

Technical Datasheet – CapSub4 | System 1 | 45-40

CapSub4 System 1 45-40 is a complete bore pumping and control system - designed and configured by the manufacturer, and delivered complete with everything you need for DIY installation.

Best Suited to: Domestic, Low Flow / Shallow Well Bores

Control

CapSmart-IPS (Intelligent Pressure Switch) - An automatic pump control system with advanced protection features:

- Fully automatic on/off electronic control
- Simple digital interface for display and setup
- Realtime display of Pressure and Current (Amps)
- Alarm Log for Diagnostics and Testing
- Advanced Protection against dry run, anti-seizure, antifreeze and over-pressurization
- Unique current sensing technology prevents motor burnout
- Standard 10amp 3 pin 240v power connection - Plug directly into standard powerpoint.

For more information on the CapSmart IPS, refer to the operating manual at:

<http://www.capsub.com.au/pages/techlibrary.aspx>

Pumping Power

The E4XP Series pump platform is newly designed from the ground-up, using the latest technology, materials and patented design innovations to deliver the most efficient, longest service life submersible pumps available.

The E4XP 25/9 Features:

- Desert Sand Out System® - delivers best in class capabilities for sandy bores, and can handle up to 300 gm3 of solids (twice the industry standard) with no deterioration in service life.
- Defender® - Integrated Galvanic Corrosion System protects the pump and motor from galvanic corrosion by passivating stainless steel components.
- Easy-Check® - Combining a unique low headloss check valve for improved flow, and innovative sealing and assembly system to extend pump life, avoid the possibility of the check valve jamming, and simplify inspection and maintenance
- Micro-cast Stainless Steel Pump Ends
- Fully enclosed Pump shaft
- Fully dismountable pump end

