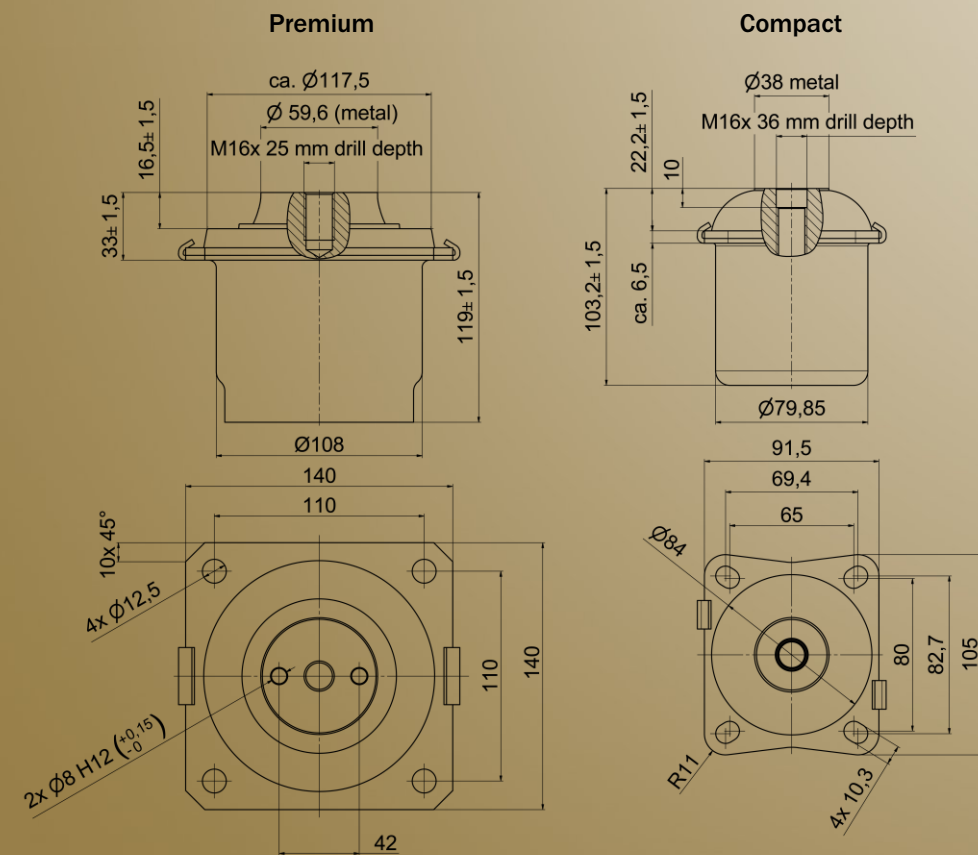
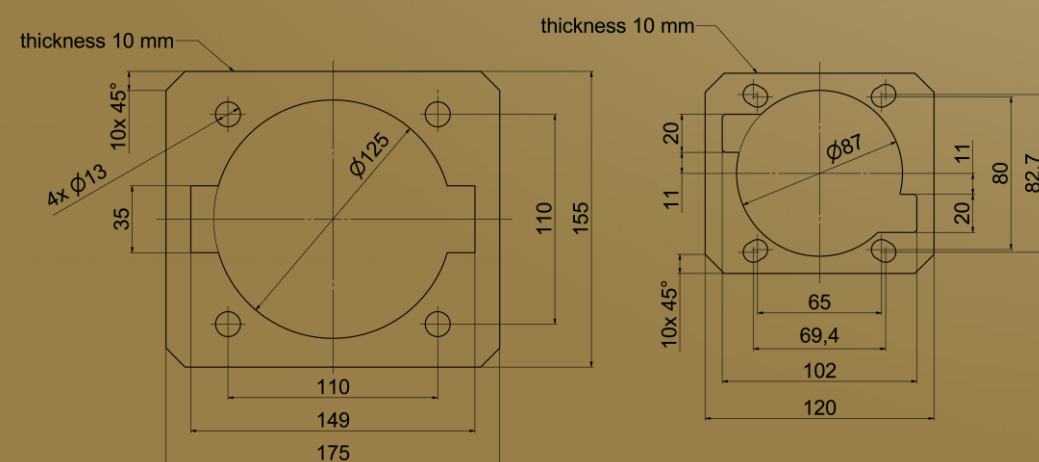


