

# stear

printer mechanisms  
& accessories



# STAR PRODUCT SUMMARY

Star's close working relationships with OEM customers all over the world have resulted in an unequalled reputation for quality and reliability as well as a range of mechanisms which have been produced to provide solutions in the widest variety of applications.

The mechanisms offered in this brochure are here to inspire you. If they are not exactly what you are looking for please contact the Star sales support team [Sales@Star-EMEA.com](mailto:Sales@Star-EMEA.com) to see if any of our products can be tailored to meet your needs.

## Matrix Mechanisms

- High Performance up to 5 lps with Logic Seeking
- Paper Widths from 44.5mm to 127mm
- Mechanical or Stepping Motor Versions
- Mono or Red / Black
- Friction, Sprocket, Platenless or Slip
- Presenter Versions for Kiosk use

## Thermal Mechanisms

- Print Speeds up to 150 mm/second
- Paper Widths from 80mm to 112mm
- Heavy Duty, Partial or Full Autocutters
- Presenter Versions for Kiosk use

## Full range of Star Accessories

including Control Boards, Cutters, Paper Feed Snouts, Re-winders and Print Heads



## KEY FEATURES

MODELS	MP200 SERIES 7-pin Matrix	MP292 SERIES 9-pin Matrix	MP300 SERIES 9-pin Matrix	MP400 SERIES 9-pin Matrix	MP500 SERIES 9-pin Matrix	DP83 SERIES 9-pin Matrix	TMP212 Thermal	TMP400Z SERIES Thermal	TMP 900 SERIES Thermal
Speed	2.5-4.39 lines per second	3.1 lines per second	3.2-5.5 lines per second	5 lines per second logic seeking	4 lines per second logic seeking	50mm per second	50mm per second	80mm per second	150mm per second
Paper Width	3"/76mm	67mm print width	3.25"/82.5mm	2.25"/58mm 1.75"/45mm*	3"/76mm 2.25"/58mm	DP832 : 2.25" DP834 : 4.5"	76 / 80mm	60 to 82.5mm	80 to 112mm
Paper Feed	Mechanical	Stepping motor	Stepping motor	Stepping motor	Stepping motor	Mechanical	Stepping motor	Stepping motor	Stepping motor
Copy Capability	1 + 2	1 + 2	1 + 2	1 + 2	1 + 2	1 + 1			
Autocutter			MP342/ MP382	Serrated Tear Bar	Serrated Tear Bar	DP834CP		TMP442Z / TMP452Z/492Z	Full 0.15mm paper Partial 0.1mm paper
Red/Black Output	MP216/246								Red or Blue/Black Special Paper required
Friction	MP212/216			MP411	MP512	DP832/ DP834/834GP			
Sprocket	MP221					DP834S/ DP834SP			
Platenless		MP292N	MP312N		MP512N				
Sensors	Paper End	Paper End	Paper End on BD 300	Six Position Paper End or Black Mark Sensor			Paper End	PE & BM	BM & PE with Paper Low & Transmissive options
Graphics capability	MP221S			MP411	MP512	DP834GDP			
Supply DC (± 5%)	12v -24v versions	24 volt	12v -24v versions	24 volt	24 volt	12 volt (±10%)	24 volt	24 volt	24 volt

\* option.

# NEW HIGH PERFORMANCE MATRIX MECHANISMS

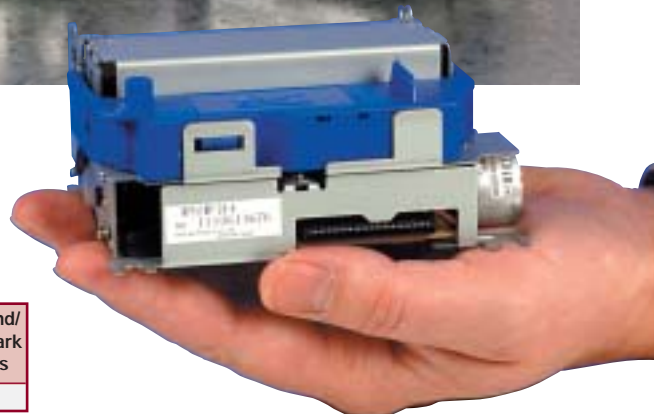


## MP400 / MP500 Series



This series of newly designed logic seeking POS ECR mechanisms must be the fastest and most reliable units available today, with black mark / paper end sensors as well as adjustable paper widths

- ✦ High performance, logic seeking 9-pin mechanisms with full graphics capability.
- ✦ MP500 - up to 4 lines per second print speed  
MP400 - up to 5 lines per second print speed
- ✦ Fully adjustable paper widths  
MP500 - 76 mm / 58mm  
MP400 - 58mm / 45mm
- ✦ Built-in tear bar with serrated edge.
- ✦ 6 position black mark or paper end sensor as standard - optional 2nd sensor available for surface or reverse blackmark sensing.
- ✦ VERY HIGH RELIABILITY  
9 million lines MCBF
- ✦ MP512N platenless version available.



