

Spring balancers

Yale YBF/A



Yale Industrial
Products
GmbH



Yale

- 1877 Yale designs the first spur geared hand chain hoist incorporating the Weston screw-and-disc type load brake. The design principle is used today for almost all hand chain hoists.
- 1936 Start of hoist manufacture in Velbert with production of the world renowned Yale Pul-Lift® ratchet lever hoist. This robust and reliable tool was (and still is) the key product establishing Yale's reputation in hoisting technology in Europe and abroad. To date more than one million Yale Pul-Lift® units have been manufactured at the Velbert plant.
- 1985 A new era began with the formation of Yale Industrial Products GmbH. By continuous and innovative product development and expanding the international network through Yale sales organisations and distributors Yale Industrial Products GmbH has gained a leading position for hoisting equipment.
- 2002 Yale presents the Yalelift 360. Areas of operation as well as operator conditions have been improved considerably. Innovative thinking and design give additional flexibility, the operator is no longer forced to work in the danger zone near the load.
- 2008 Yale starts production for the new electric chain hoist model YaleVego model CPV.
- 2009 Yale presents the electric wire rope hoist model YGK and expands its product range to wire rope hoists with capacities up to 15 t.
- 2010 Yale introduces the product-line of spring balancers, series YBF and YBA.

The advantages at a glance

Well secured –

Forged hooks with safety latch prevent accidental unhooking of both the spring balancer and the suspended tool.

Additional safety –

Upper and lower suspension eyes are provided for the attachment of secondary safety chains. Providing additional safety and preventing the spring balancer and load from falling accidentally.

Easy exchange –

The compact design of the body and the spring-assembly allow for an easy exchange of individual components.

Safe load holding –

The automatic drum-locking-device locks the drum and holds the load safely even in the event of spring failure.

Additional protection –

To reduce wear of the body and rope spring balancers are equipped with a nylon rope guide.

Well positioned –

The 360° rotating top hook ensures the optimal operating position of the spring balancer for smooth flow, and extended lifetime of the rope.

Well balanced –

The tapered rope drum assures tension in the rope throughout the full working range.

Easy maintenance –

The manual safety lock stops the rotation of the drum. A must when replacing a rope, changing the load or renewing the spring.

Extended life-cycle –

Precision made steel drum axle for extended lifetime and additional safety.

Precise adjustment –

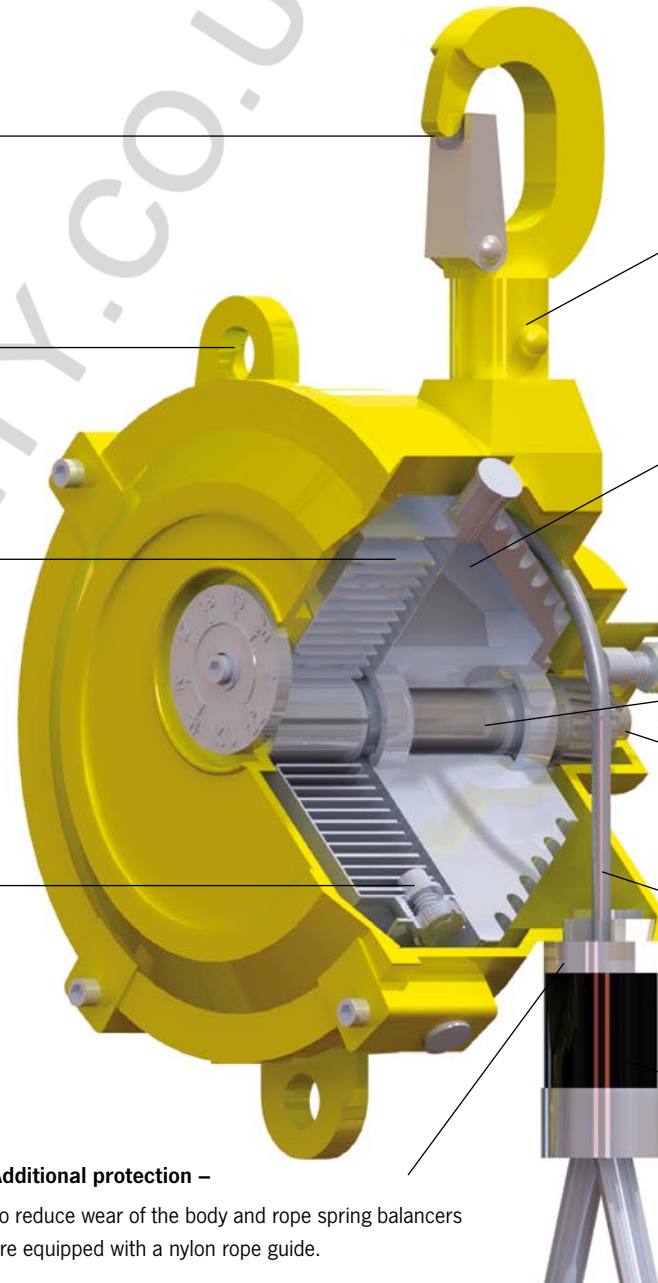
Easy and fast adjustment of the spring-tension by an easily well accessible setscrew.

