

SensiFlex[®]

Tension Control Clutches

- DESIGN FEATURES
- DESIGN OPTIONS TO MAXIMIZE HEAT DISSIPATION
- PILOT INPUT
- SHAFT INPUT
- FOOT MOUNT
- SPROCKETS AND PULLEYS

MACH III CLUTCH INC.

DESIGNED TO MEET THE NEEDS OF TODAY'S CONVERTING CUSTOMER

Tension control applications are unique. They require a clutch that will operate smoothly throughout the entire converting process without the sticking, pulsing or cogging inherent in some clutch designs. Heat caused by constant slip must be dissipated to prevent friction lining fade and premature clutch failure. The clutch must be capable of a broad range of torque output to supply the processing flexibility demanded from today's converting machinery. One pneumatic clutch offers these features plus the added benefits of competitive price, simple installation and long, maintenance free service . . . SensiFlex® from Mach III Clutch, Inc.

SensiFlex® DESIGN FEATURES

Sensitivity = Flexibility

A newly developed, patent pending actuator provides maximum sensitivity to the slightest air pressure changes for the broadest possible range of torque output and infinite controllability.

Superior Heat Dissipation

The unique, patent pending SensiFlex® clutch design pulls cooler, ambient air into the clutch (see photo) and then pushes it outward through radial holes to effectively dissipate the heat generated by constant slip.

Higher thermal horsepower capacity is achieved without the addition of fans or expensive water cooling equipment. Lower operating temperatures reduce the chance of lining fade and increase the wear life of the clutch.

Smooth, Low Maintenance Performance

A dual bearing pilot assures parallel alignment of the friction and drive surfaces for smooth operation and even wear of the single, long-lasting, low coefficient friction lining. The dual bearing pilot also provides stability for a field or factory mounted sprocket or pulley, preventing deflection caused by belts or chains.

Simple Installation

Compact, self-contained clutches provide easy, slide on the shaft installation with a single air line connection. Each unit is supplied standard with a customer selected bore size & keyway. SensiFlex® clutches are available with user specified sprockets or pulleys attached for true "out-of-the-box" installation. See page 5 for minimum sprocket and pulley specifications.

EXCEPTIONAL APPLICATION ASSISTANCE & CUSTOMER SERVICE

Mach III's engineering, design and sales team provides support before, during and after the sale. Application analysis, selection assistance, reliable lead times and quick response to questions or field problems are components of every product manufactured by Mach III Clutch, Inc.



Have Any Questions About Our Products?

Call us toll free at 1-866-291-0849 or visit our Web site at www.machiii.com

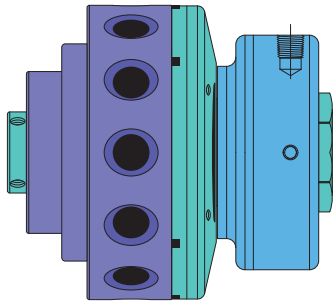
SensiFlex®

DESIGN OPTIONS TO MAXIMIZE HEAT DISSIPATION

Mach III is the only manufacturer to offer separate models designed to maximize heat dissipation based on machine layout requirements. Pilot Input, Shaft Input and Double-Shaft Foot Mount configurations insure that the unique, patent pending cooling sleeve rotates at the speed of the drive input to maximize heat dissipation.

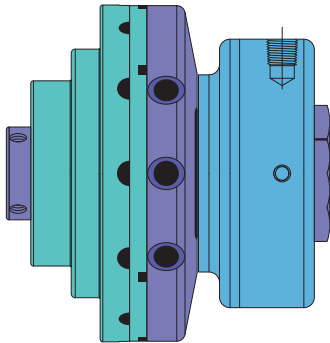
Choose the Style Best Suited To Your Machine Design Requirements:

■ ALWAYS STATIONARY
 ■ ROTATES AT SPEED OF DRIVE INPUT
 ■ ROTATES WHEN CLUTCH IS ENGAGED



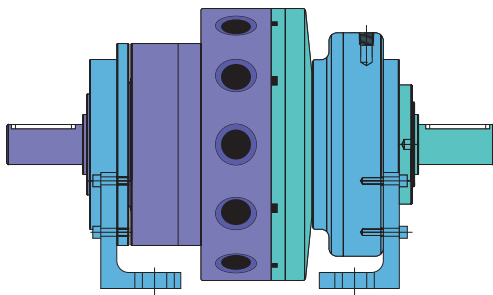
SensiFlex® PI - Pilot Input Clutch

For applications requiring the clutch to drive the shaft when engaged. Cooling sleeve rotates with the pilot mounted sprocket, pulley or coupling at the speed of the drive input.



