



Technical Data

Basic Line Module
BV 032-0X-050

Description of the Basic Module with Stroke

The Basic Module is equipped with one or two motor spindles. The pneumatic control takes place via

- external valve technology with integration into existing pneumatic systems or
- Ventil Integrated valve technology with two 5/2-way solenoid valves (control via life cycle management electronics, LCM).

Each motor spindle driven directly by an efficiency-optimized high-performance servo motor can be individually controlled and raised (double-acting cylinder unit).

The Basic Module with Stroke can optionally be equipped with a spindle position detection. The built-in sensor system detects the position of the motor spindles and the signals are made available via the sensorless servo controller type ToolDrives (Control Box).

The basic module can be designed with the following **tool holders**:

1. **ER 16 (collet)**, dimension sheet see chapters "Dimension sheet basic module with two or one motor spindle and ER16 (collet) tool holder".
2. **High Speed Weldon**, dimension sheet see chapters "Dimension sheet basic module with two or one motor spindle and High Speed Weldon tool holder".

Identification Plate

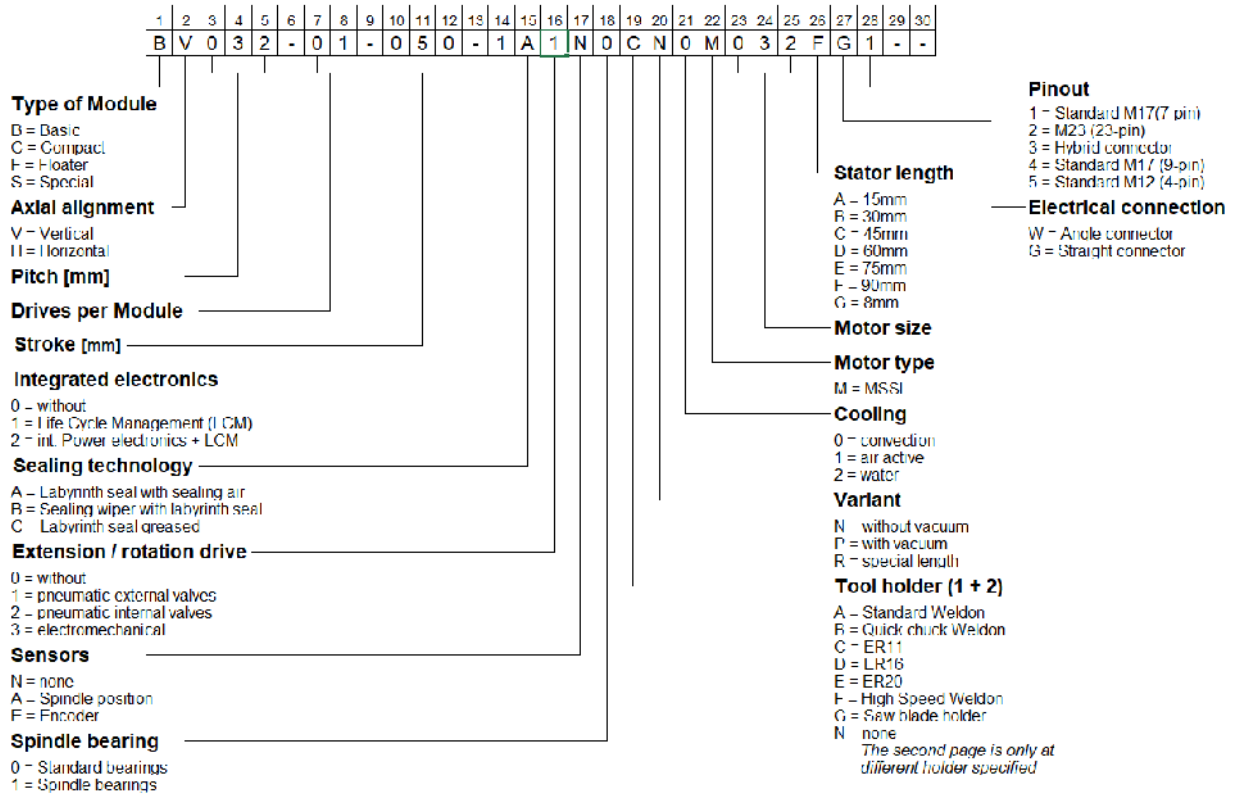
A nameplate is located on each Basic Module housing and provides detailed information about its properties.

Identification Plate	Description
<p>The diagram shows an identification plate with the following fields and labels:</p> <ul style="list-style-type: none"> A: Type code B: Number of motor spindles C: Max. rotational speed D: Terminal voltage (peak value) E: Manufacturer address F: Serial number G: Max. power H: Degree of protection I: Item code J: Direction of motor rotation K: Max. Current L: Operating pressure sealing air 	A Type code (see chapter 3.2)
	B Number of motor spindles
	C Max. rotational speed
	D Terminal voltage (peak value)
	E Manufacturer address
	F Serial number
	G Max. power
	H Degree of protection
	I Item code
	J Direction of motor rotation
	K Max. Current
	L Operating pressure sealing air

Tbl: Identification Plate

Type code

The structure and functionality of the module is described in the type code.



