

Wildermann 压装系统

Wildermann Press-fit System



Contents



B.I.W

Warranty: Warranty on quality, time and commitments

Innovation: Innovation in technology, services and concepts

Beyond: Beyond competitors, beyond ourselves, beyond clients' expectations

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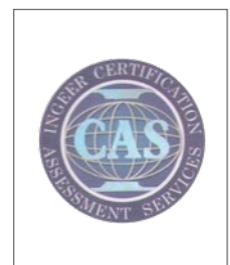
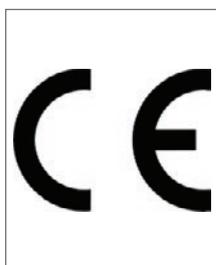
W500-P Press-fit Monitoring System
BIW2200 Portable Torque/Force Calibrator
BIW2800 Force/Torque Loading Analyzer

Sensors 58

Force sensor
Tension sensor
Pull-force sensor
Displacement sensor



The Wildermann Messtechnik Project, jointly invested and developed by Shanghai BIW Company and German DEBO Co., Ltd., was officially launched in 2007, in which the Wildermann Press-fit System was a key part of cooperation. The Wildermann Press-fit System was designed and developed by German experts and assembled in Shanghai. All parts in the system are high-quality components from certified international brands, ensuring excellent performance of the system. During the assembling, we strictly follow the criteria of ISO9000 and Europe in machine design, with supervision by German experts. Therefore, the Wildermann Press-fit System can not only provide excellent performance, but also have an ultra-high cost performance ratio. Since August 2014, BIW Group possessed all IP rights of Wildermann, becoming the largest servo press-fit and monitoring system brand in China.



Wildermann Press-fit System

The Wildermann Servo Press-fit System is a highly integrated equipment that integrates press-fit, assembly, measurement, calculation and analysis, suitable for high rhythm and high precision pressing applications such as press-fitting, molding, riveting, stamping and elastic testing. With unique technology of tolerance windows and envelope curves to monitor the force-displacement-speed relationship during the process of press-fitting effectively, it can ensure high consistency of the pressed products. Both semi-automatic workstations and fully automated assembly lines can easily integrate the Wildermann Press-fit System. In the fields of auto, aerospace, electronics, etc., Wildermann has successfully implemented countless applications for clients worldwide. As a technology-based company, BIW adheres to the goal of meeting clients' needs, continuously improving and developing our technical system, providing clients with multifunctional press-fit and assembly solutions, and producing high-quality, efficient and reliable standard equipment.

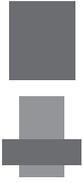




Why choose a servo press-fit system

	Servo press-fit		Traditional pneumatic/hydraulic press-fit	
Speed adjustment	Stepless adjustment	✓	Limited adjustment through valve group	✗
Press-fit speed	Consistent with program settings	✓	Changing by the pressure of gas and liquid, as well as the state of product's mating surface	✗
Press-fit force and displacement control	Active control with integrated functions	✓	Passive monitoring achieved by additional force and displacement monitoring devices	✗
Force sensors	Integrated & built-in	✓	External, necessary to be purchased from another manufacturers	✗
Displacement sensor	Integrated & built-in	✓	External, necessary to be purchased from another manufacturers	✗
Repetitive positioning precision	<0.01mm	✓	Achieved by mechanical structure	✗
Energy consumption	20%	✓	100%	✗
Floor space	50%	✓	100%	✗
Environment pollution	10%	✓	100%	✗
Maintenance hours	20%	✓	100%	✗
Design hours	20%	✓	100%	✗
Installation hours	50%	✓	100%	✗
Functionality	300%	✓	100%	✗
Production flexibility	300%	✓	100%	✗
Controllability of product quality	Strong	✓	Weak	✗
Comprehensive cost	Low	✓	High	✗
Cost performance	High	✓	Low	✗

Extensive Application



Press-fitting



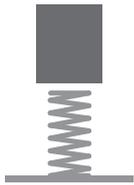
Crimping



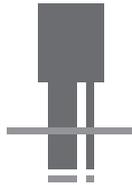
Rivetting



Molding



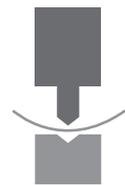
Elastic testing



Pressing



Rivetless connection

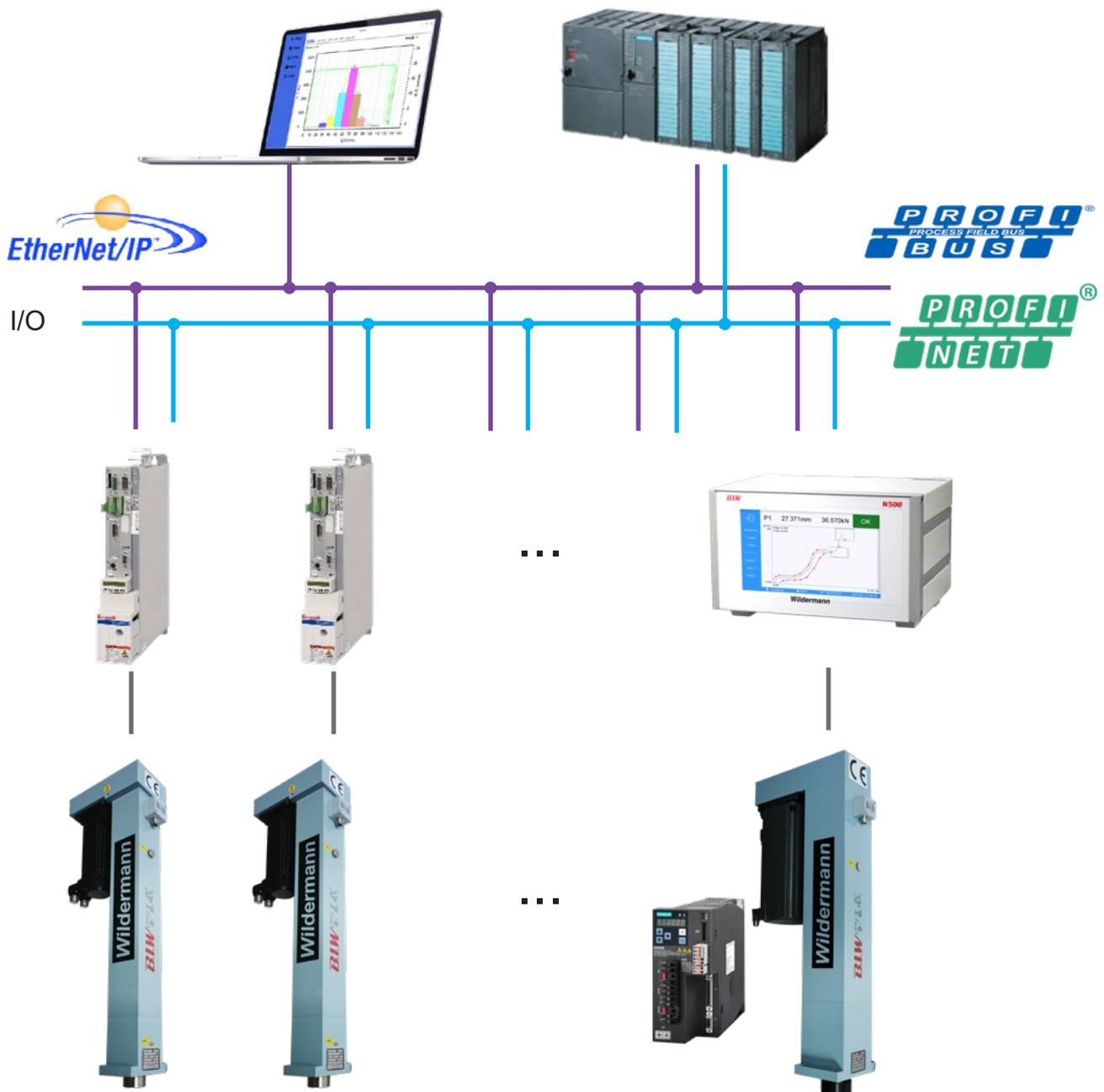


Bending

Product Advantages

- Repetitive positioning precision of 0.01mm and force precision of 1%
- Design lifetime of 10 million times
- Support dual force sensors to ensure zero defects of press-fitting
- Super function of "black box", recording any parameter changes and operation history of press-fit machine
- Synchronous curves of force, displacement and speed
- Automatic adjustment for force/speed (when the press-fitting force increases, the press-fitting speed may automatically decrease proportionally)
- Multiple monitoring methods, e.g. tolerance windows and envelope curves
- Auto-diagnosis to meet user's requirements for intelligent maintenance
- Auto-precision compensation to meet requirements of precision assembly in specific situations

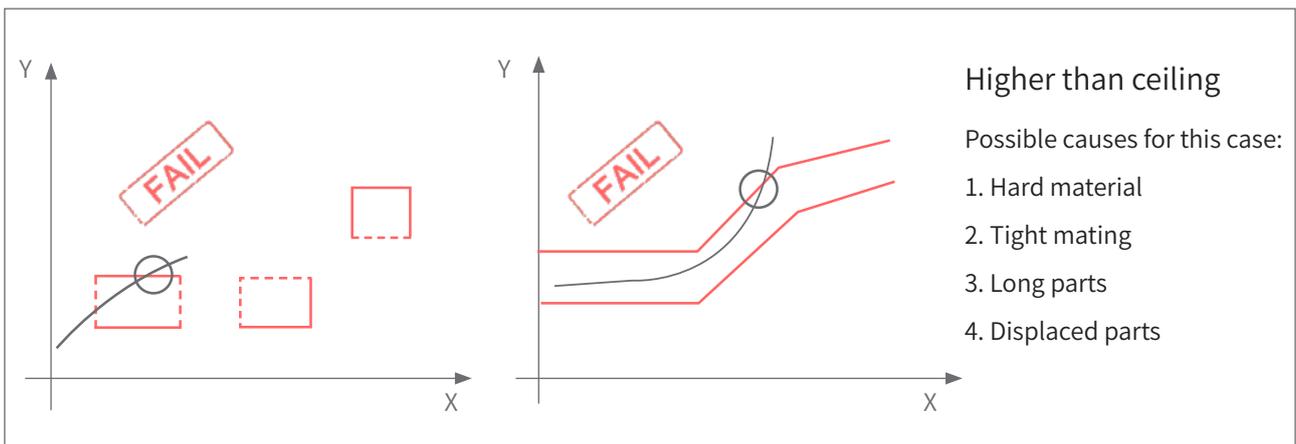
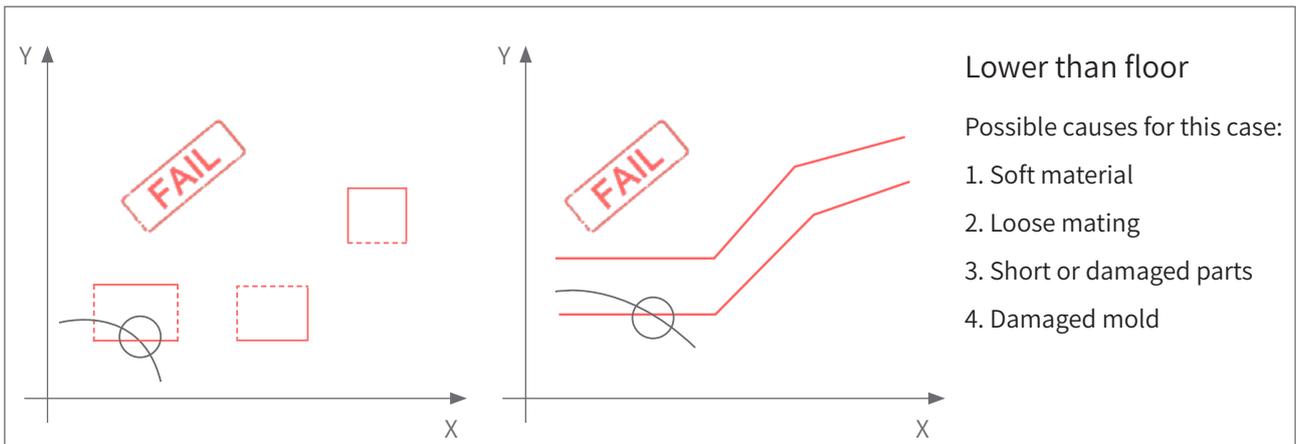
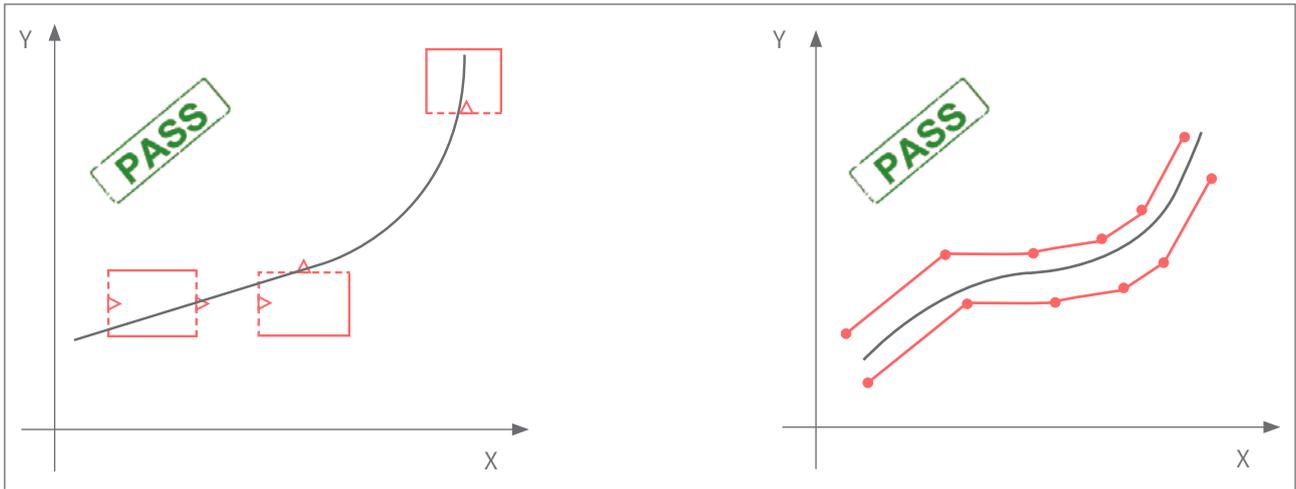
Topography of Press-fit System



Wildermann provides a compact control mode that supports multiple communication protocols, e.g. Profibus, ProfiNet, Modbus TCP, Modbus-485, EtherNet/IP, EtherCat, I/O, RS232, etc. The controller effectively monitors parameters such as force displacement velocity, and the pressing process data is used for real-time monitoring of tolerance windows, which are recorded in real-time. At the same time, real-time data exchange is carried out with the clients' controllers (such as PLC). The press-fitting process monitoring system with Wildermann software can achieve visual control operations and data storage.

Integrated tolerance windows for process detection

For the purpose to more accurately control the direction of the press-fitting curves, ensure the press-fitting process accurately, and effectively control the consistency of product press-fitting, the Wildermann Press-fit System introduces the concept of tolerance window. The Wildermann Press-fit System contains 20+ types and 50+ forms of tolerance windows.

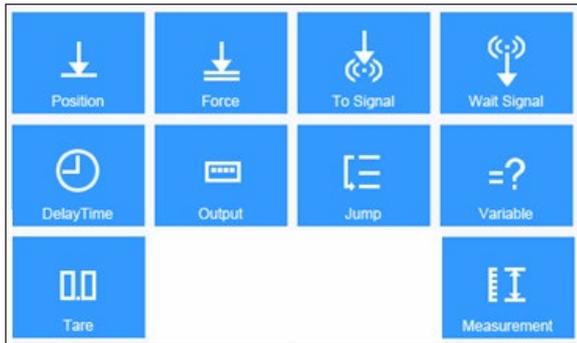


* In case of any situation that does not comply with the setting parameters of tolerance windows, the press-fit machine will immediately stop to protect the equipment and parts from damage, and provide corresponding alarm information on the program interface and PLC output terminal.

Type	Mode	Name	OK	NOK
0		Window of maximum displacement		
1		Window of maximum force		
2		Window of mating		
3		Window of lower-right limit		
4		Window of traversing		
5		Window of peaks (left, top and right limits)		
6		Window of upper-left limit		
7		Window of upper-right limit		
8		Window of top ending		
9		Window of right ending		
10		Window of mean value		
11		Window of inflection point		

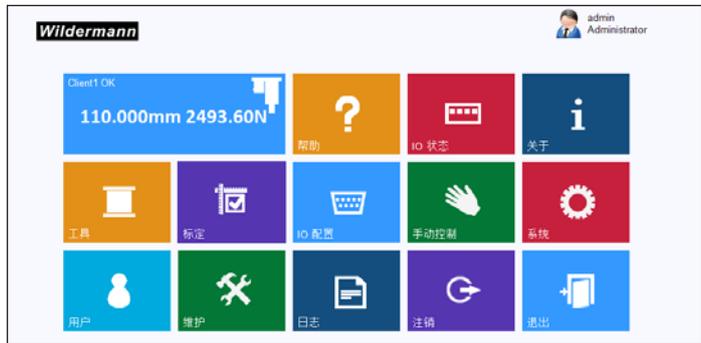
* All tolerance windows may define the direction of curve motion.

