


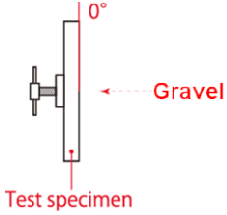
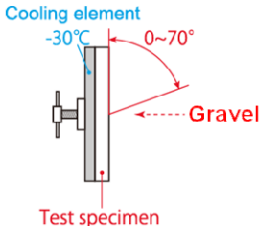
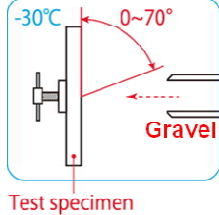


Gravel Test Instrument

Gravel Test Instrument is designed to evaluate the chipping resistance of coating for automobile part.

Products			
	JA400	JA400LA	JA400LB
	Ambient Specimen Temperature type	Low Specimen Temperature type (specimen to be cooled from the back about -30°C) *Actual photo is JA400LACE with/CE marking	Chamber Temperature Control Type (control temperature in projecting chamber from -30°C to 35°C)
Inner structure			

■ Overview

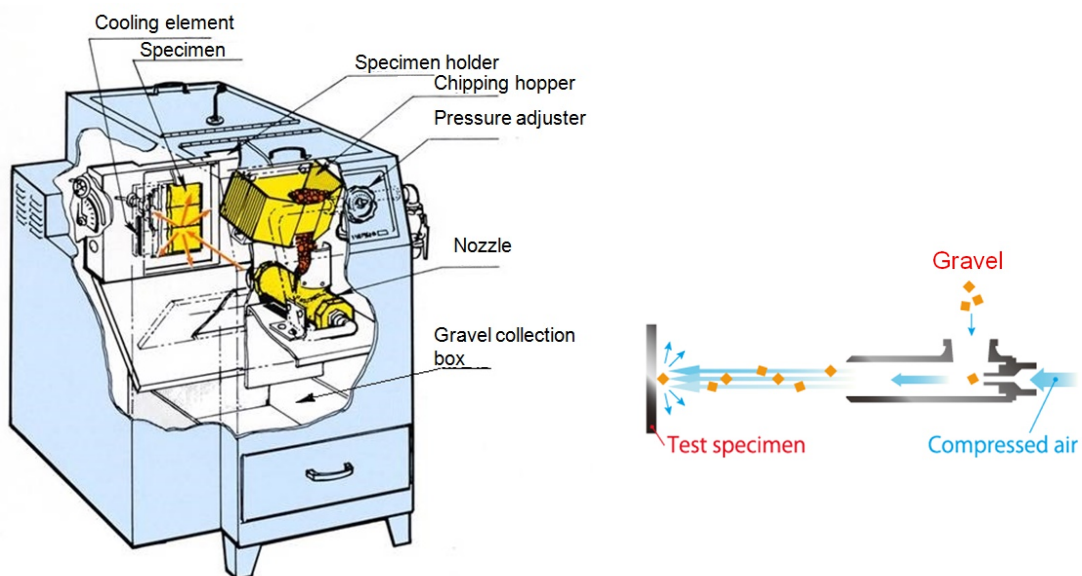
This apparatus is designed to reproduce the effect of gravel or other media striking exposed paint or coated surfaces of an automobile and has been correlated with actual field results.

■ Feature

1. This apparatus projects standardized road gravel, approx. 850 g with 0.5 MPa air pressure for 10 sec. the distance between nozzle and specimen is 350 mm. JA400 conforms to JASO M104. Metal mesh at stone box collects reusable stone. This helps operators save time to prepare next test.
2. JA400LA has an electric cooling element to control specimen temperature from -30°C to 50°C. Projecting angle toward specimen can be adjusted from vertical to 70° forward.
3. JA400LB can control temperature in projecting chamber from -30°C to 35°C. Projecting angle can be adjusted from vertical to 70° forward.

4. The modification to comply with SAE J400 and various requirements from automotive manufactures, such as the distance between nozzle and specimen, diameter of nozzle, projecting angle, etc. is available upon request.

No.		Gravel Chipping Test Instrument				Test standard		
		JA400	JA400LA	JA400LACE	JA400LB	SAE J 400 NOV02	ASTM D 3170-3	JASO M 104
1	Distance of gun barrel to sample	350±2mm				13.75"±0.30 (341.6~356.9mm) 34.9cm	13.75"±0.30 (341.6~356.9mm)34.9cm	210mm 350mm
2	Distance of gun barrel end with nozzle	200mm				8.00"±0.030 (202.4~204mm)20.3cm	8.00"±0.030 (202.4~204mm)20.3cm	200mm
3	Air outlet	Approx.7.2mm (6.8mm option)				0.266"±0.005 (6.63~6.88mm)0.68cm	0.266"±0.005 (6.63~6.88mm)0.68cm	7.2mm
4	Set air pressure	0.2~0.5MPa				480±20kPa (70±3psi)	480±20kPa (70±3psi)	0.2±0.02MPa 0.4±0.03MPa
5	Specimen size	100X200×1~5mm (102×305 option)				10.16X30.48cm (4X12in)	102X305mm (4X12in)	Brake tube straightφ4.76×300mm crankφ4.76×350mm
6	Gravel amount	850±10g				0.473L(1pt)	550mL(1pt) (250~3000 pieces)	850g (250~300 pieces)
7	Test time	10sec				7~10sec	7~10sec	5~10sec
8	Blast outlet	Approx.52mm				5.3cm	2.07"±0.030 (51.8~53.3mm) 5.3cm	52mm
9	Angle of the panel orientation	0°	0°~70°		0° (0°~70°option)	0° 45°	0° 45°	straight0°C crank20°C
10	Testing surface	85(W)×145(H)mm				143mm	5.63" (14.3cm)	-
11	Stone type	gravel				water-worn road gravel 9.53-15.86mm	water-eroded alluvial road gravel 16~9.5mm	granite gravel 9~15mm
12	Specimen temperature	generally room temperature(ambient)	-30~50±2°C		-30~35±2°C	generally room temperature(ambient) or -29°C	5°C	-
13	Electrical requirements	—	Single-phase 100V Approx.11A	Single-phase 100~240V Approx.1.1KVA 50/60Hz	3phase 200V24A	—	—	—
14	External dimation of the instrument	Approx.58(W)×79(D)×106(H)	Approx.78(W)×100(D)×112(H)		Approx.170(W)×123(D)×150(H)	—	—	—
15	Weight	80kg	170kg		490kg	—	—	—
16	Water amount	—	Approx.1.5l/min(at water temperature15°C or less)		—	—	—	—



SAE stands for "Society of Automotive Engineers".
 ASTM stands for "American Society for Testing and Materials"
 JASO stands for "Japanese Automotive Standards Organization".