	LED TM13ST 12V	2200813



**Prophy-Jet** 999500042

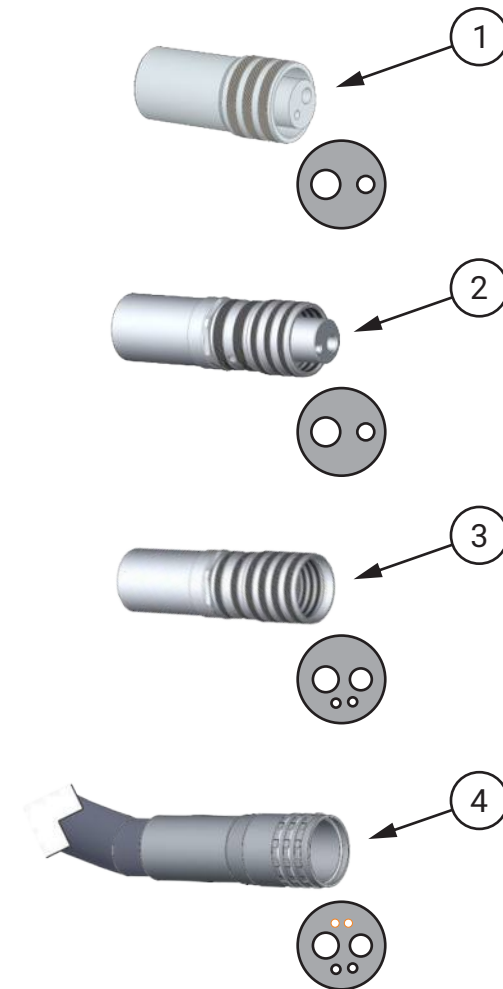
## INSTRUMENTS HOLDER



### Suportes de Instrumentos

1	Tip Holder for Air Jet 18	8102514
2	Tip Holder 18	8102516
3	Tip Holder 18 with thread 1-4 for Scaler and Vacuum Pump	8102997
4	Bienair Tip Holder with Reed 22	9303280
5	Vacuum Pump Tip Holder (USA) - ODO - 22	8103093
6	Tip Holder for Micro Motor 18	9401292
7	Micro Switch for Scaler and Vacuum Pump	9300612
8	Air Jet Drive Pin	8101605
9	Reed for Tip Holder	8100106
10	Vacuum Pump Micro switch (USA) - ODO - 22	9401524
11	Vacuum Pump Tip Support (USA) - (ODO - 22)	9303304
12	Vacuum Pump Support Button (USA) - ODO - 22	8103094

## COUPLING TERMINALS



### Coupling Terminals for Instruments

1	Borden Terminal without Refrigeration	7000121
2	Borden Terminal with Refrigeration	7000122
3	Midwest Terminal	7000159
4	Midwest Fiber Optics Set	999500069

## INTRODUCTION TO THE PARTS PRESENTED IN THIS SECTION

› **Parts**

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The tables below show the main hoses of the equipment.

### Air Hoses



Description	Code	Application
PU Blue Hose Ø 4,76 x 2mm	3300004	Main Air Entrance
PU Blue Hose Ø 3,2 x 1mm	3300159	Internal Distribution
PU Blue Hose Ø 3,2 x 0,5mm	3300161	Midwest Coupling
PU Blue Hose Ø 1,6 x 0,8mm	3300122	Flex Arm Brake
PU Blue Hose Ø 2,5 x 0,75mm	3300144	HVE
PU Blue Hose Ø1,5 x 0,5mm	3300162	Midwest Coupling

### Cristal Hoses



Description	Code	Application
Cable gland Ø 20mm	2200680	Flex Arm
Cristal Hose Ø 6,3 x 2mm	3300109	Sewer Cupfiller / Ejectors
Cristal Hose Ø 3,2 x 0,5mm	3300165	Midwest Coupling
Cristal Hose Ø 12,7 x 2mm	3300112	Midwest Filter

### Water Hoses



Description	Code	Application
Green PU Hose Ø 5,7 x 2mm	3300104	Main Water Entrance
Green PU Hose Ø 3,2 x 1mm	3300160	Internal Distribution
Green PU Hose Ø1,5 x 0,5mm	3300163	Midwest Coupling

### Corrugated Hoses



Description	Code	Application
Corrugated Hose Ø 31,7mm	3300117	Delivery Unit / Water Unit
Gray Corrugated Hose Ø 38.1mm	3300146	Junction Box
Corrugated Grey Hose Ø 19mm	3300147	S. Bowl Sewer / Steady Arm
Corrugated Beige Hose Ø 12,7mm	3300131	HVE and sewage dewatering (USA and Russia)
Corrugated Grey Hose Ø 11,8mm	3300174	Vacuum Pump Sucker (Russia)
Corrugated Grey Hose Ø 15,9mm	3300173	Vacuum Pump Sucker (Russia)

### PVC Grey Hoses



Description	Code	Application
Flexible Hose Ø 15.9 x 2mm	● 999500228   ○ 3300115	Pedal
PVC Grey Hose Ø 9 x 0,85mm	3300164	Midwest Coupling
Malleable Gray Hose Ø 6.3 x 1mm	3300001	Operating Light
PVC Grey Hose Ø 8 x 1,5mm	3300002	Vacuum Pump
PVC Grey Hose Ø 5,7 x 1,5mm	3300149	Venturi Ejector

### Special Hoses



Description	Code	Application
Double Grey Hose for Pedal	3300123	Propulsion Pedal
Triple Pedal Hose Gray L.	3300124	Double Pedal
3-way Grey Hose	3300142	Borden Coupling
4-way Hose (Midwest)	3300151	Midwest Coupling Olde Model



Below is a list with the drawings, codes and description of the Electrical Components











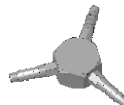
























	2200371 Micro Switch PushButton 0.5 INF		2200396 Emergency Switch		2200842 Transformador 168VA BA IP-00 118V-127V-220V-230V/12V(5A)- 24V(7A)-50/60HZ		9302557 Electric Drive Pedal
	2200186 Microswitch MG-2608 IR / E3G 20A		2200804 LED for Operating Light Olsen - Cree XLamp XM- L2 Leds		9300612 Vacuum Pump Micro Switch		999500025 Printed Circuit with Led (PCB For V3 Led)
	2200373 Inverter Micro Switch		2200813 LED TM13ST 12V LED		9301039 PCB Mounted Speed Control		999500111 Olsen Scaler V2 LED PC Board
	999500185 ON/OFF Switch		2200840 Board for Cup Holder / Spittoon Bowl Siena/Quality		9301457 Micromotor Inverter Switch Set		2200277 Micro Switch BR15IL - QACS
	2200767 Touch Sensor 24VAC (Olsen)		2200848 Pushbutton switch CS-392 NA / E1BB 0.5A		9301459 Micromotor Potentiometer		2200194 Micro Switch BR15IL - QAAA
	2200918 LI Dental CPU Board with Integrated LED Drive		2200857 X-ray Board with Coupling for Touch 24Vac		9301460 Micromotor Micro Switch		2200902 12V 2.5A 100-220V Power Supply Massager Kit
	2200796 Fiber Optics Convert Board 24 / 3.3 AC / DC		2200860 Round Key Switch		9302153 Scaler Potentiometer		2200911 MBTBW1 Rectangular Fuse Holder White
	2200798 Capacitive Touch Board Table Logic		2200909 SPS Dental CPU Board with Integrated LED Operating Light Drive (without Touch)		9302156 Thermo Comfort Inox		2200783 Siena Touch Module Board
					2200846 Auxiliary Touch Board (Fiber Optic, Air Jet and Thermo Comfort)		2200784 Cross Flex Table Touch Capacitive Board

## VALVES AND CONNECTIONS - PART I

Below is a list with the drawings, codes and description of the Valves and Connections.

	3100121 Reduction Valve		3100213 Solenoid Valve 32Vdc 10W - Thermoal (21,711)		8201232 Ejector Female Body		9301866 Distributor Thermo Comfort Syringe / Scaler
	3100136 Water Valve (Button)		3200113 Spray Flow Adjustable Valve		8201233 Ejector Male Body		9302156 Thermo Comfort Inox
	3100140 4 Way Multiple Flow Adjustable Valve		3200121 Tip Support Valve		9300111 1 x 3 Way Distributor		9302256 3 Way Distributor - 3/16 "x 3/16" x 3/32 "
	3100159 3 Way Multiple Flow Adjustable Valve		7000121 Sleeve and Terminal for Micromotor		9300137 1 x 2 Way Distributor		9302478 Air Valve Click
	3100171 Suction Valve 2008		7000122 3-way hose for High Speed		9301344 Brake Pushbutton for Flex Arm Single Tray		9302704 3 Way Distributor - 3/16 "
	3100172 Suction Valve 2008 with Terminal		7000185 Retention valve		9303124 Prophylaxis Filter 20		9303053 Filter for Midwest and Fiber Optics
	3100211 Solenoid Valve 32Vdc 10W (21710) w / Muffler for Capacitive System		7000334 Olsen Prophylaxis Pen (Meditec)		9301669 Venturi Ejector Connector (High Power)		9400077 Complete Water Valve
	3100212 Solenoid Valve 32Vdc 10W - Thermoal (12,100)		8101775 Cannula Ejector Connector Ø 9.5mm		9301670 Venturi Ejector Connector		9400635 Logic Progressive Valve

VALVES AND CONNECTIONS - PART II

	9400672 Olsen Vacuum Ejector		999500017 Aluminum Tube Ø 16 x 82 mm (for Syringe)		7000185 Retention valve		999500232 Vacuum Pump Sucker Adapter
	9400706 Pressurizer Kit for Bicarbonate		999500018 Hydropneumatic Metal Tube (for Syringe)		8201043 Connection Ø 4 x 20mm		8201436 Union 7.94 X 6.4 x 30,5mm Stainless Steel
	9401020 Water Unit Inlet Valve		999500019 Hydropneumatic Metal Valve (for Syringe)		9301147 1 x 3 Way Distributor Ø 3/16		8201443 Water Connector (USA) - ODO - 22
	9401118 Scaler Water Adjustment Valve / Logic Table		999500020 Plastic Pipe for Water Passage (Water Pipe For V3 and V2)		9400557 Long Water Valve Complete		8201445 Spigot Ø2,9 x 15,8mm Stainless steel
	9401202 Tank Filter Kit Siena / Sprint		8101776 Cannula Suction Connector		9401021 Olsen Progressive Actuation Valve		8201446 Union Lug Ø4,76
	9401247 Valve Adjustment for Fiber Optics		999500069 Fiber Optics Hose Assembly Imp.		9401369 SPSLI 18 Scaler Connection Set		8201448 Threaded spigot stainless steel
	9401334 Ejector Set Venturi 18		999500073 Electro-Pneumatic Switch Imp.		999500070 Air Regulator with Imp Filter..		8201449 3-Way Manifold Body Ø3-16 Stainless Steel
	9401335 Ejector Set Vórtice 18		3100143 Pneumatic Brake Valve		3100162 Tank Water Filter		9303303 Stainless Steel Tank Cover Connection - ODO - 22
			3100224 24Vdc Solenoid Valve		3100225 Double Solenoid Valve 24Vcc		9303344 Ejector T Connection Set (RUSSIA) - ODO - 22













































## INTRODUCTION TO THE PARTS PRESENTED IN THIS SECTION

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## TOOL LIST

Below is the list of recommended tools to installation and maintenance Olsen Medical and Dental Units.

 Universal Plier with Electrical Insulation	 Cutting Plier with Electrical Insulation	 Long Nose Plier with Electrical Insulation	 Retaining Rings Piler	 Jaw Piler
 Riveter	 Flat Blade Screw Driver: 1/8 x 2" - 1/8 x 4" - 1/4 x 6" - 3/8 x 10" - 3/16 x 4"	 Philips Screwdriver: 3/16 x 4" - 3/16 x 6"	 Short Handle Flat Blade Screwdriver: 1/4" x 1.1/2"	 Short Handle Philips: 1/4" x 1.1/2"
 L Wrench: 10 x 10 e 11 x 11mm	 L Wrench with Hole 11 x 11mm	 Open End Wrenches: from 6mm to 23mm	 Combination Wrenches Set: from 6mm to 24mm	 Adjustable Wrench
 Chaves Allen Curta: 1,5 - 2,0 - 2,5 - 3,0 - 4,0 - 5,0 - 6,0 - 7,0 - 8,0 - 9,0 - 10,0mm	 Long Hex Keys: 1,5 - 2,0 - 2,5 - 3,0mm	 Bal Point Hex Keys: 5 and 6mm	 T Handle Ball Pointed Hex Key: 2,5 and 3 mm	 Nail Remover Screwdriver 7.3/8"
 Cabinet Rasp 9"	 Cabinet File, Smooth Cut 8"	 Hammer	 Nylon's Hammer	 Measuring Tape 3 meters
 Hammer Drill 1" - 550 Watts	 Hole Saw Set for Wood	 Concrete Drill Set from 4,00 to 10mm	 Steel Drill Set from 1,0 to 13,0 mm	 Extension Cord 3 meters
 Magnetic Level	 Hacksaw	 Small Cutter	 Universal Scissors	 Insulated Tweezer with Narrow Tip
 Testing Screwdriver	 Digital Multimeter	 Soldering Iron 70 Watts	 Manometer 0 to 6 BAR for Borden Coupling	 Manometer 0 to 6 BAR fo Midwest Coupling
 Caliper Rule 150mm	 Tool Center 18 Irwin	 Tool Case	 Cart for Boxes	

## PRE-INSTALLATION

- › **Compressed Air:** Dental compressor should form the basic technical characteristics, pressure between 5.5 and 7.0 (80 to 100 psi), minimum displacement of 150 l / min. and 30-liter tank, oil-free. Recommend use of coalescing filter in the air inlet of the equipment. Pipes: - Up to 10 meters: use hose ¼ "- 10 to 20 meters: use hose 5 / 16" Use specific woven hose for compressed air. For longer stretches, it is recommended project of distribution with specific rigid pipe.
- › **Piping:** - Up to 10 meters: 1/4 "hose; - From 10 to 20 meters: use a 5/16 "hose; Use a woven hose specifically for compressed air. For greater distances, a distribution design with specific rigid tubing is recommended.
- › **Water to Spittoon Bowl and Cup-filler:** install easy access key which will be used to stop the supply of water to the equipment at the end of the day and also to limit the water pressure, if necessary. The water pressure must to be between 2.8 and 6.0 bar and ideal pH between 6.5 and 8. If the water pressure is insufficient, we recommend consulting an experienced professional for hydraulic systems. We recommend the use of water filter in the input line of equipment.
- › **Sewage System:** the sewage net must present good hydraulic declivity and should preferably be installed underground. The nominal diameter of the tubing must be of 40 mm. Use independent branches for the sewage of the Water Unit.
- › **Power Supply:** the power net must be single phase, specifically grounded and must have thermal circuit breaker exclusive for the dental set. Should the power net present tension variations a power stabilizer must be installed. The circuit braker must be turned off everyday after work hours.
- › **Chair Fixation Points:** The chair must be fixed to the floor, except when using the optional rubber mat. Not observing this instruction will result in loosing the warranty.

## CUSTOMER INSTRUCTIONS

- › **Able Professional Operation:** this equipment must be operated by professional who have the ability to work on dental procedures.
- › **Storage:** before the first operation or after long stop periods (weekends, holidays, vacations), the user must eliminate all air and water stuck inside the hoses, shut off the water-cocks, depressurize and empty the water tank, turn the general switch and the general circuit breaker off. For reactivation of the unit, verify the funtioning of the entire set before starting operation.
- › **Direct Exposure to Sunlight:** the equipment must not be exposed directly to solar light to prevent from the plastic covers and/or the upholstery to wear out precociously.
- › **Environmental Awareness:** the organic residues, the contaminated materials and disposable items must be properly eliminated according to the rules of the local law.
- › **Daily Cares:**
  - Replace the bottle water.
  - Daily cleaning of the venturi saliva ejector systems, vacuum pump and / or HVE hoses.
  - Cleaning of the debris collector, bowl and its finish.
  - Close water and compressed air records and turn off the equipment's power supply breaker after expedient.
  - Check the compressor before using the dental set.
  - Drain the compressor's moisture filter before using the dental set.

## TROUBLESHOOTING TABLE - PART I

	<b>Problems</b>	<b>Tests</b>	<b>Causes</b>	<b>Solutions</b>
<b>Chair</b>	The chair does not carry out any commands	Check mains voltage	Off	Connect the mains
		Check the mains voltage rating	Electric voltage selected in the transformer is not selected according to the rated mains voltage	select the electrical voltage of the transformer, according to the mains electrical voltage
		Low mains voltage	Varying the input voltage in the equipment	Stabilize the mains voltage
		There is no electrical voltage in the transformer	Blown fuse	Replace the fuse, compatible with the mains electrical current.
		PC board does not light the LED indicators	There is no output voltage from the transformer to the board	Replacing the chair transformer
		Check pedal switches	Poor contact in the control micro switch	Replace control switch
		Measure Chair PC board input and output voltage	There is no output voltage from the PC board to the motors	Replacing the chair PC board
		Measure pedal PC board input voltage	Pedal PC board does not send commands to chair's PC board	Replace the pedal PC board
<b>Chair</b>	Chair seat or backrest does not move	Check fuse	Broken fuse	Replace the fuse as specified for the gearmotor
	Burning seat or back fuse	Check the current of the motor	Electric current above the rated fuse current	Lubricate the geared motor spindle. If not, replace the part.
		Check limit switch	When the motor reaches the limit switch, the limit switch is not activated	Troubleshoot poor contact between connectors and micro keys, align the micro key palette or replace a defective micro key.
<b>Operating Light</b>	Operanting light does not turn on the lamp	Check electrical contact of the switch	Poor contact of the micro switch	Reconnect electrical cable or replace micro switch if it is not closing contact.
		Check PC board output voltage	There is no voltage at the operanting light output on the PC board	Replace the chair PC board
			Broken operanting light fuse	Check equipment wiring harness and replace the operanting light fuse on the board
		Electric voltage of the PC board does not reach the operanting light head	Broken cable	Connect the electrical cable.
		Check chair PC board tension selection mode	Chair PC board has the operanting light output in a mode that is not suitable with the operanting light voltage.	Select the operanting light output according to the head LED's rated voltage
<b>Water Unit and Assistant Module</b>	Cuspidor does not come out water	Check mains water valve	Closed water supply.	Open mains water record
		Check mains water supply	Lack of water or air in the pipeline	Wait for water supply or remove air from the pipeline, releasing the flow.
		Open the cuspidor water valve	Dirt in the sieve and solenoid valve tubing	Clean the solenoid valve sieve and tubing
		Check electrical output voltage of the board	Electric voltage does not reach the solenoid coil of the valve	Reconnect electrical cables and establish rated electrical voltage to the solenoid valve
		Check voltage and current of the solenoid switch	Burnt solenoid valve	Replace the valve solenoid

## TROUBLESHOOTING TABLE - PART II

	Problems	Tests	Causes	Solutions
Water Unit and Assistant Module	Curing light does not work	Check transformer output voltage and cables	No electrical voltage reaches the curing light PC board	Reconnect electrical cable from light curing harness
	Curing light does not work, does not turn on the LED	Check input voltage on the curing PC board	Nominal electrical voltage arrives from the transformer, but does not turn on the light curing LED	Replace curing PC board
	Ejector doesn't work	Check compressor air pressure	Lack of air pressure from the compressor	Start the compressor, open the valve and establish the air flow
		Check venturi ejector	Dirt in the ejector tip	Clean the suction air nozzle
		Check instrument support valve	Locked valve plunger	Open the valve and repair the plunger
	Ejector does not close	Check instrument support valve	Valve does not close when the suction connector is attached to the holder	Adjust instrument support valve
		Check instrument holder reed	Support vane broken. Does not close the air passage when the suction device is placed in the holder	Replace vane and adjust the suction support valve
	Ejector is weak or losing suction during use	Check ejector filter	Clogged filter	Clean the ejector filter
		Check air pressure	Pressure below specification coming from the compressor	Adjust the air pressure of the compressor and chair filter
		Check ejector sewer draining hose	Clogged hose	Clean sewer suction hose from ejector
	Ejector exiting air through the connector instead of suck	Check venturi ejector in the sewer connection box	Clogged sewer	Unclog sewer, clean ejector and connection box
		Check venturi ejector in the sewer connection box	Sucker outlet hose bent or obstructed	Unfold and clean the venturi ejector hose
	Bicarbonate jet (prophylaxis) does not work	Check reservoir air pressure	No air pressure at the powder tank inlet	Adjust VRP2 air pressure
		Check bicarbonate powder reservoir	Reservoir outlet clogged	Unclog bicarbonate output valve
		Check triple hose	Hose clogged with baking powder	Unclog triple hose
		Check instrument support valve	Support valve with plunger locked	Adjusting the instrument support valve plunger
	Bicarbonate jet (prophylaxis) working at the same time as another hand instrument	Check pedal valve	Pedal valve without air pressure	Replace progressive pedal valve plunger
		Check instrument support valve	Instrument support valve does not close fully	Adjust instrument support valve
	Bicarbonate jet (prophylaxis) leaving water after use	Check suction valve	Suction valve plunger takes a long time to return	Clean and lubricate rubber rings on the suction valve
	Vórtice suction does not work	Check chair's electrical tension	Chair on / off button off	Turn on / off button of the chair base
Check chair board input and output voltage		Chair PC board does not release the rated voltage for the Vórtice air solenoid valve	Replace the chair PC board or the timed Vórtice suction PC board if it is not the same model.	
Check the air solenoid valve of the Vórtice system		Solenoid coil receives the nominal voltage from the PC board, but does not open the valve plunger	Replacing the Vórtice suction air solenoid valve	
Vórtice suction does not turn off, after placing in the holder	Check trigger button	On / off button has not been turned off	Step on the chair base button or joystick to turn the Vórtice system off	



## TROUBLESHOOTING TABLE - PART III

	Problems	Tests	Causes	Solutions
Delivery Unit Platform	Flex arm does not lock the tray in the working position	Check air pressure of the equipment	Team without air pressure or with insufficient pressure	Start the compressor, open the regulator to regulate the air pressure of the equipment
		Check flex arm brake	Air leak in the flex arm brake	Replace flex arm brake
		Check the brake arm spring pressure	Low pressure on the flex arm brake spring	Adjust the brake arm spring pressure
		Check the (capacitive) touch sensor	Capacitive sensor sending direct electrical voltage to the sensor solenoid valve	Replacing the (capacitive) touch sensor
	Flex arm brake touch sensor does not trigger	Check the touch sensor solenoid valve	Touch sensor valve is not closing the air flow	Replacing the touch sensor solenoid valve
		Check input voltage on the touch (capacitive) sensor PC board	The rated voltage does not reach the touch (capacitive) sensor board	Connect electrical cable and establish the nominal electrical voltage of the PC board.
		Check equipment electrical ground	Poor sizing or lack of grounding in the electrical network	Resize or install the electrical ground in the Equipment outlet / connector
	Equipment does not respond to commands from the Touch Panel	Check touch (capacitive) sensor PC board	Touch (capacitive) sensor does not respond when receiving electrical voltage	Replacing the (capacitive) touch sensor
		Check electrical harness contacts	Touch PC board does not receive electrical voltage from the chair PC board	Reconnect cables and establish electrical voltage from the chair PC board to the touch
	Equipo operating Light and tray do not stop at work positions	Check working table touch PC board or assistant module	Chair PC board does not receive commands from the Touch PC board.	Replace the touch PC board of the chair or assistant module
Check the leveling of the equipment structure		operating Light arm column and Equipo are out of level in the vertical position	Retighten the fixing screws of the Equipo to the chair to level the structure	
Working Table	Air leakage through the Equipo water tank cover	Check tank cap rubber ring	Tank cover rubber ring is worn, causing air leak	Replace O'ring on the delivery unit water tank cap
		Check tank cap connection	Connection with broken weld	Replacing the Water Tank Cover Connection
	Scaler does not work	Check mains voltage	Mains voltage is not connected or is below 10% nominal	Establish electrical voltage from the mains to the equipment
		Check electrical supply voltage of the board	Electrical voltage below the nominal scaler PC board or poor electrical contact	Establish rated electrical voltage to the scaler board, check connectors and reconnect electrical cables
		Check electropneumatic valve	Electropneumatic valve is not operating.	Check and restore sufficient air pressure to activate the valve and / or check whether the valve closes the electrical contact. Replace valve.
		Check scaler PC board	Scaler board receives the nominal voltage from the transformer, but no electrical voltage is output to the transducer (pen)	Replace the PC board's fuse. And when there is no fuse, replace the scaler PC board
		Check scaler hose	Electric scaler hose cable is broken	Replace the scaler hose
		Check scaler instrument holder NC switch	Switch is locked does not release electrical control when the pen is removed from the holder	Unlock the button or replace the scaler holder microswitch
		Check scaler transducer (pen)	Nominal electrical voltage reaches the transducer, but the insert (tip) does not vibrate	Check that the insert is firmly attached to the transducer. If the problem persists, replace the transducer.
		Check scaler potentiometer	No voltage reaches the scaler transducer	Replace scaler potentiometer

