Peripheral device/option

Items

■Display

Lineup

Type	Name	Screen size	GSK/GKL	Model
Individual display (Equipped with Ethernet (LAN))	GSK display	5.7-inch	For GSK	GSK-D2
	GKL display		For GKL	GKL-D2
Operation panel integrated display (Equipped with Ethernet (LAN))	5.7-inch general-purpose operation panel	5.7-inch	Common to GSK/GKL	GK-D3-5.7
	8.4-inch general-purpose operation panel	8.4-inch		GK-D3-8.4
	10.4-inch general-purpose operation panel	10.4-inch		GK-D3-10.4
	12.1-inch general-purpose operation panel	12.1-inch		GK-D3-12.1
	15-inch general-purpose operation panel	15-inch		GK-D3-15

■Display model

Name	Model	Screen size
Display for GSK	GSK-D2	5.7-inch
Display for GKL	GKL-D2	5.7-inch

※For the software of display, Giken GSK (GKL) standard type has been installed.

■Operation panel integrated display model

Name	Model	Screen size
5.7-inch general-purpose operation panel	GK-D3-5.7	5.7-inch
8.4-inch general-purpose operation panel	GK-D3-8.4	8.4-inch
10.4-inch general-purpose operation panel	GK-D3-10.4	10.4-inch
12.1-inch general-purpose operation panel	GK-D3-12.1	12.1-inch
15-inch general-purpose operation panel	GK-D3-15	15-inch

※The software of display is initialized.
　When you use it, it is necessary to write it by yourself.
※The software is also designed by our company.
　Please feel free to consult with our company.

■Display cable model (Separately available)

Name	Model	Cable length	Communication specification
Display cable	GSK-DIS-10M	10m	RS422
	GSK-DIS-15M	15m	

※Common to operation panel integrated display.
※Common to GSK/GKL.
※The cable length can be separately designated. Max. 20m(minimum unit: 1m)
　At the arrangement, please designate the desired length for□in GSK-DIS-□□M.

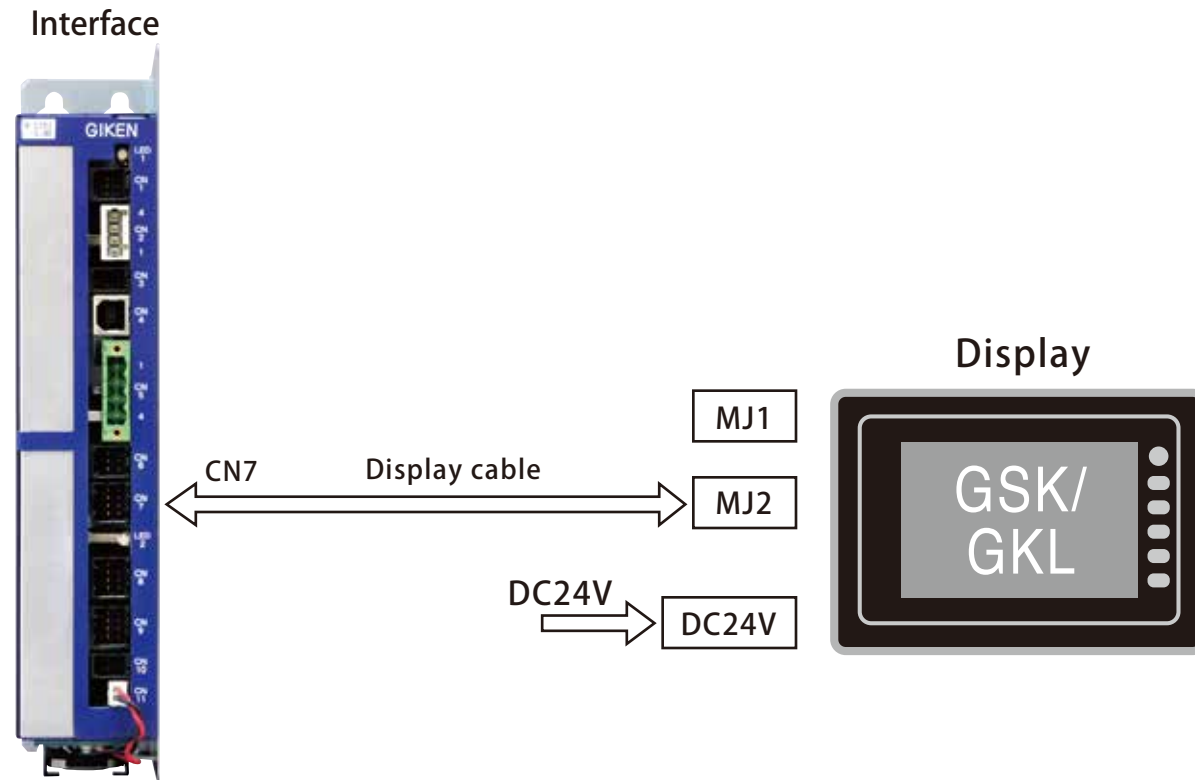## ■Display setting software (Separately available)

Name	Model
Display setting software	OP-DIS-SE

■Battery (Included)

Name	Model
Battery for individual display	TGK-BT
Battery for integrated display	GK-BT