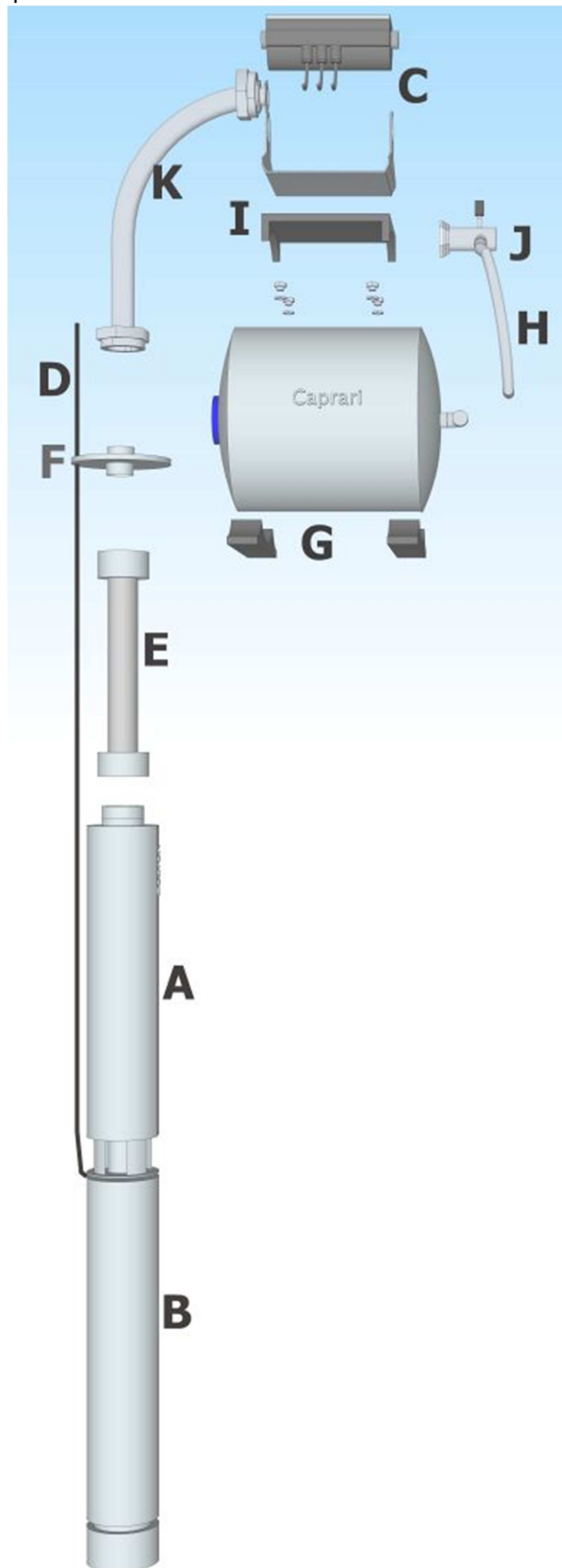
Performance Data

| | | | | | | | | | | | | | | | |
|------|-------|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| Flow | l/min | 0 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 36 | 42 | 48 | 54 | 60 | 66 |
| Head | m | 55.5 | 55 | 54.5 | 54 | 53 | 52 | 51 | 50 | 47 | 44 | 40 | 35 | 29.5 | 23 |
| | | | | | | | | | | | | | | | |
| Flow | gph | 0 | 158 | 198 | 238 | 277 | 317 | 356 | 396 | 475 | 554 | 634 | 713 | 792 | 871 |
| Head | feet | 182 | 180 | 179 | 177 | 174 | 171 | 167 | 164 | 154 | 144 | 131 | 115 | 97 | 75 |

For Performance Curve and additional performance detail refer to page 3.

System in Detail – CapSub4 | System 1 | 45-40

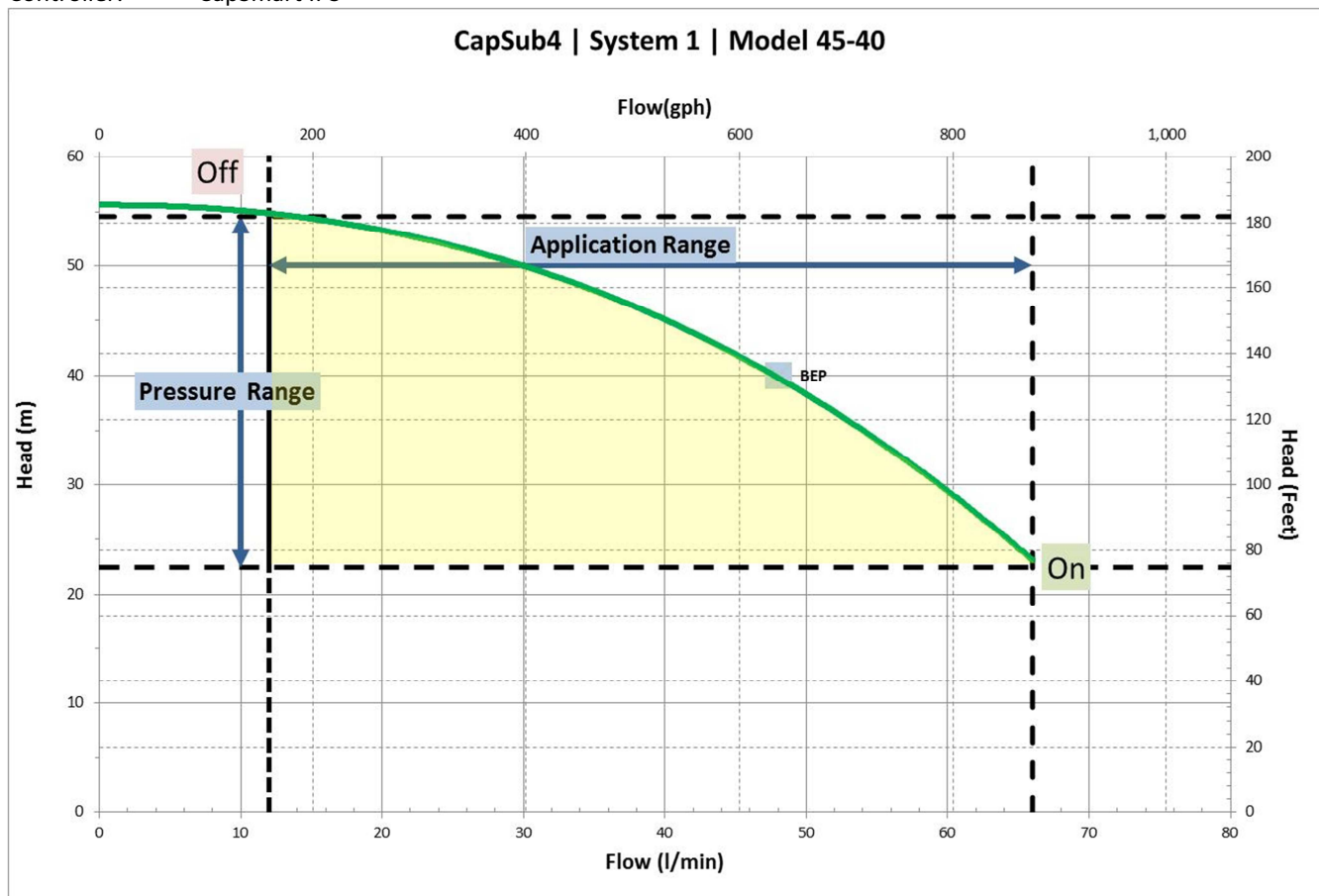
Every CapSub System includes everything you need for simple installation. It's professionally pre-wired, internally pre-plumbed with the pump unit, power supply and rising main configured to match your supplied bore specifications.