## TROUBLESHOOTING TABLE - PART IV

		<b>Problems</b>	<b>Tests</b>	<b>Causes</b>	<b>Solutions</b>
<b>Working Table</b>	Weak scaler		Check electrical voltage of the scaler PC board	Electrical voltage is below the nominal	Replacing the scaler PC board
			Check potentiometer	Potentiometer does not select the power for that insert model (tip)	Replace scaler potentiometer
			Check scaler tip	Insert (tip) was not threaded until the end of the transducer shaft thread	Use the torque wrench to thread the insert on the scaler transducer (pen) shaft
			Check scaler tip	Internal thread of the insert (tip) is not compatible with the external thread of the scaler transducer (pen) scaler insert is worn	Replace the insert (tip), using the compatible model the thread of the scaler transducer Replace the scaler insert (tip)
	Scaler does not come out of water		Check scaler water valve	Scaler water valve closed or dirty obstructing the water outlet	Open the scaler water valve and do internal cleaning
			Check the scaler PC board	The scaler PC board is not receiving rated voltage from the transformer scaler PC board does not release rated voltage to the solenoid valve	Repair electrical connection between transformer and scaler PC board Replacing the scaler PC board
			Check scaler water solenoid valve	Scaler solenoid valve receives nominal voltage from the PC board, but does not open the plunger of the water valve	Replacing the scaler water solenoid valve
	Electric micromotor does not work		Check the equipment's electrical input network	Mains disconnected or destabilized	Turn on equipment or stabilize power grid
			Check micromotor rotation switch	Inverter switch (FWD / REV) is in the OFF position	Select the key for the desired rotation FWD or REV
			Check air pressure of the electropneumatic valve	No air pressure or insufficient pressure in the electropneumatic valve	Adjust air pressure in the electropneumatic valve
		Check electropneumatic valve switch	No electrical voltage arrives in the electropneumatic valve micro switch	Reconnect cables and establish rated voltage in the electropneumatic micro switch	
		Check electric micromotor PC board	Nominal voltage does not reach the electric micromotor board The board receives electrical voltage but does not send to the electric micromotor	Connecting cables and establishing nominal input voltage on the electric micromotor board Replacing the electric micromotor PC board	
		Check micromotor rotation switch	Inverter switch (FWD / OFF / REV) with poor contact	Replacing the electric micromotor inverter switch	
		Check electric micromotor potentiometer	Potentiometer with poor contact	Replace electric micromotor potentiometer	
		Check micromotor cable	Electrical cable with bad contact or broken	Repair or replace the electric micromotor cable	
		Check electric micromotor	Micromotor rotor (handpiece) is locked	Replace electric micromotor	
		Check contra-angle or straight handpiece	Contra-angle with the cartridge locked or straight handpiece with the drive shaft locked Contra-angle or straight handpiece with crushed turbine head	Repair or replace contra-angle cartridge or transmission shaft of straight handpiece Repair or replace contra-angle or straight handpiece	

## TRUBLESHOOTING TABLE - PART V

	Problems	Tests	Causes	Solutions
Working Table	Weak electric micromotor, low speed or failing	Check the electrical voltage of the micromotor PC board	Electric voltage is below the nominal for the micromotor operation	Establish rated electrical voltage of the equipment
		Check air pressure of the electropneumatic valve	Lack or low air pressure in the electropneumatic valve	Adjust air pressure in the electropneumatic valve
		Check electric micromotor potentiometer	Potentiometer is set to minimum power	Adjust the potentiometer to the desired RPM speed
			Selector switch power variation failure	Replacing the micromotor power adjustment switch
	Thermo Comfort does not heat the syringe water	Check electrical voltage in the water heater	Nominal electrical voltage does not reach the heater	Reconnect cable and establish the rated electrical voltage of Thermo Comfort
		Check water heater lamp (Boiler)	Boiler halogen lamp is burned out	Replacing the water tank lamp
		Check on / off switch	Switch off	Turn on heater switch
	Low and high speed pneumatic turbines are weak	Check compressed air compressor	Compressor off	Check the sizing and condition of the compressor power supply circuit breaker. Turn on the circuit breaker.
			Insufficient pressure at the compressor outlet	Adjust the outlet pressure of the compressor air filter
			Starting the engine with dynamic pressure below the minimum recommended in the equipment user manual	Adjust the pressure switch to start the compressor motor with dynamic pressure reaching 5.5 bar (80 psi)
Compressor with low power and displacement below the recommended for the type of equipment			The compressor must have a minimum displacement of 150 l / min.	
Inadequate compressed air piping the distance between the equipment and the compressor			The air tubing must have the diameter according to the measures specified in the equipment user manual.	
Check air filter		Air filter near the equipment has a static pressure below 5.5 bar (80 psi)	Adjust the air filter to 5.5 bar (80 psi) next to the equipment	
Check the pressure regulating valve (VRP1)		The regulating valve (VRP1) has low pressure	Adjust the valve (VRP1) so that the dynamic working pressure of the low speed is 2.4 bar (35 psi) using the gauge on the turbine	
		Valve (VRP1) does not regulate	Replacing the air reduction valve seal	
Check the pressure regulating valve (VRP1) and air choke for the high speed turbine		The regulating valve (VRP1) has low pressure and a choke with little air flow	Set the working pressure of the handpieces.	
Check adjustment of the valves of the instrument holder		Valves on the instrument supports are out of order	Adjust the valves so that the vanes close the air of the instruments when they are in the supports	
Check the air propulsion pedal	Progressive pedal valve losing pressure or low air flow	Replacing the progressive pedal valve		

## TROUBLESHOOTING TABLE - PART VI

	<b>Problems</b>	<b>Tests</b>	<b>Causes</b>	<b>Solutions</b>
<b>Working Table</b>	Lack of water spray on the turbines	Check compressor	Low air pressure at the filter outlet	Adjust the air filter to the rated working pressure
		Check equipment air valve	Closed tank air valve	Open the air valve to pressurize the water tank
		Check the Equipo air pressure regulating valves	Low air pressure in the tank	Adjust the Equipo's VRP1 valve and the high-speed turbine air choke with the pressure gauge. Then the tank VRP2 and the spray choke
		Check triple tap	Triple tap with closed water valve	Open the triple tap water valve
		Check turbine (pen)	Turbine (pen) with the spray outlet clogged	Unclog outlets of turbine water spray (pen)
	Instruments on the stand start when the propulsion pedal is depressed or when using another handpiece	Check instruments holder valves on the delivery system	Support valves or microswitches do not close completely when they are with the instruments	Adjust the valves of the instrument holders so that the vanes close the valves fully when they are with the handpieces
	Turbine drips after use or when in the tip holder (Cross)	Check the water suction valve	The internal plunger of the water suction valve is locking	Open the water suction valve and lubricate the sealing rings. If not, replace the valve
	Syringe does not come out air and water	Check compressor air pressure	Compressor air flow interrupted	Establish air flow by turning on the compressor or adjusting the filter.
		Check air pressure of the equipment	Air valve of the water tank is closed	Open the water tank air valve
	Syringe locking air and water buttons	Check 3-way syringe	3-way syringe head with stroke marks / dented	Rectify the button fittings, if not resolved, replace the 3-way syringe
			Lack of lubrication on the buttons	Lubricate the 3-way syringe buttons, if not resolved, replace the syringe
	Syringe leaving water when pressing the air button	Check compressed air compressor	Water in the compressor air tank	Drain the reservoir, replace or replace the air filter. If the compressor is too far from the equipment, place a filter on the chair.
	Leakage of water through the fitting of the 3-way syringe tip	Check the 3-way syringe	Clearance in the metal ring of the syringe tip	Tighten the metallic ring on the tip of the 3-way syringe
			The base of the 3-way syringe tip is broken	Replacing the 3-way syringe tip
	Brushless electronic micromotor will not start	Check electrical network	Mains disconnected or with voltage below that specified for the equipment	Connect or stabilize the equipment's electrical network
Check fuse and electrical voltage of the base of the chair		Blown chair base fuse	Replace fuse according to the mains voltage. Test electrical harness	
Brushless electronic micromotor will not start	Check equipment harness	Nominal electrical voltage of the transformer does not reach the electronic micromotor PC board	Retighten connectors and establish nominal electrical voltage between the transformer and the electronic micromotor PC board	
	Check equipment air pressure	Compressor off or low air pressure in the Equipo, not activating the electronic micromotor PC board sensor	Switch on the compressor and regulate the air pressure of the equipment	
	Check instrument support valve	Delivery system air does not reach the electronic micromotor PC board pressure sensor	Check the air pressure of the Delivery System, reduction valve (VRP1), pedal valve and instrument holder	

## TROUBLESHOOTING TABLE - PART VII

	Problems	Tests	Causes	Solutions
Working Table	Brushless electronic micromotor failing the turbine or turning the drill	Check electronic micromotor PC board	Electronic PC board does not release rated voltage to the micromotor (handpiece)	Replacing the electronic micromotor PC board
		Check the selection mode of the electronic micromotor control panel	The selection mode is not suitable for the contra-angle in use	Select the working mode and RPM for the contra-angle in use 1: 1, 1: 5 or 20: 1 on the control panel
		Check contra-angle	Contra-angle with hit / hit mark on the turbine head	Rectify the part, if not resolved, replace the contra-angle
		Check electrical voltage of the electronic micromotor PC board	Low nominal voltage from the electronic PC board output to the micromotor	Replacing the electronic micromotor PC board
	Brushless electronic micromotor does not come out of water	Check reservoir and air valve of the delivery system	Tank air valve is closed	Open air valve of the delivery system tank
		Check water record of electronic micromotor	Dirt inside the water register of the electronic micromotor	Open the water register of the micromotor and perform cleaning
	Brushless electronic micromotor heating the contra-angle head	Check the selection mode of the electronic micromotor control panel	The selection mode is not suitable for the contra-angle in use	Select the working mode and RPM for the contra-angle in use 1: 1, 1: 5 or 20: 1 on the control panel
		Check contra-angle	Lack of lubrication of the drive shaft and cartridge	Lubricate the contra-angle after each service
	ChronoLub system remains beeping continuously	Check ChronoLub PC board programming	ChronoLub system has not been rebooted (RESET / ESC button) after instrument lubrication	After lubricating the pen, press the RESET / ESC button on the ChronoLub panel

<i>Revisions Program - Chair and Delivery Unit - Part I</i>	180d	360d	540d	720d	900d
<b>CHAIR</b>					
Checking of all movements	✓	✓	✓	✓	✓
Headrest checking	✓	✓	✓	✓	✓
Armrest checking	✓	✓	✓	✓	✓
Checking the valve and pedal handle	✓	✓	✓	✓	✓
Articulation axes lubrication	✓		✓		✓
Electrical motor/ spindle drive lubrication		✓		✓	✓
<b>WATER UNIT / ASSISTANTE MODULE</b>					
Articulation axes verification / lubrication	✓	✓	✓	✓	✓
Castors checking (Kart)	✓	✓	✓	✓	✓
Handpieces pressure checking	✓	✓	✓	✓	✓
O´rings coupling for handpieces checking and lubrication	✓	✓	✓	✓	✓
Micropilot valve of the handpiece holder checking	✓	✓	✓	✓	✓
Electric-pneumatic valves cheaning and lubrication	✓	✓	✓	✓	✓
Instrument Articulators (Cross) Checking	✓	✓	✓	✓	✓
Touch Commands Checking	✓	✓	✓	✓	✓
Disassembles and lubrication the syringe buttons		✓		✓	✓
Handpieces' Hoses Checking		✓		✓	✓
Wear out of Scaler Tips control		✓		✓	✓
Flex Arm movements and Brake checking		✓		✓	✓
X-ray viewer activation button checking		✓		✓	✓
Checking the prophylaxis reservoir lid ring		✓		✓	✓
Checking the prophylaxis hose	✓		✓		✓
Checking the trim of the prophylaxis pen		✓		✓	✓
<b>OPERATING LIGHT</b>					
Verification of joint movements	✓	✓	✓	✓	✓
Verification of available intensities	✓	✓	✓	✓	✓
Focus check	✓	✓	✓	✓	✓
Lamp / LED Rating		✓		✓	✓
Screen / mirror check			✓		✓

<i>Revisions Program - Chair and Delivery Unit - Part II</i>	180d	360d	540d	720d	900d
<b>WATER UNIT / ASSISTANTE MODULE</b>					
Movements checking	✓	✓	✓	✓	✓
Suction 250 to 300 mm/hg checking	✓	✓	✓	✓	✓
Lubrication of the saliva ejector´s filter O'rings	✓	✓	✓	✓	✓
Disassembles, cleaing and lubricating of the bowl O'ring	✓	✓	✓	✓	✓
Strainer Checking	✓	✓	✓	✓	✓
Blade for instruments holder checking	✓	✓	✓	✓	✓
Articulation Lubrication	✓	✓	✓	✓	✓
Prophylaxis' Hose checking	✓		✓		✓
Disassemble and lubricating the syringe buttons		✓		✓	✓
Checking of guarnition for prophylaxis' instrument		✓		✓	✓
Prophylaxis' System Reservoir O'ring checking		✓		✓	✓
Air vaccum tubes checking		✓		✓	✓
<b>STOOL</b>					
Castors checking	✓	✓	✓	✓	✓
Checking the piston and movements	✓	✓	✓	✓	✓
<b>CURING LIGHT</b>					
Verification of intensity and operating programs	✓	✓	✓	✓	✓
Checking tip and support ring	✓		✓		✓
<b>JUNCTION BOX</b>					
Air, Water and Vacuum hose checking	✓	✓	✓	✓	✓
Sewer Connector Checking and Cleaning	✓	✓	✓	✓	✓

<i>Features - Chair</i>	
<b>Electrical</b>	
Power supply	118, 127, 220 and 230 VAC; The voltage must be selected at installation. <b>Note:</b> All equipment leaves the factory set to 220VAC.
Number of phases	Single phase
Frequency	50/60 Hz
Power	168 VA
Maximum Equipment Voltage	24V
Chair and Equipment Fuses	Fast Acting Fuses
- F1 Chair	1.5A to 220VAC / 230VAC 3A to 118VAC / 127VAC
- F2 Connection Box	10A
PC Board Fuses	
- F1 and F2	3,5A Delayed Fuse
- F3 Operating Light	3,15A Fast Acting Fuse
<b>Mechanical</b>	
Protection type against electric shock	Class I equipment according to IEC 60601-1-1 and IEC 60601-1-2
Protection Degree	Type B
Operation mode	Intermittent
Protection against harmful water penetration	IPX0
Transformer thermal protection	Aperture at 130°C ±3%
Lifting capacity	150 Kg
Water tank capacity	1000ml
Operation light's intensities	8.000 to 30.000 Lux;
Seat height in relation to the floor	Minimum 44 cm; Maximum 72cm
Gross weight	260 Kg
Storage temperatures	-30°C to 45°C
Working temperatures	2°C to 45°C
Mechanical Structure	Laminated steel strip SAE 1020
Welding	MIG
Painting	Electrostatic Painting with Polyurethane
Plastic Covers	High Impact Pigmented Polystyrene
Other plastic parts	ABS, PP, Polyacetal and TPE

**Features - Accessories**

**Connections**

Electric	Flexible tube ¾"
Pneumatic	Flexible tube ¾"
Sewer connection	DN 40mm
Water tubing	Welding ø 25mm rigid PVC tube with the L/R 25 x ½" terminal

**Curing Light**

Power supply	24VAC - 50Hz/60Hz
Power	8W
Operation mode	Continuous, ramp and pulsed
Light power	Fiber Optics probe (tip) 1000-1200 mW/cm <sup>2</sup>
Wave length	420-480 nm
Timer	20 seconds

**VALO Curing Light**

Power supply	9VCC
Power	18W

**Scaler**

Power supply	24VAC - 50Hz/60Hz
Frequency	28kHz ±3kHz
Power	3 to 20 W

**Electrical Micromotor**

Power supply	24VAC - 50Hz/60Hz
RPM	0-35.000 RPM
Max. Power	60W
Torque	270g-cm

**Brushless Micromotor**

Light's intensities	25.000Lux
	20:1: -- 100-2.500 RPM
RPM	1:1: -- 2.000-40.000 RPM 1:5: -- 10.000-200.000 RPM
Max. Power	120W
Torque	~3,5Ncm

**High Speed Turbine with Fiber Optics**

Power supply	24VAC - 50Hz/60Hz
LED Voltage	3,3VCC
LED power	2W

**X-Ray**

Power supply	24VAC - 50Hz/60Hz
Power	4W

**Thermo Comfort**

Power supply	12VAC - 50Hz/60Hz
Power	50W

**Anti-Stress**

Power supply	12VCC
Power	15W

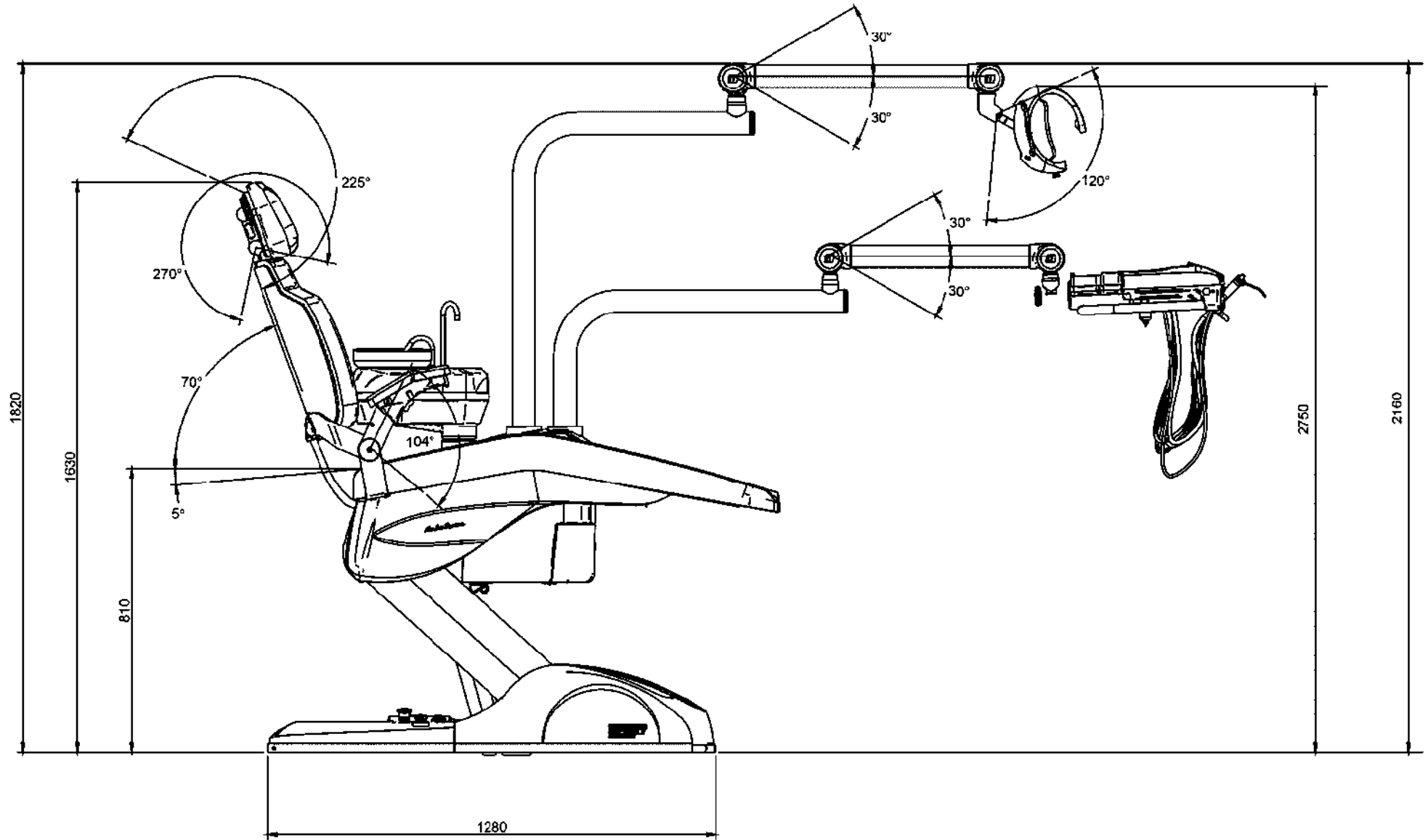
**AirJet**

Power supply	24VAC
Solenoid voltage	32VCC
Power	10W



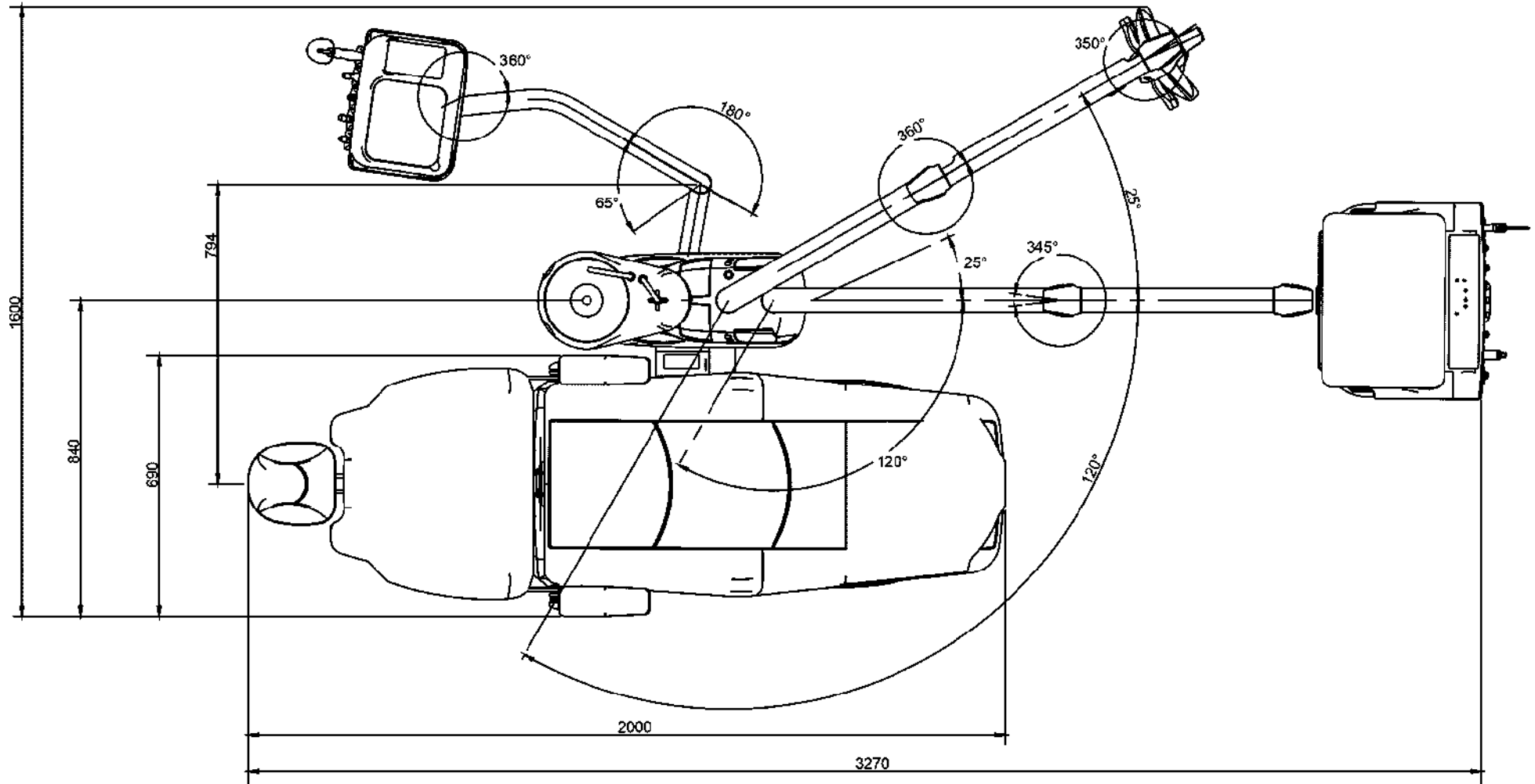
# INFINITY - SIDE VIEW

Measurements in millimeters



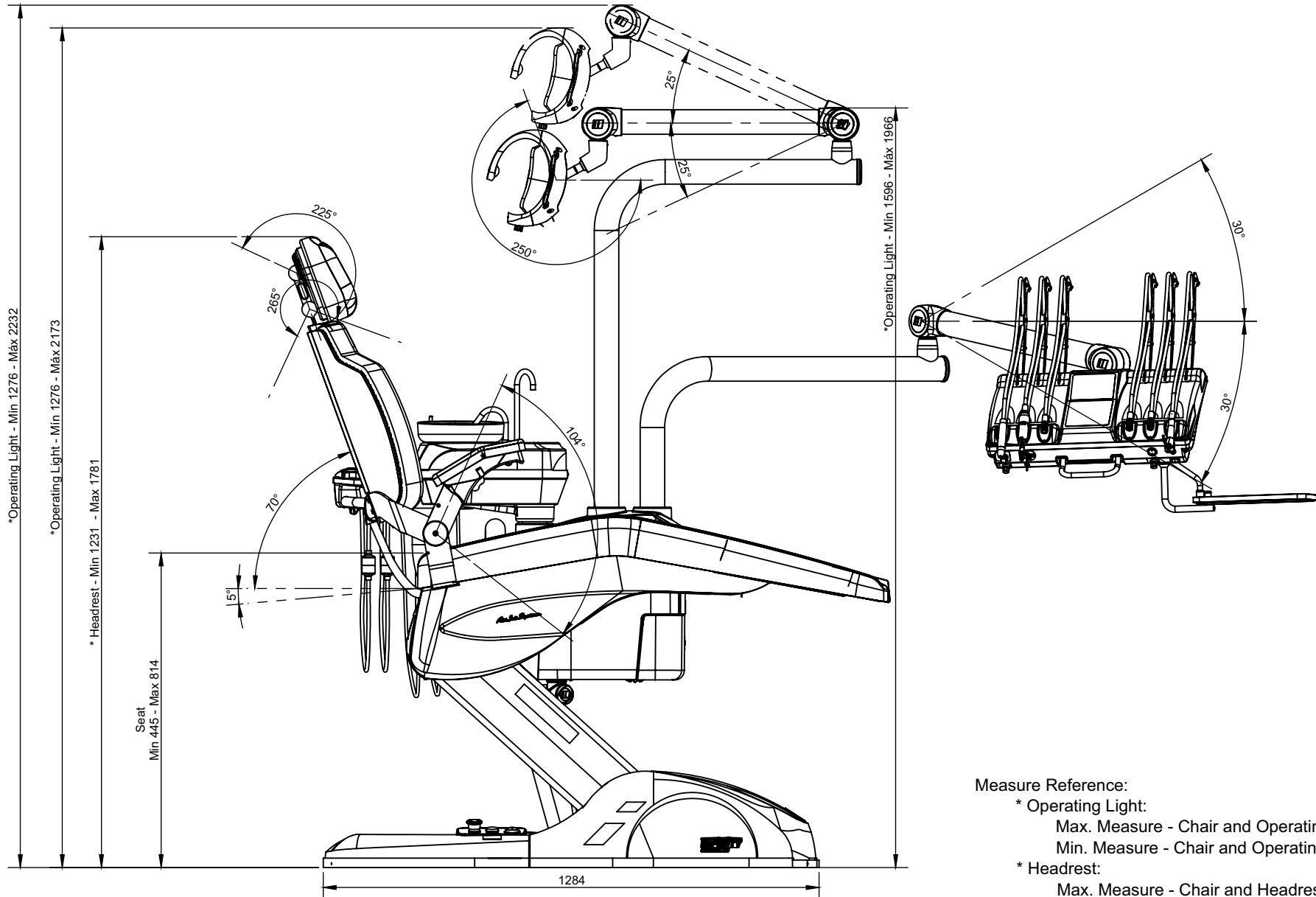
# INFINITY - UPPER VIEW

Measurements in millimeters



# INFINITY CROSS FLEX - SIDE VIEW

Measurements in millimeters



Measure Reference:

\* Operating Light:

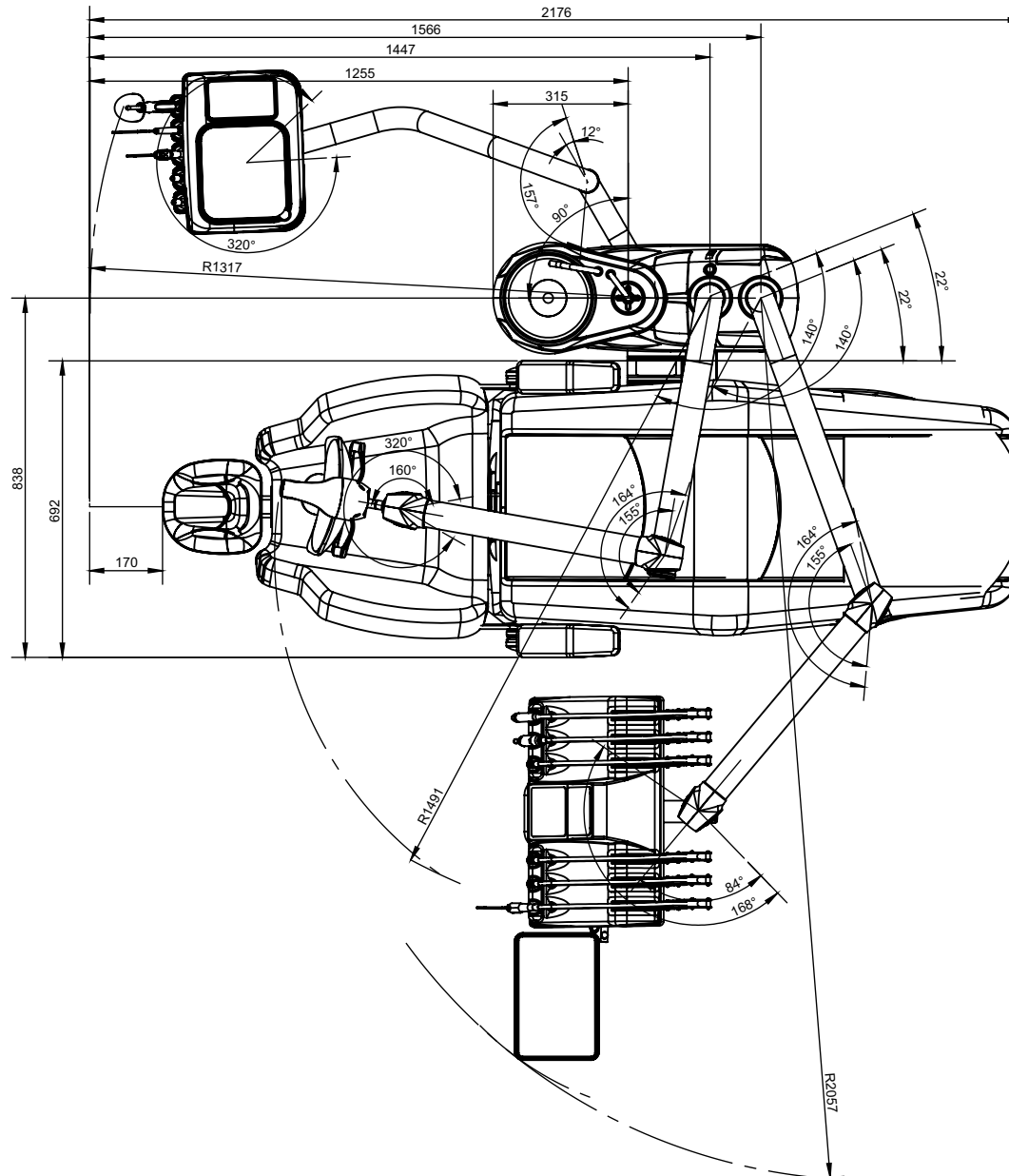
Max. Measure - Chair and Operating Light at Max.;  
 Min. Measure - Chair and Operating Light at Min.;

\* Headrest:

Max. Measure - Chair and Headrest at Max.;  
 Min. Measure - Chair and Headrest at Min..

INFINITY CROSS FLEX - UPPER VIEW

Measurements in millimeters

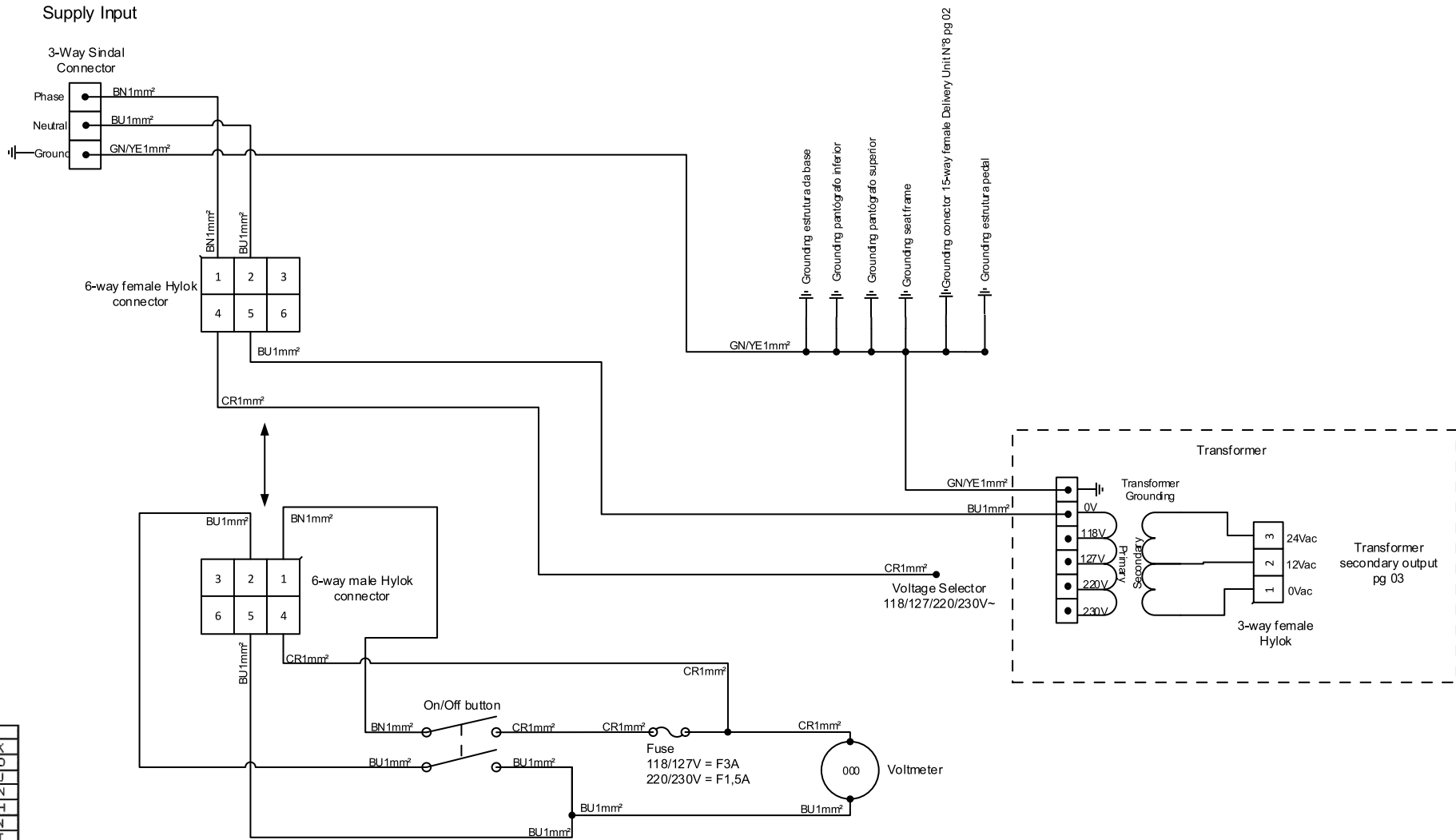


ELECTRICAL DIAGRAMS

› **5401152 - R00 - Electrical Diagram Infinity 22** . . . . . 54 to 72

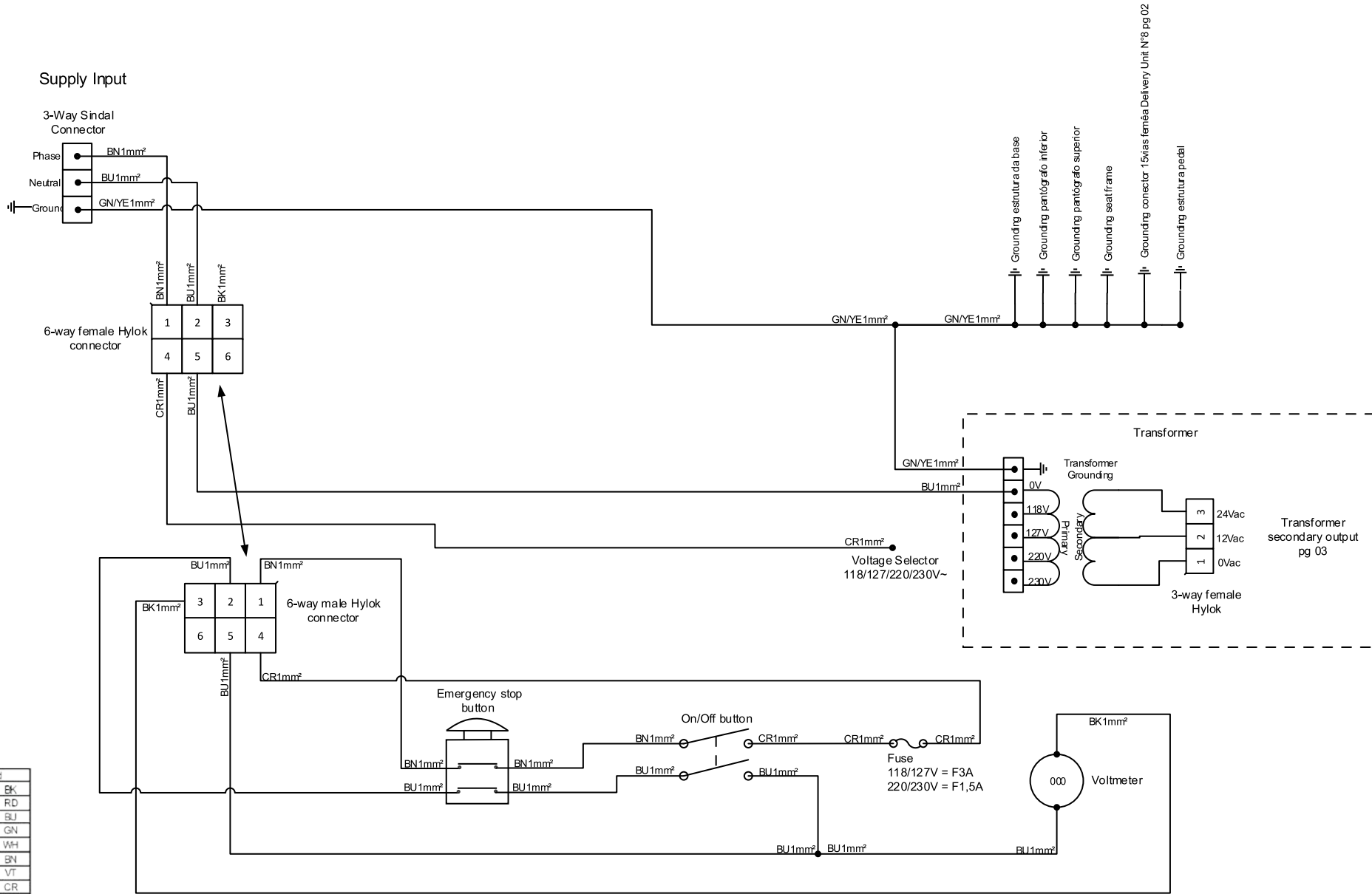
HYDROPNEUMATIC DIAGRAMS

› **5406088 - R04 - Hydropneumatic Diagram for Dental Line** . . . . . 73 to 91

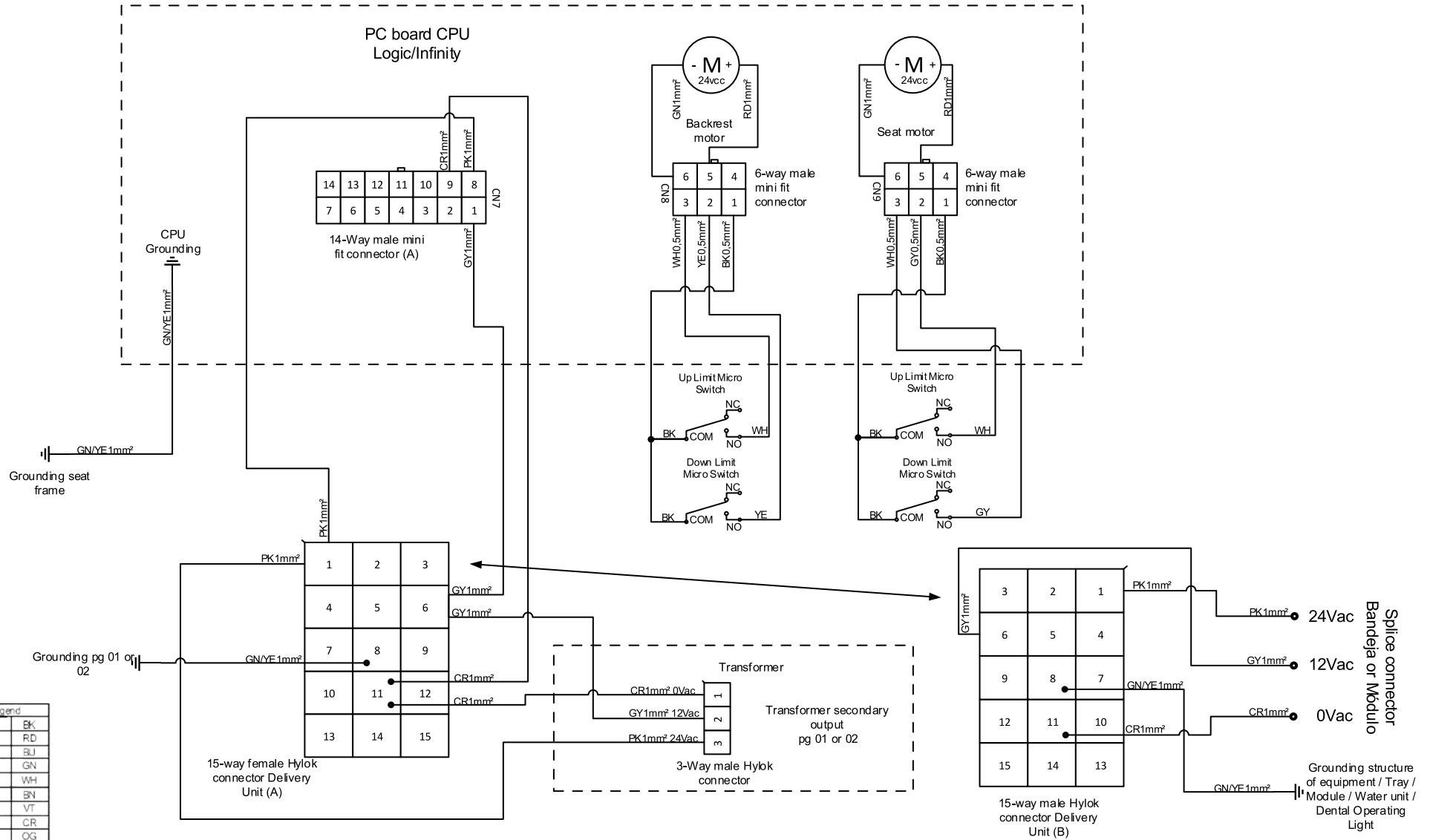


Color legend	
Black	BK
Red	RD
Blue	BU
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BU/WH
Red/White	RD/WH

Chair  
 -Electrical part + Grounding  
 -Optionals as per equipment configuration grid

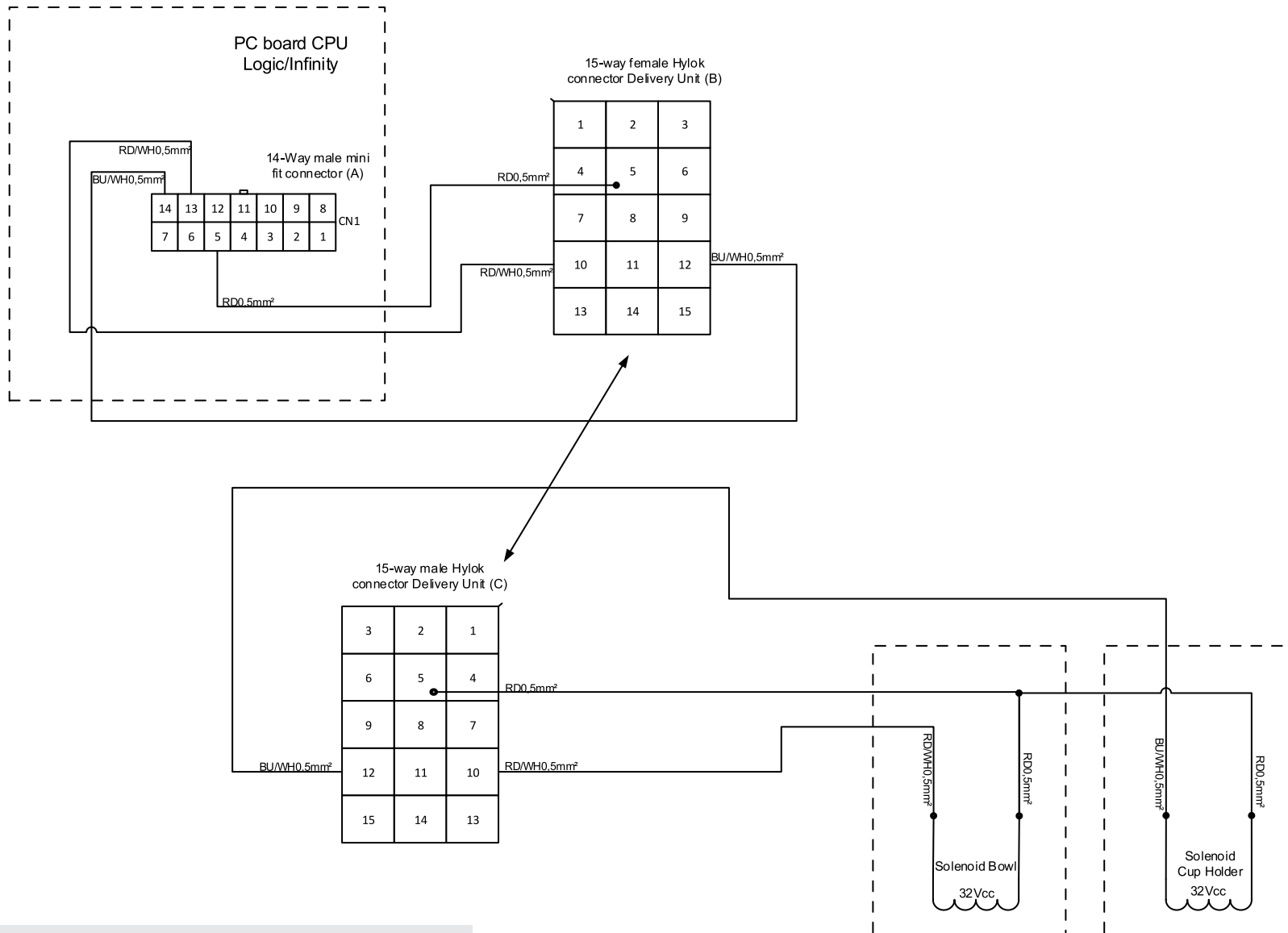


Chair  
 -Electrical part + Grounding  
 -Emergency key + monitoring system  
 -Optionals as per equipment configuration grid.



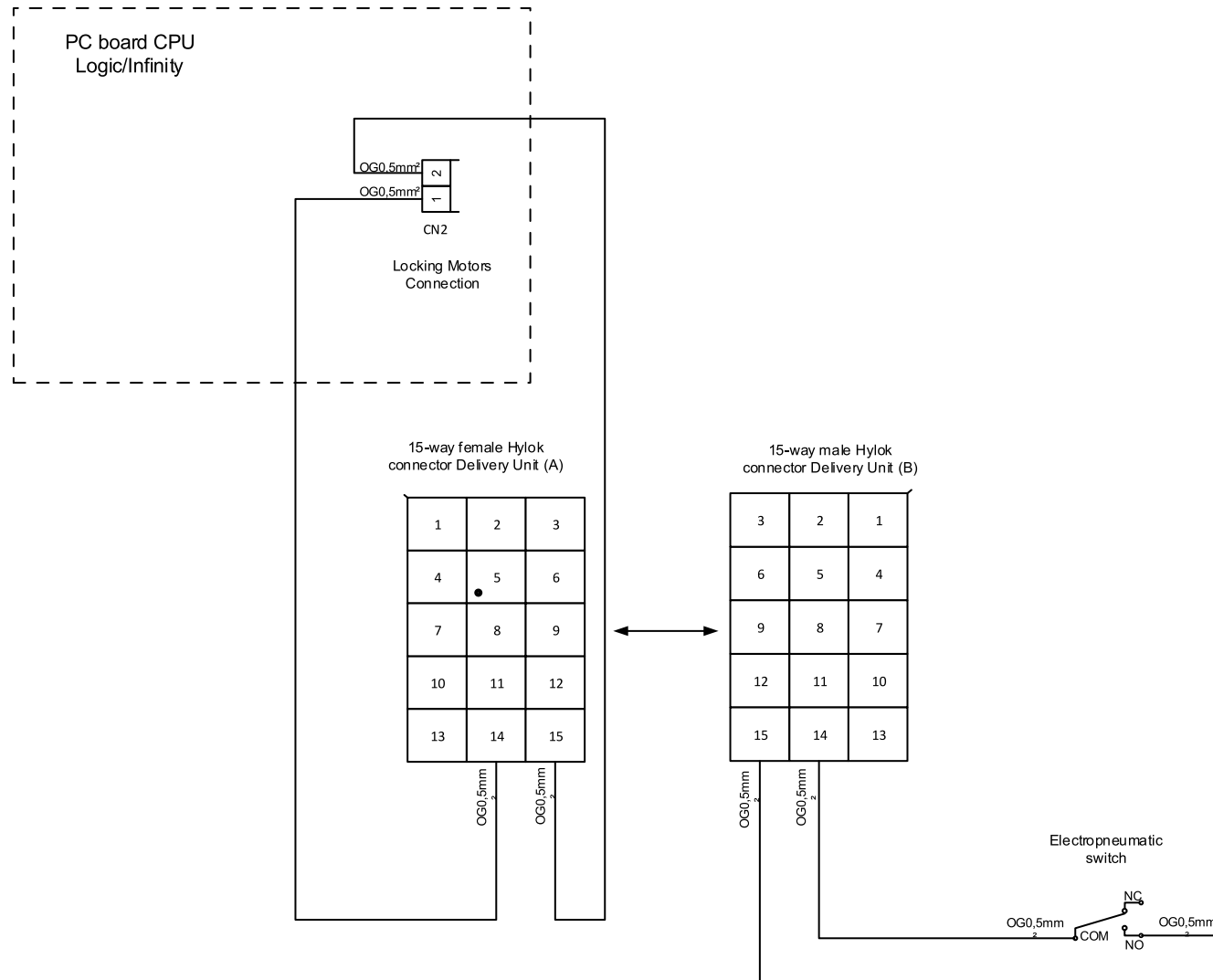






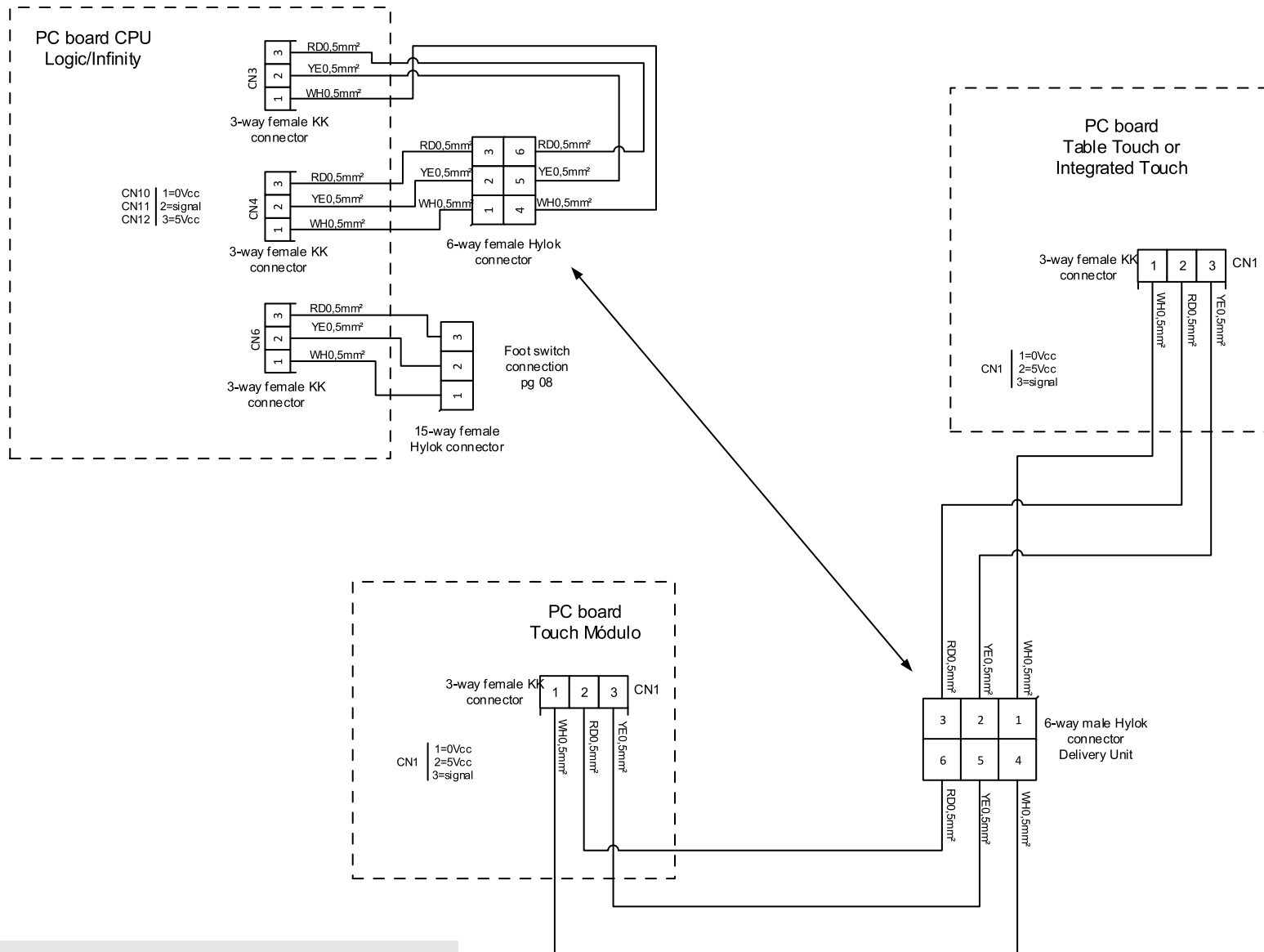
Color legend	
Black	BK
Red	RD
Blue	BL
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