Order code

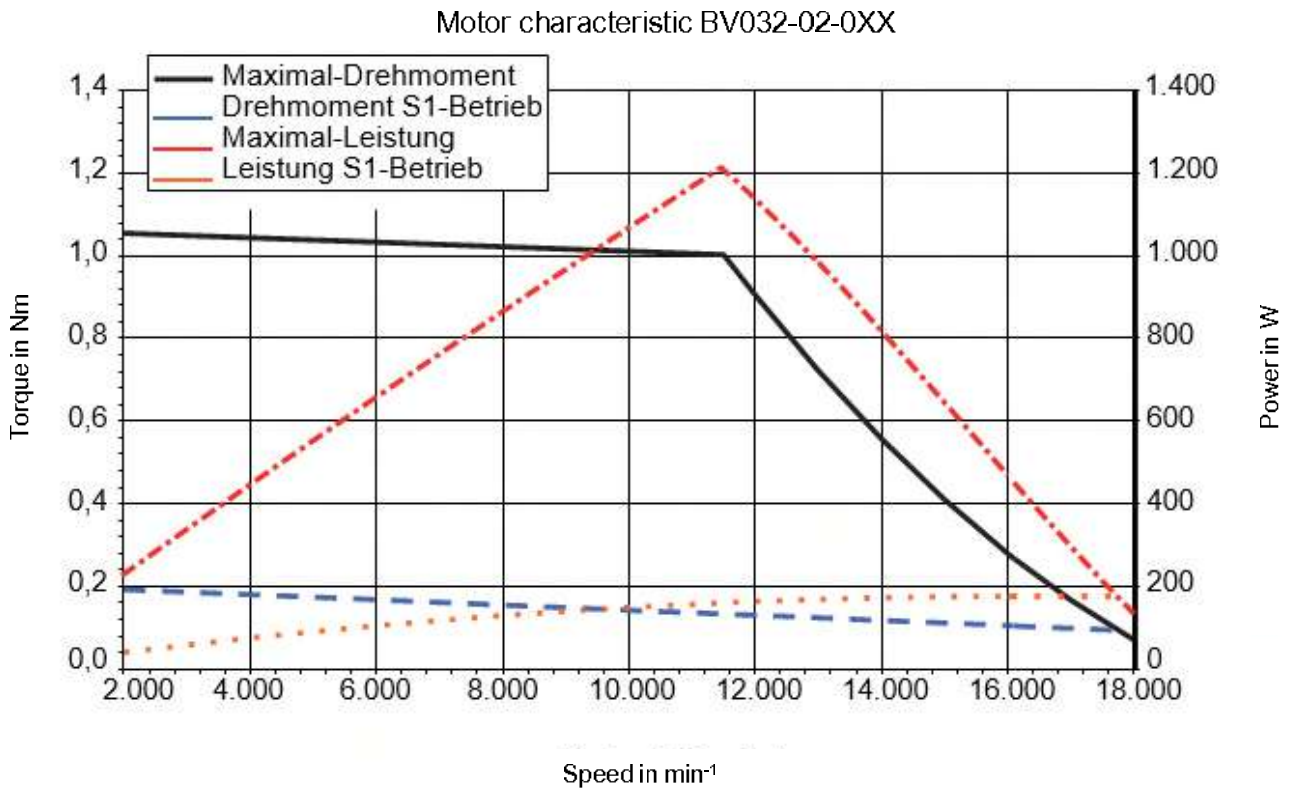
Number	Order Code BV032-0X-050- (X= number)	1 Spindle	2 Spindles	Stroke in mm	ER16	(High Speed) - Weldon	Drive Power Link	Power Self Lock	W- Angle con.	G-Straight con.	Internal Valves	Special
30000092	1B2N0FN0M032FG1	X		50		X	X			X	X	
30000093	0B1N0FN0M032FG1	X		50		X	X			X		
30000094	0B1N0FN0M032FG1		X	50		X	X			X		
30000095	1B2N0DN0M032FG1	X		50	X		X			X	X	
40023909	0B1N0DN0M032FG1	X		50	X		X			X		
40024393	1B2N0DN0M032FG1		X	50	X		X			X	X	
40024896	1B2N0FN0M032FG1		X	50		X	X			X	X	
40024897	0B1N0DN0M032FG1		X	50	X		X			X		

Technical data

Type code see chapter 3.2 Article code see chapter 9.1.3		ER16 (collet) in- ternal valves	ER16 (collet) external valves	High Speed Weldon inter- nal valves	High Speed Weldon external valves
Max. rotational speed n_{max}^*	rpm	17.000		12.000	
Max. Acceleration during operation	m/s ²	19,6 (2 g)			
Max. Axial force on the motor spindle	N	300			
Length	mm	63,8			
Width	mm	31,8			
Hight (not extended)	mm	643,6	528,0	620,6	512,5
Hight (with extended Motor spindle)	mm	695,1	579,5	672,1	564,0
Weight	kg	3,7	3,4	3,7	3,4
Housing temperature	°C	< 80 (max. allowed)			
Degree of protection		IP 54			
Operating and environmental conditions					
Ambient temperature	°C	+15 bis +40			
Relative humidity not condensing		≤ 85 %			
Use over NN	m	≤ 1000			
* the maximum permissible speed depends on the clamped tool					

