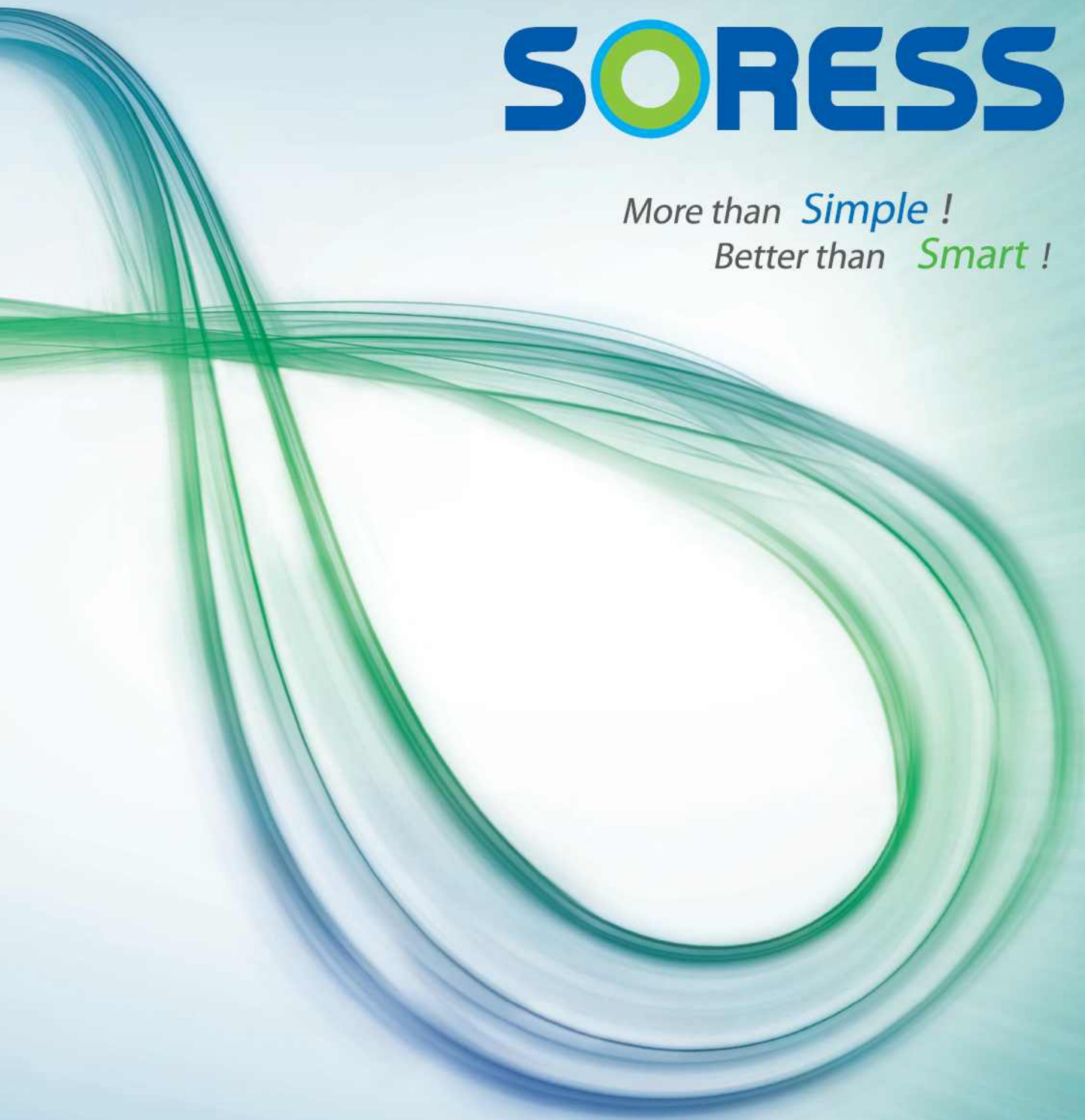
INNOBIZ KS TÜVRheinland CE
ISO 9001·14001

SORESS

More than Simple !
Better than Smart !



HYUNDAE MECHANIC & ELECTRIC CO., LTD.

Certification

SORESS

- Patent "High-efficiency Unit Type Driving Device of Electro Servo Press [No. 10-1190428]
- Apply for a patent "Control Method of Electro Servo Press"
- Patent " Safety control method of table top oil-hydraulic press" [N0. 10-1195174]
- Acquired the certificate of Design Registration Ele ctro Servo Press
- Utility model patent registration (No. 0292489, No. 0359515, No. 0360402)
- Design patent registration (No. 0334782, No. 0334780, No. 0334780)
- Acquired certificate of product-specific approved exporter(FTA)
- Venture Business recognition
- Acquired the certificate of ISO 9001 / 14001
- Acquired the Korea safety Certification System(KCS Mark)
- Acquired the safety Certification(S Mark)
- Acquired the certificate of Technical Research Institute
- Granted export industrialization business for Small & Medium company
- Acquired the certificate of CE Mark (Bench Type Hydraulic Pressing & Riveting Machine)
- Acquired the certificate of CE Mark(HD Press Control Board)
- Acquired the certificate of Trademark Registration "CETTA"


특 허 증
실용신안등록증
의장등록증
CERTIFICATE
Certificate
벤처기업확인서
디자인등록증
디자인스타지엄 지정서
모범중소기업상
표 창 장
회 원 증
기업부설연구소인정서
상 장

ELECTRO SERVO PRESS

SORESS

ELECTRO SERVO PRESS Main Features

1) Controller Based on P.C / NI FPGA

2) User convenient interface (Motion control, load cell, A/DC)
10.4/15"LCD Touch Screen - Minimized Pre-setting Labor
Easy programming for different product

3) Flexibility for various conditions

4) Maximization of load control function
- Pressing with constant load - Finding desired load
- Finding work home position by measuring pressing load

5) Repeatability (High precision)
- Free load : 0.005mm(Normal Temperature)
- Load : 0.02 mm

