



Metal Parts for Castable Refractories

 **NAMITAKIKO CO., LTD.**




Greeting



Since the founding of our company, we have been putting great effort into the production of metal parts for castable refractories, Anchor Metal, through continuous improvement for more than 40 years.

Taking advantage of this opportunity, we would like to express our gratitude for your sincere support and cooperation. At first, our anchor metal system was used for supporting castable refractories in industrial furnaces, but now they are widely used in a wide variety of industrial fields such as petrochemical plants, cement production facilities, and various incinerators represented by urban incinerators. By doing so, we have contributed to development of industrial society to the best of our ability. In order to deliver our products of a reliable quality at low cost by the delivery schedule requested by the customer, we strive to introduce leading-edge production equipment, improve production technology further, and accelerate information communication so that we can meet various demands of our customers.

It is our honor if you utilize our products for quality control and inventory management. Your continued support and guidance will be greatly appreciated.



Anchor Metal Materials

1. Major materials for anchor metals are as follows: Steel for general structure (iron), Stainless steel (SUS), and heat-resistant cast steel (SCH).
2. The anchor metal material is determined according to the furnace where the relevant refractory is used, or the working temperature of equipment.
3. The working temperature according to the anchor metal material is shown in the table below.
This information is just a general guide and could not apply to a certain situation depending on the working conditions of the equipment to be used or other particular circumstances.

Reference: Working temperature according to the material

Type	Regulations	Max. working temp.
	J I S	℃
Steel for general structure	SS 400	350
	SUS	
	SUS 430	750
	SUS 304	800
	SUS 304L	800
	SUS 316	800
	SUS 316L	800
	SUS 309S	1000
	SUS 310S	1100
	INCONEL 601	1300
SCH	SCH 13	1000
	SCH 22	1100

Anchor Metal Types

A. Castable refractory metal parts

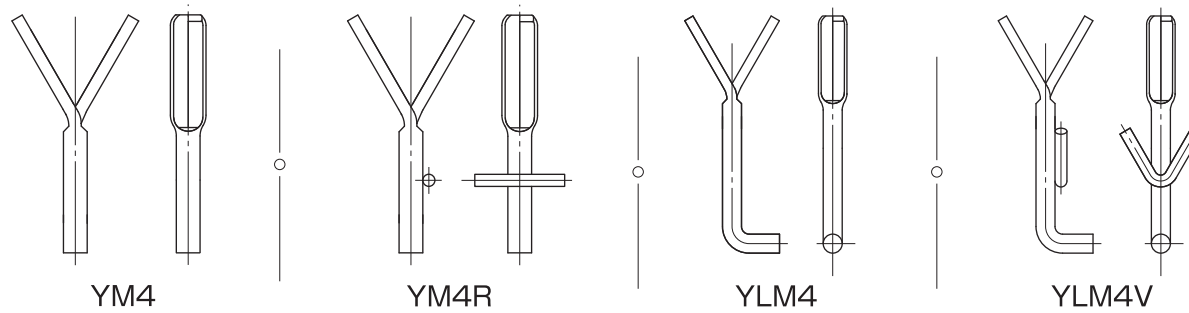
1. Castable metal parts (Namita type)

(1) YM4 - Cast flat type

One end of the round bar is pressed on a flat plate, and then the entire anchor is molded to the Y shape after solution heat treatment.

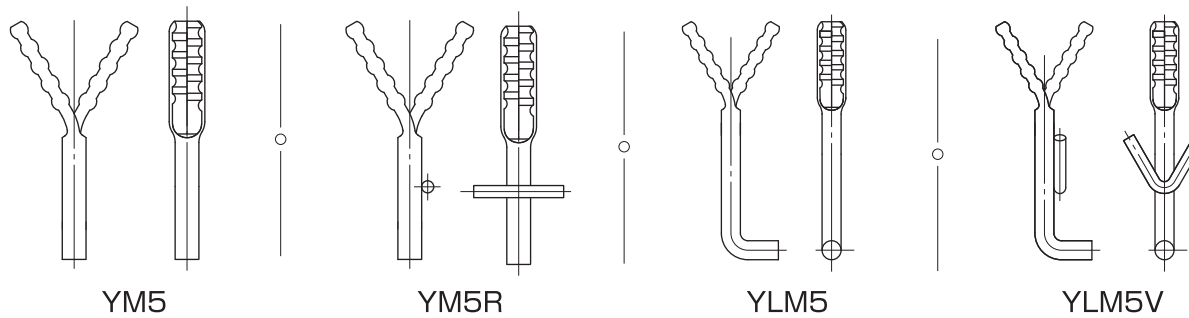
This type is advantageous in the following points when compared to YM1 (plate).

- The material is a round bar with less material loss.
- There is no direction for bending load.
- Automatic welding is supported (arc stud welding), with good workability and useful for plate working welding activity.
- Threading is available.



(2) YM5 - Cast corrugated type

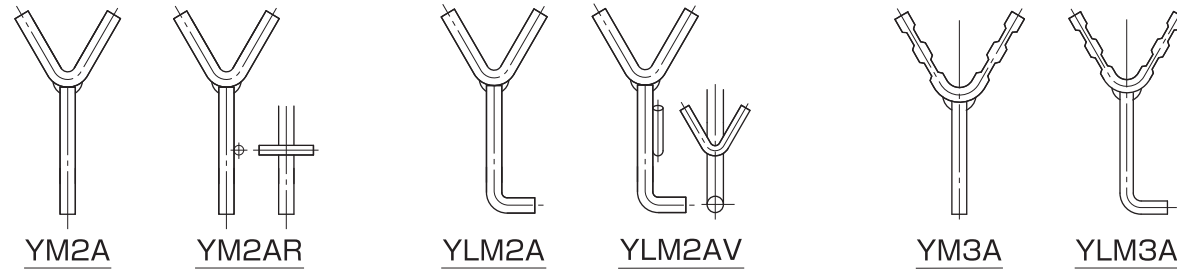
A modified version of YM4, with one end of the round bar pressed and corrugated.



2. Welded anchor metal

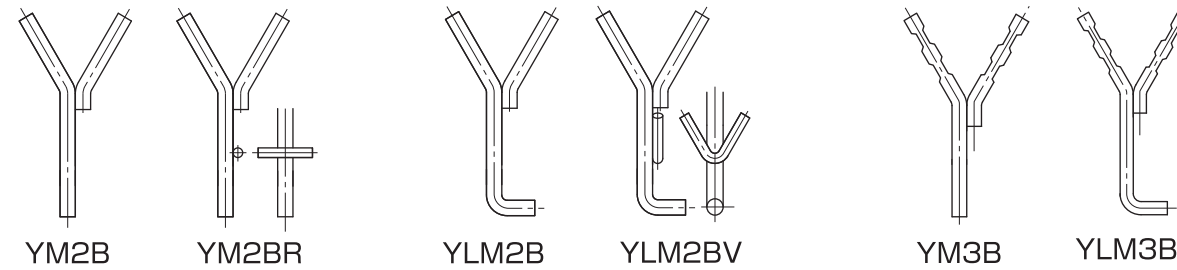
(1) Type A

A V anchor metal made with a round bar where the straight bar is welded.



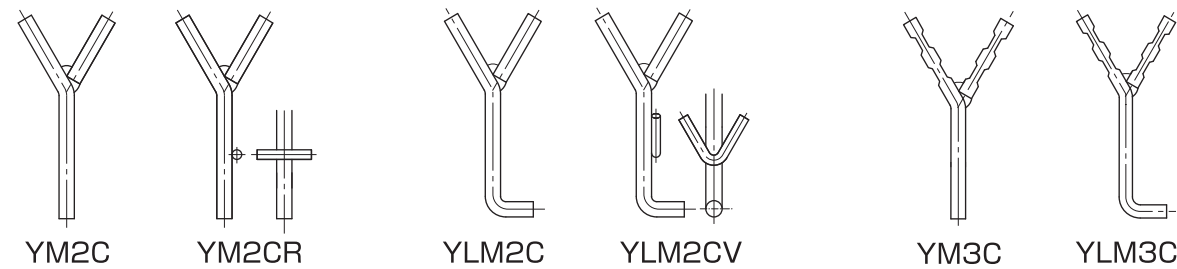
(2) Type B

An anchor metal made by welding two round bent bars.



(3) Type C

An anchor metal made by welding the round bent bar and the straight bar.



Anchor metals with the leg portion bent 90 degrees have a long welding portion with the plate body, which enhances the welding activity. Anchor metals with the straight bar or the V portion is welded to the leg has an increased holding force for castable refractories in each direction. The YM3 type is the version with corrugated V portion.

3. Two-stage anchor metal

Upper (U): The externally threaded leg of a Namita type anchor metal (YM4 and 5) or a welded anchor metal

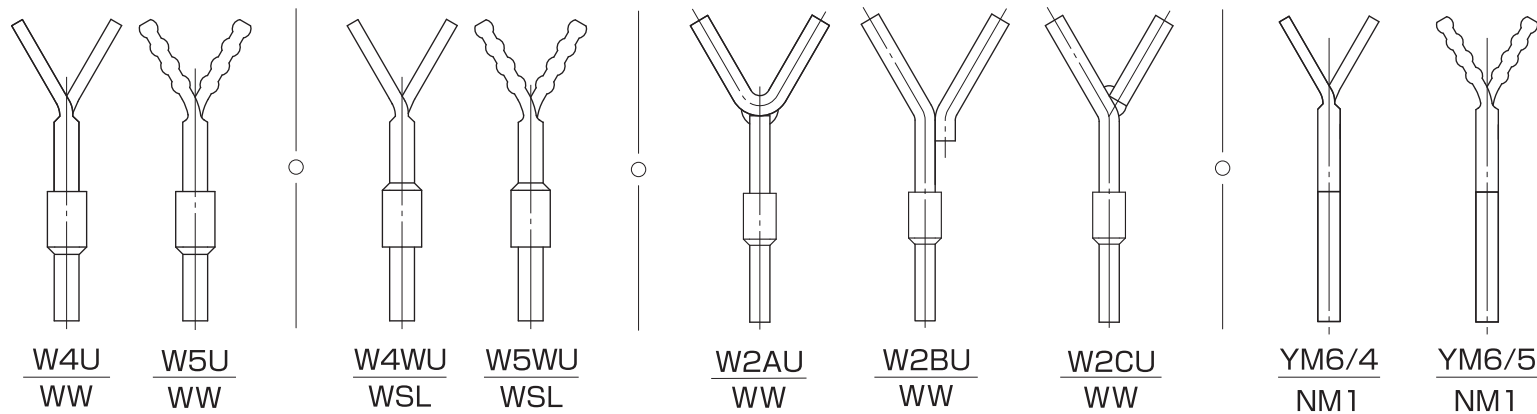
Lower (L): The one processed from a round bar with the special nut welded by after tighten screws, unlike traditional parts where a commercial nut is welded on the upper end of straight bar.

Another type, with the special nut on the upper part and the external thread on the lower part, can also be produced.

A three-stage anchor metal is also producible.

Based on working conditions, costs can be reduced by changing the upper material and the lower material.

- (1) W4U (W5U: Corrugated W4U) (3) W2AU, W2BU, W2CU (Two-stage anchor metals with welded anchor metals)
 (2) W4WU (W5WU: Corrugated W4WU) (4) YM6/4, YM6/5 (YM 4 and 5 legs treaded, used as a set with NM1 that is sold separately)

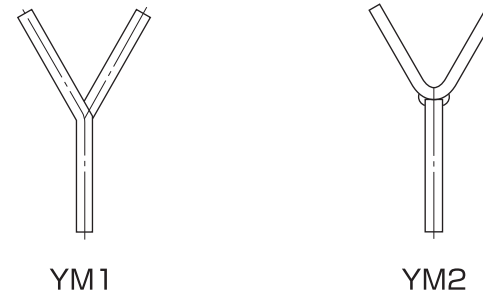


The drawings above show combinations of the upper part and the lower part of standard two-stage anchor metals. Please select your preferable combination by referring to detail drawings.

(Refer to P40 and P41 for details - e.g. The upper part is the standard shape, W5U, and the lower part is the one with the straight bar, WWR.)

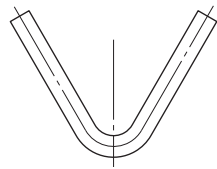
4. Plate Y anchor metal

- (1) YM1 is the version with the cut-length sheet and the flat steel pressed and molded as Y.
 (2) YM2 is the version with the cut-length sheet and the flat steel pressed and molded as V, along with the round-bar leg welded.

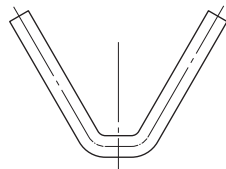


5. V anchor metal

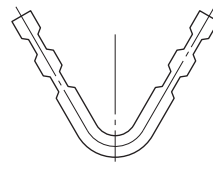
- (1) VM1: The most popular type, with the round bar bent in a V shape at the degree of 60 to 90.
- (2) VM3: The straight line is made on the bottom of VM1, so that the weldability is improved.
- (3) VM3A: The improved version of VM3 adding corrugation.
- (4) VM7: The version with improved castable support capacity by folding the edge of the V portion of VM3.



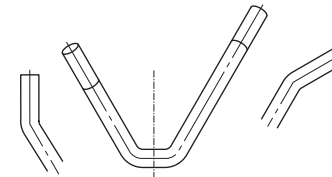
VM1



VM3

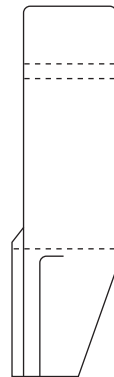
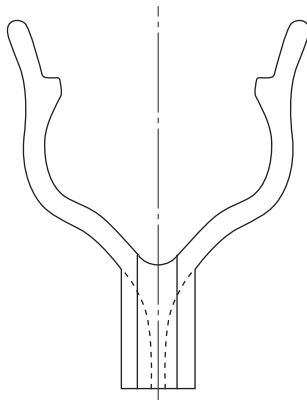


VM3A

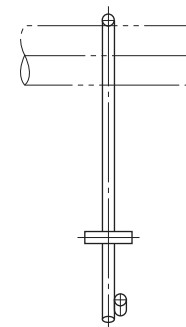
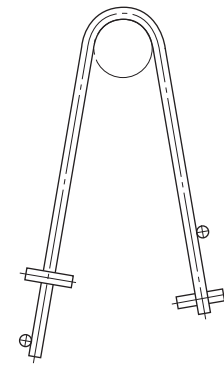


VM7

6. Anchor head



7. Suspended anchor metal



PM1

B. Metal parts for anchor tiles

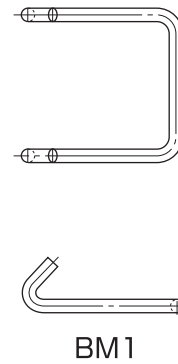
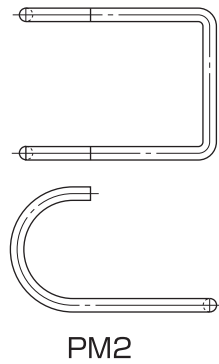
1. Suspended hanger metal

(1) PM2

This anchor is used for the anchor tiles of the hanged ceiling, in pairs by hanging them on pipes.
(PM2 anchor metals in different sizes are called PMX. Refer to P47 for details.)

(2) BM1

This anchor is used for the anchor tiles of the hanged ceiling, in pairs by hanging them on I-steel.
(BM1 anchor metals in different sizes are called BMX. Refer to P47 for details.)



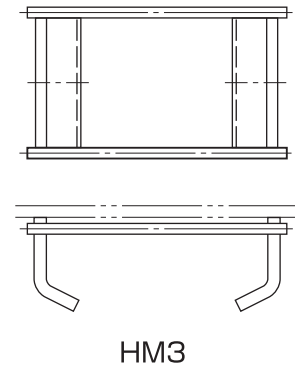
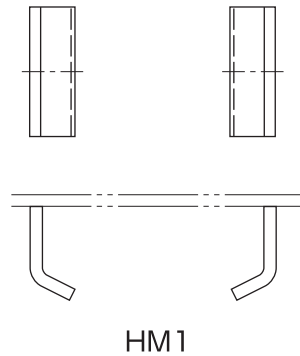
2. Hanger metal

(1) HM1

This anchor metal is used for the anchor tiles of the ceiling, side wall, or plat band, in pairs by welding them directly to the can body.

(2) HM3

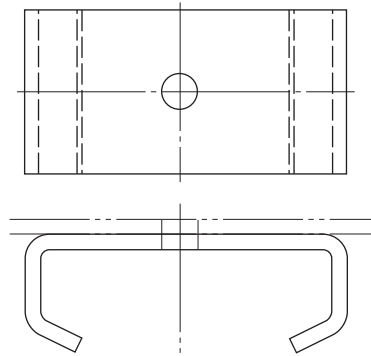
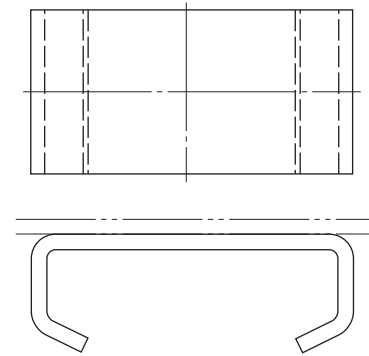
Similar to HM1, but this anchor metal is fitted to the anchor tile at the plant, which is already assembled and welded with round bars so that on-site workability is improved.



(3) CM1

This anchor metal is the improved version of HM3, which is the bending and integrated type. This version is installable by using bolts and nuts.

(4) CM2

CM1CM2

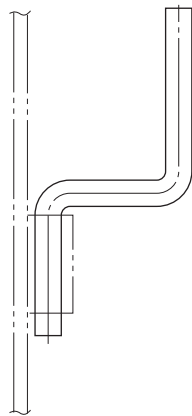
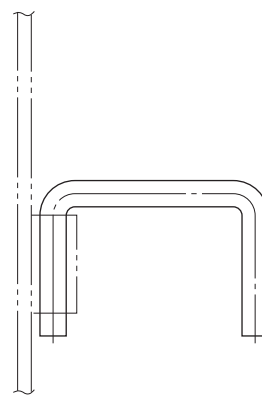
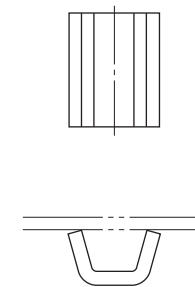
(5) SM2

(6) SM3

(7) UM1

a. Used by combining with the anchor metals for the side-wall anchor tiles.

b. These versions have flexibility toward thermal expansion of castable refractories. Used with UM1.

