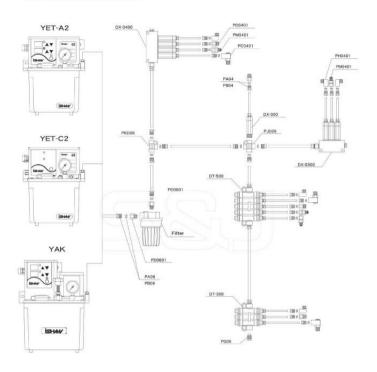
### PISTON LUBRICATION SYSTEM DIAGRAM



This diagram is available for piston lubrication system.

The output volume standard is based on the current of 60Hz at 110V/220V.

Remark: The intermittence of YET lubricatior series should be 5 times longer than the lubrication time, and the set intermittence should more than 3 minutes. The oil viscosity is at the range of 30 ~ 150cSt at 40°C for YET series, and the range of 30 ~ 250cSt at 40°C for YA series.



# POSITIVE DISPLACEMENT INIECTION SYSTEM



The system includes DX/DT series distributors, and YET/YA series lubricators via customer's demands.

### Features:

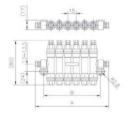
- 1. Lubricate at steady flow rate in every cycle.
- 2. The oil viscosity and lubrication time do not affect the flow rate.
- The system needs to cooperate with the lubricators including pressure release devices. Pressure switch is recommended to be added.
- 4. The system is recommended to applied on the lubrication with higher requirement level.

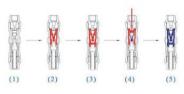
### DT-SERIES OPERATION

- 1. Oil discharged from the pump pushes the mushroom valve upward.
- 2. As the mushroom valve plugs the outlet hole, the pressure pushes the piston downward.
- 3. The storage completes as the piston moves the bottom.
- When the pumps stops, the pressure decreases and the piston recoils to bring the mushroom valve backward and plug the inlet hole. Oil discharges.
- 5. As the pump works, the previous cycle repeats.



	Mode1	no.of output bores	Α	В	Output Volume (cc/stroke)	Weight (g)
	DT-200	2	75	39-43		168
	DT-300	3	90	54-58	0.1 0.16	232
	DT-400	4	105	69-73	0.2 0.3	299
	DT-500	5	126	84-88	0.4 0.5	359
	DT-600	6	135	99-103		426





- (1). Before storage (pressurization begins)
- (2). Under storage (under pressurization)
- (3). Storage completes (pressurization completes)
- (4). Discharging(piston recoils)
- (5). Cycle repeats

### PISTON DISTRIBUTORS

### DX-300



Mode1	no.of output bores	A	В	Output Volume (cc/stroke)
DX-0100	1	32	22	0.02
DX-0200	2	47	37	0.02
DX-0300	3	62	52	0.06
DX-0400	4	77	67	0.16
DX-0500	5	92	82	0.16
DX-0600	6	107	97	
DX-0700	7	122	112	0.3
DX-0800	8	137	127	0.4
DX-0900	9	152	142	0.5

Special mode can be produced according to customer's request.



Node1	no.of output bores	Output Volume (cc/stroke)
DX-000-02	02	0.02
DX-000-06	06	0.06
DX-000-10	10	0.1
DX-000-16	16	0.16
DX-000-20	20	0.2
DX-000-30	30	0.3
DX-000-40	40	0.4
DX-000-50	50	0.5

Special mode can be produced according to customer's request.

Note: Because of continuous improvements, above specifications are subject to change without prior notice.

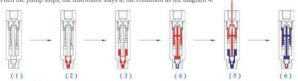
### DX-SERIES OPERATION

- 1. The initial condition of the distributor before pump starts is as the diagram 1.

- 1. The initial collision of the distribution before pump starts is as the diagram 1.
  2. Oil discharged from the pump pushes the mushroom valve upward.
  3. As the mushroom valve plugs the center hole of the rod, the pressure pushes the piston downward.
  4. When the pumps stops, the pressure decreases and the piston recoils to cause the pressure of lower chamber to bring the mushroom valve backward and plug the inlet hole. The oil is pushed to the upper chamber to finight the hole of the rod. The discharging is ready.

  5. As the pump works, the process 2 and 3 repeat to make the piston push the upper chamber to discharge.

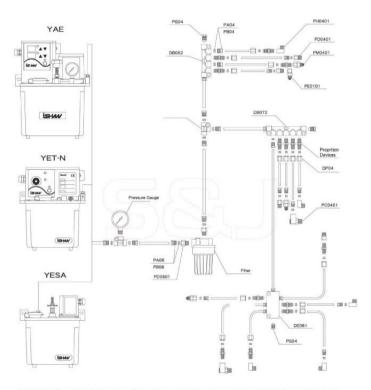
  6. When the pump stops, the distributor stays at the condition as the diagram 4.



 Before the pump starts
 Pump starts (pressurization begins) (4) Pump stops (storage completes and piston recoils) (5) Pump works and pressurization completes (Discharging) (3) Pump works (pressurization completes) (6) Pumps stops (Storage completes)

# **ISHAW**

# RESISTANCE LUBRICATION SYSTEM DIAGRAM



This diagram is available for Presistance lubrication system. The output volume standard is based on the current of 60Hz at 110V/220V.

Remark: The intermittence of YET lubricator series should be 5 times longer than the lubrication time, and the set intermittence should more than 3 minutes. The oil viscosity is at the range of 30 ~ 150cSt at 40°C for YET series, and the range of 30 ~ 250cSt at 40°C for YA series.

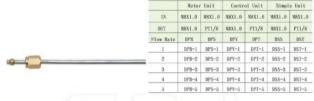
### RESISTANCE LUBRICATION SYSTEM

The system includes YML, YMT, YET, YAE, and YAC series lubricators via customer's demands.

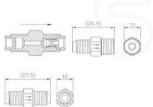
### Features .

- 1. Discharge at steady volume in every outlet.
- 2. Include check valves to prevent the reverse flow.
- 3. The oil viscosity, pressure, and temperature will affect the oil discharge volume.
- Economical and reliable system.
- 5. The system is recommended to lower pressure application.
- The system needs to incorporate with the resistance lubricators.

### PROPORTION DEVICES



Taiwanese Standards Table



			Meter U	nit		
IN	5/16-24	5/16-24	1/8NPT	M8X1.0	N8X1.0	PT1/8
OUT	5/16-24	1/8NPT	1/8NPT	M8X1.0	PT1/8	PT1/8
Flow Rat	e DSM	DCM	DTM	DSN-N	DCM-M	рти-м
3/0	DSN-3/0	DCM-3/0	DIN-3/0		-	
00	DSM-00	BCM-00	DTM-00	DSM-00	DCM-00M	DTN-00N
0	DSM-0	DCM-0	DTM-0	DSM-0	DCM-0M	DTM-0M
1	DSM-1	DCM-1	DTM-1	DSM-1	DCM-1M	DTM-1M
2	DSM-2	DCM-2	DTM-2	DSM-2	DCM-2M	DTM-2M
3	DSM-3	DCM-3	DTM-3	DSM-3	DCM-3M	DTM-3M
4	DSM-4	DCM-4	DTM-4	DSM-4	DCM-4M	DTM-4M
5	DSM-5	DCM-5	DTM-5	DSM-5	DCM-5M	DTM-5M

European and American Standards Table

1 Working press	me :	0.2~2Mpa(2~20kgf/cm2).

- Working pressure 0,2~2Mpa(2~20kgt/cm²)
   Oil viscosity(40°C) ÷ 20~500cSt.
- Flow rate: The flow will be multiplied via the serial number sequence.
- Control unit must be used with continuous lubricators.
- 5. Weight: 11g

			Control	Unit		
IN	5/16-24	5/16-24	1/8NPT	M8X1.0	M8X1.0	PT1/8
OUT	5/16-24	1/8NPT	1/8NPT	M8X1.0	PT1/8	PT1/8
Flow Rate	DSC	DCC	DTC	DSC-M	DCC-M	DTC-M
5/0	DSC-5/0	DCC-5/0	DTC-5/0			
4/0	DSC-4/0	DCC-4/0	DTC-4/0	-		-
3/0	DSC-3/0	DCC-3/0	DTC-3/0		-	_
00	DSC-00	DCC-00	DTC-00			
0	DSC=0	DCC-0	DTC-0	_		_
1	DSC-1	DCC-1	DTC-1	DSC-1	DCC-1M	DTC-1N
2	DSC-2	DCC-2	DTC-2	DSC-2	DCC-2M	DTC-2N
3	DSC-3	DCC-3	DTC-3	DSC-3	DCC-3M	DTC-3N
4	DSC−4	DCC-4	DTC-4	DSC-4	DCC-4M	DTC-4N
5	DSC-5	DCC-5	DTC-5	DSC-5	DCC-5M	DTC-5N

# YET-A MICROCOMPUTER LUBRICATOR



### YET-A-3L





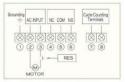


### YET-A-4L (Metal Tank)









YET-A WIRING DIAGRAM

### YET-A

- 1. Three operation modes as,
  - (a) Lubrication: The lubricator runs via lubrication time after power-on.
  - (b) Intermittence: The lubricator runs via intermittent time after power-on.
  - (c) Memory: The lubricator runs via the previous set after power-on.
- 2. Lubrication and intermittent time can be adjusted.
- The float switch alarms and output signal when the oil level is low.
- The over temperature/load protector is attached to protect the motor.
- The function of fixed pressure for the pressure relief valve can prolong the system life
- Lubrication time (second/minute) and intermittent time (second/minute/hour/cycle) are adjustable.
- The indicator on the panel can display the operation of the lubricator.
- The intermittent period can be adjusted via the machine's action cycles.
- 9. "RES" key can force the lubricator to function.

