

Pivots VFN



- **Simple, rugged and flat design**
- **Dimensions compatible to elastomer mounts VEN and compact mounts VKN**
- **Minimal reaction to lateral forces**
- **Ease of installation**
- **Stainless steel**
(VFN 1 – 4.7 t and VFN 10 - 22 t)
- **St 37, galvanized (VFN 33 t)**
- **St 37, painted to RAL 7032**
(VFN 47 - 470 t)

Application

Pivots are designed for simple weighing tasks, e.g. hopper level measurement.

Combined with one or two load cells (partial load measurement), the pivots offer a favourably priced but sufficiently accurate solution, particularly for applications with a defined centre of gravity, e.g. hoppers with liquid contents.

Construction

The pivots consist of a double T girder reinforced with ribs. The reinforcement ribs ensure a defined bending zone and increase the resistance to lateral forces, so that normally no additional tie-rods are required.

The pivots of the VFN type are dimensionally compatible with the VEN elastomer mounts, so that no height adjustment is necessary when the two types of mount are combined.

The mounts can be adjusted in height with the use of shims by max. 5mm.

When used in conjunction with load cell compact mounts, type VKN, the height is adjusted using optional shims.

Normally, the VFN mounts are welded to the existing construction. Connecting surfaces without shims can also be screwed on.

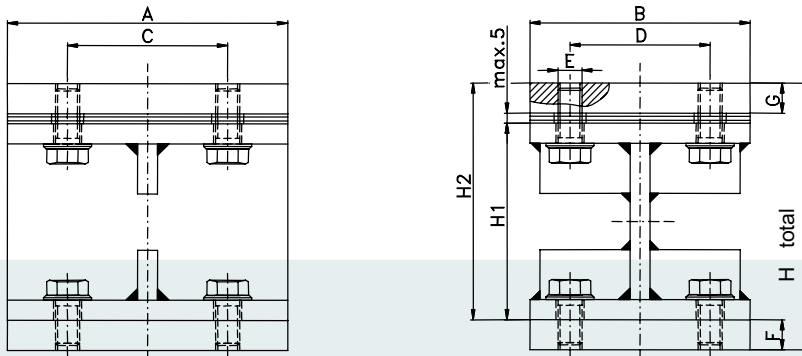
Function

The deflection for measurement of load cell and mount causes a restoring force in the bending zone of the pivot, acting on load cell but being compensated upon calibration.

Depending on the point of application, significant weighing errors can be produced through horizontal forces acting vertically to the tilting line.

Therefore it is essential that the pivots be mounted on a common tilting line as shown in the installation drawings.

The load distribution between pivots and load cells highly depends on the symmetry of the load carrier/hopper and the horizontal forces (wind, pipe connections, agitator), particularly in the case of 4 support points. In contrast to a full load measurement using load cells, these forces have the potential to cause a significantly higher weighing error.



Dimensions

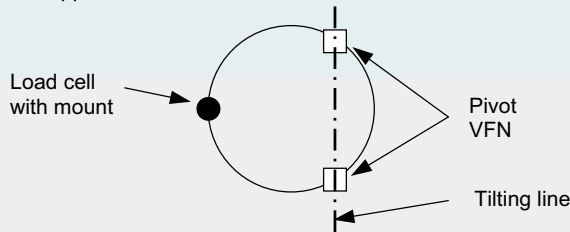
Type	Rated Capacity [t]	Weight [kg]	A	B	C	D	E	H1	H2	H total	F	G	Q1=Q2 [kN]
VFN 4,7	1-4,7	9	140	110	80	70	M12	98	113 + 5	128 + 5	15	15	5
VFN 22	10-22	27	250	140	150	90	M16	130	150 + 5	170 + 5	20	20	22
VFN 33	33	46	270	180	180	110	M20	168	193 + 5	218 + 5	25	25	33
VFN 47	47	47	270	180	180	110	M20	168	198 + 5	248 + 5	50	30	47
VFN 68	68	94	300	270	180	180	M24	220	245 + 5	270 + 5	25	25	68
VFN 100	100	113	300	270	180	180	M24	220	240 + 5	300 + 5	60	20	100
VFN 150	150	176	380	280	300	190	M24	320	355 + 5	390 + 5	35	35	150
VFN 220	220	251	450	300	330	200	M30	373	413 + 5	453 + 5	40	40	220
VFN 330	330	400	500	350	380	220	M36	425	475 + 5	525 + 5	50	50	330

VFN 470 upon request

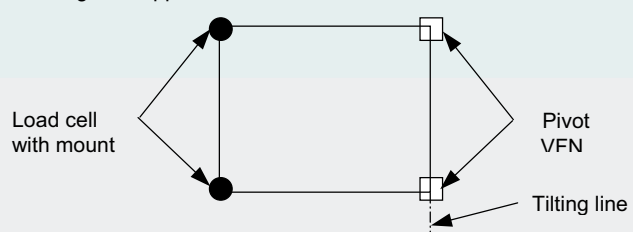
- Weight in kg including all shims
- Q1 max. lateral force parallel to tilting line
- Q2 max. lateral force vertical to tilting line

Support point arrangement

Round hopper with 2 VFN mounts and 1 L/C



Rectangular hopper with 2 VFN mounts and 2 L/Cs



Items supplied (All mounts complete with 5 mm shims)

Type	Ordering no. Mount For height, see VEN *)	Weld-on plates		Height	Ordering no. Mount For height, see VKN **)	Weld-on plates		Shims
VFN 4,7	V021894.B02	—	—	H1	V021894.B01	X	—	H2
VFN 22	V021837.B02	—	—	H1	V021837.B01	X	—	H2
VFN 33	V021776.B02	—	—	H1	V021776.B01	X	—	H2
VFN 47	V021995.B02	—	X	H2	V021995.B01	X	X	H total
VFN 68	V021974.B02	—	—	H1	V021974.B01	X	X	H total
VFN 100	V021777.B02	—	X	H2	V021777.B01	X	X	H total
VFN 150	V022583.B02	—	—	H1	V022583.B01	X	X	H total
VFN 220	V022592.B02	—	—	H1	V022592.B01	X	X	H total
VFN 330					V038093.B01	X	X	H total

VFN 470 upon request

*) The height of the mount corresponds to that of the VEN mount specified in Spec Sheet BV-D2044

***) The height of the mount corresponds to that of the VKN mount specified in Spec Sheet BV-D2083