SM2SM3UM1

C. Fiber metal parts

(1) Stud bolt

SB

(2) Stud pin

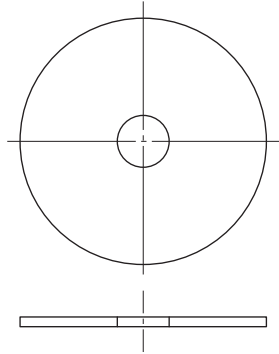
SP

(3) Twist pin

TP

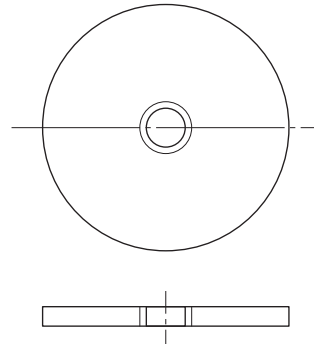


(4) Stud bolt washer



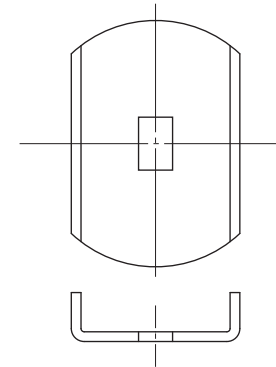
SBW

(5) Nut washer



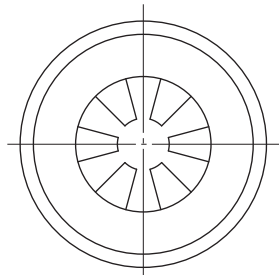
WMN1

(6) Twist pin washer



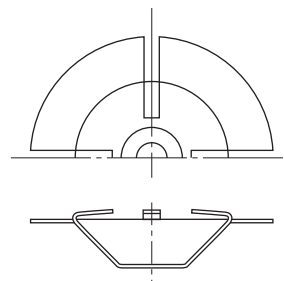
TPW

(7) Speed clip

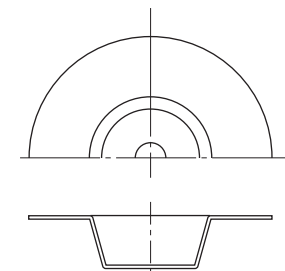


SC

(8) Retainer



AR

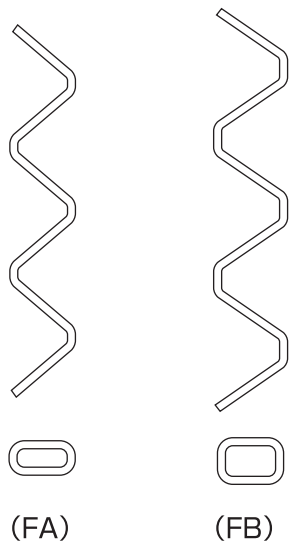


BR

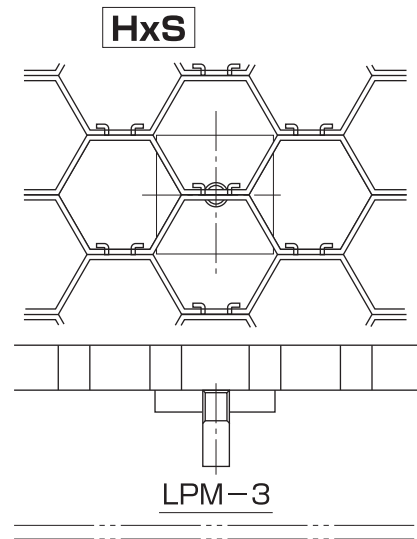


D. Other metal parts

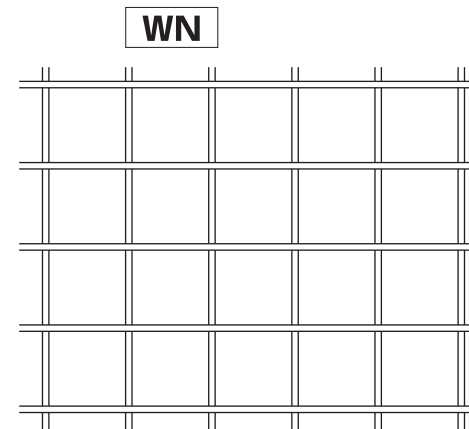
1. Chain link



2. Hex steel

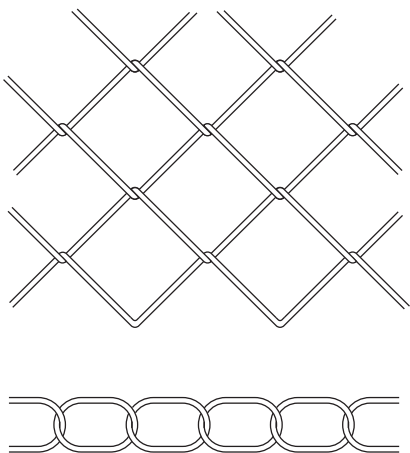


3. Welded metal mesh

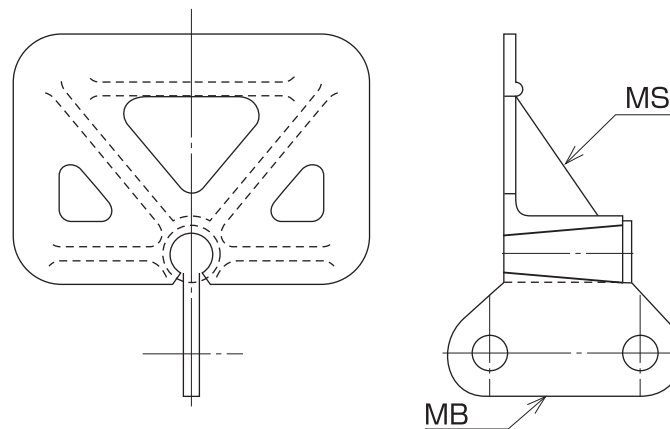


4. Diamond metal mesh

LN



5. Sectional support MS + MB



Features of Our Products

1. YM4/5 Anchor Metal

YM4 and 5 anchor metals were uniquely devised and developed, referred to as Namita type Y anchor metals.

This type of the anchor metal is produced by pressing one end of the round bar on a flat plate and molded as the Y shape after solution treatment.

There are two different types: YM4 type with the flat plate and YM5 type with corrugation added.

This anchor metal perfectly suits to arc stud welding.

Furthermore, based on our own integrated production system from raw material to finished product, our company strives to achieve mass production effects, on both the price side and the delivery period side, while trying to maintain stable quality.

Our instant delivery system with rich stock is always ready to deliver general steel anchor metals in various sizes.

2. Two-Stage (Multi-Stage) Anchor Metal

This two-stage anchor metal is produced by using the Namita type Y anchor metal. The joint portion is threaded and the nut portion was tighten screws + welding.

Where refractories are installed in two layers, the two-stage anchor metal is used by separating the anchor into two stages for the reason of on-site construction.

(This type can also be produced by using the Y type, which is the welded type.)

3. Welded Anchor Metal

The production of this welded anchor metal was started by introducing welding robots and thorough quality control. By doing so, our company was able to achieve cost reduction with improvement of productivity, in addition to enhancing product equalization as well as reliability. The welded portion is processed based on the welding guidelines that enable to obtain intensity equivalent to or stronger than the intensity of mother material.

Depending on the welded form, this type is divided into type A, B, and C.

4. NAMI COLOR (NHC-1000)

NAMI Coating, one of our well-received products, aims to prevent causing cracks on castable refractories due to thermal expansion differential by making a gap between the anchor metal and the castable refractory.

This newly-marketed NAMI COLOR is the colored version of NAMI Coating, which makes easier to discern each anchor metal material for storage and construction, and in times of inspections.





Features of NAMI COLOR

- (A) Based on EVA, NAMI COLOR is colored by highly safe coloring agents with hot-melt adhesive in which tackifier resin and waxes are added.
- (B) The adhesion thickness of NAMI COLOR is usually in a range between 1.0mm and 2.0mm.
- (C) If a strong impact is given during the installation of castable refractories, color coating could be scraped off.
In particular, exercise caution when spraying castable refractories.
- (D) NAMI COLOR is vaporized when heated; there is no harmful effect on castable refractories.
- (E) When short NAMI COLOR is used, colored portions could melt due to welding heat (Flexibility point: 70°C).
- (F) When anchor metals are welded in the can body, if welding fume or NAMI COLOR is burnt, exercise extreme caution in ventilation so as not to cause CO/CO₂ poisoning, and oxygen deficiency disease.

Reference: NAMI COLOR
(Anchor metal thermal expansion filling material)

Item	Standard physical property, etc.
Name	NHC-1000
Color phase	Milky white + Coloring agent
Softening point (Ring and ball method) °C	70
Penetration degree 20°C dmm (Total load: 100g)	2
Loss on heating (180°C 5 HR)	1.5
Melt viscosity 160°C CP	375
Ingredients	EVA, wax, etc.
Toxicity	Room temp. None
	Combustion None

Reference: Table of thermal expansion of heat-proof stainless steel

Temp. °C ($\frac{m}{m}$) Length	200°	500°	800°	1000°
1000	1003.74	1009.35	1014.96	1018.70
50	50.19	50.47	50.75	50.94
100	100.37	100.94	101.50	101.87
150	150.56	151.40	152.24	152.81

SUS 304

Color Discrimination

Material	SS	SUS304	SUS309S	SUS310S	SUS316 · SUS316L	Amount of coloring agent
NAMI COLOR	Black	Yellow	Red	Green	Blue	The amount of both organic and inorganic coloring agents is the weight of 0.1% or under.
Max. working temp. guide	350°C	800°C	1000°C	1100°C	800°C	

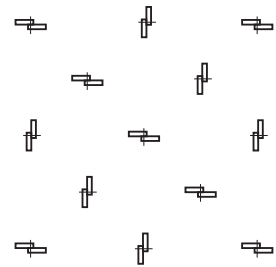
Notice: Our NAMI Coating uses the above NAMI COLORS as the standard; non-colored NAMI COAT is also producible.

Arrangements, Pitches, and Lengths of Anchor Metals

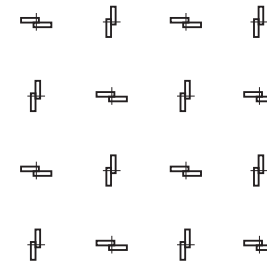
1. Arrangement

The selected arrangement for anchor metals should be the one that causes fewer cracks on castable refractories and prevents the extension of cracks caused.

The anchor metal arrangement includes the zigzag arrangement and the cell arrangement. The zigzag arrangement is usually adopted.



Staggered arrangement



Square / Matrix arrangement

Reference: Arrangement pitches and the required number of anchor metals

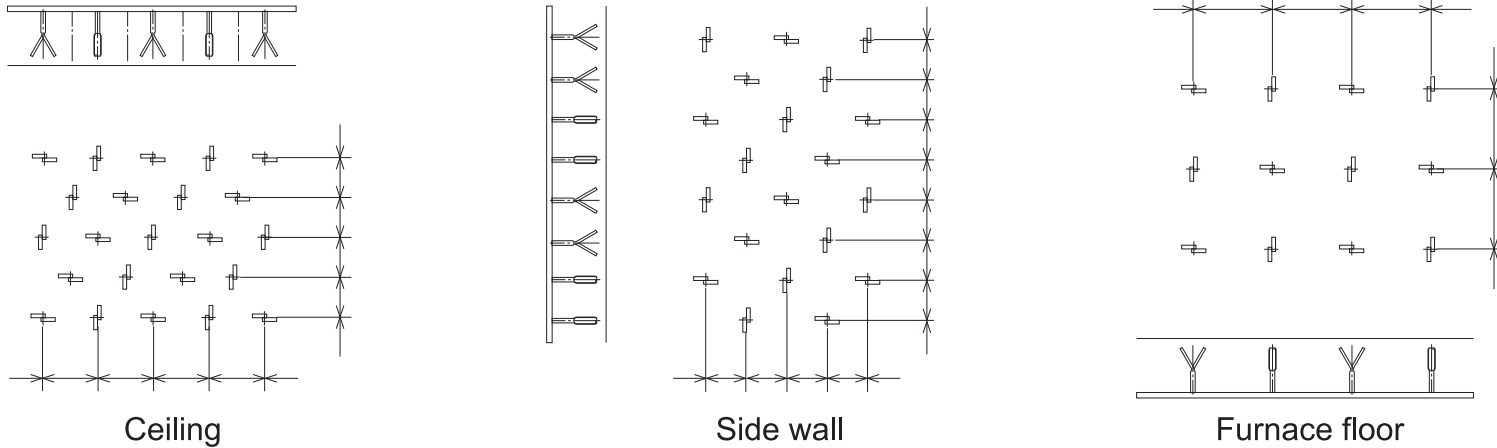
Furnace wall thickness	D^{mm}	50	60	70	80	90	100	110	120	130
Arrangement pitch	P ^{mm}	110	120	130	140	150	160	170	180	190
Required pcs.	/m ²	83	69	59	51	44	39	35	31	28
P/D		2.20	2.00	1.86	1.75	1.67	1.60	1.55	1.50	1.46
Furnace wall thickness	D^{mm}	140	150	160	170	180	190	200	210	220
Arrangement pitch	P ^{mm}	200	210	220	230	240	250	260	270	280
Required pcs.	/m ²	25	23	21	19	17	16	15	14	13
P/D		1.43	1.40	1.38	1.35	1.33	1.32	1.30	1.29	1.27
Furnace wall thickness	D^{mm}	230	240	250	260	270	280	290	300	
Arrangement pitch	P ^{mm}	290	300	310	320	330	340	350	360	
Required pcs.	/m ²	12	11	10	10	9	9	8	8	
P/D		1.26	1.25	1.24	1.23	1.22	1.21	1.21	1.20	



2. Pitch

Installation pitches of anchor metals are determined depending on the designer's wishes based on the implementation thickness of castable refractories and the furnace's working conditions.

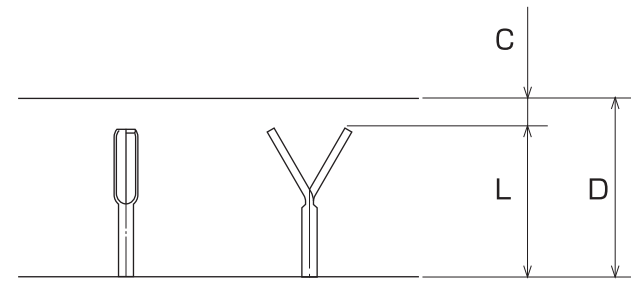
Generally, the pitch gets larger in order of the ceiling, side wall, and furnace floor. This pitch tends to become smaller at locations with significant vibration and abrasion.



3. The anchor metal length is determined according to the furnace wall thickness and working conditions.

**Anchor metal length for the furnace wall thickness
(Common sample)**

Furnace wall thickness D (mm)	Anchor length L (mm)	$D-L=C$ (mm)	L/D (%)
30	20	10	66
50	35	15	70
75	55	20	73
100	80	20	80
150	120	30	80
200	170	30	85
250	220	30	88



$$L = D - C$$

However, C usually takes the value of 10 to 30.

Arc Stud Welding (Stud welding, hereinafter)

When the principles of arc stud welding (stud welding, hereinafter) are compared with those of covered arc welding, in covered arc welding, the welding rod is worked into the holder and welding is conducted by causing arc by contacting the rod to the mother material momentarily.

When it comes to stud welding, the welding rod corresponds to the stud and the holder corresponds to the welding gun. The welding process is automatically controlled by the welder and the welding gun; therefore, the welding operator can always conduct appropriate and uniform stud welding just by pulling the trigger.

In on-site operation scenes, however, operators should have experience required to make proper decisions according to various situations, along with proper technical skills.

Contact welding method (usually called Nelson welding method)

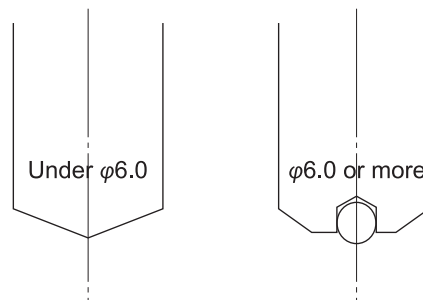
The welding end should be processed with flux. Additionally, ferrule is necessary as an arc shield material.

An example of the comparison of manual welding and stud welding (the number of welding processes conducted per one welding operator per day)

- (1) Because of flux processing, when compared to manual welding, arc welding is expensive and the longer period is required for producing studs.
- (2) Ferrule is necessary as an arc shield material.
- (3) Manual welding: Welding on about 500 anchor metals >> Stud welding: Welding on about 1500 anchor metals

Our mission is to conduct flux processing for furnace refractory anchor metals produced with stud welding, while supplying ferrule that is used as an arc shield material.

The above-mentioned flux processing form is shown below.



The ferrule model number and the portion where it is used are shown below.

Model No.	Used portion
NB-6	For $\phi 5.3$ (For lower M6 rolling diam.)
A-6	For $\phi 6.0$ and all M6 screws
NB-8	For $\phi 7.1$ (For lower M8 rolling diam.)
A-8	For $\phi 8.0$ and all M8 screws

Detail Drawings of Heat-Proof Metal Parts

Detail Drawings of Heat-Proof Metal Parts

	According to the shape	Shape outline	Part name (The "F" within each name indicates flux processing of the automatic welding type)		Page	
(A) Castable refractory metal parts	Cast Y anchor metals (Namita type)	Y round bar flat cast type	Standard	YM4	YM4F	24
			Straight bar	YM4R	YM4RF	
			V	YM4V	YM4VF	
		Y round bar corrugated cast type	Standard	YM5	YM5F	25
			Straight bar	YM5R	YM5RF	
			V	YM5V	YM5VF	
		YL round bar flat cast type	Standard	YLM4/5	YLM4/6	26
			Straight bar	YLM4R5	YLM4R6	
			V	YLM4V5	YLM4V6	
	YL round bar corrugated type	Standard	YLM5/5	YLM5/6	27	
		Straight bar	YLM5R5	YLM5R6		
		V	YLM5V5	YLM5V6		
	Welded anchor metals	Y round bar welded type A	Standard	YM2A	YM2AF	28
			Straight bar	YM2AR	YM2ARF	
			V	YM2AV	YM2AVF	
		YL round bar welded type A	Standard	YLM2A5	YLM2A6	29
			Straight bar	YLM2AR5	YLM2AR6	
			V	YLM2AV5	YLM2AV6	
Y round bar welded type B		Standard	YM2B	YM2BF	30	
		Straight bar	YM2BR	YM2BRF		
		V	YM2BV	YM2BVF		
YL round bar welded type B		Standard	YLM2B5	YLM2B6	31	
		Straight bar	YLM2BR5	YLM2BR6		
		V	YLM2BV5	YLM2BV6		



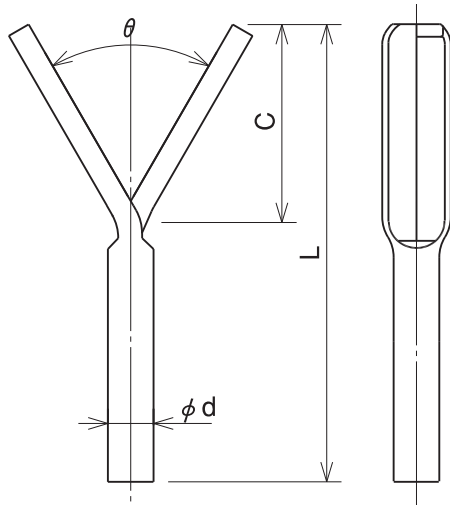
Detail Drawings of Heat-Proof Metal Parts

	According to the shape	Shape outline	Part name (The "F" within each name indicates flux processing of the automatic welding type)						Page	
(A) Castable refractory metal parts	Welded anchor metals	Y round bar welded type C	Standard	YM2C	YM2CF				32	
			Straight bar	YM2CR	YM2CRF					
			V	YM2CV	YM2CVF					
		YL round bar welded type C	Standard	YLM2C5	YLM2C6				33	
			Straight bar	YLM2CR5	YLM2CR6					
			V	YLM2CV5	YLM2CV6					
		Y and YL round bar welded type (corrugated)	Standard	YM3A	YM3B	YM3C			34	
			Straight bar	YLM3A5	YLM3A6	YLM3B5	YLM3B6	YLM3C5	YLM3C6	35
			V	YLM3AV5	YLM3AV6	YLM3BV5	YLM3BV6	YLM3CV5	YLM3CV6	
	Two-stage anchor metal upper (Namita type)	Drawings of combinations of upper and lower parts		W5U+WW	W4WU+WSLR	W2AU+WWV			36	
		Y round bar flat cast type	Standard	W4U					37	
			Straight bar	W4UR						
			V	W4UV						
		Y round bar corrugated cast type	Standard	W5U					38	
			Straight bar	W5UR						
V			W5UV							
Y round bar welded type		Standard	W2AU	W2BU	W2CU			39		
		Straight bar	W2AUR	W2BUR	W2CUR					
		V	W2AUV	W2BUV	W2CUV					
Y round bar flat cast type (Tighten screws+welding (nuts))		Standard	W4WU					39		
		Straight bar	W4WUR							
	V	W4WUV								
Y round bar corrugated cast type (Tighten screws+welding (nuts))	Standard	W5WU					39			
	Straight bar	W5WUR								
	V	W5WUV								

Detail Drawings of Heat-Proof Metal Parts

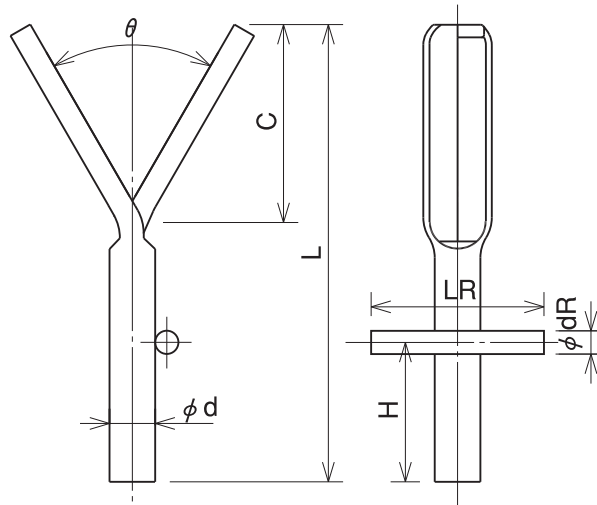
	According to the shape	Shape outline	Part name (The "F" within each name indicates flux processing of the automatic welding type)	Page	
(A) Castable refractory metal parts	Two-stage anchor metal lower (Namita type)	Tighten screws + welding (nuts) type	Standard	40	
			Straight bar		
			V		
		Straight bar single screw type	Standard		41
			Straight bar		
			V		
	Two-stage anchor metals (upper and lower)	Round bar flat cast type + NM1	YM6/4 (upper) NM1 (lower) + (washer WM1)	42	
		Round bar corrugated cast type + NM1	YM6/5 (upper) NM1 (lower) + (washer WM1)		
	Plate Y anchor metals / Plate V type + Round bar type		YM1 YM2 YM2F	43	
	V anchor metals	Round bar V bending type	VM1 VM1F	44	
Round bar V bending bottom type		VM3			
Round bar V bending corrugated type		VM3A			
Round bar V bending and bent end type		VM7			
Heat proof cast steel headed anchor metals		YLM9 YLM10	45		
Suspended anchor metals (for the ceiling)		PM1	46		
(B) Metal parts for anchor tiles	Suspended hanger metals (for the ceiling with round bars used and for the side wall)		PM2 BM1 PMX BMX	47	
	Hanger metals (for the ceiling with plates and for the side wall)	HM1 HM3	48		
		CM1 CM2	49		
	Hanger metals (for the side wall with round bars used)		SM2 SM3 UM1	50	
(C) Fiber metal parts	Stud bolts, stud pins, and twist pins		SB SBF SP SPF TP TPF	51	
	Washers (speed clips)		SBW WMN1 TPW SC	52	
	Retainers		AR BR	53	
(D) Other metal parts	Clips for L/YL anchor metals		LM1 UM2	54	
	Hex steel parts		HxS LPM3	55	
	Chain links and metal meshes	Chain links		FA FB	56
		Metal meshes	Diamond metal mesh	LN	57
			Welded metal mesh	WN	
	Metal parts for supporting load		Bracket metal + Sectional support	MB3 (MB-67L+MS) MB3N (MB-102L+MS)	58