6) Real-Time plotting Function

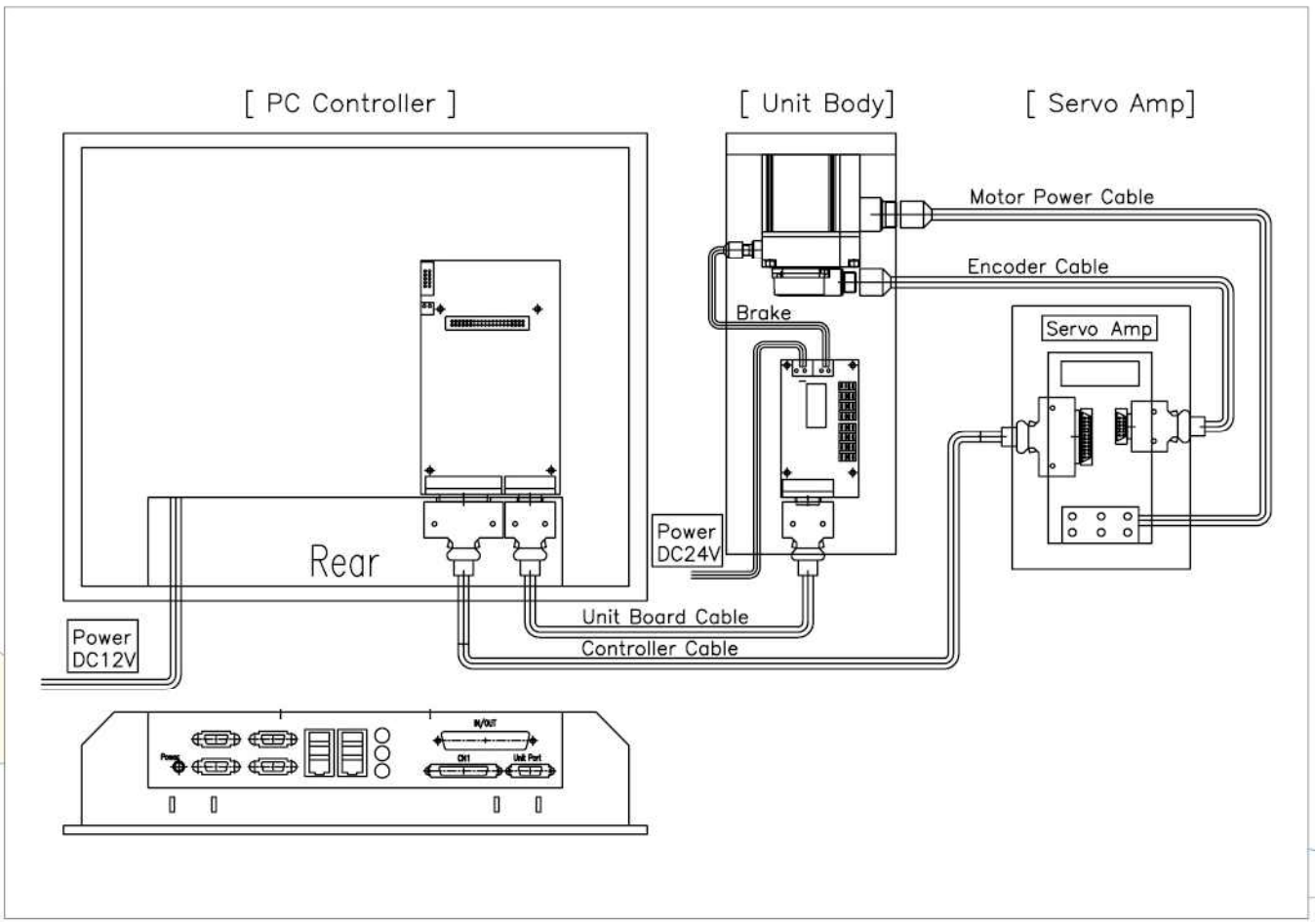
7) Various judgment function
- Numerical judgment : Distance. Load
- Graph judgment : Generate judgment block for waveform observation

8) Miscellaneous interface
Emergency Stop, Safety Sensor, External I/O, etc...

9) Efficiency of data management
- Generating data file and managing work data
- Save working list
- Search pre-working list and redisplay

10) Easy programming
Command selection method helps beginner write a program easily

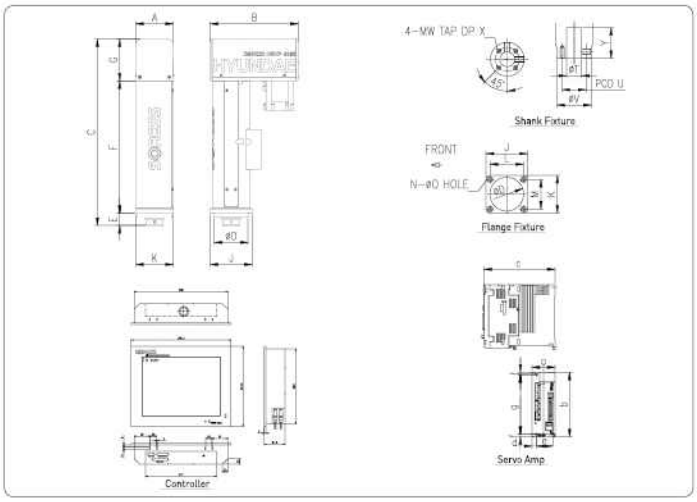
ELECTRO SERVO PRESS Electrical Schematic



SORESS Slim Type

SORESS S Series

Drawing



Specification

Model		SORESS-005S	SORESS-010S	SORESS-030S	SORESS-050S	SORESS-080S	SORESS-120S
Capacity (kg·f)	Range	40~500	40~1,000	50~3,000	100~5,000	100~8,000	500~12,000
	Increment	1	1	1	1	1	1
Ram Stroke (mm)	Range	0~150	0~200	0~200	0~200	0~200	0~350
	Increment	0.001	0.001	0.001	0.001	0.001	0.001
Ram Speed (mm/sec)	Range	0.1~240	0.1~220	0.1~180	0.1~180	0.1~180	0.1~170
	Increment	0.01	0.01	0.01	0.01	0.01	0.01
Repeatability (mm)	Free load	0.005 (Normal Temperature)					
	loading	0.02 (Vary with RAM Speed)					
Allowable Jig Weight (kg)		6	12	60	75	90	90
M/C Weight (kg)		25	30	60	70	100	160
Power Capacity (kVA)		1.3	1.6	4	6	7.5	9
Power Source (V)	3-Phase	220					
	Single- Phase	220	Not applicable				

