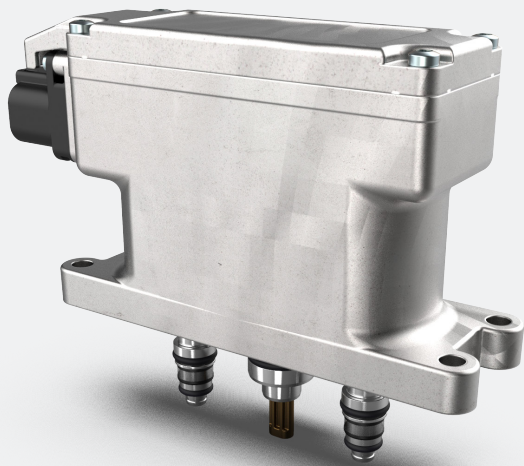
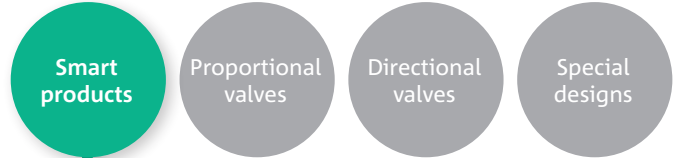


# Electrohydraulic Actuator [EHA]



## PRODUCT CLASSIFICATION



Name      Max volume flow @ 6 bar dp

EHA	2,5–5 l/min based on PPCD 04
EHA	10 l/min based on PPCD 05
EMA	

## HYDRAULIC DATA

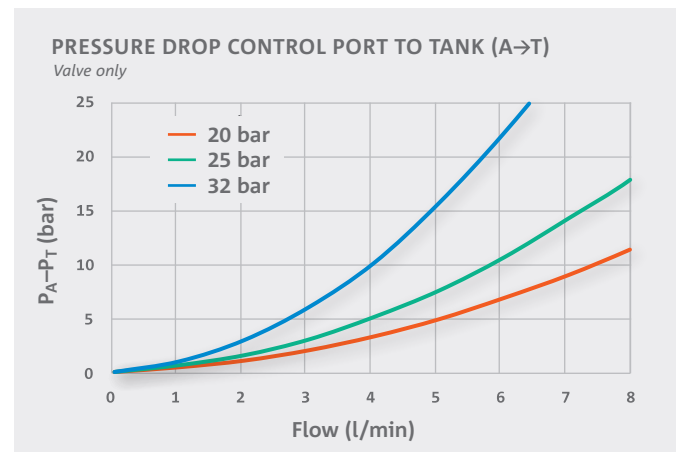
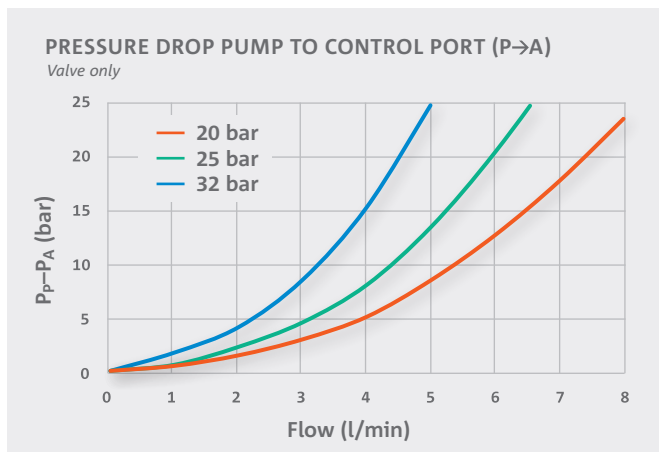
Max pressure pump	$P_p = 50$ bar
Max pressure tank	$P_T = 30$ bar
Max pressure work	$P_A = 20, 25$ or 32 bar
Contamination level	Min Filtration: 20/18/15 According to ISO 4406
Fluid	Mineral Oil According to DIN 51524
Temperature range fluid	-30°C to +90°C
Leakage (internal)	< 0,05 l/min (de-energized) < 0,05 l/min (energized)
Filterscreen size	125 $\mu$ m (at P-Port available)

## ELECTRICAL DATA

Voltage	12 V	24 V
Max current	24 mA	20 mA
Max power consumption	25 W	
EMC Immunity	1) acc. To ISO 11452-2:2004 100 V/m; 20-2000 Mhz 2) acc. To ISO 11452-4:2004 150 mA; 1-200 Mhz	
EMC Transient Conduction Test	acc. To ISO 7637-2:2004 Tests 1, 2a, 2b, 3a, 3b, 3, 5 Test level: IV except for 24 V systems + test No. 5 Test level: III	
Connector	Deutsch Connector DT04-2P	
Protection class	up to IP6K6 / IPX9K	
Switching time	$t_{on} < 50$ ms ( $p_A = 0\%$ to 90%) $t_{off} < 50$ ms ( $p_A = 100\%$ to 10%)	

\* The reported data are measured @  $P_p=35$  bar and an oil viscosity of 32 cSt

## FLOW CHARACTERISTICS\*\* (AVERAGE CHARACTERISTIC)



\*\* Shown are the flow rates based on the PPCD 04 valves. For larger flow rates, please refer to the PPCD 05 data sheet.

