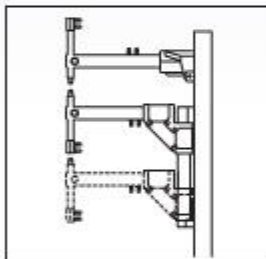


# K / KP

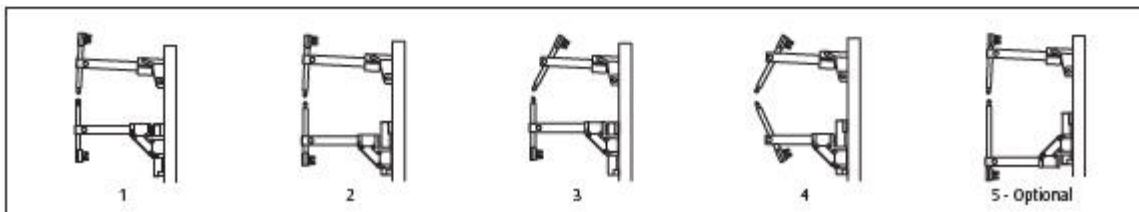


## ROCKER ARM SPOT WELDERS WITH ADJUSTABLE HEIGHT LOWER ARM

The K and KP series resistance spot welders, versatile, robust and easy-to-use, ensure best welding results on all weldable metals and represent the ideal solution in a large variety of spot-welding applications. K's and KP's allow to adjust lower arm both in height and also laterally. K models are mechanical pedal operated, whilst KP's are pneumatically operated by an electric pedal.



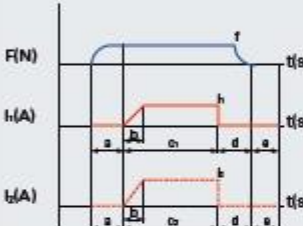
- ▶ Excellent welding on all weldable metals
- ▶ Welding current and time electronic adjustments
- ▶ Synchronous ignition SCR group with phase shift welding current adjustment to eliminate initial transient
- ▶ Reduced consumption
- ▶ Water cooled arms
- ▶ Water cooled copper electrodeholders with adjustable height
- ▶ Self-lubricated pneumatic components to eliminate oil deposits and to safeguard the environment from contaminants (KP)
- ▶ High versatility thanks to all different possible work configurations
- ▶ Lower arm with adjustable height which can be rotated for use with a longer electrodeholder (Optional K/KP fig.5)



## WS 402 ELECTRONIC CONTROL

- ▶ Welding time adjustable by periods
- ▶ Single or repeated spotting facility
- ▶ Automatic compensation of mains voltage fluctuation
- ▶ Error display during the welding cycle
- ▶ Weld/no Weld selector key
- ▶ 24 V DC supply solenoid valve
- ▶ 50/60 Hz frequency automatic identification
- ▶ 24 V AC supply electronic control
- ▶ 2 welding program (2 times 2 currents) facility by using a double pedal (optional)



K - KP		FUNCTIONS	WS 402
	a	Squeeze time	•
		Pressure contact	•
	b	Slope up time	•
	c <sub>1</sub> - c <sub>2</sub> *	Welding time	•
	i <sub>1</sub> - i <sub>2</sub> *	Welding current	•
	d	Holding time	•
e	Pause time	•	

