ADVANCED ACTUATORS

SPECIALISTS IN THE DESIGN & MANUFACTURE OF PRECISION VALVE CONTROLS, INSTRUMENTS, & ENGINEERED SOLUTIONS

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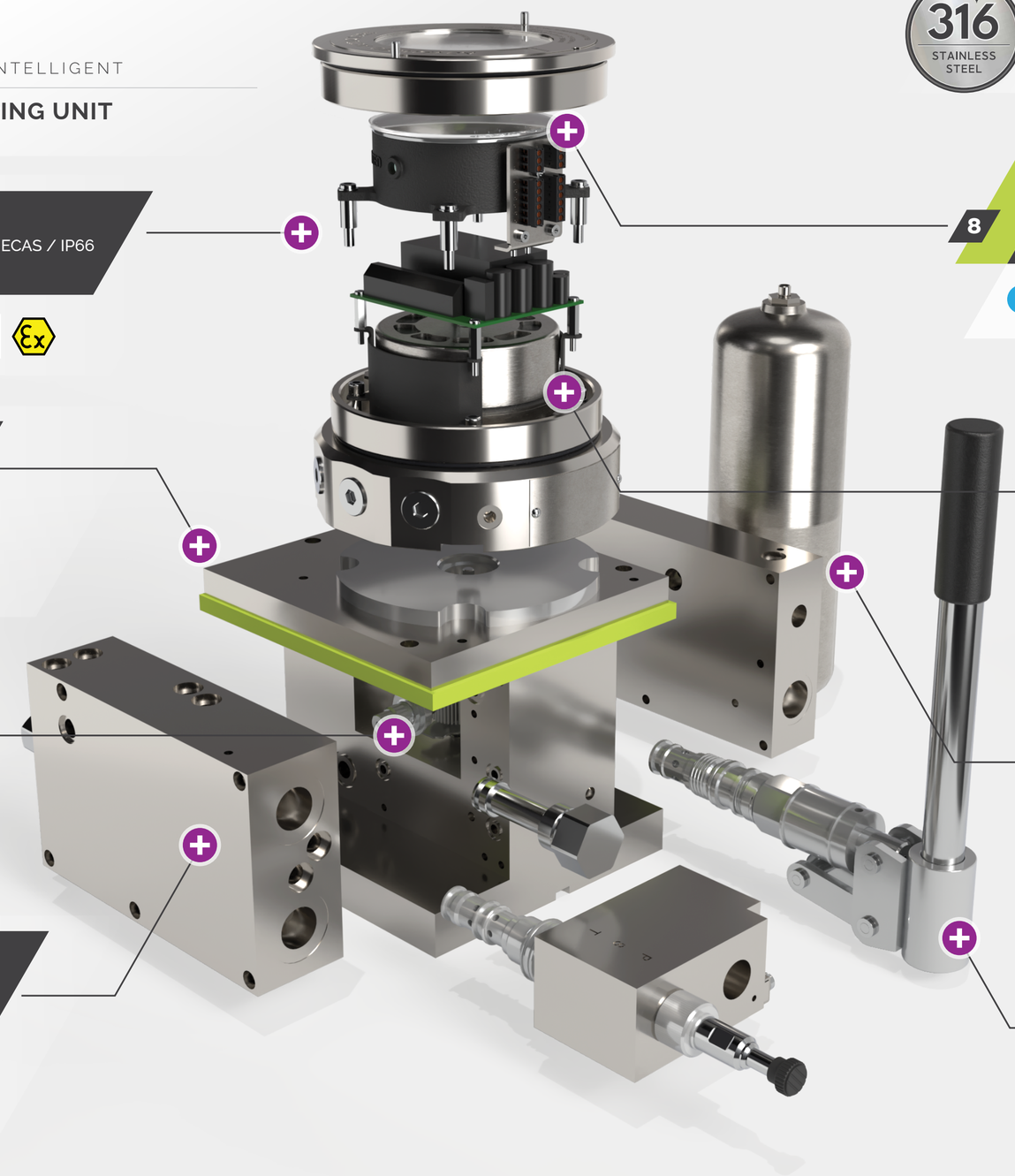
HYFLOW®

MODULAR | HIGHLY CONFIGURABLE | DIGITALLY INTELLIGENT

THE ALL-IN-ONE SMART HYDRAULIC PUMPING UNIT

316 STAINLESS STEEL

ADVANCED ACTUATORS COMPONENTS ARE ALL AVAILABLE WITH A ***316L STAINLESS STEEL*** FINISH
Rugged, corrosion-resistant bodies and internal components



1 GLOBALLY CERTIFIED
ATEX / IECEx / INMETRO / ECAS / IP66
UL C1D1 / NEMA 4X

IP66 · NEMA 4X · IECEx · INMETRO · UK CA · Ex

2 DOUBLE-ACTING OR FAILSAFE
Customisable with additional solenoids to suit your application or needs

SINGLE OR TWIN SOLENOIDS
For accumulators or spring failsafe functions.
Can be wired to control system - DC or AC.

