

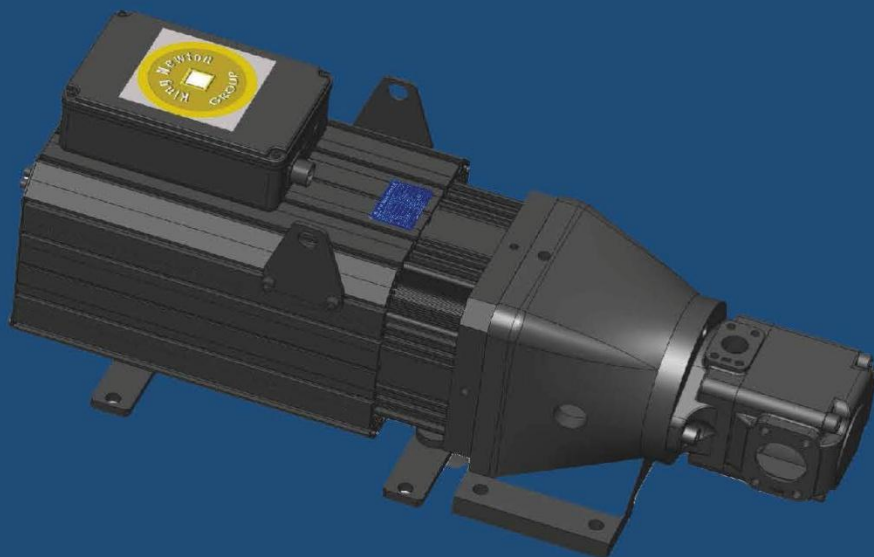


# 金牛頓工業股份有限公司

KING NEWTON INDUSTRIES CO., LTD.

## 伺服節能系統

ENERGY SAVING SYSTEM



[WWW.KING-NEWTON.COM](http://WWW.KING-NEWTON.COM)





金牛頓集團

King Newton Group



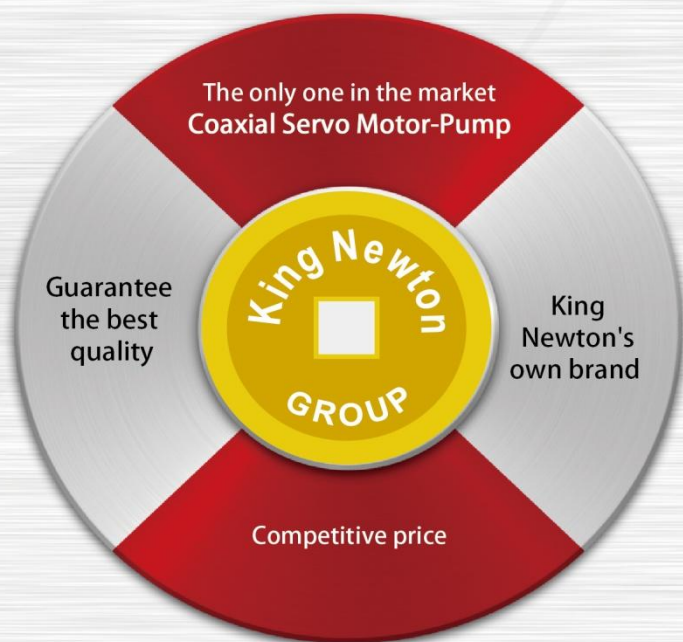
金牛頓工業股份有限公司

King Newton Industries Co., Ltd.





With the advantages of its existing team and decades of professional experience, King Newton has rapidly developed the core products of the world's most advanced Energy-Saving Systems in just three years, and has become the main supplier of biodegradable materials.





# BSR

## Biodegradable Starch Resin



### Biodegradable Starch Resin (BSR)

BSR (Biodegradable Starch Resin) is a 100% fully biodegradable starch resin raw material. Its products can be decomposed 100% into carbon dioxide, water and biological matrix by microorganisms. The raw materials do not contain any petroleum-based ordinary plastic and inorganic filler composition that are difficult to be decomposed by natural microorganisms. The composition uses thermoplastic plant fibers to achieve 100% biodegradation.





## Most advanced products and service.

King Newton is the only manufacturer in Taiwan that has the capability of producing servo permanent magnet (SPM) motors and hydraulic products.



### Vane Pump SKP Series

- ◆ Intra-vane structure with Low-noise and high-efficiency.
- ◆ These are single pump and double pump series.
- ◆ Full range of displacement (from 7.5 cm<sup>3</sup>/r to 237 cm<sup>3</sup>/r).
- ◆ The plug-in internal structure design greatly reduces the difficulty of maintenance.



