



2015/16

Main Catalogue



# www.ctmcleaning.com

# CTM online

# www.ctmcleaning.com

a website totally renovated in the contents and from the graphical point of view: it will offer easier exploration and more complete technical information.

A website of modern concept helping our customer finding the necessary updated information about our products, easily and in real time.

# www.ctmcleaning.com

will offer complete product videos about machine running, machine use and plus of the main products of professional range: an additional very useful sales tool. Thanks to the new web site, videos will be integrated directly in the product sheet.

# www.ctmcleaning.com

connecting to the CTM world is just a click away: complete information, products and news available quickly and simply.







Direct experience of professional people has resulted in CTM floor scrubbers range: easy to handle, powerful, efficient, carefully conceived and designed by using top-quality materials.

# Why disc brush?

Extended mechanical action of the bristles on the floor, ideal for persistent dirt: the special setting of the brush plate allows a balanced gripping effect, assisting easy use in the non traction models. Complete cleaning also next to walls is possible and the compact washing element lower at the sides is studied to scrub also under edges.

# How a squeegee should be designed?

The shape and the material used grant a perfect drying in every condition, also on floors with grout or when quick U turns are necessary.

The floating body can stay in the machine operating space (compact / room saving)

The manual adjusting system grants a perfect drying on each kind of floors.

# How long do battery charges last?

It is impossible to determine exactly how long a battery charge lasts and so how long a machine can work in autonomy. Battery autonomy changes depending on type of surface, dirt quantity, brush type and way in which traction system is used (speed and slope).

Battery life is made up of number of charge cycles (also incomplete), if use conditions, charge and service are perfectly observed.

Manufacturing technology diversifies numbers of cycles, service needed, use/charge conditions and performances.









# Number of disc brushes:

The scrubbing group meets different cleaning

path need with 1, 2 or 3 disc brushes.



• U-turns in closed area

to work with the machine. The smaller this room is, the higher

the machine output, because less maneuvering is needed.

The technical features of our

floor scrubber driers (the front

wheel shaft is close to the rear

one in the walk behind models

and the tight steering radius of

The space (length X width) needed to make a U-turn is the

no-stop and separate control of water quantity and chemical product concentration with automatic and delayed stop of the supply when the machine stops (Automatic Detergent Measuring System).



# • Constant brush pressure:

The pressure of brushes on the floor is made by the heavy brush plate that follows irregularity on the floor and gives

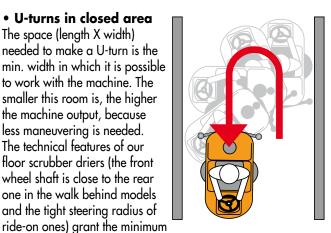
always the top pressure without any adjustment still with shorter bristles.



# Solenoid valve:

Together with the reliable mechanical solution faucet, this system reduce chemical consumption **STOP** and avoid solution waste. The flow is open

only when brush is working, there is no accidental leak with machine stopped. The system is protected by a filter with easy maintenance.





# Integrated battery charger

Some models are equipped with integrated battery charger, other ones have the predisposition only. It

**CHARGER** is possible to charge batteries in different rooms, without coming back to the same place.

room for U-turns. On each ride-on models there is an automatic device that lowers speed when turning, raising the safety level also for inexperienced users.



# Integrated battery

Standard integrated battery is built with a maintenance free technology and it does not require restrictions about the place for battery

charging. The non stop research allow to use always up-to-date batteries that combined with appropriate battery charger grant machine top performances.





# Hour meter

Useful to check work sessions and to plan stops for battery charging. Best output and investment protection.



**BEIGE PAD - POLISHING - Polyester** To polish all kinds of floor. Use dry.



# **LEVEL** • Charge meter and battery protection

It informs when the autonomy is finishing, allowing the end of the cleaning task (stopping brushes first and then the rest). It prevents

damages to the batteries, preventing the complete discharge with any kind of technologies.



# **GREEN PAD - INTERMEDIATE CLEANING ACTION**

- Nylon To remove all the old superficial wax, rests, obtaining ready floors to be recoated. Use wet.



**BLACK PAD - WET STRIPPING - Nylon For wet** stripping of heavy layers of wax. Ideal to remove old floor finish scu and cement marks.







		Page	Power supply	Brushes	Scrubbing width	Squeegee width	Max working capacity	Detergent tank capacity	Recovery tank capacity	Packaging	Weight	Weight	pcs x pallet
Code	Model		V	n°	mm	mm	m²/h - ft²/h	l/gal	l/gal	LxlxH cm/inc	kg	lbs	n°
8.518.0002	Flick 36E	8	230V/50HZ	1	360	460	1260-13562	11/2,91	12/3,17	81x56x80/32x22x32	62	135	1
8.518.0001	Flick 36B	8	12V	1	360	460	1260-13562	11/2,91	12/3,17	81x56x80/32x22x32	70	154	1
8.524.3301	Alcor 43E	10	230V/50HZ	1	450	800	1575-16952	25/6,61	28/7,39	113x61x110/44x24x43	123	271	1
8.524.1001	Alcor 43B	10	24V	1	450	800	1575-16952	25/6,61	28/7,39	113x61x110/44x24x43	73	161	1
8.524.0001	Alcor 43B	10	24V	1	450	800	1575-16952	25/6,61	28/7,39	113x61x110/44x24x43	114	251	1
8.528.0001	Swift EVO 50E	12	230V/50HZ	1	450	800	1800-19375	44/11,63	50/13,21	124x58x121/49x23x48	117	256	1
8.528.0002	Swift EVO 50B	12	24V	1	500	800	2000-21527	44/11,63	50/13,21	124x58x121/49x23x48	83	183	1
8.528.0003	Swift EVO 50B	12	24V	1	500	800	2000-21527	44/11,63	50/13,21	124x58x121/49x23x48	85	187	1
8.528.0005	Swift EVO 50B	12	24V	1	500	800	2000-21527	44/11,63	50/13,21	124x58x121/49x23x48	138	304	1
8.525.1304	Mizar EVO 66 BTR	14	24V	2	660	800	2640-28416	55/14,52	65/17,17	142x72x123/56x28x48	133	193	1
8.508.0358	Sigma 50 BM	16	24V	1	500	800	2000-21527	67/17,70	77/20,35	142x72x123/56x28x48	128	282	1
8.504.0348	Sigma 50 BTR	16	24V	1	500	800	2250-24218	67/17,70	77/20,35	142x72x123/56x28x48	128	282	1
8.504.0363	Sigma 55 BTR	16	24V	2	550	800	2475-26640	67/17,70	77/20,35	142x72x123/56x28x48	131	289	1
8.504.0373	Sigma 66 BTR	16	24V	2	660	800	2970-31968	67/17,70	77/20,35	142x72x123/56x28x48	140	308	1
8.510.0078	Sigma 26 BTR	18	24V	2	660	900	3762-40493	88/23,25	91/24,04	156x74x128/61x29x50	173	380	1





		Page	Power supply	Brushes	Scrubbing width	Squeegee width	Max working capacity	Detergent tank capacity	Recovery tank capacity	Packaging	Weight	Weight	pcs x pallet
Code	Model		V	n°	mm	mm	m²/h - ft²/h	l/gal	l/gal	LxlxH cm/inc	kg	lbs	n°
8.510.0080	Sigma 29 BTR	18	24V	2	750	900	4275-46015	88/23,25	91/24,04	156x74x128/61x29x50	178	392	1
8.579.0005	Kron Pico 66	20	24V	2	660	855	3250-34982	75/19,81	80/21,13	153x82x140/60x32x55	175	492	1
8.579.0006	Kron Pico 66	20	24V	2	660	855	3250-34982	75/19,81	80/21,13	153x82x140/60x32x55	252	492	1
8.576.3001	Kron Zero R 75 Vantage	22	24V	2	750	900	3750-40364	110/29,06	130/34,34	152x97x154/59x39x61	226	497	1
8.576.3002	Kron Zero R 85 Vantage	22	24V	2	850	900	6100-65660	110/29,06	130/34,34	152x97x154/59x39x61	227	500	1
8.576.3101	Kron Zero R Plus 75	24	24V	2	750	900	3750-40364	110/29,06	130/34,34	152x97x154/59x39x61	236	519	1
8.576.3102	Kron Zero R Plus 85	24	24V	2	850	1000	6100-65660	110/29,06	130/34,34	152x97x154/59x39x61	237	521	1
8.577.0101	Kron S3 EV	26	24V	2	900	1000	5740-61784	140/36,99	150/39,63	200x118x171/79x46x67	345	760	1
8.578.0002	Kron M2	28	36V	2	1020	1250	7140-76854	200/52,84	210/55,48	200x118x171/79x46x67	381	838	1
8.572.0013	Kron L2	30	36V	3	1220	1450	8540-91923	280/73,97	315/83,22	230x135x190/91x53x74	670	1.474	1

















- Suitable to work in high congested areas like small shops, offices, kitchens, schools, hospitals, bars, gyms, restaurants Adjustable flow (automatic start-stop with solenoid valve) of the detergent solution depending on type of surface
- Brush with quick release• Removable recovery tank Available in battery version (36B) with integrated battery charger with data memory and for any type of batteries Battery included Squeegee lifting lever Compact reclining handle with control switches Easy access and simple service of the components.

# Standard equipment:



• 5.511.1346 PPL brush Ø 360 mm - 15"



4.508.1040
 Front squeegee blade
 L.537 mm - Th. 2.5 mm
 4.508.1041
 Rear squeegee blade
 L.590 mm - Th. 3 mm



• 0.108.0061 On-board Battery charger CBHD1 12V 8A only for model code: 8.518.0001



• 0.107.0061 Maintenance free battery 12 MFP 50 -65 Ah C-20/50 Ah C-5 only for model code: 8.518.0001

• 0.108.0025 Power cable 1,5 mt. for battery charger only for model code: 8.518.0001





Watch the video on youtube: www.youtube.com/ctmcleaning

	Flick 36E	Flick 36B
code	8.518.0002	8.518.0001
power supply	220/240 V - 50/60 Hz	12 V
scrubbing / squeegee width	360 / 460 mm	360 / 460 mm
max working capacity	1260 m²/h	1260 m²/h
detergent tank capacity	11 l / 2.91 gal	11 l / 2.91 gal
recovery tank capacity	12-13 l / 3.2 gal	12-13   / 3.2 gal
traction	mechanical	mechanical
RPM / pressure on the brushes	130/18 kg /40 lbs	130/18 kg /40 lbs
brush motor power	370 W	250 W
detergent solution system	solenoid valve	solenoid valve
depression / vacuum motor	$850 \text{ mmH}_2\text{O}/400 \text{ W}$	650 mmH <sub>2</sub> O/180 W
dimensions / weight	120x43x97 cm / 38kg	120x43x97 cm / 38kg





The unit can be supplied mains (15 m cable available) or battery powered. Reclining handle: fit on any operator's height and allowing the perfect cleaning also on 90° corners. Shock-absorbing covers , simple cleaning of the recovery tank, non marking wheels .

Easy access to mechanical parts (easy maintenance of each component), removable recovery tank without tools.





User friendly analogic control panel. Control lever for brush operation and detergent water outflow.

General ON/OFF switch, brush and vacuum motor switch, solenoid valve operation switch.

Parabolic squeegee, easy rubber blades replacement. The floating brush plate and squeegee grant the right cleaning pressure on any type of floor.



# **Optional accessories:**



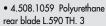
0.107.0065 Battery
 AGM 12V 60Ah C5
 -75A C20



• 0.108.0051 Booster battery charger



• 4.508.1058 Polyurethane front blade L.537 TH. 2,5





• 5.511.1413 Tynex brush Ø 360 mm-14"

• 5.511.1411 PPL 0,03 brush Ø 360 mm-14"

• 5.511.1412 PES brush Ø 360 mm-14"



• 5.511.1129 EWU pad driver Ø 360mm-14"



(5 pcs package)

• 6.508.0143

Abrasive pad Ø 381 mm-15" - beige

• 6.508.0144

Abrasive pad Ø 381 mm-15" - green

• 6.508.0141

Abrasive pad Ø 381 mm-15"

- black



• 4.512.0068 Extension electric cord 15 m with Schuko plug



















• Suitable to work in high congested areas like wellness centres and medical environments in general, gyms, retail outlets, car shops, sales points and health care • Solution water filter and solenoid valve (battery model only) • User friendly control panel • Hour meter (optional) • Chemical dosing system on request • Recovery water tank with visual inspection • Reclining handle with control lever (battery model only) • Low noise operation thanks to the protected positioning of vacuum motor • Recovery tank drain hose with adjustable flow system • Indicator of the solution water tank fill level • Easy access to the recovery tank • Nonmarking wheels.

# **Standard equipment:**



• 5.511.1688 PPL brush Ø 430 mm - 17"



• 4.508.X468 Front squeegee blade L.830 mm Shore 40 Th. 2.5 mm • 4.508.X467 Rear squeegee blade L.870 mm Shore 40 Th. 3 mm



• 0.108.0042 On-board Battery charger CBHD1 24V 10A only for model code: 8.524.1001 8.524.0001



• 2 x 0.107.0061 Maintenance free battery 12 MFP 50 - 12V 50Ah only for model code: 8.524.0001





Watch the video on youtube: www.youtube.com/ctmcleaning

	Alcor 43E	Alcor 43B	Alcor 43B
code	8.524.3301	8.524.1001	8.524.0001
power supply	230 V - 50 Hz	24V (battery charger included)	24V (Battery and battery charger included)
scrubbing / squeegee width	450 / 800 mm	450 / 800 mm	450 / 800 mm
max working capacity	1575 m²/h	1575 m²/h	1 <i>575</i> m²/h
detergent tank capacity	25 l / 6.61 gal	25   / 6.61 gal	25 l / 6.61 gal
recovery tank capacity	25-28   / 6.61 gal	25-28 l / 6.61 gal	25-28 l / 6.61 gal
traction	mechanical	mechanical	mechanical
RPM / pressure on the brushes	140/25 kg /39,68 lbs	150/18 kg /39,68 lbs	150/18 kg /39,68 lbs
brush motor power	550 W	450 W	450 W
detergent solution system	mechanical	solenoid valve	solenoid valve
depression / vacuum motor	1733 mmH <sub>2</sub> O/550 W	1100 mmH <sub>2</sub> O/370 W	1100 mmH <sub>2</sub> O/370 W
dimensions / weight	106x50x88 cm / 65 kg	106x50x88 cm / 87kg	106x50x88 cm / 87kg





User friendly analogic control panel. Control lever for brush operation and detergent water outflow. ON/OFF and battery cutout key switch, brush and vacuum motor switch, detergent dosing knob (optional), Thermal circuit breaker to protect vacuum and brush motor, battery level indicator, hour meter (optional).

Automatic detergent dosing system on request. Indicator of clean water tank level.

Detergent solution regulation.

Recovery tank drain hose with adjustable flow system.





Easy access to recovery water tank with visual inspection. Extremely silent (62 dB) thanks to the particular housing of the vacuum motor and the use of soundproofing material.

Thanks to the special squeegee support it is easily possible the tilting of the machine to carry out the drying of the floor without scrubbing. The oversize wheels facilitate maneuverability and effortless use.



# **Optional accessories:**



• 0.107.0065 Battery AGM 12V 60Ah C5 - 75A C20



4.508.1178 Polyurethane front blade L.830 TH. 3
4.508.1177 Polyurethane rear blade L.870 TH. 4



• 5.511.1713 Tynex brush Ø 430 mm-17" • 5.511.1711 PPL 0,03 brush Ø 430 mm-17" • 5.511.1712 PES brush Ø 430 mm - 17"



• 5.511.1095 EWU pad driver Ø 430 mm-17"



(5 pcs package)

• 6.508.0032 Abrasive pad Ø 430 mm-17" - beige

• 6.508.0039 Abrasive pad Ø 430 mm-17" - green

• 6.508.0046

Abrasive pad Ø 430 mm-17" - black



• 4.512.0068 Extension electric cord 15 m with Schuko plug

• 5.511.1687 Automatic detergent dosing system on request.







Standard equipment:



• 5.511.1097 PPL brush Ø 483 mm - 19"



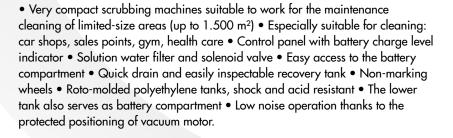
• 4.508.X468 Front squeegee blade L.830 mm Shore 40 Th. 2.5 mm • 4.508.X467 Rear squeegee blade L.870 mm Shore 40 Th. 3 mm



• 0.108.0042 On-board Battery charger CBHD1 24V 10A only for model code: 8.528.0003 - 8.528.0005



• 0.107.0054 Maintenance free battery 12V 75Ah BT DC 5.5 only for model code: 8.528.0005





Watch the video on youtube: www.youtube.com/ctmcleaning

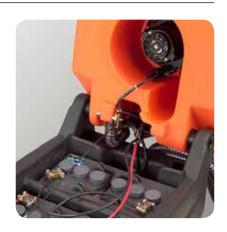
	Swift Evo 50E	Swift Evo 50B	Swift Evo 50B	Swift Evo 50B
code	8.528.0001	8.528.0002	8.528.0003	8.528.0005
power supply	230V	24V	24V (battery charger included)	24V (Battery and battery charger included)
scrubbing / squeegee width	500 / 800 mm	500 / 800 mm	500 / 800 mm	500 / 800 mm
max working capacity	2000 m²/h	2000 m <sup>2</sup> /h	2000 m²/h	2000 m²/h
detergent tank capacity	44   / 11,63 gal	44   / 11,63 gal	44   / 11,63 gal	44 l / 11,63 gal
recovery tank capacity	50-60   / 13,21-16 gal	50-60 l/13,21-16 gal	50-60 l/13,21-16 gal	50-60 l/13,21-16 gal
traction	mechanical	mechanical	mechanical	mechanical
RPM / pressure on the brushes	150/20 kg /44,09 lbs	150/18 kg /44,09 lbs	150/18 kg /44,09 lbs	150/18 kg /39,68 lbs
brush motor power	550W	550W	550W	550W
detergent solution system	solenoid valve	solenoid valve	solenoid valve	solenoid valve
depression / vacuum motor	1700 mmH <sub>2</sub> O/1000W	1280mmH2O/400W	1280 mmH <sub>2</sub> O/400W	1280 mmH <sub>2</sub> O/400W
dimensions / weight	116x46x98cm / 115 kg	116x51x98cm / 114 kg	116x51x98cm / 116 kg	116x51x98cm / 118 kg





Powerful gearmotor; metal brush plate with integrated plastic splash guard/bumper.

The outflow of the detergent solution is controlled by a solenoid valve. The actuation of the solenoid valve is operated by the control lever, avoiding the detergent solution outflow when the brush is stopped during the interruptions of work.





Renovated squeegee with new pressure adjusting system. The squeegee blades are easily replaceable without the use of tools. Quick and easy squeegee coupling through the two large knobs; the squeegee is released without any damage in the event of accidental impact.

Easy and intuitive controls. The outflow of the cleaning solution is easily controlled using the mechanical lever placed on the control panel. Inspectable mesh filter to trap any existing solid body in the cleaning solution.



