

Deadweight Tester Type 1305D, Accuracy ($\pm 0.1\%$ of reading)

Ashcroft® Type 1305D deadweight testers provide an easy means of precisely generating pressure to an accuracy of 0.1% of reading. Ashcroft 1305D units are available for operating ranges up to 10,000 psi. They are ideal for use in calibrating, setting, testing and repairing pressure measurement and control devices. Each 1305D unit is traceable to the National Institute of Standards and Technology, assuring instrument accuracy.

These pressure systems are designed to be field portable. A single carrying case holds the pressure generation pump as well as all the necessary tools and accessories. A second box contains the weights used for pressure generation (10,000 psi units require two boxes of weights). Ashcroft deadweight testers qualify as primary standards for pressure calibration.

The pump is a two-stage hydraulic pressure generator. A built-in shuttle valve allows for rapid pressure increase at low pressures. The rate of increase per pump cycle can be reduced at higher pressures to minimize resistance. This is accomplished by simply repositioning the two-position shuttle valve. With the shuttle valve in the high-pressure position,

increasing pressure even when near the 10,000 psi upper limit can be accomplished quickly and easily. Final, precise adjustment is accomplished through the use of an integral vernier-adjustment knob.

The 1305D is provided with two-piston cylinder assemblies. A low-pressure piston for pressure ranges from 15 to 2000 psi and a high-pressure unit for pressures from 75 to 10,000 psi. The high-pressure piston has an area of $\frac{1}{80}$ th of a square inch while the low pressure piston has an area of $\frac{1}{16}$ th of a square inch. Weights are provided for pressure increments of 5, 10, 20, 25, 40, 50, 100, 200 and 500 psi (depending on piston in use). An optional 1 psi incremental weight is also available. Ashcroft 1305D testers can be used anywhere within their operational range without any change in accuracy. The same weights are used with both piston and cylinder assemblies.

Ashcroft 1305 units are available for psi, bar, kg/cm² and kPa ranges. Each unit comes complete with a hand jack set (for removal of pointers on gauges being calibrated), spare O-rings and all tools, accessories and fittings required for normal use.



- **Accuracy: 0.1% of reading**
- **Operating Pressure: 15 psi to 10,000 psi (100 kPa to 70,000 kPa)**
- **Operating Media:**
1305D: SAE 20 weight automotive or machine oil
1305DH: Phosphate-based or glycol fluids
- **O-ring Material:**
1305D: Buna-N (D series)
1305DH: Ethylene Propylene (DH Series)
- **Piston and Cylinder Material: Stainless steel**
- **Weight Material: Non-magnetic die cast zinc**
- **Reservoir Volume: Approximately 1.5 pints (0.7 liter)**
- **Special "CD-5" Certification package available (see Price Sheet TE/PS-1)**

1305D STANDARD PRESSURE RANGES

psi Type	Piston Assembly Pressure Range		Piston Value		Number of Weights by Value					Net Weight	
	Low	High	Low	High	L-5 H-25	L-10 H-50	L-20 H-100	L-40 H-200	L-100 H-500	lb	kg
1305D-10	15/200	75/1000	5	25	1	3	2	3	-	60	27
1305D-20	15/400	75/2000	5	25	1	3	2	3	2	70	32
1305D-30	15/600	75/3000	5	25	1	3	2	3	4	85	39
1305D-50	15/1000	75/5000	5	25	1	3	2	3	8	105	48
1305D-100	15/2000	75/10,000	5	25	1	3	2	3	18	175	80

kg/cm ² Type	Piston Assembly Pressure Range		Piston Value		Number of Weights by Value					Net Weight	
	Low	High	Low	High	L-.5 H-2.5	L-1 H-5	L-2 H-10	L-4 H-20	L-5 H-25	lb	kg
1305DM-20	1/20	-	0.5	2.5	1	1	2	1	2	60	29
1305DM-100	1/20	5/100	0.5	2.5	1	1	2	1	2	65	30
1305DM-150	1/30	5/150	0.5	2.5	1	1	2	1	4	75	34
1305DM-350	1/70	5/350	0.5	2.5	1	1	2	1	12	105	48
1305DM-700	1/140	5/700	0.5	2.5	2	1	2	1	26	175	80

bar Type	Piston Assembly Pressure Range		Piston Value		Number of Weights by Value					Net Weight	
	Low	High	Low	High	L-.5 H-2.5	L-1 H-5	L-2 H-10	L-4 H-20	L-5 H-25	lb	kg
1305DB-20	1/20	-	0.5	2.5	1	1	2	1	2	63	29
1305DB-100	1/20	5/100	0.5	2.5	1	1	2	1	2	65	30
1305DB-150	1/30	5/150	0.5	2.5	1	1	2	1	4	75	34
1305DB-350	1/70	5/350	0.5	2.5	1	1	2	1	12	105	48
1305DB-700	1/140	5/700	0.5	2.5	2	1	2	1	26	175	80

kPa Type	Piston Assembly Pressure Range		Piston Value		Number of Weights by Value					Net Weight	
	Low	High	Low	High	L-250 H-250	L-100 H-500	L-200 H-1000	L-400 H-2000	L-500 H-2500	lb	kg
1305DA-2000	100/2000	-	50	250	1	1	2	1	2	63	29
1305DA-10000	100/2000	500/10,000	50	250	1	1	2	1	2	65	30
1305DA-15000	100/3000	500/15,000	50	250	1	1	2	1	4	75	34
1305DA-35000	100/7000	500/35,000	50	250	1	1	2	1	12	105	48
1305DA-70000	100/1400	500/70,000	50	250	2	1	2	1	26	175	80

For hydraulic fluid service (phosphate base and glycols) specify 1327DH, DMH, DBH or DAH.

Consult factory for guidance in product selection
Phone (203) 385-0217, Fax (203) 385-0602 or
visit our web site at www.ashcroft.com