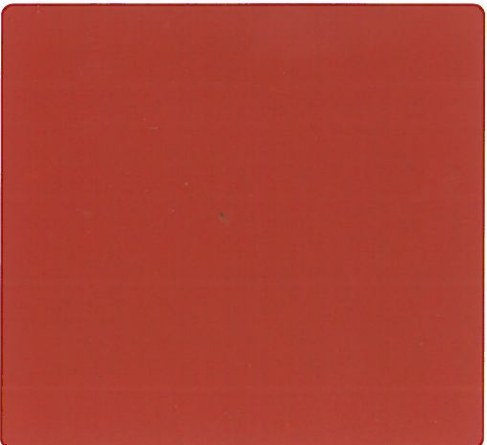
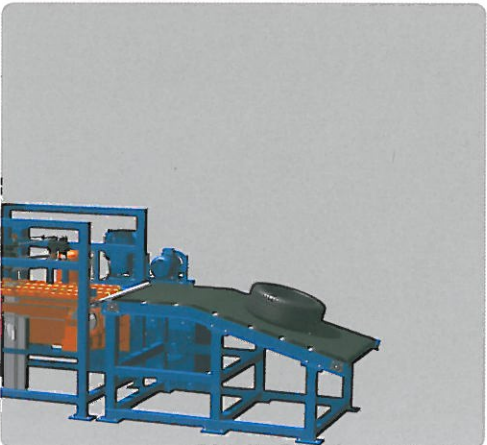
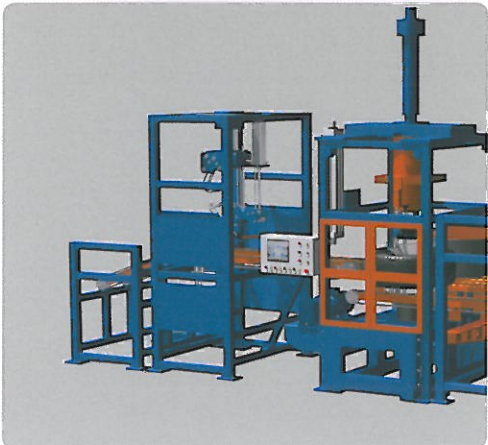
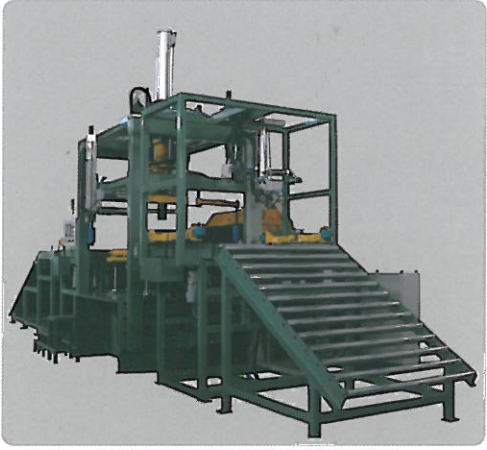
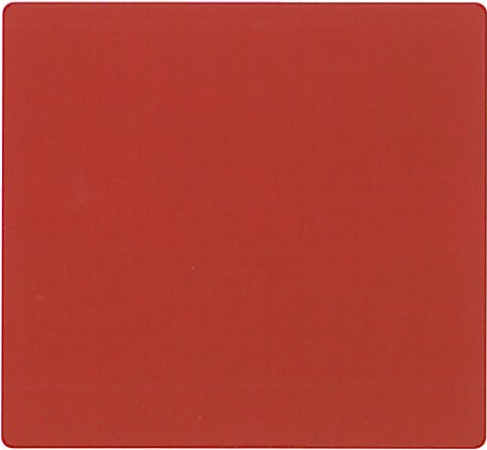
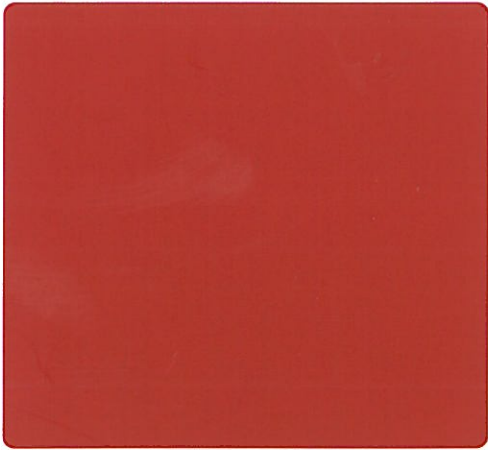


