

Series 97

Tools and harnessing machines

The complete application tooling equipment for insulation displacement technology (IDT) connector systems. Depending on your needs, choose from manual, semi and fully automated solutions for low, middle or high volume production.



KHP3022

Knuckle-joint press for termination of Micro-modul™ connectors



HA3022e-R

Semiautomatic harnessing machine for termination of Micro-modul™ connectors



PP3022

Electropneumatic harnessing machine for termination of Micro-modul™ connectors



VARICON 1000

Fully automatic harnessing machine for termination of Micromodul™ connectors



VARICON 7000-RD

Fully automatic harnessing machine for termination of RAST connectors, for flexible harness configurations

- Highly efficient connector loading
- Highly efficient cable loading
- Flexible cable processing
- Quality assurance



VARICON 7000

Versatile, fully automatic harnessing machine for termination of RAST connectors, for flexible harness configurations

- Highly efficient connector loading
- Highly efficient cable loading
- Flexible cable processing
- Quality assurance

Connectors	302299			302299, MICA, MICAL, MICALD	RAST 2.5 (351..., 352...; VARICON 7000-RD also 354...), RAST 2.5 plus™ (352...00) RAST 2.5 Power plus™ (357...00) RAST 5 (362..., 363...)	
State of delivery of connectors	in bulk	on reel	in bulk	on reel, in bar stock carrier	in chain	in chain
Processable conductor	ribbon cable	ribbon cable	ribbon cable	ribbon cable	discrete conductor	discrete conductor
Stroke capacity, discrete conductor per hour	ca 450	ca 1.200	ca 600	ca 1.200	ca 10.500 contacts	ca 17.000 contacts
Harnessing of bus cables	X			- Processing modules for mass termination - Testing units for quality control - Type U, type Z, hybrid	- 2 different RAST systems loadable in parallel - Decollating of connectors and cutting of RAST keyings - 12 cable barrels mountable in parallel - 4 different cables loadable in parallel (different types, sections, colors) - 1-to-n (U-type) and 1-to-1 (Z-type) harnesses - Crossed cables, bridged contacts and varying pitches in one harness - Variable cable lengths in one harness (min. 200 mm, max. 2500 mm) - Mechanical testing units including RAST keying and cable end position tests - Electrical testing units, including continuity, high-voltage/short-circuit tests - Destruction of reject parts - Cable bending unit for RAST 2.5 Power plus™ and RAST 5 - Produced harnesses hanging straight or in loop for manual unloading - Especially short changeover times	- 2 different RAST systems loadable in parallel - Decollating of connectors and cutting of RAST keyings - 24 cable barrels mountable in parallel - 8 different cables loadable in parallel (different types, sections, colors) - 1-to-n (U-type) and 1-to-1 (Z-type) harnesses - Crossed cables, bridged contacts and varying pitches in one harness - Multiple cable lengths in one harness (min. 200 mm, max. 2500 mm) - Mechanical testing units including RAST keying and cable position tests - Electrical testing units, including continuity, high-voltage/short-circuit tests - Destruction of reject parts - Cable bending unit for RAST 2.5 Power plus™ and RAST 5 - Produced harnesses hanging straight or in loop for manual unloading - Especially short changeover times - Main process units duplicated for maximum performance and output
Cable color detection 7 + 1 (CA)						
Verification of insertion pattern and line end position						
Storage of insertion patterns						
High-voltage test (HV)						
Cutting and vacuum extraction device for connector chain interlinks (RK)						
Key cutting (KC)						
Key test (KT)						
Automatic feeding of connectors		X				
Additional specifications			- counter			

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Harnessing in insulation displacement technology

Tools and harnessing machines

The complete application tooling equipment for insulation displacement technology (IDT) connector systems. Depending on your needs choose from manual, semi and fully automated solutions for low, middle or high volume production.



Modular manual
ings for termi-
ation of Micro-
odul™ connec-

HZ35-K tongs
for keying (also
for 357...)

HA35f-RK-CA-HV

KHP3545/46-SW
KHP3545/46-1-SW
for 3545, 3546,
3545-1, 3546-1

HA357F CA KC KT H

connectors

215 Power plus connectors

HZ-M36 modu-

HA36f-CA-KC-KT-HV

HZ-M30
HZ-M30 modular manual tonc

tensors

tensors

115

Connectors	351..., 351...-2, 352... (not including RAST 2.5 plus™)										354...			357... (not including RAST 2.5 Power plus™)								352...00 (RAST 2.5 plus™)		357...00 (RAST 2.5 Power plus™)		362..., 363...								3647, 3647-1, 3648		3690	...30 MICA ...M30 MICA, MICAL, MICALD	MICA (MICA VP3 HA30...-R) , MICAL, MICALD				302299
State of delivery of connectors	in chain	in chain	in chain				in chain				in bulk	in bulk	in bar stock carrier	in chain	in chain	in chain	in chain				in chain, to be decollated	in chain	in chain, to be decollated	in chain	in chain	in chain	in chain	in chain	in chain	in chain	in bar stock carrier (separate)	in bar stock carrier	in chain	in bulk	in bulk	in bulk	on reel, versions A and C	in bulk				
Processable conductor	discrete conductor, ribbon cable	discrete conductor, ribbon cable	discrete conductor, ribbon cable				discrete conductor, ribbon cable				discrete conductor, ribbon cable	discrete conductor, ribbon cable	discrete conductor, ribbon cable	discrete conductor	discrete conductor	discrete conductor	discrete conductor				discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	discrete conductor	ribbon cable	ribbon cable	ribbon cable	ribbon cable	ribbon cable					
Stroke capacity, discrete conductor per hour	ca 240	ca 450	ca 1.200				ca 1.200				ca 240	ca 450	ca 1.200	ca 240	ca 450	ca 1.200	ca 1.200				ca 450	ca 1.200	ca 450	ca 1.200	ca 240	ca 450	ca 1.200	ca 450	ca 1.200	ca 450	ca 240	ca 450	ca 600	ca 1.200	ca 240							
Bus cables on request																																										
Cable color detection 7 + 1 (CA)					X	X			X	X	X					X			X	X	X								X			X				X						
Verification of insertion pattern and line end position			X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X							X	X													
Storage of insertion patterns			X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X							X	X													
High-voltage test (HV)							X		X	X							X		X	X																						
Cutting and vacuum extraction device for connector chain inter-links (RK)				X		X			X	X	X																															
Keying cutting (KC)							X		X	X							double-s.		double-s.	double-s.		double-sided		double-sided																		
Keying test (KT)							X		X	X							X		X	X																						
Automatic feeding of connectors			X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X							X							X							
Additional specifications																																	- press die for MICA, MICAL, MICALD	- press die for MICA, MICAL, MICALD - counter								