

redefining manufacturing flexibility



Feeder Product Folder 2005

Assembleon

Leaders in Electronic Manufacturing Technology

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Feeder Product Folder

Issue Date: October 2004

“The Best Feeders belong to the Best Machines”

Feeding is an essential backbone of the pick and placement process. With Assembléon providing not only the best in class feeders, but also finding that packaging and feeding method that fits your process the best, you can count on a smooth and care-free operating environment guaranteeing the highest machine uptime and lowest cost of operation. To extend the pick and placement machine's flexibility to the max, a feeding solution is available for virtually any packaging method. Feeding solutions can be found for tape and reel, bulk cassette, advanced packaging, SMD sticks, Oddform, Bare Die Handling, Wafer Handling, Labels, Trays and many more.

ACM/AQ-1 ACM, AQ-1

AX AX-3, AX-5

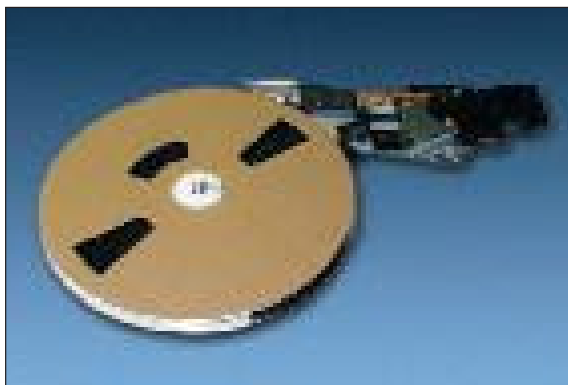
D-9 D-9

FCM FCM-II, FCM Multiflex

GEM Emerald(-X), Topaz(-X)
Emerald-X", Topaz-X", Sapphire-X", Opal-X"

GEM-Xi Emerald-Xi, Topaz-Xi
Emerald-Xi", Topaz-Xi"

Reel holders



User Benefits

- Reel holders remain attached to feeders allowing single handed operation
- Rigid reel holder designs supporting heavy reels
- Expands industry standards 7" and 13" up to 22" for support of larger and heavy components

Reelholder		Reel Size	Reel holder Type	Reel Weights	Reel width Support
PA2653/05	15" Reel holder bin ITF2 8mm, 5pcs	7" - 15"	Reel-bin	Standard	14.4 mm
PA2653/15	15" Reel holder bin ITF2 12mm, 4pcs	7" - 15"	Reel-bin	Standard	18.4 mm
PA2653/25	15" Reel holder bin ITF2 16mm, 4pcs	7" - 15"	Reel-bin	Light	22.4 mm
PA2653/35	15" Reel holder bin ITF2 24mm, 3pcs	7" - 15"	Reel-bin	Light	30.4 mm
PA2653/45	15" Reel holder bin ITF2 32mm, 2pcs	7" - 15"	Reel-bin	Light	39.4 mm
PA2653/55	15" Reel holder bin ITF2 44mm, 2pcs	7" - 15"	Reel-bin	Light	50.4 mm
PA2653/65	15" Reel holder bin ITF2 56mm, 1pc	7" - 15"	Reel-bin	Light	62.4 mm
9466 920 10271	15" Wide Reel holder ITF2 8mm, Splice-able	7" - 15"	Reel-bin	Heavy	14.9 mm
9466 920 10281	15" Wide Reel holder ITF2 12mm, Splice-able	7" - 15"	Reel-bin	Heavy	18.9 mm
9466 920 10291	15" Wide Reel holder ITF2 16mm, Splice-able	7" - 15"	Reel-bin	Heavy	22.9 mm
9466 920 10301	15" Wide Reel holder ITF2 24mm, Splice-able	7" - 15"	Reel-bin	Heavy	30.9 mm
9466 920 10311	15" Wide Reel holder ITF2 32mm, Splice-able	7" - 15"	Reel-bin	Heavy	39.9 mm
9466 920 10321	15" Wide Reel holder ITF2 44mm, Splice-able	7" - 15"	Reel-bin	Heavy	50.9 mm
9466 920 10331	15" Wide Reel holder ITF2 56mm, Splice-able	7" - 15"	Reel-bin	Heavy	62.9 mm
9466 918 14891	22" Reel holder ITF2 16mm	19" - 22"	Center Pen	Heavy	23.5 mm
9466 918 09611	22" Reel holder ITF2 24mm	19" - 22"	Center Pen	Heavy	32.5 mm
9466 918 09621	22" Reel holder ITF2 32mm	19" - 22"	Center Pen	Heavy	40.5 mm
9466 918 09631	22" Reel holder ITF2 44mm	19" - 22"	Center Pen	Heavy	52.5 mm
9466 918 09641	22" Reel holder ITF2 56mm	19" - 22"	Center Pen	Heavy	65.5 mm

Note: Reels PA2653/xx have no feeder neighborhood restrictions and allow the same density of feeders that are equipped with the standard 13" reelholders. Reels 9466 920 xxxx and 9466 918 xxxxx have neighborhood restrictions.

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						CL Tape Feeders	
						PA2903/77	8mm CL Tape Feeder, 0201, 2mm pitch, 7" Reel
						PA2903/78	8mm CL Tape Feeder 0402, 2mm pitch, 15" Reel
						PA2903/79	8mm CL Tape Feeder, 4mm pitch, 15" Reel
						PA2903/88	12mm CL Tape Feeder, 15" Reel
						PA2903/27	16mm CL Tape Feeder, 15" Reel
						PA2903/38	24mm CL Tape Feeder, 15" Reel
						PA2903/48	32mm CL Tape Feeder, 15" Reel
						PA2903/58	44mm CL Tape Feeder, 15" Reel
						PA2903/68	56mm CL Tape Feeder, 15" Reel
						9466 920 06151	72mm Tape Feeder, 15" Reel
						CLi Tape Feeders	
						PA2903/97	8mm CLi Tape Feeder, 0201, 2mm pitch, 7" Reel
						PA2903/98	8mm CLi Tape Feeder, 0402, 2mm pitch, 15" Reel
						PA2903/99	8mm CLi Tape Feeder, 4mm pitch, 15" Reel
						PA2903/89	12mm CLi Tape Feeder, 15" Reel
						PA2903/29	16mm CLi Tape Feeder, 15" Reel
						PA2903/39	24mm CLi Tape Feeder, 15" Reel
						PA2903/49	32mm CLi Tape Feeder, 15" Reel
						PA2903/59	44mm CLi Tape Feeder, 15" Reel
						PA2903/69	56mm CLi Tape Feeder, 15" Reel

