

# GM / Pulse Tube Cryocoolers

## Specification

GM Cryocooler: Nominally Sumitomo 415 model

Cooling powers at 50Hz	40W @ 40K, 1.5W @ 4.2K
Base temperature	<4K
Maintenance interval	10,000 hrs (Disassembly of coldhead required)
Charcoal adsorber life	20,000 hrs
Mains power requirement	7.2kW, 3-phase (200V, 25A)
Water cooling	7L/min (at 28 C)
Ambient temperature	4 C to 28 C
Compressor dimensions	W450mm, L485mm, H591mm, 120Kg

More information on Sumitomo Cryocoolers can be found the Sumitomo website:  
<http://www.shicryogenics.com>

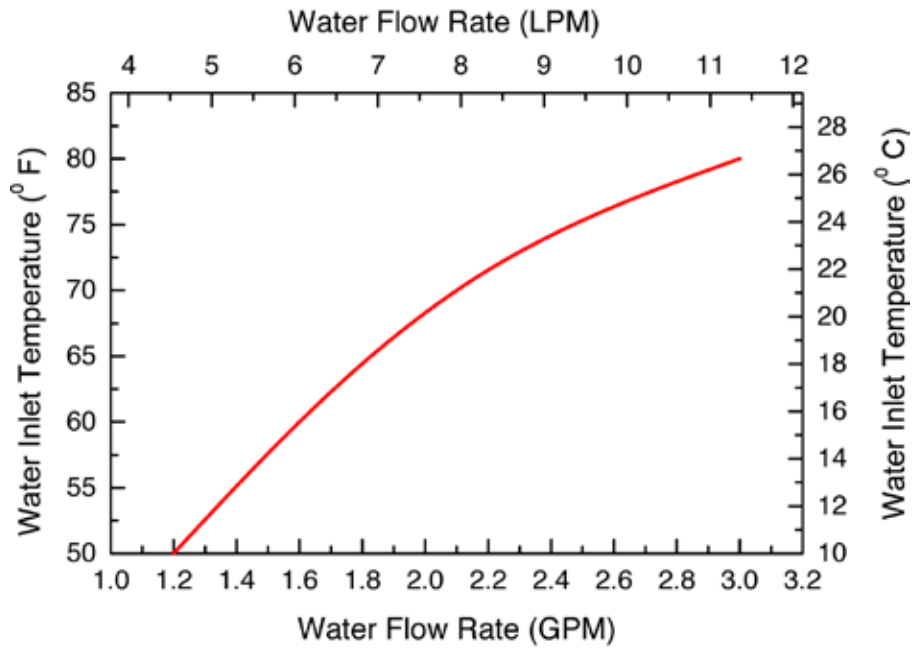
Pulse-tube Cryocooler: Nominally Cryomech PT415 model

Cooling powers at 50Hz	40W @ 45K, 1.5W @ 4.2K
Base temperature	<2.8K
Maintenance interval	20,000 hrs (Adsorber change only)
Charcoal adsorber life	20,000 hrs
Mains power requirement	10.5kW, 3-phase
Water cooling	11.5L/min (at 27 C)
Ambient temperature	7 C to 38 C
Compressor dimensions	W580mm, L610mm, H910mm, 214Kg

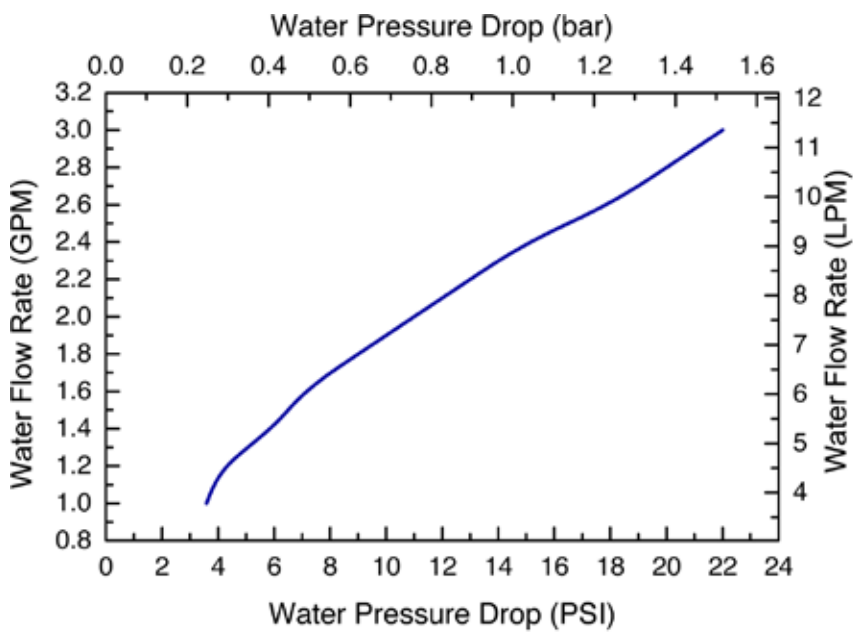
More information onCryomech Cryocoolers can be found on the Cryomech website:  
<http://www.cryomech.com>

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**Figure 5-1: Cooling water requirement\***



**Figure 5-2: Cooling water pressure drop\***

\* When using a 50-50% mixture of ethylene glycol and water increase the flow rate 10%. Pressure drop values will increase 40%.