9-Pin	Paper Feed Method	Supply Voltage	Logic Seeking	Bi-Directional	Mechanism Life Million lines	Print Head Characters	Paper End/Black Mark Sensors
✓	Friction	24V	✓	✓	9	100 million	✓

Individual Specifications	No of Cols	Paper Width	Print Speed	Copy Capability	Control Board	Graphics Capability	Ribbon Black	Dimensions incl. ribbon (mm)
MP411MB-24-A	30/24	58/45mm	5 lps	1 + 1*	BD500	✓	RC100 B	103 x 97 x 54.5
MP512MB-24	42/30	76/58mm	4 lps	1 + 2	BD500	✓	RC200 B	125.4 x 99.2 x 54.1

\* 1 + 2 available - please ask Star for details.

# NEW 150mm/sec, WIDE FORMAT THERMAL KIOSK MECHANISM

## TMP900 Series



Unique wide-format (112mm) high speed thermal mechanism with modular options including (0.15mm) paper presenter and choice of interfaces. The ultimate in cost-effective versatility without compromising reliability - perfect for unattended public operation in ticketing, gaming, lottery, web kiosks etc.

- ✦ High performance, direct thermal mechanism with full or partial cut auto cutter (guillotine).
- ✦ Up to 150 mm/second print speed (over 40cm of Print in just 3 seconds!).
- ✦ Unique Star Scalable Raster facility (A4 reduced to A6) Using Star TBD900 control board.
- ✦ Fully adjustable paper widths from 80mm to 112mm.
- ✦ Two colour print facility - red/black or blue/black using specialist paper.
- ✦ Adjustable black mark or paper end sensor.
- ✦ Optional paper low sensor available.
- ✦ Easy paper loading using semi-automatic loading mechanism.
- ✦ Highly effective presenter option with 3 paper sensors and document capture facility for output up to 0.15mm / 150gsm using TBD900 control board.
- ✦ Up to 25cm / 10" paper roles can be catered for with Star paper supply options.



Complete modular kiosk printer available (TUP900).

Individual Specifications	Print Method	Paper Width	Print Speed	No. of columns	MCBF Reliability	Graphics Capability	Control board	Dimensions	BM/PE sensors	Autocutter Life	Paper Thickness
TMP900	Direct Thermal	Up to 112mm	150mm/s	69 A4 to A6*	37 Million	✓	TBD900	162.5x94x50	✓	Up to 1 million cuts	0.065-0.15mm 65-150gsm

# MECHANISMS - MATRIX

## LOW COST



### MP200 Series 7-Pin

- Compact, low cost and reliable mechanisms.
  - 12V / 24V versions with or without autocutters.
  - 3" / 76mm paper width.
  - Print head life up to 75 million characters.
- † 24V Graphics version available



### 7 - Pin

Paper Feed Method	Paper Width	Copy Capability	Paper Thickness (Single/Multi)	Paper End Sensor	Ribbon RC200B Black	Operating Temperatures
Mechanical	3" (76mm)	1 + 2	0.07-0.10mm/ 0.2mm	✓	✓	5 to +50C

7-pin mechanism	No of Cols	Friction / Sprocket	Speed Lines/Sec	Red/Black Print RC200BR	Supply Voltage	MCBF Lines (Millions)	Print Head Characters (Millions)	Control Board	Dimensions WxDxH(mm)
MP212FP-12-A/24A†	42	F	2.5 lps		12v/24v	2.5	75	BD200FC-12or24-A/B	132 x 96 x 48.3
MP216FP-12-A/24A	42	F	2.5 lps	✓	12v/24v	2.5	75	BD200FC-12or24-A/B	132 x 96 x 48.3
MP212FP-24G-A	42	F	3.1 lps		24v	2.5	75		132 x 96 x 48.3

\* with cutter

### DP83 Series

- Robust, low cost, 9-pin, black / red mechanisms.
- 12 Volt supply for mobile applications.
- 2.25"/ 57.5mm (DP832) or 4.5"/114.3mm (DP834) carriage widths available.