Tape Feeders



User Benefits

- Pneumatic Indexing
- Easy pitch changes
- Standard reel support up to 15 inch
- Single handed operation facilitates fast setup
- Alternate feeder pick-up for maximum performance
- Supports splicing for uninterrupted production
- Support from 72mm tapes to components down to 0201
- Supports tapes based on the IEC 60286-3 specifications
- Feeder Identification (CLi Feeders) eliminate incorrect feeder setup

Article	Description	Pocket Depth (mm)	Max Reel Size	Pitches (mm)	Carrier Tape Types	Cover Tape Types
CL Tape Feeders						
PA2903/77	8mm CL Tape Feeder 0201	2.5	15"	2	Paper	HA, PSA
PA2903/78	8mm CL Tape Feeder 0402	2.5	15"	2	Paper	HA, PSA
PA2903/79	8mm CL Tape Feeder	2.5	15"	4	Paper, Embossed	HA, PSA
PA2903/88	12mm CL Tape Feeder	7	15"	4,8,12	Embossed	HA, PSA
PA2903/27	16mm CL Tape Feeder	11	15"	4,8,12,16	Embossed	HA, PSA
PA2903/38	24mm CL Tape Feeder	15	15"	4,8,12,16,20,24	Embossed	HA, PSA
PA2903/48	32mm CL Tape Feeder	15	15"	8,12,16,20,24, 28,32,36	Embossed	HA, PSA
PA2903/58	44mm CL Tape Feeder	15	15"	8,12,16,20,24, 28,32,36	Embossed	HA, PSA
PA2903/60	56mm CL Tape Feeder	15	15"	8,12,16,20	Embossed	HA, PSA
9466 920 06151	72mm Tape Feeder	15	15"	8,12,16,20	Embossed	HA, PSA
CLi Tape Feeders						
PA2903/97	8mm CLi Tape Feeder 0201	2.5	15"	2	Paper	HA, PSA
PA2903/98	8mm CLi Tape Feeder 0402	2.5	15"	2	Paper	HA, PSA
PA2903/99	8mm CLi Tape Feeder	2.5	15"	4	Paper, Embossed	HA, PSA
PA2903/89	12mm CLi Tape Feeder	7	15"	4,8,12	Embossed	HA, PSA
PA2903/29	16mm CLi Tape Feeder	11	15"	4,8,12,16	Embossed	HA, PSA
PA2903/39	24mm CLi Tape Feeder	15	15"	4,8,12,16,20,24	Embossed	HA, PSA
PA2903/49	32mm CLi Tape Feeder	15	15"	8,12,16,20,24, 28,32,36	Embossed	HA, PSA
PA2903/59	44mm CLi Tape Feeder	15	15"	8,12,16,20,24, 28,32,36	Embossed	HA, PSA
PA2903/69	56mm CLi Tape Feeder	15	15"	8,12,16,20	Embossed	HA, PSA

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						PA2923/00	Set of 20 (FV/CL) Dummy Feeders
						PA2923/10	Set of 10 (ITF2) Dummy Feeders

Dummy Feeders



User Benefits

- Allows safe operation for operators in all circumstances

Feeder	System	Width
PA2923/00	GEM	15.8mm, 1 feeder slot
PA2923/10	GEM-Xi	15.8mm, 1 feeder slot

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						Strip Component Feeders	
■		■		■	■	9466 920 10501	Strip Component Feeder (Europe / Asia only)
■		■		■	■	4035 118 00090	Strip Component Feeder (USA only)
						Carrier Tape Trays	
■		■		■	■	9466 920 10591	Carrier Tape Tray (for 4 tapes) (Europe / Asia only)
■		■		■	■	9466 920 10601	Tape Guide (1 Piece) for Carrier Tape Tray (Europe / Asia only)
■		■		■	■	4035 114 00933	Carrier Tape Tray (for 4 tapes) (USA only)
■		■		■	■	4035 114 00934	3 x Carrier Tape Tray (each for 4 tapes) (USA only)
■		■		■	■	4035 114 00932	Tape Guide (1 Piece) for Carrier Tape Tray (USA only)

Note:

To use any Strip Component Feeder or Carrier Tape Tray, a fixed tray (with or without pallet) is required.

Carrier Tape Trays



Carrier Tape Trays

User Benefits

- Low cost, flexible solution for prototyping, evaluation, small batch and low volume production
- Steady positioning of small pieces of carrier tape
- Support from 8mm to 12mm tapes on Strip Component Feeder and up to 200mm tapes on the Carrier Tape Tray
- Support of multiple tapes per lane

Feeder	Lanes	Tape Width Support	Max Tape Length	Max Pocket Depths	Maximum tapes per lane
9466 920 10501	8	6 x 8mm	318 mm	3.5 mm	Multiple (1 up to 3 common)
4035 118 00090		2 x 12mm			
9466 920 10591	Variable,	8mm through 200mm	324mm	10mm	1
4035 114 00933	default = 4 *				optional: 2
4035 114 00934					

Notes: * Lanes can be extended by adding additional Tape Guides (9466 920 10601 or 4035 114 00932)