# **Optional accessories:**



• 2 x 0.107.0002 Tubular battery Pb-acid 12V 118Ah C5



• 2 x 0.107.0063 GEL Battery 12 MFP 105 12V 105Ah C5



- 4.508.1178 Polyurethane front blade L.830 TH. 3
- 4.508.1177 Polyurethane rear blade L.870 TH. 4



• 5.511.1098 Tynex brush Ø 483 mm-19" • 5.511.1128 PPL 0,03 brush Ø 483 mm-19" • 5.511.1206 PES brush Ø 483 mm - 19"



• 5.511.1099 EWU pad driver Ø 483 mm-19"



(5 pcs package)

- 6.508.0034 Abrasive pad Ø 483 mm-19" - beige
- 6.508.0041 Abrasive pad Ø 483 mm-19″ - green • 6.508.0048
- Abrasive pad Ø 483 mm-19" - black



• 4.512.0068 Extension electric cord 15 m with Schuko plug





# **Standard equipment:**

# 6

# MIZAR 66

• 2 x 5.511.1105 PPL brush Ø 330 mm - 13"





• 4.508.1524 Front squeegee blade L.860 mm Shore 33 Th. 4 mm

• 4.508.1523 Rear squeegee blade L.900 mm Shore 40 Th. 4 mm



• 0.108.0059 On-board Battery charger CBHD1-XR 24V 12A

Designed for the maintenance and deep cleaning of large areas (up to 1.700 m²)
Especially suitable for cleaning: car shops, sales points, gym, health care
User friendly control panel
Automatic brush lifting
Fully accessible recovery water tank with visual inspection
Automatic detergent measuring system
Big size traction wheels
Handle with control lever.

	Mizar EVO 66BTR
code	8.525.1304
power supply	24V (battery charger included)
scrubbing / squeegee width	660 / 800 mm
max working capacity	2640 m²/h
detergent tank capacity	55 l / 14.5 gal
recovery tank capacity	55-65   / 14.52-17.17 gal
traction	automatic
RPM / pressure on the brushes	175/33 kg /72,7 lbs
brush motor power	2 x 400 W
detergent solution system	solenoid valve
depression / vacuum motor	1200 mmH <sub>2</sub> O/400 W
dimensions / weight	128x71x106 cm / 110 kg





User friendly analogic control panel. Control lever for brush operation and detergent water outflow.

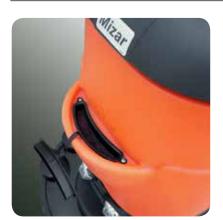
ON/OFF and battery cutout key switch, brush and vacuum motor switch, detergent regulation device.

Thermal circuit breaker to protect vacuum motor and brush motor, battery charge level indicator.

Hour meter, clean water tank level indicator. Detergent regulation device.

Recovery tank drain hose with adjustable flow system. Automatic brush lifting.





Automatic detergent dosing system.

Fully accessible recovery water tank with visual inspection.
Easy access to the recovery tank.
Easy access and simple service of the components without use of tools.

Battery trolley for a quick and easy battery change. Big size wheels for better maneuverability and effortless use.



# **Optional accessories:**



• 2 x 0.107.0002 Tubular battery Pb-acid 12V 118Ah C5



• 2 x 0.107.0063 GEL Battery 12 MFP 105 12V 105Ah C5



• 0.108.0001 Battery Charger 24V 12A 220-240/50-60



- 4.508.1526 Polyurethane front blade L.860 TH. 4
- 4.508.1525 Polyurethane rear blade L.900 TH. 4



- 5.511.1106 Tynex brush Ø 330 mm-13" 2x
- 5.511.1255 PPL 0,03 brush Ø 330 mm-13"
- 5.511.1202 PES brush Ø 330 mm-13" 2x



• 5.511.1107 EWU pad driver Ø 330mm-13"



(5 pcs package)

- 6.508.0030 Ø 340 mm-13"- beige
- 6.508.0037 Ø 340 mm-13"- green
- 6.508.0044 Ø 340 mm-13"- black







Standard equipment: SiGMA 50



• 5.511.1097 PPL brush Ø 483 mm - 19"



### SIGMA 55BTR

• 2 x 5.511.1101 PPL brush Ø 275 mm - 10"



# SIGMA 66BTR

• 2 x 5.511.1105 PPL brush Ø 330 mm - 13"



• 4.508.X468 Front squeegee blade L.830 mm Shore 40 Th. 2.5 mm

4.508.X467 Rear squeegee blade L.870 mm Shore 40 Th. 3 mm

• Suitable to work for the maintenance and deep cleaning of large areas (up to 2.200 m<sup>2</sup>) • User friendly control panel: scrubbing and vacuuming switches, forward/reverse traction selector, battery charge indicator, key switch • Adjustable traction speed with the motorcycle-type control handle • Self levelling brush plate • Easy access to the battery compartment without the use of tools • Quick vacuum motor and filter inspection • Large capacity detergent solution tank, with large filling opening protected by a screw cap • Parking brake directly on the wheel • Non-marking wheels • Easy squeegee regulation without tools • Hour meter and solenoid valve.

	Sigma 50BM	Sigma 50BTR	Sigma 55BTR	Sigma 66BTR
code	8.508.0358	8.504.0348	8.504.0363	8.504.0373
power supply	24V (battery charger included)	24V	24V	24V
scrubbing / squeegee width	500 / 800 mm	500 / 800 mm	550 / 800 mm	660 / 800 mm
max working capacity	2250 m²/h	2250 m <sup>2</sup> /h	2475 m²/h	2970 m²/h
detergent tank capacity	67   / 17.70 gal	67   / 17.70 gal	67   / 17.70 gal	67   / 17.70 gal
recovery tank capacity	75-95   / 20.35-25 gal	75-95   / 20.35-25 gal	75-95   / 20.35-25 gal	75-95   / 20.35-25 gal
traction	mechanical	automatic	automatic	automatic
RPM / pressure on the brushes	150/35 kg /77.16 lbs	150/35 kg /77.16 lbs	150/45 kg /99.20 lbs	150/24 kg /52.91 lbs
brush motor power	600 W	600 W	600 W	600 W
detergent solution system	solenoid valve	solenoid valve	solenoid valve	solenoid valve
depression / vacuum motor	$1280 \text{ mmH}_2\text{O} / 450\text{W}$	1280 mmH <sub>2</sub> O / 450W	$1280 \text{ mmH}_2\text{O} / 450\text{W}$	$1280 \text{ mmH}_2\text{O} / 450\text{W}$
dimensions / weight	135x56x102 cm / 97 kg	135x56x102 cm / 97 kg	128x71x106 cm / 100 kg	128x71x106 cm / 109 kg





User friendly control panel. Forward/reverse traction selector. General ON/OFF key switch, brush and vacuum motor switch. Thermal circuit breakers to protect vacuum and brush motor, battery level control, hour meter.

Quick access to the battery compartment without the use of tools. Large capacity solution tank (67 l), the highest in the category. Two 12V - 118 Ah C5 for a great working autonomy.





Robust quick connection squeegee, easily adjustable without the use of tools.

Heavy duty 15 mm steel monobloc brush plate. Great pressure on the floor for a deep cleaning even on the toughest dirt. Self levelling system. Solenoid valve to stop the detergent water outflow during the work interruptions.



# **Optional accessories:**



• 2 x 0.107.0002 Tubular battery Pb-acid 12V 118Ah C5



• 2 x 0.107.0063 GEL Battery 12 MFP 105 12V 105Ah C5



• 0.108.0001 Battery Charger 24V 12A 220-240/50-60

• 5.511.1494 On-board Battery charger kit - 24V - 12A



- 4.508.1178 Polyurethane front blade L.830 TH. 3
- 4.508.1177 Polyurethane rear blade L.870 TH. 4



- 5.511.1098 Tynex brush Ø 483 mm-19"
- 5.511.1102
- Tynex brush Ø 275 mm-10"
- 5.511.1106 Tynex brush Ø 330 mm-13"
- 5.511.1128
- PPL 0,03 brush Ø 483 mm-19"
- 5.511.1254
- PPL 0,03 brush Ø 275 mm-10"
- 5.511.1255 PPL 0,03 brush Ø 330 mm-13"
- 5.511.1206 PES brush Ø 483 mm - 19"
- 5.511.1201
- PES brush Ø 275 mm-10" • 5.511.1202
- PES brush Ø 330 mm-13"



- 5.511.1099
- EWU pad driver Ø 483mm-19"
- 5.511.1103
- EWU pad driver Ø 275mm-10"
- 5.511.1107
- EWU pad driver Ø 330mm-13"



(5 pcs package)

- 6.508.0034 Ø 483 mm-19"- beige
- 6.508.0041 Ø 483 mm-19"- green
- 6.508.0048 Ø 483 mm-19" black
- 6.508.0095 Ø 280 mm-11"- beige
- 6.508.0096 Ø 280 mm-11"- green
- 6.508.0097 Ø 280 mm-11"- black
- 6.508.0030 Ø 340 mm-13"- beige • 6.508.0037 - Ø 340 mm-13"- green
- 6.508.0044 Ø 340 mm-13"- black









• Capable to work for the maintenance and deep cleaning of large areas (up to 2.600 m²) • User friendly control panel: forward speed setting, scrubbing and vacuuming selectors, battery charge indicator, traction direction indicator, key main switch • Large handle with traction driving lever for forward and backward directions • Self levelling brush plate • Cover removable without tools • Quick vacuum motor and filter inspection, without tools • Detergent solution filter • Detergent solution tank provided with large opening protected by quick locking cap.

# **Standard equipment:**

## SIGMA 26BTR



• 2 x 5.511.1105 PPL brush Ø 330 mm - 13"

# SIGMA 29BTR



• 2 x 5.511.1168 PPL brush Ø 360 mm - 14"



• 4.508.0646 Front squeegee blade L.925 mm Shore 40 Th. 3 mm

• 4.508.0605 Rear squeegee blade L.1015 mm Shore 30 Th. 4 mm

	Sigma 26BTR	Sigma 29BTR
code	8.510.0078	8.510.0080
power supply	24V	24V
scrubbing / squeegee width	660 / 900 mm	750 / 900 mm
max working capacity	3726 m²/h	4275 m²/h
detergent tank capacity	88 l / 23.25 gal	88 l / 23.25 gal
recovery tank capacity	91-95   / 24.04-25 gal	91-95   / 24.04-25 gal
traction type / power	automatic / 300 W	automatic / 300 W
RPM - pressure on the brushes	150 - 43,5 kg /95.9 lbs	150 - 48,5 kg /107.48 lbs
brush motor power	1000 W	1000 W
detergent solution system	solenoid valve	solenoid valve
depression / vacuum motor	1733 mmH <sub>2</sub> O / 550 W	1733 mmH <sub>2</sub> O / 550 W
dimensions / weight	133x73x117 cm / 150 kg	133x73x117 cm / 153 kg





Easy access to battery and vacuum motor compartment, without using tools. Large capacity shock and acid proof polyethilene tanks (88 l) avoid frequent refilling and idle time. 4 x 6V -180 Ah C5 batteries granting continuous working time.

Adjustable speed ensures high precision in cleaning congested areas with obstacles. Intuitive controls reduce operator's training time. Safety thermal breakers prevent motor problems in case of overheating or operator's misuse.





Heavy duty V-shaped squeegee ensures perfect drying of every type of floor, even with large joints. Non-marking wheels avoid marks after the drying. Completely adjustable to fit any surface.

Strong mechanical control levers for heavy duty use. Large size drain hose for a fast emptying and a better cleaning of the recovery tank. Quick fitting battery charger plug.



# **Optional accessories:**



• 4 x 0.107.0004 Tubular battery Pb-acid 6V 180Ah C5



• 4 x 0.107.0072 GEL Battery 6 MFP 180 6V 180Ah C5



• 0.108.0002 Battery Charger 24V 25A 220-240/50-60

• 5.511.1495 On-board Battery charger kit - 24V - 25A



4.508.0901 Polyurethane front blade L.925 TH.3 Sh.40
4.508.0900 Polyurethane rear blade L.1015 TH.4 Sh.40



5.511.1106
Tynex brush Ø 330 mm-13"
5.511.1246
Tynex brush Ø 360 mm-14"

5.511.1255
PPL 0,03 brush Ø 330 mm-13"
5.511.1169
PPL 0,03 brush Ø 360 mm-14"

• 5.511.1202 PES brush Ø 330 mm-13" • 5.511.1203 PES brush Ø 360 mm - 14"



• 5.511.1107 EWU pad driver Ø 330 mm-13"

• 5.511.1129 EWU pad driver Ø 360 mm-14"



(5 pcs package)

• 6.508.0030 - Ø 340 mm-13"- beige • 6.508.0037 - Ø 340 mm-13"- green

• 6.508.0044 - Ø 340 mm-13"- black

• 6.508.0143 - Ø 380 mm-15"- beige • 6.508.0144 - Ø 380 mm-15"- green

• 6.508.0141 - Ø 380 mm-15"- black





# **KRON PICO**







STOR

LEVEL











# **Standard equipment:**



• 2 x 5.511.1739 PPL Brush Ø 330 mm - 14"



• 4.508.1619 Front squeegee blade L.960 mm Th. 2,5 mm

• 4.508.1618 Rear squeegee blade L.1000 mm Th. 3 mm



• 0.108.0054 On-board Battery charger CBH2D 24V 20A (only for model code: 8.579.0006)



• 2 x 0.107.0063 Gel battery 12V 105 A/C 5/120A C20 (only for model code: 8.579.0006)





Watch the video on youtube: www.youtube.com/ctmcleaning

Designed for the maintenance and deep cleaning of large areas (up to 3200 sqm.) with a very important reduction of cleaning cost. Very compact size and great maneuverability like walk behind models: suited for maintenance cleaning. • 32 kg. of constant pressure on the brushes. • Double counter rotating brush (66 cm of scrubbing width) obtaining better stability and constant pressure.
• Great working autonomy (till 4,5 hours) thanks to the possibility to use 4 batteries 6 V 240 Ah and

- Great working autonomy (till 4,5 hours) thanks to the possibility to use 4 batteries 6 V 240 Ah and to rear wheel-drive. Large load tank capacity (real load of 75 l.), resulting in reduced numbers of stops and maximum use of battery for effective operation of the machine. Ergonomic steering wheel of new design with user friendly controls and digital display. Easy access to electrical components.
- Inspection cover for fast and easy cleaning and sanification of dirt water tank. Automatic device that stops brushes and detergent water outflow when the machine is stationary. Self-levelling brush plate. **Automatic detergent measuring system**.

	Kron pico	Kron pico
code	8.579.0005	8.579.0006
power supply	24V	24V (Battery and battery charger included)
scrubbing / squeegee width	660 / 855 mm	660 / 855 mm
max working capacity	3250 m²/h	3250 m²/h
detergent tank capacity	75   / 19.81 gal	75 l / 19.81 gal
recovery tank capacity	75-80   / 19.81-21.13 gal	75-80 l / 19.81-21.13 gal
traction	rear wheel-drive / 400 W	rear wheel-drive / 400 W
RPM / pressure on the brushes	170/32 kg / 70.54 lbs	170/32 kg / 70.54 lbs
brush motor power	2 X 400 W	2 X 400 W
max gradient empty/full tank	13% / 10%	13% / 10%
depression / vacuum motor	$1300 \text{ mmH}_2\text{O}/400 \text{ W}$	1300 mmH <sub>2</sub> O/400 W
dimensions / weight	123 x 63 h 121 cm / 160 kg	123 x 63 h 121 cm / 234 kg





Great working autonomy thanks to the possibility to use 4 batteries 6 V 240 Ah granting continuous working. Possibility to use also 2 batteries 12V. Less battery consumption thanks to rear wheeldrive. Large load tanks made of shock and acid proof polyethylene (real load of 75 l.), avoiding frequent stop for refilling.

User friendly control panel. Steering wheel with digital controls and display. Squeegee and brush plate mechanical and user friendly lifting lever: min. maintenance cost training time for the users. Scrubbing unit with double brush with brush plate made of steel for a great pressure (32 Kg.) on the floor resulting in an easy and deep cleaning of any kind of dirt.





Rear wheel-drive on 2 wheels allows the machine to get over remarkable slopes. Detergent solution is cleansed by an external completely accessible filter, that holds any impurities, thus protecting the solenoid valve. The easy access to all internal components of Kron pico make it possible to reduce maintenance cost.

The comfortable and ergonomic seat allows the operator to work effortless for a long time, improving productivity. Its very compact size make it perfect to work in small areas where walk behind models are usually used. The use of Kron pico makes working easier and quicker with a huge saving of time.



# **Optional accessories:**



• 4 x 0.107.0004 Tubular battery Pb-acid 6V 180Ah C5



• 4 x 0.107.0072 Gel battery 6 MFP 180 6V 180Ah C5



• 2 x 0.107.0002 Tubular battery Pb-acid 12V 118 Ah C5



• 0.108.0002 Battery charger 24V 25A 220-240/50-60



4.508.1594 Polyurethane front blade L.960 TH.3 Sh.40
4.508.1596 Polyurethane rear blade L.1000 TH.4 Sh.40



• 2 x 5.511.1106 Tynex brush Ø 330 mm-13" • 2 x 5.511.1255 PPL 0,03 brush Ø 330 mm-13" • 2 x 5.511.1202 PES brush Ø 330 mm - 13"



• 2 x 5.511.1107 EWU pad driver Ø 330 mm-13"



(5 pcs package)

• 2 x 6.508.0030 - Ø 340 mm - 13"- beige

• 2 x 6.508.0037 - Ø 340 mm - 13"- green

• 2 x 6.508.0044 - Ø 340 mm - 13"- black



• 6.505.0062 Flashing beacon











# Kron ZERO R 75 Vantage

• 2 x 5.511.1168 PPL brush Ø 360 mm - 14"



# Kron ZERO R 85 Vantage

• 2 x 5.511.1688 PPL brush Ø 430 mm - 17"



# Kron ZERO R 75 Vantage

• 4.508.0646 Front squeegee blade L.925 mm Shore 40 Th. 3 mm

• 4.508.0605 Rear squeegee blade L.1015 mm Shore 30 Th. 4 mm

# Kron ZERO R 85 Vantage

• 4.508.1196 Front squeegee blade L.1027 mm Shore 40 Th. 3 mm

• 4.508.1195 Rear squeegee blade L.1150 mm Shore 33 Th. 4 mm







• Capable to work for the maintenance and deep cleaning of large areas (up to 3.700 m²) with a very important reduction of cost of cleaning • More than 50 kg of constant pressure on the brushes • Large load tank capacity, resulting in reduced number of stops and maximum use of battery charge for effective operation of the machine • Compact size (810 mm) • Stability even when fully loaded, front independent wheeldrive with tight steering radius • Recovery tank control window for cleaning and easy ordinary maintenance • Easy access to electrical components • Automatic device that stops brushes and detergent water outflow when the machine is stationary • Self-levelling brushes



Watch the video on youtube: www.youtube.com/ctmcleaning

	KRON ZERO R 75 Vantage	KRON ZERO R 85 Vantage
code	8.576.3001	8.576.3002
power supply	24V	24V
scrubbing / squeegee width	750 / 900 mm	850 / 900 mm
max working capacity	3750 m²/h	4100 m²/h
detergent tank capacity	110 l / 29.05 gal	110 l / 29.05 gal
recovery tank capacity	130-155   / 34.35-40.95 gal	130-155   / 34.35-40.95 gal
traction type / power	front motorwheel $/$ 600 W	front motorwheel / 600 W
RPM / pressure on the brushes	150/50 kg /110.23 lbs	150/50 kg /110.23 lbs
brush motor power	2 x 400 W	2 x 400 W
max gradient empty/full tank	13% / 10%	13% / 10%
depression / vacuum motor	1300 mmH <sub>2</sub> O/400W	1300 mmH <sub>2</sub> O/400W
dimensions / weight	146x81x138 cm / 220 kg	146x81x138 cm / 220 kg





The detergent water tank serves as battery compartment, allowing the housing of great capacity batteries granting continuous working time.

