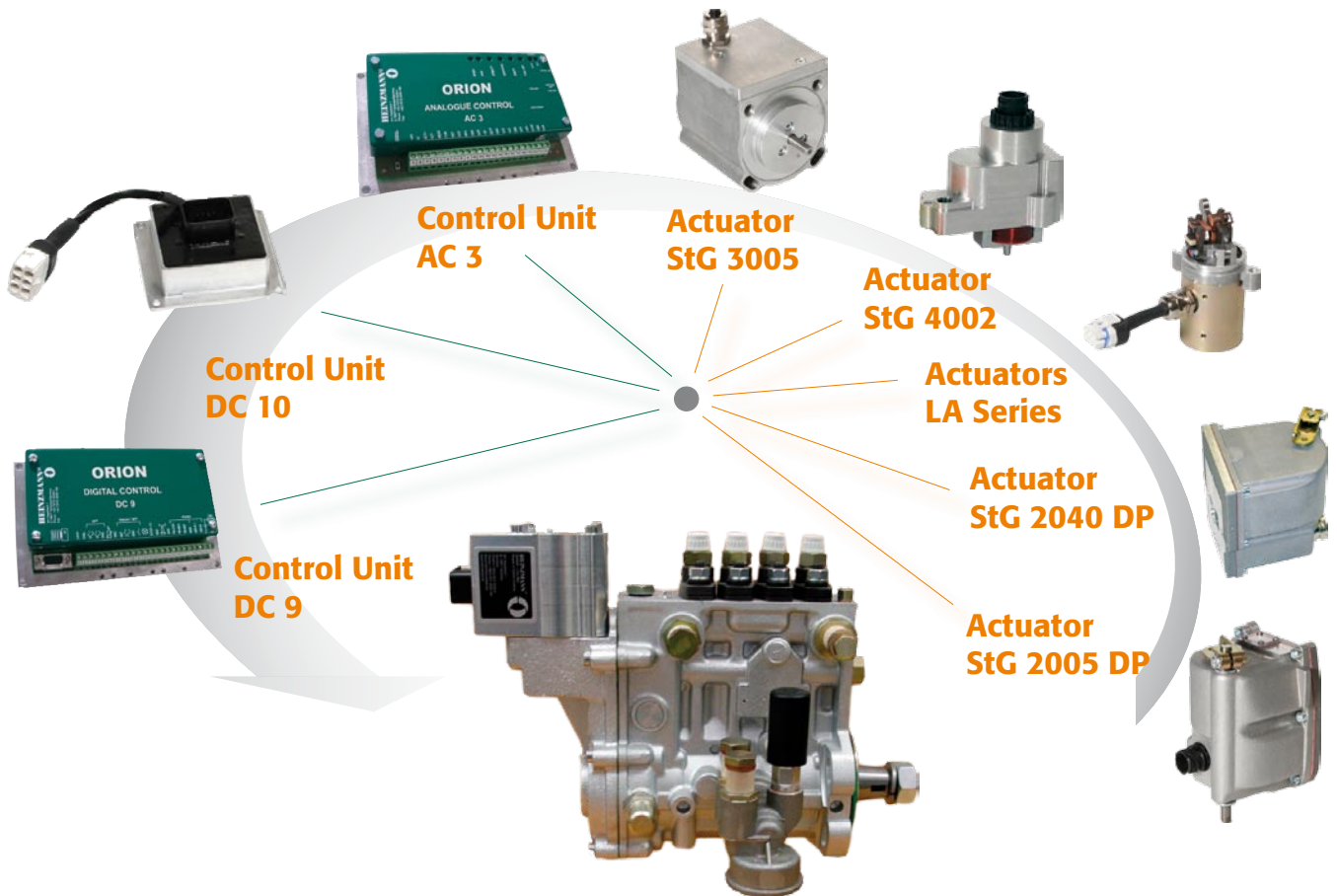


HEINZMANN Assembly Kits

Electronic Control Systems for Fuel Injection Pumps



- ✓ Enhanced options for engine control
- ✓ Fuel limitation
- ✓ Easy to adapt
- ✓ Dual Fuel options



Engine & Turbine Management

HEINZMANN ASSEMBLY KITS

Electronical conversion of injection controls

The large variety of HEINZMANN direct mounted control units and actuators offer an uncomplicated upgrade of your mechanically controlled diesel injection pump to an electronically controlled system, with all its benefits.

