



Body Sealing System



Trusted company through change and innovative R&D

DMTS Co., Ltd.



01

Business Overview

02

STRUCTURE ADHESIVE
Sealing System

03

HEMMING(SWIRL)
Sealing System

04

Motor Swirl
Sealing System

05

MASTIC Sealing
System

Since its founding in 1988, DMTS is a company that researches, develops and supplies sealing system and vision inspection system for automobile production lines, providing Total Solutions such as design, manufacturing, local installation, commissioning and A/S. In addition, all DMTS employees are doing their best to realize customer satisfaction with advanced technology and quality. DMTS is responding to global sealing business by acquiring certifications such as CE, UL, and Gost-R, which are global safety standards, and is exporting sealing systems to the worldwide, including the United States, Japan, China, Europe, Russia, India, Brazil, and Indonesia. DMTS is continuously developing technology and growing into a world class sealing company.

High Quality Performance
Sealant Equipment

DMTS

Build Smart Equipment

- ▶ Guaranteed $\pm 1\%$ accurate application accuracy
- ▶ Guaranteed repeatability of application position
- ▶ Robot compatibility
- ▶ Proactive response to user needs
- ▶ Improve vehicle safety by increasing collision stiffness
- ▶ User-oriented convenient equipment operation

06

BPR Sealing
System

07

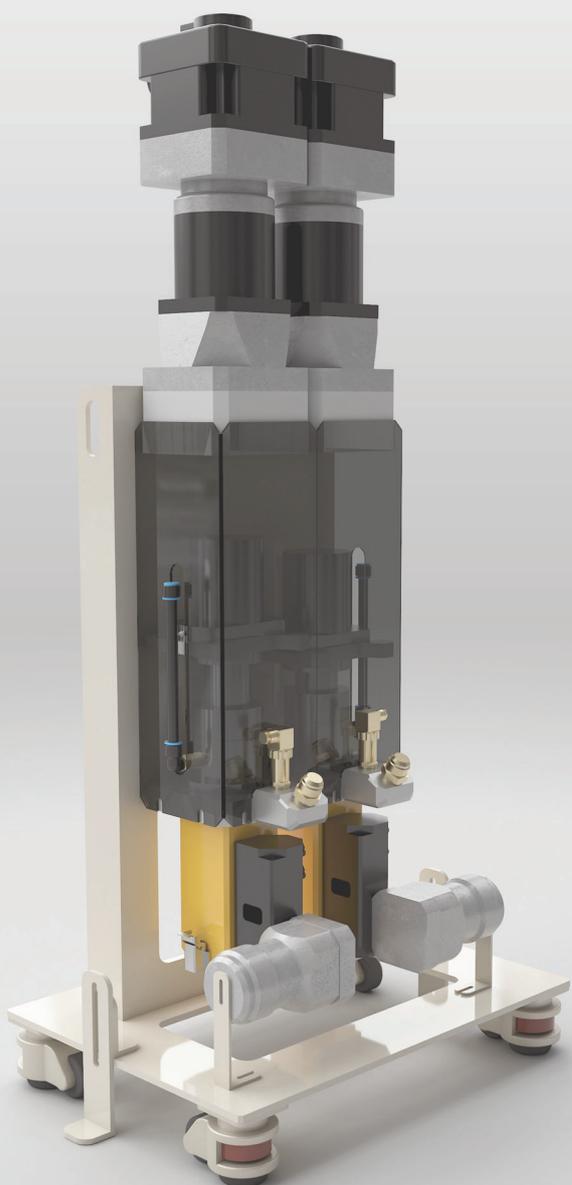
2K Sealing
System

08

Booster Line Up

09

Gun Line Up



✔ Guaranteed application repeatability

Guaranteed $\pm 1\%$ application accuracy

Guaranteed $\pm 0.5\text{mm}$ application position accuracy

✔ Robot compatibility

Compatible with all manufacturers' robots

Support all communication methods

Constant application even with changes in robot speed

Robot speed control / pattern control

✔ Proactive response to user needs

Provide customized TOTAL SOLUTION

Remote support 24/7 response service

Provides flexible methods tailored to customer requests

✔ User-oriented convenient equipment operation

Convenient operability by using the touch screen

Convenient operation by applying intuitive menu

Convenient maintenance with high compatibility for each part

Worldwide Business



The World Best
Sealing Equipment

DMTS will develop into a global leading sealing equipment company in the global automotive industry.



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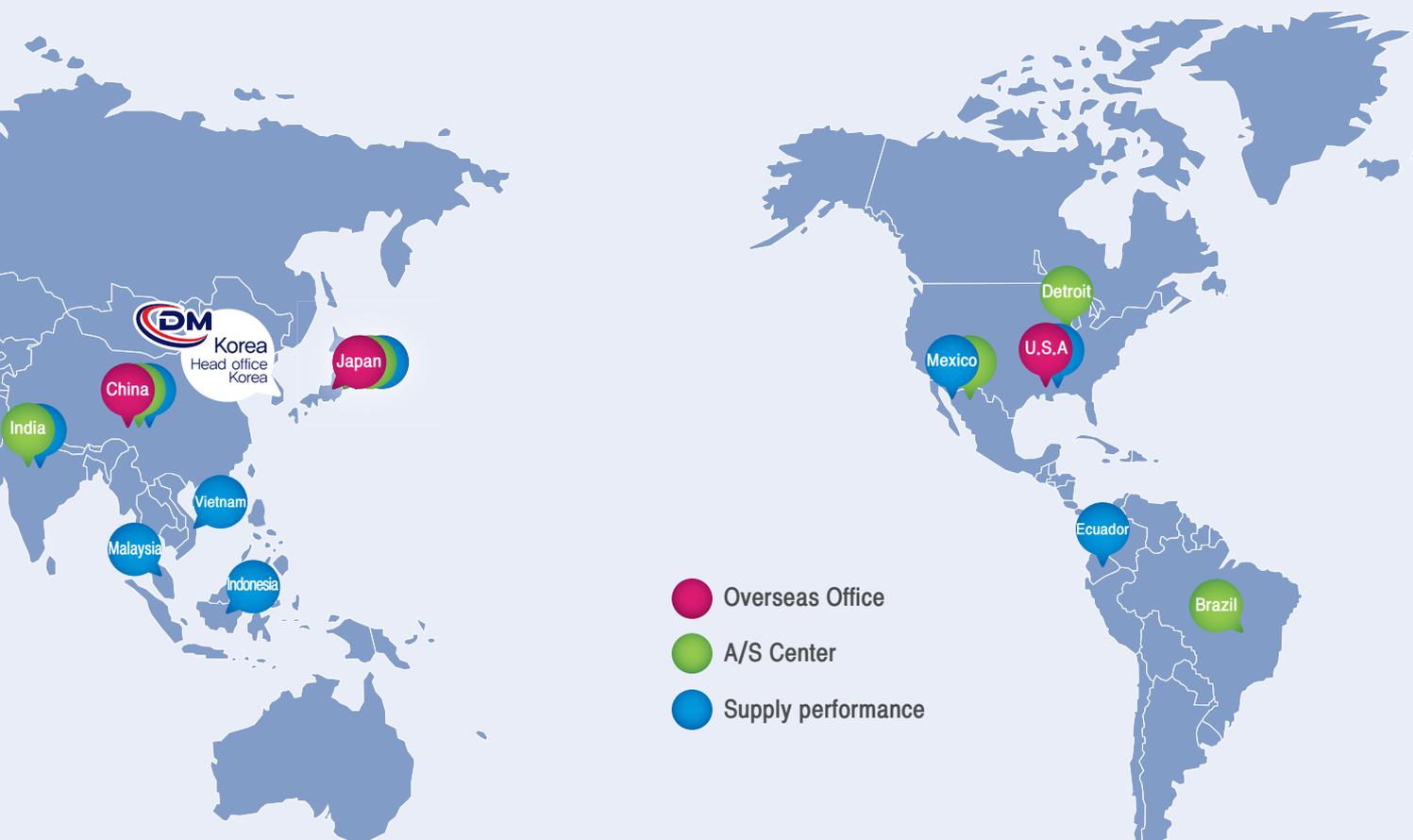
R&D CENTER