Tbl: technical data

Motor data



Description	Unit	BV032-01-xxx	BV032-02-xxx
Motor type		1x Three-phase synchronous motor per Basic Module	2x Three-phase synchronous motor per Basic Module
Direction of motor rotation (against clockwise with a view of the tool holder)		Counterclockwise rotation	
Terminal voltage U_{kl} (Peak value)	V	320	
Max. Power P_{max} (short-term)	W	1200	
Max. Current I_{max} (short-term)	A_{eff}	6	
Max. Torque M_{max} (short-term)	Ncm	100	
Nominal torque M_{nenn}	Ncm	9,5	
Nominal speed n_{nenn} *	min^{-1}	17700	
Nennfrequenz f_{nenn} *	Hz	885	
Nominal current I_{nenn}	A_{eff}	0,7	
Idle speed n_0	min^{-1}	18900	
Operating speed n *	min^{-1}	2000 to 18000	
Connection resistance R_{tt} (Phase - Phase)	\wedge	11,6	
Connection inductance L_{tt} (Phase - Phase)	mH	5,1	
Torque constant K_t	Nm/A	0,17	
Number of pole pairs p		3	
* The permissible maximum speed depends on the tool holder and the tool. All values are valid per motor spindle, unless otherwise stated. The performance data are determined on the sensorless servo drive type ToolDrives			

Tbl: Motor data

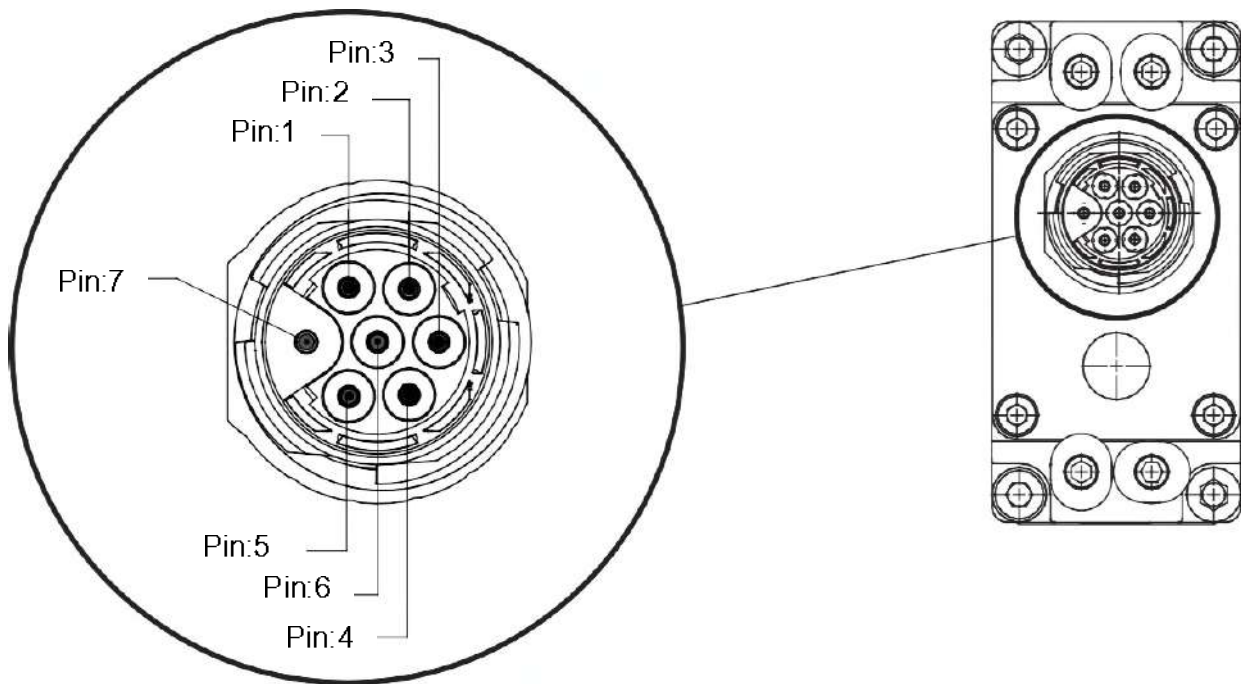
Description according AC Code

AC Code	Variant V3						
	HUB 50mm	External valves	Internal valves with LCM	High Speed Weldon	ER16 (collet)	1 Spindle	2 Spindles
30000092			X	X		X	
40024896			X	X			X
30000093	X			X		X	
30000094	X			X			X
30000095			X		X	X	
40024393			X		X		X
40023909	X				X	X	
40024897	X				X		X

Tbl: Description according AC Code

Pin assignment motor connector

- ▶ M17-pin (on Basic Module side) manufacturer: Intercontec
- ▶ Order No.: CNSHMA connector M 17 7-pin (6+PE) BEGA863NN0000054A000
- ▶ 7x CNPICR contact pin 61.004.11