Large capacity shock and acid proof polyethylene tank (1101) improves productivity avoiding frequent refilling and idle time.

Simple and intuitive controls reduce operator's training time.
Easy mechanical brush plate and squeegee lifting system, for low maintenance costs. The enbloc brush plate apply a very high pressure (50 kg) to the floor, strongly and deeply removing any kind of dirt.





New control panel with digital controls and display.

Digital display: with hour meter, battery charge level indicator, empty water tank level indicator and forward/reverse traction indicator.

Speed control adjustment, horn, suction motor switch with delayed switch-off, brush plate lifting/lowering selector switch,

brush motor switch.
The ergonomic and comfortable shape of the machine allows the operator to work effortless for a long time, improving productivity.



# **Optional accessories:**



• 4 x 0.107.0004 Tubular battery Pb-acid 6V 180Ah C5 + 2 x 5.511.0561 connection cable batteries



• 4 x 0.107.0072 GEL Battery 6 MFP 180 6V 180Ah C5



• 0.108.0002 Battery Charger 24V 25A 220-240/50-60



• 5.511.1641 On-board Battery charger kit - 24V - 20A



- 4.508.0901 Polyurethane front blade L.925 TH.3 Sh.40
  4.508.0900 Polyurethane rear blade L.1015 TH.4 Sh.40
- 4.508.1251 Polyurethane front blade L.1027 TH.3
  4.508.1252 Polyurethane rear blade L.1150 TH.4



- 5.511.1246
  Tynex brush Ø 360 mm-14"
  5.511.1169
  PPL 0,03 brush Ø 360 mm-14"
  5.511.1203
  PES brush Ø 360 mm 14"
- 5.511.1713 Tynex brush Ø 430 mm-17" • 5.511.1711 PPL 0,03 brush Ø 430 mm-17" • 5.511.1712 PES brush Ø 430 mm - 17"



- 5.511.1592 EWU pad driver Ø 380 mm-15"
- 5.511.1095 EWU pad driver Ø 406 mm-17"



- 6.508.0143 Ø 380 mm 15"- beige (5 pcs.)
- 6.508.0144 Ø 380 mm 15" green (5 pcs.) • 6.508.0141 - Ø 380 mm -
- 15"- black (5 pcs.)
- 6.508.0032 Ø 406 mm -17" - beige (5 pcs.)
- 6.508.0039 Ø 406 mm 17" green (5 pcs.)
- 6.508.0046 Ø 406 mm 17" black (5 pcs.)







• Capable to work for the maintenance and deep cleaning of large areas (up to 4.000 m²) with a considerable reduction of cleaning costs • More than 50 kg of constant pressure on the brushes • Large load tank capacity, resulting in reduced number of stops and maximum use of battery charge for effective operation of the machine • Compact size (810 mm) • Stability even when fully loaded, front independent wheeldrive with tight steering radius • Recovery tank control window for cleaning and easy ordinary maintenance • Automatic brush plate lifting system • Automatic squeegee lifting system • Automatic squeegee lifting while reverse going • Automatic device that stops brushes and detergent water outflow when the machine is stationary • Antifoam device • Self-levelling brushes

# **Standard equipment:**



# Kron Zero R Plus 75

• 2 x 5.511.1168 PPL brush Ø 360 mm - 14"



### Kron Zero R Plus 85

• 2 x 5.511.1688 PPL brush Ø 430 mm - 17"



## Kron Zero R Plus 75

• 4.308.0646 Front squeegee blade L.925 mm Shore 40 Th. 3 mm

• 4.508.0605 Rear squeegee blade L.1015 mm Shore 30 Th. 4 mm

## Kron Zero R Plus 85

• 4.508.1196

Front squeegee blade L.1027 mm Shore 40 Th. 3 mm

• 4.508.1195 Rear squeegee blade L.1150 mm Shore 33 Th. 4 mm



• 0.108.0054 On-board Battery charger CBH2D 24V 20A



Watch the video on youtube: www.youtube.com/ctmcleaning

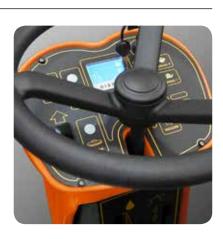
	KRON Zero R Plus 75	KRON Zero R Plus 85	
code	8.576.3101	8.576.3102	
power supply	24V	24V	
scrubbing / squeegee width	750 / 900 mm	850 / 900 mm	
max working capacity	3750 m²/h	4100 m <sup>2</sup> /h	
detergent tank capacity	110 l / 29.05 gal	110 l / 29.05 gal	
recovery tank capacity	130-155   / 34.35-40.95 gal	130-155   / 34.35-40.95 gal	
traction type / power	front motorwheel / 600 W	front motorwheel / 600 W	
RPM / pressure on the brushes	150/50 kg /110.23 lbs	150/50 kg /110.23 lbs	
brush motor power	2 x 400 W	2 x 400 W	
max gradient empty/full tank	13% / 10%	13% / 10%	
depression / vacuum motor	1300 mmH <sub>2</sub> O/400W	1300 mmH <sub>2</sub> O/400W	
dimensions / weight	146x81x138 cm / 220 kg	146x81x138 cm / 220 kg	





The easy access to the recovery tank allows fast cleaning and sanification of the tank; the tilting tank together with a large size drain hose allow the complete emptying of the tank and the removal of any type of solid dirt. The antifoam device protects suction motor, as well as the electronic floating switch that stops suction when the tank is full.

Kron Zero Plus is equipped with actuators for the automatic lifting of the brush plate and squeegee. New control panel with digital controls and display. Digital display: with hour meter, battery charge level indicator, empty water tank level indicator and forward/reverse traction indicator. Speed control adjustment, horn,





suction motor switch with delayed switch-off, brush plate lifting/ lowering selector switch, brush motor switch.All motors are protected by thermal breakers. The detergent water tank serves as battery compartment, allowing the housing of great capacity batteries. Suction motor are placed the recovery tank; the housing of the

vacuum motor allows to drastically reduce the operating noise. The ergonomic and comfortable shape of the machine allows the operator to work effortless for a long time, improving productivity. Thanks to the compact dimensions the machine can work with agility even in narrow spaces.



# **Optional accessories:**



• 4 x 0.107.0004 Tubular battery Pb-acid 6V 180Ah C5 + 2 x 5.511.0561 Connection cable



• 4 x 0 107 0072 GEL Battery 6 MFP 180 6V 180Ah C5 + 2 x 5.511.0561 Connection cable



- 4.508.0901 Polyurethane front blade L.925 TH.3 Sh.40 • 4.508.0900 Polyurethane rear blade L.1015 TH.4 Sh.40
- 4.508.1251 Polyurethane front blade L.1027 TH.3 • 4.508.1252 Polyurethane rear blade L.1150 TH.4



- 5.511.1246 Tynex brush Ø 360 mm-14" • 5.511.1169 PPL 0,03 brush Ø 360 mm-14"
- 5.511.1203 PES brush Ø 360 mm - 14"
- 5.511.1713 Tynex brush Ø 430 mm-17" • 5.511.1711 PPL 0,03 brush Ø 430 mm-17" • 5.511.1712 PES brush Ø 430 mm - 17"



- 5.511.1592 EWU pad driver Ø 380 mm-15"
- EWU pad driver Ø 406 mm-17"



- 6.508.0143 Ø 380 mm -15"- beige (5 pcs.)
- 6.508.0141 Ø 380 mm -15"- black (5 pcs.)
- 6.508.0032 Ø 406 mm -17"- beige (5 pcs.) • 6.508.0039 - Ø 406 mm -
- 17"- green (5 pcs.) • 6.508.0046 - Ø 406 mm -
- 17"- black (5 pcs.)





**Standard equipment:** 



• 2 x 5.511.1845 PPL brush Ø 457 mm - 18"



• 4.508.1196 Front squeegee blade L.1027 mm Shore 40 Th. 3 mm

• 4.508.1195 Rear squeegee blade L.1150 mm Shore 33 Th. 4 mm









- Suitable for maintenance and deep cleaning of medium and large areas (up to 4.500 m²) with a considerable reduction of cleaning costs More than 60/80 kg of constant pressure on the brushes Large load tank capacity, resulting in reduced number of stops and maximum use of battery charge for effective operation of the machine Compact size Stability even when fully loaded Front independent wheel-drive with tight steering radius Easy access to electrical components
- Automatic brush plate lifting system Automatic squeegee lifting system
- Automatic squeegee lifting while reverse going Automatic device that stops brushes and detergent water outflow when the machine is stationary Antifoam device Self-levelling brushes High-performance batteries resulting in high-working efficiency.

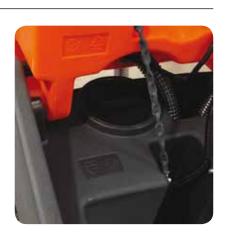
	Kron S3 EV
code	8.577.0101
power supply	24V
scrubbing / squeegee width	900 / 1000 mm
max working capacity	6200 m²/h
detergent tank capacity	140   / 36.99 gal
recovery tank capacity	150-180 l / 39.6-47 gal
traction type / power	front motorwheel / 900 W
RPM / pressure on the brushes	150/80 kg /176 lbs
brush motor power	1250 W
max gradient empty/full tank	10% / 7%
depression / vacuum motor	1734 mmH <sub>2</sub> O/550W
dimensions / weight	175x93x149 cm / 220 kg





Quick lock recovery tank cap allows for fast and esy cleaning and sanification of the tank; the tilting tank together with a large size drain hose allow the complete emptying of the tank and the removal of any type of solid dirt. The antifoam device protects suction motor, as well as the electronic floating switch that stops suction when the tank is full.

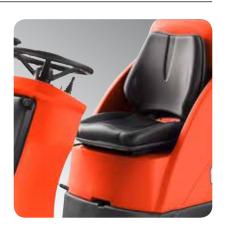
Comfortable steering wheel. User friendly control panel, provided with hour meter, speed adjustment knob and detergent solution low level warning light. All motors are protected by thermal breakers.





80 kg of continuous brush plate pressure with Self Leveling System to strongly and deeply removing any kind of dirt on any kind of floor. Strong oil-proof polyurethane wheels. 500 Ah C5 battery box allowing continuous working time.

Built with strong components, Kron S3 EV have been designed to resist even to extreme stresses; the frame is made of steel profiles with a thickness varying from 5 to 12 mm, protected with a high resistance corrosion-proof paint.



# **Optional accessories:**



• 0.107.0008 Battery box Pb-acid 24V 500Ah C5



• 0.108.0003 Battery Charger 24/36V 50/60A - 220-240/50-60



• 4.508.1251 Polyurethane front blade L.1027 TH. 3 • 4.508.1252 Polyurethane rear blade L.1150 TH. 4



• 5.511.1848 Tynex brush Ø 457 mm-18" • 5.511.1849 PPL 0,03 brush Ø 457 mm-18" • 5.511.1847 PES brush Ø 457 mm - 18"



• 5 511 1850 EWU pad driver Ø 457 mm-18"



• 6.508.0150 - Ø 457 mm -

18"- beige (5 pcs.)

• 6.508.0151 - Ø 457 mm -

18"- green (5 pcs.)

• 6.508.0142 - Ø 457 mm -

18"- black (5 pcs.)

















• Suitable for maintenance and deep cleaning of medium and large areas (up to 6.000 m²) • More than 90/120 kg of constant pressure on the brushes • Large load tank capacity, resulting in reduced number of stops and maximum use of battery charge for effective operation of the machine • Stability even when fully loaded • Front independent wheel-drive with tight steering radius • Easy access to electrical components • Automatic brush plate lifting system • Automatic squeegee lifting system • Automatic squeegee lifting while reverse going • Automatic control system for brush rotation and detergent water outflow • Antifoam device • Self-levelling brush plate • Hour meter • High-performance batteries resulting in high-working efficiency.

# Standard equipment:



• 2 x 5.511.1097 PPL brush Ø 483 mm - 19"



• 4.508.0217 Front squeegee blade L.1270 mm Shore 40 Th. 4 mm

• 4.508.0216 Rear squeegee blade L.1345 mm Shore 33 Th. 6 mm



Watch the video on youtube: www.youtube.com/ctmcleaning

	Kron M2
code	8.578.0002
power supply	36V
scrubbing / squeegee width	1020 / 1250 mm
max working capacity	7140 m²/h
detergent tank capacity	200   / 52.84 gal
recovery tank capacity	210-240 l / 55.5-63.4 gal
traction type / power	front motorwheel / 900 W
RPM / pressure on the brushes	150/120 kg /246 lbs
brush motor power	1500 W
max gradient empty/full tank	10% / 8%
depression / vacuum motor	$1800 \text{ mmH}_2\text{O} / 600 \text{ W}$
dimensions / weight	190x96x145 cm / 375 kg



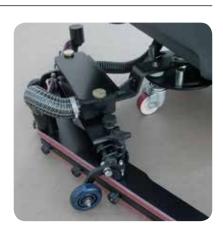


The unique anti foam device dramatically reduces the foam generation and prevents it from touching the suction motor, thus protecting its operation.

The electronic floating switch stops suction when the tank is full. Large tank opening for fast and easy cleaning and sanification.

The strong V-shaped floor squeegee made of steel profile is widely adjustable and allows to combine the operation of the rubber blades with the high suction power, to get a perfect drying result on every surface.

The special filter box retains solid debris and prevents the obstruction of the suction hose.





Kron M scrubbers are easy to use thanks to the simple and user friendly controls. From the control panel the operator can adjust the maximum forward speed and the quantity of cleaning solution outflow, selecting the options most suitable to the dirt type. Job is simplified and made faster by the automatic lifting of the squeegee and of the brush plate.

Thanks to the optimal weight distribution and to the use of strong oil-proof polyurethane wheels the drive is perfect in all working conditions.

The emptying of the solution water tank is quick with a simple and easy accessible mechanical tap.



# **Optional accessories:**



0.107.0009
 Battery box Pb-acid
 36V 360Ah C5
 0.107.0012
 Gel battery box
 36V 320Ah C5



• 0.108.0003 Battery Charger 24/36V 50/60A - 220-240/50-60



4.508.1167 Polyurethane front blade L.1270 TH. 4
4.508.0897 Polyurethane rear blade L.1345 TH. 6



• 5.511.1098 Tynex brush Ø 483 mm-19"

• 5.511.1128 PPL 0,03 brush Ø 483 mm-19"

• 5.511.1206 PES brush Ø 483 mm - 19"



• 5.511.1099 EWU pad driver Ø 483 mm-19"



(5 pcs package)

• 6.508.0034 - Ø 483 mm -19"- beige

• 6.508.0041 - Ø 483 mm - 19"- green

• 6.508.0048 - Ø 483 mm -19"- black









# Standard equipment:



• 3 x 5.511.1109 PPL brush Ø 406 mm - 16"



• 4.508.0219 Front squeegee blade L.1500 mm Shore 40 Th. 4 mm

• 4.508.0218 Rear squeegee blade L.1580 mm Shore 33 Th. 6 mm









- Suitable for maintenance and deep cleaning of medium and large areas (up to 7.000 m<sup>2</sup>) More than 120-170 kg of constant pressure on the brushes
- 300 litres solution tank capacity allows exceptional autonomy and productivity
- Stability even when fully loaded Innovative traction system with three indipendent motor wheels controlled by electronic cards Easy access to electrical components Automatic brush plate lifting system Automatic squeegee lifting system Automatic squeegee lifting while reverse going Automatic control system for brush rotation and detergent water outflow Antifoam device Self-levelling brushes, hour meter, solenoid valve. High-performance batteries resulting in highworking efficiency

	Kron L2
code	8.572.0013
power supply	36V
scrubbing / squeegee width	1220 / 1450 mm
max working capacity	8540 m²/h
detergent tank capacity	280 l / 73.97 gal
recovery tank capacity	315-340   / 83.2-89 gal
traction type / power	3-wheels drive / 3 x 600 W
RPM / pressure on the brushes	150/170 kg / 374 lbs
brush motor power	3 x 1000 W
max gradient empty/full tank	15% / 14%
depression / vacuum motor	1800 mmH <sub>2</sub> O / 600 W
dimensions / weight	222x112x169 cm / 585 kg

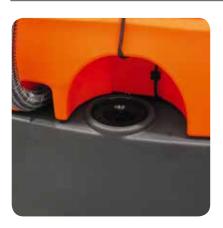




Designed to perform the hardest work and to resist even to extreme stresses with maximum comfort; the frame is made of steel profiles with a thickness varying from 5 to 12 mm, protected with a high resistance corrosion-proof paint.

The unique anti foam device dramatically reduces the foam generation and prevents it from touching the suction motor, thus protecting its operation. The electronic floating switch stops suction when the tank is full. Large tank opening for fast and easy cleaning and sanification.





The cleaning solution tank with an exceptional capacity of 300 liters and the high autonomy of the battery ensure a productivity at the top of the range. The wide rear opening allows for an easy and quick refilling of the cleaning solution tank.

The motorwheels, designed and built by Lavor, grant optimal performances and exceptional reliability.

The innovative three-wheel drive system ensures perfect traction in every operating condition. The high power of the three motorwheels allows the machine to get over remarkable slopes.



# **Optional accessories:**



• 0.107.0010 Battery box Pb-acid 36V 525Ah C5



• 0.108.0003 Battery Charger 24/36V 50/60A - 220-240/50-60



 4.508.1167 Polyurethane front blade L.1270 TH. 4
 4.508.0897 Polyurethane rear blade L.1345 TH. 6



• 5.511.1110 Tynex brush Ø 406 mm-16"

• 5.511.1120 PPL 0,03 brush Ø 406 mm-16"

• 5.511.1204 PES brush Ø 406 mm - 16"



• 5.511.1111 EWU pad driver Ø 406 mm-16"



(5 pcs package)

• 6.508.0031 - Ø 406 mm -16"- beige

• 6.508.0038 - Ø 406 mm - 16"- green

• 6.508.0045 - Ø 406 mm -16"- black



flexible, shock proof and resistant to chemical products. It is recommended for frequent moving uses or vacuuming of particularly aggressive chemicals (for example in combination with a single disc machine). The stainless steel tank is more rigid, steadier, resistant to mechanical abrasion and it is aesthetically agreeable. It is recommended for static use, with abrasive materials or in a public place.

