

DOS series

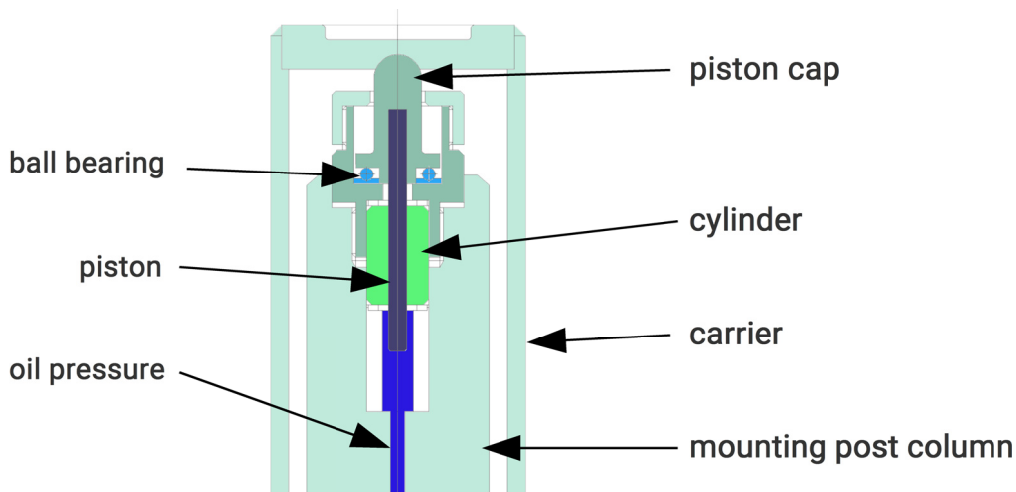
oil deadweight testers

DOS001

The oil operated deadweight tester DOS001 has an accuracy of 0.01% of reading. The weight column and pump are mounted on a stainless steel base plate. A triangle frame is used to make a steady and firm base for the weight column and can be leveled out by a spirit level. The weight carrier is of a hanging type and therefore insensible for any negative influences like friction of a support piston. The picture below shows the design of a DOS001. An EA RVA certificate by an accredited third party is standard. The certificate shows the effective area as well as the weight of each mass.



Design of DOS001/DOS0008



DOS0008

The oil operated deadweight tester DOS0008 has an accuracy of 0.008% of reading. The design is similar to the DOS001, but the piston cylinder assembly is even more accurate. To correct the temperature influence a PT100 with LCD display is applied.

DOS series

oil deadweight testers

Mass set for DOS001 and DOS0008

The oil deadweight tester DOS001 and DOS0008 can be ordered with different mass sets. Mostly it is delivered in kg. With the mentioned formula and the data listed in the certificate the best accuracy is achieved. By ordering the mass set in a pressure unit (for instance bar, psi or kg/cm²) the deadweight tester can be used without using the formula. In this case the disagreement is larger than by using the formula. The weight set can be adjusted to the local gravity to increase the accuracy.

Ranges

A list of masses corresponding with the ranges is listed below. Five different diameter of pistons are available to cover a wide pressure range. For small pressure steps a fractional weights set is available as an option.

bar	Piston number and measuring range					Standard										Optional																																																																																																																																									
						Mass set and equivalent of mass in bar																																																																																																																																																			
mass set	No. 1		No. 2			No. 3				No. 4				No. 5		1.25	0.025	0.05	0.125	0.25	0.5	1.25	2.5	5	10	0.0025	0.005																																																																																																																														
	1.25-20	2.5-40	5-80	12.5-200	25-400	2.5	0.05	0.1	0.25	0.5	1	2	5	10	20	0.01	0.02	12.5	25	50	100	0.025	0.05	25	50	100	0.05	0.1																																																																																																																													
	kg	Range bar	Range bar	Range bar	Range bar	Range bar	carrier	number of masses																																																																																																																																																	
	16	1.25-20	2.5-40	5-80	12.5-200	25-400	1	1	2	1	1	2	1	1	3	1	4	24	1.25-30	2.5-60	5-120	12.5-300	25-600	1	1	2	1	1	2	1	1	5	1	4	32	1.25-40	2.5-80	5-160	12.5-400	25-800	1	1	2	1	1	2	1	1	7	1	4	40	1.25-50	2.5-100	5-200	12.5-500	25-1000	1	1	2	1	1	2	1	1	9	1	4	48	1.25-60	2.5-120	5-240	12.5-600	25-1200	1	1	2	1	1	2	1	1	11	1	4	56	1.25-70	2.5-140	5-280	12.5-700	25-1400	1	1	2	1	1	2	1	1	13	1	4	64*					40-1600	1	1	2	1	1	2	1	1	15	1	4	72*					40-1800	1	1	2	1	1	2	1	1	17	1	4	80*					40-2000	1	1	2	1	1	2	1	1	19	1	4

* DOS001 high: modified design

psi	Piston number and measuring range					Standard										Optional																																																																																																																																																																																												
						Mass set and equivalent of mass in psi																																																																																																																																																																																																						
mass set	No. 1		No. 2			No. 3				No. 4				No. 5		20	0.5	1	2.5	5	10	25	50	100	200	400	0.05	0.1																																																																																																																																																																																
	20-300	40-600	100-1200	200-3000	400-6000	40	1	2	5	10	20	50	100	200	400	0.2	0.4	200	5	10	25	50	100	250	500	1000	0.5	1																																																																																																																																																																																
	kg	Range psi	Range psi	Range psi	Range psi	Range psi	carrier	number of masses																																																																																																																																																																																																				
	16	20-300	40-600	100-1200	200-3000	400-6000	1	1	2	1	1	2	1	1	2	1	4	22	20-400	40-800	100-1600	200-4000	400-8000	1	1	2	1	1	2	1	1	3	1	4	28	20-500	40-1000	100-2000	200-5000	400-10000	1	1	2	1	1	2	1	1	4	1	4	33	20-600	40-1200	100-2400	200-6000	400-12000	1	1	2	1	1	2	1	1	5	1	4	39	20-700	40-1400	100-2800	200-7000	400-14000	1	1	2	1	1	2	1	1	6	1	4	44	20-800	40-1600	100-3200	200-8000	400-16000	1	1	2	1	1	2	1	1	7	1	4	50	20-900	40-1800	100-3600	200-9000	400-18000	1	1	2	1	1	2	1	1	8	1	4	55	20-1000	40-2000	100-4000	200-10000	400-20000	1	1	2	1	1	2	1	1	9	1	4	61*					500-22000	1	1	2	1	1	2	1	1	10	1	4	66*					500-24000	1	1	2	1	1	2	1	1	11	1	4	72*					500-26000	1	1	2	1	1	2	1	1	12	1	4	77					500-28000	1	1	2	1	1	2	1	1	13	1	4

* DOS001 high: modified design