Pin	BV032-02-xxx...	BV032-01-xxx...
1	Motor 1/Phase W black	
2	Motor 1/Phase U red	
3	Motor 1/Phase V white	
4	Motor 2/Phase W black	not assigned
5	Motor 2/Phase U red	not assigned
6	Motor 2/Phase V white	not assigned
7	PE	

Tbl: Pin assignment motor connector M17 – 7-pin (on Basic Module side)

Pin assignment of Drive Sensor Link connector M8 (on the Basic Module side)

- ▶ Basic Module with order key: **BV032-0x-xxx-1B2Nxxx...**
- ▶ Basic Module with order key: **BV032-0x-xxx-1B2AxxxxxxxxxG1**

The diagram shows a top-down view of an M8 connector with four pins labeled Pin:1, Pin:2, Pin:4, and Pin:3. Pin:1 is at the top, Pin:2 is on the left, Pin:4 is on the right, and Pin:3 is at the bottom. A callout line connects this diagram to a larger view of the connector on a module board.

Pin	Assignment
1	+24 V brown
2	GND 24 V white
3	RS485B (low) blue
4	RS485A (high) black

Tbl: Pin assignment M8-connector (on Basic Module side)

The diagram shows a top-down view of an M8 connector with four pins labeled Pin:3, Pin:4, Pin:1, and Pin:2. Pin:3 is at the top, Pin:4 is on the left, Pin:1 is on the right, and Pin:2 is at the bottom. A callout line connects this diagram to a larger view of the connector on a module board.

Pin	Assignment
1	+24 V
2	GND 24 V
3	CAN H
4	CAN L

Tbl: Pin assignment M8- connector with spindle position detection (on the Basic Module side)

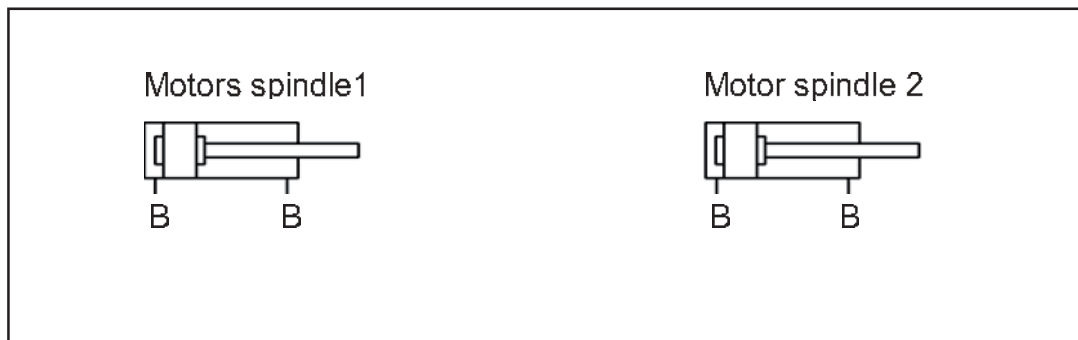
Compressed air specification

General data	Unit	Specification
Operating pressure on the input side of the connector	bar	min. 6,0 / max. 7,0
Operating medium compressed air according DIN ISO 8573-1		free of dirt, oil and water
Filter class 3 DIN ISO 8573-1	µm	≤ 5,0

Tbl: Compressed air specification

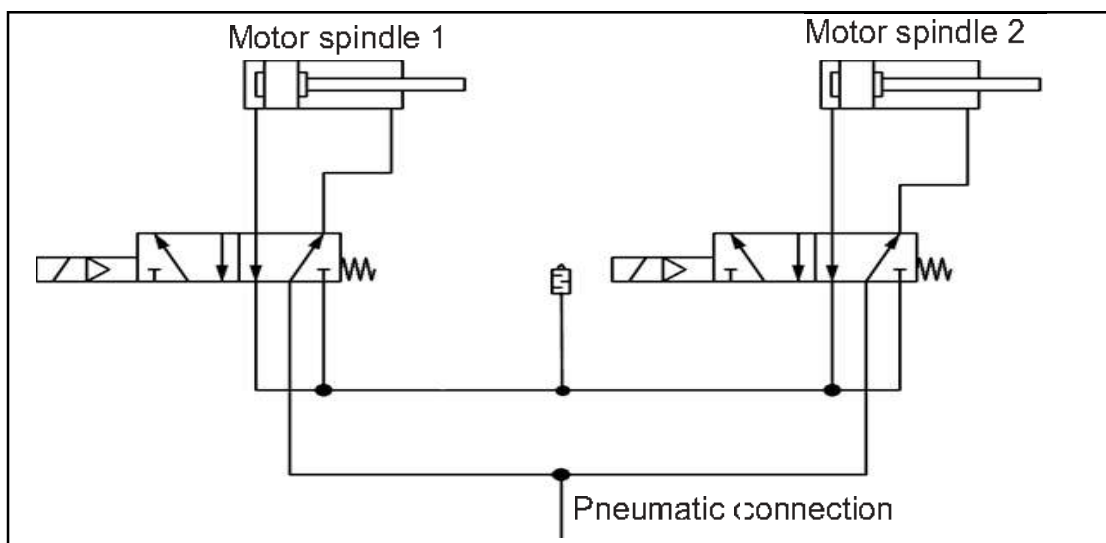
Pneumatic circuit diagram Basic Module with external valve technology