### Coaxial Servo Motor-Pump

- ◆ Low noise quality:  
Parker vane pump has the characteristics of low noise and anti-oil contamination.
- ◆ Energy saving:  
Using this Energy-saving system can greatly save electricity consumption (60% less than the traditional motor system).
- ◆ High precision control :  
Direct drive system can provide fast response and match high accuracy requirements.
- ◆ Life cycle longer :  
The straightness of the shaft center is accurate, and the accuracy will not be lost due to repairing the pump or replacing parts, which can extend the usage life and increase the mechanical efficiency.
- ◆ Smaller and easy equipment management:  
The appearance is concise and saving space, easily to design and to install for the whole machine.



### Hydraulic motor KAM Series

- ◆ Using five-piston and eccentric shaft structure, it has the characteristics of low running noise.
- ◆ Flat oil distribution pan design, high reliability and less internal leakage.
- ◆ High start-up torque, with stable low speed performance.
- ◆ Roller support is designed between crank axel and connecting bar foot, which has high mechanical efficiency.
- ◆ Made in Taiwan.



### Permanent Magnet Servo Motor-ITMG Series

- ◆ High-Efficiency Excitation, higher efficiency and less heat generation.
- ◆ Full range of specifications (220V and 380V ; G1 series is from 12KW to 41KW ,G2 series is from 42KW to 110KW).
- ◆ Built-in motor overheating protection mechanism.



## Best quality and the best choice for you.

We provide motors with complete detailed specifications. All of our products have undergone rigorous quality control inspections and their performance is well received by our users.



### Hydraulic motor Intermoda Series

The intermoda series of hydraulic motors are produced by King Newton commissioned by Ningbo Oil Control Hydraulic Co., Ltd with the most stringent quality standards.

Ningbo Oil Control Hydraulic Co., Ltd is the largest professional manufacturer of hydraulic motors in the world and jointly established by Italian Intermoda S.R.L, Italian Hydraulic Research and Development Co., Ltd. and China.



### Parker vane pump T7 series

- ◆ Specific designed for energy-saving servo system, it can maintain low noise, low internal leakage and high efficiency under the use of high pressure and high speed.
- ◆ With double-vane design, it can achieve instant reversal very smoothly while conducting the pressure control.
- ◆ The high speed would cause instantaneous suction of oil in a great amount, therefore the design of the oil inlet is relatively large.



### Parker OLAER Accumulator

Operation of the Olaer gas loaded bladder accumulator is based on the considerable difference in compressibility between a gas and a liquid, enabling a large quantity of energy to be stored in an extremely compact form. This enables a liquid under pressure to be accumulated, stored and recovered at any time. Its special design allows the bladder (the strategic component) to compress the gas and usually form into three lobes in order for the accumulator to store, then to deliver the fluid under pressure, as required.



### Orbit Motor-IAOM Series

- ◆ Orbital Motors refers to an internal cycloidal gear, small sized, low speed, high torque hydraulic motor. Due to its simple structure, it has very good low speed capabilities with very strong short-term overload capabilities and a plethora of other advantages.
- ◆ King Newton, and Danfoss, EATON' s orbital motors have interchangeable axels and joint faces which makes maintenance and part replacement convenient. Orbital Motors are currently being used widely across many different industries such as manufacturing, injection molding machine, machine tools, construction machinery, and fishing.



## Energy Saving System Specifications

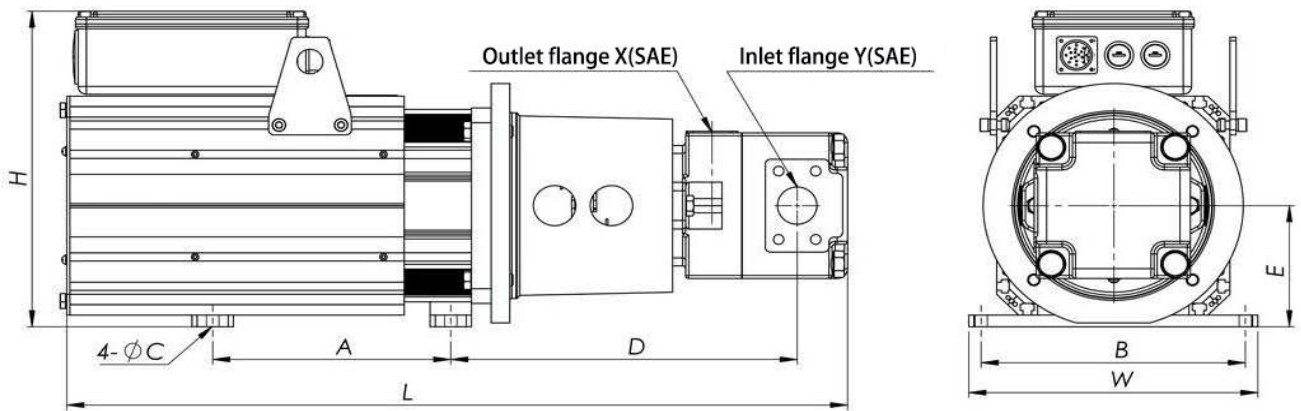
ESS	E10-	11M-	15D-	380
System	Pump	Motor	Driver	Voltage
ESS	E10=32cc/rev	11M=11KW	15D=15KW	380=380W

