

Personal Organic Synthesizer ChemiStation™ PPS-5511



PPS-5511

ChemiStation is a 5-lanes organic synthesizer which is designed to improve the efficiency of process development of new reactions and catalysis, examination of reaction condition and synthesis of intermediates. Individual setting of the temperature for each position enables examination by 5 types of temperature conditions simultaneously, allowing to achieve the most effective synthesis route. Synthesis scale can be changed by changing the reaction vessel.

Features

- PPS-5511 features wide synthetic scale from 0.5 to 60mL.
- Wide temperature control range from -23°C to 160°C. Each lanes of aluminum block temperature can be set independently.
- Variety of reaction vessels expands organic synthesis possibilities.
- By attaching cooling water manifold and dimroth condenser, effective reflux experiment is feasible.
- Cooling cartridge can be inserted from either side of main unit.
- Rising or falling gradient temperature control realizes moderate temperature rising until reaction starts.
- Reaction under inert gas is possible by using branched reaction vessel and 3 way cock injection port (Shrenk tube).
- Teflon shutter prevents dew condensation on aluminum block.
- By using sealed tubes, Schlenk tubes, pressure resistive vessels and Dean-Stark Traps, degassing, deoxidization or synthesis under high pressure provide new experimental conditions.

Specifications

Product name	Personal Organic Synthesizer (ChemiStation)
Model	PPS-5511
Cat. No.	226499/226498
Stirring	Strong magnetic stirrer
Reaction vessel	Various reaction vessels 1~5 (max. 20)
Synthesis scale	0.5~60mL (depends on reaction vessel)
Temp. control range	-23~160°C (~130°C: 50~60mL) 5 x independent control
Temp. control accuracy	±0.5°C
Rotation speed	100~2000 rpm (water 1mL) 5 x fixed speed 100~1100 rpm (water 60mL) 5 x fixed speed
Temp. setting & display	Sheet key input, digital display (-40~160°C)
Gas replacement	Vacuuming + inert gas
Reflux	NA/Reflux adapter/Cold water manifold
Reagent injection	Pipet, syringe, dripping funnel under inert condition
Observation window	Slit in front of aluminum block (with LED light)
Safety features	Leakage overcurrent breaker, Fuse, Self diagnosis (Variable upper limit temp., Sensor error), Double chamber, Drip tray, Aluminum block mounted sensor, Motor overload protection
Dimensions (mm)	465W x 335D x 295H
Weight	23kg
Power source	747VA AC115V/1.4kVA AC220V