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						Repair and Analysis Tools	
						PA2849/30	ITF2 Analysis and Repair Station
						9466 920 10391	Auxiliary feeder Test Tool
						Off Line Loading and Storage equipment	
						PA2601/01	ITF2/TTF Tape Loading Unit
						4035 114 00899	Storage cart Feeder Setup Fixture (CL compatible) *
						4035 114 01162	Bench-top Feeder Setup Fixture (CL compatible) *
						PA2602/01	Feeder Storage Cart 2003 (ITF interface)
						9466 920 08361	Small Feeder Storage Cart (ITF interface)
						4035 114 00479	Feeder Storage Cart (CL Compatible) *
						4035 114 00854	ITF2 Feeder Storage Cart, Dual Level (100 ITF Feeders) *
						Safety Guides	
						9466 920 09661	ACM Upper Guide for Single Jedec Tray Stacker
						9466 920 09671	ACM Upper Guide for GPAX 2400 Ultraflex
						Packaging	
						9466 920 09561	Packaging for 5x ITF2 8mm Tape Feeders
						9466 920 09571	Packaging for 4x ITF2 12mm Tape Feeders
						9466 920 09581	Packaging for 3x ITF2 16mm Tape Feeders
						9466 920 09591	Packaging for 3x ITF2 24mm Tape Feeders
						9466 920 09601	Packaging for 2x ITF2 32mm Tape Feeders
						9466 920 09611	Packaging for 2x ITF2 44mm Tape Feeders
						9466 920 09621	Packaging for 1x ITF2 56mm Tape Feeders
						Tape Splicing Tools	
						PA2908/11	Splice Tool 8mm-24mm

Note: *

These articles are available in the USA only

Feeders Options



Analysis Tools

Article	Description	Supports	User Benefits
PA2849/30	ITF2 Analysis and Repair tool	PA2654/0x to PA2654/6x	<ul style="list-style-type: none"> Fast feeder analysis and trouble shooting Easy operation by local technical personnel Quick Feeder repair for fast return to operation Reduces total feeder inventory
9466 920 10391	Auxiliary Test Tool	Waffle Pack Feeders, Universal Tape Feeders, Jedec Tray Stackers, Stacked Tube Feeders, Direct Die Feeders, Radial Feeders, GPAX Feeders, Data IO Feeders	<ul style="list-style-type: none"> Tests communication and IO signaling between host system and feeder. Can also be used as off-line control unit to test or load feeders off-line or in repair-shops.



Off-Line equipment

Article	Description	Interface	Supports	Specifications and Benefits
PA2601/01	ITF2 Tape Loading Unit	ITF	PA2654/0x to PA2654/6x PA2657/xx	For off-line loading of tapes. Capacity of 1 feeder
4035 114 00899	GEM Feeder Setup Fixture	GEM	PA2903/xx	For off-line loading of tapes. Capacity of 1 feeder To be installed on 4035 114 00854
4035 114 01162	GEM Bench-top Feeder Setup fixture	GEM	PA2903/xx	Table Top Model
4035 114 00479	GEM Feeder Storage Cart	GEM	PA2903/xx	100x 8mm Feeders (or equivalent) 4035 114 01162 prepared
PA2602/01	Feeder Storage Cart 2003	ITF	PA2654/0x to PA2654/6x PA2657/xx	50 x 8mm Feeders (or equivalent) 100 Reels 8mm size PA2601/01 prepared
9466 920 08361	Small Feeder Storage Cart	ITF	PA2654/0x to PA2654/6x PA2657/xx	20 x 8mm Feeders (or equivalent) 40 Reels 8mm size
4035 114 00854	Dual Level Feeder Storage Cart	ITF	PA2654/0x to PA2654/6x PA2657/xx	100 x 8mm Feeders (or equivalent) 4035 114 00899 prepared
PA2908/11	Tape Splicing Tool 8mm - 24mm	n.a.	All tape feeders	<ul style="list-style-type: none"> For 8mm, 12mm, 16mm and 24mm tapes Provides reliable tape connection and minimizes production interruptions

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-Xi	Order Number	Description
Feeder Trolleys / FES (default)							
■		■				PA2382/10	ACM, AQ-1, D-9 Feeder Trolley
■		■				PA2635/10	ACM, AQ-1, D-9 Fixed Feeder Bank
■						PA2636/00	AQ-1 A-Series Fixed Feeder Bank *
				■		PA2505/50	FES Cart 20 positions (Topaz-X, Emerald-X)
				■		PA2505/59	FES Cart 20 positions (GEM-X ⁱⁱ)
					■	PA2505/52	FES Cart 20 positions (GEM-Xi)
				■		PA2505/69	FES Cart 20 CLi, 20 positions (GEM-X ⁱⁱ)
■				■		PA2631/00	FCM-II/AX Feeder Trolley
■				■		PA2632/00	A-Series Feeder Trolley *
Alternate interfaces							
■		■				9466 920 09211	Universal Base Plate ACM, AQ-1, D-9
■		■				9466 920 09991	Universal + ITF2 mixed Base Plate
■						9466 920 10031	Manz interface plate ACM, AQ-1
Communication adapters							
■		■				9466 920 10041	Universal Communication Adapter Cable
■		■				9466 920 10521	Universal Precision Pro Adapter Cable
				■	■	9466 920 06181	GEM-X(i) ⁱⁱ I/O Auxiliary Kit

*Note: **

PA2632/00 and PA2636/00 available early 2005

Feeder Trolleys / Interfaces



User Benefits

- Facilitates fast production run change-over
- Allows off-line setup and verification
- Self aligning mechanism provides optimal pick reliability
- Preserve feeder investments by supporting alternate feeder interfaces or adaptive feeder trolleys that allow third party feeders to fit onto Assembléon machines

Trolley/Fes/Plate	Description	Feeder Types	Max Feeders Qty
Assembléon Specific			
PA2382/10	ACM, AQ-1, D-9 Feeder Trolley	ITF Feeder Types	25
PA2635/10	ACM, AQ-1, D-9 Fixed Feeder Bank	ITF Feeder Types	25
PA2636/00	AQ-1 A-Series Fixed Feeder Bank	ITF Feeder Types	25
PA2505/50	FES Cart 20 positions (Topaz-X, Emerald-X)	GEM FV/CL Feeders	20
PA2505/59	FES Cart 20 positions (GEM-X [®])	GEM FV/CL Feeders	20
PA2505/52	FES Cart 20 positions (GEM-Xi)	ITF Feeder Types	20
PA2505/69	FES Cart CLi, 20 positions	GEM CLi (and FC/CL) Feeders	20
PA2631/00	FCM-II/AX Feeder Trolley	ITF Feeder Types	24
PA2632/00	A-Series Feeder Trolley	ITF Feeder Types	27
Alternate Feeder Interfaces			
9466 920 09211	Universal Base Plate ACM, AQ-1, D-9	MPTF, PrecisionPro	Approx. 3
9466 920 09991	Universal + ITF2 mixed Base Plate	MPTF, PrecisionPro	1 or 2 x Universal
		ITF Feeder Types	19 x ITF Feeder types
9466 920 10031	Manz interface plate ACM, AQ-1	Manz	3
Communication Adapters			
9466 920 10041	Universal Communication Adapter Cable	For Universal Feeders running on 24VAC (MPTF).	
9466 920 10521	Universal Precision Pro Adapter Cable	For Universal Feeders running on 43VDC (Precision Pro).	
9466 920 06181	GEM-X(i) [®] I/O Auxiliary Kit	For support of a maximum of 8x 24VDC Auxiliary devices	

