



the fourth generation solar pump  
PMSM BLDC sensorless  
built-in electronic AC/DC hybrid solar pump



Scan code attention



## Catalog

|                                     |    |                                |    |
|-------------------------------------|----|--------------------------------|----|
| patent                              | 01 | 5SP10-3 2HP                    | 31 |
| Features&Advantages                 | 04 | 5SP15-2 2HP                    | 32 |
| Q &A                                | 05 | 5SP20-2 2HP                    | 33 |
| Installation                        | 06 | 5SP25-2 2HP                    | 34 |
| Model Description&System Components | 07 | 6SP17-2 2HP                    | 35 |
| Pump Components & Materials         | 08 | 6SP20-2 2HP                    | 36 |
| 4SP2-7 0.5HP                        | 09 | 4SP2-16 2.5HP                  | 37 |
| 4SP3-3 0.5HP                        | 10 | 4SP3-13 2.5HP                  | 38 |
| 4SP5-3 0.5HP                        | 11 | 4SP5-12 2.5HP                  | 39 |
| 4SP8-2 0.5HP                        | 12 | 4SP8-7 2.5HP                   | 40 |
| 4SP2-9 1HP                          | 13 | 4SP14-3 2.5HP                  | 41 |
| 4SP3-6 1HP                          | 14 | 4SP2-18 3HP                    | 42 |
| 4SP5-6 1HP                          | 15 | 4SP3-18 3HP                    | 43 |
| 4SP8-3 1HP                          | 16 | 4SP5-15 3HP                    | 44 |
| 4SP14-1 1HP                         | 17 | 4SP8-8 3HP                     | 45 |
| 5SP20-1 1HP                         | 18 | 4SP14-4 3HP                    | 46 |
| 5SP25-1 1HP                         | 19 | 5SP10-4 3HP                    | 47 |
| 6SP17-1 1HP                         | 20 | 5SP15-3 3HP                    | 48 |
| 6SP20-1 1HP                         | 21 | 5SP20-3 3HP                    | 49 |
| 4SP2-11 1.5HP                       | 22 | 5SP25-3 3HP                    | 50 |
| 4SP3-8 1.5HP                        | 23 | 5SP30-2 3HP                    | 51 |
| 4SP5-8 1.5HP                        | 24 | 6SP17-3 3HP                    | 52 |
| 4SP8-4 1.5HP                        | 25 | 6SP20-3 3HP                    | 53 |
| 4SP2-13 2HP                         | 26 | Solar Panels Require & Warning | 54 |
| 4SP3-11 2HP                         | 27 |                                |    |
| 4SP5-10 2HP                         | 28 |                                |    |
| 4SP8-5 2HP                          | 29 |                                |    |
| 4SP14-2 2HP                         | 30 |                                |    |

First built-in electronics solar pump company in China. The pump's innovative design allows it to be powered with both AC and DC sources without making any modifications to the pump or adding additional equipment.

Max. power output is 2200 W. The speed range for the motor is 500-3600rpm depending on the power input and the load. The motor has been developed especially for the Solar Deep Well Pump System. The motors are based on the most advanced technology within rare earth permanent magnets. The motors have a built-in electronic unit containing a frequency converter and motor controller. The Samking pump features variable speed which is offered through vector control. This means that the pump can be set to operate in any operating point in the range between the pump Min. and Max. performance curves. The system have variety of applications, such as Rural water supply for ranches ,cabins ,and cottages,Outlying area, area where lack of electric power;New energy sources application, Building/Small water-works/Domestic water supply/Tank applications, Irrigation and Small water work,Landscaping, City, Factory, and commercial establishment water supply, Water conservancy system,Fountains,Wildlife refuge.

### Main Function

- Brushless, permanent magnet double Shielded motor, frequency converter and motor controller inside.
- Soft start running make system life longer
- Powered by AC/DC
- Supply Voltage Range :90-360 VDC or 90-240 VAC at 50/60 Hz, 90-440VOC
- 50Hz and 60Hz both working
- Very easy installation
- MPPT Efficiency high
- Motor efficiency high
- Dry protection,
- Reverse protection,
- Over head protection
- Overload protection
- Over-current protection ;
- Over-voltage Protection ;
- Losting-Phase protection
- Missing-voltage protection ;

**Question:Why Samking solar pump use frequency converter**

**Answer:**variable frequency motor will actively change their speed according the all time changing power which provided by solar panels ,Perfect combination with MPPT, ultra-frequency operation,make sure absorb above 95% power provided by panels . Improve customer return on investment  
The traditional AC motor only get maximum speed is 2850RPM,and it only could passively discharge according the voltage,not according power . efficiency will low.

**Question:Why Samking solar pump use shield motor**

**Answer:**shield design make the mechanical seal is unnecessary, avoiding the risk of mechanical seal leakage because of mechanical seal wear and tear. Avoiding the the reduce of efficiency because of mechanical seal friction also ,at the same time ,wet rotor cooling beter.

**Question:Why Samking solar pump use Permanent Magnet motor not AC motor**

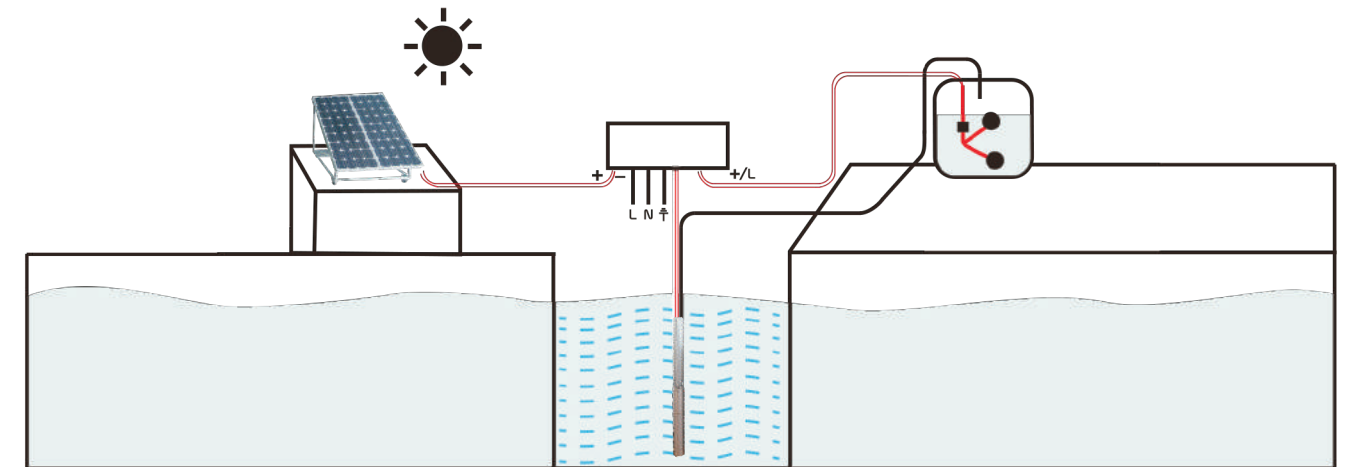
**Answer:**Our magnetic field of permanent magnet motor is provided by permanent magnet themself (rare earth) ,have not any lose of efficiency  
While traditional AC motor's magnetic field is provided by rotation of rotor and stator,so part of input power be used to generate magnetic field,reduce efficiency

**Question:Why Samking solar pump use BLDC motor not brush DC motor**

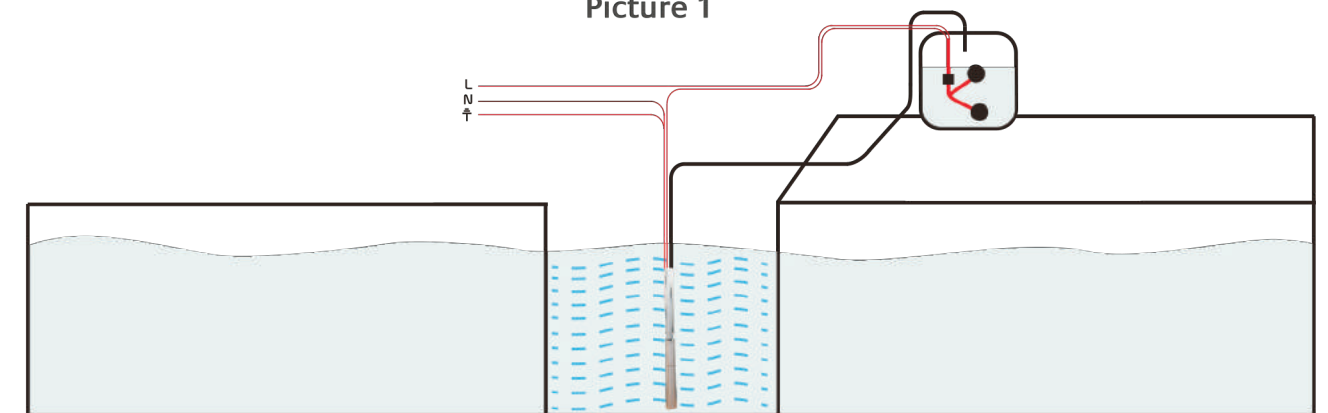
**Answer:**Although brushed DC motor can work directly with solar panels also, it's not good option,there have follow different from BLDC  
Life BLDC motor is 10000H,while brush pump Maximum life is 2000h~3000H because the brush and slip wear and tear.  
DC brush pump system have very low efficiency without MPPT,without any Protection because of without controller also ,noise,safety are significantly higher than a BLDC motor

**The system energy supply:**

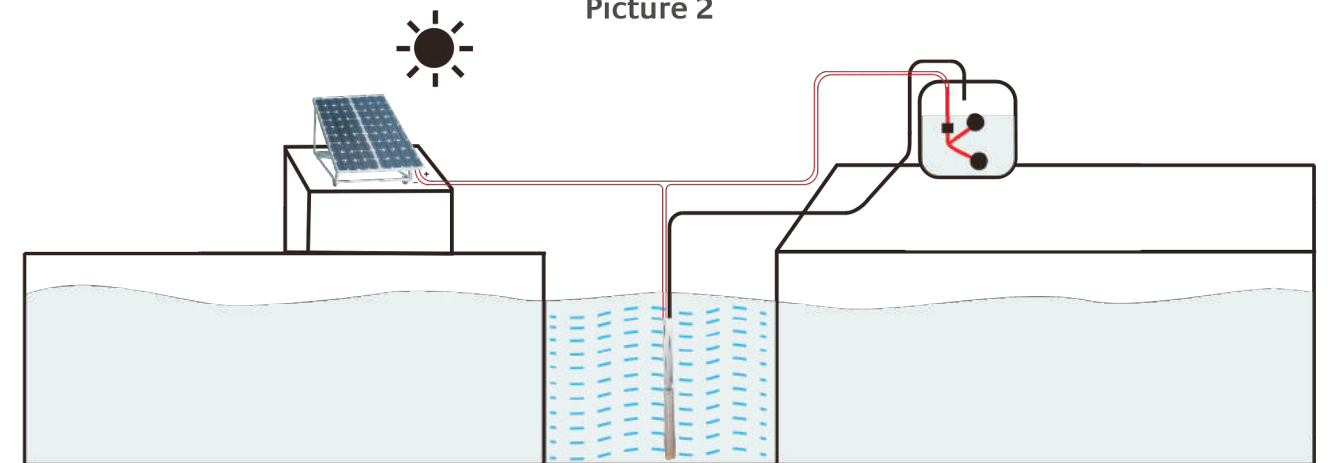
- Solar panels & Power Grid (install as picture 1)
- Power Grid (install as picture 2)
- Solar panels (install as picture 3)
- Generator (install as picture 3)
- Batteries (install as picture 3)



Picture 1

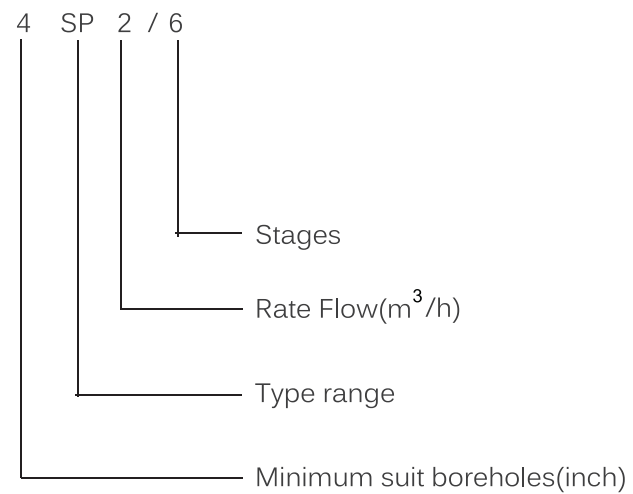


Picture 2



Picture 3

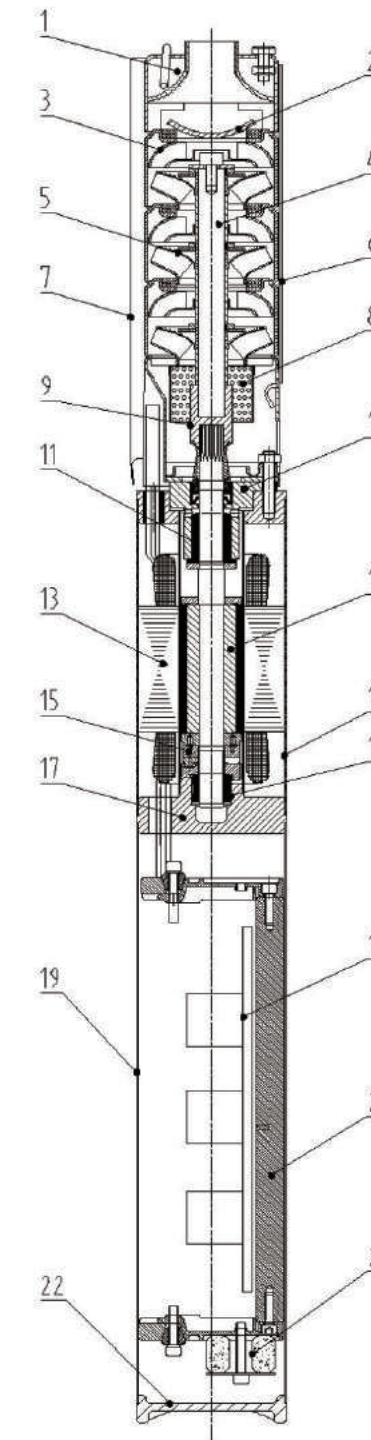
## Model Description



## System Components

- The Solar water pumping system includes
- Samking solar pump set
- Solar panel and it's mounting structure
- Cable
- Pipes
- Monitor (Non-compulsory)
- Variety of flow available in 5 to 400lpm
- Motor and drive ratings available in 0.5 to 3 HP

## Components & Materials



| Component                | Material                |
|--------------------------|-------------------------|
| 1 Discharge chamber      | Stainless steel 304     |
| 2 Non-return valve       | Stainless steel 304     |
| 3 Guide vanes            | PC/Stainless steel 304  |
| 4 Pump Shaft             | Stainless steel 304     |
| 5 Impeller               | POM/Stainless steel 304 |
| 6 Impeller fastener      | Stainless steel 304     |
| 7 cable cover            | Stainless steel 304     |
| 8 Inlet part             | Stainless steel 304     |
| 9 Shaft coupling         | Stainless steel 304     |
| 10 Upper Bearing Housing | Stainless steel 304     |
| 11 Upper Bearing         | Silicon Carbide         |
| 12 PM Rotor              | --                      |
| 13 Stator                | --                      |
| 14 Pump Housing          | Stainless steel 304     |
| 15 Thrust bearing        | Graphite                |
| 16 Lower Bearing         | Silicon Carbide         |
| 17 Lower Bearing Housing | Stainless steel 304     |
| 18 PABA                  | --                      |
| 19 Controller Housing    | Stainless steel 304     |
| 20 Radiator              | Aluminium               |
| 21 Inductor              | --                      |
| 22 base                  | Stainless steel 304     |



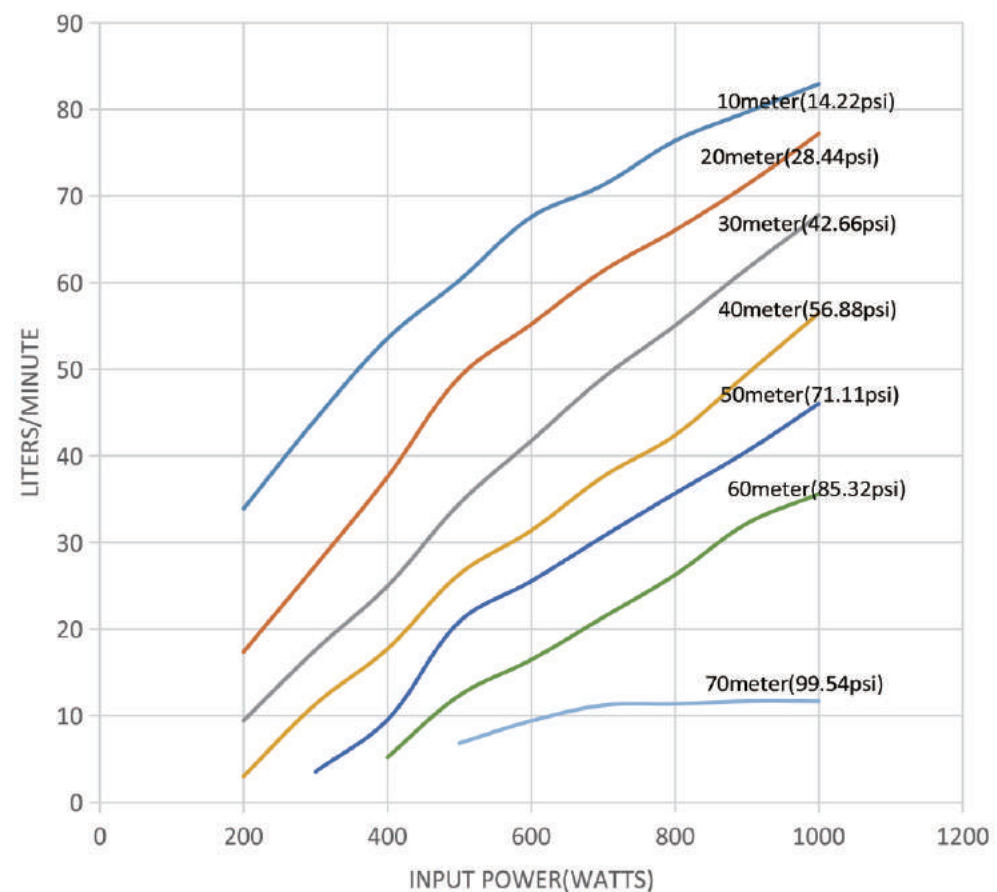
### 4SP2-7

MOTOR 0.5 HP

Flow max.90 L/min Head max.75m Max input power1.2Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |     |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|-----|------|
|          | 200                 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 10       | 34                  | 44  | 54  | 60  | 68  | 71  | 76  | 80  | 83   |
| 20       | 17                  | 27  | 38  | 49  | 55  | 61  | 66  | 71  | 77   |
| 30       | 9                   | 18  | 25  | 34  | 42  | 49  | 55  | 62  | 68   |
| 40       | 3                   | 11  | 18  | 26  | 31  | 38  | 42  | 49  | 56   |
| 50       |                     | 4   | 10  | 21  | 26  | 31  | 36  | 41  | 46   |
| 60       |                     |     | 5   | 12  | 16  | 21  | 26  | 32  | 36   |
| 70       |                     |     |     | 7   | 9   | 11  | 11  | 12  | 12   |

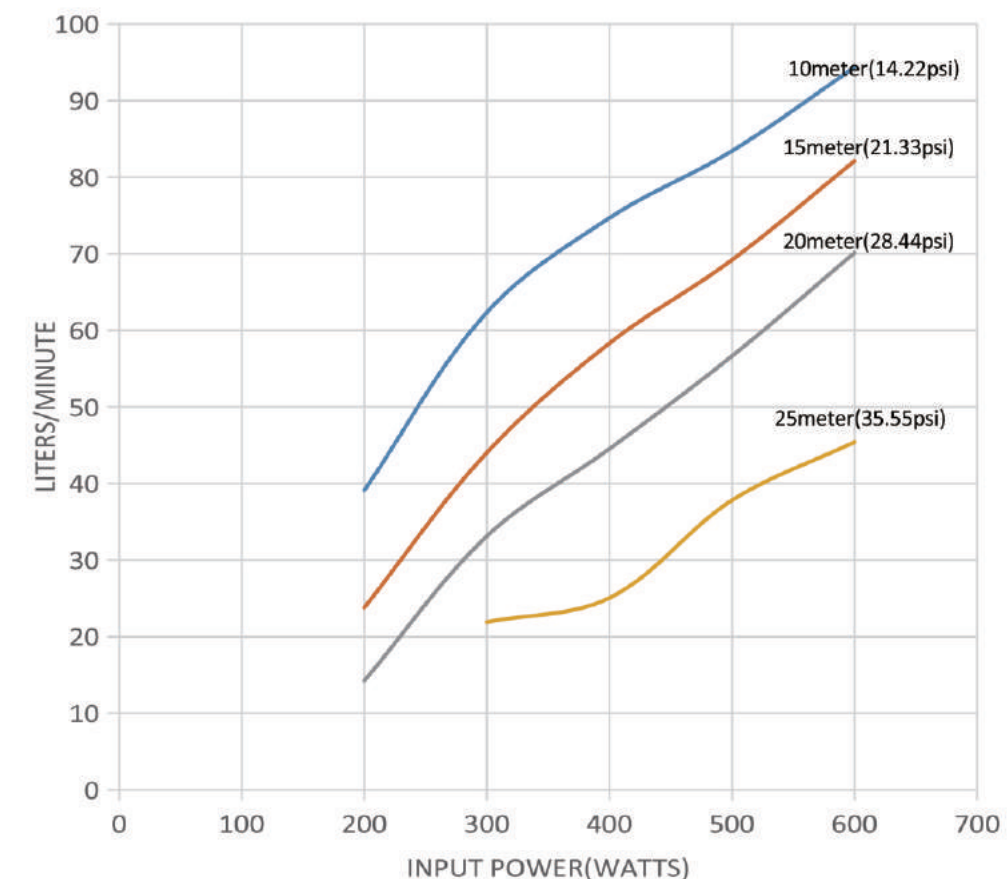
### 4SP3-3

MOTOR 0.5 HP

Flow max.100 l/min Head max.30m Max input power 630w

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |
|----------|---------------------|-----|-----|-----|-----|
|          | 200                 | 300 | 400 | 500 | 600 |
| 10       | 39                  | 62  | 75  | 83  | 94  |
| 15       | 24                  | 44  | 58  | 69  | 82  |
| 20       | 14                  | 33  | 45  | 57  | 70  |
| 25       |                     | 22  | 25  | 38  | 45  |