► (Order code: **BV032-0x-xxx-xx1xxx...**)



Pneumatic circuit diagram Basic Module with internal valve technology

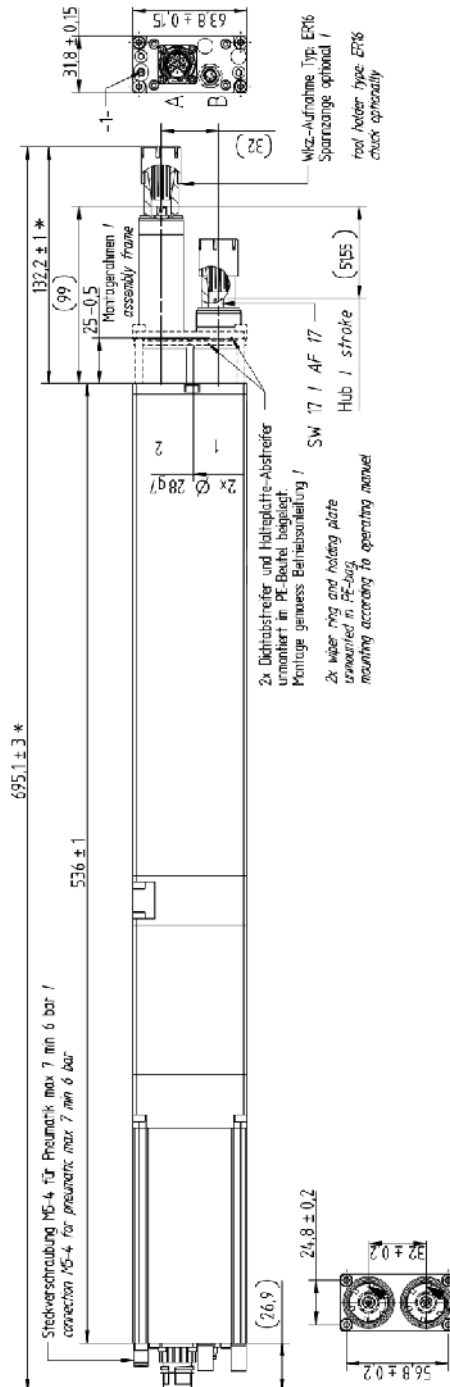
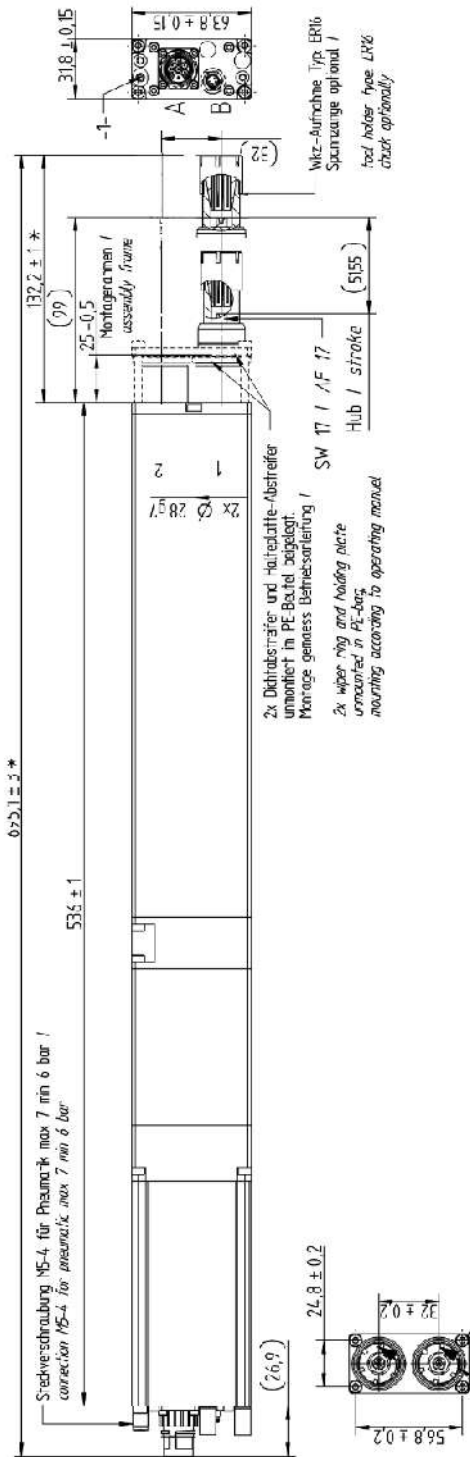
► (Order code: **BV032-0x-xxx-xx2xxx...**)