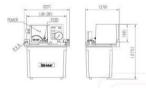
Mode1	YET-A2	YET-A2P2	YET-A1	YET-AIP1	
System	Pis	ton	Resis	tance	
Distributor	DT-series	or DX-series	DB or DE or DV-serie		
Voltage (Single Phase)	110V/60Hz or 220V/60Hz				
Consumption Power (W)	100				
Output Power (W)	11				
Capacity of Terminal Output (A)			3		
Lubrication time (second/minute)	1-999				
Intermittent Time (second/mirate/hour/cycle)	1-999				
Output Bore		Ø4	or Ø8		
Max. Output Pressure MPa (kgf/cm <sup>2</sup> )	1.5	(15)	0	.7(7)	
Output Volume (cc/min)	1	50		200	
Pressure Release device		0		X	
Float Switch			0		
Pressure Switch (kgf/cm <sup>2</sup> )	X	12-9	X	2.5-1.9	
Pressure Gauge	0				
Alarm Beeper	0				
Tank Capacity	3L		4L (Netal Tank)		
Weight (kg)	2	.9	3.7		

Note: Because of continuous improvements, above specifications are subject to change without prior notice.

## YET-C AUTOMATIC LUBRICATOR

### YET-C-3L





### YET-C-4L (Metal Tank)







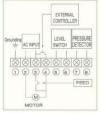
Note: Because of continuous improvements, above specifications are subject to change without prior notice.

### 11 ISHAN PRECISION

### YET-C

- 1. The float switch alarms and output signal when the oil level is low
- The over temperature/load protector is attached to protect the motor.
- The function of fixed pressure for the pressure relief valve can prolong the system life.
- The indicator on the panel can display the operation of the lubricator.
- "Feed" key can force the lubricator to function. (cooperate with PLC control system).

Mode1	YET-C2	YET-C2P2	YET-CI	YET-CIPI		
System	Pi	ston	Res	istance		
Distributor	DT-series	or DX-series	DB or DE or DV-serie			
Voltage (Single Phase)		110V/60Hz o	r 220V/60Hz	60Hz		
Consumption Power(W)	1	00		80		
Output Power (W)	11 8			8		
Capacity of Terminal Output (A)	0.3 (Float Switch) 3 (Pressure Switch)					
Lubrication time	Cooperate with PLC control system					
Intermittent Time	Cooperate with PLC control system					
Output Bore	Ø4 or Ø6					
Max. Output Pressure MPa (kgf/cm <sup>2</sup> )	1.5(15) 0.5(5)			.5(5)		
Output Volume (cc/min)	- 1	50		200		
Pressure Release device				×		
Float Switch			(NC)			
Pressure Switch (kgf/cm <sup>2</sup> )	×	12-9	×	2.5-1.9		
Pressure Gauge			)			
Alarm Beeper	×					
Tank Capacity	3L		4L (Metal Tank)			
Weight (kg)		2.8	3.5			

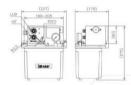


YET-C WIRING DIAGRAM



### YET-R-3L





### YET-R

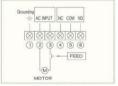
- 1. Two operation modes as,
  - (a) Lubrication: The lubricator runs via lubrication time after power-on.
  - (b) Intermittence: The lubricator runs via intermittent time after power-on.
- 2. Lubrication time and intermittent time are adjustable.
- The float switch alarms and output signal when the oil level is low.
- The over temperature/load protector is attached to protect the motor.
- The function of fixed pressure for the pressure relief valve can prolong the system life.
- The indicator on the panel can display the operation of the lubricator.
- 7. "Feed" key can force the lubricator to function.

### YET-R-4L (Metal Tank)



UB TV	233~284 FEED	(185)	- 8
33 E			(373)

Mode1	YET-R2	YET-R1				
System	Piston	Resistance				
Distributor	DT-series or DX-series	DB or DE or DV-series				
Voltage (Single Phase)	110V/60Hz e	r 220V/60Hz				
Consumption Power (W)	100	80				
Output Power (W)	11	8				
Capacity of Terminal Output (A)	10-	3				
Lubrication time(second)	1-	1-180				
Intermittent Time (minute)	1-180					
Output Bore	Ø4 o	r Ø6				
Max. Output Pressure MPa (kgf/cm <sup>2</sup> )	1.5(15)	0.5(5)				
Output Volume (cc/min)	150	200				
Pressure Release device	0	×				
Float Switch		0				
Pressure Switch (kgf/cm2)	×	×				
Pressure Gauge	Ó					
Alarm Beeper	0					
Tank Capacity	3L	4L (Metal Tank)				
Weight (kg)	2.9	3.6				

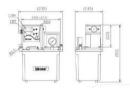


YET-R WIRING DIAGRAM

### YAK/ YAE AUTOMATIC LUBRICATOR

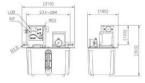
### YAK/YAE-3L





### YAK/YAE-4L (Metal Tank)

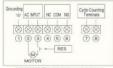




### YAK/YAE

- 1. With temperature protection device for long term operation.
- 2. Three operation modes as,
- (a) Lubrication: The lubricator runs via lubrication time after power-on.
- (b) Intermittence: The lubricator runs via intermittent time after power-on.
- (c) Memory: The lubricator runs via the previous set after power-on.
- 3. Lubrication and intermittent time can be adjusted.
- The float switch alarms and output signal when the oil level is low.
- The function of fixed pressure for the pressure relief valve can prolong the system life.
- Lubrication time (second/minute) and intermittent time (second/minute/hour/cycle) are adjustable.
- (second/minute/hour/cycle) are adjustable.
   The indicator on the panel can display the operation of the lubricator.
- The intermittent period can be adjusted via the machine's action cycles.
- 9. "RES" key can force the lubricator to function.
- 10. The motor is of long-time operation.

Mode1		YAK	Y	AE	
System		Piston	Resi	istance	
Distributor	DI-serie	s or DX-series	DB or DE or	DV-series	
Voltage (Single Phase)		110V/60Hz (	or 220V/60Hz		
Consumption Power (%)	-0	5	6		
Output Power (W)		2	5		
Capacity of Terminal Output(A)		3			
Lubrication time(second/minute)		1-9	999		
Intermittent Time (second/minuto/hour/cycle)	1-999				
Output Bore	Ø4 or Ø6				
Max. Output Pressure MPa (kgf/cm2)	2(20)		1 (10)		
Output Volume (cc/min)	150		150 (Standard) 250 (Option) or 400 (Option		
Pressure Release device	0		X		
Float Switch	0		0		
Pressure Switch (kgf/cm2)		X (Option)	X	(Option)	
Pressure Gauge	0				
Alarm Beeper	0				
Tank Capacity	3L	4L (Metal Tank)	8L	20L	
Weight (kg)	3.5	5.2	9.4	18	

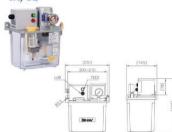


YAK/ YAE WIRING DIAGRAM

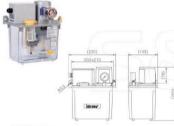
## YAJ/ YAC AUTOMATIC LUBRICATOR



### YAI-3L

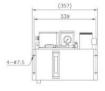


### YAC-3L



### YAC-8H







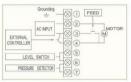
### YAJ/YAC

- 1. With temperature protection device for long term operation.
- The float switch output signal when the oil level is low.
- The indicator on the panel can display the operation of the lubricator. (YAJ only)
- 4. The motor is of long-time operation.
- The function of fixed pressure for the pressure relief valve can prolong the system life.
- "Feed" key can force the lubrication to function. (cooperate with PLC control system). (YAJ only)

				5.77	
Mode1	YAJ		1	/AC	
System	Pisto	n	Resi	stance	
Distributor	DI-series or Di	DI-series or DX-series		or DV-series	
Voltage (Single Phase)	110V/60Hz or 220V/			)Hz	
Consumption Power (V)	56				
Output Power (W)		25	5		
Capacity of Terminal Output (%)	0.3 (Float Switch) 0.3 (Float S 3 (Pressure Switch) 0.3 (Float S		oat Switch)		
Lubrication time	Cooperate with PLC control system				
Intermittent Time	Cooperate with PLC control system			1 system	
Output Bore	Ø4 or Ø6				
Max. Output Pressure NPa (kgf/cm <sup>2</sup> )	2 (20)		1(10)		
Output Volume (cc/min)	150			(Standard) )(Option)	
Pressure Release device	0			×	
Float Switch	0				
Pressure Switch (kgf/cm <sup>2</sup> )	X(Optio	on)	X	X(Option)	
Pressure Gauge	0				
Alarm Beeper	×				
Tank Capacity	3L	4L (Metal Tank)		8L	
Weight (kg)	4.5	5.	2	9.4	



### YAC WIRING DIAGRAM



YAJ WIRING DIAGRAM

### YAP YAH(90W) AUTOMATIC LUBRICATOR

### YAP-8L







### YAP

- 1. With temperature protection device for long term operation.
- 2. Three operation modes as.
  - (a) Lubrication: The lubricator runs via lubrication time after power-on.
  - (b) Intermittence: The lubricator runs via intermittent time after power-on.
  - (c) Memory: The lubricator runs via the previous set after
- 3. Lubrication and intermittent time can be adjusted.
- 4. The float switch alarms and output signal when the oil
- 5. The function of fixed pressure for the pressure relief valve
- can prolong the system life. 6. Lubrication time (second/minute) and intermittent time
- (second/minute/hour/cycle) are adjustable. 7. The indicator on the panel can display the operation of
- the lubricator. 8. The intermittent period can be adjusted via the
- machine's action cycles. 9. "RES" key can force the lubricator to function.
- 10. Cooperorate with distributors of resistance lubricator and proportion devices.