Convenient and intuitive operation software



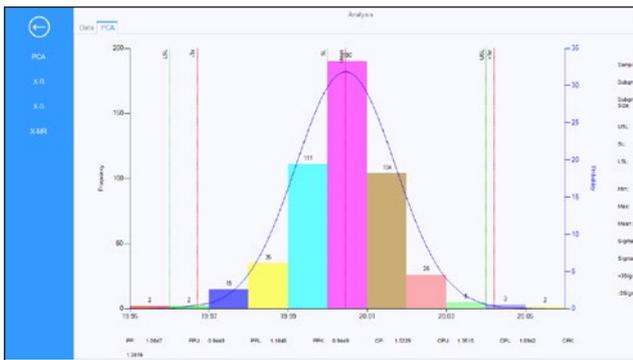
Press-fitting function

- Press to relative/absolute displacement, press to relative/absolute force, press to signal
- Delayed voltage holding, logic calculation, signal input/output
- Conditioned jump of press-fitting steps
- Real-time measurement, etc.



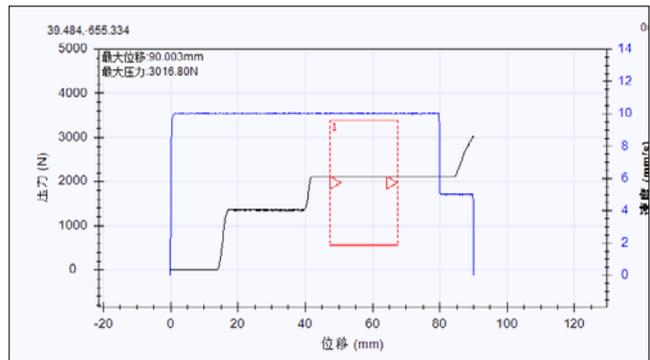
Main interface

- Concise, easy and fast operation interface
- Internationally popular flat design
- Integrated software and hardware resources
- Smart switching effects



Offline data analysis

Output files: CSV, XML, QDas...



Display of real-time force-displacement-speed synchronous curves

- Time-force curve
- Synchronous curve of displacement-force-expansion force
- Expansion displacement-force-speed curve

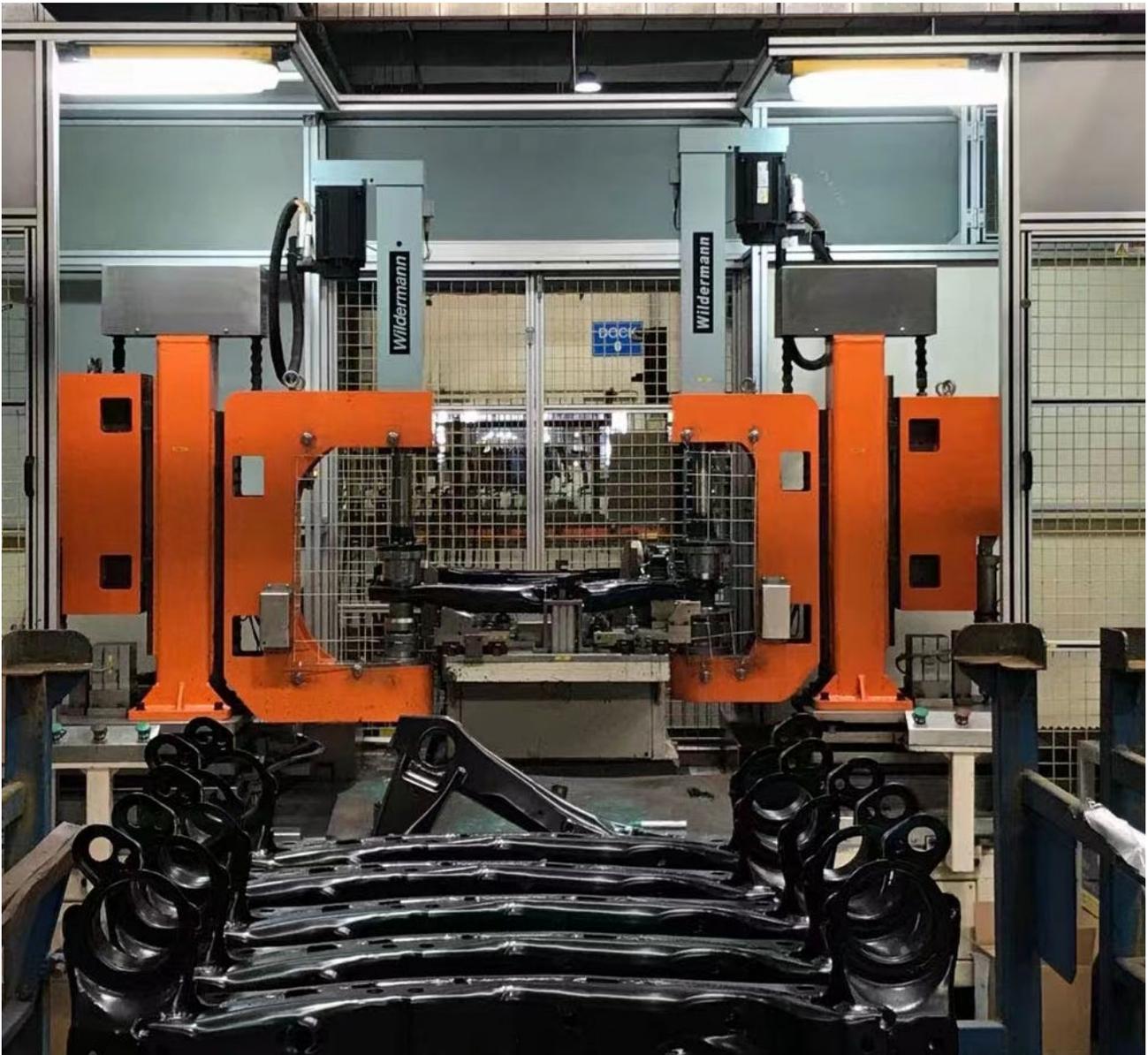
Multiple languages optional, e.g. Chinese, English, German, etc., with more user-friendly operation



NH Economic Servo Press-fit Machine

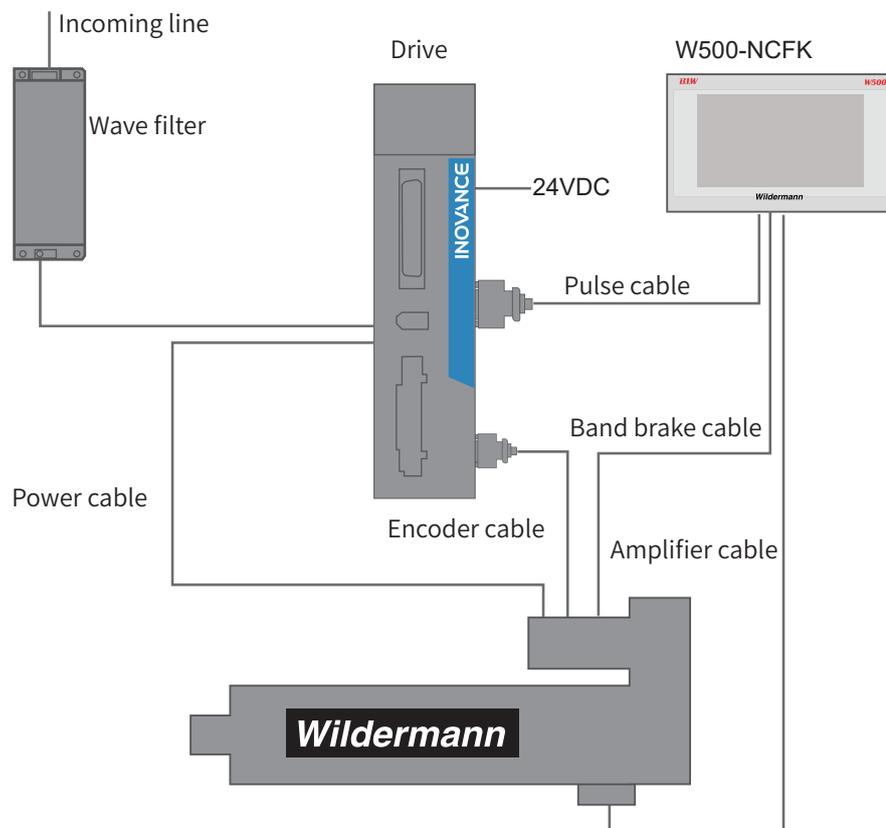
NH Economic Servo Press-fit Machine adopts highly integrated design, optimizes high-dynamic servo performance, positions rapidly, stably and accurately, adopts absolute value encoder motor, has built-in motor brake, reduces design costs to meet clients' requirements for cost control; and integrates safety function STO (safety torque stop) and high-protection motor with exquisite design, safe and reliable operation.





- Force precision, 1%
- Repetitive positioning precision, 0.01mm
- Synchronous curves of force, displacement and speed
- Remote diagnosis
- Chinese/English interface
- Supports multiple communication protocols, e.g. Profibus, ProfiNet, Modbus TCP, Modbus-485, EtherNet/IP, EtherCat, I/O, RS232, etc.

Connection of Drive & Control Units

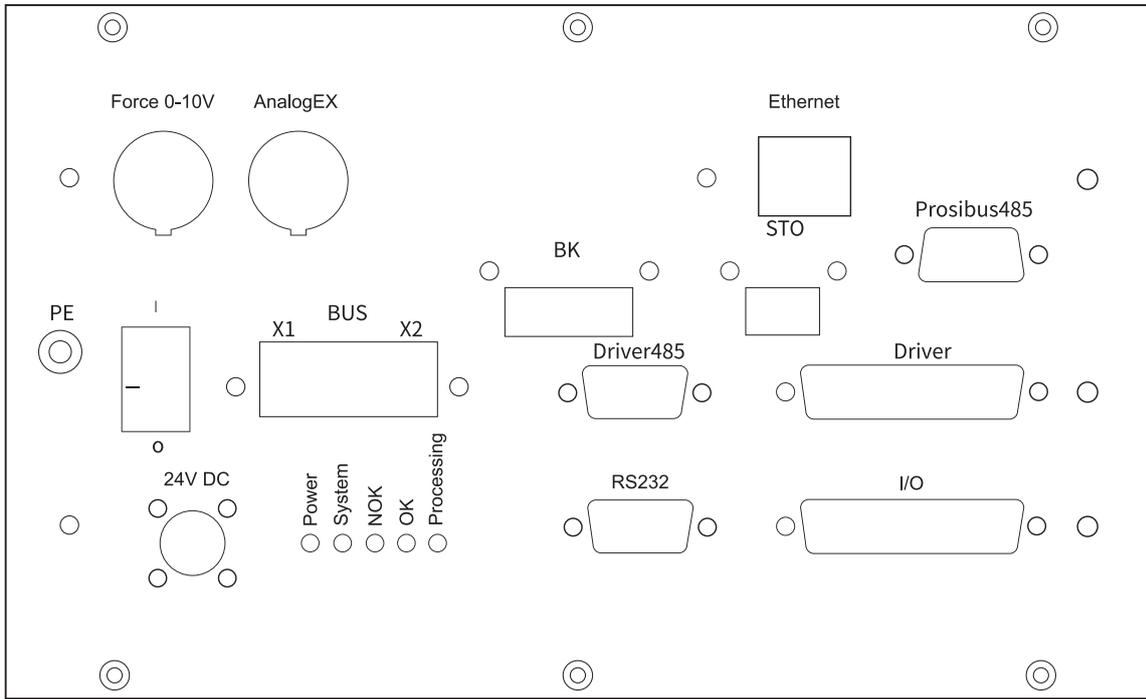


W500-NCFK Press-fit Monitoring System

- 7" color touch screen, quick and reliable configuration and operation
- Power supply: $24 \pm 10\%$ VDC, 1A
- Tolerance windows: Multiple tolerance windows for judgment
- Over-limit alarm: Maximum force limit, maximum displacement limit
- Data storage: Capable to store 1 million items of data
- RS232 serial port: Capable of software upgrades and information backup
- RJ45 network port: Capable of connection to upper computer software to synchronize display and
- Installation method: Desktop W500-NCFK; Integrated W500-NCFK-A



Definition of interfaces



Cables



Pulse cable



Power cable



Absolute cable



Power cable



Encoder cable



Band brake cable



Control cable (optional)



Amplifier cable

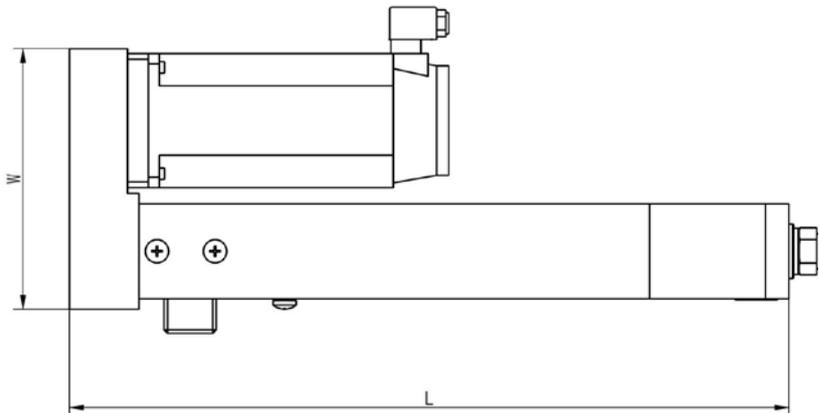
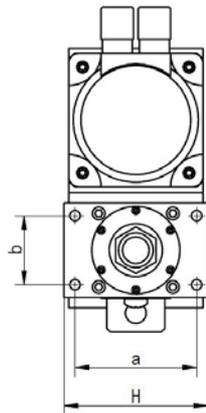
Model Description

Example: NH - 110 / 050 - 400 - 120 V 4 B

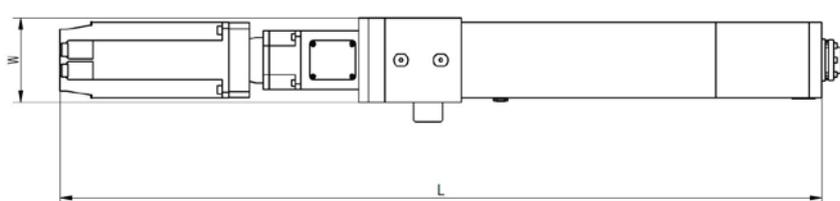
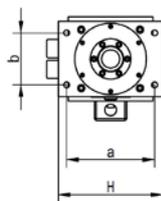
Type		Structure type
Series name		A-Bending, B-Straight
Size (side length of cylinder block cross-section, in mm)	200, 150, 110, 80, 60	Mechanical version of press-fit machine
Maximum output (in kN)	200, 100, 75, 50, 30, 20, 10, 5, 4, 3, 2, 1, 0.5	Sensor installation method
Effective stroke (in mm)	700, 600, 500, 400, 300, 200, 100	V-Built-in, W-External
		Maximum linear velocity (in mm/s)
		400, 300, 240, 200, 130, 120, 80, 70

Dimensional drawing of press-fit machine (in mm)

Bending type: Multiple choices of forces and strokes are available. The servo motor is connected to the screw in the cylinder body through a synchronous pulley, reflecting the compact design of cylinder body and reducing the installation height of cylinder body.



Straight type: The servo motor is directly connected to the screw, and the high-resolution sensor and intelligent control system can achieve micrometer-level control precision.