**MESNAC**  
Tire Uniformity/Runout  
Testing Machine





# Tire Uniformity/Runout Testing Machine



PCR series

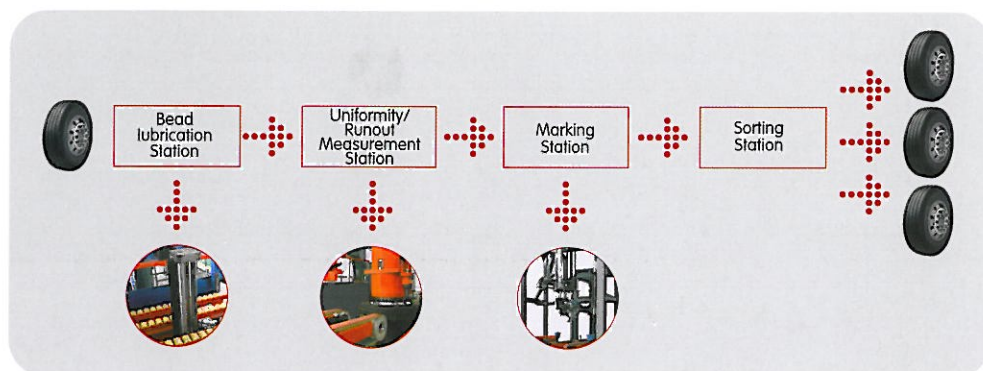


TBR series

## Functions

Tire Automatic Uniformity and Runout Testing Machine, own-developed by MESNAC Co., Ltd is the key equipment for tire testing. It is mainly used for fully-automatic online uniformity test, size deviation and convex concave test for radial truck tire, passenger tire and light truck tire. Uniformity test includes radial force variation and its harmonics, lateral force variation and offset; lateral force harmonics; conic effect force; angular effect force, high point and low point, etc. Measurements for runout include: top and bottom lateral run-out 1st harmonic; top and bottom lateral deviation; top, center and bottom radial run-out 1st harmonic; top, center and bottom radial deviation; top/bottom convex/concave, etc.

## Components



## Production Model

Model	Product
YLJP-J1326	Uniformity/runout testing machine for PCR tires
YLJP-Z1624	Uniformity/runout testing machine for TBR tires



## Main Technical Parameters

Items	Tire Type	Passenger/Light Truck Radial Tire	Truck Radial Tire
Tire Specification	Outer diameter	508 ~ 1050mm	700mm ~ 1500mm
	Bead diameter	13" ~ 26"	16" ~ 24.5"
	Section width	150 ~ 400mm	200mm ~ 550mm
	Tire weight	Max.40kg	Max.110kg
Test Condition	Rotate speed(uniformity/Runout) rpm	60rpm	
	Inflated pressure Mpa	0.2 ~ 0.4MPa	0.5 ~ 0.9MPa
	Radial force load	0 ~ 15000N	0 ~ 50000N
	Ambient temperature	5°C ~ 40°C	
Repeatability Accuracy (5 x 5)	Uniformity	$\sigma \leq 3.0N$	$\sigma \leq 20.0N$
	Runout	$\sigma \leq 0.1mm$	
Mark Accuracy		$\leq 10^\circ$ RFH1 $\geq 5kg$	
Resolutions	Uniformity	0.1N	
	Runout	0.01mm	
	Testing angles	0.3°	
Cycle Time	Uniformity/ Runout	$\leq 25s$ (195/65R15)	$\leq 60s$ (11R22.5)
Marking	Marking style	Ribbon hot stamp	
	Marking color/ shape	three colors/two kinds (such as ●, ○ or ●, ○ etc.)	
	Uniformity marking position	Upper mark: radial force $1_{st}$ harmonic high point; Lower mark: conicity	
	Runout marking position	High point or low point of $1_{st}$ harmonic	
Power Supply		AC380 $\pm 10\%$ ; three-phase five lines	
Air Supply Pressure		$\geq 0.6Mpa$	$\geq 1.0Mpa$
Power Consumption	Electric power	About 40kW	About 50kW
	Compressed air	About 0.5m <sup>3</sup> /min	About 0.8m <sup>3</sup> /min

## Testing Items

### Uniformity Testing Items

No.	Testing Items	PCR/LTR Testing Range	TBR Testing Range	Grade	Note
1	RFV(radial force variation)	0 ~ 1000N	0 ~ 5000N	Y	P-P
2	Harmonics of RFV	0 ~ 1000N	0 ~ 5000N	Y	1-10
3	Lateral force run-out	0 ~ $\pm 1000N$	0 ~ $\pm 5000N$	Y	
4	LFV (lateral force variation)	0 ~ 1000N	0 ~ 5000N	Y	P-P
5	Harmonics of LFV	0 ~ 1000N	0 ~ 5000N	Y	1-10
6	CONY (conicity)	0 ~ $\pm 1000N$	0 ~ $\pm 5000N$	Y	
7	PLSY (ply steering)	0 ~ $\pm 1000N$	0 ~ $\pm 5000N$	Y	
8	HP (high point)	0 ~ 360°	0 ~ 360°		
9	LP (low point)	0 ~ 360°	0 ~ 360°		

### Runout and Concaveconvex Testing Items

No.	Testing Items	Testing Range	Grade	Note
1	TLRO(top lateral run-out)	0 ~ 50mm, 0 ~ 360°	Y	P-P
2	TRRO(top radial run-out)	0 ~ 50mm, 0 ~ 360°	Y	P-P
3	CRRO(central radial run-out)	0 ~ 50mm, 0 ~ 360°	Y	P-P
4	BRRO(bottom radial run-out)	0 ~ 50mm, 0 ~ 360°	Y	P-P
5	BLRO(bottom lateral run-out)	0 ~ 50mm, 0 ~ 360°	Y	P-P
6	TLRO1H(top lateral run-out harmonic 1-10)	0 ~ 50mm, 0 ~ 360°	Y	P-P
7	TRRO1H(top radial run-out harmonic 1-10)	0 ~ 50mm, 0 ~ 360°	Y	P-P
8	CRRO1H(central radial run-out harmonic 1-10)	0 ~ 50mm, 0 ~ 360°	Y	P-P
9	BRRO1H(bottom radial run-out harmonic 1-10)	0 ~ 50mm, 0 ~ 360°	Y	P-P
10	BLRO1H(bottom lateral run-out harmonic 1-10)	0 ~ 50mm, 0 ~ 360°	Y	P-P
11	TBUGE	0 ~ 20mm, 0 ~ 360°	Y	-
12	BBUGE	0 ~ 20mm, 0 ~ 360°	Y	-
13	TDENT	0 ~ 20mm, 0 ~ 360°	Y	-
14	BDENT	0 ~ 20mm, 0 ~ 360°	Y	-