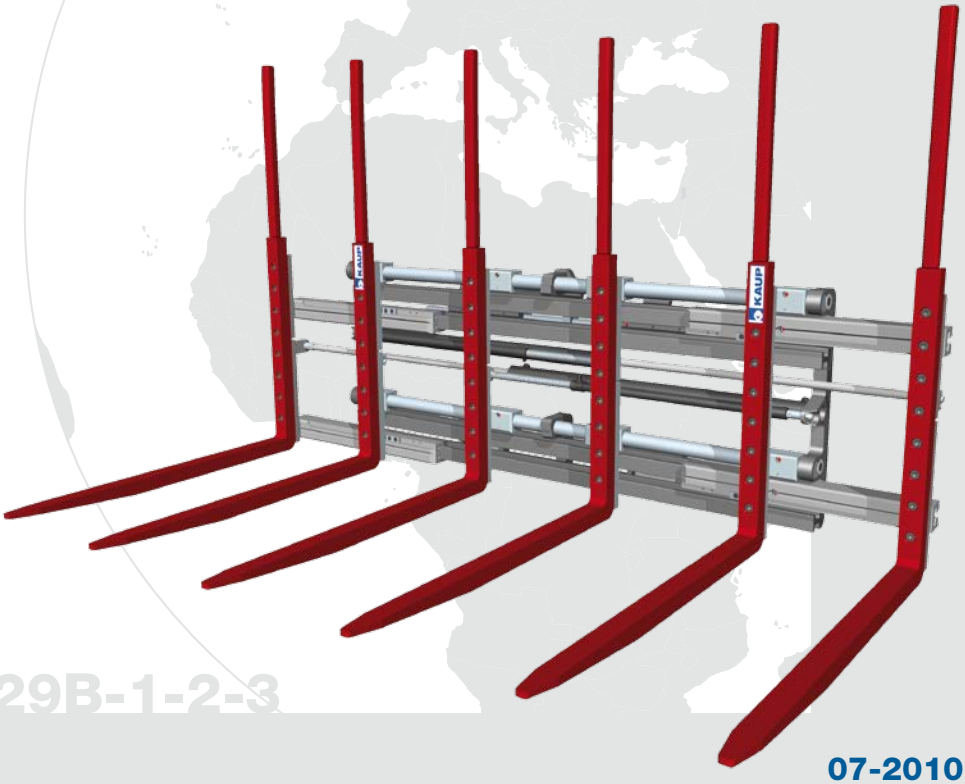
KAUP

Helping hands for your Forklift truck

RANGE BROCHURE
2010



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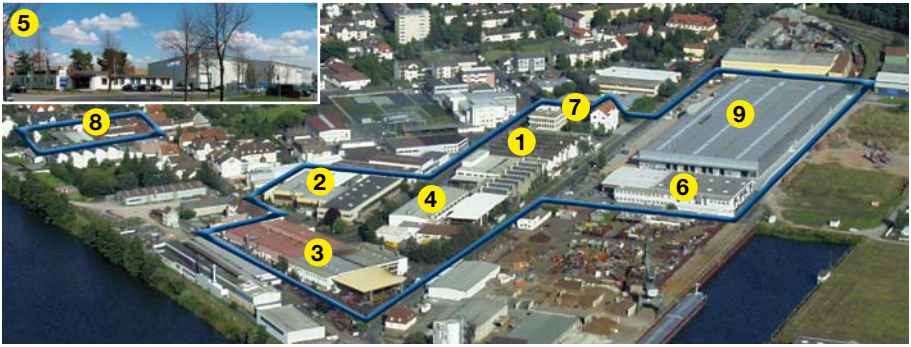

KAUP - Helping hands for your Forklift truck

Innovation is a firm part of the KAUP tradition. The history of KAUP began in 1894 when Peter Kaup set up a village blacksmith's shop in Leider, close to the German city of Aschaffenburg. In the sixty's **Otmar Kaup**, a former designer of forklift trucks, gave the company a new direction by beginning with the production of attachments as well as container spreaders and stationary equipment. This idea of greatly extending the use of lift trucks through purpose-built attachments lead to the name of KAUP becoming known, recognized and respected far afield.

The dedication to always supply the optimum solution for the customer's material handling requirement guaranteed continual growth in the following decades so that the company developed into one of the leading manufacturers of attachments for forklift trucks. KAUP know-how has played a prominent role in forklift trucks today being capable of performing the widest variety of handling tasks. Many of the designs long established in the field of material handling show our handwriting and KAUP remains a driving force behind significant developments in the industry.

Creative expertise ... has earned us European leadership in the line of forklift truck attachments. Future output at our main plant in Aschaffenburg Germany, with 9 factory shops totalling 43.000 square metres of floor area and now under the forth generation of management with **Holger Kaup**, will exceed 40.000 units annually – marketed around the world through seven European branch companies and an international network of 18 representatives. Our 550 employees and 40 apprentices, who have their own apprentice workshop (**8**), are the guarantee for our well known high standard.

KAUP customers have high regard not only for the innovative, reliable technology forming KAUP products but also for their high standard of quality and their excellent value for money, designs that allow easy and economical servicing, and as good as one-hundred percent availability of replacement parts. Our service centre (**6**) alone has a total of 3.200 square meters.

More than anything our customers rely on our proven ability to efficiently solve almost any material handling task.

The principle of short routes. So as to drastically reduce the distances travelled by material in our production, we have grouped the overall workflow into separate product segments operating largely independently. Each product is completed at a single location within the factory. Between cutting and sand blasting, straightening, welding and machining, assembly, inspection and painting, the material usually moves less than a hundred metres in all. No matter if it entails the manufacturing of small (**1**), or large scale (**2** and **3**), items, production of large equipment such as container spreaders and stationary equipment (**4**) or the production of forks (**5**). All design and administration offices (**7**) are directly next to the production halls.

Direction-setting technology. At our main plant in Aschaffenburg some 93 tons of electrode wire is consumed every year by 19 welding robots. The annual volume of 8.800 tons of steel and 820 tons of cast steel that goes into our products is processed on 60 CNC controlled manufacturing centres. Computer-based tool management and our enterprise resource planning system mySAP provide for smooth progress and seamless monitoring of the complete workflow.

Investing in the future. In Aschaffenburg a new factory shop, hall 10 (**9**) was put into operation at the end of 2008. This will increase production floor space by approx. 14.000 square meters. At the same time a new production plant with a production floor space of 12.000 square meters in Xiamen/China will start the production and sales of attachments for the Asian market.

As our company is certified according to **DIN EN ISO 9001** we can guarantee, also in the future, to equip your forklift truck with the optimum attachment to fulfil nearly every material handling requirement.

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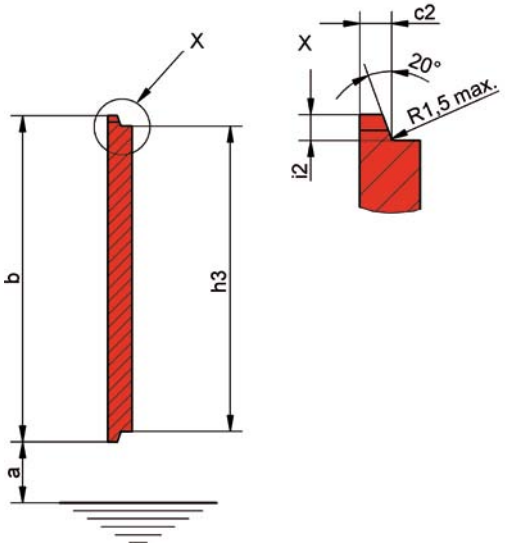
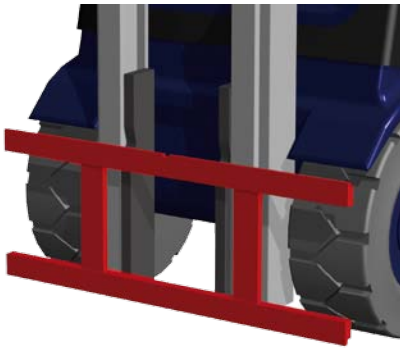
Fork carriage versions according to ISO 2328:

All KAUP attachments with capacities of up to 10.999 kg/600 mm load centre distance (LCD) are suitable for mounting on fork carriages acc. to ISO 2328.
Mountings which differ from the above (e.g. ISO 5, Pin-type, Terminal west or others) are available, please consult us.





ISO Class	Capacity of forklift truck kg	LCD mm	Version	a mm	b -1 mm	c2 mm	i2 mm	h3 mm
1	0 - 999	400	A	76	331	16	13	305
			B	114				
2	1.000 - 2.500	500	A	76	407	16	13	381
			B	152				
3	2.501 - 4.999	500	A	76	508	21,5	16	476
			B	203				
4	5.000 - 8.000	600	A	127	635	25,5	19	597
			B	254				
5	8.001 - 10.999	600	A	127	728	34	25	678
			B	257				

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T 102 VP / UVP / UH	Block arms – slip-on	48
T 103 A	Bale arms – slip-on	49
T 103 AG	Bale arms – rubber coated – slip-on	49
T 105 A	Drum arms – slip-on	49
T 106 AH / A-2H	Rotating roll arms – slip-on	49
T 124	Telescopic load stabilizer	84
T 129	Load stabilizer	84
T 140 / SV / E	Reach fork	77-78
T 141 S	Pusher	81
T 142 S	Pusher with pallet retainer	81
T 143 S / SA	Push-Pull (A = slip-on version)	81-82
T 144 S	Push-Pull with sideshift	82
T 145 S / SA	Push-Pull with sheet saver (A = slip-on version)	81, 83
T 146 S	Push-Pull with sheet saver and sideshift	83
T 149 / Z	Pantograph	78
T 151 P2/P4/I/IN/PC	Sideshifter	12-17
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General Information

1. Terms of delivery
All KAUP attachments up to ISO class 4 mounting with the exception of integrated types and sideshifter model 2T151P4N (see page 12) are supplied including hoses and couplings.

2. Capacity and safety
The T-classes **1T – 40T** relate to the capacity of the forklift truck. Attachment capacity is the max. weight at a given load centre that the attachment can safely support. Please note: The capacity listed for clamps is an indication of the max. weight that the clamp structure can safely support. It is not necessarily the max. weight that can be picked up and held between the arms, as different loads vary in shape and friction.
KAUP attachments correspond to the requirements of the valid EC regulations regarding quality, safety and technical documentation.
All KAUP attachments with independent sideshift are equipped with components from our sideshift range T151P2. This means that all attachments with independent sideshift feature SOFTSTOP end-of-stroke slow down to automatically throttle shifting speed over approximately the last 15 mm of sideshift stroke. This greatly improves truck stability when stacking at high levels. It also incorporates our SMOOTHROLL bottom hooks with needle bearing rollers.

3. Dimensions, weight and technical data are non-binding. The opening ranges are measured near the sliding profiles and do not take into account the toe-in between the tips and the end of the clamping arms.

4. Toe-in. The distance between the arms or forks (e.g. Bale Clamps, Brick Clamps, Fork Clamps) differs, measured on the tips of the arms compared to the rear side of the arms. This is referred to as clamp toe-in. The opening ranges given in our brochure are always measured at the rear of the arms. With an arm length of 1.000 mm the toe-in is approximately 30 mm (15 mm to each side). This is necessary to compensate the natural deflection of the clamping arms during transport. Without toe-in loads would be clamped on the rear side but would fall through the tips. For handling sensitive goods such as television sets Appliance clamps and Carton Clamps with adjustable toe-in are available.

5. Operation in explosion hazardous areas
Many attachments from the KAUP range are, after appropriate modifications, suitable for operation in explosion hazardous areas. All these attachments are manufactured according to the ATEX standard 94/9 EG II 2G c IIB T4. Due to the complexity of the subject please contact our specialists in each case.

6. Preferential range
In the table some specific attachments are highlighted in yellow. These versions are the most common sizes, widths and opening ranges. The choice of such a version ensures favourable / short delivery times.

7. Welding certificate
Our products are quality products which require a substantial amount of welding. Therefore KAUP welding conforms to DIN 18800 and in accordance with German Lloyd regulations.

General note to our customers

The list of products detailed in the following pages is limited to standard KAUP attachments. Countless modifications are feasible and a large backup programme of less common attachments is available by contacting your distributor. The data listed in the most recent issue apply and any preceding publications should be discarded.

All specifications are subject to change without notice, typographical errors reserved.

Contact our specialists if you have a special requirement

KAUP is certified according to DIN EN ISO 9001

The shown prices are gross prices without value added tax.
Our general conditions of sale apply, these can be viewed on **www.kaup.de** or will be mailed to you upon request.

Attachments with sideshift function

Independent or valveblock sideshift – a comparison of systems

Independent sideshift

Sideshift is the most common additional function on a forklift truck. Therefore nearly all KAUP fork positioners and clamps are standardly equipped with independent sideshift. This solution does not negatively affect the lost load centre and therefore does not influence the residual capacity of the forklift truck. The extensive range of KAUP sideshifters and multi sideshifters in different versions are described in detail on pages 12 to 17. The components of the sideshifter range **„P2“** are used in the production range of all combinations with sideshift. This system is specified by KAUP as **„independent sideshift“**.

The advantages of independent sideshift

1. The maximum allowable sideshift stoke (e.g. ± 100 mm) or any other data given by the forklift truck manufacturer can be adhered to without additional restrictions on the residual capacity.
2. Sideshift function is always available, independent of fork or arm position (clamp or fork positioners).
3. End of stroke slow down **-SOFTSTOP-** reduces the speed over the last 15 mm and therefore prevents accidents.
4. The lower roller guides **-SMOOTHROLL-** assure a smooth lateral movement, prevent wear and tear and save energy.
5. **Components of KAUP independent sideshift are designed so that the lost load centre of the attachment does not increase and accordingly the residual capacity of the truck is not reduced.**

Valveblock sideshift

In addition to the independent sideshift system all KAUP clamps and fork positioners are available with so called integrated or valveblock sideshift function. This version uses the rest stroke of the cylinder for the function „sideshift“. Therefore the sideshift function is not available in completely opened and/or completely closed position of arms. Sideshift values in the intermediate positions can be considerably above maximum safety values for lateral stability.

Nearly all KAUP attachments are available with either valveblock sideshift or independent sideshift, as required, at no extra cost.

The maximum possible lateral stroke of valveblock sideshift can be calculated with the following formula:

Calculation of largest possible valveblock sideshift stroke:

		Example
Largest possible opening range (largest measurement „A“ selected from the table)		2.370 mm
minus smallest possible opening range (smallest measurement „A“ selected from the table)	–	570 mm
results in	=	1.800 mm
divided by the factor 4	: : 4	1.800 mm : 4
largest possible sideshift stroke ±	=	450 mm

For example see Appliance Clamp 2T413G, construction width 1.520 mm, A = 570 - 2.370 mm, page 59.

Hydraulic System

WORKING PRESSURES AND OIL FLOW RATES

Most of the attachments listed in this booklet are operated hydraulically i.e. the attachments are supplied with oil from the forklift truck's hydraulic systems. The number of hydraulic functions required is listed next to each attachment. If an attachment requires more than two hydraulic functions, one of the hydraulic circuits is split by use of a solenoid valve. Generally this is the circuit which, with regards to the functional safety of the attachment, is of less significance. **In these cases the solenoid valve is a part of the attachment.**

The assembly kit necessary for the actuation of the solenoid valve must be ordered separately. When mounting the attachment on a truck with standard or duplex mast the assembly kits listed on page 97 are the most suitable. If mounting on a truck with triplex mast an electric spring cable drum as offered on page 97 should be used. If the truck is equipped with a Joystick it should be checked which assembly kit is best suited.

To ensure correct operation of the solenoid valve we require exact information regarding the voltage of the forklift truck.

In order to ensure the proper function of the KAUP attachment we recommend that you take note of the recommended oil flow rates and hydraulic pressures for the different attachment groups.

KAUP
used equipment sales and rental service

A pool of approx. 500 attachments are available for rental and used equipment sales in our 3.200 m² large service centre in Aschaffenburg.

Used equipment market:

A selection of current used attachments with pictures, technical details and price can be viewed on our web site **www.kaup.de** under 'PRODUCTS'. This data is updated and extended on a regular basis. If you can't find what you are looking for - just ask our specialists. Our service team will be pleased to assist you.

Your contact persons are:

- Mr. Harry Mirle Tel.: +49 6021 865-389 Fax: 843-762 E-Mail: harry.mirle@kaup.de
- Mrs. Christine Brunner Tel.: +49 6021 865-402 Fax: 843-778 E-Mail: christine.brunner@kaup.de

Rental service:

All used attachments listed on our web site are also available on a rental basis: whether you require the unit for one day or for several months - we are the right partner for you. You require an attachment to bridge the gap until your own attachment is repaired? You have a material handling project which only requires an attachment for a short time? You want to test which attachment is best suited for your material handling task?
Take advantage of the KAUP rental service …. quick, simple and economical!

Further information and all relevant details can be found on **www.kaup.de**

Recommended Oil flow rates, Pressures and Forklift truck capacities

Sideshifters and Multiple Sideshifters

Attachment	Page	Oil volume (l/min) min.	optimum	max.	Pressure maximum	max. capacity FLT (kg/mm LCD)
2 T 151 P4	12/14	4	8	12	200	2.500/500
2 T 151 P2 / 151 I	13/15	4	8	12	200	2.500/600
3 T 151 P2 / 151 I	13/15	4	8	12	200	3.000/500
4 T 151 P2 / 151 I	13/15	4	8	12	200	5.000/500
4,8 T 151 P2 / 151 I	13/15	4	8	12	200	5.000/600
5 T 151 P2 / 151 I	13/15	6	12	16	200	5.000/600
5,5 T 151 P2 / 151 I	13/15	6	12	16	200	5.000/600
6 T 151 P2 / 151 I	13/15	6	12	16	200	8.000/600
10 T 151 P2 / 151 I	13/15	6	12	16	200	8.000/900
2 T 151 P4N-C	14	4	8	12	200	2.500/500
2 T 151 P-C	14	4	8	12	200	2.500/500
4 T 151 P-C	14	4	8	12	200	5.000/500
6 T 151 P-C	14	6	12	16	200	8.000/600
2 T 252 B	16	6	12	20	200	2.500/600
3 T 252 B	16	6	12	20	200	3.500/500
4 T 252 B	16	6	12	20	200	4.500/600
5 T 252 B	16	8	16	25	200	5.500/600
6 T 252 B	16	8	16	25	200	8.000/600
2 T 253 B	17	6	12	20	200	2.500/600
3 T 253 B	17	6	12	20	200	3.500/500
4 T 253 B	17	6	12	20	200	4.500/600
5 T 253 B	17	8	16	25	200	5.500/600
6 T 253 B	17	8	16	25	200	6.000/600
2 T 253 B-3	17	6	12	20	200	3.000/500
3 T 253 B-3	17	6	12	20	200	3.500/500
4 T 253 B-3	17	6	12	20	200	4.500/600
6 T 253 B-3	17	8	16	25	200	6.000/600


T151P4


T151P2


T253B

Sideshifters

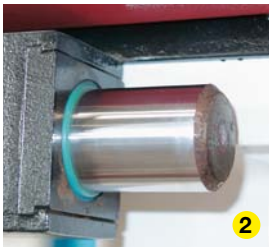
are the most common attachment encountered on forklift trucks. The sideshifter allows lateral shift of the load, taking the truck capacity into account, of ±100 up to ±160 mm.