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01

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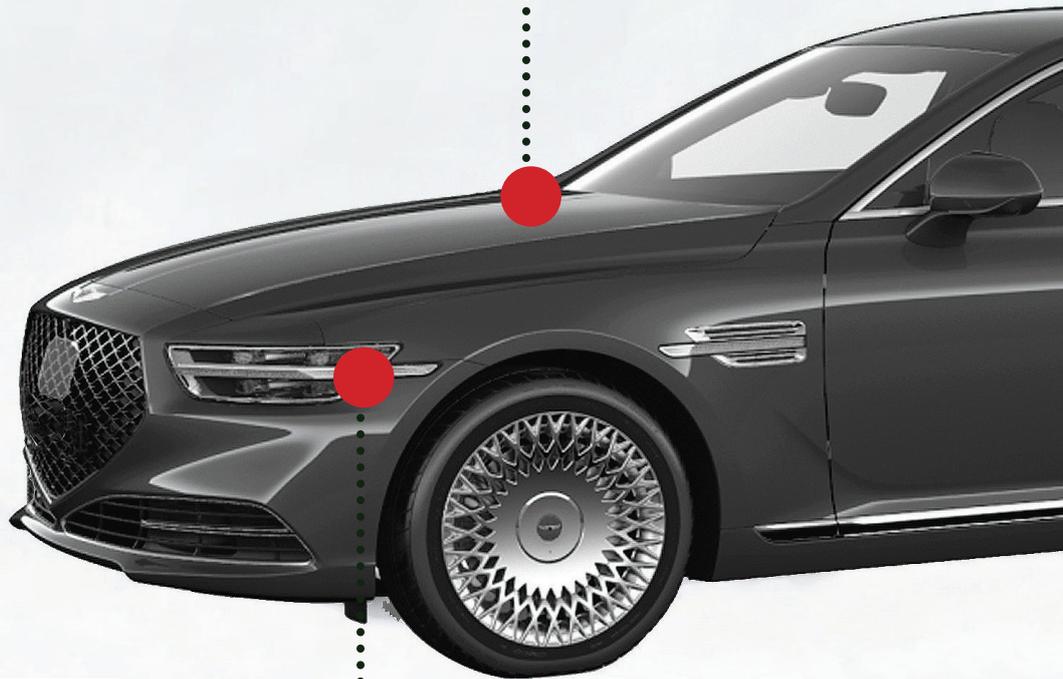


Equipment Application

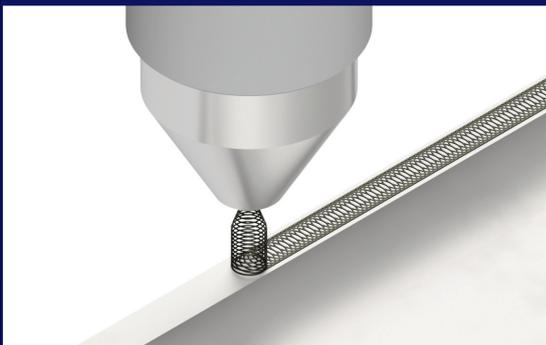
Mastic Sealing



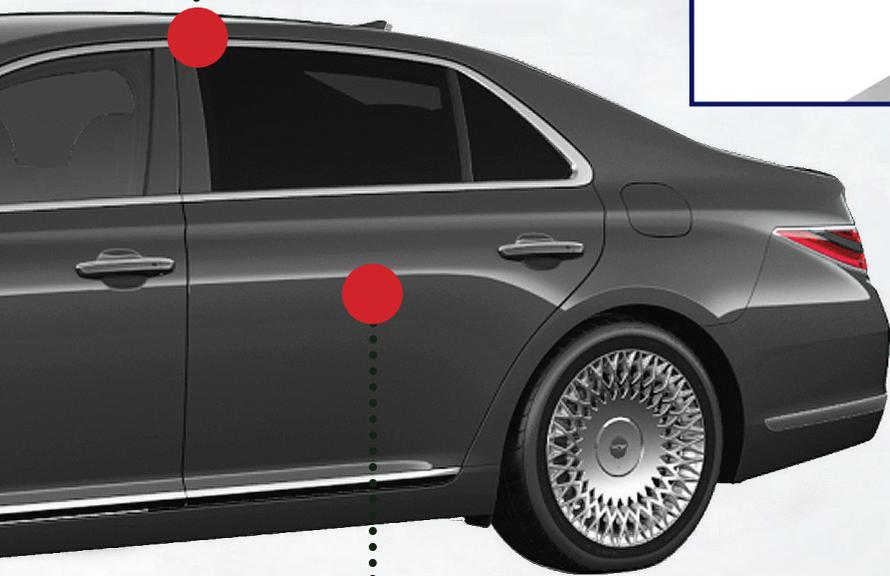
- Hood
- Door
- Roof
- Trunk Lid
- Lift Gate



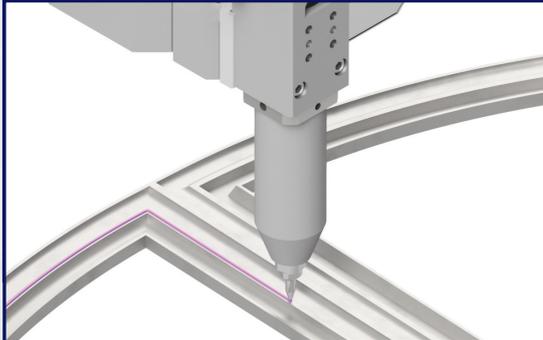
Hemming Sealing



- Hood
- Door
- Lift Gate
- Trunk Lid



Structure Adhesive Sealing



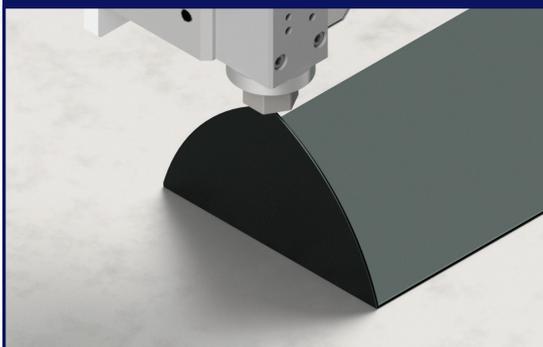
- Side
- Quarter
- Dash
- Roof
- Floor

2k Sealing



- Side
- Quarter
- Dash
- Roof
- Floor

BPR Sealing



- Hood
- Fender
- Door
- Trunk Lid
- Lift Gate
- Side

STRUCTURE ADHESIVE Sealing System

Applying structure adhesive to various joints of the body panel
 Watertight, anticorrosive and strong panel adhesion to secure excellent body rigidity



Controller Option
H : 1,360(SEALING)
H : 1,740(Sealing+Vision)