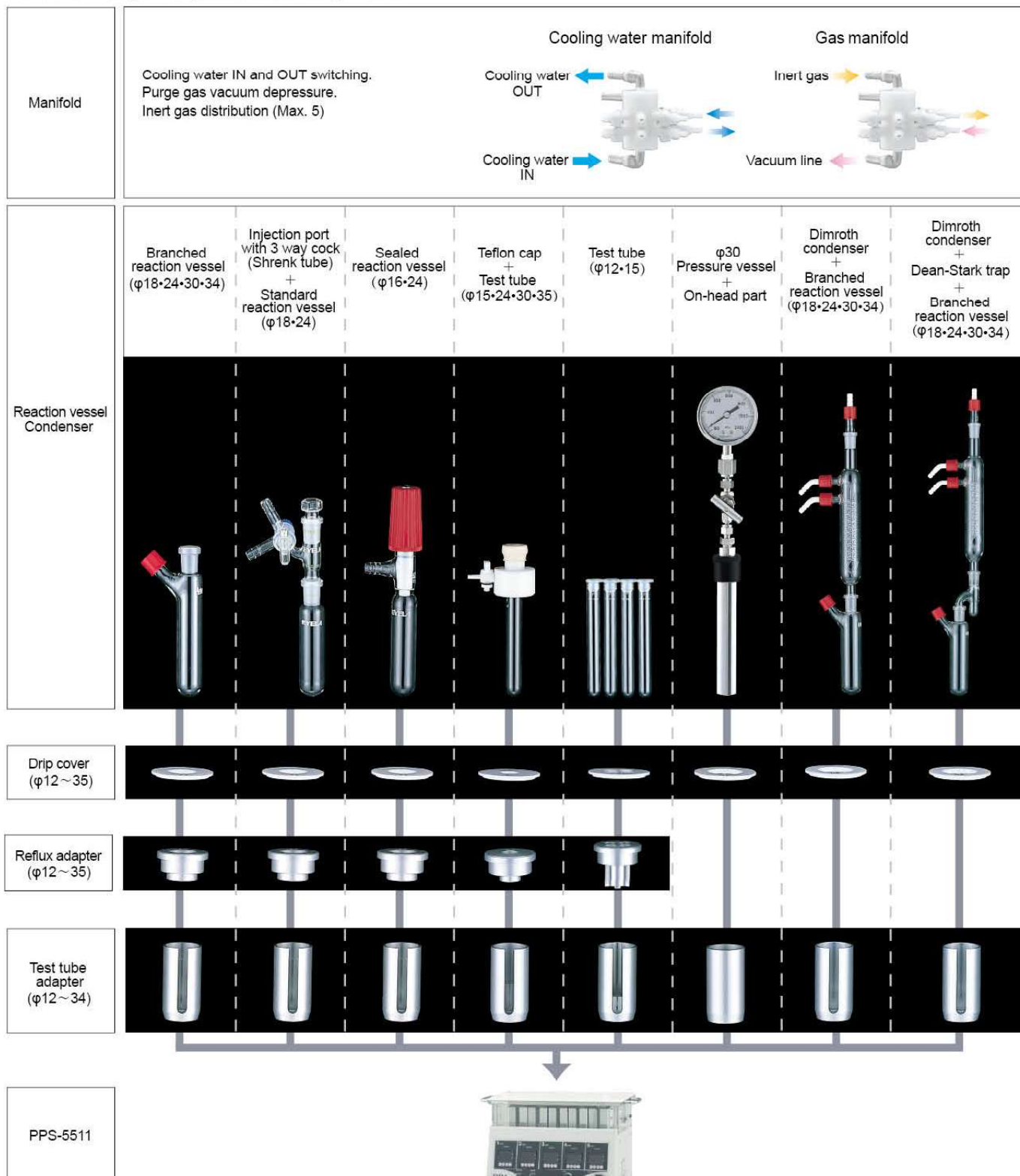
■ PPS-5511 Consist

Product name	Model	Cat. No.
Manifold	PPS-55M1	226510
Aluminum block	PPS-55A1	226390
Double chamber	PPS-55W1	226450
Cooling cartridge	PPS-55LT1	226420
Temp. control & stirring unit	PPS-CTRL1	226350

PPS-5511 Component



Personal Organic Synthesizer Configuration



Rotary Evaporator 1

Vacuum Pump & Aspirator 2

Organic Synthesizer 3

Freeze Drier - Spray Drier 4

Shaker 5

Stirrer 6

Tube Pump 7

Low Temperature Circulator 8

Cold Trap 9

Constant Temperature Bath 10

Incubator 11

Oven 12

Fermentor 13

Personal Organic Synthesizer ChemiStation™

Parts List

Parts for PPS-5511

■ Drip cover

Part Name	Type	Cat. No.
Drip cover (Φ12x4)	-	217610
Drip cover (Φ13)	-	217620
Drip cover (Φ13x3)	-	217630
Drip cover (Φ15)	-	217640
Drip cover (Φ15x3)	-	217650
Drip cover (Φ18)	-	217660
Drip cover (Φ16.5)	-	217670
Drip cover (Φ18)	-	217680
Drip cover (Φ20)	-	216890
Drip cover (Φ12)	-	217700
Drip cover (Φ21)	-	217710
Drip cover (Φ24)	-	217720
Drip cover (Φ25)	-	217720
Drip cover (Φ30)	-	217730
Drip cover (Φ34)	-	217740
Drip cover (Φ35)	-	217750
Drip cover (Φ30 for reflux adaptor) for PPS	-	245880
Drip cover (Φ35 for reflux adaptor) for PPS	-	245890