NH Economic Servo Press-fit Machine

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
200	700	70	452	230	1458	168	168	NH-200/200-700-70V4A	1202850111174
	600	70	452	230	1358	168	168	NH-200/200-600-70V4A	1202850111173
	500	70	452	230	1258	168	168	NH-200/200-500-70V4A	1202850111172
	400	70	452	230	1158	168	168	NH-200/200-400-70V4A	1202850111171
	300	70	452	230	1058	168	168	NH-200/200-300-70V4A	1202850111170
	200	70	452	230	958	168	168	NH-200/200-200-70V4A	1202850111169
100	650	130	380	180	1517	114	114	NH-150/100-650-130V4A	1202850111138
	550	130	380	180	1417	114	114	NH-150/100-550-130V4A	1202850111137
	450	130	380	180	1317	114	114	NH-150/100-450-130V4A	1202850111136
	350	130	380	180	1217	114	114	NH-150/100-350-130V4A	1202850111135
	250	130	380	180	1117	114	114	NH-150/100-250-130V4A	1202850111134
	150	130	380	180	1017	114	114	NH-150/100-150-130V4A	1202850111133
75	650	130	380	180	1517	114	114	NH-150/075-650-130V4A	1202850111126
	550	130	380	180	1417	114	114	NH-150/075-550-130V4A	1202850111125
	450	130	380	180	1317	114	114	NH-150/075-450-130V4A	1202850111124
	350	130	380	180	1217	114	114	NH-150/075-350-130V4A	1202850111123
	250	130	380	180	1117	114	114	NH-150/075-250-130V4A	1202850111122
	150	130	380	180	1017	114	114	NH-150/075-150-130V4A	1202850111121

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
50	600	120	320	160	1141	135	80	NH-110/050-600-120V4A	1202850111102
	500	120	320	160	1041	135	80	NH-110/050-500-120V4A	1202850111101
	400	120	320	160	941	135	80	NH-110/050-400-120V4A	1202850111100
	300	120	320	160	841	135	80	NH-110/050-300-120V4A	1202850111099
	200	120	320	160	741	135	80	NH-110/050-200-120V4A	1202850111098
	100	120	320	160	641	135	80	NH-110/050-100-120V4A	1202850111097
30	600	200	320	160	1141	135	80	NH-110/030-600-200V4A	1202850111090
	500	200	320	160	1041	135	80	NH-110/030-500-200V4A	1202850111089
	400	200	320	160	941	135	80	NH-110/030-400-200V4A	1202850111088
	300	200	320	160	841	135	80	NH-110/030-300-200V4A	1202850111087
	200	200	320	160	741	135	80	NH-110/030-200-200V4A	1202850111086
	100	200	320	160	641	135	80	NH-110/030-100-200V4A	1202850111085
20	500	240	225	124	920	105	60	NH-80/020-500-240V4A	1202850111069
	400	240	225	124	820	105	60	NH-80/020-400-240V4A	1202850111068
	300	240	225	124	720	105	60	NH-80/020-300-240V4A	1202850111067
	200	240	225	124	620	105	60	NH-80/020-200-240V4A	1202850111066
	100	240	225	124	520	105	60	NH-80/020-100-240V4A	1202850111065
10	500	240	225	124	920	105	60	NH-80/010-500-240V4A	1202850111049
	400	240	225	124	820	105	60	NH-80/010-400-240V4A	1202850111048
	300	240	225	124	720	105	60	NH-80/010-300-240V4A	1202850111047
	200	240	225	124	620	105	60	NH-80/010-200-240V4A	1202850111046
	100	240	225	124	520	105	60	NH-80/010-100-240V4A	1202850111045
5	400	300	160	90	795	75	45	NH-60/005-400-300W4A	1202850111040
	300	300	160	90	695	75	45	NH-60/005-300-300W4A	1202850111039
	200	300	160	90	595	75	45	NH-60/005-200-300W4A	1202850111038
	100	300	160	90	495	75	45	NH-60/005-100-300W4A	1202850111037

NH Economic Servo Press-fit Machine

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
4	400	300	160	90	795	75	45	NH-60/004-400-300W4A	1202850111036
	300	300	160	90	695	75	45	NH-60/004-300-300W4A	1202850111035
	200	300	160	90	595	75	45	NH-60/004-200-300W4A	1202850111034
	100	300	160	90	495	75	45	NH-60/004-100-300W4A	1202850111033
3	400	300	160	90	795	75	45	NH-60/003-400-300W4A	1202850111028
	300	300	160	90	695	75	45	NH-60/003-300-300W4A	1202850111027
	200	300	160	90	595	75	45	NH-60/003-200-300W4A	1202850111026
	100	300	160	90	495	75	45	NH-60/003-100-300W4A	1202850111025
2	400	300	160	90	795	75	45	NH-60/002-400-300W4A	1202850111020
	300	300	160	90	695	75	45	NH-60/002-300-300W4A	1202850111019
	200	300	160	90	595	75	45	NH-60/002-200-300W4A	1202850111018
	100	300	160	90	495	75	45	NH-60/002-100-300W4A	1202850111017
1	400	300	160	90	795	75	45	NH-60/001-400-300W4A	1202850111012
	300	300	160	90	695	75	45	NH-60/001-300-300W4A	1202850111011
	200	300	160	90	595	75	45	NH-60/001-200-300W4A	1202850111010
	100	300	160	90	495	75	45	NH-60/001-100-300W4A	1202850111009
0.5	400	300	160	90	795	75	45	NH-60/000-400-300W4A	1202850111004
	300	300	160	90	695	75	45	NH-60/000-300-300W4A	1202850111003
	200	300	160	90	595	75	45	NH-60/000-200-300W4A	1202850111002
	100	300	160	90	495	75	45	NH-60/000-100-300W4A	1202850111001

Ex explosion-proof series: Wildermann NH Ex Servo Press-fit Machine uses explosion-proof motors that meet explosion-proof criteria, with explosion-proof labels: Ex ec II B T4 Gc, Ex tb III CT135°C Db.

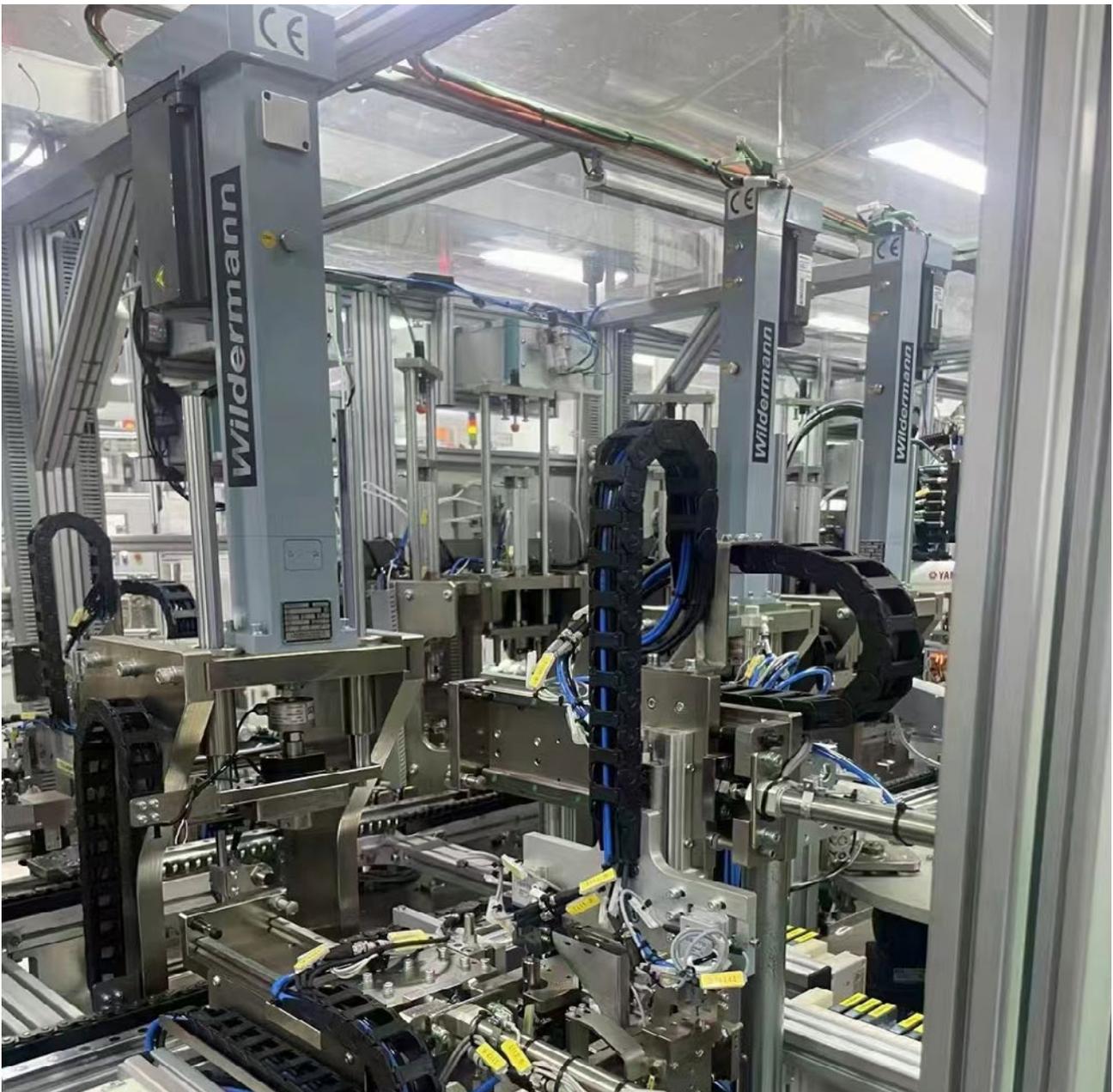
Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
50	600	120	320	160	1141	135	80	NH-110Ex/050-600-120V4A	1202850111341
	500	120	320	160	1041	135	80	NH-110Ex/050-500-120V4A	1202850111340
	400	120	320	160	941	135	80	NH-110Ex/050-400-120V4A	1202850111339
	300	120	320	160	841	135	80	NH-110Ex/050-300-120V4A	1202850111338
	200	120	320	160	741	135	80	NH-110Ex/050-200-120V4A	1202850111337
	100	120	320	160	641	135	80	NH-110Ex/050-100-120V4A	1202850111336
30	600	200	320	160	1141	135	80	NH-110Ex/030-600-200V4A	1202850111335
	500	200	320	160	1041	135	80	NH-110Ex/030-500-200V4A	1202850111334
	400	200	320	160	941	135	80	NH-110Ex/030-400-200V4A	1202850111333
	300	200	320	160	841	135	80	NH-110Ex/030-300-200V4A	1202850111332
	200	200	320	160	741	135	80	NH-110Ex/030-200-200V4A	1202850111331
	100	200	320	160	641	135	80	NH-110Ex/030-100-200V4A	1202850111330
20	500	240	225	124	920	105	60	NH-80Ex/020-500-240V4A	1202850111329
	400	240	225	124	820	105	60	NH-80Ex/020-400-240V4A	1202850111328
	300	240	225	124	720	105	60	NH-80Ex/020-300-240V4A	1202850111327
	200	240	225	124	620	105	60	NH-80Ex/020-200-240V4A	1202850111326
	100	240	225	124	520	105	60	NH-80Ex/020-100-240V4A	1202850111325
10	500	240	225	124	920	105	60	NH-80Ex/010-500-240V4A	1202850111324
	400	240	225	124	820	105	60	NH-80Ex/010-400-240V4A	1202850111323
	300	240	225	124	720	105	60	NH-80Ex/010-300-240V4A	1202850111322
	200	240	225	124	620	105	60	NH-80Ex/010-200-240V4A	1202850111321
	100	240	225	124	520	105	60	NH-80Ex/010-100-240V4A	1202850111320

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
5	400	300	160	90	795	75	45	NH-60Ex/005-400-300W4A	1202850111319
	300	300	160	90	695	75	45	NH-60Ex/005-300-300W4A	1202850111318
	200	300	160	90	595	75	45	NH-60Ex/005-200-300W4A	1202850111317
	100	300	160	90	495	75	45	NH-60Ex/005-100-300W4A	1202850111316
4	400	300	160	90	795	75	45	NH-60Ex/004-400-300W4A	1202850111315
	300	300	160	90	695	75	45	NH-60Ex/004-300-300W4A	1202850111314
	200	300	160	90	595	75	45	NH-60Ex/004-200-300W4A	1202850111313
	100	300	160	90	495	75	45	NH-60Ex/004-100-300W4A	1202850111312
3	400	300	160	90	795	75	45	NH-60Ex/003-400-300W4A	1202850111311
	300	300	160	90	695	75	45	NH-60Ex/003-300-300W4A	1202850111310
	200	300	160	90	595	75	45	NH-60Ex/003-200-300W4A	1202850111309
	100	300	160	90	495	75	45	NH-60Ex/003-100-300W4A	1202850111308
2	400	300	160	90	795	75	45	NH-60Ex/002-400-300W4A	1202850111307
	300	300	160	90	695	75	45	NH-60Ex/002-300-300W4A	1202850111306
	200	300	160	90	595	75	45	NH-60Ex/002-200-300W4A	1202850111305
	100	300	160	90	495	75	45	NH-60Ex/002-100-300W4A	1202850111304
1	400	300	160	90	795	75	45	NH-60Ex/001-400-300W4A	1202850111303
	300	300	160	90	695	75	45	NH-60Ex/001-300-300W4A	1202850111302
	200	300	160	90	595	75	45	NH-60Ex/001-200-300W4A	1202850111301
	100	300	160	90	495	75	45	NH-60Ex/001-100-300W4A	1202850111300

NL Intelligent Servo Press-fit Machine

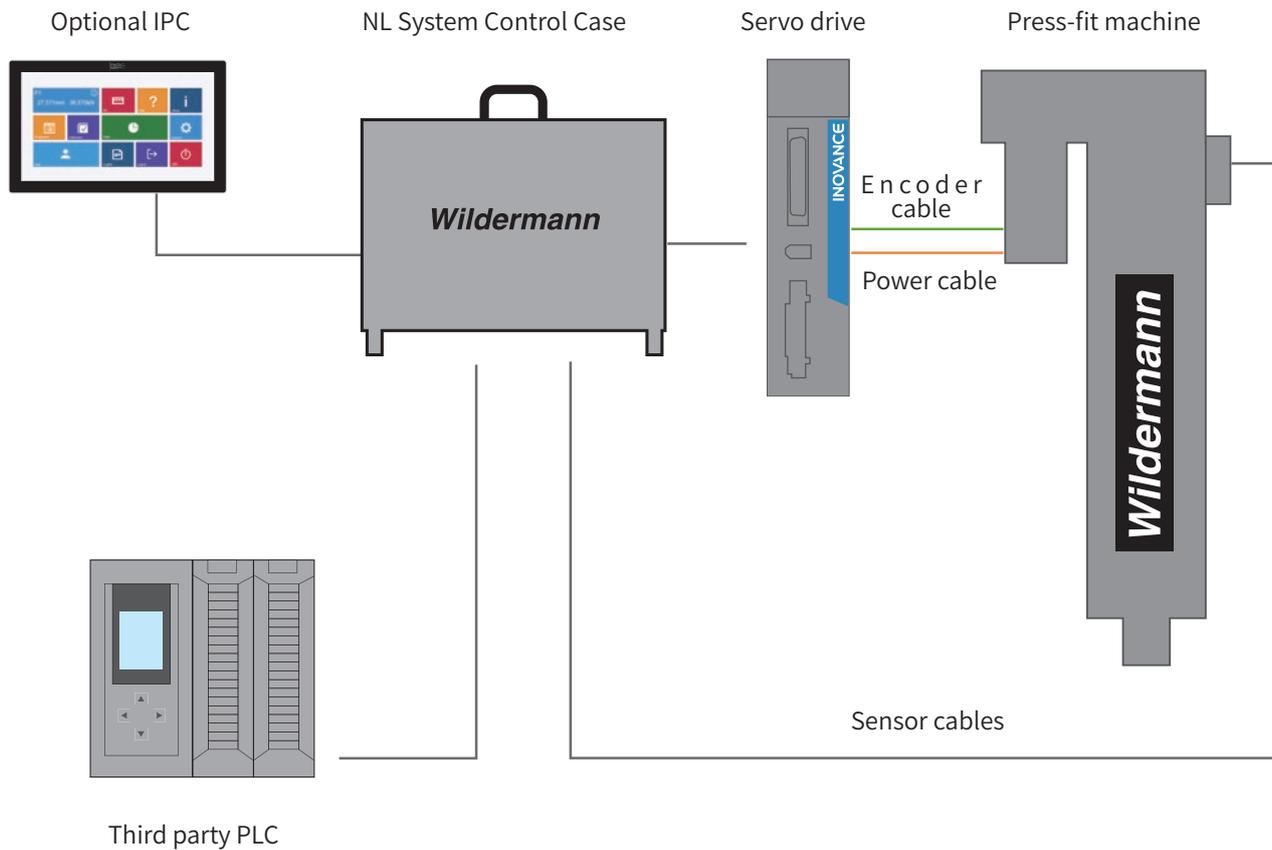
Wildermann NL Intelligent Servo Press-fit Machine is an advanced press-fitting equipment that integrates high precision, high stability and high efficiency. This series of press-fit machines adopt advanced servo control systems, combine precise mechanical structure design, and provide users with excellent press-fitting solutions. Whether used in automobile manufacturing, electronic assembly, or other precise manufacturing fields, the Wildermann NL Intelligent Servo Press-fit Machines can meet your requirements of higher level.





- Force precision, 1%
- Repetitive positioning precision, 0.01mm
- Synchronous curves of force, displacement and speed
- Remote diagnosis
- Chinese/English interface
- Support multiple communication protocols, e.g. Profinet, Ethernet/IP, EtherCat, DeviceNet, CC Link, Profibus DP, etc.

Connection of Drive & Control Units



NL System Control Case

NL System Control Case is the core controller of the Wildermann NL Servo Press-fit Machines, with strong computing and data processing capabilities. It can monitor and control various parameters of the press-fit machines in real time, ensuring that the press-fitting works according to the predetermined process requirements. At the same time, the control case can also communicate and interact with the PLC, achieving seamless integration with the entire production line, and providing support for automated production.



