

# MINI SERVO PRESS (DSP-1500)



DAI-ICHI DENTSU LTD.

**LOW LOAD SERVO PRESS**

## INTRODUCTION

Recently, miniaturization and precision are in progress in the mechanical industry and electric industry.

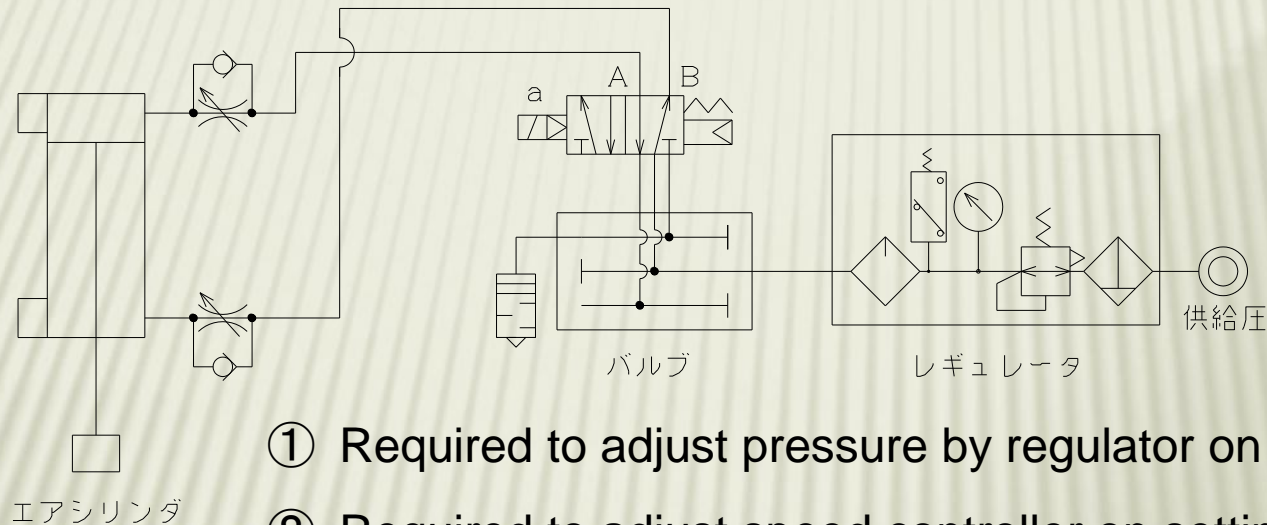
The improvement of quality is also required even the range of low load.

For pressing small components electronic and resinous parts,

**MINI servo press is so suitable for these applications.**

Let me explain how merit you can by replacing with MINI servo press from current pneumatic method.

## FEATURE OF PNEUMATIC STRUCTURE



- ① Required to adjust pressure by regulator on setting up load
- ② Required to adjust speed controller on setting up speed.(Speed is fixed.)
- ③ No function for judging load.
- ④ Distance and position can't be recognized.軸の移動距離、
- ⑤ Takes much time to install to piping and wiring.
- ⑥ Required to install parts and diagram if functions of ③ and ④ are added.

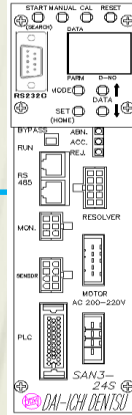
# MINI

## RECOMMENDATION FOR REPLACING MINI



ツールユニット

ONE  
connector  
cable



軸ユニット

Serial communication cable (RS485)

