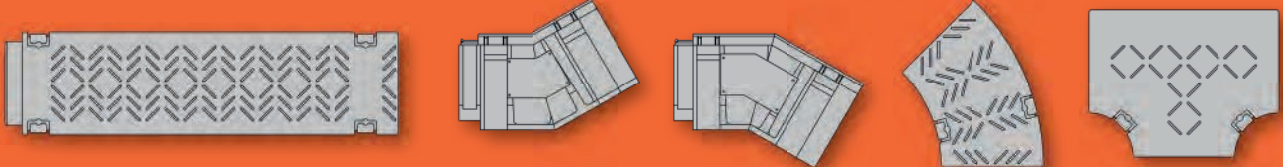




**TECHNICAL SPECIFICATION**



Powered by  **FURUKAWA ELECTRIC GROUP**





FURUKAWA ELECTRIC CO., LTD.

2-3 Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8322, Japan

Specification  
No. PR-15005C

SPECIFICATION  
FOR  
GREEN TROUGH (CABLE TROUGH)  
-Screw Type-

FURUKAWA ELECTRIC CO., LTD.  
Engineering & Development Department  
Pipe Products Department  
Functional Plastics Div.



1. Scope

This specification applies to Trough made by synthetic resin (hereinafter called the “Green Trough”).

2. Structure

The structure and component of the straight Trough are as shown in Figure 1 & 2 and Table 1.

The color tone is purposely designed to be similar to Concrete (grey color).

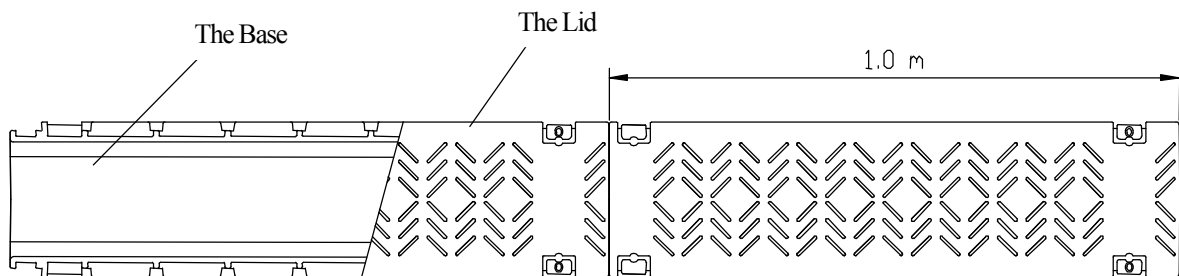


Figure 1. Structure (Assembly drawing of G90,G135,150B,200B,300B)

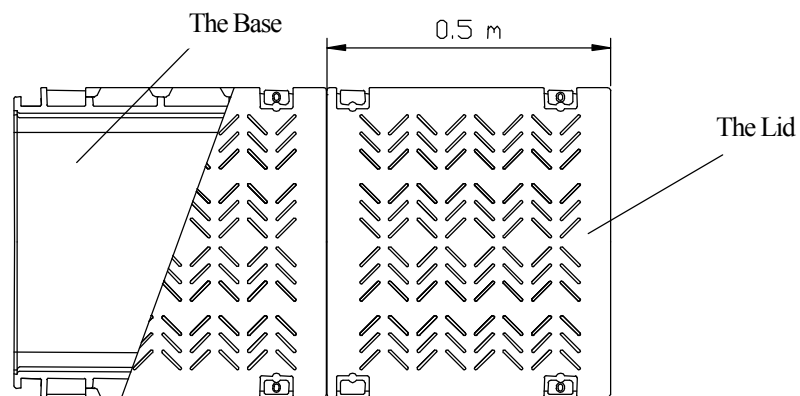


Figure 2. Structure (Assembly drawing of 430C)

Table 1. Component

Member subject	Quantity	Quality of material
The Lid	1 Piece	Basic material : Recycled Polyethylene(PE), Recycled Polypropylene (PP), Inorganic filler, etc..
The Base	1 Piece	

Note : For the Lid fixed, Please use the Screw (Appendix 7) .



### 3. Performance

The performance of the Trough is as shown in Table 2

Table 2 Performance

Item	Test method	Performance
Dimensions	4.1	As shown in Appendix
Compressive strength	4.2	In condition 4.9kN/500mm, no crack or crevice shall appear in any part.
Flame retardance	4.3	After having removed the source flame in the fire-retardant test of JESC E 7003 (2005), it extinguishes on the product within 60 seconds.
Chemical resistance	4.4	A rate of weight change shall be 1% or less after soaking in water solution of 30%CaCl <sub>2</sub> in a test method of JIS K 7114-ISO175

### 4. Test method

#### 4.1 Dimensions

The each parts of the Trough will be measured with a steel tape measure at normal temperature (20±10 degrees Centigrade)

#### 4.2 Compressive strength

As shown in Figure 3. , the Trough with lid shall be added a linear load of more than 4.9kN/500 mm at a rate of 20 mm/min.

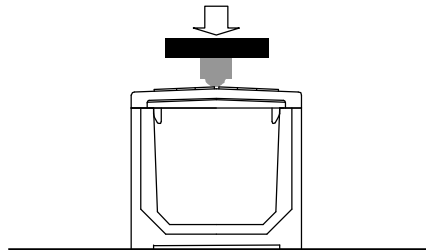


Figure 3. Illustration of compressive test

#### 4.3 Flame retardance

Based on the test method of JESC E 7003 : 2005 ("flame retardance in combination with self-extinguishing properties", JESC : Japan Electro technical Standards and Codes Committee), prepare the specimen of about 300mm from the final product of the Trough. And support this specimen horizontally and the central part of the specimen is burnt with a Bunsen burner which is about 130mm of the oxidizing flame. After having removed the flame, confirm that it disappears spontaneously within 60 seconds.