### YAH-8L







Grounding ± AC	NPUT	NC COL	NO.	Cycle-Counting Terminals
		⊗ ⊗ ④ ⑤		7 8
M	MOTOR			

Grounding	- (8)	(1)	
-	-8	2	20
AC INPUT		(3)	MOTOR
NC -		4	MOTOR
COM		(5)	
NO -	- 00	(6)	

### YAP WIRING DIAGRAM YAH WIRING DIAGRAM

### YAH

- 1. With temperature protection device for long term operation.
- 2. The float switch output signal when the oil level is low.
- 3. The function of fixed pressure for the pressure relief valve can prolong the system life.
- 4. The motor is of long-time operation.

Mode1	YAP	YAH	
System	Res	sistance	
Distributor	DB or DE or DV-series		
Voltage (Single Phase)	110V/60Hz or 220V/60Hz		
Consumption Power (W)	210	210	
Output Power (W)	90	90	
Capacity of Terminal Output (A)	3	0.3 (Float switch) 3 (Pressure Switch)	
Lubrication time (second/minute)	1-999	Cooperate with PLC control system	
Intermittent Time (second/minute/hour/cycle)	1-999	Cooperate with PLC control system	
Output Bore	Ø4 or Ø6	Ø4 or Ø6	
Max, Output Pressure Mpa (kgf/cm <sup>2</sup> )	3 (30)	3 (30)	
Output Volume (cc/min)	600	600	
Float Switch	0	O(NC)	
Pressure Release Devices	X (Option)	X (Option)	
Pressure Switch(kgf/cm2)	X (Option)	X (Option)	
Pressure Gauge	0	0	
Alarm Beeper	0	X	
Tank Capacity (L)	8	8	
Weight (kg)	10	9.5	

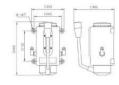
### YML ROCK TYPE OILER

## YMT PULL TYPE OILER

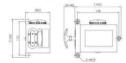
YML



Features:



# YMT-8 (Left) YMT-8 (Right))



1	Compact	size	for	installatio
2	Fami one	mati.		

- 3. Include check valves to prevent the reverse flow.
- The system is recommended to applied to to easier machinery system with the lubrication of lower requirement level
- 5. Oil viscosity(40°c): 20~150cSt.

Wode1	YHL-8	YMT-8
Output Volume (cc/cy)	8	8
Max. output Pressure Npa(kgf/cm2)	1.5(15)	5 (Avergae)
Tank Capacity (cc)	600	600
Effective Capacity (cc)	450	550
Output Bore	Ø4 or Ø6	Ø4
Direction of Bore	Left or Right	Upward or Downward
Weight (kg)	1.4	0.9

### YESA/ YESB AUTOMATIC MANUAL TYPE LUBRICATOR







YESB With Float Switch

- 1. The float switch output signal when the oil level is low.
- 2. Intermittent time can be set before delivery.

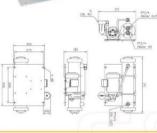
	08	Grounding
MOTOR	-0 & - -0 & -	AC INPUT
MOTOR	@ Ø-	LEVEL
	⑥ ⊗	

Mode1	System	Intermittent time (min)	Voltage (Single Phase)	Consumption Power (W)	Capacity of Terminal Output (A)	Output bore	Float switch	Disharg Pressure Mpa(kgf/cm²)	Output volume (cc/cy)		Weight (kg)
YESA	Resistance	3/5/10/15/30/60	110V/60Hz	5	_	a. a.	-	0.3(3)	0.0	0	1.5
YESB	Resistance	(No Adjustment)	220V/60Hz		0.3(Float switch)	Ø4 or Ø6	0	0.0(0)	3-6	- 2	1.5

### COOLING CYCLE LUBRICATION SYSTEM

### YLC





### YLC COOLING CYCLE LUBRICATOR

- 1. Equip a powerful cyclic device to achieve cooling.
- 2.YLC can be revised via customer's demand.
- 3.YLC is available to incorporate with TOP pump. 4. Simple and reliable structure with effective cooling.
- 5. Filter is Included to ensure oil quality.

ModeI	YLC			
Voltage	2201/3	00 (Singl 1800 (Thro 1400 (Thro	e Phase)	
Max. Output Pressure Mpa(kgf/cm2)		0.5(5)		
0	2.7	4.5	6.3	
Output Volume (L/min)	TOP-IIA	T0P-124	TOP-13A	
Cooling Water Input Volume (L/min)	50(Standard) 100(Option)			
Output Bore		PT3/4		

Model	YLC					
Oulput Volume(L/min)						
D	PS1/4	PS1/4	PS3/8	PS1/4	PS1/4	PS3/8
Max. Water Input. Volume (L/min)		50			100	
A	465		465 540			
В	198		198 223			
C		327 359				

### YCM LOW TEMPERATURE COOLING SPEAR



		1.Or
THE RESERVE TO SERVE THE PARTY OF THE PARTY	-	po
		0.00

	2.0
Wall on	3.S
YCM-02	4.I
(150) (140 or 245)	5.I
	6.1
	7.F

YCM-03

2.4

Model	ACM-01	YCM-02	YCM-03				
Output Bore	Int	Internal Thread PS1/4 (with Universal Nozzle)					
Intput Air Pressure Mpa(kgf/cm <sup>2</sup> )		0.4 (4)					
Connector Type		Quick Connector (Male Type)					
Intput Air Switch	0	0	0				
Pressure Gauge	0	0	0				
Stand		Magnetic Stand	Universal Hydraulic Magnetic Stand				

1.8

### YCM

- nly compressed air is needed (refrigerant or wer is not needed).
- Cooling air volume and temperature are adjustable, Simple and reliable structure.
- Device is set on the hot air exit to reduce the noise.
- Include air inlet switch.
- No electrical or chemical action.
- 7. Effective cooling performance. 8. Air exit direction is adjustable.
- 9. Universal Nozzle is equipped in the air exit.
- 10.Magnetic stand is optional.
- 11. Prolong the tool life in machining.
- 12. Apply for various cooling demands.

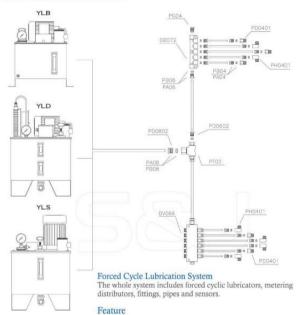
	Test Result	
Rate of Cool Wind	%	50
Inlet Temperature	Pressure Mpa(kgf/cm2)	0.44(4.4)
(30°C)	Air Volume (L/min)	149
	Air Volume (L/min)	88
Outlet	Temperature ('C)	-25
Inlet / Outlet	Different Temperature (°C)	55
Hot air	Temperature (°C)	51.7
Quantity of Heat	kca1/H	66

0.5

Weight (Kg)

# **İSHAN**

### FORCED CYCLE LUBRICATION SYSTEM DIAGRAM



### 1.Oil can be recycled after lubrication process

- 2. Include cycling device and filter to ensure oil quality
- 3.Include pressure valve and pressure gauge for adjustment
- 4. The float outputs signal when the oil level is low.

### Remark

The system cooperates with DV-series distributors and DB-series distributors.

### Installation

- 1. Clear-cut pipes are necessary to prevent the leakage.
- 2. Pipes needs inside cleanness for installation.
- 3. Clean oil of viscosity 30-150cSt at 40°C with high quality is recommended.
- 4. Temperature range is 0-50°C.

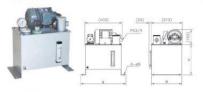
### Lubricators

YLB, YLS, and YLD

### FORCED CYCLE LUBRICATOR



### YLB-20H



### YLB YLS

- 1.YLS includes pressure switch to ensure the normal function.
- 2.Oil can be recycled after lubrication process. 3.Include pressure valve and pressure gauge for adjustment.
- 4. The float switch outputs signal when the oil level is low.
- 5.Include cycling device and filter to ensure oil quality.

### YLS-30H



### YLD

- 1.Oil can be recycled after lubrication process. 2.Include cycling device and filter to ensure oil quality.
- 3.Include cooling device to lower the oil temperature.
- 4. The float switch outputs signal when the oil level is low.
- 5.Include pressure valve and pressure gauge for adjustmen.