Model No.	Displacement	Flow	Pressure	Voltage	Rated/Max
	cm3/rev	L/min	bar	V	RPM
ESS-E08-7.5M-11D 220/380	25	50	175	220/380	2000/2500
ESS-E10-12M-15D 220/380	32	64	175	220/380	2000/2500
ESS-E12-18M-18D 220/380	40	80	175	220/380	2000/2500
ESS-E15-23M-22D 220/380	50	100	175	220/380	2000/2500
ESS-E20-28M-30D 220/380	64	128	175	220/380	2000/2500
ESS-E24-41M-45D 220/380	80	160	175	220/380	2000/2500
ESS-E31-42M-45D 220/380	100	200	175	220/380	2000/2500
ESS-E38-57M-55D 220/380	120	240	175	220/380	2000/2500
ESS-E52-68M-75D 220/380	160	320	175	220/380	1700/2000

- ※1.If the system application exceeds 175bar or the speed exceeds 2500 rpm, it should discuss with the technical department to adjust the driver and motor specifications.
- ※2. The maximum pressure of the closed loop system is 175bar within 30s. If any of the above conditions are exceeded, please discuss with us.
- ※3. The maximum flow rate of the system is 80%, the pressure is 140bar within 30s. If any of the above conditions are exceeded, please discuss with us.
- ※4. The pump flow rate 10 is the US unit, and it can be converted into cc by multiplying it by 3.2, for example 10\*3.2=32cc/rev
- ※5. The viscosity range of hydraulic oil is 13~54mm<sup>2</sup>/s, although the highest viscosity can reach 860 mm<sup>2</sup>/s at low speed and low pressure. The recommended hydraulic oil is 46#.
- ※6. The temperature of the hydraulic oil should be controlled at 30. C ± 5. C



# G1 Servo Motor Specifications

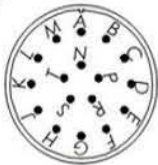


No.	A	B	C	D	E	L	W	H	X	Y
Unit	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
ESS-E08-7.5M-11D 220/380	190	254	Ø12	333	124	702	278	313	25.4	38.1
ESS-E10-12M-15D 220/380	190	254	Ø12	333	124	702	278	313	25.4	38.1
ESS-E12-18M-18D 220/380	230	254	Ø12	333	124	737	278	313	25.4	38.1
ESS-E15-23M-22D 220/380	275	254	Ø12	333	124	787	278	313	25.4	38.1
ESS-E20-28M-30D 220/380	305	254	Ø12	372	124	853	278	313	31.8	50.8
ESS-E24-41M-45D 220/380	380	254	Ø12	372	124	932	278	313	31.8	50.8

※ Flange: SAEJ518c (Standard Pressure) · P : Thread ; W : Welded.