YM4



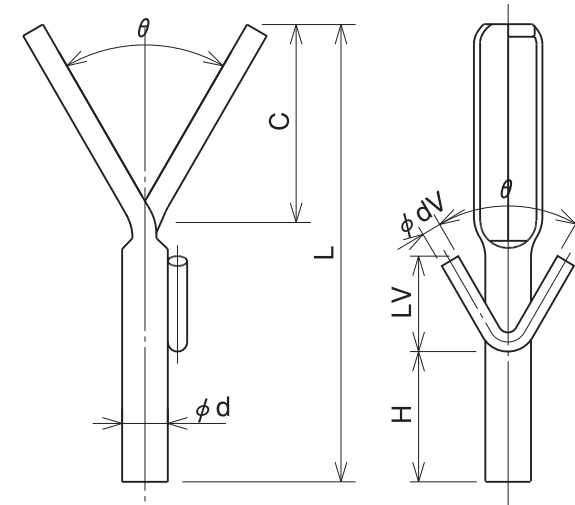
YM4	Type indication	θ -YM4- ϕ d-C-L
YM4F	Type indication	θ -YM4F- ϕ d-C-L

YM4R



YM4R	Type indication	θ -YM4R- ϕ d-C-L- ϕ dR-LR-H
YM4RF	Type indication	θ -YM4RF- ϕ d-C-L- ϕ dR-LR-H

YM4V



YM4V	Type indication	θ -YM4V- ϕ d-C-L- θ - ϕ dV-LV-H
YM4VF	Type indication	θ -YM4VF- ϕ d-C-L- θ - ϕ dV-LV-H

Example of description: 60-YM4F-10-50-100...

The "F" at the end of each product name indicates flux processing of automatic welding.

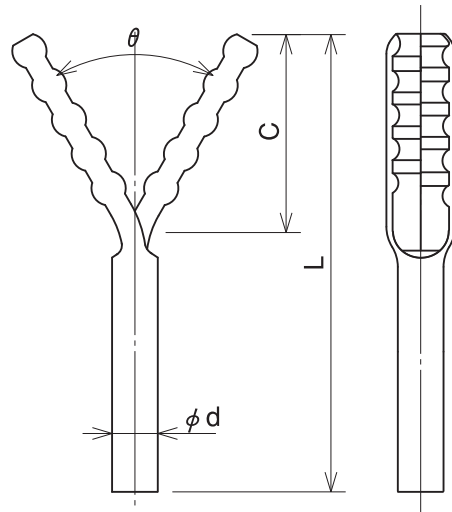
φ d	Min. L	C size	
		60°	90°
φ 8	30	15~80	15~60
φ 10	35	15~90	20~80
φ 12	40	25~100	25~80
φ 14	50	30~100	30~80
φ 16	60	35~100	35~80

Y cast anchor metal (Namita type)
Flat cast type
YM4. YM4R. YM4V

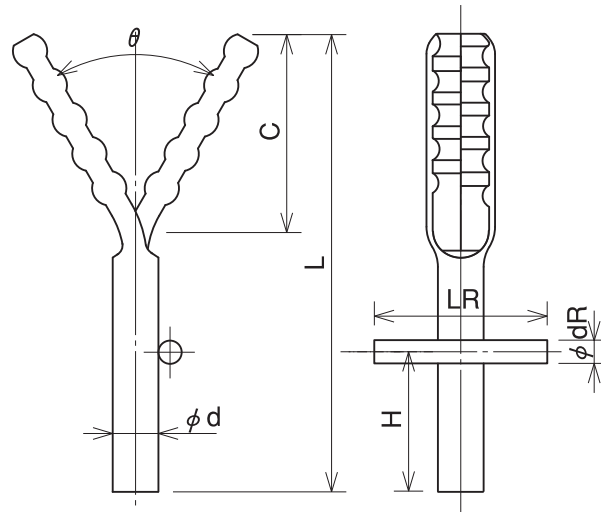
Drawing No.
124

 NAMITAKIKO CO.,LTD.

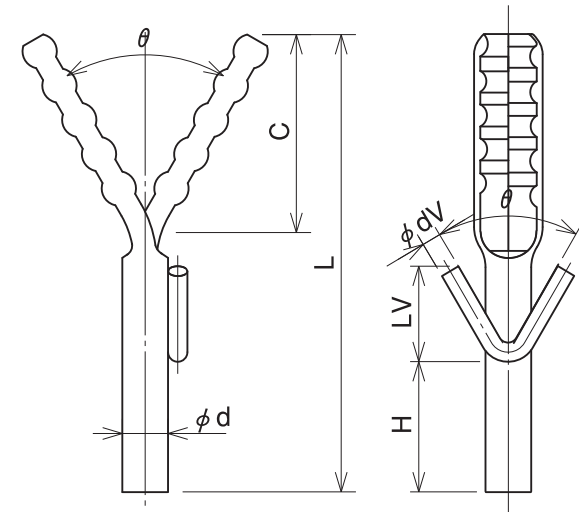
YM5



YM5R



YM5V



YM5	Type indication	θ -YM5- ϕ d-C-L
YM5F	Type indication	θ -YM5F- ϕ d-C-L

YM5R	Type indication	θ -YM5R- ϕ d-C-L- ϕ dR-LR-H
YM5RF	Type indication	θ -YM5RF- ϕ d-C-L- ϕ dR-LR-H

YM5V	Type indication	θ -YM5V- ϕ d-C-L- θ - ϕ dV-LV-H
YM5VF	Type indication	θ -YM5VF- ϕ d-C-L- θ - ϕ dV-LV-H

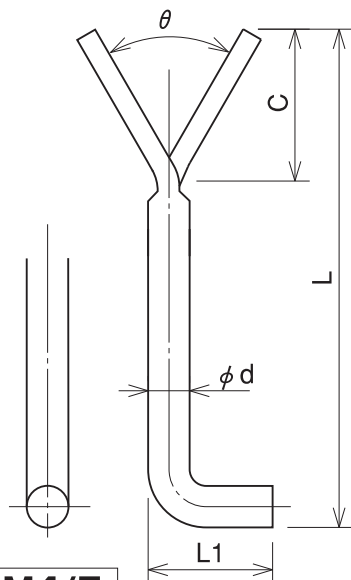
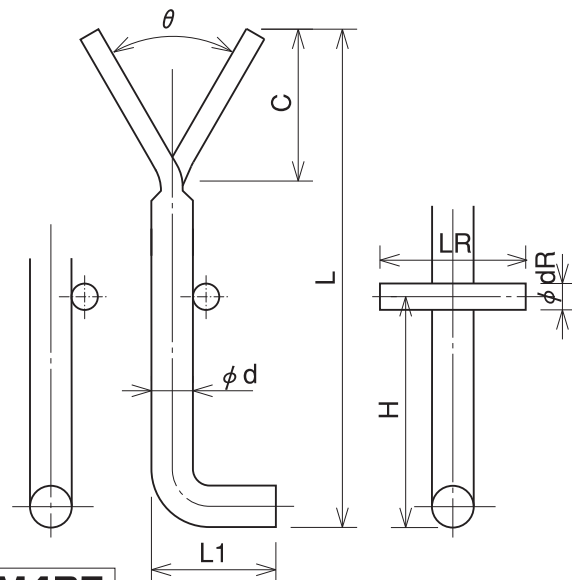
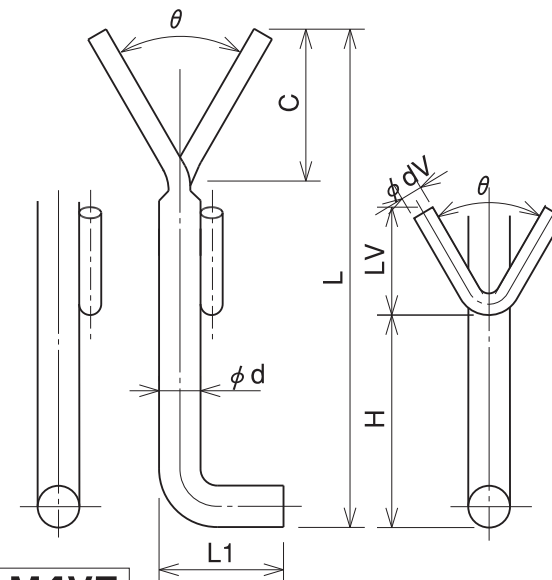
Example of description: 60-YM5-10-50-100

ϕ d	Min. L	C size	
		60°	90°
ϕ 8	30	15~80	15~60
ϕ 10	35	15~90	20~80
ϕ 12	40	25~100	25~80
ϕ 14	50	30~100	30~80
ϕ 16	60	35~100	35~80

Y cast anchor metal (Namita type)
Corrugated cast type
YM5. YM5R. YM5V

Drawing No.
125

NAMITAKIKO CO., LTD.

YLM4/6**YLM4/5****YLM4R6****YLM4R5****YLM4V6****YLM4V5**

YLM4/5	Type indication	θ -YLM4/5- ϕd -C-L-L1
YLM4/6	Type indication	θ -YLM4/6- ϕd -C-L-L1

YLM4R5	Type indication	θ -YLM4R5- ϕd -C-L-L1- ϕdR -LR-H
YLM4R6	Type indication	θ -YLM4R6- ϕd -C-L-L1- ϕdR -LR-H

YLM4V5	Type indication	θ -YLM4V5- ϕd -C-L-L1- θ - ϕdV -LV-H
YLM4V6	Type indication	θ -YLM4V6- ϕd -C-L-L1- θ - ϕdV -LV-H

Example of description: 60-YLM4/5-10-50-100-40... L1 is more than three times ϕd (if not specified, three times ϕd)

The "5" at the end of each product name indicates that the bending direction of the leg is at the right angle toward Y.

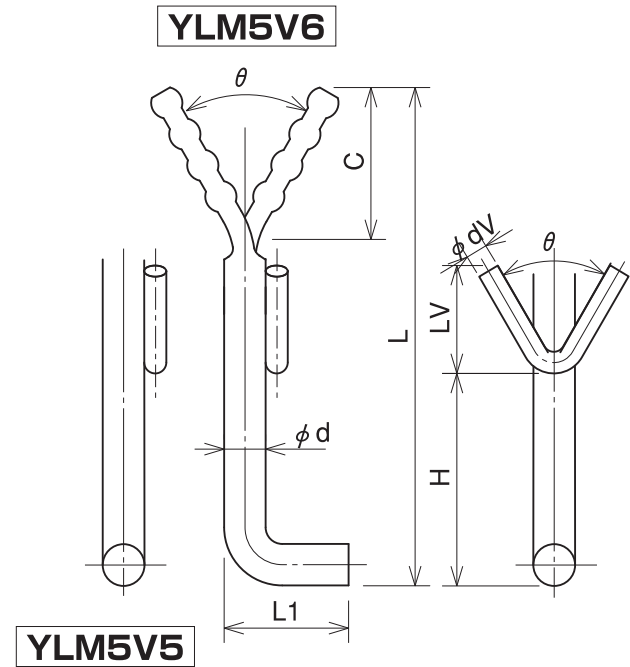
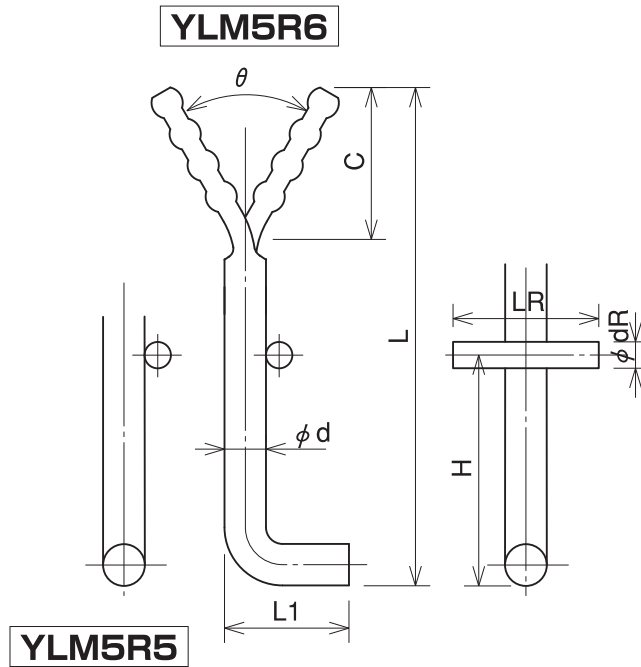
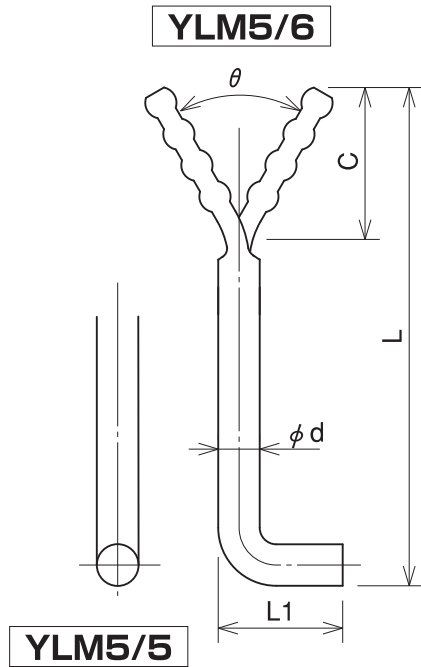
The "6" at the end of each product name indicates that the bending direction of the leg is parallel toward Y (as shown in this drawing).

YL cast anchor metal (Namita type)
Flat cast type

YLM4. YLM4R. YLM4V

Drawing No.
126

 **NAMITAKIKO CO.,LTD.**



YLM5/5	Type indication	θ -YLM5/5- ϕ d-C-L-L1
YLM5/6	Type indication	θ -YLM5/6- ϕ d-C-L-L1

YLM5R5	Type indication	θ -YLM5R5- ϕ d-C-L-L1- ϕ dR-LR-H
YLM5R6	Type indication	θ -YLM5R6- ϕ d-C-L-L1- ϕ dR-LR-H

YLM5V5	Type indication	θ -YLM5V5- ϕ d-C-L-L1- θ - ϕ dV-LV-H
YLM5V6	Type indication	θ -YLM5V6- ϕ d-C-L-L1- θ - ϕ dV-LV-H

Example of description: 60-YLM5/5-10-50-100-40... L1 is more than three times ϕ d (if not specified, three times ϕ d)

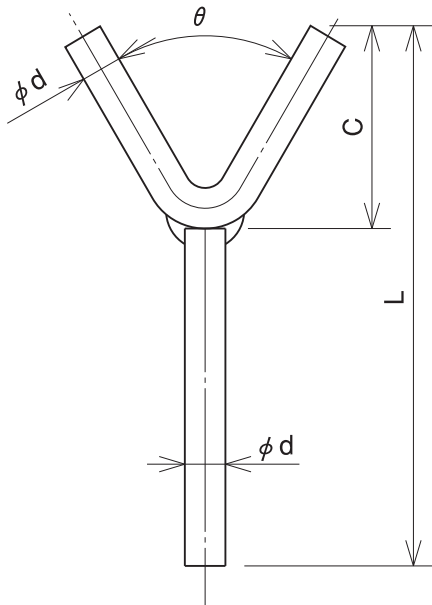
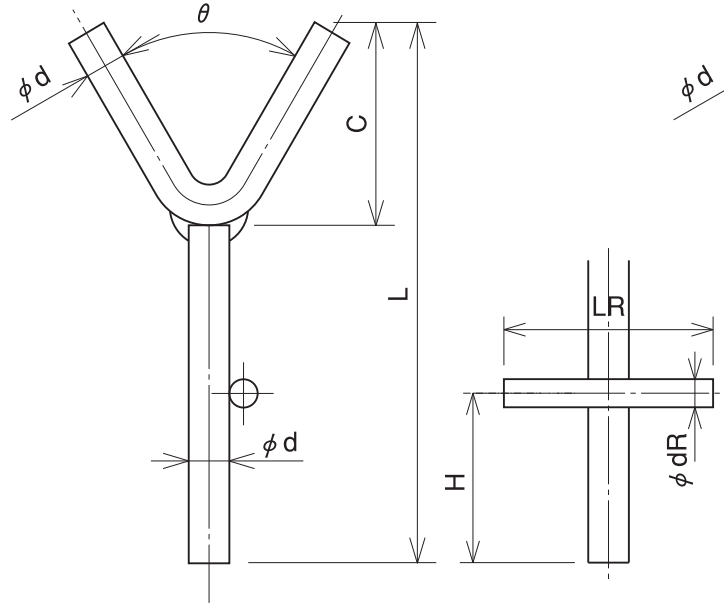
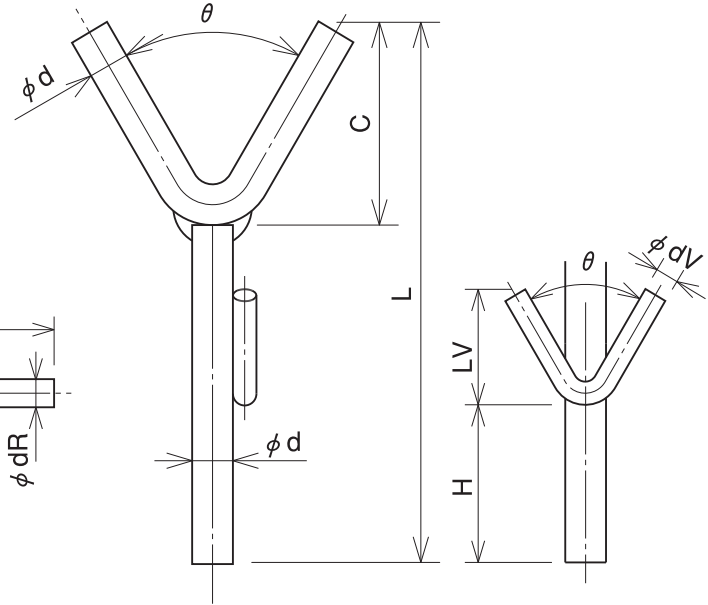
The "5" at the end of each product name indicates that the bending direction of the leg is at the right angle toward Y.

The "6" at the end of each product name indicates that the bending direction of the leg is parallel toward Y (as shown in this drawing).

YL cast anchor metal (Namita type)
Corrugated cast type
 YLM5. YLM5R. YLM5V

Drawing No.
 127

NAMITAKIKO CO., LTD.

YM2A**YM2AR****YM2AV**

YM2A	Type indication	θ -YM2A- ϕ d-C-L
YM2AF	Type indication	θ -YM2AF- ϕ d-C-L

YM2AR	Type indication	θ -YM2AR- ϕ d-C-L- ϕ dR-LR-H
YM2ARF	Type indication	θ -YM2ARF- ϕ d-C-L- ϕ dR-LR-H

YM2AV	Type indication	θ -YM2AV- ϕ d-C-L- θ - ϕ dV-LV-H
YM2AVF	Type indication	θ -YM2AVF- ϕ d-C-L- θ - ϕ dV-LV-H

Example of description: 60-YM2AF-10-50-100...

The "F" at the end of each product name indicates flux processing of automatic welding.

