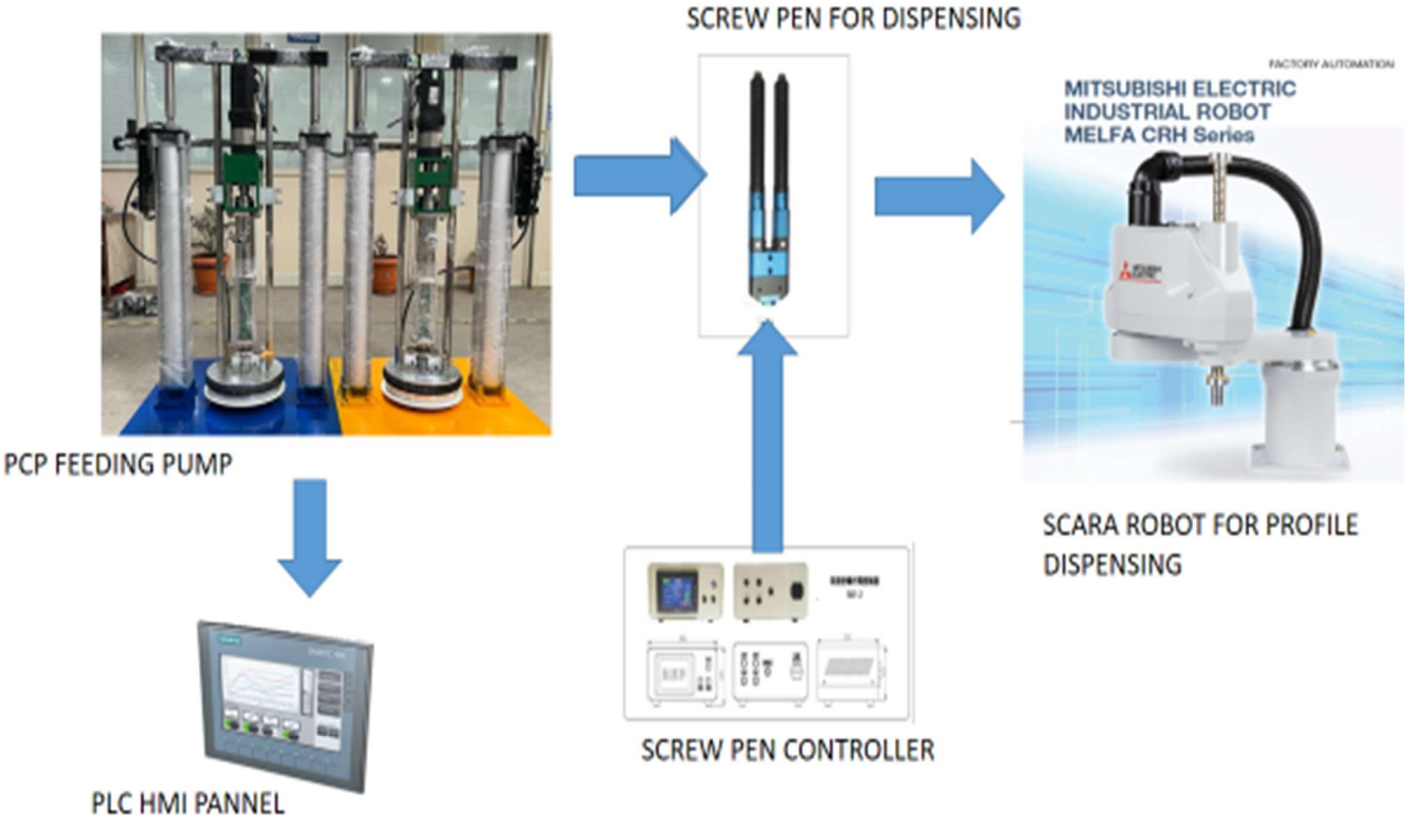
SML INDUSTRIES

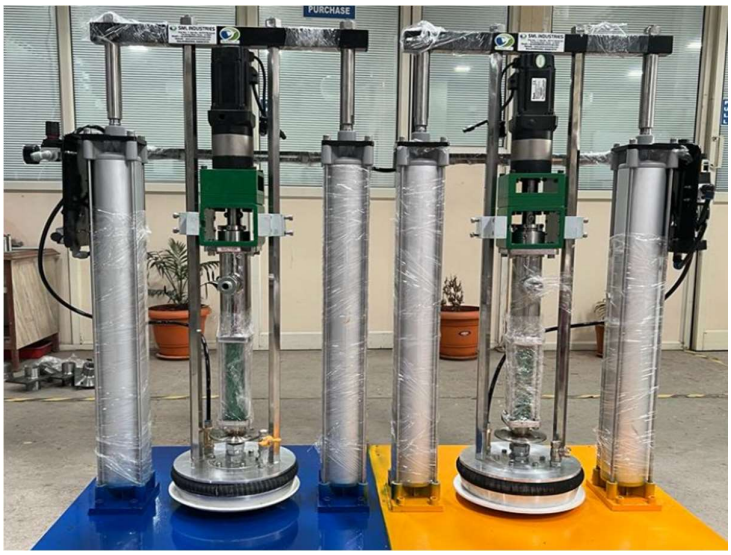
SMLC MAKE GAP FILLER MACHINE

Major Parts of Dispenser: -

- BARREL PUMP
- 2k Dispenser Valve (**STD060)**
- Controller

Process Layout





- **BARREL PUMP PARAMETERS**

Technical parameters:

1. Key technical indicators

1.1. Basic parameters of the device:

Name: emptying barrel pump (clear bucket pump, pressure plate pump)

- Model: STD-YP1.8CC-36H (Model name will be changed according to the screw pump model)

Voltage : AC 220V to 5%, 50 to 2Hz

Dimension: 910mm x 700 x 970mm (cylinder height 1370mm)

Weight: about 80kg/unit (weight is different according to different pump)

The ambient temperature of the equipment: 10℃~50℃

2.1 Screw pump:

Description: The motor drives the rotor screw, wraps around the axis in the stator cavity for planetary swing, and the glue in the closed cavity formed between the screw and the stator is discharged continuously, uniformly and consistently.

- **Flow parameters:**

Model No.	Speed	Recommend dosing volume	Output pressure
STD-15CC-24H	0~85rpm/min	2.5~21 ml/s	24 bar
* The speed varies depending on the characteristics of the medium. When the medium is high lyvisory, high solidity, high abrasive, poor mobility, please set low speeds whenever possible. The detailed selection can contact our engineers.			

Screw type pressure plate pump advantages:

1. Use directly with standard plastic drums (5 gallons), no need to transfer materials to other containers, which can reduce the waste rate of raw materials to extremely low.
2. Suitable for medium with high viscosity, poor fluidity and high solid content, with the highest viscosity up to 1,000,000CPS.
3. The medium output evenly and quantitatively, can be used as a feeding and conveying device for precise dispensing equipment.
4: Compact size, light weight, simple operation, easy to install and operate.
5: With a variety of specifications of the pump, modular assembly, suitable for a variety of different flow interval.

Precision：±2%

Repeated accuracy±1%

Max output pressure：according to the pump type

Transporting medium：

(1) Viscosity：≤1,000,000cps

(2) Pressure：≤0.6MPa

(3) Temperature：≤80℃

Configuration:

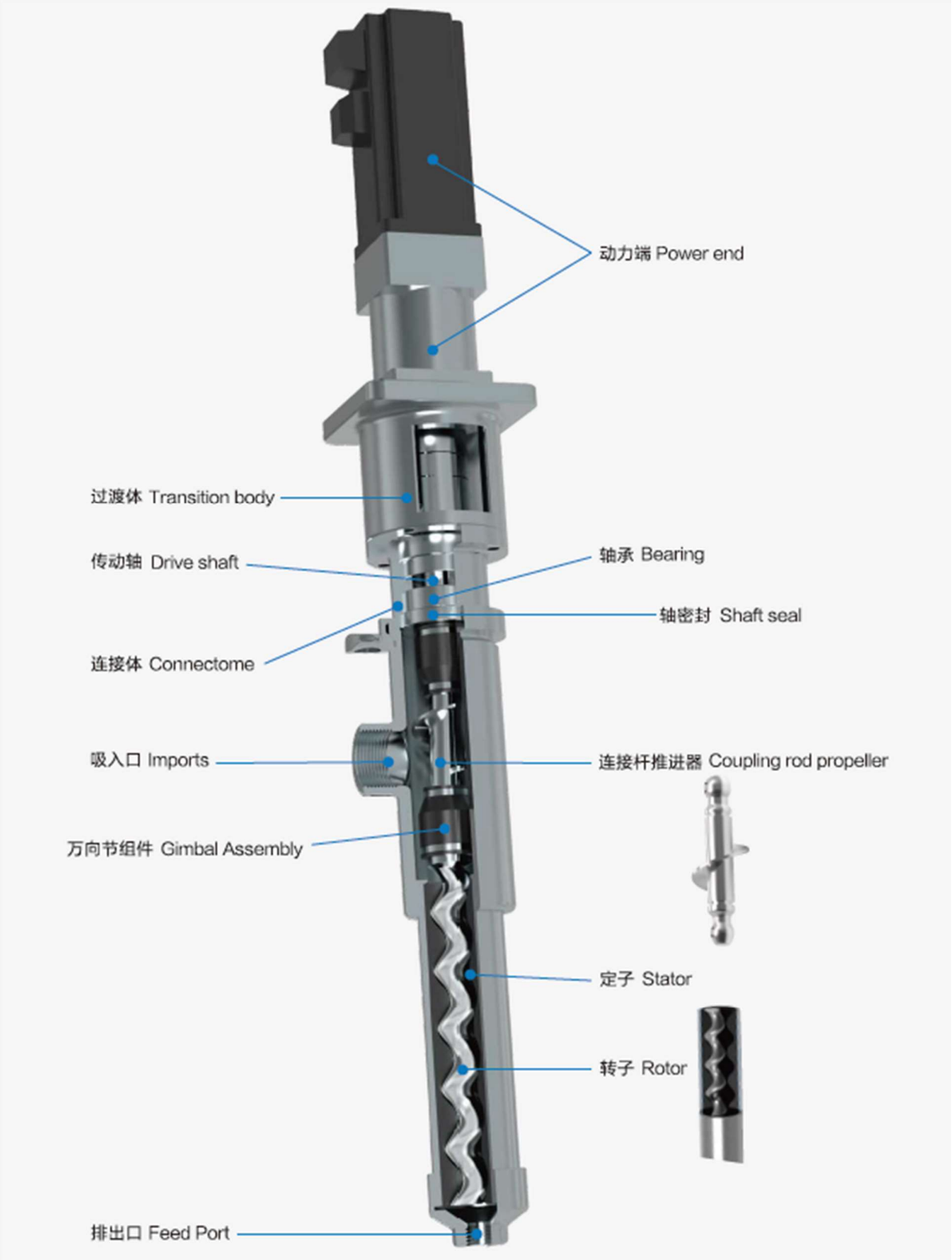
1) Motor: stepper motor/servo motor
2) Material of rotor: 304 stainless steel (hardening treatment)
3) Stator material: FKM (fluorine rubber), NBR(butylene rubber)/EPDM (ethylene propylene diene diene rubber) can be selected according to the medium
4) Pump body material: SS304
5) Seals material: FKM (fluorine rubber) or EPDM (ethylene propylene diene diene rubber).
6) Barrel specification: 5 gallons (Pressure plate configuration is different for straight bucket and coner drum or barrel)

Empty barrel system operation:

The cylinder rises, put the barrel under the pressure plate pump, the cylinder presses down, and the motor drives the screw pump to rotate to extract the medium inside the barrel.

Media enters the position where the feed is needed through the line. When the amount of glue in the barrel is not enough, the switch in place will be triggered, and the alarm will prompt that the material supply is insufficient and a new barrel needs to be replaced.

- **2k Dispensing Valve (STD060) Details:-**



The two-component dispensing screw valve is developed for the dispensing and filling process of electronic industry. It is mainly used to control the mixing proportion of two-component liquid. Users can control the flow of conveying medium according to the rotating speed of the motor, and make a certain percentage of the difference. The two mediums will be evenly stirred in the mixing pipe at the discharge end to avoid the solidification of the mixing glue in the pump. Taking the place of traditional pneumatic dispensing valve, the two-component dispensing screw pump can be directly installed on the mechanical arm of the equipment, which saves space and cost of the automatic equipment.

ITEM	STD003	STD010	STD060	STD200	STD400	STD1000	STD1600	STD3000	STD7000
Delivery/ revolution	0.003ml	0.01ml	0.06ml	0.2ml	0.4ml	1.0ml	1.6ml	3.0ml	7.0ml
Smallest dosing quantity	0.0003ml	0.001ml	0.004ml	0.015ml	0.03ml	0.075ml	0.15ml	0.25ml	0.55ml
Adjustable dosing flow	0.03-0.3/min	0.15-1.5ml/min	0.5-6.0ml/min	1.5-15ml/min	3-30ml/min	8-75ml/min	15-150ml/min	25-250ml/min	55-550ml/min
Motor min/max rpm	0-120								
Recommended fluid viscosity min/max	0-1000000CPS								
Input connection	1/8"	1/8"	1/8"	1/8"	1/4"	1/4"	3/8"	3/8"	3/8"
Input min/max pressure	0-6bar	0-6bar	0-6bar	0-6bar	0-6bar	0-6bar	0-6bar	0-6bar	0-6bar
Output connection	luer lock with O ring				1/4"	1/4"	1/4"	1/4"	1/4"
Output max pressure	16-20bar								
Material-Screw	SUS304, SUS316L, ALUMINUM								
Material Stator	FKM, NBR, EPDM, HNBR, FFKM								
Material Contact part	SUS304, SUS316L, ALUMINUM								
Dimensions	L: 10mm Dia.:33mm	L: 210mm Dia.：33mm	L: 250mm Dia.：33mm	L: 270mm Dia:35mm	L: 376mm Dia.：40mm	L: 415mm Dia.：40mm	L: 440mm Dia.：40mm	L: 450mm dia：60mm	L: 480mm dia：60mm
Weight	320g	350g	380g	400g	1600g	1800g	2000g	2500g	2800g