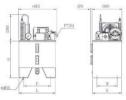
YLB Tank Dim	LxWxH	YLS Tank Dim	LxWxH
20L	444x297x298	30L	410x335x4
30L	410x335x400	40L	560x410x4
40L	560x410x400	60L	600x390x4
60L	600x390x400	80L	610x420x4
80L	610x420x460	100L	760x460x

	20L	444x297x298	30L	410x335x400	300	225
	30L	30L 410x335x400		560x410x400	455	300
	40L	560x410x400	60L	600x390x400	440	250
	60L	600x390x400	80L	610x420x460	450	250
	.108	80L 610x420x460		760x460x500	550	225
Mode1	YLB (He	orizontal)	YLS (Vertic	a1)	YLD	

Mode1	Y	LB (H	ori	zonta	11)	Y	LS	Ver	tica	1)		YLI	)
Voltage (Three Phase)				OVor					80Voi 140V	-	220V/380Vor 220V/440V		
Power (HP)			1/4			1/2						1/	1
Capacity of Terminal Output (A)	minal Output (A) 0.3(Float switch) 0.3(Float switch)							switch switch					
Pole			4			4			4				
Current Frequency (Hz)	50/60			50/60				50/60					
Max, Output Pressure Mpa (kgf/cm <sup>2</sup> )	0.5(5)			1.5(15)				0.5(5)					
Output Volume (L/min) at⊘10	2.7 (TOP-11A) 4.0 (TOP-12A) 5.2 (TOP-13A)							3.4	(TOE	-11A) -12A) -13A)			
Output Volume (L/min) at Ø6				7		0.96 or 2.4			4				
Float Switch			0					0				0	
Pressure Switch(kgf/cm²)	ï		X	Opti	on)			0	Ŷ			0	
Pressure Gauge			0					0				0	
Output Bore	Ø6	or	Ø8	or (	010	Ø6	ог	Ø8	or	Ø10	Ø6 or	Ø8	or Ø10
Alarm Beeper	X					Х			×				
Tank Capacity (L)	20 30 40 60 80			30	40	60	80	100	30		40		

### YLD-30H





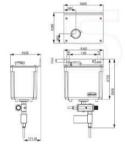
Note: Because of continuous improvements, above specifications are subject to change without prior notice.





### SSP-MT1

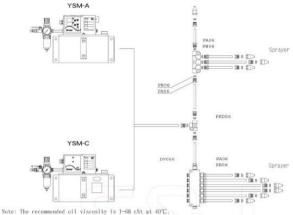
- 1. Lubricant micro output reaches 0.03 c.c./ cy
- 2. Cost reduction via the low consumption of lubricant during cutting process.
- 3. Enhance the productivity and prolong the tool life.
- 4. Environment friendly via the low consumption of lubricant during cutting process.
- 5. Improve the precision of cutting process
- 6. Air/ Fluid Separation Filter is a MUST. 7. The filtration below 0.3u is recommended to prolong the
- system life.
- 8. The recommended Input Air Pressure is 4.0 kgf/cm2.
- 9. The venting holes of muffler and pneumatic timer need to be away from oil and clean.
- 10. It is recommended to vent at the first usage of the system by loosening both venting screws.



Model	SSP-MT1-2L			
Input Air Pressure Range	3 ~ 8 kgf/cm <sup>2</sup>			
Output Volume Range	0.003 ~ 0.03 c.c/cy			
Output Volume Adjust Step	0.0005 c.c.  Note: may change via the input a pressure and lubricant viscosity			
Longest Adjustable Time (under the Input Air Pressure of 4kgf/cm²)	20.0 Sec.			
Tank Capacity	2.0 Liter			
Output Bore	PT1/8			
Recommended Viscosity Range	10∼68 cSt			
No. of Mist	1~3			



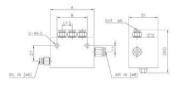
### LUBRICATION SYSTEM



### SD SPRAY MIST

When the piston lubricator delivers oil into the inlet, and the air is delivered from the inlet of the other side. The oil becomes mist and sprays on the surface of work piece to achieve cooling and lubrication, The Spray mist distributor should incorporate with piston lubricators than spray mist lubricators. The requires working pressure is 3 kgf/cm<sup>2</sup>.





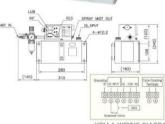
Mode1	Outlet	A	В	Output Volume (cc/stroke)
SD-1	1	41.5	18	
SD-2	2	59	35.5	
SD-3	3	76.5	53	0.1 0.16
SD-4	4	94	70.5	0.2 0.3
SD-5	5	111.5	88	

### YSM-A MICROCOMPUTER SPRAY

# ish*an*

### MIST LUBRICATOR





YSM-A

- 1. Three operation modes as,
- (a) Lubrication: The lubricator runs via lubrication time after power-on.
  (b) Intermittence: The lubricator runs via intermittent time
- after power-on.
- (c) Memory: The lubricator runs via the previous set after power-on.
- 2. Lubrication and intermittent time can be adjusted. The minimum unit of lubrication is 0.1 second.
- 3. The float switch alarms and outputs signal when the oil
- 4. The indicator on the panel can display the operation of
- the lubricator. 5. The intermittent period can be adjusted via the machine
- action cycles. 6. The cooling, lubrication, and cleaning during machining can be completed at the same time.
- 7. The oil volume in air can be adjusted.
- 8. High cooling efficiency.
- 9. YSM-A is suitable for high-speed and high-precision
- The required air capacity is 31L/min for maintaining the working pressure of 0.3 Mpa (3 kgf/cm2).

YSM-A WIRING DIAGRAM

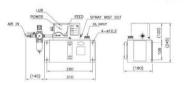
Туре	Lubrication Time(0.1sec)	Intermittent Fine(xc./xx./c)	Volta (Single		Capacity of Terminal Ostput (A)	Output Bore	Air Pressure Range Mpa(kgf/cm²)	Spray Particle Size	Alarm Beeper	Float Switch	Tank Capacity(L)	Weight(kg)
YSM-A	1~999	1-999	110V or	220V	3	Ø6	0,3-0,5(3-5)	4-10 μm	0	0	4	10.1

### YSM-C

### AUTOMATIC SPRAY MIST LUBRICATOR 1. The float switch outputs signal when the oil



Cooperate with PLC



### YSM-C

- 2. The indicator on the panel can display the operation of the lubricator.
- 3. The cooling, lubrication, and cleaning during machining can be completed at the same time.
- 4. The oil volume is air can be adjusted
- 5. High cooling efficiency
- 6. YSM-A is suitable for high-speed and high -precision machining



YSM-C WIRING DIAGRAM

Туре	Lubrication Time	Intermittent Time	Voltage (Single phase)	Capacity of Terminal Output (A)	Output Bore	Air Pressure Range Mpa (kgf/cm²)	Spray Particle Size	Alarm Beeper	Float Switch	Tank Capacity(L)	Weight (kg)
YSM-C		with PLC L system	110V or 220V	0.3(Float Switch)	Ø6	0.3-0.5(3-5)	4-10 µm	Х	O (NC)	4	10.1

### YSC-U MULTI- FUNCTIONAL OIL MIST NOZZLE

# BHAN

### Feature

YSC-U provides oil and air mist to lubricate nd clean piece, tool, and spindle during machining to prolong the tool life in enhance productivity.

- The cooling, lubrication, and cleaning during machining can be completed at the same time.
- 2. Enhance machining speed to save time and cost.
- 3. Achieve fine and precise machining for alloy and hard metal.
- 4. Prevent leakage to prolong the life.
- 5. Provide various mounting for different accessories.

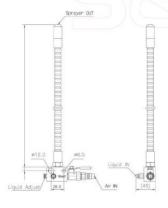
### Application

To applied on machineries like, lathes, drilling machines, milling machines, grinding machines, topping machines, CNC machines, pressing machines, and conveyors.

### Remark

- 1.Clean oil is a must.
- 2. Corrosive oil is prohibited.
- 3.Compressed air pressure: 0.25Mpa (2.5 kgf/cm2).
- 4. Viscosity 0~68cSt.

### YSC oil consumption test results,







Based on the max. Output pressure 0.4 Mpa (4kgf/cm²)



YSC-U-1





YSC-U-3

Note: Because of continuous improvements, above specifications are subject to change without prior notice.

## ishan

# YSD PISTON RATIONING SPRAY MIST LUBRICATOR





YSD-AN

YSD-CN



### YSD

- 1. The oil storage display indicates the capacity status
- 2.Include the ball cock to isolate the air inlet
- 3. Equip with the water filter for the air inlet
- 4. Equip with pressure switch for the air inlet
- 5.Independently adjustable air pressure for each outlet
- 6. Air directional device ensures the air flow in one direction
- Equip with pressure gauge on the air inlet and lubricator to detect the function
- 8.Equip with three filters to ensure oil quality
- 9.Steady oil volume in lubrication
- 10.The air inlet is controlled by solenoid.
  11.Equip float switch to detect oil level.
- 12. Viscosity: 30~68cSt
- 13. Lubrication Time: 1~2 cv/min
- 14.Compressed air pressure: 0.4~0.7 Mpa(4~7 kgf/cm²)

Node1	Lubrication Time (seccond/minute)	Intermittent Time (seccoud/minute/hour/cycle)	Voltage (Single Phase)	Tank Capacity(L)	Output Volume (cc/cy)	Number o Outlet
YSD-AN	1-999	1-999	1100 0000		0.lor0.16	1 - (01)
YSD-CN	D-CN cooperate with PLC control system		110V or 220V	3	0.2or0.3	1-5 (Ø4)

# YSV CONTINUOUS REGULATING SPRAY MIST LUBRICATOR





YSV-AN

YSV-CN

### YSV

- The mist and cooling are regulated by electric-magnetic valve.
- 2. Include the ball cock to isolate the air inlet.
- Equip with the water filter, drainage device on the air inlet.
- Equip with pressure gauge on the air inlet and lubricator to detect the function.
- 5. Equip with three filters to ensure oil quality.
- 6. Viscosity: 30~68cSt.
- 7.Compressed air pressure:0.3~0.5 Mpa(3~5 kgf/cm²)

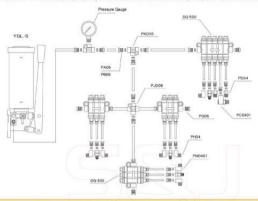
ModeI	Lubrication Time	Intermittent Time (second/alaute/hour/cycle)	Voltage (Single Phase)	Tank Capacity(L)	Output Volume (cc/min)	Number of Outlet
YSV-AN	1-999	1-999	1100 0000		50	n = (0.4)
YSV-CN	cooperate with PLC control system		110V or 220V	3	50	2-5(Ø4)

### GREASE LUBRICATION SYSTEM

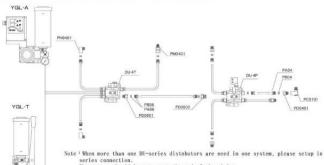


- 1.Only No.0 or No.00
- 2.Only clean grease
- 3.Only use grease gun to refill. It is prohibited to refill from the top of the cup

### PISTON GREASE LUBRICATION SYSTEM DIAGRAM



### RESISTANCE GREASE LUBRICATION SYSTEM DIAGRAM



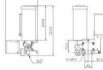
The sensor should be set up at the end of the piping.