#### 4.4 Chemical resistance

Follow to the test method of JIS K 7114 - ISO 175 (Chemical resistance test), prepare the specimen from the final product of the Trough. And soak the specimen in 30% calcium chloride water solution for 24 hours and measure the mass of the specimen before and after the examination. Calculate a rate of weight change by the following the expression.

$$M = \frac{M2 - M1}{M1} \times 100$$

M : A rate of weight change [%]

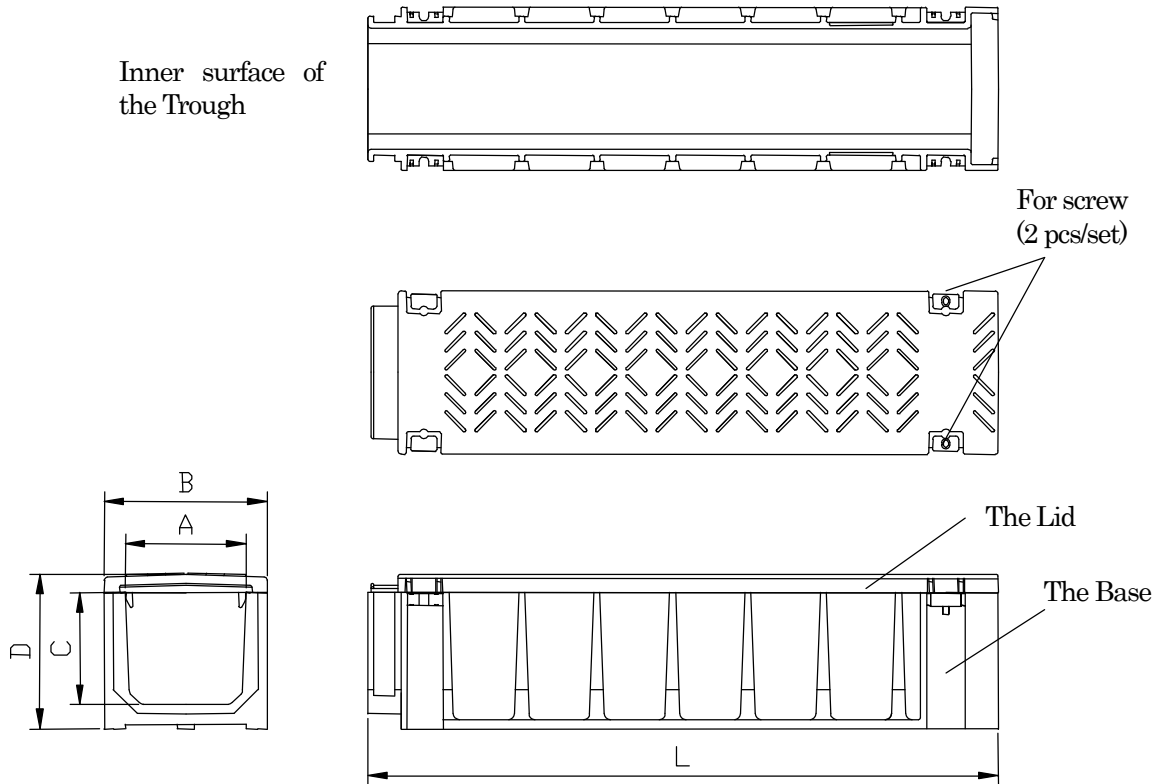
M1 : A mass of the specimen before the test [mg]

M2 : A mass of the specimen after the test [mg]

The Appendices on the following pages detail the sizing and part numbers for the available units in the range.