SensiFlex® SI - Shaft Input Clutch

For applications requiring the clutch to drive a pilot mounted pulley, sprocket or coupling when engaged. Cooling sleeve rotates with the shaft at the speed of the drive input. Shaft input clutches can also be used as brakes by fixing the pilot to the machine frame or other stationary surface.



SensiFlex® FM - Foot Mount Clutch

For applications requiring input and output shaft connections. Clutch drives output shaft when engaged. Input shaft and cooling sleeve rotate at the speed of the drive input.

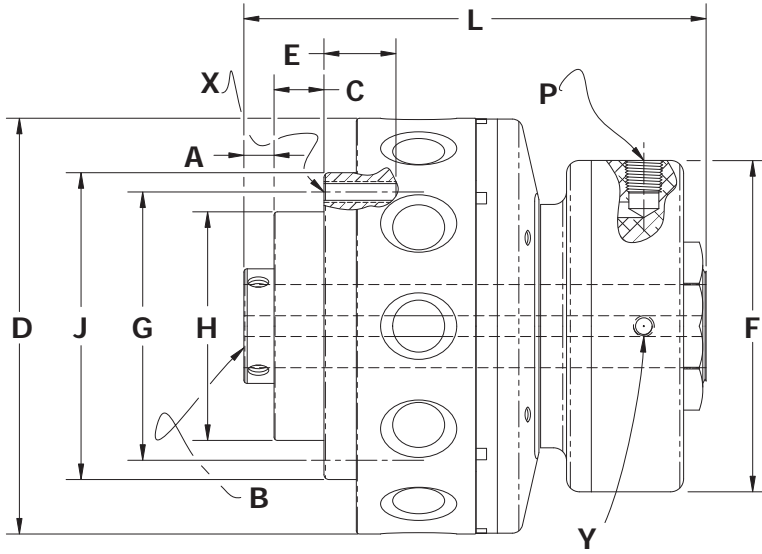
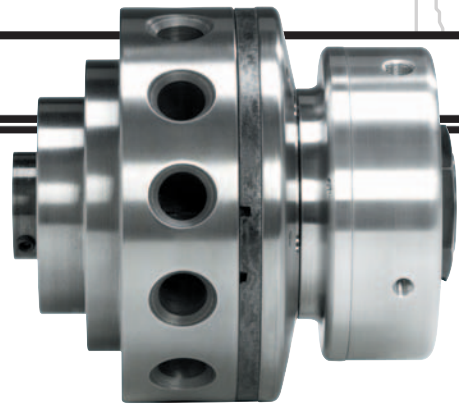
Specifications and dimensional information for the Pilot and Shaft Input Clutches are contained within this brochure. Please contact Mach III Clutch for details on foot mount models.

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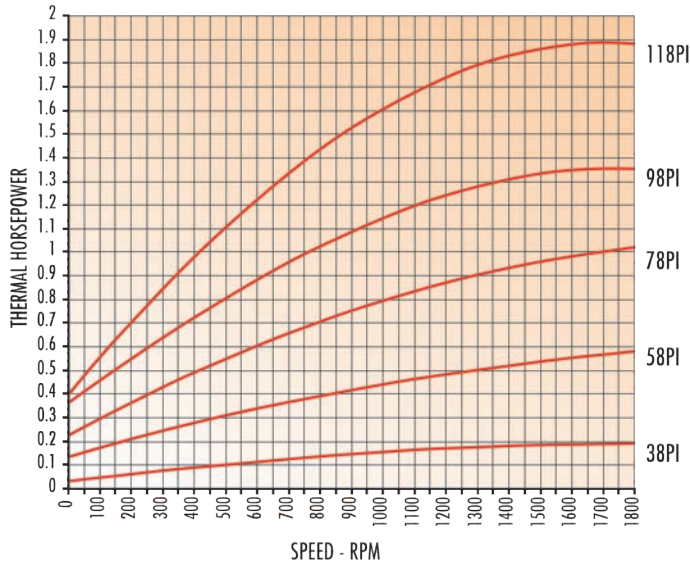
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MACH III CLUTCH INC.