## isi-an

# YGL MICROCOMPUTER GREASE LUBRICATOR

# YGL-A08





### YGL-R08







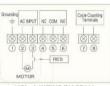


Mode1	YGL	A		YGL-R		
Voltage (Single Phase)	110V or 220V	DC24	11	OV or 220V		
Consumption Power (W)	56	75		56		
Output Power (W)	25	28		25		
Capacity of Terminal Output (A)	3			3		
Lubrication time (second)	1-99	9		1-180		
Intermittent Time	1-999 (ninute/	hour/cycle)	1-	1-180 (minute)		
Output Bore		p	T1/4			
Max. Output Pressure Mpa(kgf/cm²)	8-10 (80	-100)	8-	8-10 (80-100)		
Output Volume (cc/min)	Above	13		Above 13		
Pressure Gauge			0	-		
Cup Capacity (cc)	800	1200	2000	400 (Tabo Type)		
Weight (kg)	3.7	4.6	5.0	5.2 (Cartridge onl included)		

### YGL-A

- 1. Three operation modes as,
- (a) Lubrication : The lubricator runs via lubrication time after power-on.
- (b) Intermittence : The lubricator runs via intermittent time after power-on.
- (c) Memory: The lubricator runs via the previous set after power-on.
- Lubrication and intermittent time can be adjusted.
- The indicator on the panel can display the operation of the lubricator.
- The function of fixed pressure for the pressure relief valve can prolong the system life.
- Lubrication time (second) and intermittent time (minute/hour/cycle) are adjustable.
- time (minute/hour/cycle) are adjustable.

  6. "RES" key can force the lubricator to function.

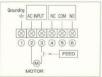


YGL-A WIRING DIAGRAM

### YGL-R

be adjusted

- Two operation modes as,
   (a) Lubrication : The lubricator runs
  - (a) Lubrication: The lubricator runs via lubrication time after power-on.
- (b) Intermittence : The lubricator runs via intermittent time after power-on.
- via intermittent time after power-or 2. Lubrication and intermittent time can
- The indicator on the panel can display the operation of the lubricator.
- The function of fixed pressure for the pressure relief valve can prolong the system life.
- "FEED" key can force the lubricator to function.

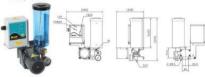


YGL-R WIRING DIAGRAM

### YGL-C YGL-D AUTOMATIC

### GREASE LUBRICATOR

### YGL-C08



### YGL-C

- 1. The indicator on the panel can display the operation of the lubricator.
- 2. The function of fixed pressure for the pressure relief valve can prolong the system life.
- 3. "FEED" key can force the lubricator to
- 4. The motor is of long-time operation.





YGL-C WIRING	DIAGRAM	YGL-D	WIRING	DIAGRAM

Node1	YGL-C			YGL-D		
Voltage (Single Phase)	110	Y -	220V	DC24V		
Consumption Power	56		56	75		
Output Power(%)	25		25	28		
Lubrication time	Cooperate with PLC control system					
Intermittent Time	Co		with I			
Output Bore		PT	11/4			
Max. Output Pressure Mpa(kgf/cm²)	8-10 (80-100)					
Output Volume (cc/min)	Above 13					
Pressure Gauge			0			
Cup Capacity (cc)	800	1200	2000	400 (Take Type)		
Weight (kg)	3.6	4.4	4.9	5.1 Kartridge		

# YGL-T YGL-S MANUAL



### YGL-T YGL-S

- 1. Include double sealing device. The grease chunk will not be stocked in the cup.
- The grease residue will not remain in the cup.
- 3. The output bore can be right or left via installation demand.
- 4. Refill by manual or electrical grease guns.
- 5. Include manual pressure release device. (YGL-S only)
- 6. YGL-S incorporates with piston grease distributor.

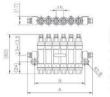
### YGL-T04 YGL-S04(TUBE TYPE)

- 1.ISHAN #0 grease cartridge is recommended.
- 2. Grease refilling is convenient by replacing
  - the new cartridge directly.
- 3. Cartridge cover can prevent damage.
- 4. Easy to set up on machines.

Model	Resist	YGL-1 ance Lui		YGL-S Piston Lubricator			
Max. Output Pressure Mpa(kgf/cm²)	10 (100)						
Output Volume (cc/cycle)	2						
Output Bore		Ø6					
Cup Capacity (cc)	800	1200	40	OO(Tube Type)			
Weight (kg)	1.9	2.2	(Catri	1.4 dge not included)			

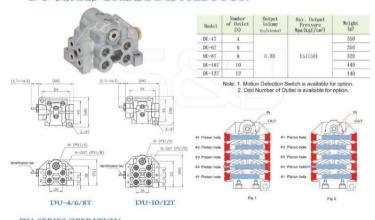






Mode1	Number of Outlet	A	В	Output Volume (cc/stroke)	Weight (g)
DG-200	2	75	39-43	0.3	168
DG-300	3	90	54-58		232
DG-400	4	105	69-73	0.4	299
DG-500	5	120	84-88	0.5	359
DG-600	6	135	99-103		426

### DU-SERIES GREASE DISTRIBUTOR



### **DU-SERIES OPERATION**

As grease passes IN, each piston balances at the position as Diagram 1.

The grease continuously pushes the left side of No.3 piston hole and pushes piston 3-7 rightward to discharge grease in No.6 outlet. The inclined right-sided holes of the closed No.3 piston hole and No.4 piston hole connect, and the inclined left-sided hole of No.4 piston hole connects the No.3 outlet.

The grease continuously pushes the right side of No.4 piston hole and pushes piston 4-8 leftward to discharge grease in No.3 outlet. The inclined left-sided holes of the closed No.4 piston hole and No.1 piston hole connect, and the inclined right-sided hole of No.1 piston hole connects he No.8 outlet.

The grease continuously pushes the left side of No.1 piston hole and pushes piston 1-5 rightward to discharge grease in No.8 outlet. The inclined left-sided holes of the closed No.1 piston hole and No.2 piston hole connect, and the inclined left-sided hole of No.2 piston hole connects the No.1 outlet.

The grease continuously pushes the right side of No.2-6 piston hole and pushes piston leftward to discharge grease in No.1 outlet. The first half of the discharging completes, and the final position is as Diagram 2. The second half cycle is almost the same.

# METERING FOR PROGRESSIVE SYSTEM

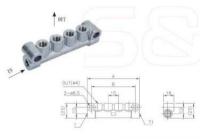
# DV-SERIES OIL REGULATING DISTRIBUTOR DV06(SET)



\*Option of the **Q6** outlet is available.

	Node1	Inlet Bore	Number of Outlet	A	В	Weight(g)
	DV024	Ø4	2	47	37	101
	DV026	Ø6	. 40	31	- 91	19/1
	DV034	Ø4	3	62	52	131
	DV036	Ø6	U	96	36	101
	DV044	Ø4	- 4	77	67	165
	DV046	Ø6	9.	11	67	165
	DV054	Ø4	5	92	82	194
	DV056	Ø6	9	92	82	194
	DV064	Ø4	6	107	97	228
	DV066	Ø6	0		91	228
	DV074	Ø4	7	122	112	200
	DV076	Ø6		126	112	255
	DV084	Ø4	8	137	127	000
	DV086	Ø6	0	137	121	290
	DV094	Ø4		152	140	
	DV096	Ø6	9	132	142	321
	DV104	Ø4	10	100	157	
	DV106	cas:	10	167		355

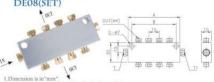
# DB-SERIES OIL DISTRIBUTOR DB06(PCS)



\*Option of the Ø6 outlet is available.

Model	1/11	Number of Outlet	A	В	Weight (g)	
DB041	Ø4/Ø4					
DB042	Ø4/Ø6	2	48	35-36	59	
DB043	Ø6/Ø6	_				
DB051	Ø4/Ø4					
DB052	Ø4/Ø6	3	64	52	76	
DB053	Ø6/Ø6					
DB061	Ø4/Ø4				96	
DB062	Ø4/Ø6	4	80	68		
DB063	Ø6/Ø6	300		500		
DB071	@4/@4					
DB072	Ø4/Ø6	5	96	84	113	
DB073	Ø6/Ø6	1-11	1.0.25	OSSE SE	10000000	
DB081	Ø4/Ø4		112		135	
DB082	Ø4/Ø6	6		95-100		
DB083	Ø6/Ø6	7.0				
DB091	04/04					
DB092	Ø4/Ø6	7	128	116	145	
DB093	Ø6/Ø6					
DB101	04/04					
DB102	Ø4/Ø6	8	144	132	164	
DB103	Ø6/Ø6					
DB121	Ø4/Ø4					
DB122	Ø4/Ø6	10	176	164	201	
DB123	Ø6/Ø6					

# DE-SERIES OIL DISTRIBUTOR DE08(SET)



- Dimension is in"mm".
   The dristributor by"set"includes the distributor body,
- compression sleeve, and compression bushing. 3. The distributor by 'pcs' includes the distributor body only.
- \*Option of the Ø6 outlet is available.