(For RS485/RS232C converter

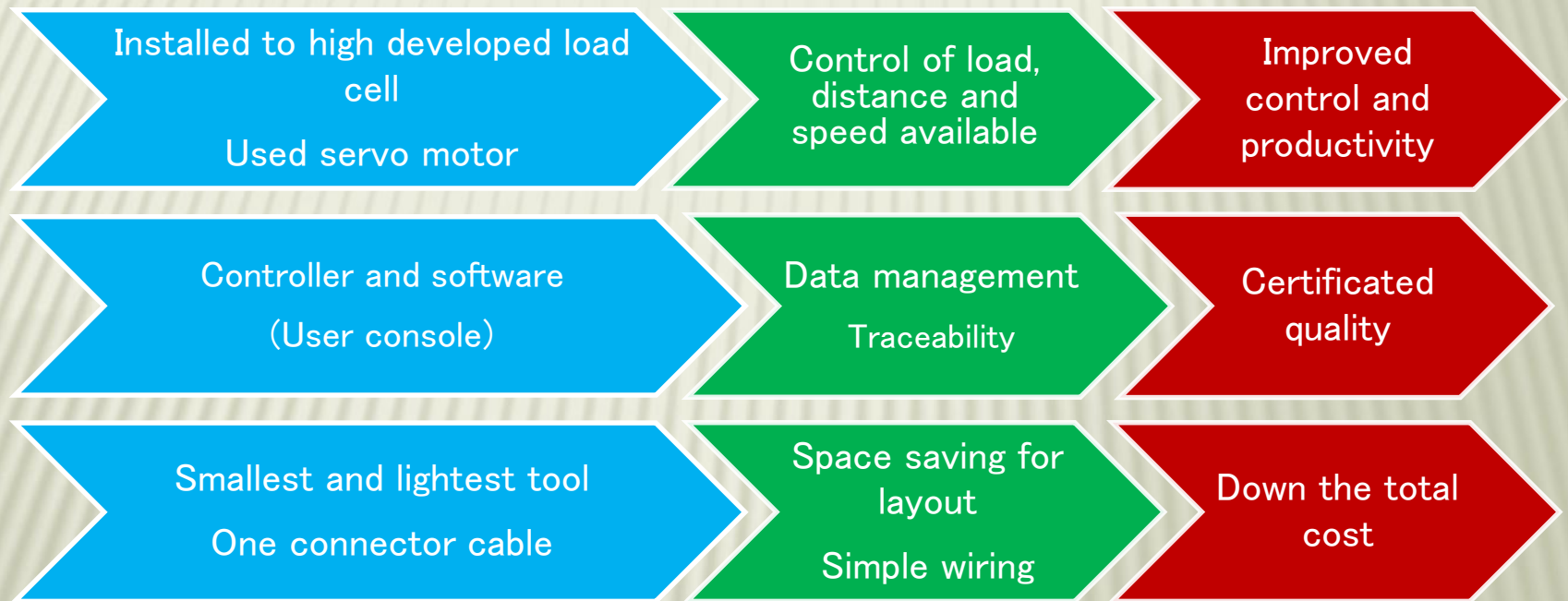
Power cable (AC200V)

SINGLE SYSTEM



- ① Easy set up with software (USER CONSOLE)
- ② High precision pressing available with controlling load.
- ③ Safety pressing operation available with controlling distance.
- ④ Speed can be controlled from 0.1mm/sec and it's changeable for 3 step.
- ⑤ Simple wiring with one connector cable.
- ⑥ Contributed to reduce the energy consumption.

## FEATURES



## TOOL SPECIFICATION

DESCRIPTION	CONTENTS	
MODEL	DPM-050H1-10P	DPM-011H1-10F
MAX.LOAD [kN]	0.5	1.0
LOAD OF CONTINUOUS RATINGS [kN]	0.5	0.55
MAX.SPEED [mm/s]	130	
STANDARD STROKE [mm]	100	
DISTANCE ACCURACY[mm]	±0.01	
LOAD CELL ACCURACY [%]	±1.0 F.S.	
DIMENSION [mm]	49(W) × 153(D) × 270(H)	
WEIGHT [kg]	4.0	