| | |
|--|--|
| System | 1 |
| Model | 45-40 |
| Suitable for | Domestic, low-flow / shallow-well bores |
| Comes with everything you need | ✓ |
| In Detail | |
| A Caprari E4XP Series Pump Model | 25/9 |
| B Motor Model | 4R202 |
| Motor P2 Power (kW) | 0.37 |
| Max in-bore diameter (suits 4") | 98mm |
| Controller | |
| C Controller Model | CapSmart IPS |
| Automatic On/Off Control | ✓ |
| Current sensing technology (Pump & Motor Protection) | ✓ |
| Plug and Play - 240v 10 Amp 3 Pin "IN" (2m Length) | ✓ |
| Power Out, to Motor | 240V, 1 Phase |
| The Pump | |
| Galvanic Defender ® Corrosion Protection | ✓ |
| Easy Check ® High Flow Check Valve | ✓ |
| Desert Sand ® (Sand Protection system to 300gm3) | ✓ |
| Down the Bore | |
| D Electrical Drop Cable (High Quality Rubber Submersible rated) | 2C+E 1.5mm |
| E Flexibore 100 Series Flexible Rising Main, c/- Stainless Steel Couplings | ✓ |
| Flexible Rising Main Size | 32mm |
| Pump and Motor Suspension | Not Independently Required - Flexibore is designed to suspend the pump |
| F Solid Stainless Steel Bore Cap (Adjustable) - Suit Bores | 4-6" |
| Bore Cap Outlet (Threaded) | 1 1/4" |
| Additional Plumbing and Components | |
| Fits inside Std "Polyslab" Pump Cover | ✓ |
| G 18L Horizontal Pressure Tank | ✓ |
| H Connection Kit 316SS | 1" |
| I Bracket | 25 SS |
| J Delivery Connection (BSP) | 32mm / 1 1/4" |
| K Flexible Swept Bend in Stainless Steel, c/- Unions | 1 1/4" |
| Performance Characteristics | |
| Metric | |
| Max Head (m) | 55 |
| Max Flow (l/min) | 66 |
| Output at BEP | 48 l/min @ 400 kpa |
| Imperial | |
| Max Pressure (psi) | 78 |
| Max Flow (gph) | 880 |
| Output at BEP | 630 gph @ 57psi |

Performance Data – CapSub 4 | System 1 – 45-40

Pump Model: E4XP 25/9
Motor: 4R202
Controller: CapSmart IPS



Application Range 12 - 66 l/min | 158-871 gph

Pressure Range 220kpa (ON) - 535 kpa (OFF) | 32psi (ON) - 78psi (OFF)
22m (ON) - 55m (OFF) | 74 Feet (ON) - 179 Feet (OFF)

How to read the Application Curve

This Application Curve defines the performance and application range of CapSmart IPS controller paired with Caprari E4XP 25/9 submersible pump and 4R202 Motor.

When flow demand is within the Application Range the controller runs the pump constantly, delivering pressure equivalent of the pump curve (the green line).

CapSmart IPS will switch the pump off when system pressure reaches the top of the pressure range (this will occur when, for example, a tap has been turned off). When system pressure falls below the bottom of the pressure range, the pump is switched on.

Using your own details

Plot the Total Dynamic Head* of your water delivery system against the vertical axis. Read across to the Pump Curve (the green line) to determine flow delivery. The closer to BEP (Best Efficiency Point) on the curve, the closer to the pump's optimal operating range.

*Calculate Total Dynamic Head for your bore installation using the CapSub selection tool:

<http://www.capsub.com.au/pages/SelectionGuide.aspx>

CapSub 4 System 1 - 45-40

Requested data

| | |
|--------------|------------------|
| Flow | 0 l/s |
| Head | 0 m |
| Fluid | Clean Water |
| Pumpe type | Single head pump |
| No. of pumps | 1 |

Operating pump data

| | |
|----------------------|--------|
| Flow | |
| Head | |
| Shaft power | |
| Efficiency | % |
| Head H(Q=0) | 55.5 m |
| Discharge connection | 1 1/4" |