## SAFETY FUNCTIONS

The EHA provides three safety functions in compliance of DIN EN ISO 13849

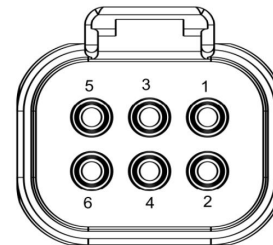
	SAFETY FUNCTION 1	SAFETY FUNCTION 2	DIAGNOSTIC FUNCTION 3
	Current less state	Pressure less state	Rated customer diagnostic function - EHA diag-message
<b>Description</b>	Whenever the signal processing of setpoints along the rated safety-chain (CAN ... valve-coil) is disturbed, the valves enter the current less state, which is defined as the safe state.	Whenever the signal processing of setpoints along the rated safety-chain (CAN ... pilot-pressure) is disturbed, the valves enter the pressure less state, which is defined as the safe state.	The current position of the valve slider (accuracy ±4%) is transmitted via the CAN bus interface cyclically (user configurable intervals of 10ms, 30ms and 100ms) accompanied by an error code in case one has occurred.
<b>MTTFd</b>	46,6 years	28,7 years	77,8 years
<b>Diagnostic coverage</b>	97% (mid: 90% to 99%)	72% (low: 60% to 90%)	96% (mid: 90% to 99%)
<b>Performance Level</b>	D	C	D

## SENSORIC ACCURACY

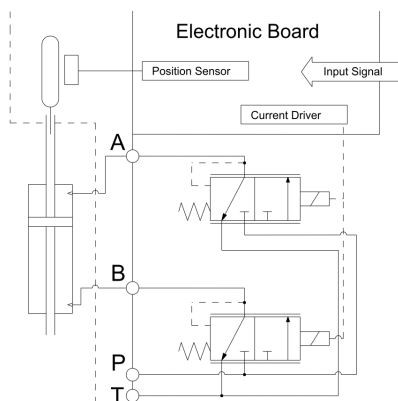
SENSOR TYPE	HALL EFFECT	
<b>Range</b>	± 8 mm	± 11 mm
<b>Redundant sensoric</b>	yes	no
<b>Absolut accuracy</b>	< 1,0% (± 3 mm)	< 1,0% (± 5 mm)
	< 2,5% (± 8 mm)	< 1,5% (± 8 mm)
	< 3,5% (± 9 mm)	< 2,0% (± 11 mm)
<b>Temperature coefficient (-25°C – 100°C)</b>	±300ppm/°C (<±8 mm)	±300ppm/°C
	±500ppm/°C (>±8 mm)	

## PIN ASSIGNMENT

Pin number	Function
1	U Bat (battery voltage)
2	CAN_L CAN Signal (dominant low)
3	"Aout (analog output signal) Ain (analog input signal)"
4	Agnd (analog output ground)
5	GND (battery ground)
6	CAN_H CAN Signal (dominant high)