## CONTROLLER SPECIFICATION

DESCRIPTION	CONTENTS
MODEL	SAN3-24H SM/SMS
MOTOR TYPE	RH1
DIMENSION [mm]	74(W) × 175(D) × 235(H)
WEIGHT [kg]	1.4
POWER VOLTAGE [V]	3phase AC200~220V ±10%
POWER FREQUENCY [HZ]	50/60
CONSUMPTION POWER RATINGS [W]	80
ENVIRONMENT	Axis unit should be installed to dustproof enclosure.(control panel)
CONDITION	Temperature : 0°C~+45°C Humidity : under 90%RH
SERIAL COMMUNICATION [bps]	RS232C、RS485 : 9,600、12,800、38,400
STANDBY POWER[W]	18
OPERATING METHOD	Load method/Distance method
RANGE OF OPERATION	1cycle duty ratings : within 50%
NO. OF PROGRAM	32 kinds(32 parameters)
NO. OF STORAGE	10,000 results
CABEL LENGTH [m]	STANDARD : 5m or 10m *Cable length can be customize

## MAINTAINANCE



### Proofread load cell

- Installed to pre-amplifier with self-diagnostic function.
- Proofread of load cell available at user's site.



### Lubricate Grease

- Lubricating Grease available to ball screw by brush or spatula.
- No need to prepare specific tool.



### Adjust belt

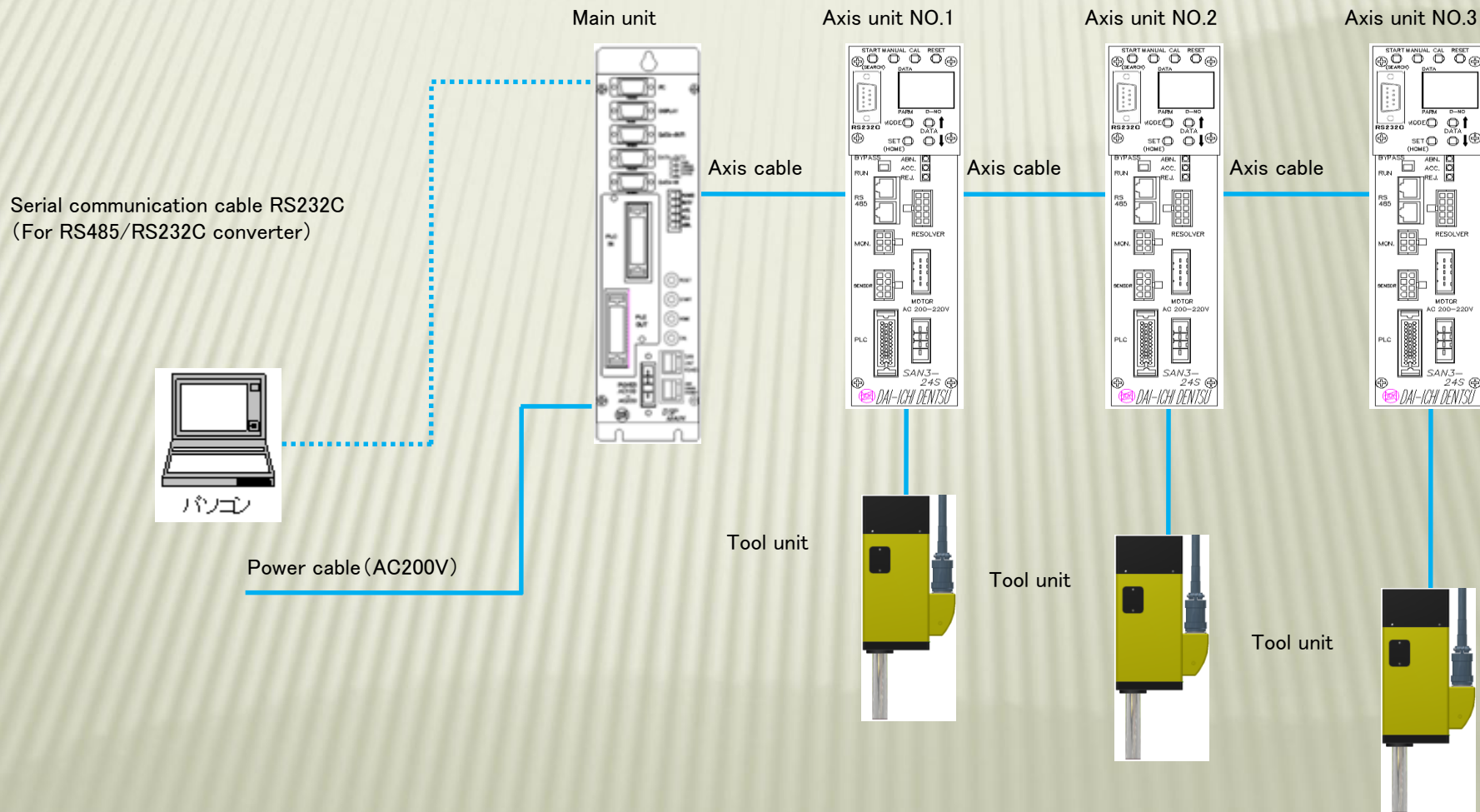
- Installed to tension bolt.