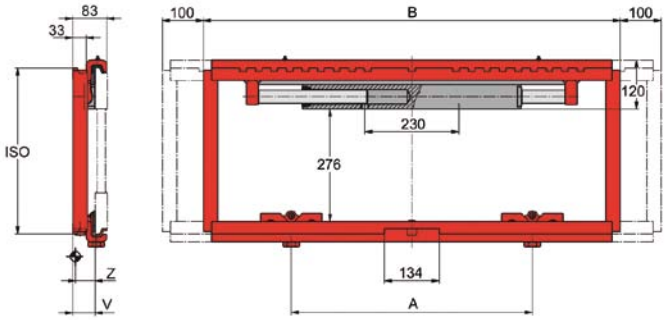
A special version, the so called container sideshifter (see page 14), features increased sideshift strokes.

P4 Series
Bottom brackets with **EASYSLIDE** greasable sliding pads. 1

Exchange of seal kits without any tool **QUICKSEAL** 2

P2 Series
Bottom brackets with needle bearing rollers **SMOOTHROLL** and end-of- stroke slow-down **SOFTSTOP** 3 4





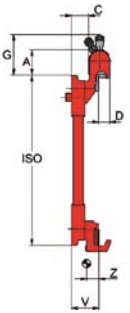
EX

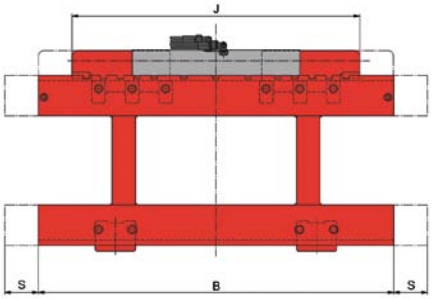
Sideshifter
Standard Model 2T151P4N

Quick mounting, hook-on type,
bottom mounting brackets with **EASYSLIDE** greasable sliding pads.
Capacity 2.500 kg at 500 mm LCD, max. width 1.190 mm – 1 hydraulic function

Model	B mm	A mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 151 P4 N	890	550	2	55	20	51
2 T 151 P4 N	920	590	2	55	20	52
2 T 151 P4 N	980	590	2	55	20	54
2 T 151 P4 N	1.000	590	2	55	20	54
2 T 151 P4 N	1.020	590	2	55	20	55
2 T 151 P4 N	1.040	590	2	55	20	56
2 T 151 P4 N	1.100	590	2	55	20	57
2 T 151 P4 N	1.150	590	2	55	20	58

Preferential range





Quick mounting, hook-on type, end-of-stroke slow-down **SOFTSTOP**, high visibility design, e.g. CofG up to 1.800 mm,
Bottom brackets with needle bearing rollers, **SMOOTHROLL**.

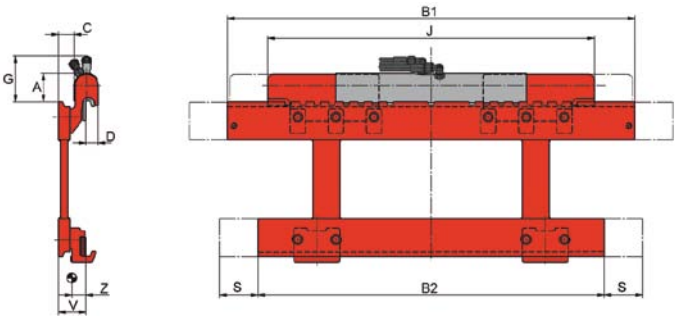
EX

Sideshifter High-Performance Model T151P2 - 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	C mm	D mm	S mm	G mm	J mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 151 P2	2.500/600	76	890	44	32	100	116	858	2	72	37	70
		76	920	44	32	100	116	858	2	72	37	72
		76	980	44	32	100	116	858	2	72	38	74
		76	1.020	44	32	100	116	858	2	72	39	76
		76	1.040	44	32	100	116	858	2	72	39	77
		76	1.100	44	32	100	116	858	2	72	40	80
		76	1.150	44	32	100	116	858	2	72	43	97
		76	1.200	44	32	100	116	858	2	72	43	100
		76	1.300	54	32	100	116	858	2	82	44	105
		76	1.600	54	32	100	116	858	2	82	52	146
3 T 151 P2*	3.000/500	76	1.020	54	34	100	116	858	3	82	45	106
		76	1.070	54	34	100	116	858	3	82	45	110
		76	1.100	54	34	100	116	858	3	82	46	112
		76	1.150	54	34	100	116	858	3	82	46	115
		76	1.300	54	34	100	116	858	3	82	48	132
		76	1.600	64	34	100	116	858	3	92	57	207
4 T 151 P2	5.000/500	85	1.100	50	40	100	125	1.040	3	82	41	136
		85	1.150	50	40	100	125	1.040	3	82	41	139
		85	1.200	50	40	100	125	1.040	3	82	42	143
		85	1.300	50	40	100	125	1.040	3	82	44	156
		85	1.310	50	40	100	125	1.040	3	82	44	156
		85	1.350	50	40	100	125	1.040	3	82	44	165
		85	1.400	50	40	100	125	1.040	3	82	45	180
		85	1.410	50	40	100	125	1.040	3	82	45	180
		85	1.600	60	40	100	125	1.040	3	92	54	231
		85	1.800	60	40	100	125	1.040	3	92	55	248
		85	2.000	60	40	100	125	1.040	3	92	56	256
4,8 T151 P2	5.000/600	103	1.150	42	44	100	165	922	3	82	39	149
		103	1.200	42	44	100	165	922	3	82	40	153
		103	1.300	42	44	100	165	922	3	82	42	166
		103	1.310	42	44	100	165	922	3	82	42	166
		103	1.350	42	44	100	165	922	3	82	42	175
		103	1.410	42	44	100	165	922	3	82	44	190
		103	1.600	52	44	100	165	922	3	92	52	241
		103	1.800	52	44	100	165	922	3	92	53	258
		103	2.000	52	44	100	165	922	3	92	56	313
5 T 151 P2	5.000/600	80	1.220	60	42	100	125	1.040	4	92	51	212
		80	1.400	60	42	100	125	1.040	4	92	53	231
		80	1.800	70	42	100	125	1.040	4	102	63	334
		80	2.180	70	42	100	125	1.040	4	102	63	383
		80	2.260	70	53	100	125	1.040	4	112	65	455
5,5 T151 P2	7.000/600	96	1.220	52	44	100	156	922	4	92	50	230
		96	1.400	52	44	100	156	922	4	92	51	249
		96	1.800	62	44	100	156	922	4	102	61	352
		96	2.180	62	44	100	156	922	4	102	62	401
		96	2.260	62	44	100	156	922	4	102	62	473
6 T 151 P2	8.000/600	112	1.400	50	53	160	212	1.392	4	92	42	295
		112	1.800	60	53	160	212	1.392	4	102	53	397
		112	2.180	60	53	160	212	1.392	4	102	55	446
		112	2.260	70	53	160	212	1.392	4	112	61	516
10 T 151	8.000/1.100	112	1.800	54	53	160	45	1.510	4	106	46	455
		112	2.000	54	53	160	45	1.510	4	106	46	490
		112	2.260	54	53	160	45	1.510	4	106	46	535
		112	2.400	54	53	160	45	1.510	4	106	46	560

Preferential range *Exclusively for FLT's with 3.000 kg. capacity at 500 mm LCD.

Load Backrest Model T179 see page 91.



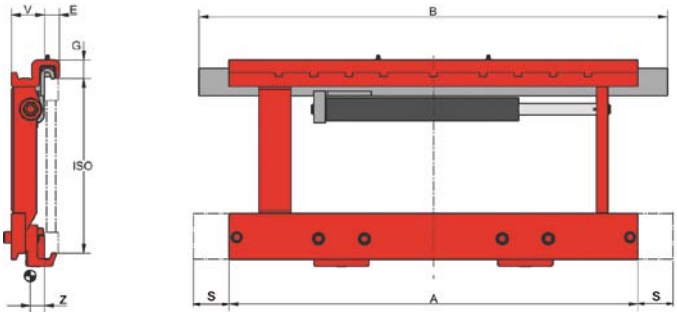
Quick mounting, hook-on type, end-of-stroke slow-down **SOFTSTOP,** high visibility design, e.g. CofG up to 1.800 mm,
Bottom brackets with needle bearing rollers, **SMOOTHROLL**.

Fig. 2T151P2

Sideshifter for Reach Trucks 2T151P2 / P4N - 1 hydraulic function

Model	Capacity kg	A mm	B1 mm	B2 mm	C mm	D mm	G mm	S mm	J mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 151 P2	2.500/600	76	890	680	44	32	116	100	858	2	72	36	66
		76	680	680	44	32	116	100	858	2	72	36	56
2 T 151 P4N	2.500/500	20	900	720	33	33	---	75	---	2	55	24	45
		20	822	720	33	33	---	50	---	2	55	24	44

Load Backrest Model T179 see page 91. 2T151P4 with EASYSLIDE greasable sliding pads.



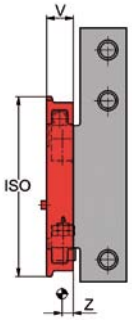
Sideshifter with increased sideshift stroke T151P-C

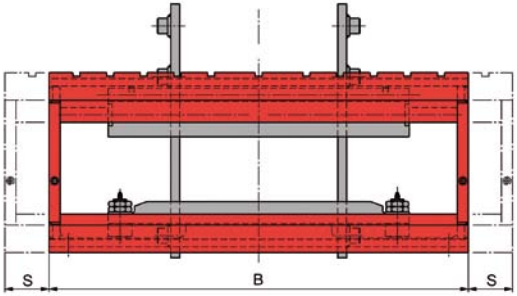
for container stuffing applications – 1 hydraulic function

Model	Capacity kg	A mm	S mm[1)]	B mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 151 P4N-C	2.500/500	780	160	800	33	33	2	55	21	55
2 T 151 P-C	2.500/500	780	225	1.020	33	40	2	72	34	57
		1.060	225	1.020	33	40	2	72	35	68
		1.150	225	1.020	33	40	2	72	35	73
4 T 151 P-C	5.000/500	780	250	1.100	40	49	3	82	36	90
		1.200	250	1.100	40	49	3	82	38	117
		1.600	250	1.100	40	49	3	82	40	143
6 T 151 P-C	8.000/600	1.800	250	1.100	50	66	4	107	55	301

Preferential range

[1)] Differing shift strokes available upon request.
Load Backrest Model T179 see page 91. 2T151P4-C with EASYSLIDE greasable sliding pads.





EX

Sideshifter, integral mounting T151I - 1 hydraulic function

Model	Capacity kg	B mm	S mm	ISO cl.	V mm	CofG[1] Z mm	Weight[1] kg
1,5 T 151 I	1.750/500	1.040	100	2	61	36	92
2,5 T 151 I	2.500/500	1.150	100	2	70	36	102
3 T 151 I	3.000/500	1.150	100	3	75	35	130
3,5 T 151 I	3.500/500	1.150	100	3	85	43	135
4,5 T 151 I	4.500/500	1.350	100	3	85	44	200
4,8 T 151 I	5.000/500	1.350	100	3	90	43	220
6 T 151 I	6.000/600	1.550	140	4	95	47	280
		1.650				47	298
		1.800				47	310
8 T 151 I	8.000/600	1.800	140	4	120	60	458
		2.260				62	556
10 T 151 I	8.000/1.100	1.860	160	4	130	66	625
		2.260				67	715
		2.400				67	735
12 T 151 I[2]	12.000/600	2.600	150	--	215	165	2.650
16 T 151 I[2]	16.000/600	2.800	150	--	215	175	2.780

Higher capacities and other construction widths available upon request.

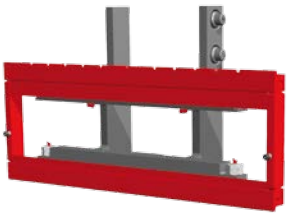
[1] CofG and weight measurements do not take the cheek plates into account.
[2] Including forks, optional 180 x 80 x 1.200 mm or 180 x 90 x 1.200 mm.

To determine the residual capacity the difference between measurement „V“ and the appropriate clearance of the serial fork carriage should be taken into account.

Load Backrest Model T179 see page 91.

T151P-C

2T151P2

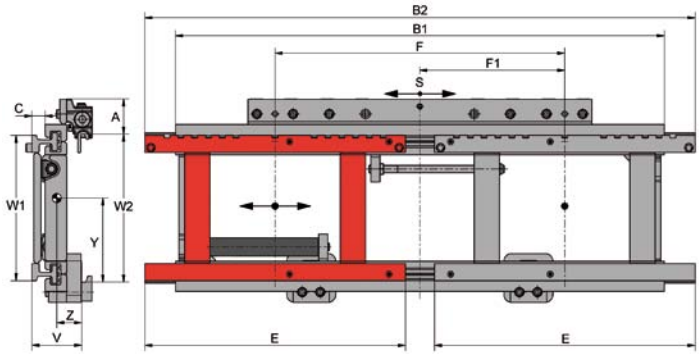


T151I

Multi Sideshifters

According to the version they allow pick up of two, three, four or even five pallets which considerably rationalizes the application of the forklift truck. KAUP Multi Sideshifters are equipped with one main sideshifter which allows the entire load to be shifted together. The two, three, four or five additional fork carriages are partly equipped with individual sideshifters. These individual sideshifters allow moving each carriage separately by solenoid valves or simultaniously / synchronized by flow dividers.

Multi Sideshifters should only be used when the exact number of loads will be picked up every time. Please note, if individual loads are picked up off-centre, damage might be caused to the mast or fork carriage.



Double Sideshifter T252B - 2 hydraulic functions

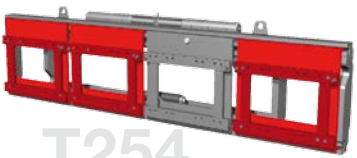
Model	Capacity per fork carriage kg/mm	Mounting W1 ISO	Mounting W2 ISO	A mm	Const. width B1 mm	Const. width B2 mm	C mm	E mm	Adjusting range F mm	Adjusting range F1 mm	Adjusting range S mm	CofG V mm	CofG Z mm	$CofG_v$ Y mm	Weight kg
2 T 252B-L	1.250/600	2	2	98	1.350	1.520	36	720	800-1.000	400	± 100	138	66	232	187
2 T 252B-Q	1.250/600	2	2	98	1.550	1.780	36	800	980-1.300	580	± 100	138	67	230	203
3 T 252B-L	1.750/600	2	3	85	1.350	1.520	36	720	800-1.000	400	± 100	138	63	263	205
3 T 252B-Q	1.750/600	2	3	85	1.550	1.780	36	800	980-1.300	580	± 100	138	64	259	221
4,5 T 252B-L	2.000/600	2	3	85	1.350	1.520	36	720	800-1.000	400	± 100	148	68	255	240
4,5 T 252B-Q	2.000/600	2	3	85	1.550	1.780	36	800	980-1.300	580	± 100	148	69	251	256
5 T 252B-L	2.750/600	3	4	118	1.460	1.520	41	720	800-1.000	400	± 100	153	73	322	335
5 T 252B-Q	2.750/600	3	4	118	1.600	1.780	41	800	980-1.300	580	± 100	153	74	319	350
6 T 252B-L	2.000/1.200	4	4	135	1.460	1.520	56	720	800-1.000	400	± 160	176	80	363	412
6 T 252B-Q	2.000/1.200	4	4	135	1.860	1.780	56	800	980-1.300	580	± 160	176	81	360	436

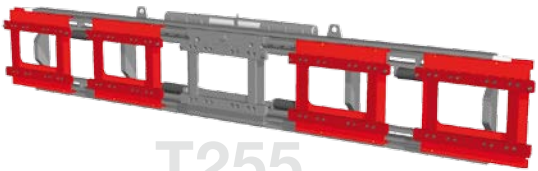
Preferential range

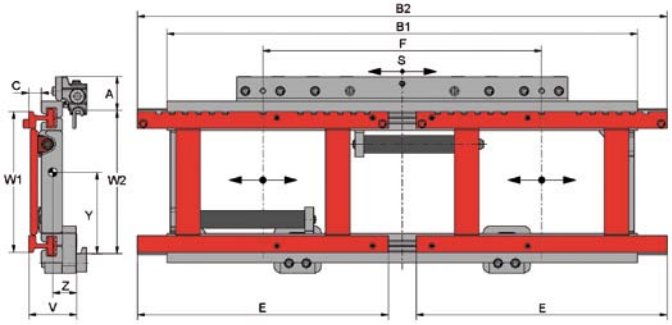
L = Pallet handling lengthwise / Q = Pallet handling crosswise.
Forks see pages 92 and 93. Please observe necessary fork shank under-clearance.
Load Backrest Model T173 s. page 91.