Welded anchor metal
Type A

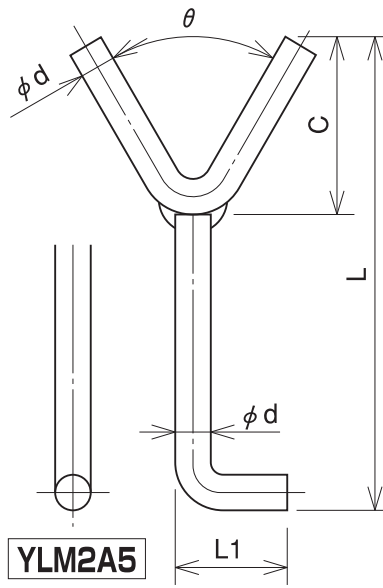
YM2A. YM2AR. YM2AV

 NAMITAKIKO CO.,LTD.

Drawing No.

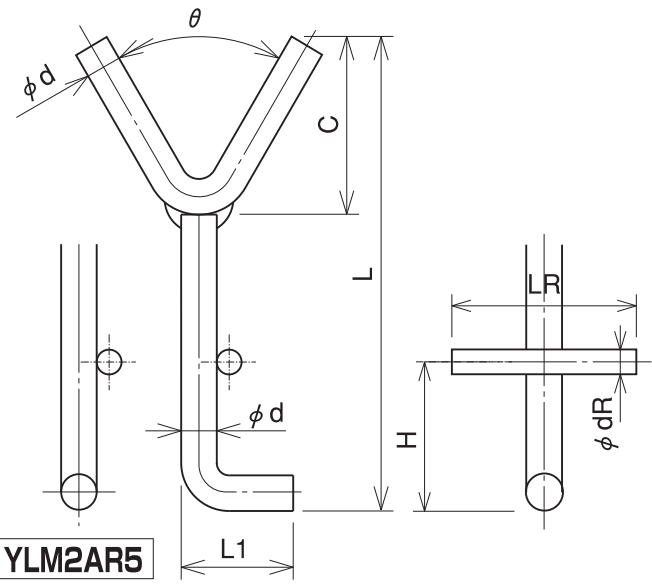
128

YLM2A6



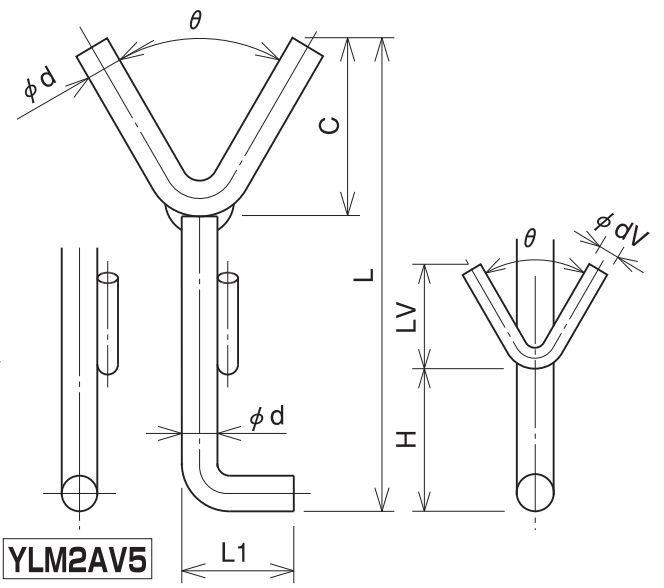
YLM2A5

YLM2AR6



YLM2AR5

YLM2AV6



YLM2AV5

YLM2A5	Type indication	θ -YLM2A5- ϕd -C-L-L1
YLM2A6	Type indication	θ -YLM2A6- ϕd -C-L-L1

YLM2AR5	Type indication	θ -YLM2AR5- ϕd -C-L-L1- ϕdR -LR-H
YLM2AR6	Type indication	θ -YLM2AR6- ϕd -C-L-L1- ϕdR -LR-H

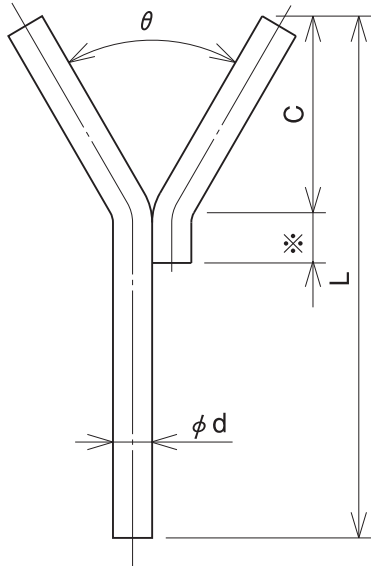
YLM2AV5	Type indication	θ -YLM2AV5- ϕd -C-L-L1- θ - ϕdV -LV-H
YLM2AV6	Type indication	θ -YLM2AV6- ϕd -C-L-L1- θ - ϕdV -LV-H

Example of description: 60-YLM2A6-10-50-100-40... L1 is more than three times (if not specified, three times ϕd)

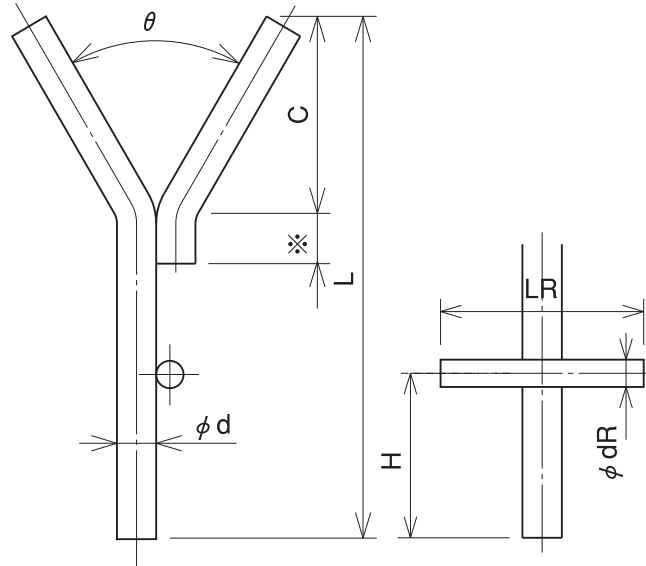
The "5" at the end of each product name indicates that the bending direction of the leg is at the right angle toward Y.
 The "6" at the end of each product name indicates that the bending direction of the leg is parallel toward Y
 (as shown in this drawing).

Welded anchor metal Type A YLM2A. YLM2AR. YLM2AV	Drawing No.
	129
	NAMITAKIKO CO., LTD.

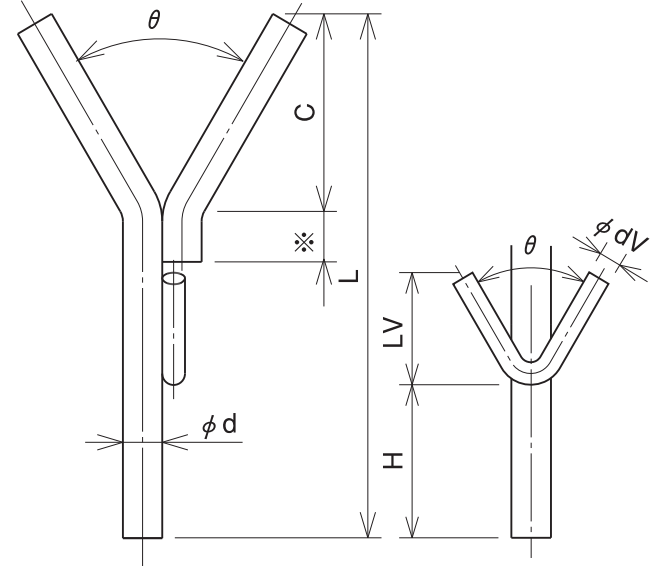
YM2B



YM2BR



YM2BV



YM2B	Type indication	θ -YM2B- ϕd -C-※-L
YM2BF	Type indication	θ -YM2BF- ϕd -C-※-L

YM2BR	Type indication	θ -YM2BR- ϕd -C-※-L- ϕdR -LR-H
YM2BRF	Type indication	θ -YM2BRF- ϕd -C-※-L- ϕdR -LR-H

YM2BV	Type indication	θ -YM2BV- ϕd -C-※-L- θ - ϕdV -LV-H
YM2BVF	Type indication	θ -YM2BVF- ϕd -C-※-L- θ - ϕdV -LV-H

Example of description: 60-YM2BF-10-50-100... The "F" at the end of each product name indicates flux processing of automatic welding.
The "※" mark indicates an overlap space (if not specified, 1.5 times ϕd).

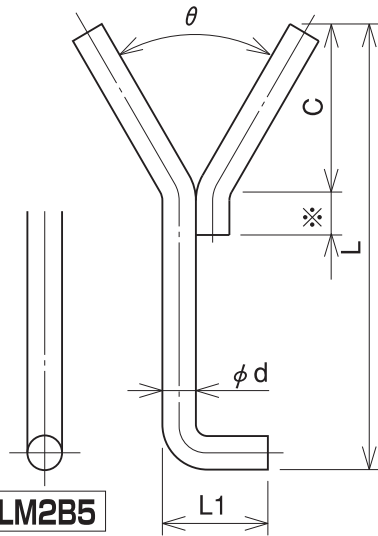
**Welded anchor metal
Type B**

YM2B. YM2BR. YM2BV

NAMITAKIKO CO., LTD.

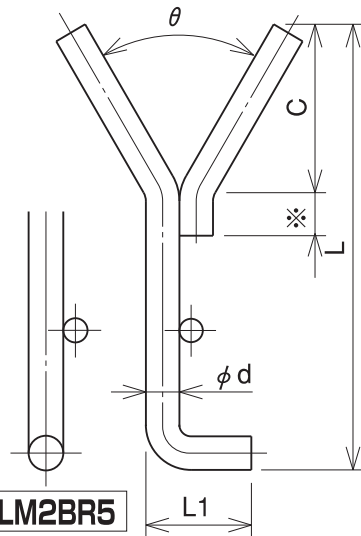
Drawing No.
130

YLM2B6



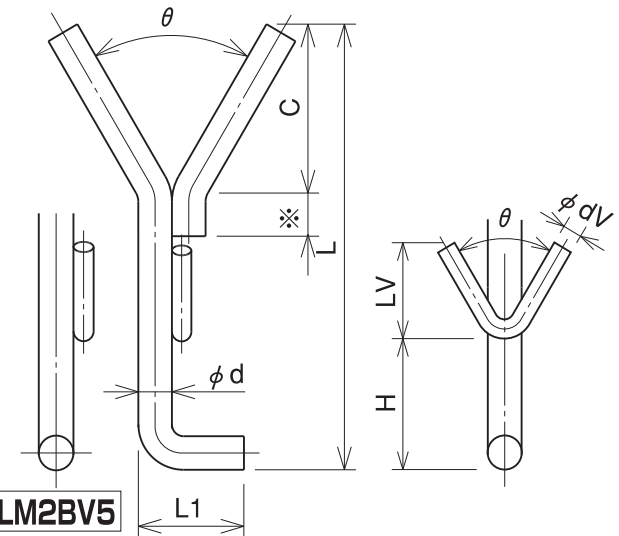
YLM2B5

YLM2BR6



YLM2BR5

YLM2BV6



YLM2BV5

YLM2B5	Type indication	θ -YLM2B5- ϕd -C-※-L-L1
YLM2B6	Type indication	θ -YLM2B6- ϕd -C-※-L-L1

YLM2BR5	Type indication	θ -YLM2BR5- ϕd -C-※-L-L1- ϕdR -LR-H
YLM2BR6	Type indication	θ -YLM2BR6- ϕd -C-※-L-L1- ϕdR -LR-H

YLM2BV5	Type indication	θ -YLM2BV5- ϕd -C-※-L-L1- θ - ϕdV -LV-H
YLM2BV6	Type indication	θ -YLM2BV6- ϕd -C-※-L-L1- θ - ϕdV -LV-H

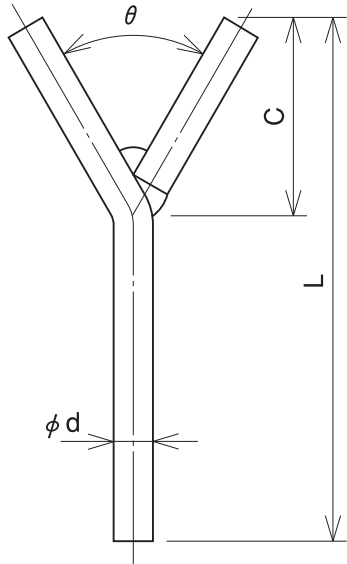
The "※" mark indicates an overlap space (if not specified, 1.5 times ϕd).

Example of description: 60-YLM2B6-10-50-100-40... L1 is more than three times ϕd (if not specified, three times ϕd).
 The "5" at the end of each product name indicates that the bending direction of the leg is at the right angle toward Y.
 The "6" at the end of each product name indicates that the bending direction of the leg is parallel toward Y
 (as shown in this drawing).

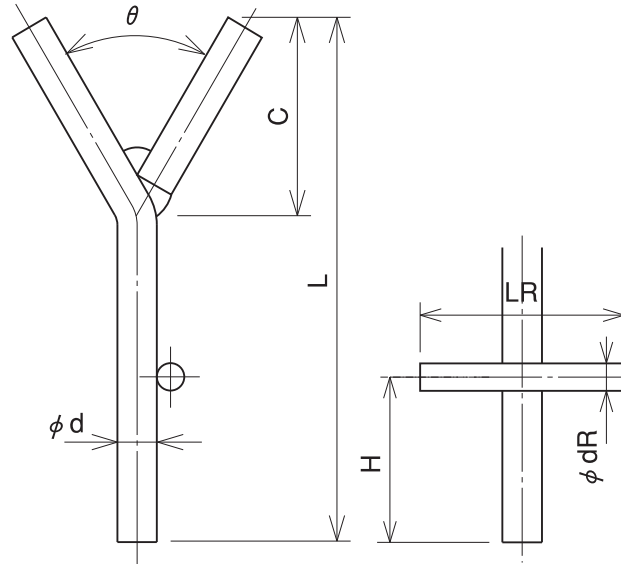
Welded anchor metal Type B YLM2B. YLM2BR. YLM2BV	Drawing No.
	131

NAMITAKIKO CO., LTD.

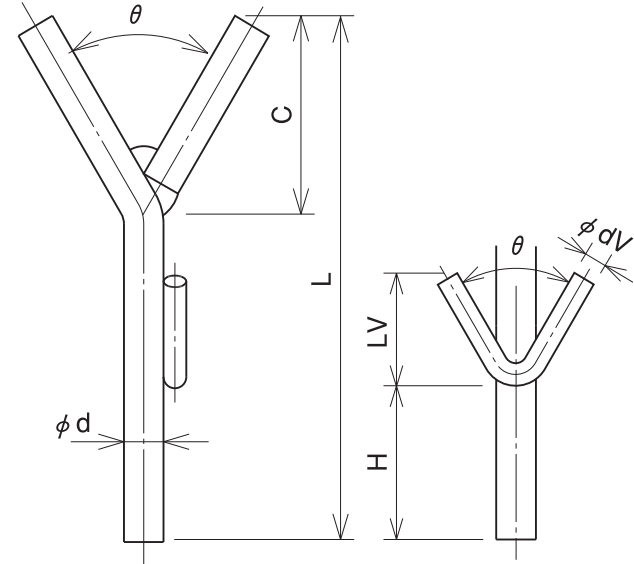
YM2C



YM2CR



YM2CV



YM2C	Type indication	θ -YM2C- ϕ d-C-L
YM2CF	Type indication	θ -YM2CF- ϕ d-C-L

YM2CR	Type indication	θ -YM2CR- ϕ d-C-L- ϕ dR-LR-H
YM2CRF	Type indication	θ -YM2CRF- ϕ d-C-L- ϕ dR-LR-H

YM2CV	Type indication	θ -YM2CV- ϕ d-C-L- θ - ϕ dV-LV-H
YM2CVF	Type indication	θ -YM2CVF- ϕ d-C-L- θ - ϕ dV-LV-H

Example of description: 60-YM2CF-10-50-100...

The "F" at the end of each product name indicates flux processing of automatic welding.

**Welded anchor metal
Type C**

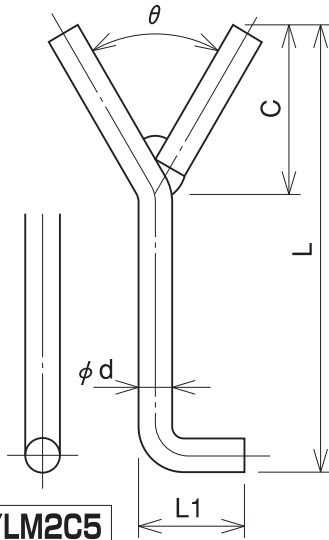
YM2C. YM2CR. YM2CV

NAMITAKIKO CO., LTD.

Drawing No.

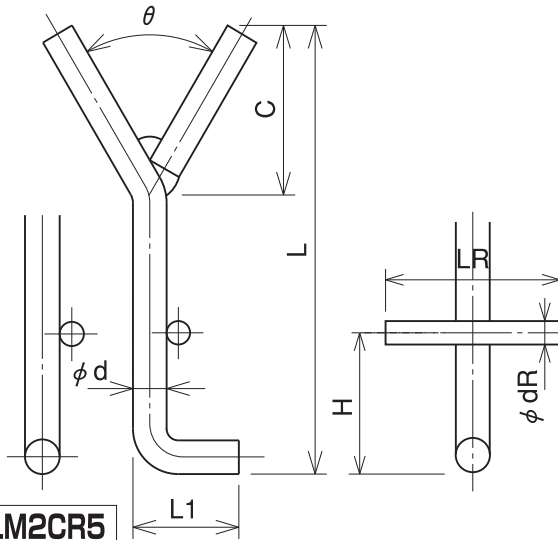
132

YLM2C6



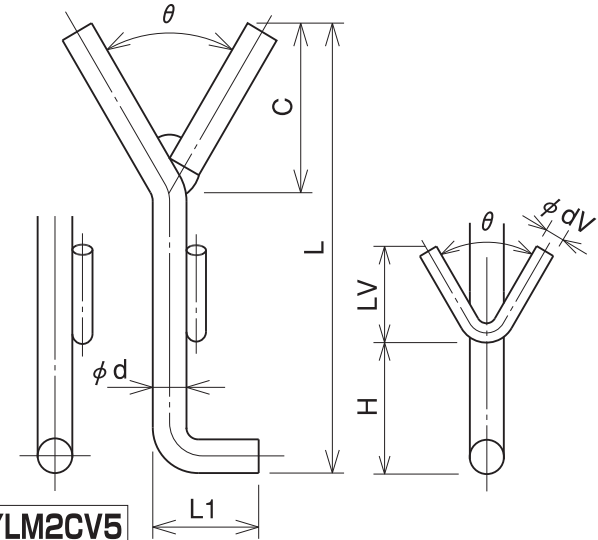
YLM2C5

YLM2CR6



YLM2CR5

YLM2CV6



YLM2CV5

YLM2C5	Type indication	θ -YLM2C5- ϕd -C-L-L1
YLM2C6	Type indication	θ -YLM2C6- ϕd -C-L-L1

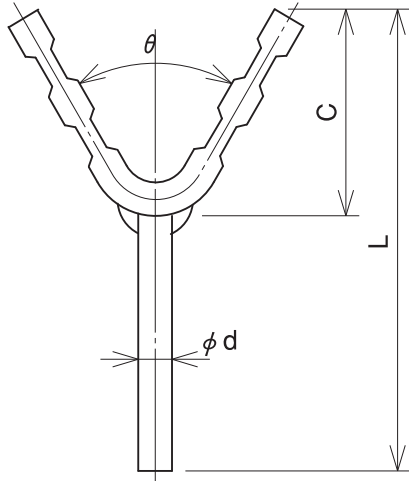
YLM2CR5	Type indication	θ -YLM2CR5- ϕd -C-L-L1- ϕdR -LR-H
YLM2CR6	Type indication	θ -YLM2CR6- ϕd -C-L-L1- ϕdR -LR-H

YLM2CV5	Type indication	θ -YLM2CV5- ϕd -C-L-L1- θ - ϕdV -LV-H
YLM2CV6	Type indication	θ -YLM2CV6- ϕd -C-L-L1- θ - ϕdV -LV-H

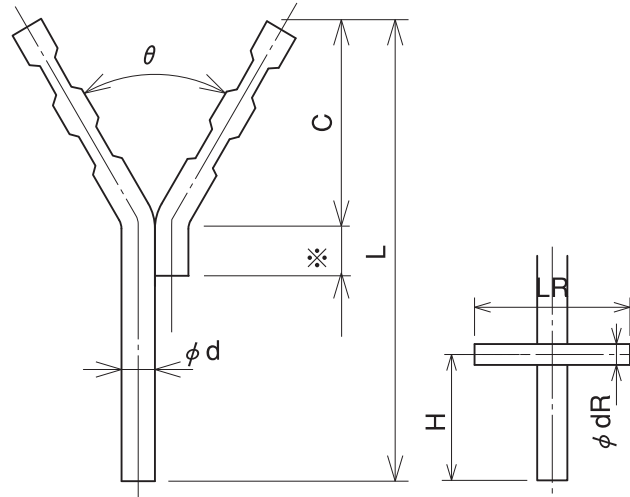
Example of description: 60-YLM2C6-10-50-100-40... L1 is more than three times ϕd (if not specified, three times ϕd).
 The "5" at the end of each product name indicates that the bending direction of the leg is at the right angle toward Y.
 The "6" at the end of each product name indicates that the bending direction of the leg is parallel toward Y
 (as shown in this drawing).