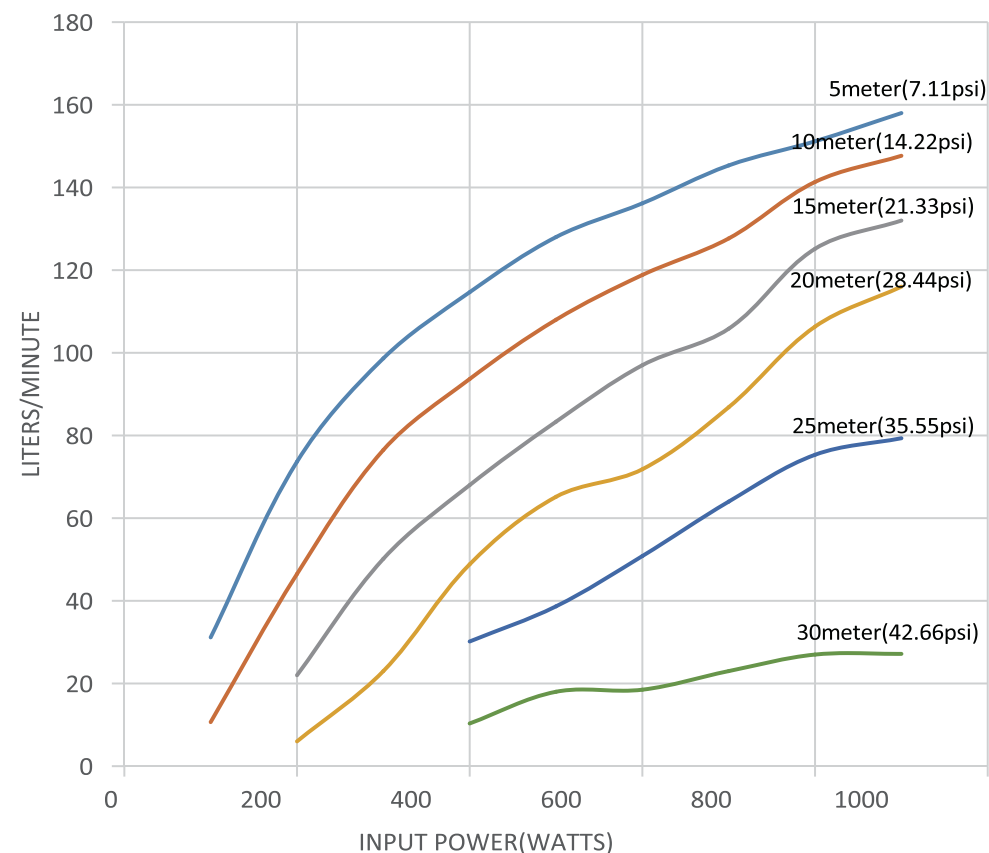
### 4SP5-3

MOTOR 0.5 HP

Flow max.166 l/min Head max.33m Max input power0.9Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.5"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |     |     |
|----------|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|
|          | 100                 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 5        | 31                  | 74  | 99  | 115 | 128 | 136 | 145 | 151 | 158 |
| 10       | 11                  | 47  | 77  | 94  | 108 | 119 | 128 | 141 | 148 |
| 15       |                     | 22  | 50  | 68  | 83  | 97  | 106 | 125 | 132 |
| 20       |                     | 6   | 23  | 49  | 65  | 72  | 87  | 106 | 116 |
| 25       |                     |     |     | 30  | 39  | 51  | 64  | 75  | 79  |
| 30       |                     |     |     | 10  | 18  | 19  | 23  | 27  | 27  |

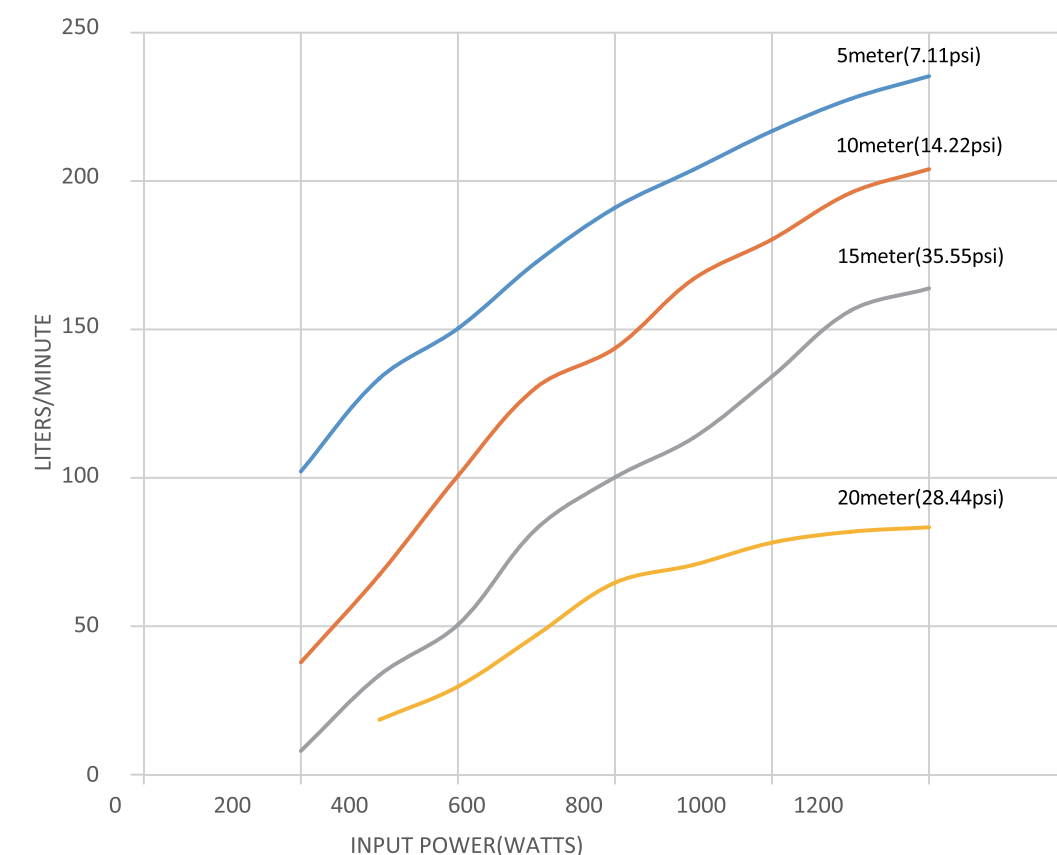
### 4SP8-2

MOTOR 0.5 HP

Flow max.260 l/min Head max.22m Max input power1.1Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |     |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|-----|------|
|          | 200                 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 5        | 102                 | 134 | 150 | 173 | 191 | 204 | 217 | 228 | 235  |
| 10       | 38                  | 67  | 101 | 131 | 144 | 167 | 180 | 196 | 204  |
| 15       | 8                   | 34  | 51  | 83  | 100 | 114 | 134 | 156 | 164  |
| 20       |                     | 19  | 30  | 47  | 65  | 71  | 78  | 82  | 83   |



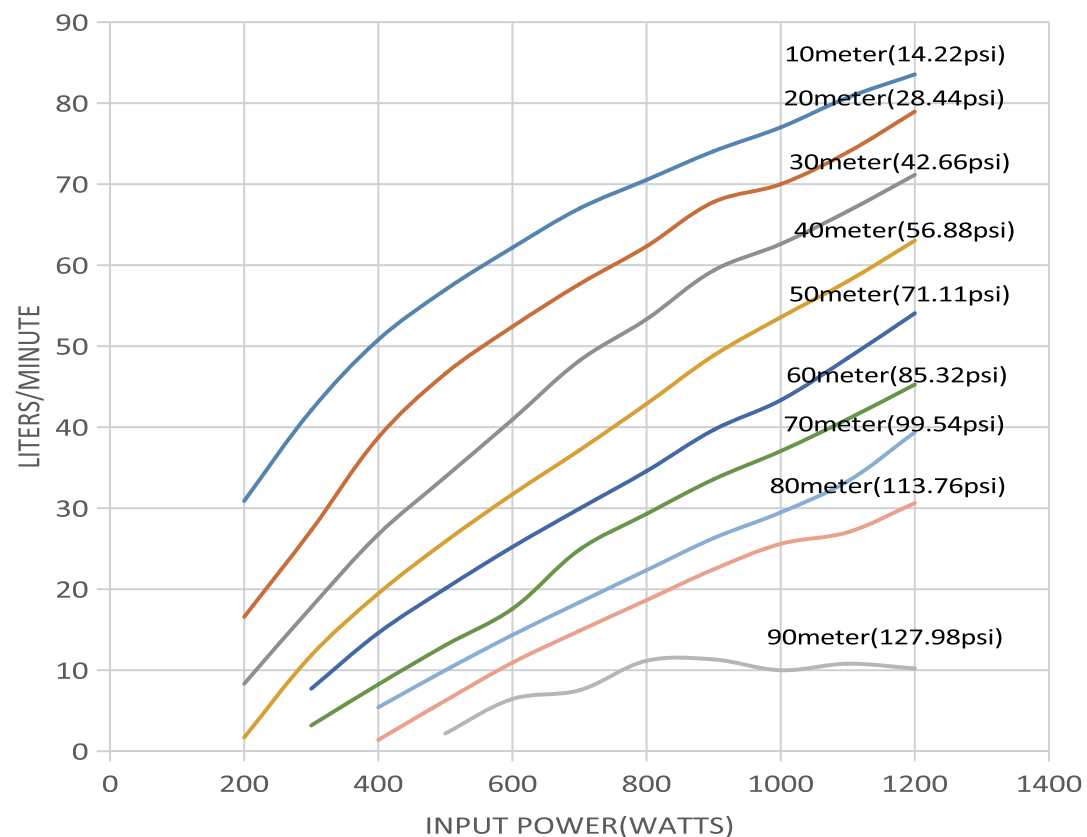
### 4SP2-9

MOTOR 1 HP

Flow max.90 l/min Head max.95m Max input power1.5Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |     |      |      |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|
|          | 200                 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 |
| 10       | 31                  | 42  | 51  | 57  | 62  | 67  | 71  | 74  | 77   | 81   | 84   |
| 20       | 17                  | 27  | 39  | 47  | 52  | 58  | 62  | 68  | 70   | 74   | 79   |
| 30       | 8                   | 18  | 27  | 34  | 41  | 48  | 53  | 59  | 63   | 67   | 71   |
| 40       | 2                   | 12  | 19  | 26  | 32  | 37  | 43  | 49  | 54   | 58   | 63   |
| 50       |                     | 8   | 15  | 20  | 25  | 30  | 35  | 40  | 43   | 49   | 54   |
| 60       |                     | 3   | 8   | 13  | 18  | 25  | 29  | 34  | 37   | 41   | 45   |
| 70       |                     |     | 5   | 10  | 14  | 18  | 22  | 26  | 29   | 33   | 39   |
| 80       |                     |     | 1   | 6   | 11  | 15  | 19  | 22  | 26   | 27   | 31   |
| 90       |                     |     |     | 2   | 6   | 8   | 11  | 11  | 10   | 11   | 10   |

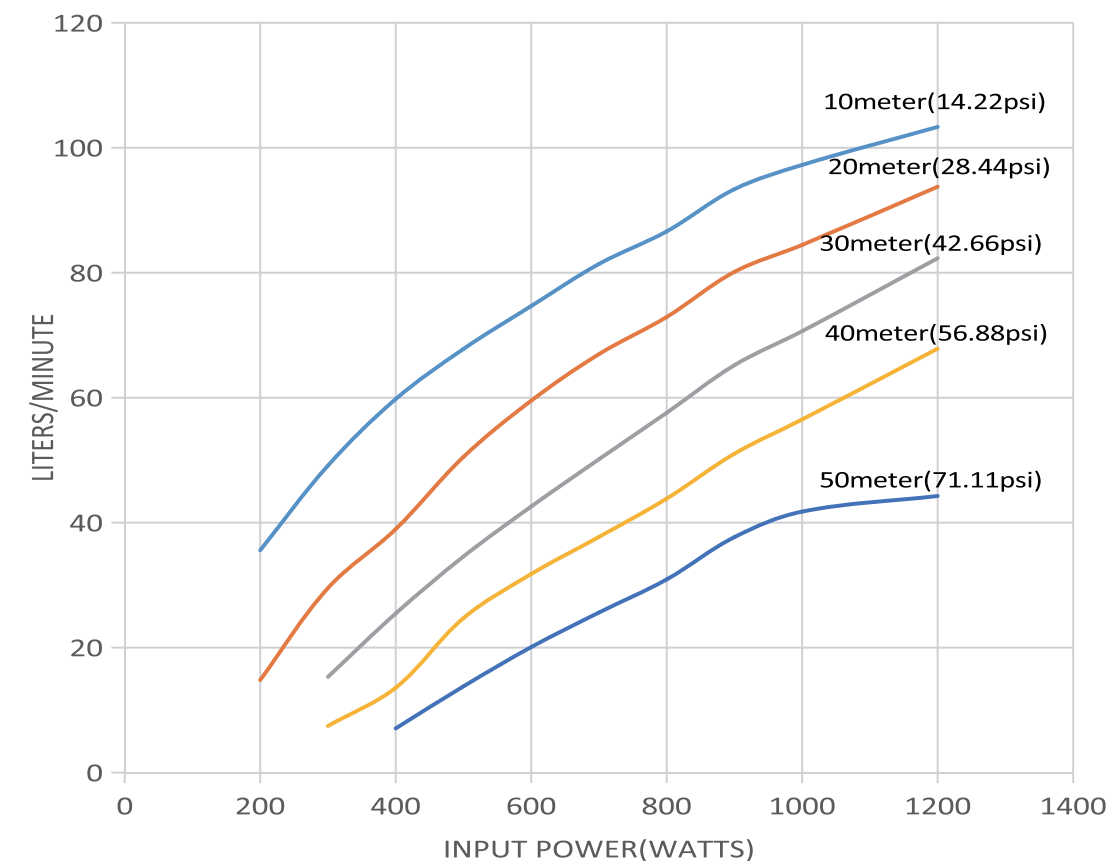
### 4SP3-6

MOTOR 1 HP

Flow max.106 l/min Head max.60m Max input power1.2Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |     |      |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|-----|------|------|
|          | 200                 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 |
| 10       | 36                  | 49  | 60  | 68  | 75  | 81  | 87  | 93  | 97   | 103  |
| 20       | 15                  | 30  | 39  | 51  | 60  | 67  | 73  | 80  | 84   | 94   |
| 30       |                     | 15  | 25  | 35  | 43  | 50  | 58  | 65  | 71   | 82   |
| 40       |                     | 7   | 14  | 25  | 32  | 38  | 44  | 51  | 57   | 68   |
| 50       |                     |     | 7   | 14  | 20  | 26  | 31  | 38  | 38   | 44   |

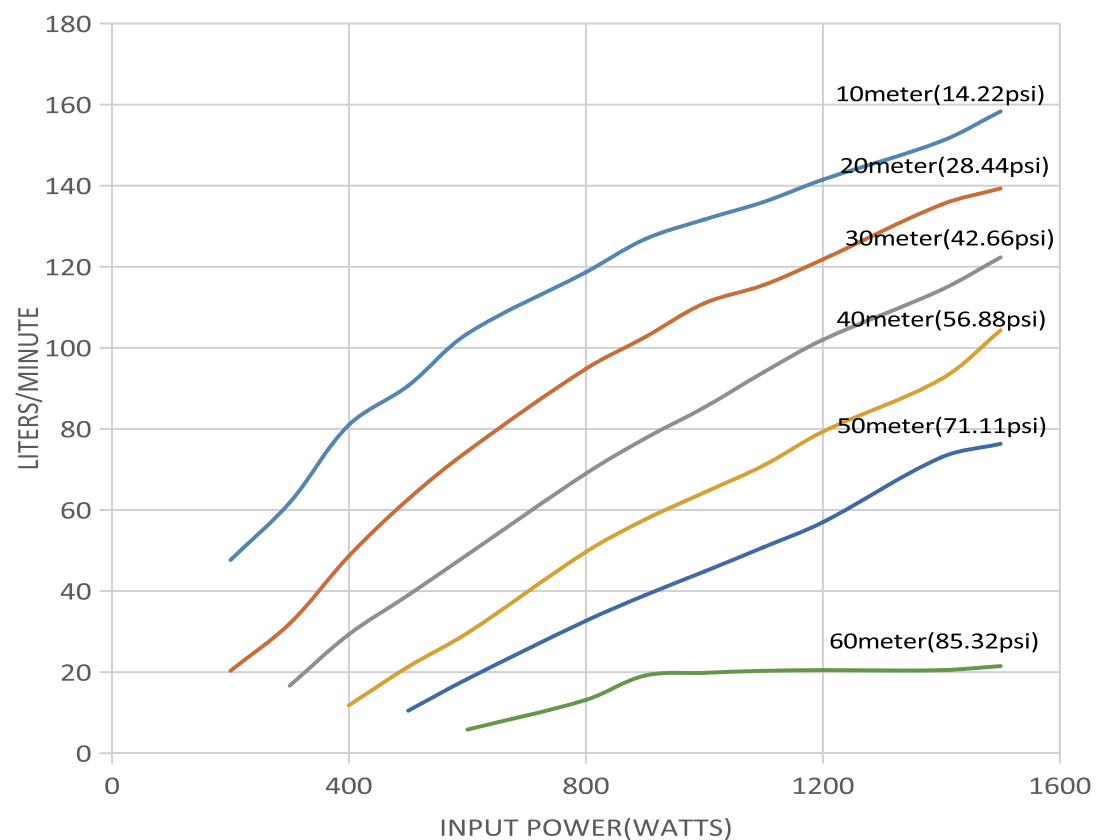
### 4SP5-6

MOTOR 1 HP

Flow max.166 l/min Head max.66m Max input power1.8Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.5"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
|          | 200                 | 300 | 400 | 500 | 600 | 800 | 900 | 1000 | 1100 | 1200 | 1400 | 1500 |
| 10       | 48                  | 62  | 81  | 91  | 104 | 119 | 127 | 132  | 136  | 142  | 151  | 158  |
| 20       | 20                  | 32  | 49  | 63  | 75  | 95  | 103 | 111  | 116  | 122  | 135  | 139  |
| 30       |                     | 17  | 29  | 39  | 49  | 69  | 78  | 85   | 94   | 102  | 114  | 122  |
| 40       |                     |     | 12  | 21  | 30  | 50  | 58  | 64   | 71   | 79   | 92   | 104  |
| 50       |                     |     |     | 11  | 18  | 33  | 39  | 45   | 51   | 57   | 73   | 76   |
| 60       |                     |     |     |     | 6   | 13  | 19  | 20   | 20   | 21   | 21   | 22   |

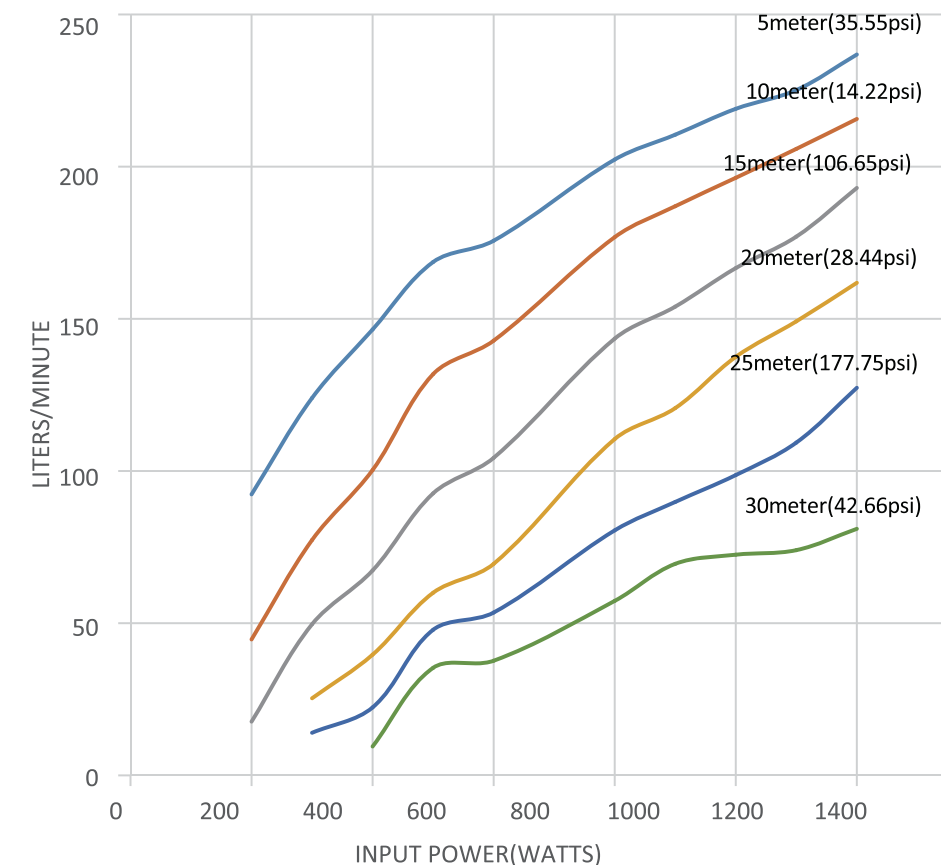
### 4SP8-3

MOTOR 1 HP

Flow max.260 l/min Head max.33m Max input power1.5Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |      |      |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|------|------|------|
|          | 200                 | 300 | 400 | 500 | 600 | 800 | 900 | 1000 | 1100 | 1200 |
| 5        | 92                  | 124 | 147 | 169 | 176 | 202 | 211 | 219  | 225  | 237  |
| 10       | 45                  | 77  | 100 | 132 | 143 | 177 | 187 | 196  | 206  | 216  |
| 15       | 18                  | 50  | 67  | 93  | 104 | 144 | 157 | 167  | 177  | 193  |
| 20       |                     | 25  | 40  | 60  | 70  | 111 | 121 | 138  | 149  | 162  |
| 25       |                     | 14  | 22  | 48  | 54  | 81  | 90  | 99   | 109  | 127  |
| 30       |                     |     | 10  | 35  | 38  | 57  | 70  | 70   | 74   | 81   |