Quadruple Sideshifter T254 and Quintuple Sideshifter T255

available upon request





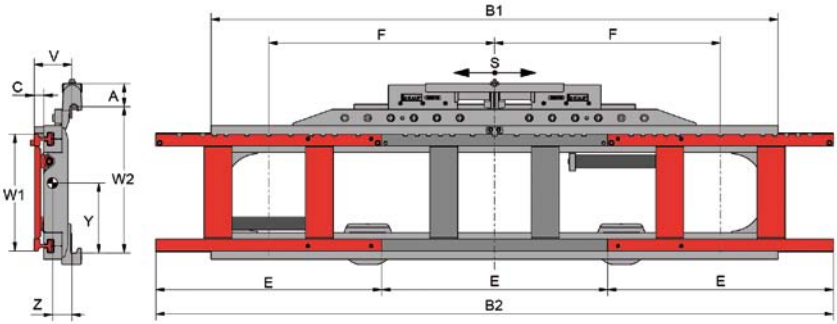


Triple Sideshifter T253B - 2 hydraulic functions[1)]

Model	Capacity per fork carriage kg/mm	Mounting W1 ISO	Mounting W2 ISO	A mm	Const. width B1 mm	Const. width B2 mm	C mm	E mm	F mm	S mm	V mm	CofG Z mm	CofG$_v$ Y mm	Weight kg
2 T 253B-L	1.250/ 600	2	2	98	1.350	1.520	36	720	800-1.200	± 100	138	66	234	191
2 T 253B-L/Q	1.250/600	2	2	98	1.550	1.600	36	800	800-1.440	± 100	138	67	231	207
3 T 253B-L	1.750/600	2	3	85	1.350	1.520	36	720	800-1.200	± 100	138	63	264	209
3 T 253B-L/Q	1.750/600	2	3	85	1.550	1.600	36	800	800-1.440	± 100	138	65	260	225
4,5 T 253B-L	2000/600	2	3	85	1.350	1.520	36	720	800-1200	± 100	148	68	255	244
4,5 T 253B-L/Q	2000/600	2	3	85	1.550	1.600	36	800	800-1440	± 100	148	69	251	260
5 T 253B-L	2.750/600	3	4	118	1.460	1.520	40	720	800-1.200	± 100	153	73	322	339
5 T 253B-L/Q	2.750/600	3	4	118	1.600	1.600	40	800	800-1.440	± 100	153	74	320	355
6 T 253B-L	2.000/1.200	4	4	135	1.460	1.520	56	720	800-1.200	± 160	176	81	366	419
6 T 253B-L/Q	2.000/1.200	4	4	135	1.600	1.600	56	800	800-1.440	± 160	176	82	363	445

Preferential range

L = Pallet handling lengthwise / Q = Pallet handling crosswise / L / Q = Pallet handling lengthwise or crosswise. Load Backrest Model T173 s. page 91. [1)] Alternatively with solenoid valve or flow divider. Forks see pages 92 and 93. Please observe necessary fork shank under-clearance.



Triple Sideshifter T253B-3

with 3 sideshifting carriages - 2 hydraulic functions + solenoid valve/flow divider[1)]

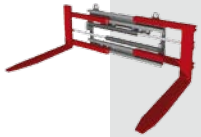
Model	Capacity per fork carriage kg/mm	Mounting W1	Mounting W2	A mm	Const. width B1 mm	Const. width B2 mm	C mm	E mm	F mm	S mm	V mm	CofG Z mm	CofG$_v$ Y mm	Weight kg
3 T 253B-L-3	900/600	2	3	85	2.100	2.160	35	720	720-1.000	± 100	148	68	269	380
3 T 253B-Q-3	900/600	2	3	85	2.700	2.940	35	980	980-1.260	± 100	158	76	265	420
3 T 253B-L/Q3	900/600	2	3	85	3.050	2.400	35	800	800-1.390	± 100	158	72	267	460
6T 253B-L-3	1.500/600	3	4	118	2.260	2.320	41	720	800-1.050	± 100	162	82	307	545
6T 253B-Q-3	1.500/600	3	4	118	2.460	2.940	41	980	980-1.230	± 100	162	84	303	595
6T 253B-L/Q-3	1.500/600	3	4	118	2.460	2.320	41	720	800-1.200	± 100	162	82	305	570

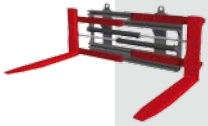
L = Pallet handling lengthwise / Q = Pallet handling crosswise / L / Q = Pallet handling lengthwise or crosswise.
[1)] Alternatively with solenoid valve or flow divider. Forks see pages 92 and 93. Please observe necessary fork shank under-clearance.

Recommended Oil flow rates and Pressures

Fork Positioners

Model	page	Oil volume (l/min) min.	optimum	max.	Pressure (bar) maximum
2 T 163 N / SN	19	12	20	25	180
4 T 163 N / SN	19	12	20	25	180
4,5 T 163 N / SN	19	12	20	25	180
6 T 163 N / SN	19	15	25	35	180
8 T 163 N / SN	19	15	25	35	180
1,5 T 160 BZ	22	15	25	30	180
2 T 160 B / Z	20-23	15	25	30	180
3,5 T 160 B / Z	20-23	15	25	30	180
4,5 T 160 BZ	22	15	25	30	180
4,8 T 160 B / Z	20-23	15	25	30	180
6 T 160 / Z	20-23	50	65	80	180
8 T 160 / Z	20-23	50	65	80	180
10 T 160 / Z	20-23	50	65	80	180
1,5 T 466 / 466 Z	24-27	15	25	30	180
1,5 T 466 BZ	24-27	15	25	30	180
2 T 466 B / 466 BZ	24-27	15	25	30	180
3,5 T 466 B / 466 BZ	24-27	15	25	30	180
4,5 T 466 BZ	24-27	15	25	30	180
4,8 T 466 B / 466 BZ	24-27	15	25	30	180
6 T 466 / 466 Z	24-27	25	40	50	180
8 T 466 / 466 Z	24-27	50	65	80	180
10 T 466 / 466 Z	24-27	50	65	80	180
1 T 411 Z / ZR	30-31	12	20	35	180
1,5 T 411 Z / ZR	30-31	12	20	35	180
2 T 411 Z / ZR	30-31	12	20	35	180
3 T 411 Z	30	12	20	35	180
4 T 411 Z	30	12	20	35	180
4,5 T 411 Z	30	15	25	45	180
5 T 411 Z	30	15	25	45	180
4 T 411 BZ (I)	30-31	12	20	25	180
5 T 411 BZ (I)	30-31	15	25	45	180
6 T 411 BZ (I)	30-31	25	40	60	180
8 T 411 BZ (I)	30-31	25	40	60	180





KAUP Fork Positioners

After sideshifters the second most popular attachments for forklift trucks are Fork Positioners. They are an important accessory of the forklift truck, especially when the widths of the loads change constantly. Adjustment of the distance between forks accommodating to different widths is an important aspect of safety in this kind of operation. KAUP realises the importance of these attachments and has therefore four different series in the programme.

Series T163SN: Inexpensive, simple Fork Positioner with independent sideshift and absolutely symmetrical fork adjustment via positive synchronism by a chain. The original forklift truck forks can be used. The construction width and therefore the opening range of the attachment is not dependent on the width of the fork carriage of the forklift truck. Also available without sideshift function (T163N).

Series T160: Very economical Fork Positioner which allows the forklift truck driver excellent view on to the fork tips and the load. Fork Positioners T160 have a very favourable lost load centre. Therefore the achievable residual capacity is very good. Attachments in this range are fitted with „valve block sideshift“ as standard (see explanation on page 9). The original forklift truck forks can be used.

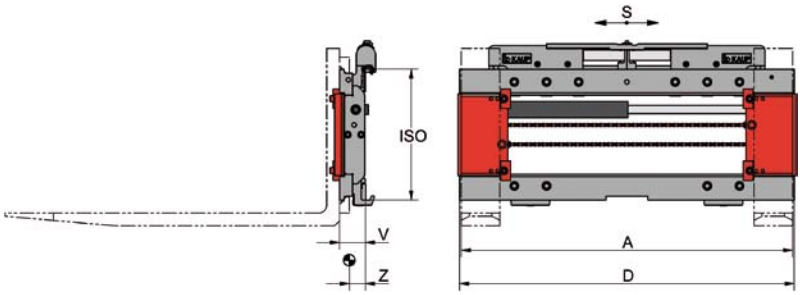
Series T466: Extremely variable concept with a total of four different versions:

T466..... hook-on design allowing the use of the original truck forks
T466Z ..... hook-on design with forks welded on
T466 I ..... integrated design allowing the use of the original truck forks
T466IZ ..... integrated design with forks welded on

Especially the integrated versions with welded on forks offer an excellent residual capacity. The hook-on versions are also available without sideshift function.

Series T411Z, T411BZ, T411BZI und T411R (Fork Positioner with round forks)

Fork Positioners for extremely tough operation. The T411Z range of Fork Positioners is based on the T400 Clamp series. The forks can be opened further than the width of the clamp body. Due to the large profile overlapping between fork guide and clamp body, spreading forces e.g. for the transportation of coils or cable drums, can easily be done. Independent sideshift enables the load to be handled with the forks fully opened or closed together. The BZ and BZI versions function valveblock sideshift. (No sideshift possible when the forks are opened to the widest position). Sideshift strokes are dependent on opening range. This version is standard design concept for large opening ranges - up to 5.600 mm measured over the inner edges of forks. The BZI version is for integration into the mast to achieve even better residual capacities.



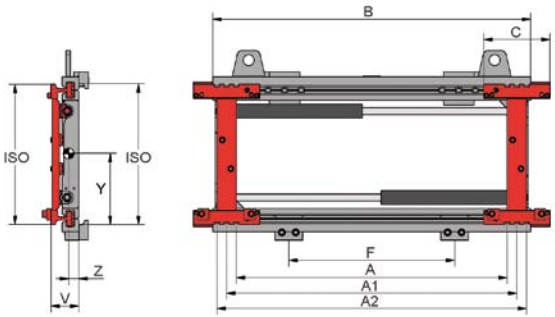
Fork Positioner T163SN

with **independent sideshift** – for forks acc. to ISO 2330 (supplied without forks) – 2 hydraulic functions

Model	Capacity kg	S mm	Opening range A mm	D mm	Fork width mm	ISO cl.	CofG V mm	CofG Z mm	Weight kg
2 T 163 SN	2.500/500	± 100	350- 820	830	70-120	2	82	41	90
			350- 820	830	125-140		82	41	91
			310-1.030	1.040	70-120		82	43	102
			350-1.030	1.040	125-140		82	43	103
			430-1.150	1.160	70-120		82	44	108
			390-1.350	1.360	70-120		82	51	133
			390-1.490	1.500	70-120		92	52	142
			390-1.690	1.710	70-120		92	51	170
			500-2.120	2.130	70-120		92	53	208
4 T 163 SN	4.000/500	± 100	390-1.030	1.040	90-160	3	82	41	158
			430-1.150	1.160	90-160		82	42	167
			390-1.350	1.360	90-160		82	43	182
			390-1.490	1.510	90-160		92	51	219
			390-1.690	1.710	90-160		92	52	237
4,5 T 163 SN	5.000/500	± 100	430-1.150	1.160	90-160	3	92	48	187
			390-1.350	1.360	90-160		92	50	205
			390-1.790	1.810	90-160		112	64	318
			450-1.900	1.910	90-160		112	64	330
5 T 163 SN	5.000/600	± 100	470-1.190	1.200	150-200	4	102	57	256
6 T 163 SN	8.000/600	± 160	470-1.390	1.400	150-200	4	102	46	345
			500-1.680	1.690	150-200		102	50	385
			470-1.870	1.880	150-200		112	58	451
			530-1.980	1.990	150-200		112	58	463
8 T 163 SN	8.000/600	± 160	500-2.120	2.130	150-200	4	132	68	588
			530-2.380	2.400	150-200		132	70	642

Preferential range

The KAUP series T163 is not suitable for clamping between the forks. Forks see pages 92 and 93. The original forks of the forklift truck, up to length of 1.600 mm, can be used. If using longer forks the minimum bracket width to be selected is 250 mm (recommended width).
Load Backrest Model T173 s. page 91.
Model T163N – without sideshift



EX

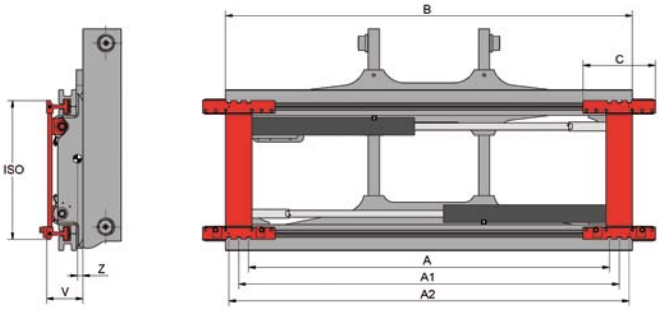
Fork Positioner T160

with **valveblock sideshift** dependent on opening range without forks - for forks acc. to ISO 2330 - 2 hydraulic functions

Model	Capacity kg/mm	Opening range centre to centre fork A mm	A1 mm	A2 mm	B mm	C mm	F[1] mm	suitable for max. fork width	ISO cl.	V mm	CofG Z mm	CofGv Y mm	Weight kg
2 T 160B	2.500/500	150-690	250-790	320-860	880	240	600	120	2	96	32	237	110
		150-790	250-890	320-960	980						32	235	115
		150-850	250-950	320-1.020	1.040						32	234	119
		150-950	250-1.050	320-1.120	1.150						31	232	125
		150-1.150	250-1.250	320-1.320	1.350						31	230	137
		150-1.250	250-1.350	320-1.420	1.450						31	228	143
		150-1.350	250-1.450	320-1.520	1.550						30	227	149
		150-1.450	250-1.550	320-1.620	1.650						29	224	155
3,5 T 160B	3.600/500	180-880	250-950	320-1.020	1.040	240	600	130	3	101	38	258	119
		180-980	250-1.050	320-1.120	1.150						37	257	125
		180-1.180	250-1.250	320-1.320	1.350						37	257	137
		180-1.280	250-1.350	320-1.420	1.450						36	255	143
		180-1.380	250-1.450	320-1.520	1.550						35	255	149
		180-1.480	250-1.550	320-1.620	1.650						34	254	155
4,8 T 160B*	5.000/600	180-980	250-1.050	320-1.120	1.150	255	650	150	3	111	42	252	196
		180-1.180	250-1.250	320-1.320	1.350						41	253	214
		180-1.280	250-1.350	320-1.420	1.460						40	253	223
		180-1.360	250-1.430	320-1.500	1.550						40	254	232
		180-1.480	250-1.550	320-1.620	1.650						40	254	246
		180-1.580	250-1.650	320-1.720	1.750						39	255	260
		180-1.680	250-1.750	320-1.820	1.850						39	255	274
6 T 160	6.000/600	260-1.060	350-1.150	440-1.240	1.350	330	1.070	150	4	136	51	323	261
		260-1.170	350-1.260	440-1.350	1.460						51	323	273
		260-1.360	350-1.450	440-1.540	1.650						50	323	293
		260-1.560	350-1.650	440-1.740	1.860		1.450				49	323	315
8 T 160	8.000/600	260-1.760	350-1.850	440-1.940	2.060	330	1.450	150	4	136	49	322	335
		260-1.960	350-2.050	440-2.140	2.260						48	322	357
		260-2.060	350-2.150	440-2.240	2.400						48	322	367
10 T 160	8.000/1.100	260-1.760	360-1.860	460-1.960	2.060	370	1.450	200	4	170	68	326	542
		260-1.960	360-2.060	460-2.160	2.260						67	326	571
		260-2.060	360-2.160	460-2.260	2.400						67	326	590

Preferential range

[1] Min. width of FLT carriage. * 4,8T with capacity (kg/mm) 2.700/1.200 available upon request.
Not suitable for clamping between the forks. Available without sideshift. Load Backrest Model T479 s. page 91.
Forks see pages 92 and 93.



EX

Fork Positioner integrated T160I

with **valveblock sideshift** dependent on the opening range – supplied without forks - for forks acc. to ISO 2330
2 hydraulic functions

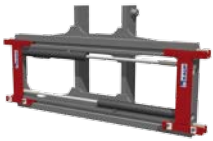
Model	Capacity kg/mm	Opening range centre to centre fork A mm	A1 mm	A2 mm	B mm	C mm	suitable for max. fork width	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 160BI	2.500/500	150-850	250-950	320-1.020	1.040	240	120	2	116	55	139
		150-950	250-1.050	320-1.120	1.150					54	145
3,5 T 160BI	3.600/500	180-880	250-950	320-1.020	1.040	240	130	3	121	60	149
		180-980	250-1.050	320-1.120	1.150					59	155
4,5 T 160BI	5.000/500	180-980	250-1.050	320-1.120	1.150	255	150	3	131	65	225
		180-1.180	250-1.250	320-1.320	1.350					64	243
6 T 160 BI	6.000/600	260-1.170	350-1.260	440-1.350	1.460	330	150	4	166	64	395
		260-1.360	350-1.450	440-1.540	1.650					63	411
		260-1.560	350-1.650	560-1.860	1.860					61	457
8 T 160 BI	8.000/600	260-1.560	350-1.650	440-1.740	1.860	330	150	4	166	61	457
		260-1.760	350-1.850	440-1.940	2.060					61	474
		260-1.960	350-2.050	440-2.140	2.260					62	490
		260-2.060	350-2.150	440-2.240	2.400					62	502
10 T 160 BI	8.000/1.100	260-1.760	360-1.860	460-1.960	2.060	370	200	4	210	97	605
		260-1.960	360-2.060	460-2.160	2.260					96	635
		260-2.060	360-2.160	460-2.260	2.400					94	654

CofG and weight measurements do not take the cheek plates into account. Forks s. pages 92 and 93. Forks manually adjustable. Fork carriage drawings, roller studs and chain anchors to be supplied by customer if necessary. Not suitable for clamping between the forks. Available without sideshift. Load Backrest Model T479 s. page 91.