Solenoid Spitton bowl and Cupholder connection  
 -Optionals as per equipment configuration grid



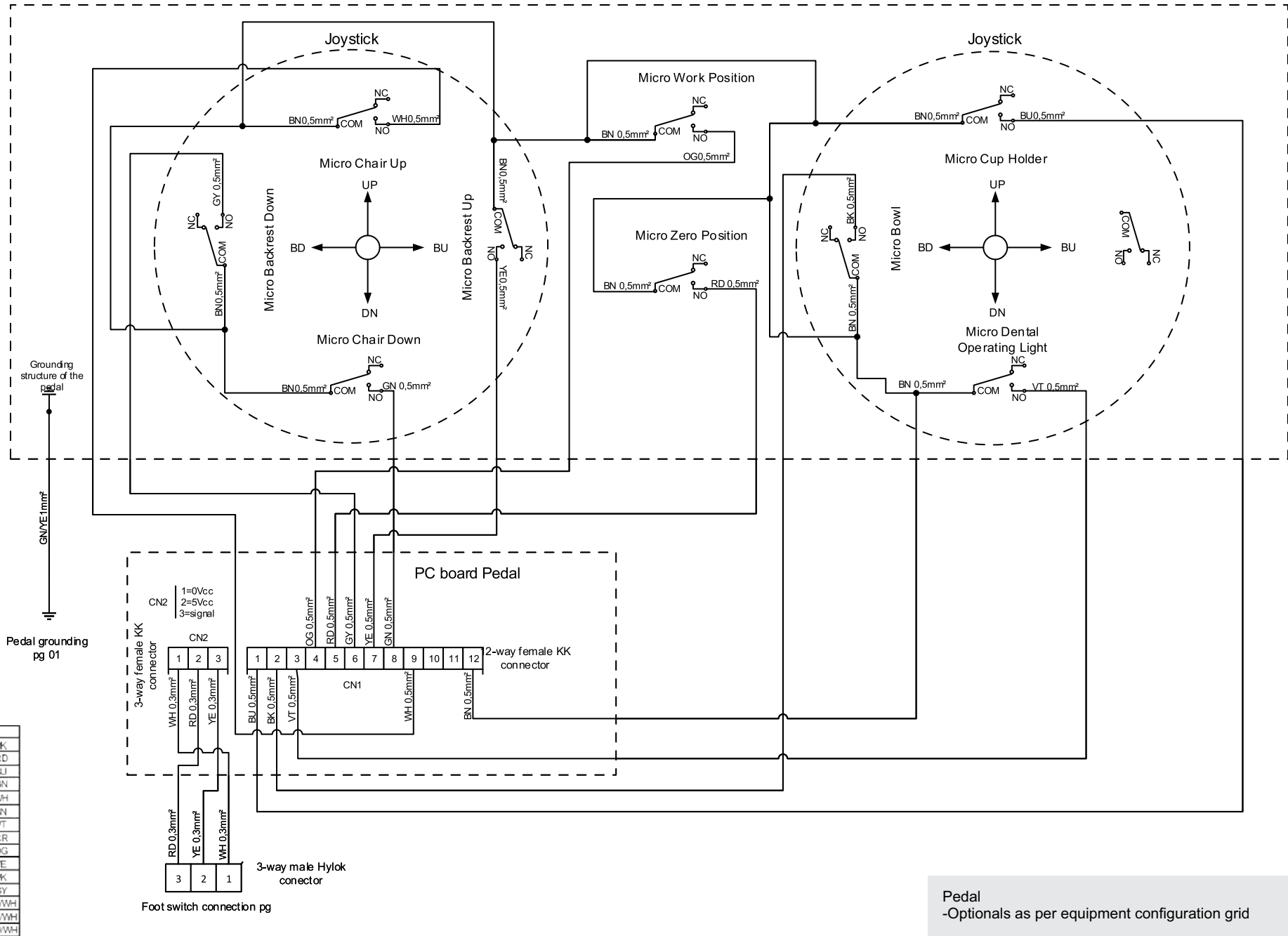
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Red	RD
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Brown	BN
Violet	VT
Crystal	CR
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Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

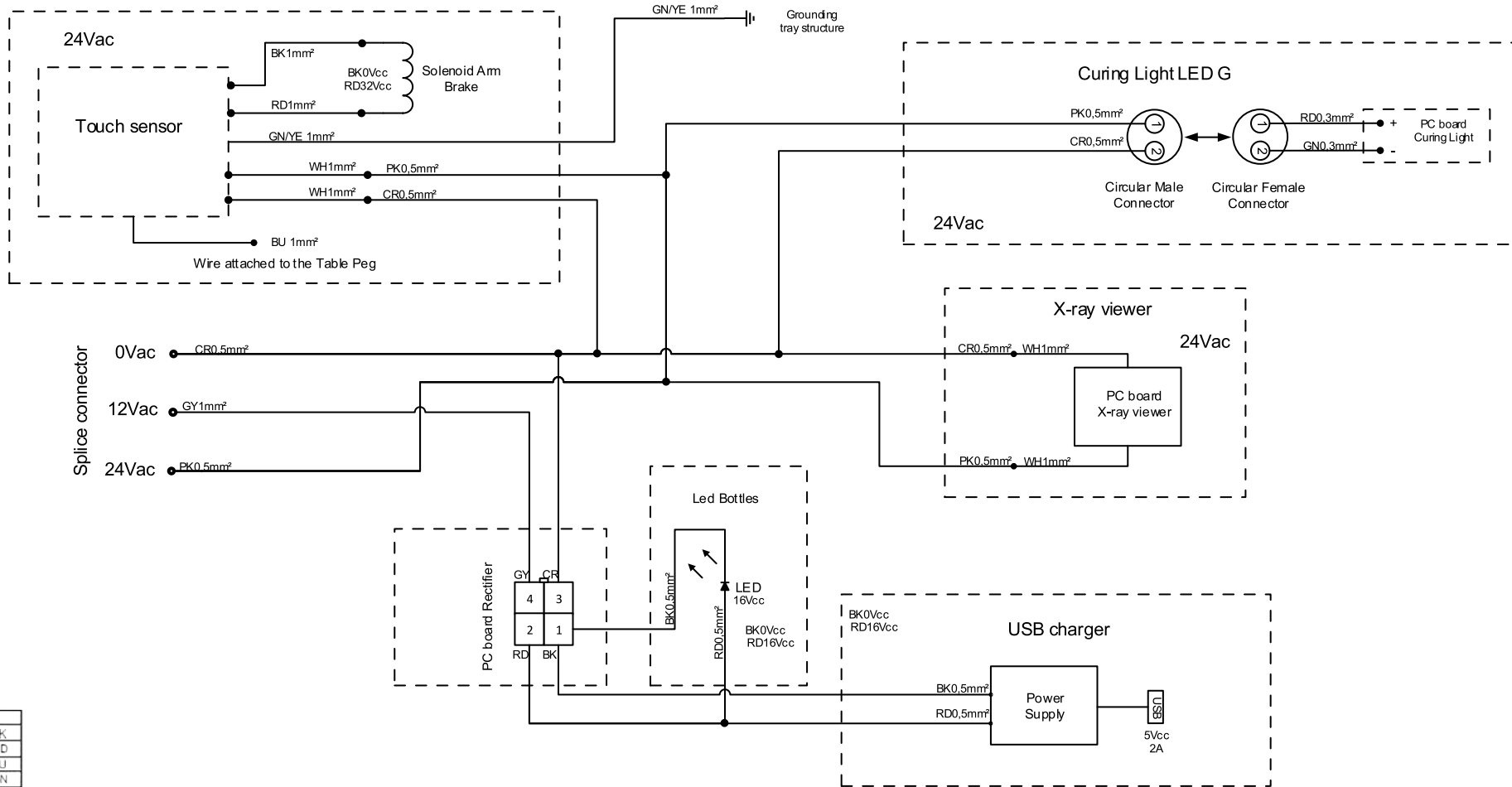
Connecting the motor locking system on the PC board  
 -Optionals as per equipment configuration grid



Color legend	
Black	BK
Red	RD
Blue	BL
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

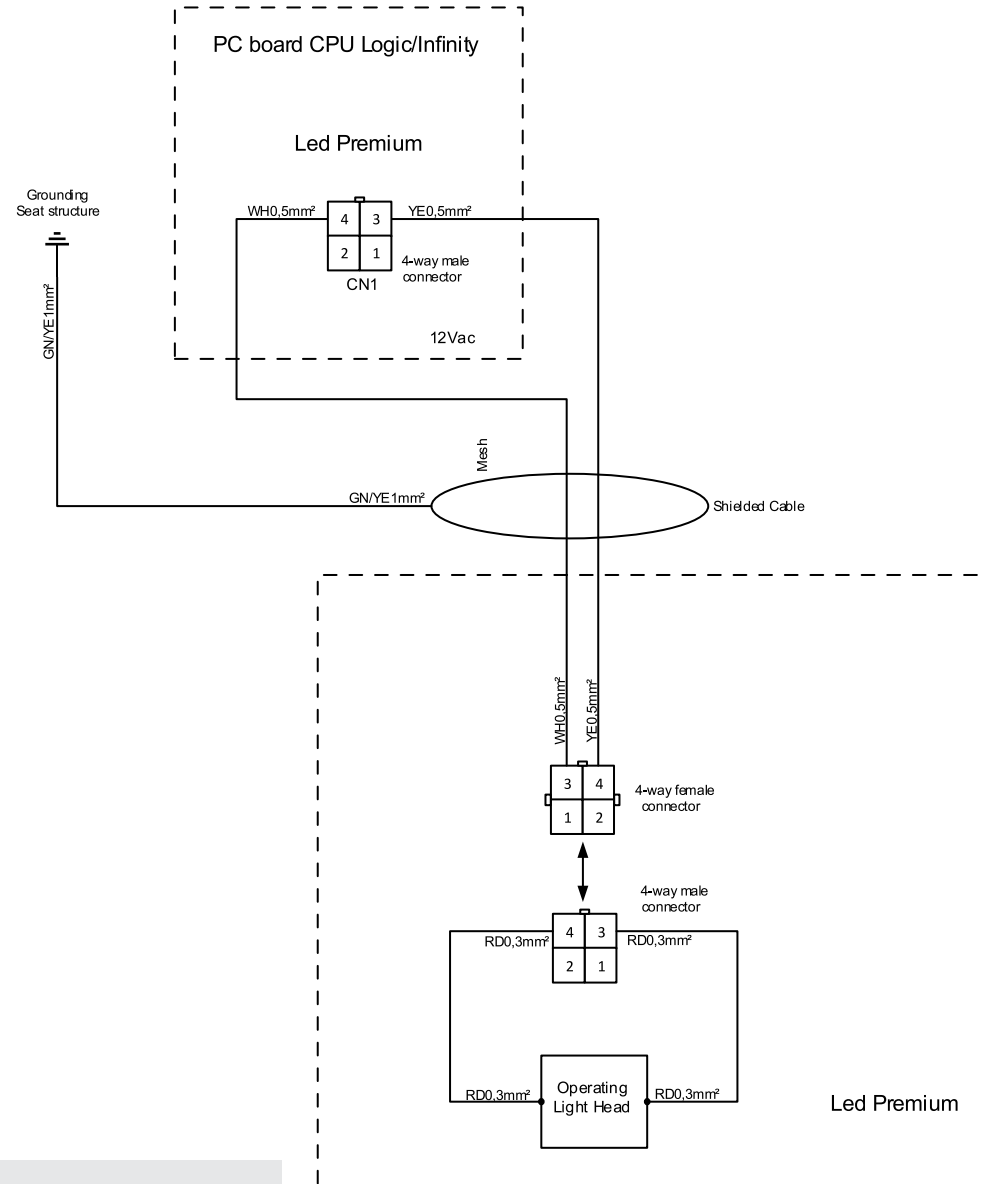
Touch Connection  
-Optionals as per equipment configuration grid





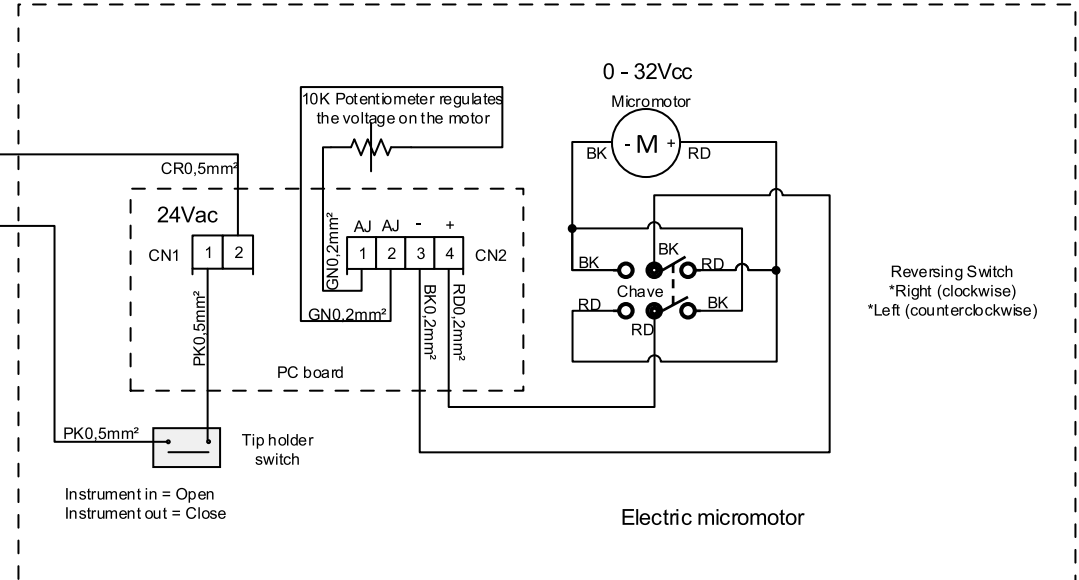
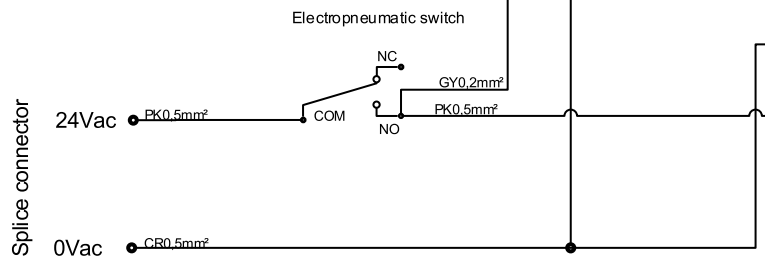
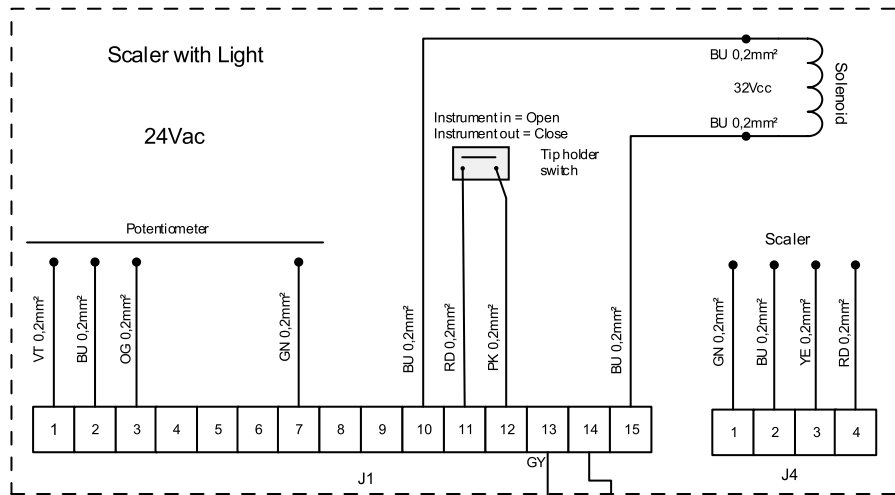
Color legend	
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Red	RD
Blue	BL
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

Touch Sensor, Curing Light, X-ray Viewer, Bottle LED and USB Charger Connection  
 -Optionals as per equipment configuration grid



Color legend	
Black	BK
Red	RD
Blue	BL
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

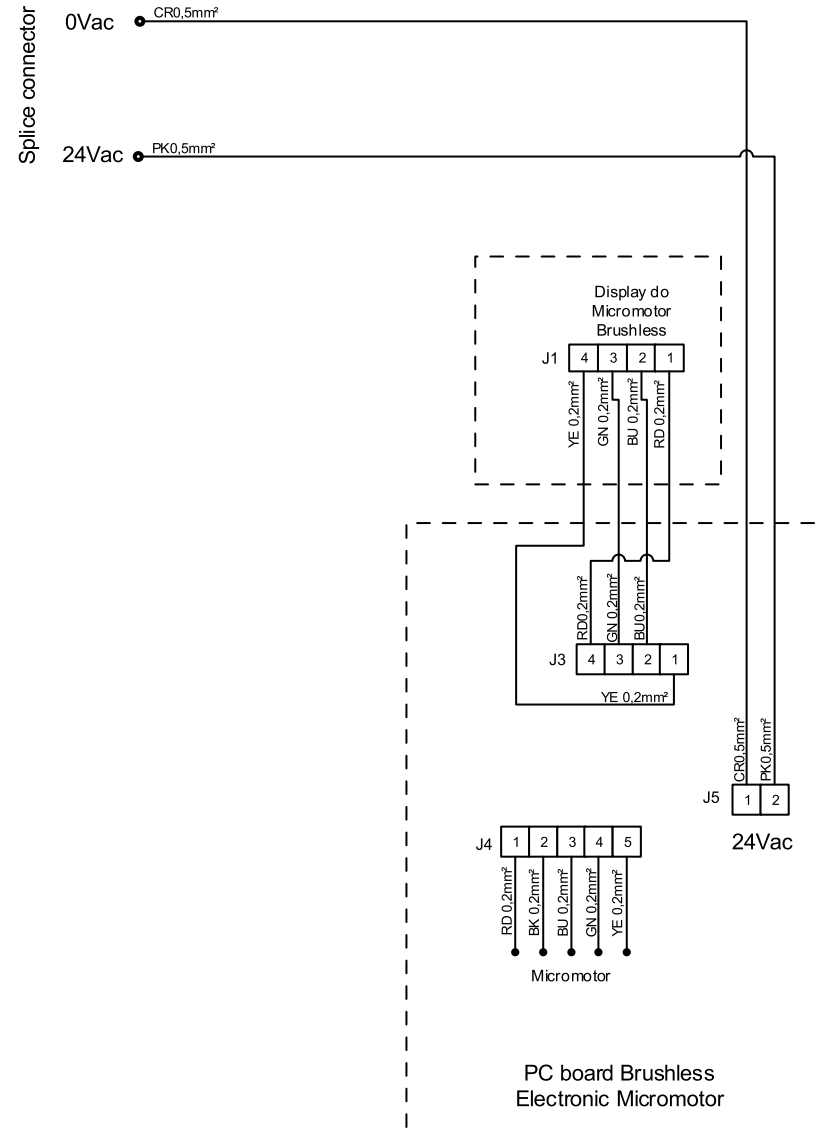
Operating Light Connection  
 -Optionals as per equipment configuration grid



Color legend	
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Red	RD
Blue	BU
Green	GN
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Brown	BN
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Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BU/WH
Red/White	RD/WH

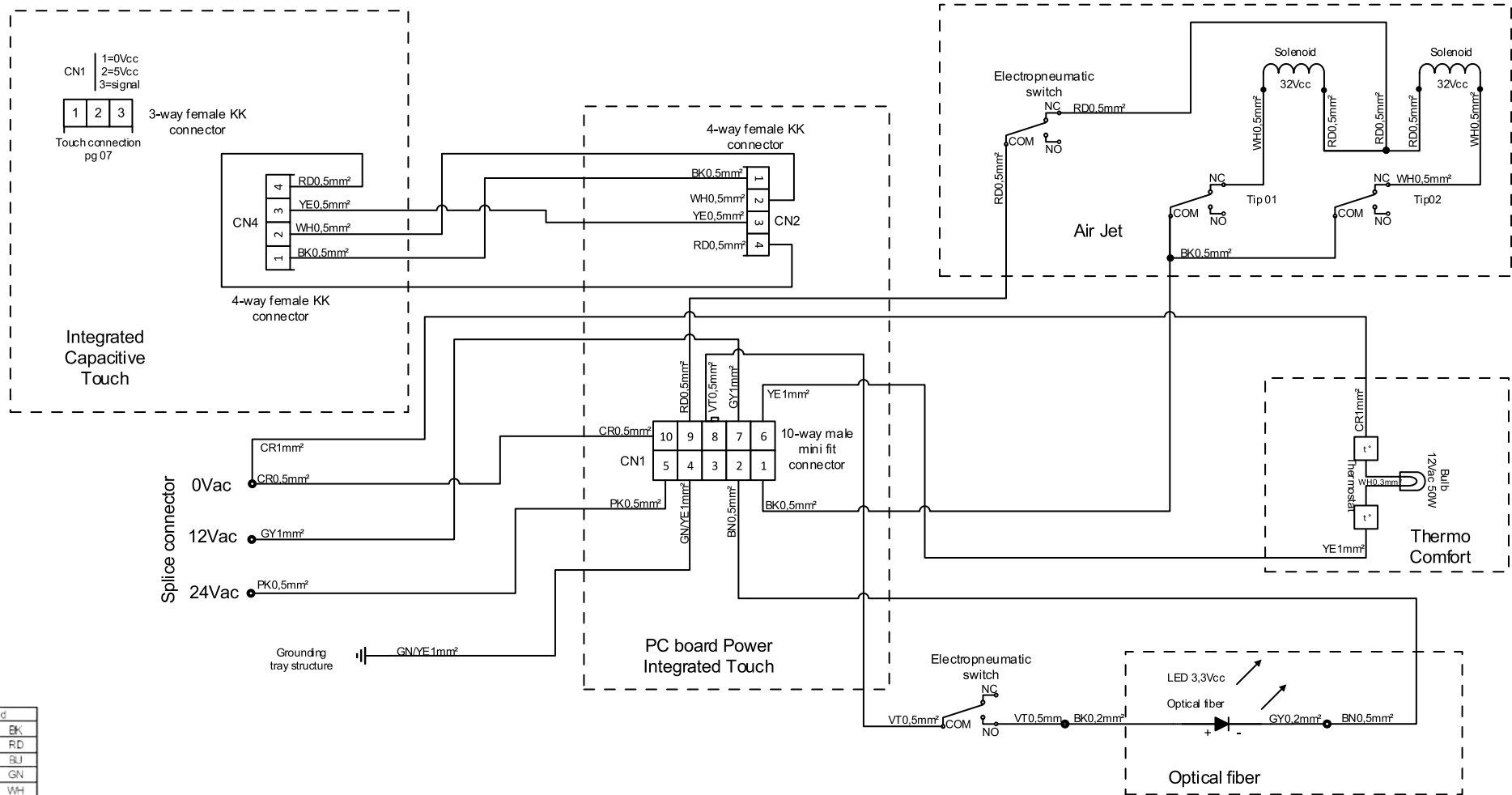
Scaler and electric micromotor connection  
-Optionals as per equipment configuration grid