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
	■		■			PA2648/00	C0201 Twin Bulk Feeder
	■		■			PA2648/35	C0805T1.25 Single Lane Bulk Feeder
	■		■			PA2648/45	MELF0805 Single Lane Bulk Feeder
	■		■			PA2648/50	C0402 Twin Bulk Feeder
	■		■			PA2648/60	R0402 Twin Bulk Feeder
	■		■			PA2648/70	C0603 Twin Bulk Feeder
				■		PA2904/51	C0603 Single Lane Bulk Feeder
	■		■			PA2648/80	R0603 Twin Bulk Feeder
	■		■			PA2648/85	MELF0604 Twin Bulk Feeder
	■		■			PA2648/90	C0805T0.6 Twin Bulk Feeder
	■		■			PA2648/95	R0805 Twin Bulk Feeder

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						9466 920 07671	C-Express Stick Feeder Base
						9466 920 07681	Top Plate SOIC 8, 7 lanes
						9466 920 07691	Top Plate SOIC 14/16, 7 lanes
						9466 920 07701	Top Plate SOLIC 16/20/28, 4 lanes
						9466 920 07711	Top Plate SOMIC 14/16/20, 5 lanes
						9466 920 07721	Top Plate SOLJ 26, 5 lanes
						9466 920 07731	Top Plate SOLJ 32, 5 lanes
						9466 920 07741	Top Plate SOXJ 32, 4 lanes
						9466 920 07751	Top Plate SOXJ 44, 4 lanes
						9466 920 07761	Top Plate PLCC 18, 5 lanes
						9466 920 07771	Top Plate PLCC 20, 5 lanes
						9466 920 07781	Top Plate PLCC 28, 4 lanes
						9466 920 07791	Top Plate PLCC 32, 4 lanes
						9466 920 07801	Top Plate PLCC 44, 3 lanes
						9466 920 07811	Top Plate PLCC 52, 3 lanes
						9466 920 07821	Top Plate PLCC 68, 2 lanes
						9466 920 07831	Top Plate PLCC 84, 2 lanes
						9466 920 07841	Top Plate Generic
						9466 920 09201	Top Plate Customized

Stick Feeders



Stick Feeders

User Benefits

- Standard top plate support for must used stick component types
- Easy connect top plates
- Custom top plate support for long term use in operation of non-standard component ranges or component mix
- Generic top plate support for quick use in operation of non-standard component ranges or component mix
- Occupies only 5 feeder slots

Top Plate	Component	Component Body Width	Tube Width Range
9466 920 07681	S08	3.9 mm	7.5 ~ 8.4 mm
9466 920 07691	S014/16	3.9 mm	7.5 ~ 8.4 mm
9466 920 07701	SOL-IC 16/20/28	7.6 mm	9.5 ~ 10.3 mm
9466 920 07711	SOM-IC 14/16/20	5.6 mm	9.6 ~ 10.3 mm
9466 920 07721	SOLJ 26	7.6 mm	9.9 ~ 10.6 mm
9466 920 07731	SOLJ 32	7.6 mm	9.9 ~ 11.2 mm
9466 920 07741	SOXJ 32	10.0 mm	12.6 ~ 14.0 mm
9466 920 07751	SOXJ 44	10.0 mm	12.6 ~ 14.0 mm
9466 920 07761	PLCC 18	7.37 x 12.45 mm	(no JEDEC standard)
9466 920 07771	PLCC 20	8.8 mm	11.2 ~ 12.0 mm
9466 920 07781	PLCC 28	11.4 mm	14.2 ~ 15.2 mm
9466 920 07791	PLCC 32	11.4 x 13 mm	14.2 ~ 15.2 mm
9466 920 07801	PLCC 44	16.5 mm	19.3 ~ 20.6 mm
9466 920 07811	PLCC 52	19.0 mm	21.84 ~ 23.4 mm
9466 920 07821	PLCC 68	24.1 mm	26.9 ~ 28.4 mm
9466 920 07831	PLCC 84	29.2 mm	32.0 ~ 33.5 mm
9466 920 07841	Generic	N/a	Max. Tube width = 70mm Max. Tube Height = 6.3mm Max. Tube Length = 430 mm
9466 920 09201	Customized	Max. Component Height = 9.2mm Max. Component Width = 66.7mm	Max. Tube width = 65.7 mm Maximum Tube Height = 10.4mm Max. Tube Length = 300mm

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00532	Vibratory Base, Generic 110VAC
				<input type="checkbox"/>	<input type="checkbox"/>	9469 918 03261	Interface Adapter FV -> ITF
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00544	Top Plate SOIC 8, 8 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00533	Top Plate SO14/16, 8 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00534	Top Plate Mixed 2xSO, 2xSOL, 2xPLCC20
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00535	Top Plate SOLIC 16/20/28, 5 Lanes)
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00547	Top Plate SOMIC 14/16/20, 6 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00540	Top Plate SOLJ 26, 5 Lanes (SOJ-20/28
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00548	Top Plate SOLJ 32, 5 Lanes (SOJ28/32)
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00549	Top Plate SOXJ 32, 4 Lanes (SOJ24/32
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00550	Top Plate SOXJ 44, 4 Lanes (SOJ26/44)
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00539	Top Plate PLCC 18, 5 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00536	Top Plate PLCC 20, 5 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00537	Top Plate PLCC 28/32, 5 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00543	Top Plate PLCC 44, 3 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00545	Top Plate PLCC 52, 3 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00541	Top Plate PLCC 68, 2 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00542	Top Plate PLCC 84, 2 Lanes
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00546	Top Plate PLCC 100, 2 lane
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00551	Top Plate Generic
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00584	Top Plate Customized
				<input type="checkbox"/>	<input type="checkbox"/>	9469 900 00538	Top Plate Blank, for own customization

Notes:

These feeders are available in the USA only.