Welded anchor metal	Drawing No.
Type C	133
YLM2C. YLM2CR. YLM2CV	
NAMITAKIKO CO., LTD.	

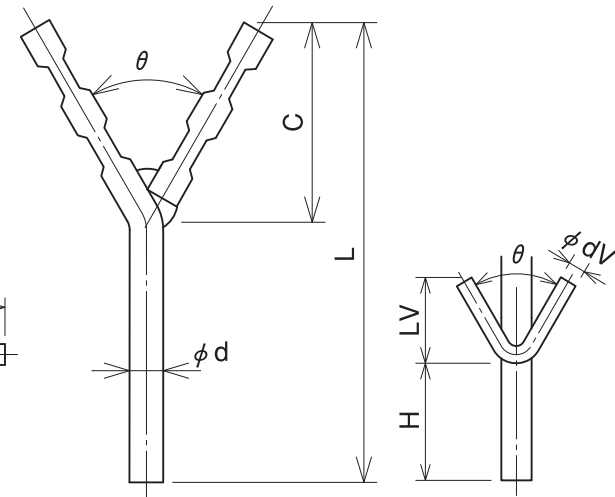
YM3A



YM3B



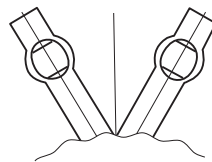
YM3C



Line diam.	No. of corrugations for the C size		
	54 or under	55 or more	60 or more
8	1	2	2
9	1	2	2
10	1	2	2
12	1	1	2
13	1	1	2
14	1	1	2
16	1	1	2

Example of description: 60-YM3B-10-50-20-100
 The "*" mark indicates an overlap space
 (if not specified, 1.5 times ϕd).

YM3A	Type indication	θ -YM3A- ϕd -C-L
YM3B	Type indication	θ -YM3B- ϕd -C-*L
YM3C	Type indication	θ -YM3C- ϕd -C-L



When the C size is smaller, the corrugation direction could be in the direction shown in this drawing.

Line diam.	C size
$\phi 10$ or under	35 or smaller
$\phi 12$ or more	40 or smaller

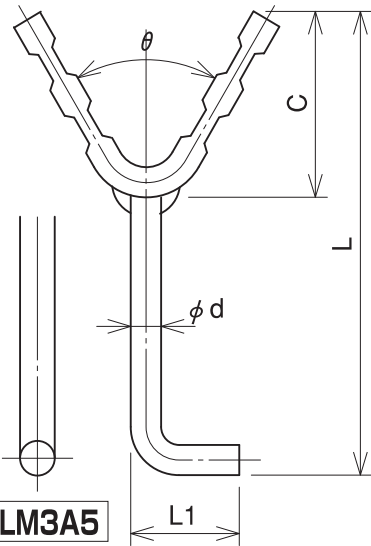
**Welded anchor metal (corrugated)
 Type A, B, and C**

YM3A. YM3B. YM3C

Drawing No.
134

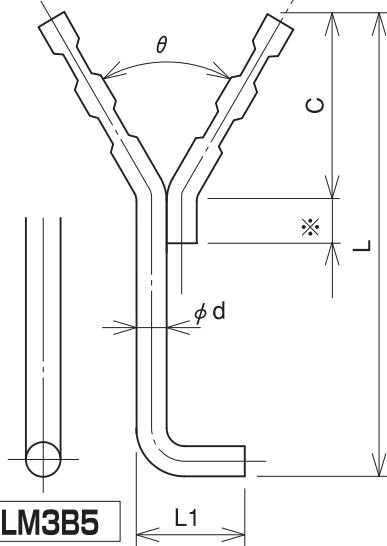
NAMITAKIKO CO., LTD.

YLM3A6

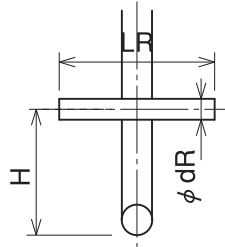


YLM3A5

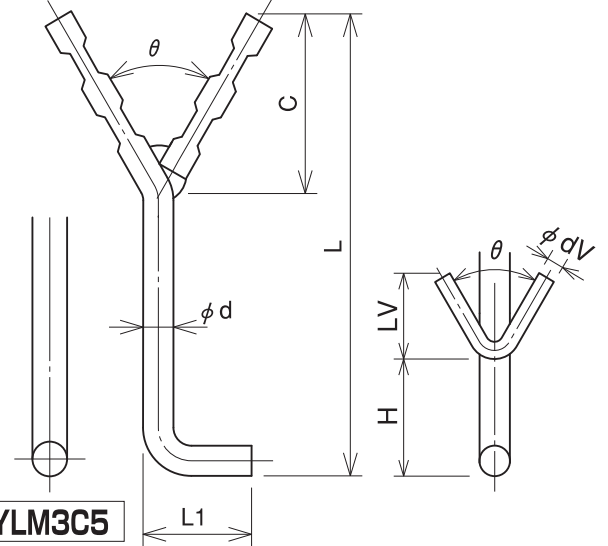
YLM3B6



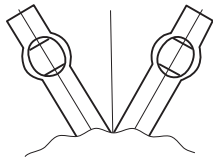
YLM3B5



YLM3C6



YLM3C5



When the C size is smaller, the corrugation direction could be in the direction shown in this drawing.

Line diam.	C size
φ10 or under	35 or smaller
φ12 or more	40 or smaller

L1 is more than three times φd (if not specified, three times φd).
 The "5" at the end of each product name indicates that the bending direction of the leg is at the right angle toward Y.
 The "6" at the end of each product name indicates that the bending direction of the leg is parallel toward Y (as shown in this drawing).

Line diam.	No. of corrugations for the C size		
	54 or under	55 or more	60 or more
8	1	2	2
9	1	2	2
10	1	2	2
12	1	1	2
13	1	1	2
14	1	1	2
16	1	1	2

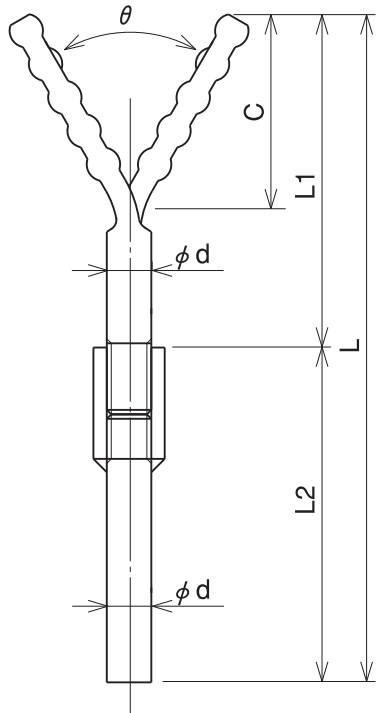
YLM3A5	Type indication	θ -YLM3A5-φd-C-L-L1
YLM3A6	Type indication	θ -YLM3A6-φd-C-L-L1
YLM3B5	Type indication	θ -YLM3B5-φd-C-※-L-L1
YLM3B6	Type indication	θ -YLM3B6-φd-C-※-L-L1
YLM3C5	Type indication	θ -YLM3C5-φd-C-L-L1
YLM3C6	Type indication	θ -YLM3C6-φd-C-L-L1

**Welded anchor metal (corrugated)
 Type A, B, and C**

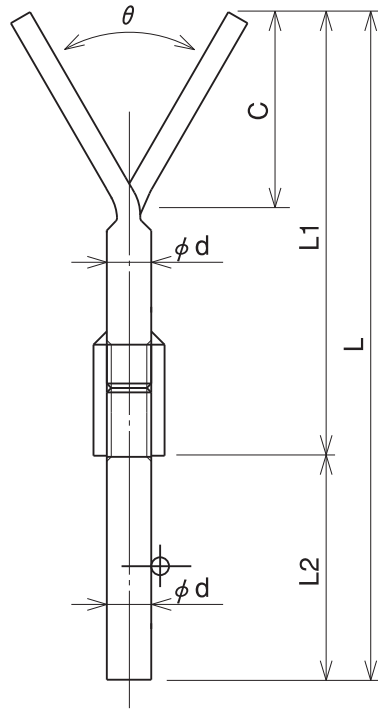
YLM3A. YLM3B. YLM3C

Drawing No.
 135

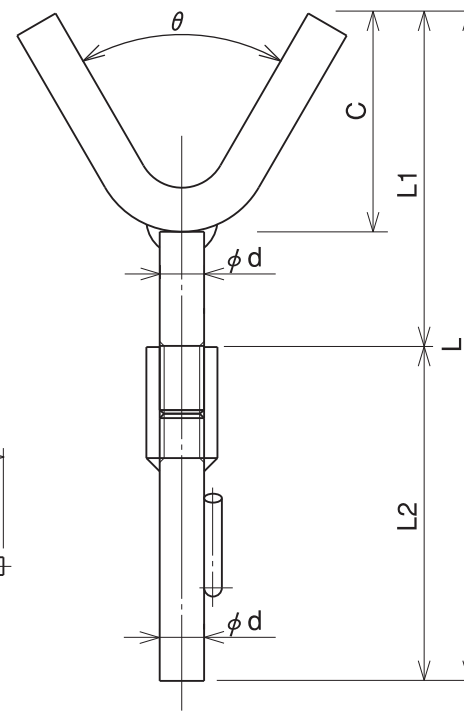
NAMITAKIKO CO., LTD.



W5U
WW



W4WU
WSLR



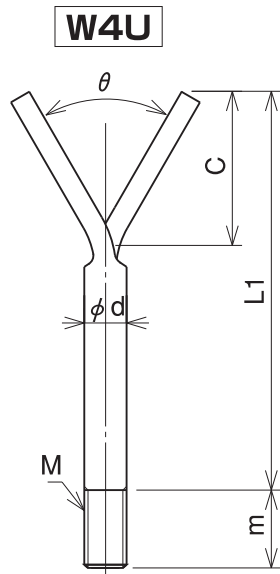
W2AU
WWV

This drawing shows an example of combinations of the upper part and the lower part of two-stage anchor metal.
Please select your preferable combinations by using each material for the upper part and the lower part shown in other drawings.

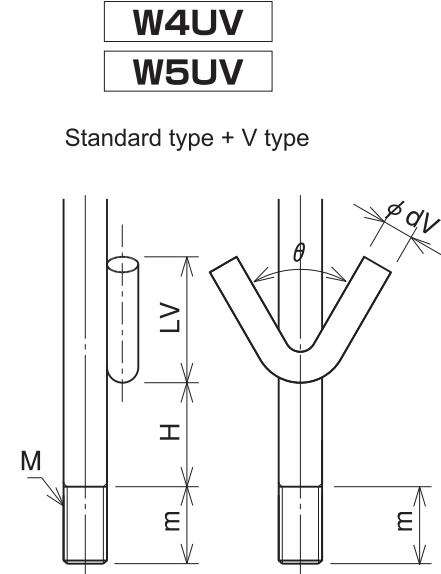
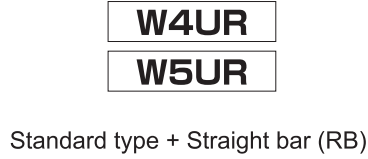
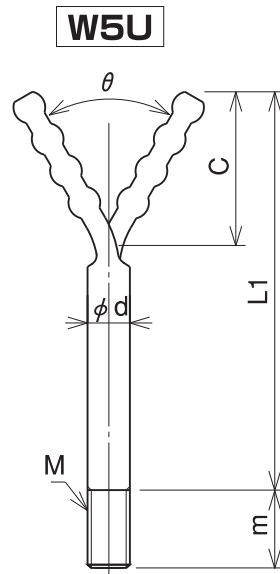
Two-stage anchor metal
assembly drawing
Namita type

Drawing No.
136

NAMITAKIKO CO., LTD.



Standard type



W4U Type indication θ -W4U- ϕ d-C-L1-M-m

W5U Type indication θ -W5U- ϕ d-C-L1-M-m

Example of description: 60-W5U-10-50-100-M10-15

W4UR Type indication θ -W4UR- ϕ d-C-L1-M-m- ϕ dR-LR-H
W5UR Type indication θ -W5UR- ϕ d-C-L1-M-m- ϕ dR-LR-H

W4UV Type indication θ -W4UV- ϕ d-C-L1-M-m- θ - ϕ dV-LV-H
W5UV Type indication θ -W5UV- ϕ d-C-L1-M-m- θ - ϕ dV-LV-H

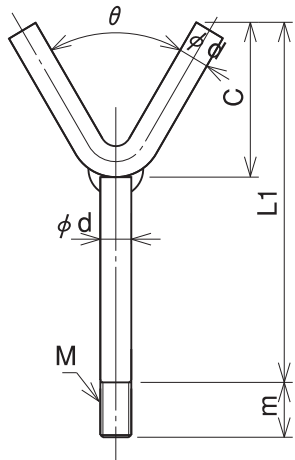
ϕ d	L1 (W4U,W5U)	M	m
ϕ 8	Min. 45	M8	12
ϕ 10	Min. 55	M10	15
ϕ 12	Min. 60	M12	18
ϕ 14	Min. 70	M14	21
ϕ 16	Min. 80	M16	24

Please select your preferable combinations by using each material for the lower part shown in other drawings.

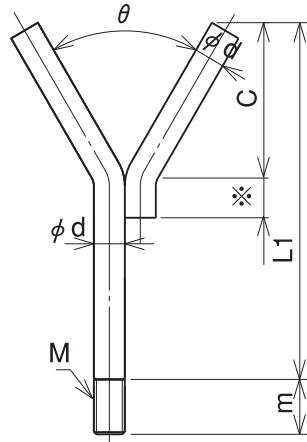
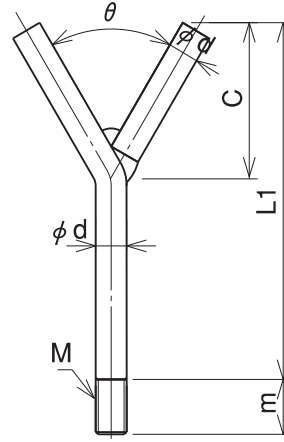
Two-stage anchor metal Upper (U)
Cast type Namita type
W4U. W4UR. W4UV
W5U. W5UR. W5UV

Drawing No.
137

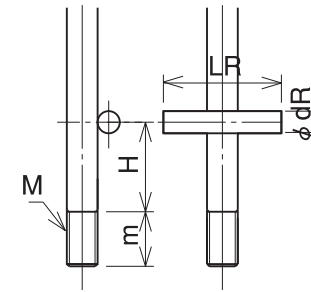
NAMITAKIKO CO., LTD.

W2AU**W2BU**

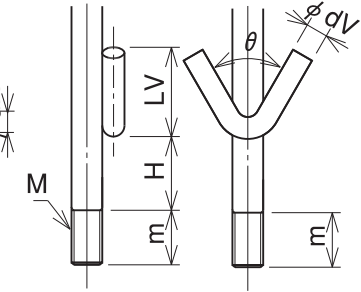
Standard type

**W2CU****W2AUR****W2BUR****W2CUR**

Standard type + Straight bar (RB)

**W2AUV****W2BUV****W2CUV**

Standard type + V type

W2AU Type indication θ -W2AU- ϕd -C-L1-M-mW2BU Type indication θ -W2BU- ϕd -C-※-L1-M-mW2CU Type indication θ -W2CU- ϕd -C-L1-M-m

Example of description: 60-W2BU-10-50-20-M10-15

ϕd	L1 (W2AU, W2CU)	L1 (W2BU)	M	m
$\phi 8$	Min. 45	Min. 45	M8	12
$\phi 10$	Min. 45	Min. 45	M10	15
$\phi 12$	Min. 50	Min. 50	M12	18
$\phi 14$	Min. 60	Min. 70	M14	21
$\phi 16$	Min. 60	Min. 70	M16	24

Please select your preferable combinations by using each material for the lower part shown in other drawings.

W2AUR	Type indication	θ -W2AUR- ϕd -C-L1-M-m- ϕdR -LR-H
W2BUR	Type indication	θ -W2BUR- ϕd -C-※-L1-M-m- ϕdR -LR-H
W2CUR	Type indication	θ -W2CUR- ϕd -C-L1-M-m- ϕdR -LR-H
W2AUV	Type indication	θ -W2AUV- ϕd -C-L1-M-m- θ - ϕdV -LV-H
W2BUV	Type indication	θ -W2BUV- ϕd -C-※-L1-M-m- θ - ϕdV -LV-H
W2CUV	Type indication	θ -W2CUV- ϕd -C-L1-M-m- θ - ϕdV -LV-H

The "※" mark indicates an overlap space (if not specified, 1.5 times ϕd).

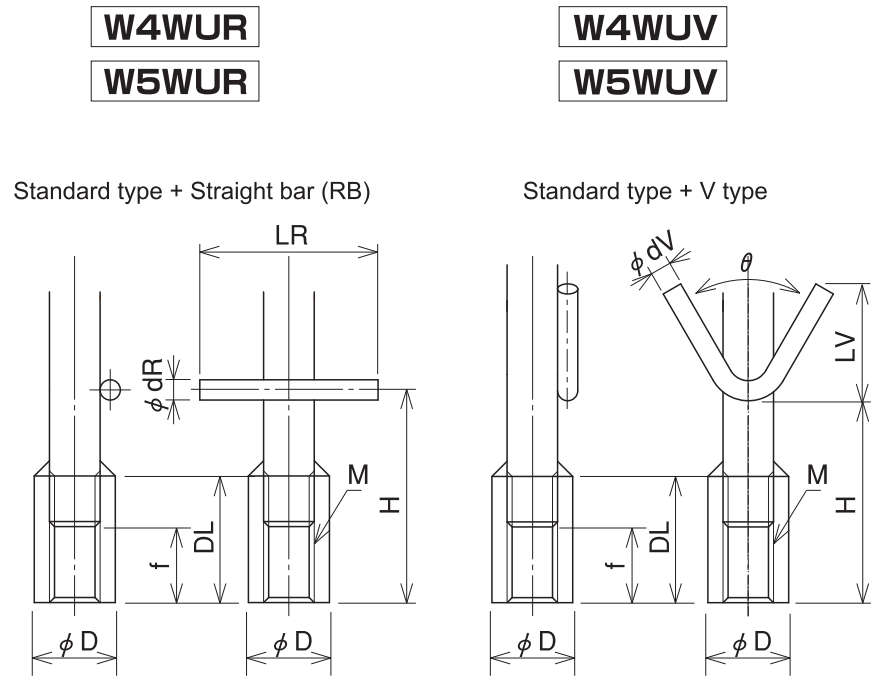
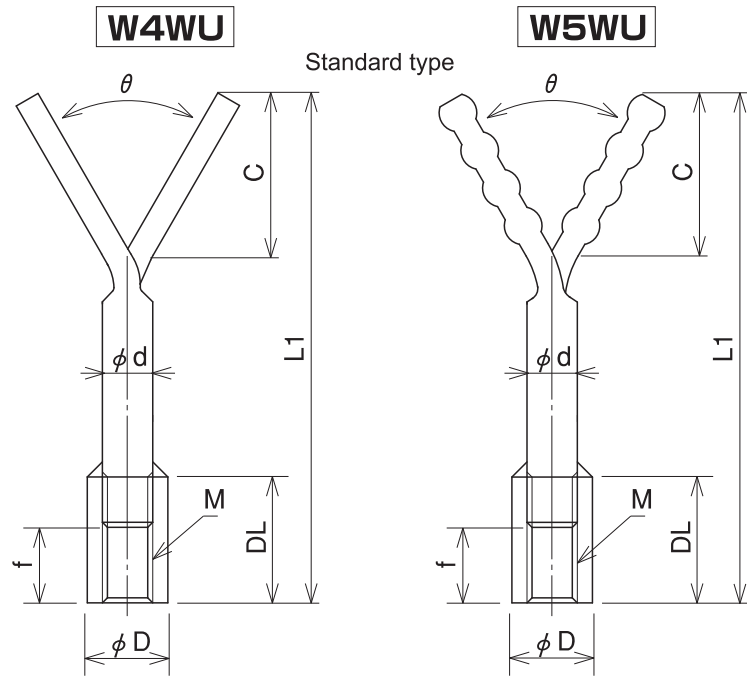
Two-stage anchor metal upper (U)
Welded type

W2AU. W2AUR. W2AUV
W2BU. W2BUR. W2BUV
W2CU. W2CUR. W2CUV

Drawing No.

