

DUROMETER (RUBBER, PLASTIC HARDNESS TESTER)



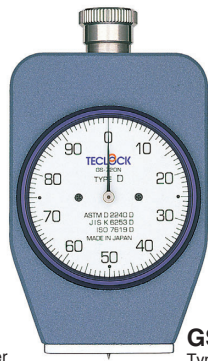
When the base of Durometer and workpiece are coerced each other, the indenter changes shape of workpiece by pressurized force caused by spring of Durometer and workpiece makes force against this force. Force amount of indenter is indicated as hardness when this pressurized force and repulsive force are equivalent. The reason why there are various kinds of Durometer, it is for the purpose of measuring various hardness for soft materials like sponge and hard materials like plastic by combining strong and weak spring force and shape of needle indenter (sharp pointed or round)

Compliance with JIS K 6253, ISO7619, ISO868 and ASTM D 2240 — standard for hardness test of vulcanized or thermoplastic rubber

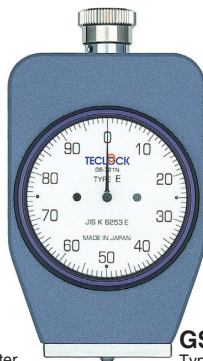
This is Durometer to comply with JIS K 6253 (new JIS) standard established in 1993 for the purpose of conforming to ISO (International Standard Organization). Durometers consist of 3 types namely, Type A for medium hardness, Type D for high hardness and Type E for low hardness. Type A tends to indicates higher value by 1~2 points compared with former Type A durometers. Type D is suitable for hard rubber having more than 90 hardness measured by type A durometer and Type E is suitable for soft rubber of which hardness is 20 and below measured by Type A durometer.



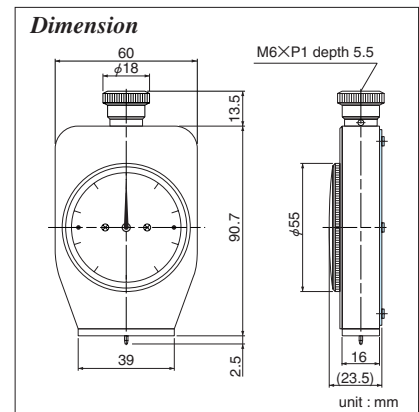
GS-719N
Type A Durometer
General rubber



GS-720N
Type D Durometer
Hard rubber

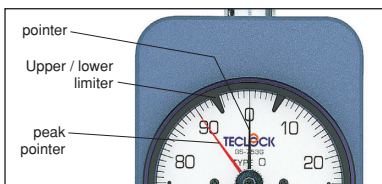


GS-721N
Type E Durometer
Soft rubber



Specifications

Model	Type	APPLICATION / MATERIALS	Conform standards	Spring load value 0-100	Indenter shape (mm)	Indenter height (mm)	Weight (g)
GS-719N	Type A	General rubber (Medium hardness)	JIS K 6253	550-8050mN (56.1-821.1gf)	Truncated Cone of ϕ 0.79 with 35° angle	2.50	180
GS-719G	Type A (Peak pointer type)	General rubber (Medium hardness)	ISO7619	550-8050mN (56.1-821.1gf)	Truncated Cone of ϕ 0.79 with 35° angle	2.50	180
GS-720N	Type D	Hard rubber (High hardness)	ISO868	0-44450mN (0-4533gf)	Conical Cone of R0.1 with 35° angle	2.50	180
GS-720G	Type D (Peak pointer type)	Hard rubber (High hardness)	ASTM D 2240	0-44450mN (0-4533gf)	Conical Cone of R0.1 with 35° angle	2.50	180
GS-721N	Type E	Soft rubber (Low hardness)	JIS K 6253	550-8050mN (56.1-821.1gf)	Hemisphere of R2.50	2.50	180
GS-721G	Type E (Peak pointer type)	Soft rubber (Low hardness)	ASTM D 2240	550-8050mN (56.1-821.1gf)	Hemisphere of R2.50	2.50	180



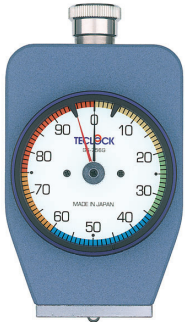
Peak Pointer Type

Some of Rubbers, Elastomer' elastic body is not easily read the maximum value after firm contacting with a presser foot of durometer , due to the stress relaxation. The pointer indicates the descendent value but the peak pointer is holding the maximum measured value. The peak pointer type can easily read the maximum value efficiently. In case the pointer cannot be read directly due to some obstacles although the measuring can be done, the measured value can be confirmed from peak pointer after measuring. The upper / lower limiters equipped will be effectively used in tolerance judgment.