Enhanced options of engine control, increased engine performance and control accuracy are some of the advantages.

HEINZMANN offers the perfect solution for any engine size and type of machine. This includes inline injection pumps as well as distributor injection pumps.

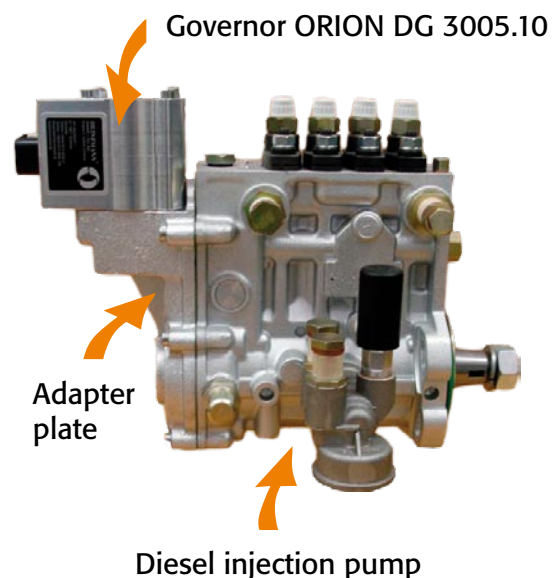
You can choose between an analogue or a digital control unit and the suitable type of actuator.

More than 100 years experience in developing and manufacturing diesel engine controls ensures reliability and flexibility of the HEINZMANN control solutions. Our systems provide options to meet all customer needs.

With our worldwide net of branches, representatives and authorised dealers we can make sure that we are always close to our customer in order to deliver professional service.

HEINZMANN ASSEMBLY KITS Benefits

- ✓ **Enhanced engine control quality, individual adjustment to engine, additional engine parameters**
- ✓ **Larger variety of control applications**
- ✓ **Enhanced control performance in generator operation**
- ✓ **Fast and accurate reaction of control in case of load steps**
- ✓ **Best price-performance ratio**
- ✓ **High efficiency**
- ✓ **Precise feedback system**
- ✓ **Long life cycle**
- ✓ **Proven reliability**
- ✓ **Sophisticated PID control structure allows operation without zero speed droop**



HEINZMANN ASSEMBLY KIT

The system components of the HEINZMANN assembly kits consist of

- ✓ **Control unit**
- ✓ **Actuator**
- ✓ **Adapter plate**
- ✓ **Linkage to fuel rack**

SYSTEMS COMPONENTS

Choose the suitable system components out of the HEINZMANN range of controls and actuators. They are all designed for direct mounting.

The adapter plate for your respective injection pump will be tailored to your needs. In the conversion table below you find the existing customised solutions. For these injection pump types, a plug-and-play system can be ordered.

Conversion Table

Injection pump	Sense of rotation	Working direction
Upgrade kit with actuator variant StG 2040-DP		
BOSCH type P	cw	bidirectional
BOSCH type P10	ccw	unidirectional
BOSCH type P10	cw	bidirectional
BOSCH type P9	ccw	bidirectional
BOSCH type PE8-ZWM	ccw	bidirectional
Upgrade kit with actuator variant StG 2005-DP		
BOSCH type P	cw	bidirectional
Motorpal	cw	unidirectional
Upgrade kit with actuator variant StG 4002		
Stanadyne DB4	ccw	unidirectional
Upgrade kit with control unit variant DG 3005.10		
DELPHI/Perkins type 1429	cw	unidirectional
Motorpal	cw	unidirectional
Injection pump	Direction of action	
Upgrade kit with actuator variant LA 35 without feedback		
Motorpal	linear, unidirectional	

CONTROL UNITS

ORION DC 9

Digital control unit

ORION DC 9 cost-effective speed control units are highly flexible and have a good speed control performance on small and medium-sized combustion engines.