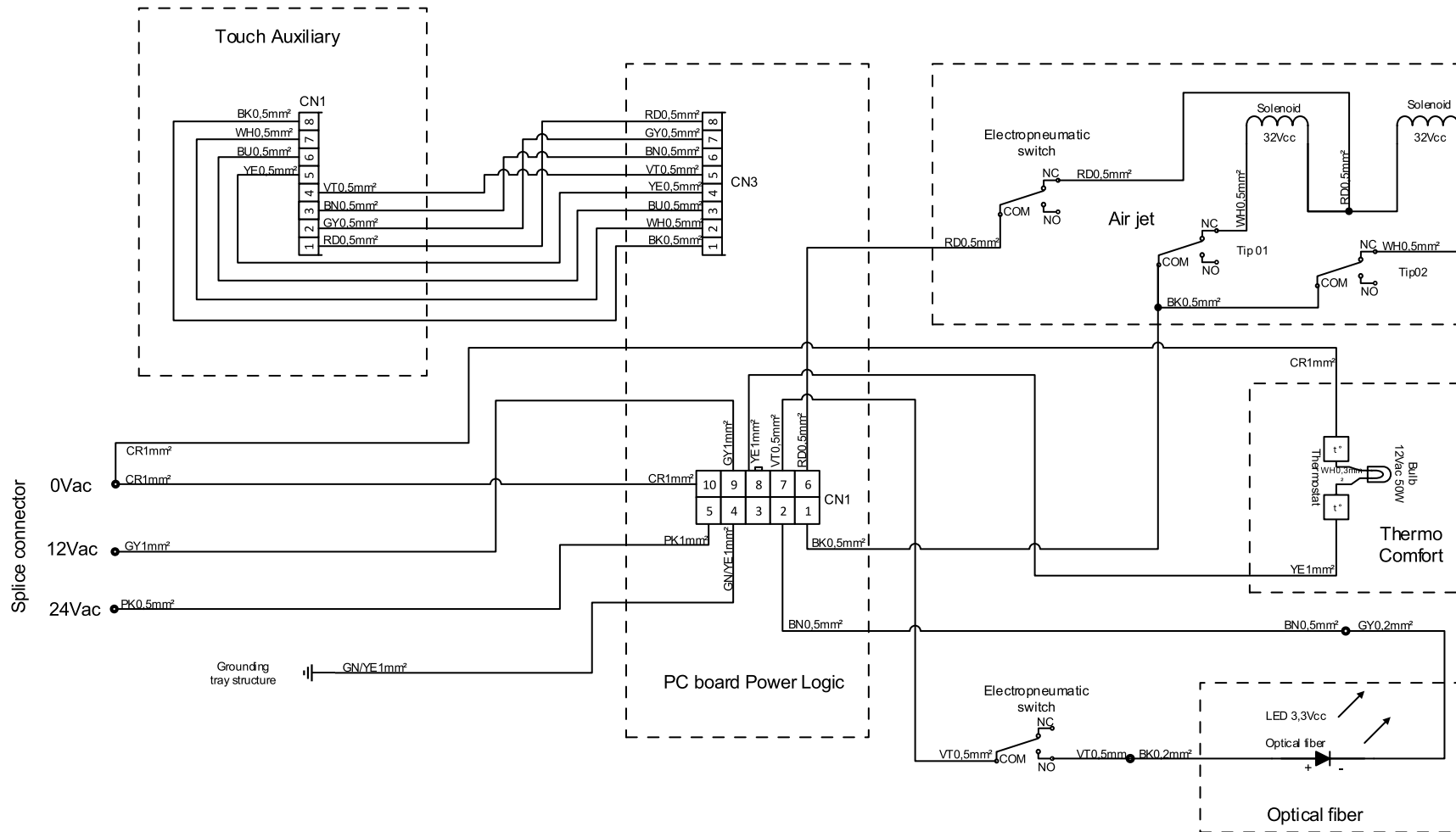
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Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

Brushelles electronic micromotor connection  
-Optionals as per equipment configuration grid



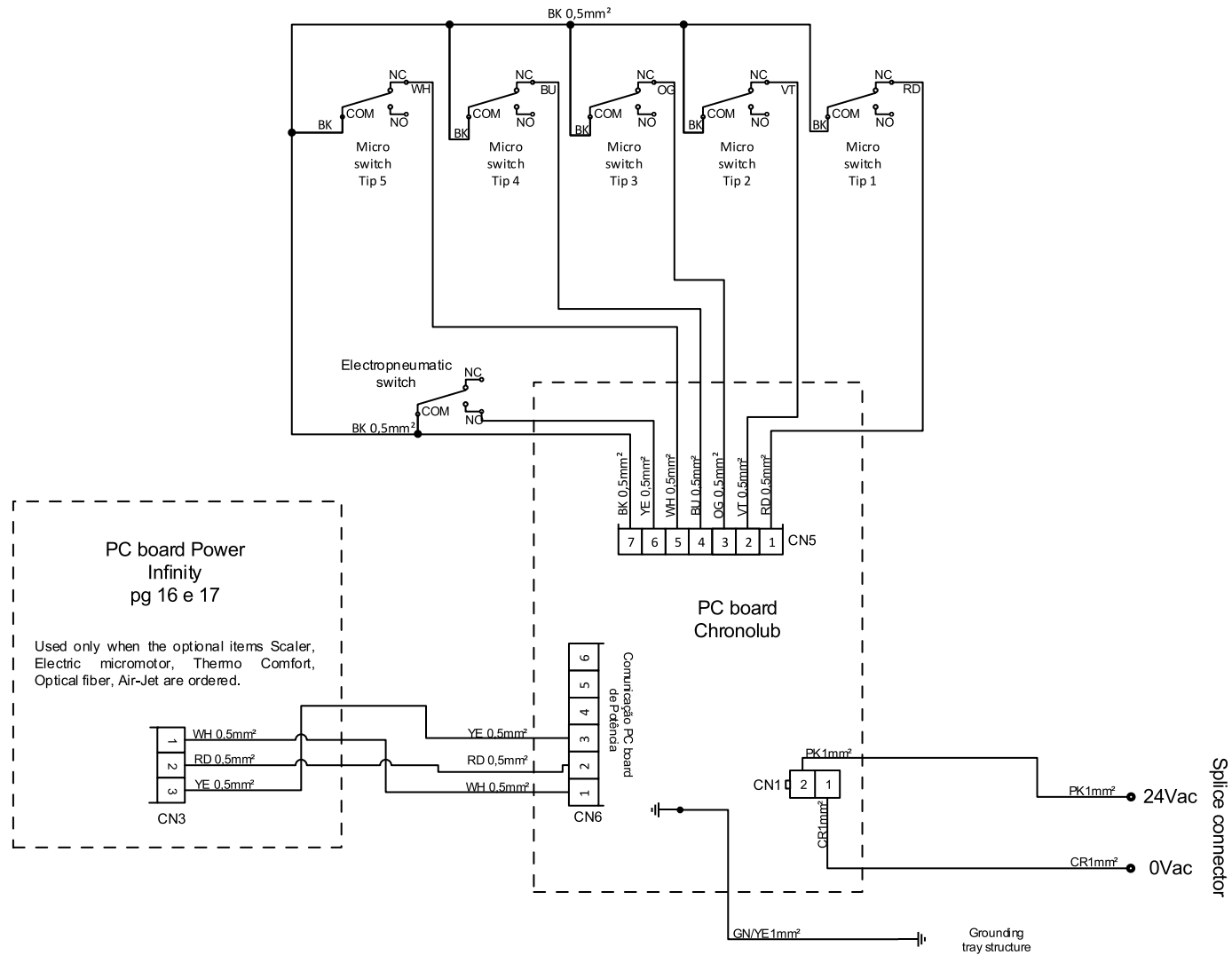
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Red	RD
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Green	GN
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Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BJ/WH
Red/White	RD/WH

Air-Jet, Fiber Optic, Thermo Comfort and Integrated Capacitive Touch connection.  
-Optionals as per equipment configuration grid



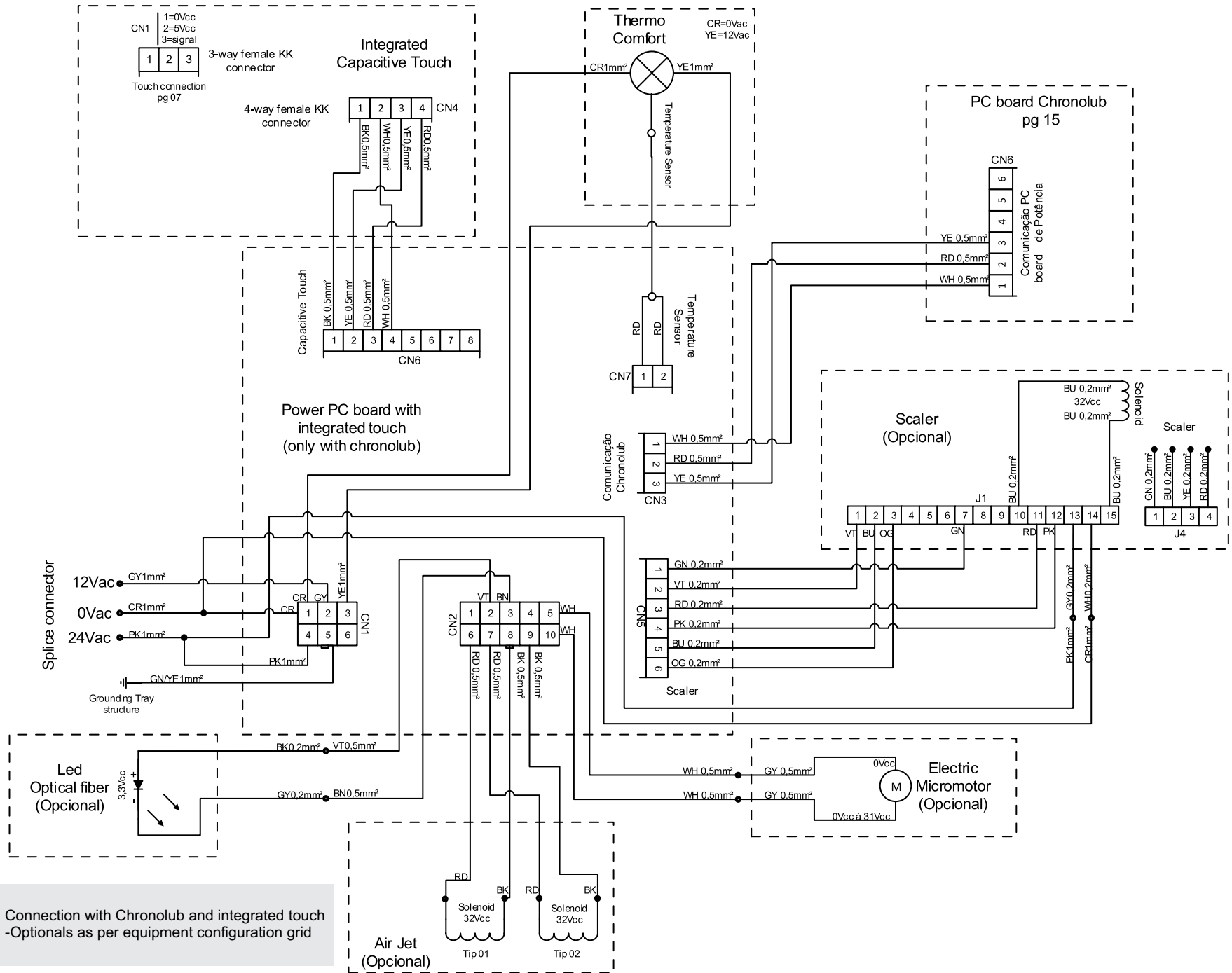
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Red	RD
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Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BL/WH
Red/White	RD/WH

Air-Jet, Fiber Optic, Thermo Comfort and Capacitive Touch Auxiliary connection.  
 -Optionals as per equipment configuration grid



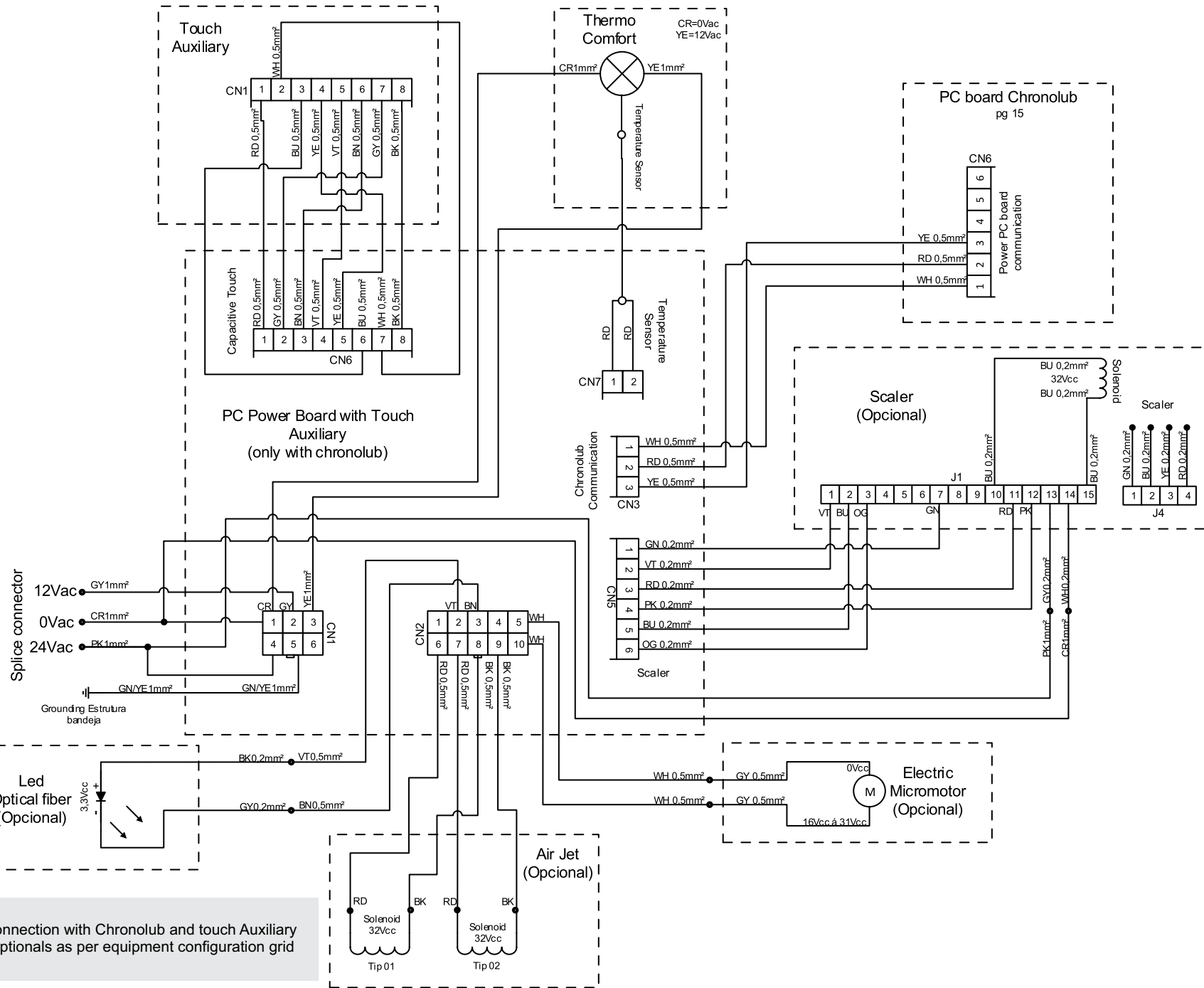
Color legend	
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Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BU/WH
Red/White	RD/WH

Chronolub connection  
-Optionals as per equipment configuration grid



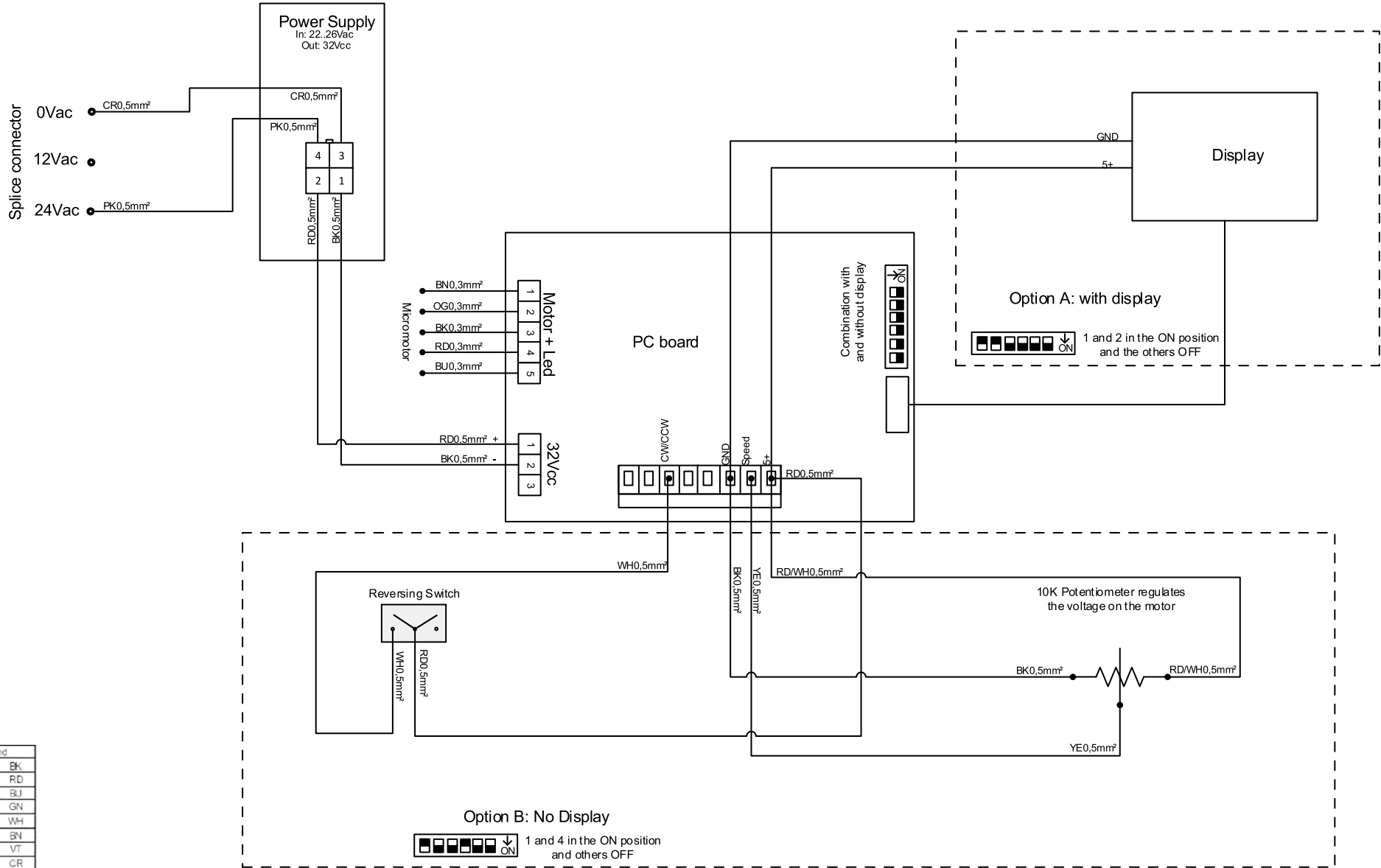
Connection with Chronolub and integrated touch  
-Optionals as per equipment configuration grid

Color legend	
Black	BK
Red	RD
Blue	BU
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
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Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BU/WH
Red/White	RD/WH



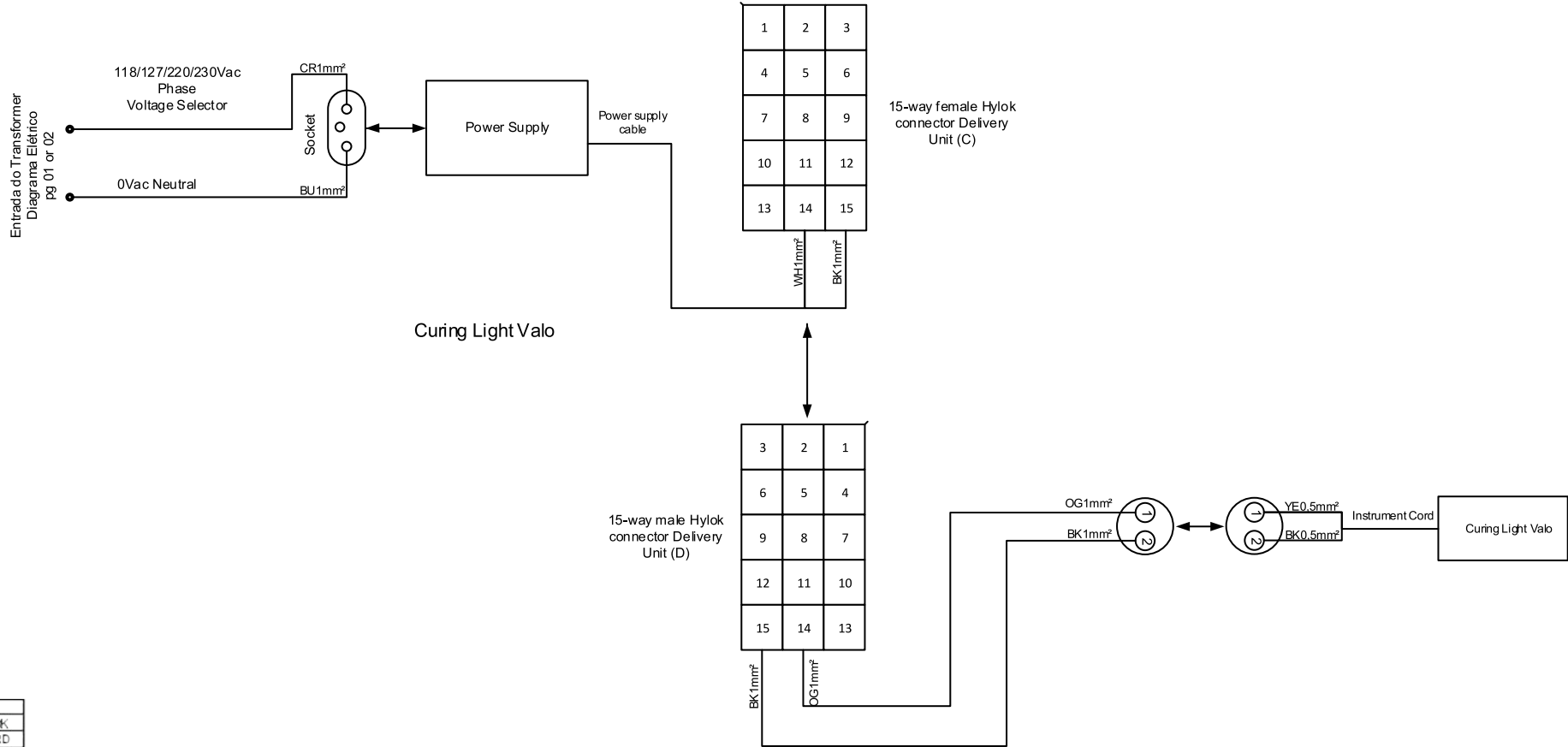
Connection with Chronolub and touch Auxiliary  
-Optionals as per equipment configuration grid

Color legend	
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Red	RD
Blue	BU
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BU/WH
Red/White	RD/WH



Color legend	
Black	BK
Red	RD
Blue	BL
Green	GN
White	WH
Brown	BN
Violet	VT
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Blue/White	BL/WH
Red/White	RD/WH