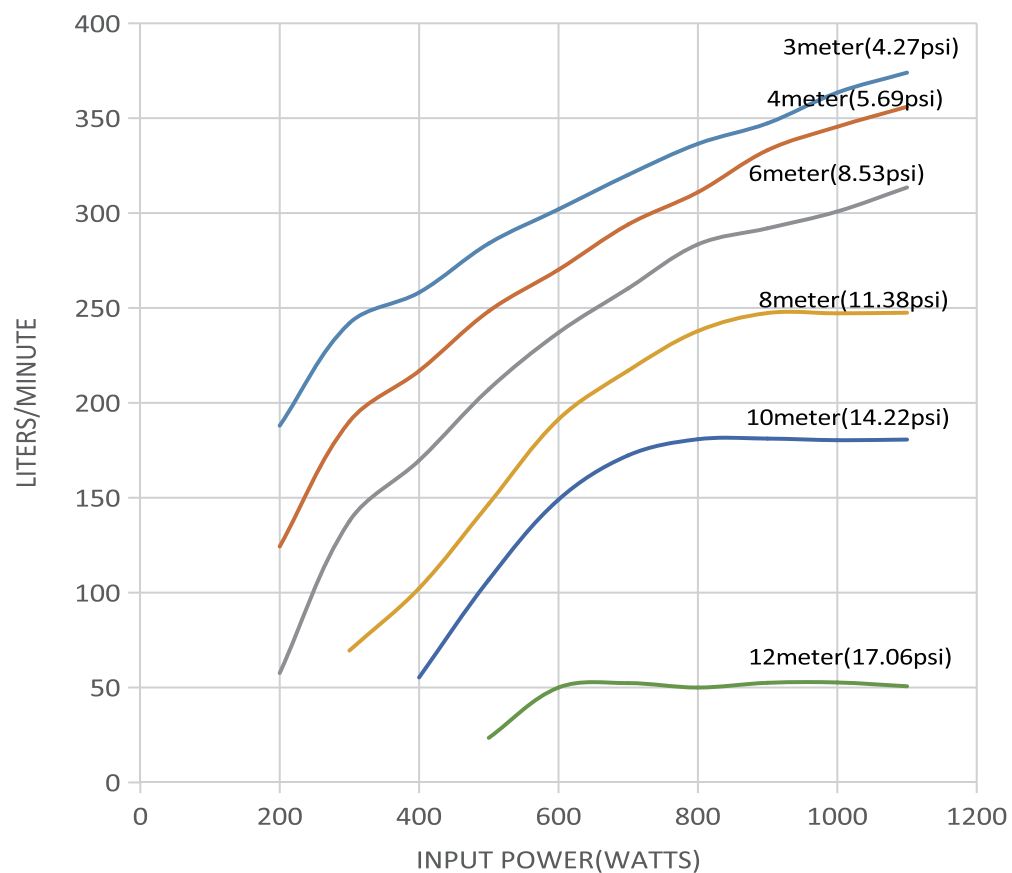
## 4SP14-1

MOTOR 1 HP

Flow max.375 l/min Head max.12m Max input power1.1Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



|          | INPUT POWER (WATTS)       |     |     |     |     |     |     |     |      |      |
|----------|---------------------------|-----|-----|-----|-----|-----|-----|-----|------|------|
|          | 200                       | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |     |     |     |     |     |      |      |
| 3        | 188                       | 242 | 258 | 284 | 302 | 320 | 337 | 347 | 364  | 374  |
| 4        | 124                       | 190 | 217 | 248 | 270 | 294 | 311 | 333 | 346  | 356  |
| 6        | 58                        | 138 | 170 | 207 | 237 | 260 | 284 | 292 | 301  | 314  |
| 8        |                           | 70  | 102 | 147 | 191 | 217 | 238 | 247 | 247  | 248  |
| 10       |                           |     | 55  | 107 | 149 | 172 | 181 | 181 | 180  | 181  |
| 12       |                           |     |     | 24  | 50  | 52  | 50  | 53  | 53   | 51   |

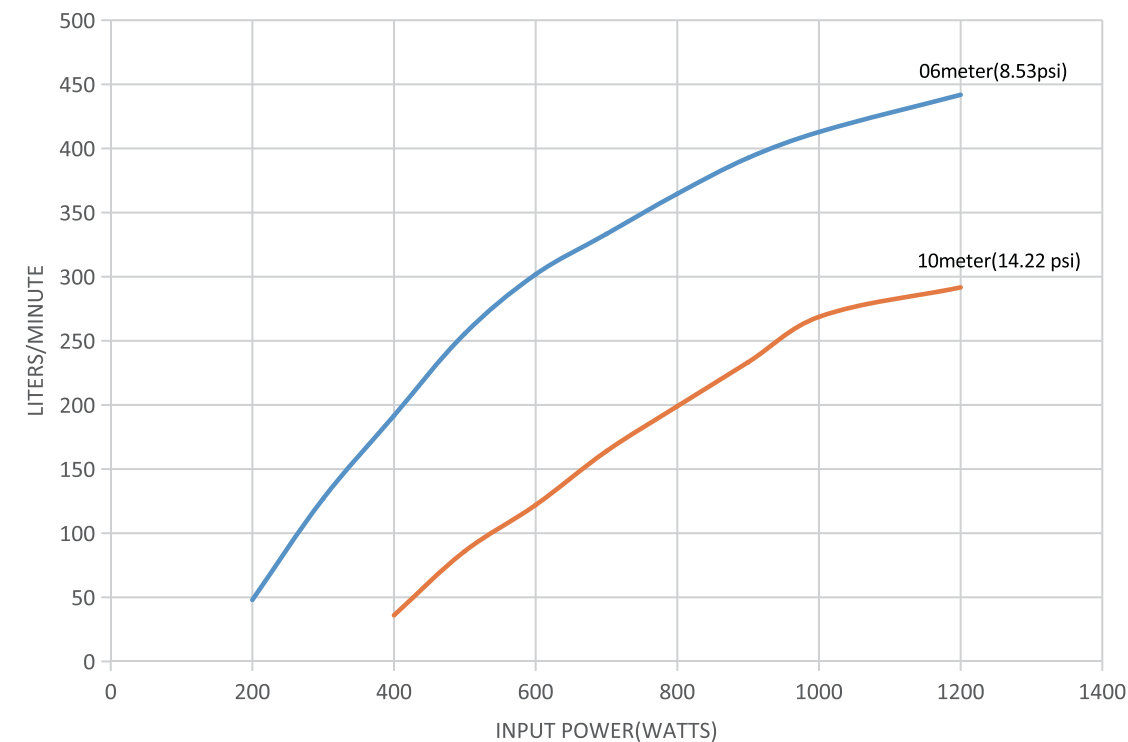
## 5SP20-1

MOTOR 1 HP

Flow max.560 l/min Head max.13m Max input power1.2Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



|          | INPUT POWER (WATTS)       |     |     |     |     |     |     |     |      |      |
|----------|---------------------------|-----|-----|-----|-----|-----|-----|-----|------|------|
|          | 200                       | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |     |     |     |     |     |      |      |
| 6        | 48                        | 127 | 192 | 256 | 302 | 333 | 365 | 393 | 413  | 442  |
| 10       |                           |     | 36  | 86  | 122 | 164 | 199 | 233 | 269  | 292  |

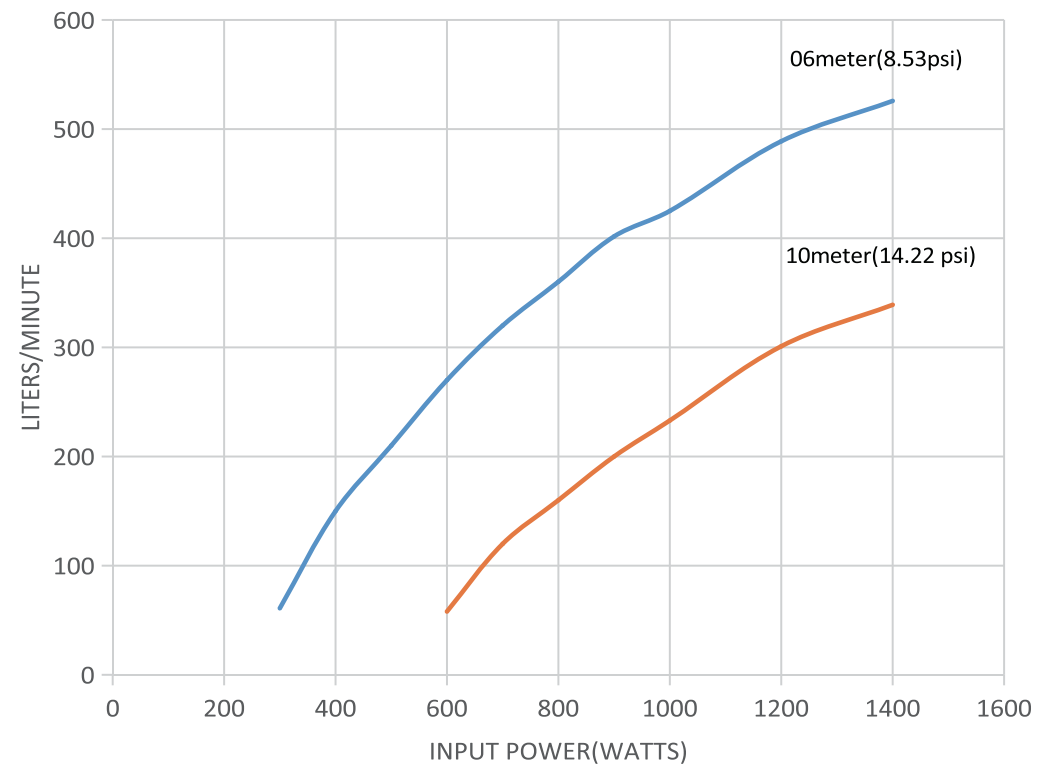
## 5SP25-1

MOTOR 1 HP

Flow max.650 l/min Head max.14m Max input power1.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



|          | INPUT POWER (WATTS)       |     |     |     |     |     |     |      |      |      |
|----------|---------------------------|-----|-----|-----|-----|-----|-----|------|------|------|
|          | 300                       | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |     |     |     |     |      |      |      |
| 6        | 61                        | 150 | 210 | 270 | 320 | 360 | 402 | 425  | 489  | 526  |
| 10       |                           |     |     | 58  | 120 | 160 | 200 | 233  | 301  | 339  |

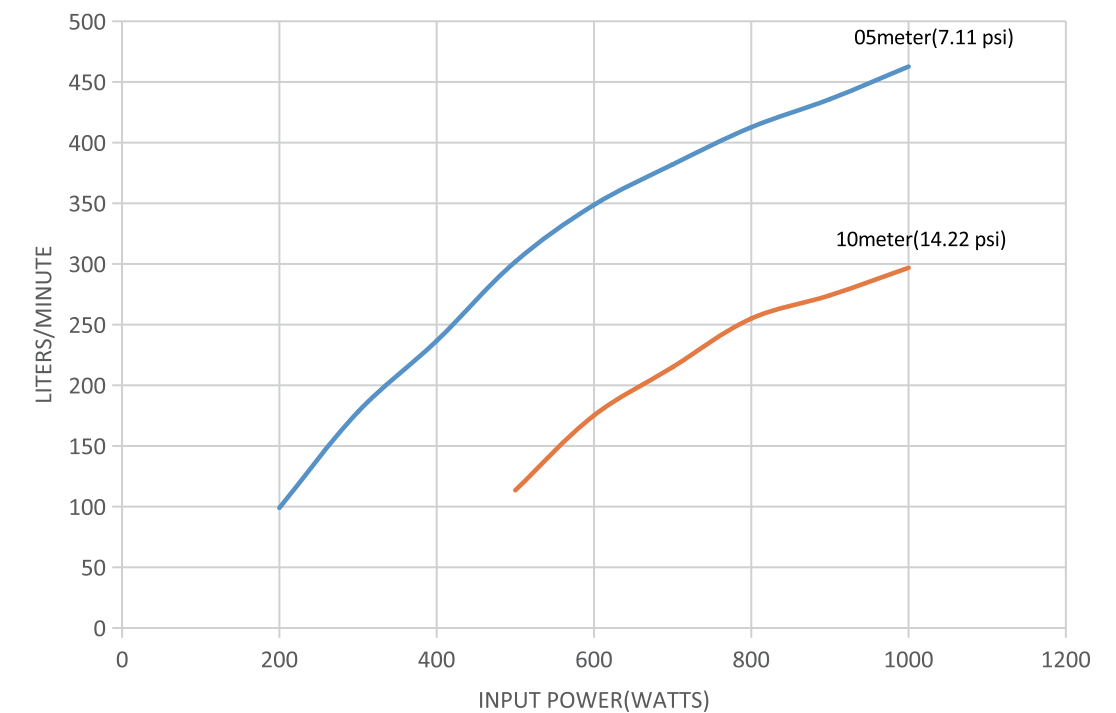
## 6SP17-1

MOTOR 1 HP

Flow max.533 l/min Head max.13m Max input power1.1Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 3"

Maximum OD 6"



|          | INPUT POWER (WATTS)       |     |     |     |     |     |     |     |      |  |
|----------|---------------------------|-----|-----|-----|-----|-----|-----|-----|------|--|
|          | 200                       | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |  |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |     |     |     |     |     |      |  |
| 5        | 99                        | 178 | 237 | 302 | 349 | 382 | 413 | 436 | 463  |  |
| 10       |                           |     |     | 114 | 175 | 215 | 255 | 274 | 297  |  |



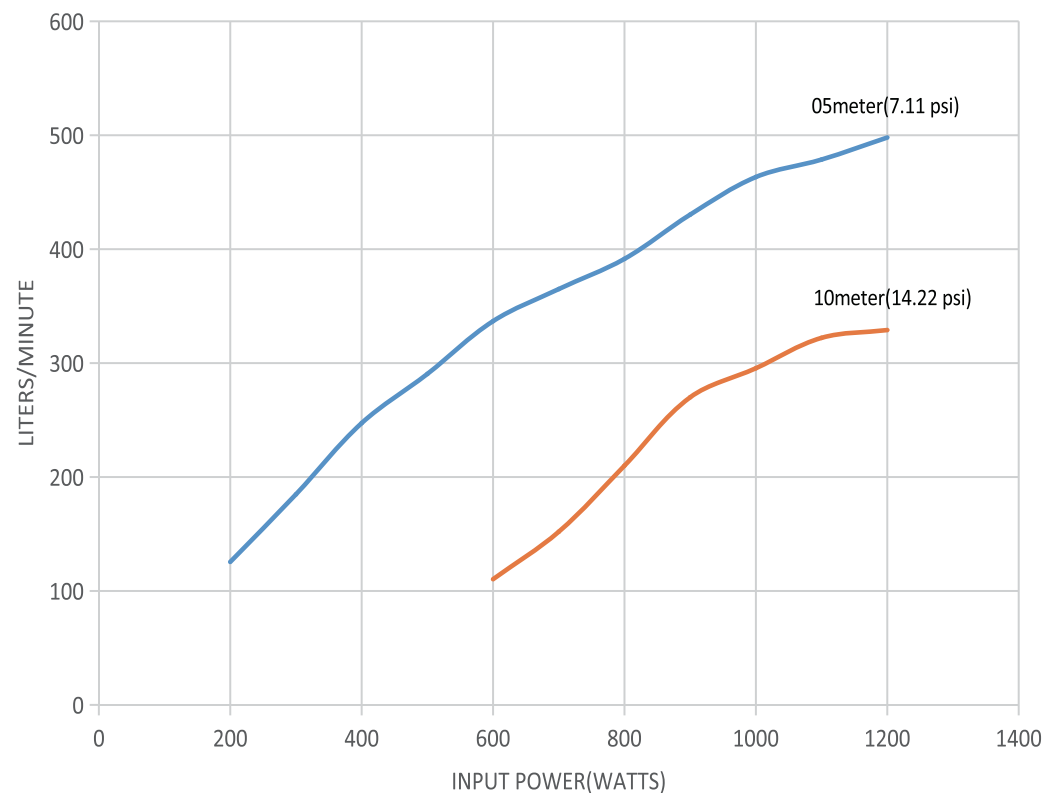
## 6SP20-1

MOTOR 1 HP

Flow max.570 l/min Head max.14m Max input power1.4Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 3"

Maximum OD 6"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |     |      |      |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|
|          | 200                 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 |
| 5        | 126                 | 185 | 247 | 291 | 337 | 365 | 392 | 430 | 463  | 479  | 498  |
| 10       |                     |     |     |     | 110 | 152 | 210 | 270 | 296  | 322  | 329  |

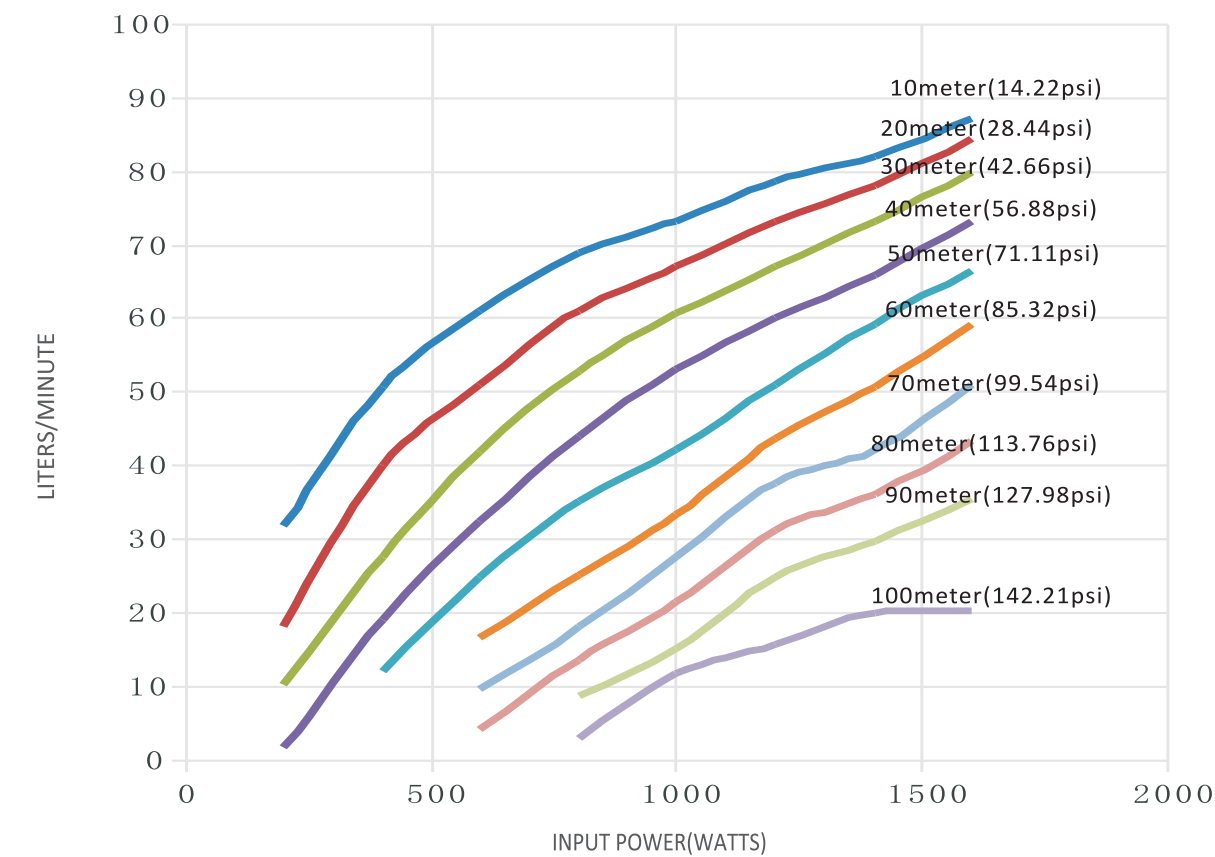
## 4SP2-11

MOTOR 1.5 HP

Flow max.90 l/min Head max.110m Max input power1.9Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
| 10       | 32                  | 51  | 61  | 69  | 73   | 79   | 82   | 87   |
| 20       | 18                  | 40  | 51  | 61  | 67   | 73   | 78   | 84   |
| 30       | 11                  | 28  | 42  | 53  | 61   | 67   | 73   | 80   |
| 40       | 2                   | 19  | 33  | 44  | 53   | 60   | 66   | 73   |
| 50       |                     | 12  | 25  | 35  | 42   | 51   | 59   | 67   |
| 60       |                     |     | 17  | 25  | 34   | 44   | 51   | 59   |
| 70       |                     |     | 10  | 18  | 28   | 38   | 42   | 51   |
| 80       |                     |     | 4   | 14  | 22   | 31   | 36   | 43   |
| 90       |                     |     |     | 9   | 15   | 25   | 30   | 36   |
| 100      |                     |     |     | 3   | 12   | 16   | 20   | 20   |

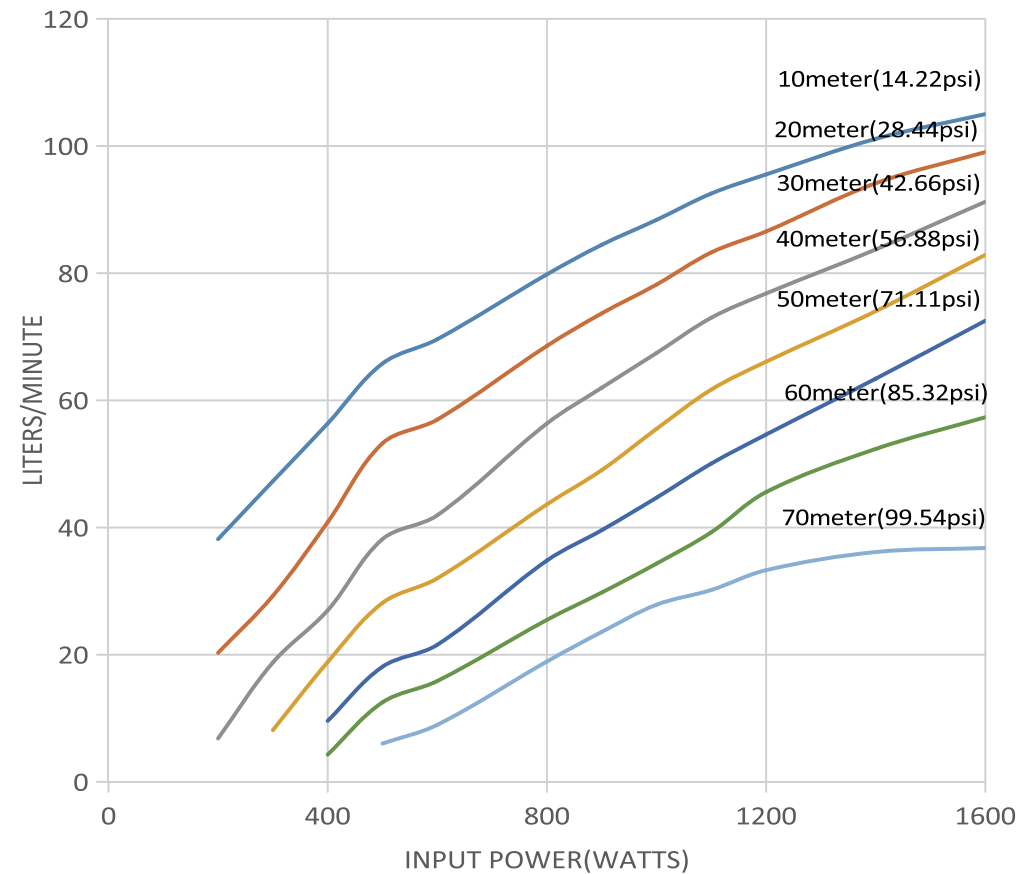
### 4SP3-8

MOTOR 1.5 HP

Flow max.106 l/min Head max.80m Max input power1.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |     |     |     |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
|          | 200                 | 300 | 400 | 500 | 600 | 800 | 900 | 1000 | 1100 | 1200 | 1400 | 1600 |
| 10       | 38                  | 47  | 56  | 66  | 70  | 80  | 84  | 88   | 93   | 96   | 101  | 105  |
| 20       | 20                  | 29  | 41  | 53  | 57  | 69  | 74  | 78   | 83   | 87   | 94   | 99   |
| 30       | 7                   | 19  | 27  | 38  | 42  | 56  | 62  | 67   | 73   | 77   | 84   | 91   |
| 40       |                     | 8   | 19  | 28  | 32  | 44  | 49  | 56   | 62   | 66   | 74   | 83   |
| 50       |                     |     | 10  | 18  | 22  | 35  | 40  | 45   | 50   | 55   | 63   | 73   |
| 60       |                     |     | 4   | 13  | 16  | 25  | 30  | 34   | 39   | 46   | 52   | 57   |
| 70       |                     |     |     | 6   | 9   | 19  | 24  | 28   | 30   | 33   | 36   | 37   |

