

In this month's Hydrafile:**New Product - Walvoil DPC130 Proportional L/S Valve**

Hyspecs is now stocking a full line of Walvoil DPC130 pressure compensated proportional load sensing valves and parts.

These valves are used for systems with constant displacement pumps (open centre version) or variable displacement pumps (closed centre version).

Features

- * Load independent flow control.
- * Internal pilot oil supply built into inlet cover.
- * Options for electrical LS unloading valves.
- * Interchangeable spools.
- * A wide variety of service ports valves.
- * Available manual, hydraulic and electro-hydraulic proportional spool control kits.
- * Available with compensated or non compensated working sections.
- * Safety and diagnostics available on the 8ZR proportional electro-hydraulic control spool kit closed loop system, with electronics on board.
- * Rated to 150 l/min and 315 bar with higher flows available on double inlet*



The main feature of load sensing systems is that the flow rate to the user is proportional to the spool position under any operating condition, regard-less of the resistance encountered by the user (pressure) and the number of levers activated (exceeding the pump's total flow rate, a condition defined as saturation, is the only limitation).

Therefore, with the LS systems, there is a specific correspondence between the position of the control lever and the movement speed of the user, cylinder or hydraulic motor. This feature is particularly useful in the hydraulic handling machine sector (excavators, cranes, loaders, agricultural and forestry machinery) in which each movement phase has specific sequences that the operator must control using memorised movements.

In addition, for the DPC130 control valve, spool movement can be controlled using a remote electric control (spool movement is "proportional" to the pilot electric parameter magnitude). Along with all the advantages described above, the LS system also:

- * Saves energy
- * Extends parts service life
- * Lowers heat due to energy dissipation
- * Reduces noise
- * Can be used to create a single-pump circuit (compared with the use of multiple- pump circuits in which each pump is dedicated to different actuators to be operated simultaneously).

Download the full DPC130 specification booklet [here](#). If you require a Service & Spare Parts Manual for the DPC130, request an electronic copy by [emailing us](#).

To enquire about the DPC130 and see how it can help your hydraulic systems give Hyspecs a call using the numbers in the footer or [drop us an email](#).

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Technical Corner - Emmegi Coolers

With summer nearly upon us (yes it is, I promise) the extra heat in the atmosphere really starts to test the integrity of a hydraulic system. We've featured the following article in a previous Technical Corner but thought it was a good time to remind everyone of the ways we can overcome hot hydraulic systems.

Definition of too hot for a hydraulic system: Eaton recommends the maximum system operating temperature to be no higher than 82 degrees Celsius. Even 60 degrees Celsius (which is what Hyspecs recommends as an operating temperature) is too hot to touch for more than a split second, so use a tank temperature gauge to get an accurate reading. Keeping your system cool will increase the life of your system and save you money in the long run.

In a perfect hydraulic world all energy put into a system could be transferred to the job at hand, whether it is a cylinder, motor or some other hydraulic machinery. However we are lucky if we get 65-75% of the input energy turned into useful work. The rest gets turned into heat, noise and vibration.

The loss of power can be attributed to many things:

- * High pressure drop across hoses, orifices and valves
- * Mismatched motor sizes in a pressure compensated system
- * In-built inefficiencies in pumps and motors
- * Poorly designed hydraulic systems

Try as we may to get the system 100% efficient we will never do it, so we are usually stuck with two options to overcome heat:

- * Build a large oil tank to dissipate the heat. This is usually the easiest and cheapest option if designing a system from new. Hyspecs recommends a tank size of at least 2.5-3 times the maximum flow of oil in the system (not applicable to closed loop systems where the designer can get away with a much smaller tank).
- * Install a hydraulic oil cooler capable of cooling approximately 30% of the system input power. Oil coolers typically come as either air/oil or water/oil variety. The air/oil coolers are pretty much the same as a car radiator with either an electric or hydraulic fan blowing over the fins to cool the oil flowing inside the radiator. Oil/water coolers are designed to have oil running through a large outer tube with a separate series of smaller tubes running inside this, containing flowing fresh or salt water which carries the heat away from the oil.

If you need help with an overheating hydraulic system call Hyspecs today using the numbers in the footer or drop us an [email](#).

For specification and pricing information on Hyspecs range of Emmegi oil coolers please [click here](#).

For specification and pricing information on Hyspecs range of Oil Reservoirs please [click here](#).



Hyspecs News

We've got some exciting new projects happening at Hyspecs that will benefit both of us. Plans are underway to make it easier for you to deal with Hyspecs and for us to provide you with an improved level of service....check back soon.

Until next month, all the best with business.

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