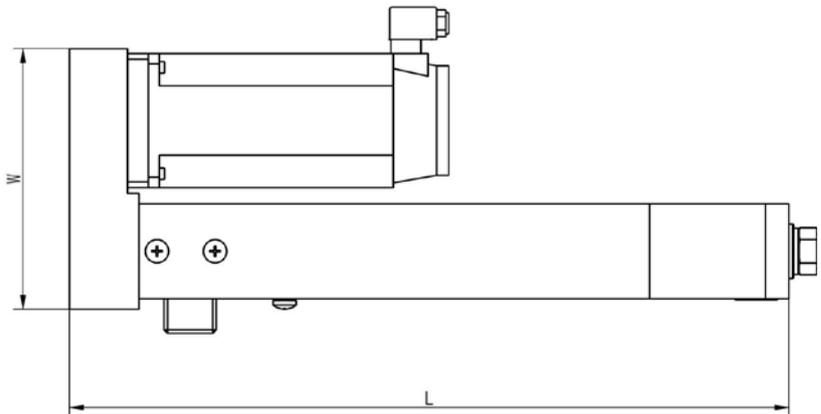
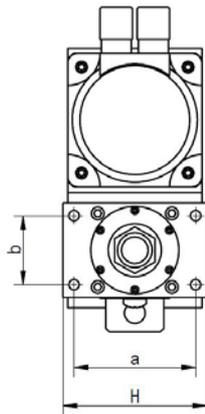
Model Description

Example: NL - 110 / 050 - 400 - 120 V 4 B

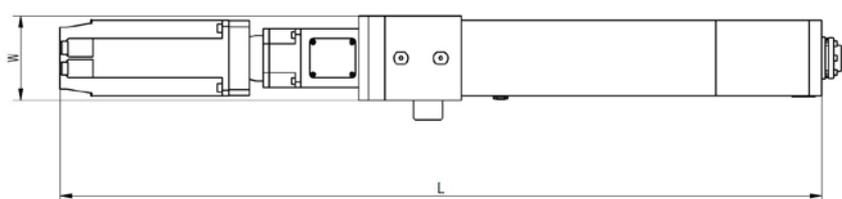
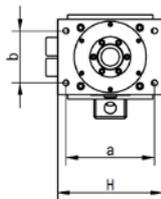
Type		Structure type
Series name		A-Bending, B-Straight
Size (side length of cylinder block cross-section, in mm)		Mechanical version of press-fit machine
200, 150, 110, 80, 60		
Maximum output (in kN)		Sensor installation method
200, 100, 75, 50, 30, 20, 10, 5, 4, 3, 2, 1, 0.5		V-Built-in, W-External
Effective stroke (in mm)		Maximum linear velocity (in mm/s)
700, 600, 500, 400, 300, 200, 100		400, 300, 240, 200, 130, 120, 80, 70

Dimensional drawing of press-fit machine (in mm)

Bending type: Multiple choices of forces and strokes are available. The servo motor is connected to the screw in the cylinder body through a synchronous pulley, reflecting the compact design of cylinder body and reducing the installation height of cylinder body.



Straight type: The servo motor is directly connected to the screw, and the high-resolution sensor and intelligent control system can achieve micrometer-level control precision.



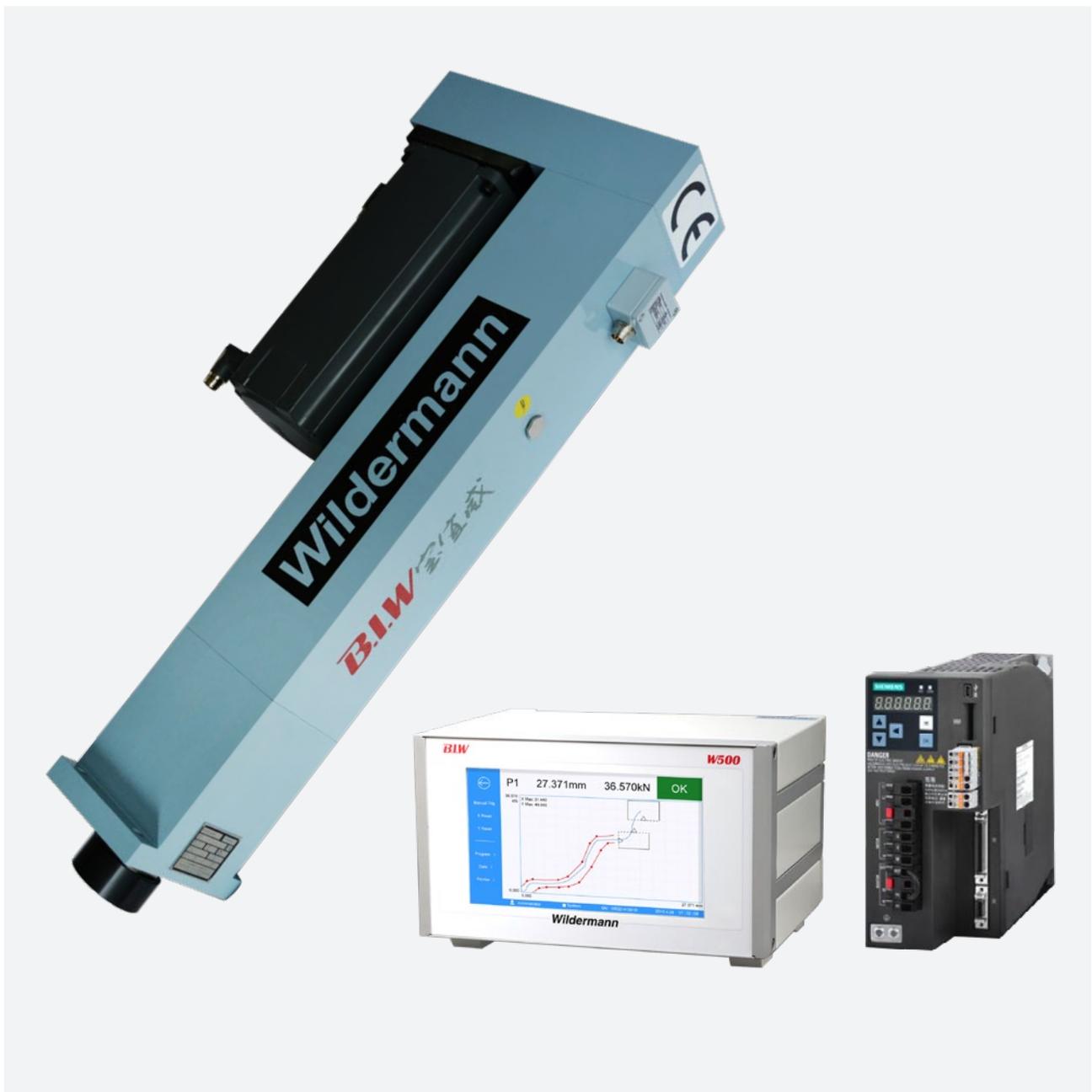
Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
300	700	80	474	222	1586	168	168	NL-200/300-700-80V4A	1202850112186
	600	80	474	222	1486	168	168	NL-200/300-600-80V4A	1202850112185
	500	80	474	222	1386	168	168	NL-200/300-500-80V4A	1202850112184
	400	80	474	222	1286	168	168	NL-200/300-400-80V4A	1202850112183
	300	80	474	222	1186	168	168	NL-200/300-300-80V4A	1202850112182
	200	80	474	222	1086	168	168	NL-200/300-200-80V4A	1202850112181
200	700	70	452	230	1458	168	168	NL-200/200-700-70V4A	1202850112174
	600	70	452	230	1358	168	168	NL-200/200-600-70V4A	1202850112173
	500	70	452	230	1258	168	168	NL-200/200-500-70V4A	1202850112172
	400	70	452	230	1158	168	168	NL-200/200-400-70V4A	1202850112171
	300	70	452	230	1058	168	168	NL-200/200-300-70V4A	1202850112170
	200	70	452	230	958	168	168	NL-200/200-200-70V4A	1202850112169
100	650	130	380	180	1517	114	114	NL-150/100-650-130V4A	1202850112138
	550	130	380	180	1417	114	114	NL-150/100-550-130V4A	1202850112137
	450	130	380	180	1317	114	114	NL-150/100-450-130V4A	1202850112136
	350	130	380	180	1217	114	114	NL-150/100-350-130V4A	1202850112135
	250	130	380	180	1117	114	114	NL-150/100-250-130V4A	1202850112134
	150	130	380	180	1017	114	114	NL-150/100-150-130V4A	1202850112133
75	650	130	380	180	1517	114	114	NL-150/075-650-130V4A	1202850112126
	550	130	380	180	1417	114	114	NL-150/075-550-130V4A	1202850112125
	450	130	380	180	1317	114	114	NL-150/075-450-130V4A	1202850112124
	350	130	380	180	1217	114	114	NL-150/075-350-130V4A	1202850112123
	250	130	380	180	1117	114	114	NL-150/075-250-130V4A	1202850112122
	150	130	380	180	1017	114	114	NL-150/075-150-130V4A	1202850112121

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
50	600	120	320	160	1141	135	80	NL-110/050-600-120V4A	1202850112102
	500	120	320	160	1041	135	80	NL-110/050-500-120V4A	1202850112101
	400	120	320	160	941	135	80	NL-110/050-400-120V4A	1202850112100
	300	120	320	160	841	135	80	NL-110/050-300-120V4A	1202850112099
	200	120	320	160	741	135	80	NL-110/050-200-120V4A	1202850112098
	100	120	320	160	641	135	80	NL-110/050-100-120V4A	1202850112097
30	600	200	320	160	1141	135	80	NL-110/030-600-200V4A	1202850112090
	500	200	320	160	1041	135	80	NL-110/030-500-200V4A	1202850112089
	400	200	320	160	941	135	80	NL-110/030-400-200V4A	1202850112088
	300	200	320	160	841	135	80	NL-110/030-300-200V4A	1202850112087
	200	200	320	160	741	135	80	NL-110/030-200-200V4A	1202850112086
	100	200	320	160	641	135	80	NL-110/030-100-200V4A	1202850112085
20	500	240	225	124	920	105	60	NL-80/020-500-240V4A	1202850112069
	400	240	225	124	820	105	60	NL-80/020-400-240V4A	1202850112068
	300	240	225	124	720	105	60	NL-80/020-300-240V4A	1202850112067
	200	240	225	124	620	105	60	NL-80/020-200-240V4A	1202850112066
	100	240	225	124	520	105	60	NL-80/020-100-240V4A	1202850112065
10	500	240	225	124	920	105	60	NL-80/010-500-240V4A	1202850112049
	400	240	225	124	820	105	60	NL-80/010-400-240V4A	1202850112048
	300	240	225	124	720	105	60	NL-80/010-300-240V4A	1202850112047
	200	240	225	124	620	105	60	NL-80/010-200-240V4A	1202850112046
	100	240	225	124	520	105	60	NL-80/010-100-240V4A	1202850112045
5	400	300	160	90	795	75	45	NL-60/005-400-300W4A	1202850112040
	300	300	160	90	695	75	45	NL-60/005-300-300W4A	1202850112039
	200	300	160	90	595	75	45	NL-60/005-200-300W4A	1202850112038
	100	300	160	90	495	75	45	NL-60/005-100-300W4A	1202850112037

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
4	400	300	160	90	795	75	45	NL-60/004-400-300W4A	1202850112036
	300	300	160	90	695	75	45	NL-60/004-300-300W4A	1202850112035
	200	300	160	90	595	75	45	NL-60/004-200-300W4A	1202850112034
	100	300	160	90	495	75	45	NL-60/004-100-300W4A	1202850112033
3	400	300	160	90	795	75	45	NL-60/003-400-300W4A	1202850112028
	300	300	160	90	695	75	45	NL-60/003-300-300W4A	1202850112027
	200	300	160	90	595	75	45	NL-60/003-200-300W4A	1202850112026
	100	300	160	90	495	75	45	NL-60/003-100-300W4A	1202850112025
2	400	300	160	90	795	75	45	NL-60/002-400-300W4A	1202850112020
	300	300	160	90	695	75	45	NL-60/002-300-300W4A	1202850112019
	200	300	160	90	595	75	45	NL-60/002-200-300W4A	1202850112018
	100	300	160	90	495	75	45	NL-60/002-100-300W4A	1202850112017
1	400	300	160	90	795	75	45	NL-60/001-400-300W4A	1202850112012
	300	300	160	90	695	75	45	NL-60/001-300-300W4A	1202850112011
	200	300	160	90	595	75	45	NL-60/001-200-300W4A	1202850112010
	100	300	160	90	495	75	45	NL-60/001-100-300W4A	1202850112009
0.5	400	300	160	90	795	75	45	NL-60/000-400-300W4A	1202850112004
	300	300	160	90	695	75	45	NL-60/000-300-300W4A	1202850112003
	200	300	160	90	595	75	45	NL-60/000-200-300W4A	1202850112002
	100	300	160	90	495	75	45	NL-60/000-100-300W4A	1202850112001

NS Standard Servo Press-fit Machine

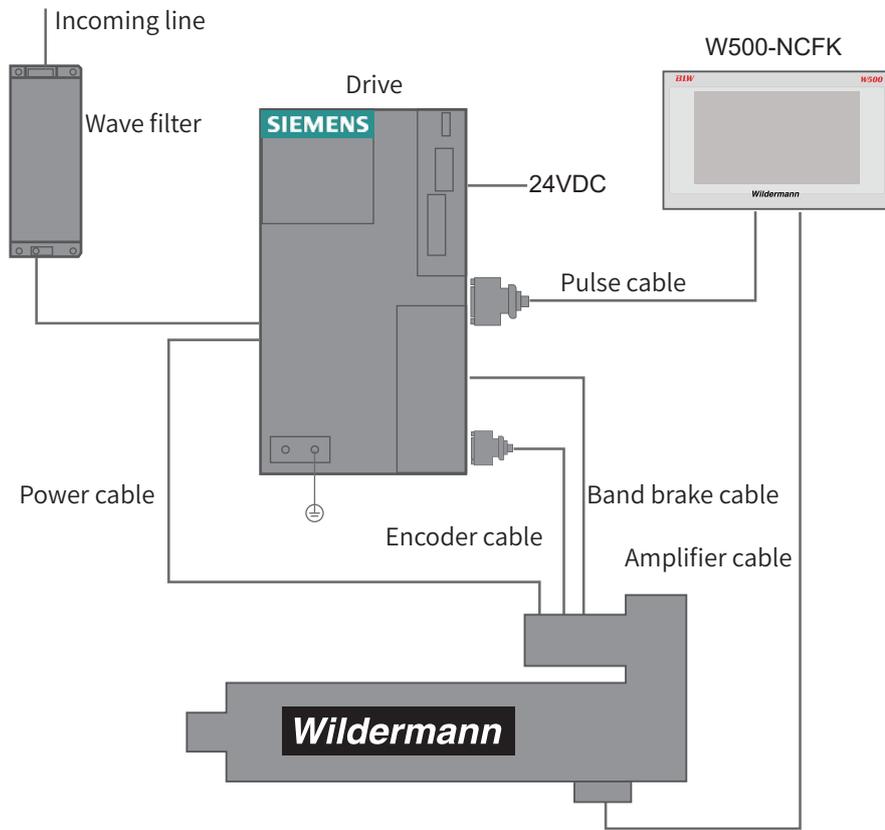
NS Standard Servo Press-fit Machine adopts highly integrated design, optimizes high-dynamic servo performance, positions rapidly, stably and accurately, adopts absolute value encoder motor, has built-in brake resistor and integrated brake relay, reduces design costs to meet clients' requirements for cost control; and integrates safety function STO (safety torque stop) and high protection level motor with exquisite design, safe and reliable operation.





- Force precision, 1%
- Repetitive positioning precision, 0.01mm
- Synchronous curves of force, displacement and speed
- Remote diagnosis
- Chinese/English interface
- Supports multiple communication protocols, e.g. Profibus, ProfiNet, Modbus TCP, Modbus-485, EtherNet/IP, EtherCat, I/O, RS232, etc.

Connection of Drive & Control Units

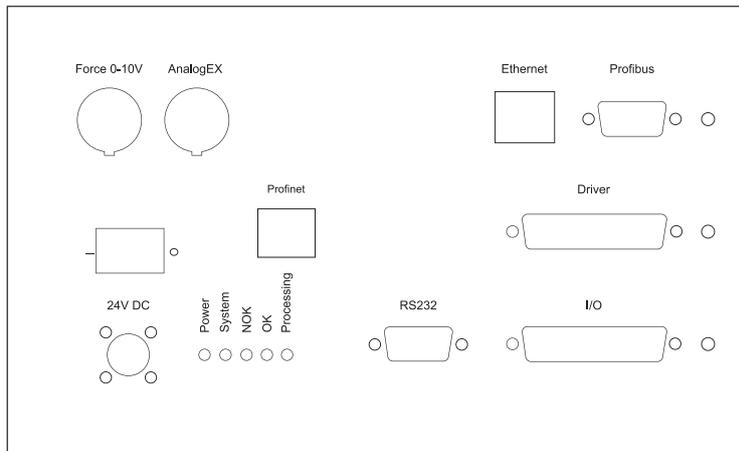


W500-NCFK Press-fit Monitoring System

- 7" color touch screen, quick and reliable configuration and operation
- Power supply: $24 \pm 10\%$ VDC, 1A
- Tolerance windows: Multiple tolerance windows for judgment
- Over-limit alarm: Maximum force limit, maximum displacement limit
- Data storage: Capable to store 1 million items of data
- RS232 serial port: Capable of software upgrades and information backup
- RJ45 network port: Capable of connection to upper computer software to synchronize display and storage
- Installation method: Desktop W500-NCFK; Integrated W500-NCFK-A



Definition of interfaces



Siemens driver



Wave filter

Cables



Pulse cable



Power cable



Absolute cable



Power cable



Encoder cable



Band brake cable



Control cable (optional)



Amplifier cable

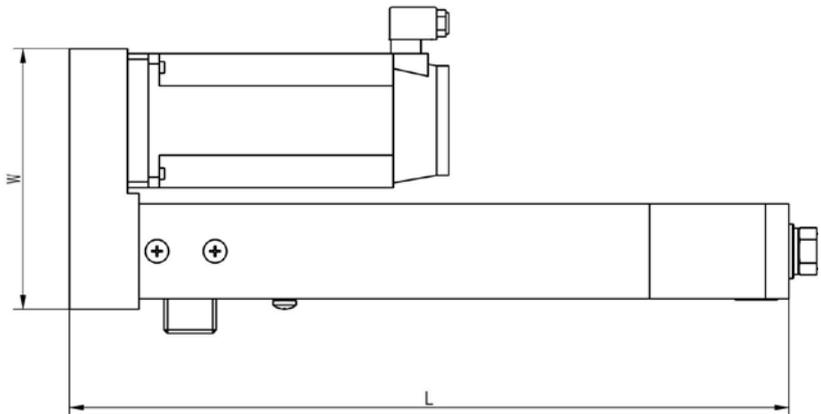
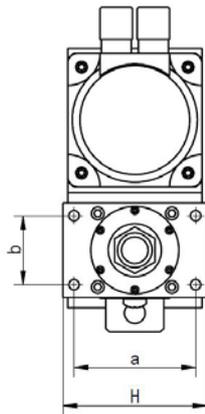
Model Description

Example: NS - 110 / 050 - 400 - 120 V 4 B

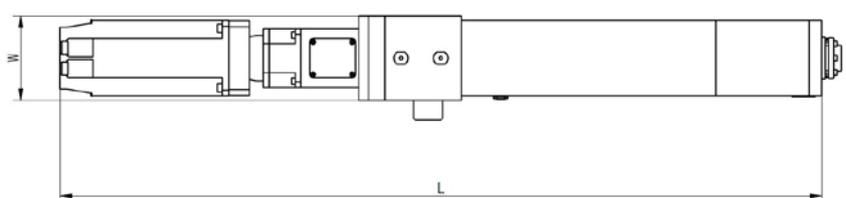
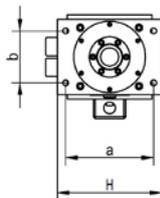
<p>Type NS (Siemens servo and motor)</p> <p>Size (side length of cylinder block cross-section, in mm) 200, 150, 110, 80, 60</p> <p>Maximum output (in kN) 200, 100, 75, 50, 30, 20, 10, 5, 4, 3, 2, 1, 0.5</p> <p>Effective stroke (in mm) 700, 600, 500, 400, 300, 200, 100</p>	<p>Structure type A-Bending, B-Straight</p> <p>Mechanical version of press-fit machine</p> <p>Sensor installation method V-Built-in, W-External</p> <p>Maximum linear velocity (in mm/s) 400, 300, 240, 170, 130, 120, 100, 60</p>
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Dimensional drawing of press-fit machine (in mm)

Bending type: Multiple choices of forces and strokes are available. The servo motor is connected to the screw in the cylinder body through a synchronous pulley, reflecting the compact design of cylinder body and reducing the installation height of cylinder body.