Pilot Input
Tension Control Clutch
Clutch Drives Shaft When Engaged

HEAT DISSIPATION



SPECIFICATIONS

Product No.	Torque Rating @ 80 PSI	Heat Dissipation at 1800 RPM	Air Pressure To Engage Clutch*	Weight-Lbs
38PI	66 lb-in	.19 tHP	5.5 – 6.5 PSI	3 lbs
58PI	222 lb-in	.57 tHP	3 – 4 PSI	11 lbs
78PI	593 lb-in	1.02 tHP	3.5 – 4.5 PSI	29 lbs
98PI	1214 lb-in	1.36 tHP	4 – 5 PSI	53 lbs
118PI	2356 lb-in	1.90 tHP	4.5 – 5 PSI	98 lbs

*Avoids possible inconsistent regulator output below 3 PSI

DIMENSIONS – inches

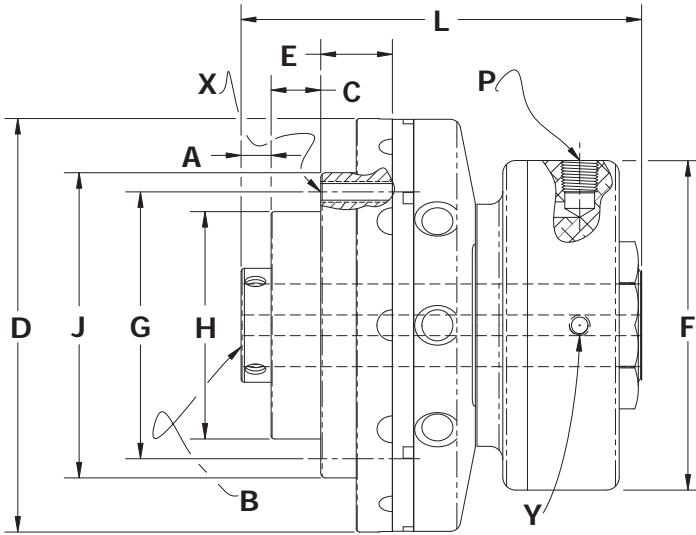
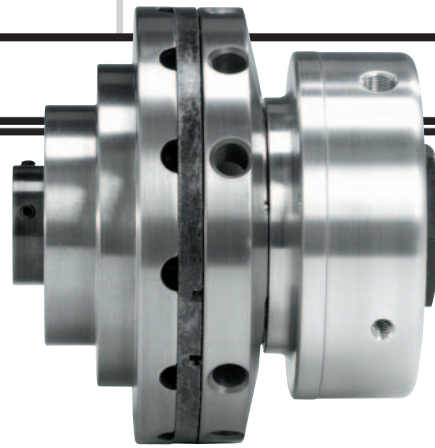
Product No.	A	B Range	C	D	E	F	G	H	J	L	P NPT	X Thread	Y Thread
38PI	.22	1/2 to 5/8	.40	3.38	.61	2.79	2.25	1.875	2.56	3.84	1/16	(3) 10 – 24	10 – 24
58PI	.32	5/8 to 1	.60	5.00	.87	3.99	3.25	2.750	3.69	5.56	1/8	(3) 1/4 – 20	1/4 – 20
78PI	.45	1 to 1-3/8	.81	7.00	1.20	5.48	4.50	3.875	5.00	7.39	1/8	(3) 5/16 – 18	1/4 – 20
98PI	.49	1-3/8 to 1-7/8	.87	8.50	1.25	6.98	5.63	5.000	6.22	8.88	1/8	(6) 3/8 – 16	1/4 – 20
118PI	.55	1-5/8 to 2-1/4	1.10	10.50	1.50	8.73	7.00	6.250	7.66	10.32	1/4	(6) 7/16 – 14	5/16 – 18

SensiFlex® clutches include rotating components and should be guarded according to OSHA requirements and other federal, state and local regulations. It is the responsibility of the user to provide the necessary guarding.

