

# Cell topping-up equipment for Ni-Cd batteries (AC)

This equipment has been designed to aid the topping-up of water for large sizes or numbers of cells, especially where the electrolyte levels cannot easily be seen.

The complete topping-up watering equipment comprises two basic units –

- the filling pistol, which has a flow rate of 6.4 liters/min, shuts off at the right electrolyte level of a cell when the correct spacer tube is used.
- watering cart (120 V AC), complete with a flexible hose.

## Safety precautions

- Remove all rings, watches, and other items with metal parts prior to working with battery.
- Wear protective gear, rubber gloves, long sleeves, closed goggles or shield.
- Never allow an exposed flame or spark near the battery.
- Never smoke while performing any operation on the battery.
- Discharge any possible static electricity from clothing and/or tools by touching an earth-connected part “ground” prior to working with the battery.
- Use insulated tools.
- Electrolyte is harmful to skin and eyes. In the event of contact with skin and eyes, wash immediately with plenty of water. If eyes are affected, flush with water, and obtain immediate medical attention.
- Always consult with the battery SDS “Safety Data Sheet” prior to working with the battery.

**Read Saft’s battery Installation and Operation Instructions/Manual prior to servicing battery.**



## Parts list equipment - Celltopper Plus (AC)

Item	Part Number	
	Pocket plate cells	Sintered/PBE cells
Celltopper Plus topping-up equipment (includes filling pistol, watering cart, hose and spacer tube kit)	08-00195-02	220866
Watering cart 120 V AC (includes hose)	INJ-Mini	220867
Filling pistol (includes spacer tube kit)	01-02002-01	220323
Spacer tube kit (includes 9 spacer tubes marked “A” to “I”)	01-02007-01	220974



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# Operation procedure

## Watering cart equipment (Part Number 220867)

- Remove black cap and fill tank with ONLY distilled or de-ionized water. Replace black cap when full.
- Connect the output hose of the watering cart to the bottom of the filling pistol's handle. A quick connect is preassembled.
- Plug to an AC outlet (120 V AC).
- Turn the power switch to the ON position. The switch is located on the back of the cart. The pump will energize for a few seconds and then stop.
- Refer to "Filling pistol operation" (page 3).
- Once all topping-up is complete, turn the power to the OFF position and unplug from AC outlet.



### Watering cart equipment

Container capacity	38 L (made of polypropylene)
Input	120 V AC, 60Hz (~3.9 m length cable)
Hose	~3 m in length
Dimensions (mm)	~381 x 343 x 889 (L x W x H)
Weight (kg)	~11 (empty) ~49 (full)
Packaging dimensions (mm)	~431 x 431 x 940 (L x W x H)
Shipping weight (kg)	~15.4

# Operation procedure

## Filling pistol

(Part Number 220323)

- Refer to Saft's operating instructions for the Celltopper Plus topping-up equipment (Part Number 220866) and select the correct spacer tube for the corresponding cell type marked with a letter "A" to "I" (Spacer kit Part Number 220974).
- Attach spacer tube to the front end of the probe by orientating the spacer tube so that the stepped inside diameter is placed on the probe first.
- Push the spacer tube completely against the probe top so that there is NO visible space between the spacer tube and the probe top (refer to the pictures below).
- Open vent cap of cell and insert probe into cell until spacer tube sits on open vent hole.
- Press and hold handle until the pistol automatically stops dispensing water and release handle.
- Remove the probe from the cell.
- Repeat topping-up other cells.

### Note:

- There will be some water that drips out of the probe after the handle is released. Let this drain into the cell or to another desirable location.

### Caution:

- Use correct spacer tube to prevent overfilling or underfilling.
- Only use distilled or de-ionized water. NEVER use tap water.
- Topping-up equipment should be dedicated to Ni-Cd batteries.



### Filling pistol

Total filling pistol length (mm)	~680
Spacer tube kit	Quantity 9 (marked "A" to "I") included
Packaging dimensions (mm)	~813 x 203 x 76 (L x W x H)
Shipping weight (kg)	~1.4

### Correct installation for specified spacer tubes (see page 4)



Spacer tubes  
"A" to "F", "H" and "I"



Spacer tube  
"G"

# Spacer tubes

## For pocket plate cells

Battery type	Capacity range (Ah)	Spacer tube to be used
SBH	8.3 - 16, 49	A
SBH	19 - 39, 51	B
SBH	59 - 920	B
SBL	7.5 - 30, 45, 59	A
SBL	37 & 48, 70, 90	B
SBL	102 - 1540	B
SBM	11 - 30	A
SBM	43 - 84	B
SBM	86 - 1390	B
SCH	11 - 50	B
SCH	58 - 137	C
SCH	147 - 265	B
SCH S - steel	67 - 128	A
SCH S - steel	147 - 320	B
SCL	11 - 69	B
SCL	76 - 128	C
SCL	157 - 411	B
SCL P	10 - 70	H
SCM	11 - 59	B
SCM	65 - 118	C
SCM	145 - 341	B
SCM S - steel	32 - 118	A
SCM S - steel	145 - 435	B
SNH	9 - 34	A
SNH	40 - 210	B
SNL	10 - 59	A
SNL	70 - 355	B
SNM	9 - 55	A
SNM	70 - 335	B
SPL	80 - 420	B
STL⊕	38 - 460	B
SUN⊕	45 - 1110	B

## For sintered/PBE cells

Battery type	Capacity range (Ah)	Spacer tube to be used
SM 100 LFR	95	C
SM 100 P/FR	95	F
SM 110 S	110	B
SM 155 P/FR	155	A
SMRX F3	160, 180, 200, 230, 260, 290	B
SMRX F3	320, 360	A
SPH	11	A
SPH	16 - 52	D
SPH	60 - 80	B
SPH	90 - 190	A
SPH	220 - 320	C
SPH B	16 - 47	A
SRA	75, 90, 110, 125, 140	B
SRA	160, 190, 220, 260, 280, 310, 340, 375	C
SRA HT	70, 85, 105, 115, 130	B
SRA HT	150, 175, 200, 245, 265, 290, 315, 350	C
SRA LT	75, 90, 110, 125, 140	B
SRA LT	160, 190, 220, 260, 280, 310, 340, 375	F
SRM - stainless steel	46 - 80	B
SRM - stainless steel	105 - 440	G
SRM⊕	40 - 135	B
SRM⊕	160 - 360	E
SRM 320 LFR	320	A
SRM 340 CP/CFR	340	E
SRM F3	80,100,140,160,180	C
SRM F3	120,140L	D
SRM F3	250C	E
SRM P/FR	25 - 66	D
SRM P/FR	80 - 105	D
SRM P/FR	125 - 270	F
SRX / SRX E - steel	72 - 370	C
SRX 44 E - steel	44	B
SRX C	50	C
SRX F3	220	A
SRX LP/LFR	175	A
SRX P-LC	250	B
SRX P/FR	22 - 80	D
SRX P/FR	90 - 220	C
SRX stainless steel	90 - 250	B
STH	21 - 80	D
STH	90 - 190	E
STH B	11 - 47	A



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