Hydromount

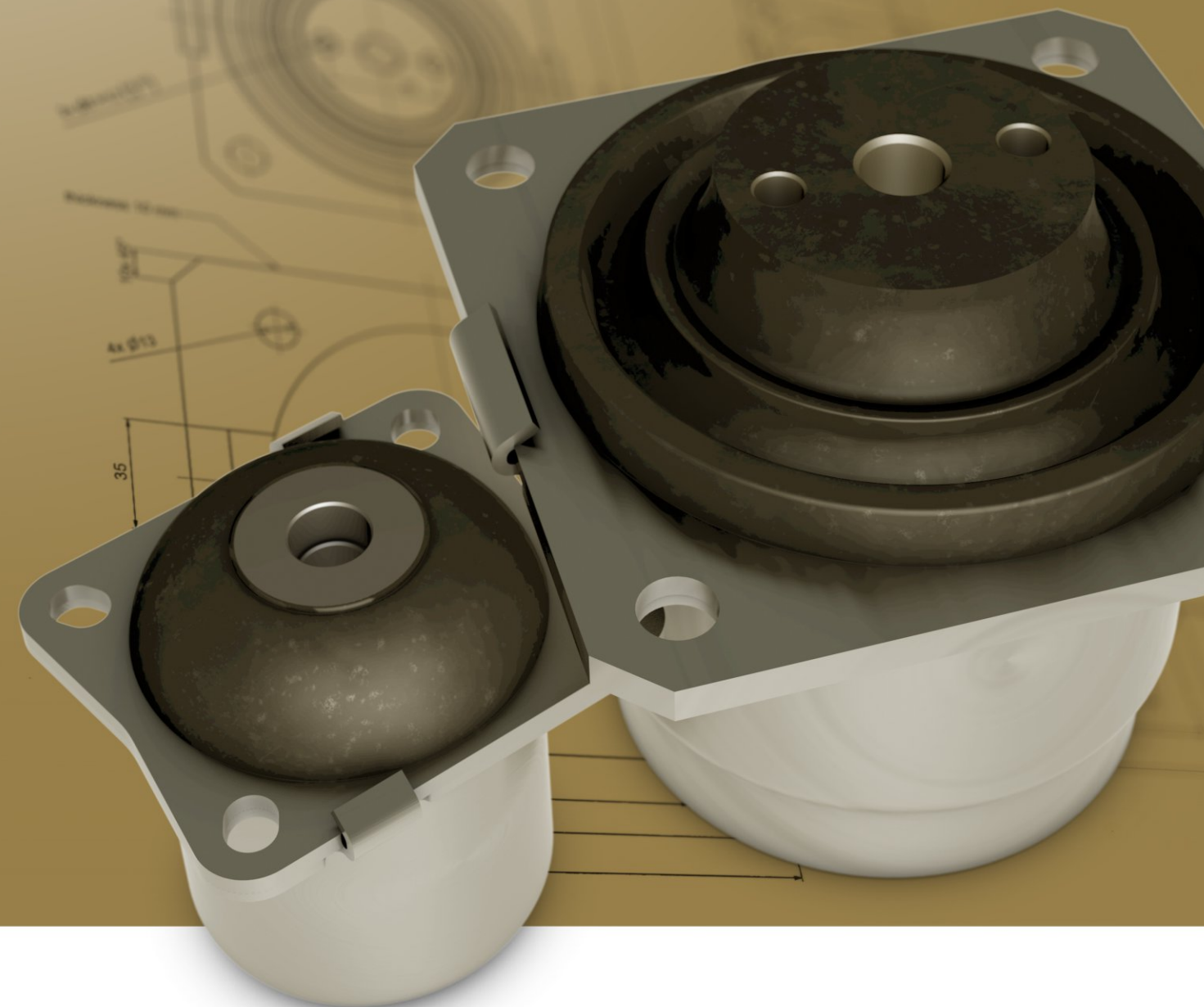


Flange reinforcement



HYDROMOUNTS

HYDRAULIC DAMPING
FOR BEST COMFORT



HYDROMOUNTS

Vibration reduction and best comfort

Rubber springs are well-established solutions for vibration control and widely used in many applications. In some demanding agriculture and construction equipment applications where ride comfort and vibration control are the highest priority, hydraulically damped rubber springs (called Hydromounts) are used to mount cabins and engines. This is done to reduce undesired oscillations and vibrations and to minimize noise load to operator and environment as well as to improve the ride comfort of the vehicle.

During the operation of such equipment, high loads can often be experienced by the mounts, e.g. shock loading. Consequently the target, i.e. finding the right balance of stiffness for shock compliance and isolation performance, can be difficult. This trade-off can be solved with Hydromounts by using hydraulic damping in conjunction with rubber springs to tune ride and vibration isolation separately. Thus, inconvenient vibrations and heavy loads to the human body and equipment from resonances and shock loads are avoided.

Hydromounts have proved themselves in cab applications of agriculture and construction equipment vehicles. Their damping capability ranges between 5 and 15 Hz and therefore the operator is protected from shock impacts, which are commonplace in these types of applications. Furthermore, excessive cabin motions and shaking are remedied. Due to their robust and closed design, our hydromounts are well prepared for hard use and rough environmental conditions.