Dimension sheets

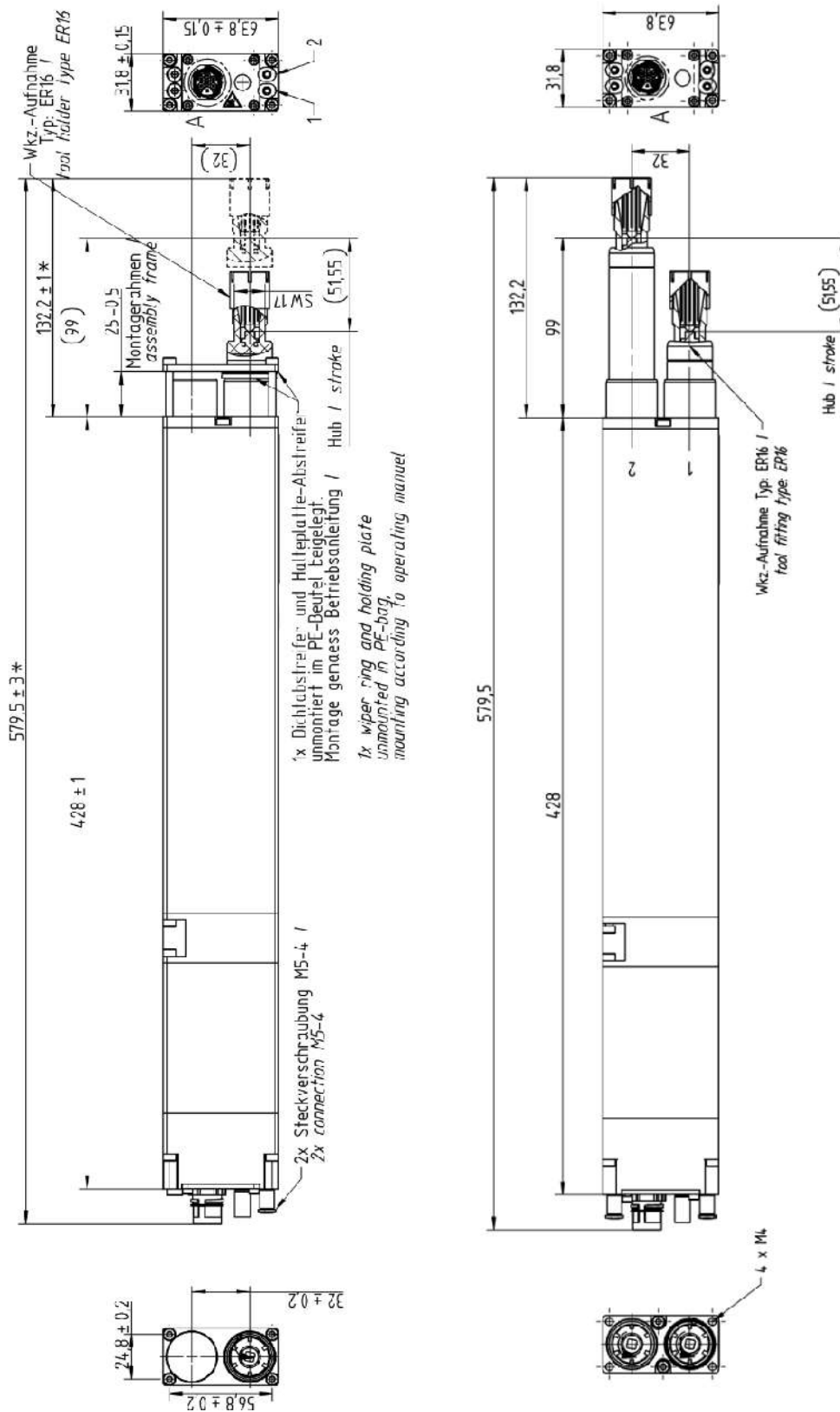
Dimension sheet ER16 (collet) internal valves (LCM)

with one / two motor spindles.