Straight type: The servo motor is directly connected to the screw, and the high-resolution sensor and intelligent control system can achieve micrometer-level control precision.



Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
200	700	60	452	200	1458	168	168	NS-200/200-700-60V4A	1202850101815
	600	60	452	200	1358	168	168	NS-200/200-600-60V4A	1202850101814
	500	60	452	200	1258	168	168	NS-200/200-500-60V4A	1202850101813
	400	60	452	200	1158	168	168	NS-200/200-400-60V4A	1202850101812
	300	60	452	200	1058	168	168	NS-200/200-300-60V4A	1202850101811
	200	60	452	200	958	168	168	NS-200/200-200-60V4A	1202850101810
100	650	100	150	150	1840	114	114	NS-150/100-650-100V4B	1202850101809
	550	100	150	150	1740	114	114	NS-150/100-550-100V4B	1202850101808
	450	100	150	150	1640	114	114	NS-150/100-450-100V4B	1202850101807
	350	100	150	150	1540	114	114	NS-150/100-350-100V4B	1202850101806
	250	100	150	150	1440	114	114	NS-150/100-250-100V4B	1202850101805
	150	100	150	150	1340	114	114	NS-150/100-150-100V4B	1202850101804
100	650	100	380	150	1590	114	114	NS-150/100-650-100V4A	1202850101781
	550	100	380	150	1490	114	114	NS-150/100-550-100V4A	1202850101780
	450	100	380	150	1390	114	114	NS-150/100-450-100V4A	1202850101779
	350	100	380	150	1290	114	114	NS-150/100-350-100V4A	1202850101778
	250	100	380	150	1190	114	114	NS-150/100-250-100V4A	1202850101777
	150	100	380	150	1090	114	114	NS-150/100-150-100V4A	1202850101776
75	650	130	380	150	1590	114	114	NS-150/075-650-130V4A	1202850101775
	550	130	380	150	1490	114	114	NS-150/075-550-130V4A	1202850101774
	450	130	380	150	1390	114	114	NS-150/075-450-130V4A	1202850101773
	350	130	380	150	1290	114	114	NS-150/075-350-130V4A	1202850101772
	250	130	380	150	1190	114	114	NS-150/075-250-130V4A	1202850101771
	150	130	380	150	1090	114	114	NS-150/075-150-130V4A	1202850101770

NS Standard Servo Press-fit Machine

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
50	400	120	130	116	1416	135	80	NS-110/050-400-120V4B	1202850101767
	300	120	130	116	1316	135	80	NS-110/050-300-120V4B	1202850101766
	200	120	130	116	1216	135	80	NS-110/050-200-120V4B	1202850101765
	100	120	130	116	1116	135	80	NS-110/050-100-120V4B	1202850101764
50	400	120	320	160	941	135	80	NS-110/050-400-120V4A	1202850101763
	300	120	320	160	841	135	80	NS-110/050-300-120V4A	1202850101762
	200	120	320	160	741	135	80	NS-110/050-200-120V4A	1202850101761
	100	120	320	160	641	135	80	NS-110/050-100-120V4A	1202850101760
30	600	170	320	160	1140	135	80	NS-110/030-600-170V4A	1202850101759
	500	170	320	160	1041	135	80	NS-110/030-500-170V4A	1202850101758
	400	170	320	160	941	135	80	NS-110/030-400-170V4A	1202850101757
	300	170	320	160	841	135	80	NS-110/030-300-170V4A	1202850101756
	200	170	320	160	741	135	80	NS-110/030-200-170V4A	1202850101755
	100	170	320	160	641	135	80	NS-110/030-100-170V4A	1202850101754
20	500	240	225	124	920	105	60	NS-80/020-500-240V4A	1202850102424
	400	240	225	124	820	105	60	NS-80/020-400-240V4A	1202850101856
	300	240	225	124	720	105	60	NS-80/020-300-240V4A	1202850101855
	200	240	225	124	620	105	60	NS-80/020-200-240V4A	1202850101854
	100	240	225	124	520	105	60	NS-80/020-100-240V4A	1202850101853
20	500	300	114	124	1298	105	60	NS-80/020-500-300V4B	1202850102465
	400	300	114	124	1198	105	60	NS-80/020-400-300V4B	1202850102464
	300	300	114	124	1098	105	60	NS-80/020-300-300V4B	1202850102463
	200	300	114	124	998	105	60	NS-80/020-200-300V4B	1202850102462
	100	300	114	124	898	105	60	NS-80/020-100-300V4B	1202850102461

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
10	500	240	225	124	1216	105	60	NS-80/010-500-240V4A	1202850101852
	400	240	225	124	1116	105	60	NS-80/010-400-240V4A	1202850101851
	300	240	225	124	1016	105	60	NS-80/010-300-240V4A	1202850101850
	200	240	225	124	916	105	60	NS-80/010-200-240V4A	1202850101849
	100	240	225	124	816	105	60	NS-80/010-100-240V4A	1202850101848
10	500	300	114	124	920	105	60	NS-80/010-500-300V4B	1202850102455
	400	300	114	124	820	105	60	NS-80/010-400-300V4B	1202850102454
	300	300	114	124	720	105	60	NS-80/010-300-300V4B	1202850102453
	200	300	114	124	620	105	60	NS-80/010-200-300V4B	1202850102452
	100	300	114	124	520	105	60	NS-80/010-100-300V4B	1202850102451
5	300	270	160	90	695	75	45	NS-60/005-300-270W4A	1202850101846
	200	270	160	90	595	75	45	NS-60/005-200-270W4A	1202850101845
	100	270	160	90	495	75	45	NS-60/005-100-270W4A	1202850101844
4	300	300	160	90	695	75	45	NS-60/004-300-300W4A	1202850101836
	200	300	160	90	595	75	45	NS-60/004-200-300W4A	1202850101835
	100	300	160	90	495	75	45	NS-60/004-100-300W4A	1202850101834
3	300	300	160	90	695	75	45	NS-60/003-300-300W4A	1202850101818
	200	300	160	90	595	75	45	NS-60/003-200-300W4A	1202850101817
	100	300	160	90	495	75	45	NS-60/003-100-300W4A	1202850101816
2	300	300	160	90	695	75	45	NS-60/002-300-300W4A	1202850101843
	200	300	160	90	595	75	45	NS-60/002-200-300W4A	1202850101842
	100	300	160	90	495	75	45	NS-60/002-100-300W4A	1202850101841

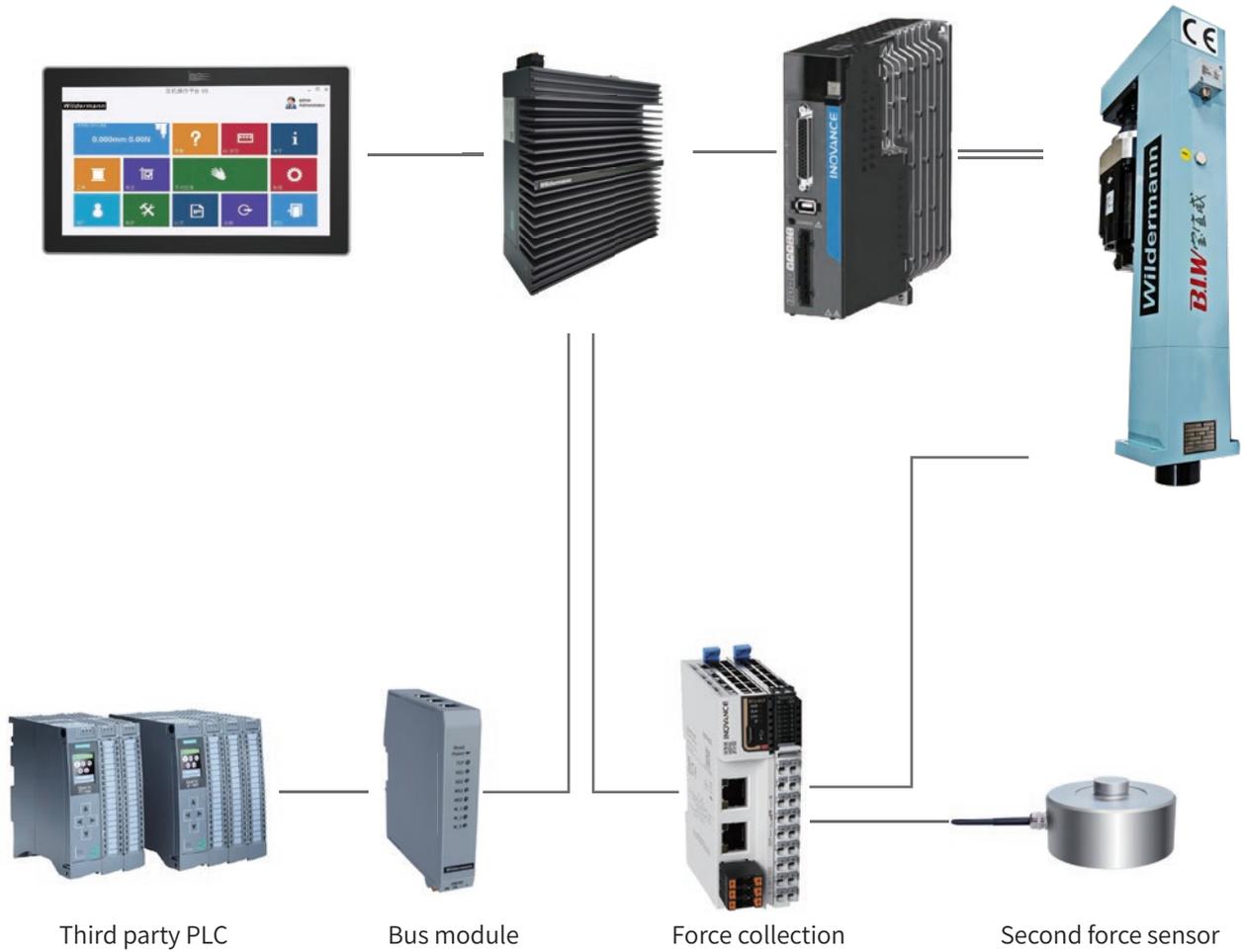
NS Standard Servo Press-fit Machine

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
1	300	400	60	90	860	75	45	NS-60/001-300-400W4B	1202850101830
	200	400	60	90	760	75	45	NS-60/001-200-400W4B	1202850101829
	100	400	60	90	660	75	45	NS-60/001-100-400W4B	1202850101828
1	300	300	160	90	695	75	45	NS-60/001-300-300W4A	1202850101827
	200	300	160	90	569	75	45	NS-60/001-200-300W4A	1202850101826
	100	300	160	90	495	75	45	NS-60/001-100-300W4A	1202850101825
0.5	300	400	60	90	860	75	45	NS-60/000-300-400W4B	1202850101824
	200	400	60	90	760	75	45	NS-60/000-200-400W4B	1202850101823
	100	400	60	90	660	75	45	NS-60/000-100-400W4B	1202850101822
0.5	300	300	160	90	695	75	45	NS-60/000-300-300W4A	1202850101821
	200	300	160	90	595	75	45	NS-60/000-200-300W4A	1202850101820
	100	300	160	90	495	75	45	NS-60/000-100-300W4A	1202850101819

MSCI Multi-Smart Servo Press-fit Machine

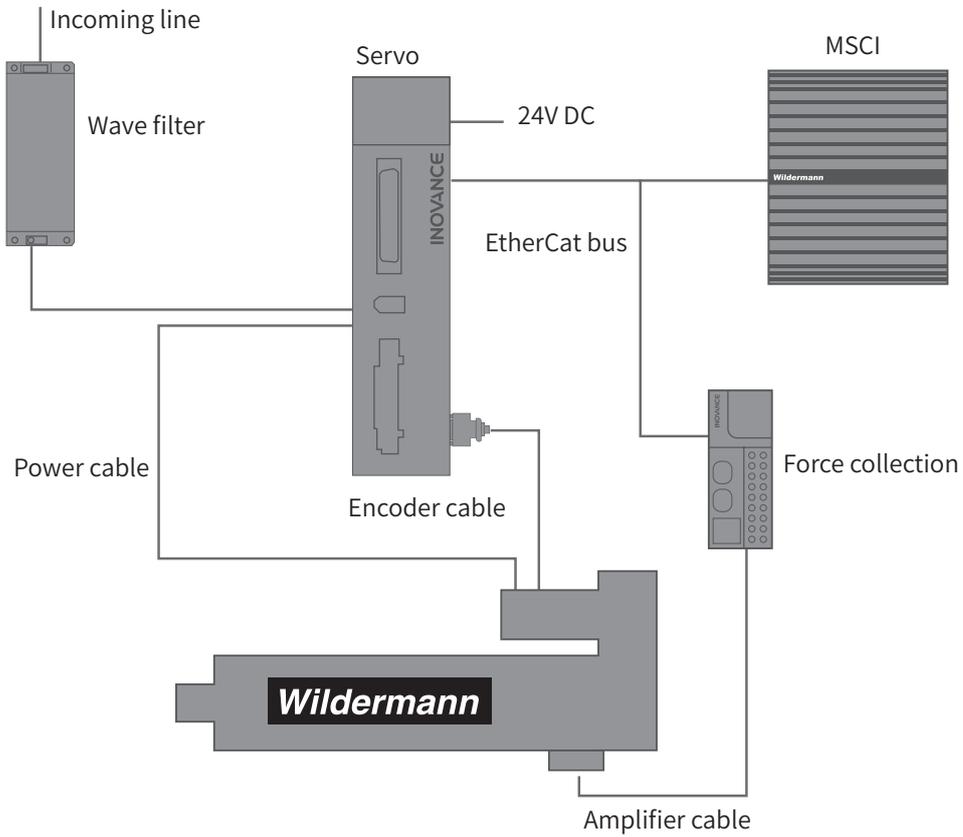
The MSCI Series Servo Press-fit Machines integrate a high-performance servo control system, a flexible database and a human-machine interaction platform, which can achieve high-precision synchronous control of multi-head press-fit machine and complete high-precision assembly at high speed. At the same time, it provide flexible and convenient data acquisition methods for plant data traceability. The MSCI Series Servo Press-fit Machines adopt advanced control technology and multi-axis precision synchronization technology, which can achieve high efficiency and precision. At the same time, it also has the advantages of compact mechanical structure, simple and convenient operation, and easy maintenance, suitable for the press-fitting process of various automated production lines. With the technology of MSCI Series Servo Press-fit Machines, it can significantly improve the efficiency of production line and the quality of work-pieces, thereby reducing production costs and enhancing the market competitiveness of enterprises.



