

## Pumps specification analysis

Requirements: Pump flow rate surface water flooding: 26,500 gallons per hour, high solids capability, towable including trailer, storable (size), budget £20,000 per pump reserving £15,000 for insurance and maintenance.

<b><u>Key information</u></b>	<b>Hilta C100</b>	<b>SSP QHH80</b>	<b>SSP QC/P100</b>	<b>SLD CD100M/403D.15</b>
<b>Manufactured in:</b>	UK	UK	UK	UK
<b>Flow Rate:</b>	30,000 gallons per hour	26,400 gallons per hour	44,000 gallons per hour	27,000 gallons per hour
<b>Ease of use and Self-priming:</b>	Key start Self-priming	Key start Self priming	Key start Self priming	Key start Self-priming
<b>Part availability:</b>	UK	UK	UK	UK
<b>Warranty:</b>	24 months	24 months	24 months	24 months
<b>Servicing:</b>	Manufacturer, A Plant, Fairfax	Manufacturer, A Plant, Fairfax	Manufacturer, A Plant, Fairfax	Manufacturer, A Plant, Fairfax

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<b>Solids capability:</b>	35mm with filter trays	20mm	40mm x 65mm	45mm with filter trays
<b>Storage size:</b>	3200 x 1800 x 1500mm 1010kg	4272 x 1778 x 1600mm 1313kg	4272 x 1778 x 1600mm 1288kg	1940x1050x 1500mm 1106kg
<b>Transportation:</b>	Towable	Towable	Towable	Towable
<b>Noise:</b>	73 decibels at approximate 7 metres	Not specified	65 decibels at approximate 7 metres	64 decibels at approximate 7 metres
<b>Price:</b>	Morris Machinery: £11,493 Plus VAT including trailer.  A Plant: £13500.64 Plus VAT	£21,505.00 plus VAT not including trailer £955.00 plus VAT	£16,980 plus VAT not including trailer £955.00 plus VAT	£23,707 plus VAT including trailer.

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<p><b>Summary of pump advantages and disadvantages:</b></p>	<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Price</li> <li>• Sourced direct from supplier</li> <li>• Storage size</li> <li>• Solid capability and filter tray</li> <li>• Flow rate meeting requirements</li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• Noise</li> <li>• Can NOT be run dry</li> </ul>	<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Can be run dry</li> <li>• Flow rate just meeting specification requirement</li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• Only available 3 inch hose, not suitable</li> <li>• Weight for towing</li> <li>• Storage size</li> <li>• Pricing</li> </ul>	<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Can be run dry</li> <li>• Noise 65 decibels</li> <li>• Solids capability</li> <li>• Very high flow rate</li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• Pricing</li> <li>• Storage size</li> </ul>	<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Noise 65 decibels</li> <li>• Solids capability with filter tray</li> <li>• Flow rate just meeting specification requirement.</li> <li>• Storage size</li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• Pricing</li> <li>• Can NOT be run dry</li> </ul>
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### Conclusion flood pump manufacturer and model for Tadcaster:

After investigation, the Hilta C100 flood pump is a suitable choice in the opinion of Tadcaster Flood Action Group to help with foreseeable surface water flooding on Bridge Street.

The manufacturer, Morris Machinery, performed an on-site analysis to assess the most suitable flood pump with a charity rate discount applied to the purchase.

Reviewing the pump specifications further, the C100 has a suitable fuel tank capacity of 38 litres which an adequate running time of 10 to 15 hours per tank of fuel.

The group has identified the main disadvantage of the C100 that it cannot be to run dry and therefore it needs to be supervised and shut down if the water has cleared. The SSPQHH80 and SSPQC/P100 pumps could be run dry although the increased price and size weighed the viability of being able to provide two flood pumps for the town taking into account insurance and on going maintenance.

The head capability of the pump is 32 metres with the QC/P100 discharge head at 28metres. The QC/P100 was a close comparable with a large flow rate of 44,000 gallons per hour, high solids capability 40mm, can be run dry and 220 litre tank. The QC/P100 price is £6,442 more expensive per pump than the Hilta C100, the size is 1072mm larger and 278 KG heavier to tow and manoeuvre.

The decibels of the C100 are higher than the above pumps we compared although it does conform with the noise directive 2000/14/EC.