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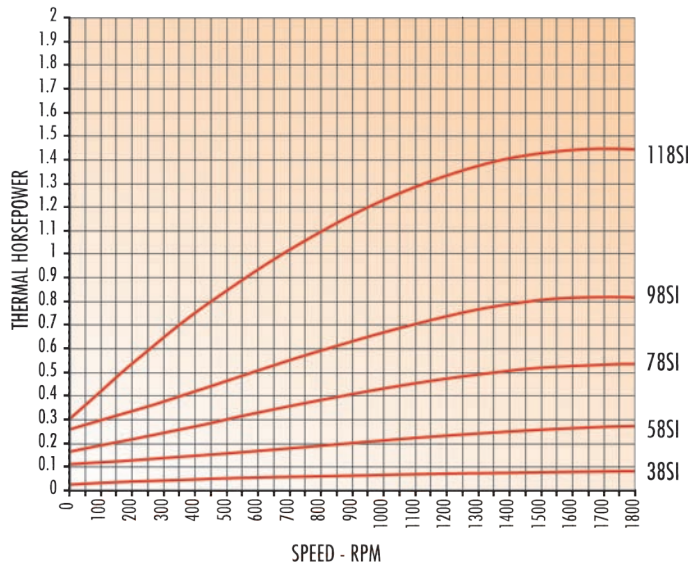
SensiFlex®

MACH III CLUTCH INC.



**Shaft Input
Tension Control Clutch**
*Clutch Drives Pilot Mounted Sprocket
or Pulley When Engaged*

HEAT DISSIPATION



SPECIFICATIONS

Product No.	Torque Rating @ 80 PSI	Heat Dissipation at 1800 RPM	Air Pressure To Engage Clutch*	Weight-Lbs
38SI	66 lb-in	.08 tHP	5.5 – 6.5 PSI	3 lbs
58SI	222 lb-in	.27 tHP	3 – 4 PSI	8 lbs
78SI	593 lb-in	.54 tHP	3.5 – 4.5 PSI	23 lbs
98SI	1214 lb-in	.83 tHP	4 – 5 PSI	47 lbs
118SI	2356 lb-in	1.46 tHP	4.5 – 5 PSI	90 lbs

*Avoids possible inconsistent regulator output below 3 PSI

DIMENSIONS - inches

Product No.	A	B Range	C	D	E	F	G	H	J	L	P NPT	X Thread	Y Thread
38SI	.22	1/2 to 5/8	.40	3.38	.61	2.79	2.25	1.875	2.56	3.55	1/16	(3) 10 – 24	10 – 24
58SI	.36	5/8 to 1	.60	5.00	.87	3.99	3.25	2.750	3.69	4.84	1/8	(3) 1/4 – 20	1/4 – 20
78SI	.45	1 to 1-3/8	.81	7.00	1.20	5.48	4.50	3.875	5.00	6.52	1/8	(3) 5/16 – 18	1/4 – 20
98SI	.49	1-3/8 to 1-7/8	.87	8.50	1.25	6.98	5.63	5.000	6.22	8.15	1/8	(6) 3/8 – 16	1/4 – 20
118SI	.55	1-5/8 to 2-1/4	1.10	10.50	1.50	8.73	7.00	6.250	7.66	9.60	1/4	(6) 7/16 – 14	5/16 – 18

SensiFlex® clutches include rotating components and should be guarded according to OSHA requirements and other federal, state and local regulations. It is the responsibility of the user to provide the necessary guarding.

