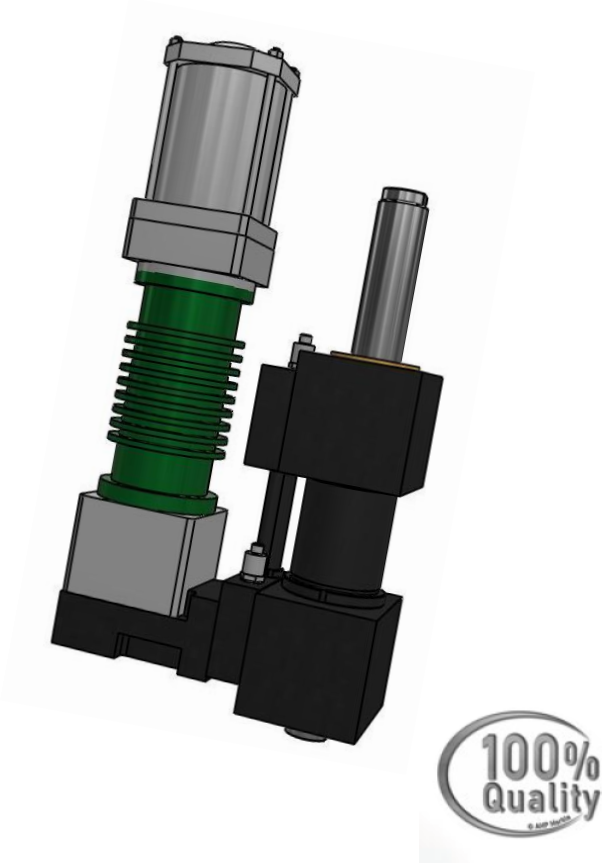


# 电动液压线性驱动器： e-ahp 基础型

## Electro-hydraulic linear drive: e-ahp BASIC



- 紧凑的，位置独立的电动液压线性驱动器，带双头活塞杆的油缸
- 集成式位移和力传感器（可选）
- 四象限泵，没有旋转密封
- 高功率密度的油浸式三相伺服电机
- 位置独立的补偿器，用于温度以及油量补偿
- 适用于快速短行程的生产过程（例如冲孔和铆接）
- 适用于可变负载控制应用
- 纯电气插拔式接口


- Compact, position-independent electro-hydraulic linear drive with double rod cylinder
- Integrated position and force measurement (optional)
- 4-quadrant pump, without rotary seal
- Oil-flow-through 3-phase servo motor with high power density
- Position-independent compensator, for temperature and oil volume compensation
- Well suited e.g. for production processes with fast smaller strokes (e.g. punching and riveting)
- Ideal for applications with feedback control and changing load directions
- Pure electrical Plug & Play - Interface



如有技术变更，恕不另行通知。现有技术资料请浏览 [www.ahp.de/eahp](http://www.ahp.de/eahp)  
Subject to technical changes without notice. Current data sheets at [www.ahp.de/eahp](http://www.ahp.de/eahp)

订购名称 (示例) **Order specifications (example)**

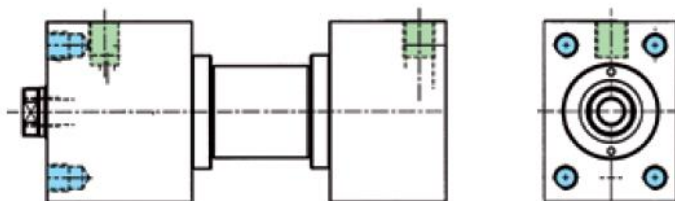
**EAHP BAS.63/40.W04.201.150.MI.WMO.G1.P11**

活塞Ø Piston Ø	活塞杆Ø Rod Ø	结构类型 e-AHP Style EAHP	安装方式 Mounting mode	工作模式 Operating Mode	行程 Stroke	活塞杆端形式 Piston rod end	位移测量系统 Position measuring system	速度 Speed	压力传感器 Captours de pression
50	32	U Z L G	04	 201 单作用式 double-acting	150 - 1500	MI	WMO	G1	P01
63	40								
80	50								
100	60								
125	80				50 - 300 (1500)		BA100	G4	P42
160	100								
160	80								
200	125								
200	100								