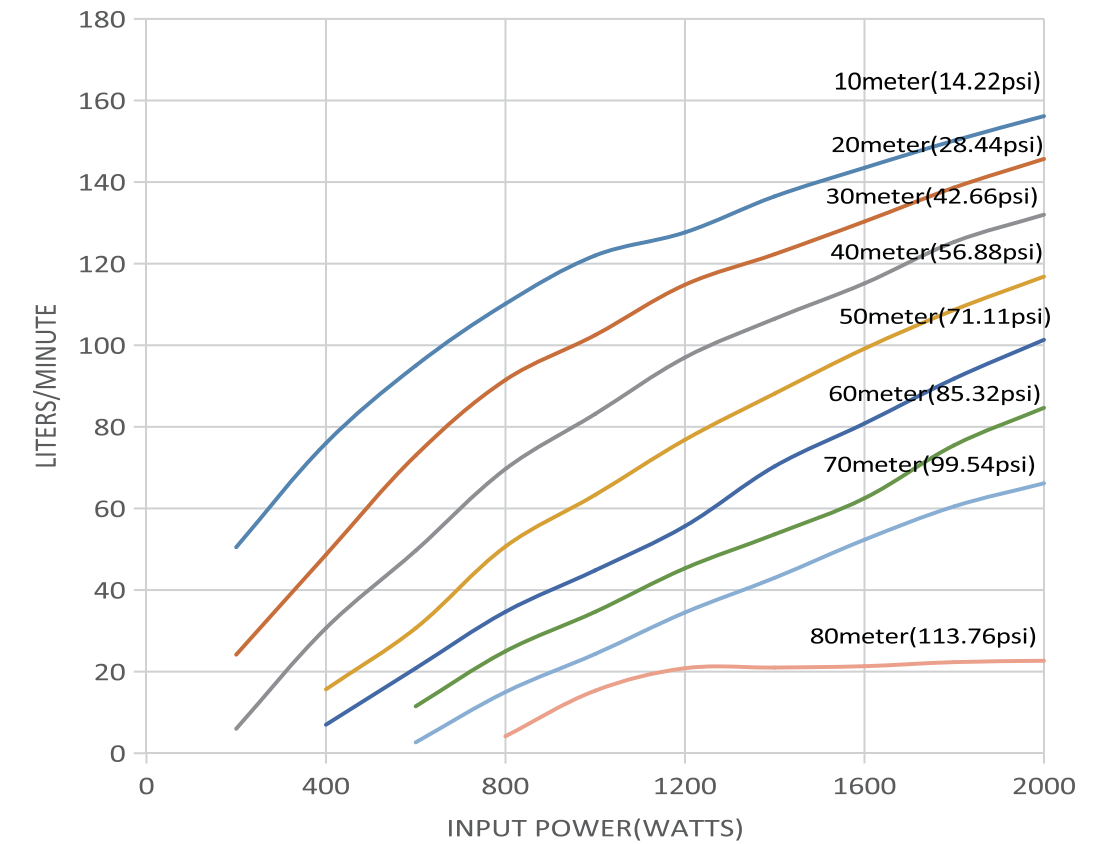
### 4SP5-8

MOTOR 1.5 HP

Flow max.166 l/min Head max.88m Max input power2.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.5"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 10       | 51                  | 76  | 95  | 110 | 122  | 128  | 137  | 144  | 150  | 156  |
| 20       | 24                  | 49  | 73  | 92  | 103  | 115  | 122  | 130  | 139  | 146  |
| 30       | 6                   | 31  | 50  | 70  | 83   | 97   | 107  | 115  | 125  | 132  |
| 40       |                     | 16  | 31  | 51  | 63   | 77   | 88   | 99   | 109  | 117  |
| 50       |                     | 7   | 21  | 35  | 45   | 56   | 70   | 81   | 92   | 101  |
| 60       |                     |     | 12  | 25  | 35   | 45   | 54   | 63   | 76   | 85   |
| 70       |                     |     | 3   | 15  | 24   | 35   | 43   | 52   | 61   | 66   |
| 80       |                     |     |     | 4   | 15   | 21   | 21   | 21   | 22   | 23   |



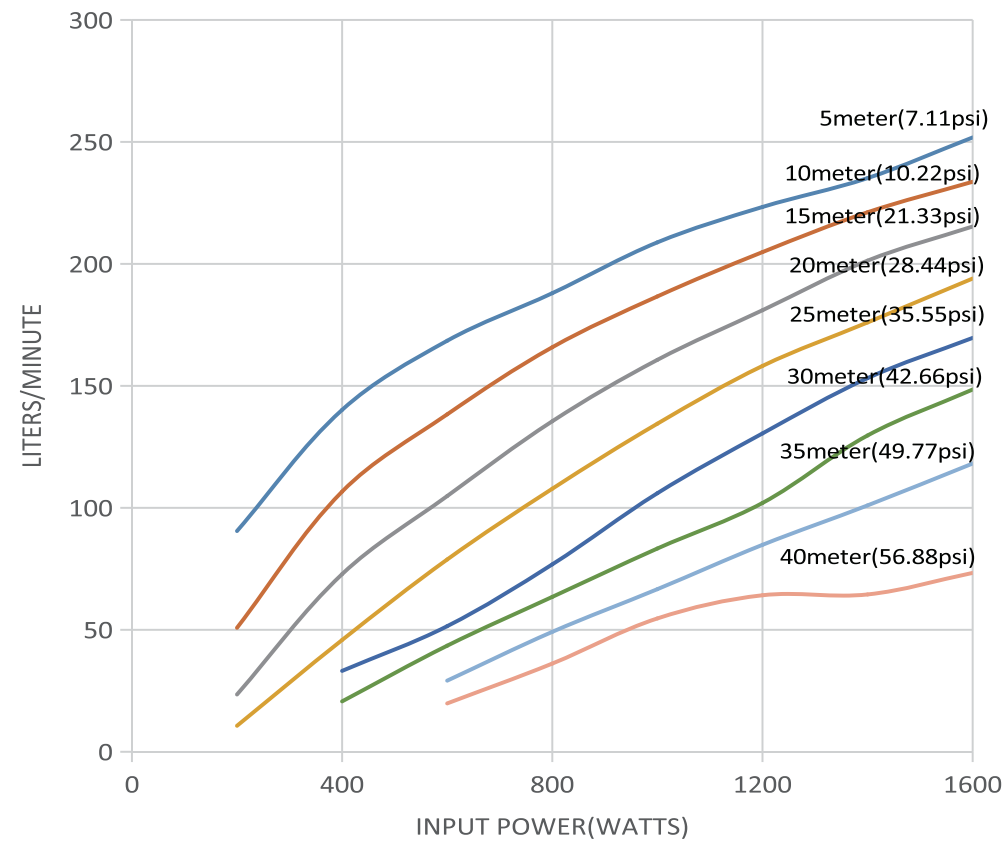
### 4SP8-4

MOTOR 1.5 HP

Flow max.280 l/min Head max.44m Max input power2.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
| 5        | 91                  | 140 | 169 | 188 | 209  | 223  | 235  | 252  |
| 10       | 51                  | 107 | 138 | 166 | 187  | 205  | 221  | 234  |
| 15       | 24                  | 73  | 105 | 136 | 161  | 181  | 201  | 215  |
| 20       | 11                  | 46  | 79  | 108 | 135  | 158  | 176  | 194  |
| 25       |                     | 33  | 52  | 77  | 106  | 131  | 153  | 170  |
| 30       |                     | 21  | 44  | 64  | 83   | 102  | 130  | 149  |
| 35       |                     |     | 29  | 49  | 67   | 85   | 101  | 118  |
| 40       |                     |     | 20  | 36  | 55   | 64   | 65   | 73   |

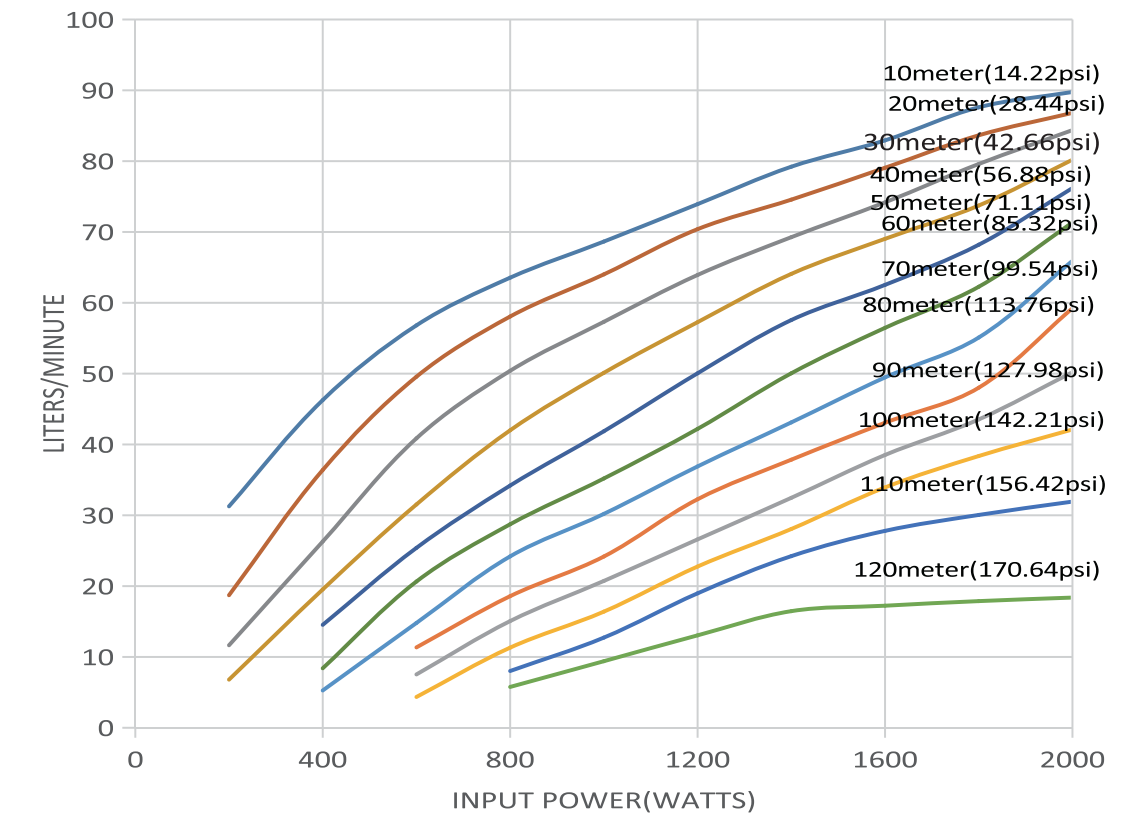
### 4SP2-13

MOTOR 2 HP

Flow max.90 l/min Head max.130m Max input power2.2Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 10       | 31                  | 46  | 57  | 64  | 69   | 74   | 79   | 83   | 88   | 90   |
| 20       | 19                  | 36  | 50  | 58  | 64   | 70   | 75   | 79   | 84   | 87   |
| 30       | 12                  | 26  | 41  | 50  | 57   | 64   | 69   | 74   | 80   | 84   |
| 40       | 7                   | 20  | 32  | 42  | 50   | 57   | 64   | 69   | 74   | 80   |
| 50       |                     | 15  | 25  | 34  | 42   | 50   | 58   | 63   | 68   | 76   |
| 60       |                     | 8   | 21  | 29  | 35   | 42   | 50   | 56   | 62   | 71   |
| 70       |                     | 5   | 15  | 24  | 30   | 37   | 43   | 49   | 55   | 66   |
| 80       |                     |     | 11  | 19  | 24   | 32   | 38   | 43   | 48   | 59   |
| 90       |                     |     | 8   | 15  | 21   | 27   | 32   | 39   | 44   | 50   |
| 100      |                     |     | 4   | 11  | 16   | 23   | 28   | 34   | 38   | 42   |
| 110      |                     |     |     | 8   | 13   | 19   | 24   | 28   | 30   | 32   |
| 120      |                     |     |     | 6   | 9    | 13   | 16   | 17   | 18   | 18   |

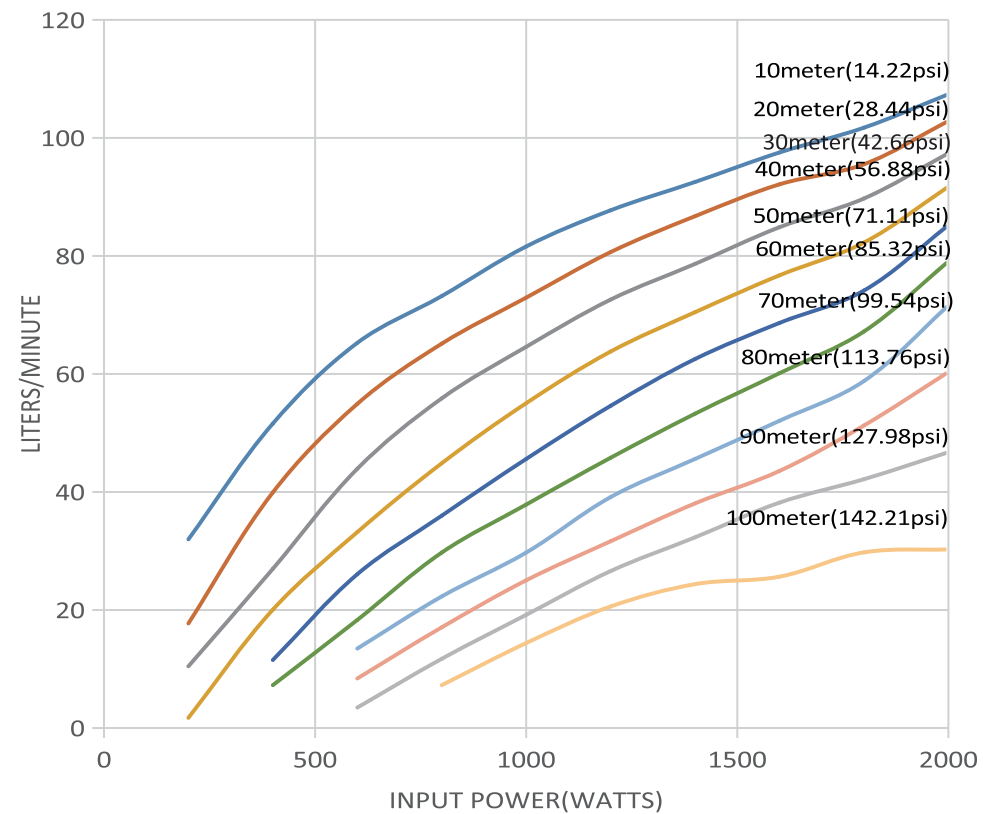
# 4SP3-11

MOTOR 2 HP

Flow max.106 l/min Head max.110m Max input power2.2Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 10       | 32                  | 52  | 65  | 73  | 82   | 88   | 93   | 98   | 102  | 107  |
| 20       | 18                  | 40  | 55  | 65  | 73   | 81   | 87   | 92   | 96   | 103  |
| 30       | 10                  | 27  | 44  | 56  | 65   | 73   | 79   | 85   | 90   | 97   |
| 40       | 2                   | 20  | 33  | 45  | 55   | 64   | 70   | 77   | 82   | 92   |
| 50       |                     | 12  | 26  | 36  | 46   | 55   | 63   | 69   | 74   | 85   |
| 60       |                     | 7   | 18  | 30  | 38   | 46   | 53   | 60   | 67   | 79   |
| 70       |                     |     | 13  | 22  | 30   | 39   | 46   | 52   | 59   | 72   |
| 80       |                     |     | 8   | 17  | 25   | 32   | 38   | 44   | 51   | 60   |
| 90       |                     |     | 3   | 12  | 19   | 27   | 32   | 38   | 42   | 47   |
| 100      |                     |     |     | 7   | 14   | 21   | 24   | 26   | 30   | 30   |

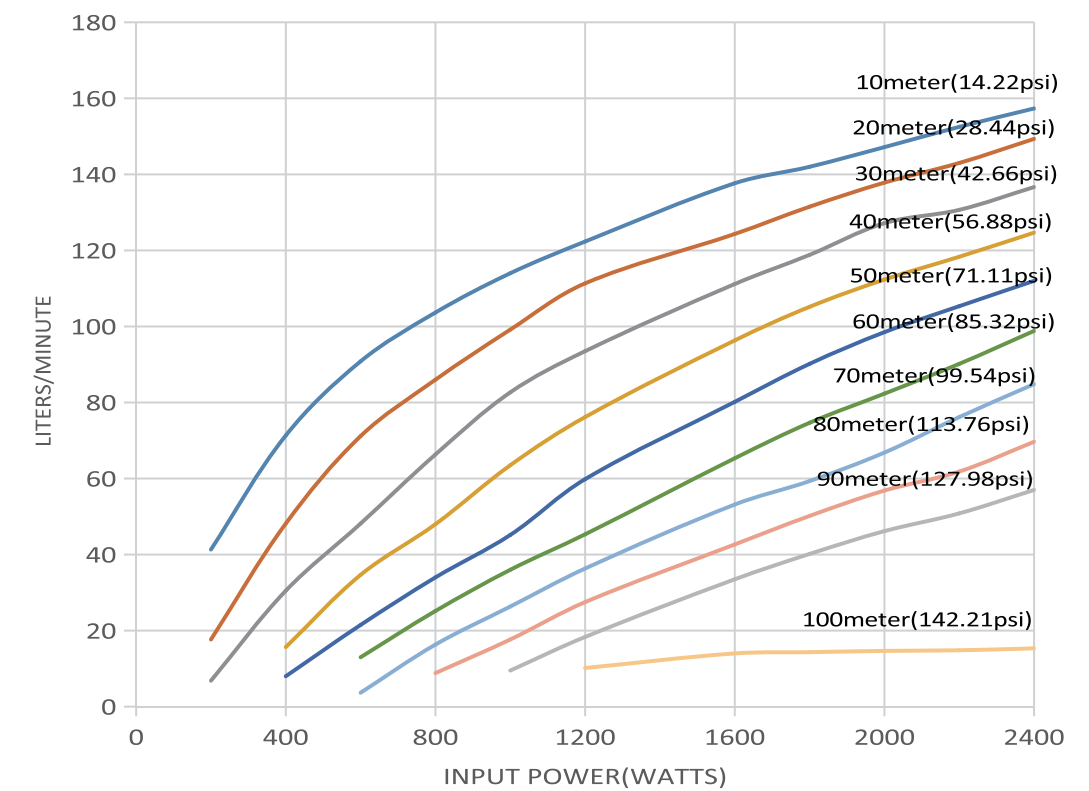
# 4SP5-10

MOTOR 2 HP

Flow max.166 l/min Head max.110m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.5"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 | 2400 |
| 10       | 41                  | 71  | 91  | 104 | 114  | 122  | 138  | 142  | 147  | 153  | 157  |
| 20       | 18                  | 48  | 71  | 86  | 99   | 111  | 124  | 132  | 138  | 143  | 149  |
| 30       | 7                   | 31  | 48  | 66  | 83   | 94   | 111  | 119  | 127  | 131  | 137  |
| 40       |                     | 16  | 35  | 48  | 64   | 76   | 96   | 105  | 112  | 118  | 125  |
| 50       |                     | 8   | 22  | 34  | 45   | 60   | 80   | 90   | 99   | 105  | 112  |
| 60       |                     |     | 13  | 25  | 36   | 45   | 65   | 75   | 82   | 90   | 99   |
| 70       |                     |     | 4   | 16  | 26   | 36   | 53   | 59   | 67   | 76   | 85   |
| 80       |                     |     |     | 9   | 18   | 28   | 43   | 50   | 57   | 62   | 70   |
| 90       |                     |     |     |     | 10   | 18   | 34   | 40   | 46   | 51   | 57   |
| 100      |                     |     |     |     |      | 10   | 14   | 14   | 15   | 15   | 15   |