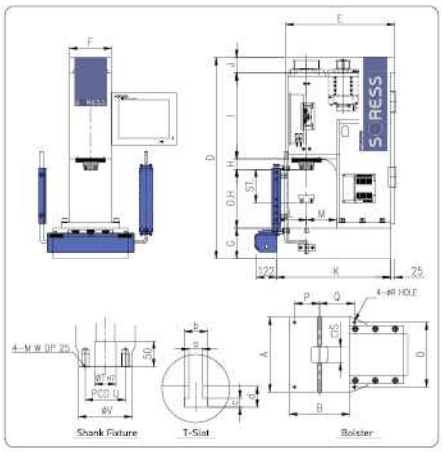
Dimension

Model	ST.	Frame Dim.									Flange Fixture Dim.						Shank Fixture Dim.						Servo Amp Dim.						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	V	W	X	Y	a	b	c	d	e	f	g
-005S	150	102	220	468	99	35	328	105	187	100	116	102	96	82	4	9	22	35	50	6	15	45	40	168	170	6	-	6	156
-010S	200	110	257	545	99	35	388	122	209	109	122	110	98	86	4	11	22	35	50	6	15	45	60	168	185	12	42	6	156
-030S	200	145	300	660	129	43	470	147	415	136	163	145	130	115	4	16	32	50	65	8	25	50	90	168	195	6	78	6	156
-050S	200	150	347	683	143	40	489	154	474	141	168	150	136	116	4	16	32	50	70	8	25	50	130	250	200	6	118	7.5	235
-080S	200	195	423	730	160	60	501	169	518	140	230	195	200	200	8	16	32	60	80	8	25	50	130	250	200	6	118	7.5	235
-120S	350	195	520	970	180	70	685	215	596	165	250	195	220	220	8	16	32	70	100	8	25	50	172	300	200	6	160	7.5	285

SORESS Bench Type

SORESS B Series

Drawing



Specification

Model		SORESS-005B	SORESS-010B	SORESS-030B	SORESS-050B	SORESS-080B
Capacity (kg·f)	Range	30~500	40~1,000	50~3,000	100~5,000	100~8,000
	Increment	1	1	1	1	1
Ram Stroke (mm)	Range	0~150	0~200	0~200	0~200	0~350
	Increment	0.001	0.001	0.001	0.001	0.001
Ram Speed (mm/sec)	Range	0.1~240	0.1~220	0.1~200	0.1~200	0.1~190
	Increment	0.01	0.01	0.01	0.01	0.01
Repeatability (mm)	Free load	0.005 (Normal Temperature)				
	loading	0.02 (Vary with RAM Speed)				
Holding Time (sec)	Range	0~20	0~20	0~20	0~10	0~10
	Increment	0.1	0.1	0.1	0.1	0.1
Allowable Jig Weight (kg)		10	20	100	120	150
M/C Weight (kg)	Bench Type	160	210	310	460	810
Power Capacity (kVA)		1.3	2	4	6	7.5
Power Source (V)	3-Phase	220				
	Single- Phase	220	Not applicable			

※ Holding Time will be varied with various conditions.

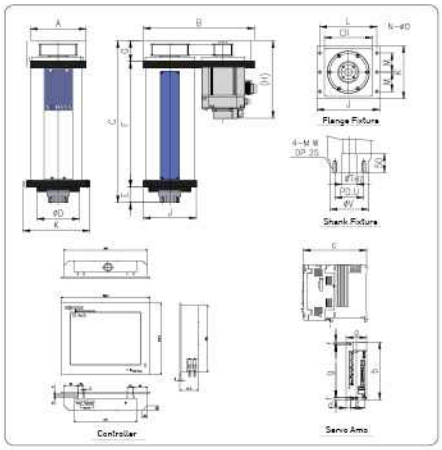
Dimension

Model	O.H	ST.	Base Size		Frame Dim.											Bolster Dim.					Shank Fixture Dim.				T-Slot Dim.			
			A	B	C	D	E	F	G	H	I	J	K	L	M	O	P	Q	R	S	T	U	V	W	a	b	c	d
-005B	250	150	350	240	612	890	450	200	140	40	410	50	465	120	120	300	90	140	9	80	22	35	50	6	16	28	10	20
-010B	300	200	400	300	732	1070	555	228	150	45	510	65	585	150	150	340	120	170	11	80	32	48	62	8	16	28	10	20
-030B	350	200	450	360	832	1205	655	250	180	65	520	90	685	180	180	390	150	210	11	100	32	60	80	8	16	28	11	25
-050B	350	200	480	360	852	1275	675	300	200	65	570	90	705	180	180	420	150	150	11	100	32	65	90	8	16	28	11	25
-080B	500	350	580	425	957	1730	750	350	250	80	780	120	810	225	200	520	190	230	14	100	32	70	100	8	16	28	11	25
-120B	550	350	600	450	997	1800	800	400	250	80	800	120	850	225	225	540	190	190	14	100	32	80	130	10	16	28	11	25
-180B	600	350	600	500	1147	2100	960	550	350	120	900	130	1000	250	250	610	150	650	18	100	32	100	150	10	16	28	11	25

SORESS Unit Type

SORESS U Series

Drawing



Specification

Model		SORESS-005U	SORESS-010U	SORESS-030U	SORESS-050U	SORESS-080U	SORESS-120U	SORESS-180U
Capacity (kg·f)	Range	30~500	40~1,000	50~3,000	100~5,000	100~8,000	500~12,000	500~18,000
	Increment	1	1	1	1	1	1	1
Ram Stroke (mm)	Range	0~150	0~200	0~200	0~200	0~350	0~350	0~350
	Increment	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ram Speed (mm/sec)	Range	0.1~240	0.1~220	0.1~200	0.1~200	0.1~190	0.1~150	0.1~140
	Increment	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Repeatability (mm)	Free load	0.005 (Normal Temperature)						
	loading	0.02 (Vary with RAM Speed)						
Holding Time (sec)	Range	0~20	0~20	0~20	0~20	0~10	0~10	0~5
	Increment	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Allowable Jig Weight (kg)		10	20	100	120	150	150	180
M/C Weight (kg)	Unit Type	45	60	160	170	230	300	370
Power Capacity (kVA)		1.3	2	4	6	7.5	9	13
Power Source (V)	3-Phase	220						
	Single- Phase	220	Not applicable					

※ Holding Time will be varied with various conditions.