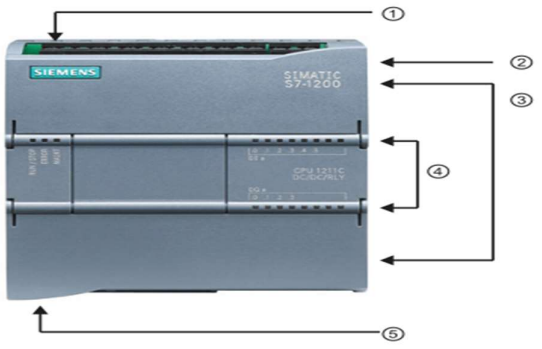
PLC CONTROL PANNEL WITH 4” HMI DISPLAY – SIEMENS S7 1200 AND KPT 700 BASIC

Introducing the S7-1200 PLC

The S7-1200 controller provides the flexibility and power to control a wide variety of devices in support of your automation needs. The compact design, flexible configuration, and powerful instruction set combine to make the S7-1200 a perfect solution for controlling a wide variety of applications.

The CPU combines a microprocessor, an integrated power supply, input and output circuits, built-in PROFINET, high-speed motion control I/O, and on-board analog inputs in a compact housing to create a powerful controller. After you download your program, the CPU contains the logic required to monitor and control the devices in your application. The CPU monitors the inputs and changes the outputs according to the logic of your user program, which can include Boolean logic, counting, timing, complex math operations, and communications with other intelligent devices.

The CPU provides a PROFINET port for communication over a PROFINET network. Additional modules are available for communicating over PROFIBUS, GPRS, RS485 or RS232 networks.



① Power connector
② Memory card slot under top door
③ Removable user wiring connectors (behind the doors)
④ Status LEDs for the on-board I/O
⑤ PROFINET connector (on the bottom of the CPU)

Several security features help protect access to both the CPU and the control program:

- Every CPU provides password protection (Page 164) that allows you to configure access to the CPU functions.
- You can use "know-how protection" (Page 165) to hide the code within a specific block.
- You can use copy protection (Page 166) to bind your program to a specific memory card or CPU.

Technical data

SIMATIC HMI, KTP700 Basic, Basic Panel, Key/touch operation, 7" TFT display, 65536 colors, PROFINET interface, configurable from WinCC Basic V13/ STEP 7 Basic V13, contains open-source software, which is provided free of charge see enclosed CD

General information	
Product type designation	KTP700 Basic color PN
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	7 in
Display width	154.1 mm
Display height	85.9 mm
Number of colors	65 536
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	20 000 h
• Backlight dimmable	Yes

MITSIBUSHI SCARA ROBOT

Robot arm specifications

			RH-3CRH4018-D	RH-6CRH6020-D	RH-6CRH7020-D
Payload	kg		Maximum: 3 (rated: 1)	Maximum: 6 (rated: 2)	
Arm length	Arm No. 1	mm	225	325	425
	Arm No. 2	mm	175	275	
Maximum reach	mm		400	600	700
Operating range	J1	deg	264 (±132)	264 (±132)	
	J2	deg	282 (±141)	300 (±150)	
	J3	mm	180	200	
	J4	deg	720 (±360)	720 (±360)	
Position repeatability	XY directions	mm	±0.01	±0.02	
	J3 (Z)	mm	±0.01	±0.01	
	J4 (θ)	deg	±0.01	±0.01	
Maximum speed	J1	deg/sec	720	420	360
	J2	deg/sec	720	720	
	J3 (Z)	mm/sec	1100	1100	
	J4 (θ)	deg/sec	2600	2500	
	J1+J2	mm/sec	7200	7800	
Cycle time*2	sec		0.44	0.41	0.43
Permissible inertia	Rating	$kg \cdot m^2$	0.005	0.01	
	Maximum*3	$kg \cdot m^2$	0.05 (0.075)	0.12 (0.18)	
Robot weight	kg		14	17	18
Hand I/O wires and hoses			D-sub 15 pins / ø6 × 2, ø4 × 1		
Robot controller			CR800-CHD		
IP rating			IP20		