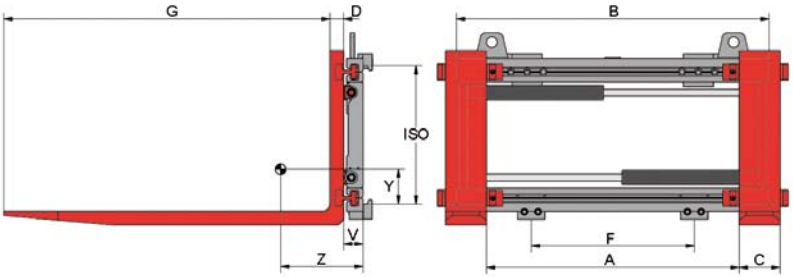
Fork Positioner T160


T160


T160Z


T160I


T160IZ



EX

Fork Positioner T160Z

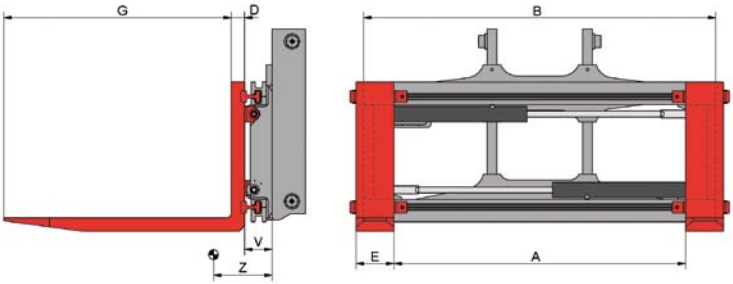
with **valveblock sideshift** dependent on opening range – 2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	Fork profile D mm	Fork profile E mm	F[1] mm	G mm	ISO cl.	V mm	CofG Z mm	CofGv Y mm	Weight kg
1,5 T 160 BZ	1.600/500	170-710	880	40	100	600	1.200	2	71	251	132	205
		170-810	980							245	134	209
		170-870	1.040							240	135	213
		170-970	1.150							234	137	219
2 T 160 BZ	2.500/500	130-670	880	45	120	600	1.200	2	71	289	116	240
		130-770	980							284	118	244
		130-830	1.040							280	120	247
		130-930	1.150							273	122	253
		130-1.130	1.350							263	125	265
		130-1.230	1.450							258	127	271
		130-1.330	1.550							253	129	277
		130-1.430	1.650							248	131	283
3,5 T 160 BZ	3.600/500	130-830	1.040	50	150	600	1.200	3	71	308	126	302
		130-930	1.150							303	129	307
		130-1.130	1.350							292	133	317
		130-1.230	1.450							295	135	322
		130-1.330	1.550							292	138	327
		130-1.430	1.650							290	140	332
4,5 T 160 BZ	5.000/500	130-930	1.150	60	150	650	1.200	3	84	275	144	403
		130-1.130	1.350							264	149	421
		130-1.230	1.460							258	152	433
		130-1.310	1.550							253	154	439
		130-1.430	1.650							248	157	450
		130-1.530	1.750							244	160	458
		130-1.630	1.850							240	162	467
4,8 T 160 BZ*	5.000/600	130-930	1.150	70	150	650	1.200	3	84	300	138	444
		130-1.130	1.350							291	143	462
		130-1.230	1.460							286	147	471
		130-1.310	1.550							280	150	480
		130-1.430	1.650							275	153	492
		130-1.530	1.750							271	156	504
		130-1.630	1.850							267	158	517
6 T 160 Z	6.000/600	200-1.110	1.350	70	150	1.070	1.200	4	111	257	257	529
		200-1.200	1.460							252	252	541
		200-1.400	1.650							245	199	554
		200-1.600	1.860			1.450				237	204	576
8 T 160 Z	8.000/600	200-1.800	2.060	70	150	1.450	1.200	4	111	230	208	597
		200-2.000	2.260							224	212	618
		210-2.060	2.400							220	214	629
10 T 160 Z	8.000/900	100-1.730	2.060	70	200	1.450	1.200	4	138	253	212	877
		100-1.900	2.260							247	216	905
		100-2.000	2.400							243	218	924
10 T 160 Z	8.000/1.100	100-1.730	2.060	80	200	1.450	1.200	4	138	242	219	900
		100-1.900	2.260							236	221	928
		100-2.000	2.400							232	223	947

Preferential range

[1] Min. width of FLT carriage.
* 4,8T with capacity (kg/mm) 2.700/1.200 available upon request.
Available without sideshift.
Load Backrest Model T479 see page 91.
Not suitable for clamping between the forks.

ZA-Version: with screw-on forks



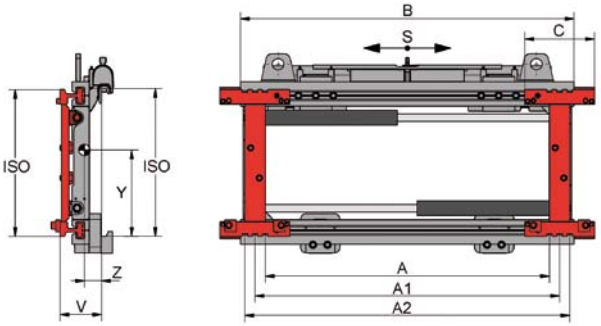
Fork Positioner integrated T160IZ

with **valveblock sideshift** dependent on the opening range – 2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	Fork profile D mm	Fork profile E mm	G mm	V mm	CofG Z mm	Weight kg
1,5 T 160 BIZ	1.600/500	170-870	1.040	40	100	1.200	91	238	233
		170-970	1.150					233	239
2 T 160 BIZ	2.500/500	130-830	1.040	45	120	1.200	91	278	267
		130-930	1.150					272	273
3,5 T 160 BIZ	3.500/500	130-830	1.040	50	150	1.200	91	299	332
		130-930	1.150					295	337
4,5 T 160 BIZ	5.000/500	130-930	1.150	60	150	1.200	104	275	433
		130-1.130	1.350					265	451
6 T 160 BIZ	6.000/600	200-1.200	1.460	70	150	1.200	141	254	676
		200-1.400	1.650					247	692
		200-1.600	1.860					239	738
8 T 160 BIZ	8.000/600	200-1.800	2.060	70	150	1.200	141	233	755
		200-2.000	2.260					228	771
		210-2.060	2.400					224	783
10 T 160 BIZ	8.000/900	100-1.730	2.060	70	200	2.400	178	596	1.182
		100-1.900	2.260					585	1.210
		100-2.000	2.400					577	1.230
10 T 160 BIZ	8.000/1.100	100-1.730	2.060	80	200	2.400	178	615	1.262
		100-1.900	2.260					602	1.290
		100-2.000	2.400					594	1.310
12 T 160 IZ	12.000/600	370-2.000	2.400	80	200	1.200	138	225	1.190
		300-2.300	2.700					219	1.220
		500-2.700	3.100					212	1.275
16 T 160 IZ	16.000/600	370-2.000	2.400	90	200	1.200	178	222	1.600
	8.000/1.200					2.400		475	1.905
	8.000/1.200	500-2.700	3.100			2.400		438	2.090
24 T 160 IZ	24.000/600	270-1.900	2.400	90	250	1.200	178	244	1.755
	12.000/1.200					2.400		521	2.137
	12.000/1.200	400-2.600	3.100			2.400		486	2.320
32 T 160 IZ	32.000/600	270-2.100	2.600	100	250	1.200	178	230	2.020
	16.000/1.200					2.400		493	2.435
	16.000/1.200	260-2.600	3.100			2.400		470	2.570

CofG and weight measurements do not take the cheek plates into account.
Fork carriage drawings, roller studs and chain anchors to be supplied by customer if necessary.
Larger models and different widths available upon request.
Not suitable for clamping between the forks.
Available without sideshift.
Load Backrest Model T479 s. page 91.

IZA-Version: with screw-on forks



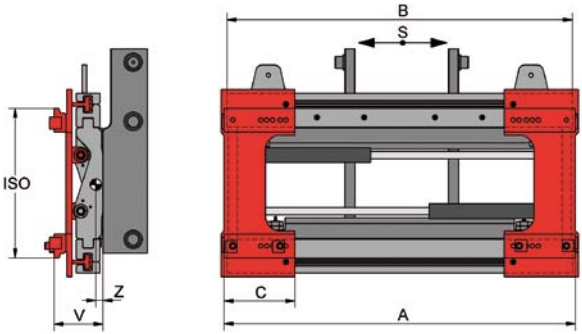
EX

Fork Positioner T466

with **independent sideshift** - without forks - for forks acc. to ISO 2330 - 2 hydraulic functions

Model	Capacity kg/mm	Opening range centre to centre fork A mm	A1 mm	A2 mm	B mm	C mm	S mm	suitable for max. fork width	ISO cl.	V mm	CofG Z mm	CofG Y mm	CofG$_v$ Weight kg
2 T 466B	2.500/500	150-690	250-790	320-860	880	240	± 100	120	2	138	55	245	137
		150-790	250-890	320-960	980						55	244	141
		150-850	250-950	320-1.020	1.040						56	242	145
		150-950	250-1.050	320-1.120	1.150						57	240	152
		150-1.150	250-1.250	320-1.320	1.350						57	238	164
		150-1.250	250-1.350	320-1.420	1.450					148	62	237	196
		150-1.350	250-1.450	320-1.520	1.550						64	235	203
		150-1.450	250-1.550	320-1.620	1.650						67	232	211
3,5 T 466B	3.500/500	180-880	250-950	320-1.020	1.040	240	± 100	130	3	143	59	296	162
		180-980	250-1.050	320-1.120	1.150						59	294	169
		180-1.180	250-1.250	320-1.320	1.350						57	291	184
		180-1.280	250-1.350	320-1.420	1.450					153	63	285	218
		180-1.380	250-1.450	320-1.520	1.550						62	283	228
		180-1.480	250-1.550	320-1.620	1.650						61	281	238
4,8 T 466B*	5.000/600	180-980	250-1.050	320-1.120	1.150	255	± 100	150	3	153	69	273	236
		180-1.180	250-1.250	320-1.320	1.350						68	272	258
		180-1.280	250-1.350	320-1.420	1.460						67	271	270
		180-1.360	250-1.430	320-1.500	1.550						67	270	281
		180-1.480	250-1.550	320-1.620	1.650					163	74	270	324
		180-1.580	250-1.650	320-1.720	1.750						75	269	337
		180-1.680	250-1.750	320-1.820	1.850						75	268	350
6 T 466	6.000/600	260-1.060	350-1.150	440-1.240	1.350	330	± 100	150	4	176	72	372	348
		260-1.170	350-1.260	440-1.350	1.460						72	370	363
		260-1.560	350-1.650	440-1.740	1.860		± 160				72	366	404
8 T 466	8.000/600	260-1.760	350-1.850	440-1.940	2.060	330	± 160	150	4	176	73	364	425
		260-1.960	350-2.050	440-2.140	2.260						73	362	445
		260-2.060	350-2.150	440-2.240	2.400						74	359	460
10 T 466	8.000/1.100	260-1.760	360-1.860	460-1.960	2.060	370	± 160	200	4	270	106	353	733
		260-1.960	360-2.060	460-2.160	2.260						106	349	758
		260-2.060	360-2.160	460-2.260	2.400						106	345	779

Preferential range * 4,8T with capacity (kg/mm) 2.700/1.200 available upon request. Not suitable for clamping between the forks. Widths for reach trucks available upon request. Load Backrest Model T479 see page 91. Forks see pages 92 and 93.
Available without sideshift.



EX

Fork Positioner, integrated, T466I

with **independent sideshift** - without forks - for forks acc. to ISO 2330 - 2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	C mm	S mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 466 I	1.600/500	490-1.090	1.040	240	± 100	2	129	51	175
		490-1.190	1.150					51	181
2 T 466 I	2.300/500	490-1.190	1.150	240	± 100	2	138	57	194
		490-1.390	1.350					56	205
3,5 T 466 I	3.200/500	490-1.190	1.170	240	± 100	3	165	63	274
		490-1.390	1.350					62	294
4 T 466 I	5.000/500	490-1.390	1.350	240	± 100	3	165	59	354
		490-1.590	1.550					59	374
6 T 466 I	6.000/600	490-1.670	1.650	240	± 140	4	180	63	424
		490-1.790	1.850					63	443
8 T 466 I	8.000/600	560-1.960	1.860	270	± 140	4	214	80	754
		560-2.360	2.260					78	868
		560-2.460	2.400					78	888
10 T 466 I	8.000/1.100	560-2.160	2.060	295	± 160	4	252	95	1.065
		560-2.360	2.260					95	1.115
		560-2.460	2.400					95	1.135

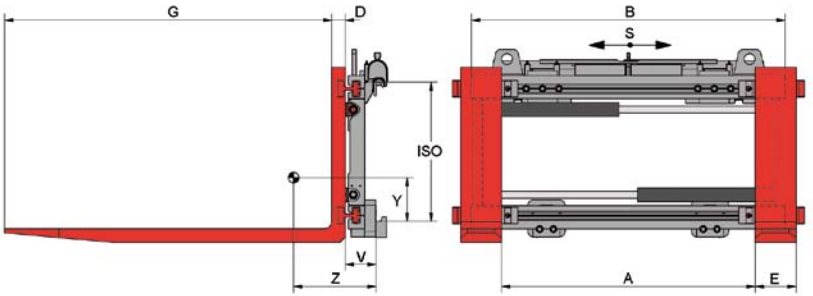
CofG and weight measurements do not take the cheek plates into account. Load Backrest Model T479 s. page 91. Forks s. page 92 and 93.
Forks manually adjustable. Fork carriage drawings, roller studs and chain anchors to be supplied by customer if necessary.
Not suitable for clamping between the forks. Available without sideshift.


T466


T466Z


T466I


T466IZ



EX

Fork Positioner T466Z

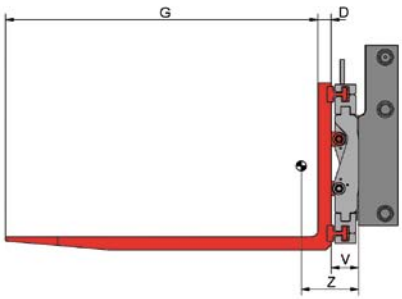
with **independent sideshift** - 2 hydraulic functions

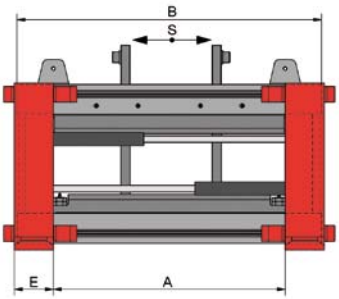
Model	Capacity kg/mm	A mm	B mm	Fork profile D mm	E mm	G mm	S mm	ISO cl.	V mm	CofG Z mm	CofG Y mm	Weight kg
1,5T 466BZ	1.600/500	170-710	880	40	100	1.200	± 100	2	113	255	150	231
		170-810	980							251	151	237
		170-870	1.040							248	152	240
		170-970	1.150							243	153	246
2T 466BZ	2.500/500	130-670	880	45	120	1.200	± 100	2	113	295	134	267
		130-770	980							292	135	271
		130-830	1.040							287	136	274
		130-930	1.150							282	138	280
		130-1.130	1.350							274	140	292
		130-1.230	1.450						123	265	143	323
		130-1.330	1.550							262	145	331
		130-1.430	1.650							257	149	339
3,5T 466BZ	3.500/500	130-830	1.040	50	150	1.200	± 100	3	113	308	160	341
		130-930	1.150							303	162	346
		130-1.130	1.350							295	165	356
		130-1.230	1.450						123	293	170	391
		130-1.330	1.550							290	173	399
		130-1.430	1.650							288	175	407
4,5T 466BZ	5.000/500	130-930	1.150	60	150	1.200	± 100	3	126	285	166	440
		130-1.130	1.350							275	173	458
		130-1.230	1.460							270	175	468
		130-1.310	1.550							267	176	476
		130-1.430	1.650						136	248	185	523
		130-1.530	1.750							243	187	536
		130-1.630	1.850							238	190	549
4,8T 466BZ*	5.000/600	130-930	1.150	70	150	1.200	± 100	3	126	312	162	491
		130-1.130	1.350							303	165	511
		130-1.230	1.460							298	167	521
		130-1.310	1.550							294	168	530
		130-1.430	1.650						136	275	177	574
		130-1.530	1.750							280	179	587
		130-1.630	1.850							285	182	600
6 T 466 Z	6.000/600	200-1.110	1.350	70	150	1.200	± 100	4	151	280	225	620
		200-1.200	1.460							277	226	630
		200-1.600	1.860				± 160			262	235	682
8 T 466 Z	8.000/600	200-1.800	2.060	70	150	1.200	± 160	4	151	256	238	704
		200-2.000	2.260							250	240	725
		210-2.060	2.400							247	242	741
10 T 466 Z	8.000/900	160-1.790	2.060	70	200	1.200	± 160	4	190	252	241	1.029
		160-1.960	2.260							247	243	1.056
		160-2.060	2.400							243	245	1.076
10 T 466 Z	8.000/1.100	160-1.790	2.060	80	200	1.200	± 160	4	190	278	231	1.099
		160-1.960	2.260							272	233	1.136
		160-2.060	2.400							267	235	1.155

Preferential range

* 4,8T with capacity (kg/mm) 2.700/1.200 available upon request.
Available without sideshift.
Load Backrest Model T479 see page 91.
Not suitable for clamping between the forks.

ZA-Version: with screw-on forks





Fork Positioner integrated T466IZ

with **independent sideshift** - 2 hydraulic functions

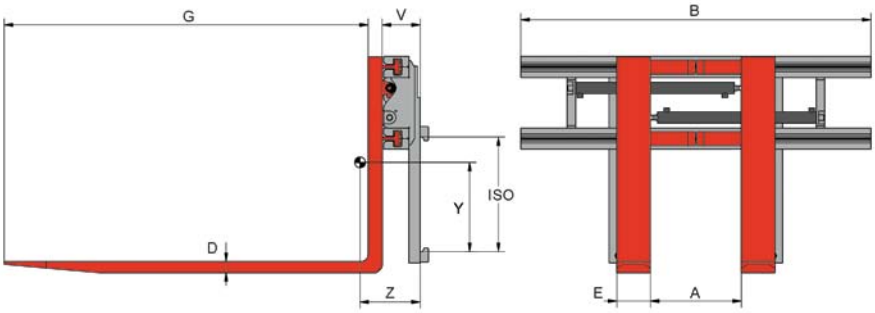
Model	Capacity kg/mm	A mm	B mm	Fork profile D mm	Fork profile E mm	G mm	S mm	V mm	CofG Z mm	Weight kg
1,5 T 466 IZ	1.600/500	290- 890	1.040	40	100	1.200	± 100	79	218	223
		290- 990	1.150						213	229
2 T 466 IZ	2.300/500	250- 950	1.150	45	120	1.200	± 100	88	251	296
		250-1.150	1.350						244	308
3,5 T 466 IZ	3.200/500	190- 890	1.170	50	150	1.200	± 100	105	250	425
		190-1.090	1.350						242	440
4 T 466 IZ	5.000/500	190-1.090	1.350	60	150	1.200	± 100	105	223	561
		190-1.290	1.550						217	581
6 T 466 IZ	6.000/600	190-1.370	1.650	70	150	1.200	± 140	110	235	675
		190-1.490	1.850						230	694
8 T 466 IZ	8.000/600	260-1.660	1.860	70	150	1.200	± 140	128	197	965
		260-2.060	2.260						186	1.069
		260-2.160	2.400						184	1.090
10 T 466 IZ	8.000/900	160-1.760	2.060	70	200	2.400	± 160	158	467	1.564
		160-1.960	2.260						459	1.590
		160-2.060	2.400						453	1.615
10 T 466 IZ	8.000/1.100	160-1.760	2.060	80	200	2.400	± 160	158	485	1.652
		160-1.960	2.260						478	1.676
		160-2.060	2.400						473	1.700

CofG and weight measurements do not take the cheek plates into account.
Fork carriage drawings, roller studs and chain anchors to be supplied by customer if necessary.
Larger models and different widths available upon request.
Not suitable for clamping between the forks.
Available without sideshift.
Load Backrest Model T479 s. page 91.