GSK

GKL

Positioning GSK

Controller

Peripheral device/option

Peripheral device/option

Basic system configuration

GSK/GKL display system configuration

Interface

Display

CN7 — Display cable →

MJ1

MJ2

DC24V → DC24V

GSK/
GKL

Operational panelintegrated display system configuration

Interface
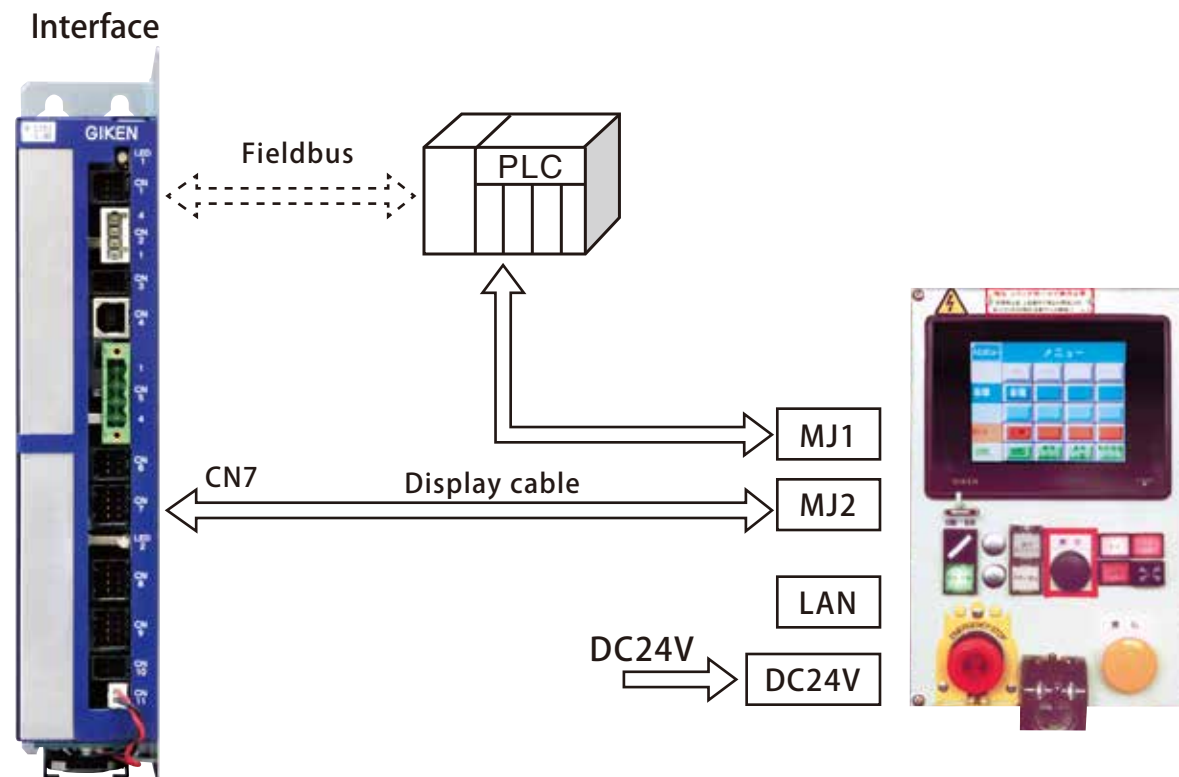
Fieldbus

PLC

MJ1

CN7 — Display cable →

MJ2

LAN

DC24V → DC24V

■Other system configuration

Communication composition of quality information collection system and ID conntoroll

Interface

Fieldbus

PLC

CN1

ID controller

MJ1

CN7 — Display cable →

MJ2

LAN

DC24V → DC24V

Determination results of various types of tightening
・Tightening torque of each shaft
・Tightening judgment for each axis
・Comprehensive judgment
・Abnormal treatment etc.

Top quality information gathering system

Example of system GSK configuration

Interface

CN1

ID controller

MJ1

CN7 — Display cable →

MJ2

LAN

DC24V → DC24V

GSK

GKL

Positioning GSK

Controller

Peripheral device/option

Peripheral device/option
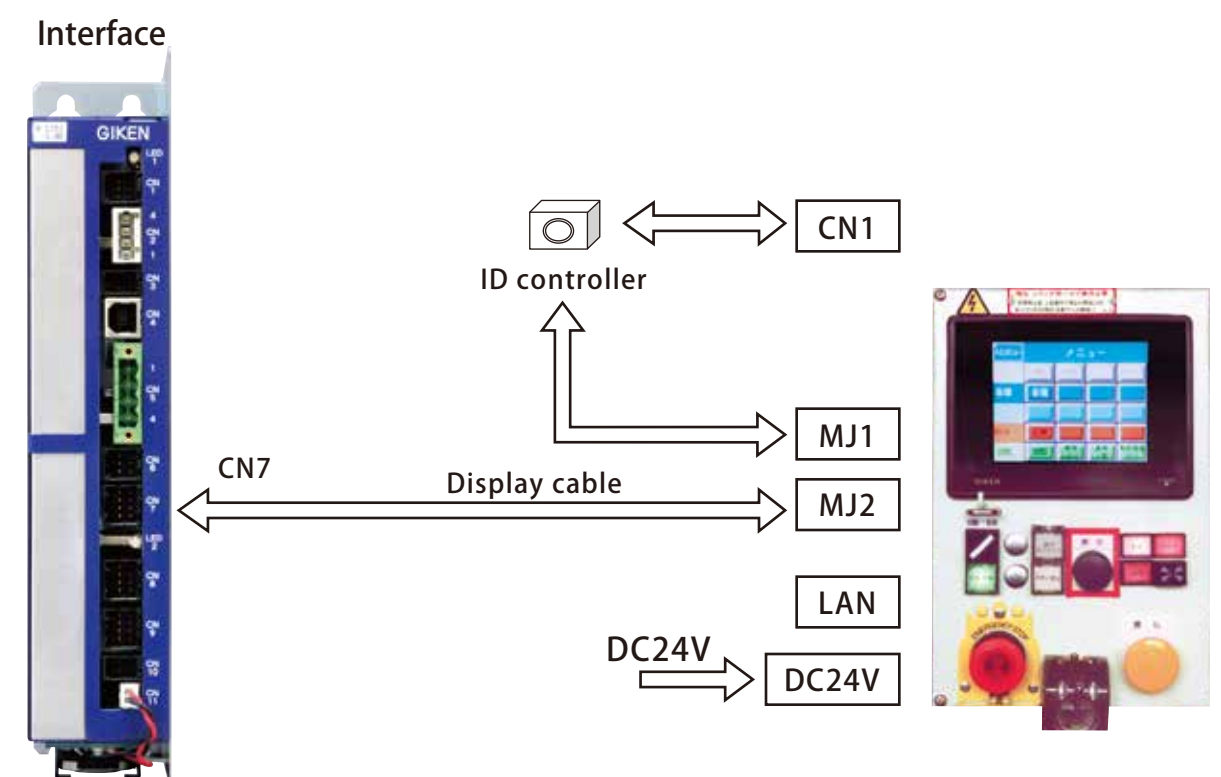
■Display & operation panel

◆Functions (Displayed content)

Display content	Remark
Tightening setting value	Displays all of setting items such as GSK,GKL, positioning
Tightening program	Displaysthe tightening program created by setting PC
Tightening torque waveform	Displays the tightening torque waveform of each screw
Tightening speed waveform	Displaysthe tightening speed waveform of each screw
Axis array	Displays allocated position of each screw changing the color for OK and NG
I/O monitor input screen	Displays the input status from PLC to interface
I/O monitor output screen	Displays the output status from interface to PLC
Alarm information	Displays the alarm informationof interface / driver
Tightening OK/NG judgment	DisplaysOK of synthetic judgement

■Example of display

Tightening result of axis array is quite obvious!
Tightening data is quite obvious!
Setting data is quite obvious!

