

# SUNRELAND



## **$\alpha$ -Power Series Metering Pump**

*Hydraulically Actuated Diaphragm Liquid End*

SUNRELAND INDUSTRIAL EQUIPMENT (SUZHOU) CO., LTD



## Sunreland Industrial Equipment (Suzhou) Co., Ltd

Our company focuses on the production of pumps, valves, mixers, analytical instruments and other industrial products. The company adopts international advanced technology, providing clients first-class products and services according to the international standards.

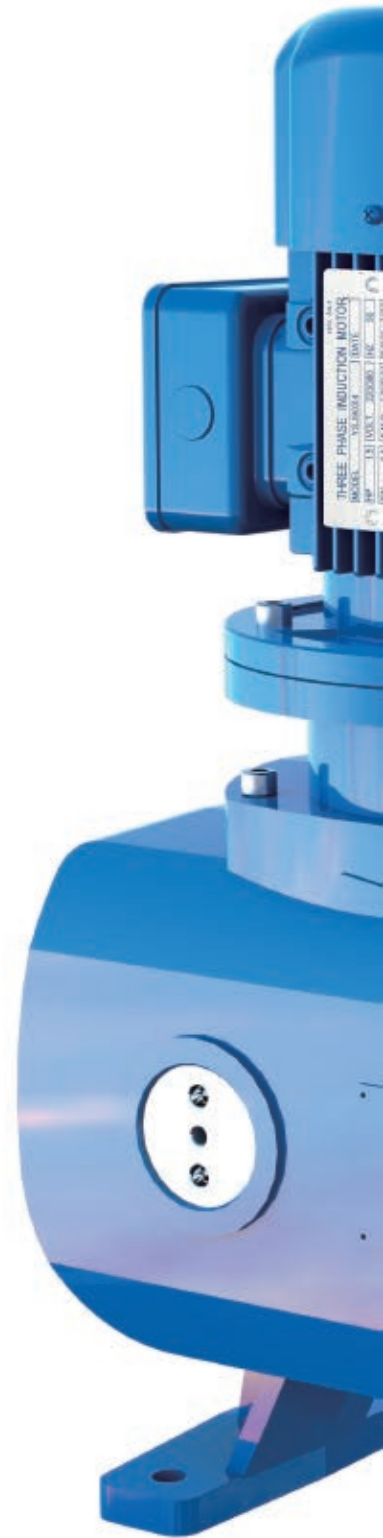
**$\alpha$ -Power Series hydraulically actuated diaphragm metering pump** is a high-precision, compact hydraulic diaphragm metering pump designed and manufactured according to the API 675 requirements. It is suitable for the application in various demanding and complicated process condition, with the advantages of compact structure and easy maintenance. Mainly applied in power supply, chemistry, petro-chemistry, papermaking, textile, green energy and environmental protection, could be used in bio-pharmaceutical and food industry as well.

## Technical Specification

- Flow rate: 1.6~326 L/h
- Max. discharge pressure: 160 Bar
- Turndown Ratio: 10:1
- Stability accuracy:  $\pm 1\%$
- Max. liquid temperature: 90 $^{\circ}$ C
- Max. viscosity: up to 1200cP