■ Reflux adaptor

Part Name	Type	Cat. No.
Reflux adaptor (Φ12x4)	-	217320
Reflux adaptor (Φ13)	-	217330
Reflux adaptor (Φ13x3)	-	217340
Reflux adaptor (Φ15)	-	217350
Reflux adaptor (Φ15x3)	-	217360
Reflux adaptor (Φ16)	-	217370
Reflux adaptor (Φ16.5)	-	217380
Reflux adaptor (Φ18)	-	217390
Reflux adaptor (Φ20)	-	217400
Reflux adaptor (Φ21)	-	217410
Reflux adaptor (Φ24)	-	217420
Reflux adaptor (Φ25)	-	217430
Reflux adaptor (Φ30) for PPS	-	245900
Reflux adaptor (Φ35) for PPS	-	245910

■ Test tube adaptor

Part Name	Type	Cat. No.
Test tube (Φ12x4)	-	217080
Test tube adaptor (Φ13)	-	212810
Test tube adaptor (Φ13x3)	-	217090
Test tube adaptor (Φ15)	-	212820
Test tube adaptor (Φ15x3)	-	217100
Test tube adaptor (Φ16)	-	212830
Test tube adaptor (Φ16.5)	-	212840
Test tube adaptor (Φ18)	-	212850
Test tube adaptor (Φ20)	-	212860
Test tube adaptor (Φ21)	-	212870
Test tube adaptor (Φ24)	-	212880
Test tube adaptor (Φ25)	-	212890
Test tube adaptor (Φ30)	-	212900
Test tube adaptor (Φ30) for pressure vessel	-	218550
Test tube adaptor (Φ34)	-	217110

■ Reaction Vessel

Part Name	Type	Cat. No.
① Standard reaction vessel (Φ18 NS14/23)	-	217120
② Standard reaction vessel (Φ24 NS14/23)	-	217130
③ Branched reaction vessel (Φ18 NS14/23 GL14)	-	217140
④ Branched reaction vessel (Φ24 NS14/23 GL14)	-	217150
⑤ Branched reaction vessel (Φ30 NS14/23 GL14)	-	212760
⑥ Branched reaction vessel (Φ34 NS14/23 GL14)	-	217160
⑦ Sealed reaction vessel (Φ16)	-	217170
⑧ Sealed reaction vessel (Φ24)	-	217180
⑨ Φ30 Pressure vessel	HIP-30	218290
⑩ On-head part	HIP-HEAD	218320
Φ30 Test tube	-	245920
Φ35 Test tube	-	245930
Φ12 Test tube	P-12	225720
Φ15 Test tube with lip	P-15S	225740
Φ15 Test tube with screw port	ST-15S	254320

■ Condenser, Hose

Part Name	Type	Cat. No.
⑪ Dimroth condenser NS14/23, GL 14	-	212780
⑫ Liebig condenser L100 NS14/23, GL 14	-	217200
Silicone hose for manifold 5m	-	212790
Cooling hose set (Φ9x1m, 2pcs)	CT-1S	194050
Cooling hose set (Φ9x2m, 2pcs)	CT-2S	201830
⑬ Small size condenser (NS 14/23)	-	240120
⑭ Ultra small size condenser (Ts 15/25)	-	240130
⑮ Ultra small size condenser (Ts 29/32)	-	240140

■ NS 14/23 parts

Part Name	Type	Cat. No.
⑯ Injection port with 3 way cock	-	217190
⑰ Dan-Stark trap for PPS-CCX	-	212770
⑱ Stopper NS 14/23 (10pcs)	-	217290
⑲ Screwthread (GL 14 NS 14/23 (10pcs)	-	217220
⑳ Adapter top: Ts 15/25 bottom: NS 14/23	-	217310
㉑ Dripping funnel 25mL NS 14/23	-	217210
㉒ KECK clip NS 14 Ts 15	-	217300

■ GL 14 parts

Part Name	Type	Cat. No.
㉓ Screw cap GL 14 (open type 10pcs)	-	217230
㉔ Screw cap GL 14 (blank type 10pcs)	-	217240
㉕ Hose connection straight (10pcs)	-	217250
㉖ Hose connection bent (10pcs)	-	217260
㉗ Silicone rubber sealing septa (25pcs)	-	217280
㉘ Silicone rubber sealing open (10pcs)	-	217270

■ Drip cover



Cover to prevent dew condensation in the aluminum block. To be used when using cooling cartridge.