# Power, air suction, depressure: which technical data is most important?

The right technical data of a vacuum cleaner is the vacuum efficiency, that is the mix of different values, i.e. air suction, motor power and depression. Air suction is the vacuumed air volume, commonly expressed in litres per seconds (I/sec) and it is the result of the average air speed multiplied by hose diameter. The depression is the vacuum power (it can be defined as the vacuum power to collect dirt) and it is commonly expressed in kPA or in mbar. It is an inverse relation to air suction: the narrower the flex diameter, the least vacuumed air volume but the best strength to pick up dirt.

# Power motor is expressed in Watt and it is not proportional to vacuumefficiency!

If the vacuum cleaner is not well-done, it wastes a lot of electric power without having the best performances possible. Summing up, the vacuum cleaner efficiency is a relationship between air suction (resulting in multiplication of pressure and air suction) and motor power. All our vacuum cleaners have a top efficiency and are manufactured considering essence and user's benefit.

# Fixed or tilting trolley, which one to choose?

The choice of the trolley must be made considering the type of use needed.

Generally, tilting trolley is much more useful to collect dust and solids, because the tilting tank make it easier the emptying or pouring.

The fixed trolley is better for liquids vacuuming, because it is equipped with drain hose system, emptying is fast and step by step, avoiding the effort of lifting the tank.

# What kind of tank material is to be preferred?

Our vacuum cleaner range includes plastic tanks (polypropylene or PP) or stainless steel tanks. The PP tank is











# Number of motors:

It explains how many motors there

are in the vacuum cleaner. Ignition is independent in order to increase progressively the performances. The working system (whenever it is more than one) is in parallel, so the air suction increases and the depressure is steady whenever the motors are progressively switched on.



# Anti electrostatic current device

Dust rubbing at high speed against vacuum cleaner walls creates a magnetic field that neutralizes on the user with

small and annoying discharges also through plastic material. This certified system removes this phenomenon on the machine, granting best comfort and safety for the user.



# **HEPA** filter

High Efficiency Particulate Arrestance. Hepa filter is 99,97% efficient until 0,3 micron impurities.



# Multipurpose washable filter

It combines all the advantages of the cartridge filter but with the plus that it can vacuum both dry and wet at the

same time. It can be washed with tap water.



# Filter shaker

It clears filter from dust without touching it or opening the vacuum cleaner; the vacuum efficiency is kept at max.



# Paper collector filter

Allows filtering and collection (with a valve) of rough dirt without dirty the tank whenever it is time to replace it.

It is useful for dry waste, also in combination of other thinner filters.



# **Cloth filter**

The cloth consistency and its shape allow a simple cleaning phase and the reusage of the filter.

It can be used only for vacuuming dry waste; if combined with nylon filter it is possible to work for a longer period of time.



# Cartridge filter

The continuous folders arranged in circle allow a higher filtering surface in a smaller area.

More cleaning autonomy with a thin filtering action. It can be used only for vacuuming dry waste and it is re-usable.











Windy 265 PF

Windy 265 IF

Windy 365 IF

SP 150F

Code	Model	Page	Voltage	Motor power	Column depresion	Air suction	Tank capacity	Noise level	Packaging L x l x H	Packaging weight	Packaging weight	Pieces for pallet
\			V - Hz	W / W max	kPa/mmH <sub>2</sub> 0	l/s	I	dB (A)	cm	kg	lbs	N°
8.239.0008	WINDY 265 PF	37	230V - 50Hz	2000 / 2400	22 / 2200	130 l/s	65	79 dB (A)	60x48x87	18,8	41	8
8.239.0001	WINDY 265 IF	38	230V - 50Hz	2000 / 2400	22 / 2200	130 l/s	65	79 dB (A)	60x48x87	19,8	44	8
8.240.0001	WINDY 365 IR	39	230V - 50Hz	3000 / 3600	22 / 2200	195 l/s	65	79 dB (A)	65x55x104	25,5	56	4
8.215.0518	SP 150F	41	230V - 50Hz	1200 / 1400	24 / 2400	54 l/s	50	71 dB (A)	60x48x72	16,6	36	8
8.216.0516	SP 278F	42	230V - 50Hz	2000 / 2400	24 / 2400	108 l/s	781	71 dB (A)	62x55x95	25,2	55	4





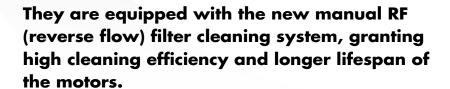
Code	Model	Page	Voltage	Motor power	Column depresion	Air suction	Tank capacity	Noise level	Packaging L×l×H	Packaging weight	Packaging weight	Pieces for pallet	
			V - Hz	W / W max	kPa/mmH <sub>2</sub> 0	l/s	- 1	dB (A)	cm	kg	lbs	Ν°	
8.217.0513	SP 378F	43	230V - 50Hz	3000 / 3600	24 / 2400	162 l/s	781	74 dB (A)	62x55x95	28,8	62	4	
8.215.0517	LX 150F	44	230V - 50Hz	1200 / 1400	24 / 2400	55 l/s	50	74 dB (A)	60x48x72	17,6	38,5	8	
8.216.0515	LX 278F	45	230V - 50Hz	2000 / 2400	24 / 2400	108 l/s	781	76 dB (A)	62x55x95	27,8	61	4	
8.217.0512	LX 378F	46	230V - 50Hz	3000 / 3600	24 / 2400	162 l/s	781	76 dB (A)	62x55x95	29,8	65,6	4	



# WINDY: New commercial wet & dry range of vacuum cleaners



WINDY range is the new line of commercial vacuum cleaners suitable for wet and dry applications: three models equipped with 2 or 3 professional single stage motor (from 2,4 up to 3,6 kW), stainless steel or anti shock plastic tank, tilting or fixed tank: WINDY are mainly designed for daily light industrial use and are perfectly suited to the most common demand of cleaning contractors, garages, workshops etc...



Practical in every situation, the new WINDY range offers accessories holder, cable holder and a new rotating ON/OFF switch, simple and resistant to daily use.

Equipped with professional accessories and professional filter, WINDY is the answer to your requests!







# Windy 265 PF





**Equipped with:** 

- 2 high efficiency by pass motors. Suction system with by-pass cooling. Filter cleaning system. • Plastic tank (PP). • Static electric shock inhibitor. • Shock proof trolley. • Liquid float valve. • Cloth filter. • 7,5 m power cable. • Traceless wheels.
- Accessories Ø 40. Handy accessory holder.



#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.209.0177 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter



Watch the video on youtube: www.youtube.com/ctmcleaning

	Windy 265 PF
code	8.239.0008
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	2 - 2000 (2400) W
column depression	22 kPα/2200 mmH <sub>2</sub> O
air suction	130 l/s
total volume/dust/liquid	65 l./30 l./40 l.
dimension/weight	44x46x96 cm / 13 kg

**Standard equipment:** 



# Windy 265 IF





#### **Equipped with:**

- 2 high efficiency by pass motors. Suction system with by-pass cooling. Filter cleaning system. S/S tank. Static electric shock inhibitor. Shock proof trolley.
- Liquid float valve. Cloth filter. 7,5 m power cable. Traceless wheels.
- Accessories Ø 40. Handy accessory holder.

#### Optional:

- code. 5.212.0022 Paper collector filter set
- code. 5.209.0177 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter



Watch the video on youtube: www.youtube.com/ctmcleaning

	Windy 265 IF
code	8.239.0001
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	2 - 2000 (2400) W
column depression	22 kPα/2200 mmH <sub>2</sub> O
air suction	130 l/s
total volume/dust/liquid	65 l./30 l./40 l.
dimension/weight	44x46x96 cm / 14,5 kg







# Optional:

- code. 5.212.0022 Paper collector filter set
- $\bullet$  code. 5.209.0177 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter



Watch the video on youtube: www.youtube.com/ctmcleaning

#### **Equipped with:**

• 3 high efficiency by pass motors. • Suction system with by-pass cooling. • Filter cleaning system. • S/S tank. • Static electric shock inhibitor. • Tilting tank. • Fully removable tank. • Shock proof trolley. • Liquid float valve. • Cloth filter. • 7,5 m power cable. • Traceless wheels. • Accessories  $\varnothing$  40. • Handy accessory holder.

	Windy 365 IR
code	8.240.0001
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	3 - 3000 (3600) W
column depression	22 kPa/2200 mmH <sub>2</sub> O
air suction	195 l/s
total volume/dust/liquid	65 l./30 l./40 l.
dimension/weight	62x51x100 cm / 20 kg



# Heavy duty range



The new Professional range of CTM vacuum cleaners provides the solution for every kind of heavy duty daily use.

The models of the wet and dry series are equipped with 1 up to 3 double stage motor (1.2 to 3.6 kW), different tank capacities (50 and 78 l.), tilting or fixed tank and PPL antishock or stainless steel tanks. Designed to be user friendly, they are equipped with ergonomic handle, big wheels and stable trolley offering the final answer to the needs of cleaning contactors, industries, workshops, car washing station etc. The accessories sets allowing all the different operation of wet and dry suction, are designed to be stressless for the end user (using longer extension pipes) and can easily fit and change quickly one to the other. The antischock feature has to be considered a big advantage when metal dust, flour and all the different types of dirt creating ESD electrostatic discharge are collected inside the tank. This feature avoids shocks to the end user, making usage easier.

Wide cloth filter bag (standard) grants good performances of the motor also when it is used for a long period; HEPA, cartridge, nylon, sponge and collector bag can be equipped easily (Optional). The filter area is reachable easily and the wide float seat grants stability on the floor during filter cleaning session.

The ANTIFOAM device (optional) must be used in case of mixture chemical/water suction, avoiding the foam to reach motor.



## Scirocco SP 150F









#### **Equipped with:**

- Silenced two stage motor. Suction system with by-pass cooling. Plastic tank (PP).
- Professional closing hooks. Drain hose system. Shock proof trolley. Liquid float valve. Cloth filter. 10 m power cable. Easy standing head (during filter cleaning). Traceless wheels. Accessories  $\varnothing$  40



#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.212.0094 Nylon filter
- code. 5.212.0020 Washable filter
- code. 5.212.0006 Cartridge filter
- code. 5.212.0010 HEPA filter

	Scirocco SP150F
code	8.215.0518
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	1 - 1200 (1400) W silenced motor
column depression	24 kPa/2400 mmH <sub>2</sub> O
air suction	54 l/s
total volume/dust/liquid	50 l./21 l./35 l.
dimension/weight	62x51x85 cm / 16,5 kg

# Wet & dry vacuum cleaners



## Scirocco SP 278F









# • 5.209.0021 Hose 2,5 m • 6.205.0126 • 3.754.0048 • 3.754.0083 • 3.754.0084 • 3.754.0246 • 5.509.0039 • Power cable 7,5 m

#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.509.1405 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter
- code. 5.212.0021 Washable filter
- code. 5.212.0034 HEPA filter

#### **Equipped with:**

- Silenced two stage motor. Suction system with by-pass cooling. Plastic tank (PP).
- Professional closing hooks.
   Drain hose system.
   Shock proof trolley.
   Liquid float valve.
   Cloth filter.
   7,5 m power cable.
   Easy standing head (during filter cleaning).
   Traceless wheels.
   Accessories Ø 40

	Scirocco SP 278F
code	8.216.0516
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	2 - 2000 (2400) W silenced two stage motor
column depression	24 kPα/2400 mmH <sub>2</sub> O
air suction	108 l/s
total volume/dust/liquid	78 l./35 l./48 l.
dimension/weight	62x51x96 cm / 23 kg



## Scirocco SP 378F









#### **Equipped with:**

- Silenced two stage motor. Suction system with by-pass cooling. Plastic tank (PP).
- Professional closing hooks.
   Drain hose system.
   Shock proof trolley.
   Liquid float valve.
   Cloth filter.
   7,5 m power cable.
   Easy standing head (during filter cleaning).
   Traceless wheels.
   Accessories Ø 40



#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.509.1405 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter
- code. 5.212.0021 Washable filter
- code. 5.212.0034 HEPA filter

	Scirocco SP 378F
code	8.217.0513
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	3 - 3000 (3600) W silenced two stage motor
column depression	24 kPa/2400 mmH <sub>2</sub> O
air suction	162 l/s
total volume/dust/liquid	78 l./35 l./48 l.
dimension/weight	62x51x96 cm / 25 kg



# Libeccio LX 150F









# • 5.209.0102 Hose 2,5 m • 3.753.0039 • 3.754.0048 • 3.754.0049 • 3.754.0169 • 3.754.0170 • 6.205.0001 • Power cable 7,5 m

#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.212.0094 Nylon filter
- code. 5.212.0020 Washable filter
- code. 5.212.0006 Cartridge filter
- code. 5.212.0010 HEPA filter

#### **Equipped with:**

- Silenced two stage motor. Suction system with by-pass cooling. S/S tank.
- Professional closing hooks. Static electric shock inhibitor. Drain hose system.
- Shock proof trolley. Liquid float valve. Cloth filter. 7,5 m power cable. Easy standing head (during filter cleaning). Traceless wheels. Accessories Ø 40

	Libeccio LX 150F
code	8.215.0517
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	1 - 1200 (1400) W
column depression	24 kPa/2400 mmH <sub>2</sub> O
air suction	55 l/s
total volume/dust/liquid	50 l./21 l./35 l.
dimension/weight	45x45x60 cm / 19 kg



# Libeccio LX 278F



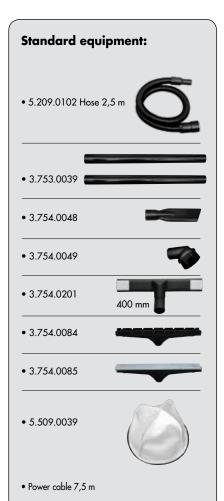






#### **Equipped with:**

- Silenced two stage motor. Suction system with by-pass cooling. S/S tank.
- Professional closing hooks. Static electric shock inhibitor. Drain hose system.
- Shock proof trolley. Liquid float valve. Cloth filter. 7,5 m power cable. Easy standing head (during filter cleaning). Traceless wheels. Accessories Ø 40



#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.509.1405 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter
- code. 5.212.0021 Washable filter
- code. 5.212.0034 HEPA filter

	Libeccio SX 278F
code	8.216.0515
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	2 - 2000 (2400) W silenced two stage motor
column depression	24 kPα/2400 mmH <sub>2</sub> O
air suction	108 l/s
total volume/dust/liquid	78 l./35 l./48 l.
dimension/weight	62x51x96 cm / 29 kg

# Wet & dry vacuum cleaners



# Libeccio LX 378F









# Equipped with:

- Silenced two stage motor. Suction system with by-pass cooling. S/S tank.
- Professional closing hooks. Static electric shock inhibitor. Drain hose system.
- Shock proof trolley. Liquid float valve. Cloth filter. 7,5 m power cable. Easy standing head (during filter cleaning). Traceless wheels. Accessories  $\varnothing$  40



#### **Optional:**

- code. 5.212.0022 Paper collector filter set
- code. 5.509.1405 Cloth filter for fine dust
- code. 5.212.0093 Nylon filter
- code. 5.212.0021 Washable filter
- code. 5.212.0034 HEPA filter

	Libeccio SX 378F
code	8.217.0512
voltage	220-240V ~ 50-60Hz
n°motors - power (max)	3 - 3000 (3600) W silenced two stage motor
column depression	24 kPa/2400 mmH <sub>2</sub> O
air suction	162 l/s
total volume/dust/liquid	78 l./35 l./48 l.
dimension/weight	62x51x96 cm / 31 kg







Code	Description	m	Ø
3.753.0038	Roll of flexible hose without swivel	30	40

Code	Description	Ø
3.754.0047	Sleeve tank side	40
3.754.0046	Swivel straight accessories side	40

# Complete flexible hose Ø 40



Code	Description	m	Ø
5.209.0127	Flexible hose with swivel	4	40
5.209.0082	Flexible hose with swivel	5	40

#### **Antifoam device**

Code 0.110.0020





Anti foam device (for Windy, Scirocco and Libeccio models)

This device avoids the forming of foam that may affect the operation of the float.



# Is it better a petrol engine driven or a battery powered model?

The use of a petrol engine implies the presence of exhaust gasses and therefore the machine must be used only in outside areas or in areas where the operator is not exposed at such risk. The battery models can be used also inside. From the technical and qualitative point of view the sweepers do exactly the same cleaning task, but the petrol engine machine can work nonstop (it is only necessary to fill up the tank with petrol), while the electric models, once the battery is empty, need to be re-charged (an average of 8-10 hours of charge, if battery is completely worn-out)

#### How should the brush be?

In the sweepers, there are two types of bushes: the first one rotates with a perpendicular axle to the floor (this is the one called "side brush"), it is useful to move dirt into the collecting area and to reach dirt near borders or under edges; the second one rotates with a parallel axle to the floor (this is the one called "main brush"); it rotates counterclockwise (opposite) to the forward direction of machine and collects dirt into the collection tank. The brushes differ in the shape (round flat the "side brush" and cylindrical the "main brush"), in the type of bristles (the way bristles are arranged on the brush body), in the body material (that accordingly to options, provides resistance still in humid environment or competitive construction) and in the bristle material /diameter/shape. Generally, the stiffer and rougher the bristles are, the better they collect the heaviest dirt adherent to the floor (typically wet leaves). The more flexible and thinner the bristles are, the better they collect light and thin dirt . To have a better scraping action, it is necessary to add steel bristle to the PPL ones. To collect very thin dirt, it is necessary to use only short round PPL bristles. As a consequence of motorization (petrol engine or electric one) and so of indoor or outdoor use, the walk behind models have stiffer or softer bristles, to adapt in best way possible to the type of dirt typically found in the

working area.

#### How long do battery charges last?

It is impossible to determine exactly how long a battery charge lasts. Battery autonomy changes depending on type of surface, dirt quantity, brush type and way in which traction system is used (speed and slope). Battery life is made up of number of charge cycles (also incomplete), if use conditions, charge and service are perfectly observed. Manufacturing technology diversifies numbers of cycles, service needed, use/charge conditions and performances.

# Which kind of battery technology?

Batteries have different prices and so it is important to know their features in order to choose the best one as far as the operator's needs or habits are concerned.

They divide into two families according to the possessity of

the charge cycle a lot of gasses are

generated (for this reason a specific

They divide into two families according to the necessity of recurrent acid solution refilling.

Acid lead batteries (Pb-Acid), need refilling, because during

and aired room is necessary for safe working) and the solution vaporizes: it is necessary to add distilled water before the submerged lead parts that are no more covered with water begin to oxidize

(compromised efficiency).

VRLA batteries (Valve)

VRLA batteries (Valve Regulated Lead Acid) are airtight, this means that gasses generated during the charge cycle are rearranged inside the battery: refilling is not necessary, it is possible to charge them in any

room and they can be carried without risk. Acid lead batteries divide themselves into categories depending on the thickness of plate they are built of: if the plate is plane, the resistance to discharge is lower and few charge cycles are necessary, if the plate is tubular (or armed, recognizable opening the battery cap and verifying that the plate is made up of a lot of cylinders side by side instead of a thin leaf sheet) there is a higher resistance to discharge and to charge cycles.