Gem Xi versions are only applicable with the 9469 918 03261 Interface adapter FV -> ITF

Stick Feeders



User Benefits

- Standard top plate support for most used stick component types
- Easy replaceable top plates
- Custom top plate support for long term use in operation of non-standard component ranges or component mix
- Generic top plate support for quick use in operation of non-standard component ranges or component mix
- Occupies only 5 feeder slots

Top Plate	Component	Component Body Width
9469 900 00544	Top Plate SOLIC 8, 8 Lanes	3.9 mm
9469 900 00533	Top Plate SOL14/16, 8 Lanes	3.9 mm
9469 900 00534	Top Plate Mixed 2xSO, 2xSOL, 2xPLCC20	7.6 mm
9469 900 00535	Top Plate SOLIC 16/20/28, 5 Lanes)	5.6 mm
9469 900 00547	Top Plate SOMIC 14/16/20, 6 Lanes	7.6 mm
9469 900 00540	Top Plate SOLJ 26, 5 Lanes (SOJ-20/28	7.6 mm
9469 900 00548	Top Plate SOLJ 32, 5 Lanes (SOJ28/32)	10.0 mm
9469 900 00549	Top Plate SOXJ 32, 4 Lanes (SOJ24/32	10.0 mm
9469 900 00550	Top Plate SOXJ 44, 4 Lanes (SOJ26/44)	7.37 x 12.45 mm
9469 900 00539	Top Plate PLCC 18, 5 Lanes	8.8 mm
9469 900 00536	Top Plate PLCC 20, 5 Lanes	11.4 mm
9469 900 00537	Top Plate PLCC 28/32, 5 Lanes	11.4 x 13 mm
9469 900 00543	Top Plate PLCC 44, 3 Lanes	16.5 mm
9469 900 00545	Top Plate PLCC 52, 3 Lanes	19.0 mm
9469 900 00541	Top Plate PLCC 68, 2 Lanes	24.1 mm
9469 900 00542	Top Plate PLCC 84, 2 Lanes	29.2 mm
9469 900 00546	Top Plate PLCC 100, 2 lane	34.29 mm
9469 900 00551	Top Plate Generic	Max. Component Height = 9.2mm Max. Component Width = 66.7mm Max. Tube width = 65.7 mm Maximum Tube Height = 10.4mm Max. Tube Length = 300mm
9469 900 00584	Top Plate Customized	Max. Tube width = 70mm Max. Tube Height = 6.3mm Max. Tube Length = 430 mm
9469 900 00538	Top Plate Blank, for own customization	Max. Tube width = 70mm Max. Tube Height = 6.3mm Max. Tube Length = 430 mm

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
■					■	9466 918 05161	Basic Stick Feeder ACM/GEM-Xi
■					■	9466 918 05171	Top Plate SOIC 14/16, 6 lanes
■					■	9466 918 05181	Top Plate SOLIC 16/20/28, 4 lanes
■					■	9466 918 06311	Top Plate SOMIC 14/16/20, 4 lanes
■					■	9466 918 06321	Top Plate SOLJ 26, 4 lanes
■					■	9466 918 05441	Top Plate SOLJ 32, 4 lanes
■					■	9466 918 06331	Top Plate SOXJ 32, 3 lanes
■					■	9466 918 06341	Top Plate SOXJ 44, 3 lanes
■					■	9466 918 06351	Top Plate PLCC 18, 4 lanes
■					■	9466 918 06361	Top Plate PLCC 20, 4 lanes
■					■	9466 918 05911	Top Plate PLCC 28/32, 4 lanes
■					■	9466 918 05451	Top Plate PLCC 44, 3 lanes
■					■	9466 918 06371	Top Plate PLCC 52, 2 lanes
■					■	9466 918 05921	Top Plate PLCC 68, 2 lanes
■					■	9466 918 05461	Top Plate PLCC 84, 2 lanes
■					■	9466 918 06381	Top Plate PLCC 100, 1 lane
■					■	9466 918 08951	Top Plate Generic

Stick Feeders



Stick Feeders

User Benefits

- Standard top plate support for must used stick component types
- Easy replaceable top plates
- Custom top plate support for long term use in operations of non-supported component ranges or component mix
- Generic top plate support for quick use in operation sof non-supported component ranges or component mix
- Occupies only 6 feeder slots

Top Plate	Component	Component Body Width
9466 918 05171	S014/16	3.9 mm
9466 918 05181	SOL-IC 16/20/28	7.6 mm
9466 918 06311	SOM-IC 14/16/20	5.6 mm
9466 918 06321	SOLJ 26	7.6 mm
9466 918 05441	SOLJ 32	7.6 mm
9466 918 06331	SOXJ 32	10.0 mm
9466 918 06341	SOXJ 44	10.0 mm
9466 918 06351	PLCC 18	7.37 x 12.45 mm
9466 918 06361	PLCC 20	8.8 mm
9466 918 05911	PLCC 28/32	11.4 (x 13) mm
9466 918 05451	PLCC 44	16.5 mm
9466 918 06371	PLCC 52	19.0 mm
9466 918 05921	PLCC 68	24.1 mm
9466 918 05461	PLCC 84	29.2 mm
9466 918 06381	PLCC 100	34.29 mm
9466 918 08951	Generic	Max. Tube Width = 70mm Max. Tube Height = 6.3mm Maximum Tube Length = 430 mm