Mode1	1/11	Inlet Bore	A	B	Weight (g)
DE041	04/04				
DE042	06/04	4	48	36	70
DE043	Ø6/Ø6				1.5
DE061	04/04				
DE062	Ø6/Ø4	6	64	52	92
DE063	06/06			- 5	5533
DE081	04/04				
DE082	Ø6/Ø4	8	80	68	116
DE083	Ø6/Ø6				20020
DE101	04/04				
DE102	Ø6/Ø4	10	96	84	138
DE103	06/06				15570.0
DE121	04/04				
DE122	Ø6/Ø4	12	112	99	159
DE123	06/06				

29 ISHAN PRECISION

Note: Because of continuous improvements, above specifications are subject to change without prior notice.



### CONNECTING MOTOR-IRON CASE

(WITH TOP FEED PUMP)







### CONNECTING MOTOR-IRON CASE

(WITH PROLONGED SHAFT CONNECTOR)







### CONNECTING MOTOR-MILLING CASE







Power (HP)		1/4						
Voltage	110V/220Ver	220V/380or220V/440Vc	r208V/415V					
Pole	V. H	4P						
Time Interval	Continuous							
Speed	1400/1700rpm							
Freguency		50/60Hz						
Weight (kg)	Conneting Moter- Iron Case 7kg	Conneting Noter- Iron Case 8kg	Conneting Moter- Milling Case 10kg					

### Note: TOP feed pump is not standard device for the motor.

# ELECTRIC SUCTION PUMP(COOLANT PUMP)



Voltage	110V/220Vor220V/380or220V/440Vor208V/415V												
Power (HP)	Н	Pumping Water(2m)	Input	Output	A	В	Øc	D	Weight (kg				
1/8	175	22L/min	PT3/8"	PT3/8"	142	99	8	48	6.5				
1/4	235	56L/min	PT3/4"	PT1/2"	185	133	9	55	14.2				
1/2	310	100L/min	PT1"	PT3/4"	165	133	10	70	18.5				

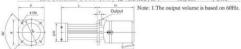
Note: 1.The output volume is based on 60Hz.

2.Please set up the motor at the bottom of the coolant and the coolant must be higher than the position of the inlet to ensure smooth operation.

### ELECTRIC IMMERSION PUMP(COOLANT PUMP)



Voltage	110V/220Vor220V/380or220V/440Vor208V/415V											
Power (HP)	Н	Pumping Water(2m)	Output	ØA	ØB	E	ØD	Y	L	Weight (kg)		
1/8	150	25L/min	PT3/8"	128	8	125	90	18	110/130/150/180/210	6.4		
1/4	170	60L/min	PT1/2"	158	9	180	125	20	150/180/210/270	13.5		
1/2	230	107L/min	PT3/4"	170	9	180	140	20	150	19.4		
1/2	240	107L/min	PT3/4"	170	10	195	140	25	175/210/300	19.4		
1	295	160L/min	PT 1"	170	10	195	150	27	180/280	24.2		



Note: Because of continuous improvements, above specifications are subject to change without prior notice.

### FITTINGS & ACCESSORIES

### STRAIGHT ADAPTER





Activities parameter				4	1		ADDRESS OF THE PARTY OF THE PAR
Model	Bore	₩d	I.	T	T1	H	Weight (g)
PD0401	Ø4	3	18	M8x1.0	PT1/8	10	8
PD0401S	Ø4	3	18	5/16-24	PT1/8	10	- 8
PB0402	04	3.5	18	M8x1.0	PT1/4	14	17
PD0406-1	Ø4	2.5	18	M8x1.0	M6x0.75	10	6
PD0406	Ø4	2.5	18	M8x1.0	M6x1.0	10	6
PD0408	Ø4	3	18	M8x1.0	M8x1.0	10	6
PB0601	Ø6	4	18	M10x1.0	PT1/8	12	8
PD0602	Ø6	5	18	M10x1.0	PT1/4	14	14
PB0608	Ø6	3	18	M10x1.0	M8x1.0	12	8
PD0801	Ø8	5	26	M14x1.5	PT1/8	17	22
PD0802	Ø8	6	26	M14x1.5	PT1/4	17	26
PB1001	Ø10	5	28	M16x1.5	PT1/8	19	29
PD1002	Ø10	7	28	M16x1 5	PT1/4	19	33

REVERSE-FLOW STRAIGHT ADAPTER



Mode1	Bore	L	T	TI	H	Weight (g
PD0401B	Ø4	26	M8x1.0	PT1/8	10	11
PD0601B	Ø6	26	M10x1.0	PT1/8	12	14

ADAPTER



Mode1	Bore	L	I	T1	H	Weight (g)
PD0401A	Ø4	26	M8x1.0	PT1/8	10	11
PD0601A	Ø6	26	M10x1.0	PT1/8	12	14

ELBOW ADAPTER





	Mode1	Bore	₩d.	LI	1.2	T	TI	H	Weight (g
	PH0401	694	3	18	18	M8x1.0	PT1/8	10	13
	PH0401T	Ø4	3	18	18	5/16-24	NPT1/8	10	13
remonyuma E	PH0402	Ø4	4	20	22	M8x1.0	PT1/4	14	32
I 1 1 1	PH0406-1	04	2	18	18	M8x1.0	M6x0.75	10	13
=1\	PH0406	Ø4	2	18	18	M8x1.0	M6x1.0	10	12
	PH0408	Ø4	3	18	18	M8x1.0	M8x1.0	10	13
11/7-1	PH0601	Ø6	4	20	20	M10x1.0	PT1/8	12	20
/M	PH0602	Ø6	4	20	22	M10x1.0	PT1/4	14	29
	PH0608	Ø6	3	20	20	M10x1.0	M8x1.0	12	20
	PH0801	Ø8	5	26	29	M14x1.5	PT1/8	17	52
	PH0802	Ø8	6	26	29	M14x1.5	PT1/4	17	56
(Special Order)	PH1001	Ø10	5	29	31	M16x1.5	PT1/8	19	70
	PH1002	Ø10	7	29	31	M16x1 5	PT1/4	19	70

REVERSE-FLOW ELBOW ADAPTER





Mode1	Bore	1.1	L2	T	TI	H	Weight (g)
PH0401B	Ø4	18	20	M8 x 1.0	PT1/8	10	14
PH0601B	Ø6	20	22	M10 x 1.0	PT1/8	12	21

ONE-WAY ELBOW ADAPTER





Mode1	Bore	1.1	1.2	T	TI	H	Weight(g)
PH0401A	Ø4	18	20	M8 x 1.0	PT1/8	10	14
PH0601A	Ø6	20	22	M10 x 1.0	PT1/8	12	21

ONE-WAY STRAIGHTADAPTER FOR NYLON PIPE



Mode1	Spec	Weight(g)
440N03-C1006	PT1/8 x Ø6	16
440N03-C1010	PT1/8 x PE1/8	12
440N03-C1020	PT1/8 x PE1/4	16
440N03-C1025	PT1/8 x PE5/16	18
440N03-L2006	PT1/4 x Ø6	22
440N03-L2010	PT1/4 x Ø10	28
440N03-C2020	PT1/4 x PE1/4	21
440N03-C2025	PT1/4 x PE5/16	25
440N03-C2030	PT1/4 x PE3/8	27.5
440X03-C3020	PT3/8 v PE1/4	27.5

REVERSE-FLOW ELBOW ADAPTER FOR



Mode1	Spec	Weight(g)
440N06-L102	PT1/8 x PE1/4	16.5
440N06-L1025	PT1/8 x PE5/16	23.5
440N06-L2006	PT1/4 x Ø6	25.5
440N06-L2010	PT1/4 x Ø10	30.5
440N06-L2020	PT1/4 x PE1/4	26
440N06-L2025	PT1/4 x PE5/16	32.5
440N06-L203	PT1/4 x PE3/8	34.5
4 40 VAC -1 909	DTD 00 DELLA	91 €



### COMPRESSION SLEEVE





Mode1	Bore	₽d	D	L	Weight (g)
PB04	04	4.1	6	4.5	0.3
PB06	Ø6	6.1	8	4.5	0.6
PB08	Ø8	8.1	11	7	2
PB10	Ø10	10.1	13.5	8	3

### COMPRESSION BUSHING





Mode1	Bore	₩d	E	T	H	Weight (g)
PA04	04	4.1	12	M8 x 1.0	8	3
PA04T	04	4.1	12	5/16-24	8	3
PA04-1	Ø4	4.2	12	M8 x 1.0	8	3
PA06	Ø6	6.1	12.5	M10 x 1.0	10	4
PA08	Ø8	81	14	M14x1.5	14	9
PA10	Ø10	10 1	15	M16 x 1 5	16	12
Special (	Order)					

### **COMPRESSION NUT**





Mode1	Bore	₽d	L	T	Н	Weight (g
DP04	Ø4	4.05	13	M8 x 1.0	10	3
DP04T	Ø4	4.05	13	5/16-24	10	3

### CONNECTOR INSERT





Mode1	A	В	Weight (g)
PPD94	Ø4	Ø2	
PPD06	Ø6	Ø4	0.2

### SWIVEL STRAIGHT ADAPTER







Mode1	Bore	T	TI	Weight (g
PN0401	04	M8 x 1.0	PT1/8	28
PM0101		PT1/8	PT1/8	26

### SWIVEL ELBOW ADAPTER





1	1	0
1	2	

Mode1	Bore	T	TI	Weight (g)
PC0401	Ø4	M8 x 1.0	PT1/8	38
PC0101		PT1/8	PT1/8	36

### PLANE SWIVEL ELBOW ADAPTER







Mode1	Bore	T	TI	Weight (g)
PE0101		PS1/8	PT1/8	25
PE0101-N		NPT1/8	NPT1/8	25

Nodel A B T T1 Weight(g)

### CONNECTOR







PK10404	23	10	M8 x 1.0	M8 x 1.0	10
PK10606	25	12	M10 x 1.0	M10 x 1.0	15
PK20101	24.5	10	PT1/8	PT1/8	9
PK20102	27	14	PT1/8	PT1/4	17
PK20202	30	14	PT1/4	PY1/4	15
PK20203	30	17	PT1/4	PT3/8	26
PK31010	29	17	M10 x 1.0	M10 x 1.0	9

Dimension is in 'mm'.
 Option of the Ø6 outlet is available.