## Connector

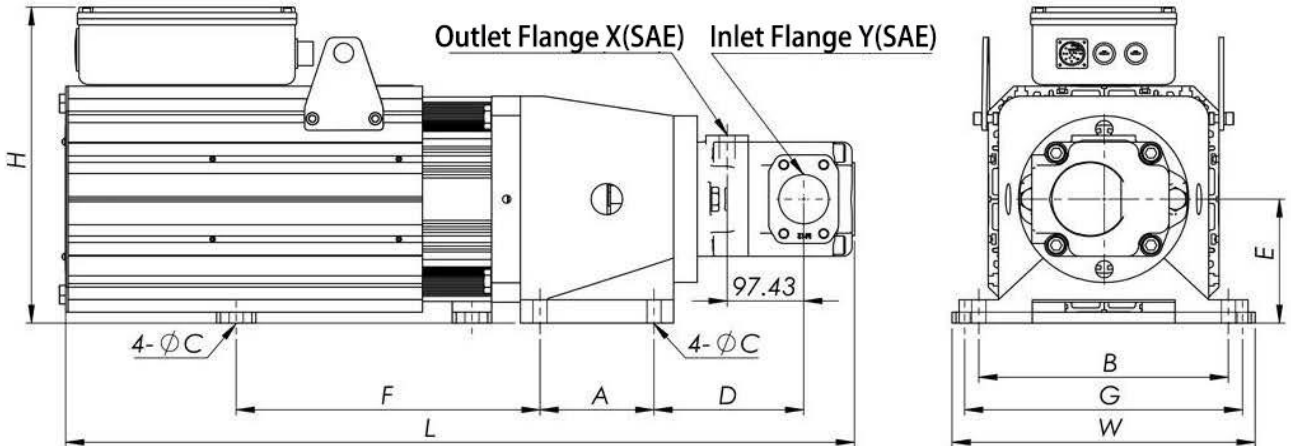
## Encoder



Position	A	B	C	D	E	F	G	H	K	L	J
Color	Red White	Yellow White	Red	Black	Yellow	Blue	Blue	Blue	White	Green	Shield
Function	V+	V-	COS+	COS-	SIN+	SIN-	PTC+	PTC-	KTY+	KTY-	Shielded Wire



# G2 Servo Motor Specifications



No.	A	B	C	D	E	F	G	H	L	W	X	Y
Unit	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
ESS -E31-42M-45D 220/380	145	316	∅18	190	160	335	356	382	936	395	31.8	50.8
ESS -E38-57M-55D 220/380	145	316	∅18	190	160	385	356	382	986	395	31.8	50.8
ESS -E52-68M-75D 220/380	145	316	∅18	217	160	485	356	382	1169	395	38.1	75

※ Flange: SAEJ518c (Standard Pressure). P : Thread ; W : Welded.