Appendix1 Straight Trough

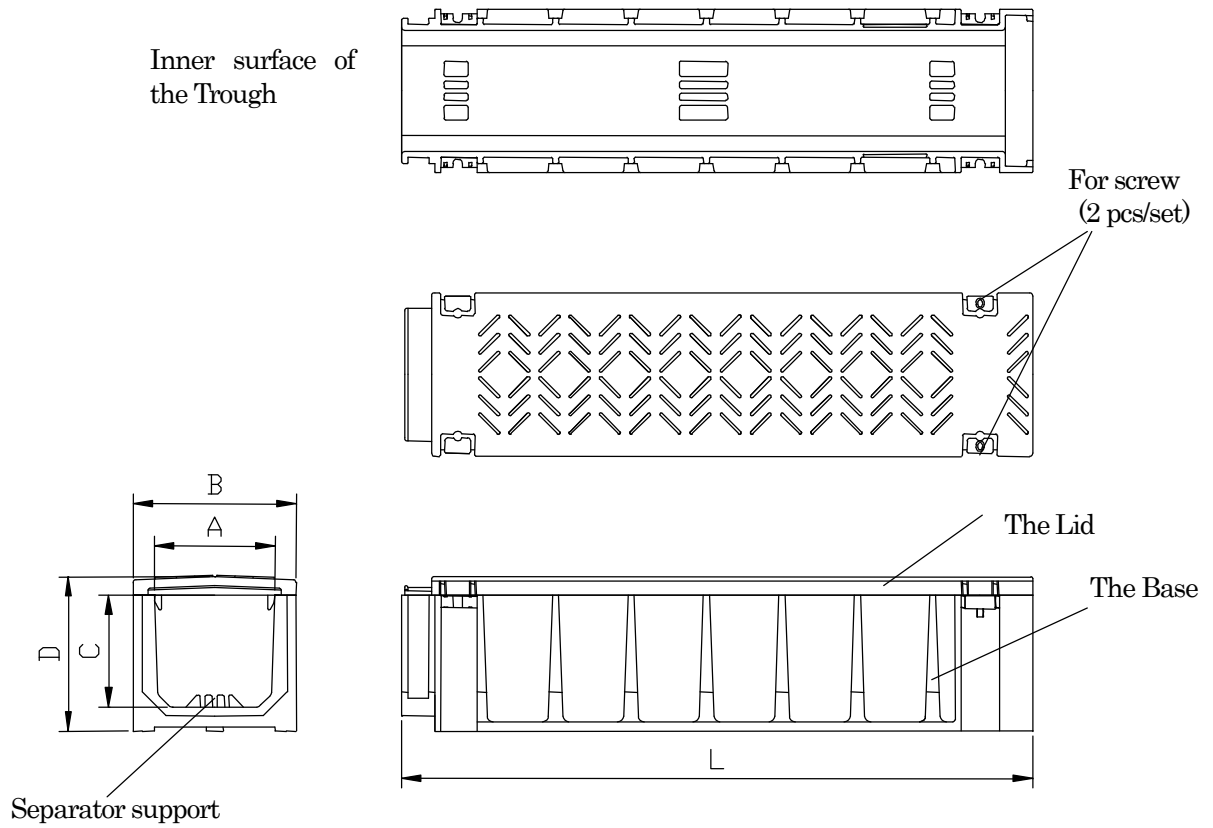


(Unit : mm)

Size	Part No.	A	B	C	D	L
G90	GT-L090G-S00-G	90±8	120±8	100±8	136±10	1035 <sup>+30</sup> <sub>-10</sub>
G135	GT-L135G-S00-G	135±8	170±8	125±8	170±10	1035 <sup>+30</sup> <sub>-10</sub>
150B	GT-L150B-S00-G	160±8	210±8	135±8	190±10	1035 <sup>+30</sup> <sub>-10</sub>
200B	GT-L200B-S00-G	200±8	270±8	185±8	255±10	1045 <sup>+30</sup> <sub>-10</sub>
300B	GT-L300B-S00-G	300±8	390±8	175±8	265±10	1045 <sup>+30</sup> <sub>-10</sub>
430C	GT-L430C-S00-G	450±8	540±8	255±8	360±10	545 <sup>+30</sup> <sub>-10</sub>



Appendix2 Straight Trough Multiple-hole type



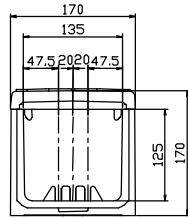
(Unit : mm)

Size	Part No.	A	B	C	D	L
G135	GT-L135G-SF0-G	135±8	170±8	125±8	170±10	1035 <sup>+30</sup> <sub>-10</sub>
150B	GT-L150B-SF0-G	160±8	210±8	135±8	190±10	1035 <sup>+30</sup> <sub>-10</sub>
200B	GT-L200B-SF0-G	200±8	270±8	185±8	255±10	1045 <sup>+30</sup> <sub>-10</sub>
300B	GT-L300B-SF0-G	300±8	390±8	175±8	265±10	1045 <sup>+30</sup> <sub>-10</sub>
430C	GT-L430C-SF0-G	450±8	540±8	255±8	360±10	545 <sup>+30</sup> <sub>-10</sub>

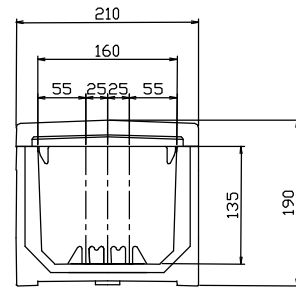


[Reference dimensions : Straight Trough Multiple-hole type The location of Separator support]