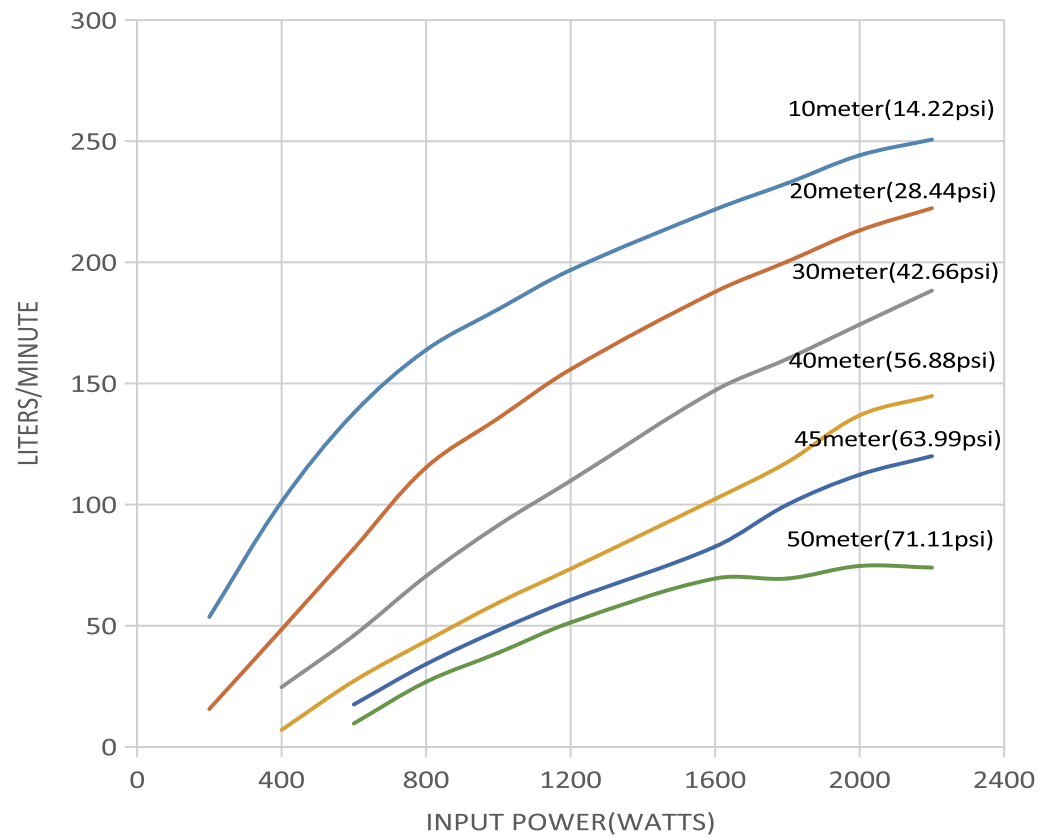
### 4SP8-5

MOTOR 2 HP

Flow max.280 l/min Head max.55m Max input power2.5Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 |
| 10       | 54                  | 101 | 138 | 164 | 181  | 197  | 222  | 233  | 244  | 251  |
| 20       | 16                  | 49  | 82  | 115 | 136  | 156  | 188  | 200  | 213  | 222  |
| 30       |                     | 25  | 46  | 71  | 92   | 110  | 147  | 160  | 174  | 188  |
| 40       |                     | 7   | 27  | 44  | 60   | 74   | 102  | 118  | 137  | 145  |
| 45       |                     |     | 18  | 34  | 48   | 61   | 83   | 100  | 112  | 120  |
| 50       |                     |     | 10  | 27  | 39   | 51   | 70   | 70   | 75   | 74   |

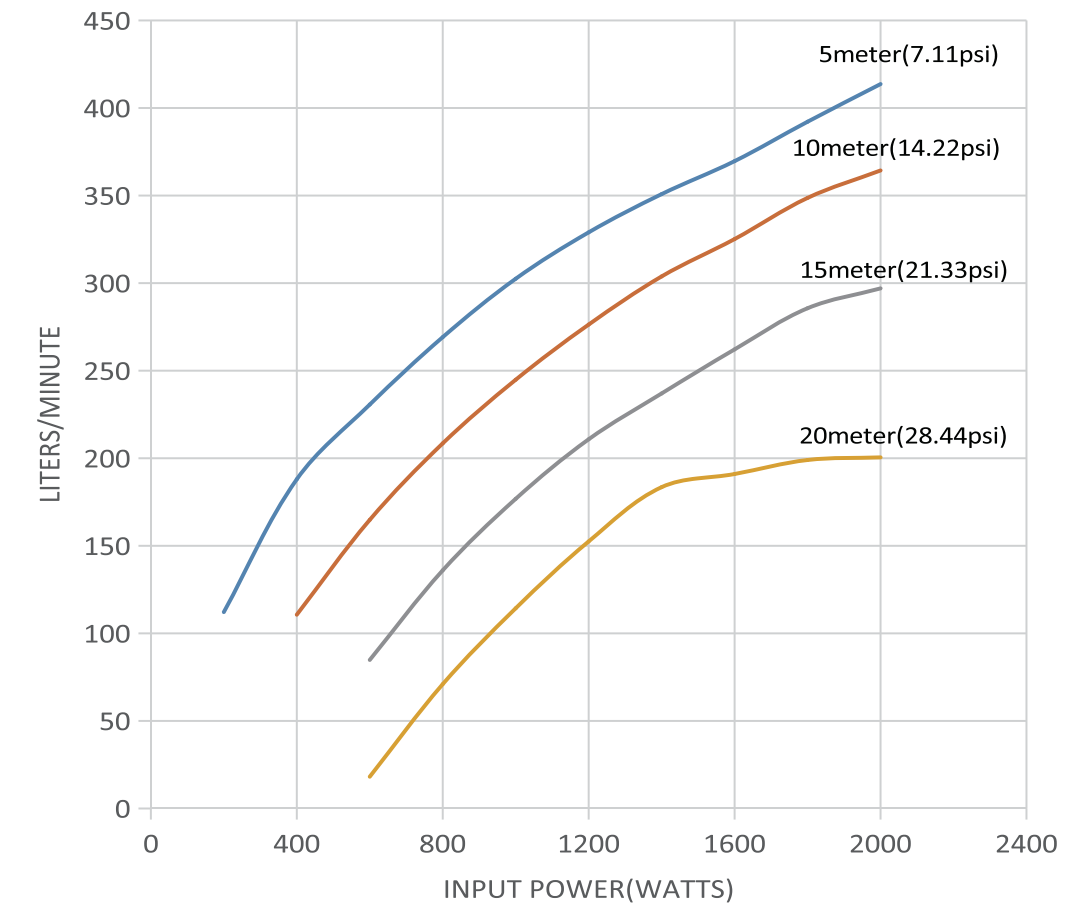
### 4SP14-2

MOTOR 2 HP

Flow max.420 l/min Head max.24m Max input power2.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 5        | 112                 | 188 | 231 | 269 | 303  | 329  | 351  | 370  | 392  | 414  |
| 10       |                     | 111 | 165 | 209 | 245  | 276  | 304  | 325  | 349  | 364  |
| 15       |                     |     | 85  | 136 | 177  | 211  | 237  | 262  | 286  | 297  |
| 20       |                     |     | 18  | 71  | 114  | 153  | 184  | 191  | 199  | 201  |



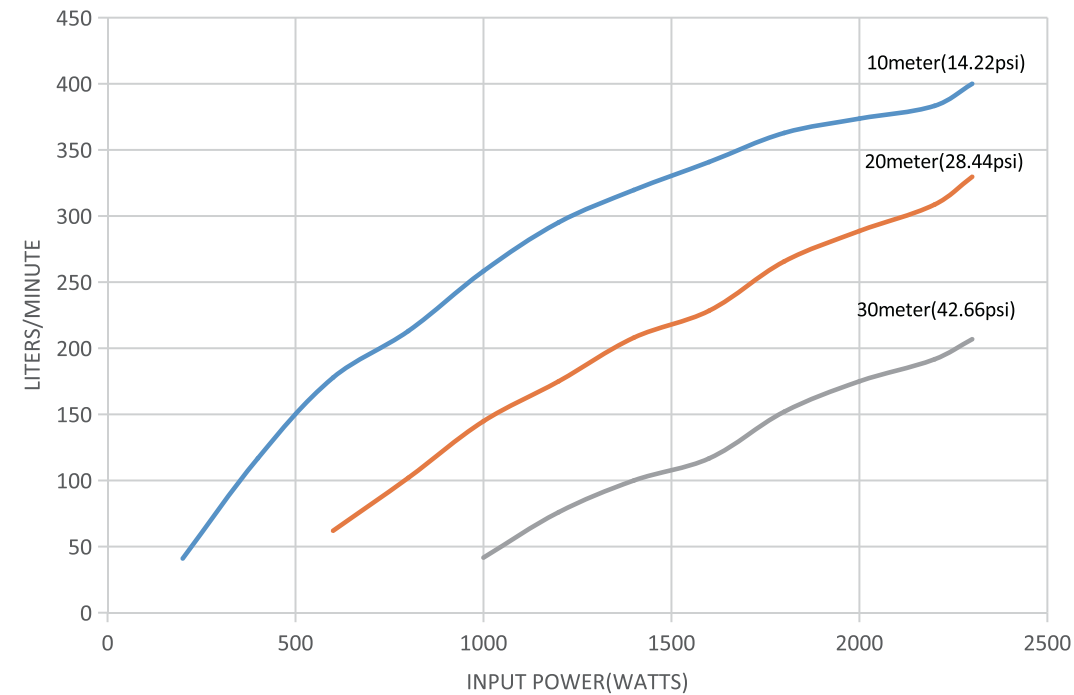
## 5SP10-3

MOTOR 2 HP

Flow max.450 l/min Head max.37m Max input power2.4Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



|          | INPUT POWER (WATTS)       |     |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------------|-----|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                       | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2300 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |     |      |      |      |      |      |      |      |      |
| 10       | 41                        | 117 | 178 | 213 | 258  | 295  | 320  | 341  | 363  | 374  | 383  | 400  |
| 20       |                           |     | 62  | 102 | 145  | 175  | 208  | 228  | 266  | 289  | 309  | 330  |
| 30       |                           |     |     |     | 42   | 76   | 100  | 117  | 152  | 175  | 192  | 207  |

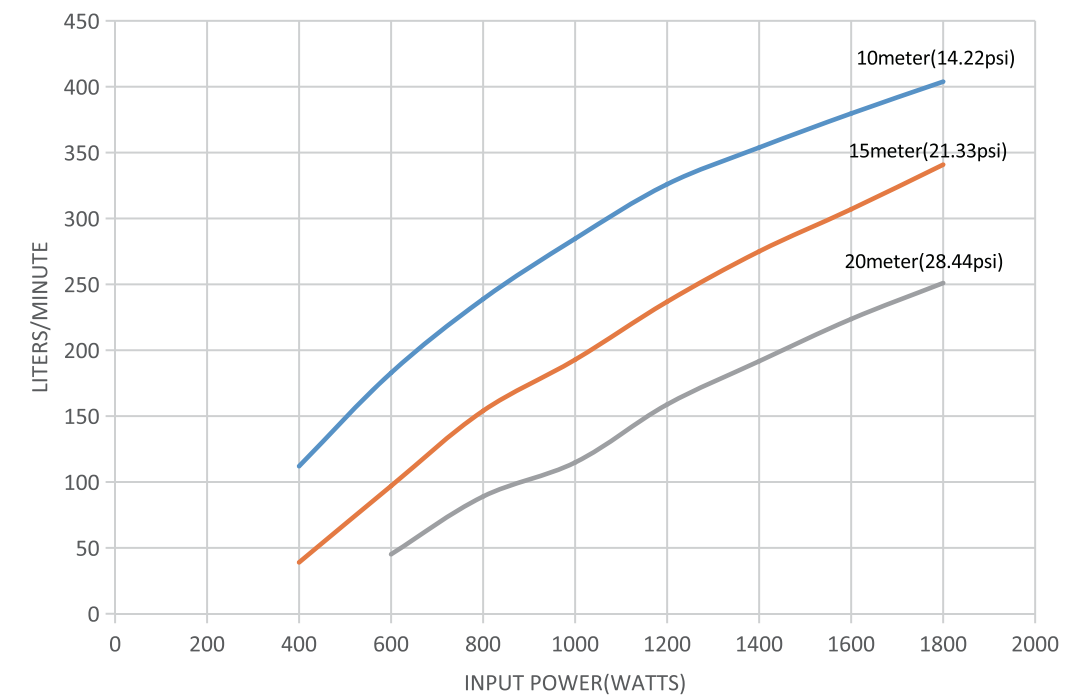
## 5SP15-2

MOTOR 2 HP

Flow max.480 l/min Head max.25m Max input power2.1Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



|          | INPUT POWER (WATTS)       |     |     |      |      |      |      |      |
|----------|---------------------------|-----|-----|------|------|------|------|------|
|          | 400                       | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |      |      |      |      |      |
| 10       | 112                       | 183 | 239 | 285  | 326  | 354  | 380  | 404  |
| 15       | 39                        | 97  | 154 | 193  | 237  | 275  | 307  | 341  |
| 20       |                           | 45  | 89  | 115  | 159  | 192  | 224  | 251  |

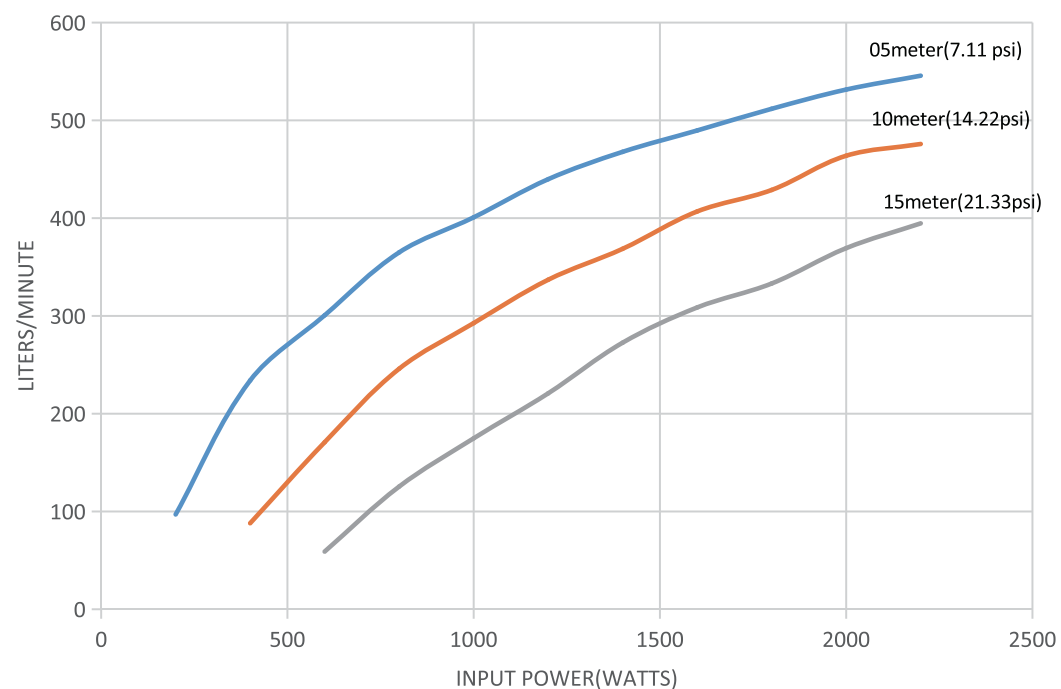
## 5SP20-2

MOTOR 2 HP

Flow max.590 l/min Head max.25m Max input power2.2Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



| HEAD(M) | INPUT POWER(WATTS) |     |     |     |      |      |      |      |      |      |      |
|---------|--------------------|-----|-----|-----|------|------|------|------|------|------|------|
|         | 200                | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 5       | 97                 | 234 | 301 | 365 | 401  | 440  | 468  | 490  | 512  | 532  | 546  |
| 10      |                    | 88  | 171 | 246 | 293  | 337  | 369  | 407  | 429  | 464  | 476  |
| 15      |                    |     | 59  | 126 | 175  | 221  | 273  | 309  | 333  | 369  | 395  |

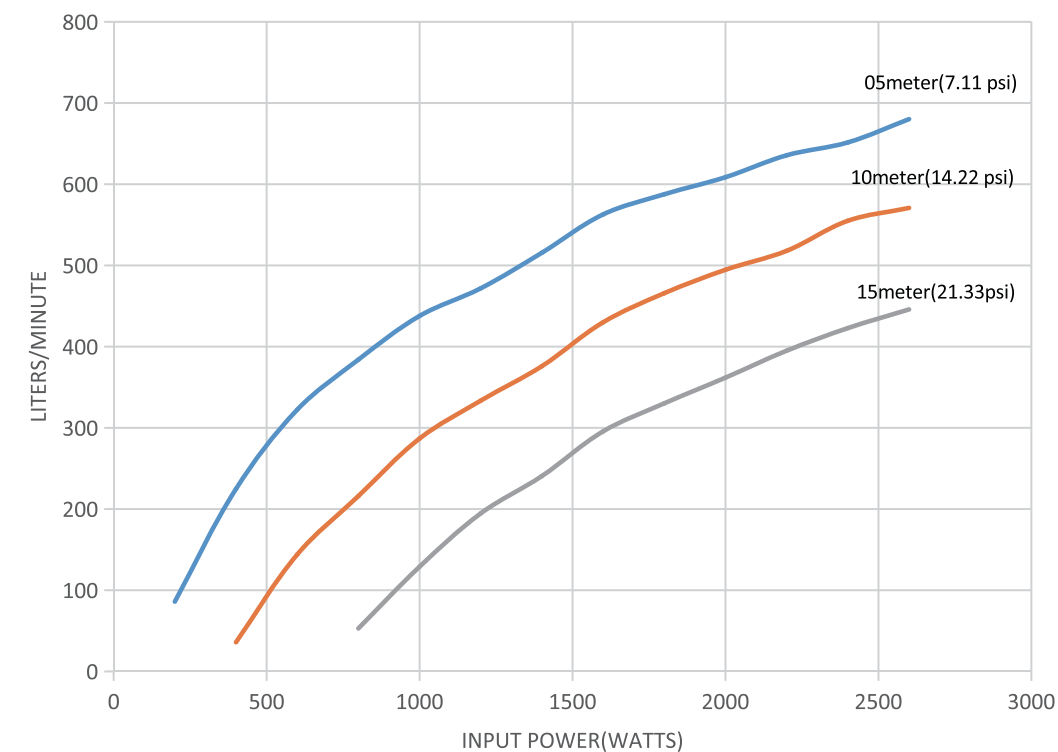
## 5SP25-2

MOTOR 2 HP

Flow max.710 l/min Head max.25m Max input power2.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



| HEAD(M) | INPUT POWER(WATTS) |     |     |     |      |      |      |      |      |      |      |      |      |  |
|---------|--------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|--|
|         | 200                | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |  |
| 5       | 86                 | 225 | 322 | 384 | 438  | 472  | 516  | 563  | 588  | 609  | 636  | 652  | 680  |  |
| 10      |                    | 36  | 144 | 216 | 287  | 334  | 376  | 430  | 466  | 495  | 518  | 555  | 571  |  |
| 15      |                    |     |     | 53  | 129  | 195  | 241  | 296  | 330  | 362  | 395  | 423  | 446  |  |

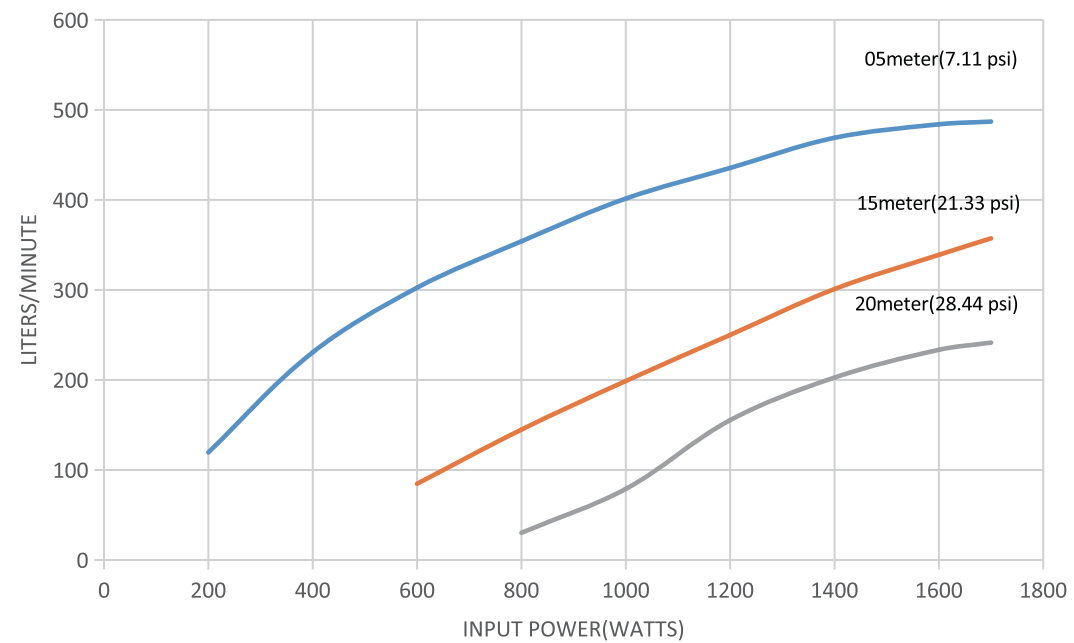
## 6SP17-2

MOTOR 2 HP

Flow max.525 l/min Head max.25m Max input power2.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



|         | INPUT POWER(WATTS)       |     |     |     |      |      |      |      |      |
|---------|--------------------------|-----|-----|-----|------|------|------|------|------|
|         | 200                      | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1700 |
| HEAD(M) | FLOW RATE(LITERS/MINUTE) |     |     |     |      |      |      |      |      |
| 5       | 120                      | 231 | 303 | 354 | 402  | 436  | 469  | 484  | 487  |
| 15      |                          |     | 85  | 145 | 199  | 250  | 301  | 339  | 357  |
| 20      |                          |     |     | 30  | 79   | 155  | 203  | 234  | 242  |

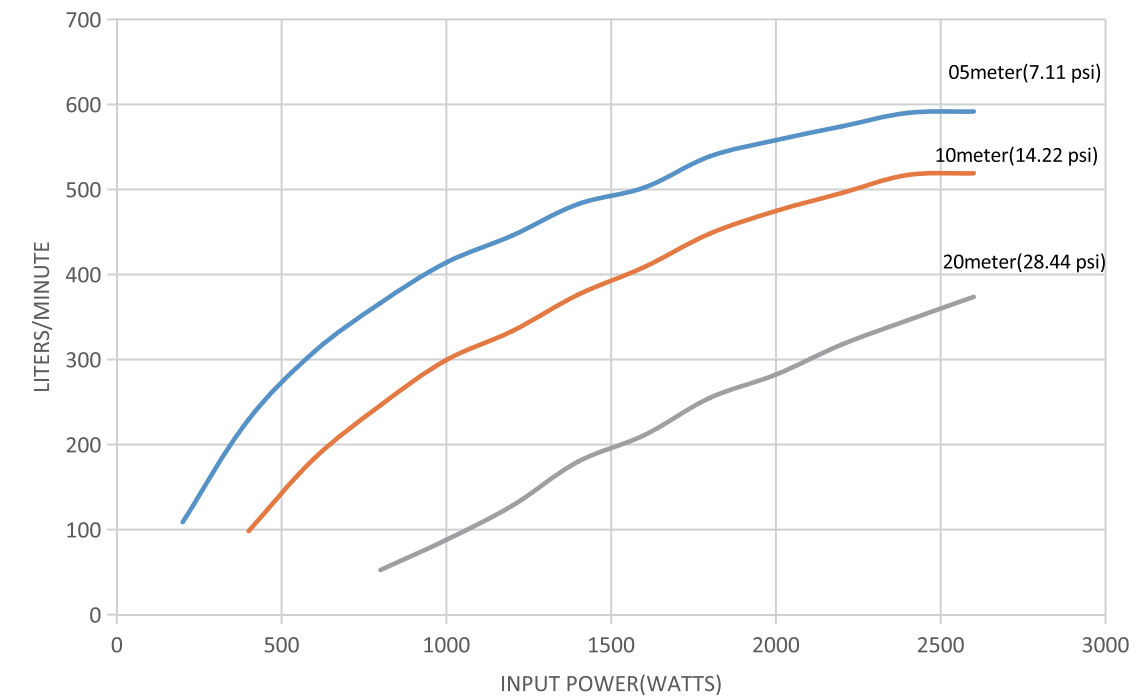
## 6SP20-2

MOTOR 2 HP

Flow max.630 l/min Head max.28m Max input power2.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 3"