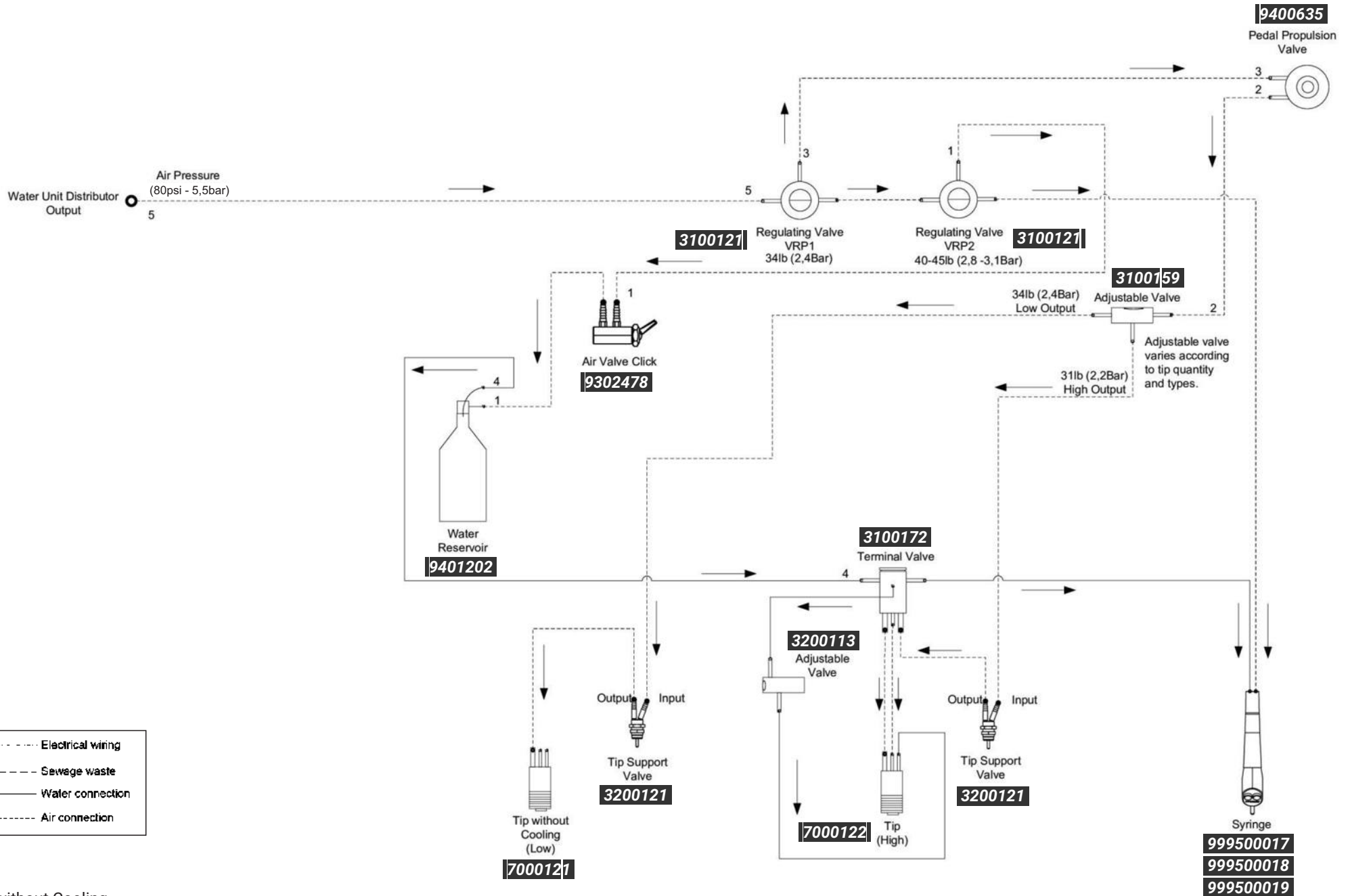
Bien Air Micromotor Connection  
 -Optionals as per equipment configuration grid



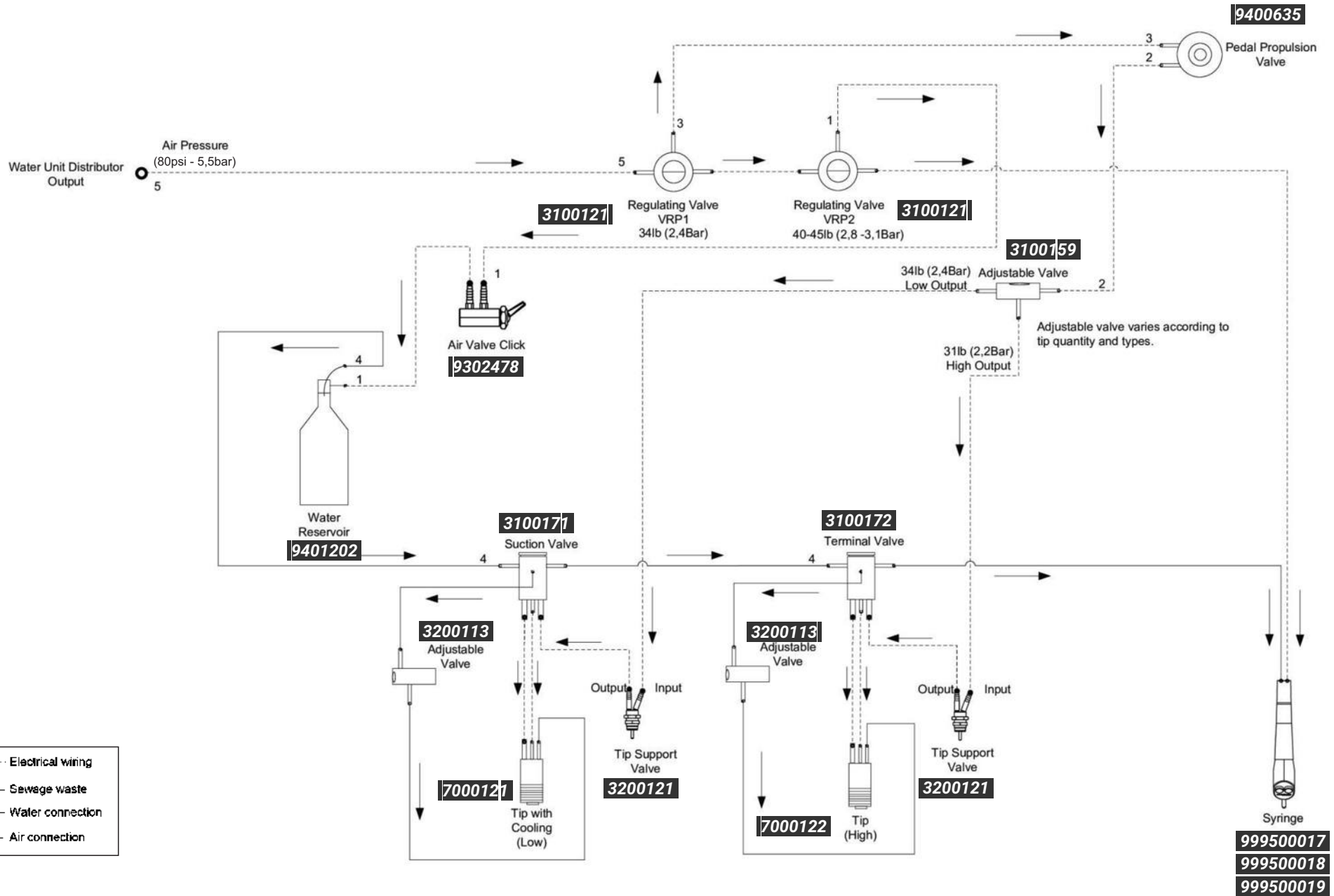
Color legend	
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Red	RD
Blue	BJ
Green	GN
White	WH
Brown	BN
Violet	VT
Crystal	CR
Orange	OG
Yellow	YE
Pink	PK
Grey	GY
Black/White	BK/WH
Blue/White	BJ/WH
Red/White	RD/WH

**Valo Light Curing Connection**  
 -Optionals as per equipment configuration grid

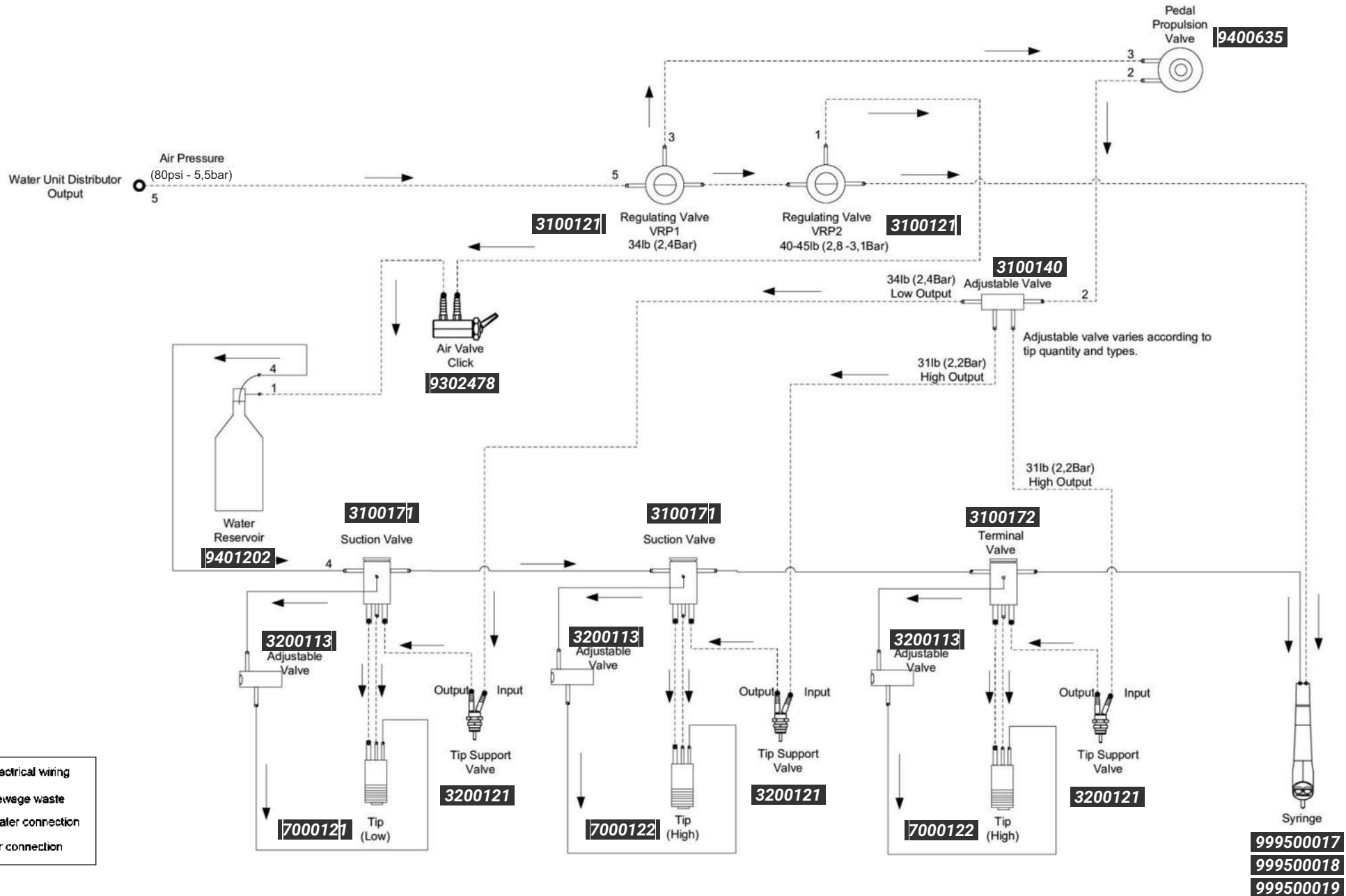




1.3  
Low without Cooling



1.3  
Low with Cooling



- - - - - Electrical wiring  
 - - - - - Sewage waste  
 ——— Water connection  
 - - - - - Air connection

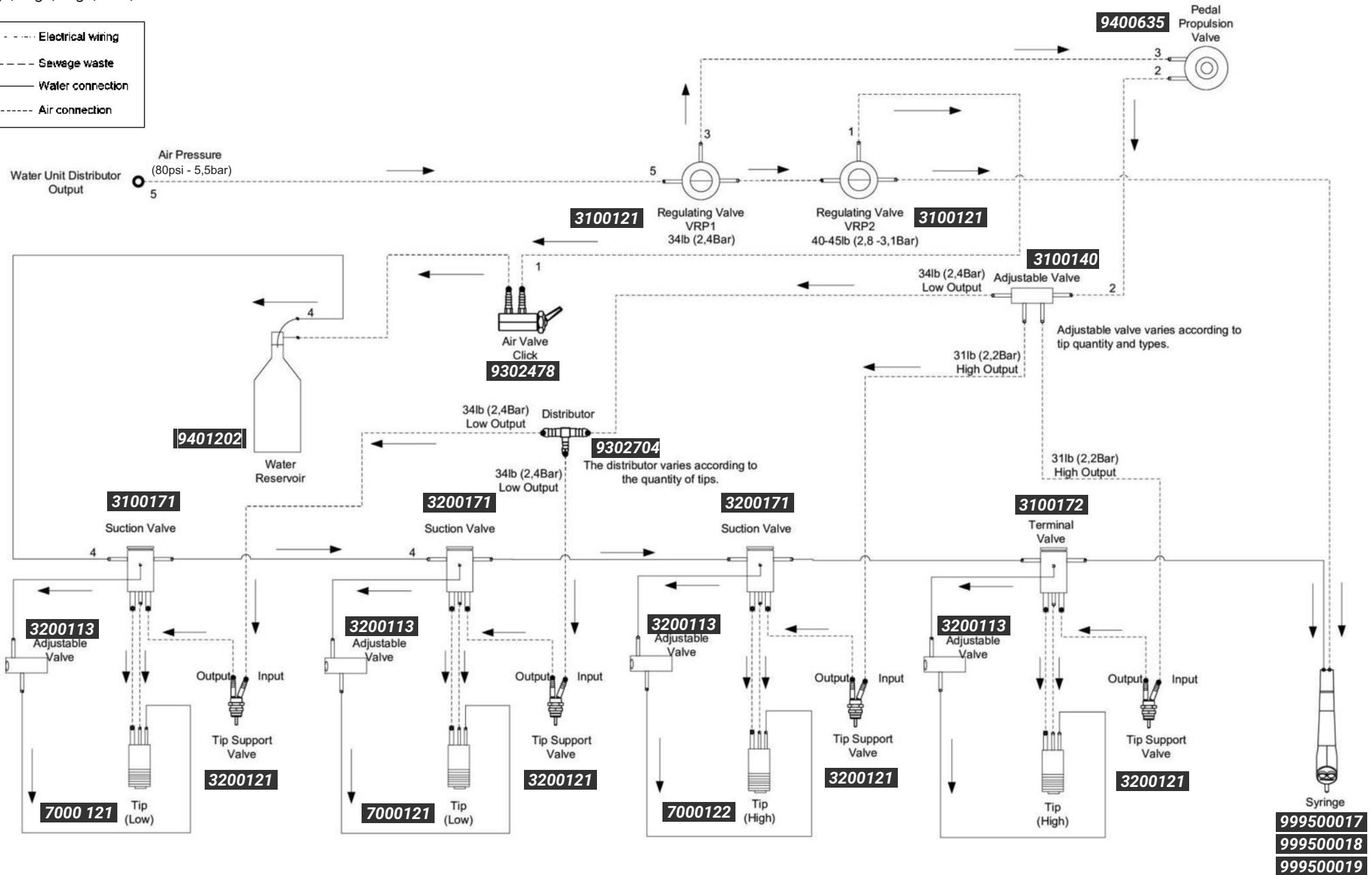
1.4  
Syringe, High, High, Low

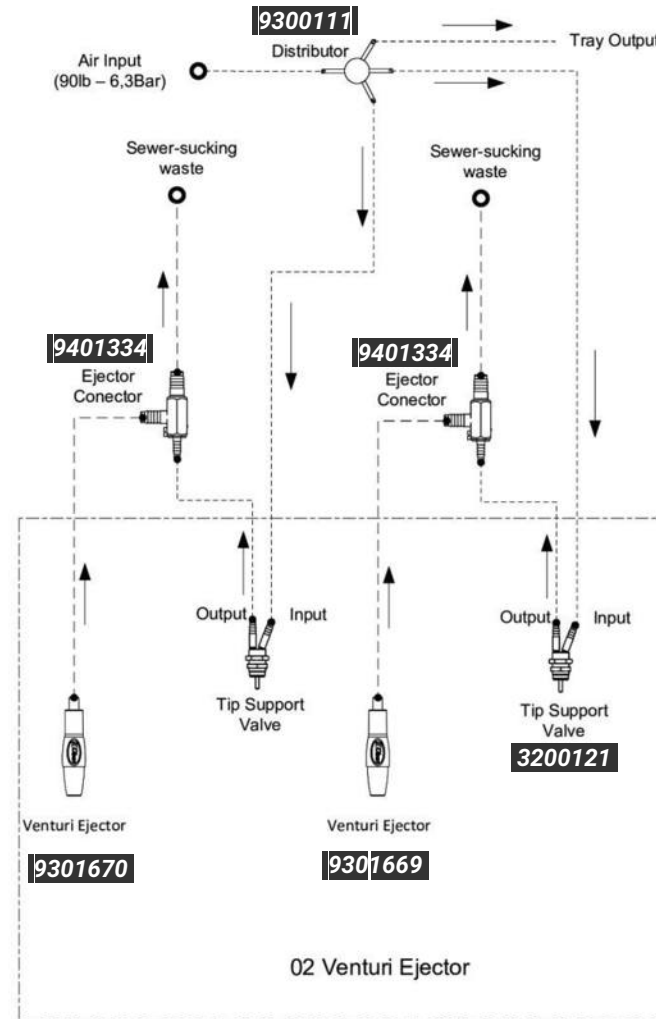
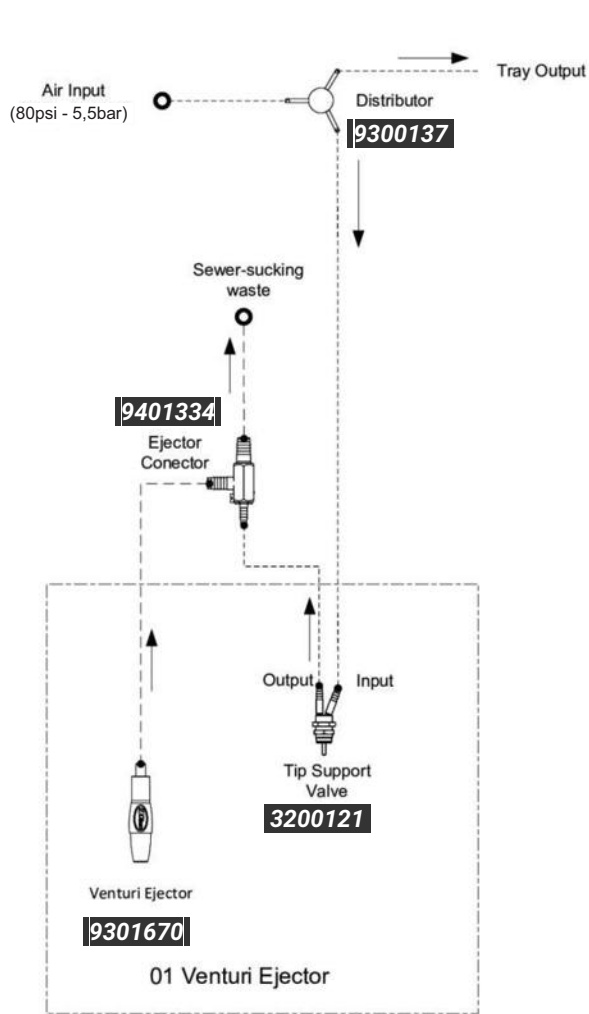


# 1.5

Syringe, High, High, Low, Low

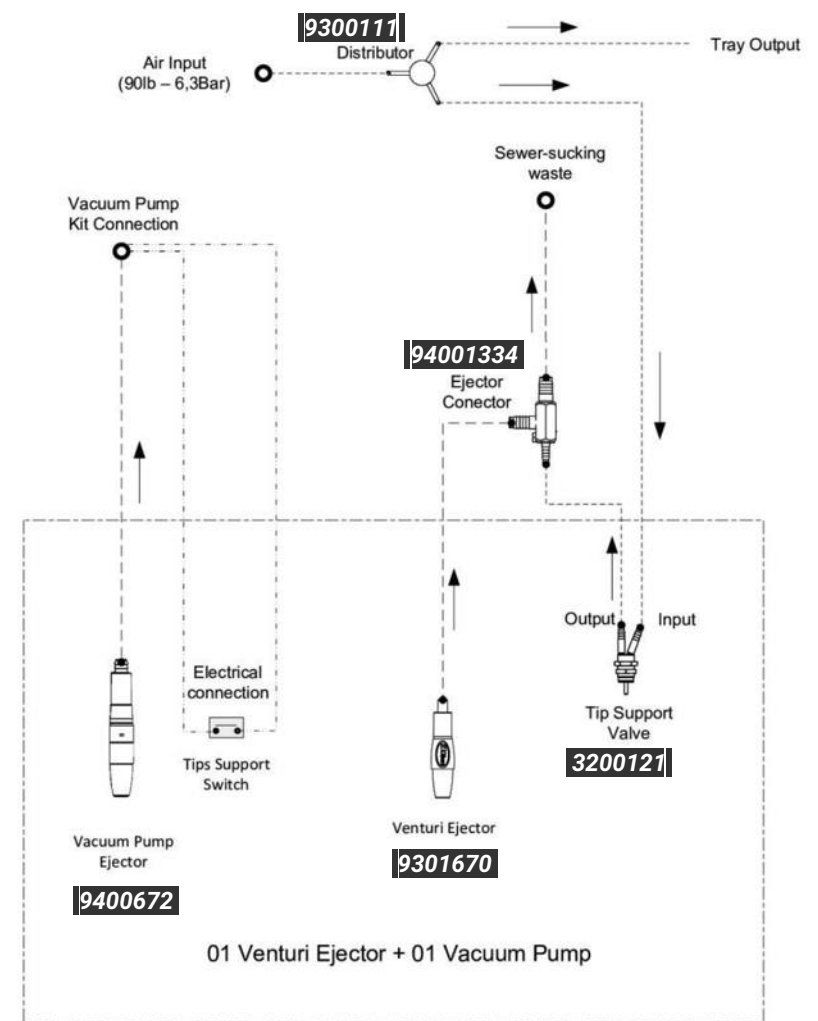
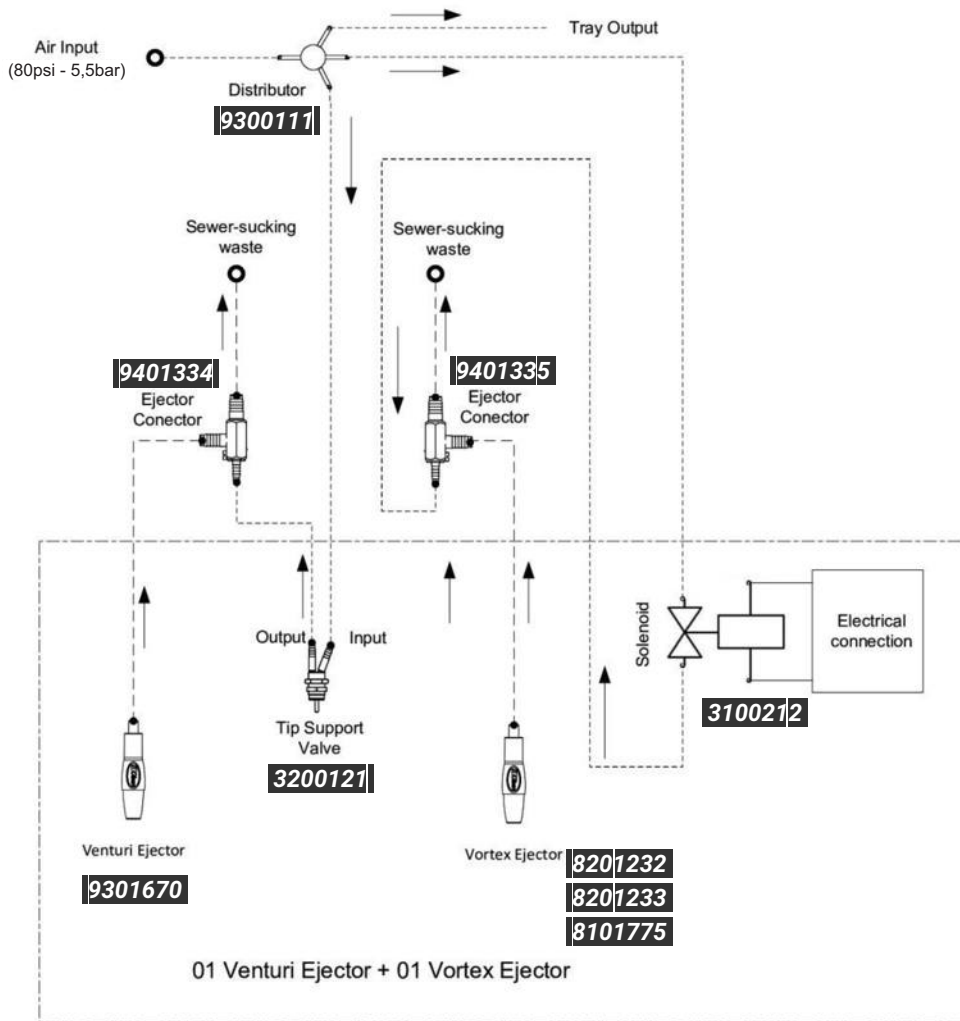
Electrical wiring  
 Sewage waste  
 Water connection  
 Air connection