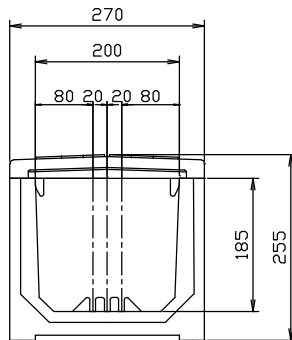
Size G135



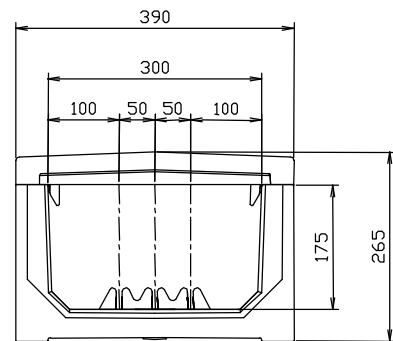
Size 150B



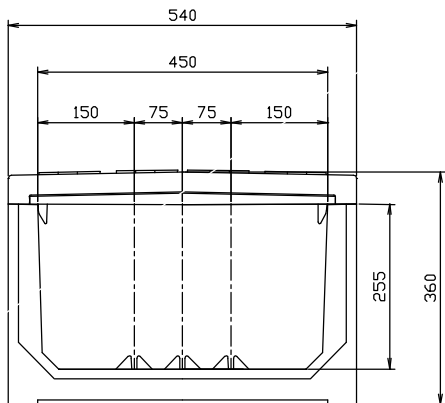
Size 200B



Size 300B



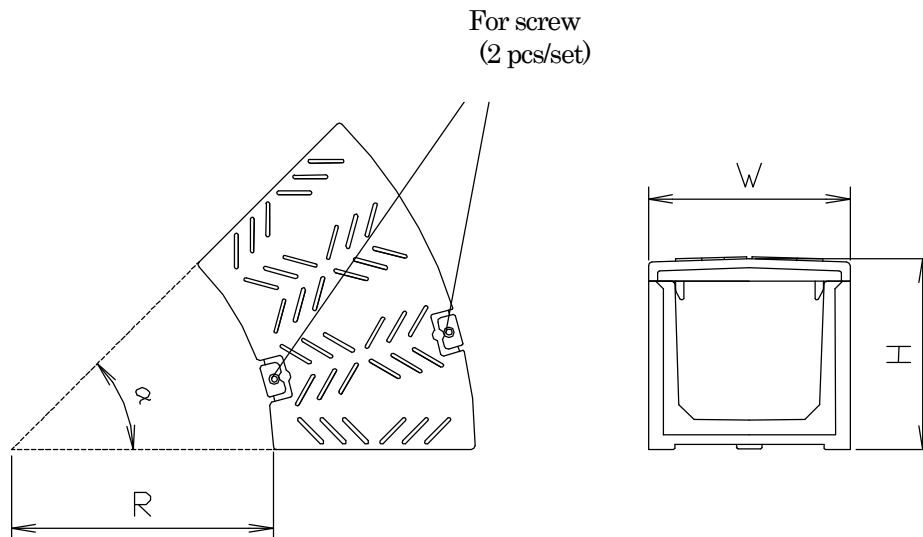
Size 430C







Appendix3 45-degree angle Trough



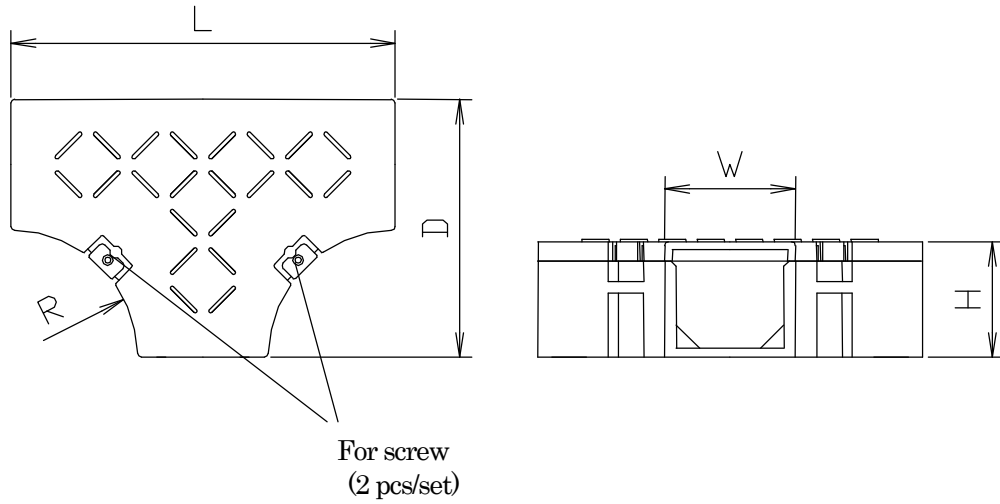
(Unit : mm)

Size	Part No.	W	H	$\alpha$	R
G90	GT-C090G-S00-G	120±8	136±10	45°	350
G135	GT-C135G-S00-G	170±8	170±10		
150B	GT-C150B-S00-G	210±8	190±10		
200B	GT-C200B-S00-G	270±8	255±10		
300B	GT-C300B-S00-G	390±8	265±10		
430C	GT-C430C-S00-G	540±8	360±10		

Accessory : Male-male adaptor : 1 set



Appendix4 Tjunction Trough



(Unit : mm)

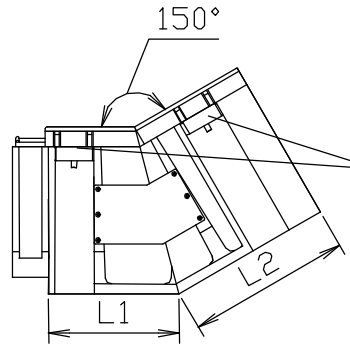
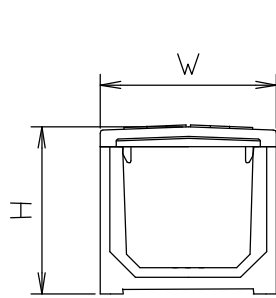
Size	Part No.	L	D	W	H	R
G90	GT-T090G-S00-G	600±20	360±20	120±8	136±10	190
G135	GT-T135G-S00-G	600±20	385±20	170±8	170±10	165
150B	GT-T150B-S00-G	500±20	355±20	210±8	190±10	145
200B	GT-T200B-S00-G	500±20	385±20	270±8	255±10	115
300B	GT-T300B-S00-G	600±20	495±20	390±8	265±10	105
430C	GT-T430C-S00-G	730±20	635±20	540±8	360±10	80

Accessory : Male-male adaptor : 1 set



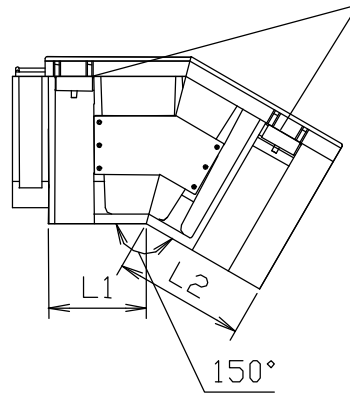
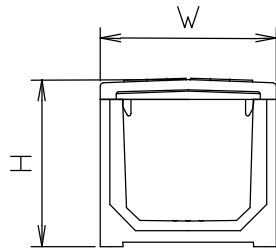
Appendix5 Gradient Trough

Gradient Trough (Up)



For screw (4 pcs/set)

Gradient Trough (Down)