Dimension

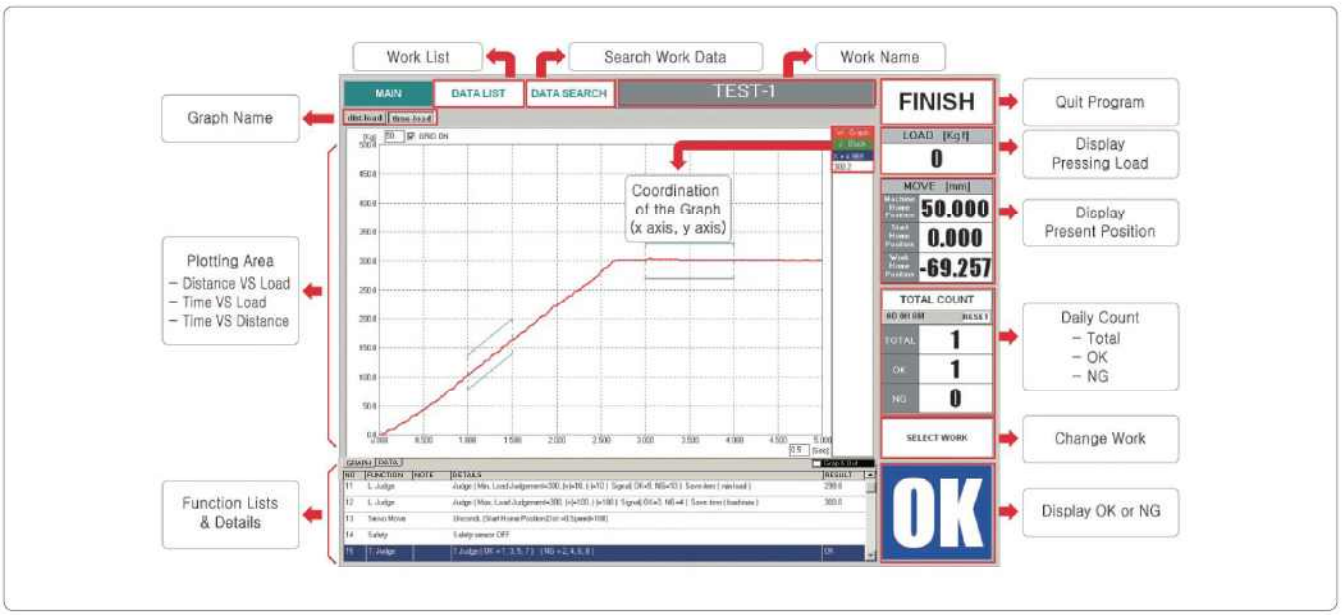
Model	ST.	Frame Dim.								Flange Fixture Dim.							Shank Fixture Dim.				Servo Amp Dim.						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	V	W	a	b	c	d	e	f	g
-005U	150	130	230	500	110	40	410	50	183	115	154	130	134	50	4	9	22	35	50	6	40	168	170	6	-	6	156
-010U	200	180	350	620	130	45	510	65	243	150	200	170	180	60	6	9	32	48	62	8	60	168	185	12	42	6	156
-030U	200	240	490	675	175	65	520	90	283	200	260	220	236	80	6	11	32	60	80	8	90	168	195	6	78	6	156
-050U	200	240	490	725	175	65	570	90	232	200	260	220	236	80	6	11	32	65	90	8	130	250	200	6	118	7.5	235
-080U	350	270	550	980	210	80	780	120	373	230	306	260	270	95	6	14	32	70	100	8	172	300	200	6	160	7.5	285
-120U	350	320	590	1000	230	80	800	120	595	260	344	290	310	115	6	16	32	80	130	10	172	300	200	6	160	7.5	285
-180U	350	350	700	1150	280	120	900	130	863	300	398	350	360	120	6	18	32	100	150	10	260	400	260	12	236	12	376