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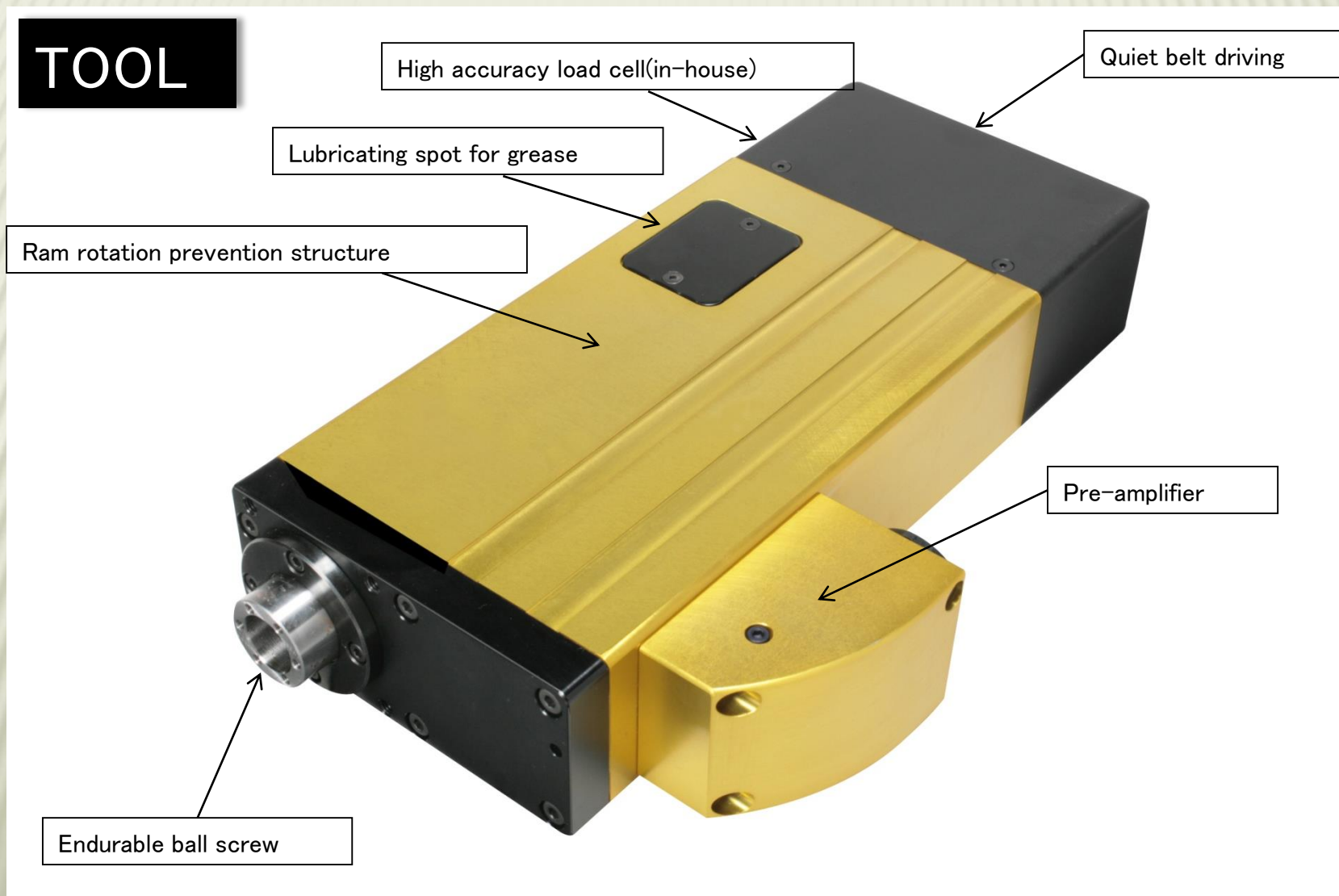
## SYSTEM CONFIGURATION