Top page screen

Axis array
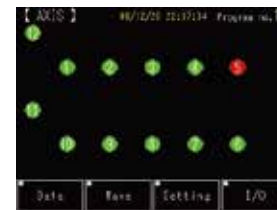
Axis array OK, NG

OK screen

Tightening result data
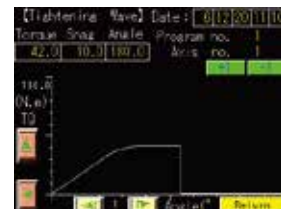
Tightening waveform graph

Setting menu screen

Error display screen

Display language selection screen
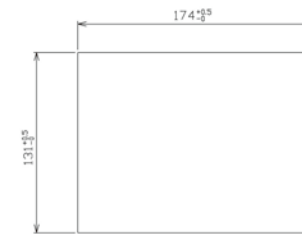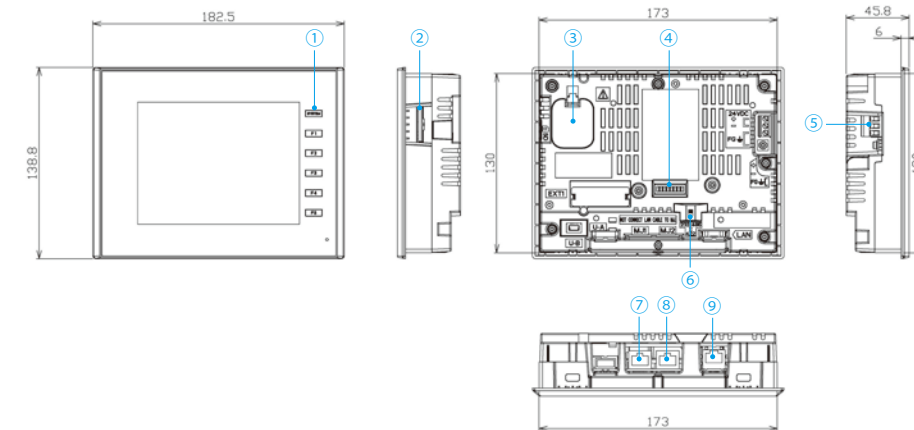

IO monitor input screen

Final tightening setting value-1 screen

※Displayed content and content of operation can be designed according to the specifications.
For details, please contact the sales representative of our company.
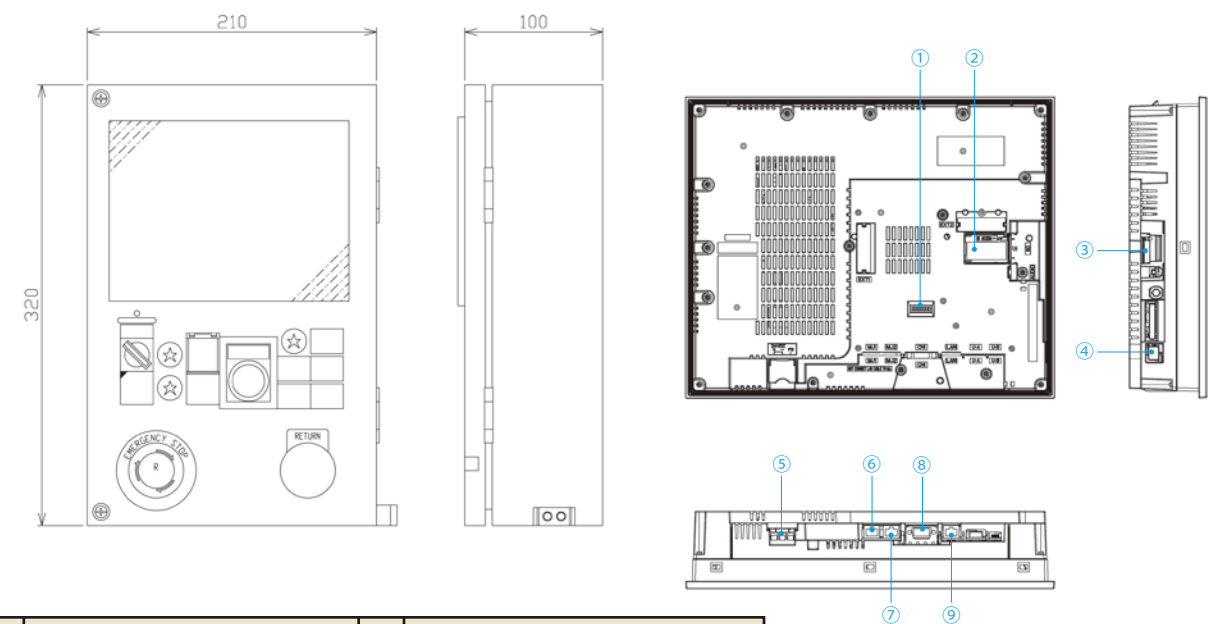
175

■External view/dimension diagram

◆Individual display

Panel cut

①	Function switch	⑥	Slide switch
②	SD card slot	⑦	Modular jack (MJ1)
③	Battery holder	⑧	Modular jack (MJ2)
④	DIP switch	⑨	LAN
⑤	Power supply input terminal block		

◆5.7-inch type dimension diagram

①	DIP switch	⑥	Modular jack (MJ1)
②	Battery holder	⑦	Modular jack (MJ2)
③	SD card slot	⑧	PLC communication connector (CN1)
④	LAN2	⑨	LAN
⑤	Power supply input terminal block		

GSK

GKL

Positioning GSK

Controller

Peripheral device/option

■PC software of GSK support system

This is the exclusive software to analyze the tightening data acquired SD card which is inserted GSK interface.