### FITTINGS & ACCESSORIES



### T-JUNCTION





Model	Bore	T	1.1	1.2	Weight (g)
PKD04	Ø4	M8x1.0	28	19.5	15
PKD04-000	694	5/16-24	28	19 5	15
PKD06	Ø6	M10x1.0	30	22	26

### **CROSS JUNCTION**





Model	Bore	I	L	Weight(g)
PJD04	Ø4	M8x1 0	28	15
PJD04-000	Ø4	5/16-24	28	15
PJD06	Ø6	M10x1.0	30	20

### 3-WAY JUNCTION

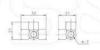




Mode1	Bore	T	Weight (g)
PHD0301	Ø4	M8x1.0	20

### 4-WAY JUNCTION





Mode1	Bore	T	Weight (g)
PHD0401	04	M8x1.0	25

### 5-WAY JUNCTION





Model	Bore	T	Weight (g)
PHD0501	6)4	M8x1.0	29

### 2-WAY JUNCTION





Mode1	Bore	T	TI	Weight (g)
PJ0404	Ø4xØ4	M8x1.0	M8x1.0	23
PJ0404-000	Ø4xØ4	5/16-24	5/16-24	23
PJ0406	Ø4xØ6	M8x1.0	M10x1.0	22
PJ0606	Ø6xØ6	M10x1 0	M10x1.0	20

### GREASE NOZZLE







Mode1	Spec	Weight(g)
440029	PT1/4x450	15
440026	PT1/8x450	8.5
440027	PT1/8x900	9
440057	M8x90°	8
440023	PT1/4x180°(straight)	12.5
440000	PI1/8x180°(straight)	8.5
440047	M8x1800(straight)	4



### PLANE ELBOW ADAPTER





Mode1	Bore	₩ d	L	T	T1	H	Weight (g)
PI0401	04	2	21	M8 x 1.0	PT1/8"	12.7	17
PI0408	04	2	21	M8 x 1.0	M8 x 1.0	12.7	15
P10601	Ø6	2	22	M10 x 1.0	PT1/8"	14	15
P10101	1.000	2.5	21	PS1/8	PT1/8"	12.7	15





Model	L	T	H	Weight (g)
PG0408	12	M8 x 1.0	8	4.4
PG0601	14	PT1/8	10	7.6

### PLUG





Mode1	L	T	II	Weight (g
PG04	16	M8 x 1.0	8	5.4
PG06	17	M10 x 1.0	10	8.8

### 3-WAY T CONNECTOR







Mode1	T	L1	1.2	W.	Weight (g)
PT01	PS1/8*	27	21	14	34
PT02	PS1/4"	31	25	18	17
PT03	PS3/8**	40	31	21	86

### BRASS SWIVEL FITTING





Mode1	T	Н	Weight(g)
PQ0101	PT1/8"	14	44
PQ0201	PT1/4"	14	47

### HEAVY DUTY SWIVEL FITTING





Mode1	T	L	Weight(g)
PN142	PT1/8"	42	180
PN230	PT1/4"	30	170
PN242	PT1/4"	42	185
PN260	PT1/4"	60	205

### TRANSITIONAL T-JUNCTION







Mode1	Bore	T	TI
PKT0401	Ø4	PT1/8	M8 x 1.0
PKT0406	Ø4	M6 x 1.0	M8 x 1.0
PKT0408	Ø4	M8 x 1.0	M8 x 1,0
PKT0601	Ø6	PT1/8	M10 x 1.0
PKT0606	Ø6	M6 x 1.0	M10 x 1.0
PKT0608	Ø6	M8 x 1.0	M10 x 1.0

### FITTINGS & ACCESSORIES



### HORIZONTAL PRESSURE GAUGE





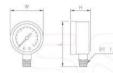


Node1	Specification(kgf/cm2)	W	L	Weight (g)
327000	15	42	38	53
327001	35	42	38	53
227400	95	48	4.4	0.6

Madel	Specification(Bar/Mpa)	W	1.	Weight (g)
327004	1.5	42	38	53
327005	3.5	42	38	53

### VERTICAL PRESSURE GAUGE





Mode1	Specification NPa(kgf/cm2)	W	L	H	Weight(g)
327207	1.5(15)	42	58	24	53
327610	3,5(35)/0il Charged	42	58	24	53

### PRESSURE SWITCH (MECHANICAL TYPE)







### Remark:

- 1. The options of Normal Close and Normal Open.
- 2.Different Output wire length is available via customer's demand.
- 3. Capacity of Output is 5A. Max. operation pressure is 3Mpa (30 kgf/ cm2).

Mode1	Specification(kgf/cm2)	Weight (g)
321661	2.5-1.9	81
321660	12-9	81

### FILM PRESSURE SWITCH



Mode1	Specification		T	Water to Cal
Mode1	ON	OFF	1	Weight (g)
321606	2. 1kg 4	-	UNF3/8"-24	35
321607	3.5kg 4	-	NPT1/8*	35
321609	-	2. 1kg4	UNF3/8"-24	35
321610	9kg*	11kg#	NPT1/8"	35
321611	11kgA	9kg*	NPT1/8"	35

A:upward ▼:downward

P.S. 1.Use rated current 3.5A and below. 2.Max. bome pressure is 50kgf/cm2.



### VALVE



Mode1	Specification	Weight (g)
MA0405	PS1/4 X PE5/16	64.5
MB0404	PS1/4 double female	57
MB0606	PS3/8 double male	94
MC0404	PT1/4 double male	59
MD0402	1/4 (female) X 1/8 (male)	51
MD0402	1/4 (female & male)	53
MD0606	3/8 (female & male)	82.5
ME0404	PT1/4 x PE1/4	58
ME0405	PT1/4 x PE5/16	54
ME0406	PT1/4 x PE3/8	59

### OIL FILTER

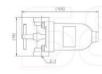




Mode1	T	L	Filter Precision(µ)	Weight (g)
PF25806	PT1/4"	60	196	125
PF25808	PT1/4"	80	196	140
PF25810	PT1/4"	100	196	150
PF35806	PT3/8"	60	196	120
PF35808	PT3/8"	80	196	130
PF35810	PT3/8"	100	196	135

### ADJUSTABLE OIL FILTER





Node1	Inlet/Outlet Thread	Filter Precision (Mesh)	Max. Output Volume (L/min)	Max. Pressure
PR-C1	PS1/4 x PS1/4	60	20L/min	1 -11
PR-C2	PS3/8 x PS3/8	60	30L/min	1.5Mpa
PR-C3	PS1/2 x PS1/2	60	30L/min	(15 kgf/cm <sup>2</sup> )

### FLOIL FILTER





Model	Max. Operation Pressure (kgf/cm <sup>2</sup> )	Max. Output Volume (L/min)	Filter Precision (µ)	INxOUT	Weight (g)
L-010025	25	2.5	10	PS1/8xPS1/8	30.0
L-025030	25	3			
L-125035	25	3.5	125	PS1/4xPS1/4	30.0

### DOUBLE-SIDED OIL FILTER





Mode I	T	Filter Precision (µ)	Weight (g)
PR0202	PS1/4 x PS1/4	196	1000
PR0303	PS3/8 x PS3/8	196	1000

### TOP OIL FEED PUMP



### TOP OIL FEED PUMP



The structure is simple with strong suction and low noise as well as high speed. It is suitable for the continuous low pressure lubrication. Viscosity: 30–150cSt





ModeI	Output	0./		Pressure Mpa	Revolution (rpm)	Bore (E)	(4)	D	0	(n)	Weight (kg)
Model	(cc/rev)	1500epa	1800rpm	(kgf/cm²)	(clan)	DOLG (E)	UV	D	1	100	(kg)
TOP-11A	1.5	2.2	2.7	0.5(5)	2000	PT1/8"orPT1/4"	49	11	8	68	0.55
T0P-12A	2.5	3.7	4.5	0.5(5)	1800	PT1/4"	56	11	8	76	0.6
TOP-13A	3.5	5.2	6.3	0.5(5)	1800	PT3/8"	20	14	5	99	0.8

### 1RA OIL FEED PUMP(REVERSABLE)



The structure is simple with strong suction and low noise as well as high speed. It is suitable for the continuous low pressure lubrication. The feature is of fixed inlet and outlet, but reversible rotation direction. Viscosity: 30–150eSt.