## Typical Dosing Applications

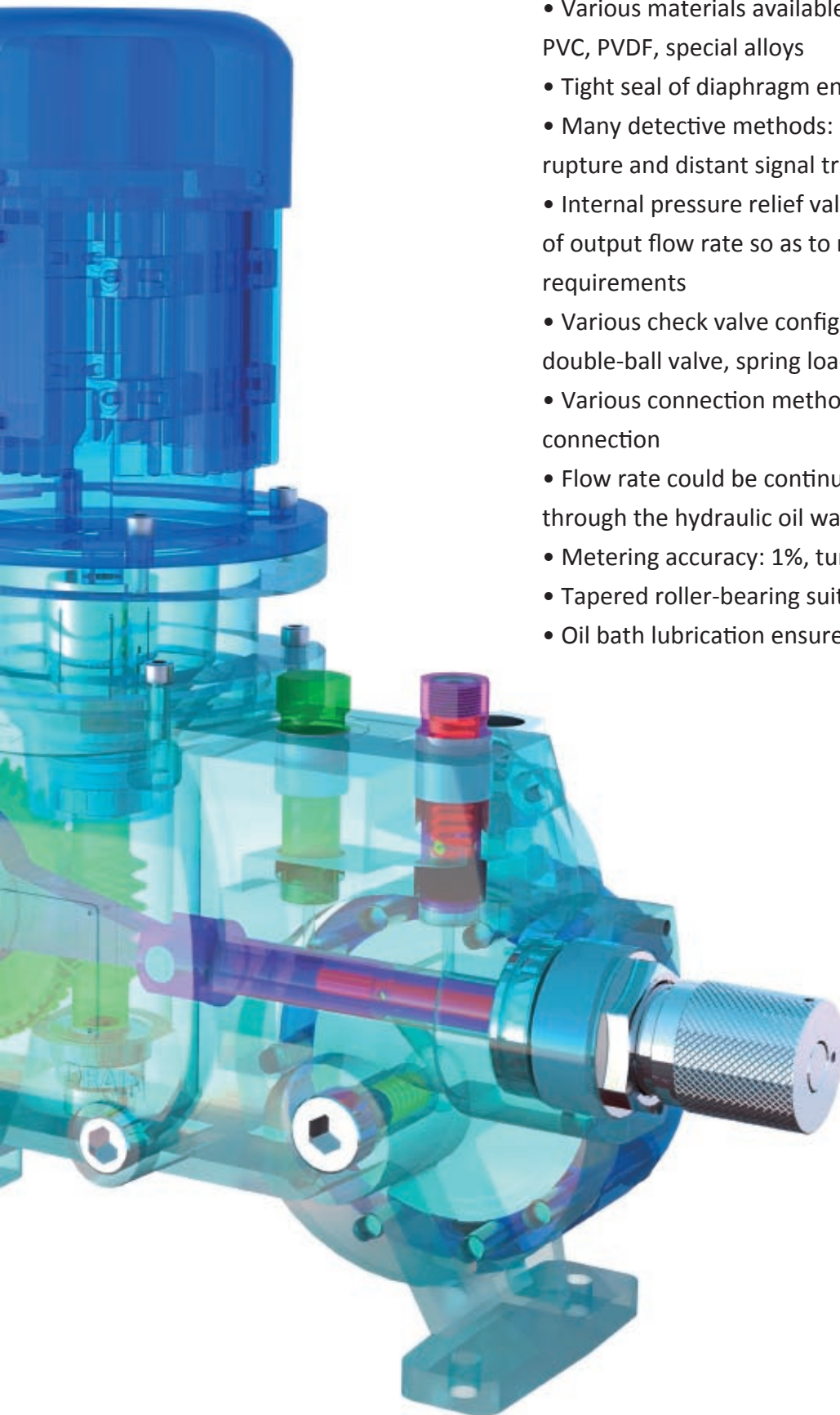
- Ammonia
- Hydrazine
- Scale inhibitor
- Water treatment additives
- Chemical process additives
- Oil industry additives
- Edible pigment and food flavor



## The Technical Features

- Designed for continuous delivery of various special mediums
- Various materials available for the pump head: 316SS, PVC, PVDF, special alloys
- Tight seal of diaphragm ensures no leakage
- Many detective methods: on-site signs of diaphragm rupture and distant signal transmission
- Internal pressure relief valve which ensures the stability of output flow rate so as to meet the accuracy requirements
- Various check valve configuration: single-ball valve, double-ball valve, spring loaded valve
- Various connection methods: threaded connection, flange connection
- Flow rate could be continuous adjusted from 0% to 100% through the hydraulic oil way control
- Metering accuracy: 1%, turndown ratio: 10:1
- Tapered roller-bearing suit high loads operation condition
- Oil bath lubrication ensures low wear and high reliability

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- High-efficiency worm gear and worm shaft decelerating mechanism works steadily with low noise
- Compact structure and small volume, suit limited installation space
- The design and manufacture complies with the API 675 standards



## α-Power Series Metering Pump Code

Frame Size	Plunger Diameter	Diaphragm	Check Valve	Pressure	Options
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Frame Size: *ET Drive Unit*  
*EV Drive Unit*

Plunger Diameter: *Plunger Diameter(mm)*

Diaphragm: *S - Single Diaphragm*  
*D - Double Diaphragm*

Check Valve: *V - Single Ball*  
*W - Double Ball*

Pressure: *Discharge Pressure(Bar)*



Diaphragm Rupture Detection

### Flow rate adjustment methods

**Manual adjustment:** change the stroke length through handwheel

- Adjust flow rate is available either during running or at standstill
- Minimum adjustment scale is 1%

**Electric actuated stroke controller:** receive external control signal to adjust the stroke length

- Power source: 220V-50Hz-single phase
- Input signal: 4-20mA simulated signal
- Output signal: 4-20mA/1-5V simulated signal, used for record display and control system

**Frequency conversion controller:** receive external control signal to adjust the stroke speed

- Power supply: 220V-50Hz-single phase or 380V-50Hz-three phase
- Input signal: 4-20mA simulated signal



High Precision Check Valve



Automatic Stroke Length Adjustment

# α-Power Series Data Sheet

Frame Size : ET

Plunger mm	Speed spm	Flow rate L/h	Pressure bar	Connection
Φ15	47	2	125	Suction: NPT 1/2"F Horizontal
	72	3		
	110	5		
	144	7		
	175	8		
Φ17	47	4	106	Discharge: NPT 1/4"F Horizontal
	72	6		
	110	9		
	144	12		
	175	15		
Φ19.5	47	7	67	Suction: NPT 1/2"F Horizontal
	72	11		
	110	17		
	144	22		
	175	27		
Φ23	47	13	42	Discharge: NPT 1/4"F Horizontal
	72	19		
	110	29		
	144	38		
	175	47		
Φ28	47	22	25	Suction: NPT 1/2"F Horizontal
	72	33		
	110	51		
	144	66		
	175	81		