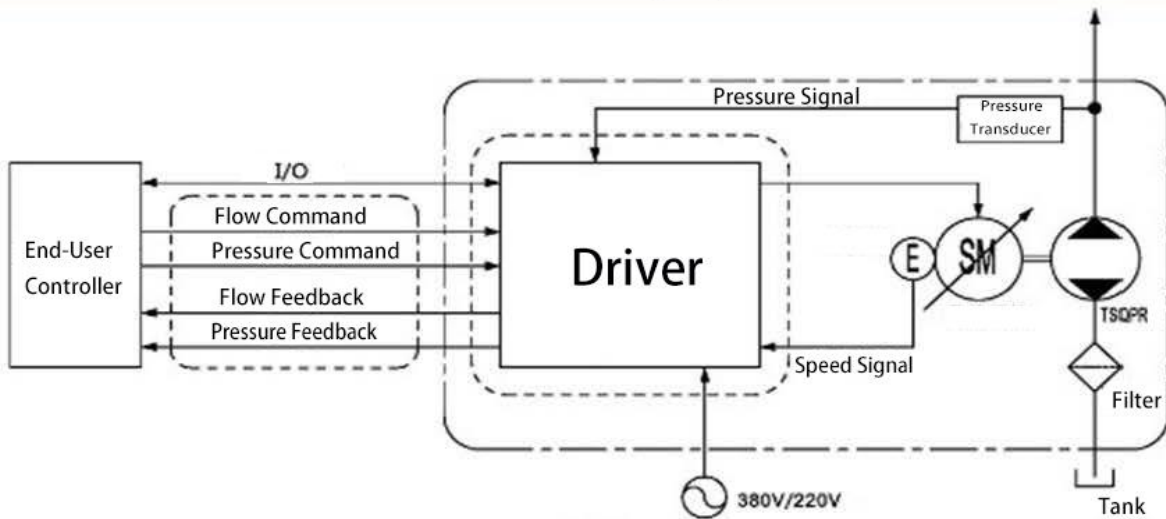
## Connector

### Encoder

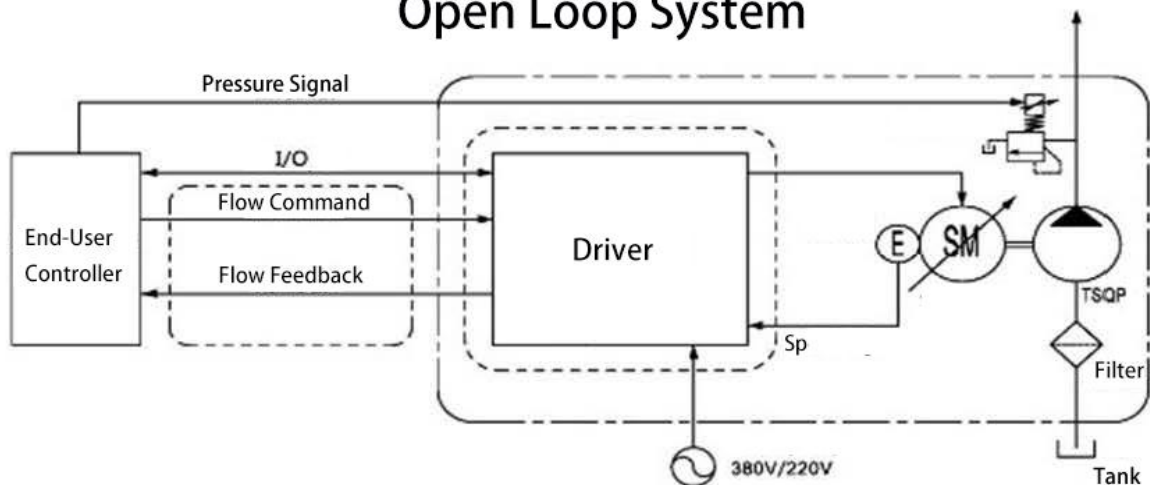


Position	A	B	C	D	E	F	G	H	K	L	J
Color	Red White	Yellow White	Red	Black	Yellow	Blue	Blue	Blue	White	Green	Shield
Function	V+	V-	COS+	COS-	SIN+	SIN-	PTC+	PTC-	KTY+	KTY-	Shielded Wire