#### **Sweepers**



VRLA batteries divide themselves depending on the condition (liquid or gel) of the acid solution (that enables energy exchange) and on the way it is kept inside the battery: if it is liquid and kept by a spongy and filamentous material, the battery is called AGM; if it is a gel solution inside a membrane, the battery is called GEL battery. On the market there are a lot of products completely different in features and value and it is very important to know the manufacturing details to couple the right battery charger (it is not sure that any battery charger is suited and get a better result than the ones in our range that are specific for our batteries) and to come up to the working expectations.

Whatever technology may be it is important to know that batteries have a common effect of self discharge (different for each type of manufacturing technology) and so it is important a recurrent charge (each three months approximately) if they are unused for long periods of time. Batteries suffer from incomplete charge cycle (except "pure lead" technology) and so it is necessary to charge them at the end of the working day (our battery charger is going to supply only the necessary energy and the charge cycle is going to finish earlier). It is also important not to cut off the charge before the battery charger has finished the cycle (green light). Respecting these simple rules, the best result and the best machine output will be obtained.



#### • Belt drive

The circular section grants a high resistance, stillness, reliability and it doesnt need service.



#### Side brush exclusion

It is a system protecting bristles during machine stop or whenever it is not necessary to use it.



#### Dust vacuum system

It can be found in the main brush area.

Together with the mechanical action, it conveys waste and dust that are collected into the tank through the right filters supplied.



#### • Front dust vacuum system

As well as traditional vacuum system, a vacuum system can be found in the lateral brush/es collection area.

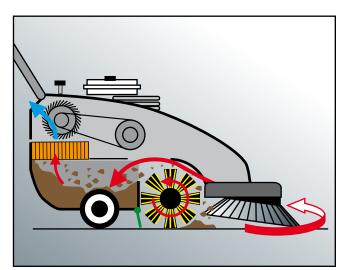
Dust dispersion outside the machine is limited also before the main collection area is reached.



#### • Flap raise system

The main brush collection area is delimited by protections (flaps) touching the ground, better vacuum effect. Whith a big residual is possible to raise the flap collecting it rather

than keep going pushing it on the floor



#### Filter shaker

It clears filter from dust without touching it or opening the sweeper; the vacuum efficiency is kept at max, granting the best comfort and

output for the user.





		Page	Type	Traction	Main brush width	Main brush + 1 side brush	Main brush + 2 side brushes	Collector tank	Max working capacity	Packaging	Weight with packaging	Weight with packaging	Pcs x pallet
Code	Model				mm / inc	mm / inc	mm / inc	lt/gal	m² / foot²	LxlxH cm/inc	kg	lbs	n°
0.042.0101	BSW 651 M	52	manual	Manual	500/19,68	700/27,56	-	40/10,58	1500/16146	79x76x46/31x29x18	25	55	5
0.061.0019	CSW 568 BT	53	electric	Mechanical	510/20,08	680/26,77	-	45/11,89	2620/28201	126x63x85/50x25x34	78	172	1
0.061.0020	CSW 568 BT	53	gasoline motor	Mechanical	510/20,08	680/26,77	-	45/11,89	2620/28201	126x63x85/50x25x34	77	169	1
0.061.0021	CSW 788 G	54	electric	Mechanical	710/27,95	880/34,64	-	60/15,85	3700/39826	126x83x85/50x33x34	89	196	1
0.061.0022	CSW 788 G	54	gasoline motor	Mechanical	710/27,95	880/34,64	-	60/15,85	3700/39826	126x83x85/50x33x34	97	213	1
0.061.0023	CSW R785 BT	55	electric	hydraulic	650/25,59	850/33,46	-	55/14,53	4900/52743	115x80x120/45x31x47	186	409	1
0.061.0024	CSW R792 BT	56	electric	hydraulic	700/27,56	920/36,22	1230/48,42	62/16,38	6200/66735	143x91x114/56x36x45	260	572	1
0.061.0025	CSW R792 G	56	gasoline motor	hydraulic	700/27,56	920/36,22	1230/48,42	62/16,38	8280/89124	143x91x114/56x36x45	300	660	1
0.061.0026	CSW R792 BT Plus	57	electric	hydraulic	700/27,56	920/36,22	1230/48,42	62/16,38	6200/66735	163x91x114/66x36x45	310	682	1





			lype	Traction	Main brush width	Main brush + 1 side brush	Main brush + 2 side brushes	Collector tank	Max working capacity	Packaging	Weight with packaging	Weight with packaging	Pcs x pallet	
Code	Model				mm / inc	mm / inc	mm / inc	lt/gal	m² / foot²	L x l x H cm / inc	kg	lbs	n°	
0.061.0027	CSW R792 G Plus	57	gasoline motor	hydraulic	700/27,56	920/36,22	1230/48,42	62/16,38	8280/89124	163x91x114/66x36x45	350	770	1	
0.061.0038	CSW R810 BT	58	electric	hydraulic	800/31,50	1050/41,34	1300/51,18	115/30	9700/104409	160x101x130/65x43x52	375	825	1	
0.061.0035	CSW R810 G	58	Diesel motor	hydraulic	800/31 50	1050/41 34	1300/51 18	115/30	9700/104409	160x101x130/65x43x52	434	955	1	





#### BSW 651 M code 0.042.0101 main brush width 500mm / 19,68 inc main brush + 1 side brush width 700mm / 27,56 inc 40 lt -10,58 gal / manual collector tank/emptying system 1500 m<sup>2</sup>/h - 16146 ft<sup>2</sup> max working capacity manual traction elastic belt brushes transmission pressure on the brushes adjustable lifting arm system side brush dust-laying system direct frame material dimension / weight $79 \times 76 \times 46 \text{ cm}/25 \text{ kg}$





Standard accessories:



0.961.0008 PP CSW 568 BT 0.961.0012 PP-Mixed steel CSW 568 G



0.961.0005 PP



0.961.0001 paper filter 14 µm

#### **Optional:**



0.961.0028 Side brush protection



0.961.0016 PE panel filter 5µm



0.961.0018 HEPA panel filter



Batteries



Battery charger

• 0.961.0026 Trolley for collector tank set

#### **Equipped with:**

- Ideal for medium and large surfaces Large filter surface with electric filter shaker (BT model) Manual filter shaker (G model) Side brush raising control Suction switch off
- Flap raise system Panel filter in horizontal position
- Main brush pressure regulation Indirect back collection
- Quick main brush release Long life elastic belts
- Reclining handle Suction selection lever. Traction lever. Antistatic device. Wide collector tank Heavy duty steel frame Side brush mechanical engagement Battery and battery charger not included.



	CSW 568 BT	CSW 568 G	
code	0.061.0019	0.061.0020	
main brush width	510mm / 20,08 inc	510mm / 20,08 inc	
main brush + 1 side brush width	680mm / 26,77 inc	680mm / 26,77 inc	
collector tank	45 lt / 11,89 gal	45 lt / 11,89 gal	
max working capacity	2620 m <sup>2</sup> /h-28201 ft <sup>2</sup>	2620 m <sup>2</sup> /h-28201 ft <sup>2</sup>	
traction	mechanical	mechanical	
max speed	4 km/h-2,49 mile/h	4 km/h-2,49 mile/h	
motor type / power	12V / 400W	Honda 4 HP / 2,9kW	
filtering surface	$2 m^2 / 21,53 ft^2$	$2 m^2 / 21,53 ft^2$	
pressure on the brushes	adjustable	adjustable	
filter shaker	electric	manual	
dimension / weight	126x63x85cm / 78kg	126x63x85cm /77kg	





#### **Equipped with:**

- Ideal for medium and large surfaces Large filter surface with electric filter shaker (BT model) Manual filter shaker (G model) Side brush raising control Suction switch off
- Flap raise system Panel filter in horizontal position Main brush pressure regulation • Indirect back collection • Quick main brush release • Long life elastic belts • Reclining handle
- Suction selection lever Traction lever Antistatic device
- Wide collector tank Heavy duty steel frame Side brush mechanical engagement Battery and battery charger not included.

#### **CSW 788 G**



#### Standard accessories:



0.961.0009 PP CSW 788 BT

0.961.0013 PP-Mixed steel CSW 788 G



0.961.0005 PP



0.961.0002 paper filter 14 µm

#### **Optional:**



0.961.0028 Side brush protection



0.961.0017 PE panel filter 5µm



0.961.0019 HEPA panel filter



Batteries



Battery charger

• 0.961.0027 Trolley for collector tank set

	CSW 788 BT	CSW 788 G
code	0.061.0021	0.061.0022
main brush width	710mm / 27,95 inc	710mm / 27,95 inc
main brush + 1 side brush width	880mm / 34,64 inc	880mm / 34,64 inc
collector tank	60 lt / 15,85 gal	60 lt / 15,85 gal
max working capacity	3700m²/h-39826 ft²	3700m²/h-39826 ft²
traction	mechanical	mechanical
max speed	4 km/h-2,49mile/h	4 km/h-2,49mile/h
motor type / power	12V / 400W	Honda 4 HP / 2,9kW
filtering surface	$3,02 \text{ m}^2 / 32,50 \text{ ft}^2$	3,02 m <sup>2</sup> / 32,50 ft <sup>2</sup>
pressure on the brushes	adjustable	adjustable
filter shaker	electric	manual
dimension / weight	126x83x85 cm / 89 kg	126x83x85 cm / 97 kg



#### **CSW R785 BT**







0.961.0010 PP



0.961.0006 PP



5 x 0.961.0003 paper filter 14 μm

#### **Optional:**

- Cartridge polyester filter code: 0.961.0020
- Hepa cartridge filter code: 0.961.0180



0.961.0021 Left side arm brush (with brush)



**Batteries** 



Battery charger

#### **Equipped with:**

- ullet Ideal for large surfaces ullet Large filter surface distributed on 5 cartridge filters fitted with electric filter shaker ullet Side brush raising control ullet Suction switch off ullet Flap raise system
- Flashing light Main brush pressure regulation Indirect back collection Front dust vacuum system Quick changing of the main brush and side brush without tools Long life elastic belts
- Suction selection lever Shock proof steel frame Traction lever Antistatic device Wide collector tank Heavy duty steel frame Perfectly balanced weight of the components, thus resulting in totally safe quick changes of direction Battery and battery charger not included.

	CSW R785 ST	
code	0.061.0023	
main brush width	650 mm / 25,59 inc	
main brush + 1 side brush	850 mm / 33,46 inc	
collector tank	55 lt / 14,53 gal	
max working capacity	4900 m²/h-52743 ft²	
traction / limiting gradient	front wheels / 14%	
max speed	5,8 km/h-3,60 mile/h	
motor type / power	24V / 1670 W (5 motors)	
filtering surface	$4 \text{ m}^2 / 43,06 \text{ ft}^2$	
pressure on the brushes	adjustable	
filter shaker	electric	
dimension / weight	115x80x120cm/186 kg	





#### **Equipped with:**

• Ideal for large surfaces • Large filter surface distributed on 6 cartridge filters fitted with electric filter shaker • Side brush raising control • **Complete right/left side brush** • Suction switch off • Lift flap pedal • Flashing light • Main brush pressure regulation • Indirect back collection • Front dust vacuum system • Quick changing of the main brush and side brush without tools • Long life elastic belts • Suction selection lever • Shock proof steel frame • Traction lever • Antistatic device • Battery level indicator • Wide collector tank • Heavy duty steel frame • Adjustable seat • Perfectly balanced weight of the components, thus resulting in totally safe quick changes of direction • Battery

and battery charger not included. • Front light system (optional on request).

#### **Standard accessories:**



0.961.0011 PP CSW R792 BT

0.961.0015 PP-Mixed steel CSW R792 G



0.961.0007 PP CSW R792 BT

0.961.0023 PP-Mixed steel CSW R792 G



6 x 0.961.0004 paper filter 14 μm

#### **Optional:**

- Steel collector tank code: 0.961.0029
- Front light system (on request)
- Anti-trace wheels, code: 0.961.0031
- Polyester filters code: 0.961.0024
- Hepa filters code: 0.961.0025



0.961.0030 Side brush protection



Watch the video on youtube: www.youtube.com/ctmcleaning

	CSW R792 BT	CSW R 792 G	
code	0.061.0024	0.061.0025	
main brush width	700 mm / 27,56 inc	700 mm / 27,56 inc	
main brush + 1 side brush	920 mm / 36,22 inc	920 mm / 36,22 inc	
main brush + 2 side brushes	1230 mm / 48,42 inc	1230 mm / 48,42 inc	
collector tank	62 lt / 16,38 gal	62 lt / 16,38 gal	
max working capacity	6200 m²/h-66736 ft²	8280 m²/h-89125 ft²	
traction / limiting gradient	rear wheels / 12%	front wheel / 14%	
max speed	5,8 km/h-3,60 mile/h	5,8 km/h-3,60 mile/h	
motor type / power	24V / 1150W	Honda 5,5 HP / 4,1 kW	
filtering surface	6 m² / 64,6 ft²	6 m² / 64,6 ft²	
filter shaker	electric	electric	
dimension / weight	143x91x114cm/260kg	143x91x114cm/300kg	

















#### **Equipped with:**

• Ideal for large surfaces • Large filter surface distributed on 6 cartridge filters fitted with electric filter shaker • Side brush raising control • Unload device for tank emptying into dust containers up to 110 cm height • Complete right/left side brush • Suction switch off. • Lift flap pedal• Flashing light • Main brush pressure regulation • Indirect back collection • Front dust vacuum system • Quick changing of the main brush and side brush without tools • Long life elastic belts • Suction selection lever • Shock proof steel frame • Traction lever • Antistatic device • Battery level indicator • Wide collector tank • Heavy duty steel frame • Adjustable seat • Perfectly balanced weight of the components, thus resulting in totally safe quick changes of direction • Battery and battery charger not included. • Front light system (optional on request).

#### Standard accessories:



0.961.0011 PP CSW R792 BT

0.961.0015 PP-Mixed steel CSW R792 G



0.961.0007 PP SWL R 1000 ET

0.961.0023 PP-Mixed steel SWL R 1000 ST



6 x 0.961.0004 paper filter 14 µm

#### **Optional:**

- Steel collector tank code: 0.961.0029
- Front light system (on request)
- Anti-trace wheels, code: 0.961.0031
- Polyester filters code: 0.961.0024
- Hepa filters code: 0.961.0025



0.961.0030 Side brush protection

	CSW R792 BT PLUS	CSW R 792 G PLUS	
code	0.061.0026	0.061.0027	
main brush width	700mm / 27,56 inc	700mm / 27,56 inc	
main brush + 1 side brush	920mm / 36,22 inc	920mm / 36,22 inc	
main brush + 2 side brushes	1230mm / 48,42 inc	1230mm / 48,42 inc	
collector tank	62 lt / 16,38 gal	62 lt / 16,38 gal	
max working capacity	6200m²/h-66736 ft²	8280m²/h-89125 ft²	
traction / limiting gradient	rear wheels / 12%	front wheel / 14%	
max speed	5,8km/h-3,60mile/h	5,8km/h-3,60mile/h	
motor type / power	24V / 1150W	Honda 5,5 HP / 4,1kW	
filtering surface	6 m² / 64,6 ft²	6 m² / 64,6 ft²	
filter shaker	electric	electric	
dimension / weight	163x91x114cm/310kg	163x91x114cm/350kg	

CSW R792 BT PLUS

CSW R792 G PLUS





#### Standard accessories:



0.961.0176 PP CSW R810 BT

0.961.0178 PP-Mixed steel CSW R810 G



0.961.0177 PP CSW R810 BT

0.961.0179 PP-Mixed steel CSW R810 G



8 x 0.961.0003 paper filter 14 μm

#### **Optional:**

- Cartridge polyester filter code: 0.961.0020
- Hepa cartridge filter code: 0.961.0180

• Ideal for large surfaces. • Large filter surface distributed on 8 cartridge filters fitted with electric filter shaker. • Side brush raising control. • On request DSA unload device for tank emptying into dust containers up to 145 cm height. • **Complete right/left side brush**. • Anti-trace wheels (mod.BT). • Suction switch off. • Lift flap pedal. • Flashing light. • Main brush pressure regulation.

• 90° steering angle. • Electric starter. • Service and parking brake. • Hour meter and klaxon.

- Antislip platform. Indirect back collection. Front dust vacuum system. Quick changing of the main brush and side brush without tools. Long life elastic belts. Suction selection lever.
- Shock proof steel frame. Traction lever. Antistatic device. Battery level indicator (mod.BT).
- 115 lt wide collector tank. Heavy duty steel frame. Adjustable seat. Front working light system. Battery and battery charger not included.

	CSW R810 BT	CSW R810 G
code	0.061.0038	0.061.0035
main brush width	800mm / 31,50 inc	800mm / 31,50 inc
main brush + 1 side brush	1050mm / 41,34 inc	1050mm / 41,34 inc
main brush + 2 side brushes	1300mm / 51,19 inc	1300mm / 51,19 inc
collector tank	115 lt / 30 gal	115 lt / 30 gal
max working capacity	9700 m²/h-104409 ft²	9700 m²/h-104409 ft²
traction / limiting gradient	front wheels / 12%	front wheel / 20%
max speed	7,5 km/h-4,66 mile/h	7,5 km/h-4,66 mile/h
motor type / power	24V / 1,91 kW	Diesel Yanmar-6,7 Hp / 4,92 kW
filtering surface	6,4 m² / 68,89 ft²	6,4 m <sup>2</sup> / 68,89 ft <sup>2</sup>
filter shaker	electric	electric
dimension / weight	160x101x130 cm/375 kg	160x101x130 cm/434 kg



No.961.0001   paper panel filter 14 micron   S. S.   S.   S.   S.   S.   S.   S.	S S S S S S S S S S S S S S S S S S S
0.961.0001         paper panel filter 14 micron         S S         S           0.961.0002         paper panel filter 14 micron         S S         S           0.961.0016         polyester panel filter 5 micron         O O         O           0.961.0018         Hepa panel filter         O O         O           0.961.0017         polyester panel filter 5 micron         O O         O           0.961.0019         Hepa panel filter         O O         O           0.961.0003         cartridge paper filter 14 micron         S S         S S           0.961.0004         cartridge paper filter 14 micron         S S         S S           0.961.0020         cartridge polyester filter 20 micron         O         O	S S
0.961.0002         paper panel filter 14 micron         S S         S           0.961.0016         polyester panel filter 5 micron         O O         O           0.961.0018         Hepa panel filter         O O         O           0.961.0017         polyester panel filter 5 micron         O O         O           0.961.0019         Hepa panel filter         O O         O           0.961.0003         cartridge paper filter 14 micron         S S         S           0.961.0004         cartridge paper filter 14 micron         S S S S         S           0.961.0020         cartridge polyester filter 20 micron         O         O	
0.961.0016         polyester panel filter 5 micron         O O	
0.961.0018         Hepa panel filter         O O	
0.961.0017         polyester panel filter 5 micron         O O         O           0.961.0019         Hepa panel filter         O O         O           0.961.0003         cartridge paper filter 14 micron         S         S           0.961.0004         cartridge paper filter 14 micron         S         S           0.961.0020         cartridge polyester filter 20 micron         O         O	
0.961.0019         Hepa panel filter         O O         Image: Comparison of the compar	
0.961.0003         cartridge paper filter 14 micron         S	
0.961.0004         cartridge paper filter 14 micron         S S S           0.961.0020         cartridge polyester filter 20 micron         O	
0.961.0020 cartridge polyester filter 20 micron	0 0
	0 0
0.961.0024   cartridge polyester filter 20 micron	
0.961.0025   Hepa cartridge filter	
0.961.0180 Hepa cartridge filter	0
0.942.0037 PP side brush S S	
0.961.0005 PP side brush S S S S	
0.961.0006 PP side brush S	
0.961.0007 PP side brush S O S O	
0.961.0177 PP side brush	0
0.961.0181 mixed steel side brush	
0.961.0023 mixed steel side brush OSOS	
0.961.0179 mixed steel side brush	S
0.942.0050 PP main brush S	
0.961.0008 PP - moplen body main brush - bristle d. 0,5 mm	
0.961.0008 PP - moplen body main brush - bristle a. 0,5 mm S O O O.961.0009 PP - moplen body main brush - bristle d. 0,5 mm S O	
0.961.0010 PP - moplen body main brush - bristle d. 0,5 mm	
0.961.0011 PP - moplen body main brush - bristle d. 0,5 mm S O S O	
0.961.0176 PP - moplen body main brush - bristle d. 0,5 mm	6 0
0.961.0012 mixed steel - moplen body main brush OS	
0.961.0013 mixed steel - moplen body main brush O S	
0.961.0014 mixed steel - moplen body main brush	
0.961.0015 mixed steel - moplen body main brush OSOS	
0.961.0178 mixed steel - moplen body main brush	S
0.107.0002 Tubular battery Pb-acid - 12V 118Ah C5 O1 O1 O2	
0.107.0063 GEL Battery 12 MFP 105 - 12V 105Ah C5 O1 O1 O2	
0.107.0004 Tubular battery Pb-acid - 6V 180Ah C5 O2 O2 O4 O4	
	04
0.107.0072 GEL Battery 6 MFP 180 - 6V 180Ah C5 O2 O2 O4 O4	

S = standard equipment O = optional

(1)-(2)= n° batteries

# E E	0.108.0001	LWS 1-12/24V-12A	for battery 0.107.0002 - 0.107.0063					
	0.108.0002	LWS 2-12/24V-25A	for battery 0.107.0004 - 0.107.0072 - 0.107.0023					





VSG range is made up of electric generators producing saturated steam at 10 atm pressure and 180°C temperature.

