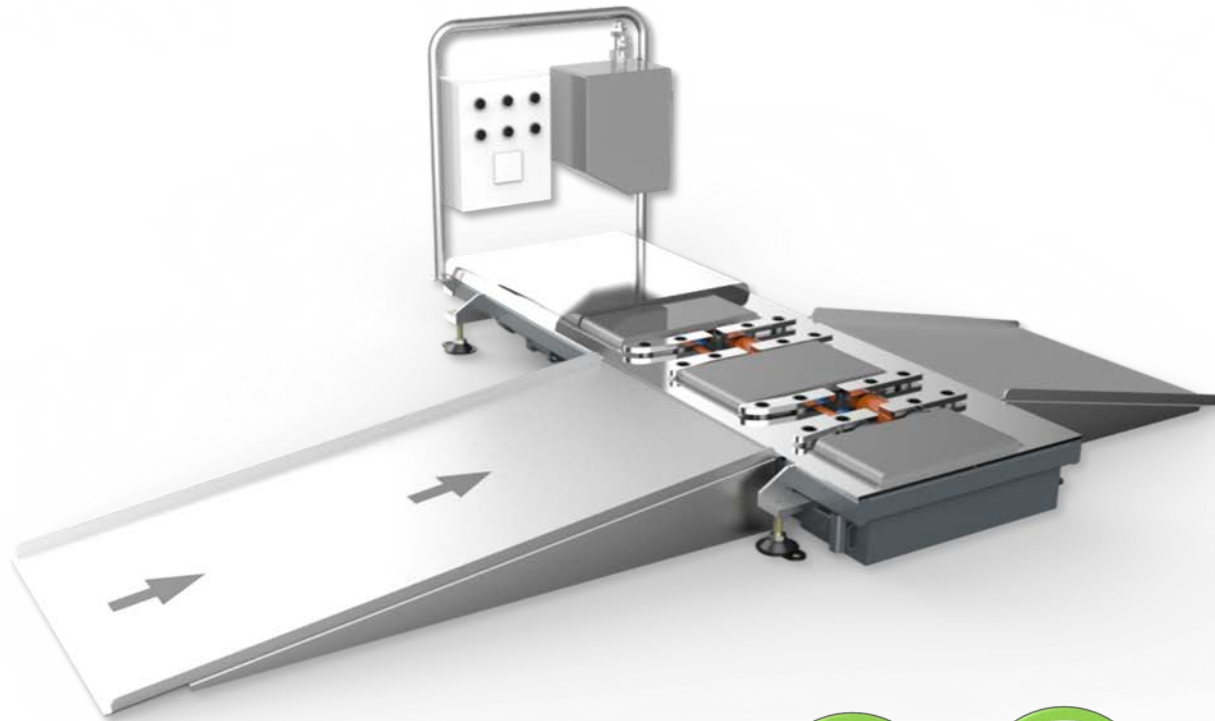


Caster Cleaner Perfect Cleaner

"World First & Only" Trolley Wheel Cleaner

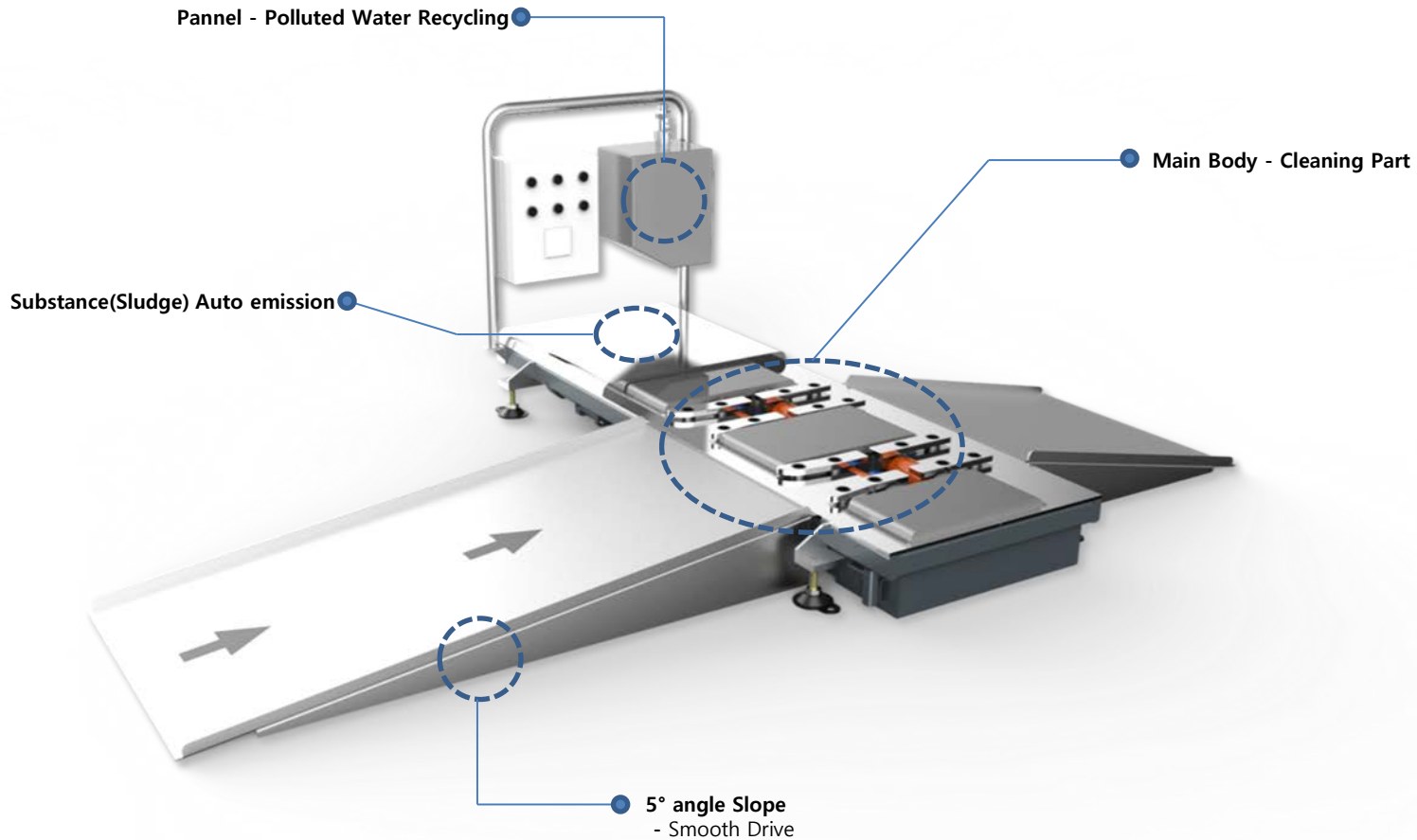


Purpose to use Caster Cleaner

Main purpose to use Caster Cleaner is to improve factory environment by solving the main factory cleanliness problem with keeping factory cleanliness, quality and with decreasing the cost of labor by cleaning pollutants on trolley wheel financially and effectively using Caster Cleaner developed perfectly by Dae Shin M/C corp.

New Paradigm : Trolley Wheel Cleaner : Caster Cleaner

“World First & Only Development” – Perfect Cleanliness



Caster Cleaner – Trolley Wheel Cleaner Spec.

Main Body - Cleaning Part

Power	220V 60Hz
Power Consumption	300 ~ 350W
Size(Standard)	2500(W) x 1350(L) x 120(H)
Weight	250KG

Panel - Polluted Water Recycling

Power	220V 60Hz
Power Consumption	1000W
Size(Standard)	300W 200L 400H
Weight	100KG

Urethane Drive Motor

Power	220V 60Hz
Power Consumption	180W
Number of pole	4P
RPM	1750
Electric Current	2.8A
Reduction Gear Ratio	1/15

**No. of Cleaning Trolley a Day :
720 unit**

30(s) No. of cleaning trolley	1 unit
1(m) No. of cleaning trolley	2 unit
60(m) No. of cleaning trolley	120 unit
6(h) No. of cleaning trolley	720 unit

Including time of entering and leaving trolley

Drain Pump Motor

Power	220V 60Hz
Power Consumption	100W
Lift	6M

Cleaning Spray Drive Motor

Power	DC 12V
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Sludge Drive Conveyor Motor