Work Window

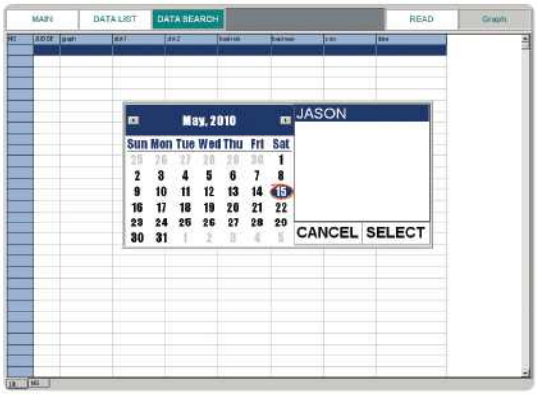
PC Based Controller

SORESS

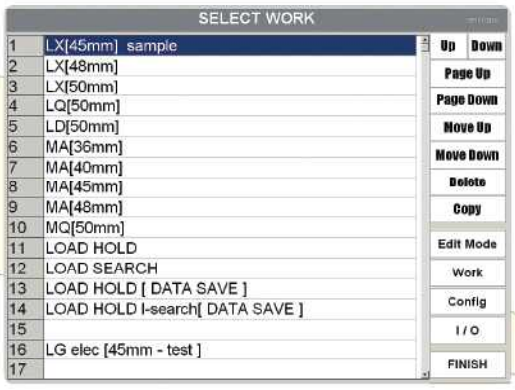
Main Work Window



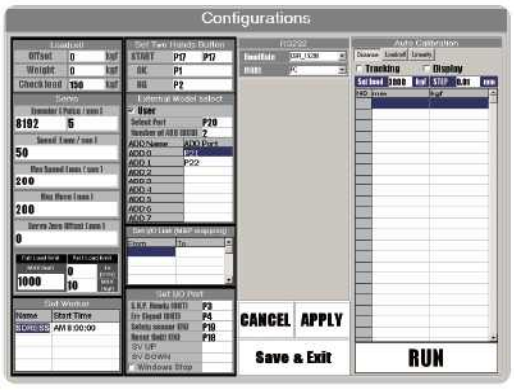
Data List Sub Window



Data Search Sub Window



Work Selection Window



Configuration Window

English Version

Program Edit Window

SORESS

1) Maximization of User Convenience

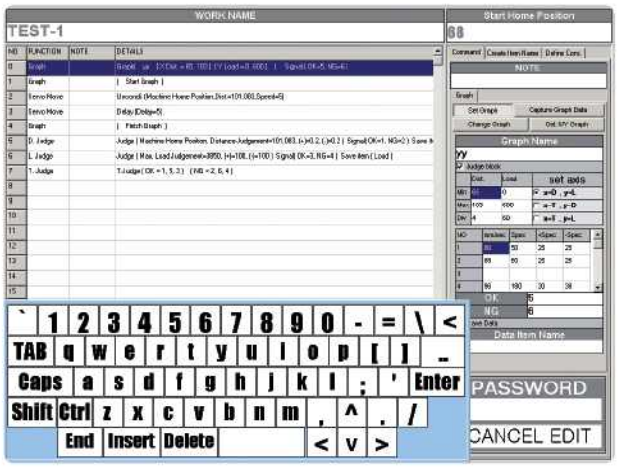
- Servo Control Function : Distance, Speed, Load & Hold Time
- Judgment function : Distance, Load, Block, Graph
- Jump Function : Conditional / Unconditional branching command
- Graphical User Interface
- Password setting function
- Real-Time data display function

2) Flexibility for Various Conditions

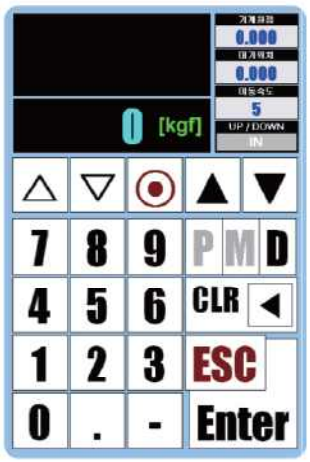
- Control Flexibility for any Operation Conditions
- Real-Time Data Plotting
  (Time VS Load, Time VS Distance, Load VS Distance)
- Multiple-Judgement Block

3) External Interface

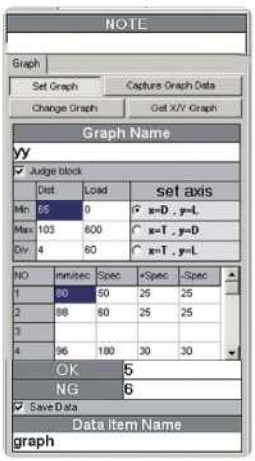
- Easy Communication Using I/O port
- ex) Start Button, Alarm, Safety Sensor, PLC, Feeder, etc...