138

NAMITAKIKO CO., LTD.



W4SU Type indication θ -W4SU- ϕ d-C-L1-M-f W5SU Type indication θ -W5SU- ϕ d-C-L1-M-f

Example of description: 60-W4WU-10-50-20-M10-15

ϕ d	L1 (W4WU,W5WU)	ϕ D	f	M	DL
ϕ 8	Min. 45	ϕ 12	12	M8	20
ϕ 10	Min. 63	ϕ 16	15	M10	25
ϕ 12	Min. 74	ϕ 20	18	M12	30
ϕ 14	Min. 85	ϕ 22	21	M14	35
ϕ 16	Min. 102	ϕ 24	24	M16	40

W4WUR Type indication θ -W4WUR- ϕ d-C-L1-M-f- ϕ dR-LR-H
W5WUR Type indication θ -W5WUR- ϕ d-C-L1-M-f- ϕ dR-LR-H

W4WUV Type indication θ -W4WUV- ϕ d-C-L1-M-f- θ - ϕ dV-LV-H
W5WUV Type indication θ -W5WUV- ϕ d-C-L1-M-f- θ - ϕ dV-LV-H

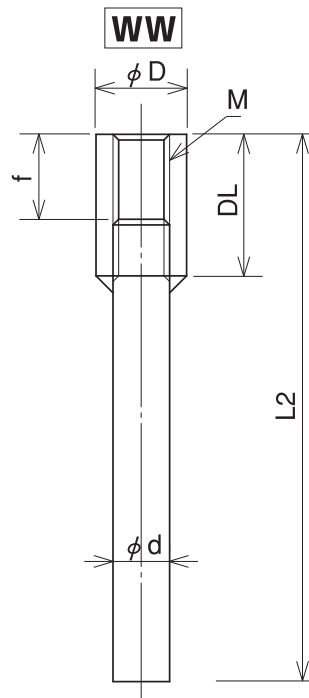
**Two-stage anchor metal upper (U)
Namita type**

W4WU, W4WUR, W4WUV
W5WU, W5WUR, W5WUV

Drawing No.
139

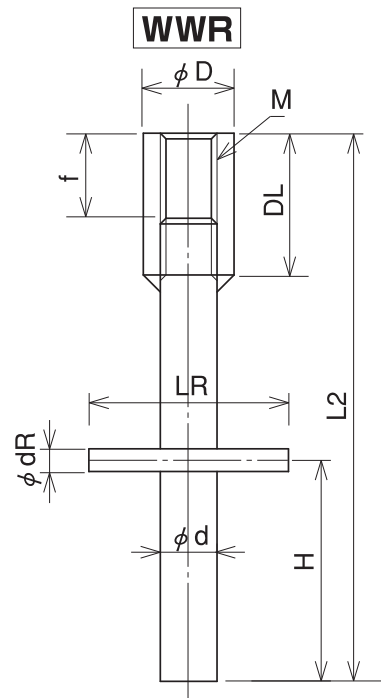
Please select your preferable combinations by using each material for the lower part shown in other drawings.

NAMITAKIKO CO., LTD.



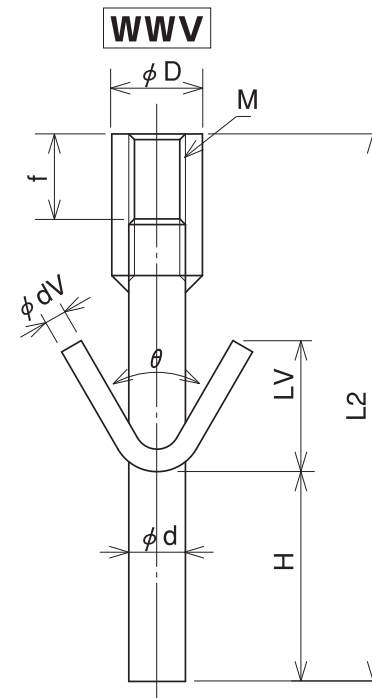
Standard type

WW	Type indication	WW-φd-L2-M-f
WWF	Type indication	WWF-φd-L2-M-f



Standard type + Straight bar (RB)

WWR	Type indication	WWR-φd-L2-M-f-φdR-LR-H
WWRf	Type indication	WWRf-φd-L2-M-f-φdR-LR-H



Standard type + V type

WWV	Type indication	WWV-φd-L2-M-f-θ-φdV-LV-H
WWVF	Type indication	WWVF-φd-L2-M-f-θ-φdV-LV-H

Example of description: WW-10-100-M10-15

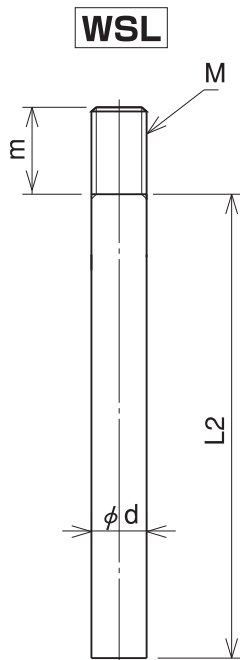
φd	φD	f	M	DL
φ8	φ12	12	M8	20
φ10	φ16	15	M10	25
φ12	φ20	18	M12	30
φ14	φ22	21	M14	35
φ16	φ24	24	M16	40
φ20	φ30	30	M20	50

Please select your preferable combinations by using each material for the upper part shown in other drawings.

**Two-stage anchor metal (L)
Namita type**
WW. WWR. WWV

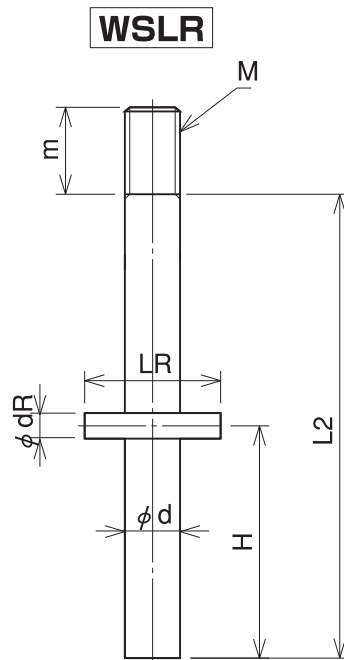
Drawing No.
140

NAMITAKIKO CO., LTD.



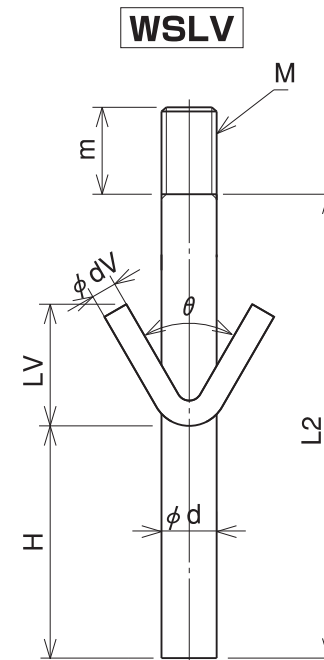
Standard type

WSL	Type indication	WSL-φd-L2-M-m
WSLF	Type indication	WSLF-φd-L2-M-m



Standard type + Straight bar (RB)

WSLR	Type indication	WSLR-φd-L2-M-m-φdR-LR-H
WSLRF	Type indication	WSLRF-φd-L2-M-m-φdR-LR-H



Standard type + V type

WSLV	Type indication	WSLV-φd-L2-M-m-θ-φdV-LV-H
WSLVF	Type indication	WSLVF-φd-L2-M-m-θ-φdV-LV-H

Example of description: WSLF-10-100-M10-15... The "F" at the end of each product name indicates flux processing of automatic welding.

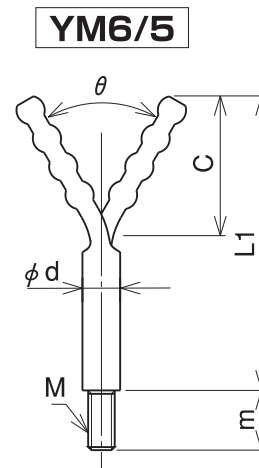
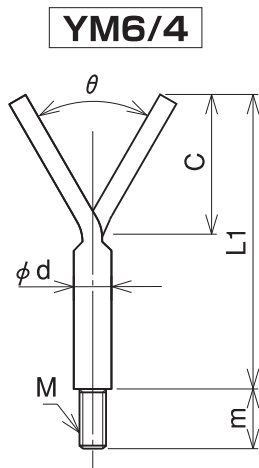
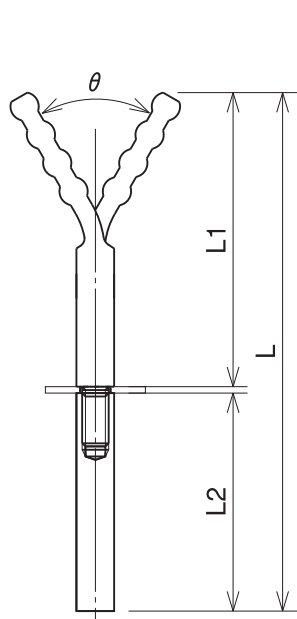
φ d	M	m
φ 8	M8	12
φ 10	M10	15
φ 12	M12	18
φ 14	M14	21
φ 16	M16	24

Please select your preferable combinations by using each material for the upper part shown in other drawings.

**Two-stage anchor metal (L)
Namita type**
WSL. WSLR. WSLV

Drawing No.
141

NAMITAKIKO CO.,LTD.

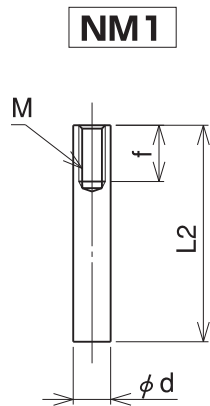


YM6/4 Type indication θ YM6/4- ϕ d-C-L1-M-m

YM6/5 Type indication θ YM6/5- ϕ d-C-L1-M-m

Example of description: YM6/4-10-50-100-M10-15

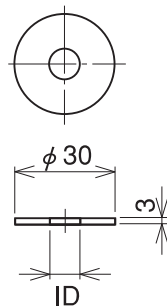
YM6/5
WM1 is available
NM1



NM1 Type indication NM1- ϕ d-L2-M-f

Example of description: NM-12-100-M8-12

WM1



WM1 Type indication WM1

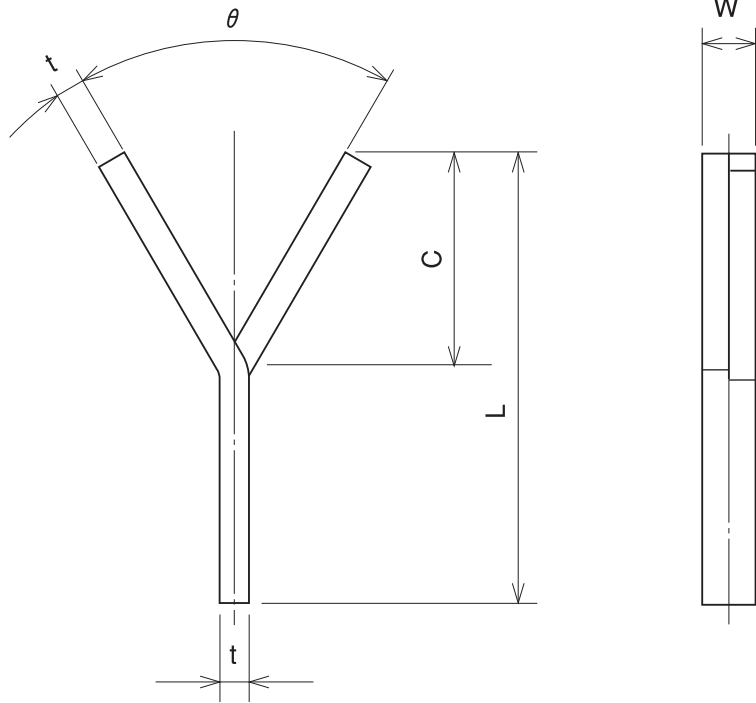
Standard size	M	f or m	ϕ d	WM1 ID
	M8	12	12	10
	M10	15	16	12
	M12	18	20	14
	M14	21	22	16
	M16	24	24	18

Two-stage anchor metal
(upper and lower)
YM6/4. YM6/5. NM1. WM1

Drawing No.
142

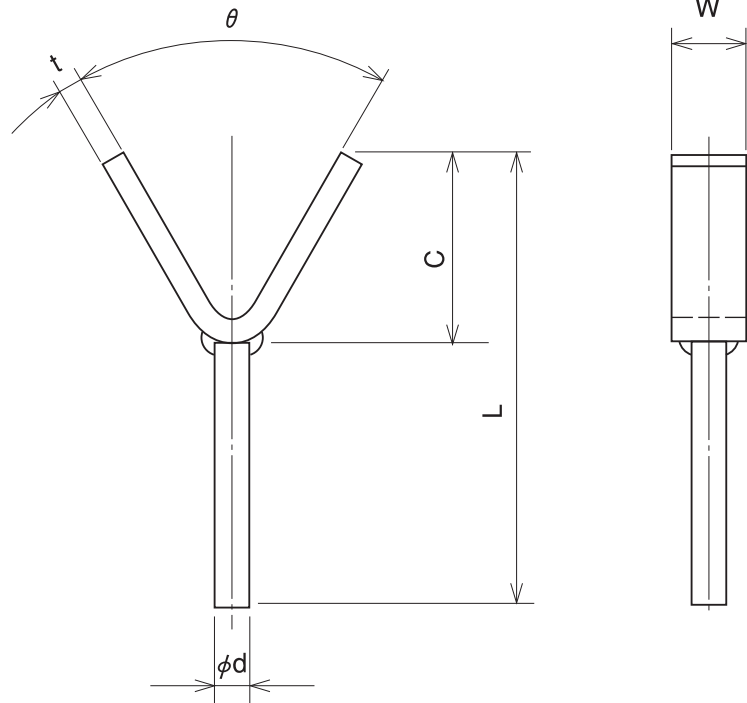
NAMITAKIKO CO., LTD.

YM1



YM1	Type indication	θ -YM1-t-W-C-L
-----	-----------------	-----------------------

YM2



YM2	Type indication	θ -YM2-t-W-C- ϕ d-L
YM2F	Type indication	θ -YM2F-t-W-C- ϕ d-L

Plate Y anchor metal

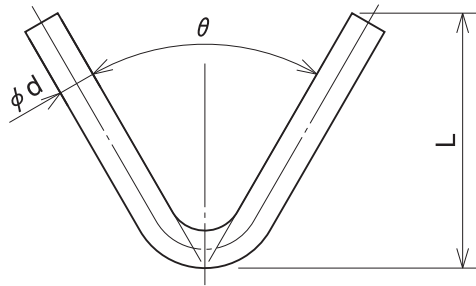
YM1. YM2

Drawing No.

143

NAMITAKIKO CO., LTD.

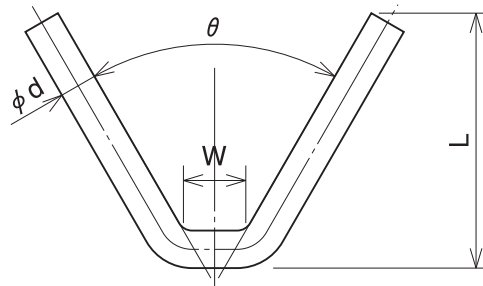
VM1



VM1	Type indication	θ -VM1- ϕd -L
VM1F	Type indication	θ -VM1F- ϕd -L

The "F" at the end of each product name indicates flux processing of automatic welding.

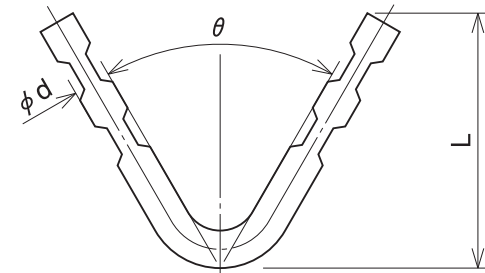
VM3



VM3	Type indication	θ -VM3- ϕd -L-W
-----	-----------------	------------------------------

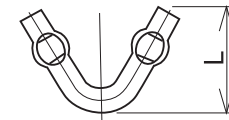
Example of description: 60-VM3-10-50-15

VM3A



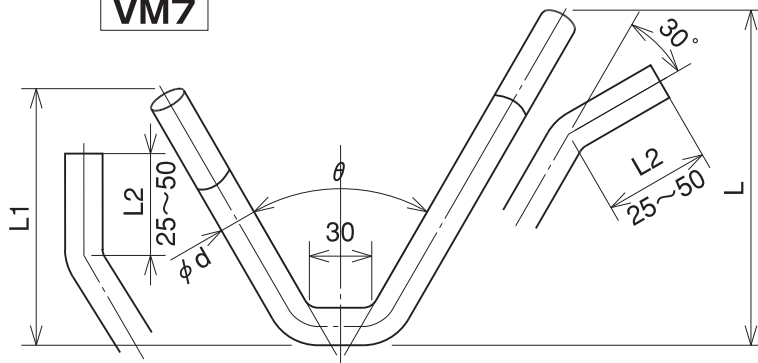
VM3A	Type indication	θ -VM3A- ϕd -L
------	-----------------	-----------------------------

When the L size is smaller, the corrugation direction could be in the direction shown in this drawing.



Line diam.	L size
$\phi 10$ or under	35 or smaller
$\phi 12$ or more	40 or smaller

VM7



VM7	Type indication	θ -VM7- ϕd -L-L1-L2
-----	-----------------	----------------------------------

Line diam.	No. of corrugations for the L size		
	54 or under	55 or more	60 or more
8	1	2	2
9	1	2	2
10	1	2	2
12	1	1	2
13	1	1	2
14	1	1	2
16	1	1	2

V anchor metal

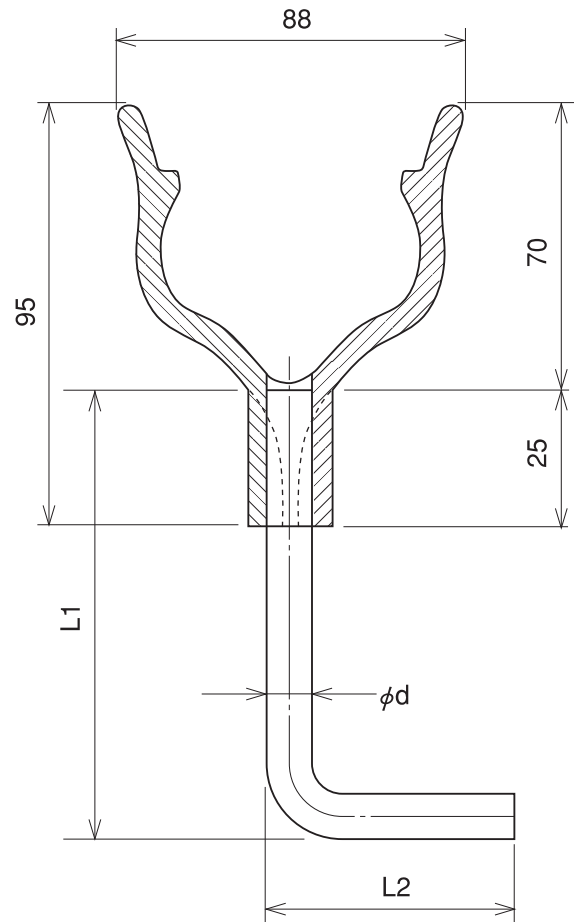
VM1. VM3. VM3A. VM7

Drawing No.

144

NAMITAKIKO CO.,LTD.