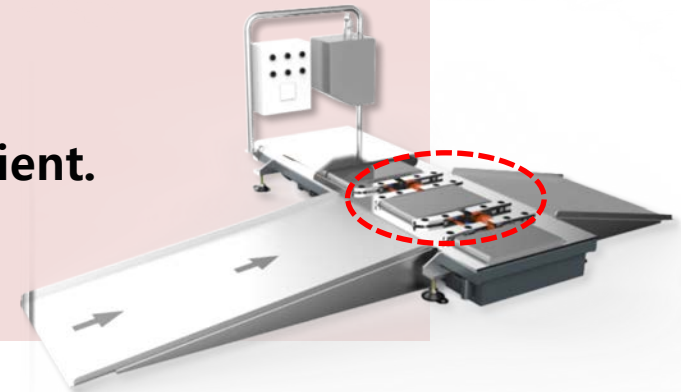
Power	DC 12V
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Consumables

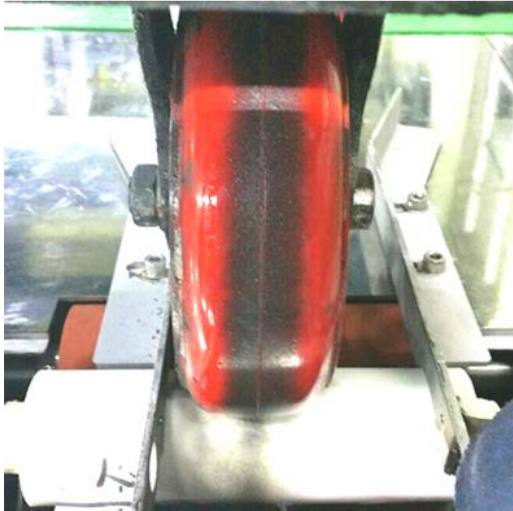
Sponge Roller	CC-SPG-380
Detergent	DS-10T
Filters	CC-S-F1F2, CC-RCS-F1F2

“Strong Points” – Cleaning Part

- A.- Various Trolley “All Accepted” (above 350mm between front wheels)**
- B.- Wheel Inch “All at once Accepted” (3"4"/4"5"/5"6"/6"7"/7"8")**
- C.- Rear Wheel “No circled/rotated” develop finished.**
- D.- “Perfect Remove Water” on the wheel.**
- E. - Sponge Exchange “One-Touch” convenient.**
- F. -“Sludge Auto Emission” convenient.**



Caster Cleaner(C/C) – Trolley Wheel Cleaner - Before vs. After



Before using C/C

After using C/C

Caster Cleaner Cleanliness Effect : Almost "97%" Cleanliness!!!

	with Detergent				
	Before cleaning	cleaning 5sec	cleaning 10sec	cleaning 15sec	cleaning 20sec
>100µm	2909(0%)	1015(65%)	362(87%)	80(97%)	75(97%)
>200µm	338(0%)	91(73%)	39(88%)	12(96%)	11(95%)
>300µm	14(0%)	4(71%)	3(78%)	1(93%)	1(93%)
SUM	3261(0%)	1110(66%)	404(87%)	93(97%)	87(96%)

300 units trolley test.

