

# Application story



## EDM Machining for Major Japanese OEM

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |                                                 |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------|
| <b>Location</b>                                          | Japan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Hydra-Cell model</b> | G13SDBTHFECA,<br>G03SDBTHFECA &<br>G04SDBTHFECG |
| <b>Type of application</b>                               | EDM Machining for Major Japanese OEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Flow rate</b>        | 1 - 3 l/min (0.3 - 8 gpm)                       |
| <b>Liquid</b>                                            | De-Ionised Water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Pressure</b>         | 70,100 & 170 bar (1015, 1450 & 2465 psi)        |
| <b>Application details</b>                               | <p>The OEM used Maruyama piston pumps (CAT PUMPS) for their EDMs. However, microscopic particles created in the process of the machining works wore out the packing of the conventional plunger pumps very quickly. Those piston pumps required maintenance every 800 hours.</p> <p>Hydra-Cell was then chosen for its seal-less design and maintenance service network, and with a trial of over 3,000 hours of long-run tests with no breakdown.</p> <p>Over 100 units have since been supplied.</p> |                         |                                                 |
| <b>Advantages of Hydra-Cell pump on this application</b> | <p>The injection of deionised (DI) water requires precise, consistent control down to very low flow rates at high pressures. DI water is corrosive, non-lubricating and can cause excessive maintenance with pumps with dynamic seals and packing.</p> <p>Hydra-Cell's seal-free, packing-free design, coupled with a constant accurate flow rate independent of discharge pressure, ensures a controllable dependable process.</p>                                                                    |                         |                                                 |

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