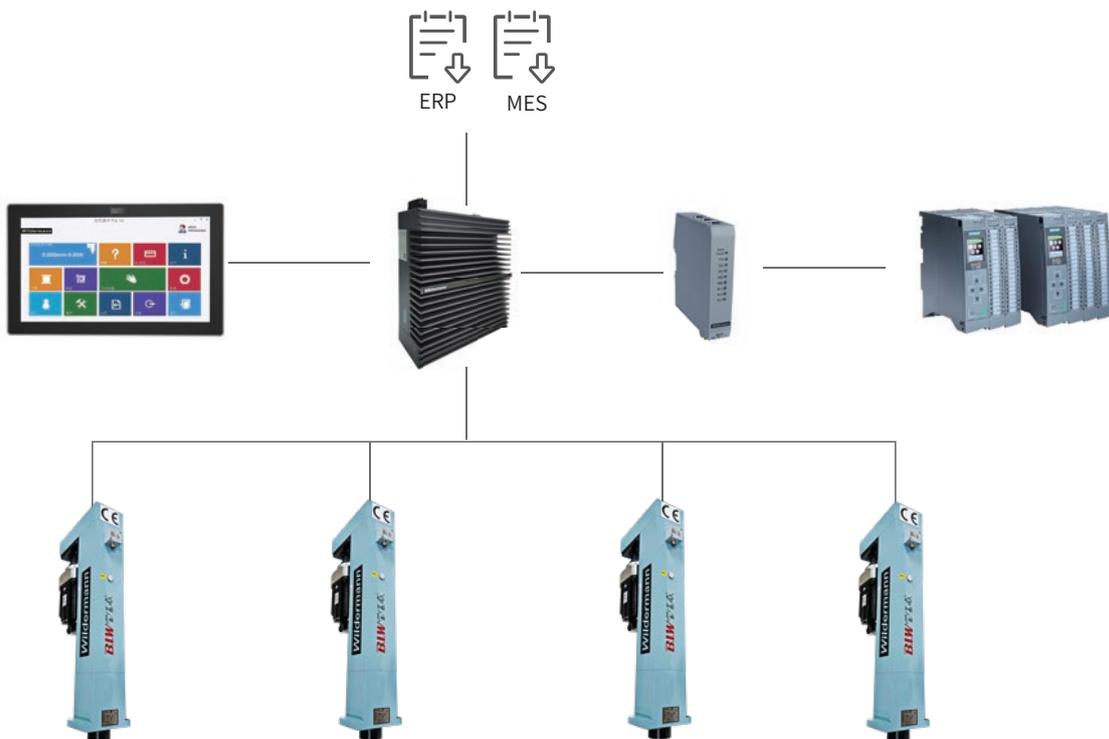


- Force precision, 1%
- Repetitive positioning precision, 0.01mm
- Synchronous curves of force, displacement and speed
- Step-by-step press-fitting
- Synchronous press-fitting
- Chinese/English interface
- Support multiple communication protocols, e.g. Profinet, Ethernet/IP, EtherCat, DeviceNet, CC Link, Profibus DP, etc.

Connection of Drive & Control Units



System layout



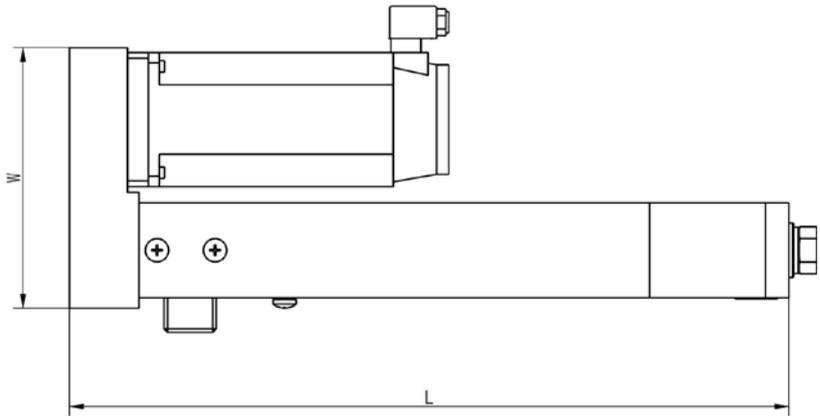
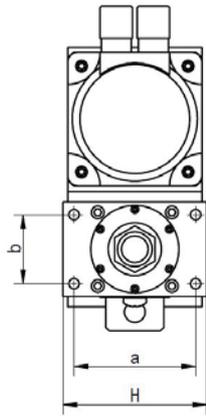
Model Description

例: MSCI - 110I / 050 - 400 - 120 V 4 B

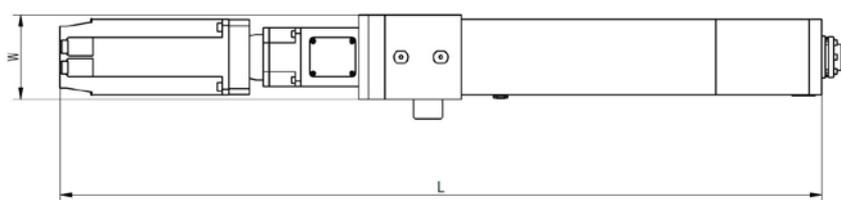
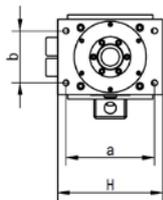
Type		Structure type
Series name		A-Bending, B-Straight
Size (side length of cylinder block cross-section, in mm)	200, 150, 110, 80, 60	Mechanical version of press-fit machine
Maximum output (in kN)	200, 100, 75, 50, 30, 20, 10, 5, 4, 3, 2, 1, 0.5	Sensor installation method
Effective stroke (in mm)	700, 600, 500, 400, 300, 200, 100	V-Built-in, W-External
		Maximum linear velocity (in mm/s)
		400, 300, 240, 200, 130, 120, 80, 70

Dimensional drawing of press-fit machine (in mm)

Bending type: Multiple choices of forces and strokes are available. The servo motor is connected to the screw in the cylinder body through a synchronous pulley, reflecting the compact design of cylinder body and reducing the installation height of cylinder body.



Straight type: The servo motor is directly connected to the screw, and the high-resolution sensor and intelligent control system can achieve micrometer-level control precision.



Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
200	700	70	452	230	1458	168	168	MSCI-200I/200-700-70V4A	1202850112174
	600	70	452	230	1358	168	168	MSCI-200I/200-600-70V4A	1202850112173
	500	70	452	230	1258	168	168	MSCI-200I/200-500-70V4A	1202850112172
	400	70	452	230	1158	168	168	MSCI-200I/200-400-70V4A	1202850112171
	300	70	452	230	1058	168	168	MSCI-200I/200-300-70V4A	1202850112170
	200	70	452	230	958	168	168	MSCI-200I/200-200-70V4A	1202850112169
100	650	130	380	180	1517	114	114	MSCI-150I/100-650-130V4A	1202850112138
	550	130	380	180	1417	114	114	MSCI-150I/100-550-130V4A	1202850112137
	450	130	380	180	1317	114	114	MSCI-150I/100-450-130V4A	1202850112136
	350	130	380	180	1217	114	114	MSCI-150I/100-350-130V4A	1202850112135
	250	130	380	180	1117	114	114	MSCI-150I/100-250-130V4A	1202850112134
	150	130	380	180	1017	114	114	MSCI-150I/100-150-130V4A	1202850112133
75	650	130	380	180	1517	114	114	MSCI-150I/075-650-130V4A	1202850112126
	550	130	380	180	1417	114	114	MSCI-150I/075-550-130V4A	1202850112125
	450	130	380	180	1317	114	114	MSCI-150I/075-450-130V4A	1202850112124
	350	130	380	180	1217	114	114	MSCI-150I/075-350-130V4A	1202850112123
	250	130	380	180	1117	114	114	MSCI-150I/075-250-130V4A	1202850112122
	150	130	380	180	1017	114	114	MSCI-150I/075-150-130V4A	1202850112121
50	600	120	320	160	1141	135	80	MSCI-110I/050-600-120V4A	1202850112102
	500	120	320	160	1041	135	80	MSCI-110I/050-500-120V4A	1202850112101
	400	120	320	160	941	135	80	MSCI-110I/050-400-120V4A	1202850112100
	300	120	320	160	841	135	80	MSCI-110I/050-300-120V4A	1202850112099
	200	120	320	160	741	135	80	MSCI-110I/050-200-120V4A	1202850112098
	100	120	320	160	641	135	80	MSCI-110I/050-100-120V4A	1202850112097

MSCI Multi-Smart Servo Press-fit Machine

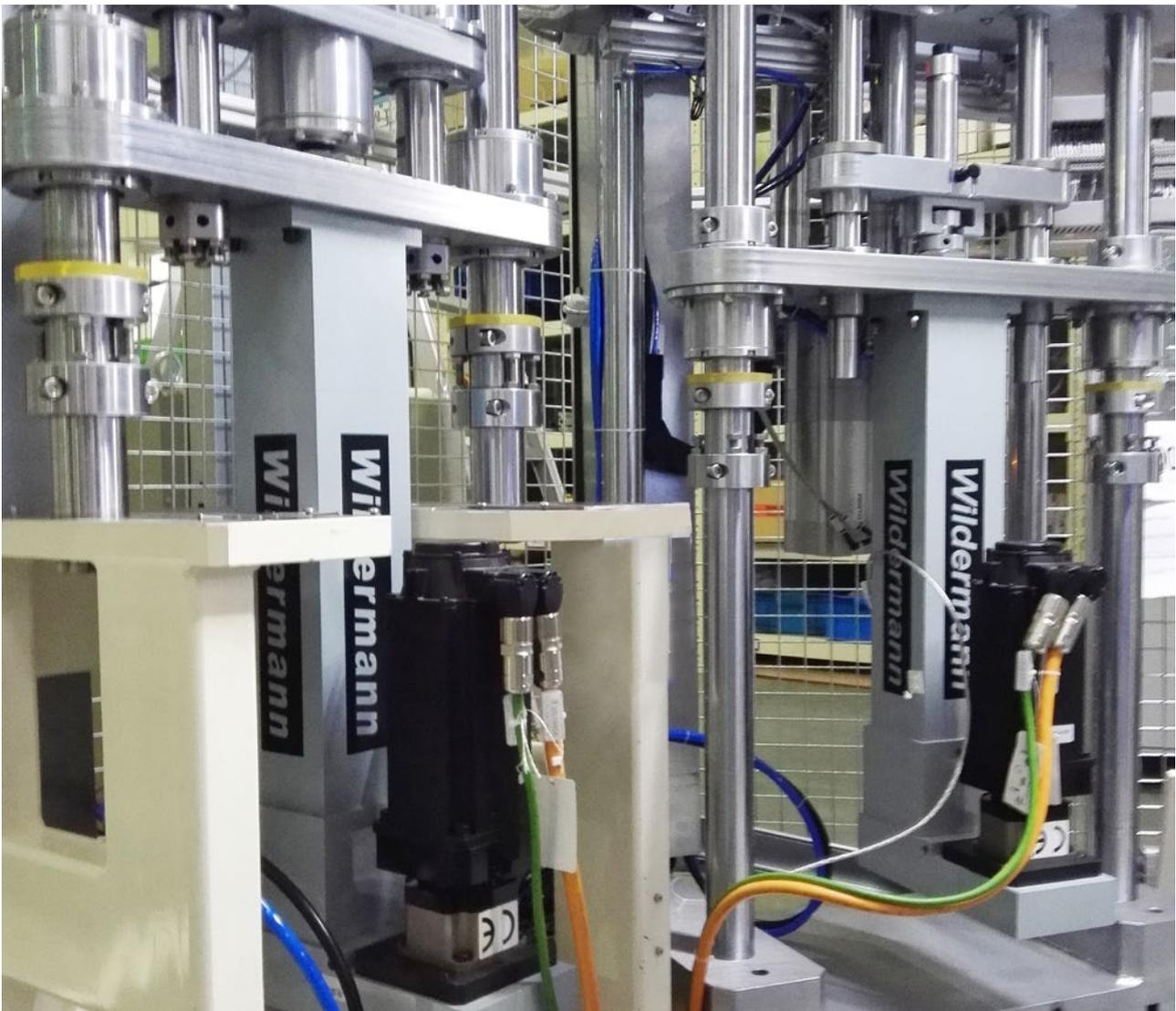
Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
30	600	200	320	160	1141	135	80	MSCI-110I/030-600-200V4A	1202850112090
	500	200	320	160	1041	135	80	MSCI-110I/030-500-200V4A	1202850112089
	400	200	320	160	941	135	80	MSCI-110I/030-400-200V4A	1202850112088
	300	200	320	160	841	135	80	MSCI-110I/030-300-200V4A	1202850112087
	200	200	320	160	741	135	80	MSCI-110I/030-200-200V4A	1202850112086
	100	200	320	160	641	135	80	MSCI-110I/030-100-200V4A	1202850112085
20	500	240	225	124	920	105	60	MSCI-80I/020-500-240V4A	1202850112069
	400	240	225	124	820	105	60	MSCI-80I/020-400-240V4A	1202850112068
	300	240	225	124	720	105	60	MSCI-80I/020-300-240V4A	1202850112067
	200	240	225	124	620	105	60	MSCI-80I/020-200-240V4A	1202850112066
	100	240	225	124	520	105	60	MSCI-80I/020-100-240V4A	1202850112065
10	500	240	225	124	920	105	60	MSCI-80I/010-500-240V4A	1202850112049
	400	240	225	124	820	105	60	MSCI-80I/010-400-240V4A	1202850112048
	300	240	225	124	720	105	60	MSCI-80I/010-300-240V4A	1202850112047
	200	240	225	124	620	105	60	MSCI-80I/010-200-240V4A	1202850112046
	100	240	225	124	520	105	60	MSCI-80I/010-100-240V4A	1202850112045
5	400	300	160	90	795	75	45	MSCI-60I/005-400-300W4A	1202850112040
	300	300	160	90	695	75	45	MSCI-60I/005-300-300W4A	1202850112039
	200	300	160	90	595	75	45	MSCI-60I/005-200-300W4A	1202850112038
	100	300	160	90	495	75	45	MSCI-60I/005-100-300W4A	1202850112037
4	400	300	160	90	795	75	45	MSCI-60I/004-400-300W4A	1202850112036
	300	300	160	90	695	75	45	MSCI-60I/004-300-300W4A	1202850112035
	200	300	160	90	595	75	45	MSCI-60I/004-200-300W4A	1202850112034
	100	300	160	90	495	75	45	MSCI-60I/004-100-300W4A	1202850112033

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
3	400	300	160	90	795	75	45	MSCI-60I/003-400-300W4A	1202850112028
	300	300	160	90	695	75	45	MSCI-60I/003-300-300W4A	1202850112027
	200	300	160	90	595	75	45	MSCI-60I/003-200-300W4A	1202850112026
	100	300	160	90	495	75	45	MSCI-60I/003-100-300W4A	1202850112025
2	400	300	160	90	795	75	45	MSCI-60I/002-400-300W4A	1202850112020
	300	300	160	90	695	75	45	MSCI-60I/002-300-300W4A	1202850112019
	200	300	160	90	595	75	45	MSCI-60I/002-200-300W4A	1202850112018
	100	300	160	90	495	75	45	MSCI-60I/002-100-300W4A	1202850112017
1	400	300	160	90	795	75	45	MSCI-60I/001-400-300W4A	1202850112012
	300	300	160	90	695	75	45	MSCI-60I/001-300-300W4A	1202850112011
	200	300	160	90	595	75	45	MSCI-60I/001-200-300W4A	1202850112010
	100	300	160	90	495	75	45	MSCI-60I/001-100-300W4A	1202850112009
0.5	400	300	160	90	795	75	45	MSCI-60I/000-400-300W4A	1202850112004
	300	300	160	90	695	75	45	MSCI-60I/000-300-300W4A	1202850112003
	200	300	160	90	595	75	45	MSCI-60I/000-200-300W4A	1202850112002
	100	300	160	90	495	75	45	MSCI-60I/000-100-300W4A	1202850112001

NCFK High-performance Servo Press-fit Machine

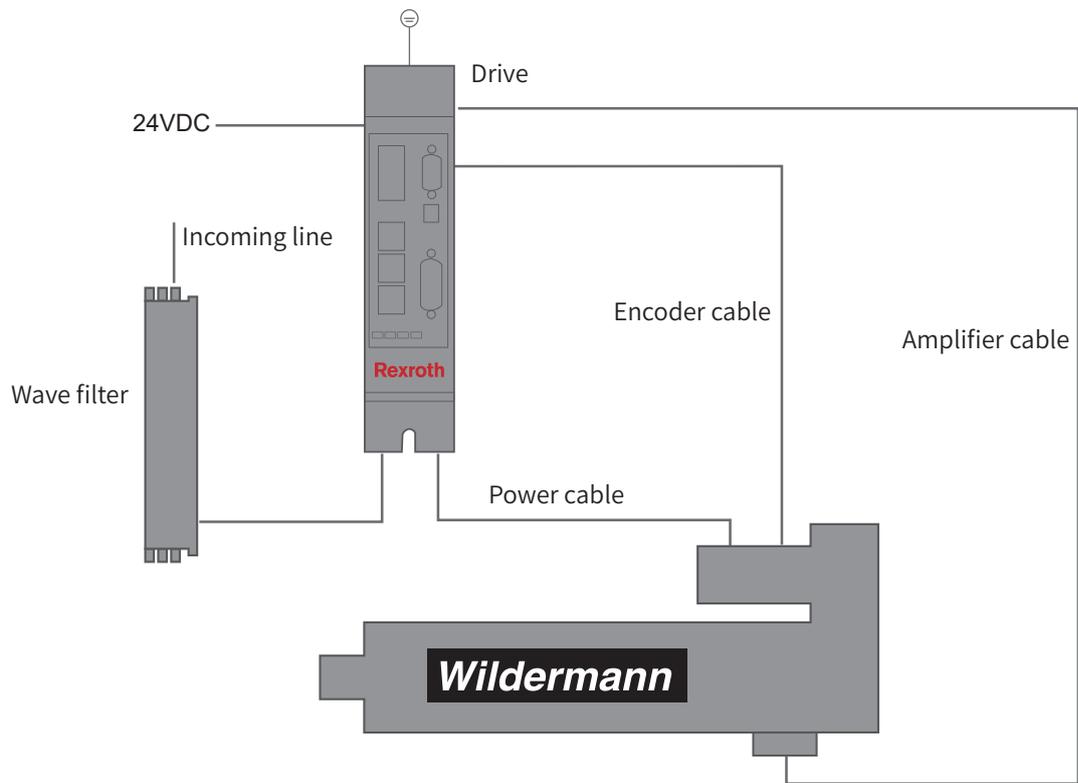
Wildermann NCFK High-performance Servo Press-fit Machine has the characteristics of energy saving, environment friendly and low-cost maintenance, with functions of automatic compensation, excellent control and stability, and able to achieve accurate displacement and pressure control. Based on the requirements of the product, it can set the optimal press-fitting process, record and monitor the press-fitting data in real time, so as to ensure the high-precision press-fitting operation, and realize the press-fitting control impossible for the traditional press-fitting equipment such as oil-hydraulic press.