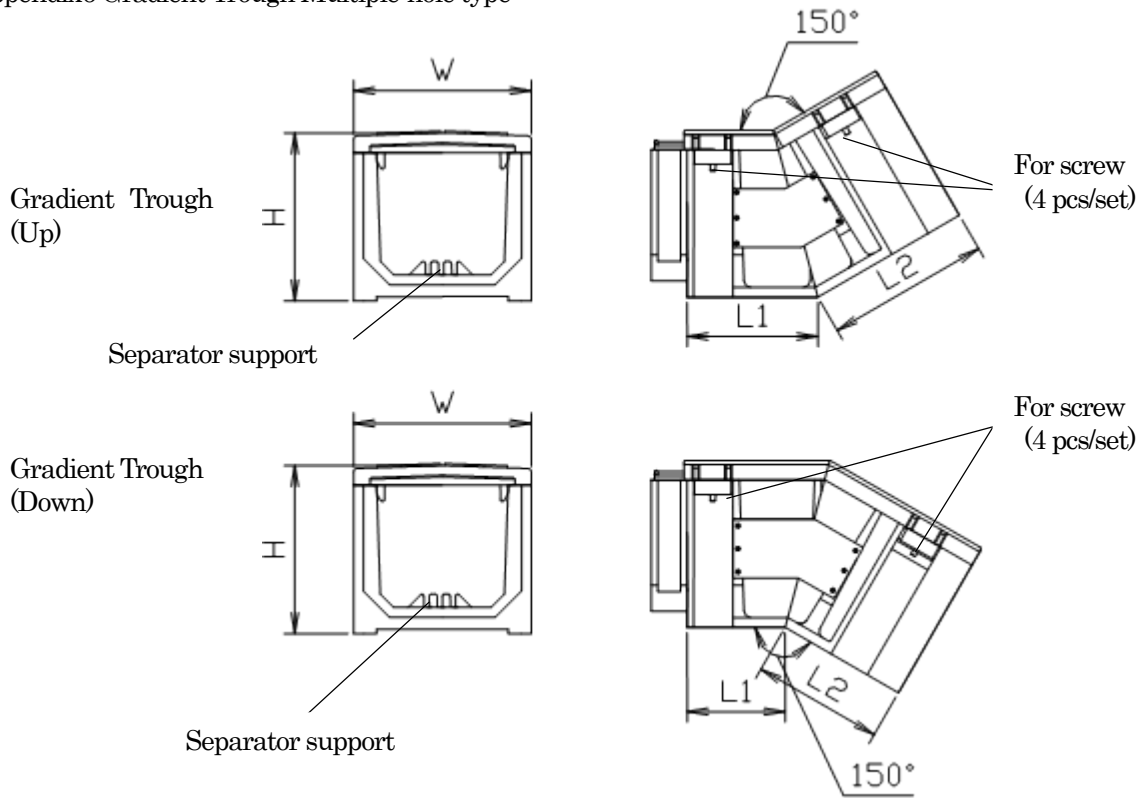
For screw (4 pcs/set)

(Unit : mm)

Part name	Size	Part No.	W	H	L1	L2
Gradient Trough (Up)	G90	GT-U090G-S00-G	120±8	136±10	300±10	350±10
	G135	GT-U135G-S00-G	170±8	170±10		
	150	GT-U150B-S00-G	210±8	190±10		
	200B	GT-U200B-S00-G	270±8	255±10	200±10	250±10
	300B	GT-U300B-S00-G	390±8	265±10		
	430C	GT-U430C-S00-G	540±8	360±10		
Gradient Trough (Down)	G90	GT-D090G-S00-G	120±8	136±10	250±10	300±10
	G135	GT-D135G-S00-G	170±8	170±10		
	150B	GT-D150B-S00-G	210±8	190±10		
	200B	GT-D200B-S00-G	270±8	255±10	150±10	200±10
	300B	GT-D300B-S00-G	390±8	265±10		
	430C	GT-D430C-S00-G	540±8	360±10		



Appendix6 Gradient Trough Multiple-hole type



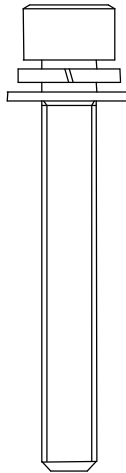
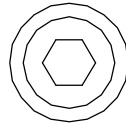
(Uni : mm)

Part name	Size	Part No.	W	H	L1	L2
Gradient Trough(Up) Multiple-hole type	G135	GT-U135G-SF0-G	170±8	170±10	300±10	350±10
	150B	GT-U150B-SF0-G	210±8	190±10		
	200B	GT-U200B-SF0-G	270±8	255±10	200±10	250±10
	300B	GT-U300B-SF0-G	390±8	265±10		
	430C	GT-U430C-SF0-G	540±8	360±10		
Gradient Trough(Down) Multiple-hole type	G135	GT-D135G-SF0-G	170±8	170±10	250±10	300±10
	150B	GT-D150B-SF0-G	210±8	190±10		
	200B	GT-D200B-SF0-G	270±8	255±10	150±10	200±10
	300B	GT-D300B-SF0-G	390±8	265±10		
	430C	GT-D430C-SF0-G	540±8	360±10	100±10	150±10



## Appendix7 Screw

Hexagonal head fitting supplied as standard



Other head types available upon request

Examples;

- Snake eye

Size	Part No.	Type of Screw	Security Level
For G90,G135	GT-BS20	CAP SEMS P3 M5L20	Standard
For150B,200B,300B, 430C	GT-BS45	CAP SEMS P3 M6L45	Standard
For150B,200B,300B, 430C	GT-BH42	CAP Snake Eye M6L42	High

Use for Straight Trough, 45-degree angle Trough, Tjunction Trough, Gradient Trough (Up & Down).