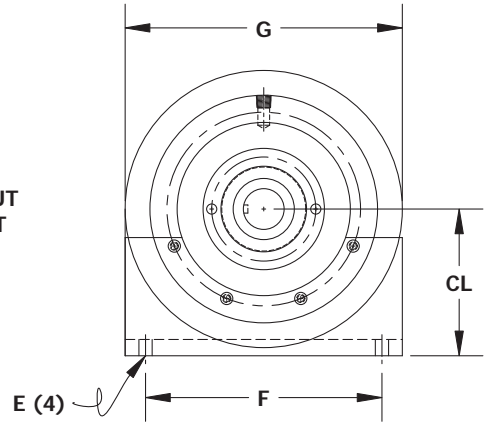
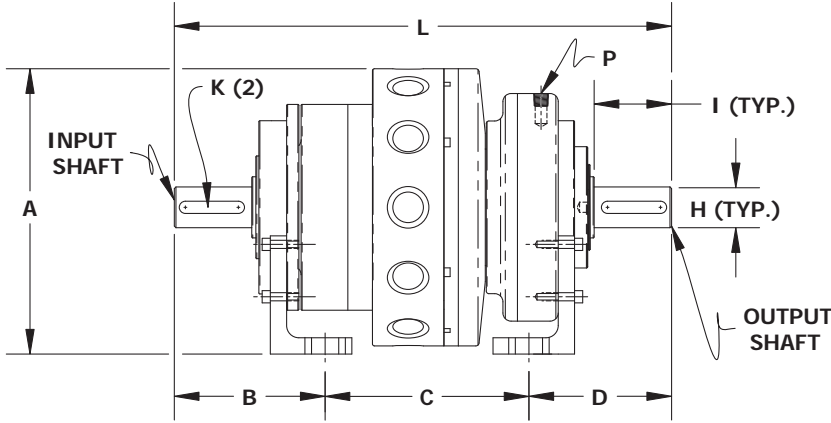
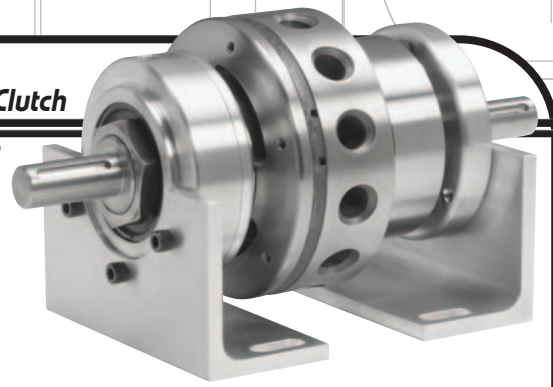
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SensiFlex®

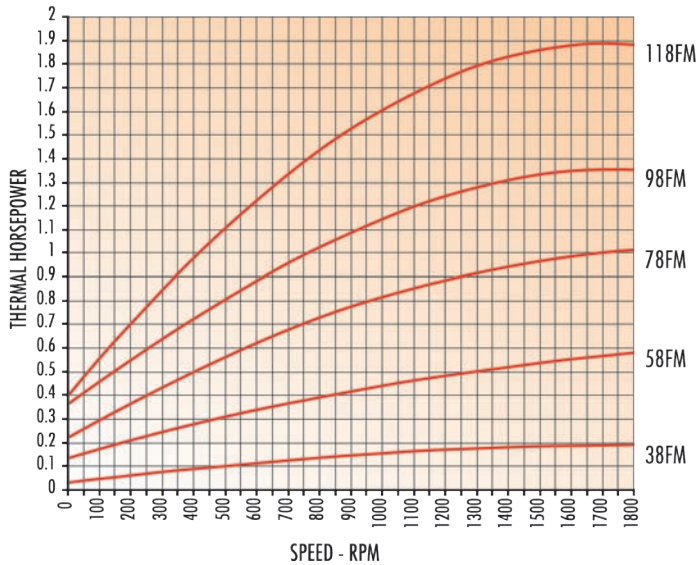
MACH III CLUTCH INC.

Foot Mount Tension Control Clutch

Clutch Drives Output Shaft When Engaged



HEAT DISSIPATION



SPECIFICATIONS

Product No.	Torque Rating @80 PSI	Heat Dissipation at 1800 RPM	Air Pressure To Engage Clutch*	Weight-Lbs
38FM	66 lb-in	.19 tHP	5.5 - 6.5 PSI	6 lbs
58FM	222 lb-in	.57 tHP	3 - 4 PSI	18 lbs
78FM	593 lb-in	.54 tHP	3.5 - 4.5 PSI	42 lbs
98FM	1214 lb-in	1.36 tHP	4 - 5 PSI	82 lbs
118FM	2356 lb-in	1.90 tHP	4.5 - 5 PSI	120 lbs