### 9 - Pin

Common Features	9-Pin	Paper Feed Method	Supply Voltage	Copy Capability	Paper Thickness (Single)	Paper Thickness (Multi-part)	MCBF Lines (Millions)	Print Head Characters (Millions)	Black Ribbon SF-03B	Operating Temperatures
DP83 Series	✓	Mechanical	12V	1 + 1	0.07-0.09mm	0.13mm	5	70	✓	5 to +45C

Individual Specifications	No of Cols	Friction / Sprocket	Paper Width	Speed Lines / Sec	Red/Black Print SF-03BR	Full Cutter	Control Board	Paper End Sensor	Dimensions WxDxH(mm)
DP832-12	22	F	2.25" (57.5mm)	3 lps	✓				135.5 x 138.5 x 59
DP832P-12	22	F	2.25" (57.5mm)	3 lps	✓		BD83SND - 12	✓	135.5 x 138.5 x 59
DP834-12	40	F	4.5" (114.3mm)	2 lps	✓		BD83PNC - 12		174.5 x 138.5 x 59
DP834P-12	40	F	4.5" (114.3mm)	2 lps	✓				174.5 x 138.5 x 59
DP834S-12	40	S	4.5" (114.3mm)	2 lps	✓		BD83SSD - 12	✓	174.5 x 138.5 x 59
DP834SP-12	40	S	4.5" (114.3mm)	2 lps	✓		BD83PNC - 12	✓	174.5 x 138.5 x 59
DP834GP-12	40	F	4.5" (114.3mm)	1.5 lps			BD83SGD/PNC-12	✓	174.5 x 138.5 x 59
DP834CP-12	40	F	4.5" (114.3mm)	2 lps	✓	✓		✓	218 x 138.5 x 79

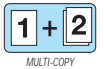
# HIGH PERFORMANCE

## 9 - Pin

Common Features	9-Pin	Paper Feed Method	Copy Capability	Paper Thickness (single /multi-part)	Print Head Characters (Millions)	Operating Temperatures	Graphics Capability	Ribbon RC300B Black	Supply Voltage
MP300/320 MP330	✓	Stepping Motor	1 + 2	0.07-0.10mm/ 0.2mm	200	5 to +50C	✓	✓	24V

### MP300 Series 9-Pin

- ✦ Class leading, high performance, 9-pin mechanisms.
- ✦ MCBF 8 million lines.
- ✦ Print head life 200 million characters.
- ✦ Available with or without autocutters.
- ✦ Versatile paper handling with 3 adjustable paper widths (2.5"/57.5mm, 3"/76mm, or 3.25" / 82.5mm versions).
- ✦ Easily changeable long lasting ribbons.
- ✦ Platenless version MP312N.
- ✦ Paper end sensor supported by BD300 board.



Individual Specifications	No of Cols	Friction / Sprocket	Speed Lines / Sec	Cutter	MCBF Lines (millions)	Paper Width	Control Board Please select FC/FD interface version	Dimensions W x D x H(mm)
MP312F-24-A	40	F	3.2 lps		8	57.5mm/76mm/82.5	BD300 FC/FD-24	136.9 x 187.9 x 65.1
MP317FV-24-AC *	40	F	5.5 lps		8	3.25" (82.5mm)	BD317 FC/FD-24	136.9 x 187.9 x 65.1
MP342FX-24-A	40	F	3.2 lps	Yes - Partial	8	57.5mm/76mm/82.5	BD300 FC/FD-24	136.9 x 187.9 x 84.6
MP342FX-24-L	40	F	3.2 lps	Yes - Full	8	57.5mm/76mm/82.5	BD300 FC/FD-24	136.9 x 187.9 x 84.6
MP382FW-24-L With presenter	40	F	3.2 lps	Yes - Full	8	3.25" (82.5mm)	BD382 FC/FD-24	136.9 x 187.9 x 143.13

\* Star Control Board must be used.



# MECHANISMS - MATRIX

## PLATENLESS VERSIONS

### MP200/MP300/MP500 Series

Platen free versions of the MP200, MP300 and MP500 Series of mechanisms provide OEM's / system manufacturers with the flexibility to design their own paper feed systems.