Caster Cleaner(C/C) – Trolley Wheel Cleaner - Before vs. After



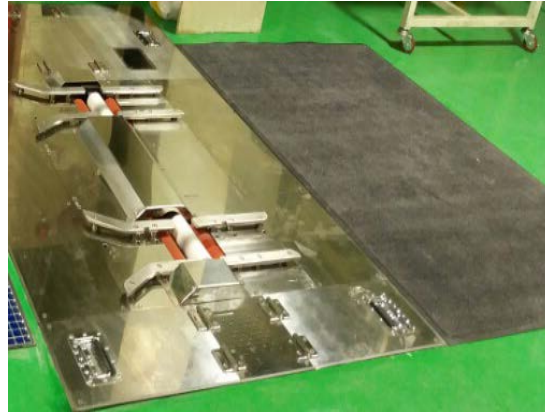
Before using C/C

After using C/C

I Installation I



Automotive Part Assemble Company



Automotive Part Assemble Company



Automotive Part Assemble Company



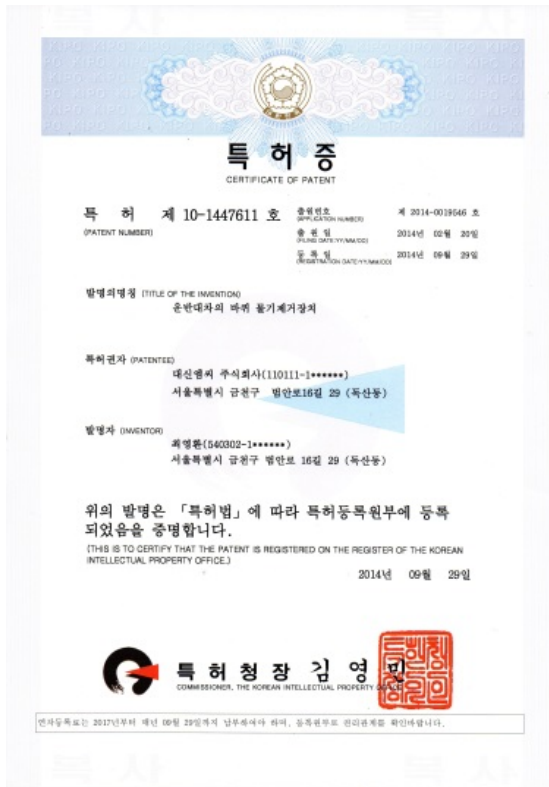
Semiconductor Company
(Sam Sung SDI)



Sam Sung Electronic Company

Caster Cleaner – Trolley Wheel Cleaner Certification

Certification



Wheel Water Removal Device



Wheel Cleaning Device

Clean Factory

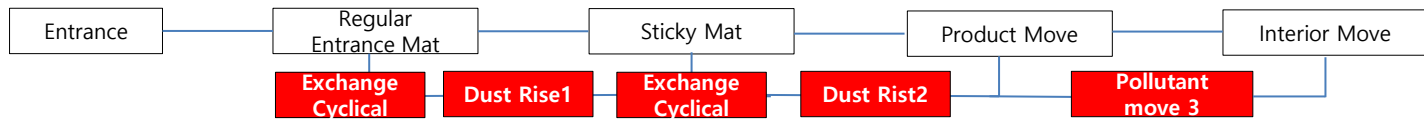
Keep Quality

Reduce Expense



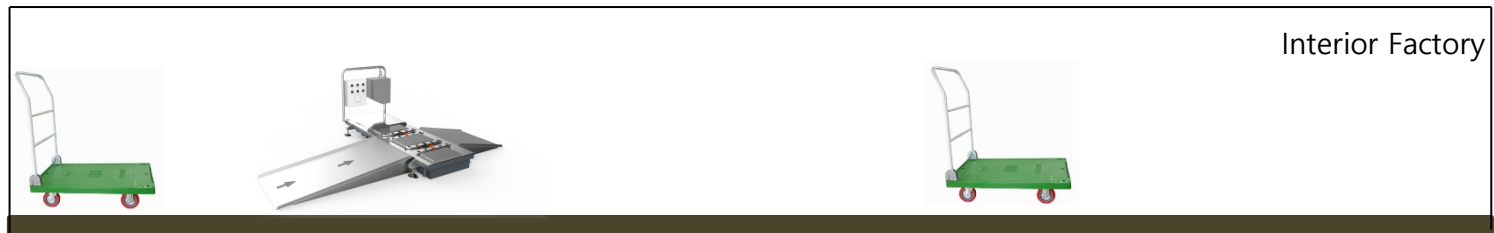
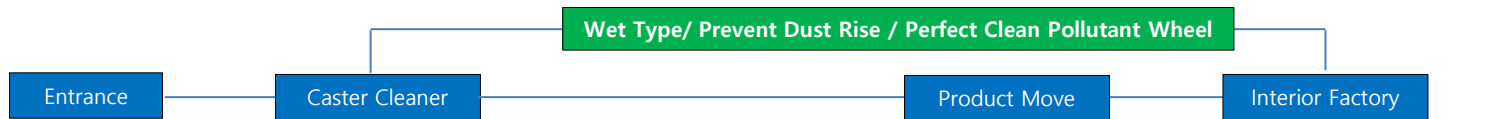
New Paradigm for Clean Factory : Caster Cleaner – Trolley Wheel Cleaner

