

Delivering hydraulic cooling solutions for **The Mining Industry**

Bowman has been cooling hydraulically powered machinery and equipment for over 60 years and is renowned for the quality and efficiency of its hydraulic oil coolers.

Excessive heat in the hydraulic oil will reduce the performance of plant and equipment and may lead to component failure, so maintaining the correct temperature is extremely important.

As one of the leading manufacturers of hydraulic oil coolers, Bowman has extensive experience of cooling hydraulic systems for the mining industry.

All oil coolers are precision made in the UK using high quality materials, enabling them to operate reliably in the most challenging conditions.



Deep Underground Mines

Bowman offer a range of cooling solutions for hydraulically controlled rock drilling and crushing machines, plus ancillary equipment used in deep underground mining and tunnelling.

Open Cast Mines

Heat exchangers and oil coolers are also available for applications in open cast mines, where ambient air temperatures are too high to cool mobile plant via conventional means.

Underground Coal Mines

Bowman also have a range of hydraulic oil coolers with cast iron construction that are suitable for underground coal mining.

High efficiency, easy to maintain

Some of the features that make Bowman oil coolers the ideal solution for cooling hydraulic systems in mining applications.

Most models suitable for **water and oil pressures up to 35 bar.**

Shell and tube construction suitable for using both **clean and harsh cooling water.**

Fully floating tube stack **minimises thermal stresses and aids removal for cleaning.**

SAE hydraulic oil flange connections available on larger models.

Tube stack materials and construction options **available to suit mine water conditions – including high salt content.**

Large heat exchange surface area to volume ratio gives **high thermal efficiency.**



BOWMAN®

100 YEARS OF HEAT TRANSFER TECHNOLOGY

Performance, reliability and durability. Bowman cooling solutions for the mining industry.

Mining Hydraulic Oil Coolers

For underground mining applications, a special range of oil coolers is available, suitable for use with water pressures up to 35 bar. These units have a cast iron shell, strengthened end covers, Viton seals and a special tube stack.

Typical examples of oil cooler performance with;

Oil type	ISO VG 37
Oil outlet temperature	50°C
Oil pressure drop	100 kPa
Water inlet temperature	25°C
Water pressure drop	50 kPa

Type	Heat Dissipated	Maximum Oil Flow	Maximum Fresh Water Flow	Internal Oil	Internal Water
	kW	l/min	l/min	litre	litre
EC120-3425-3	13	77	77	0.49	0.44
FC100-3426-2	19	145	135	1.10	0.94
FG100-3427-2	37	190	175	2.40	1.56
FG120-3427-3	50	160	160	3.00	1.96
FG140-3427-4	62	160	150	3.90	2.42
FG160-3427-5	79	145	135	5.00	2.97
GL140-3428-2	56	300	300	3.60	3.1
GL240-3428-4	93	280	260	6.30	4.6

Easy product selection

To ensure the correct product is specified for the application, Bowman offer a computer aided selection programme. Simply by supplying the following information, Bowman's technical team can advise the correct specification unit;

- 1: Oil type (or its viscosity at a specific temperature)
- 2: Oil flow in l/min
- 3: Required oil outlet temperature in °C
- 4: Heat to be dissipated in kW
- 5: Temperature of cooling water in °C
- 6: Type of cooling water to be used (i.e. fresh water, contaminated water, mineral rich water)

Trusted by the worlds leading equipment manufacturers

Bowman is a respected OEM supplier to many of the worlds leading equipment manufacturers in the mining industry. Bowman heat exchangers and oil coolers are also available for retro fitment to virtually any mining machinery or equipment to overcome cooling problems in the field.

Comprehensive support

Bowman heat exchangers and oil coolers are supported with technical information, a full replacement parts programme and a network of authorised distributors worldwide who provide rapid local service, fully supported by comprehensive stocks held at Bowman's UK manufacturing facility.



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