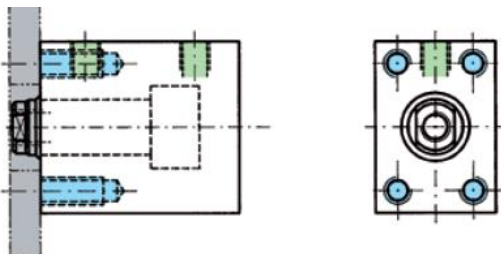
安装方式 **Mounting options**

**04**

Ø 50/32 - 100/60, 150 - 1500 mm



Ø 125/80 - 200/100; 50 - 300 mm

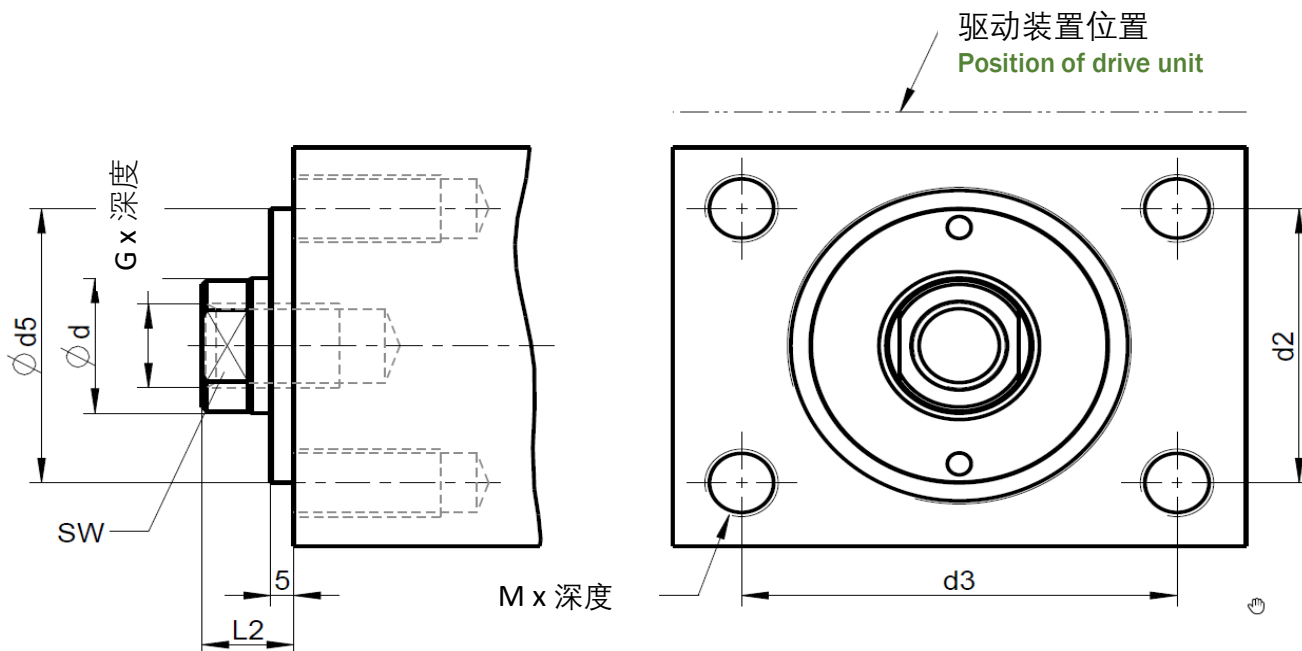


**MI**

活塞杆端适配BZ系列配件  
**Piston rods fits BZ accesories**

# 安装 Mounting


## 连接尺寸 Connection dimensions



活塞Ø Piston Ø	活塞杆Ø Rod Ø	L2	G x 深度	Ød5 f7	D2	d3	M x 深度	SW
50	32	20	M20x30	65	65	95	M16x32	SW26
63	40	20	M27x40	65	65	95	M16x32	SW32
80	50	25	M30x40	90	80	120	M20x40	SW41
100	60	25	M42x60	110	108	158	M24x48	SW50
125	80	30	M48x70	110	180	130	M24x40	(4x90°) Ø8
160	100	30	M56x80	125	230	160	M36x55	(4x90°) Ø8
160	80	30	M48x70	125	230	160	M36x55	(4x90°) Ø8
200	125	40	M72x100	165	240	200	M48x80	(4x90°) Ø8
200	100	40	M56x80	165	240	200	M48x80	(4x90°) Ø8