- Force precision, 1%
- Repetitive positioning precision, 0.01mm
- Support dual-sensor control to ensure "zero defect"
- Super function of "black box" to record any parameter changes and operation history of press-fit machine
- Synchronous curves of force, displacement and speed
- Automatic adjustment for force/speed (when the press-fitting force increases, the press-fitting speed may automatically decrease proportionally)
- Remote diagnosis
- Support multiple languages, e.g. Chinese, English, German, etc.

Connection of Drive & Control Units



Rexroth drive



Rexroth filter

Cables



Power cable



Encoder cable



Amplifier cable

Note: The cable length is optional, with a default length of 5 m.

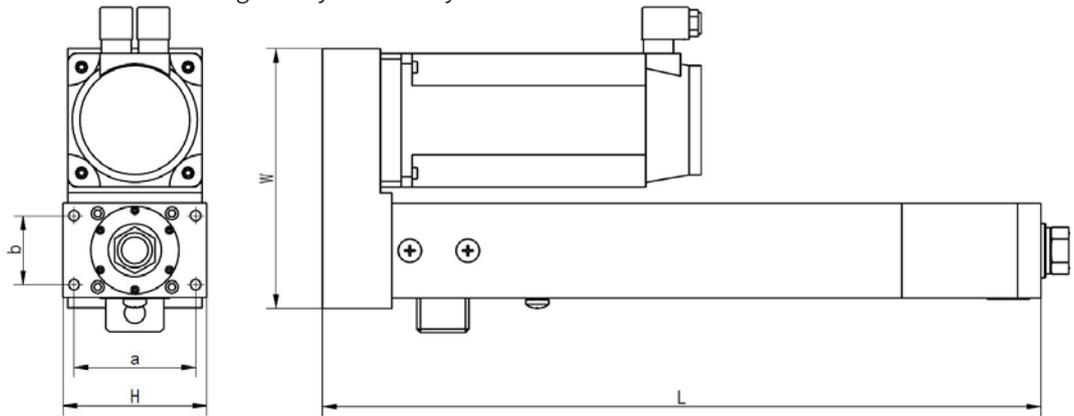
Model Description

Example: NCFK - 110R / 050 - 200 - 150 V 4 A

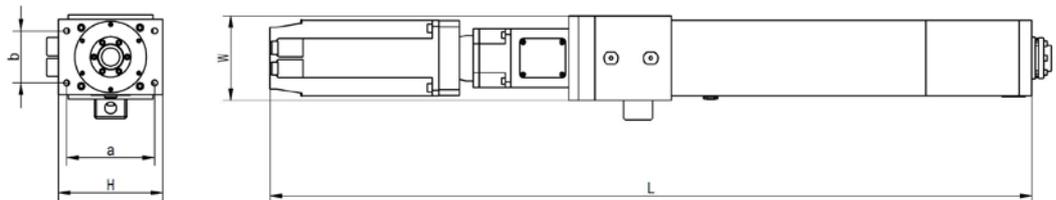
Type	NCFK (Bosch Rexroth Servo & Motor)	Structure type	A-Bending, B-Straight
Size (side length of cylinder block cross-section, in mm)	200, 150, 110, 80, 60	Mechanical version of press-fit machine	
Maximum output (in kN)	300, 200, 100, 75, 50, 30, 20, 10, 4, 3, 2, 1	Sensor installation method	V-Built-in, W-External
Effective stroke (in mm)	700, 600, 500, 400, 300, 200, 100	Maximum linear velocity (in mm/s)	400, 350, 300, 250, 240, 150, 100, 90

Dimensional drawing of press-fit machine (in mm)

Bending type: Multiple choices of forces and strokes are available. The servo motor is connected to the screw in the cylinder body through a synchronous pulley, reflecting the compact design of cylinder body and reducing the installation height of cylinder body.



Straight type: The servo motor is directly connected to the screw, and the high-resolution sensor and intelligent control system can achieve micrometer-level control precision.



NCFK High-performance Servo Press-fit Machine

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
500	700	100	579	250	1949	200	200	NCFK-250R/500-700-100V4A	1202850102799
	600	100	579	250	1849	200	200	NCFK-250R/500-600-100V4A	1202850102793
	500	100	579	250	1749	200	200	NCFK-250R/500-500-100V4A	1202850102794
	400	100	579	250	1649	200	200	NCFK-250R/500-400-100V4A	1202850102795
	300	100	579	250	1549	200	200	NCFK-250R/500-300-100V4A	1202850102796
	200	100	579	250	1449	200	200	NCFK-250R/500-200-100V4A	1202850102797
300	700	100	490	200	1560	168	168	NCFK-200R/300-700-100V4A	1202850102304
	600	100	490	200	1460	168	168	NCFK-200R/300-600-100V4A	1202850102305
	500	100	490	200	1360	168	168	NCFK-200R/300-500-100V4A	1202850102306
	400	100	490	200	1260	168	168	NCFK-200R/300-400-100V4A	1202850102307
	300	100	490	200	1160	168	168	NCFK-200R/300-300-100V4A	1202850102308
	200	100	490	200	1060	168	168	NCFK-200R/300-200-100V4A	1202850102309
200	700	100	452	200	1458	168	168	NCFK-200R/200-700-100V4A	1202850101788
	600	100	452	200	1358	168	168	NCFK-200R/200-600-100V4A	1202850101787
	500	100	452	200	1258	168	168	NCFK-200R/200-500-100V4A	1202850101786
	400	100	452	200	1158	168	168	NCFK-200R/200-400-100V4A	1202850101785
	300	100	452	200	1058	168	168	NCFK-200R/200-300-100V4A	1202850101784
	200	100	452	200	958	168	168	NCFK-200R/200-200-100V4A	1202850101783
100	650	150	315	150	1590	114	114	NCFK-150R/100-650-150V4A	1202850100043
	550	150	315	150	1490	114	114	NCFK-150R/100-550-150V4A	1202850100042
	450	150	315	150	1390	114	114	NCFK-150R/100-450-150V4A	1202850100041
	350	150	315	150	1290	114	114	NCFK-150R/100-350-150V4A	1202850100040
	250	150	315	150	1190	114	114	NCFK-150R/100-250-150V4A	1202850100039
	150	150	315	150	1090	114	114	NCFK-150R/100-150-150V4A	1202850100038

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
75	650	150	380	150	1590	114	114	NCFK-150R/075-650-150V4A	1202850100941
	550	150	380	150	1490	114	114	NCFK-150R/075-550-150V4A	1202850100940
	450	150	380	150	1390	114	114	NCFK-150R/075-450-150V4A	1202850100939
	350	150	380	150	1290	114	114	NCFK-150R/075-350-150V4A	1202850100938
	250	150	380	150	1190	114	114	NCFK-150R/075-250-150V4A	1202850100937
	150	150	380	150	1090	114	114	NCFK-150R/075-150-150V4A	1202850100936
50	400	150	130	160	1370	135	80	NCFK-110R/050-400-150V4B	1202850100979
	300	150	130	160	1270	135	80	NCFK-110R/050-300-150V4B	1202850100980
	200	150	130	160	1170	135	80	NCFK-110R/050-200-150V4B	1202850100981
	100	150	130	160	1070	135	80	NCFK-110R/050-100-150V4B	1202850100982
50	400	150	320	160	941	135	80	NCFK-110R/050-400-150V4A	1202850100977
	300	150	320	160	841	135	80	NCFK-110R/050-300-150V4A	1202850100956
	200	150	320	160	741	135	80	NCFK-110R/050-200-150V4A	1202850100955
	100	150	320	160	641	135	80	NCFK-110R/050-100-150V4A	1202850100978
30	600	240	320	160	1141	135	80	NCFK-110R/030-600-240V4A	1202850100983
	500	240	320	160	1041	135	80	NCFK-110R/030-500-240V4A	1202850100984
	400	240	320	160	941	135	80	NCFK-110R/030-400-240V4A	1202850100985
	300	240	320	160	841	135	80	NCFK-110R/030-300-240V4A	1202850100986
	200	240	320	160	741	135	80	NCFK-110R/030-200-240V4A	1202850100987
	100	240	320	160	641	135	80	NCFK-110R/030-100-240V4A	1202850100988
20	400	250	225	124	820	105	60	NCFK-80R/020-400-250V4A	1202850100021
	300	250	225	124	720	105	60	NCFK-80R/020-300-250V4A	1202850100020
	200	250	225	124	620	105	60	NCFK-80R/020-200-250V4A	1202850100019
	100	250	225	124	520	105	60	NCFK-80R/020-100-250V4A	1202850100018

NCFK High-performance Servo Press-fit Machine

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
10	500	250	225	124	920	105	60	NCFK-80R/010-500-250V4A	1202850100017
	400	250	225	124	820	105	60	NCFK-80R/010-400-250V4A	1202850100016
	300	250	225	124	720	105	60	NCFK-80R/010-300-250V4A	1202850100015
	200	250	225	124	620	105	60	NCFK-80R/010-200-250V4A	1202850100014
	100	250	225	124	520	105	60	NCFK-80R/010-100-250V4A	1202850100013
4	300	300	160	90	695	75	45	NCFK-60R/004-300-300W4A	1202850100970
	200	300	160	90	595	75	45	NCFK-60R/004-200-300W4A	1202850100969
	100	300	160	90	495	75	45	NCFK-60R/004-100-300W4A	1202850100968
3	300	400	60	90	940	75	45	NCFK-60R/003-300-400W4B	1202850100147
	200	400	60	90	840	75	45	NCFK-60R/003-200-400W4B	1202850100146
	100	400	60	90	740	75	45	NCFK-60R/003-100-400W4B	1202850100145
3	300	300	160	90	695	75	45	NCFK-60R/003-300-300W4A	1202850101869
	200	300	160	90	595	75	45	NCFK-60R/003-200-300W4A	1202850101868
	100	300	160	90	495	75	45	NCFK-60R/003-100-300W4A	1202850101867
2	300	400	60	90	940	75	45	NCFK-60R/002-300-400W4B	1202850100144
	200	400	60	90	840	75	45	NCFK-60R/002-200-400W4B	1202850100143
	100	400	60	90	740	75	45	NCFK-60R/002-100-400W4B	1202850100142
2	300	350	160	90	695	75	45	NCFK-60R/002-300-350W4A	1202850101586
	200	350	160	90	595	75	45	NCFK-60R/002-200-350W4A	1202850101585
	100	350	160	90	495	75	45	NCFK-60R/002-100-350W4A	1202850101584
1	300	400	60	90	940	75	45	NCFK-60R/001-300-400W4B	1202850100141
	200	400	60	90	840	75	45	NCFK-60R/001-200-400W4B	1202850100140
	100	400	60	90	740	75	45	NCFK-60R/001-100-400W4B	1202850100139
1	300	350	160	90	695	75	45	NCFK-60R/001-300-350W4A	1202850101583
	200	350	160	90	595	75	45	NCFK-60R/001-200-350W4A	1202850101582
	100	350	160	90	495	75	45	NCFK-60R/001-100-350W4A	1202850101581

Ex explosion-proof series: Wildermann NCFK Ex High-performance Servo Press-fit Machines use explosion-proof motors that meet explosion-proof criteria with explosion-proof labels: Ex nA IIB T155° C(T3)Gc X, Ex tc IIIC T155° C Dc

Max output kN	Stroke mm	Max speed mm/s	Size, mm					Type	Order No.
			W	H	L	a	b		
200	700	100	452	200	1458	168	168	NCFK-200Ex/200-700-100V4A	1202850102791
	600	100	452	200	1358	168	168	NCFK-200Ex/200-600-100V4A	1202850102790
	500	100	452	200	1258	168	168	NCFK-200Ex/200-500-100V4A	1202850102789
	400	100	452	200	1158	168	168	NCFK-200Ex/200-400-100V4A	1202850102788
	300	100	452	200	1058	168	168	NCFK-200Ex/200-300-100V4A	1202850102787
	200	100	452	200	958	168	168	NCFK-200Ex/200-200-100V4A	1202850102786
100	650	150	315	150	1590	114	114	NCFK-150Ex/100-650-150V4A	1202850102785
	550	150	315	150	1490	114	114	NCFK-150Ex/100-550-150V4A	1202850102784
	450	150	315	150	1390	114	114	NCFK-150Ex/100-450-150V4A	1202850102783
	350	150	315	150	1290	114	114	NCFK-150Ex/100-350-150V4A	1202850102782
	250	150	315	150	1190	114	114	NCFK-150Ex/100-250-150V4A	1202850102781
	150	150	315	150	1090	114	114	NCFK-150Ex/100-150-150V4A	1202850102780

Calibration Equipment and Services

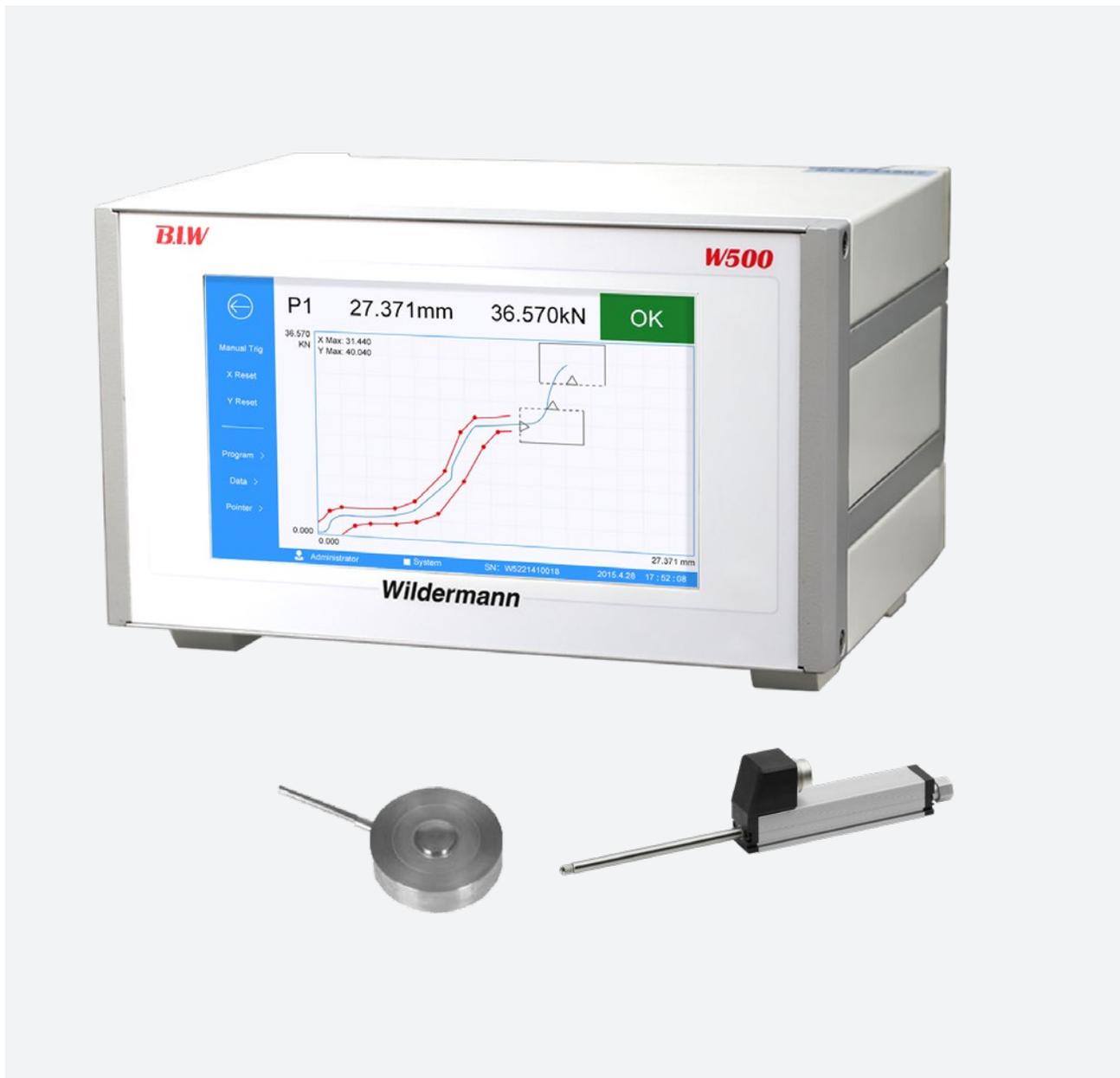
BIW adheres to the principle of "transcendence, innovation, service", relies on a high-quality work team and strong technical strength, and is committed to providing clients with a "one-stop" comprehensive solution for press-fitting equipment and process control as well as fast, reliable, ultimate and satisfactory services.