PUMP OPTION
5 gal
55gal

BOOSTER OPTION
50cc
100cc
150cc
200cc

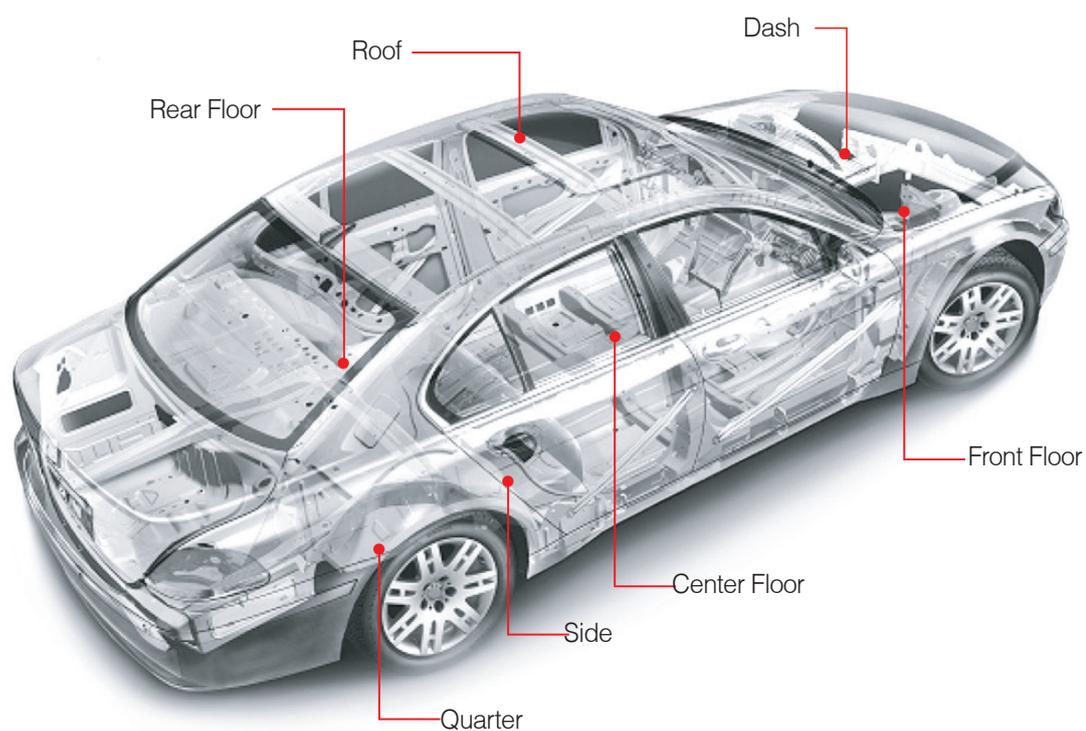
GUN OPTION
Extrude 100
Extrude 150

Equipment Features

Application type	Discharge flow	Discharge pressure	Application speed	Flow Control Method	Flow control accuracy
Extrude	Max 20cc/sec	Max 200bar	Max 700mm/sec	Servo Volume control	±1%

STRUCTURE ADHESIVE
Sealing System

Application part



Application type

Continuous or stitch application with Extrude Type

Stitch application improves application position imbalance and maintains constant bead spacing by using a dedicated program



HEMMING(SWIRL) Sealing System

Applying hemming sealer to the hemming joint of the body panel Used for panel bonding and anticorrosive



Controller Option
H : 1,360(SEALING)
H : 1,740(Sealing+Vision)

PUMP OPTION
5 gal
55gal

BOOSTER OPTION
200cc
500cc
AOPR Type

GUN OPTION
Extrude 100
Extrude 150
Extrude 200

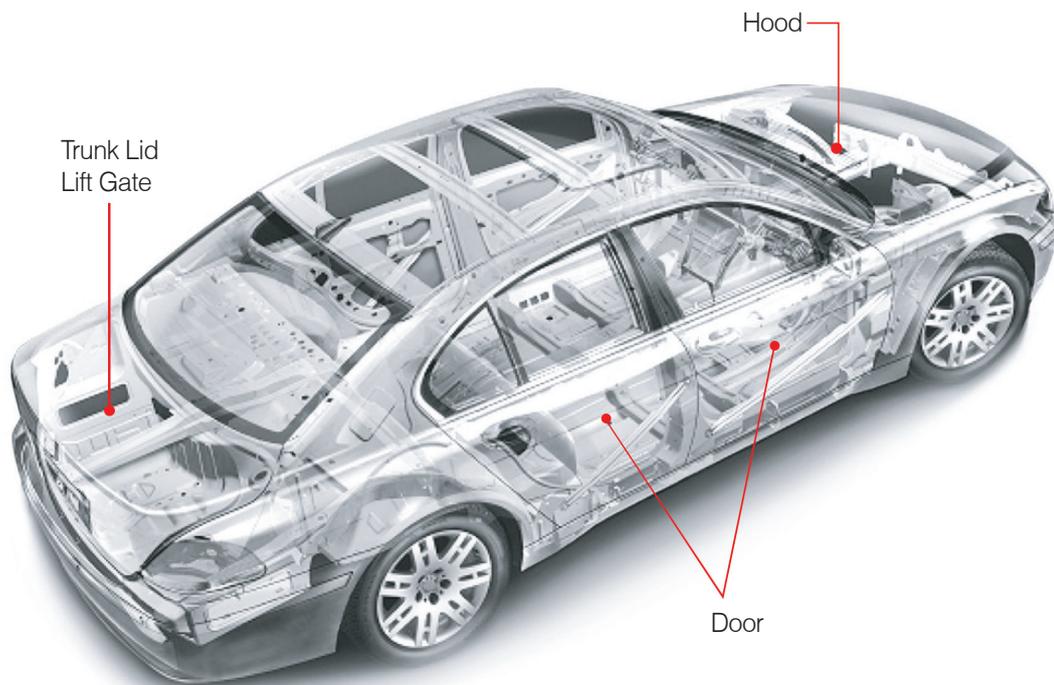
Equipment Features

Application type	Discharge flow	Discharge pressure	Application speed	Flow Control Method	Flow control accuracy
Swirl	Max 20cc/sec	Max 200bar	Max 500mm/sec	Servo Volume control	±1%

03

HEMMING(SWIRL) Sealing System

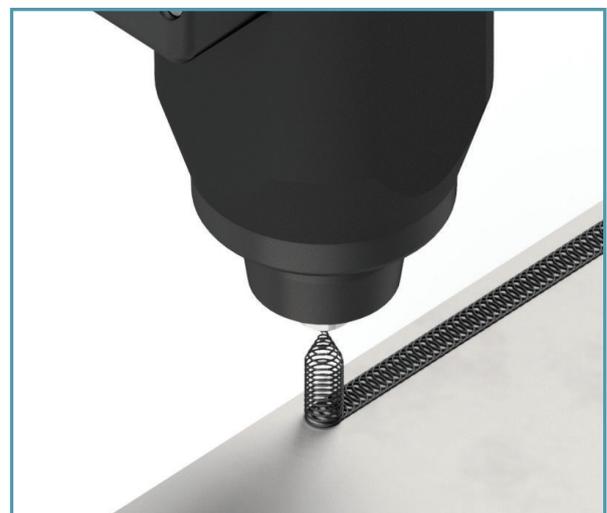
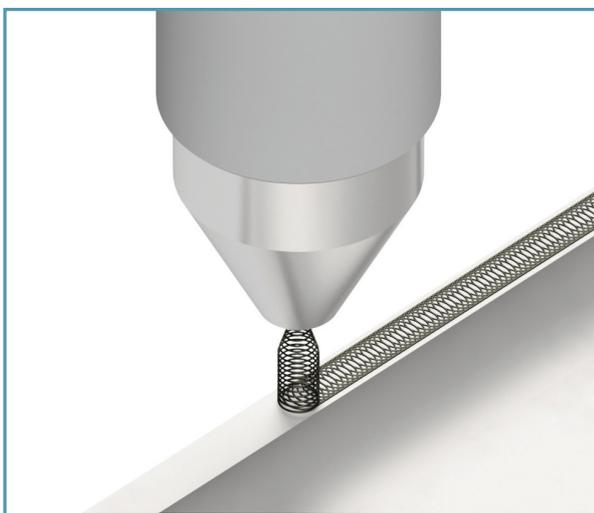
Application part