IZA-Version: with screw-on forks

Fork Positioners for Reach Trucks

As the leading manufacturer of industrial truck attachments, **KAUP** supplies a complete range of attachments specially designed for reach trucks. Due to the complexity of the scope (details regarding the wheel arms, ground clearance, width of the attachment etc.) it is advisable to contact our specialists directly for an individual quotation.



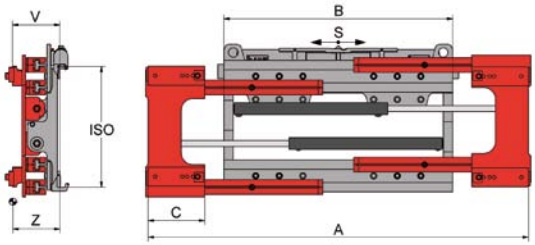
Fork Positioner T466ZH **without sideshift** - 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	fork profile D mm	E mm	G mm		ISO cl.	CofG V mm	CofG$_v$ Z mm	Weight kg
2 T 466 ZH	1.900/600	325-1.285	1.250	40	120	1.200	2	126	258	191	270
		320-1.780	1.720					135	222	318	380
		320-1.900	1.860					135	219	324	390

Also available with sideshift.

Fork Positioner T411IZH and T411ZH

Available upon request



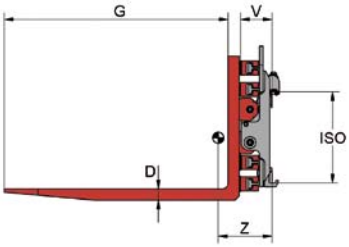
Fork Positioner T410Z

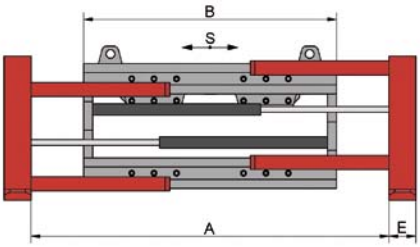
with **independent sideshift** - 2 hydraulic functions - supplied without forks - with fork carriage bar for forks acc. to ISO 2330

Model	Capacity kg/mm	S mm	A mm	B mm	C mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 410 Z	1.500/500	± 100	540-1.500	750	240	2	183	89	173
			540-1.720	970				87	196
			550-1.900	1.130				87	206
			530-1.930	1.200				86	211
1,6 T 410 Z	2.300/500	± 100	530-1.710	1.040	240	2	188	86	231
			560-1.860	1.130				85	237
			560-2.060	1.330				85	250
2,5 T 410 Z	2.800/500	± 100	530-1.710	1.040	240	2	198	91	245
			560-1.860	1.130				90	251
			560-2.060	1.330				89	264
2,5 T 410 Z	3.000/500	± 100	560-1.860	1.130	240	3	208	84	281
			560-2.060	1.330				84	295
3 T 410 Z	3.600/500	± 100	560-1.860	1.130	240	2/3	223	95	374
			560-2.060	1.330				94	392
			550-2.170	1.460				94	403
4 T 410 Z	4.150/500	± 100	560-1.860	1.130	240	3	233	100	420
			560-2.060	1.330				99	440
			550-2.170	1.460				99	452
4,5 T 410 Z	5.000/500	± 100	580-1.930	1.200	240	3	258	114	497
			540-1.980	1.330				113	515
			470-1.970	1.460				112	532
			580-2.280	1.550				112	547
5 T 410 Z	6.200/600	± 160	530-2.160	1.550	260	4	260	96	640
			800-2.700[1)]	1.550				99	700
			530-2.430	1.820				95	679

Preferential range

[1)] Transport of europallets lengthwise not possible.
Fork Positioner with cylinder- and sideshift protector upon request.
Not suitable for clamping between the forks.
Unit available as clamp fitted with bolt-on plates, see page 45.
Load Backrest Model T479 s. page 91. Forks s. pages 92 and 93.
Fork Positioner without sideshift model T400Z.





EX

Fork Positioner T411Z with **independent sideshift** – 2 hydraulic functions

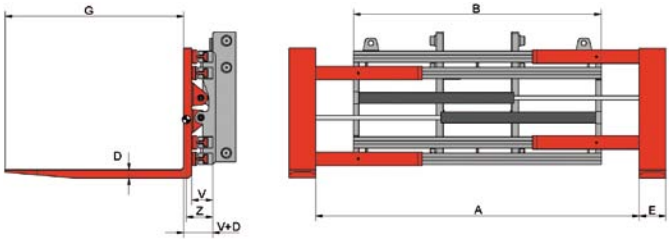
Model	Capacity kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 411 Z	1.500/500	± 100	340-1.300	750	40	100	1.200	2	133	268	237
			340-1.520	970						251	259
			350-1.700	1.130						244	270
			330-1.730	1.200						241	274
1,6 T 411 Z	2.300/500	± 100	290-1.470	1.040	45	120	1.200	2	133	266	331
			320-1.620	1.130						262	337
			320-1.820	1.330						255	351
1,6 T 401 Z	2.300/500	without	300-1.300	850	45	120	1.200	2	126	277	310
2,5 T 411 Z	2.800/500	± 100	290-1.470	1.040	50	120	1.200	2	143	272	360
			320-1.620	1.130						269	367
			320-1.820	1.330						262	379
2,5 T 401 Z	2.800/500	without	300-1.300	850	50	120	1.200	2	136	285	330
2,5 T 411 Z	3.000/500	± 100	320-1.620	1.130	50	120	1.200	3	143	253	390
			320-1.820	1.330						247	402
3 T 411 Z	3.600/500	± 100	260-1.560	1.130	50	150	1.200	2/3	152	259	495
			260-1.760	1.330						253	513
			130-1.630	1.460						250	522
			250-1.870	1.460						249	524
4 T 411 Z	4.150/500	± 100	260-1.560	1.130	50	150	1.200	3	162	248	559
			260-1.760	1.330						243	578
			130-1.630	1.460						240	589
			250-1.870	1.460						239	591
4,5 T 411 Z	5.000/500	± 100	280-1.630	1.200	60	150	1.200	3	188	259	662
			240-1.680	1.330						254	679
			170-1.670	1.460						250	697
			280-1.980	1.550						247	712
5 T 411 Z	6.200/600	± 160	190-1.690	1.460	70	150	1.200	4	176	242	846
			230-1.860	1.550						239	860
			500-2.400[1]	1.550						232	920
			230-2.130	1.820						233	898

Fork Positioner, wide version T411BZ

with **valveblock sideshift**, dependent on opening range - 2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
4 T 411 BZ	4.500/500	330-2.530	2.030	60	120	1.200	3	168	184	805
4,8 T 411 BZ	6.000/500	220-1.850	1.550	60	150	1.200	3	184	209	885
5 T 411 BZ	6.300/600	220-1.850	1.550	60	150	1.200	4	184	203	925
		180-2.080	1.860						195	1.010
		380-2.480[1]	1.860						195	1.014
		310-2.510[1]	2.030						191	1.046
6 T 411 BZ	8.000/600	170-1.800	1.550	60	200	1.200	4	194	233	1.165
		130-2.030	1.860						226	1.225
		330-2.430[1]	1.860						225	1.229
6 T 411 BZ	8.000/600	200-3.800[1]	3.390	50	300	1.200	4	194	218	1.545
8 T 411 BZ	8.000/900	210-1.840[1]	1.550	70	200	1.200	4	230	230	1.435
		330-2.530[1]	2.000						219	1.564
		400-2.900[1]	2.400						211	1.672
8 T 411 BZ[2]	5.000/1.200	2600-5.600[1]	4.500	70	200	1.200	4	230	135	2.515

[1] Transport of europallets lengthwise not possible.
[2] Alternatively available with third fork in centre.
Load Backrest Model T479 s. page 91. T411Z / T411BZ also available with screw-on forks.
Also available without sideshift, model T401Z / T401BZ.

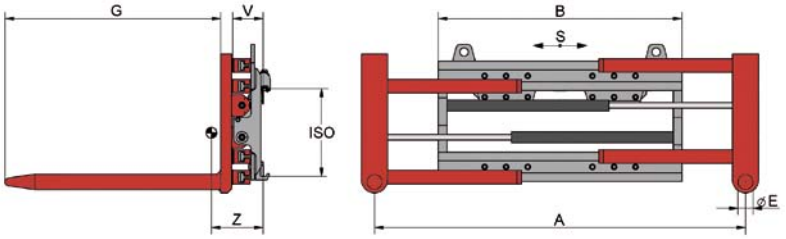


Fork Positioner, wide version, integrated T411BZI

with **valveblock sideshift**, dependent on opening range – 2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	D mm	E mm	G mm	V mm	CofG Z mm	Weight kg
4 T 411 BZI	4.500/500	330-2.530	2.030	60	120	1.200	139	138	848
5 T 411 BZI	6.300/600	220-1.850	1.550	60	150	1.200	159	193	840
		180-2.080	1.860					185	902
		380-2.480[1)]	1.860					185	906
		310-2.510[1)]	2.030					181	936
6 T 411 BZI	8.000/600	170-1.800	1.550	60	200	1.200	169	223	1.057
		130-2.030	1.860					216	1.117
		330-2.430[1)]	1.860					215	1.121
6 T 411 BZI	8.000/600	200-3.800[1)]	3.390	50	300	1.200	169	208	1.437
8 T 411 BZI	8.000/900	330-2.530[1)]	2.000	70	200	1.200	188	199	1.424
		400-2.900[1)]	2.400					191	1.532

CofG and weight measurements do not take the cheek plates into account.
[1)] Transport of europallets lengthwise not possible.
Fork carriage drawings, roller studs and chain anchors to be supplied by customer if necessary.
Load Backrest Model T479 s. page 91. T411BZI also available with screw-on forks.
Also available without sideshift, model T401BZI.



Fork Positioner with round forks T411ZR

with **independent sideshift** – 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	B mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 411 ZR	1.500/500	± 100	420-1.380	750	60	1.200	2	133	245	235
			420-1.600	970					230	258
			430-1.780	1.130					224	268
			410-1.810	1.200					221	273
1,5 T 411 ZR	2.300/500	± 100	440-1.620	970	60	1.200	2	133	211	295
			160-1.060	970					215	285
			450-1.800	1.130					207	305
			210-1.390	1.200					205	308
			430-1.830	1.200					205	310
2 T 411 ZR	2.800/500	± 100	400-1.500	970	70	1.200	2/3	143	210	316
			440-1.740	1.130					205	326
			190-1.240	1.130					209	315
			240-1.540	1.330					201	337
			440-1.940	1.330					200	339

Preferential range
Can be supplied without sideshift Model T401ZR.
Load Backrest Model T479 s. page 91.

Recommended Oil flow rates, Pressures and Forklift truck capacities

Multi Pallet Handlers

Attachment	Page	Oil volume (l/min) min.	optimum	max.	Pressure (bar) maximum	max. capacity FLT (kg/mm LCD)
1,5 T 429	34	15	25	30	200	2.000/500
2 T 429	34	15	25	30	200	3.500/500
2 T 429-4	34	15	25	30	200	3.500/500
3 T 429	34	15	25	30	200	4.500/500
3 T 429-2	34	25	40	50	200	6.000/600
3 T 429-4	34	25	40	50	200	5.000/600
4 T 429-4	34	25	40	50	200	8.000/600
6 T 429-4	34	25	40	50	200	8.000/900
1,5 T 409	34	15	25	30	200	2.000/500
1,5 T 409-2	34	15	25	30	200	2.000/500
2 T 409	34	15	25	30	200	3.500/500
3 T 409	34	15	25	30	200	4.000/500
2 T 429 / T 149 Z	35	15	25	30	200	5.000/500
3 T 429B-1-2-3 / T 149 Z	35	15	25	30	200	5.000/600
3 T 429B-1-2-3	36	15	25	30	200	4.000/500
4 T 429B-1-2-3	36	15	25	30	200	5.000/500
5 T 429B-1-2-3	36	15	25	30	200	6.000/600
4 T 429-4-6	37	25	40	50	180	5.000/600
6 T 429-4-6	37	50	65	80	180	8.000/600
10 T 429-4-6	37	50	65	80	180	8.000/900
4 T 419-4-8	37	25	40	50	180	8.000/600
6 T 419-2-4	37	50	65	80	180	8.000/600

Multi Pallet Handlers

are, -like multi sideshifters- specific for transporting several pallets simultaneously. Contrary to multi sideshifters the forks of the multi pallet handlers can be moved together or spread apart as required. Therefore a centre pick up of the load is guaranteed. Multi Pallet Handlers are indispensable for rational intra-company transport where uniform palletized goods have to be moved. Initially they were found in beverage industries. Today they can be found in increased numbers and are also becoming more and more popular in other branches of industry e.g. Block & Brick plants. Please orientate yourself with the selection criteria according to the scheme on the following page.


T429


T429B-1-2-3

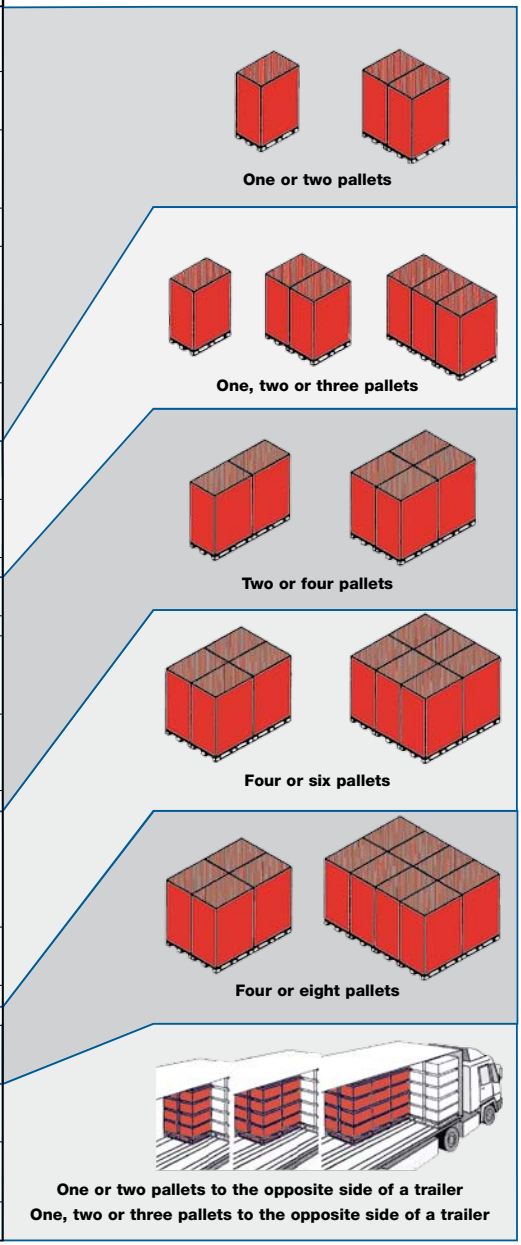

T429-4-6

For every transport scheme a solution which fits

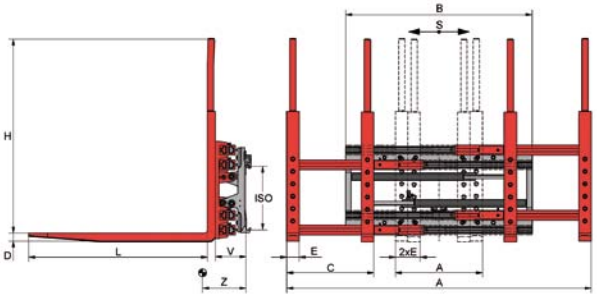
Criteria to choose the right KAUP attachment, the right truck capacity and the residual capacity
Q = Nominal Capacity of FLT, **LCD** = Load centre distance, **R** = Residual capacity

Q [kg/mm]	KAUP Attachment	LCD [mm]	R [kg]
1.600/500	1,5 T 409	600	1.080
1.800			1.260
2.000			1.440
1.600/500	1,5 T429	600	980
1.800			1.160
2.000			1.325
2.000/500	2 T 409	600	1.375
2.500			1.750
3.000			2.175
3.500			2.500
2.000/500	2 T 429 (2.200/600)	600	1.310
2.500			1.685
2.000/500	2 T 429 (2.500/600)	600	1.250
2.500			1.625
3.000			2.025
3.500			2.450
3.500/500	3 T 429	600	2.375
4.000			2.775
4.500			3.145
5.000/500	3 T 429-2	600	3.550
5.000/600			3.950
6.000/600			4.800
2.500/500	3 T 429B-1-2-3	600	1.600
3.000			2.000
3.500			2.425
4.000/500	4 T 429B-1-2-3	600	2.575
4.500			3.175
5.000			3.600
5.000/600	5 T 429B-1-2-3	600	4.000
2.500/500	2 T 429-4	1.200	880
3.000			1.160
3.500/500	2,5 T 429-4	1.200	1.420
4.000/500	3 T 429-4	1.200	1.625
4.500			1.925
5.000			2.225
5.000/600			2.500
5.000/600	4 T 429-4	1.200	2.450
6.000			3.050
7.000			3.700
8.000			4.300
8.000/900	6 T429-4	1.200	5.500
3.500/500	4 T 429-4-6	1.200	1.225
4.000/500			1.425
4.500/500			1.775
4.500/600			2.000
5.000/500			2.025
5.000/600			2.375
6.000/600	6 T 429-4-6	1.200	2.900
7.000			3.575
8.000			4.000
8.000/900	10 T 429-4-6	1.200	5.300
7.000/600	4 T 419-4-8L	1.200	3.375
12.000/600	12 T 419-4-8	1.200	6.040
14.000/600			7.460
15.000/600			8.000
4.000/500	3T429B-1-2-3/2T149ZD	600+1.200	1.200
4.500			1.500
4.500/600			1.700
5.000/600	3T429B-1-2-3/3T149Z	600+1.300	1.860
6.000			2.370
4.500/600	3T429B-1-2-3/2T149ZD	600+1.200	1.560
5.000/600	3T429B-1-2-3/3T149Z	600+1.300	1.630
6.000			2.110

Transporthandling



Please consider that the residual capacities will only show you an estimated capacity. Contact your forklift truck supplier for exact values. An online calculation can be made on our website **www.kaup.de**

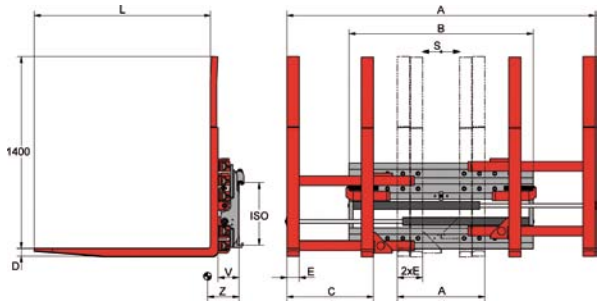


Double Pallet Handler T429

with **independent sideshift** – with bolt-on forks - 2 hydraulic functions[1)]
For 1 pallet or 2 pallets side by side - model 429-4 for 2 or 4 pallets

Model	Capacity kg/mm	S mm	A mm	B mm	D mm	E mm	H mm	L mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 429	1.600/600	± 100	560-1.720	930	40	80	1.400	1.150	2/3	202	275	430
2 T 429	2.200/600	± 100	560-1.960	1.200	40	80	1.400	1.150[3)]	2	199	250	485
2 T 429	2.500/600	± 100	560-1.960	1.200	50[2)]	80	1.400	1.150[3)]	2/3	202	280	520
2 T 429	2.500/600	± 100	560-2.180	1.400	50[2)]	80	1.400	1.150[3)]	2/3	202	275	535
2 T 429-4	1.250/1.200	± 100	560-1.960	1.200	50	80	1.400	2.400	2/3	202	640	705
2,5 T 429-4	1.600/1.200	± 100	560-1.960	1.200	60	80	1.400	2.400	3	202	605	760
3 T 429	3.200/ 600	± 100	560-1.960	1.200	60	80	1.400	1.150[3)]	3	202	295	580
3 T 429	3.200/ 600	± 100	560-2.180	1.400	60	80	1.400	1.150[3)]	3	202	290	595
3 T 429-2	5.000/ 600	± 100	560-1.960	1.200	60	80	1.400	1.150[3)]	3/4	212	270	705
3 T 429-2	5.000/ 600	± 100	560-1.960	1.400	60	80	1.400	1.150[3)]	3/4	212	265	725
3 T 429-4	2.500/1.200	± 100	560-1.960	1.200	60	80	1.400	2.400	3/4	212	605	895
3 T 429-4	2.500/1.200	± 100	560-1.960	1.400	60	80	1.400	2.400	3/4	212	595	915
4 T 429-4	4.600/1.200	± 160	560-1.960	1.460	70	80	1.400	2.400	4	212	590	1.040
6 T 429-4	6.000/1.200	± 160	560-1.960	1.860	75	90	1.400	2.400	4	218	530	1.390
6 T 429-4	6.000/1.200	± 250	560-1.960	1.920	75	90	1.400	2.400	4	218	530	1.410

Preferential range
Measurement „C" = alternatively 560 / 650 / 700 mm mechanically or hydraulically adjustable (solenoid valve required).
Measurement „H" = standard height 1.400 mm, other lengths and forms upon request. Locating claw on fork tip available upon request.
Wider fork shanks available upon request.
1) Double solenoid valve for additional individual adjustment for each pair of forks available upon request (add-on price).
2) Optional with fork thickness 40 mm (add-on price). 3) Fork length optional 1.150 or 1.200 mm.