Maximum OD 6"



|         | INPUT POWER(WATTS)       |     |     |     |      |      |      |      |      |      |      |      |      |
|---------|--------------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|
|         | 200                      | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| HEAD(M) | FLOW RATE(LITERS/MINUTE) |     |     |     |      |      |      |      |      |      |      |      |      |
| 5       | 109                      | 230 | 310 | 367 | 414  | 446  | 483  | 502  | 539  | 558  | 574  | 590  | 592  |
| 10      |                          | 98  | 184 | 246 | 300  | 334  | 376  | 409  | 448  | 475  | 496  | 517  | 519  |
| 20      |                          |     |     | 53  | 88   | 128  | 180  | 211  | 255  | 282  | 318  | 346  | 374  |



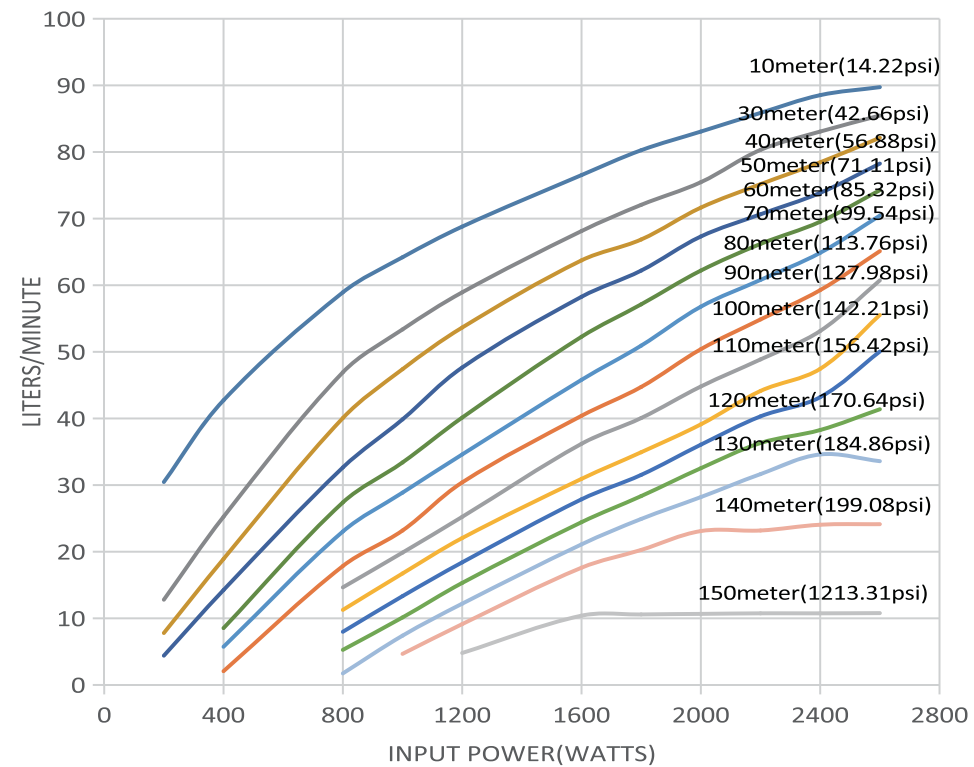
# 4SP2-16

MOTOR 2.5 HP

Flow max.90 l/min Head max.160m Max input power2.8Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| 10       | 30                  | 43  | 59  | 64   | 69   | 77   | 80   | 83   | 86   | 89   | 90   |
| 30       | 13                  | 25  | 47  | 53   | 59   | 68   | 72   | 75   | 80   | 83   | 85   |
| 40       | 8                   | 19  | 40  | 47   | 54   | 64   | 67   | 72   | 75   | 78   | 82   |
| 50       | 4                   | 14  | 33  | 40   | 48   | 58   | 62   | 67   | 71   | 74   | 78   |
| 60       |                     | 9   | 27  | 33   | 40   | 52   | 57   | 62   | 66   | 70   | 74   |
| 70       |                     | 6   | 23  | 29   | 35   | 46   | 51   | 57   | 61   | 65   | 70   |
| 80       |                     | 2   | 18  | 23   | 30   | 40   | 45   | 50   | 55   | 59   | 65   |
| 90       |                     |     | 15  | 20   | 25   | 36   | 40   | 45   | 49   | 53   | 61   |
| 100      |                     |     | 11  | 17   | 22   | 31   | 35   | 39   | 44   | 47   | 56   |
| 110      |                     |     | 8   | 13   | 18   | 28   | 32   | 36   | 40   | 43   | 50   |
| 120      |                     |     | 5   | 10   | 15   | 24   | 28   | 33   | 36   | 38   | 41   |
| 130      |                     |     | 2   | 7    | 12   | 21   | 25   | 28   | 32   | 35   | 34   |
| 140      |                     |     |     | 5    | 9    | 18   | 20   | 23   | 23   | 24   | 24   |
| 150      |                     |     |     |      | 5    | 10   | 11   | 11   | 11   | 11   | 11   |

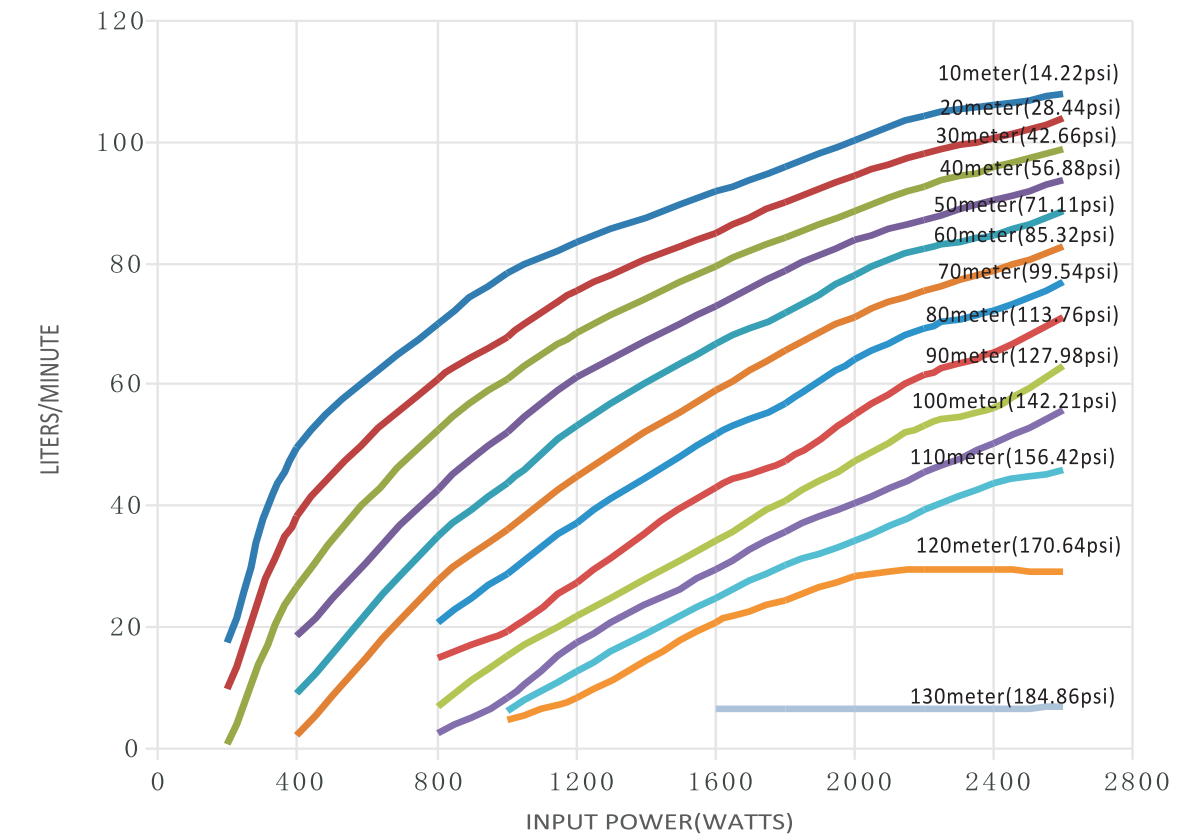
# 4SP3-13

MOTOR 2.5 HP

Flow max.116 l/min Head max.130m Max input power2.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| 10       | 18                  | 50  | 70  | 78   | 83   | 92   | 96   | 100  | 104  | 106  | 108  |
| 20       | 10                  | 38  | 61  | 68   | 76   | 85   | 90   | 94   | 98   | 101  | 104  |
| 30       | 1                   | 27  | 53  | 61   | 69   | 80   | 84   | 89   | 93   | 96   | 99   |
| 40       |                     | 19  | 43  | 52   | 61   | 73   | 79   | 84   | 87   | 90   | 94   |
| 50       |                     | 9   | 35  | 44   | 53   | 67   | 72   | 78   | 83   | 85   | 89   |
| 60       |                     | 2   | 28  | 36   | 45   | 59   | 66   | 71   | 76   | 79   | 83   |
| 70       |                     |     | 21  | 29   | 37   | 52   | 57   | 64   | 69   | 72   | 77   |
| 80       |                     |     | 15  | 20   | 28   | 43   | 48   | 55   | 62   | 65   | 71   |
| 90       |                     |     | 7   | 15   | 22   | 34   | 41   | 47   | 53   | 56   | 63   |
| 100      |                     |     | 3   | 8    | 18   | 30   | 36   | 41   | 46   | 50   | 56   |
| 110      |                     |     |     | 6    | 13   | 25   | 30   | 34   | 39   | 44   | 46   |
| 120      |                     |     |     | 5    | 9    | 21   | 25   | 28   | 30   | 30   | 29   |
| 130      |                     |     |     |      |      | 7    | 7    | 7    | 7    | 7    | 7    |

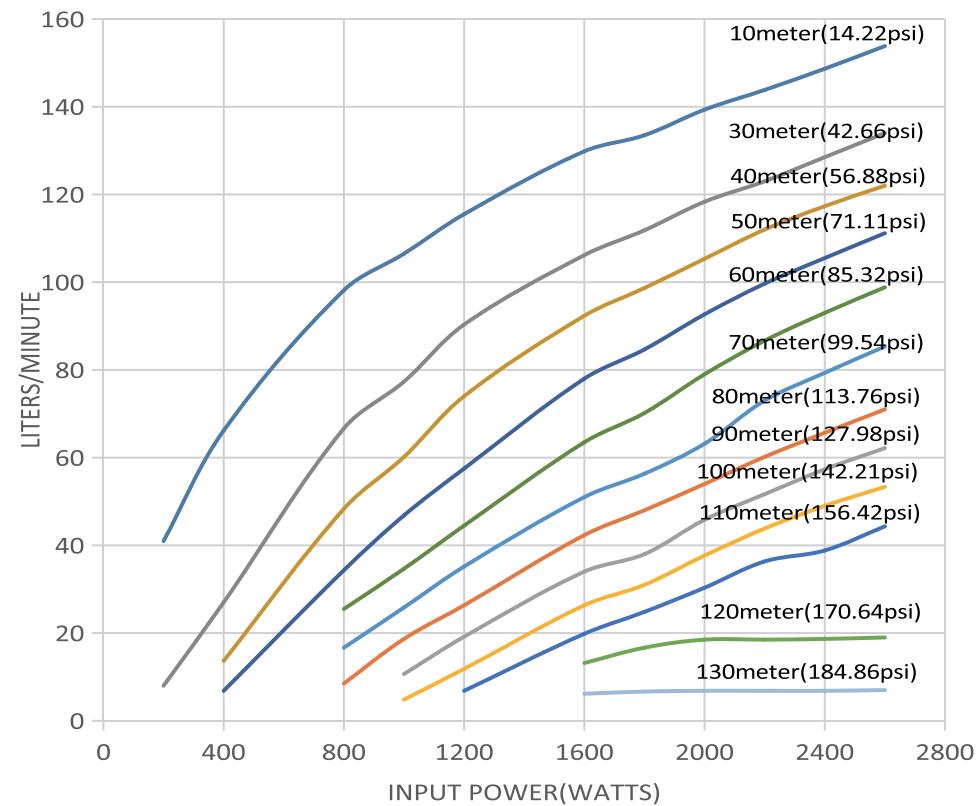
# 4SP5-12

MOTOR 2.5 HP

Flow max.166 l/min Head max.134 m Max input power2.5Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| 10       | 41                  | 66  | 98  | 107  | 116  | 130  | 134  | 139  | 144  | 149  | 154  |
| 30       | 8                   | 27  | 67  | 77   | 90   | 106  | 112  | 118  | 123  | 129  | 134  |
| 40       |                     | 14  | 48  | 60   | 74   | 92   | 99   | 105  | 112  | 117  | 122  |
| 50       |                     | 7   | 34  | 47   | 58   | 78   | 85   | 93   | 100  | 106  | 111  |
| 60       |                     |     | 26  | 35   | 45   | 64   | 70   | 79   | 87   | 93   | 99   |
| 70       |                     |     | 17  | 26   | 35   | 51   | 56   | 63   | 73   | 79   | 85   |
| 80       |                     |     | 9   | 19   | 26   | 42   | 48   | 54   | 60   | 66   | 71   |
| 90       |                     |     |     | 11   | 19   | 34   | 38   | 46   | 52   | 57   | 62   |
| 100      |                     |     |     | 5    | 12   | 26   | 31   | 38   | 44   | 49   | 53   |
| 110      |                     |     |     |      | 7    | 20   | 25   | 30   | 36   | 39   | 44   |
| 120      |                     |     |     |      |      | 13   | 17   | 19   | 19   | 19   | 19   |
| 130      |                     |     |     |      |      | 6    | 7    | 7    | 7    | 7    | 7    |

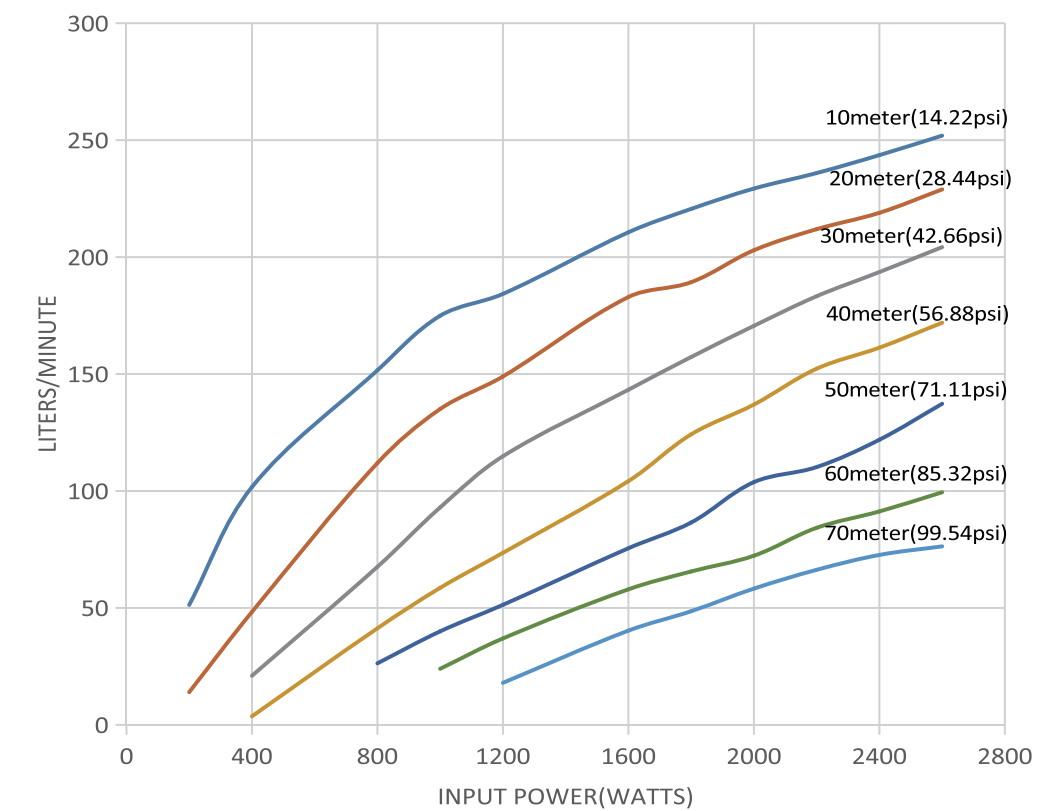
# 4SP8-7

MOTOR 2.5 HP

Flow max.270 l/min Head max.77m Max input power2.8Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| 10       | 51                  | 102 | 152 | 175  | 184  | 211  | 221  | 229  | 236  | 244  | 252  |
| 20       | 14                  | 48  | 112 | 135  | 149  | 183  | 189  | 203  | 212  | 219  | 229  |
| 30       |                     | 21  | 68  | 93   | 115  | 143  | 157  | 171  | 183  | 194  | 204  |
| 40       |                     | 4   | 41  | 59   | 74   | 104  | 124  | 137  | 152  | 161  | 172  |
| 50       |                     |     | 26  | 40   | 51   | 76   | 87   | 104  | 110  | 122  | 137  |
| 60       |                     |     |     | 24   | 37   | 58   | 66   | 72   | 84   | 91   | 99   |
| 70       |                     |     |     |      | 18   | 40   | 49   | 58   | 66   | 73   | 76   |

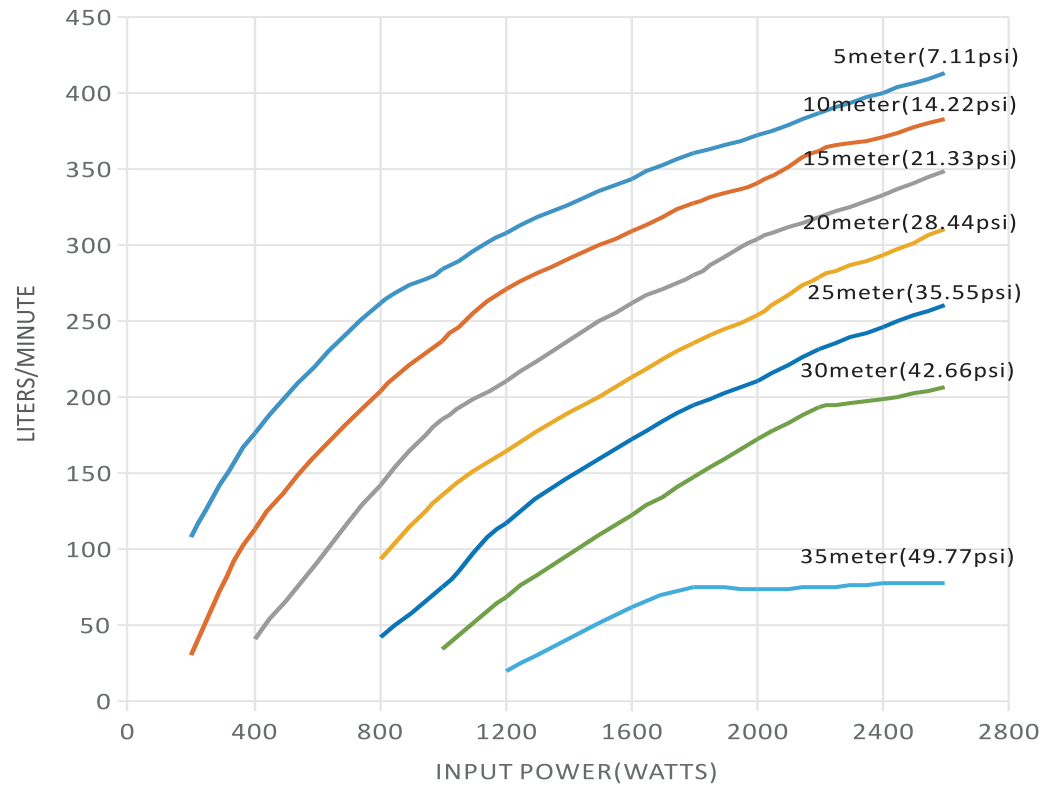
# 4SP 14-3

MOTOR 2.5 HP

Flow max.435 l/min Head max.36m Max input power2.8Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 800 | 1000 | 1200 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| 5        | 108                 | 176 | 261 | 284  | 308  | 344  | 360  | 372  | 386  | 400  | 413  |
| 10       | 30                  | 113 | 204 | 237  | 271  | 309  | 327  | 340  | 362  | 371  | 383  |
| 15       |                     | 40  | 142 | 185  | 211  | 262  | 280  | 304  | 318  | 333  | 349  |
| 20       |                     |     | 93  | 136  | 164  | 213  | 236  | 254  | 279  | 293  | 311  |
| 25       |                     |     | 42  | 75   | 118  | 172  | 194  | 210  | 231  | 246  | 261  |
| 30       |                     |     |     | 34   | 69   | 122  | 147  | 172  | 193  | 199  | 206  |
| 35       |                     |     |     |      | 19   | 62   | 74   | 74   | 75   | 77   | 78   |