YLM9. 10



YLM9	Type indication	YLM9-φd-L-L2
YLM10	Type indication	YLM10-φd-L-L2

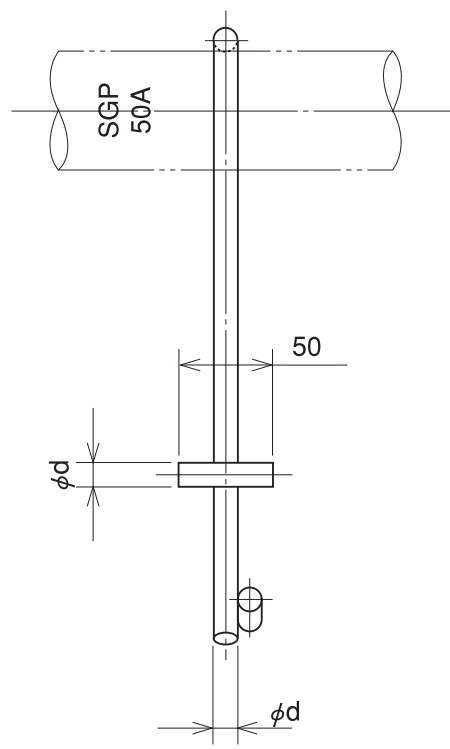
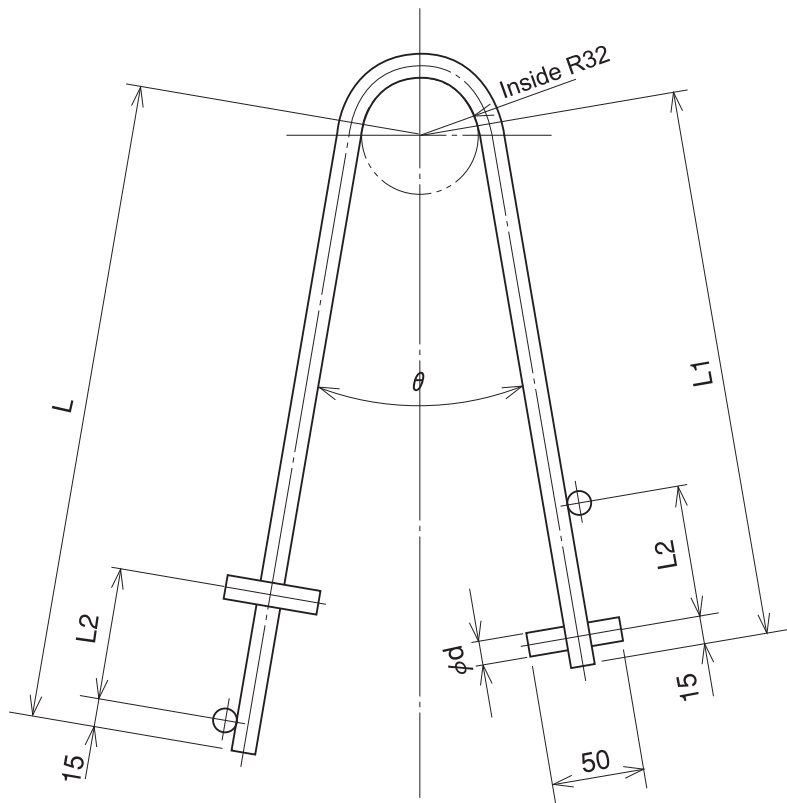
SCH-13
("A" anchor head)

- L2: If not specified, the length is three times the diameter (ϕ).
- (9): The leg's bending direction is at the right angle toward Y.
- (10): The leg's bending direction is parallel toward Y (as shown in this drawing).("A" anchor head)

Headed anchor metal	Drawing No.
YLM9. YLM10	145

NAMITAKIKO CO.,LTD.

PM1



PM1	Type indication	θ -PM1- ϕ d-L-L1-L2-R
-----	-----------------	-----------------------------------

Suspended anchor metal (for ceiling)

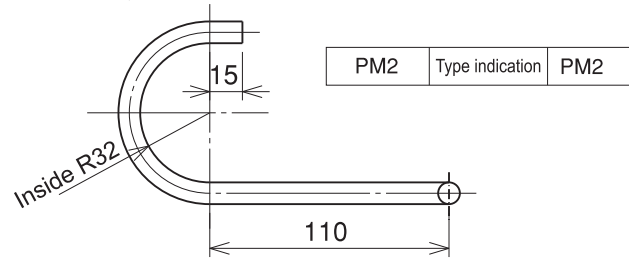
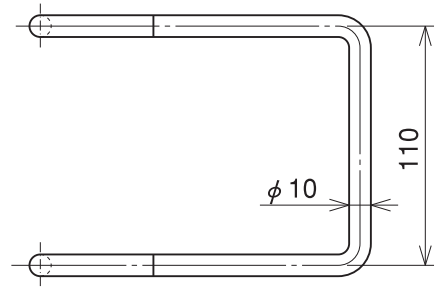
PM1

Drawing No.

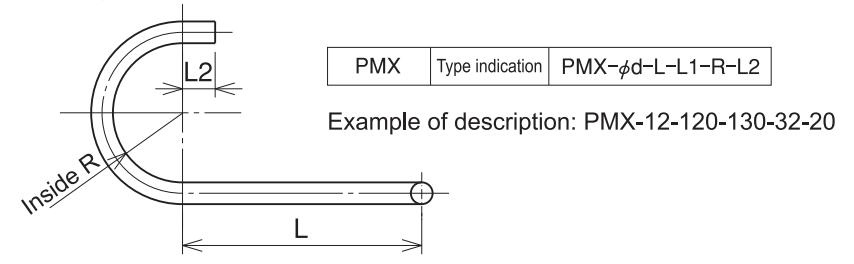
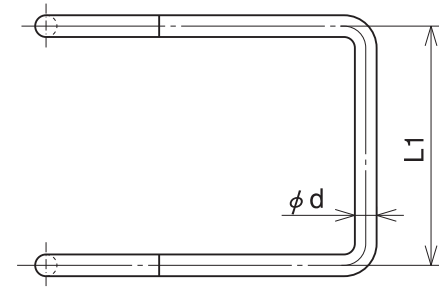
146

NAMITAKIKO CO., LTD.

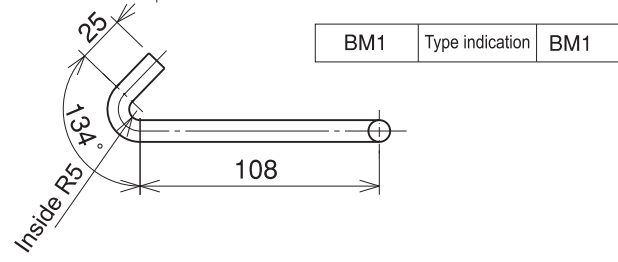
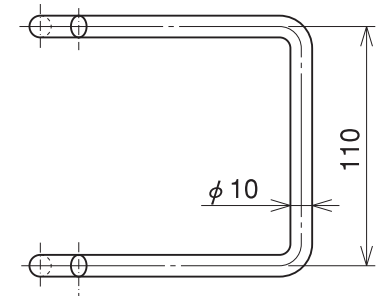
PM2



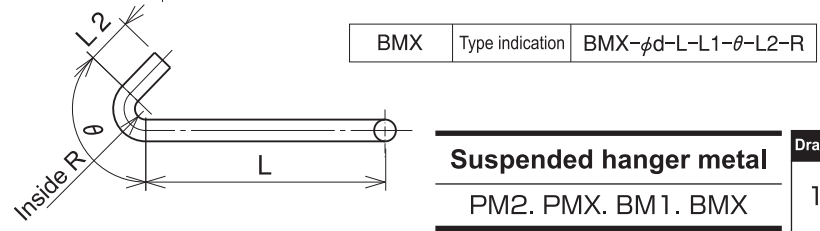
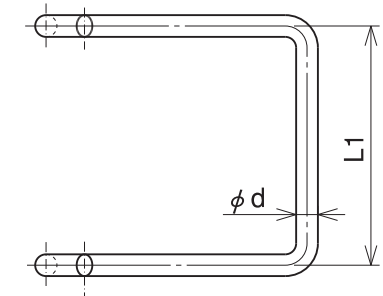
PMX



BM1



BMX

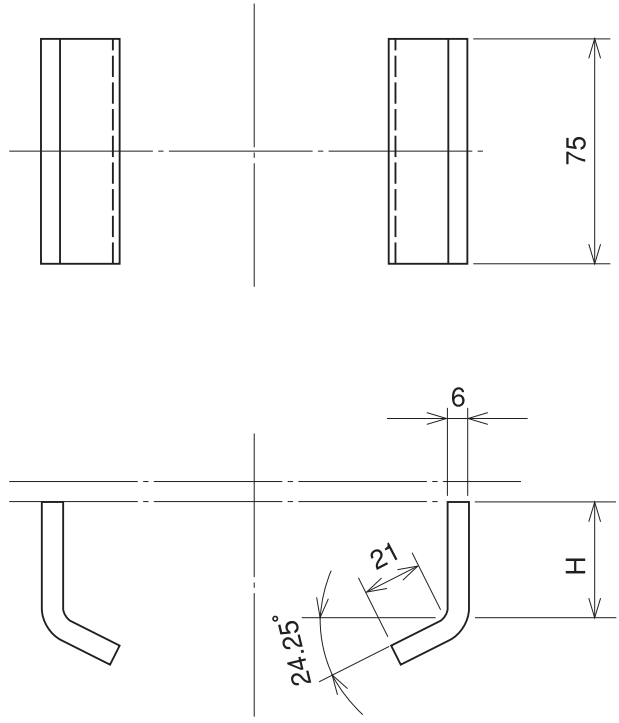


Suspended hanger metal
 PM2. PMX. BM1. BMX

Drawing No.
 147

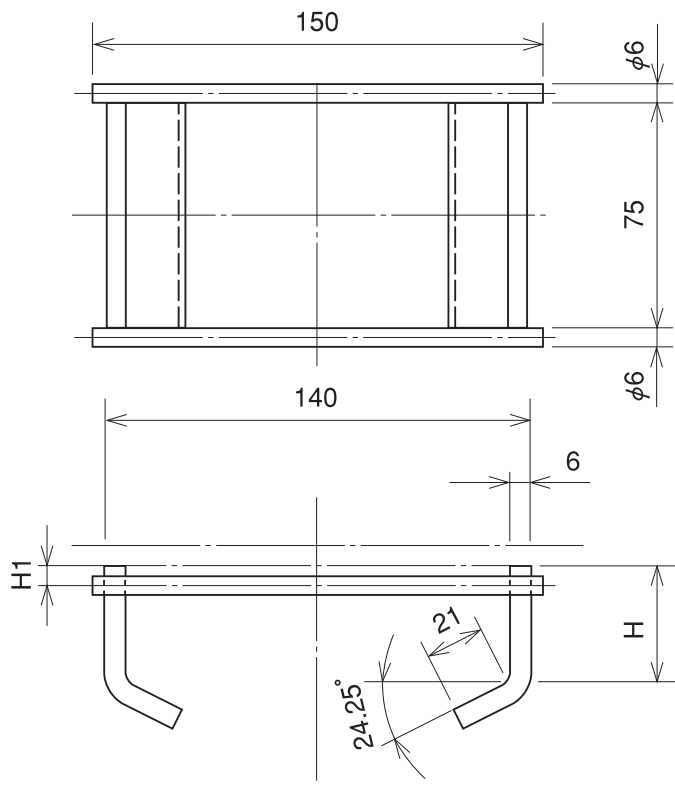
NAMITAKIKO CO., LTD.

HM1



HM1	Type indication	HM1-H
-----	-----------------	-------

HM3

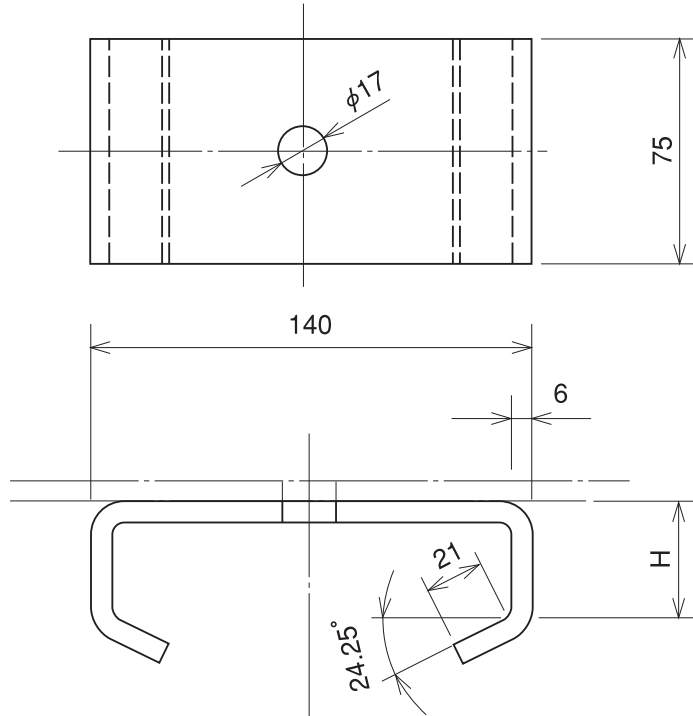


HM3	Type indication	HM3-H-H1
-----	-----------------	----------

Hanger metal	Drawing No.
HM1. HM3	148

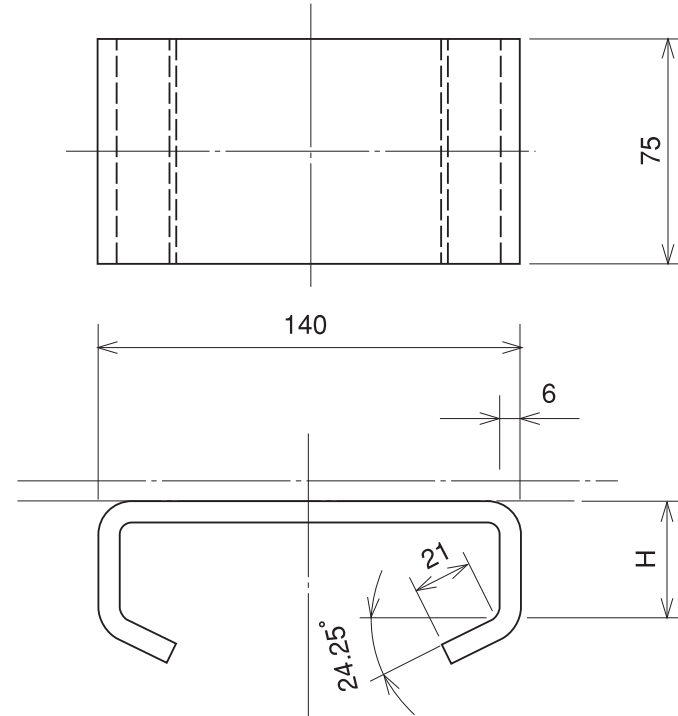
 NAMITAKIKO CO., LTD.

CM1



CM1	Type indication	CM1-H
-----	-----------------	-------

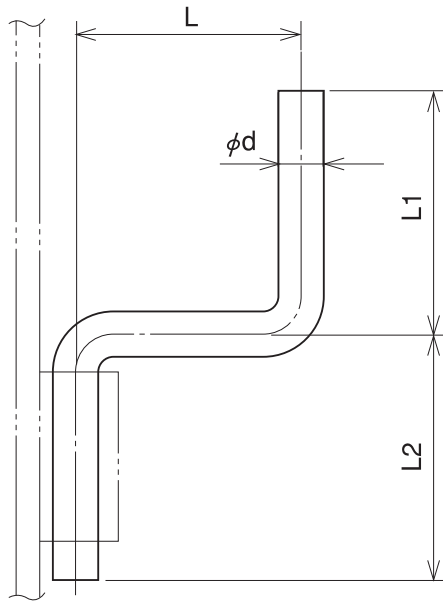
CM2



CM2	Type indication	CM2-H
-----	-----------------	-------

Hanger metal	Drawing No.
CM1. CM2	149
NAMITAKIKO CO., LTD.	

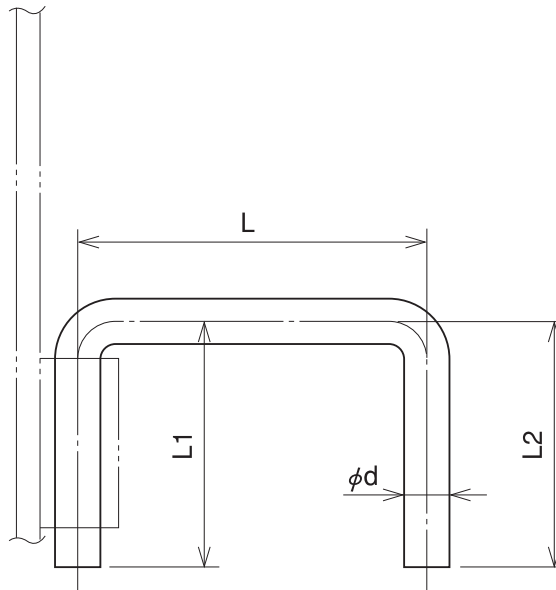
SM2



SM2 Type indication SM2- ϕd -L-L1-L2

Diam.	L size	L1 and L2 sizes	
	Min.	Min.	Max.
$\phi 8$	80	20	83
$\phi 9$		25	84
$\phi 10$		30	85
$\phi 12$		35	87
$\phi 13$		40	88
$\phi 14$		40	89
$\phi 16$		45	91

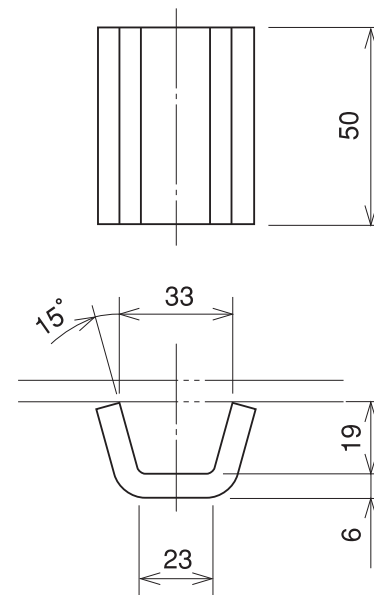
SM3



SM3 Type indication SM3- ϕd -L-L1-L2

Diam.	L size	L1 and L2 sizes
	Min.	Max.
$\phi 8$	60	20
$\phi 9$		25
$\phi 10$		30
$\phi 12$		35
$\phi 13$		40
$\phi 14$		40
$\phi 16$		45

UM1



UM1 Type indication UM1

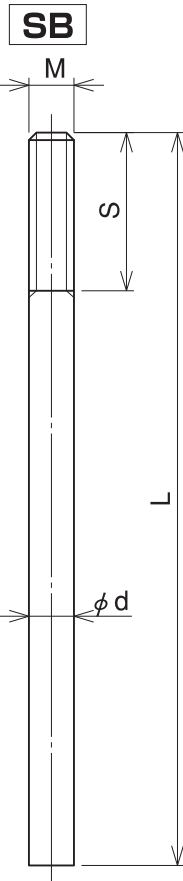
Hanger metal
SM2. SM3. UM1

Drawing No.

150

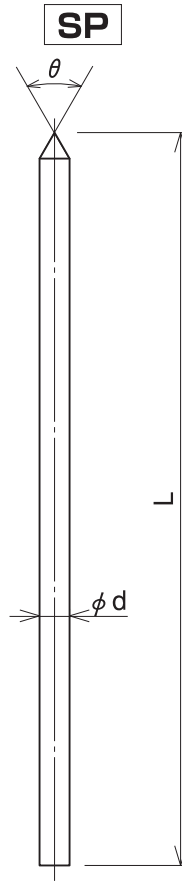
NAMITAKIKO CO., LTD.

Stud bolt



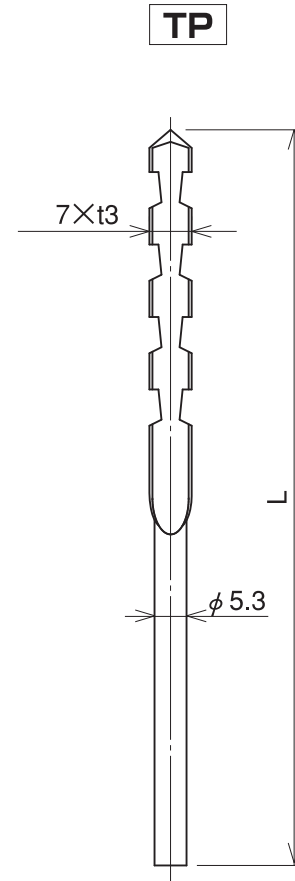
SB	Type indication	SB-φd-L-M-S
SBF	Type indication	SBF-φd-L-M-S

Stud pin



SP	Type indication	SP-φd-L
SPF	Type indication	SPF-φd-L

Twist pin



TP	Type indication	TP-φ5.3-L
TPF	Type indication	TPF-φ5.3-L

Please select combinations of single-end screws, both-end screws, single-end tips, both tips, flux processing, etc.