9 - Pin



Individual Specifications	No of Cols	Speed Lines/Sec	9-Pin	MCBF Lines (Millions)	Supply Voltage	Paper Thickness (up to)	Print Head Characters (Millions)	Ribbon	Dimensions WxDxH(mm)
MP292N-24G-A	42	3.1 lps	✓	2.5	24V	0.2mm	70	RC200B Black	132.4 x 71.58 x 56.86
MP312N-24-A	40	3.2 lps	✓	8	24V	0.2mm	70	RC300B Black	131.1 x 101.5 x 65.1
MP512N-24-A	42/30	4 lps logic seeking	✓	9	24V	0.2mm	100	RC200B Black	115 x 71 x 54

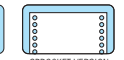
## MATRIX SLIP PRINTER MECHANISM

### MP292 Series

- ✦ High performance, 24V, bi-directional 9-pin slip mechanism with high reliability (MCBF 2.5 million).
- ✦ Up to 3.1 lines per second print speed.
- ✦ 9-pin head with high quality graphics capability including character descenders.
- ✦ Automatic paper alignment facility using the Star BD290 control board.



9 - Pin



Individual Specifications	No of Cols	Friction / Sprocket	Speed Lines/Sec	Graphics Capability	Paper End Sensor	MCBF Lines (Millions)	Ribbon RC200B Black	Paper Feed Method	Control Board	Dimensions WxDxH (mm)
MP292-24G-A	42	F	3.1 lps	✓	✓	2.5	✓	Stepping Motor	BD 290MD-24-A BD 290 MC-24-A	154x107x101

### MP300 Series 9-Pin



# THERMAL MECHANISMS



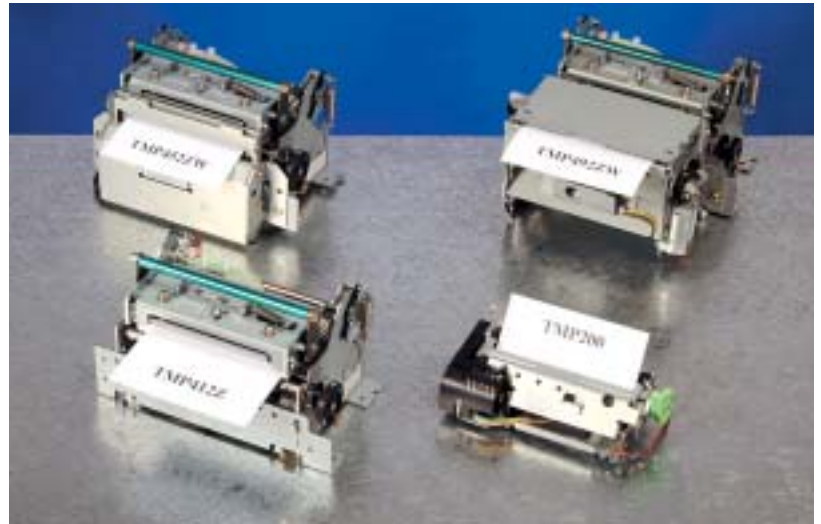
## LOW COST



### TMP200 Series

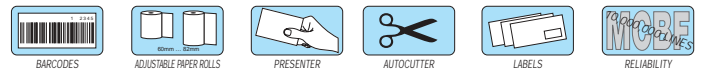
NEW low cost, compact direct linear thermal mechanism.

- ✓ Easily accessible print head for simple maintenance purposes.
- ✓ High reliability MCBF 10 million lines.
- ✓ Rear or bottom feed.
- ✓ Print speeds of up to 2" / 50 mm per second.
- ✓ 8 dots per mm (203 dpi) resolution.
- ✓ Paper end sensor available.



## HIGH PERFORMANCE

### TMP400 Series



Highly versatile, direct linear thermal mechanisms with robust paper handling capabilities and low maintenance requirements.

- ✓ Print speeds of up to 80mm/3.1" per second.
- ✓ Straight paper path for paper, ticket or card stock up to 150 gsm.
- ✓ Advanced design allows easy access to both print head and paper paths.
- ✓ Autocutter (TMP452Z) and Presenter (TMP492Z) models available.
- ✓ Adjustable paper widths (60 - 82 mm) with paper end, transmissive and black mark sensors.
- ✓ High quality print resolution 8 dots per mm (203 dpi) resolution.