Double Pallet Handler T409 with **independent sideshift** – 2 hydraulic functions[1)]

Model	Capacity kg/mm	S mm	A mm	B mm	D mm	E mm	L mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 409	1.600/600	± 100	560-1.740	930	40	80	1.150[3)]	2/3	133	253	377
1,5 T 409-2	1.600/600	± 100	560-2.010	1.200	40	80	1.150[3)]	2/3	133	233	418
2 T 409	2.500/600	± 100	560-2.010	1.200	50[2)]	80	1.150[3)]	2/3	133	253	490
3 T 409	3.200/600	± 100	560-2.010	1.200	60	80	1.150[3)]	3	133	259	585

Preferential range Locating claw on fork tip available upon request. Measurement „C" = alternatively 560 or 650 mm.
1) Double solenoid valve for additional individual adjustment for each pair of forks available upon request (add-on price).
2) Optional with fork thickness 40 mm (add-on price).
3) Fork length optional 1.150 or 1.200 mm.

Load Stabilizers for Multi Pallet Handlers

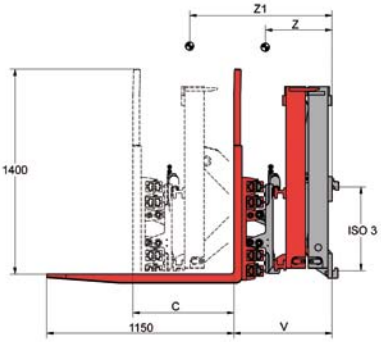
All **KAUP** Multi Pallet Handlers can be fitted/combined with different load stabilizers as required, exactly specified to the load where palletized goods have to be secured during transportation with a forklift truck to prevent the load from slipping when going around corners or driving over uneven ground. A multitude of KAUP Multi Pallet Handlers fitted with Load Stabilizers are used, for example, in the beverage industry for loading crates stacked on a pallet. KAUP Load Stabilizers can be designed to meet every customer's requirement. Following are only a few examples.

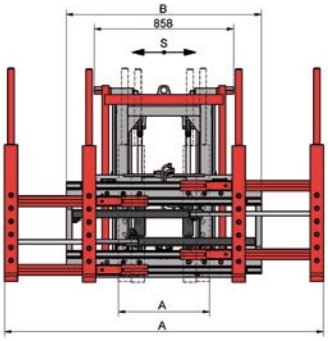
Double Pallet Handler
T429-124 with body-installed telescopic Load Stabilizer

Opening range over outer edges of forks 560 to 1.960 mm
Opening range of load stabilizer approx. 1.170 to 2.970 mm
Load Stabilizer contact pad frame approx. 800 x 800 mm with rubber tubing

Double Pallet Handler T429-129
with interlocking Load Stabilizers on the outer forks

Opening range over outer edges of forks 560 to 1.960 mm
Opening range of load stabilizer approx. 1.250 to 1.840 mm
Load Stabilizer contact pad frame approx. 800 x 800 mm with rubber tubing



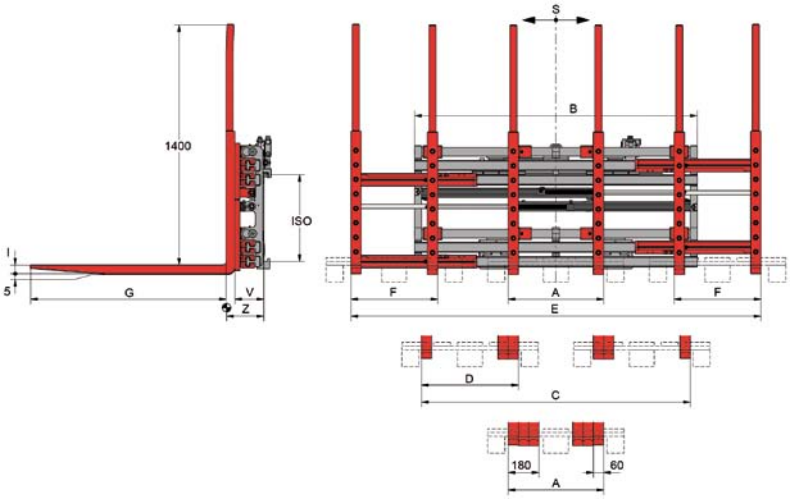


Double / Triple Pallet Handler on a Pantograph T429 / T149Z

with **independent sideshift** – with bolt-on forks - for loading and unloading of up to 3 pallets from one side (Lorries, Waggons etc.) - 2 hydraulic functions + solenoid valve

Model	Capacity kg/mm	S mm	Opening range A mm	Width B mm	Forks mm	C mm	V mm	CofG Z mm	CofG Z1 mm	Weight kg
2 T 429 / 2 T 149 Z	1.750/600	± 100	560-1.960	1.200	80 x 50 x 1.150	620	602	410	875	980
2 T 429 / 3 T 149 Z	2.500/600	± 100	560-1.960	1.200	80 x 50 x 1.150	750	598	365	892	1.220
3 T 429B-1-2-3 / 3 T 149 Z	2.625/600	± 100	560-2.410	1.660	60 x 50 x 1.150	750	570	375	937	1.435

Locating claw on fork tip available upon request. Wider fork shanks available upon request. Fork length optional 1.150 or 1.200 mm.



Triple Pallet Handler T429B-1-2-3

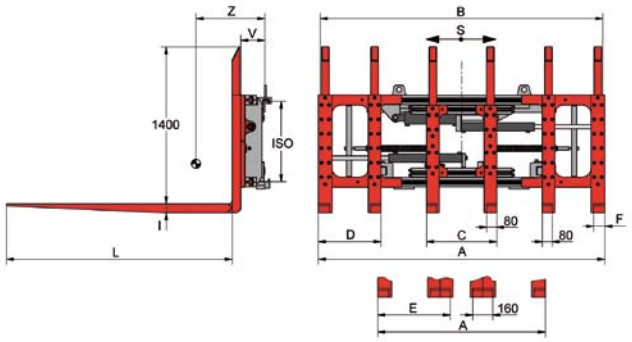
with **independent sideshift** – with bolt-on forks - for 1, 2 or 3 pallets side by side – 2 hydraulic functions[1)]

Model	Pallet handling	Capacity kg/mm	for FLT max.	S mm	Opening range B mm	A mm	C mm	E mm	fork dist. D mm	F mm	G mm	I mm	ISO cl.	CofG V mm	Z mm	Weight kg
3T429B-1-2-3	800x1.200	3.000/600	3,5/500	± 100	1.460	560	1.580	2.210	570	510	1.150	50	3	170	225	720
	800x1.200		3,5/500	± 100	1.660	560	1.580	2.410	570	510	1.150	50	3	170	220	745
	800x1.200		3,5/500	± 100	1.760	560	1.580	2.510	570	510	1.150	50	3	170	216	760
	1.000x1.200		3,5/500	± 100	1.960	660	1.900	2.910	680	620	1.150	50	3	170	212	785
4T429B-1-2-3	800x1.200	3.600/600	5,0/500	± 100	1.460	560	1.580	2.210	570	510	1.150	60	3	170	245	770
	800x1.200		5,0/500	± 100	1.660	560	1.580	2.410	570	510	1.150	60	3	170	238	795
	800x1.200		5,0/500	± 100	1.760	560	1.580	2.510	570	510	1.150	60	3	170	235	805
	1.000x1.200		5,0/500	± 100	1.960	660	1.900	2.910	680	620	1.150	60	3	170	231	835
	1.200x1.000		5,0/500	± 100	2.150	670	1.910	3.120	680	620	1.000	60	3	170	195	865
5T429B-1-2-3	800x1.200	4.500/600	6,0/600	± 160	1.460	560	1.580	2.210	570	510	1.150	60	4	190	240	875
	800x1.200		6,0/600	± 160	1.660	560	1.580	2.410	570	510	1.150	60	4	190	235	900
	1.000x1.200		6,0/600	± 160	1.960	660	1.900	2.910	680	620	1.150	60	4	190	230	950
	1.200x1.000		6,0/600	± 160	2.150	670	1.910	3.120	680	620	1.000	60	4	190	200	980

Preferential range

Locating claw on fork tip available upon request. Wider fork shanks available upon request. Fork length optional 1.150 or 1.200 mm.

[1)] Solenoid valve for individual control of pallets left and right.

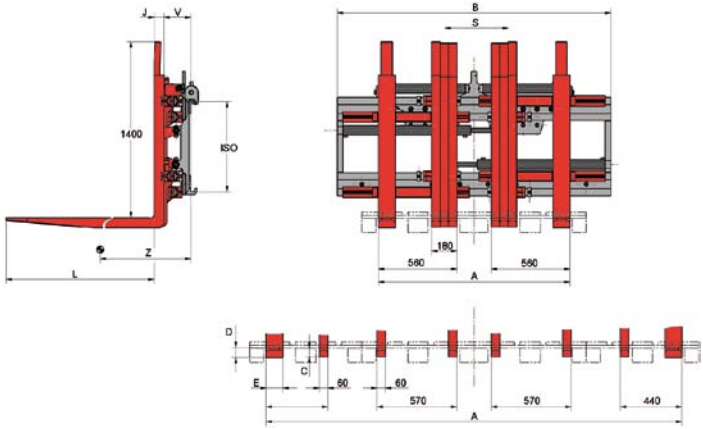


Six Pallet Handler T429-4-6

with **independent sideshift** – with bolt-on forks
Pallet handling lengthwise 800 x 1.200 mm for 4 or 6 pallets – 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	B mm	C mm	D mm	E mm	F mm	I mm	L mm	ISO cl.	V mm	CofG Z mm	Weight kg
4 T429-4-6	2.500/1.200	± 125	1.340-2.140	1.400	560	500	580	80	60	2.350	3/4	212	635	1.250
6 T 429-4-6	4.000/1.200	± 160	1.340-2.290	1.790	560	500	580	90	70	2.350	4	192	615	1.435
6 T 429-4-6	4.000/1.200	± 160	1.340-2.740	2.260	560	500	580	90	70	2.350	4	192	605	1.470
10 T 429-4-6	6.000/1.200	± 160	1.340-2.290	1.790	560	500	580	110	70	2.350	4	207	600	1.680
10 T 429-4-6	6.000/1.200	± 160	1.340-2.740	2.260	560	500	580	110	70	2.350	4	207	585	1.720
10 T 429-4-6	6.000/1.200	± 160	1.360-2.840	2.260	560	480	560	110	70	2.350	4	207	585	1.720

6T and 10T available with ± 250 mm extended sideshift.
Six Pallet Handler with Load Stabilizer available upon request. **Six Pallet Handler in integrated version available upon request.**



Four Pallet Handler / Eight Pallet Handler T419-2-4 / T419-4-8L

with **independent sideshift** – for 2 or 4 pallets side by side or 4 or 8 pallets – 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	B mm	C mm	D mm	E mm	J mm	L mm	ISO cl.	V mm	CofG Z mm	Weight kg
4 T 419-4-8L	3.600/1.200	± 160	1.365-2.965	1.950	60	70	120	70	2.350	4	194	612	1.655
12 T 419-4-8L	8.000/1.200	± 160	1.365-2.965	2.500	80	70	150	80	2.400	Pin-Type	305	554	3.110
6 T 419-2-4	4.800/600	± 160	1.365-2.965	1.950	45	50	120	70	1.150	4	192	257	1.320
6 T 419-2-4	4.800/600	± 250	1.365-2.965	1.950	45	50	120	70	1.150	4	192	256	1.325

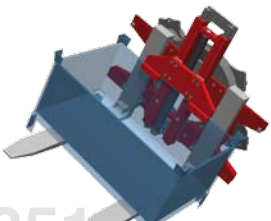
Recommended Oil flow rates, Pressures and Forklift truck capacities

Rotators – Ladle Tipplers

Attachment	Page	Oil volume (l/min) min.	optimal	max.	Pressure (bar) maximal	max. capacity FLT (kg/mm LCD)
0,8 T 351	40	15	20	25	200	1.200/500
1 T 351 / T 391 (G)	39-42	15	20	25	200	2.000/500
2 T 351 / T 391 (G/S)	39-42	15	20	25	200	2.500/500
2,5 T 351 / T 391 (G/S)	39-42	25	40	50	200	3.500/500
3,5 T 351 / T 391 (G)	39-42	25	40	50	200	4.500/500
4 T 351 / T 391 (G)	39-42	25	40	50	200	5.000/600
4,5 T 351 / T 391 (G)	39-42	30	50	70	200	5.000/600
5 T 351 / T 391 (G)	39-42	30	50	70	200	7.000/600
6 T 351 / T 391 (G)	39-42	40	60	75	200	8.000/600
8 T 351 (G)	39-42	40	60	75	200	10.000/600
10 T 351	41	40	60	75	200	15.000/600
2 T 360	43	30	40	50	150	2.500/500
3 T 360	43	30	40	50	150	4.000/500
5 T 360	43	40	60	75	150	6.000/600
7 T 360	43	50	70	90	150	8.000/600

KAUP Rotators. The standard version of the **KAUP** Rotator is equipped with a fork carriage. It can be rotated 360° endless. Containers with a slip-in underlay can be turned for emptying. Standard forks with normal widths can be fixed by means of square stops, included in the delivery, which are bolted onto the lower carriage bar. Bolt holes in the stops offset to all four sides for safe fixing. This is the point of the highest load strain during rotation. Forks see page 94.

KAUP Rotators
form basic modules of the KAUP Modular Built Systems for all combinations of rotating attachments.



with gripping claw

with supporting sidefork

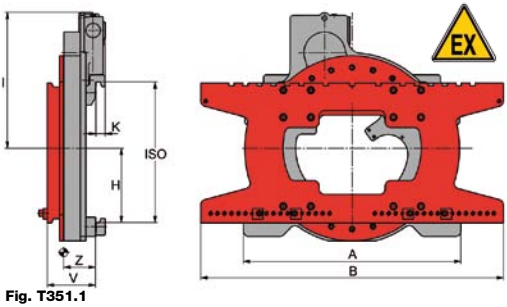


Fig. T351.1

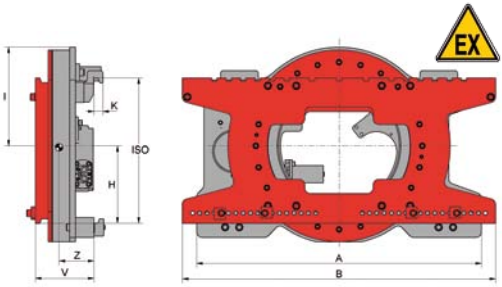


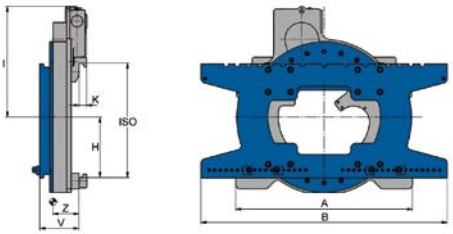
Fig. T351.2

Rotator 360° endless T351 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	H mm	I mm	K mm	ISO cl.	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	V mm	CofG Z mm	Weight kg
0,8 T 351.2[1)]	1.200/500	860	1.040	203	278	33	2	4.226	5,3	156	97	175
1 T 351.1	1.800/500	560	890	213	478	33	2	6.013	7,6	155	83	180
1 T 351.2	1.800/500	780	890	211	287	31	2	6.013	7,6	190	110	170
2 T 351.1	2.500/500	790	1.040	269	457	33	2	7.700	9,7	166	90	225
2 T 351.2	2.500/500	1.000	1.040	270	345	29	2	7.700	9,7	200	113	255
2,5 T 351.1	3.200/500	790	1.100	269	492	33	3	7.700	9,7	176	98	290
2,5 T 351.2	3.200/500	1.000	1.100	270	345	33	3	7.700	9,7	205	122	305
4 T 351.2	5.000/500	1.010	1.100	339	395	33	3	8.950	11,3	213	122	380
4,5 T 351.1	5.000/500	870	1.350	328	675	36	4	14.823	17,4	221	124	524
5 T 351.2	6.000/600	1.260	1.350	345	455	40	4	13.434	15,7	264	156	655
6 T 351.2	6.500/600	1.260	1.350	345	455	40	4	17.157	20,7	264	150	715
8 T 351.2	8.000/900	1.300	1.600	396	485	40	4	21.679	18,8	304	172	1.045

Preferential range [1)] Fork carriage plate closed. Rotators with higher rotating speeds available upon request.
Forks for KAUP Rotators can be found on page 94. Other fork carriage widths available upon request.