Motor data

| | |
|----------------------|------------|
| Frequency | 50 Hz |
| Rated voltage | 400 V |
| Nominal speed | 2820 1/min |
| Number of poles | 2 |
| Rated power P2 | 0.55 kW |
| Rated current | 1.5 A |
| Motor type | 3~ |
| Insulation class | B |
| Degree of protection | IP 68 |

Operating limits

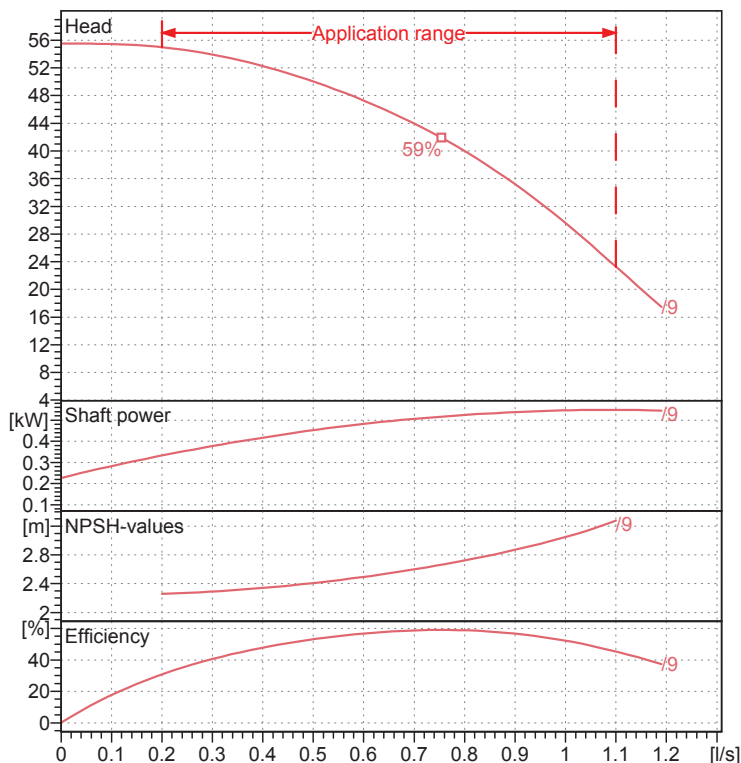
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|-------------------------------------|-----------|
| Starts per hour max. | 20 |
| Maximum temperature of pumped fluid | 30 °C |
| Maximum content of solid | 150 g/m³ |
| Max. Density | 998 kg/m³ |
| Max. viscosity | 1 mm²/s |

General data

| | |
|--------|-------|
| Weight | 12 kg |
|--------|-------|

Materials

| | |
|--------------------------------------|---|
| PUMP CONSTRUCTION | |
| Suction and delivery body | AISI 304 Precision cast stainless steel |
| Outer shell | AISI 304 Stainless steel |
| Shaft | AISI 304 Stainless steel |
| Protective bushing | Chromed, precision cast AISI 304 |
| Impeller | Thermoplastic resin |
| Diffuser | Thermoplastic resin |
| Insert, middle disc and stage shell | AISI 304 Stainless steel |
| Transmission coupling | AISI 316 Stainless steel |
| Cable guard | AISI 304 Stainless steel |
| Cone strainer | AISI 304 Stainless steel |
| Swing check valve with spring return | |
| MOTOR CONSTRUCTION | |
| Upper bearing | Protected by a stainless steel cover |
| Shaft | Stainless steel |
| Outer shell | Stainless steel |
| Seal on shaft, external | Ring with rubber lip |
| Seal on shaft, internal | Mechanical in ceramic/graphite |
| Guide-Thrust bearing | Ball bearing steel |



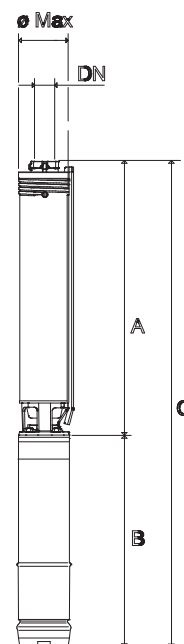
Operating data

ISO 9906-A

| Q [l/s] | H [m] | P [kW] | Eff. [%] | NPSH [m] |
|---------|-------|--------|----------|----------|
| | | | | |

A = 398
B = 365
C = 763
DN = G1 1/4"
ø Max = 98

Dimensions mm



Remarks:

| | | | |
|---------------------------|------------------|---|----------------------|
| Date 2013-10-31 | Page 4 | Offer no. CapSub 4 system curve | Pos.no 2.1 |
|---------------------------|------------------|---|----------------------|