Hydromount: Premium vs. Compact Version

	Premium	Compact
radial isolation degree (mounts with same ShA hardness)	higher, because of lower stiffness	lower, because of higher stiffness
max. vertical amplitude of oscillation	±5 mm	±4 mm
acoustic decoupling	high, due to use of additional diaphragm in the bottom	standard-level
rubber spring geometry	rotation-symmetric	rotation symmetric or with lateral voids (different longitudinal and lateral stiffness possible)
rupture forces* (with flange reinforcement and bolted plunger)	approx. 130 kN	approx. 90 kN
damping fluid / damping properties	different viscosities available / variable	standard fluid with fixed viscosity / not variable
direction of installation	arbitrary (e.g. head first)	upright - vertical
anti-twist device	available, two borings at kernel	not available
dimension (LxWxH in mm)	larger (148 x 140 x ca. 133)	smaller (105 x 100 x 103)
level of comfort	++	+
price level	++	+

*should be avoided, a change of mounts after occurrence of such forces is recommended.



Technical data

all data only presented for information purposes									
drawing no.	rubber spring, compound + hardness ShA	max axial load** F _z , N	max axial deflection** S _z , mm	max radial load** F _x , N	max radial deflection** S _x , mm	max radial load** F _y , N	max radial deflection** S _y , mm	damping level	capability for bearing high rupture forces*
036 18 706	NR, 40 - 70	2800 - 9300	10	1800 - 7500	3,5	1800 - 7500	3,5	high	none
036 18 706	NR, 40 - 70	2800 - 9300	10	1800 - 7500	3,5	1800 - 7500	3,5	very high	none
036 18 706	NR, 40 - 70	2800 - 9300	10	1800 - 7500	3,5	1800 - 7500	3,5	shock damping	none
036 18 707	NR, 40 - 65	2100 - 5700	10	950 - 3900	3,5	950 - 3900	3,5	high	none
036 18 717	NR, 40 - 70	3300 - 9100	10	1800 - 6500	3,5	1800 - 6500	3,5	very high	yes
036 18 716***	NR, 40 - 75	3700 - 16000	8	1400 - 8800	1,5	1400 - 8800	1,5	high	yes

* depending on application additional features are required (e. g. flange reinforcement).

**all noted forces and deflections represent the sum of static and dynamic loads.

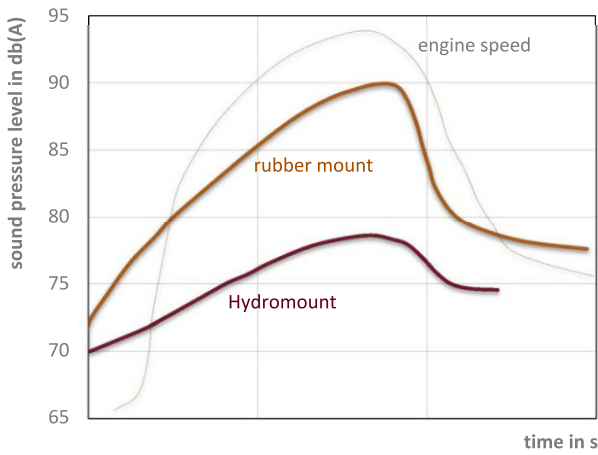
*** Hydromount compact.

Unique selling propositions at a glance

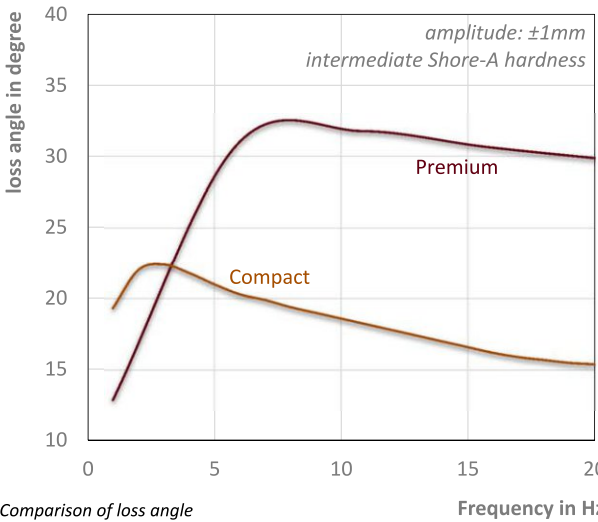
- long-life, galvanized surface protection (Gr-VI free)
- all materials are conform to environmental regulations, e. g. RoHS or REACH
- high damping for a wide frequency range
- optional choice between rubber mount and Hydromount within unique connecting design
- excellent acoustic isolation by means of installed diaphragm in the bottom (at Premium Version)
- natural rubber with best mechanical properties
- large range of catalog product portfolio with short delivery times
- customer specific designs available on demand

Installation remarks and service conditions

- temperature range for permanent use: -45 to 60 °C
- temperature for short use: up to 80°C
- permanent contact with mineral oils should be avoided
- large torsional rotation of rubber during bolting should be avoided
- full-faced support at flat flange area is recommended



accelerated run of a track vehicle
(schematic illustration of real test data)



Comparison of loss angle
(for quantification of damping level)