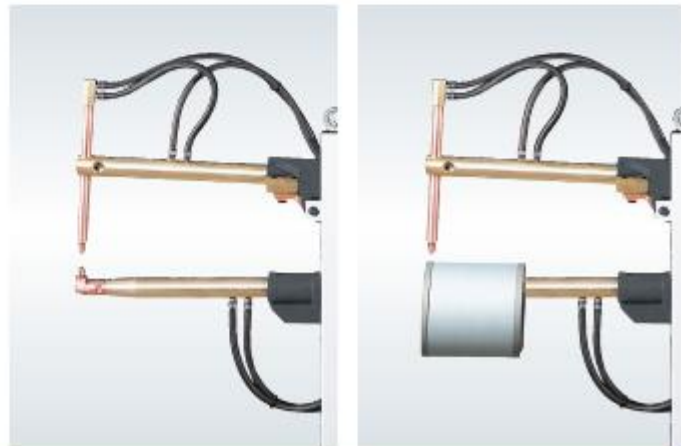
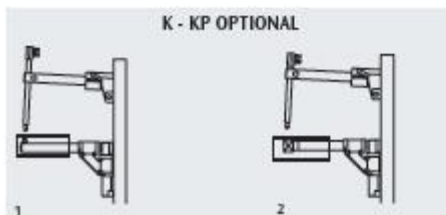
\* i<sub>2</sub> - c<sub>2</sub> available only whenever using a double pedal

- ▶ Electrode force adjustable by spring nut and, for KP, also by air pressure regulation manometer
- ▶ Easy electrode gap adjustment without moving the electrodeholders



## K – KP LOWER ARM FITTED WITH PRESSED-IN ELECTRODE

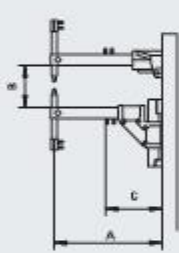

Whenever the lower arm is fitted with a pressed-in electrode, also a long electrodeholder is necessary on the upper arm.

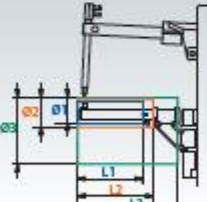


**ACCESSORIES**

- ▶ IR 14 water cooling equipment (only for K / KP 22 and 28)
- ▶ Special electrodes (on request)
- ▶ 65 mm offset electrode holders
- ▶ Long electrode holders
- ▶ Barholders with 100 mm bars
- ▶ Possibility of a two-step pedal: squeeze without welding and welding after pressing the second step
- ▶ Possibility of a double pedal for quick use of two different welding programs



K - KP			K 22 KP 22	K 28 KP 28	K 48 KP 48
	A	mm	455	455	490
	A (Optional)	mm	600	600	700
		mm	800	800	1000
	B	MIN. mm	173	168	163
		MAX. mm	410	443	438
	C	mm	255	255	285
		Ø mm	40	45	50
		Ø mm	21	21	25
		Ø mm	16	16	16
				10%	10%

			K 22 KP 22	K 22 KP 22	K 28 KP 28	K 28 KP 28	K 48 KP 48	K 48 KP 48	K 48 KP 48
	A	mm	455	600	455	800	490	700	1000
	L1	mm	252	397	252	597	257	467	767
	Ø1 Min	mm	60	60	63	63	65	65	65
	L2	mm	280	429	289	643	295	505	805
	Ø2 Min	mm	85	85	90	90	98	98	98
	L3	mm	397	542	402	747	427	637	937
	Ø3 Min	mm	180	180	185	185	205	205	205

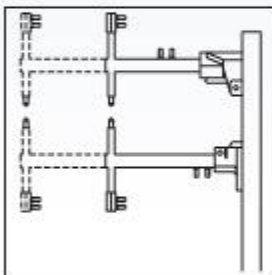
TECHNICAL DATA			K 22 KP 22	K 28 KP 28	K 48 KP 48
Single phase input 50/60 Hz	V		400	400	400
Rated power at 50%	kVA		20	25	45
Max. welding power	kVA		36,5	54,7	75
Installed power	kVA		12	14	24
Cross section connecting cables	mm <sup>2</sup>		10	16	25
Delayed fuse	A		25	36	63
Open Circuit Voltage	V		3,5	4,2	5,2
Short circuit current	kA		11,6	14	17,8
Max. welding current	kA		9,3	11,2	14,2
Max. electrode force (6 bar)	daN		180	300	280
Water consumption at 300 kPa (3 bar)	l/min		3,8	3,8	3,8
Dimensions	↔ mm		330	390	390
	↑ mm		1200	1250	1250
Weight	kg		120	167	194