It has a serching function of tightening data.
And the NG number and the frequency of occurrence can be graphed out.
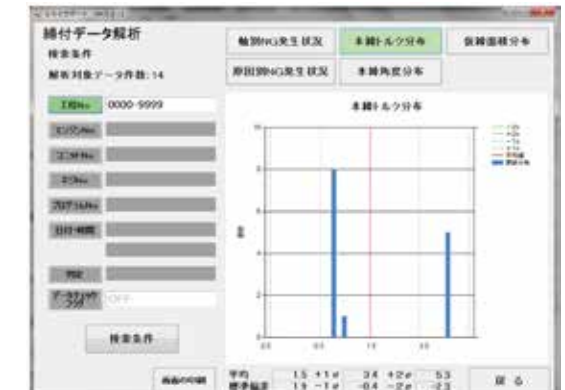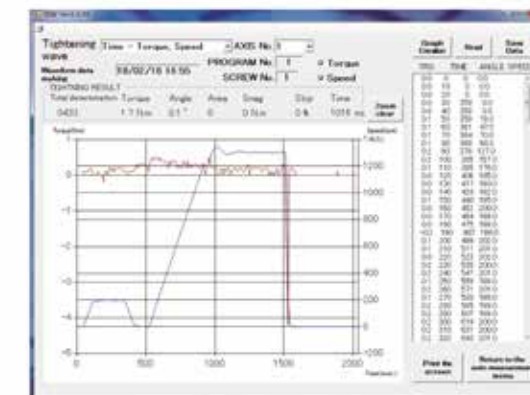The distribution of torque value angle data can be graphed out.

◆PC software type of GSK support system

Software type	Language	Controller type
GSK-SPT-SOFT-J	Japanese	GSK GSKW
GSK-SPT-SOFT-E	English	

OS: win7/8/8.1/10

◆SD card type

SD card type	Capacity
GK-SD-32G	32GB

SD card is option.
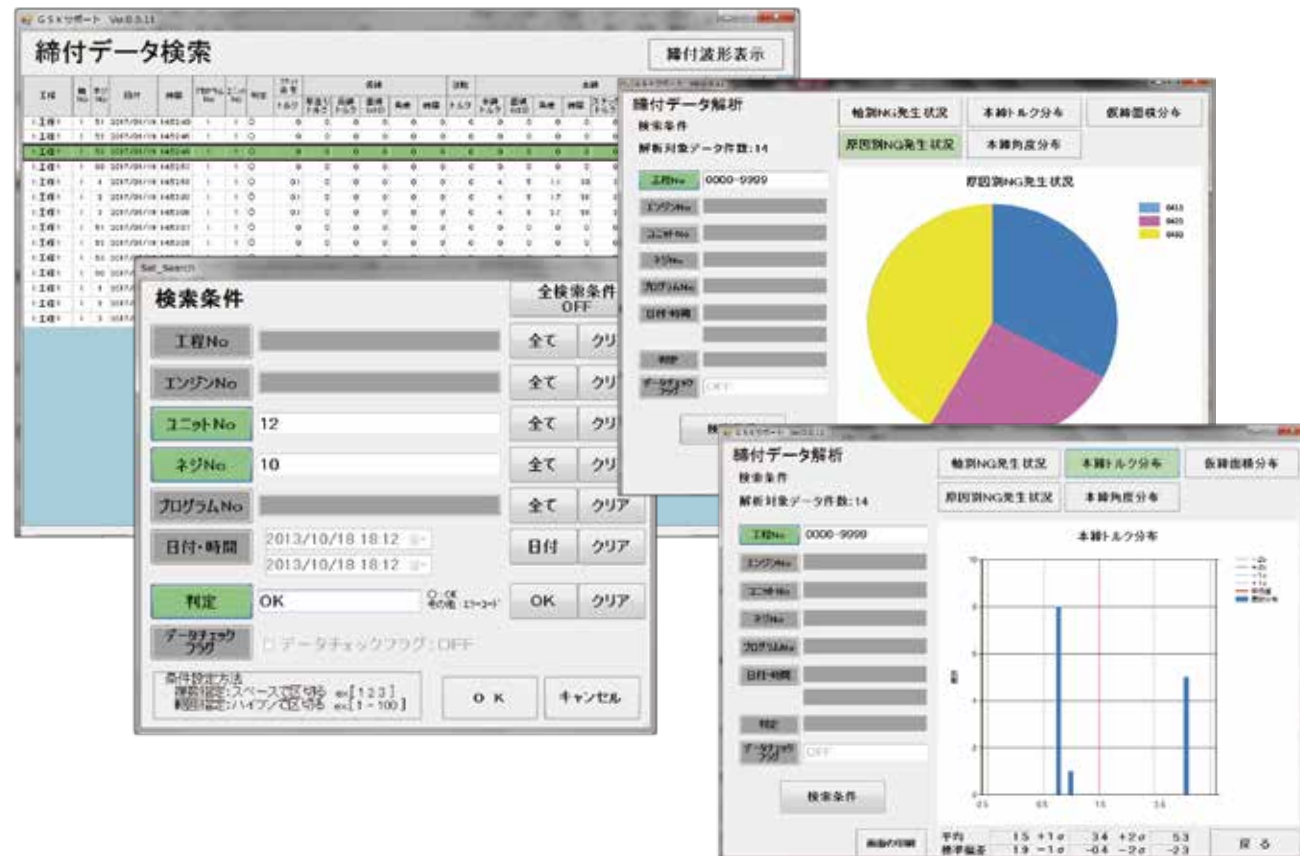
【List of tightening data】

Screen for variously setting.

【Analysis of tightening data】

The screen can be cheked the mean and the distribution of chosen data.

【Tightening wave】

The screen can be cheked the tightening wave of chosen data.

【Analysis of tightening data】

The screen can be cheked the generation status of every item.

【Search condition】

The screen select condition for data which you want.