Greensand Hardness Tester

- Exclusive durometer to measure surface hardness of greensand mold.
- As casting is made on better condition by adjusting density of casting sand based on acquired measurement result, quality of products are stable.
- Limiter to be able to set permissible value and peak pointer to indicate maximum value are equipped. It can be judged according to distinguish of color of dial face.



GS-756G

Mold condition	hardness data
mold hardened extremely soft	~20
mold hardened soft	20~35
mold hardened normal	35~60
mold hardened solid	60~75
mold hardened extremely solid	75~

Specifications

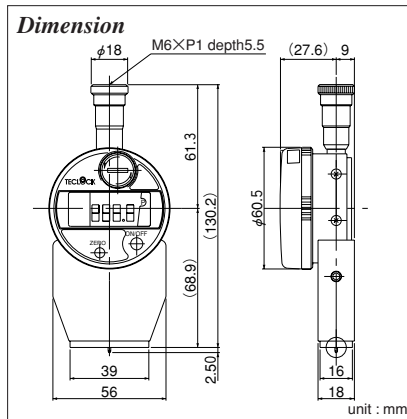
Model	APPLICATION / MATERIALS	Conform standards	Spring load value 0-100	Indenter shape (mm)	Indenter height (mm)	Weight (g)
GS-756G	Sand mold	Teclock original	1,030-2,324mN (105-237gf)	Hemisphere of R 2.54	2.54	180

Digital Durometer

- Possible to observe a change of hardness with the passage in time.
- Minimum readable value is 0.5HS which 1/2 of analog type.
- Statistics calculation is possible by connected to SD-764P Printer (Option) shown on page 51.



GSD-719S
Type A Durometer
Digital type



Specifications

Model	Type	APPLICATION / MATERIALS	Conform standards	Spring load value 0-100	Indenter shape (mm)	Indenter height (mm)	Weight (g)
GSD-719S	Type A	General rubber Soft plastic	JIS K 6253, JIS K 7215, ISO7619 ISO868, ASTM D 2240 Type A durometer	550-8050mN (56.1-821.1gf)	Truncated cone of φ 0.79 with 35° angle	2.50	250
GSD-720S	Type D	Hard rubber Plastic	JIS K 6253, JIS K 7215, ISO7619 ISO868, ASTM D 2240 Type D durometer	0-44450mN (0-4533gf)	Conical corn of R 0.1 with 30° angle	2.50	250
GSD-721S	Type E	Soft rubber	JIS K 6253, ASTM D 2240 Type E durometer	550-8050mN (56.1-821.1gf)	Hemisphere of R 2.50	2.50	250
GSD-701S	Type SRIS	Soft rubber	SRIS 0101, JIS S 6050	539-8379mN (55-855gf)	Hemisphere of φ 5.08	2.54	250
GSD-706S	Type A (old)	General rubber	JIS K 6301, Spring type A style	539-8379mN (55-855gf)	Truncated cone of φ 0.79 with 35° angle	2.54	250
GSD-743S	Type E2	Soft rubber	TECKLOCK E2 durometer	550-4300mN (56.1-438.6gf)	Hemisphere of R 2.50	2.50	250
GSD-744S	Type FO	Soft styrene foam	TECKLOCK FO durometer	550-4300mN (56.1-438.6gf)	Cylindrical cone of φ 25.2	2.50	250
GSD-750S	Type B	Medium-hard rubber	ASTM D 2240, Type B durometer	550-8050mN (56.1-821.1gf)	Conical corn of R 0.1 with 30° angle	2.50	250
GSD-751S	Type C	Hard rubber	ASTM D 2240, Type C durometer	0-44450mN (0-4533gf)	Truncated cone of φ 0.79 with 35° angle	2.50	250
GSD-752S	Type DO	Medium-hard rubber	ASTM D 2240, Type DO durometer	0-44450mN (0-4533gf)	Hemisphere of R 1.19	2.50	250
GSD-753S	Type O	Soft rubber	ASTM D 2240, Type O durometer	550-8050mN (56.1-821.1gf)	Hemisphere of R 1.19	2.50	250
GSD-754S	Type OO	Very soft rubber	ASTM D 2240, Type OO durometer	203-1111mN (20.7-113.3gf)	Hemisphere of R 1.19	2.50	250