C
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Fall off quality ↓ , Increase expense ↑ , Increase Labor ↑

C
L
E
A
N
E
R



Caster Cleaner Only, Clean Factory from entrance to interior = Keep Quality, Save Expense ↓ , Save Labor ↓

Save Expense Effect (Caster Cleaner vs. Sticky Mat)

Won=10,000won



1,800won vs. 516won

Initial Investment



-92%

480won vs. 5,796won

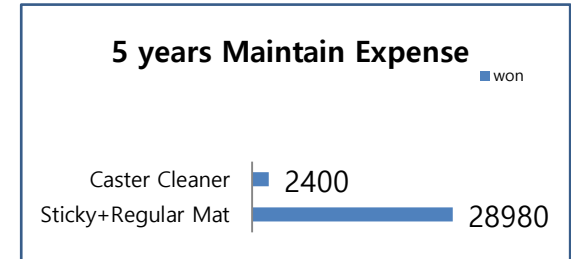
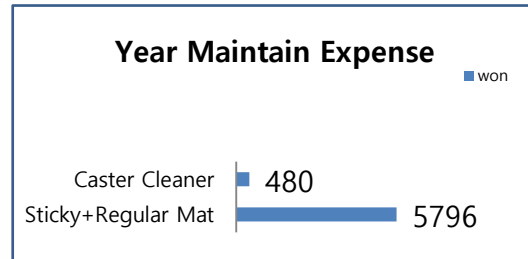
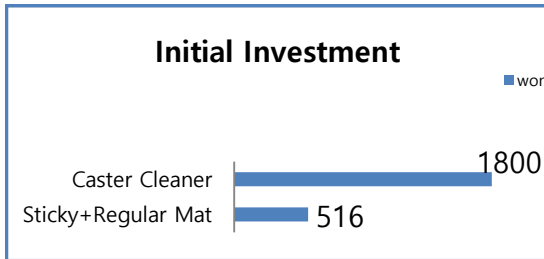
Year Maintain Expense



-460%

2,400won vs. 28,980won

5 years Maintain Expense



Initial Investment

Caster Cleaner (Slope Type/2500*1350mm) = 1800won
 Sticky Mat(10ea/1200*1800mm)+Regular Mat(1ea/1150*1800mm) : (48won*10ea)+36won=516won

Year Maintain Expense

Caster Cleaner Consumables : {Detergent(20won)+SpongeRoller(20won)+WasteWater(20won):
 60won+Electricity(2won)/Month} *12Month=480won
 Sticky Mat(480won*12month=5,760won)+Regular Mat(36won) = 5,796won

Standard : South Korea Factory Facility 1st Floor Maintain

Save Expense Effect (Caster Cleaner vs. Cleaning Cost Labor)

Won=10,000won



Year Maintain Expense

-93.5%

62won vs. 960won

Caster Cleaner - Approximate Cost (20day/month, 6hr/a day standard)			
Content	Amount of use	Cost Expense(won)	Note
Waste Water	2,160L	20	1,000L=11won
Electricity	120Kw	2	1Kw=0,015won
Detergent	16,800m	20	10L=10won
Sponge Roller	4sets	20	1set=1week (500unit standard)
Total		62won	Monthly Cost Expense

VS.

Month(20day) Cleaning Cost Labor			
Content	No.	Cost Expense	Note
Cleaning Labor	4 persons	240won	<Automotive Part Assemble Company Monthly Cleaning Cost Labor>
Total		960won	Monthly Cost Expense

< Note for the Caster Cleaner Approximate Cost : standard of direct waste water >

Time	Trolley Unit	Amount of water used	Amount of detergent used	Electricity used
30(s)	1 unit	150ml	0.2ml	1Kw
1(m)	2 units	300ml	0.4ml	
60(m)	120 units	18,000ml	24ml	
360m(6hrs)	720 units	108,000ml	840ml	6Kw
month(20day)	14,400 units	2,160L	16,800ml	120Kw

Clean Factory

Keep Quality

Reduce Expense

Thank you

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Laboratory : Incheon Seo-gu, Jungseojin-ro, 410 (Environmental Industry Research Park)

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