Optional: Foldable lateral supporting fork on the left side in driving direction.
Downhold (to empty metal grid boxes etc.) 1T - 3T167 incl. rotary conduit
Opening range (over fork) 700-1.290 mm.

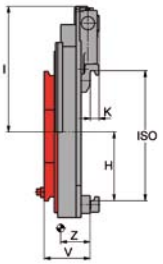


Rotator-Fishing Industry
T351.1S / T351.1.3S 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	H mm	I mm	K mm	ISO cl.	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	V mm	CofG Z mm	Weight kg
1T351.1 S	1.800/500	560	890	213	478	33	2	6.013	7,6	155	83	180
2T351.1 S	2.500/500	790	1.040	269	515	29	2	7.700	9,7	166	90	225
2,5T351.1 S	3.200/500	790	1.100	269	515	33	3	7.700	9,7	177	98	290
1T351.1.3 S	1.800/500	560	890	213	478	33	2	6.013	7,6	155	83	180
2T351.1.3 S	2.500/500	790	1.040	269	515	29	2	7.700	9,7	166	90	225
2,5T351.1.3 S	3.200/500	790	1.100	269	515	33	3	7.700	9,7	177	98	290

Preferential range

There are two types of **KAUP Fishing Industry Rotators:** The version **T351.1S** has 2 layers of sea water resistant paint (RAL 5005), galvanised screws and drill holes sealed with silicon. The version **T351.1.3S** has 3 layers of sea water resistant paint (navy gray, galvanised fork carriage and flange, galvanised screws, drill holes sealed with silicon and drainage for water.
Rotators with higher rotating speeds available upon request.



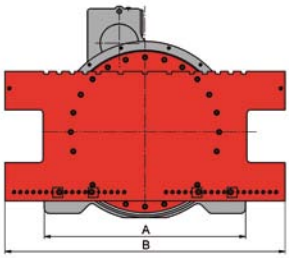
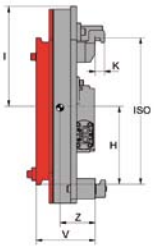


Fig. T351.1G



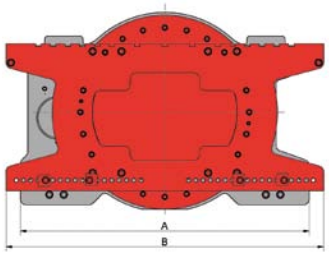


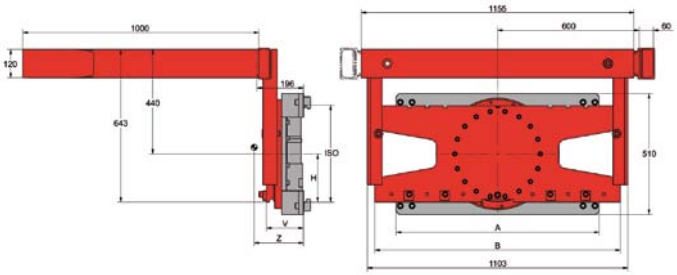
Fig. T351.2G

Rotator 360° endless, foundry version T351G 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	H mm	I mm	K mm	ISO cl.	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	V mm	CofG Z mm	Weight kg
1 T 351.1 G	1.800/500	817	890	203	288	33	2	6.013	7,6	207	124	250
2 T 351.1 G	2.500/500	790	1.040	269	515	29	2	7.700	9,7	174	93	302
2 T 351.1 G	2.500/500	790	1.150	269	515	29	2	7.700	9,7	174	95	310
2,5 T 351.1 G	3.200/500	790	1.100	269	515	33	3	7.700	9,7	179	106	387
3,5 T 351.1 G	4.000/500	880	1.100	381	539	36	3	11.815	13,8	202	113	525
4 T 351.1 G	5.000/500	900	1.100	378	595	36	3	14.823	17,4	221	120	575
4,5 T 351.1 G	5.000/500	900	1.350	328	695	40	4	14.823	17,4	231	129	670
5 T 351.2 G	6.000/600	1.260	1.350	345	455	40	4	13.434	15,7	275	163	780
6 T 351.2 G	6.500/600	1.260	1.350	345	455	40	4	17.157	20,7	275	157	831
8 T 351.2 G	8.000/900	1.300	1.600	396	480	40	4	21.679	18,8	304	175	1.080

Preferential range

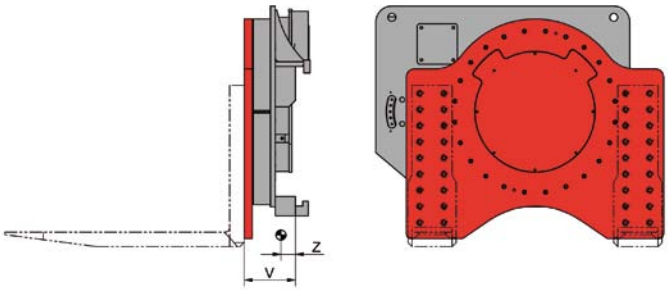
In general the foundry version features a closed fork carriage plate and a closed base plate as well as hydraulic hoses protected against heat. It is suitable to operate in applications with extreme high temperatures. Dust proof versions and foundry rotators up to 40 T upon request. Forks for KAUP Rotators can be found on page 94. Other fork carriage widths available upon request.
Foldable lateral supporting forks available upon request. Rotators with higher rotating speeds available upon request.



Rotator 360° endless with lateral supporting fork 0,8T351.2-SG 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	H mm	ISO cl.	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	V mm	CofG Z mm	Weight kg
0,8 T 351.2-SG	1.200/500	860	1.040	203	2	4.226	5,3	156	145	235

FLT carriage width min. 890 mm. Rotators with higher rotating speeds available upon request



Rotator 360° endless 10 - 30T351 1 hydraulic function

Model	Capacity kg/mm	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	V mm	CofG Z mm	Weight kg
10 T 351	12.000/900	50.000	60	300	190	2.600
15 T 351	15.000/900	50.000	60	300	190	2.600
25 T 351	24.000/1.200	115.000	120	300	215	4.500
30 T 351	28.000/1.200	115.000	120	300	215	4.500

With sideshift function model T 391 upon request. Larger tonnages available upon request.

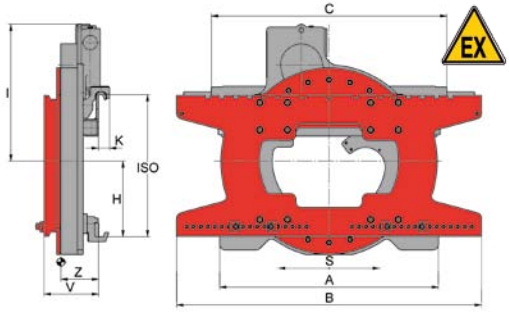


Fig. T391.1

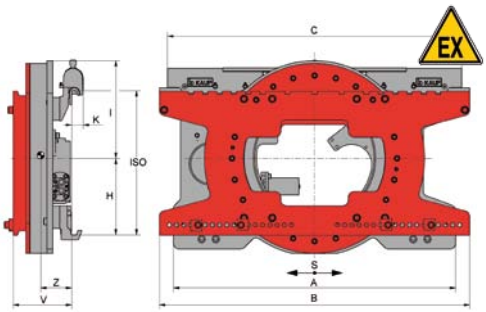


Fig. T391.2

Rotator 360° endless T391 with **independent sideshift** - 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	B mm	C mm	H mm	I mm	K mm	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 391.2	1.800/500	± 100	780	890	858	213	294	32	6.013	7,6	2	192	99	198
2 T 391.1	2.500/500	± 100	790	1.040	858	269	492	32	7.700	9,7	2	172	90	255
2 T 391.2	2.500/500	± 100	1.000	1.040	950	270	345	32	7.700	9,7	2	198	104	283
2,5 T 391.1	3.200/500	± 100	790	1.100	850	269	492	40	7.700	9,7	3	198	113	310
2,5 T 391.2	3.200/500	± 100	1.000	1.100	1.043	270	345	40	7.700	9,7	3	208	110	373
4 T 391.2	5.000/500	± 100	1.010	1.100	1.010	339	395	40	8.950	11,3	3	215	113	425
4,5 T 391.1	5.000/500	± 160	1.110	1.350	940	378	675	49	14.823	17,4	4	229	123	595
5 T 391.2	6.000/600	± 160	1.260	1.350	1.260	345	455	50	13.434	15,7	4	264	142	740
6 T 391.2	6.500/600	± 160	1.260	1.350	1.260	345	455	50	17.157	20,7	4	264	138	790
8 T 391.2	8.000/900	± 160	1.300	1.600	1.700	396	480	54	21.679	18,8	4	304	164	1.110

Preferential range Rotators with higher rotating speeds available upon request.
Forks for KAUP Rotators can be found on page 94. Other fork carriage widths available upon request.

Optional: Foldable lateral supporting fork on the left side in driving direction.
Downhold (to empty metal grid boxes etc.) 1T - 3T167 incl. rotary conduit, solenoid valve and accessory-kit - opening range (over fork) 700-1.290 mm.

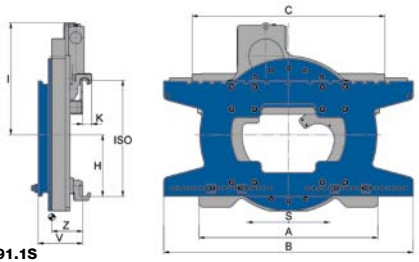


Fig. T391.1S

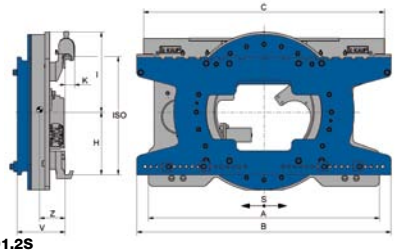


Fig. T391.2S

Rotator Fishing Industry
T391.1/.2S - T391.1.3/.2.3S with **independent sideshift** - 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	B mm	C mm	H mm	I mm	K mm	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1T391.2 S	1.800/500	± 100	780	890	858	213	294	32	6.013	7,6	2	192	99	198
2T391.1 S	2.500/500	± 100	790	1.040	858	269	492	32	7.700	9,7	2	172	90	255
2,5T391.1 S	3.200/500	± 100	790	1.100	850	269	492	40	7.700	9,7	3	197	108	318
1T391.2.3 S	1.800/500	± 100	780	890	858	213	294	32	6.013	7,6	2	192	99	198
2T391.1.3 S	2.500/500	± 100	790	1.040	858	269	492	32	7.700	9,7	2	172	90	255
2,5T391.1.3 S	3.200/500	± 100	790	1.100	850	269	492	40	7.700	9,7	3	197	108	318

There are two types of **KAUP Fishing Industry Rotators**: The version **T391.1/.2S** has 2 layers of sea water resistant paint (RAL 5005), galvanised screws and drill holes sealed with silicon. The version **T391.1.3/.2.3S** has 3 layers of sea water resistant paint (navy gray, galvanised fork carriage and flange, galvanised screws, drill holes sealed with silicon and drainage for water.
Rotators with higher rotating speeds available upon request.

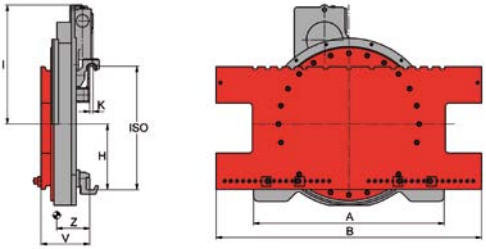


Fig. T391.1G

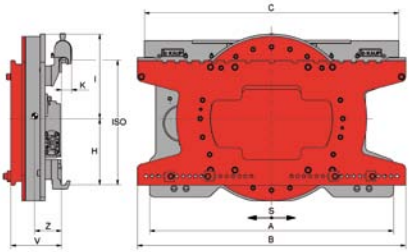
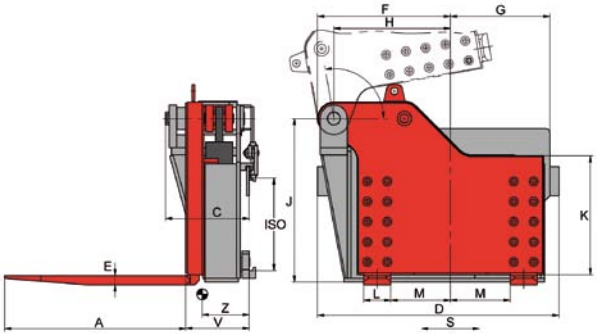


Fig. T391.2G

Rotator 360° endless
foundry version T391G with **independent sideshift** - 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	B mm	C mm	H mm	I mm	K mm	Torque Md Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 391.2 G	1.800/500	± 100	800	890	858	203	410	32	6.013	7,6	2	206	114	276
2 T 391.1 G	2.500/500	± 100	800	1.040	880	269	492	32	7.700	9,7	2	204	115	327
2 T 391.1 G	2.500/500	± 100	800	1.150	880	269	492	32	7.700	9,7	2	204	116	335
2,5 T 391.1 G	3.200/500	± 100	800	1.100	850	269	492	40	7.700	9,7	3	205	121	420
3,5 T 391.1 G	4.000/500	± 100	1.060	1.100	1.060	381	539	43	11.815	13,8	3	210	117	544
4 T 391.1 G	5.000/500	± 100	1.110	1.100	940	378	595	43	14.823	17,4	3	218	113	610
4,5 T 391.1 G	5.000/500	± 160	1.110	1.350	940	378	695	49	14.823	17,4	4	238	128	723
5 T 391.2 G	6.000/600	± 160	1.260	1.350	1.260	345	455	50	13.434	15,7	4	275	151	875
6 T 391.2 G	6.500/600	± 160	1.260	1.350	1.260	345	455	50	17.157	20,7	4	275	147	925
8 T 391.2 G	8.000/900	± 160	1.300	1.600	1.700	396	480	54	21.679	18,8	4	304	165	1.145

In general the foundry version features a closed fork carriage plate and a closed base plate as well as hydraulic hoses protected against heat. It is suitable to operate in applications with extreme high temperatures. Dust proof versions and foundry rotators up to 40T upon request. Forks for KAUP Rotators can be found on page 94. Other fork carriage widths available upon request.
Foldable lateral supporting forks available upon request.
Rotators with higher rotating speeds available upon request.



Ladle Tippler T360

with **independent sideshift** – tilt angle α = 100° to the right side in driving direction – 2 hydraulic functions

Model	Capacity kg/mm	S mm	A mm	C mm	E mm	F mm	G mm	H mm	J mm	K mm	L mm	M mm	D mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 360	1.500/500	± 100	1.000	390	50	635	400	545	760	560	150	210	1.040	2	314	263	675
3 T 360	2.500/500	± 160	1.000	460	50	735	550	645	900	660	150	330	1.285	3	356	239	1.085
5 T 360	4.000/600	± 200	1.000	630	60	990	525	880	890	750	160	175	1.890	4	460	282	1.430
7 T 360	6.000/600	± 200	1.000	630	70	990	525	880	890	750	200	195	1.890	4	460	304	1.545
12T 360	9.000/700	± 275	1.400	748	90	1.015	870	895	950	1.125	200	350	1.975	PT*	620	415	3.300

Optional available for tilting to the left side in driving direction. *PT = Pin-Type

Casting Device for Foundry Ladles T360G

2 hydraulic functions

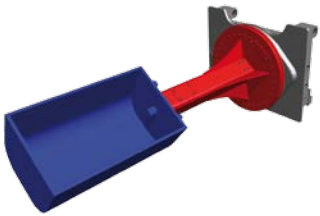
To empty ladles to both sides and forward.

Model	Capacity kg/mm	V mm	CofG Z mm	Weight kg
1,5 T 360 G	750/850	120	510	400
2 T 360 G	1.300/850	120	505	590
4 T 360 G	2.000/1.150	160	850	1.060
6 T 360 G	5.000/815	180	610	1.960
8 T 360 G	5.000/1.500	200	1.240	2.800

Further Casting Devices for Foundry Ladles in various sizes, versions as well as with different rotation or tilt angles available upon request.

Charging Device T355 / T395

For charging furnaces with additives – available with hydraulic locking of bucket (upon request).

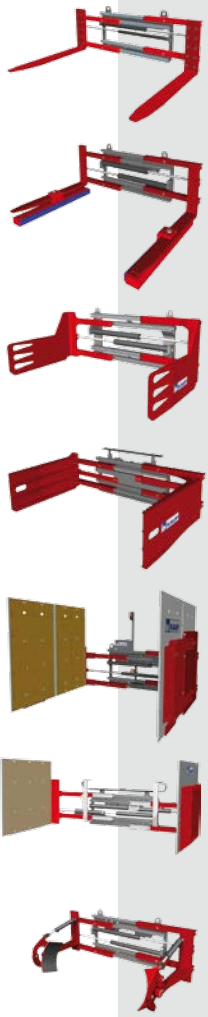


Charging Devices T355 and T395 (with sideshift) in in various capacities and versions (upon request).