【Search result list】

The screen indicated list which was searched.

■Standard Cushion Attachment

Expression of model $\dfrac{9.5/12/15/19/25}{①} - \dfrac{K/F}{②} \quad \dfrac{P/W/B}{③} - \dfrac{□st}{④}$

	①Sq. size	②Fitting shape	③Socket fit	④Standard stroke			
Ⅰ	9.5 : 9.52 sq	K : Cushon case	P : Pin type	9.5 : 20	35		
Ⅱ	12 : 12.7 sq			12 : 20	35	50	
Ⅲ	15 : 15.87sq	F : Swing-stop plate	W : Onetouch	15 :	35	50	65
Ⅳ	19 : 19.05sq		B : Bit type	19 :		50	65
Ⅴ	25 : 25.4 sq			25 :		50	65

Square size 9.5

Stroke	A	B	L1	L2	L3	L4
20	22	71	106	116	117	48
35	37	86	136	146	147	63

9.5-KP-□st

9.5-KB-□st

9.5-KW-□st

Case size (for K)

9.5-F□-□st

Swing-stop bushing
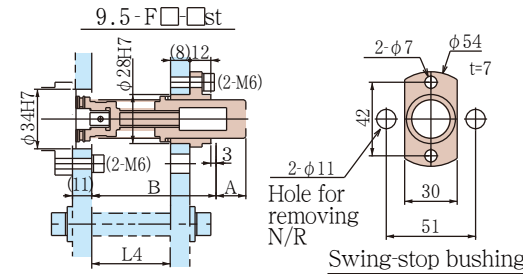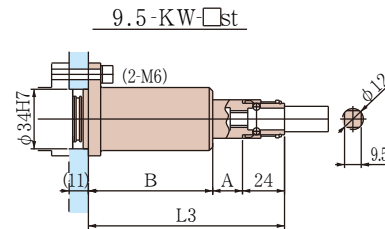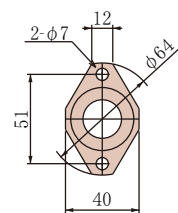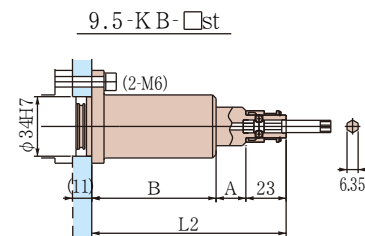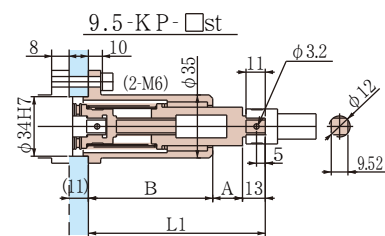
Square size 12

Stroke	A	B	L1	L2	L3	L4
20	22	79	119	124	129	54
35	37	94	149	154	159	69
50	52	109	179	184	189	84

2-M6 : ANZM-350
2-M8 : ANZM-550

12-KP-□st

12-KB-□st

12-KW-□st

Case size (for K)

12-F□-□st

Swing-stop bushing
Hole for removing N/R
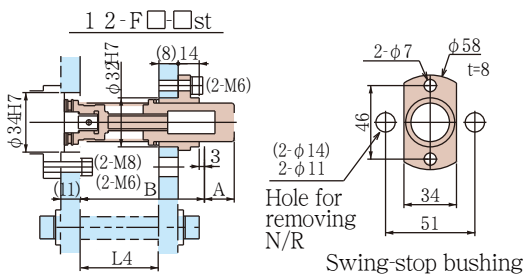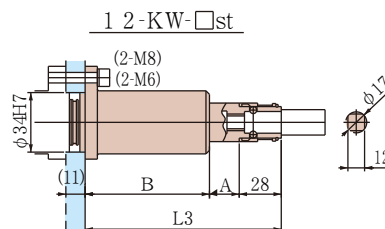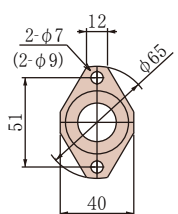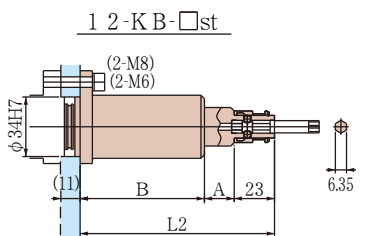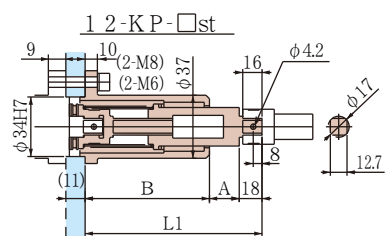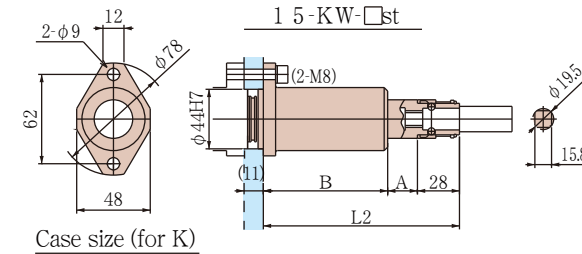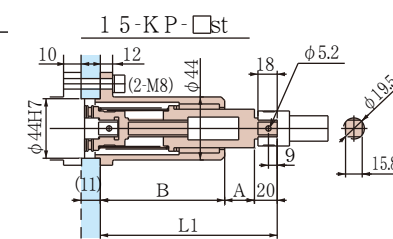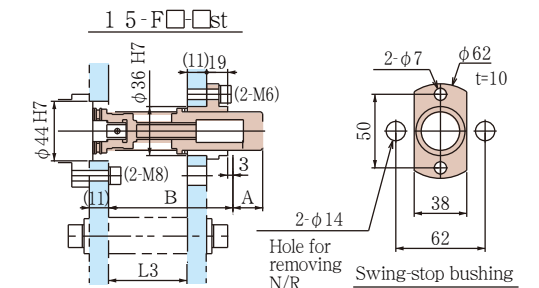
Square size 15

Stroke	A	B	L1	L2	L3
35	37	109	166	173	76
50	52	124	196	203	91
65	67	139	226	233	106