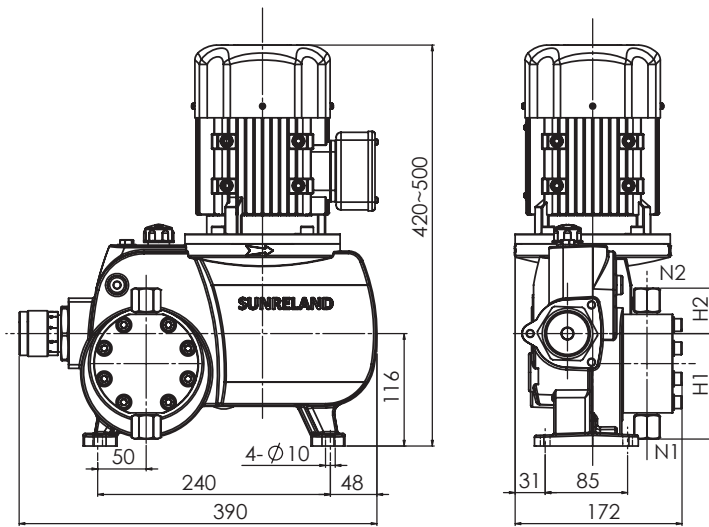
Frame Size: EV

Plunger mm	Speed spm	Flow rate L/h	Pressure bar	Connection
Φ19	47	11	160	Suction: NPT 1/2"F Horizontal
	72	16		
	106	24		
	145	33		
Φ22	47	18	105	Discharge: NPT 1/4"F Horizontal
	72	27		
	106	40		
	145	55		
Φ26	47	33	68	Suction: NPT 1/2"F Vertical
	72	51		
	106	75		
	145	103		
Φ32	47	64	41	Discharge: NPT 1/2"F Vertical
	72	98		
	106	144		
	145	197		
Φ38	47	105	25	Suction: NPT 1/2"F Vertical
	72	161		
	106	237		
	145	325		





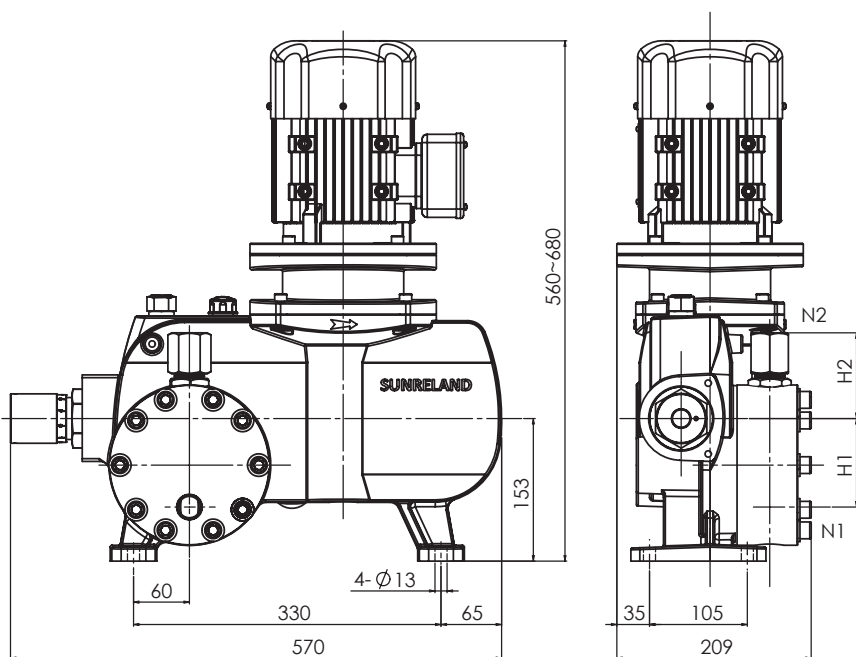
**α-Flow Series Hydraulically Actuated Diaphragm Pump**  
Capacity up to 10000L/h Pressure Max. 700bar



GA drawing of ET



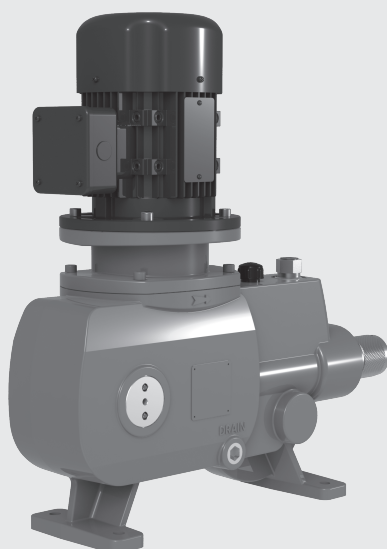
**α-Dose Series Mechanically Actuated Diaphragm Pump**  
Capacity up to 5500L/h Pressure Max. 10bar



GA drawing of EV



Package System



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