DUROMETER (RUBBER, PLASTIC HARDNESS TESTER)

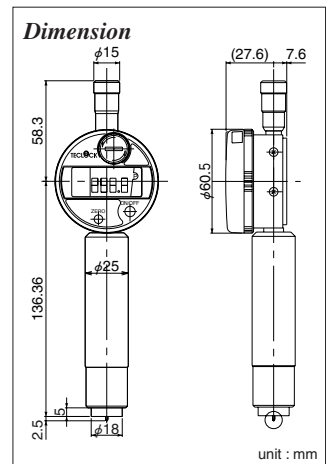
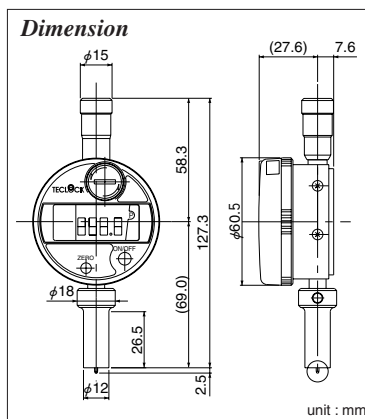
Deep Hole / Long Leg Type Digital Durometer



GSD-719SH
Type A Durometer
Deep hole (H) model



GSD-719SL
Type A Durometer
Long leg (L) model



Specifications

Model	Type	Application / Materials	Standards	Spring Load 0 - 100	Shape of Indentor (mm)	Height of Indentor (mm)	Weight (g)
GSD-719SH	Type A Deep hole model	General rubber	JIS K 6253, JIS K 7215, ISO7619, ISO868, ASTM D 2240	550-8050mN (56.1-821.1gf)	Truncated cone of φ 0.79 with 35° angle	2.50	170
GSD-720SH	Type D Deep hole model	Hard rubber	JIS K 6253, JIS K 7215, ISO7619, ISO868, ASTM D 2240	0-44450mN (0-4533gf)	Conical corn of R 0.1 with 30° angle	2.50	170
GSD-719SL	Type A Long leg model	General rubber	JIS K 6253, JIS K 7215, ISO7619, ISO868, ASTM D 2240, DIN53 505*	550-8050mN (56.1-821.1gf)	Truncated cone of φ 0.79 with 35° angle	2.50	380
GSD-720SL	Type D Long leg model	Hard rubber	JIS K 6253, JIS K 7215, ISO7619, ISO868, ASTM D 2240, DIN53 505*	0-44450mN (0-4533gf)	Conical corn of R 0.1 with 30° angle	2.50	380

*Permissible value such as edge diameter prescribed in DIN and spring load value is the value complying with ISO.

Constant Pressure Load Instrument for Durometer



GS-710

Durometer is option



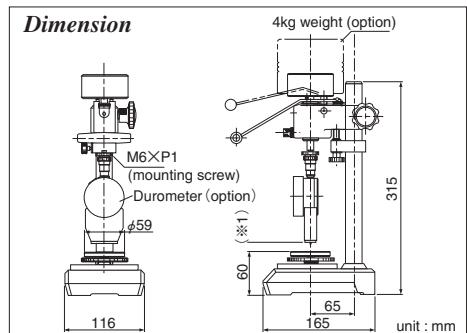
4kg weight
ZY-046 (option)

Specifications

Model	Weight
GS-710	7kg
ZY-046	4kg

※Dimension
(※1) Maximum workpiece Thickness
Digital Durometer : 20mm
Analog Durometer : 63mm

Load Value	Applicable Durometer type
About 1kg	A, B, E, A (old), SRIS, O
About 5kg	D, C, DO, C (old)



Durometer Tester GS-707 Series



GS-707

Durometer is option

This is an calibration instrument to simply confirm spring load value of analog type durometer. It inspects whether dial 25, 50 and 75 are correctly indicating by providing prescribed load to inverted durometer with 3 pieces of standard weight. Calibration Certificate for analog type durometers can be issued on request (option) but it is not available for Digital Durometer calibration method that durometer is erect condition by using mechanism of balance is introduced in domestic and international standard.

Specifications

Model	Applicable Durometer model	Weight (kg)
GS-707	GS-701N/GS-701G/GS-706N/GS-706G	3.7
GS-707A	GS-709N/GS-709G	3.7
GS-707B	GS-719N/GS-719G/GS-721N/GS-721G	3.7