15-KP-□st

15-KW-□st

15-F□-□st

Case size (for K)

Swing-stop bushing
Hole for removing N/R

Square size 19

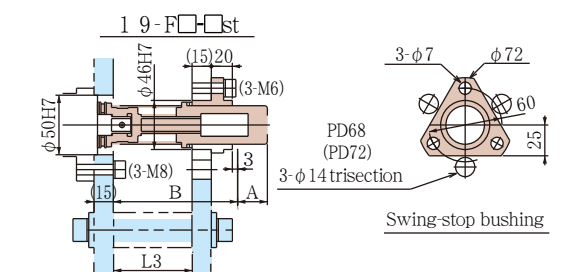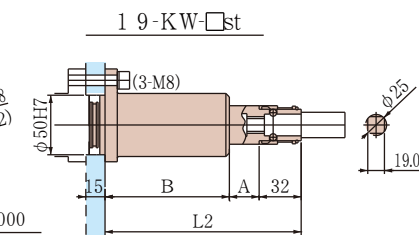| Stroke	A	B	L1	L2	L3
50	53	138	219	223	100
65	68	153	249	253	115

19-KP-□st

19-KW-□st
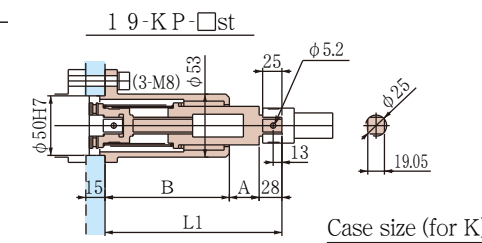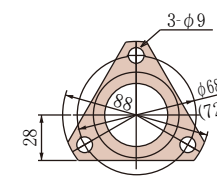
Case size (for K)

Case size ANZM-2000
Size in ( ) : for ANZM-3000

19-F□-□st

PD68 (PD72)
3-φ14 trisection

Swing-stop bushing

Square size 25
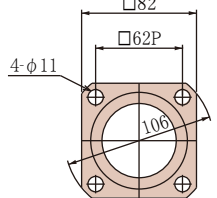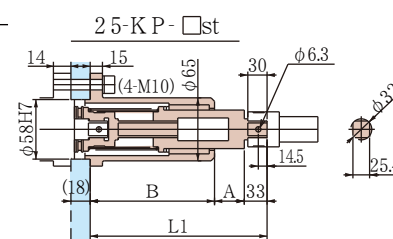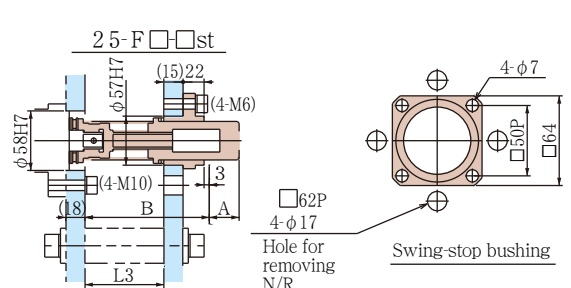
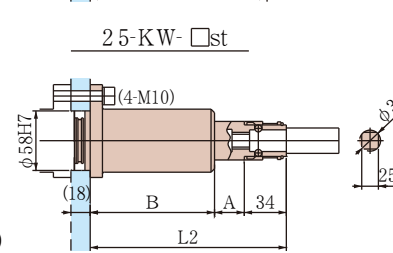| Stroke	A	B	L1	L2	L3
50	53	154	240	241	114
65	68	169	270	271	129

25-KP-□st

25-KW-□st

Case size (for K)

25-F□-□st

Swing-stop bushing
Hole for removing N/R

※Sockets and bits at the end of the tightening units are not included. Please use the parts to be purchased in the markets or contact to our agent.
※In case of using one-touch fitting sockets, please contact to our agent.We will decide proper methods by mutual consultation.
※The thick plates for Nut runner fixing plate and swing-stop bushing fitting plate are indicated with reference sizes. According to the purpose, please select proper sizes.
◇Besides, this is the dimension table for the straight type nut runner. When you would use the table for the offset gear type nut runners and gear case fitting parts, please consult to us.

GSK

GKL

Positioning GSK

Controller

Peripheral device/option

■Angle head

◆Option of Angle head
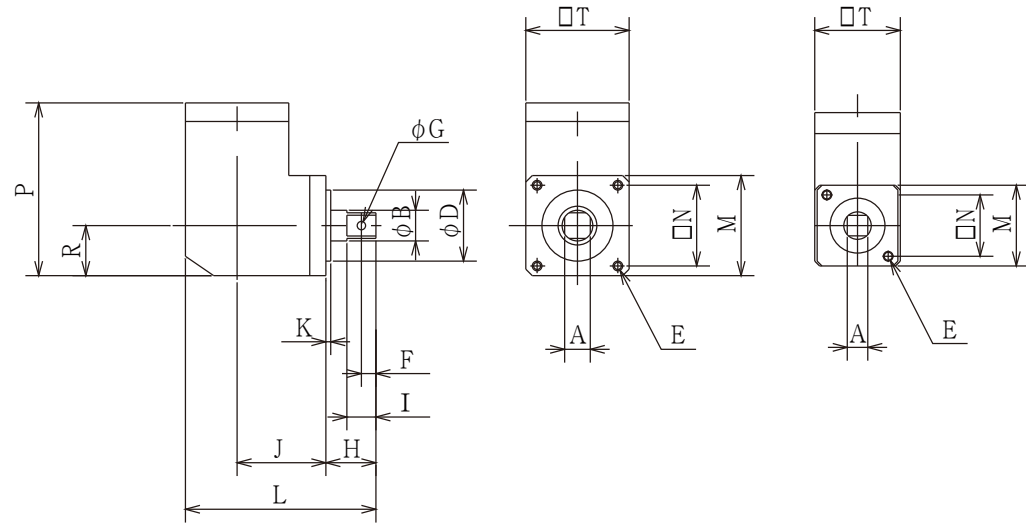
Model	A		B	D		E	F	G	H	I	J	K	L	M	N	P	R	T
	Reference dimension	Tolerance		Reference dimension	Tolerance													
GA-15	9.52	-0.04 -0.07	12	32	-0.025 -0.050	2-M6	5	3.2	21	11	38		83	43	32	78.5	21.5	44
GA-35	12.7		17	34			8	4.2	26	16	46		98.5	50	38	95	25	53
GA-65	15.87		19	44	-0.02 -0.04	4-M6	9		31	18	55	3	118	62	50	107	31	64
GA-120		-0.05 -0.10						5.2			65		133	72	58	130	36	74
GA-230	19.05		24	50		4-M8	13		39	25	80		165	88	72	154	44	92
GA-550	25.4		32	58	-0.02 -0.05	4-M10	14.5	6.2	48	30	103	4	211	118	96	197	59	120
GA-900	32		39.5	60		4-M12			50		126		250	144	120	243	72	148

