**BakerFlow Pump Specifications**

**General**

Pumps shall be of the long coupled, end suction back pullout type equal to ‘Bakerflow’ series as supplied by Masterflow Solutions (phone: 02 9748 2022), complying with the following performance and construction criteria.

**Casing:**

* Cast Iron construction with drain and pressure gauge tappings.
* Pump casing shall be radially split end suction vertical discharge cast iron designed for an operating pressure of 1600kPa, unless otherwise specified.
* Outlet shall be sized for a maximum velocity of 3m/s.
* Casing shall be provided with drain facilities and pressure gauge tappings.
* Built to pump standards DIN24255/EN733.
* Chilled water pumps shall be fitted with stainless steel drip trays for the collection of condensate. Drip trays shall have a 20mm BSP port welded on the underside, and be piped to waste by installer.

**Impeller:**

* Stainless Steel material and balanced.
* Impeller shall be directly connected to the motor shaft and not exceed 95% of the maximum impeller size that can fit into the pump casing.

**Shaft:**

* Shaft shall be mounted on roller bearings providing a minimum 100,000 hours of life.
* Mechanical Seals shall be provided between the casing and shaft to suit the fluid and operating pressures of the pump.
* Mechanical Seal shall be fitted over a stainless steel shaft sleeve and not directly to the shaft.
* The shaft shall be connected to the motor via spacer jaw type couplings to allow the pump or motor to be removed without disturbing the other.

**Motor:**

* The motor shall be metric frame, totally enclosed, fan cooled, 415V, 3 phase with minimum IP66 protection and operating at 24 r/s where practical.
* Minimum Class F insulation.
* High Efficiency type and compliant to AS1359.5:2004, Table B3.
* The motor shall be non-overloading at any point of the curve for the next size impeller.
* The pump and motor shall be provided with a rigid base supporting both the pump and motor.
* The pump and motor shall be fully assembled on the baseplate and factory-aligned. Pumpsets shall be site aligned after installation.
* If pumps are located in plantroom other than basement, pumpsets shall be mounted on concrete inertia bases with a total mass of 1.5 times the mass of the rotating elements.
* The whole assembly shall be supported on springs mounts of 25mm static deflection.
* Suction Diffusers shall be installed on the suction of each pump.
* For motor sizes 5.5kW and larger, the base shall include welded alignment tabs for easy onsite alignment adjustments.