Application type

M-Swirl : Eccentric disk is rotated using a motor, the nozzle rotates radially and is applied in a swirl pattern

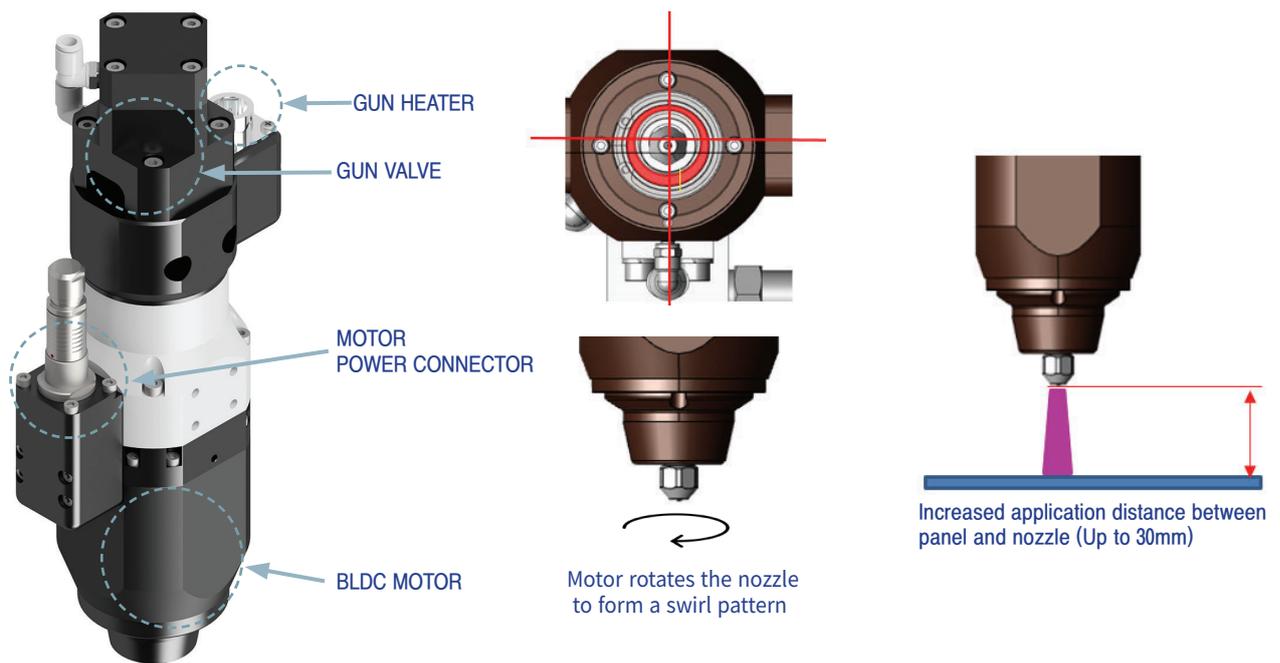
Air Swirl : Air is sprayed along the air hole of the air nozzle, sealer is applied in a swirl pattern



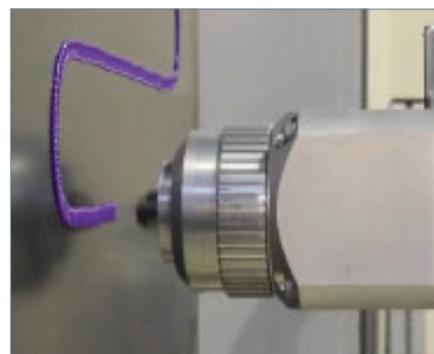
Motor Swirl Sealing System

Improved structure adhesive quality through the development of Motor Swirl Sealing System (TS-SWIRL 7000)

Features



Structure adhesive application

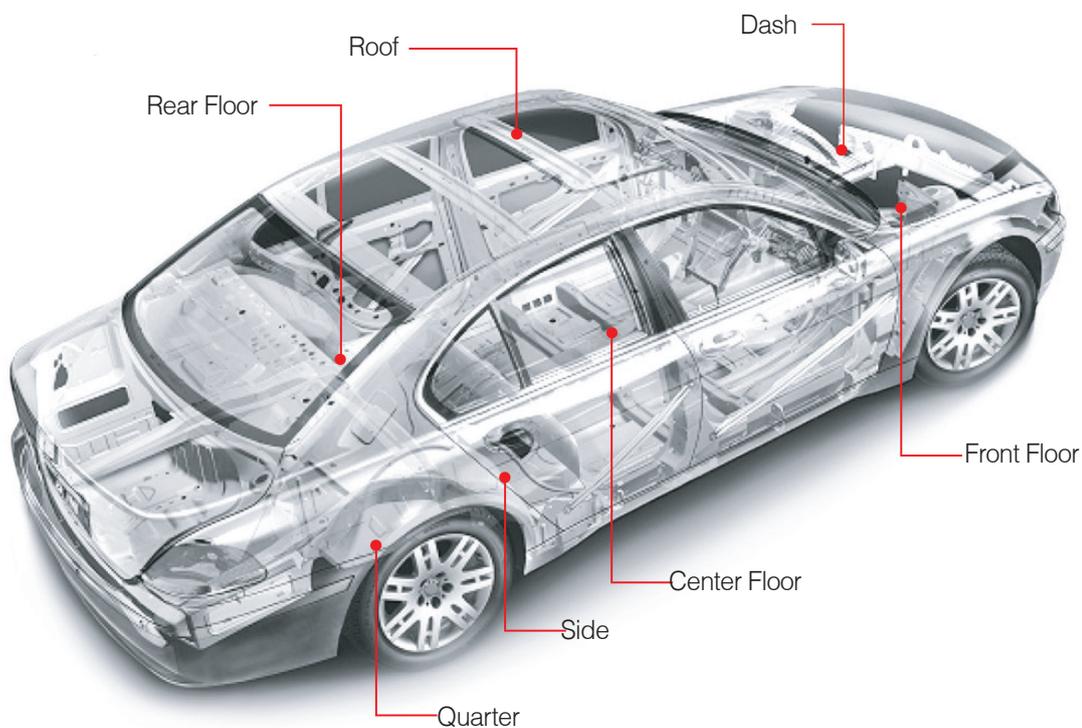


Structure adhesive horizontal application
(Nozzle-panel distance up to 30 mm)

Effectiveness

- Improved adhesion when applying structure adhesive horizontally
- Compared to BEAD application, nozzle damage and panel scratches due to panel separation do not occur, and fine teaching is not required according to the panel height.
- Application height 10~30mm
- Panel and gun angle 90° Vertical and horizontal application possible
- Swirl pitch adjustable through RPM control