BIW produces and provides high-performance, high-precision, easy to operate and portable calibration equipment to measure and calibrate the press-fitting equipment and process, adjust instruments and equipment with measurement deviations, ensure the accuracy and reliability of instruments and equipment, and guarantee the accuracy and reliability of measurement data, thereby achieving consistency, compliance and traceability of products and production processes.



W500-P Press-fit Monitoring System

Real-time monitoring and quality assurance of the press-fitting process are essential basic requirements for modern automatic production processes. The W500-P Press-fit Monitoring System integrates the precise collection and monitoring of pressing force and displacement data during the press-fitting process, and uses the judgment functions of rich tolerance windows to achieve the goal of precise press-fitting and manufacturing of defect-free parts.

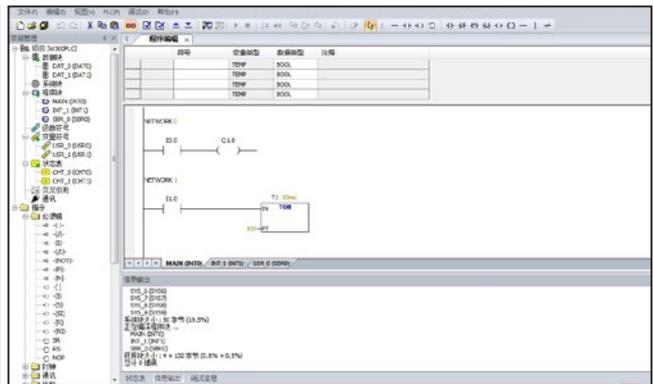
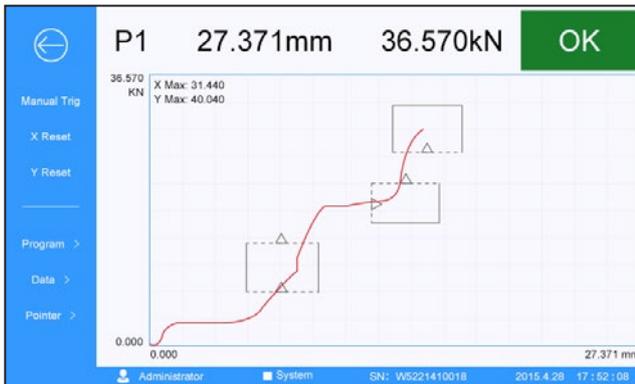




- Adopt 7" color LCD touch screen with all kinds of information at a glance and easy operation
- Up to 128 control programs configurable
- Function of over-limit alarm with maximum pressure and displacement
- Supported by software of upper computer with more convenient parameter settings and synchronized display of press-fitting curve and SPC statistical analysis
- Built-in programmable logic control system



Operation Software

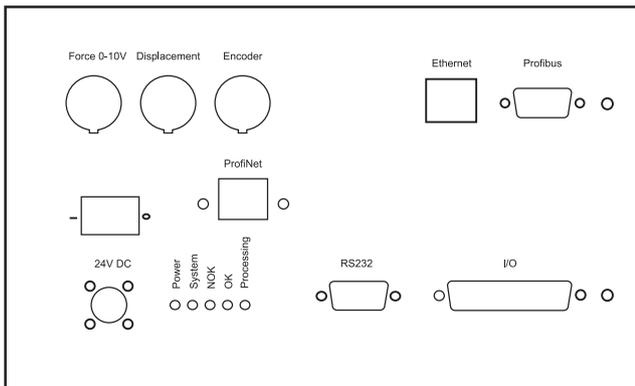


Data curve

1. Able to save 1 million press-fitting history curves classified for searching
2. Each program with up to 4 judgment windows configurable, plus maximum and minimum envelope curves

Built-in programmable logic control system

Switch terminals with 10 inputs and 8 outputs to realize the communication of control signal with the master PLC;



Definition of interfaces:

Supports multiple communication protocols, e.g. Profibus, ProfiNet, Modbus TCP, Modbus-485, EtherNet/IP, EtherCat, I/O, RS232, etc.

Specifications and dimensions (in mm)



Desktop W500-P



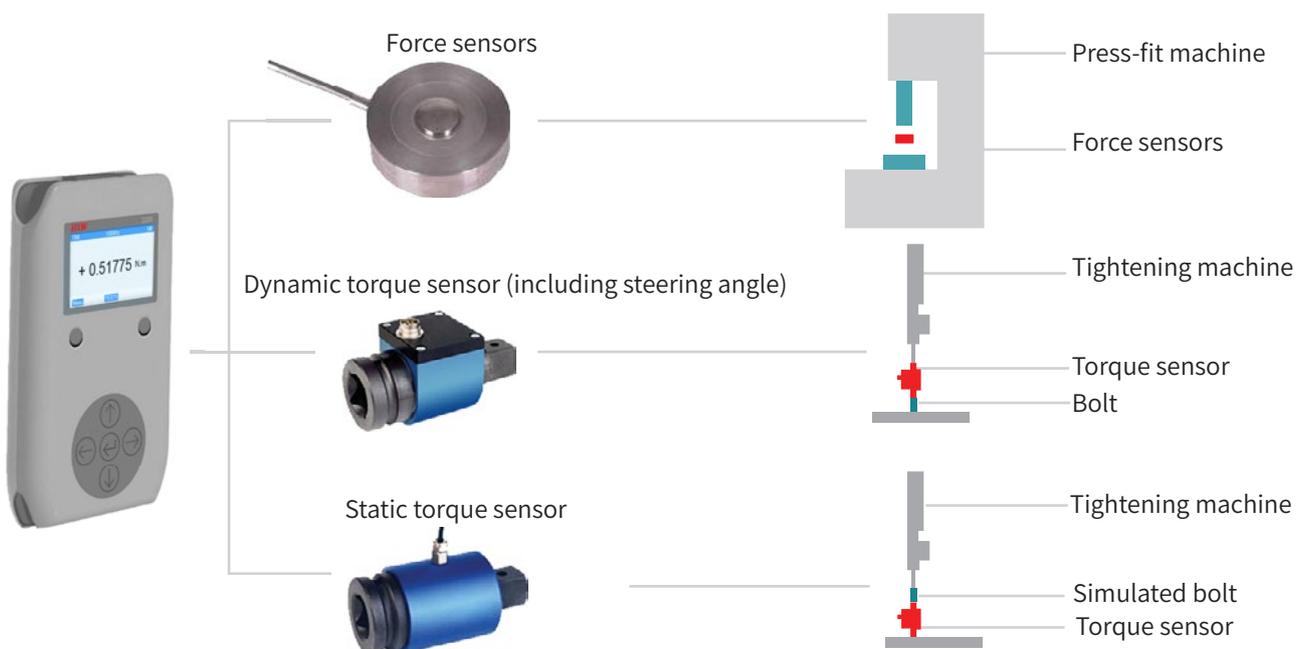
Integrated W500-P-A

BIW2200 Portable Torque/Force Calibrator

BIW2200 Torque/Force calibrator is a portable battery-powered handheld calibration instrument suitable for rapid on-site collection of high-precision data, and can be applied to the calibration of torque tools. With the addition of auxiliary tools such as simulation bolts, it can be used to calibrate and test pneumatic tools, electric tools, tightening machines, hydraulic pulse tools, impact tools, etc.



- System accuracy 0.5%
- Support automatic recognition of sensors and automatic reading of intelligent sensor model/calibration information data/date
- Adopt RGB 240 × 400 color industrial LCD screen
- Large capacity, thin, polymer lithium battery with up to 16 hours of endurance
- Sound/light alarm for qualified/unqualified products
- No need for PC and upper software in online calibration
- 2 calibration methods: Handheld, fast
- 7 torque measurement units: Nm, Ncm, Lbfin, Lbfft, Ozfin, kgfm, kgfcm
- 3 force testing units: lbf, kN, N
- 5 optional low-pass filters: 200Hz, 500Hz, 1500Hz, 2000Hz, 3000Hz
- 5 operating modes: Follow, peak, first peak, review, torque+angle
- 5-digit display
- 8 KHz sampling frequency
- Storage of 128 items of non-intelligent sensor data
- Storage of 128 items of tool information
- Storage of 5000 sets of test data
- USB charging
- Chinese/English optional
- Able to detect pneumatic tools, electric tools, tightening machines, manual tools, etc.

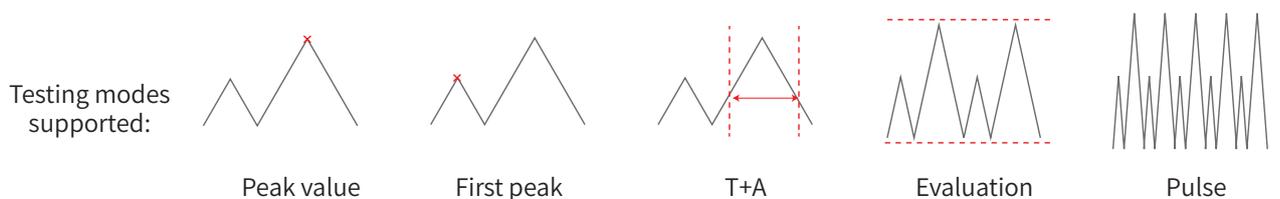
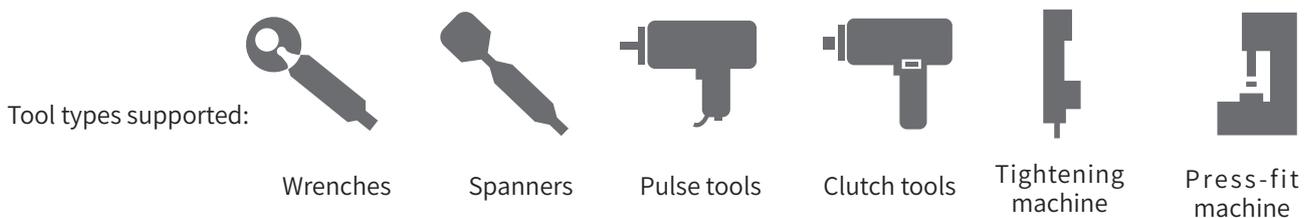


BIW2800 Force/Torque Loading Analyzer

BIW2800 Force/Torque Loading Analyzer is a calibration and testing analyzer used for force equipment and torque tools. It can calibrate and test pneumatic tools, electric tools, tightening machines, hydraulic pulse tools, impact tools, pressure equipment, etc. BIW2800 has a sampling frequency up to 20KHz, calibration accuracy of 0.5%, large capacity data and information storage, 7" industrial color screen display, touch screen parameter settings, strong man-machine interaction, and more powerful statistical analysis functions. The structural design is compact, lightweight, easy to carry, battery powered, and supports USB charging.



- Built-in lithium battery, endurance >8 hours
- Color recognition of test results, OK/NG
- No need for PC and upper software in online calibration, supporting handheld and fast calibration modes
- Chinese and English optional for standard version
- Support automatic recognition of intelligent sensors
- Able to measure torque/force/angle/speed/power, etc.
- Input range of sensor: Class V: $\pm 10V$, Class mV: 0.5~3.9 mV/V
- Able to store 5,000 items of tool information (quick retrieval of tools), and at least 10,000 test curves
- Display and store curves including information of time and value in testing process, as well as curves for angle and value
- Powerful SPC data statistical function, supporting histograms, X-R, X-S, XMR, CM, CMK, CP, CPK



Sensors

BIW acts as an agent of sensors from internationally renowned brands, which have the characteristics of high sensitivity, high resolution, high stiffness, long service life, exquisite and compact design, and flexible and convenient installation for accurate measurement and collection of press-fitting and punching forces, monitoring of press-fitting equipment and tools, and ensuring press-fitting and stamping precision. BIW provides imported sensor cables, and can satisfy clients' different demands with customization based on their needs.



Force sensor

Photo	Type	Load/mechanical connection	Range [kN]	Precision class, %F.S.	Output signal [mV/V]	Supply voltage [V]	Application scope
	K-22	Button-type pressure head design/female thread installation	0.05...2	0.5	1	2...6	Ultra-small sensors, for measurement of shear or pressing forces
	K-1613	Button-type pressure head design/female thread installation	0.1...50	0.5	1	2...12	Micro external dimensions
	K-13	Button-type pressure head design/female thread installation	0.01...100	0.5	0.5...1	2...6 ... 2...12	For compression force measurement/micro force testing
	K-13B	Button-type pressure head design/female thread installation	0.01...100	0.5	0.5...1	2...6 ... 2...12	With overload protection, for compression force measurement/micro force testing
	K-450	Button-type pressure head design/fixing hole & female thread installation	1...1000	0.1...0.3	2	2...12	Universal force sensor, for surface pressure testing, pressure installation force detection
	K-1250	Bottom installation with outer ring sleeve stressed	2...100	0.5	1	2...12	For press-fitting force detection
	K-2698	Surface forces on both ends and installation	100...600	0.5...1	1	2...12	Industrial process control, press-fitting, riveting, stamping, stretching ...
	K-1563	Male thread forces on both ends and installation	0.1...2	0.15...0.3	1...2	2...12	Material testing, traction testing ...
	K-12	Male thread forces on both ends and installation	0.5...1000	0.1...0.25	1	2...12	For tensile-stress testing and execution force measurement of actuator
	K-25	Female thread forces on both ends and installation	0.02...50	0.1...0.2	1...2	2...12	For tensile-stress testing ...

Photo	Type	Load/mechanical connection	Range [kN]	Precision class, %F.S.	Output signal [mV/V]	Supply voltage [V]	Application scope
	WDM-25	Female thread forces on both ends and installation	0.2...90	0.03...0.05	2...3	10...12	For tensile-stress testing ...
	WDM-12	Button-type pressure head design/female thread installation	0.5...1000	0.1...0.25	1	2...12	For tensile-stress testing and execution force measurement of actuator
	WDM-1563	Male thread forces on both ends and installation	0.1...2	0.15...0.3	1...2	2...12	Material testing, traction testing ...
	WDM-11	Central internal thread stressed, outer ring through-hole thread fixed	0.5...2000	0.05...1.0	2	2...12	For material testing, press-fitting, rolling force testing ...
	WDM-1107	Male thread forces on both ends and installation	0.01...0.2	0.2	0.5	2...6	Small size sensors, for measurement of rope tension, enameled wire production control
	WDM-100	Male thread forces on both ends and installation	1...100	0.3	1	2...6 2...12	For measurement of small range displacement press-fitting, <0.1mm
	WDM-21	Button-type pressure head design/female thread installation	1...20	0.5...1	1...2	10...12	Universal force sensor, for surface pressure testing, pressure installation force detection
	WDM-22	Button-type pressure head design/female thread installation	10...100	0.1	2	10...12	Universal force sensor, for surface pressure testing, pressure installation force detection
	WDM-23	Button-type pressure head design/female thread installation	25...250	0.05	2	10...12	Universal force sensor, for surface pressure testing, pressure installation force detection

Photo	Type	Load/mechanical connection	Range [kN]	Precision class, %F.S.	Output signal [mV/V]	Supply voltage [V]	Application scope
	WDM-24	Button-type pressure head design/female thread installation	100...5000	0.05...0.1	2	10...12	Large range force sensor, for surface pressure testing, pressure installation force detection
	WDM-22	Button-type pressure head design/female thread installation	0.05...2	0.5	1	2...6	Ultra-small sensors, for measurement of shear or pressing forces
	WDM-1613	Button-type pressure head design/female thread installation	0.1...50	0.5	1	2...12	Micro external dimensions
	WDM-13	Button-type pressure head design/female thread installation	0.01...100	0.5	0.5...1	2...6 ... 2...12	For compression force measurement/micro force testing
	WDM-1250	Surface forces on both ends and installation	10...100	0.5	1	5...12	For press-fitting force detection
	WDM-1260	Surface forces on both ends and installation	300...1200	0.3	2	10...12	Large range, for press-fitting force detection
	WDM-1360	Surface forces on both ends and installation	400...3000	0.3	2	10...12	Large range, for press-fitting force detection

Displacement sensor

Photo	Series	Range [mm]	Independent linearity	Output signal	Repeatability [mm]	Max. operating speed [m/s]	Application scope
	T/TS	0...25, 0...150	$\pm 0.2...$ $\pm 0.075\%$	Voltage divider	0.002	10m/s	Small displacement sensor, for precision measurement and control application
	TR/TRSmit Ruckstellfeder	0..10, 0...100	$\pm 0.2...$ $\pm 0.075\%$	Voltage divider	0.002	2m/s	For precision measurement and control application. Spring-loaded displacement sensor can reach a stroke length of 100mm
	TEX mit Gelenkkopfr	0..10, 0...300	$\pm 0.25...$ $\pm 0.05\%$	Voltage divider	0.01	10m/s (IP40,IP54), 5m/s(IP67)	Cost-effective linear sensor with high protection level and minimum size
	TEX mit Schubstange	0..10, 0...300	$\pm 0.25...$ $\pm 0.05\%$	Voltage divider	0.01	10m/s (IP40,IP54), 5m/s(IP67)	Cost-effective linear sensor with high protection level and minimum size
	TEX mit Schubstange	0..10, 0...200	$\pm 0.25...$ $\pm 0.05\%$	Voltage divider	0.01	5m/s	Cost-effective linear sensor with high protection level and minimum size
	PTP	0..10, 0...300	$\pm 0.25...$ $\pm 0.05\%$	Voltage divider	0.01	10m/s	Open pilot system provides foundation of customized solution

National Sales and Services



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