## 可选项 Options

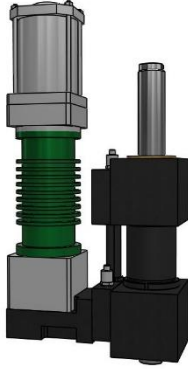
### 传感器 Sensors

 位置测量系统 <b>Position measuring system</b>		
位置测量系统 Position measuring system	<b>WMO</b>	不带位置检测系统 Ohne Wegmesssystem
	<b>MT100</b>	MTS SSI Typ GBM (M12 插头, 24bit, 格雷编码, 计数方向上升, 同步模式) (M12, 24 bit, grey-code, steigend, synchron)
	<b>BA100</b>	Balluff SSI Typ BTL7 (M12 插头, 24bit, 格雷编码, 计数方向上升, 同步模式) (M12, 24 bit, grey-code, steigend, synchron)

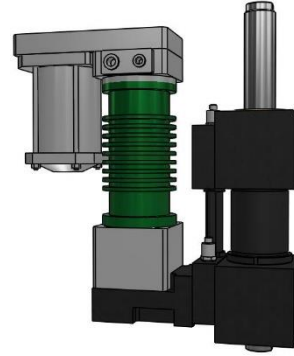
 压力传感器 <b>Pressure sensors</b>		
压力传感器, A和B端 (每端250bar) pressure sensors, A and B side (250 bar FS each)	<b>P 0 _</b>	为传感器预留位置 Only preparation for sensors
	<b>P 1 _</b>	STW M01 - 4-20mA, FS ≤0,5 %, M12x1 (5-polig) IP67
	<b>P 2 _</b>	STW M01 - 0...10V, FS ≤0,5 %, M12x1 (5-polig) IP67
	<b>P 3 _</b>	Wika精密传感器 P-30-4-20mA, precision sensors
	<b>P 4 _</b>	Wika精密传感器 P-30-4-20mA, precision sensors
系统压力传感器 (25 bar) system pressure sensor (25 bar FS)	<b>P _ 1</b>	STW M01 - 4-20mA, FS ≤0,5 %, M12x1 (5-polig) IP67
	<b>P _ 2</b>	STW M01 - 0...10V, FS ≤0,5 %, M12x1 (5-polig) IP67

## 结构类型 Form-factors

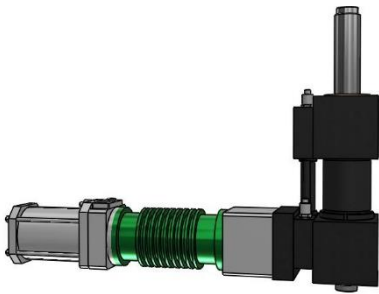
结构类型 “U”  
Form factor „U“



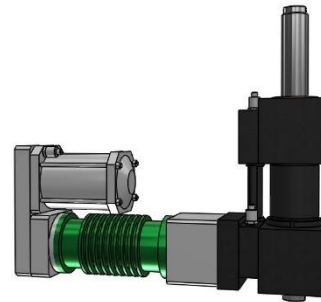
结构类型 “Z”  
Form factor „Z“



结构类型 “L”  
Form factor „L“



结构类型 “G”  
Form factor „G“



### 信息 Information

结构类型“Z”和“G”仅在部分行程长度以下时可用  
尺寸规格及3D数据请见[www.ahp.de/eahp](http://www.ahp.de/eahp)  
可根据需求特别定制

Type "Z" and "G" are only available up to a limited stroke length.  
Dimensions and 3D data at [www.ahp.de/eahp](http://www.ahp.de/eahp)  
Special designs available on request

## 技术参数      Technical data

G型号 (标准/高速)

G version (standard / high velocities)

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		50 / 32		63 / 40		80 / 50		100 / 60	
速度, 型号 Speed, Version		G1	G2	G1	G2	G1	G2	G1	G2
持续力, [kN]1) Continuous force, [kN] 1)	推动和拉动方向 Push and pulldirection	10		17,5		27,5		45	
最大力, [kN]2) Maximum force, [kN] 2)	推动和拉动方向 Push and pulldirection	25		37,5		62,5		100	
速度, [mm/s]3) Speed, [mm/s] 3)	伸出和缩回 Extending and retracting	150	300	100	175	60	100	37,5	67,5
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] 4)	拉动, pulling,	1,5	3	1	1,75	0,6	1	0,375	0,675
额定功率, 电机[kW] Rated power, motor [kW]		3,5	6,2	3,5	6,2	3,5	6,2	3,5	6,2
泵流量[L/min] Pump flow rate [L/min]		12,5	22,5	12,5	22,5	12,5	22,5	12,5	22,5



更多信息请见第15页  
Further Remarks on page 15

## 技术参数 Technical data

G型号 (标准/高速)