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						9469 900 00161	96mm Belt Feeder SOIC 8/14/16, 10 Lanes
						9469 900 00164	96mm Belt Feeder SOMIC 14/16, 8 Lanes
						9469 900 00168	96mm Belt Feeder SOLIC 16/20/24/28, 6 Lanes
						9469 900 00169	96mm Belt Feeder SOWIC 16/20/24/28, 5 Lanes
						9469 900 00172	96mm Belt Feeder SOYIC 28/32, 4 Lanes
						9469 900 00173	96mm Belt Feeder PLCC 18, 8 Lanes
						9469 900 00174	96mm Belt Feeder PLCC 20, 6 Lanes
						9469 900 00175	96mm Belt Feeder PLCC 24, 6 Lanes
						9469 900 00176	96mm Belt Feeder PLCC 28/32, 5 Lanes
						9469 900 00177	96mm Belt Feeder PLCC 44, 4 Lanes
						9469 900 00178	96mm Belt Feeder PLCC 52, 3 Lanes
						9469 900 00179	96mm Belt Feeder PLCC 84, 2 Lanes
						9469 900 00560	96mm Belt Feeder SOJ-300, 7 Lanes
						9469 900 00559	96mm Belt Feeder SOJ-400, 6 Lanes
						9469 900 00183	Belt Feeder CUSTOM 96mm wide
						9469 900 00142	80mm Belt Feeder SOIC 8/14/16, 8 Lanes
						9469 900 00145	80mm Belt Feeder SOMIC 14/16, 6 Lanes
						9469 900 00149	80mm Belt Feeder SOLIC 16/20/24/28, 5 Lanes
						9469 900 00150	80mm Belt Feeder SOWIC 16/20/24/28, 4 Lanes
						9469 900 00153	80mm Belt Feeder SOYIC 28/32, 3 Lanes
						9469 900 00154	80mm Belt Feeder PLCC 18, 6 Lanes
						9469 900 00155	80mm Belt Feeder PLCC 20, 5 Lanes
						9469 900 00156	80mm Belt Feeder PLCC 24, 4 Lanes
						9469 900 00157	80mm Belt Feeder PLCC 28/32, 4 Lanes
						9469 900 00158	80mm Belt Feeder PLCC 44, 3 Lanes
						9469 900 00159	80mm Belt Feeder PLCC 52, 2 Lanes
						9469 900 00160	80mm Belt Feeder PLCC 68, 2 Lanes
						9469 900 00562	80mm Belt Feeder SOJ-300, 6 Lanes
						9469 900 00561	80mm Belt Feeder SOJ-400, 4 Lanes
						9469 900 00182	Belt Feeder CUSTOM 80mm wide

Note:

These feeders are available in the USA only.

Belt Feeders



Stick Feeders

User Benefits

- Standard support for most used stick component types
- Custom belt feeder support for long term use in operations of non-standard component ranges
- Occupies only 5 feeder slots on the 80mm version and 6 feeder slots on the 96mm version

Feeder	Component	Component Body Width
9466 900 00161, 9466 900 00142	SO8/14/16	3.9 mm
9466 900 00168, 9466 900 00149	SOL-IC 16/20/24/28	7.6 mm
9466 900 00164, 9466 900 00145	SOM-IC 14/16	5.6 mm
9466 900 00169, 9466 900 00150	SOWIC 16/20/24/28	8.4 mm
9466 900 00172, 9466 900 00153	SOYIC-28/32	11.1 mm
9466 900 00173, 9466 900 00154	PLCC 18	7.37 x 12.45 mm
9466 900 00174, 9466 900 00155	PLCC 20	8.8 mm
9466 900 00175, 9466 900 00156	PLCC 24	9.7 mm
9466 900 00176, 9466 900 00157	PLCC 28/32	11.4 (x 13) mm
9466 900 00177, 9466 900 00158	PLCC 44	16.5 mm
9466 900 00178, 9466 900 00159	PLCC 52	19.0 mm
9466 900 00160	PLCC 68	24.1 mm
9466 900 00179	PLCC 84	29.2 mm
9466 900 00560, 9466 900 00562	SOJ-300	7.62 mm
9466 900 00559, 9466 900 00561	SOJ-400	10.16 mm
9466 900 00183, 9466 900 00182	Custom	variable

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
■					■	9469 900 00617	80mm Belt Feeder SOIC 8/14/16, 8 Lanes
■					■	9469 900 00618	80mm Belt Feeder SOMIC 14/16, 6 Lanes
■					■	9469 900 00619	80mm Belt Feeder SOLIC 16/20, 5 Lanes
■					■	9469 900 00620	80mm Belt Feeder SOWIC 16/20/24/28, 4 Lanes
■					■	9469 900 00621	80mm Belt Feeder SOYIC 28/32, 3 Lanes
■					■	9469 900 00622	80mm Belt Feeder PLCC 18, 6 Lanes
■					■	9469 900 00623	80mm Belt Feeder PLCC 20, 5 Lanes
■					■	9469 900 00624	80mm Belt Feeder PLCC 24, 4 Lanes
■					■	9469 900 00625	80mm Belt Feeder PLCC 28,/32, 4 Lanes
■					■	9469 900 00626	80mm Belt Feeder PLCC 44, 3 Lanes
■					■	9469 900 00627	80mm Belt Feeder PLCC 52, 2 Lanes
■					■	9469 900 00628	80mm Belt Feeder PLCC 68, 2 Lanes
■					■	9469 900 00629	80mm Belt Feeder SOJ-300, 6 Lanes
■					■	9469 900 00630	80mm Belt Feeder SOJ-400, 4 Lanes
■					■	9469 900 00631	80mm Belt Feeder CUSTOM

Note:
These feeders are available in the USA only.