### BD400 and IFTBD400 Interfaces (inset) Heavy Duty Cutter



Common Features	Print Method	Paper Feed Method	Friction / Sprocket	Graphics capability	Operating Temperatures
All Models	Direct Line Thermal	Stepping Motor	Friction	✓	5 to +40c

Individual Specifications	Print Speed	Paper Width (Maximum)	Cutter	Presenter	No of Columns	Mechanism Reliability (Lines)	Print Head Reliability	Paper Thickness (Single)	Control Boards	Dimensions WxDxH(mm)
TMP212	50 mm/s	80mm			64	10 Million	50 km	0.65-0.07mm		116 x 54.66 x 27.51
TMP412Z-24	80 mm/s	60 - 82.5mm			50	10 Million	100 km	0.65-0.15mm	TBD400Z	144 x 79.2 x 89
TMP442Z-24	80 mm/s	60 - 82.5mm	Heavy Duty		50	10 Million	100 km	0.65-0.15mm	TBD400Z	150.5 x 121.9 x 89
TMP452ZW-24	80 mm/s	60 - 82.5mm	Full		50	10 Million	100 km	0.65-0.10mm	TBD400Z	144 x 101 x 96.2
TMP492ZW-24	80 mm/s	60 - 82.5mm	Full	✓	50	10 Million	100 km	0.65-0.10mm	TBD400Z	144 x 157 x 90



TUP400 Open Frame Kiosk printers also available with similar specifications to the TMP400 Series. Contact Star for the latest Kiosk Brochure.



TMP492 paper supply snout

# ACCESSORIES

## PRINT HEADS

Star's range of highly successful print heads have been used in a wide variety of applications from bus ticketing to cheque printing. Their current success is the logical result of their consistently high reliability record, value for money and compact versatile design.



	DP200-12	DP200-24	DP8901	DP8302/8304A
Number of pins	7		9	
Supply voltage	12V	24V	24V	12V
Current	2.7A	0.9A	0.9A	1.8A
Pulse width	350 $\mu$ sec.	360 $\mu$ sec.	340 $\mu$ sec.	460 $\mu$ sec.
Reliability	75 million characters	200 million characters	70 million characters	

## AUTOCUTTER

Star offers a range of autocutters including full or partial cut versions, as well as the more sophisticated models which are capable of both. Each version is highly durable and meets the requirements of today's EPOS users.



## MATRIX & THERMAL CONTROL BOARDS

Star offers a range of control boards and interface solutions specifically designed to work with the Star Series of mechanism products.

	BD300FD-24-B		BD300FC-24-B	BD300SC-24-B
Interface	Serial (RS232C) RS422A(option) 20mA current loop (option)		Parallel	
Interface connector	D-SUB25 (FEMALE)		Parallel interface standard Amphenol 36-pin 57-30360 (MALE)	
Dimensions (mm)	150 (W) x 166 (D) x 26 (H)		150 (W) x 168 (D) x 26(H)	
	BD200FC-12-A/B	BD200FC-24-A/B	BD290MD-12-A	BD290MC-24-A
Interface	Parallel and TTL level Serial		Serial (RS232C)	Parallel
Interface connector	26-pin ribbon connector		D-SUB25	Amphenol 36-pin
Dimensions (mm)	125(W) X 100 (D) x 20(H)		160 (W) x 179 (D) x max. 35(H)	
		*BD83SND-12 BD83SNM-12 (USA)		BD83PNC-12
Interface	Serial (RS232C) 20mA current loop			Parallel
Interface connector	*D-SUB25 (FEMALE) RJ45 (FEMALE) (USA)			Parallel interface standard Amphenol 36-pin 57-30360 (FEMALE)
Dimensions (mm)	162 (W) x 167 (D)			158 (W) x 167 (D)

### BD500



### TBD400Z and IFTBD400



\* except USA

	IFTBD400V2D	IFTBD400V2C		TBD400Z-24-A	BD500-24-A
Interface	Serial (RS232C)	Parallel	Interface	N/A	Parallel & TTL Level Serial
Interface connector	D-SUB25 (FEMALE)	Amphenol 36-pin	Interface connector	N/A	26-pin ribbon connector
Dimensions (mm)	46 (W) x 99 (D) x 18 (H)		Dimensions(mm)	117 (W) x 154(D) x 25(H)	108 (W) x 119 (D) x 10~15(H)
The IFTBD400 Series of interface boards should be used with TBD400Z control board			Power supply	DC24 $\pm$ 7% Av. 2.5A/ max. 6A within 15 sec	Suitable for MP400 & MP500



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Star reserves the right to amend or change specifications at any time.