Additional advantage –

The special steel rope resists kinking, reduces drum wear and requires no additional lubrication.

Low wear –

A shock absorber and adjustable rope stop limits retraction of the rope to any desired point in its travel, preventing excessive wear of the rope drum.



Spring balancer features

Spring balancers are used to relieve the operator from the weight of hand-tools. By using a tapered rope drum the weight of the attached load is compensated, loads up to 200 kg can be moved effortlessly in vertical axis. Common applications are spot-welding guns, riveting-machines, slaughterhouse equipment and multiple nut-runners etc.

Features

- Spring balancers model YBF are designed in accordance with DIN 15112
- The housing is manufactured from high-tensile aluminium pressure die casting for maximum resistance to impact.
- The special spring-assembly inside the balancer guarantees a consistent counterbalance throughout the complete working range.



Spring assembly

Spring assemblies as separate units in a closed steel housing for better handling during maintenance. This design avoids accidents during the replacement of springs.



Easy exchange of wire rope

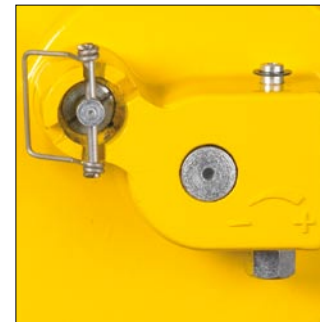
A small slot in the body facilitates the removal and re-installation of the wire rope without any need to disassemble the unit. Down times during maintenance can be reduced significantly.



Rope guide

Rope guide made of wear-resistant nylon for reduced wear of rope and body.

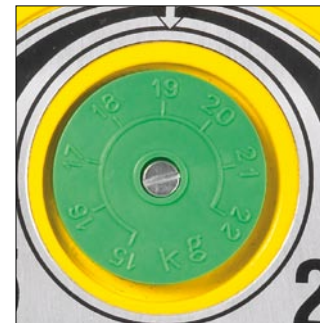
Lifetime of the balancer is increased. The rope guide can be removed and installed on site without disassembling the rope.



Adjustment of spring tension, manual drum-lock

For easy adjustment of the spring tension, the gearbox has been turned 90°. The operator is no longer forced to carry out adjustments at balancer level but can now work comfortably from below.

The rope-drum can be locked manually for an easy exchange of the rope.



Load indicator

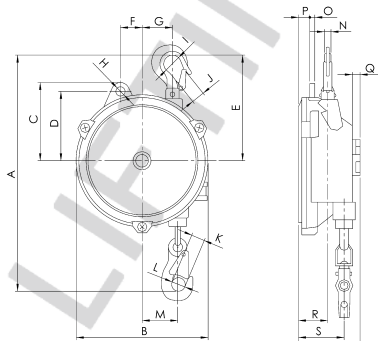
A dial gauge has been attached to the front of the spring balancer allowing easy reading of the capacity set.

Advantage: Adjustments of the spring-tension below or above the working load limits are avoided.

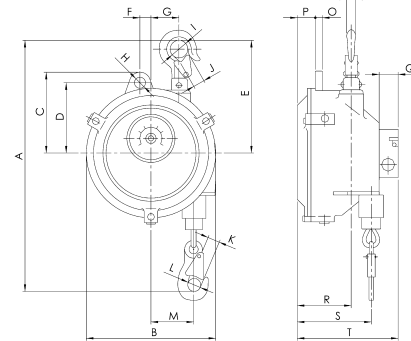
Dimensions model YBF & YBF-L and model YBA & YBA-L