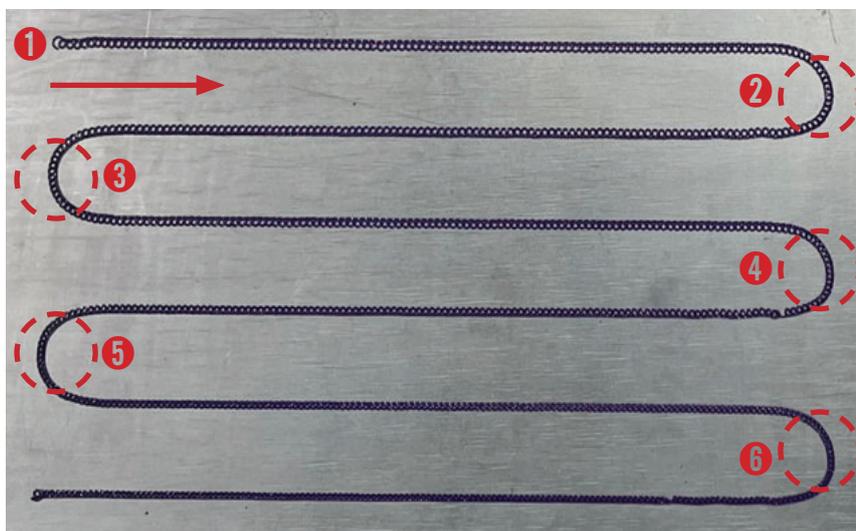
Application part



Application Tests

Application width change test per RPM

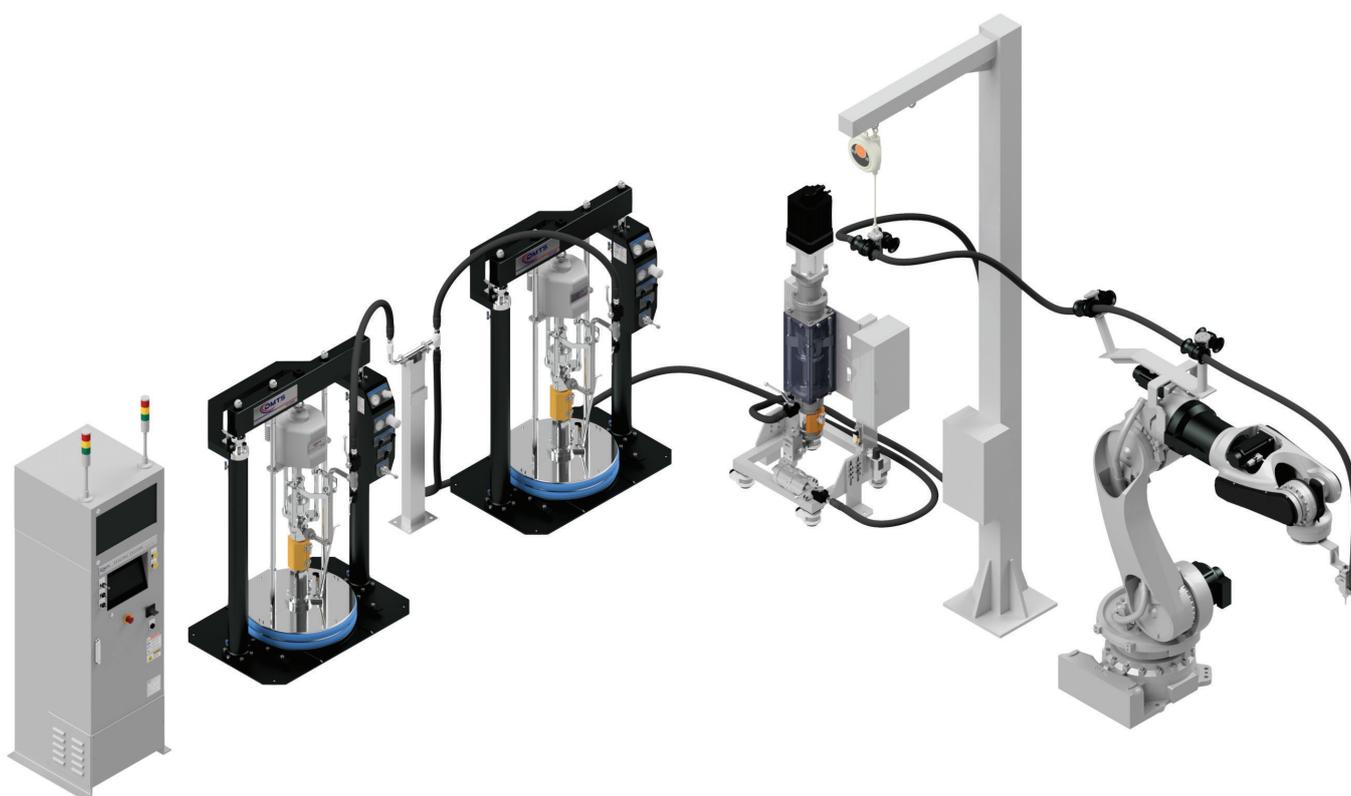
5,000rpm~9,000rpm Test (Application Height : 10mm, Application Speed : 300mm/s, Nozzle : $\varnothing 0.8$)



At the same flow rate (1.0cc), as the nozzle rotation speed increases, the application width narrows, showing an inverse proportional relationship

MASTIC Sealing System

Applying mastic sealer between the outer and inner panels of the body panel Filling, adhesion, and antivibration by foaming and curing



Controller Option
H : 1,360(SEALING)
H : 1,740(Sealing+Vision)

PUMP OPTION
5 gal
55gal

BOOSTER OPTION
200cc
500cc
AOPR Type

GUN OPTION
Extrude 100
Extrude 150
Extrude 200

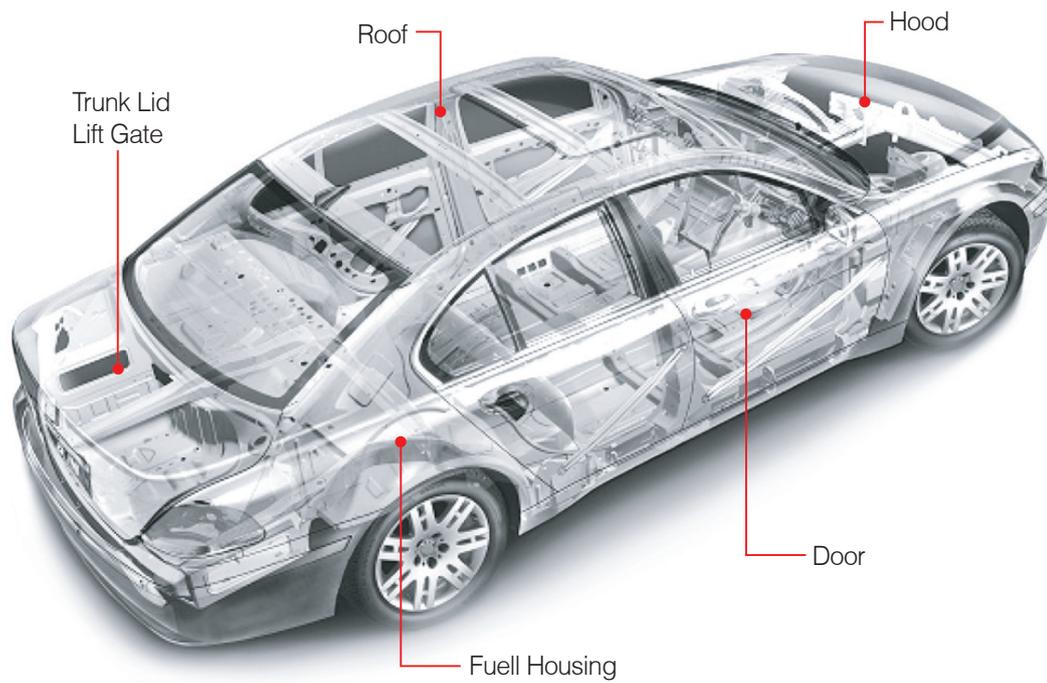
Equipment Features

Application type	Discharge flow	Discharge pressure	Application speed	Flow Control Method	Flow control accuracy
Extrude	Max 20cc/sec	Max 200bar	Max 500mm/sec	Servo Volume control	±1%