Other voltages on request - Technical features might change without notice

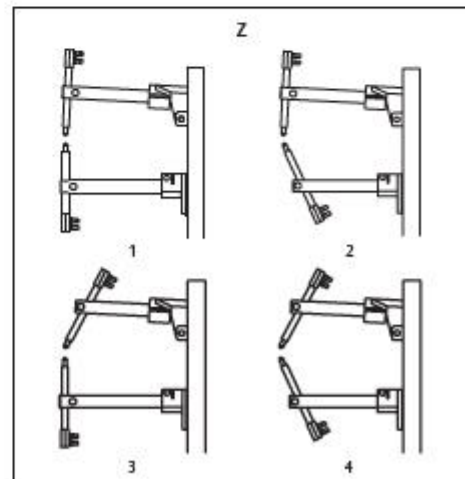


## ROCKER ARM SPOT WELDERS WITH ADJUSTABLE ARM LENGTH

The Z and ZP series resistance spot welders, versatile, robust and easy-to-use, ensure best welding results on all weldable metals. Thanks to their adjustable length feature they represent the ideal solution in a large variety of spot-welding applications. Z models are mechanical pedal operated, whilst ZP's are pneumatically operated by an electric pedal.



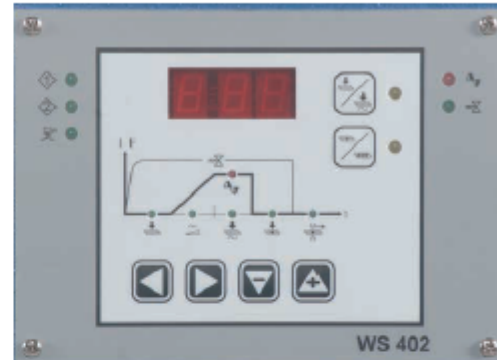
- ▶ Excellent welding on all weldable metals
- ▶ Welding current and time electronic adjustments
- ▶ Synchronous ignition SCR group with phase shift welding current adjustment to eliminate initial transient
- ▶ Reduced consumption
- ▶ Water cooled arms
- ▶ Water cooled copper electrodeholders with adjustable height
- ▶ Self-lubricated pneumatic components to eliminate oil deposits and to safeguard the environment from contaminants (ZP)
- ▶ High versatility thanks to all different possible work configurations

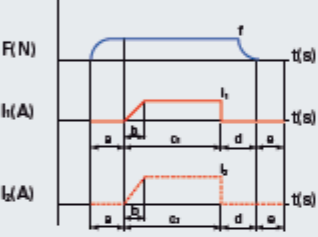




## WS 402 ELECTRONIC CONTROL

- ▶ Welding time adjustable by periods
- ▶ Single or repeated spotting facility
- ▶ Automatic compensation of mains voltage fluctuation
- ▶ Error display during the welding cycle
- ▶ Weld/no Weld selector key
- ▶ 24 V DC supply solenoid valve
- ▶ 50/60 Hz frequency automatic identification
- ▶ 24 V AC supply electronic control
- ▶ 2 welding program (2 times 2 currents) facility by using a double pedal (optional)