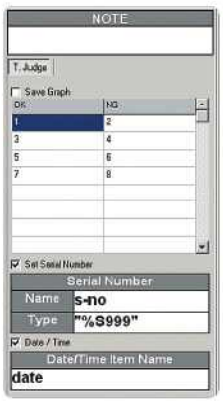
Main Program Edit Window



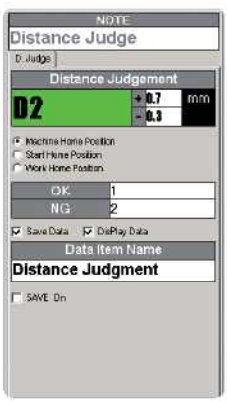
Input Keypad



Graph Setting



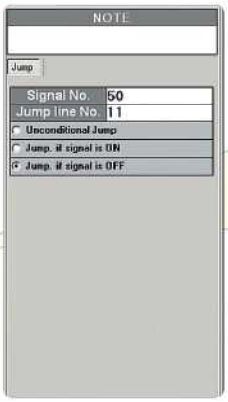
Set Total Judgment



Distance Judgment

Load Judgment

Servo Move Function



Jump Function

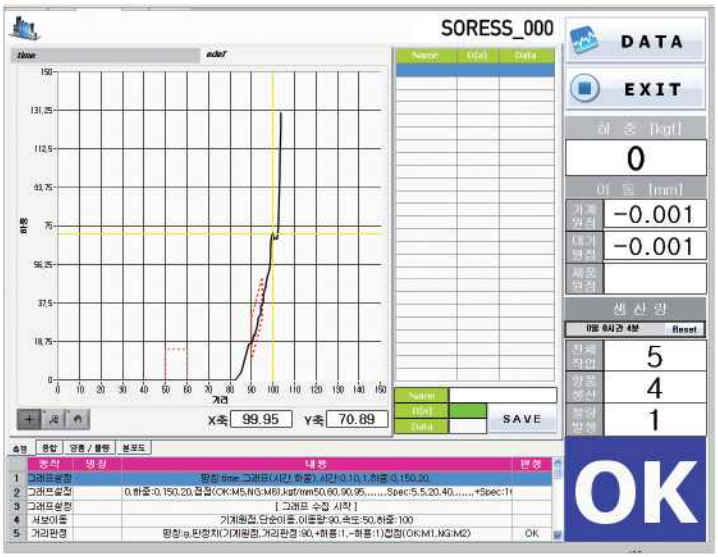
English Version

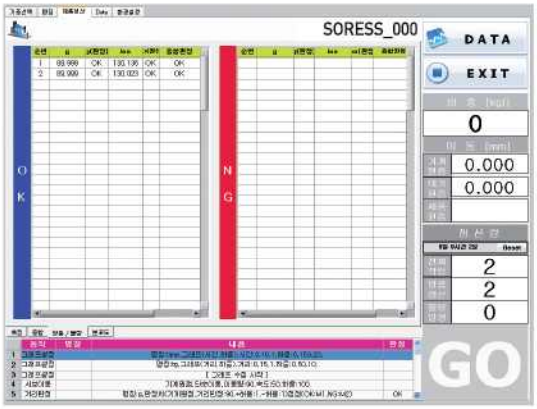
Work Window

NI FPGA Controller

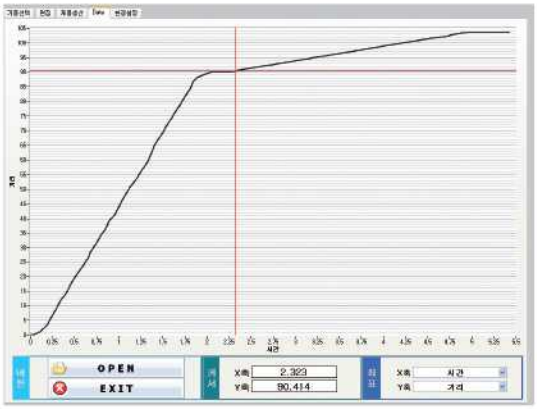
SORESS

Main Work Window

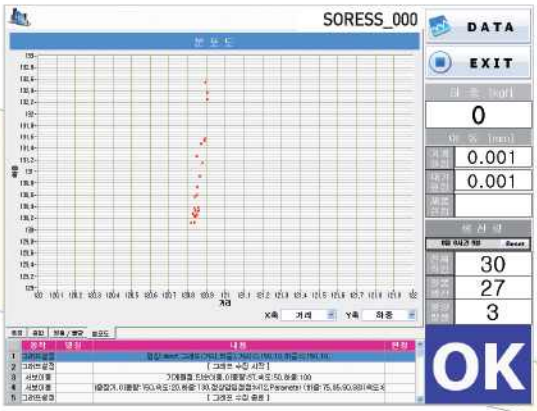




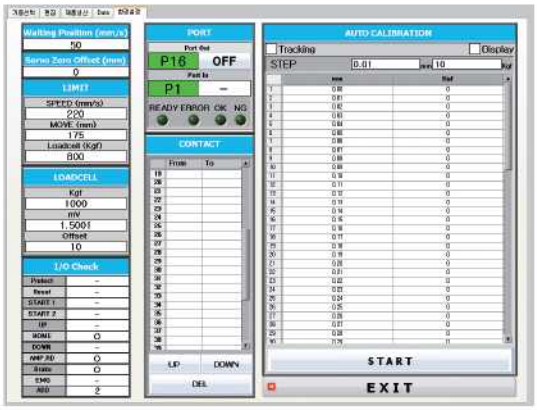
Result Display Window(OK/NG)



Data Search Window



SPC Function



Configuration

Korean Version

Program Edit Window

SORESS

1) Maximization of User Convenience

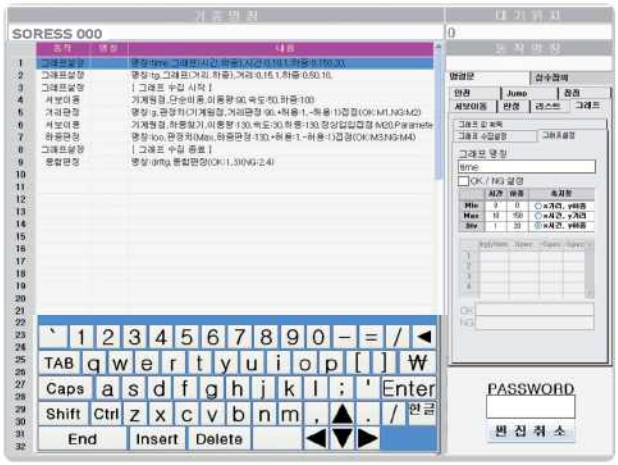
- NI FPGA Controller(High performance, durability)
- RT Operation(stand alone)
- SPC Function(Distribution Map)
- Load Limit Function(Overload Preventing function)
- RS 232C communication(ethernet)

2) Flexibility for Various Conditions

- Control Flexibility for any Operation Conditions
- Real-Time Data Plotting
  (Time VS Load, Time VS Distance, Load VS Distance)
- Multiple-Judgement Block

3) External Interface

- Easy Communication Using I/O port
- ex) Start Button, Alarm, Safety Sensor, PLC, Feeder, etc...



Main Program Edit Window

Input Keypad

Graph Setting

Total Judgment

Distance Judgment

Load Judgment

Servo Move Function

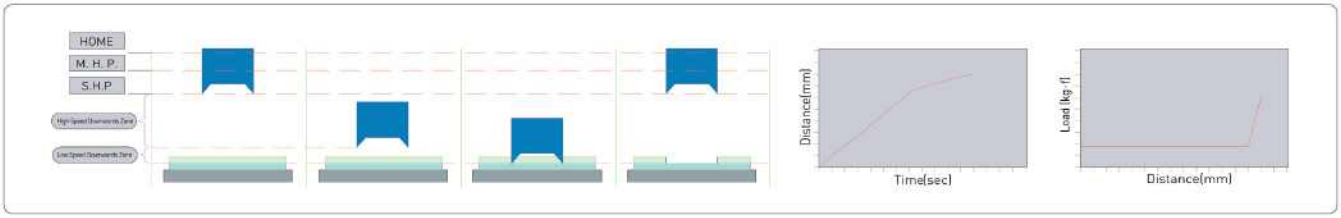
Jump

Korean Version

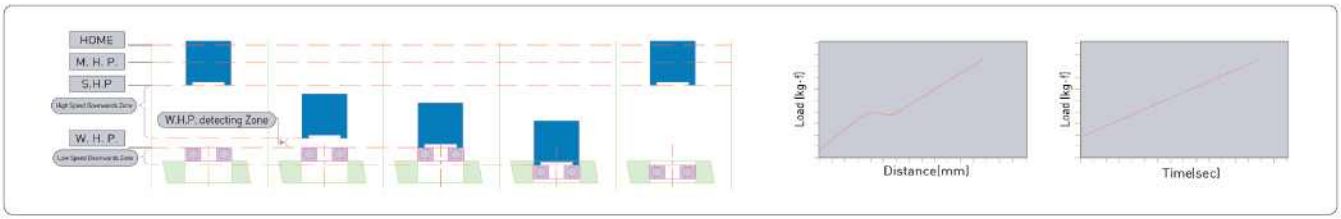
Servo Moving Function

SORESS

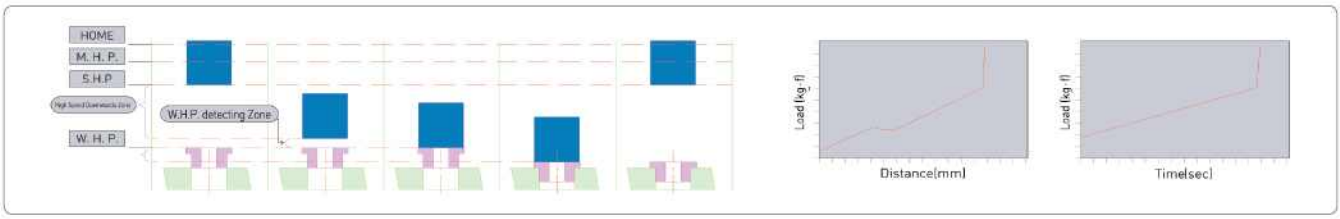
1) Move Setted Distance (S.H.P. -> Setted Distance) ex. Half Cutting