Stud bolts and pins

SB. SP. TP

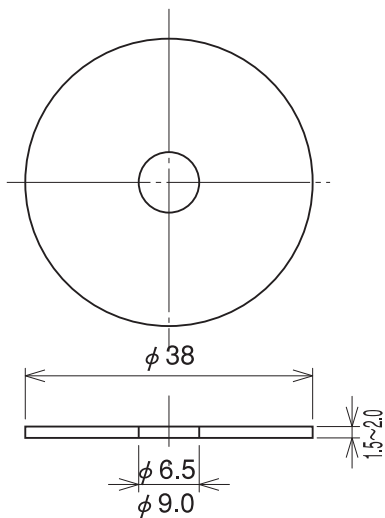
Drawing No.

151

 **NAMITAKIKO CO., LTD.**

Stud bolt washer

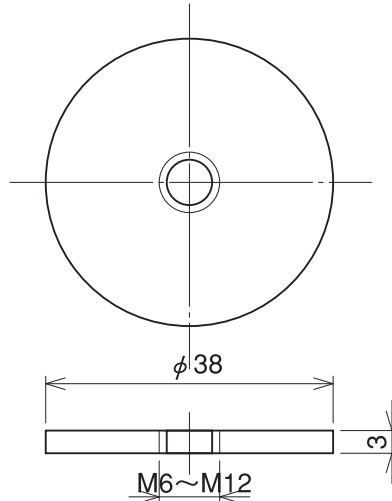
SBW



Washers in other sizes are also producible.

Nut washer

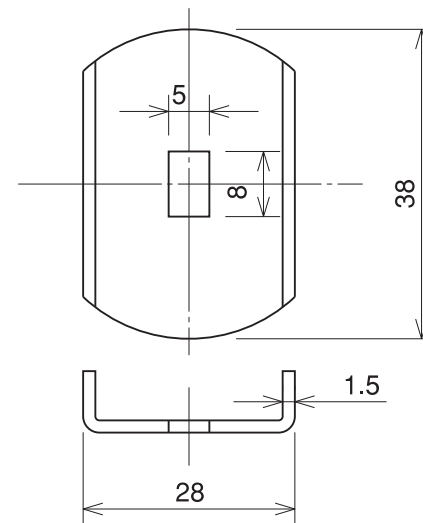
WMN1



Washers in other sizes are also producible.

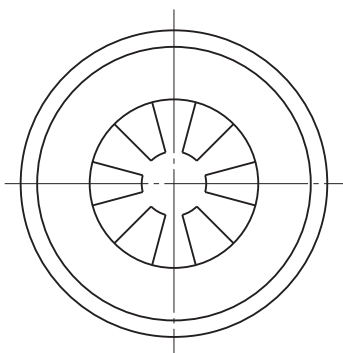
Twist pin washer

TPW



Speed clip

SC



For $\phi 5.3$	Shared
For M6	
For $\phi 6$	Shared
For $\phi 7.1$	
For M8	Exclusive
For $\phi 8$	
For $\phi 8.9$	Shared
For M10	
For $\phi 10$	Exclusive

Washers in other sizes are also producible.

Washers

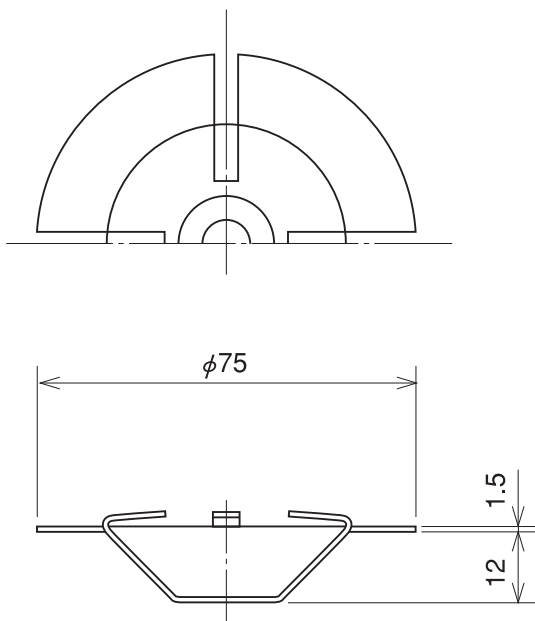
SBW. WMN1. TPW. SC

Drawing No.

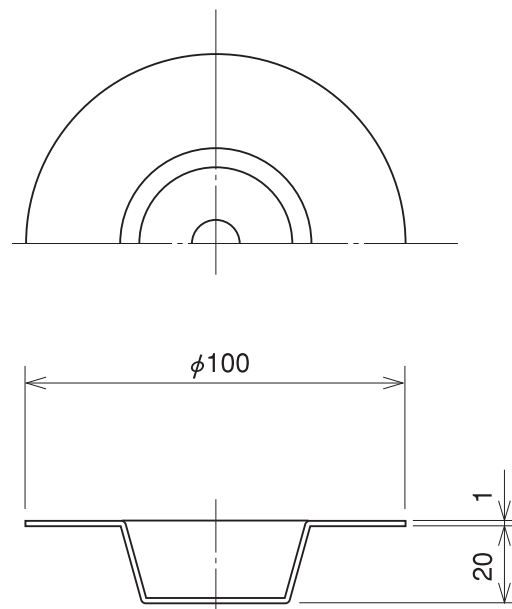
152

 NAMITAKIKO CO., LTD.

Retainer AR

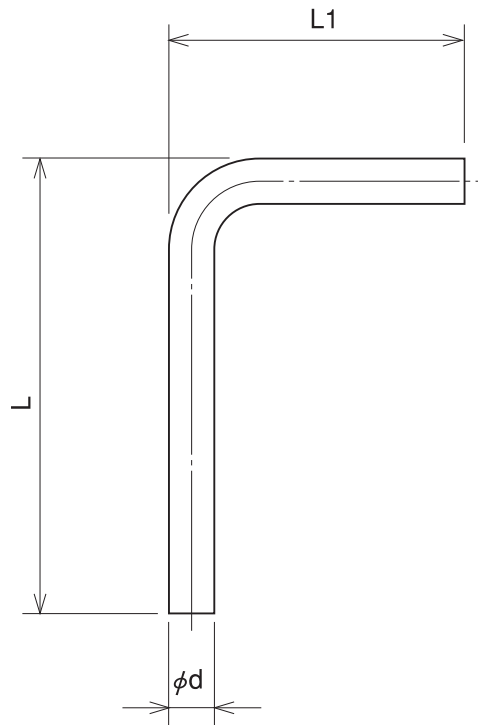


Retainer BR



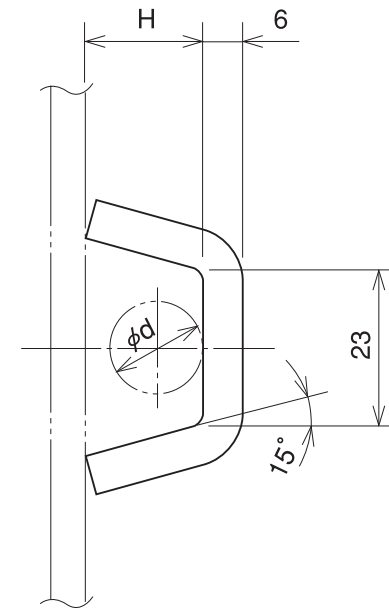
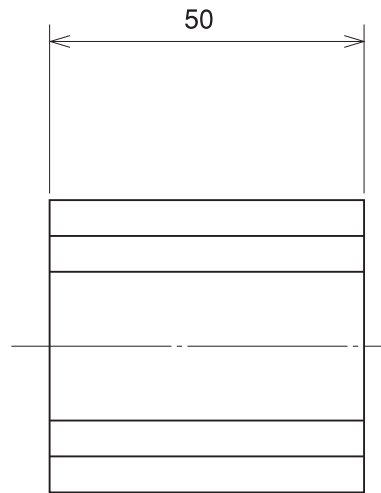
Retainers	Drawing No.
AR. BR	153
NAMITAKIKO CO., LTD.	

LM1



LM1	Type indication	LM1-φ d-L-L1
-----	-----------------	--------------

UM2



No.	Type	H	φd
1	UM 2-12	12	10
2	UM 2-13	13	11
3	UM 2-14	14	12
4	UM 2-15	15	13
5	UM 2-16	16	14
6	UM 2-17	17	15

Clips for L anchor and YL anchor metals

LM1. UM2

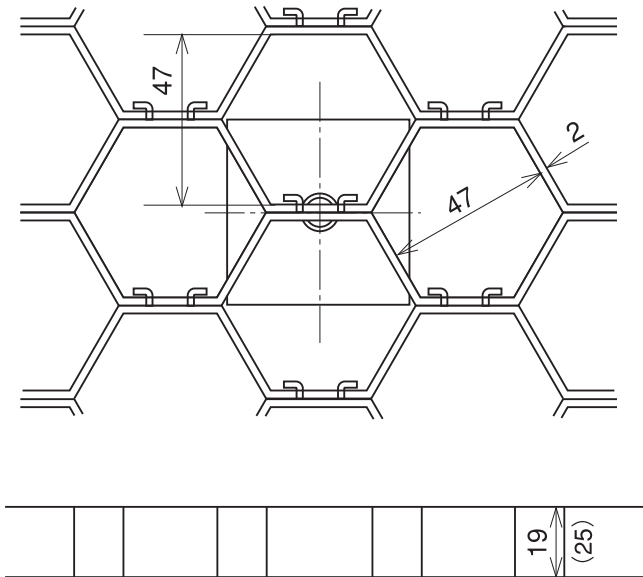
Drawing No.

154

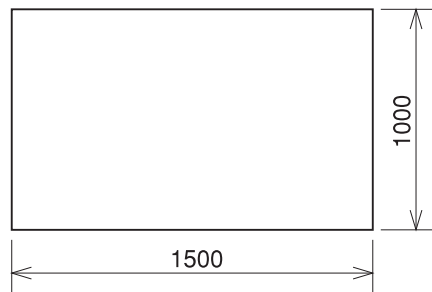
 NAMITAKIKO CO., LTD.

Hex steel

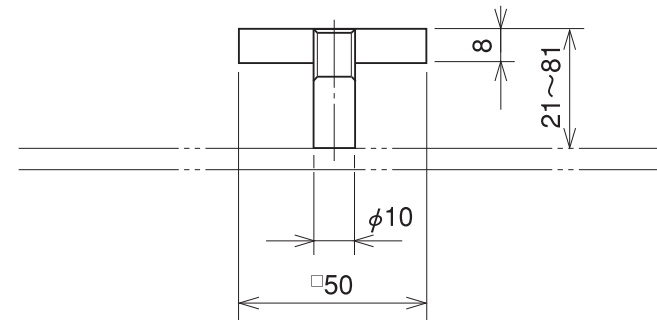
HxS



The standard size is 1000 x 1500.



LPM3



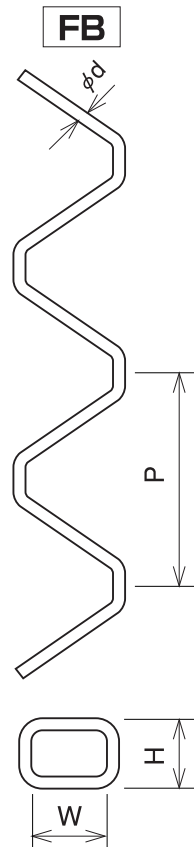
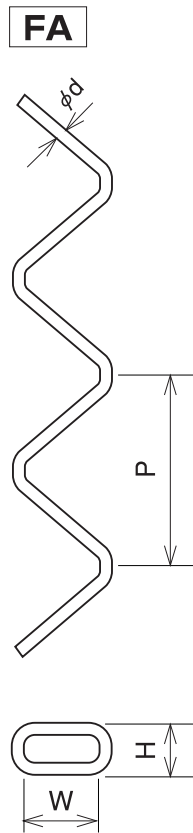
Hex steel

HxS. LPM3

Drawing No.

155

NAMITAKIKO CO., LTD.



Chain links

The standard lengths is about 1m

Part name	φ3.2			φ4			φ5		
	P	W	H	P	W	H	P	W	H
F-A 1	55	29	16	55	29	20	55	29	30
∕ 2	63	31	17	63	31	20	63	31	30
∕ 3	100	55	22	100	55	22	100	55	30
∕ 4	77	35	30	77	35	30	77	35	30
∕ 5	80	40	30	80	40	30	80	40	30
∕ 6	100	50	30	100	50	30	100	50	30
∕ 8	100	55	35	100	55	35	100	55	35
∕ 9	115	65	35	115	65	35	115	65	35
∕ 11	120	70	35	120	70	35	120	70	35
∕ 12	120	75	35	120	75	35	120	75	35
∕ 13	100	50	45	100	50	45	100	50	45
∕ 14	115	65	45	115	65	45	115	65	45
∕ 15	130	85	65	130	85	70	130	85	70
∕ 16	150	100	85	150	100	85	150	100	85
F-B 13	100	50	45	100	50	45	100	50	45
∕ 14	115	65	45	115	65	45	115	65	45
∕ 15	130	85	70	130	85	70	130	85	70
∕ 16	150	100	85	150	100	85	150	100	85

*Please contact us for details about non-standard products of type A, type B, φd, P, W, and H.

Chain links

FA. FB

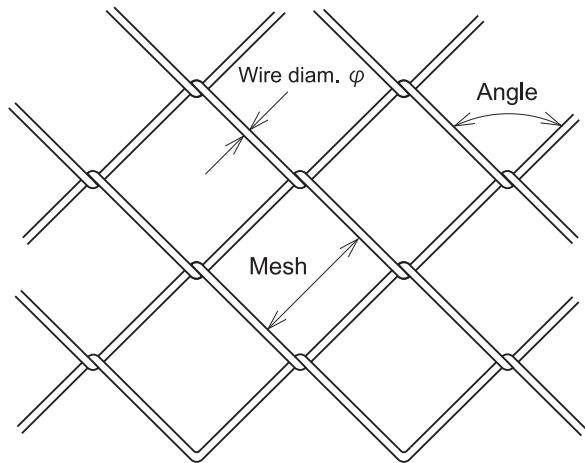
Drawing No.

156

NAMITAKIKO CO.,LTD.

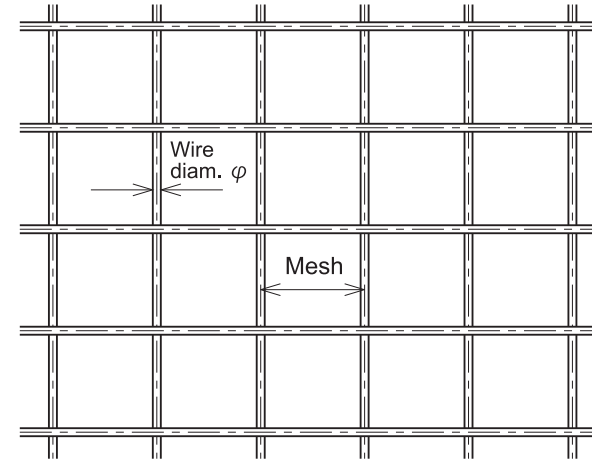
Diamond metal mesh

LN



Welded metal mesh

WN



Mesh \ Wire diam.	2.6	3.2	4.0
50 × 50	Max. producible size 1000 x 2000		
75 × 75			
100 × 100			

Metal meshes

Diamond metal mesh and
welded metal mesh

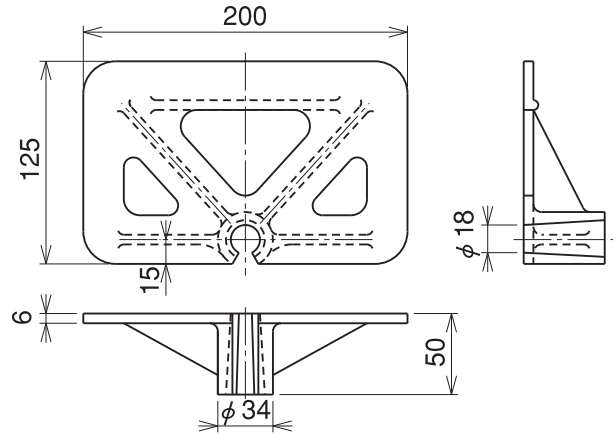
Drawing No.

157

 NAMITAKIKO CO., LTD.

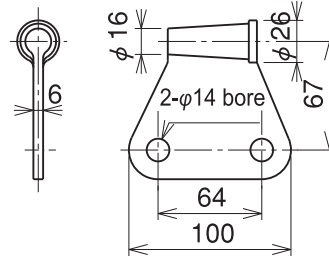
Support metal

MS



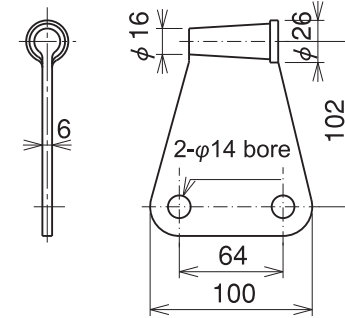
Bracket metal

MB-67L



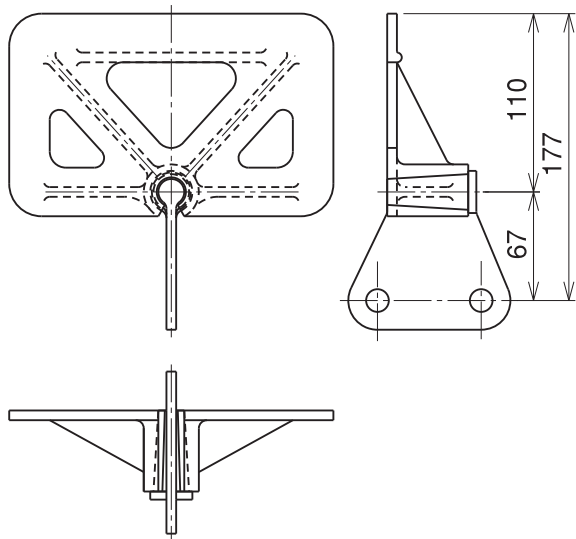
Bracket metal

MB-102L



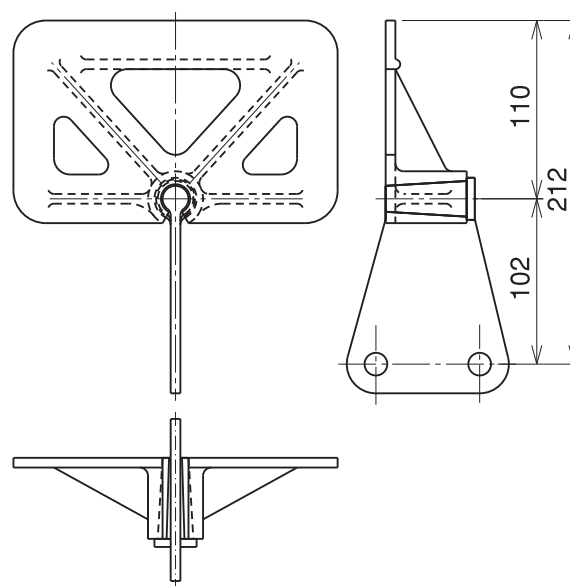
Sectional support MB3

MS+MB-67L



Sectional support MB3N

MS+MB-102L



Load support metal parts
Sectional support

MB3. MB3N

Drawing No.
158

NAMITAKIKO CO.,LTD.



NAMITAKIKO CO., LTD.

Head Office 1-13-13 Kobayashi-nishi, Taisho-ku,
Osaka City 551-0013
TEL: +81 6 6553 0155 / FAX: +81 6 6553 0150

Tokyo WORK BASE Nihombashi. 2F
Branch Office 2-16-4, Nihonbashi, Chuo-ku, Tokyo 130-0027
TEL: +81 3 6228 7762 / FAX: +81 3 3272 2555

Nagoya Matsumoto Daiichi Bldg. 2F, 4-1-12
Branch Office Kouzoujicho-kita, Kasugai City, Aichi Pref.
487-0016
TEL: +81 568 29 6740 / FAX: +81 568 29 6741

Okayama 14-21 Mizushimaaioi-cho, Kurashiki City,
Branch Office Okayama Pref. 712-8039
TEL: +81 86 436 6671 / FAX: +81 86 436 6672

Kyushu 72-39 Nishimatomachi, Kokurakita-ku,
Branch Office Kitakyushu City, Fukuoka Pref. 803-0801
TEL: +81 93 482 3445 / FAX: +81 93 482 3446

Head Office TEL: +81 6 6551 7421 (Direct Dial-In)
Factory FAX: +81 6 6551 7895

Shodoshima Ko 2305 Kankakedori, Shodoshima-cho,
Factory Shozu-gun, Kagawa Pref. 761-4433
TEL: +81 879 82 6331
FAX: +81 879 82 6332

Hari Factory 442 Muyama, Muro-ku, Uda City,
Nara Pref. 632-0207
TEL: +81 743 82 1654
FAX: +81 743 82 1623

All rights reserved.
We will make drawings for products having special shapes. Please contact us.



 **NAMITAKIKO CO., LTD.**