The number of the standard use:

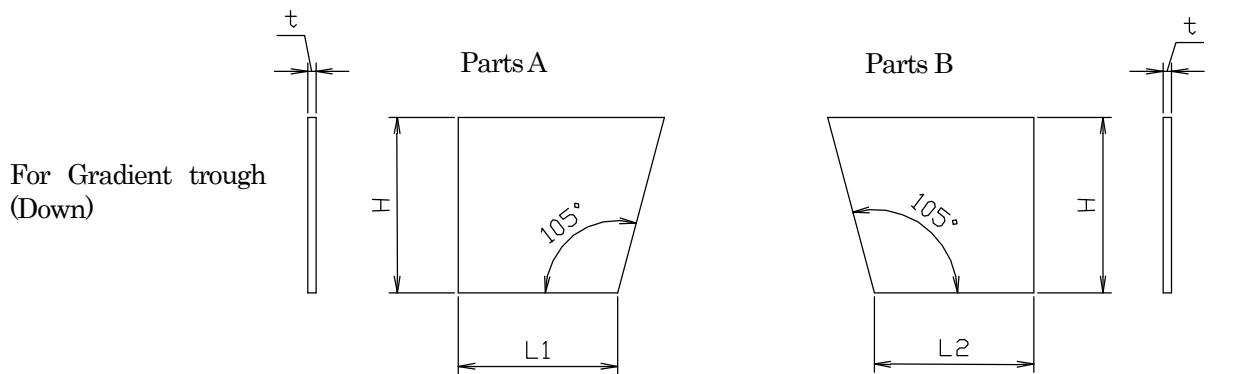
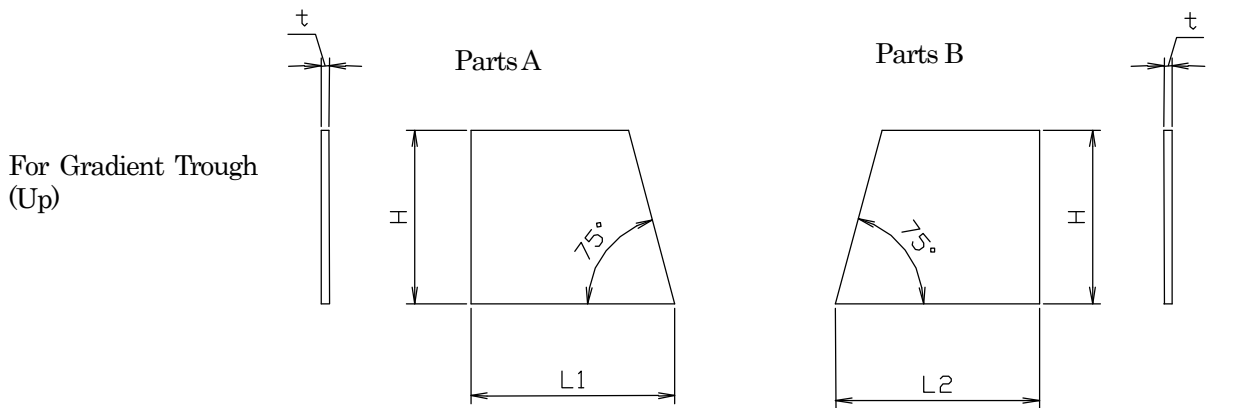
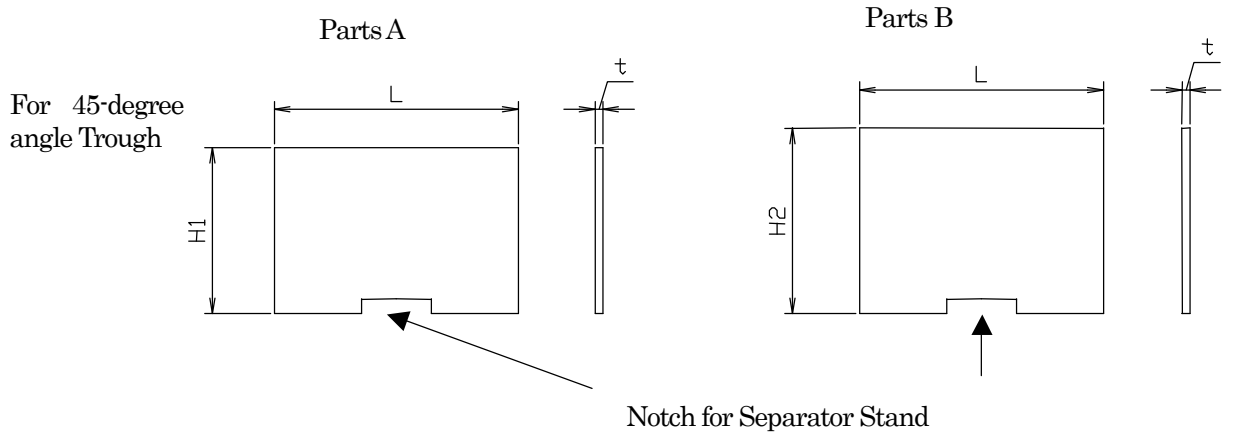
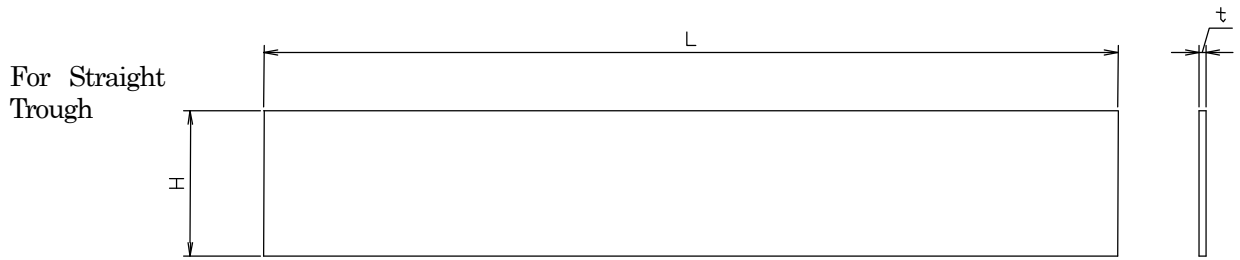
2 parts / Trough : Straight Trough, 45-degree angle Trough, Tjunction Trough

4 parts / Trough : Gradient Trough (Up & Down)

Material: Stainless steel.