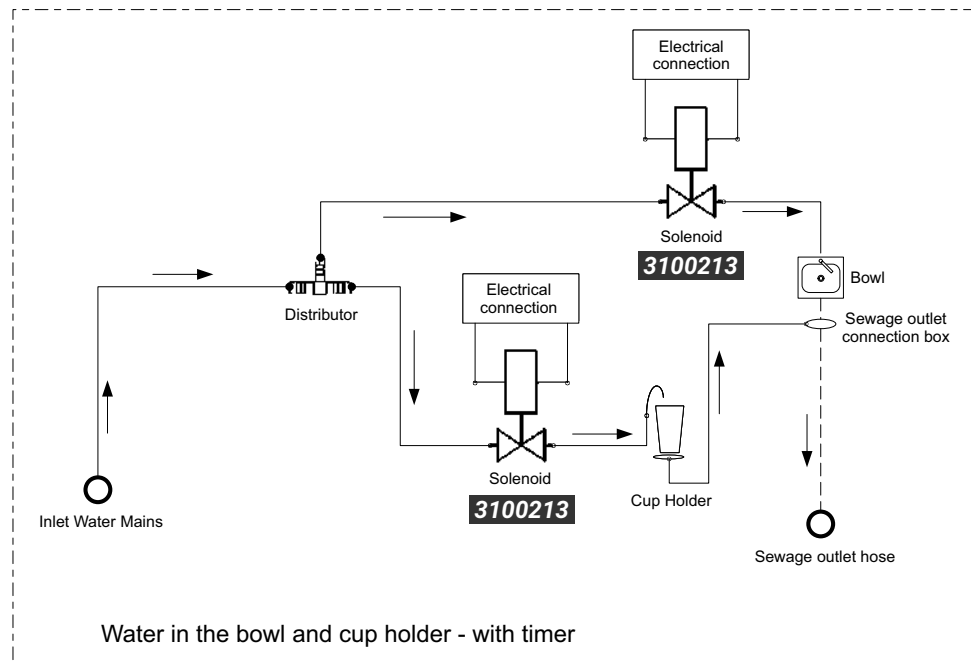
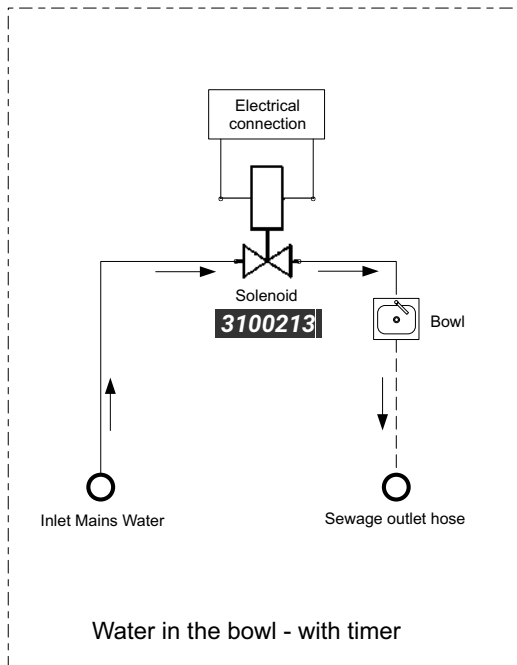
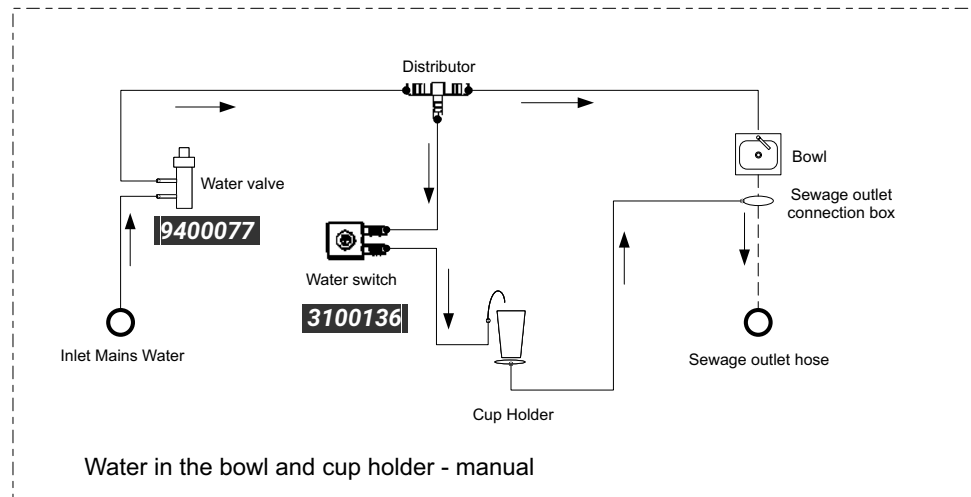
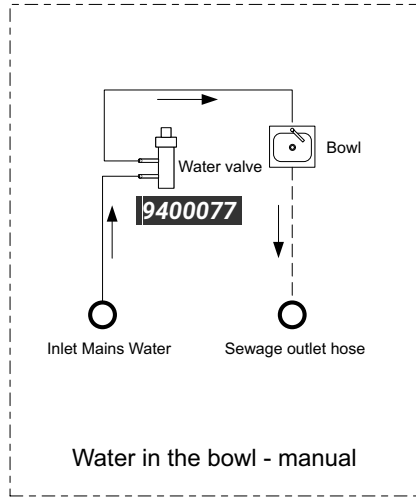
- ..... Electrical wiring
- Sewage waste
- Water connection
- ..... Air connection

WATER UNIT I



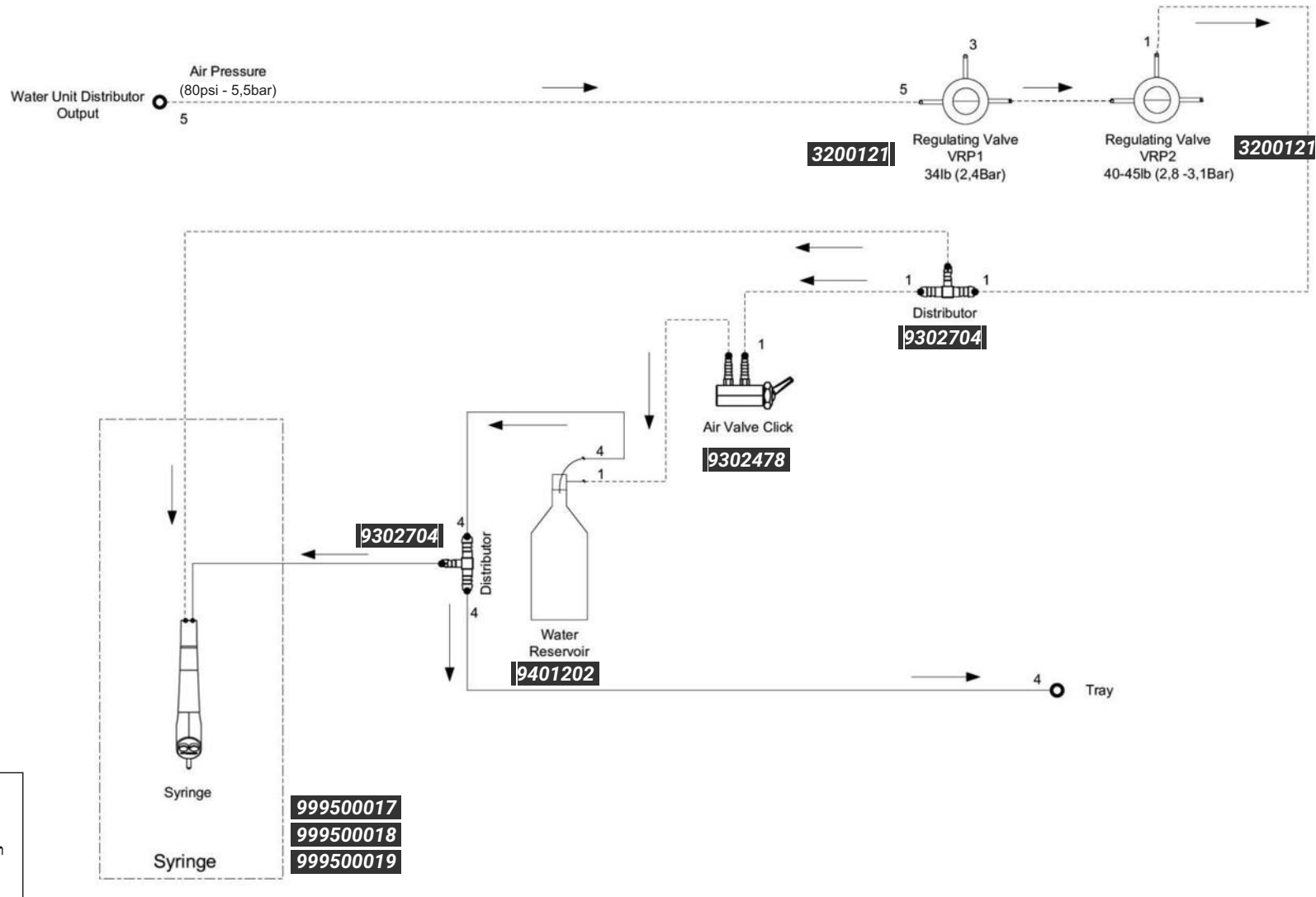
- Electrical wiring
- Sewage waste
- Water connection
- Air connection

WATER UNIT II



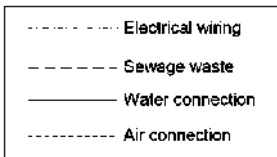
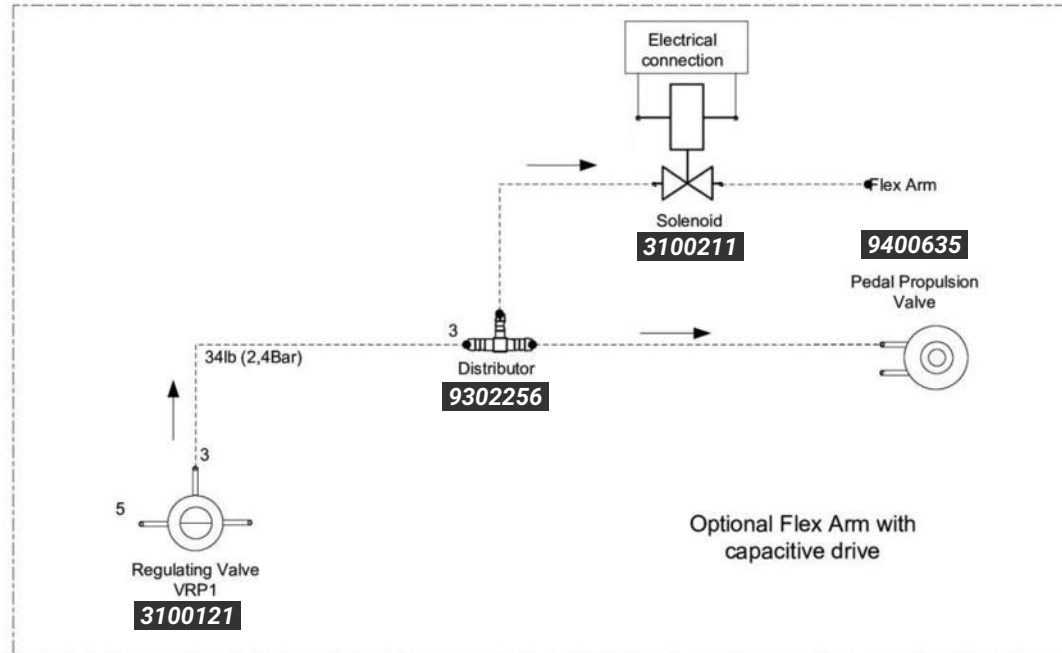
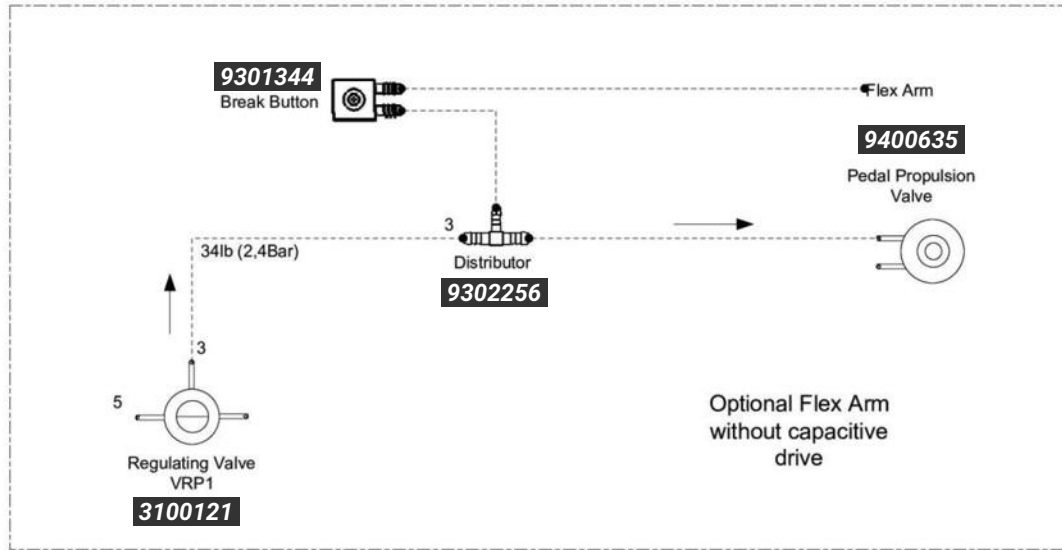
- Electrical wiring
- Sewage waste
- Water connection
- Air connection

WATER UNIT III

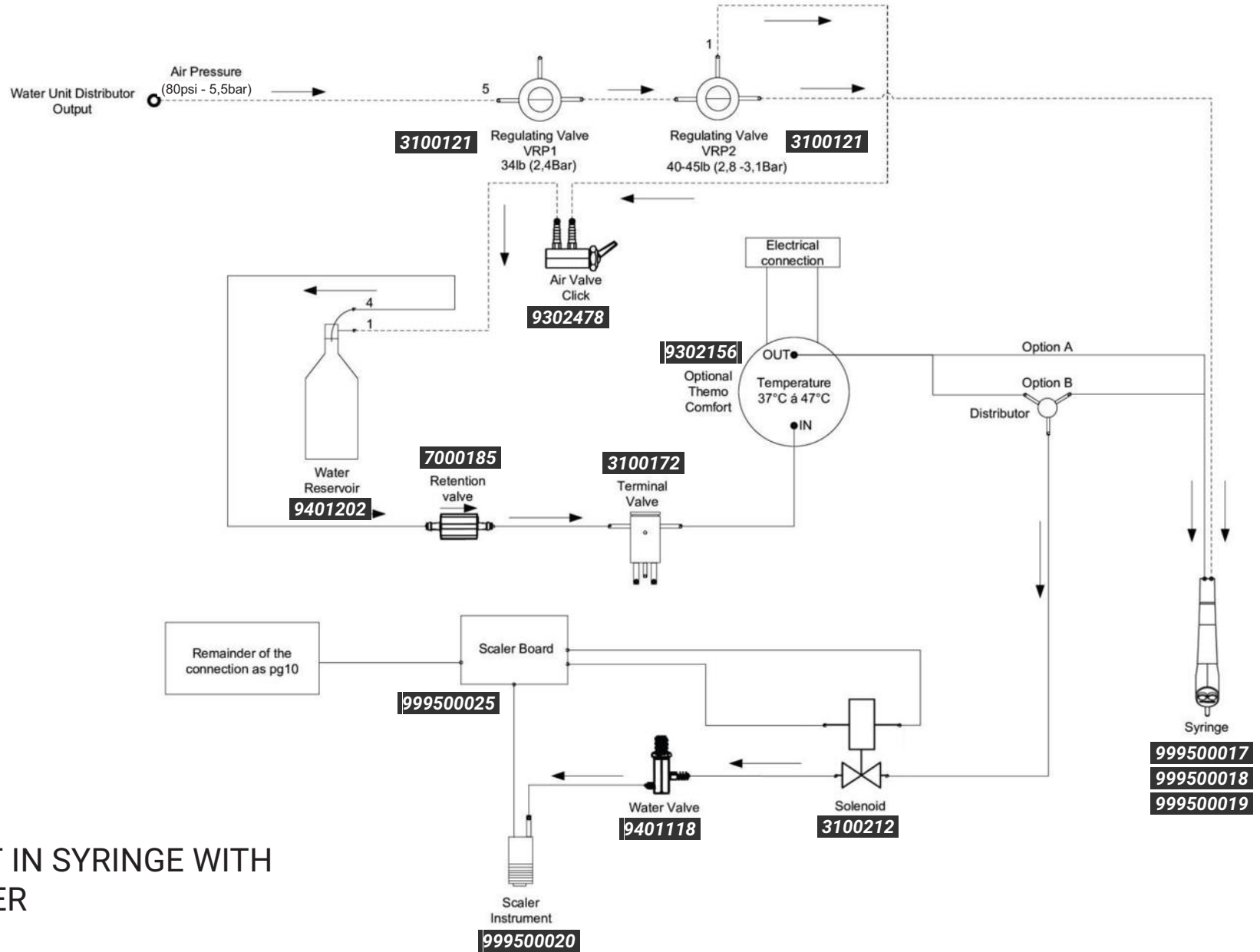


WATER UNIT IV





FLEX ARM

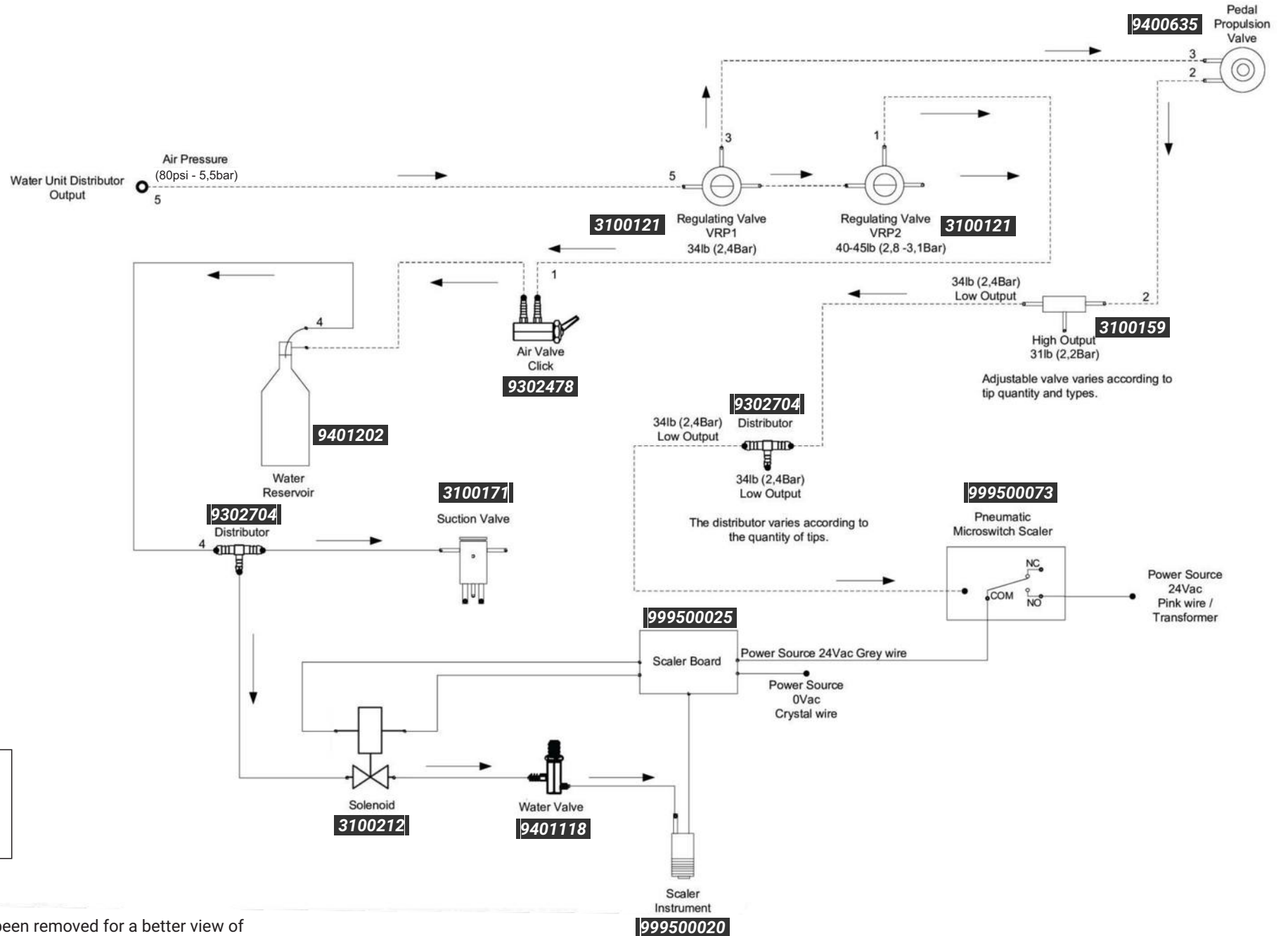


## THERMO COMFORT IN SYRINGE WITH OPTIONAL IN SCALER

Option A: Syringe only

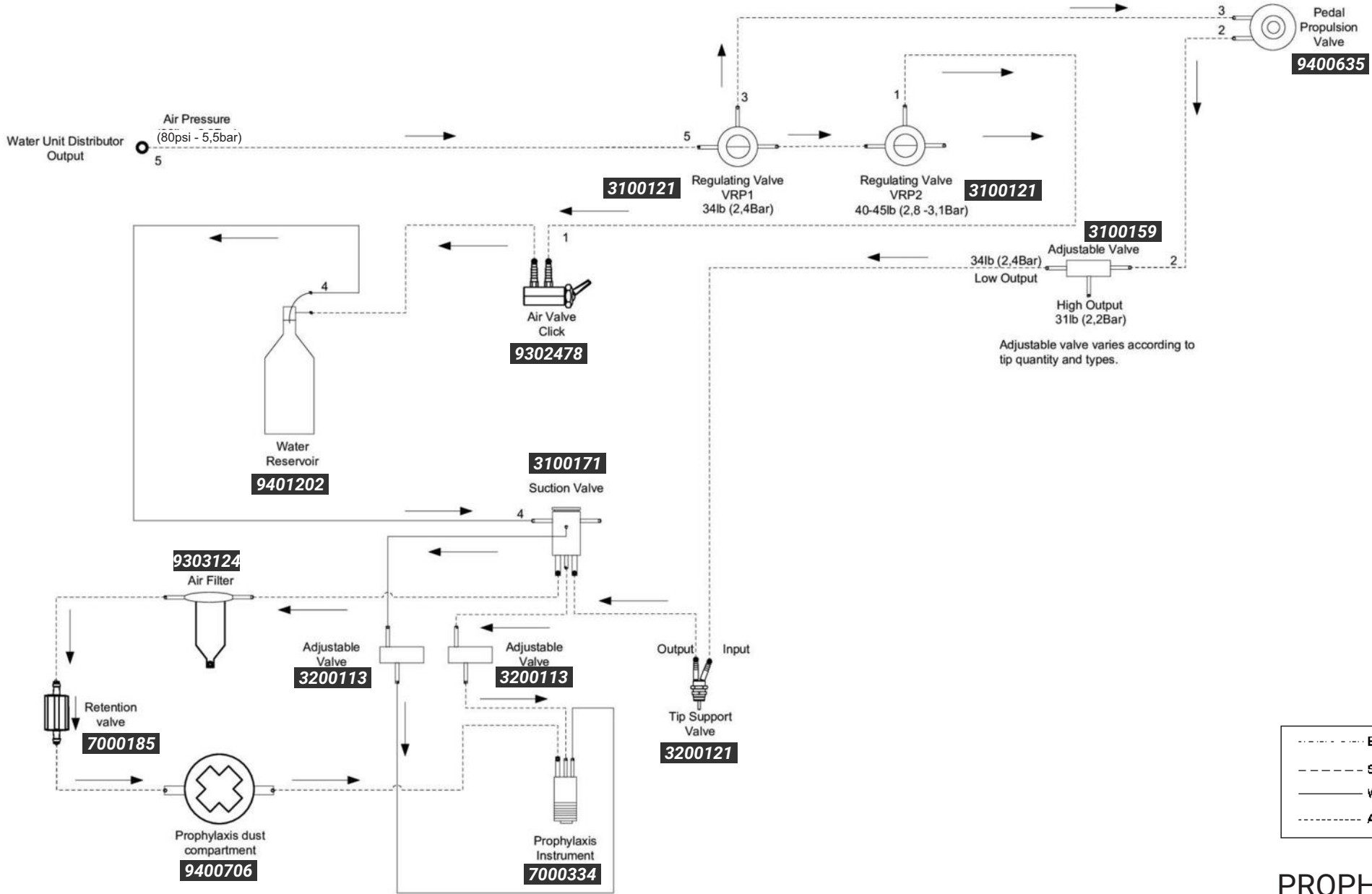
Option B: With Optional Scaler

All suction valves have been removed for a better view of the wiring diagram.