G version (standard / high velocities)

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		80 / 50		100 / 60	
速度, 型号 Speed, Version		G3 )	G4 )	G3 )	G4 )
持续力, [kN]1) Continuous force, [kN] 1)	推动和拉动方向 Push and pulldirection	27,5		45	
最大力, [kN]2) Maximum force, [kN] 2)	推动和拉动方向 Push and pulldirection	62,5		100	
速度, [mm/s]3) Speed, [mm/s] 3)	伸出和缩回 Extending and retracting	200	400	125	250
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] 4)	拉动, pulling	2	4	1,25	2,5
额定功率, 电机[kW] Rated power, motor [kW]		16	32	16	32
泵流量[L/min] Pump flow rate [L/min]		40	80	40	80

\*)初步数据, 3D模型正在准备中

\*) Preliminary data, 3D models in preparation



更多信息请见第15页  
Further Remarks on page 15

## 技术参数 **Technical data**

HD型号(高持久力)

**HD version (high durable forces)**

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		50 / 32	63 / 40	80 / 50	100 / 60
速度, 型号 Speed, Version		<b>HD1</b>			
持续力, [kN]1) Continuous force, [kN] 1)	推动和拉动方向 Push and pulldirection	<b>15</b>	<b>25</b>	<b>40</b>	<b>65</b>
最大力, [kN]2) Maximum force, [kN] 2)	推动和拉动方向 Push and pulldirection	<b>25</b>	<b>37,5</b>	<b>62,5</b>	<b>100</b>
速度, [mm/s]3) Speed, [mm/s] 3)	伸出和缩回 Extending and retracting	<b>150</b>	<b>100</b>	<b>60</b>	<b>37,5</b>
加速度, [m/s²]4) Acceleration, [m/s²] 4)	拉动, pulling	<b>1,5</b>	<b>1</b>	<b>0,6</b>	<b>0,375</b>
额定功率, 电机[kW] Rated power, motor [kW]		<b>6,2</b>			
泵流量[L/min] Pump flow rate [L/min]		<b>12,5</b>			



更多信息请见第15页  
**Further Remarks on page 15**



## 技术参数 **Technical data**

**HD型号(高持久力)**

**HD version (high durable forces)**

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		80 / 50	100 / 60
速度, 型号 Speed, Version		HD3 *)	
持续力, [kN]1) Continuous force, [kN] 1)	推动和拉动方向 Push and pulldirection	40	65
最大力, [kN]2) Maximum force, [kN] 2)	推动和拉动方向 Push and pulldirection	62,5	100
速度, [mm/s]3) Speed, [mm/s] 3)	伸出和缩回 Extending and retracting	200	125
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] 4)	拉动, pulling	2	1,25
额定功率, 电机[kW] Rated power, motor [kW]		32	
泵流量[L/min] Pump flow rate [L/min]		40	

\*)初步数据, 3D模型正在准备中

\*) Preliminary data, 3D models in preparation



更多信息请见第15页  
**Further Remarks on page 15**

## 结构类型 Form-factors

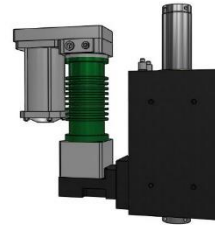
结构类型“U”，行程上限300mm

Form factor „U“ up to 300 mm stroke



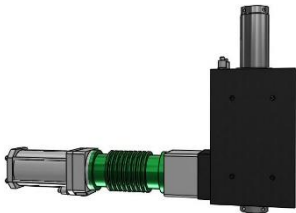
结构类型“Z”，行程上限300mm

Form factor „Z“ up to 300 mm stroke



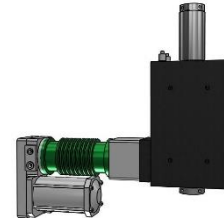
结构类型“L”，行程上限300mm

Form factor „L“ up to 300 mm stroke



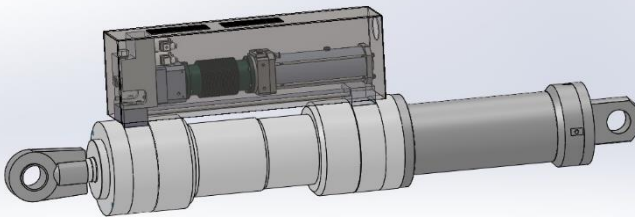
结构类型“G”，行程上限300mm

Form factor „G“ up to 300 mm stroke



结构类型“U”基于DHZ液压缸，行程300mm起

Form factor "U" on DHZ basis from 300 mm stroke



仅作示例性说明。可根据要求设计。

Illustration exemplary only.