05

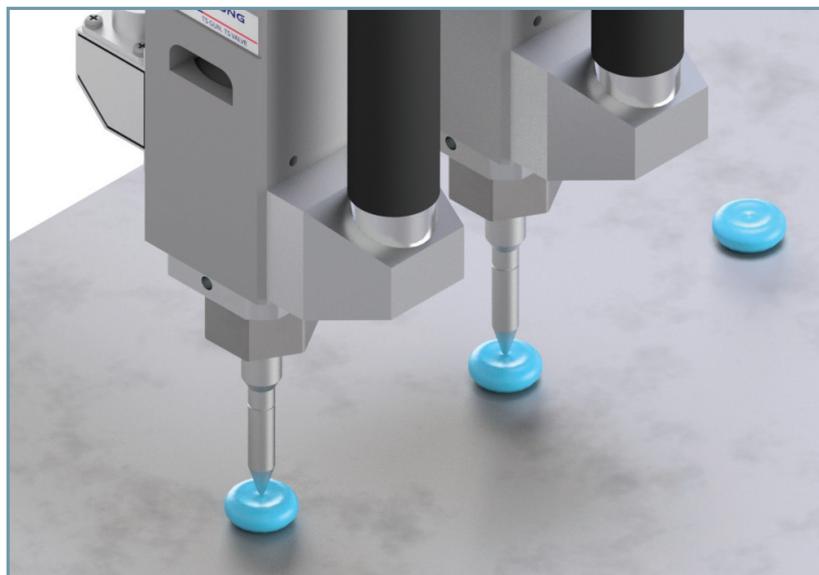
MASTIC Sealing System

Application part



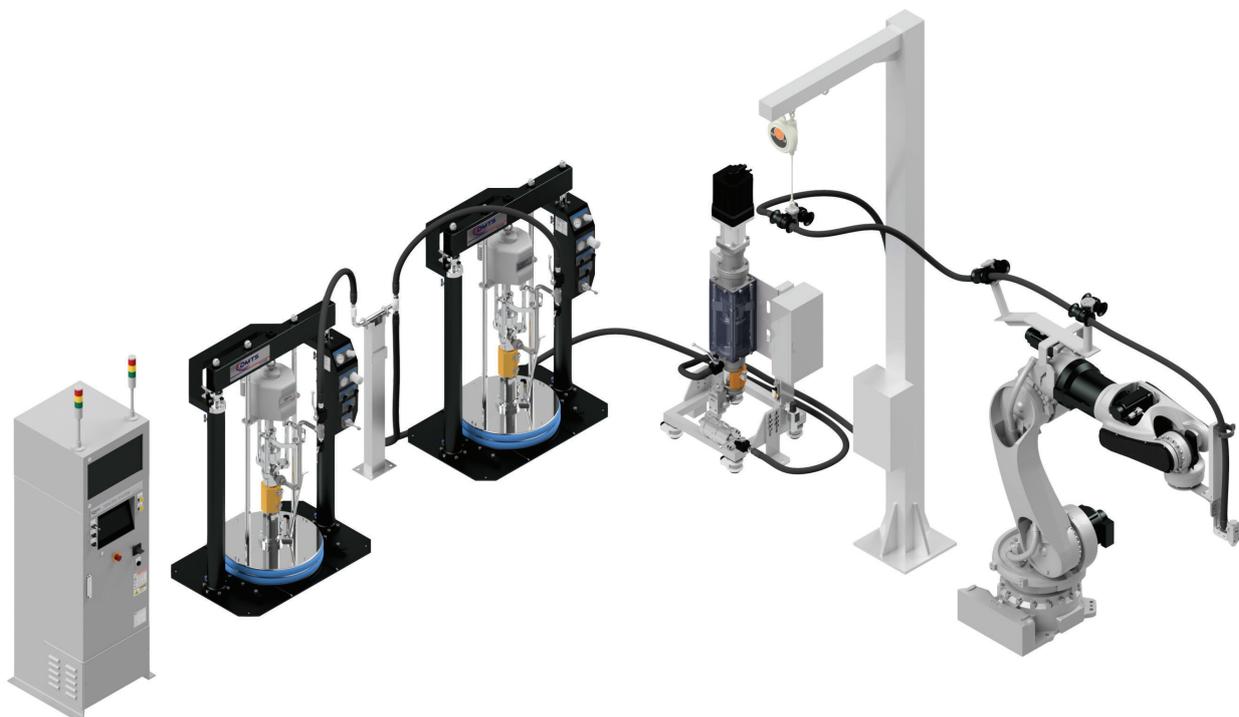
Application type

Applied in the extrude type, available to implement various application forms such as dot or line application



BPR Sealing System

Applying BPR sealer to the weak part of the body panel
Used for panel reinforcement and antivibration



Controller Option
H : 1,360(SEALING)
H : 1,740(Sealing+Vision)

PUMP OPTION
5 gal
55gal

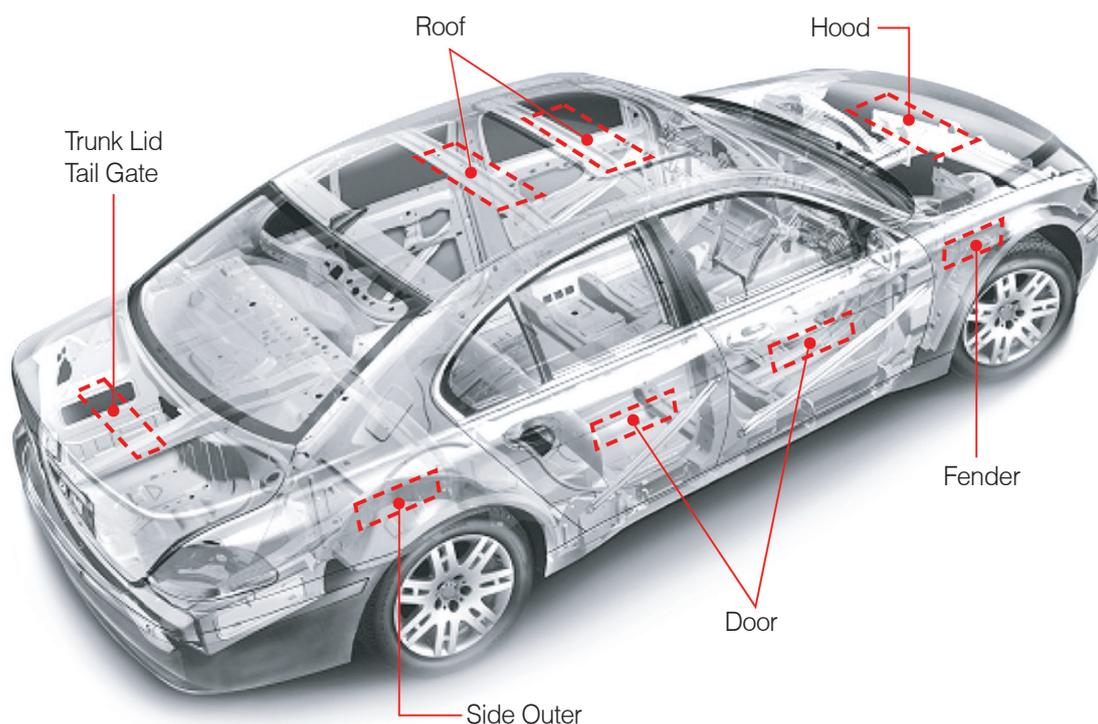
BOOSTER OPTION
500cc

GUN OPTION
Extrude 100
Extrude 150
Extrude 200

Equipment Features

Application type	Discharge flow	Discharge pressure	Application speed	Flow Control Method	Flow control accuracy
Flat Stream	Max 120cc/sec	Max 200bar	Max 700mm/sec	Servo Volume control	±1%