■ Reflux adaptor



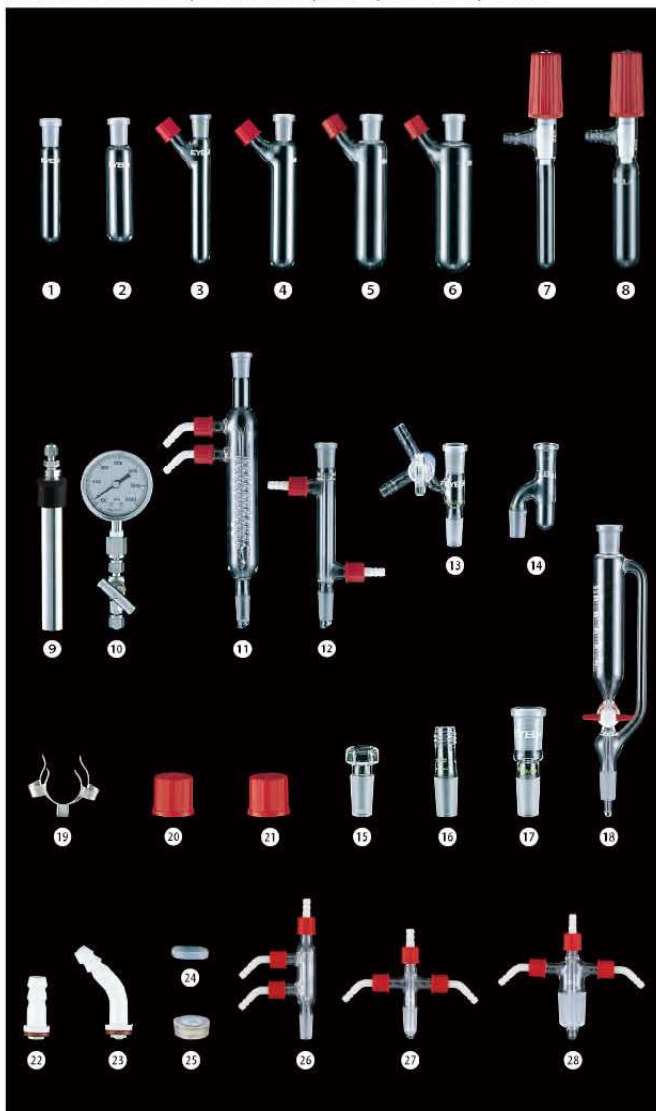
Built-in type condenser attached to aluminum block. It cools down top of reaction vessel.

■ Test tube adaptor



Select proper adaptor according to reaction vessel to be used. Adapter for one, three and four tubes available.

■ Reaction Vessel, Condenser, Hose, NS 14/23, GL-14



■Septum

Part Name	Type	Cat. No.
① Suba seal (Silicone rubber for GL 14 10pcs)	-	212700
② Septum (Synthetic rubber for NS 14 10pcs)	-	218420
③ Septum (Silicone rubber for NS 14 10pcs)	-	218410
Septum (Synthetic rubber for Ts 15 10pcs)	-	218430
Septum (Silicone rubber for Ts 15 10pcs)	-	195710

■Stirring impeller

Part Name	Type	Cat. No.
④ Teflon stirring impeller (disk shape)	ST-10L	217120
⑤ Teflon stirring impeller (cross shape)	ST-1X	191840
⑥ Teflon stirring impeller (football shape Φ6x15L)	TFS-15	200280
⑦ Teflon stirring impeller (football shape Φ10x20L)	TFS-20	200290
⑧ Teflon stirring impeller (football shape Φ10x25L)	TFS-25	200300
⑨ Strong magnetic stirring impeller (oval shape)	ST-2F	213110
⑩ Strong magnetic stirring impeller (bar shape)	ST-2L	213220
⑪ Glass stirring impeller (thin cylinder shape)	ST-1G	218330
⑫ Glass stirring impeller (thick cylinder shape)	ST-2G	218340
⑬ Shaft holder (for floating stirring bar)	-	240930
⑭ Floating stirring impeller	PR-10	240150