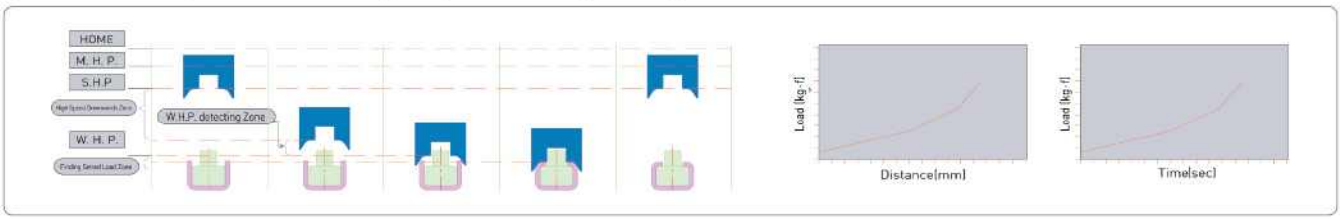
2) Move Setted Distance (S.H. P. -> W.H.P.-> Setted Distance) ex. Bearing Insertion



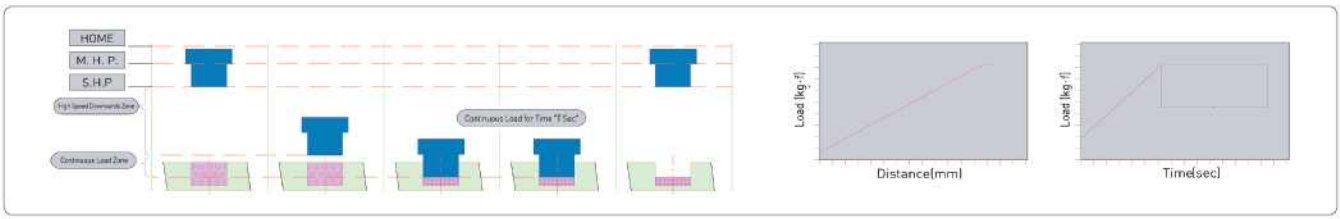
3) Move Setted Distance (S.H. P. -> W.H.P.-> Setted Distance) ex. Bush Insertion



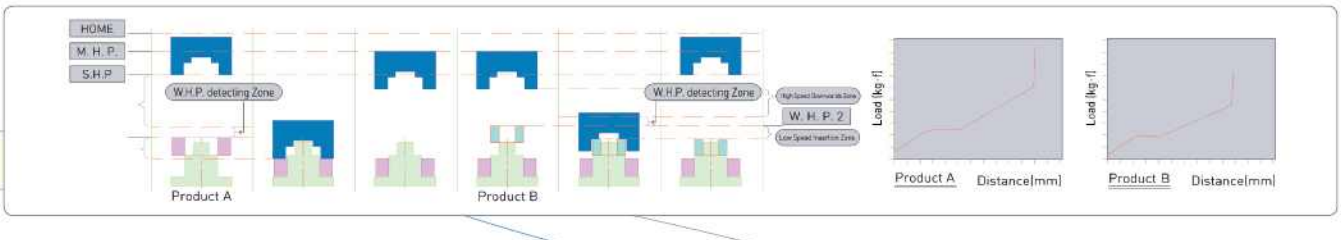
4) Move Setted Load (S.H. P. -> W.H.P.-> Finding Load) ex. Motor Flange Caulking



5) Move Setted Load (S.H. P. -> Continuous Load for Time "T Sec") ex. Powder Compression



6) Move Setted Distance (S.H. P. -> W.H.P.-> Setted Distance) ex. Multiple-Bush Insertion

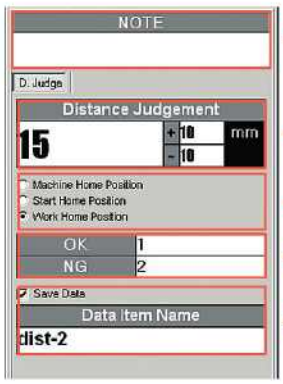


Judgment Function

SORESS

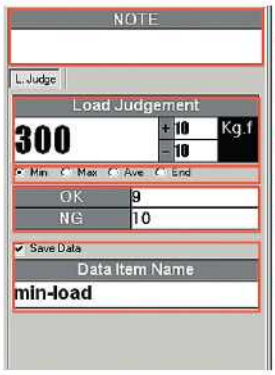
- Various Methods for Judgment : Distance, Load, Graph, Block
- In Total judgment Function can select desired judgment result

Distance judgment



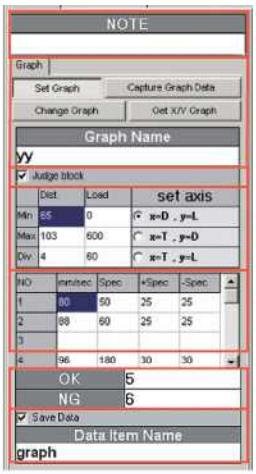
- Judgment Name
- Spec. ()
- Set Referance Position
- Set I/O for OK, NG
- Save the Judgment Result

Load judgment



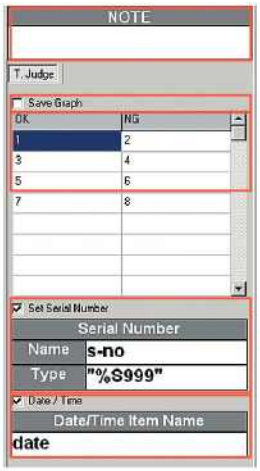
- Judgment Name
- Spec. ()
- Set Referance Position
- Set I/O for OK, NG
- Save the Judgment Result

Graph Judgment



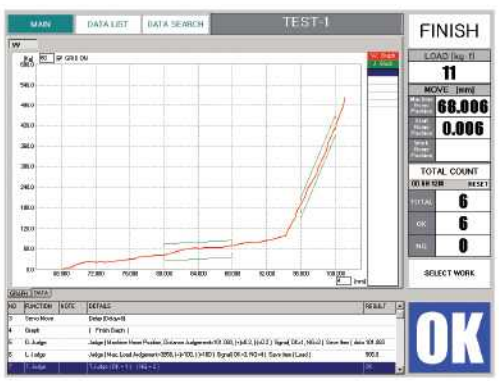
- Judgment Name
- Graph Name
- Set Graph Judgment
- Set Graph Coordination
- Set Judgment Block
- Set I/O for OK, NG
- Save the Judgment Result