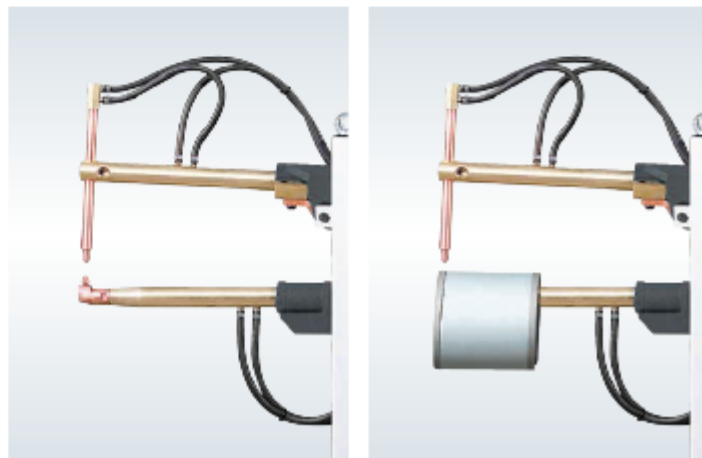
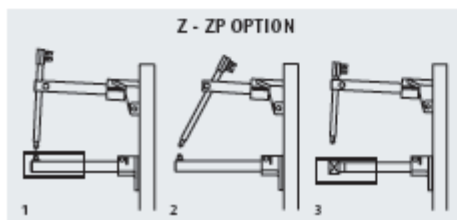
Z - ZP		FUNCTIONS	WS 402
	a	Squeeze time	•
		Pressure contact	•
	b	Slope up time	•
	$c_1 - c_2^*$	Welding time	•
	$i_1 - i_2^*$	Welding current	•
	d	Holding time	•
	e	Pause time	•
* $i_2 - c_2$ available only whenever using a double pedal			

- ▶ Electrode force adjustable by spring nut and, for ZP, also by air pressure regulation manometer
- ▶ Easy electrode gap adjustment without moving the electrodeholders



## Z – ZP LOWER ARM FITTED WITH PRESSED-IN ELECTRODE

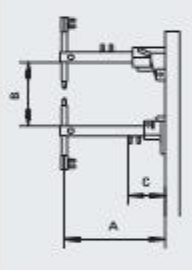
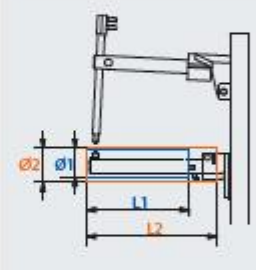
Whenever the lower arm is fitted with a pressed-in electrode, also a long electrodeholder is necessary on the upper arm.



**ACCESSORIES**

- ▶ IR 14 water cooling equipment (for all Z's and ZP's)
- ▶ Special electrodes (on request)
- ▶ 65 mm offset electrode holders
- ▶ Long electrode holders
- ▶ Barholders with 100 mm bars
- ▶ Possibility of a two-step pedal: squeeze without welding and welding after pressing the second step
- ▶ Possibility of a double pedal for quick use of two different welding programs

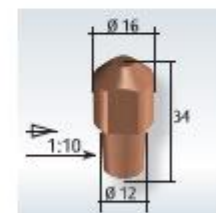


Z - ZP			Z 18 ZP 18	Z 28 ZP 28				Z 18 ZP 18	Z 28 ZP 28	
	A	MIN.	mm	250	250		L1	mm	492	492
		MAX.	mm	600	600		Ø1 Min	mm	60	60
	B		mm	215	215		L2	mm	570	570
	C		mm	135	135		Ø2 Min	mm	85	85
			Ø mm	40	40					
			Ø mm	21	21					
			Ø mm	16	16					
				10%	10%					

TECHNICAL DATA		Z 18 ZP 18	Z 28 ZP 28
Single phase input 50/60 Hz	V	400	400
Rated power at 50%	kVA	15	25
Max. welding power	kVA	23	41,6
Installed power	kVA	11	14
Cross section connecting cables	mm <sup>2</sup>	10	10
Delayed fuse	A	32	40
Open Circuit Voltage	V	2,6	3,5
Short circuit current	kA	10,2	13,8
Max. welding current	kA	8,2	11
Max. electrode force (6 bar)	daN	300	300
Water consumption at 300 kPa (3 bar)	l/min	3,8	3,8
Dimensions	∅ mm	760	760
	→ mm	330	330
	↑ mm	1200	1200
Weight	kg	104	118



Standard electrode



Electrode for lower arm in pressed-in electrode version

Other voltages on request - Technical features might change without notice