

# Table welding guns

Type of welding gun	CONTACT/ CONTACT-M* <sup>1</sup>	GAP/ GAP-M* <sup>1</sup>	GAP-10M* <sup>1</sup>	DA-10/ DA-10M* <sup>1</sup>	GAP-12M* <sup>1</sup>	DA-12/ DA-12M* <sup>1</sup>	DA-19M* <sup>1</sup>	DA-22M* <sup>1</sup> DA-25M* <sup>1</sup>	ATP-8* <sup>2</sup> / ATP-8M* <sup>1 + 2</sup>
<b>Stud welding process</b>		Capacitor discharge welding (gap process)	Short cycle (with or without shielding gas)		Drawn arc stud welding with ceramic ferrules or shielding gas			Drawn arc with ceramic ferrules	Drawn arc, short cycle, tip ignition (gap process)
<b>Welding area</b>	M3 – M10 (Ø11mm* <sup>3</sup> )	M3 – M10 (Ø11mm* <sup>3</sup> )	M3 – M10 (Ø11mm* <sup>3</sup> )	M3 – M10 (Ø11mm* <sup>3</sup> )	M3 – M12 (Ø12mm* <sup>3</sup> )	M3 – M12 (Ø12mm* <sup>3</sup> )	M8 – M20(Ø16mm* <sup>3</sup> )	DA-22M:M8-M24(Ø22mm* <sup>3</sup> ) DA-25M: M8-M30(Ø25mm* <sup>3</sup> )	M3(Ø3mm) – M8(Ø8mm* <sup>3</sup> )
<b>Piston Guide</b>	Slide bearing guide	Linear ball guide					Double linear ball guide		Sleeve bearing guide
<b>Way measurement system</b>	<b>*1: Way measurement system for measuring stud overlap, lift, depth of immersion and piston velocity</b>								
<b>Lift adjustment</b>	./.	1,0...4,0mm, continuously adjustable via scale to welding gun	Konstant	1,0...4,0mm, continuously adjustable via scale to welding gun	Konstant	2,0mm...6mm, in increments of 0,5mm (lift either via scale on welding gun and with connected position encoder additionally digitally readable at the inverter)	1,0mm...6,0mm (continuously adjustable)		
<b>Vertical alignment</b>	Manual (without circular lever)						Circular lever (integrated in the end cap)	Manual (without circular lever)	
<b>Length compensation</b>	./.	Ball-carrier system							./.
<b>Immersion damping</b>	./.						continuously adjustable (hydraulic damper)	./.	
<b>Welding cable</b>	6,5m, 25mm <sup>2</sup>	3m, 25mm <sup>2</sup>	5m, 35mm <sup>2</sup>				5m, 50mm <sup>2</sup>	DA-22M: 5m, 95mm <sup>2</sup> (* <sup>4</sup> ) DA-25M: 5m, 120mm <sup>2</sup> (* <sup>4</sup> )	3m, 25mm <sup>2</sup>
<b>Weight (without cable)</b>	0,85kg						2,10kg	2,70kg	1,5kg

\*1: Welding guns with integrated way measurement system

\*2: Only in combination with integrated automatic module in machine series CDP-M and/or DAI

\*3: Maximum welding-diameter (according standard DIN EN 13918); Material, group of material and class of mechanical strength of usable welding elements and allowed welding-joints of studs und ground material see DVS-roule 0902 "Drawn arc stud welding", DVS roule 0903 "capacitor discharge stud welding" and DVS-roule 0967 „Calculation of welding joints“

\*4: Welding cable external