Node1			Revolution	Bore (E)	(A)	Weight		
(cc/rev)	1500rps	1800rps	(kgf/cm²)	(rpn)	nore (E)	- 00	(kg)	
IRA-2FS	1.8	2.7	3.2	0.5(5)	2000	PT1/4*	50	1.1
1RA-3FS	2.5	3.7	4.5	0.5(5)	2000	PT1/4*	-55	1.2

### TOP ADJUSTABLE VALVE







The structure is simple and easily adjusted. It cooperates with TOP feed pump to adjust the pressure of pipes.

Pressure Adjustment Range: 0.2-0.5Mpa (2-5 kgf/ cm²); Weight(g):281

### VOP OIL FEED PUMP



VOP-220





PT3/4"





Model cc/rev		Flow rate		Max. Pressure	Max. Speed		E	Weight
		1/1500rpm	1/1800rpm	Mpa (kgf/cm2)	rpm	A	E	(kg)
VOP-204	4	6	7.2	2.5(25)	1800	148	PT1/2"	3.7
VOP-206	6	9	10.8	2.5(25)	1800	153	PT1/2"	4.0
VOP-208	8	12	14.4	2.5(25)	1800	158	PT1/2"	4.2
VOP-210	10	1,5	18.0	2.5(25)	1800	160	PT3/4"	4.3
VOP-212	12	18	21.6	2.0(20)	1800	168	PT3/4"	4.5
VOP-216	16	24	28.8	2.0(20)	1500		PT3/4"	4.8

Motor Output	(L)	(H)	F2	FI	M	N	Т
1/2 HP	246	168	100	125	158	80	138
1 HP	261	168	100	125	158	80	138
2 HP	285	188	125	140	174	90	152



### FLEXIBLE HOSE





Low pressure flexble hose: Model #PST. Pressure range 0-4Mpa(0-40 kgf/cm<sup>3</sup>). Middle pressure flexble hose: model# PSM. Pressure range 4-8Mpa(40-80 kgf/cm<sup>3</sup>). Note: Length is available via customers demand.

Mode1	Pipe Diameter
PST04	614

### STEEL WIRE SHIELD TURI





Note: Length is available via customers demand.

Mode1	Pipe Diameter Max. Operation	Pressure Mpa(kgf/cm2)
P-SF04	694	10(100)
P-SF06	Ø6	10(100)

### HEAVY DUTY MACHINERY Vibration absorber





Node1	Rubber		Dimension			Max Loading /pcs	Weight
MONO I	Hardness	Ø	М	H	h	Fmax (kg)	kg
578-080-25-70	70	80	M10x80	25	8	255	0.4
S78-120-32-80	80	120	M12x100	32	12	1225	1.1
S78-160-35-80	80	160	N16x120	35	12	3570	2.2
\$78-185-39-80	80	185	N20x160	39	12	4280	3.4
\$78-228-54-80	80	228	M24 (PL.5) x180 (M20x180)	54	12	6630	7.3

### PIPE



Description	Mode1	Specifi	cation		
Copper Pipe	P-CP ,	Bore	Ø4	Ø6	Ø8
		Minimum Bending Radius	R20	R30	R50
Aluminum Pipe	0.10	Bore	Ø4	Ø6	Ø8
Attanzanan rape	P-AP	Minimum Bending Radius	R20	R40	R40
Plastic Pipe	n pp	Bore	Ø4	Ø6	Ø8
Plastic Pipe	P-PP	Minimum Bending Radius	R20	R40	R40
Markey Direct	P-NP	Bore	694	Ø6	Ø8
NyIon Pipe	I-M	Minimum Bending Radius	R20	R30	R50

NYLON PIPE SPRING.

Note: Plastic pipe is not recommended for piston lubrication system.



Description	Model	Specification	Length
Nylon Pipe Spring	NPS	Ø4 and Ø6	1800±5mm

### PIPE CLIP





Node1	Pipe Diameter	Number of holes	A	C	Weight(g)
PZ1104	Ø4	1	6	5	1.2
PZ1106	Ø6	1	8.5	7	2.6
PZ1108	Ø8	1	10	9	2.2
PZ1110	Ø10	1	12.5	11	3.6
PZ1204	Ø4	2	11	5	1.8
PZ1206	Ø6	2	14.5	7	2.8
PZ1304	Ø4	3	15	5	2.8

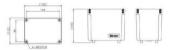


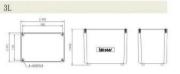
## OIL TANK



Mode1	Tank Capacity	W	L	H
156001-SE	2L	112	162	145
156002-SE	3L	131	195	163

2L

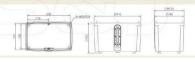






Mode1	Tank Capacity	W	L	Н
156145-001-SE	4L	141	230	163

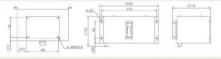
4L





Mode1	Tank Capacity	W	L	H	
156016-SE	6L	212	328	170	
156013-SE	8L	227	357	188	

6L



8L





### FLOAT SWITCH



Mode1	Apply For	Note
321003-000	YET-A, R, E, N	(NO)



Mode1	Apply For	Note
321002-011	YET-C	(NC)
321002-012	YAJ, YAC(3L, 4L, 6L, 8L)	(NC)
321002-013	YAK, YAE (3L, 4L, 6L, 8L)	(NO)

### INLET FILTER



Mode1	Apply For	Note
153013	2L 0il Tank	40u
153000	3L-8L Oil Tank	чон

### FLEXIBLE NOZZLE



Item Spec.	7	hread	E		lead of		Body B	Flat	Type (	utlet	Round	Type O	ıtlet C
1 / 10 . 10 . 1	PT1/8*	PT1/4*	PT3/8"	PT1/8"	PT1/4"	PT3/8"	14.5	W	Н	C	Ø1.6	Ø3. 3	Ø6.8
1/4" Tube	8, 0	10.5	10.5	10.8	10.8	10.8	14.5	25.0	1.8	29.0	30.0	30.0	35. 0
3/8" Tube	PT3/8*	PT1/2*		PT3/8"	PT1/2"	/	17.3	W	Н	C	Ø6. 5	Ø9.6	Ø12
3/8 Tube	12, 0	14.5		12.3	12.3			32.0	3. 2	39. 0	32.0	39.0	32, 5
	PT3/8"	PT1/2*	/	PT3/8"	PT1/2"	/		W	Н	C	Ø6.5	Ø9. 6	Ø12
1 (OF T )		12.0 14.5 13.0		3. 0 13. 0		21. 2	32.0	4.5	41.0				
1/2" Tube 12.	12.0		13.0		21.2	47.5	4.2	49.0	37.0	37.0	37.0		
								61.0	3.4	50.0			



### CENTRALIZED LUBRICATION SYSTEM



YET-A2-3L Hicrocomputer Piston Lubricator



YET-C2-4L Automatic Piston Lubricator



YAC-3L Automatic Resistance Lubricator (Adjustment Device in side the Control Box)



YAE-3L Microcomputer Resistance Lubricator (Adjustment Device in side the Control Book



YET-A2-4L Microcomputer Piston Lubricator



YESA-2L Automatic Resistance Lubricator (without float switch)



YLB-20H Forced Cycle Lubricator



YLC Cooling Cycle Lubricator



TOP 011 Feed Pum



1RA 1RA D11 Feed Pump (neversible)



TOP Addusting Valve



**Connecting Motor-Iron Case** 



Electromagnetic Pump



Manual Grease Lubricator



YGL-A08 Microcomputer Grease Lubricator



Automatic Grease Lubricator



Heavy Duty Swivel Fitting SIZE | PS1/8.1/4



Brease Distributor



SD Spray Mist Distributor



DX-300 Piston Distributor SIZE: 0.02, 0.06, 0.1, 0.16 0.2, 0.3, 0.4, 0.5cc



DT-500 Piston Distributor SIZE + 0.1, 0.16, 0.2, 0.3, 0.4, 0.5cc



Compression Bushing Pipe die: 04.5.8.10



Compression Sleeve Pipe die : 64.6.8.10



Straight-Adapter Pipe die : 64.5.8.10



Elbow-Adapter Pipe die : 64.6.8.10



Proportion Devices SIZE : MBXM8.MBXPT1/B



T-Junction
Pipe die:04.6
41 ISHAN PRECISION



Cross-Junction Pipe die i Ø4.6



2-WAY Junction Pipe die | Ø4.6



Oil Filter SIZE : PS1/4.3/8



IZE + PS1/8.1/4

### PERIPHERAL OF LUBRICATION SYSTEM



YAK-3L Microcomputer Piston Lubricator



YAK-4L Microcomputer Piston Lubricator



VA 1.31 Automatic Piston Lubricator



YAC-8H Automatic Resist Lubricator (with meter-in filter)



YET-R2-2L Automatic Piston Lubricator



Automatic Piston Lubricator



YET-C1-3L Automatic Resistance Lubricator



metic Resistance Lubricator



Rock Type Lubricator



Pull Type Lubricator



**Submerged Coolant Pump** 



Self-absorbent Coolant Pump





Functional Oil Mist Nozzle



Microcomputer Spray Mist Lubricator



Automic Spray Mist Eubricator



DB 011 Distributor SIZE:04.6



Flexible Hose S17E:04.6

DV Type 011 Regulating Distributor SIZE:04.6



DB 011 Distributor SIZE:04.6



Swivel Straight Adapter SIZE:@4x1/8, 1/8x1/8,@6x1/8



SIZE:PS1/8xPT1/8



Nozzle SIZE:PT1/4. PT3/8. PT1/2



mylon	Pipe	opring	

Copper Pipe **Aluminum Pipe** Plastic Pipe

**Nylon Pipe** 



S78 Heavy Machines Anti-Vibration Mounts