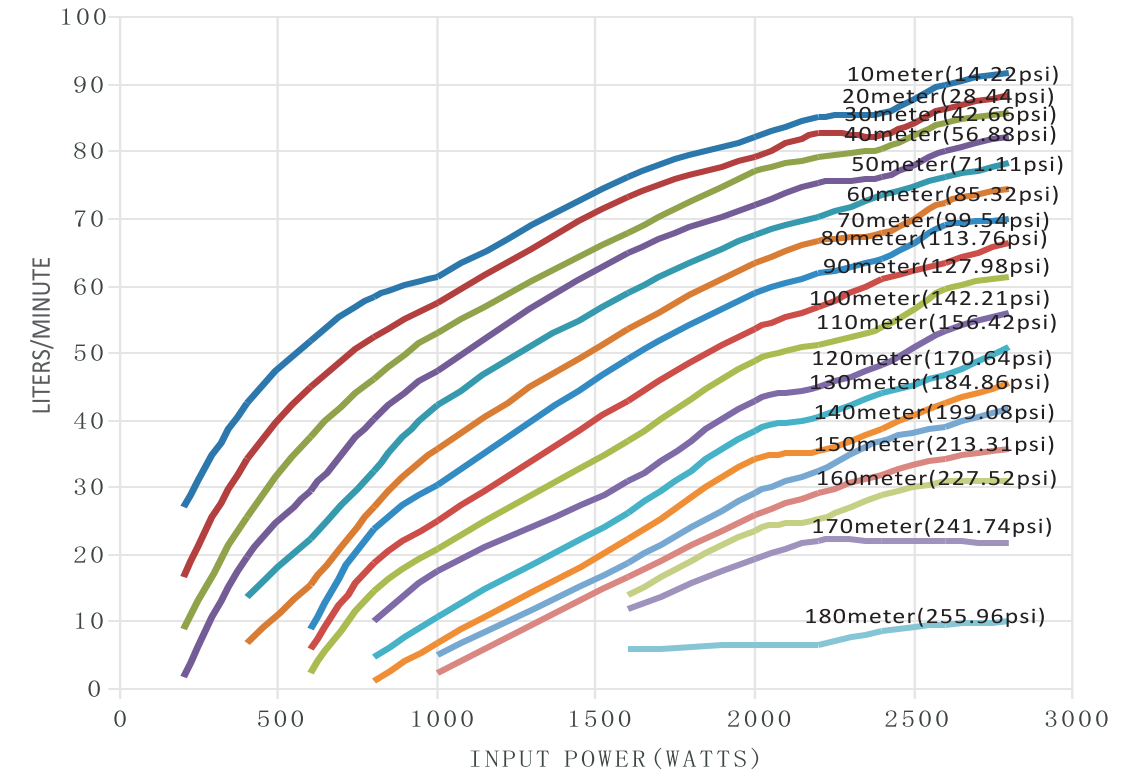
# 4SP 2-18

MOTOR 3 HP

Flow max.90 l/min Head max.176m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1600 | 2000 | 2200 | 2400 | 2600 | 2800 |
| 10       | 27                  | 43  | 52  | 59  | 62   | 76   | 82   | 85   | 86   | 90   | 92   |
| 20       | 17                  | 34  | 45  | 52  | 58   | 73   | 79   | 83   | 83   | 87   | 88   |
| 30       | 9                   | 26  | 38  | 46  | 53   | 68   | 77   | 79   | 81   | 84   | 86   |
| 40       | 2                   | 20  | 30  | 40  | 48   | 65   | 72   | 76   | 76   | 80   | 82   |
| 50       |                     | 14  | 22  | 33  | 42   | 59   | 68   | 70   | 74   | 76   | 78   |
| 60       |                     | 7   | 16  | 27  | 36   | 54   | 63   | 67   | 68   | 73   | 75   |
| 70       |                     |     | 9   | 24  | 30   | 49   | 59   | 62   | 64   | 69   | 70   |
| 80       |                     |     | 6   | 19  | 25   | 43   | 54   | 57   | 61   | 64   | 67   |
| 90       |                     |     | 3   | 15  | 21   | 37   | 49   | 51   | 54   | 60   | 62   |
| 100      |                     |     |     | 10  | 18   | 31   | 43   | 45   | 48   | 53   | 56   |
| 110      |                     |     |     | 5   | 11   | 26   | 39   | 41   | 44   | 47   | 51   |
| 120      |                     |     |     | 1   | 7    | 22   | 34   | 35   | 39   | 43   | 46   |
| 130      |                     |     |     |     | 5    | 19   | 29   | 33   | 37   | 39   | 42   |
| 140      |                     |     |     |     | 2    | 17   | 26   | 29   | 32   | 34   | 36   |
| 150      |                     |     |     |     |      | 14   | 24   | 25   | 29   | 31   | 31   |
| 160      |                     |     |     |     |      | 12   | 19   | 22   | 22   | 22   | 22   |
| 170      |                     |     |     |     |      | 6    | 7    | 7    | 9    | 10   | 10   |



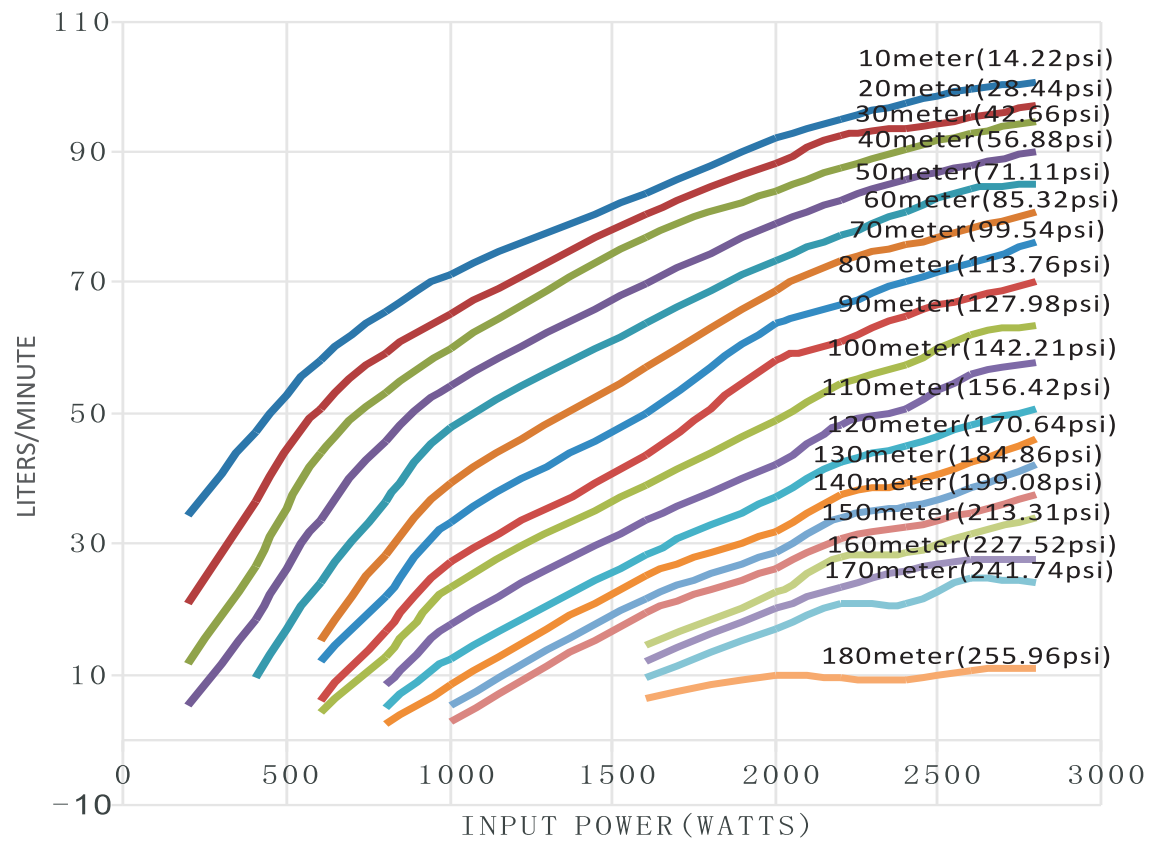
# 4SP 3-18

MOTOR 3 HP

Flow max.100 l/min Head max.185m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.25"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1600 | 2000 | 2200 | 2400 | 2600 | 2800 |
| 10       | 34                  | 47  | 58  | 66  | 71   | 84   | 92   | 95   | 97   | 100  | 101  |
| 20       | 21                  | 37  | 51  | 59  | 65   | 81   | 88   | 93   | 94   | 95   | 97   |
| 30       | 12                  | 27  | 44  | 53  | 60   | 77   | 84   | 88   | 91   | 93   | 95   |
| 40       | 5                   | 19  | 34  | 46  | 54   | 70   | 79   | 83   | 86   | 88   | 90   |
| 50       |                     | 10  | 24  | 37  | 48   | 64   | 74   | 77   | 81   | 84   | 85   |
| 60       |                     |     | 15  | 28  | 39   | 57   | 69   | 73   | 76   | 78   | 81   |
| 70       |                     |     | 12  | 22  | 33   | 50   | 64   | 67   | 70   | 73   | 76   |
| 80       |                     |     | 6   | 17  | 27   | 44   | 58   | 61   | 65   | 68   | 70   |
| 90       |                     |     | 4   | 13  | 23   | 39   | 49   | 55   | 58   | 62   | 64   |
| 100      |                     |     |     | 8   | 18   | 34   | 42   | 48   | 51   | 56   | 58   |
| 110      |                     |     |     | 5   | 13   | 28   | 37   | 43   | 45   | 48   | 51   |
| 120      |                     |     |     | 2   | 8    | 25   | 32   | 38   | 39   | 43   | 46   |
| 130      |                     |     |     |     | 5    | 22   | 29   | 34   | 36   | 39   | 42   |
| 140      |                     |     |     |     | 3    | 19   | 26   | 31   | 33   | 35   | 38   |
| 150      |                     |     |     |     |      | 15   | 23   | 28   | 29   | 32   | 34   |
| 160      |                     |     |     |     |      | 12   | 20   | 23   | 26   | 28   | 28   |
| 170      |                     |     |     |     |      | 10   | 17   | 21   | 21   | 25   | 24   |
| 180      |                     |     |     |     |      | 7    | 10   | 10   | 9    | 11   | 11   |

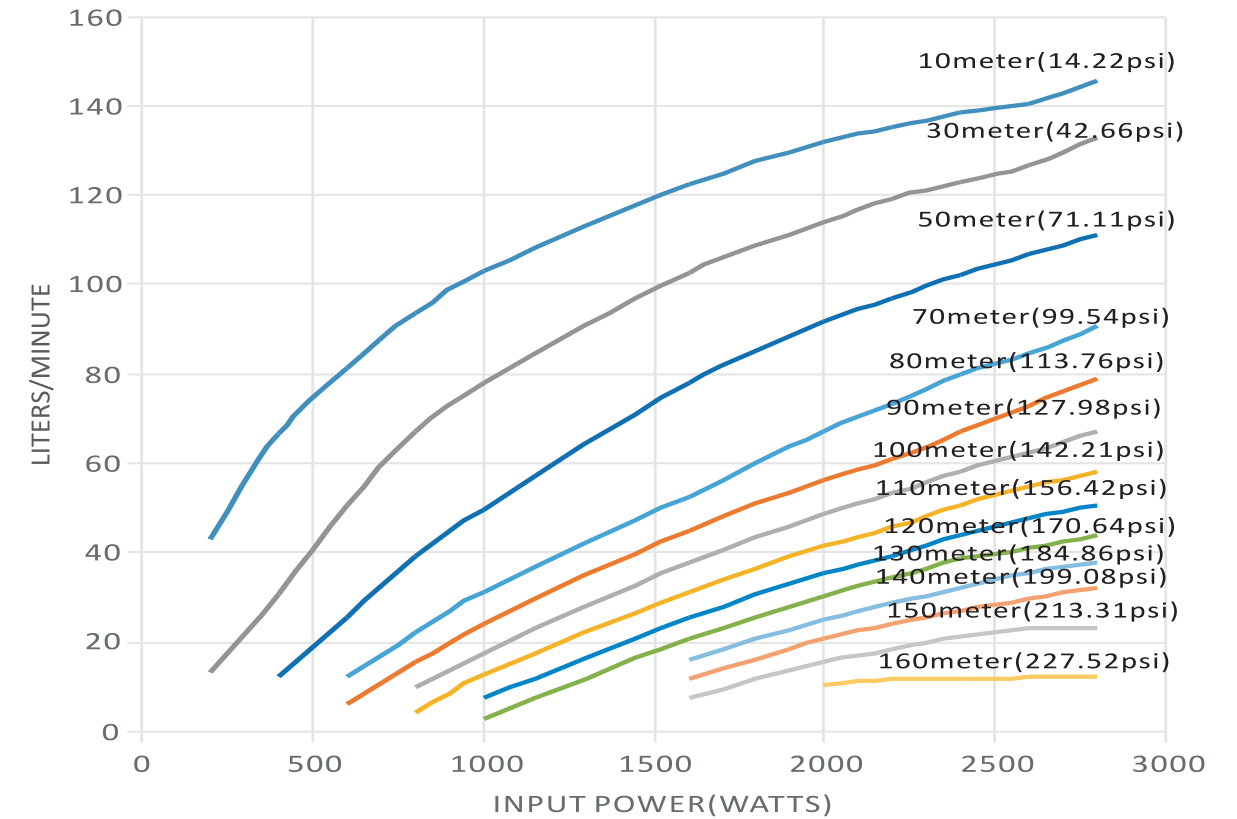
# 4SP 5-15

MOTOR 3 HP

Flow max.166 l/min Head max.165m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 1.5"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1600 | 2000 | 2200 | 2400 | 2600 | 2800 |
| 10       | 43                  | 67  | 81  | 94  | 103  | 122  | 132  | 135  | 138  | 141  | 146  |
| 30       | 13                  | 31  | 51  | 67  | 78   | 103  | 114  | 119  | 123  | 127  | 133  |
| 50       |                     | 12  | 26  | 39  | 50   | 78   | 92   | 97   | 102  | 107  | 111  |
| 70       |                     |     | 12  | 22  | 31   | 53   | 67   | 73   | 80   | 85   | 91   |
| 80       |                     |     | 6   | 15  | 24   | 45   | 56   | 61   | 67   | 73   | 79   |
| 90       |                     |     |     | 10  | 18   | 38   | 49   | 53   | 58   | 62   | 67   |
| 100      |                     |     |     | 4   | 13   | 31   | 42   | 46   | 51   | 55   | 58   |
| 110      |                     |     |     |     | 7    | 25   | 35   | 39   | 44   | 48   | 51   |
| 120      |                     |     |     |     | 3    | 21   | 30   | 34   | 39   | 41   | 44   |
| 130      |                     |     |     |     |      | 16   | 25   | 29   | 32   | 36   | 38   |
| 140      |                     |     |     |     |      | 12   | 21   | 24   | 27   | 30   | 32   |
| 150      |                     |     |     |     |      | 7    | 16   | 18   | 21   | 23   | 23   |
| 160      |                     |     |     |     |      |      | 10   | 12   | 12   | 12   | 12   |

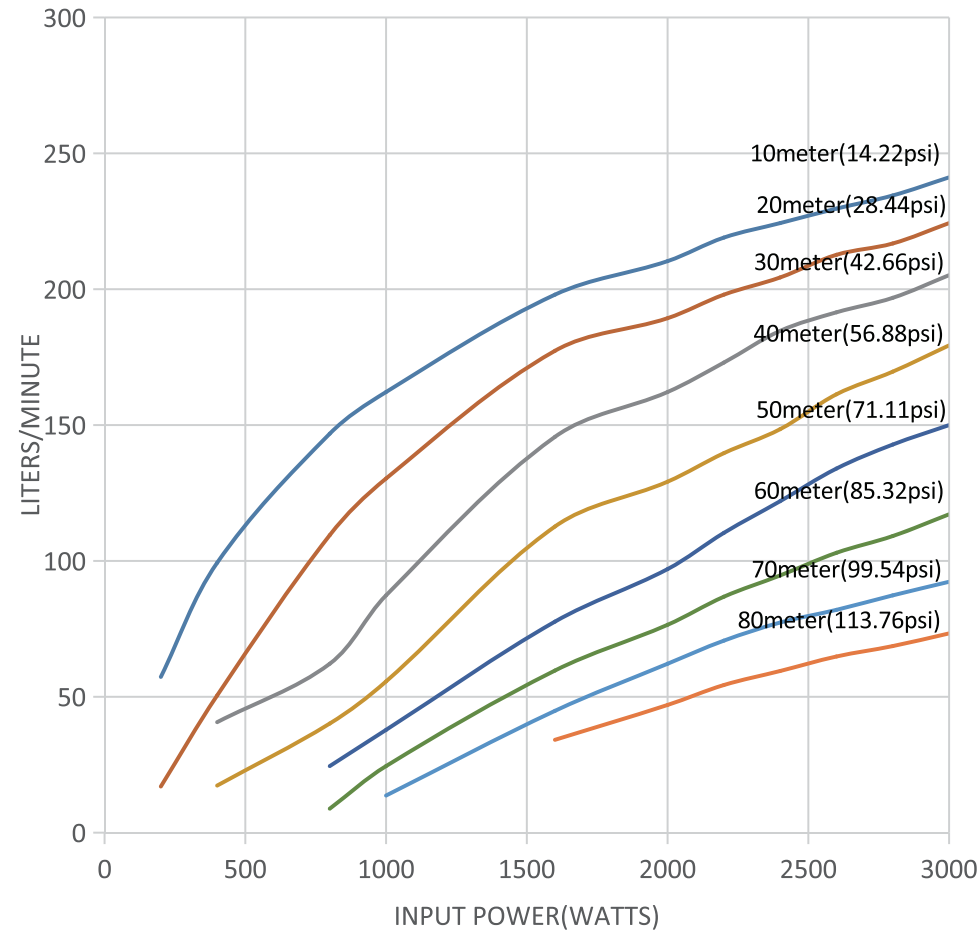
### 4SP8-8

MOTOR 3 HP

Flow max.250 l/min Head max.88m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 800 | 1000 | 1600 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| 10       | 57                  | 99  | 147 | 162  | 198  | 210  | 219  | 224  | 230  | 235  | 241  |
| 20       | 17                  | 51  | 110 | 130  | 177  | 189  | 198  | 204  | 213  | 217  | 224  |
| 30       |                     | 41  | 62  | 87   | 146  | 162  | 173  | 185  | 192  | 197  | 205  |
| 40       |                     | 17  | 40  | 56   | 113  | 129  | 140  | 149  | 161  | 170  | 179  |
| 50       |                     |     | 25  | 38   | 78   | 97   | 110  | 122  | 134  | 143  | 150  |
| 60       |                     |     | 9   | 25   | 60   | 77   | 87   | 95   | 103  | 109  | 117  |
| 70       |                     |     |     | 14   | 45   | 62   | 71   | 77   | 82   | 87   | 92   |
| 80       |                     |     |     |      | 34   | 47   | 54   | 60   | 65   | 69   | 73   |

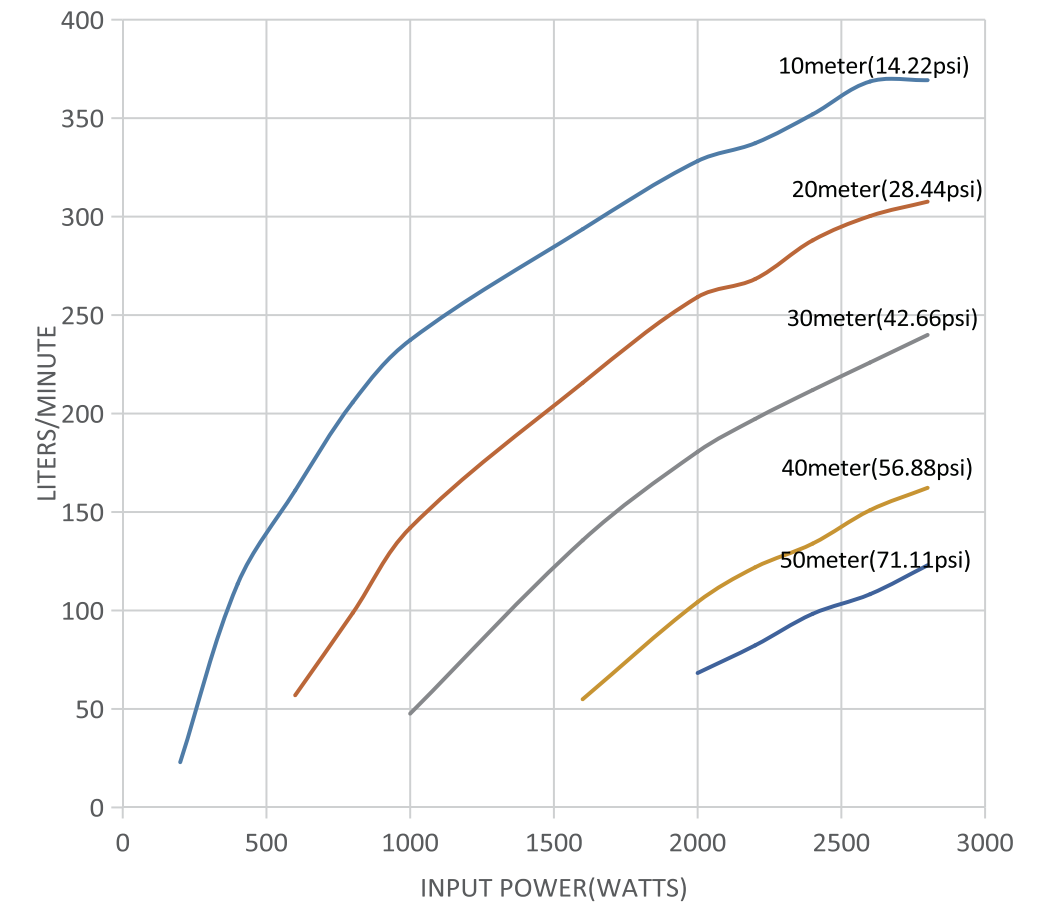
### 4SP14-4

MOTOR 3 HP

Flow max.400 l/min Head max.48m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2"

Maximum OD 4"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1600 | 2000 | 2200 | 2400 | 2600 | 2800 |
| 10       | 23                  | 114 | 161 | 206 | 237  | 294  | 328  | 337  | 352  | 369  | 369  |
| 20       |                     |     | 57  | 99  | 142  | 216  | 259  | 268  | 288  | 300  | 308  |
| 30       |                     |     |     |     | 48   | 136  | 181  | 197  | 212  | 226  | 240  |
| 40       |                     |     |     |     |      | 55   | 104  | 122  | 134  | 151  | 162  |
| 50       |                     |     |     |     |      |      | 68   | 82   | 98   | 108  | 123  |