It is ideal for food and baking industry, for private and institutional use, for pharmaceutical and mechanical industry, for dairy factories, for building sectors and so on.

# Performances: temperature, steam production and pressure

The same remarks about pressure and delivery rate made for high-pressure cleaners, have to be taken into consideration also for steam generators; in this case, the important difference is the physical relationship (and so not subjective or debatable) that exists between steam pressure and its temperature: to a fixed pressure values correspond right and univocal temperature.

Knowing these values it is easy to identify the ones (like us) who show the right double relation between pressure and temperature.

Outlet steam temperature (not boiler temperature, that is higher)

# Is it better a steam generator or a hot water high-pressure cleaner?

and so the purpose that led to the machine purchase

(clearly wrong) could be unattended.

which it is not possible to talk about sanification

natural limits (about 140°C) under

As far as the choice is concerned, the aspects to be considered are the analysis of the task that must be done and all the elements that make up the cost of the operation, i.e. working speed (labour cost) and (more and more important) waste treatment (waste disposal cost). As far as the working speed is considered, it is important the whole cleaning procedure and not only the effective washing time: with the high-pressure cleaner it is not possible an indoor washing, unless there is a filled in collection system, instead it is necessary to move the washing phase outside; with the steam generator it is not necessary to move outside, it is possible to wash the part exactly where it is, because the water generated can be easily dried.

#### Steam generators



Steam at 180°C allow to degrease dirt also without the use of heavy chemical products. If they are necessary to speed up the washing task, it is very important to consider the cost of draining away dirty water.

The danger of chemical products used is generally proportional to the effectiveness against increasing dirt

tenacity.

If we wash with the high-pressure cleaner we produce from 10 to 21 litres of polluted water, that must be collected and drained following the current regulation: in a single wash of a couple of hours 2,5 tons of dirty water is produced!

If we wash with a steam generator, the most powerful machine produces 37 litres per hour, with the most part of the liquid that evaporates, with a two hour wash the remaining dampness and disinfecting product is very low! Analyzing all these subjects it is clear that in particular circumstances (lack of purification plant for water treatment), the steam generator is more advantageous of a high-pressure cleaner.

On the other side, rinsing speed is the consequence to the delivery rate that hits dirt, so if only the washing phase is considered, high-pressure cleaner is faster.

Steam can be considered water with a related dampness very, very low (superheated steam is just hot air and it doesn't have a significant mechanical action...), with an outlet temperature much higher (180°C) than a highpressure cleaner: this means that the mechanical power is lower than the one of water, but the degreasing power of steam is much higher.



#### Unlimited autonomy:

The boiler is refilled by a water pump that gets water from an external water tank. This system allows an unlimited autonomy, because it is not necessary to turn off the

steam generator and wait a lower temperature to refill with water.

An automatic control recharges the boiler when necessary. In some models there is an acoustic signal advising about low water level inside the water tank.



#### Integrated vacuum:

Dirt is vacuumed inside a tank integrated in the machine



#### Multipurpose washable filter

It combines all the advantages of the cartridge filter but with the plus that it can vacuum both dry and wet at the same time.

It can be washed with tap water.



#### Temperature regulator:

The temperature is set-up by an electronic regulator: it allows to obtain damp steam **REGULATOR** (low temperature) if our application needs

a stronger kinetic energy; or saturated steam it the application needs a little water waste on the surface. A lower temperature produces a set lower working pressure accordingly to the steam physic law.



#### Discharge valve:

Allows a complete discharge of the boiler (not possible even through gun use). In this way it is possible to remove water and limestone

residual inside the boiler and from the coil surface. This valve maybe opened only when the boiler is not hot, and it is recommended to accomplish regularly.











			Absorbed power	Suction motor	Max pressure	Steam production	Max Temperature	Heating and activation time required	Water tank capacity	Detergent tank capacity	Packaging L x l x H	Packaging weight	Packaging weight	Pieces for pallet
Code	Model	Page	W	W	bar	Kg/h	°C	min	_		mm Lxlxh	kg	lbs	n°
8.451.0101	VSG 4000	64	3000	1100	7	3,25	165	4-7	5	5	750x600x1030	42,5	93,69	4
8.451.0108	VSG 4000 FOAM	66	3000	1100	7	3,25	165	4-7	5	5	750x600x1030	42,5	93,69	4
8.453.0001	CSG 3,3	68	3300	-	9	4,62	175	7-10	5	5	750x600x700	31	91,27	6















CSG 10/CSG 18/CSG 30

			Absorbed power	Suction motor	Max pressure	Steam production	Max Temperature	Heating and activation time required	Water tank capacity	Detergent tank capacity	Packaging L×l×H	Packaging weight	Packaging weight	Pieces for pallet	
Code	Model	Page	W	W	bar	Kg/h	°C	min	I	I	mm Lxlxh	kg	lbs	n°	
8.450.0010	CSG 3.3M PLUS	70	3300	-	9	4,62	175	7-10	5	5	595x435x650	37	81,57	2	1
8.452.0010	CSG 10	72	10000	-	10	15	180	9-10	25	5	1300x780x1080	130	290,41	1	
8.452.0002	CSG 18	72	18000	-	10	22,5	180	7-10	25	5	1300x780x1080	134	295,41	1	
8.452.0001	CSG 30	72	30000	-	10	37,5	180	7-10	25	5	1300x780x1080	134	295,41	1	















• Stainless steel body AISI 304 • Ready steam warning lamp • Boiler 3kW S/S AISI 304 - Thickness 25/10 • Low level water lamp indicator • Boiler is refilled continuously • Switch for using chemicals and detergents mixed with steam • Device for cleaning hot water mixed with steam • Washable filter • Flex hose 4 m • Recovery tank capacity 64 l • Drain hose system • Steam regulation • Wheels suitable for use in food processing area • Blower system available • ON/OFF main switch with indicator lamp • ON/OFF boiler switch with indicator lamp

Standard o	equipme	ent:
• 5.211.0068	Hose 4 m	0
• 5.209.0151	Hose 2 m	Q
• 3.753.0085		
• 3.754.0195		<b>5</b>
• 3.754.0005		
• 5.209.0126		
• 3.754.0192		1
• 3.754.0109		-
• 3.754.0108		
• 3.754.0110		4
• 6.405.0207		9 9 9
• 3.754.0194		T
• 3.754.0215		
• 3.754.0196		
• 3.754.0197		===
• 3.754.0204		
• 5.212.0021		9

	VSG 4000
Code	8.451.0101
Max steam pressure/temperature	7 bar / 165° C
Boiler absorbed power	3000 W / 230V ~ 50Hz (Ph 1)
Vacuum motor absorbed power	1100 W
Column depression/Air flow	20.39 kPa / 220 m³/h
Water tank/detergent tank capacity	51/51





New simple and intuitive control panel, quick-coupling steam gun, main ON/OFF switch with lamp, boiler ON/OFF switch with lamp, steam/detergent regulator/selector, steam flow rate regulator, steam ready warning lamp, low level water indicator lamp with buzzer, steam pressure gauge. Gun with integrated start-up control, adjustment of the vacuum power and steam function activation key.

Unlimited autonomy thanks to the continuous power supply of the boiler, which enables water top-ups in the tank without having to stop the machine or interrupt work.

Hot air output blow function for quick drying of car interiors with a 2 m flexible hose and flat nozzle supplied. Discharge pipe to quickly drain dirty water collected without removing the head. Two-stage bypass vacuum motor with cyclone effect.





Equipped with 3 pumps: boiler, detergent and water.

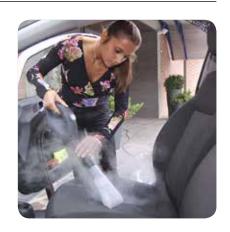
Maximum safety thanks to the 2 safety thermostats, 1 pressure switch and 1 mechanical maximum pressure valve.

# Fields of applications

**Steam system:** Food & beverage (food industry, catering, beverage, winery).

Hospitality, community & healthcare (hospitality, buildings cleaning, spa & sport, education & community, healthcare).

Industry (industry, transportation, car washers, car dealers).















# **Standard equipment:** • 5.211.0068 Hose 4 m • 5.209.0151 Hose 2 m • 3.753.0085 • 3.754.0195 • 3.754.0005 • 5.209.0126 • 6.402.0106 • 6.402.0107 • 6.405.0207 • 3.754.0194 • 3.754.0215 • 3.754.0196 • 3.754.0197

• 5.212.0021

#### **Equipped with:**

• Stainless steel body AISI 304 • Ready steam warning lamp • Boiler 3kW S/S AISI 304 - Thickness 25/10 • Low level water lamp indicator • Boiler is refilled continuously • Switch for using chemicals and detergents mixed with steam • Device for cleaning hot water mixed with steam • Washable filter • Flex hose 4 m • Recovery tank capacity 64 l • Drain hose system • Steam regulation • Wheels suitable for use in food processing area • Blower system available • ON/OFF main switch with indicator lamp • ON/OFF boiler switch with indicator lamp

	VSG 4000 Foam
Code	8.451.0108
Max steam pressure/temperature	7 bar / 165° C
Boiler absorbed power	3000 W / 230V ~ 50Hz (Ph 1)
Vacuum motor absorbed power	1100 W
Column depression/Air flow	20.39 kPa / 220 m³/h
Water tank/detergent tank capacity	51/51





New simple and intuitive control panel, quick-coupling steam gun, main ON/OFF switch with lamp, boiler ON/OFF switch with lamp, steam function/compressed air function selector, water/detergent selector, steam flow rate regulator, steam ready indicator lamp, low water level indicator lamp with buzzer, steam pressure gauge, and air pressure gauge. Gun with integrated start-up control, adjustment of the vacuum power and

steam/foam function activation key.

Multipurpose machine: cleaning with detergent, steam, steam with detergent, foam and hot water. Equipped with a compressed air connection and pressure gauges for air and steam. Unlimited autonomy of steam thanks to the electronically controlled power supply of the boiler, which enables water top-ups in the tank without having to stop the machine or interrupt work.





Hot air output blow function for quick drying of car interiors with a 2 m flexible hose. Discharge pipe to quickly drain dirty water from the tank. Two-stage bypass vacuum motor. Equipped with 3 pumps: boiler, detergent and water. Maximum safety thanks to the 2 safety thermostats, 1 pressure switch and 1 mechanical maximum pressure valve.

# Fields of applications

**Steam system:** Food & beverage (food industry, catering, beverage, winery).

Hospitality, community & healthcare (hospitality, buildings cleaning, spa & sport, education & community, healthcare).

Industry (industry, transportation, car washers, car dealers).

**Foam system:** Car dealers, car washers, garages, car body shops, and every other place where a source of compressed air is already available









• Satured steam at 9 bar at a temperature of 175°C • Steam gun with low tension control • S/S body AISI 304 • Boiler 3,3 kW S/S AISI 304. Thickness 25/10 • Low level water lamp indicator • Device for using chemicals and detergents mixed with steam • Heating and activation time required: 7 min. • Steam regulation • Discharge valve • Pressure gauge • The boiler can be refilled from the tank provided (continuous duty) • Wheels suitable for food and processing areas • Storage basket

# **Standard equipment:** • 5.409.0256 Hose 3 m • 3.753.0111 • 3.754.0228 • 3.754.0229 • 3.754.0235 • 3.754.0250 • 3.754.0230 • 6.405.0207 • 6.402.0096 • 3.754.0234 • 6.402.0095 • 3.099.0126 You Watch the video on youtube: www.youtube.com/ctmcleaning

	CSG 3,3
Code	8.453.0001
Max steam pressure/temperature	9 bar / 175° C
Boiler absorbed power	3300 W / 230V ~ 50Hz (Ph 1)
Steam production	4,62 kg/h
Boiler type/volume	Inox AISI 304 / 4 l
Water tank/detergent tank capacity	51/51

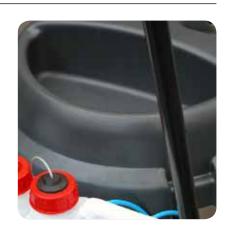




Simple and intuitive control panel, quick-coupling steam gun, main ON/OFF switch with lamp, boiler ON/OFF switch with lamp, water/detergent selector, steam flow rate regulator, steam ready indicator lamp, low water level indicator lamp with buzzer, steam pressure gauge. Steam gun with integrated steam/detergent function activation key and quick coupling of accessories.

Unlimited autonomy thanks to the continuous power supply of the boiler, which enables water top-ups in the tank without having to stop the machine or interrupt work, with major time saving in the operating phase. Boiler with saturated steam at 9 bar at a temperature of 175°C.

Equipped with 3 pumps: boiler, detergent and water. Maximum safety thanks to the 1 safety thermostat, 1 pressure switch and





1 mechanical maximum pressure valve. Discharge valve for complete discharge of the boiler; it eliminates water residues and formation of lime scale, thus lengthening the lifespan of the boiler. A 5-litre water and detergent double tank. A rich and complete range of accessories is supplied. Fieldswater and scale growth, extending boiler's life.

#### Fields of applications

#### **Steam system:**

Food & beverage (food industry, catering, beverage, winery). Hospitality, community & healthcare (hospitality, buildings cleaning, spa & sport, education & community, healthcare). Industry (industry, transportation, car washers, car dealers).







# • 5.409.0256 Hose 3 m

**Standard equipment:** 

• 3.753.0111

• 3.754.0228

• 3.754.0229

7

• 3.754.0235



• 3.754.0250



• 3.754.0230



• 6.405.0207



• 6.402.0096



• 3.754.0234



• 6.402.0095



• 3.099.0126



#### **Equipped with:**

- Satured steam at 9 bar at a temperature of 175°C Steam gun with low tension control Made of AISI 304 stainless steel Boiler 3,3 kW S/S AISI 304. Thickness 25/10 Heating and activation time required: 7 min. Steam regulation
- Discharge valve Pressure gauge Device for using chemicals and detergents mixed with steam The boiler can be refilled from the tank provided (continuous duty)
- Pivoting wheels with brakes, suitable for use in food processing areas.



	CSG 3,3 M PLUS
Code	8.450.0010
Max steam pressure/temperature	9 bar / 175° C
Boiler absorbed power	3.3 kW / 230V ~ 50Hz (Ph 1)
Steam production	4.62 kg/h
Boiler type/volume	Inox AISI 304 / 4 l
Water tank/detergent tank capacity	51/51



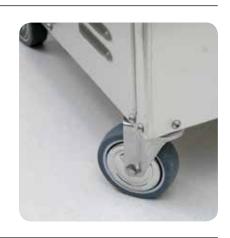


Simple and intuitive control panel, quick-coupling steam gun, main ON/OFF switch with lamp, boiler resistance activation lamp, steam flow rate regulator, steam ready indicator lamp, steam pressure gauge. Steam gun with integrated steam/detergent function activation key and quick coupling of accessories. Boiler no water safety stop sensor. No water and water tank full lamp. Water pump activation lamp. Detergent pump activation lamp. Water/detergent selector key.

Boiler draining key.

Unlimited autonomy thanks to the continuous power supply of the boiler, which enables water top-ups in the tank without having to stop the machine or interrupt work, with major time saving in the operating phase. Boiler with saturated steam at 9 bar at a temperature of 175°C.

Equipped with 2 pumps: boiler and detergent. Maximum safety thanks to the 1 safety thermostat, 1 pressure switch and 1





mechanical maximum pressure valve.

Discharge valve for complete discharge of the boiler; it eliminates water residues and formation of lime scale, thus lengthening the lifespan of the boiler.

Equipped with 4 pivoting wheels suitable for food environments. A 5-litre water and detergent double tank. A rich and complete range of accessories is supplied.

#### Fields of applications

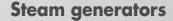
# Steam system:

Steam system: Food & beverage (food industry, catering, beverage, winery).

Hospitality, community & healthcare (hospitality, buildings cleaning, spa & sport, education & community, healthcare).

Industry (industry, transportation, car washers, car dealers).