Possible designs on request.



## 信息 Information

结构类型“Z”和“G”仅在部分行程长度以下时可用  
尺寸规格及3D数据请见[www.ahp.de/eahp](http://www.ahp.de/eahp)  
可根据需求特别定制

Type "Z" and "G" are only available up to a limited stroke length.

Dimensions and 3D data at [www.ahp.de/eahp](http://www.ahp.de/eahp)

Special designs available on request

## 技术参数 Technical data

G型号(标准/高速)

G version (standard / high velocities)

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		125 / 80		160 / 100		160 / 80		200 / 125		200 / 100	
速度, 型号 Speed, Version		G1	G2	G1	G2	G1	G2	G1	G2	G1	G2
持续力, [kN]1) Continuous force, [kN] 1)	推动和拉动方向 Push and pulldirection	65		100		125		175		200	
最大力, [kN]2) Maximum force, [kN] 2)	推动和拉动方向 Push and pulldirection	150		250		300		400		500	
速度, [mm/s]3) Speed, [mm/s] 3)	伸出和缩回 Extending and retracting	25	47,5	15	27,5	12,5	22,5	10	17,5	8	15
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] 4)	伸出和缩回 Extending and retracting	0,25	0,475	0,15	0,275	0,125	0,225	0,1	0,175	0,08	0,15
额定功率, 电机[kW] Rated power, motor [kW]		3,5	6,2	3,5	6,2	3,5	6,2	3,5	6,2	3,5	6,2
泵流量[L/min] Pump flow rate [L/min]		12,5	22,5	12,5	22,5	12,5	22,5	12,5	22,5	12,5	22,5



更多信息请见第15页  
 Further Remarks on page 15

## 技术参数 Technical data

G型号(标准/高速)

G version (standard / high velocities)

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		125 / 80		160 / 100		160 / 80		200 / 125		200 / 100	
速度, 型号 Speed, Version		G3 )	G4 )	G3 )	G4 )	G3 )	G4 )	G3 )	G4 )	G3 )	G4 )
持续力, [kN]1) Continuous force, [kN] <sup>1)</sup>	推动和拉动方向 Push and pulldirection	65		100		125		175		200	
最大力, [kN]2) Maximum force, [kN] <sup>2)</sup>	推动和拉动方向 Push and pulldirection	150		250		300		400		500	
速度, [mm/s]3) Speed, [mm/s] <sup>3)</sup>	伸出和缩回 Extending and retracting	82,5	175	50	100	40	80	32,5	62,5	25	50
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] <sup>4)</sup>	伸出和缩回 Extending and retracting	0,825	1,75	0,5	1	0,4	0,8	0,325	0,625	0,25	0,5
额定功率, 电机[kW] Rated power, motor [kW]		16	32	16	32	16	32	16	32	16	32
泵流量[L/min] Pump flow rate [L/min]		40	80	40	80	40	80	40	80	40	80

\*)初步数据, 3D模型正在准备中

\*) Preliminary data, 3D models in preparation



更多信息请见第15页  
Further Remarks on page 15

## 技术参数 Technical data

HD型号(高持久力)

HD version (high durable forces)

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		125 / 80	160 / 100	160 / 80	200 / 125	200 / 100
速度, 型号 Speed, Version		HD1				
持续力, [kN]1) Continuous force, [kN] 1)	推动和拉动方向 Push and pulldirection	100	150	200	250	300
最大力, [kN]2) Maximum force, [kN] 2)	推动和拉动方向 Push and pulldirection	150	250	300	400	500
速度, [mm/s]3) Speed, [mm/s] 3)	伸出和缩回 Extending and retracting	25	15	12,5	10	8
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] 4)	伸出和缩回 Extending and retracting	0,25	0,15	0,125	0,1	0,08
额定功率, 电机[kW] Rated power, motor [kW]		6,2				
泵流量[L/min] Pump flow rate [L/min]		12,5				



更多信息请见第15页  
Further Remarks on page 15

## 技术参数 **Technical data**

HD型号(高持久力)