## MAIN SYSTEM



# MINI

## TOOL



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## USER CONSOLE

DSP SYSTEM [Ver 3.21]

1軸 パラメータ 1 : パラメータ設定

方式/ツール: コントロール 干渉チェック ワークチェック 前進/後退位置信号出力 システム

単位  
 荷重 : (KN)  
 距離/位置 : (mm)  
 速度 : (mm/sec)  
 時間 : (sec)

【荷重注】

0.000 リターン位置 [41]  
 10.0 リターン速度 [76]

0.00 下限荷重 [12]  
 0.00 目標荷重 [14]  
 1.96 上限荷重 [13]

0.000 下限距離 [31]  
 500.000 上限距離 [32]

10.0 減圧速度 [75]  
 0.0 荷重保持時間 [61]

グラフ  
 荷重カーブ  
 電流カーブ

1軸  
 読み込  
 再作画  
 消去

全てのデータを表示  
 最大荷重 14.91  
 最終距離 180.10

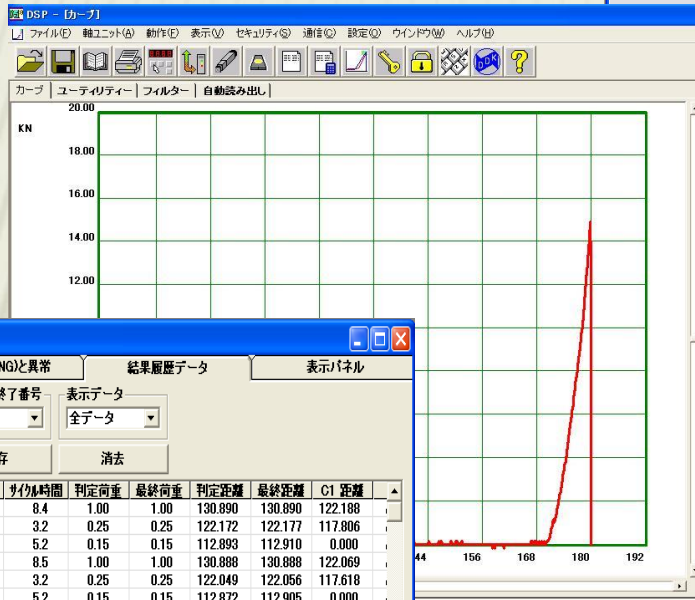
スケール  
 20.00

自動調整

120 mm

0%

荷重: 9.300 KN  
 距離: 3.6 mm



① Easy set up and visible screen

② Curve data collection available on pressing

③ High developed data management system

動作結果表示

表示設定 動作結果表示 REJECT(NG)と異常 結果履歴データ 表示パネル

軸番号: 1軸  
 データ数: 10,959  
 読み出し開始番号: 1  
 読み出し終了番号: 100  
 表示データ: 全データ

検索 読み出し 中止 保存 消去

日付	時間	サイクルカウント	軸番号	パラメータ番号	サイクル時間	判定荷重	最終荷重	判定距離	最終距離	C1 距離
2006/11/23	09:00:50	10,959	1	12	8.4	1.00	1.00	130.890	130.890	122.188
2006/11/23	09:00:41	10,958	1	11	3.2	0.25	0.25	122.172	122.177	117.806
2006/11/23	09:00:31	10,957	1	10	5.2	0.15	0.15	112.893	112.910	0.000
2006/11/23	09:00:14	10,956	1	12	8.5	1.00	1.00	130.888	130.888	122.069
2006/11/23	09:00:04	10,955	1	11	3.2	0.25	0.25	122.049	122.056	117.618
2006/11/23	08:59:54	10,954	1	10	5.2	0.15	0.15	112.872	112.905	0.000
2006/11/23	08:59:37	10,953	1	12	8.4	1.00	1.00	130.889	130.889	122.208
2006/11/23	08:59:28	10,952	1	11	3.2	0.25	0.25	122.189	122.196	117.680
2006/11/23	08:59:18	10,951	1	10	5.2	0.15	0.15	113.043	113.087	0.000
2006/11/23	08:59:01	10,950	1	12	8.4	1.00	1.00	130.889	130.889	122.196
2006/11/23	08:58:51	10,949	1	11	3.1	0.25	0.25	122.177	122.185	117.774
2006/11/23	08:58:41	10,948	1	10	5.2	0.15	0.15	113.033	113.063	0.000