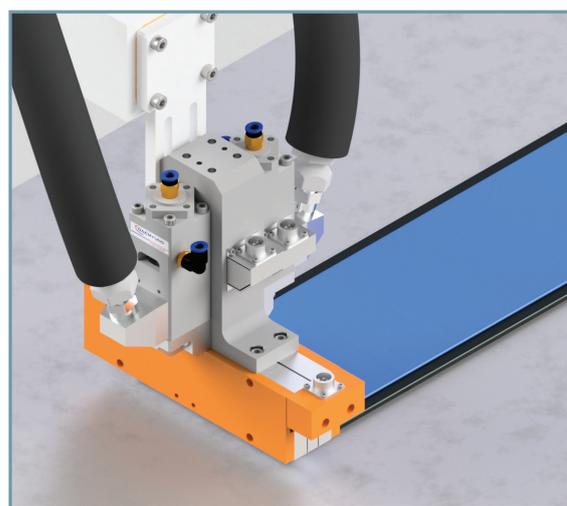
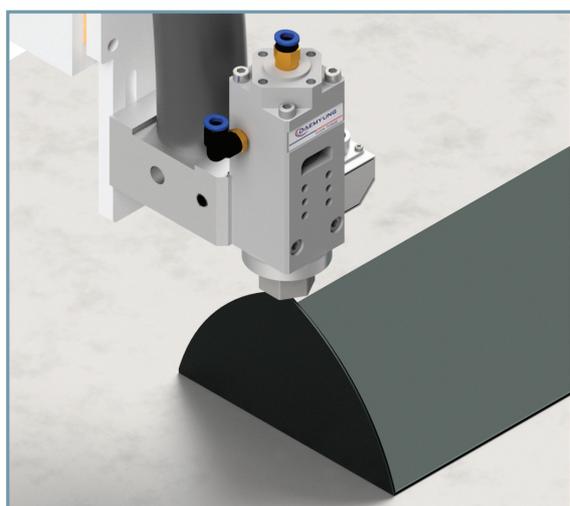
Application part



Application type

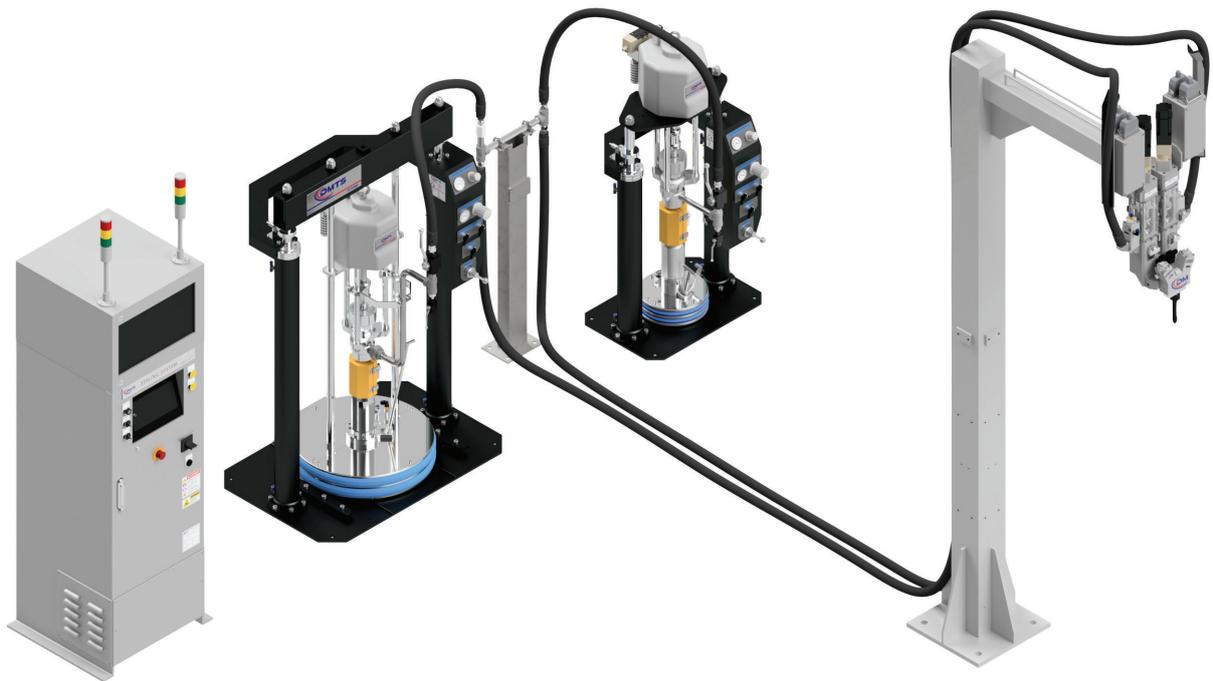
BPR : High-viscosity sealer is heated to the working temperature to lower the viscosity and applied in a flat stream type with high pressure, applicable to curved surfaces and areas with steps

Double BPR : Double-coated epoxy material on the rubber material to prevent dent phenomenon. Extruded type coating method rather than spray type



2K Sealing System

Natural curing at room temperature by mixing resin and hardener.
 Bonding to dissimilar materials that could not be bonded with structure adhesive is available.



Controller Option
H : 1,360(SEALING)
H : 1,740(Sealing+Vision)

PUMP OPTION
5 gal
55gal

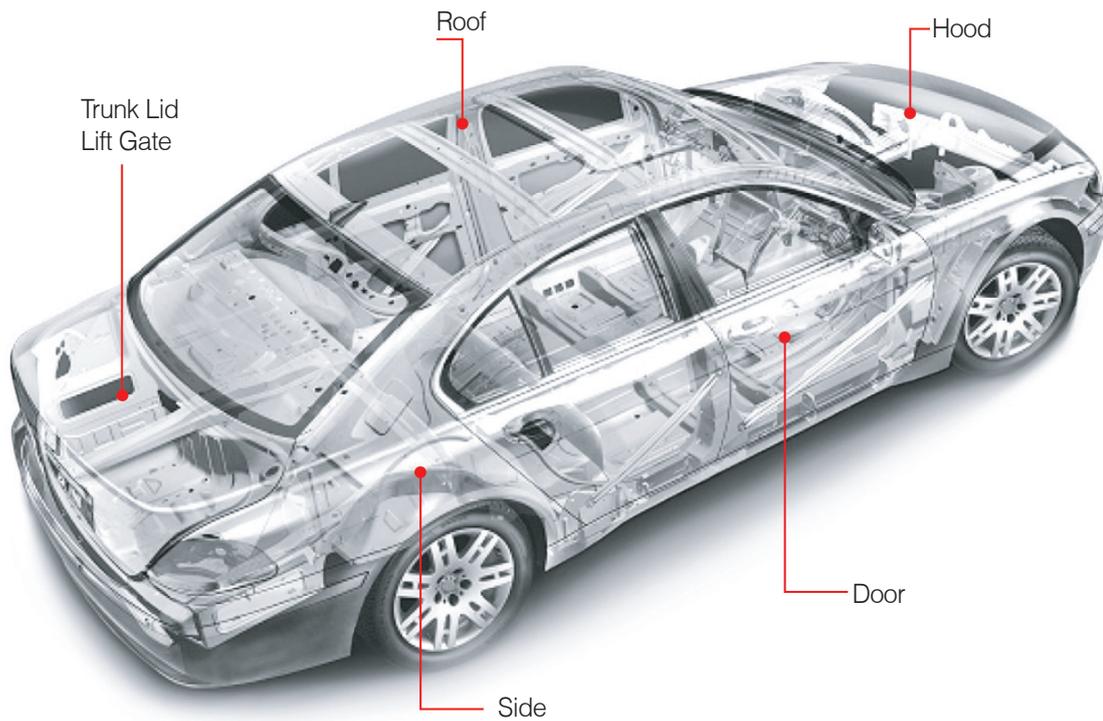
BOOSTER OPTION	
Resin	Hardener
50cc	50cc
100cc	100cc
150cc	150cc
200cc	200cc