Appendix8 Separator



\*The number of usage:  
2 parts(Parts A &B) / set : For 45-degree angle Trough, For Gradient Trough



(Unit : mm)

Part name		Part No.	L	H	t
Separator (For Straight Trough)	For G135,150B	GT-SP150B-L	1000±5	117±5	8±1
	For 200B,300B	GT-SP200B-L		167±5	
	For 430C	GT-SP430C-L	500±5	247±5	

(Unit : mm)

Part name		Part No.	L	H1	H2	t
Separator (For 45-degree angle Trough)	For G135,150B	GT-SP150B-C	250±5	117±5	130±5	8±1
	For 200B	GT-SP200B-C		167±5	187±5	
	For 300B	GT-SP300B-C		184±5	184±5	
	For 430C	GT-SP430C-C	500±5	247±5	267±5	

\*In case of usage Separator for 45-degree angle Trough, need to [Separator Stand] separately.

\*Set the target length and use the Separator with cutting.

(Unit : mm)

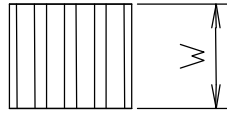
Part name		Part No.	L1	L2	H	t
Separator For Gradient Trough(Up)	For G135,150B	GT-SP150B-U	338±8	308±8	117±5	8±1
	For 200B,300B	GT-SP200B-U	244±8	194±8	167±5	
	For 430C	GT-SP430C-U	230±8	190±8	247±5	
Separator For Gradient Trough(Down)	For G135,150B	GT-SP150B-D	301±8	271±8	117±5	
	For 200B,300B	GT-SP200B-D	215±8	165±8	167±5	
	For 430C	GT-SP430C-D	160±8	118±8	247±5	

Material : Calcium silicate with fiber mixture cement

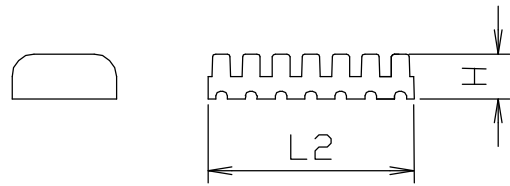
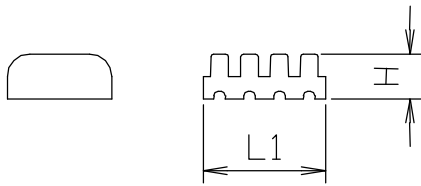
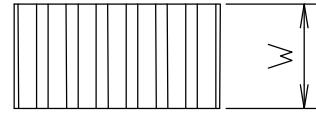


Appendix9 Separator Stand For 45-degree angle Trough

Parts A

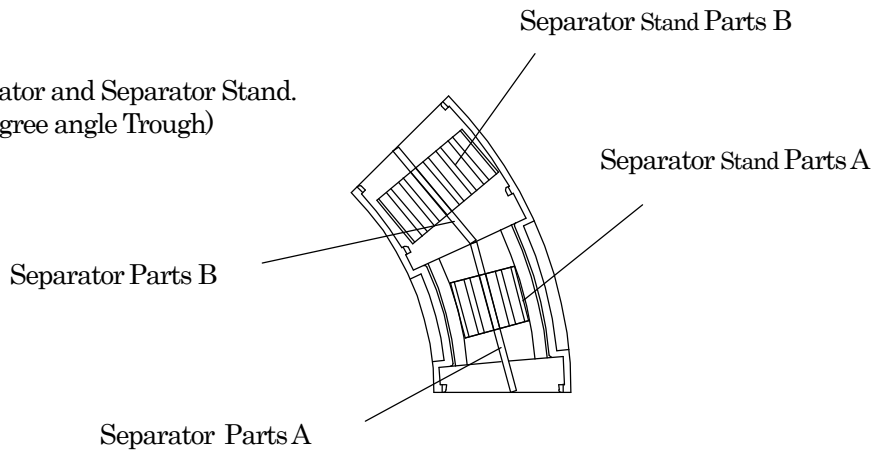


Parts B



\*The number of usage : 2 parts (Parts A & B) / set

Usage examples for Separator and Separator Stand.  
(Inner surface of the 45-degree angle Trough)



(Unit : mm)

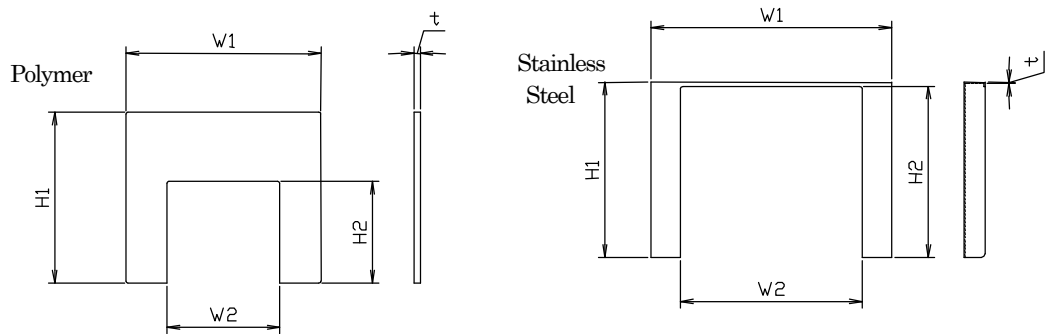
Part name	Size	Part No.	L1	L2	H	W
Separator Stand For 45-degree angle Trough	For G135	GT-ST135G-C	82±5	138±5	30±3	70±3
	For 150B	GT-ST150B-C	118±5	175±5		
	For 200B	GT-ST200B-C	155±5	219±5		
	For 300B	GT-ST300B-C	272±5	272±5		
	For 430C	GT-ST430C-C	405±5	405±5		