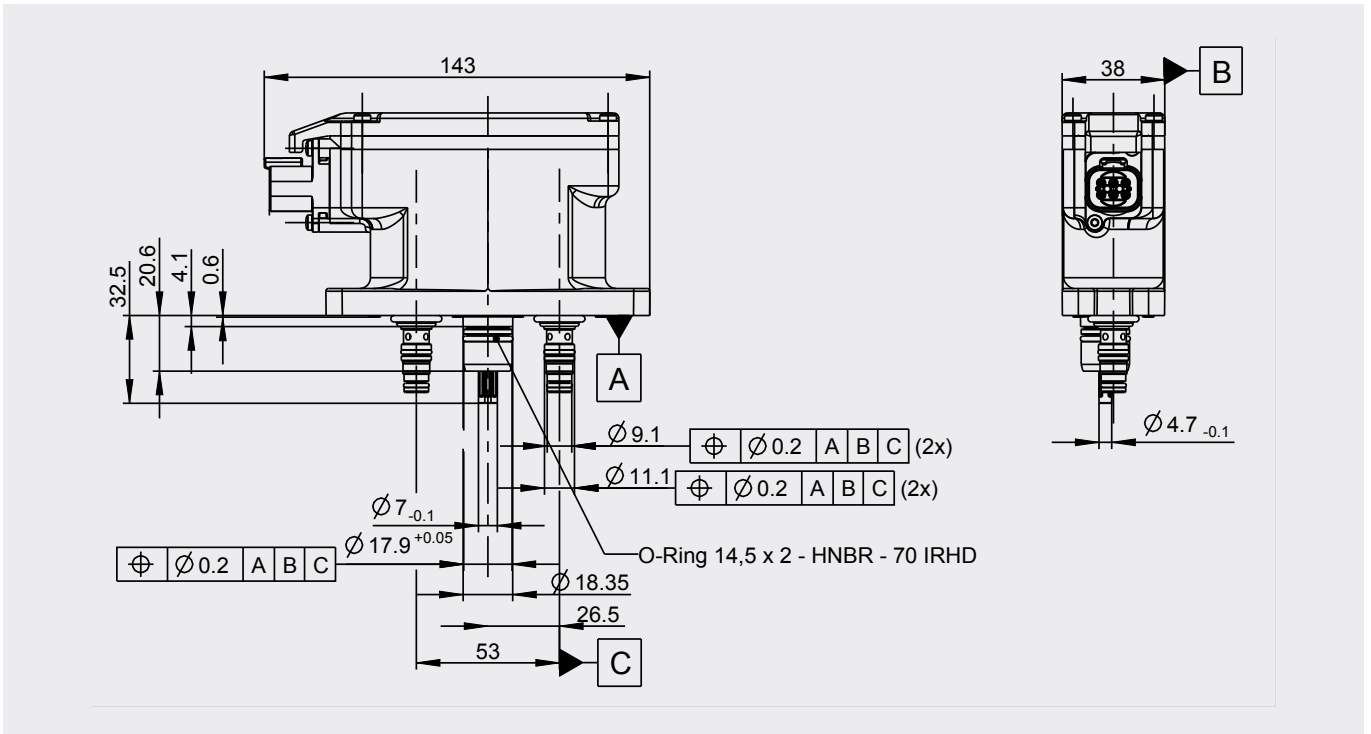
## HYDRAULIC SCHEMATIC



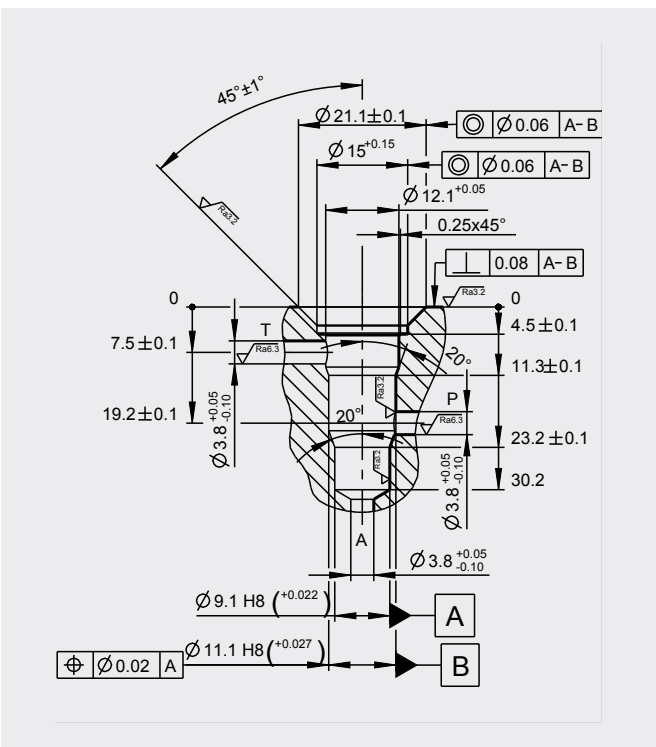
## ADDITIONAL DATA

<b>Weigth</b>	approx. 760 g
<b>Mounting position (recommended)</b>	any
<b>Reference</b>	Valve specifications according to Thomas LHP 81a

**DIMENSIONS WITH DEUTSCH CONNECTOR**  
(All dimensions in mm)



**CAVITY DIMENSIONS**  
(All dimensions in mm)



MODEL CODE										
EHA	-04	-001	-H08	-20	-12	-D	-H	-C	-0	-1
	-05			-25	-24					
				-30						
				-32						

**Valve style**

Valve size: PPCD 04 or PPCD 05

Special version upon request

Sensoric

Pressure level of the valves:  
20, 25 and 32 bar (PPCD 04)  
30 bar (PPCD 05)

Voltage: 12 V or 24 V

Connector: D Deutsch DT14-6P

Seal material: H HNBR

Control signal:  
C: CAN, A: analog

Add. position signal:  
0: not available, 1: available

Additional analog inputs:  
Number of inputs

● Defined by Thomas

● Customers choice

### CONTACT DETAILS

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