3 DYNAMIC FLOW CONTROL
Fully dynamic, software-managed flow rates from 0.1 - 6.0* lpm standard

TWIN-FLOW
*Units can be connected in parallel, as master and slave, for increased flow

4 PRESSURE RATING *SEE PRESSURE FLOW GRAPH*
Available in a range of pressure ratings, including 1K, 2K, and 3K PSI

BUILT-IN SENSORS
Monitor pressure levels & temperature for diagnostics & maintenance scheduling

5 316 SS MANUAL HAND PUMP
During start-up or power loss, the system can be operated manually.

6 ACCUMULATORS
Dual-function, optimising power usage and failsafe operations.

Sizes from 0.5-4.0 litres. Carbon & 316 SS.

7 HYDRIVE® BRUSHLESS SMART MOTOR
High-efficiency, ultra-low steady-state consumption DC motor with powerful torque.

Sizes from **90 - 600W**, with **<1W** steady-state
Input supplies: **DC** / **1-Phase AC** / **3-Phase AC**

8 HYCONTROL® CLOSED-LOOP POSITIONING
Integrated for real-time accuracy, intelligent actuator response, and exceptional repeatability.

HART, Basic Diagnostic Functions, and Custom Control Packages available

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SYSTEM FEATURES

THE ALL-IN-ONE SMART HYDRAULIC PUMPING UNIT

The HYFLOW® range of compact hydraulic pumping units has been engineered to deliver the performance of a proportional control system in a rugged, stainless steel form factor. Built around a 24V DC brushless motor and fully integrated with our proprietary controls and instrumentation, it offers precise, intelligent control of any hydraulic actuator.

Designed for flexibility, the **HYFLOW®** platform is modular by design, allowing solenoid banks, motors, and pump assemblies to be tailored for specific applications. With performance ranges from 90W to 600W and flows from 0.1 to 8 LPM at up to 207 Bar, it suits everything from instrument-level actuation to high-demand field systems.

No matter what your specification will be, each **HYFLOW®** unit is built for maximum reliability, remote integration, field-serviceable maintenance, and backed by international certification for use in the most demanding sectors.

1 GLOBALLY CERTIFIED

HYFLOW® meets the most stringent international safety standards for hazardous area use, including **ATEX, IECEx, ECAS, INMETRO, and UL Class 1 Division 1**. Coupled with **IP66 and NEMA 4X ingress protection**, each unit is built to operate safely in explosive, wet, dusty, or corrosive environments.

2 DOUBLE-ACTING OR FAILSAFE

Configure **HYFLOW®** to suit your application and needs with additional solenoids. Allowing choice between double-acting or failsafe operation, our regulators are ideal for improving control stability and extending actuator service life. With two solenoids specified, an accumulator can be added to the system to reduce power consumption and enable failsafe functions *(see 6)*.

3 DYNAMIC FLOW CONTROL & PUMP SIZE

Fully dynamic, software-managed flow rates ranging **from 0.1 - 6.0* lpm** are available. As flow is increased, pressure will reduce. The standard pump sizes include **0.6 lpm, 1.0 lpm, 1.8 lpm, & 3.0 lpm**, but **HYFLOW®** can accomodate other, non-standard pumps.

4 PRESSURE RATING

HYFLOW® is available in a range of pressure ratings, including 1K, 2K, and 3K PSI. See the *Pressure Flow Graph* for operating characteristics. These can be matched to your particular application.

5 MANUAL HAND PUMP

The **HYFLOW®** system has been designed to include a 316L Stainless Steel Hand Pump that enables manual operation of the system during start-up or in the event of power loss.

6 ACCUMULATOR & SIZE

Available with capacities of between **0.5 and 4.0 litres**, adding an accumulator to the **HYFLOW®** system has two functions. Stored pressure can be drawn upon to save powering the motor for smaller adjustments, reducing overall consumption. When fully pressurised, it also functions as part of the failsafe operation.

7 HYDRIVE® SMART MOTOR

HYFLOW® is powered by a high-performance, brushless DC motor, available in sizes **from 90W to 600W**. Designed for ultra-low power consumption of **<1W during steady-state** operation, the motor delivers smooth, precise output and efficient energy use. Motor control is digitally managed, enabling rapid response and accurate modulation.

8 HYCONTROL® CLOSED-LOOP POSITIONING

Our in-house closed-loop control system, delivering real-time actuator positioning with exceptional repeatability. By integrating advanced algorithms and sensor feedback, it continuously adjusts output to match target conditions, enhancing precision, responsiveness, and system stability.