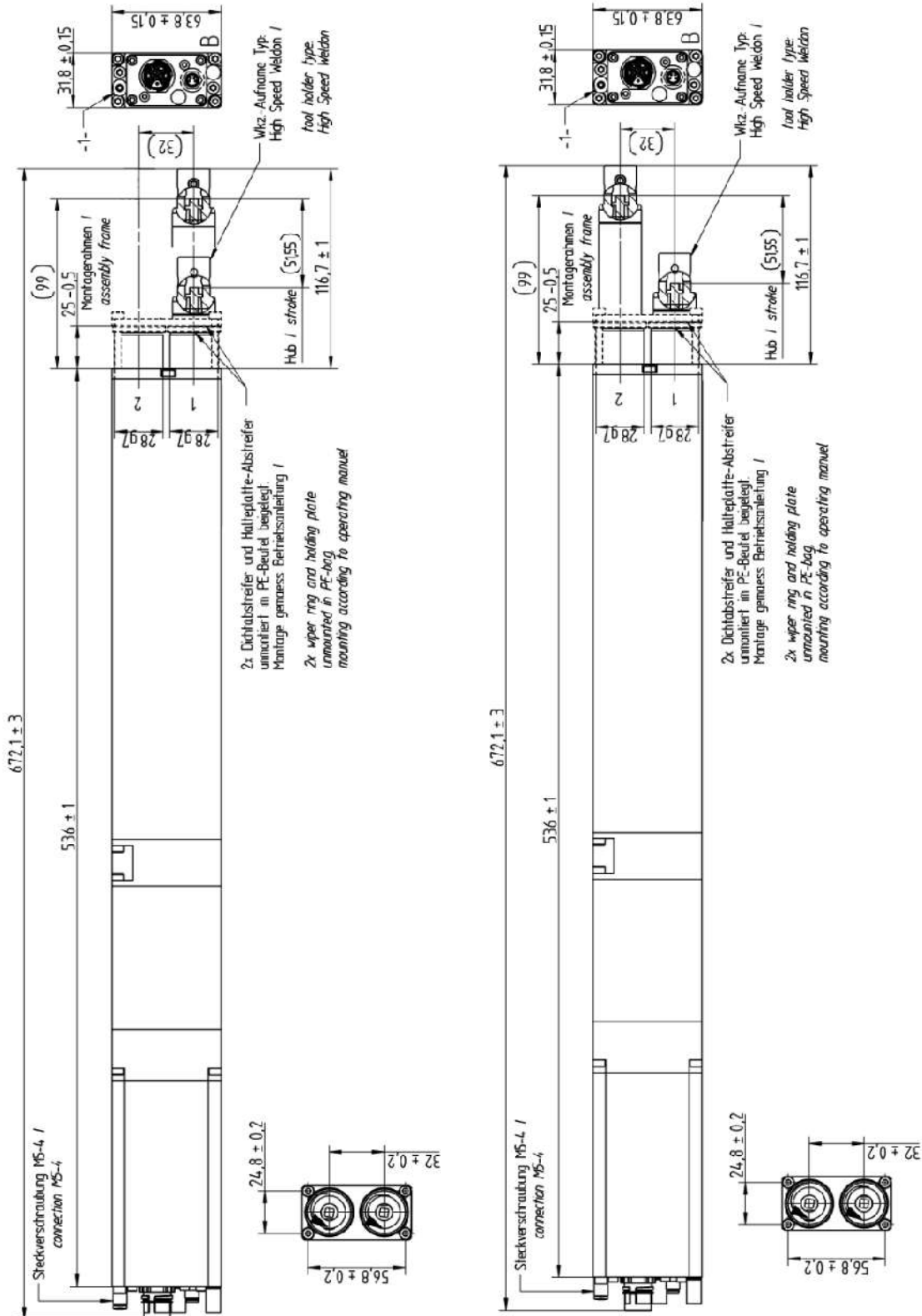
Dimension sheet ER16 (collet) external valves

with one / two motor spindles.



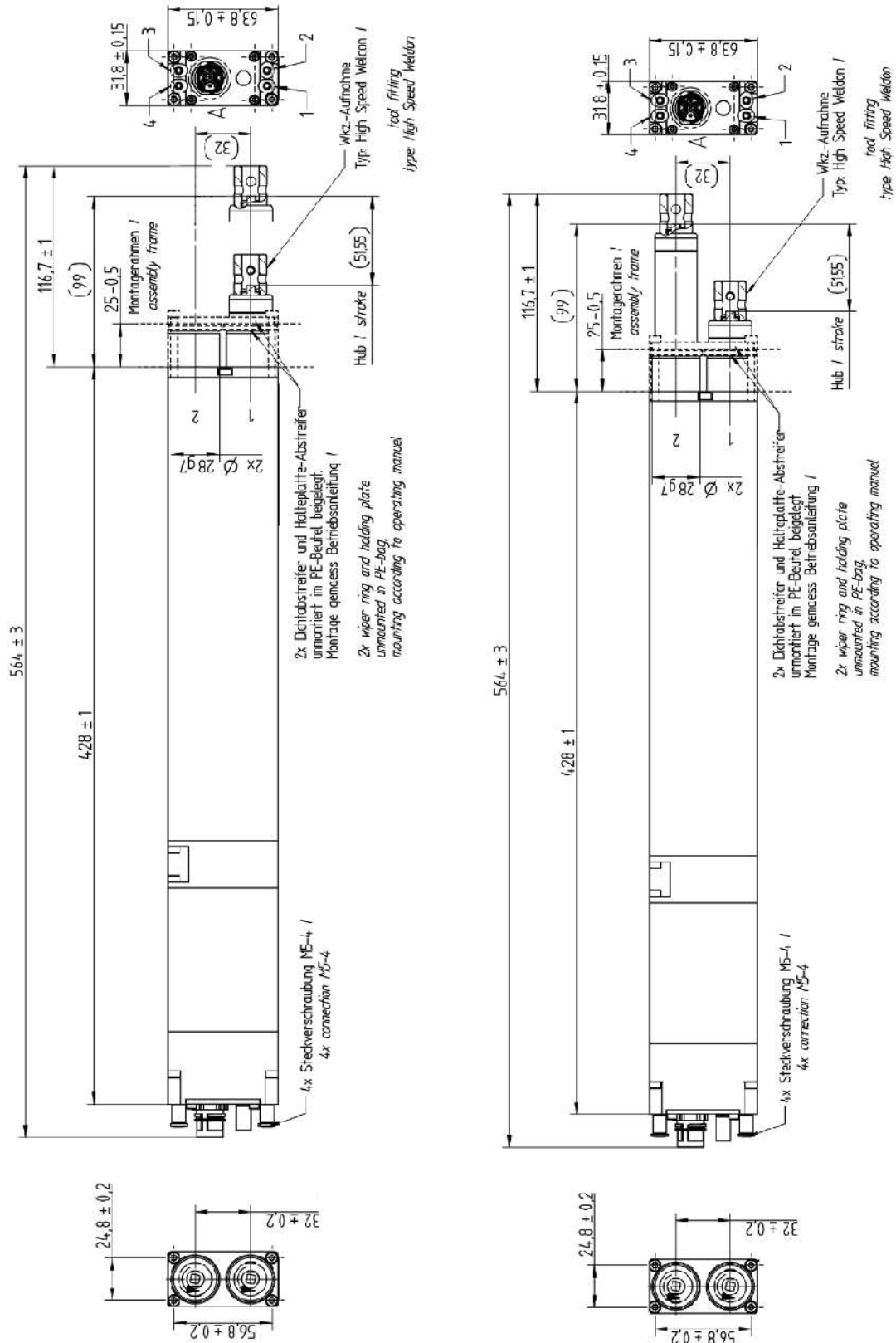
Dimension sheet High Speed Weldon internal valves (LCM)