**HD version (high durable forces)**

活塞φ[mm]/活塞杆φ[mm] Piston Ø / Rod Ø (d)		125 / 80	160 / 100	160 / 80	200 / 125	200 / 100
速度, 型号 Speed, Version		<b>HD3</b> *)				
持续力, [kN]1) Continuous force, [kN] <sup>1)</sup>	推动和拉动方向 Push and pulldirection	<b>100</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
最大力, [kN]2) Maximum force, [kN] <sup>2)</sup>	推动和拉动方向 Push and pulldirection	<b>150</b>	<b>250</b>	<b>300</b>	<b>400</b>	<b>500</b>
速度, [mm/s]3) Speed, [mm/s] <sup>3)</sup>	伸出和缩回 Extending and retracting	<b>82,5</b>	<b>50</b>	<b>40</b>	<b>32,5</b>	<b>25</b>
加速度, [m/s <sup>2</sup> ]4) Acceleration, [m/s <sup>2</sup> ] <sup>4)</sup>	伸出和缩回 Extending and retracting	<b>0,825</b>	<b>0,5</b>	<b>0,4</b>	<b>0,325</b>	<b>0,25</b>
额定功率, 电机[kW] Rated power, motor [kW]		<b>32</b>				
泵流量[L/min] Pump flow rate [L/min]		<b>40</b>				

\*)初步数据, 3D模型正在准备中

\*) **Preliminary data, 3D models in preparation**



更多信息请见第15页  
**Further Remarks on page 15**



## 提示 Remarks

技术参数相关

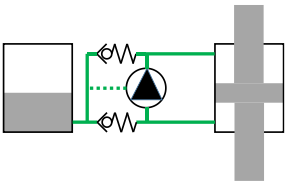
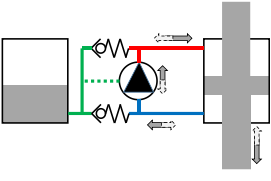
related to technical data

- 1) 压力方向上的力不能持续超过平均10秒的时间。对于周期中所需的额外拉力和快速移动时的拉力，必须按时间比例考虑，并标准化相应的连续力值。需要通过机器/机器框架进行充分的通风和/或散热，以达到规定的持续负载系数。在特殊情况下，可能需要风扇来进行冷却。  
 1) The continuous force in the direction of pressure must not be exceeded on a time average of more than 10 seconds. For additional tensile forces and forces in rapid traverse required in the cycle, these must be taken into account pro rata temporis and standardised to the respective continuous force values. Sufficient ventilation and/or heat dissipation via the machine/machine frame is required to achieve the specified continuous load factor. In individual cases, a fan may be required for cooling.
- 2) 系统可在短时间内建立、保持和主动调节在压缩或拉伸方向上的最大峰值力。随着力的增加和控制，连续荷载1)不得超过平均值。最大力可通过“保持压力”或“保持张力”选项来进行长期保持。  
 2) Maximum peak force in compression or tension direction, which the system can build up, hold and regulate actively for a short time. With force build-up and control, the continuous load1) must not be exceeded on average over time. The maximum force can be permanently maintained via the options "Hold compressive force" or "Hold tensile force".
- 3) 抵抗压力或牵引力的最大速度。随着力>连续负载力和/或系统温度> 60度时，最大速度可降低25%。“快速移动”选项允许在伸展过程中提高速度。  
 3) Maximum speed against compressive force or with tractive force. With forces > continuous load force and/or system temperatures > 60 degrees, the maximum speed can be reduced by up to 25%. The "rapid traverse" option allows higher speeds during extension.
- 4) 伸缩过程中会存在典型加速度。“快速移动”选项允许在伸展过程中提高加速度。  
 4) Typical acceleration during extension or retraction. The "Rapid traverse" option allows higher accelerations during extension.

## 操作模式 **Operating State**

e-ahp基础型的液压回路支持以下操作模式

The hydraulic circuit of the e-ahp BASIC enables the following operating mode

<p><b>1.基本位置</b> <b>Basic position</b></p> 	<p><b>2.伸出和缩回，控制模式操作</b> <b>Extension and retraction, Control mode operation</b></p> 
<p>驱动器静止不动 <b>Rest position of the actuator without movement</b></p>	<p>启用收缩、伸展和控制模式操作 <b>Enables retraction, extension and control mode operation</b></p>
<p>无外部推动和拉力。驱动器关闭。 <u>No external pushing and pulling forces. Drive switched off.</u></p>	<p>也可用于控制力的增加和释放，直至推力或拉力达到最大值。外部推力或拉力达到最大值时。驱动器：伸出和缩回，主动控制力或位置。 <u>Also for the controlled build-up and release of a pushing or pulling force up to maximum force. External a pushing or pulling forces up to the maximum force. Drive: retracting and extending, as well as active control of force or position.</u></p>