Model	Body type I		Body type II			Body type III						Body type IV				Body type V					
	YBF-01 YBF-02	YBF-03 YBF-05	YBF-09 YBF-15	YBF-03L YBF-05L	YBA-15	YBF-22 YBF-30	YBF-40 YBF-50	YBF-60 YBF-70 YBF-85 YBF-100	YBF-09L YBF-15L YBF-22L YBF-30L	YBF-40L YBF-50L	YBF-60L YBF-70L	YBF-120 YBF-140	YBF-170 YBF-200	YBF-85L YBF-100L	YBF-120L YBF-130L	YBA-22 YBA-30	YBA-40 YBA-50	YBA-60 YBA-70	YBA-15L YBA-22L YBA-30L	YBA-40L YBA-50L	YBA-60L YBA-70L
A min, mm	315	290	340	375	340	445	440	440	445	440	440	550	550	550	550	445	440	440	445	440	440
A max, mm	1315	1590	1640	2875	1640	1945	1940	1940	2745	2740	2740	2050	2050	3050	3050	1945	1940	1940	2745	2740	2740
B, mm	132	148	174	197	174	218	220	220	218	220	220	247	247	247	247	218	220	220	218	220	220
C, mm	72	89	109	114	109	130	130	130	130	130	130	156	156	156	156	130	130	130	130	130	130
D, mm	68	78	95	105	95	111	111	111	111	111	111	128	128	128	128	111	111	111	111	111	111
E, mm	120	120	152	175	152	194	194	194	194	194	194	265	265	265	265	194	194	194	194	194	194
F, mm	22	25	15	23	15	35	35	35	35	35	35	40	40	40	40	35	35	35	35	35	35
G, mm	26	33	38	30	38	47	47	47	47	47	47	65	65	65	65	47	47	47	47	47	47
H, mm	10	10	12	12	12	15	17	17	15	17	17	17	17	17	17	15	17	17	15	17	17
I, mm	14	14	24	14	24	30	30	30	30	30	30	26	26	26	26	30	30	30	30	30	30
J, mm	9	9	14	14	14	18	18	18	18	18	18	15	15	15	15	18	18	18	18	18	18
K, mm	10	8	15	14	15	18	18	18	18	18	18	24	24	24	24	18	18	18	18	18	18
L, mm	17	14	18	17	18	24	24	24	24	24	24	27	27	27	27	24	24	24	24	24	24
M min, mm	45	45	39	65	39	46	46	46	46	46	46	54	54	54	54	46	46	46	46	46	46
M max, mm	65	75	68	105	68	83	83	83	83	83	83	95	95	95	95	83	83	83	83	83	83
N, mm	9	9	14	14	14	16	16	16	16	16	16	18	18	18	18	16	16	16	16	16	16
O, mm	6	6	9	8	9	12	14	14	12	14	14	16	16	16	16	12	14	14	12	14	14
P,mm	11	12	24	30	24	35	75	86	35	75	86	142	185	142	185	55	95	105	55	95	105
Q, mm	5	9	25	9	25	30	33	33	30	33	33	37	37	37	37	30	33	33	30	33	33
R, mm	30	32	72	45	94	80	105	116	80	105	116	155	193	155	193	115	140	140	115	140	140
S min, mm	20	35	65	55	87	72	97	97	72	97	97	175	215	175	215	107	132	132	107	132	132
S max, mm	38	50	99	85	121	112	137	137	112	137	137	205	248	205	248	147	172	172	147	172	172
T, mm	49	69	136	110	148	158	188	199	158	188	199	268	268	268	310	180	208	218	180	208	218
U, mm	-	-	-	-	-	130	130	130	130	130	130	156	156	156	156	130	130	130	130	130	130