Belt Feeders



Stick Feeders

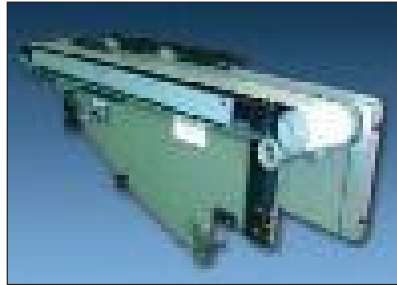
User Benefits

- Standard support for must used stick component types
- Custom belt feeder support for long term use in operations of non-standard component ranges
- Occupies only 5 feeder slots

Feeder	Component	Component Body Width
9466 900 00617	SO8/14/16	3.9 mm
9466 900 00619	SOL-IC 16/20/24/28	7.6 mm
9466 900 00618	SOM-IC 14/16	5.6 mm
9466 900 00620	SOWIC 16/20/24/28	8.4 mm
9466 900 00621	SOYIC-28/32	11.1 mm
9466 900 00622	PLCC 18	7.37 x 12.45 mm
9466 900 00623	PLCC 20	8.8 mm
9466 900 00624	PLCC 24	9.7 mm
9466 900 00625	PLCC 28/32	11.4 (x 13) mm
9466 900 00626	PLCC 44	16.5 mm
9466 900 00627	PLCC 52	19.0 mm
9466 900 00628	PLCC 68	24.1 mm
9466 900 00629	SOJ-300	7.62 mm
9466 900 00630	SOJ-400	10.16 mm

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						9466 920 10911	Re-use feeder GEM-Xi
						9466 920 10921	Re-use feeder GEM

Reject Belt Feeders



User Benefits

- Reduce costs of production by allowing re-use of rejected components
- Occupies only 5 feeder slots
- Transports component out of the system without production interruption

Re-Use Feeder	Index steps	Belt Full indicator	End sensor overrule
9466 920 10911	10 - 90mm in steps of 10mm	Audible Alarm (can be switched off) LED indication 'Full' signal to host	No Can be overruled by manual belt movement
9466 920 10921	10 - 90mm in steps of 10mm	Audible Alarm (can be switched off) LED indication 'Full' signal to host	No Can be overruled by manual belt movement

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		9466 920 10371	Jedec Tray Stacker 2 ACM/AQ-1
				<input checked="" type="checkbox"/>		9466 920 10381	Jedec Tray Stacker 2 GEM (Europe / Asia)
				<input checked="" type="checkbox"/>		4035 114 00991	Jedec Tray Stacker 2 GEM (USA)
				<input checked="" type="checkbox"/>		9466 920 06191	Jedec Tray Stacker 2 Mechanical Installation Kit (1 per machine)
Options							
<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	9466 920 10421	First Aid Kit Jedec Tray Stacker 2 ACM/AQ-1
				<input checked="" type="checkbox"/>		9466 920 10431	First Aid Kit Jedec Tray Stacker 2 GEM

Notes:

When using the Jedec Tray stackers on the GEM or GEM-Xi equipment, it requires the IO Auxiliary Kit 9466 920 06181 and Mechanical Installation Kit 9466 920 06191 to be installed

A single Jedec Tray Stacker installed on an ACM requires the upper-guide 9466 920 09661 to be installed.

Jedec Tray Stacker



User Benefits

- Dramatically increase throughput by automatically delivering trays non-stop
- Low cost of ownership
- Efficient operation due to low interaction with operators.
- No pallet setup time or pallet teaching
- Enhances productivity in applications up to 4 different tray components (1 feeder per component type)

Item	9466 920 10371	9466 920 10381 / 4035 114 00991
Supported Tray Type	JEDEC (95-1), IEC 60286-5	JEDEC (95-1) , IEC 60286-5
Number of thin trays	30	30
Number of thick trays	20	20
Number of different component types	1	1
Maximum tray thickness	12.27 mm	12.27 mm
Loading Mechanism	Stacked Trays (no Pallets)	Stacked Trays (no Pallets)
Loading Time	~ 10 seconds for 20 or 30 trays	~ 10 seconds for 20 or 30 trays
Unload Time	< 5 seconds for up to 30 trays	< 5 seconds for up to 30 trays
Tray Exchange time	~ 4 seconds in standard mode	~ 5 seconds in standard mode
Mode settings	Standard and Slow	Standard and Slow
Feeder Slots	11	11

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						Factory Build-in ATS Tray Feeders	
						PA2696/24	ATS20 Tray Feeder Portrait
						PA2696/25	Double ATS20 Tray Feeder Portrait
						PA2981/35	Pallet for ATS20 Tray Feeder Portrait
						PA2696/26	ATS20 Tray Feeder Landscape
						PA2981/36	Pallet for ATS20 Tray Feeder Landscape
						External Tray Feeders (LCS)	
						PA2699/22	Double Shuttle Tray Feeder (LCS) (For Topaz-X and Emerald-X)
						PA2699/23	Double Shuttle Tray Feeder (LCS) (For Topaz-X" and Emerald-X")
						PA2699/24	Double Shuttle Tray Feeder (LCS) (For Opal-X")
						PA2981/15	Pallet for Double Shuttle Tray Feeder (LCS) for PA2699/22
						Tray Trolleys	
						PA2675/00	ACM/AQ-1 Tray Trolley
						PA2681/00	AQ-1 A-Series Tray Trolley
						PA2674/00	ACM/AQ-1 Tray Carrier (Set of 10)

ATS Tray Feeders



User Benefits

- Direct pick from tray
- Handles a multiple of unique tray components
- ATS and Tray Trolleys occupy only 1 feeder section
- LCS has no impact on board width or feeder slots (LCS)
- For all applications from 1 to multiple unique tray components

Order Number	Description	Feeder slots	Tray capacity	Mechanism
Factory Built-in ATS Tray Feeders				
PA2696/24	ATS 20 Tray Feeder Portrait	1 feeder section	20	Direct pick from tray
PA2696/25	Double ATS 20 Tray Feeder Potrait	2 feeder sections	40	Direct pick from tray
PA2696/26	ATS20 Tray Feeder Landscape	1 feeder section	20	Direct pick from tray
External Tray Feeders (LCS)				
PA2699/22	Double Shuttle Tray Feeder (LCS) (For Topaz-X and Emerald-X)	None	120	Double Shuttle
PA2699/23	Double Shuttle Tray Feeder (LCS) (For Topaz-X [®] and Emerald-X [®])	None	120	Double Shuttle
PA2699/24	Double Shuttle Tray Feeder (LCS) (For Opal-X [®])	None	120	Double Shuttle
Tray Trolleys				
PA2675/00	ACM/AQ-1 Tray Trolley	1 feeder section	94	Direct pick from tray
PA2681/00	AQ-1 A-Series Tray Trolley	1 feeder section	94	Direct pick from tray

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
				■		PA2695/11	Manual Tray Feeder Topaz / Emerald
				■		PA2695/12	Manual Tray Feeder for Topaz-X/X ^{II} , Emerald X/X ^{II}
				■		PA2685/15	Fixed Manual Tray Feeder
■						PA2676/00	Manual Tray Feeder ACM/AQ-1
				■		9469 900 00408	Manual Internal Tray Feeder *
				■	■	4035 114 00065	X-SITF Internal Tray Feeder *

*Note: **

Feeders marked with an asterisk are available in the USA only.