ORION DC 9

ORION DC 10

Digital control unit

The economically advantageous ORION DC 10 control unit, with protection grade IP 66, is tailored for direct engine mounting without panel and can be used for small combustion engines.



ORION DC 10

ORION DG 3005.10

Digital control unit with integrated actuator

ORION DG 3005.10 consists of a digital control unit DC 10 with integrated actuator StG 3005.



DG 3005.10

ORION AC 3 **Analogue control unit**

This control unit has been developed for simple applications employing small diesel engines with power ratings up to 100 kW. It can be used together with a rotary or a linear actuator. Possible applications are generators and pump drives.



ORION AC 3

ORION StG 4002 **Actuator**

This actuator working in unidirectional operation (spring return) is intended to be mounted on a distributor injection pump and connected directly to the control rod.

The non-contact feedback provides precise positioning on the total range of adjustment even in oily ambient conditions.



ORION StG 4002

ACTUATORS

ORION StG 3005 **Actuator**

This direct acting actuator is working in unidirectional operation (spring return) with rotary output. It comes with a well-proven contactless position feedback and integrated return spring.

ORION StG 3005 is designed for direct mounting and application in various fields of use (e.g. operating butterfly valves, pump rods, etc.).



ORION StG 3005

ORION LA Series **Linear actuator versions:** **LA 25/LA 30/LA 35**

Actuators of the ORION LA series work in unidirectional operation (spring return). Actuation is produced by magnetic force, restoring force comes from a return spring. The range of strokes of this linear actuators runs from 12.5 mm up to 19.5 mm. The range of working force runs from 25 to 35 N.

The non-contact feedback provides precise positioning on the total range of adjustment even in oily ambient conditions. Mounting position is pump front side using an adapter.



ORION LA 30

StG 2040 DP Actuator

Directly acting actuators with 0.7 to 6 Nm output torque and 36° travel. Main application is on industrial diesel engines from 100 to 1.000 kW. The StG 2000 series may be combined with various analogue or digital HEINZMANN control units. The actuator provides a contactless position feedback.

The DP version of StG 2040 is designed for direct mounting on diesel inline injection pumps and is driven by a digital control unit.



StG 2040 DP

StG 2005 DP Actuator

Direct acting actuators with 0.7 to 1 Nm output torque and 36° travel. The main application is on industrial diesel engines from 100 to 200 kW. The StG 2000 series may be combined with various analogue or digital HEINZMANN control units. The actuators provide a contactless position feedback.

The DP version of StG 2005 is designed for direct mounting on diesel inline injection pumps and driven by digital control units.



StG 2005 DP

Overview – control units

	DC 9	DC 10	AC 3
Digital	x	x	
Analogue			x
CAN		Optional	
Inputs	Up to 2 magnetic pick ups (MPU) Feedback Up to 2 analogue inputs Engine Stop Up to 4 binary inputs	Magnetic pick up (MPU) Feedback Up to 4 analogue inputs (3 opt.) Engine Stop Up to 4 binary inputs	Magnetic pick up (MPU) Feedback Setpoint Engine Stop Speed up/Speed down
Outputs	Actuator 1 binary output	Actuator 1 binary output	Actuator

Overview – actuators

	StG 3005	StG 4002	StG 2005 DP	StG 2040 DP	LA 25	LA 30	LA 35
Angle/ Length of stroke	53°/ up to 13 mm	35°/ up to 21 mm	36°/ up to 21 mm	36°	19.5 mm	15.5 mm	12.5 mm
Torque/Force	0.5 Nm	0.2 Nm	0.5 Nm	6.5 Nm	25 N	30 N	35 N
Feedback	Digital	Digital	Digital	Digital	Digital	Digital	Digital
Application	Inline injection pump	Distributor in- jection pump	Inline injection pump	Inline injection pump	Inline injec- tion pump	Inline injec- tion pump	Inline injec- tion pump
Direction of operation	L/R*	L/R	L/R	L/R	F/B*	F/B	F/B

