



The IntelliCyl® is the successful combination of HyperCyl's hydro-pneumatic cylinder systems and state of the art electronic technology. IntelliCyl® was designed for applications where continuous monitoring of materials and processes is critical to the successful assembly of components. IntelliCyl® consists of two options:

1. Low voltage Linear transducer (LVLT)
2. Fully integrated Load Cell installed on the end of the cylinder rod.

Both devices provide for an analog feedback signal through an analog card to the PLC. The feedback signals indicate distance (cylinder travel) to ± 0.001 " and force(lbs.) applied to the tooling. The ability to monitor cylinder and tooling travel and force during the assembly process allows for:

Quality Improvement through in-process verification

- IntelliCyl, HyperView-Press – verify dimensional stack-ups before you do work, and monitor the assembly process while you do work
- May eliminate costly EOL testing and destructive testing
- Drives quality into your assemblies. Drives out deviation
- Traceability – long-term data collection.

Standard Features:

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| <ul style="list-style-type: none"> • Measure a part height (prior to assembly) • Confirm multi-component stack-up dimension(s) • Measure and confirm correct component(s) match-up • Confirm end of stroke (extend/retract) • Control distance travel during approach and power stroke cycles • Monitor tool wear • Monitor and confirm I.D./O.D. tolerance fit during assembly | <ul style="list-style-type: none"> • With known distance values, continuously monitored individual and multi-component finished part deviation from user set benchmarks or standards. • HPS-LT option • HPI-LTI option • 3 Year Warranty |
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Output Force:

11 size ranges from 1 - 100 tons (with specific model sizes), independent air regulation of extend/retract and power stroke forces and speeds.

Drive Unit:

Hydra-pneumatic; Hybrid of pneumatic and hydraulic technologies utilize air to extend and retract the drive unit ram. Auto-sequencing into power stroke anywhere within the total cylinder travel, complete air/oil separation, operation in any attitude. Heavy-duty, continuous use (designed and built to exceed both NFPA and SAE guidelines) and compact design with a three-year warranty (please refer to Warranty Terms contained in catalog). Standard stroke lengths of 2.00", 4.00", 6.00" and 8.00" with power stroke lengths of .25", .50" and 1.00", (non-standard stroke and power stroke lengths are available). Note: all drive units require (2) pneumatic air valves and minimum 40 micron pneumatic filter and regulator for operation.

Sensors:

Distance – Low Voltage Linear Transducers - Magnetostrictive technology with Auto Tuning, non-contact, wear free, Analog, Digital, SSI, Pulse, CANopen, Profibus and Quadrature output, .0001" resolution capable, 7-pin connector/cable.

Resolution	≤0.66μA
Non-linearity	+/- 0.02% over full scale
Repeatability	Resolution/ min 2μm
Hysteresis	≤ 5μm
Sampling Rate	2KHz
Operating Voltage	24 Vdc or 15 Vdc

Force – Strain bridge design load cell. Load cell O.D. matches drive unit ram O.D. for a compact, integrated design. Mini Brad-Harrison style four 4-pin connector. Signal conditioner is required.

Rated Output	2mV/ V
Combined Error	0.25% of full scale
Non-repeatability	0.05%
Zero Balance	1%
Excitation Voltage	10VDC
Maximum Load	150% of full scale (safe) 200% of full scale (ultimate)