* Avoids possible inconsistent regulator output below 3 PSI

DIMENSIONS — inches

PRODUCT No.	A	B	C	CL	D	E	F	G	H	I	K	L	P (NPT)
38FM	4.12	2.31	3.63	2.44	2.31	11/32	3.50	4.25	.50	1.25	1/8	8.25	1/16
58FM	5.72	3.61	4.19	3.22	3.61	13/32	4.75	5.53	.75	1.80	3/16	11.41	1/8
78FM	7.34	3.73	5.12	3.84	3.73	13/32	6.25	7.00	0.75	1.80	3/16	12.59	1/8
98FM	8.75	4.48	6.25	4.50	4.52	13/32	7.25	8.50	1.25	2.37	1/4	15.25	1/8
118FM	10.75	4.73	7.38	5.5	5.39	9/16	9.00	10.50	1.625	2.63	3/8	17.50	1/4

SensiFlex® brakes include rotating components and should be guarded according to OSHA requirements and other federal, state and local regulations. It is the responsibility of the user to provide the necessary guarding.

Have Any Questions About Our Products?

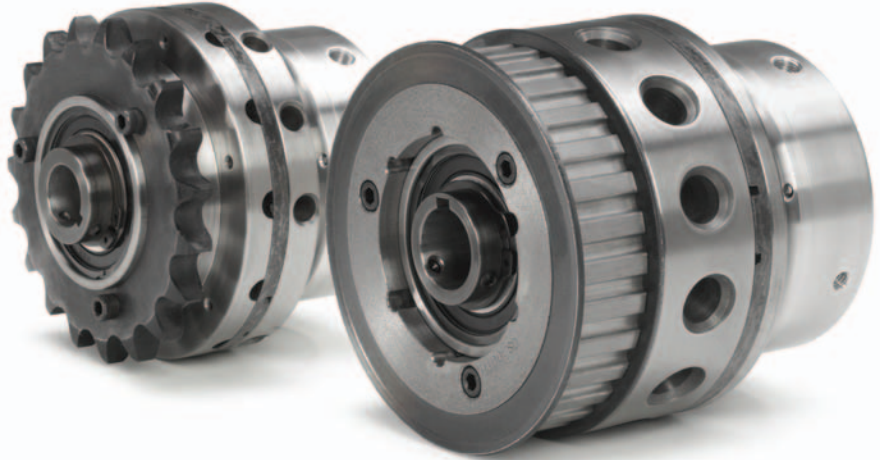
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SensiFlex®

SensiFlex® CLUTCH PILOT MOUNTED SPROCKETS AND PULLEYS

In addition to supplying every SensiFlex® clutch with the precise bore size required, all Shaft Input and Pilot Input SensiFlex® clutches are available from our factory with the sprocket or pulley you specify.

Pilot mounted coupling adapters are also available. Contact Mach III with your special requirements.



SPROCKET AND PULLEY AVAILABILITY

Product No.	Minimum "A" Type Sprockets						Minimum Gearbelt Pulleys <i>Contact Mach III For Types Not Listed</i>
	35 Chain	40 Chain	50 Chain	60 Chain	80 Chain	100 Chain	
38PI - 38SI	25	20	17	15	-	-	26L050, 26L075
58PI - 58SI	35	27	22	19	-	-	27H100
78PI - 78SI	-	35	29	25	20	-	37H100
98PI - 98SI	-	43	35	30	23	-	45H100
118PI - 118SI	-	-	42	36	28	23	60H100

GENERAL ENGINEERING INFORMATION

Safety/Service Factor

When calculating required torque, always use a service factor of 1.5 to 2. It is not recommended to select a clutch or brake for use at its maximum rated torque for continuous duty.

Listed Torque Ratings

All torque ratings listed in this catalog are dynamic torque ratings. Clutches will reach their full rated design torque after a brief wear in period. The exact length of time for this to occur depends upon the application.

REPLACEMENT PART KITS

Kit	Contents	Part Number
Facing Kit	Low Coefficient Friction Disc, Brass Mounting Screws	Add "-FK" to the product number. (e.g. 58SI-FK)
Repair Kit	Low Coefficient Friction Disc, Brass Mounting Screws, Spring(s) and Diaphragm	Add "-RK" to the product number. (e.g. 58SI-RK)

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