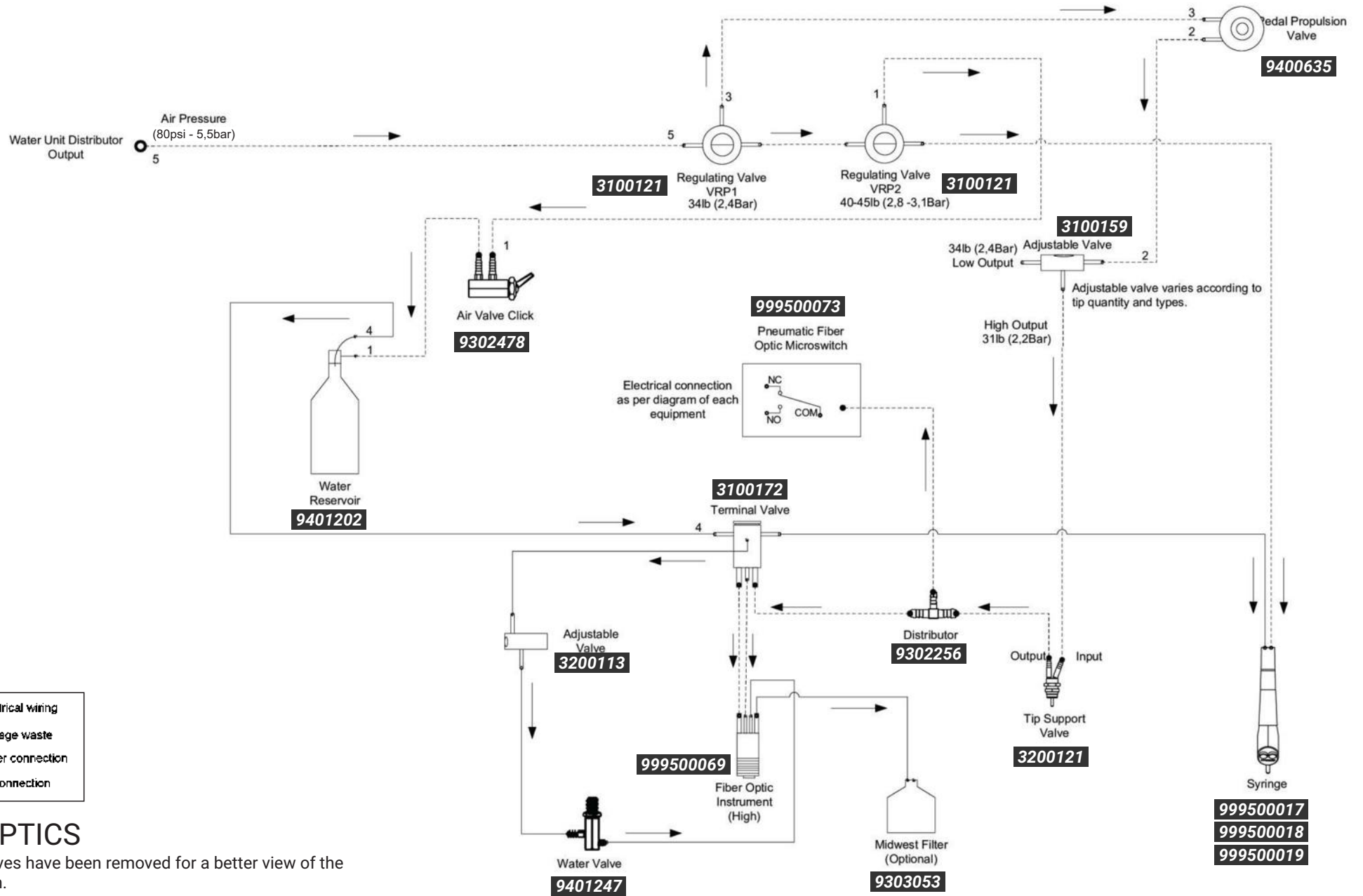
## SCALER

All suction valves have been removed for a better view of the wiring diagram.



## PROPHYLAXIS

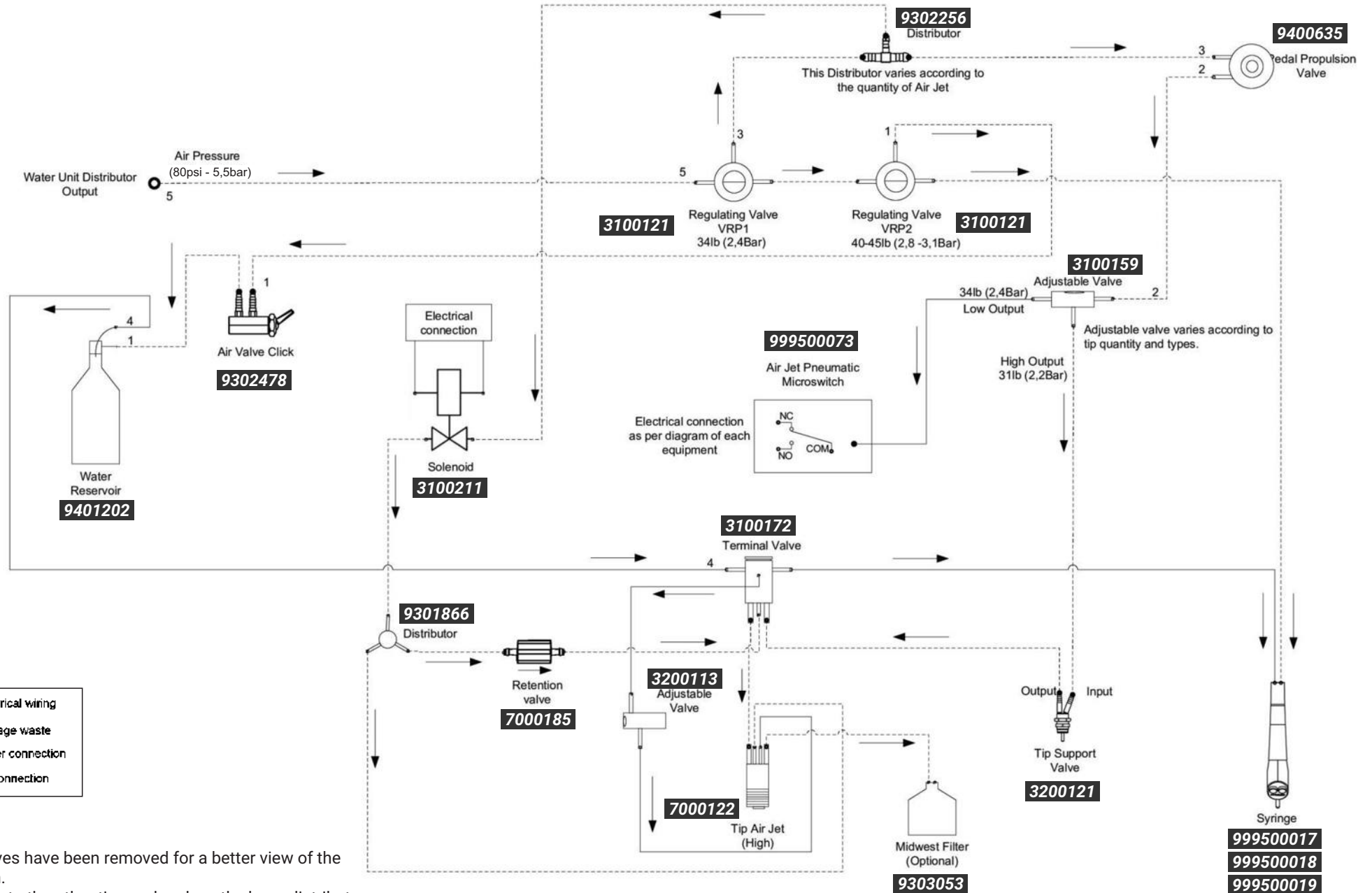
All suction valves have been removed for a better view of the wiring diagram.



## FIBER OPTICS

All suction valves have been removed for a better view of the wiring diagram.

Note: Replicate to the other tips and replace the hose distributor 3 according to the number of tips.

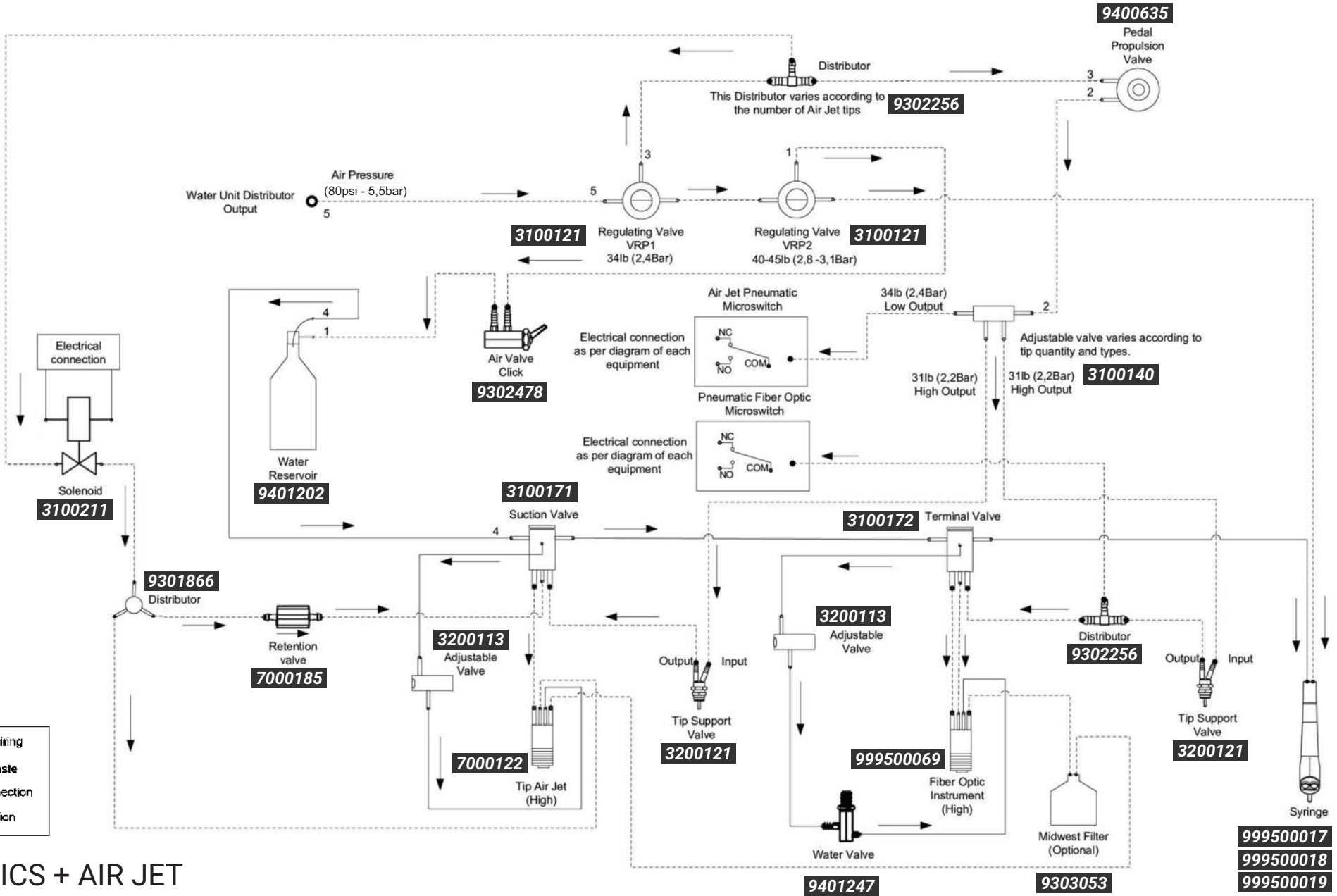


- ..... Electrical wiring
- Sewage waste
- Water connection
- Air connection

### AIR JET

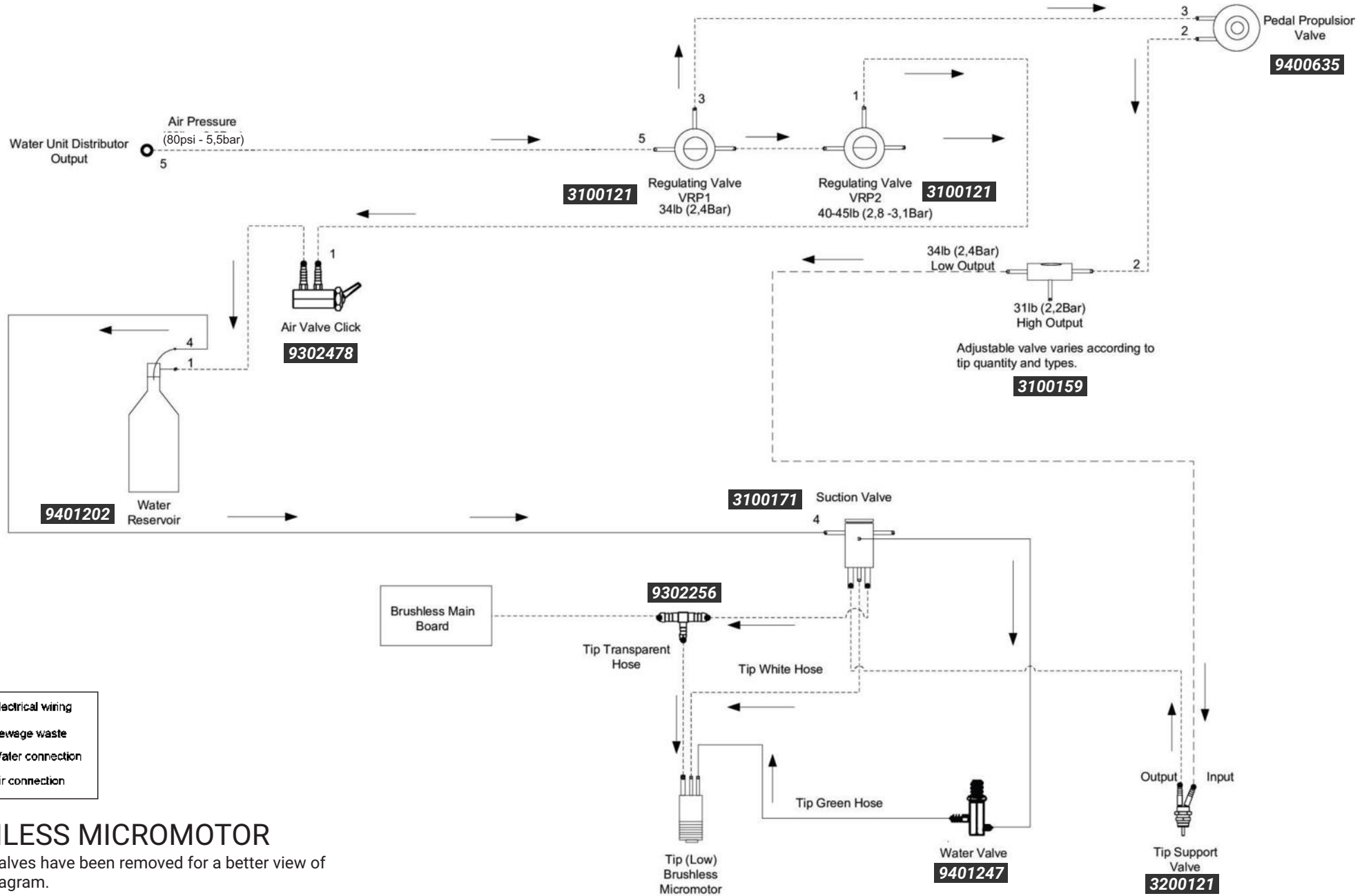
All suction valves have been removed for a better view of the wiring diagram.  
 Note: Replicate to the other tips and replace the hose distributor 3 according to the number of tips.





## FIBER OPTICS + AIR JET

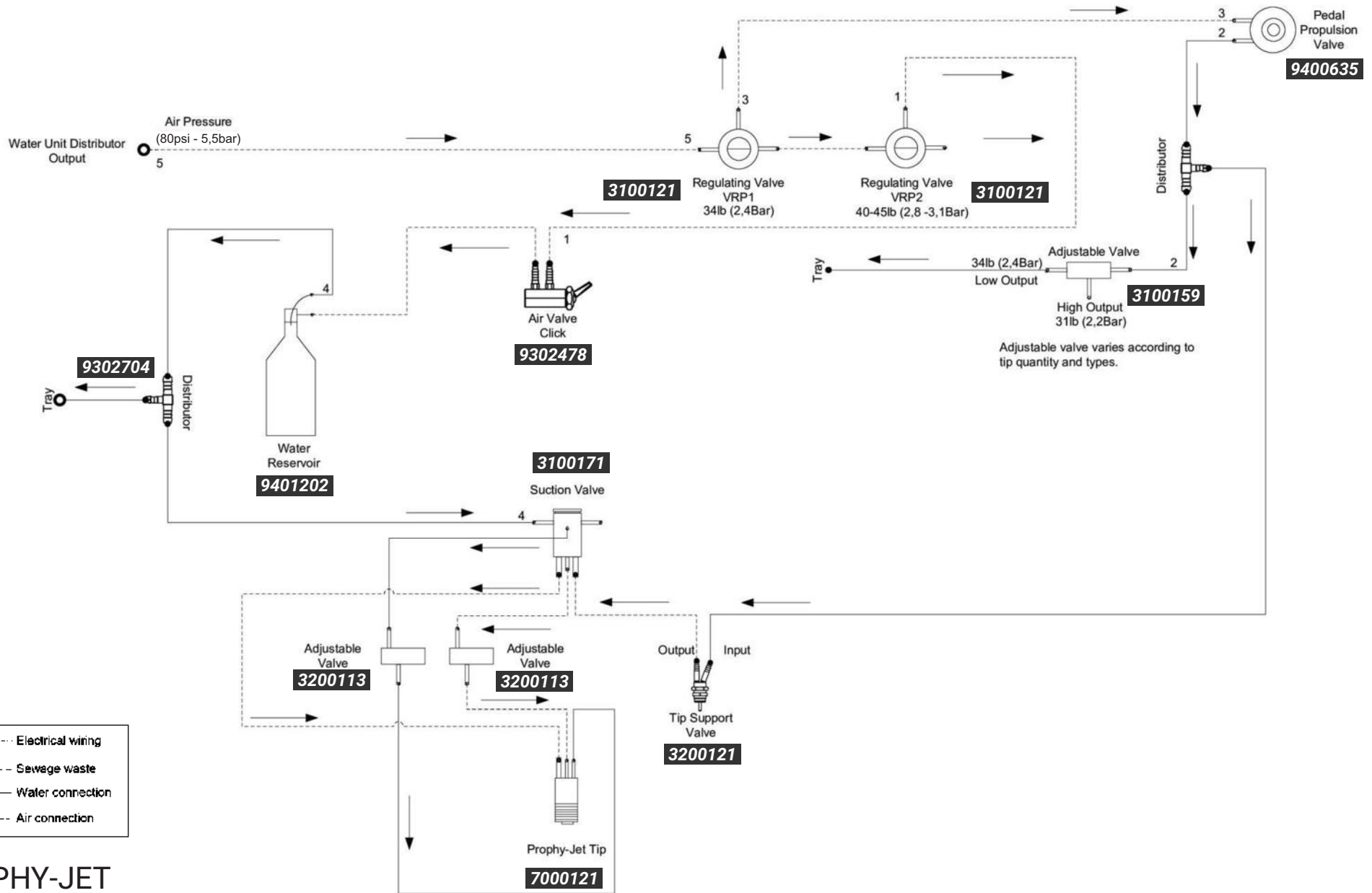
All suction valves have been removed for a better view of the wiring diagram.  
 Note: Replicate to the other tips and replace the hose distributor 3 according to the number of tips.



## BRUSHLESS MICROMOTOR

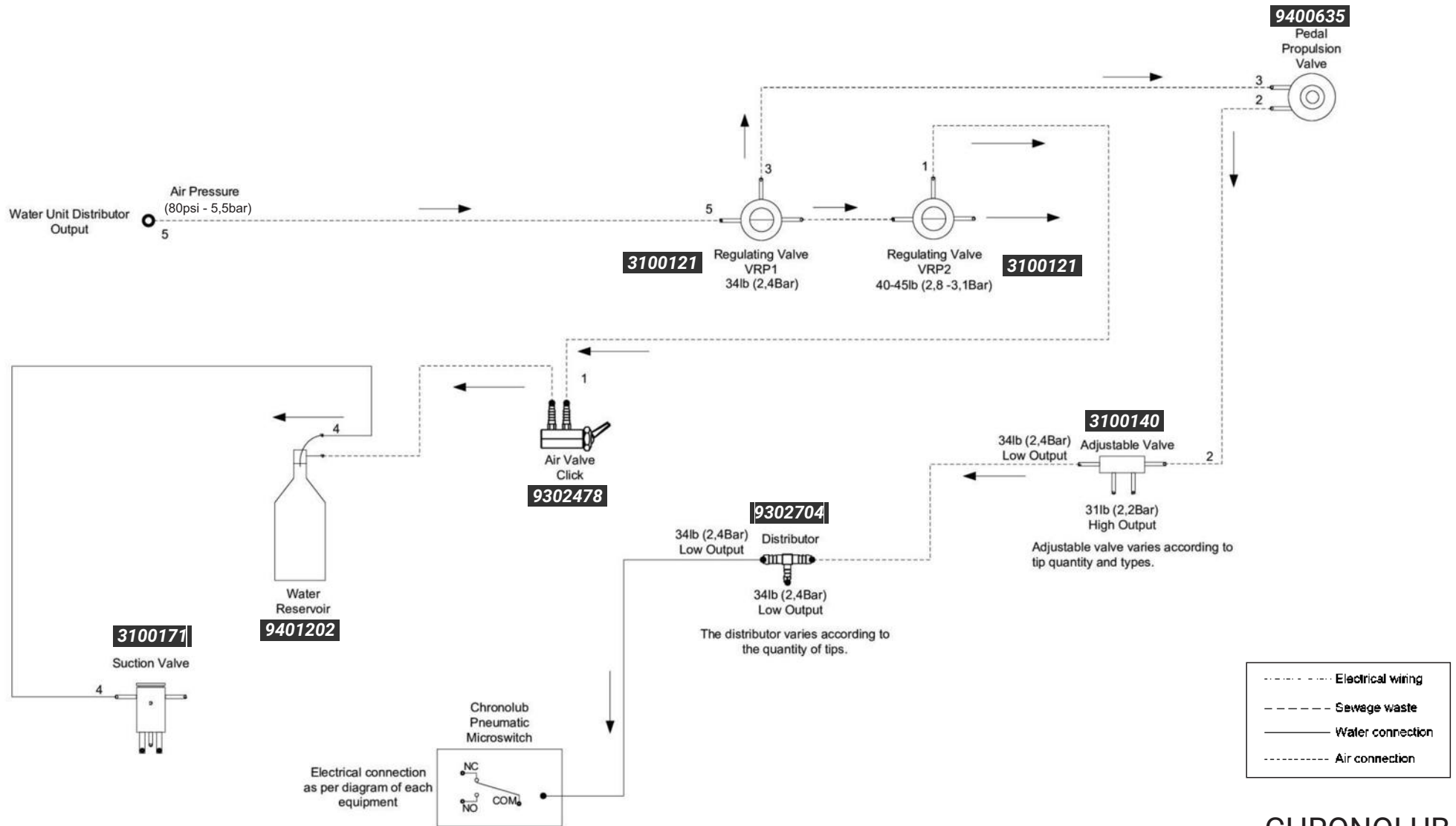
All suction valves have been removed for a better view of the wiring diagram.





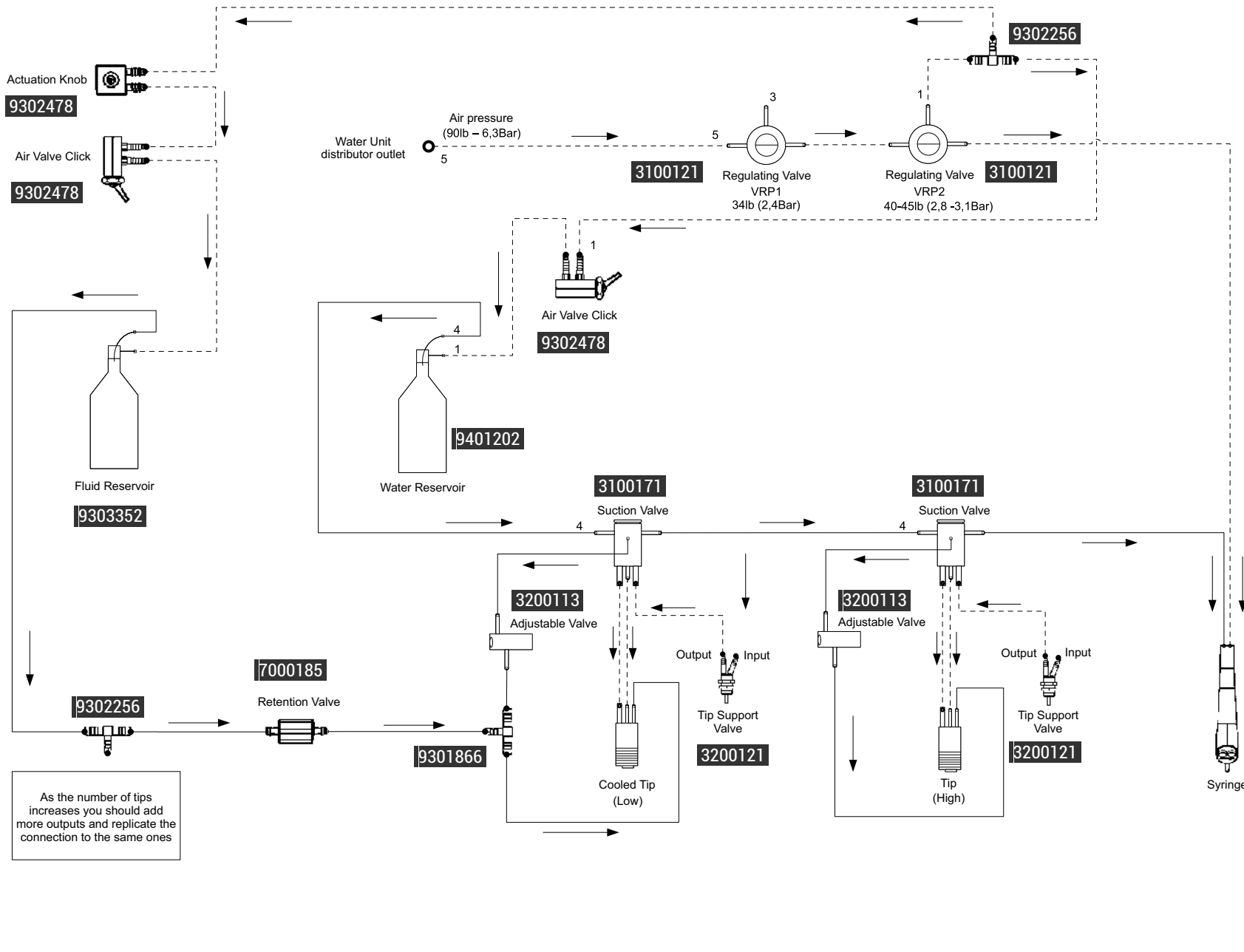
## PROPHY-JET

All suction valves have been removed for a better view of the wiring diagram.



## CHRONOLUB

All suction valves have been removed for a better view of the wiring diagram. The low outlet distributor can also be connected to hose 2, depending on the equipment.



CLEANING SYSTEM

# **///Olsen**

Equipament made to last

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