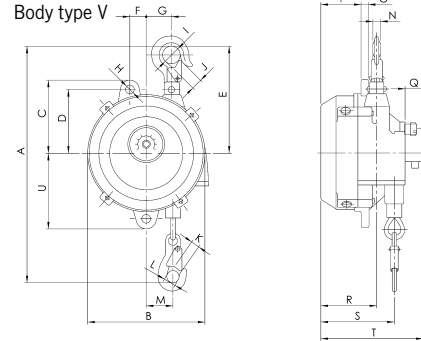
Body type I



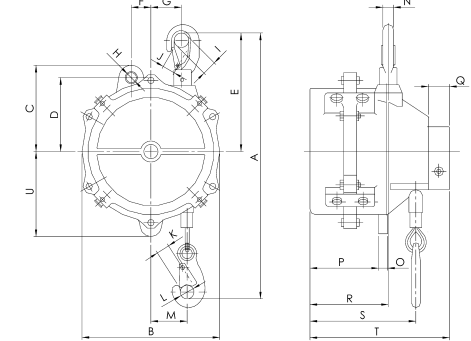
Body type II



Body type III
Body type V



Body type IV



Technical data model YBF & model YBF-L

Model	EAN-No. 4025092*	Capacity min. kg	Capacity max. kg	Rope length m	Weight with rope kg	Suspension eyes top (T) and bottom (B)	Adjustment of spring tension V=vertical H=horizontal	Tapered rope drum	Manual drum lock	Automatic drum-locking device	Load indicator	Enclosed spring assembly	Closed body	Rope guide, nylon	Rope exchange without disassembly
YBF-01	*485654	0.5	1.5	1.0	1.0	T	H	•	–	–	–	–	•	–	–
YBF-02	*485661	1	2	1.0	1.0	T	H	•	–	–	–	–	•	–	–
YBF-03	*485685	1.5	3	1.3	1.8	T	H	•	–	–	–	–	•	–	–
YBF-05	*485692	2.5	5	1.3	1.9	T	H	•	–	–	–	–	•	–	–
YBF-09	*485777	4.5	9	1.3	4.0	T	H	•	•	•	•	•	•	•	•
YBF-15	*485784	9	15	1.3	4.0	T	H	•	•	•	•	•	•	•	•
YBF-22	*485791	15	22	1.5	8.0	T + B	V	•	•	•	•	•	•	•	•
YBF-30	*485807	22	30	1.5	8.0	T + B	V	•	•	•	•	•	•	•	•
YBF-40	*485814	30	40	1.5	10.5	T + B	V	•	•	•	•	•	•	•	•
YBF-50	*485821	40	50	1.5	10.5	T + B	V	•	•	•	•	•	•	•	•
YBF-60	*485838	50	60	1.5	11.0	T + B	V	•	•	•	•	•	•	•	•
YBF-70	*485845	60	70	1.5	11.5	T + B	V	•	•	•	•	•	•	•	•
YBF-85	*485968	70	85	1.5	12.0	T + B	V	•	•	•	–	•	•	•	•
YBF-100	*485975	85	100	1.5	12.5	T + B	V	•	•	•	–	•	•	•	•
YBF-120	*485999	100	120	1.5	28.0	T	H	•	•	•	–	•	•	•	–
YBF-140	*485982	120	140	1.5	29.0	T	H	•	•	•	–	•	•	•	–
YBF-170	*486002	140	170	1.5	35.0	T	H	•	•	•	–	•	•	•	–
YBF-200	*486019	170	200	1.5	36.0	T	H	•	•	•	–	•	•	•	–
YBF-03L	*485708	1.5	3	2.5	3.9	T	H	•	–	•	–	–	•	–	–
YBF-05L	*485753	2.5	5	2.5	4.0	T	H	•	–	•	–	–	•	–	–
YBF-09L	*486026	4.5	9	2.3	7.0	T	V	•	•	•	–	•	•	•	–
YBF-15L	*486033	9	15	2.3	7.5	T	V	•	•	•	–	•	•	•	–
YBF-22L	*486040	15	22	2.3	8.5	T	V	•	•	•	–	•	•	•	–
YBF-30L	*486057	22	30	2.3	8.5	T	V	•	•	•	•	•	•	•	–
YBF-40L	*486064	30	40	2.3	11.0	T + B	V	•	•	•	•	•	•	•	–
YBF-50L	*486071	40	50	2.3	11.0	T + B	V	•	•	•	•	•	•	•	–
YBF-60L	*486088	50	60	2.3	11.5	T + B	V	•	•	•	•	•	•	•	–
YBF-70L	*486095	60	70	2.3	12.0	T + B	V	•	•	•	•	•	•	•	–
YBF-85L	*486101	70	85	2.5	26.5	T + B	V	•	•	•	–	•	•	•	–
YBF-100L	*486217	85	100	2.5	27.0	T	H	•	•	•	–	•	•	•	–
YBF-120L	*486231	100	120	2.5	34.0	T	H	•	•	•	–	•	•	•	–
YBF-130L	*486255	120	130	2.5	35.0	O	H	•	•	•	–	•	•	•	–