2006/11/23	08:58:24	10,947	1	12	8.5	1.00	1.00	130.889	130.889	122.084
2006/11/23	08:58:15	10,946	1	11	3.2	0.25	0.25	122.064	122.072	117.654
2006/11/23	08:58:05	10,945	1	10	5.2	0.15	0.15	112.850	112.890	0.000
2006/11/23	08:57:48	10,944	1	12	8.3	1.00	1.00	130.888	130.888	122.236
2006/11/23	08:57:38	10,943	1	11	3.1	0.25	0.25	122.216	122.224	117.745
2006/11/23	08:57:28	10,942	1	10	5.2	0.15	0.15	113.085	113.129	0.000
2006/11/23	08:57:11	10,941	1	12	8.5	1.00	1.00	130.888	130.888	122.072
2006/11/23	08:57:01	10,940	1	11	3.2	0.25	0.25	122.053	122.059	117.683
2006/11/23	08:56:52	10,939	1	10	5.2	0.15	0.15	112.910	112.929	0.000
2006/11/23	08:56:35	10,938	1	12	8.6	1.00	1.00	130.887	130.888	122.002

## TROUBLE SHOOTING

### INSTALLED TO IN HOUSE SELF-DIAGNOSTIC FUNCTION WITH ID DATA



ACCEPT LED alarms as OK.



REJECT LED alarms as NG.



ABNOMAL LED alarms as abnormal.

Alarm abnormal code from display.

Recognize abnormal condition.

Conduct the suitable solution.

High self-diagnostic function contributes to prevent from defective products in advance.

Controller stops itself if the abnormal is detected.

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## AFTER SALES SERVICE

WE PROMISE YOU  
GOLOBAL SUPPORT.

A world map is shown with yellow boxes indicating service regions. The following table lists the regions and their corresponding service partners:

Region	Service Partner
ITALY	tema
CHINA	三菱商事 (Mitsubishi商事)
INDIA	Venus Automation
TAHILAND	A.I. TECHNOLOGY CO., LTD.
MALAYSIA	
INDONESIA	
KOREA	DaKo LEEWOOTECH
日本 (Japan)	DDK
TAIWAN	福樂科技股份有限公司 (FULLER TECH CO., LTD.)
AUSTRALIA	HEADLAND
CANADA	
AMERICA	FEC (Fastening Automation, Certified QS-9000/TE)
MEXICO	
BRAZIL	M.SHIMIZU

DDK CAN SUPPORT AFTER SALES SERVICE WORLDWIDELY.