■PPS parts

Part Name	Type	Cat. No.
Cross shape impeller Φ15 10pcs	ST-1X	191840
Cross shape impeller Φ30 10pcs	ST-2X	191850
Cross shape impeller Φ35 10pcs	ST-3X	212680
3 way cock 10pcs	QK-3P	191920
Cooling hose set (1mx2pcs)	CT-1S	194050
Cooling hose set (2mx2pcs)	CT-2S	201830
Φ15 Test tube 50pcs	-	195670
Φ30 Test tube 50pcs	-	195690
Φ35 Test tube 50pcs	-	212690
Perfluoro O-ring for PPS-15TC	-	195760
Perfluoro O-ring for PPS-25TC	-	195770
Perfluoro O-ring for PPS-35TC	-	213070
Screw ring for teflon cap Φ15 5pcs	-	195640
Screw ring for teflon cap Φ30 5pcs	-	195650
Screw ring for teflon cap Φ35 5pcs	-	213100
Teflon O-ring for PPS-15TC 10pcs	-	195780
Teflon O-ring for PPS-25TC 10pcs	-	195790
Teflon O-ring for PPS-35TC 10pcs	-	213080
2 way cock for teflon cap 5pcs	-	195700
Gas piping (for PPS teflon cap)	-	213090
Cap for PPS Φ15	-	195620
Cap for PPS Φ30	-	195630

■PPV parts

Part Name	Type	Cat. No.
① 3 port reaction vessel	-	228040
② 4 port reaction vessel	-	228050
③ Dean-Stark trap	-	228060
④ Separable flask 50mL	-	228810
⑤ Separable flask 100mL	-	228820
Separable flask 150mL 3 port	-	251070
Separable flask 150mL 4 port	-	251080
Multi-adapter	-	228080
Impeller (football shape) 5pcs	TFS-35	200320
Strong magnetic impeller (football shape)	-	203660
Stopper 10pcs	-	228100
Keck clip 10pcs	-	228090
Stirring seal	-	228120
Impeller Φ30	-	228140
Impeller Φ60	-	228130

■PPV-4430-4431-4460 parts

Part Name	Type	Cat. No.
① Pressure vessel Φ30 with inner vessel & impeller	HIP-30	218290
② Pressure vessel Φ30 with inner vessel, impeller, protection tube	HIP-30L	228190
③ Pressure vessel Φ60 with inner vessel & impeller	HIP-60	218310
④ Inner vessel glass Φ20 (for HIP-30)	-	218560
⑤ Inner vessel glass Φ20 (for HIP-30L)	-	231890
⑥ Inner vessel glass Φ45 (for HIP-60)	-	212340
⑦ Inner vessel teflon Φ20 (for HIP-30)	-	218570
⑧ Inner vessel teflon Φ45 (for HIP-60)	-	218580
⑨ Strong magnetic impeller (teflon Φ10)	ST-2F	213110
⑩ Strong magnetic impeller (teflon Φ14)	ST-3F	206430
⑪ On-head part	HIP-HEAD	218320
⑫ Pressure gauge (-100/2400kPa)	-	218480
⑬ Pressure gauge (0/6000kPa)	-	218490
⑭ Test tube adapter (for Φ30 vessel)	-	227970
⑮ Dnp cover Φ30	-	228020
⑯ Dnp cover Φ60	-	228010
⑰ Temp. sensor protection tube (HIP-30L)	-	231920
⑱ Temp. sensor protection tube (HIP-60L)	-	238500
⑲ Stopper	-	245830
⑳ Pressure connection	-	216470
㉑ Spiral hose for vessel connection	-	218400
Gas inlet spiral hose	-	218390
㉒ Flexible hose for exhaust port	-	218460
㉓ Independent relief valve	-	218510
Seal kit (fluoro carbon)	-	218380
Seal kit (rubber)	-	218370
Spring kit (2.41-5.16MPa)	-	215040
Spring kit (0.34-2.41MPa)	-	215050
O-ring Φ30	-	245810
O-ring Φ60	-	245820
Backup ring Φ30	-	218440
Backup ring Φ60	-	218450

■Septum, Stirring impeller



■PPS Teflon Cap



■PPV parts



■PPV-4430 · 4431 · 4460 parts



Rotary Evaporator 1

Medium Pump & Aspirator 2

Organic Synthesizer 3

Phase Divider, Strip Divider 4

Shaker 5

Stirrer 6

Tube Pump 7

Low Temperature Circulator 8

Cold Trap 9

Constant Temperature Bath 10

Incubator 11

Oven 12

Fermentor 13