#### **Equipped with:**

- Built-in AISI 304 stainless steel Pivoting wheels with brakes, suitable for use in food processing areas The boiler can be refilled from the tank provided (continuous duty) Temperature regulator Discharge valve Pressure gauge
- Device for using chemicals and detergents mixed with steam Heating and activation time required: 6 min. Control with low tension controls Control panel: ON-OFF main switch, indicator lamp, thermoregulator, water and warning light (with buzzer), boiler activating key, gun activating key Satured steam at 10 bar at a temperature of 180°C

# **CSG**

# Standard equipment:

• 6.402.0080 Hose with gun 3,5 m



- 6.402.0082 without nozzle
- 6.402.0081 without nozzle
- 6.402.0083 = without nozzle
- 6.405.0207
- 6.402.0046





- 4.407.0033 Steam nozzle (CSG 10)
- 4.407.0077 Steam nozzle (CSG 18)
- 4.407.0079 Steam nozzle (CSG 30)

#### **Optional:**

- 6.402.0087 Steam gun with hose (6 m)
- 6.402.0085 Steam gun with hose (10 m)
- 6.402.0093 Steam gun with hose (15 m)
- 6.402.0090 Steam gun with hose (20 m)
- 6.402.0092 Straight lance mm 750 without nozzle
- 6.405.0197 Coupling for tanks Ø 40
- 6.402.0094 Extension 650 mm
- 6.402.0097 Lance with flat nozzle
- 6.402.0098 Brass bristles brush Ø 80



Watch the video on youtube: www.youtube.com/ctmcleaning

	CSG 10	CSG 18	CSG 30
Code	8.452.0010	8.452.0002	8.452.0001
Max steam pressure/temperature	10 bar / 180° C	10 bar / 180° C	10 bar / 180° C
Boiler absorbed power	10 kW / 400V ~ 50Hz (Ph 3)	18 kW / 400V ~ 50Hz (Ph 3)	30 kW / 400V ~ 50Hz (Ph 3)
Steam production	15 kg/h	22.5 kg/h	37.5 kg/h
Boiler type/volume	Inox AISI 304 / 18 I	Inox AISI 304 / 18 I	Inox AISI 304 / 18 l
Water tank/detergent tank capacity	25   / 5	25   / 5	25   / 5



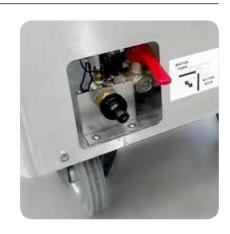


Simple and intuitive control panel, quick-coupling steam gun, main ON/OFF switch, activation lamp, electronic regulator of the temperature with digital display, low water level display with buzzer, boiler activation key, gun activation key, steam pressure gauge, steam selector and detergent selector. Steam gun with integrated steam/detergent function activation key and quick coupling of accessories.

Unlimited autonomy thanks to the continuous power supply

of the boiler, which enables water top-ups in the tank without having to stop the machine or interrupt work, with major time saving in the operating phase. Boiler with saturated steam at 10 bar at a temperature of 180°C.

Equipped with 2 pumps: detergent and water. Maximum safety thanks to the 2 level controls, 1 thermostat, 1 pressure switch and 1 mechanical pressure valve. Discharge valve for complete discharge of the boiler; it eliminates water residues





and formation of lime scale, thus lengthening the lifespan of the boiler. Double tank: 25 litres for water and 5 litres for detergent. Equipped with 2 pivoting wheels and appropriate brake to use in food environments + 2 fixed wheels. A rich and complete range of accessories is supplied with practical accessory holders.

## Fields of applications

#### Steam system:

Steam system: Food & beverage (food industry, catering, beverage, winery).

Hospitality, community & healthcare (hospitality, buildings cleaning, spa & sport, education & community, healthcare).
Industry (industry, transportation).









# Which are key components in a single disc machine?

The procedure to choose the right product for specific application must take into consideration of: the weight (that is the pressure over the brush), the surface to work, the RPM / type of construction of the motor and the transmission type. Generally speaking, the lower is the rotation speed, the most effective is the pressure over the brush and deeper is dirt removal.

With the increasing of rotation speed, lower is the effect of the pressure over the floor.

Different accessories combinations, rotation speed and motor power can provide the solution for any application: from dewaxing or deep scrub, up to polishing or buffing; from the crystallization up to spray cleaning; also carpet cleaning or sanding. Please see application chapter on the next pages.

#### How much power is necessary?

There is not a set rule, if not the common sense: higher is the friction over the floor (a combination of type of working, type of surface and type of accessory used), the higher will be the power request to the motor. So more powerful is the motor, the harder the job being able to be done.

#### The power is nothing without a control....

Together with its construction simplicity there are the worst danger for the operator who has to control the machine for long working sessions.

Only the perfect components and weights distribution on the machine allows a perfect balanced and ergonomic working posture, without any vibration and any strange effort to keep it in place.

A cheap construction (less strength) not considering the perfect ergonomic for the user, further to the waste of money (less productivity), it's a serious danger for the health!







#### • Satellite planetary gearbox trnsmission:

Up to 400 RPM the reduction and transmission system is made with satellite planetary gear.

Grants continuous power, long life and noiselessness of the machine.



#### • Belt transmission:

When the rotation speed is more than 1000 RPM, the necessary traction torque decreases and technically it is a better solution because it damps

the vibration of the rotary motion; assembling procedure and maintenance are easier.



#### • Brush speed:

Means Rotation Per Minute of the brush.





#### PRESSURE • Pressure regulator:

In order to obtain the best effect, it is possible to regulate the brush pressure on the floor.

Application	Poge	Code	Ø brush	Stripping synthetic floor (PVC)	Stripping cork present floor (linoleum)	Wet scrubbing/basic cleaning of stones, tiles and lino (sensitive floors)	Wet scrubbing/basic cleaning of syn- thetic or non sensitive floors pvc	Crystallizing	Carpet shampooing	Sanding wood	Sanding wood	Spray cleaning	
CDK G35 150-10	77	0.055.0220	330 - 13"	•	•	•	•		•			•	ĺ
CDK G45 150-13	77	0.055.0223	430 - 17"	•	•	•	•	•	•	•		•	ı
CDK G5 150-18	77	0.055.0224	430 - 17"	•	•	•	•	•	•		•	•	ı
CDK G53 150-18	77	0.055.0226	505 - 20"	•	•	•	•	•	•			•	ı













		Page	Absorbed power	Scrubbing width	Brush speed	Brush contact pressure	Handle packaging dimensions	Handle packaging weight	Handle packaging weight	Body packaging dimensions	Body packaging weight	Body packaging weight	Pieces for pallet	
Code	Model		W	mm-inch	RPM	g/cm²	LxlxH cm	Kg	lbs	L x l x H cm	Kg	lbs	n°	
0.055.0220	CDK G35 150-10	77	1000	330 - 13"	154	36,7	38x13x109	5,50	12,12	42x38x25	19,50	42,99	24	
0.055.0223	CDK G45 150-13	77	1300	430 - 17"	154	40,8	38x14x114	6,80	14,99	56×46×31	41,00	90,38	16	
0.055.0224	CDK G45 150-18	77	1800	430 - 17"	154	41,3	38x14x114	6,80	14,99	56x46x31	42,00	92,59	16	
0.055.0226	CDK G53 150-18	77	1800	505 - 20"	154	34,9	38x14x114	6,80	14,99	56x46x31	48,00	105,82	12	







#### **Scrubbers**

Complete range of single disc machines professional, sturdy, manageable, practical and simple to use. Ergonomic handle with integrated safety controls. Strong handle joint. Powerful and noiseless motor

• Adapted in order to satisfy all the cleaning requirements, marble restoration and treatment and natural stones, woods and parquet, moquette, dewaxing, hard scrubbing.



Accessories and brushes are included. For available accessories refer to accessories pages.



	CDK G35G 150-10	CDK G45G 150-13	CDK G45G 150-18	CDK G53G 150-18
code	0.055.0220	0.055.0223	0.055.0224	0.055.0226
type	low speed	low speed	low speed	low speed
brush speed	154 RPM	154 RPM	154 RPM	154 RPM
scrubbing width	330 mm	430 mm	430 mm	505 mm
voltage	230V / 50HZ	230V / 50HZ	230V / 50HZ	230V / 50HZ
abs. power	1000 W	1300 W	1800 W	1800 W
transmission		satellite plan	etary gearbox	
brush contact pressure	36,7 g/cm <sup>2</sup>	40,8 g/cm <sup>2</sup>	41,3 g/cm <sup>2</sup>	34,9 g/cm <sup>2</sup>
noise level	54 dB(A)	54 dB(A)	54 dB(A)	54 dB(A)
cable lenght	10 m	12 m	15 m	15 m
body height	220 mm	280 mm	280 mm	280 mm
dimensions / weight	42x34x112 cm / 28 Kg	54,2x42,5x120 cm / 36Kg	54,2x42,5x120 cm / 37 Kg	62,5x50,5x120 cm / 41 Kg





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Accessories						Wet scrubbing/basic cleaning of stones, tiles and lino (sensitive floors)	Wet scrubbing/basic cleaning of synthetic or non sensitive floors pvc						
				Q \	<u> </u>	g of	Wet scrubbing/basic cleaning of synthetic or non sensitive floors p						Б
				Stripping synthetic floor (PVC)	Stripping cork present floor (linoleum)	Wet scrubbing/basic cleaning tiles and lino (sensitive floors)	clea ive f						Spray polishing and buffing
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				jug .	sing eum)	를 들는 기계	cruk	Crystallizing	Carpet shampooing	Sanding wood	Sanding cement	Spray cleaning	<u>8</u>
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	Carpet brush	0.955.0014	CDK G45						Х		$\vdash\vdash$		_
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	Pad green 5 pcs	6.508.0037	CDK G35		X		X				$\vdash\vdash$		
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X = suitable



Accessories			Stripping synthetic floor (PVC).	Stripping cork present floor (linoleum).	Wet-scrubbing/basic cleaning of stones, files and lino (sensitive floors)	Wet-scrubbing/basic cleaning of synthetic or non-sensitive floors (PVC)	Crystallizing	Carpet shampooing	Sanding wood	Sanding cement	Spray cleaning	Spray polishing and buffing
10 l chemical tank	0.955.0001K	CDK G35 150-10	0	0	0	0		0				
		CDK G45 150-13	0	0	0	0		0				
		CDK G45 150-18	0	0	0	0		0				
		CDK G53 150-18	0	0	0	0		0				
Detergent LCN-800F	3.697.0023	4 X 5 litres	•	•	•	•						
LCN-800	3.697.0024	4 X 5 litres	•	•	•	•						
LCB-740F	3.697.0031	4 X 5 litres			•							
LCB-900WR	3.697.0030	4 X 5 litres	•									
LCN-600SVI	3.697.0033	4 X 5 litres	•		•	•						
LCN-700	3.697.0035	4 X 5 litres						•				
LCN-680AL	3.697.0025	4 X 5 litres			•						•	•
LCN-650	3.697.0026	4 X 5 litres				•					•	
LCN-640'	WM 3.697.0027	4 X 5 litres									•	•

S = standard equipment

## **Applications pads**



BEIGE PAD - POLISHING - Polyester To polish all kinds of floor. Use dry.



**GREEN PAD - INTERMEDIATE CLEANING ACTION - Nylon** To remove all the old superficial wax, rests, obtaining ready floors to be recoated. Use wet.



**BLACK PAD - WET STRIPPING - Nylon** For wet stripping of heavy layers of wax. Ideal to remove old floor finish scu and cement marks.



# Cold water high-pressure cleaner



PWC 1.0 1209	PWC 5.0 1211	TWC 3.0	PWC 5.0 2021

		Page	Operating pressure (max pressure)	Operating pressure (max pressure)	Delivery rate	Delivery rate	Absorbed power	RPM	Voltage	Max inlet water temperature	Weight with packaging	Packaging	Pieces for pallet
Code	Model		bar (max bar)	psi (max psi)	l/h	GPM	W	RPM	V - Hz	°C	Kg/lbs	cm	n°(cm x cm)
8.665.0015	PWC 1.0 1209	84	120 (150)	1740(2175)	510	2.23	2300	1450	230 - 50	40	30.5/67	60x38 h 72	12(120-80)
8.654.0075	PWC 5.0 1211	85	30÷120	435÷1812	660	2.91	3000	1450	230 - 50	40	40/88	55x62 h 59	12 (120x100)
8.659.0045	PWC 3.0 1211	86	30÷120(150)	435÷1740(2175)	660	2.91	3000	1450	230 - 50	40	38.6/85	77x41 h 71	9(120x80)
8.659.0046	PWC 3.0 2015	86	30÷200	435÷2900	900	3.96	7000	1450	400 - 50	40	46/101	77x41 h 71	9(120x80)
8.654.0076	PWC 5.0 2021	87	30÷200	435÷2900	1260	5.55	9400	1450	400 - 50	40	62/136	55x62 h 59	12 (120x100)







# Hot water high-pressure cleaner





PWH 1.0 1310 PWH 3.0 1211 PWH 5.0 PWH 7.0 2021

			operating pressure (max pressure)	operating pressure (max pressure)	delivery rate	delivery rate	absorbed power	шді	voltage	outlet temp.	fuel consumption	diesel tank	antiscale tank	heat output	packaging	packaging weight
Code	Model	pag	bar	psi	l/h	GPM usa	W	RPM	٧	°C	l/h - gal/h	l - gal	l - gal	kW	cm	Kg - lbs
8.625.0018	PWH 1.0 1310	90	30÷130	435÷1885	330÷600	1.45÷2,64	3000	2800	230~50	max 90°	2,83 - 0.75	14 - 3.7	-	38	65x85x100	71.5 - 157
8.620.0625	PWH 3.0 1211	91	30÷120	435÷1740	330÷660	1.45÷2.91	3200	2800	230~50	max 140°	4,72 - 1.25	18 - 4.8	٠	58	71x113x111	118 - 260
8.621.0986	PWH 5.0 1310	92	30÷110	435÷1595	330÷660	1.45÷2.91	3000	1450	230~50	max 140°	4,72 - 1,25	18 - 4.8	•	58	113x71x111	130.5 - 287
8.621.0987	PWH 5.0 2015	92	30÷200	435÷2900	450÷900	1.98÷3.96	7300	1450	400~50	max 140°	5,6 - 1.5	18 - 4.8	٠	74	113x71x111	146 - 322
8.622.0923	PWH 7.0 2021	93	30÷200	435÷2900	630÷1260	2.77÷5.55	9700	1450	400~50	max 140°	6,6 - 1,75	22 - 5.8	2,4 - 0.6	88	130x78x111	180 - 396











Efficiency, reliability, safety and ease of use are the basic factors for a careful selection of a professional product. On the ground of these standards, CTM has conceived professional line high-pressure cleaners, in order to match, through high-tech products, perfect hygiene and clean with time/labour saving.

# Being Manufacturers: from experience to knowledge

In the high-pressure cleaners market companies are divided in those who buy components to assemble products and manufacturers, who have a continuous R&D on all product components.

Lavorwash manufactures all the high-pressure cleaners components entirely and this allows: to spread product knowledge, culture and experience inside the company; to check the entire manufacturing cycle; to adopt possible improvements immediately; better sensitivity to market request adjusting product range design in real time.

# What high pressure cleaner? Is it better pressure or delivery rate?

The right criteria to define the high-pressure cleaner performances is the washing effectiveness.

The elements that influence this value are: delivery rate (water volume processed by the pump in a unity of time) and pressure (I/h water power on a surface). The higher the delivery rate, the faster the washing phase (less rinsing time); the higher the pressure, the deeper the washing (better dirt degreasing). It is often emphasized the pressure only (also because the pump size and the consequent manufacturing cost are cheaper), but delivery rate is as important as pressure.



# What pump? Is it better a linear (crankshaft) or an axial one?

It does not exist a winning technology, because both solution can provide same performances and lifetime. What determines the pump quality is the quality of the project itself (linear or axial) and of the components used; for this reason Lavorwash decided to develop both technologies, taking into consideration a design that grants margin of safety and reliability.

## Cold water high-pressure cleaner



• Linear pump:

The movement of the (3) pistons occur through a system of connecting rods and crankshaft. The longitudinal axle of the pistons (placed at the same level or linear) is perpendicular to the motor rotation axle. It is more versatile to bear high delivery rates (from 21 l/min) and it has a better self priming.

• Motor low rotation speed:

The electric motor transfers the same number of revolutions to the pump. With a 4 poles motor there is a lower rotation speed of the components (1400 RPM in case of 50Hz or 1750 RPM in case of 60 Hz) granting longer pump life. Extending lifetime solution.

WATER

#### • Water cooled motor:

Water flows through the S/S coil around the motor, this allows a better thermal exchange

(and so a cooling) than air also in those countries where inlet water could reaches 60°C. This allows a drop in operating temperature of the motor and pump mechanical elements, granting a better reliability and longer life.

• Pressure accumulator:

vibrations.

The release of the gun trigger produces a strong counterstroke in the pump. This device amortizes this power with great benefit for the pump components and for the user, because it removes all the

Total Stop:

Releasing the gun trigger the pump stops automatically avoiding element damages during the by-pass phase. Pulling the trigger, the high-pressure cleaner starts automatically. Max pump protection.



# Low voltage and delayed Total Stop:

To avoid quick and multiple start and shut down of the motor/pump group whenever the gun trigger is pulled and released, this disposal delays of about 15 seconds the machine shut down. Prevention, energy saving, top safety and pump longer life.

• Thermal valve:

When the gun trigger is released, the same water flows through the pump (by-pass) and it overheats and sooner or later this damages the valve seals. With this completely mechanical system, the thermal valve checks the temperature in the pump, opening / closing the by-pass circuit letting new and fresh water flow inside before the elements are damaged. Simple solution without electronic devices.



# Cold water high-pressure cleaner





- 4 poles electrical motor (1450 RPM) with thermal protection. Three ceramic coated pistons, brass linear pump head with built-in by-pass valve. Suction and delivery S/S valves. Detergent built-in tank for indirect suction. Pressure regulator.
- Glicerine pressure gauge. Hose-reel **(optional)**. Accessory holder. Hose-holder. Ergonomic handle.

	PWC 1.0 1209
code	8.665.0015
operat. pressure/max	120/150 bar-1740/2175 psi
delivery rate	510 l/h-2.23 GPM
abs. power/voltage	2300W - 230V~50Hz 1 ph
motorpump type/RPM	MP3/1450 RPM
max. water inlet temperature	40 °C
dimension/weight	59x37x87cm / 26 Kg - 57 lbs



### PWC 5.0 1211

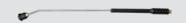


#### **Standard equipment:**

• 3.700.0036 Gun M22 - 3/8"



• 3.701.0015 Lance M22 high/low pressure



• 3.103.0050 Nozzle type 045



• 4.618.0049 High pressure hose 8 m



• Power cable 5 m

### **Optional:**

• cod. 6.608.0068 High-pressure hose-reel (hose not included)

- 4 poles electrical motor (1450 RPM) with thermal protection Three ceramic coated pistons, brass linear pump head with built-in by-pass valve. Total Stop system.
- Suction and delivery S/S valves. Integrated detergent suction with external suction probe. Pressure regulator. Glicerine pressure gauge. Hose-reel (optional).
- Accessory holder. Power cable holder. Steel frame. Steel cover.

	PWC 5.0 1211
code	8.654.0075
operat. pressure/max	120/150 bar-1740/2175 psi
delivery rate	660 l/h-2.91 GPM
abs. power/voltage	3000W - 230V~50Hz 1 ph
motorpump type/RPM	MP3/1450 RPM
max. water inlet temperature	40 °C
dimension/weight	50x90x83cm / 37 kg - 81 lbs



## Cold water high-pressure cleaner

### **PWC 3.0**







Model: 2015



Model: 1211





#### **Standard equipment:**

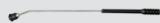
• 3.700.0036 Gun M22 - 3/8 (mod 1211)



• 3.700.0030 Gun M22 - 3/8 with rotating coupling (mod. 2015).



• 3.701.0015 Lance M22 high/low pressure



• 3.103.0050 Nozzle type 045



- 4.618.0049 High pressure hose 8 m (mod.
- 4.618.0143 High pressure hose 10 m (mod. 2015).