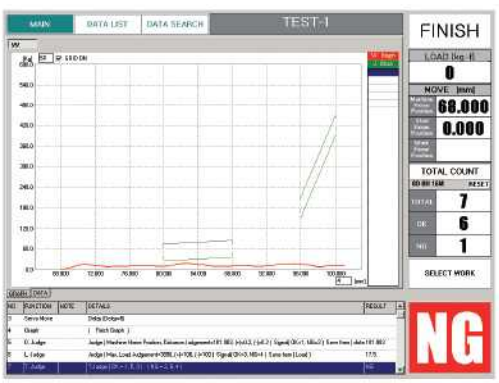
Total judgment



- Judgment Name
- Save Graph
- Set Total Judgment Results
- Save Serial NO .
- Save Date

Example of judgments





Application

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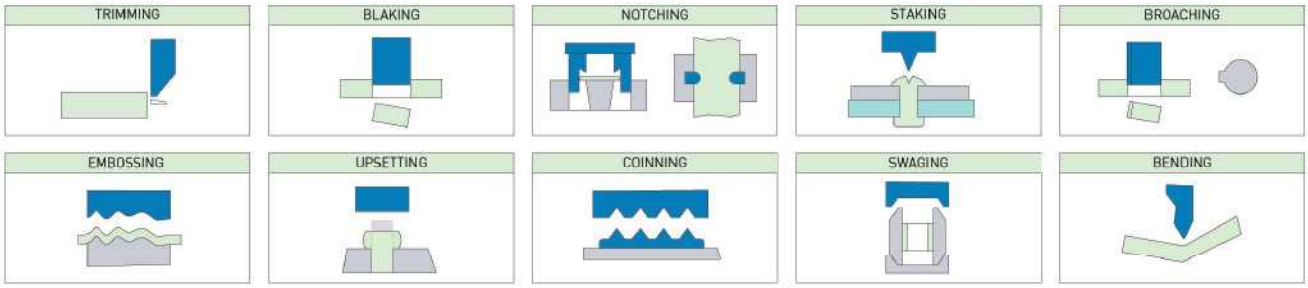
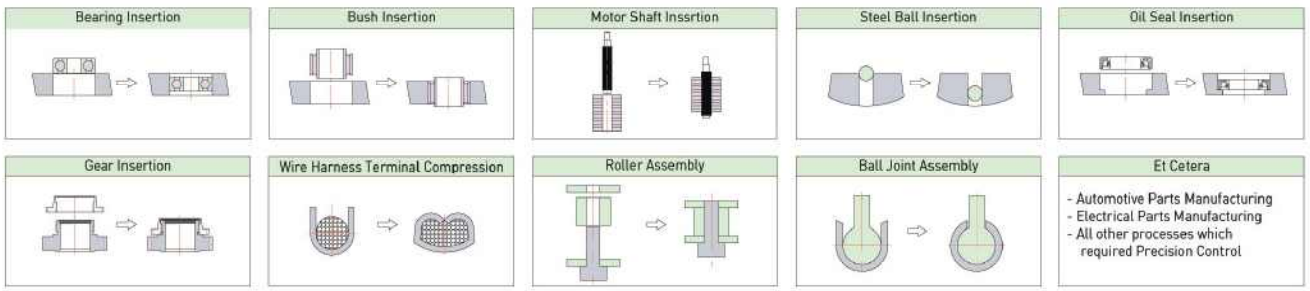
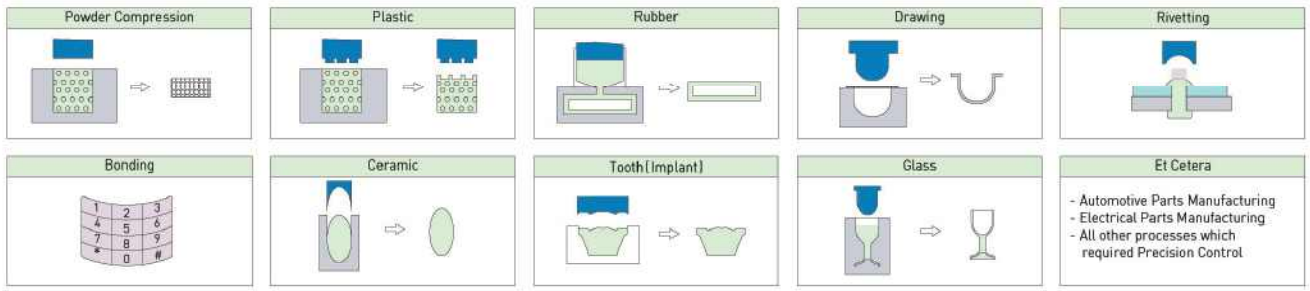
Manufacturing



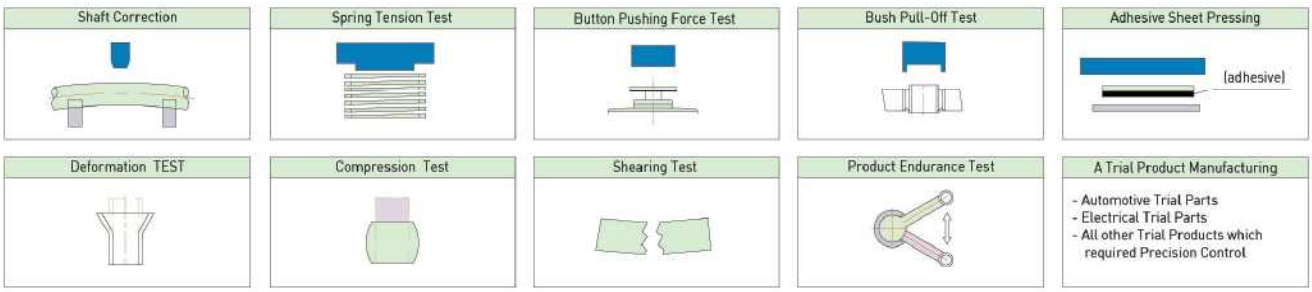
Assembly



Forming



Others



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