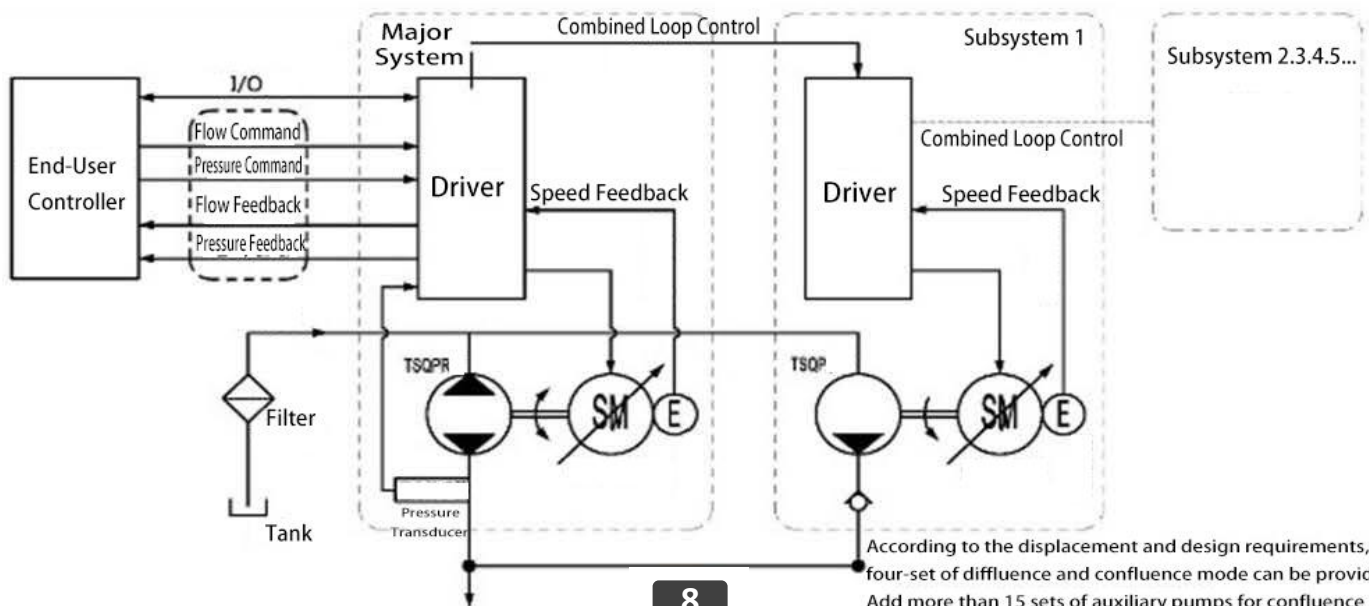
## Closed Loop System



## Open Loop System

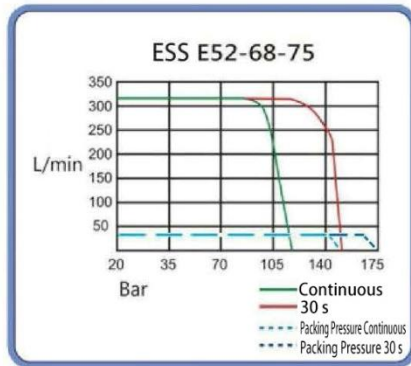
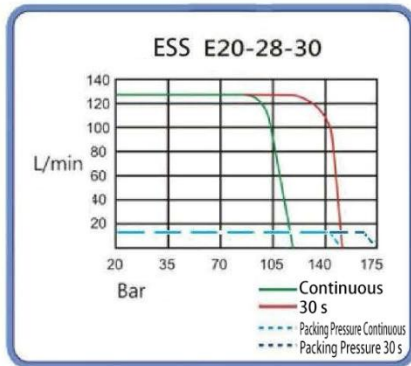
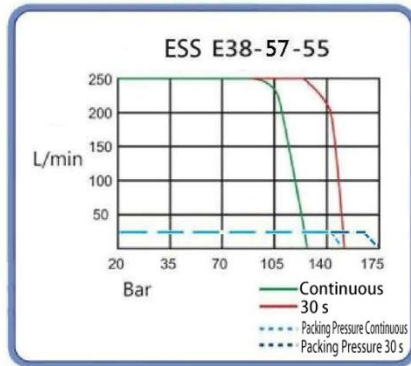
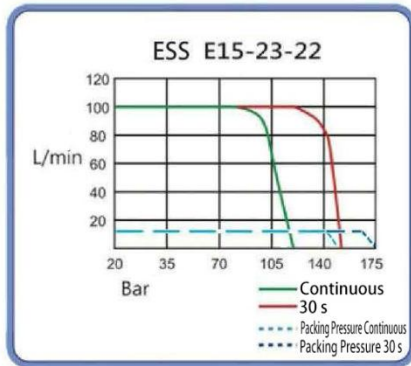
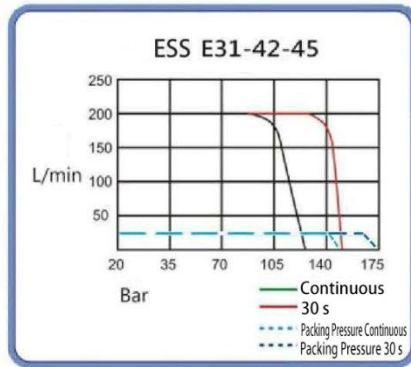
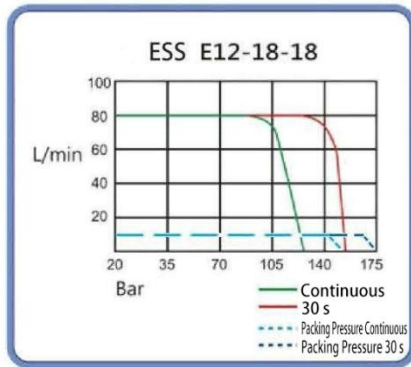
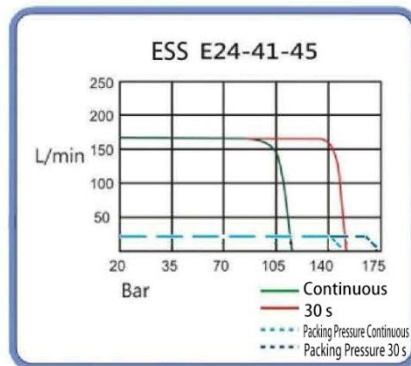
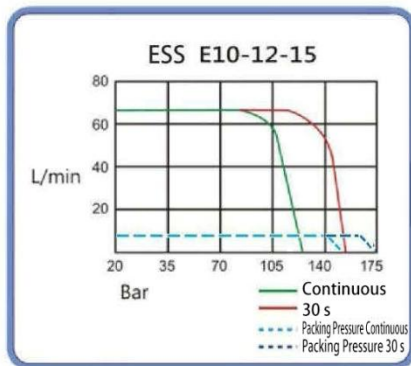


## Multi Pumps Combined Loop Controller System





# ESS PQ CHART







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Official QR code



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