• Power cable 5 m

#### **Optional:**

• cod. 6.608.0021 High-pressure hose-reel (hose not included)

#### **Equipped with:**

• 4 poles electrical motor (1450 RPM) with thermal protection and water cooling (model 2015). • Three ceramic coated pistons (1 ph), full ceramic pistons (3 ph), brass linear pump head with built-in by-pass valve. • Suction and delivery S/S valves.

Low voltage and delayed Total Stop (model 2015).
 Detergent built-in tank for indirect suction.
 Pressure regulator.
 Glicerine pressure gauge.
 Hose-reel (optional).
 Accessory holder.
 Power cable holder.
 Ergonomic handle.

	PWC 3.0 1211	PWC 3.0 2015
code	8.659.0045	8.659.0046
operat. pressure/max	120/150 bar-1740/2175 psi	200 bar-2900 psi
delivery rate	660 l/h-2.91 GPM	900 l/h-3.96 GPM
abs. power/voltage	3000W - 230V~50Hz 1 ph	7000W - 400V~50Hz 3 ph
motorpump type/RPM	MP3/1450 RPM	MPW3/1450 RPM
max. water inlet temperature	40 °C	40 °C
dimension/weight	76x41x75cm / 33 kg - 72,6 lbs	76x41x75cm / 44 kg - 96,8 lbs







#### Standard equipment:

• 3.700.0030 Gun M22 - 3/8" with rotating coupling



• 3.701.0015 Lance M22 high/low pressure



• 3.103.0056 Nozzle type 075 (mod. 2021 LP)



• 4.618.0143 High pressure hose 10 m



• Power cable 5 m



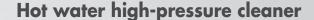
#### **Equipped with:**

- 4 poles electrical motor (1450 RPM) with thermal protection and water cooling. Three ceramic pistons, brass linear pump head with built-in by-pass valve. Integrated elastic joint, for best pump coupling. Low voltage and delayed Total Stop. Suction and delivery S/S valves.
- Integrated detergent suction with external suction probe. Pressure regulator. Glicerine pressure gauge. Hose-reel (optional). Steel frame.
- Steel covers.

#### Optional:

• cod. 6.608.0068 High-pressure hose-reel (hose not included)

	PWC 5.0 2021
code	8.654.0076
operat. pressure	200 bar-2900 psi
delivery rate	1260 l/h-5.55 GPM
abs. power/voltage	9400W - 400V~50Hz 3ph
pump type/RPM	MPW5/1450 RPM
max. water inlet temperature	40 °C
dimension/weight	50x90x83cm / 58 Kg - 128 lbs







#### Why a hot water high-pressure cleaner?

It is necessary the use of a hot water high-pressure cleaner whenever it is necessary to degrease oily or particularly tough dirt in the shortest time possible. Washing efficiency of hot water is much higher that the cold water one (up to 50% higher on some kind of dirt), because heat assists dirt degrease. Heat effect on the surface produce also fast drying. With the use of a hot water high-pressure cleaner it is possible to have: shorter washing time (under the same kind of dirt), better degrease of non water-soluble dirt, shorter drying time and less quantity of chemical product used: in few words, lower cleaning fixed costs.

#### The boiler

It is a diesel fuel heater that raises water temperature coming out of the pump; the difference between inlet and outlet water temperature is technically indicated like DeltaT. Boiler dimensions, in other words coil and diesel fuel consumption, determine the thermal power of the burner. Under the same conditions, increasing the delivery rate (quantity of water to be heated) the Delta T decreases proportionally. It is easy to understand why high pressure cleaners with higher delivery rates have more powerful burners: to grant the best operating temperature in each working condition. All our boilers have thermal output very high, near 90% or higher. This means that the relation between usable obtained power (Delta T impressed in water) and power consumption (diesel fuel) to produce that power is very high.

# What changes among high-pressure cleaners with similar performances?

It is necessary to consider besides pressure and delivery rate also the standard equipment (dimensions and type), optional functions (antiscale, total stop, etc.) and the manufacturing specifications (type of materials and applied technology). Nevertheless the most important aspect is the resistance to wear and tear and to continuous use, that raises progressively with the increase of manufacturing components specifications or moving up from a model to the next class one.

## Hot water high-pressure cleaner



#### • Linear pump:

The movement of the (3) pistons occur through a system of connecting rods and crankshaft. The longitudinal axle of the pistons (placed at the same level or linear) is perpendicular to the motor rotation axle. It is more versatile to bear high delivery rates (from 21 l/min) and it has a better self priming.



#### • Water cooled motor:

Water flows through the S/S coil around the motor, this allows a better thermal exchange

(and so a cooling) than air also in those countries where inlet water could reaches 60°C. This allows a drop in operating temperature of the motor and pump mechanical elements, granting a better reliability and longer life.

#### TS Total Stop

#### Total Stop:

Releasing the gun trigger the pump stops automatically avoiding element damages during the by-pass phase. Pulling the trigger, the high-pressure cleaner starts automatically. Max pump protection.

# Low voltage and delayed Total Stop:

Total Stop 24V To avoid quick and multiple start and shut down of the motor/pump group whenever the gun trigger is pulled and released, this disposal delays of about 15 seconds the machine shut down. Prevention, energy saving, top safety and pump longer life.



#### Low voltage and delayed Total Stop with intelligent shut down:

To avoid quick and multiple start and shut down of the motor/pump group whenever the gun trigger is pulled and released, this disposal delays of about 15 seconds the machine shut down. In case the machine is unused for more than 20 minutes or there are leakages in the pressure circuit, the machine shuts down automatically and completely: control panel power cut-off. Prevention, energy saving, top safety and pump longer life.

### 1450 RPM

#### Motor low rotation speed:

The electric motor transfers the same number of revolutions to the pump. With a 4 poles

motor there is a lower rotation speed of the components (1400 RPM in case of 50Hz or 1750 RPM in case of 60 Hz) granting longer pump life. Extending lifetime solution.



#### Pressure accumulator:

The release of the gun trigger produces a strong counterstroke in the pump. This device

amortizes this power with great benefit for the pump components and for the user, because it removes all the vibrations.



#### • Eco Energy:

Eco Energy System: in this setting, the running parameters of the

machine grant the best compromise among performance, result of the cleaning task and ecological footprint. The relation between water temperature and boiler fuel consumption is optimized.



# Hot water high-pressure cleaner

### PWH 1.0 1310





- Three ceramic coated pistons, brass axial pump head with built-in by-pass valve.
- Suction and delivery S/S valves. Vertical burner with high thermal efficiency steel coil. Temperature regulation gauge. Diesel pump with by-pass valve. Detergent built-in tank for indirect suction. Pressure regulator. Glicerine pressure gauge.
- Power cable holder. Accessory holder. Ergonomic handle.

	PWH 1.0 1310
code	8.625.0018
operat. pressure/max	130/150 bar-1885/2175 psi
delivery rate	600 l/h-2.64 GPM
abs. power/voltage	3000W - 230V~50Hz 1ph
motorpump type/RPM	MPBX2/2800 RPM
max. temp. inlet/oulet	40/90 °C
dimension/weight	80x55x83cm / 55 Kg - 121 lbs



### PWH 3.0 1211

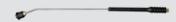


#### Standard equipment:

 $\bullet$  3.700.0030 Gun M22 - 3/8" with rotating coupling.



• 3.701.0015 Lance M22 high/low pressure



• 3.103.0050 Nozzle type 045



• 4.618.0143 High pressure hose 10 m



• Power cable 5 m

#### **Optional:**

• cod.6.608.0001 Hose-reel with brake (hose not included)

- Three ceramic coated pistons, brass axial pump head with built-in by-pass valve. Low voltage and delayed Total Stop. Suction and delivery S/S valves. Vertical burner with high thermal efficiency steel coil. Temperature regulation gauge. Low fuel lamp. Safety valve.
- Detergent built-in tank for indirect suction. Pressure regulator. Glicerine pressure gauge.
- Panel with analogic controls. Heavy duty steel frame. Accessory holder. Two ways fuel pump. Hose-reel with brake **(optional)**

	PWH 5.0 1211
code	8.620.0625
operat. pressure/max	120/150 bar-11450/2175 psi
delivery rate	660 l/h-2.91 GPM
abs. power/voltage	3200W - 230V~50Hz 1ph
motorpump type/RPM	MPBX2/2800 RPM
max. temp. inlet/oulet	40/140 °C
dimension/weight	94x65x90cm / 97 Kg - 213 lbs



## Hot water high-pressure cleaner



- 4 poles electrical motor (1450 RPM) with thermal protection and water cooling (three phase models). Three ceramic coated pistons (1 ph), full ceramic pistons (3 ph), brass linear pump head with built-in by-pass valve. Low voltage and delayed Total Stop. Suction and delivery S/S valves. Vertical burner with high thermal efficiency steel coil. Temperature regulation gauge with high sensitive stainless steel sensor. Detergent built-in tank for indirect suction.
- Auxiliary motor for burner. Heavy duty steel frame. Hose-reel with brake (optional).

- Hose-reel with brake (hose not included) cod.6.608.0004
- On request models with header tank and/or antiscale device.
- Antiscale LC-PRECAL (pcs. 4 x 5 lt.) cod. 3.697.0044

	PWH 5.0 1310	PWH 5.0 2015
code	8.621.0986	8.621.0987
operat. pressure/max	110/150 bar-1595/2175 psi	200 bar-2900 psi
delivery rate	660 l/h-2.91 GPM	900 l/h-3.96 GPM
abs. power/voltage	3000W - 230V~50Hz 1ph	7300W - 400V~50Hz 3 ph
motorpump type/RPM	MP3/1450 RPM	MP3/1450 RPM
max. temp. inlet/oulet	40/140 °C	40/140 °C
dimension/weight	94x65x90cm / 112 Kg - 246 lbs	94x65x90cm / 128 Kg - 282 lbs











#### Standard equipment:

• 6.601.0001 Gun PRO S'10 3/8" M with quick connection



• 6.602.0043 Lance 900 mm with quick connection.

• 3.103.0055 Nozzle type 070 (mod. 2021 LP)



• 4.618.0143 High pressure hose 10 m



• Power cable 5 m

## Equipped with:

- 4 poles electrical motor (1450 RPM) with thermal protection and water cooling. Three ceramic pistons, brass linear pump head with built-in by-pass valve. Low voltage and delayed Total Stop. Suction and delivery S/S valves. Vertical burner with high thermal efficiency steel coil.
- Auxiliary motor for burner air-cooling and two ways fuel pump. Temperature regulation gauge with high sensitive stainless steel sensor. Low fuel lamp and cut off. Safety valve.
- Header tank and antiscale device. Panel with analogic controls. Hose-reel (optional).

#### **Optional:**

- Hose-reel with brake (hose not included) cod.6.608.0005
- On request models with header tank and/or antiscale device.
- Antiscale LC-PRECAL (pcs. 4 x 5 lt.) cod. 3.697.0044

	PWH 7.0 2021
code	8.622.0923
operat. pressure	200 bar-2900 psi
delivery rate	1260 l/h-5.55 GPM
abs. power/voltage	9700W - 400V~50Hz 3 ph
motorpump type/RPM	MPW5/1450 RPM
max. temp. inlet/oulet	40/140 °C
dimension/weight	125x69x87cm / 145 Kg - 319 lbs



## High-pressure cleaner accessories

### Lance with rotary nozzle

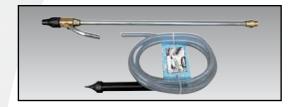


# Lance with rotary nozzle max 280 bar:

max temperature 90° C. rotary nozzle with brass body lance for gun M 22

6.602.0040	rotary nozzle - 045
6.602.0041	rotary nozzle - 055
6.602.0042	rotary nozzle - 070

## Widia sand-blasting lance



# Sand-blasting lance max 280 bar:

max temperature 90° C. Sand-blasting lance with Widia nozzle for gun M 22

6.602.0027	sand-blasting lance - 040
6.602.0028	sand-blasting lance - 050
6.602.0029	sand-blasting lance - 075



# Sand-blasting head kit max 280 bar:

max temperature 90° C

(For lance 1/4"M)

6.608.0049	sand-blasting lance - 040
6.608.0050	sand-blasting lance - 050
6.608.0051	sand-blasting lance - 075

Sand-blasting lance kit



# Rotary head nozzle

## Rotary nozzle max 280 bar:

G 1/4"F with brass body

**Extension set for rotary nozzle:** 1/4"M - 1/4"M codes 3.749.0004 + 4.006.0099 Spare coupling for gun M 22

3.749.0292	rotary nozzle - 030
6.608.0040	rotary nozzle - 045
6.608.0069	rotary nozzle - 055
3.749.0467	rotary nozzle - 070



#### Rotary nozzle max 500 bar:

G 1/4"F with S/S body and seat/nozzle in highly shock-resistant tungsten carbide

## Extension set for rotary nozzle:

1/4"M - 1/4"M codes 3.749.0004 + 4.006.0099 Spare coupling for gun M 22

### Rotary head nozzle

3.749.0200	rotary nozzle - 040
3.749.0201	rotary nozzle - 045
3.749.0202	rotary nozzle - 050
3.749.0203	rotary nozzle - 055
3.749.0204	rotary nozzle - 060
3.749.0205	rotary nozzle - 065
3.749.0206	rotary nozzle - 070





#### **Indirect foam lance**

**Foam injector lance max 250 bar:** Indirect foam lance max temperature 90° C. For gun M 22

6.602.0003 indirect foam lance



#### Foam lance max 180 bar:

max temperature 60° C Indirect foam lance with regulator and plastic bottle.

6.602.0051	For gun with quick ball coupling
6.602.0053	For gun with M 22 coupling

#### **Double lances**

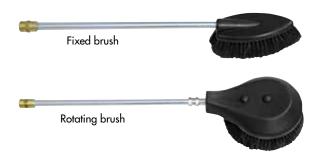
Foam lance



#### Double lance with regulator knob max 250 bar:

for high/ low pressure regulator, max temperature 150° C, for gun M 22 (nozzles 1/8″ not included)

3.701.0025 Double lance with regulator knob mm 500



#### Fixed and rotate brushes

**Fixed and rotate brushes max 250 bar:** mm 700, max temperature 90° C, for gun M 22

6.602.0035	Fixed brush with extension pipe mm 700
6.602.0036	Rotating brush with extension pipe mm 700



## Calibrated sand for sand-blasting lances

**6 pieces of 5 kg each:** code 0.011.0001



#### **Technology**















MODEL	DESCRIPTION	PROPERTIES	USE:	
Ph 7.8 - 8.2 1,000 g/ml 5000 ml x 4 pz.	FRAGRANCE-FREE SANITISING DETERGENT	Destroys unpleasant odours, fights the proliferation of bacteria, harmful micro-organisms, fungi and moulds. Contains quaternary ammonium salts.	On all types of hard surface, dilute from 1 to 3%. In the case of tenacious contaminations and aggressive unpleasant odours, dilute up to 6%.	T1

MODEL	DESCRIPTION	PROPERTIES	USE:		
Ph 7.8 - 8.2 1,000 g/ml 5000 ml x 4 pz.	FRAGRANCE SANITISING DETERGENT	Destroys unpleasant odours, fights the proliferation of bacteria, harmful micro-organisms, fungi and moulds. Contains quaternary ammonium salts. Leaves a fresh and long-lasting fragrance in the enviroment.	On all types of hard surface, dilute from 1 to 3%. In the case of tenacious contaminations and aggressive unpleasant odours, dilute up to 6%.	T1 T2 T3 T5	

MODEL	DESCRIPTION	PROPERTIES	USE:	
LCN-680AL code 3.697.0025	ALCOHOLIC MAINTENANCE DETERGENT	Quick-drying universal neutral detergent. Anti-dust effect for 4-5 days. Leaves a pleasant fragrance in the environment. Does not leave residues.	On all types of washable shiny or hard surface such as glass, stone or ceramic, dilute with water from 0.5% to 1 %.	T1 13 7 15 17 17 17 17
Ph 6,6 - 7,0 1,000 g/ml 5000 ml × 4 pz.				<i>V.₀.</i>

# **Chemicals products**



#### **Technology**

















MODEL	DESCRIPTION	PROPERTIES	USE:	
LCN-650 code 3.697.0026  Ph 6,3 - 6,7 1,000 g/ml 5000 ml x 4 pz.	NON ALCOHOLIC MAINTENANCE DETERGENT	Universal neutral detergent, does not corrode polymers, natural or synthetic waxes. Lea- ves a pleasant fragrance in the environment. Does not leave residues.	On all types of washable hard surfaces, even if protected by wax and/or sealants, dilute in water to 0.5%-1%.	T1 13 13 17 17 17

MODEL	DESCRIPTION	PROPERTIES	USE:	
LCN-640WM code 3.697.0027	NON STRATIFYING WAX WASH DETERGENT	Cleans and shines surfaces. Regenerates protective and wax treatments. Non filmo- genous and leaves a pleasant fragrance in the environment.	On all types of washable hard surfaces, including floors protected by wax and/or sealants, dilute in water to 0.5%-1%.	T1 17 17 17
Ph 5,9 - 6,9 1,000 g/ml 5000 ml × 4 pz.				

MODEL	DESCRIPTION	PROPERTIES	USE:	
LCB-900WR code 3.697.0030  Ph 8,8 - 9,2 1,000 g/ml 5000 ml x 4 pz.	FRAGRANCE-FREE WAX REMOVING DETERGENT	Removes any type of wax or polymer (even if old or stratified).	According to the degree of dirt and the thickness of the film, dilute in water from 1% to 10%. In extreme situations, dilute in water up to 20%.	T1 🛂



### Technology















MODEL	DESCRIPTION	PROPERTIES	USE:	
Ph (sol. 1%) 6.9 - 7.9 1,000 g/ml	ALKALINE MULTIPURPOSE DETERGENT	Dissolves and detaches organic and inorganic dirt.	On all types of hard washable surfaces, ceramic or enamelled surfaces, windows and doors, equipment and industrial machine tools. Dilute in water from 1% to 2%.	T1

MODEL	DESCRIPTION	PROPERTIES	USE:	
Ph 5,8 - 6,2 0,950 g/ml 5000 ml x 4 pz.	SOLVENT DETERGENT OF VEGETABLE ORIGIN	Eliminates tar, rubber, glue and adhesive residues. Removes even stratified (acrylic or polymer) wax films. Disintegrates persistent dirt of animal or mineral origin.	According to the degree of dirt and thickness of the film, dilute in water from 0.5% to 2%.	T1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

MODEL	DESCRIPTION	PROPERTIES	USE:	
LCN-700 code 3.697.0035	CARPET AND TEXTILE WASH DETERGENT	Removes dirt, regenerates and protects fibres. Does not leave residues and releases a pleasant fragrance.	Dilute in water from 2% to 5%.	T3 15
Ph 6.8 - 7.2 1,010 g/ml 5000 ml × 4 pz.				

### GENERAL TERMS OF SALE

Goods travel at buyer's risk. Images and technical specifications of products and accessories are not binding and can be modified without notice.



Watch the video on youtube: www.youtube.com/ctmcleaning