GUN OPTION
2k Gun

Equipment Features

Application type	Discharge flow	Discharge pressure	Application speed	Flow Control Method	Flow control accuracy
Extrude	Max 20cc/sec	Max 200bar	Max 700mm/sec	Servo Volume control	±1%

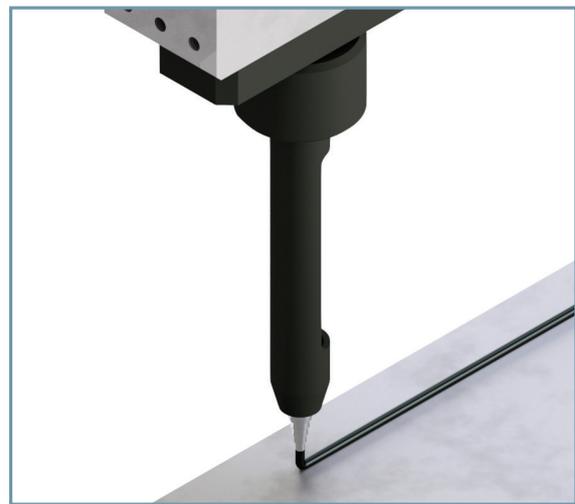
Application part



Application type

2k sealing is applied in the extrude method and can be applied overall to the structural adhesive application area.

It can be applied in various ways depending on the usage.



Booster Line Up

The Servo Booster is equipped with functions necessary for quantitative application (initial pressure control, constant flow rate discharge control, application flow rate check). Servo Booster uses a sealed space filled with a sealer, so the pressure, pulsation and resistance (pipeline resistance) of the primary supply pump do not affect the application quality.

TS Booster 50



TS Booster 100



TS Booster 50

Stroke	70mm
Booster capacity	50cc
Charge pressure	Max 200bar
Discharge flow rate	20cc/sec
Dimension	250 X 300 X 870

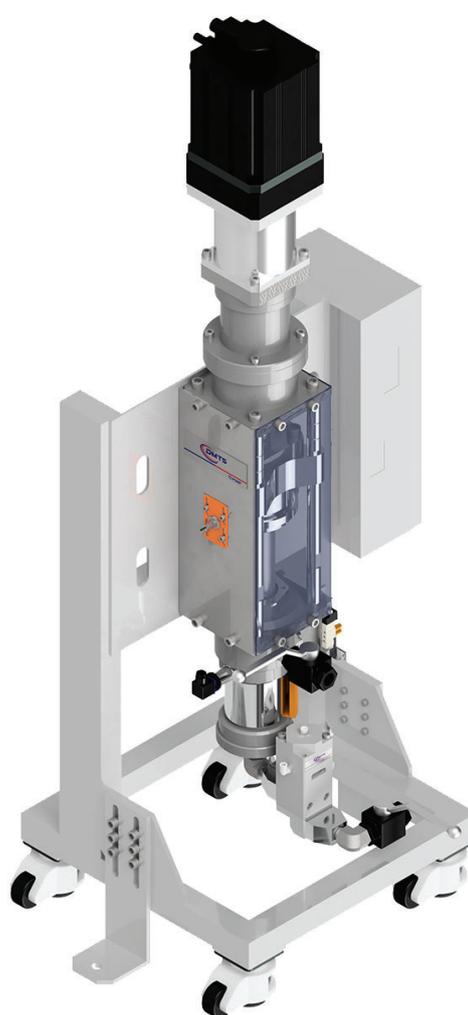
TS Booster 100

Stroke	141mm
Booster capacity	100cc
Charge pressure	Max 200bar
Discharge flow rate	20cc/sec
Dimension	250 X 308 X 1200

TS Booster 200



TS Booster 500



TS Booster 200

Stroke	102mm
Booster capacity	200cc
Charge pressure	Max 200bar
Discharge flow rate	40cc/sec
Dimension	314 X 423 X 1185

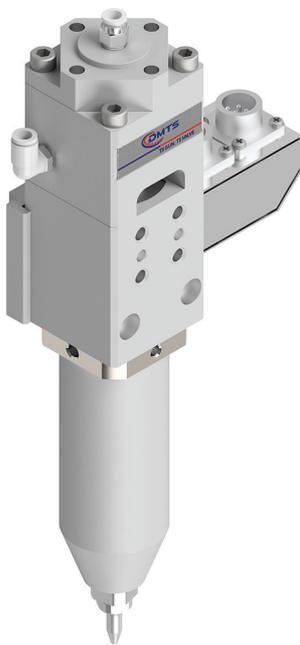
TS Booster 500

Stroke	150mm
Booster capacity	500cc
Charge pressure	Max 200bar
Discharge flow rate	120cc/sec
Dimension	790 X 644 X 1790

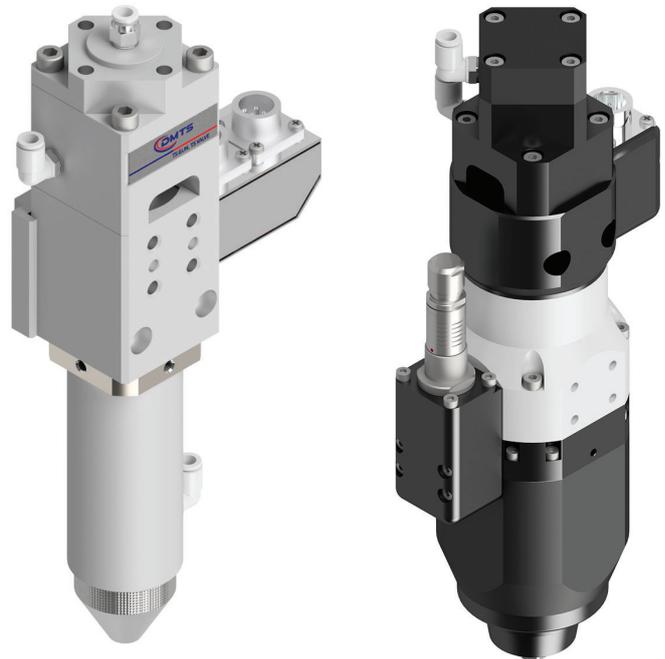
Gun Line Up

DMTS Gun has various application patterns such as Extrude, Dot, Flat stream and Swirl. One pneumatic actuator is mounted, and sealer is discharged through actuator On/Off control.

TS Extrude 100



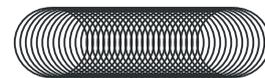
TS Swirl



Application morphology



Application morphology



TS Extrude 100

Stroke	2mm
Proper operating pressure	3~5bar
Discharge pressure	Max 300bar
Weight	1.5kg
Dimension	130 X 60 X 300

Air-Swirl

Pattern width	3~15mm
Distance from panel	25~35mm
Discharge pressure	Max 300bar
Weight	1.5kg
Dimension	130 X 60 X 300

M-Swirl

Pattern width	3~15mm
Distance from panel	10~50mm
Discharge pressure	Max 200bar
Weight	2kg
Dimension	413 X 118 X 108

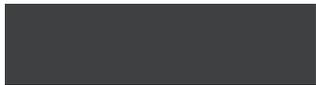
09

Gun
Line Up

TS Flat Stream



Application morphology



TS Flat Stream

Stroke	2mm
Proper operating pressure	3~5bar
Discharge pressure	Max 300bar
Weight	1.5kg
Dimension	115 X 140 X 189

TS 2k Gun



Application morphology



TS 2k Gun

Stroke	2mm
Proper operating pressure	3~5bar
Discharge pressure	Max 300bar
Weight	2kg
Dimension	220 X 85 X 220



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Printed in Mar. 2023

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