Technical data model YBA & model YBA-L

Model	EAN-No. 4025092*	Capacity min. kg	Capacity max. kg	Rope length m	Weight with rope kg	Suspension eyes top (T) and bottom (B)	Adjustment of spring tension V=vertical H=horizontal	Tapered rope drum	Manual drum lock	Automatic drum-locking device	Load indicator	Enclosed spring assembly	Closed body	Rope guide, nylon	Rope exchange without disassembly
YBA-15	*486279	9	15	1.3	5.5	T	V	•	•	•	•	•	•	•	•
YBA-22	*486286	15	22	1.5	8.5	T + B	V	•	•	•	•	•	•	•	•
YBA-30	*486293	22	30	1.5	9.0	T + B	V	•	•	•	•	•	•	•	•
YBA-40	*486309	30	40	1.5	11.5	T + B	V	•	•	•	•	•	•	•	•
YBA-50	*486316	40	50	1.5	12.0	T + B	V	•	•	•	•	•	•	•	•
YBA-60	*486330	50	60	1.5	13.0	T + B	V	•	•	•	•	•	•	•	•
YBA-70	*486323	60	70	1.5	13.5	T + B	V	•	•	•	•	•	•	•	•
YBA-15L	*486347	9	15	2.3	8.5	T + B	V	•	•	•	–	•	•	•	–
YBA-22L	*486354	15	22	2.3	9.0	T + B	V	•	•	•	•	•	•	•	–
YBA-30L	*486361	22	30	2.3	9.5	T + B	V	•	•	•	•	•	•	•	–
YBA-40L	*486378	30	40	2.3	12.0	T + B	V	•	•	•	•	•	•	•	–
YBA-50L	*486385	40	50	2.3	12.5	T + B	V	•	•	•	•	•	•	•	–
YBA-60L	*486392	50	60	2.3	13.5	T + B	V	•	•	•	•	•	•	•	–
YBA-70L	*486408	60	70	2.3	14.0	T + B	V	•	•	•	•	•	•	•	–

Yale spring balancers with safety feature in case of rope breakage model YBA and model YBA-L

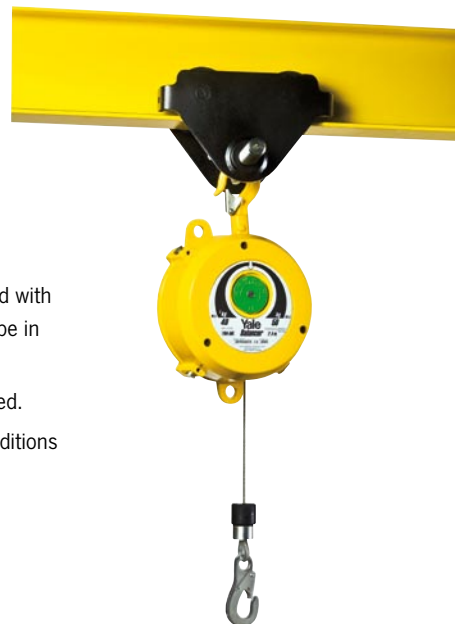
Capacity 9 - 70 kg

YBA series spring balancers have the same technical features as the YBF series, but are equipped with an additional safety feature in case of rope breakage. This mechanism automatically locks the rope in case of accidental dislodging of the suspended weight, breakage of the bottom hook or the rope.

Whipping of the rope and potential injuries to the operator or other personnel in the area is avoided.

This series is used primarily in areas in which higher safety standards are applied or adverse conditions are common (flying sparks etc.) which might cause damages to the rope.

This series is available with standard and extended rope length.



! Spring balancers with capacities up to 300 kg are optionally available.



Suspension eye
According to DIN 15112 spring balancers must be equipped with additional suspension eyes for the attachment of secondary safety chains.

The comprehensive
Yale product range also offers:



**Trolley clamp
model CTP**
Easy fitting to overhead
beams for the attachment
and transport of loads.



**Push type trolley
model HTP**
The trolley enables easy
traversing of large loads with
either manual or powered
hoisting equipment.



**Beam clamp
model YRC**
Compact and rigid beam
clamp to be used as a versa-
tile rigging point for hoisting
equipment and loads.
Flattened clamping jaws for
use even in confined spaces.



**Geared type trolley
model HTG**
The trolley enables the exact
positioning or easy traversing
of large loads with either
manual or powered hoisting
equipment.



Light crane system



**Floor-mounted jib cranes
Wall-mounted jib cranes
Gantry cranes
Workshop cranes**

Yale Industrial Products GmbH
Am Lindenkamp 31
D-42549 Velbert

Phone: 020 51/600-0
Fax: 020 51/600-194
Web Site: www.yale.de · e-mail: central@yale.de

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