Main material: Recycled polymer  
Color: Black





Appendix10 Joint plate for different sizes (For 150B,200B,300B,430C)



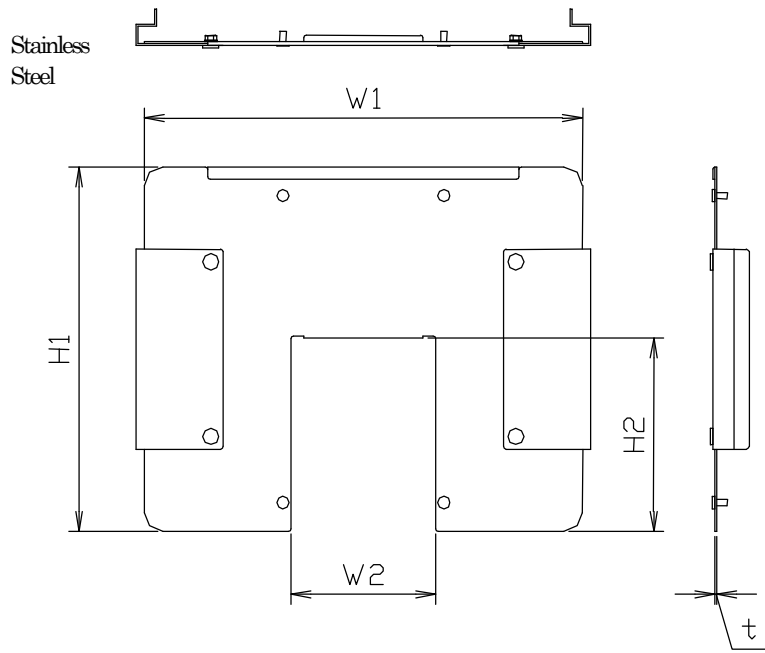
\*There are two materials, it depends on Sizes.

(Unit : mm)

Part No.	H1	H2	W1	W2	t (thickness)	Material
GT-SB200B-150B	213±5	165±5	245±5	178±5	8±3	Polymer
GT-SB300B-200B	220±5	215±5	358±5	229±5	1.5±0.5	Stainless
GT-SB300B-150B	215±5	165±5		178±5	8±3	Polymer
GT-SB430C-300B	300±5	220±5	510±5	335±5	8±3	Polymer
GT-SB430C-200B		225±5		229±5		
GT-SB430C-150B		165±5		178±5		



Appendix11 Joint plate for different sizes (For G90,G135)

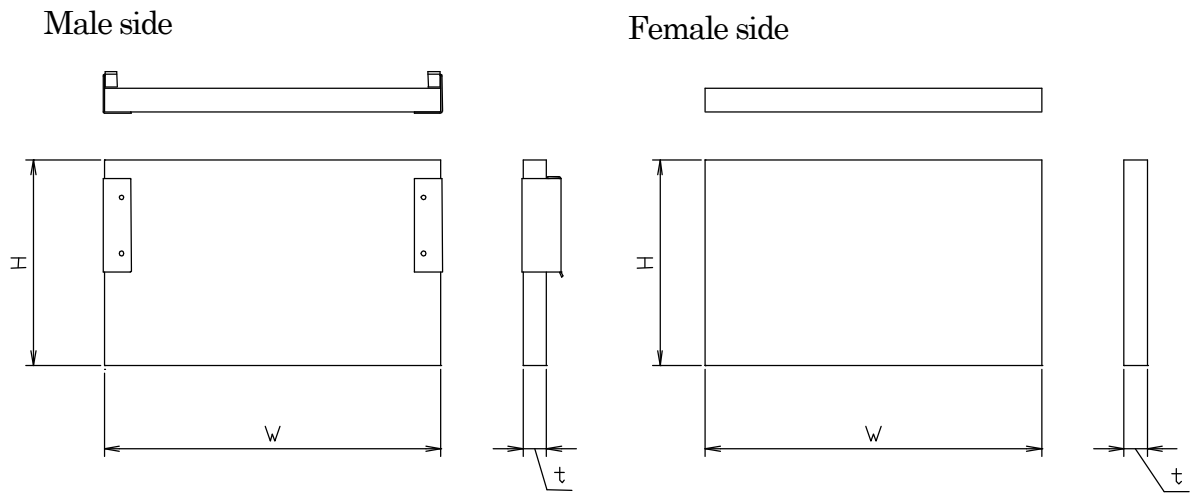


(Unit : mm)

Part No.	W1	W2	H1	H2	t
GT-SB200B-090G	234±5	116±5	219±5	155±5	1.5±0.5
GT-SB300B-135G	352±5		212±5	189±5	
GT-SB300B-090G			155±5		
GT-SB430C-135G	500±5		292±5	189±5	
GT-SB430C-090G			155±5		



Appendix12 End Plate



(Unit : mm)

Part name	Size	Part No.	H	W	t
End Plate For Male side	For G90	GTTB090G-M	105±5	119±5	23±3
	For G135	GTTB135G-M	153±5	148±5	
	For 150B	GTTB150B-M	160±5	194±5	
	For 200B	GTTB200B-M	215±5	243±5	
	For 300B	GTTB300B-M	215±5	356±5	
	For 430C	GTTB430C-M	300±5	508±5	
End Plate For Female side	For G90	GTTB090G-F	105±5	119±5	23±3
	For G135	GTTB135G-F	153±5	148±5	
	For 150B	GTTB150B-F	160±5	188±5	
	For 200B	GTTB200B-F	215±5	243±5	
	For 300B	GTTB300B-F	215±5	356±5	
	For 430C	GTTB430C-F	300±5	508±5	

The specifications described in this document are subject to change without notice for product improvement or other reasons.