■Operation handle with push botton

Special feature
1. Light weight, compact push button type to be used as the operation handle of equipment.
2. It is possible to use for both of the right handle and the left handle.
3. Colour of push button is changeable according to your specification.
   B : black, G : green, Y : yellow, A : blue and R : red are available.
4. Setting method is M8x4 places and so it is durable.

	Name	Standard model
①	1point handle	PH1M-B
②	2points handle	PH2M-BG
③	3points handle	PH3M-BGY
④	4points handle	PH4M-BGYA
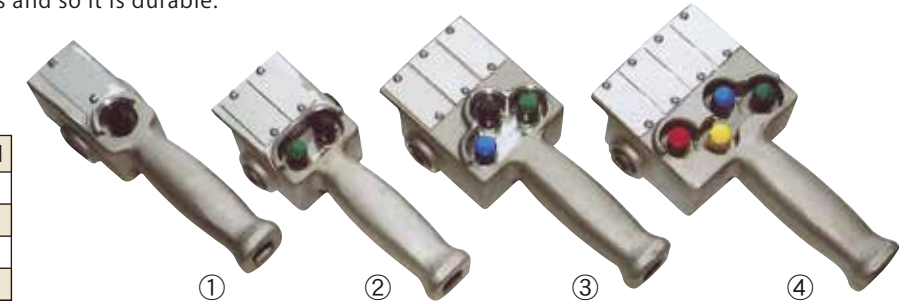
（Picture of name plate: image）

① Model PH1M-B
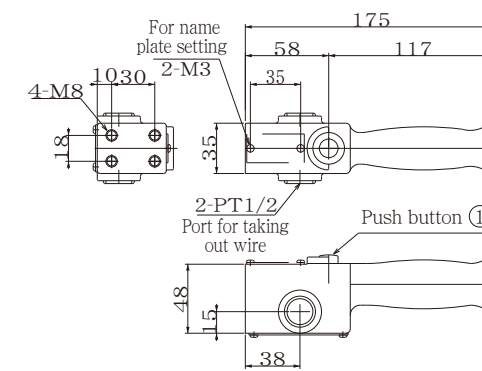
② Model PH2M-BG
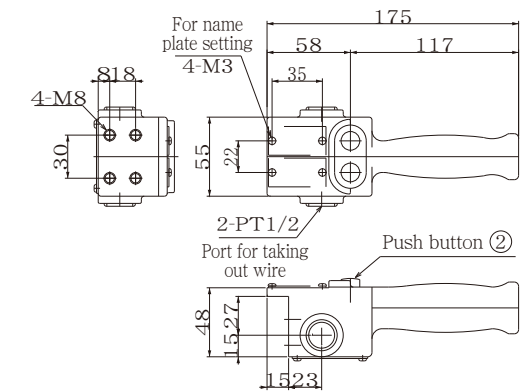
③ Model PH3M-BGY
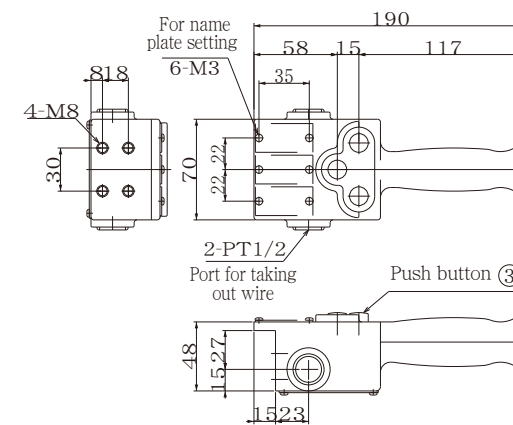
④ Model PH4M-BGYA
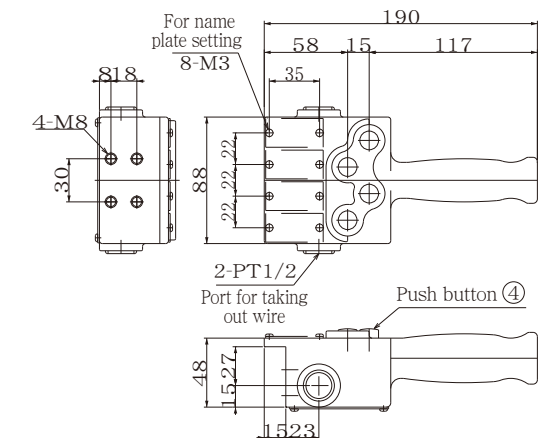
Colour of push button

B : Black	
G : Green	
Y : Yellow	
A : Blue	
R : Red	

□It is recommended that the indicated length of bolts (thread part less than 10)are used at 4 places to fix the handle.
□Colours of push buttons of the above models are standard, but different colours are applied according to your order ,if necessary.
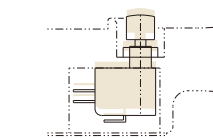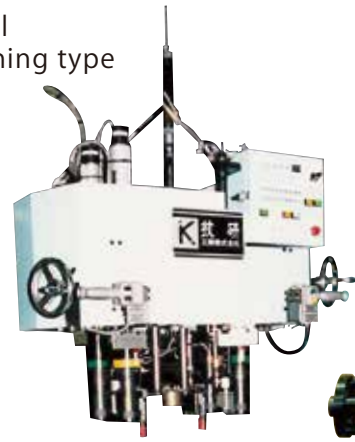

Push button model
VAQ （Omron）

Wiring can be taken out either way from upper or lower port.