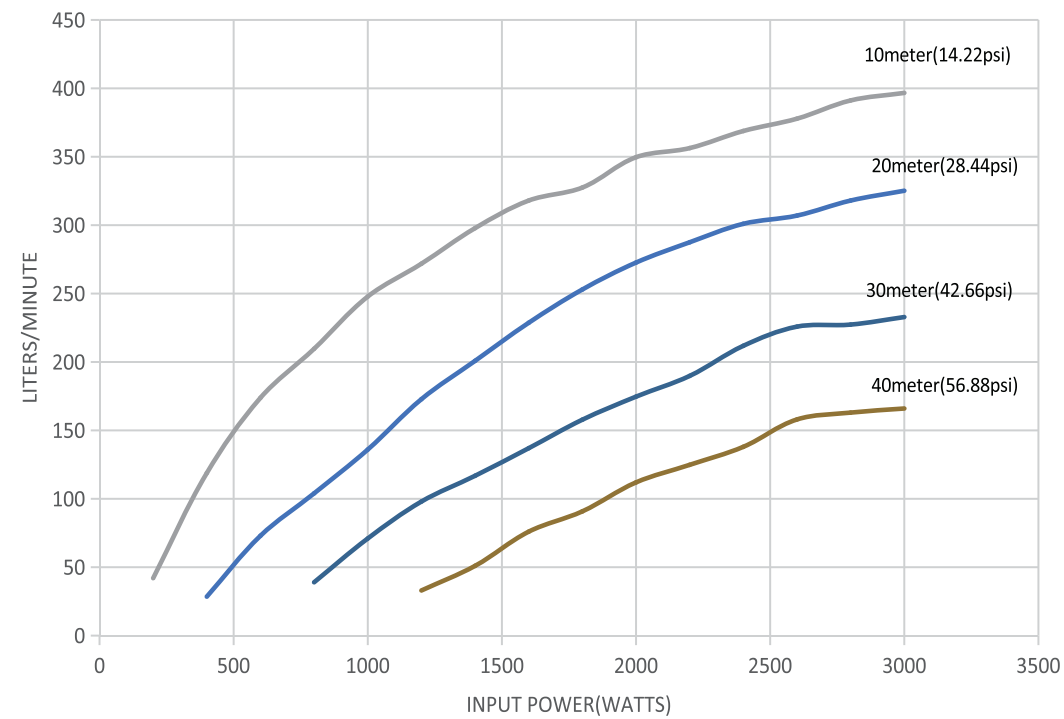
## 5SP10-4

MOTOR 3 HP

Flow max.440 l/min Head max.49m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| 10       | 42                  | 119 | 174 | 210 | 248  | 272  | 298  | 318  | 328  | 350  | 356  | 369  | 378  | 391  | 397  |
| 20       |                     | 29  | 73  | 104 | 136  | 173  | 201  | 229  | 253  | 273  | 288  | 301  | 307  | 318  | 325  |
| 30       |                     |     |     | 39  | 71   | 98   | 117  | 137  | 158  | 175  | 190  | 212  | 226  | 227  | 233  |
| 40       |                     |     |     |     | 33   | 51   | 76   | 91   | 112  | 125  | 138  | 158  | 163  | 166  |      |

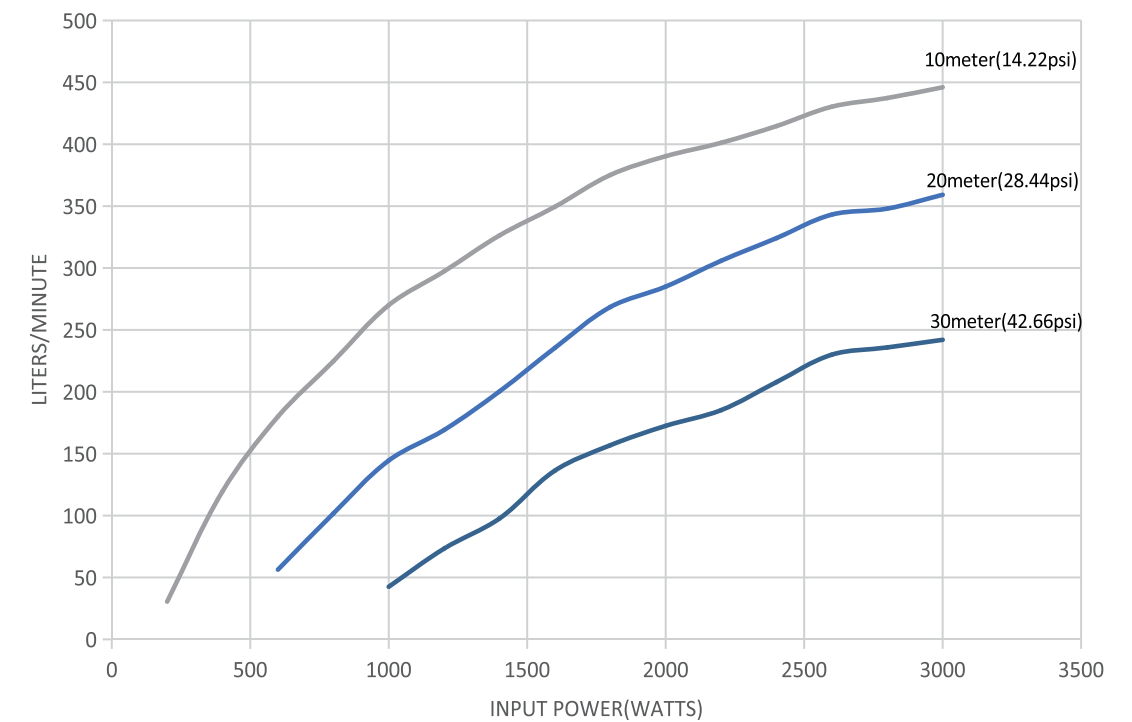
## 5SP15-3

MOTOR 3 HP

Flow max.500 l/min Head max.38m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| 10       | 31                  | 120 | 180 | 225 | 270  | 297  | 326  | 350  | 375  | 390  | 401  | 415  | 430  | 437  | 446  |
| 20       |                     |     | 56  | 102 | 145  | 169  | 200  | 236  | 269  | 285  | 306  | 324  | 343  | 348  | 359  |
| 30       |                     |     |     |     | 43   | 73   | 98   | 136  | 157  | 173  | 185  | 208  | 230  | 236  | 242  |



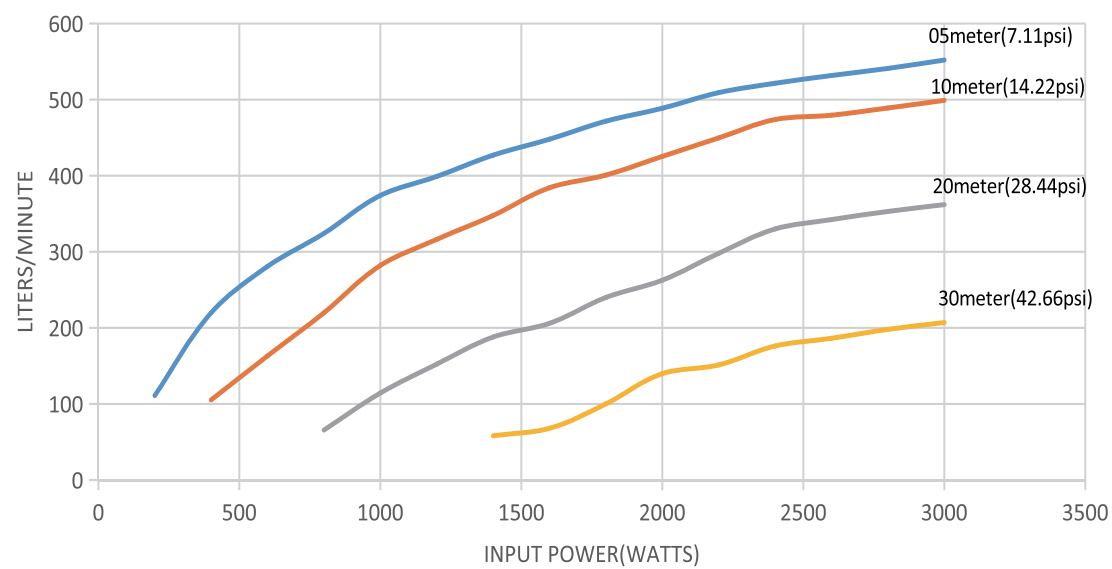
## 5SP20-3

MOTOR 3 HP

Flow max.580 l/min Head max.38m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| 5        | 111                 | 220 | 281 | 324 | 374  | 399  | 427  | 448  | 472  | 489  | 509  | 522  | 532  | 541  | 552  |
| 10       |                     | 105 | 163 | 220 | 282  | 316  | 348  | 384  | 401  | 425  | 450  | 474  | 480  | 489  | 499  |
| 20       |                     |     |     | 66  | 114  | 152  | 188  | 206  | 240  | 263  | 298  | 330  | 342  | 353  | 362  |
| 30       |                     |     |     |     |      |      | 58   | 68   | 100  | 140  | 151  | 176  | 186  | 198  | 207  |

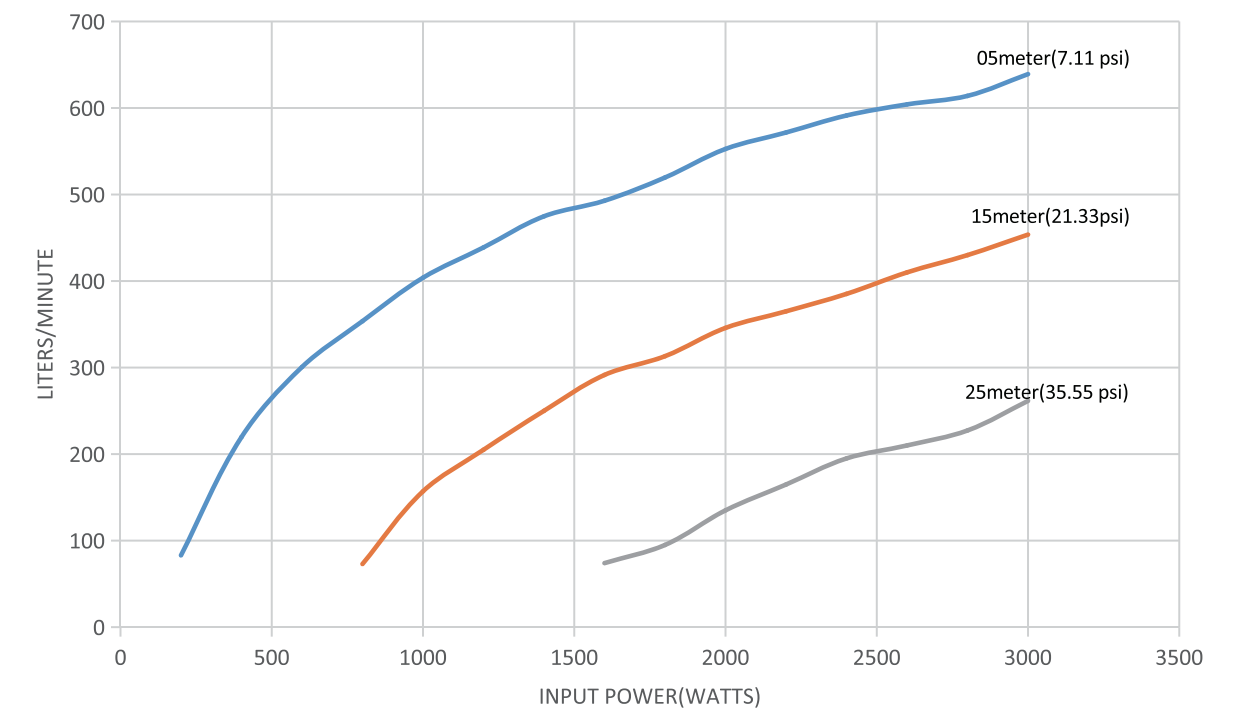
## 5SP25-3

MOTOR 3 HP

Flow max.678 l/min Head max.38m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| 5        | 83                  | 220 | 301 | 354 | 404  | 439  | 475  | 493  | 520  | 553  | 572  | 591  | 604  | 614  | 639  |
| 15       |                     |     |     | 73  | 157  | 205  | 250  | 292  | 313  | 346  | 365  | 385  | 410  | 430  | 454  |
| 25       |                     |     |     |     |      |      |      | 74   | 95   | 135  | 165  | 195  | 210  | 227  | 262  |

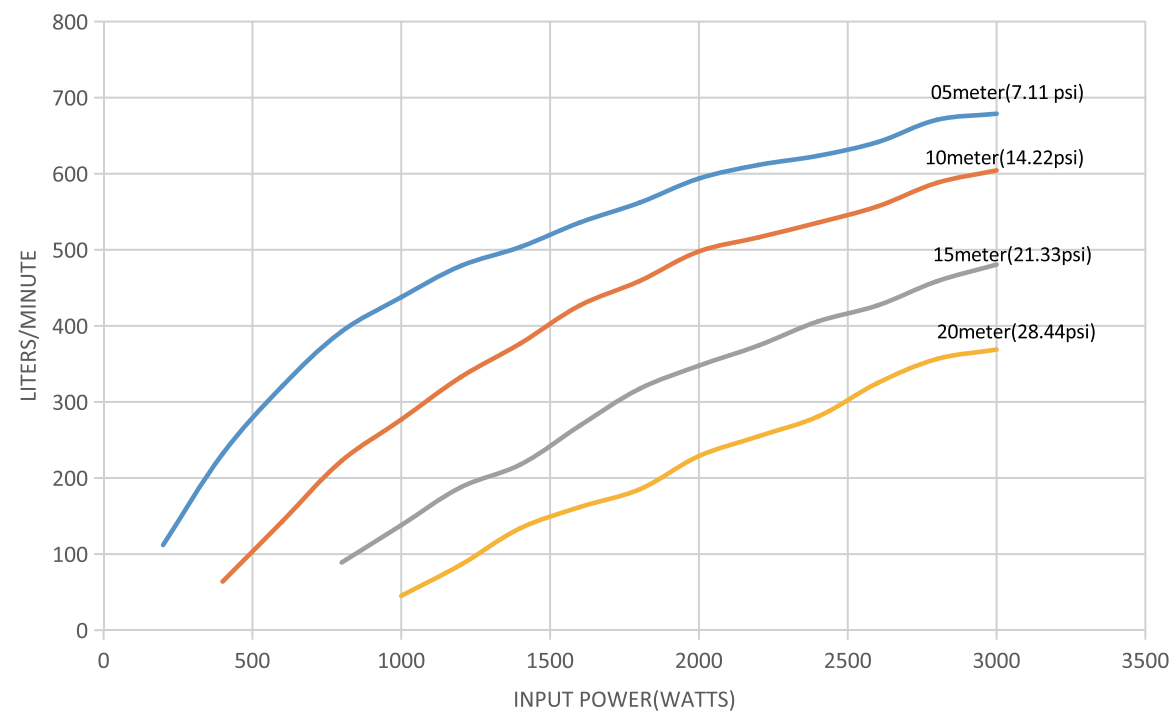
## 5SP30-2

MOTOR 3 HP

Flow max.715 l/min Head max.26m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 2.5"

Maximum OD 5"



|          | INPUT POWER (WATTS)       |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|          | 200                       | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
| 5        | 112                       | 232 | 321 | 393 | 438  | 479  | 504  | 536  | 562  | 594  | 612  | 624  | 642  | 671  | 679  |
| 10       |                           | 64  | 143 | 223 | 277  | 333  | 377  | 427  | 459  | 498  | 516  | 536  | 557  | 588  | 604  |
| 15       |                           |     |     | 89  | 138  | 188  | 218  | 269  | 317  | 348  | 374  | 406  | 427  | 459  | 481  |
| 20       |                           |     |     |     | 45   | 86   | 134  | 162  | 185  | 229  | 255  | 281  | 325  | 357  | 369  |

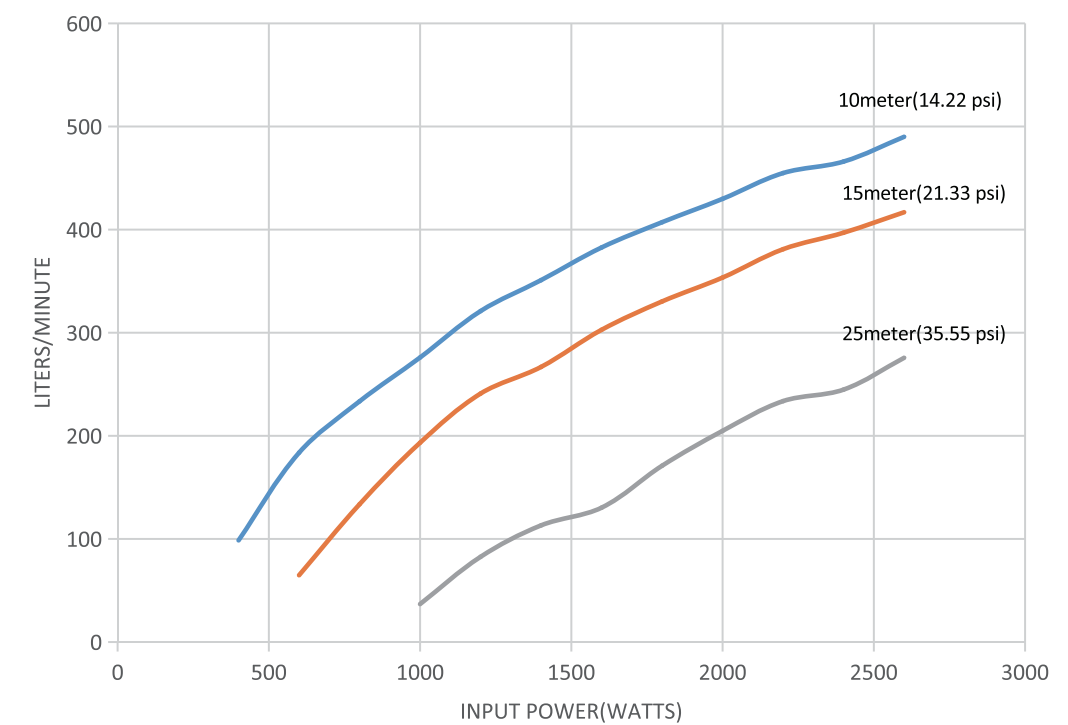
## 6SP17-3

MOTOR 3 HP

Flow max.560 l/min Head max.38m Max input power2.6Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 3"

Maximum OD 6"



|          | INPUT POWER (WATTS)       |     |     |      |      |      |      |      |      |      |      |      |
|----------|---------------------------|-----|-----|------|------|------|------|------|------|------|------|------|
|          | 400                       | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 |
| HEAD (M) | FLOW RATE (LITERS/MINUTE) |     |     |      |      |      |      |      |      |      |      |      |
| 10       | 99                        | 184 | 234 | 276  | 321  | 351  | 383  | 407  | 430  | 455  | 466  | 490  |
| 15       |                           | 65  | 134 | 193  | 241  | 267  | 303  | 330  | 354  | 381  | 397  | 417  |
| 25       |                           |     |     | 37   | 83   | 113  | 130  | 171  | 205  | 234  | 245  | 276  |

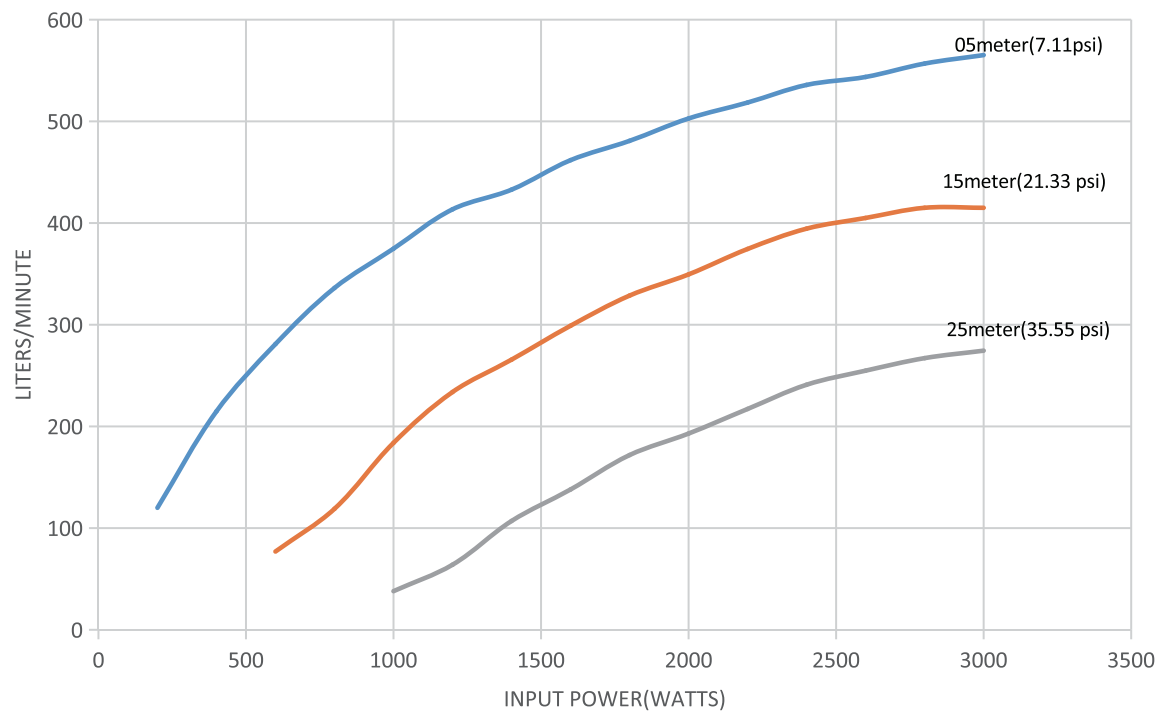
## 6SP20-3

### MOTOR 3 HP

Flow max.590 l/min Head max.41m Max input power3.0Kw

90-360VDC,1X90-240VAC,50/60Hz Motor-(4" \*4" )-BSP 3"

Maximum OD 6"



| HEAD (M) | INPUT POWER (WATTS) |     |     |     |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
|          | 200                 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 |
| 5        | 120                 | 215 | 281 | 336 | 375  | 414  | 433  | 462  | 481  | 503  | 519  | 536  | 544  | 557  | 565  |
| 15       |                     |     | 77  | 119 | 184  | 234  | 266  | 299  | 329  | 350  | 375  | 395  | 405  | 415  | 415  |
| 25       |                     |     |     |     | 38   | 64   | 107  | 138  | 172  | 193  | 217  | 241  | 255  | 267  | 275  |

## Solar Panels Require

The solar module is equipped with plugs and sockets for easy connection of several modules in series connection. The solar panels are mounted on a support structure, tilted at an angle ensuring optimum utilization of the solar energy. The number of solar modules is determined by means of the pump type. (The pump type and solar array power shown in table below).

| Max.Motor Power(kW) | Max.Motor Power(HP) | Min.Photovoltaic Power(kW) | Connection |
|---------------------|---------------------|----------------------------|------------|
| 0.37                | 0.5                 | 0.5                        | In series  |
| 0.55                | 0.75                | 0.75                       | In series  |
| 0.75                | 1                   | 1                          | In series  |
| 1.1                 | 1.5                 | 1.5                        | In series  |
| 1.5                 | 2                   | 2                          | In series  |
| 1.8                 | 2.5                 | 2.5                        | In series  |
| 2.2                 | 3                   | 3                          | In series  |

The illustration of solar panel shows below.

| Rate Power | Open loop voltage | Max. Current | Dimensions           |
|------------|-------------------|--------------|----------------------|
| 250W       | 37.7V             | 9.09A        | L1650mm*W990mm*H40mm |

## Warning

AC and DC change need wait 15 minutes

Be sure that pump immerse completely in liquid 10 minutes before running