* L/R = Left/Right, F/B = Forward/Backward



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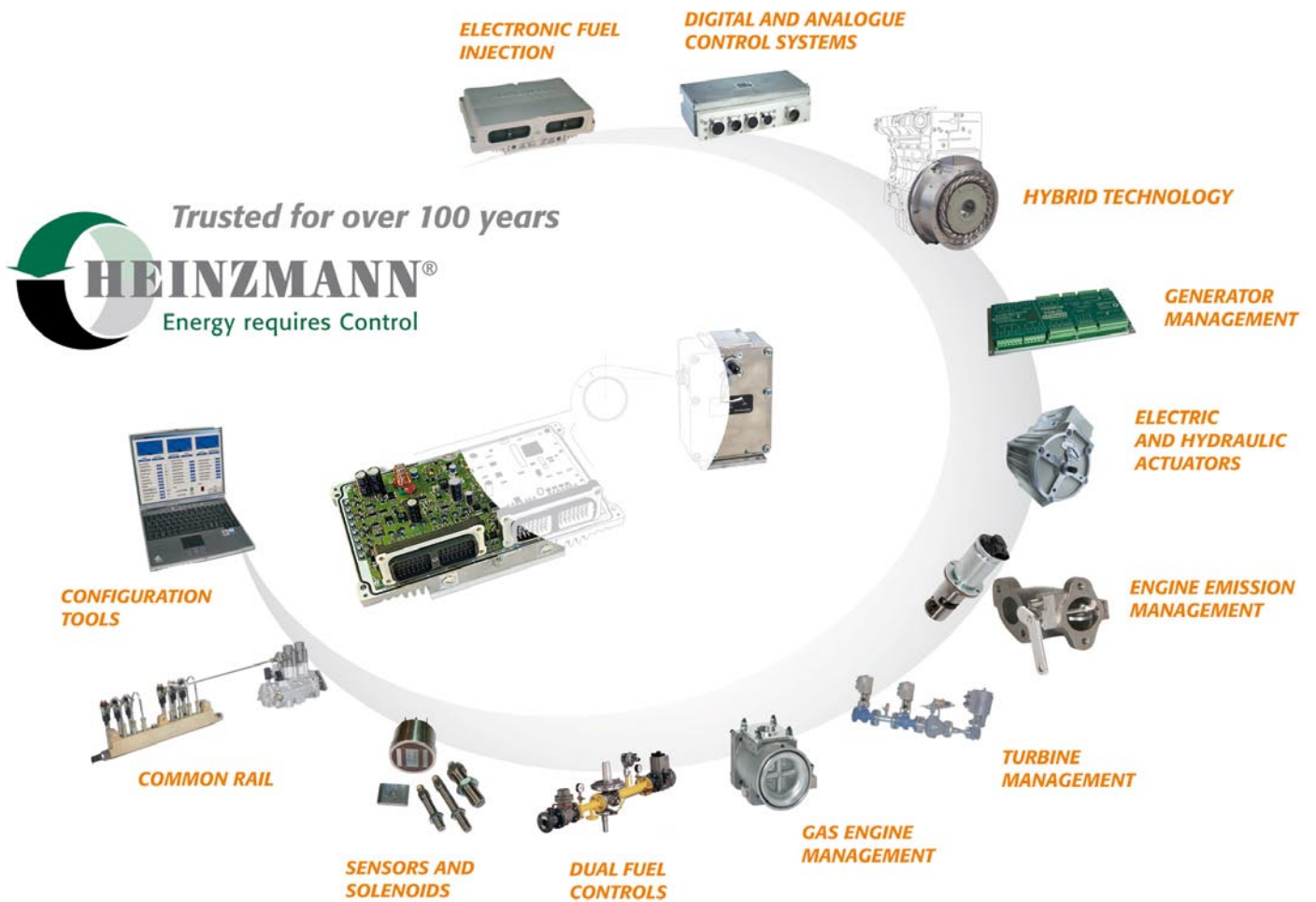
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Selection of HEINZMANN products



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