GSK

GKL

Positioning GSK
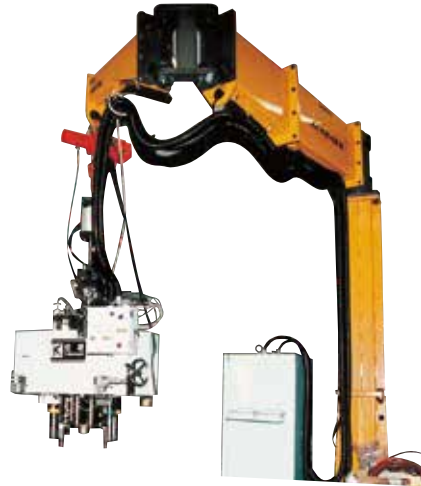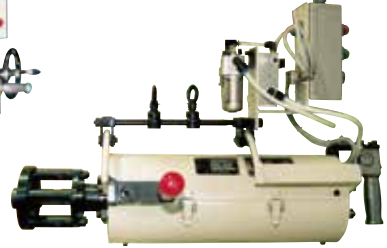
Controller

Peripheral device/option

Examples of uses with Nut Runners

1.Hanging types with spring balancers, free balancers and other hanging tools for lifting.

Vertical tightening type

Horizontal tightening type

2.While working（Nagara)type

Hanging while-working type nut runner (PAT.No.764031) as semi-automatic system with synchronization, etc. for a cycle from locating position, tightening process and rising.

3.Simple machine independent while-working type

Hanging the simple indipendent while-working nut runner unit,the simple independent type tightens bolts from the upper side. It is possible to make a semi-automatic or full automatic unit by setting a device for locating the position of the conveyor.

・Compact type
Simple Flexible Specification

4.Full automatic tightening nut runner machine

Complete automatic conveyance and locating position. This is the machine which uses nut runners with a complete automatic system starting from the tightening process to carryout.
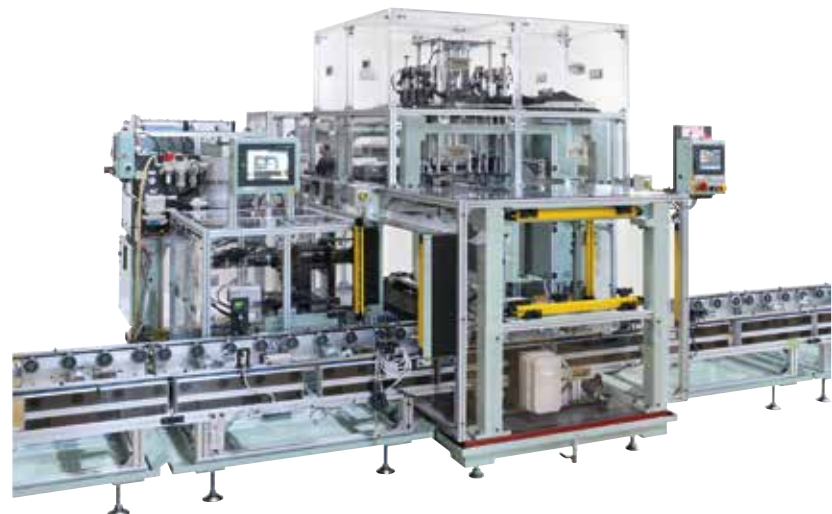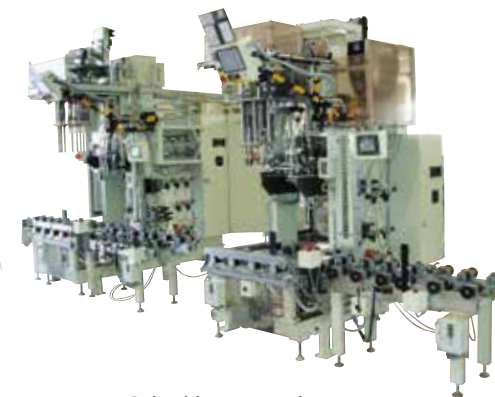
5.Complete automatic tightening machine equipped with bolts automatic feeding device.

Parts feeder and bolts line-up device made by Giken are equipped and it is the　complete automatic bolt tightening machine supplying bolts and combined with the nut runner unit.
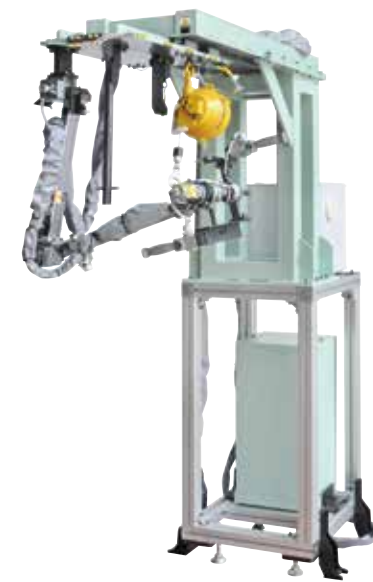
Magnet receiving supply system

Bolt table type supply system

6.Simple robot type nut runner tightening machine

High speed robot type nut runner motors are used. It is also available with the locate position detecting type as option.
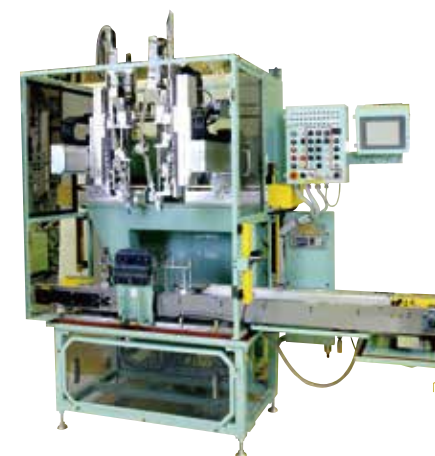
・Automatic single screw tightening machine

7.Robot type tightening machine which has nut runner motors installed in a through robot

Parts feeder and bolts line-up device made by Giken are equipped.

8.Motion control system (Positioning GSK)

MEMO