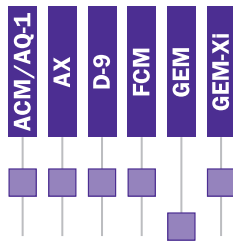
Manual Tray Feeders



User Benefits

- Ideal for small production batches
- Low cost tray solution
- Easily attached and detached from feederbar (GEM only)
- No impact on feeder slots (X-SITF version)
- Holds 1 (X-SITF) or 2 (all other) Jedec sized trays

Order Number	Description	Tray Capacity	Feeder slots
PA2695/11	Manual Tray Feeder Topaz / Emerald	2	21
PA2695/12	Manual Tray Feeder Topaz-X [™] / Emerald-X [™]	2	21
PA2685/15	Fixed Manual Tray Feeder	2	1 feeder section
PA2676/00	Manual Tray Feeder ACM/AQ-1	2	1 feeder section
9469 900 00065	Manual Internal Tray Feeder	1	No impact
4035 114 00065	X-SITF Internal Tray Feeder	1	No impact



Order Number

Description

LPA-01-001

Hover-Davis Label Feeder Assembléon

LPG-01-001

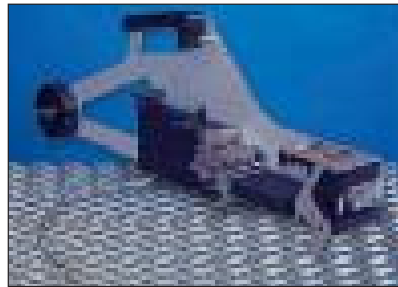
Hover-Davis Label Feeder GEM

Note:

Available via Hover-Davis Sales offices only

*The list of Hover-Davis Sales Offices can be found at:
www.hoverdavis.com*

Label Feeders



Label Feeders

User Benefits

- Faster and accurate presentation of pre-printed labels
- More economical than manual applied labels
- Occupies 5 feeder slots
- The exchangeable label module allows the feeder to present a variety of label types

Item	Specification
Label Types	Pre-Printed labels
Label Presenter	Detach-able: Specific to label liner width and label length
Advance Rate	53mm/sec (2.1 inch/sec)
Pick point repeatability	±0.25mm (±0.010 inch)

ACM/AQ-1	AX	D-9	FCM	GEM	GEM-XI	Order Number	Description
						9466 920 05021	8mm SurfTape® Feeder

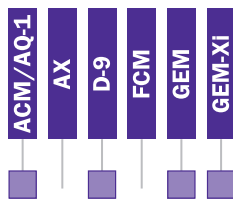
Waffle Pack Feeders



User Benefits

- Support of 2"x2" and 4"x4" waffle packs
- Easy load and unload of waffle packs
- Operation efficient due to low operator interaction
- Automatic waffle pack loading and eject
- Waffles loaded as a stack rather than on pallets

Item	Specification 2" x 2"	Specification 4" x 4"
Maximum number of waffle packs	50 (45 recommended)	20
Minimum Die size	1 mm (shortest edge length)	1.27 mm (shortest edge length)
Maximum Die size	Limited by system capabilities	Limited by System Capabilities
Slot occupation	6 (ACM/AQ-1), 7 (GEM)	10 (ACM/AQ-1), 11 (GEM)
Waffle Index Time	< 3 sec	< 4 sec



Order Number

Description

DDF Assembléon

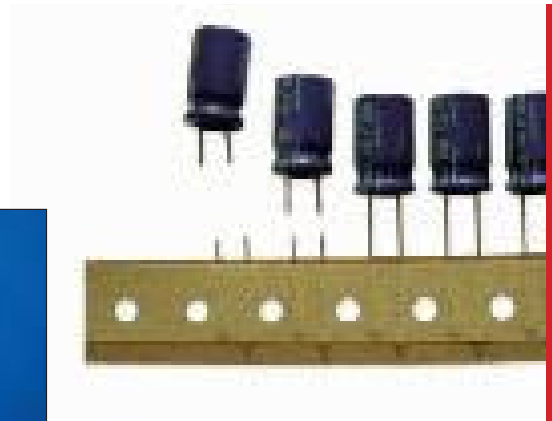
Hover-Davis Direct Die Feeder (DDF)

Notes:

*The Hover-Davis Direct Die Feeder is available via the Hover-Davis Sales offices only. Contact addresses can be obtained at:
www.hoverdavis.com*

To fit the Direct Die Feeder on the ACM/AQ-1 and D-9, the Universal Base Plate 9466 920 09211 is required

Radial Component Feeders

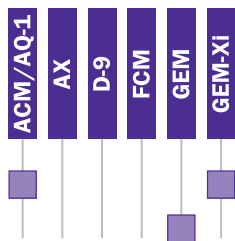


Oddform Feeders

User Benefits

- Easy to use and rugged construction
- Support for 12.7mm and 15mm Radial Tapes
- Support for Reels and AmmoPacks
- Slanted cut action possible for enhanced component insertion

Item	Specification
Tape types	Radial, according IEC 60286-2
Tape height	Max. 36mm
Physical Component dimensions	Mix. Diameter: 12.5mm Max. Comp. Height 22mm
Standard grid	2.5mm to 24.5mm
Lead Diameter	0.4 - 0.8mm
Index speed	Max 1,2sec
Component storage	Reel size diameter max 400mm Ammopack
Cut	Straight, 30° angle cut



Order Number

Description

9466 920 09971	Horizontal Tube Feeder ACM/GEM-Xi
9466 920 10061	Horizontal Tube Feeder GEM

Options:

9466 920 10051	HTF Tooling Kit
9466 920 10001	HTF First Aid Kit