with one / two motor spindles.

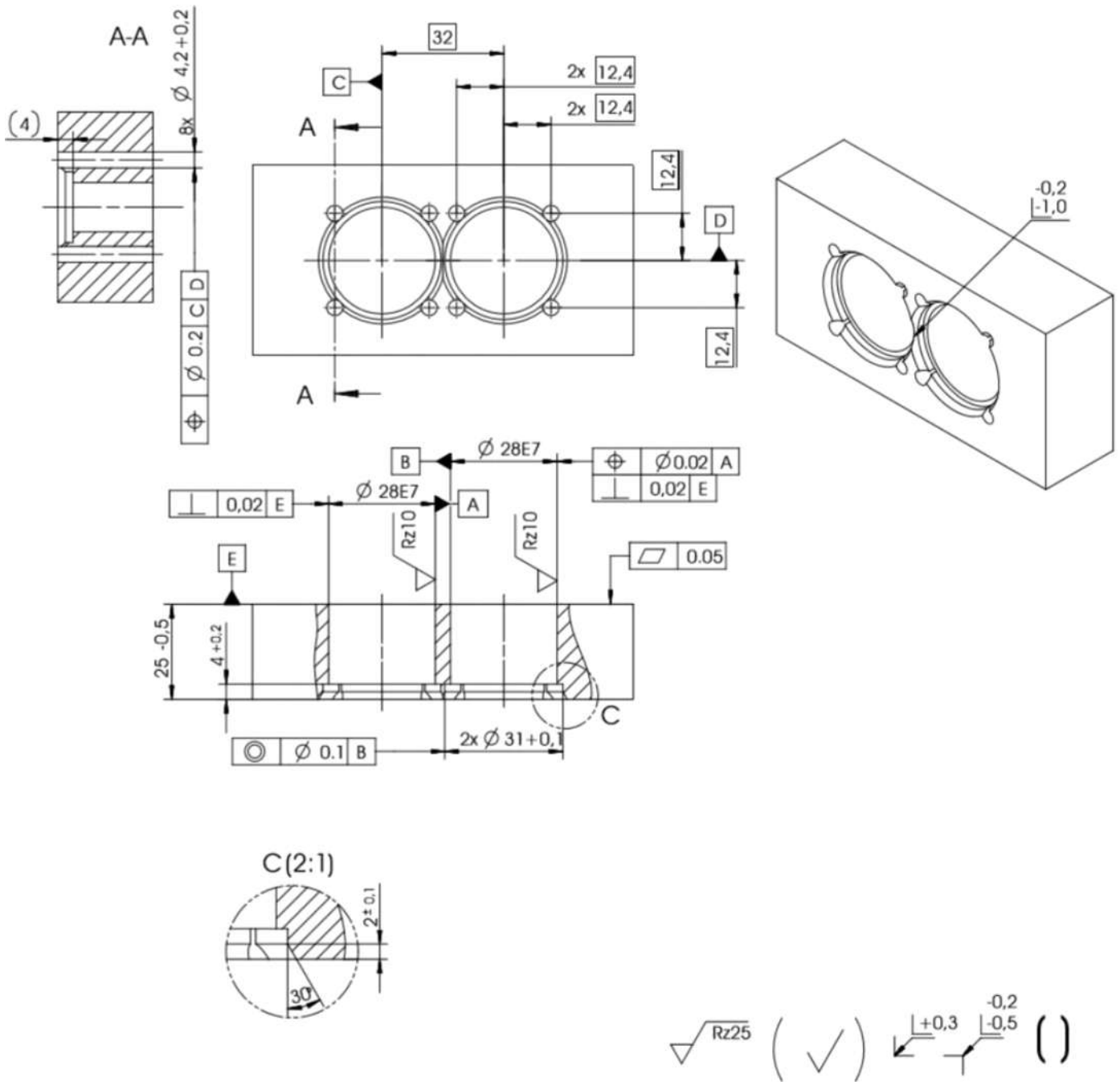


Dimension sheet High Speed Weldon external valves

with one / two motor spindles.



Dimension sheet Mounting frame (drilling pattern)



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