Recommended Oil flow rates and Pressures

Clamps

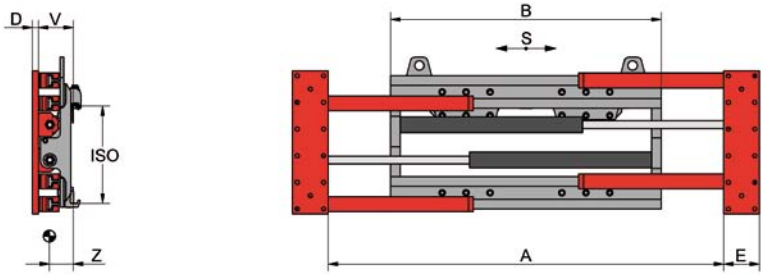
Model	Page	Oil volume (l/min) min.	optimum	max.	Pressure (bar) maximum
1 T 410 / 411 / A / D	45-47	20	30	45	180
1,5 T 410 / 411 / A / H / D	45-47	20	30	45	180
2 T 410 / 411 / A / H / D	45-47	20	30	45	180
3 T 410 / 411 / A / H / D	45-47	25	40	60	180
4,5 T 411 / H / D	45-47	25	40	60	180
5 T 411 / H / D	45-47	45	60	70	180
6 T 411 B / H / D	45-47	45	60	70	180
1,5 T 412 V / H / HP / UVP	50-51	20	30	45	180
2 T 412 V / H / HP / UVP	50-51	20	30	45	180
3 T 412 V / H / HP / UVP	50-51	25	40	60	180
1,5 T 413	52-57	20	30	45	180
2 T 413	52-57	20	30	45	180
3 T 413	52-57	25	40	60	180
4 T 413	52-57	25	40	60	180
4,5 T 413	52-57	25	30	45	180
5 T 413	52-57	45	60	70	180
5,5 T 413	52-57	45	60	70	180
6 T 413 B	52-57	45	60	70	180
6,5 T 413 B	52-57	45	60	70	180
8 T 413 B	52-57	45	60	70	180
4,5 T 413 RC	52-57	25	40	60	180
5 T 413 BRC	52-57	45	60	70	180
8 T 413 BRC	52-57	45	60	70	180
1 T 413 G, G-1	58-59	20	30	45	180
1,5 T 413 G, G-1	58-59	20	30	45	180
2 T 413 G, G-1	58-59	20	30	45	180
1 T 413 GT	60	15	20	25	180
1,5 T 413 GT	60	15	20	25	180
2 T 413 GT, GT-1L	60	15	20	25	180
3 T 413 GT, GT-1L	60	20	30	40	180
2 T 414 GT-1L	60	15	20	25	180
3 T 414 GT-1L	60	20	30	40	180
1,5 T 414-1/2	61-62	20	30	45	160
2 T 414-1/2	61-62	20	30	45	160
1 T 415	63	20	30	45	160
1,5 T 415-1	63	20	30	45	160
1,5 T 406 H / -2H	64	20	30	45	160
2 T 406 H / -2H	64	20	30	45	160
2 T 415 TB, CT, SC	64	20	30	45	160
0,3 T 445 F	63	10	15	20	180
0,8 T 445 F	63	10	15	20	180



KAUP Clamps

feature independent sideshift function as standard (see page 9). Clamps of the 4XX series are identical in design and differ only in the capacity and construction width.

Due to the KAUP Modular Build System, all clamps can be combined with rotators (models T451..8) and/or with additional sideshift function (models T491…8). All clamps feature lifting lugs which also serve as fixing points for load backrests. KAUP Clamps are always fitted with manometer gauge and clamp valve. This valve incoporates an adjustable pressure relief valve for the function “clamping” and a preset pressure reducer for the function “clamp open” to prevent arm damage which could occur if the pressure in the cylinder is too high when activating the function “open clamp”.



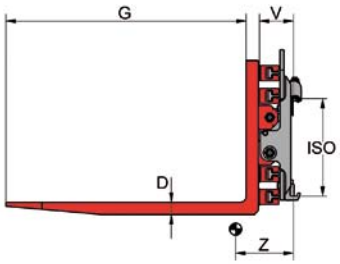
Clamp with bold-on plates T410A

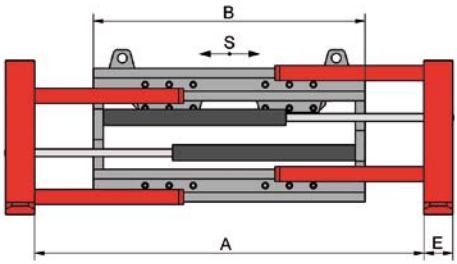
with **independent sideshift** - 2 hydraulic functions, clamp without arms[1)]

Model	Capacity on forks kg/mm	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 410 A	1.500/500	700/500	± 100	340-1.520	970	25	100	2	133	80	175
1,5 T 410 A	2.300/500	1.250/500	± 100	320-1.500	970	25	120	2	133	82	215
				40- 940	970					81	214
				330-1.680	1.130					81	227
2 T 410 A	2.800/500	2.000/500	± 100	250-1.350	970	25	150	2/3	143	88	260
				290-1.590	1.130					88	272
				40-1.090	1.130					88	267
				290-1.790	1.330					87	291
3 T 410 A	3.600/500	2.500/500	± 100	260-1.560	1.130	25	150	3	152	88	352
				260-1.760	1.330					87	371
4T 410 A	4.150/500	2.900/500	± 100	260-1.560	1.130	25	150	3	162	92	401
				260-1.760	1.330					92	423
				130-1.630	1.460					92	433
				260-1.890	1.460					92	436
4,5 T 410 A	5.000/500	3.500/500	± 100	250-1.650	1.330	25	150	3	188	106	519
				120-1.520	1.460					106	535
				220-1.720	1.460					106	538
5 T 410 A	6.200/600	3.500/600	± 160	230-1.860	1.550	40	200	4	176	98	687
				500-2.400	1.550					100	753
				230-2.130	1.820					97	729

Preferential range

[1)] Suitable forks or arms available upon request.
Clamps with cylinder- and sideshift protection upon request.
Load Backrest Model T479 s. page 91. Forks see page 94.
Clamps without sideshift Model T400A.





EX

Fork Clamp T411

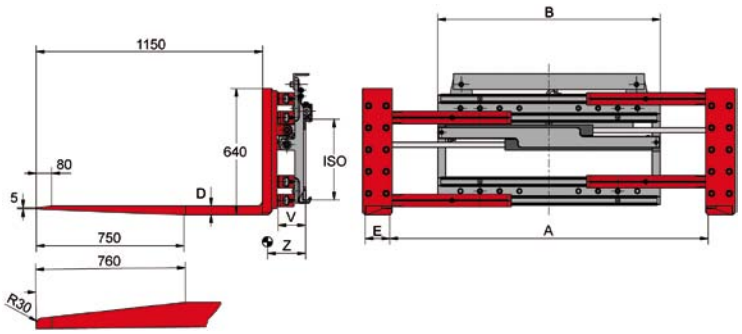
with **independent sideshift** - 2 hydraulic functions

The Fork Clamp can be used for the transportation of palletised goods as well as for clamping purposes. Slip-on arms in different versions easily turn the Fork Clamp into a special clamp.

Model	Capacity of forks kg/mm	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 411	1.500/500	700/500	± 100	340-1.300	750	40	100	1.200	2	133	268	236
				340-1.520	970						251	258
				350-1.700	1.130						244	269
				330-1.730	1.200						241	273
1,5 T 411	2.300/500	1.250/500	± 100	320-1.500	970	45	120	1.200	2	133	266	323
				40- 940	970						254	312
				330-1.680	1.130						253	335
				90-1.270	1.200						252	336
				310-1.710	1.200						270	339
1,5 T 401	2.300/500	1.250/500	without	260-1.260	850	45	120	1.200	2	126	260	300
2 T 411	2.800/500	2.000/500	± 100	280-1.380	970	50	120	1.200	2/3	143	262	384
				320-1.620	1.130						257	396
				70-1.120	1.130						259	391
				120-1.420	1.330						252	408
				320-1.820	1.330						250	412
2 T 401	2.800/500	2.000/500	without	300-1.300	850	50	120	1.200	2/3	136	282	339
3 T 411	3.600/500	2.500/500	± 100	260-1.560	1.130	50	150	1.200	3	152	255	510
				260-1.760	1.330						249	529
				130-1.630	1.460						245	539
				260-1.890	1.460						245	541
4 T 411	4.150/500	2.900/500	± 100	260-1.560	1.130	50	150	1.200	3	162	245	572
				260-1.760	1.330						240	591
				130-1.630	1.460						237	603
				260-1.890	1.460						236	606
4,5 T 411	5.000/500	3.500/500	± 100	230-1.480	1.200	60	150	1.200	3	188	253	689
				250-1.650	1.330						248	709
				120-1.520	1.460						245	725
				220-1.720	1.460						244	728
				260-1.890	1.550						241	744
5 T 411	6.200/600	3.500/600	± 160	240-1.740	1.460	70	150	1.200	4	176	237	879
				280-1.910	1.550						235	894
				550-2.450	1.550						227	958
				280-2.180	1.820						228	936
6 T 411 B	8.000/600	4.800/600	± 160	180-1.810	1.550	60	200	1.200	4	259	238	1.410
				140-2.040	1.860						229	1.499
				340-2.440	1.860						229	1.506
8 T 411 B	8.000/900	6.500/600	VSS	310-2.510	2.200	70	200	1.200	4	309	241	2.045

Preferential range

Clamp available with cylinder and sideshift protection upon request. Load Backrest Model T479 s. page 91.
Available without sideshift – model T401.
Also available with bolt-on forks.



Harbour Clamp T411AH

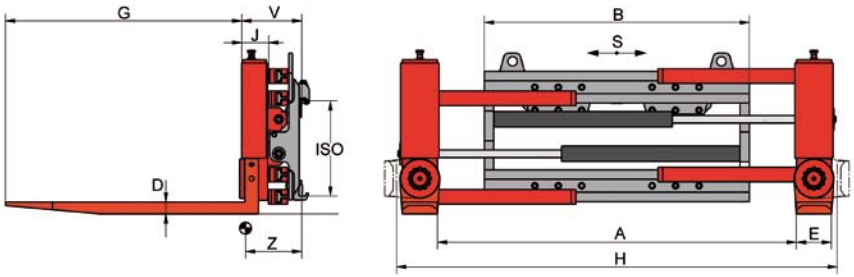
with **independent / valveblock sideshift** – 2 hydraulic functions - with bolt-on forks - fork length 1.150 mm

The Harbour Clamp is a special version of the Fork Clamp. The carrying part of the fork, in addition to the normal tapering to about 2/3 of the fork length, it is also tapered in the fork width. This makes it possible to also pick up transport goods stored tightly next to each other. Attachments standardly equipped with protection of cylinders and sideshifter.

Model	Capacity of forks kg/mm	Capacity as clamp kg/mm	S* mm	A mm	B mm	D mm	E mm	ISO cl.	V mm	CofG Z mm	Weight kg
2,5T411AH	3.000/500	1.600/500	± 100	200-1.380	1.130	45	125	2/3	143	203	400
2,5T411AH	3.000/500	1.600/500	± 100	320-1.620	1.130	45	125	2/3	143	202	402

Preferential range

Load Backrest Model T479 s. page 91. *Also available with valveblock sideshift dependent on opening range.
Also available without sideshift, model T401AH.



Fork Clamp with Turnable Forks T411D

with **independent sideshift** – Fork length max. 1.300 mm – 2 hydraulic functions

The carrying part of the forks is turnable by ± 90° manually. Therefore the Fork Clamp with Turnable Forks is suitable for fork operation (transport of palletised goods, grate boxes etc.) as well as for clamping bales, boxes and cartons. If the carrying parts are turned only 45° a prism is formed which allows easy transportation of drums or other cylindrical objects. Therefore the Fork Clamp with Turnable Forks is a very versatile attachment.

Model	Capacity of forks kg/mm	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	H mm	J mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 411 D	1.500/500	700/500	± 100	310-1.490	970	40	100	1.200	580-1.760	110	2	248	245	331
1,5 T 411 D	2.000/500	1.250/500	± 100	110-1.110	970	40	120	1.200	400-1.400	110	2	248	267	343
				290-1.470	970				580-1.760				263	353
				300-1.650	1.130				590-1.940				257	364
				280-1.680	1.200				570-1.970				254	369
2 T 411 D	2.800/500	2.000/500	± 100	220-1.420	1.040	50	150	1.200	570-1.770	110	2/3	258	305	450
				130-1.330	1.130				480-1.680				302	456
				230-1.530	1.130				580-1.880				301	458
				230-1.730	1.330				580-2.080				294	473
3 T 411 D	3.600/500	2.500/500	± 100	225-1.525	1.130	60	150	1.200	605-1.905	110	3	267	287	573
				225-1.855	1.460				605-2.235				276	604

Preferential range

Hydraulically turnable forks available upon request. Load Backrest Model T479 s. page 91. Slip-on arms for the forks see page 48 and 49.
Also available without sideshift, model T401D.

Slip-on Arms

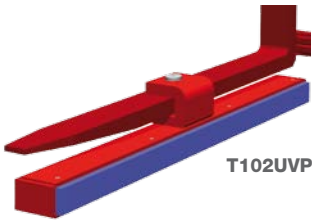
KAUP offers a wide variety of slip-on arms for nearly every application which turns your high visibility clamp into a multi talent. It can be used not only for transportation of pallets or grate boxes but also as a clamp. Slip-on arms are supplied to suit every customer's requirement. The following arms only show a small portion of the versions available.

Block Arms T102UVP

underslung version with vulcollan lining

Model	Lenght mm	Weight kg/pair	
2 T 102 UVP	1.200	124	

Preferential range



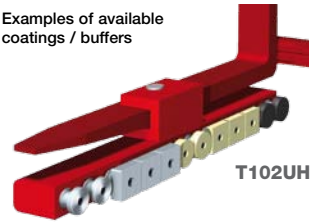
Block Arms T102UH

underslung version with mechano-hydraulic equilibration

Model	Lenght mm	Weight kg/pair	
2 T 102 UH	1.238	170	

HG = Rubber coating Ø 75 mm, HV = Polyurethane coating Ø 75 mm, HS = Steel disc Ø 60 mm. Length depends on the number of pistons ( ), available arm length 910 (11), 992 (12), 1.074 (13), 1.156 (14), 1.238 (15)

Examples of available coatings / buffers

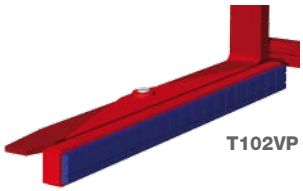


Block Arms T102VP

slip-on version with vulcollan linings

Model	Lenght mm	Weight kg/pair	
1 T 102 VP	1.200	80	
2 T 102 VP	1.200	80	
3 T 102 VP	1.200	80	
1 T 102 VP[1)]	1.200	108	
2 T 102 VP[1)]	1.200	108	
3 T 102 VP[1)]	1.200	108	

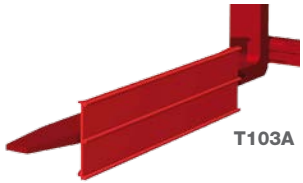
Preferential range [1)] Double high arms



Bale Arms T103A

slip-on version

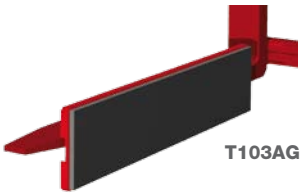
Model	Lenght/Height mm	Weight kg/pair	
1 T 103 A	700/200	36	
2 T 103 A	800/400	62	
3 T 103 A	800/400	64	



Bale Arms T103AG

gripping nap strap coated, slip-on version

Model	Lenght/Height mm	Weight kg/pair	
1 T 103 AG	700/200	38	
2 T 103 AG	800/400	64	
3 T 103 AG	800/400	66	



T103AG

Drum Arms T105A

slip-on version, for handling of cylindrical steel drums* Ø 560 mm
rubber coated

Model	Number of drums	Weight kg/pair	
1 T 105-1 A	1	26	
2 T 105-1 A	1	26	

Preferential range

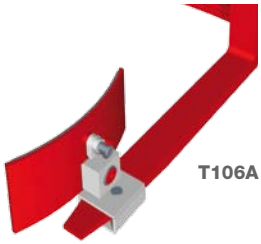
*special designs available for transportation of plastic drums (upon request).

T105A

Rotating Roll Arms T106A

slip-on version - mechanically turnable

Model		Weight kg/pair	
2 T 106 A		44	
4 T 106 A		48	



T106A

Rotating Roll Arms T106AH 90°

slip-on version - hydraulically turnable up to 90°

Model	No of hydr. arms	Weight kg/pair	
2T106 AH	1	102	
4T106 AH	1	114	
2T106 A-2H	2	132	
4T106 A-2H	2	140	

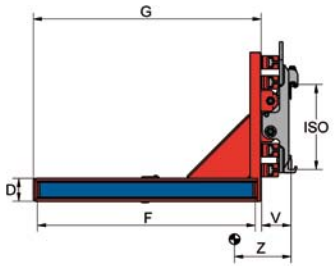
T106AH 90°

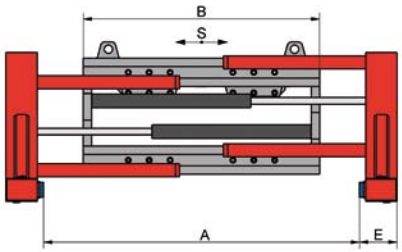
Rotating Roll Arms T106AH 180°

slip-on version - hydraulically turnable up to 180°

Model	No of hydr. arms	Weight kg/pair	
2T106 AH	1	120	
4T106 AH	1	130	
2T106 A-2H	2	148	
4T106 A-2H	2	158	

T106AH 180°





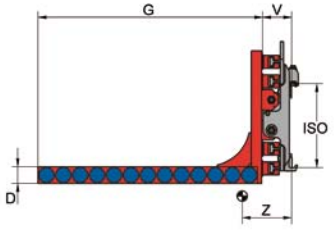
Block Clamp T412V

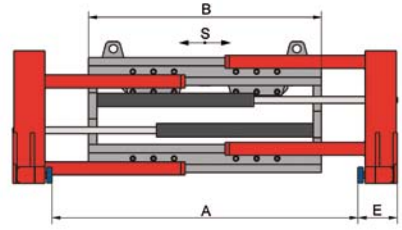
with **independent sideshift** - with polyurethane lining and parallel compensation - 2 hydraulic functions

Block stacks are clamped from the sides. In order to reduce pressure to the load as well as spot load on the blocks, which often have not completely dried, the arms of this type are provided with an easy-to-replace vulkollan bar suspended swivelling in the centre to compensate for dimensional variations of the load.

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	F mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 412 V	1.250/500	± 100	220-1.400	970	110	180	1.200	1.265	2	133	335	420
2 T 412 V	2.000/500	± 100	270-1.570	1.130	110	180	1.200	1.265	2/3	143	314	475
3 T 412 V	2.500/500	± 100	270-1.570	1.130	110	180	1.200	1.265	3	152	289	546
			270-1.900	1.460							277	577
4,5 T 412 V	3.200/600	± 100	290-1.790	1.330	110	180	1.200	1.265	3	188	266	702
			290-1.920	1.460							262	722
5 T 412 V	3.500/600	± 160	230-1.860	1.550	110	180	1.200	1.265	4	176	219	825

Preferential range Load Backrest Model T479 s. page 91. Available with cylinder- and sideshift protection upon request. Variations in arm dimensions upon request. Also available without sideshift, model T402V.





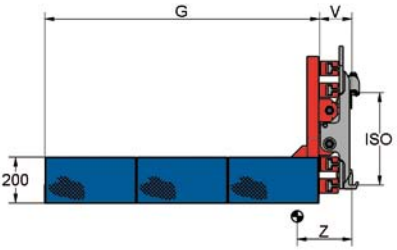
Block & Brick Clamp T412H

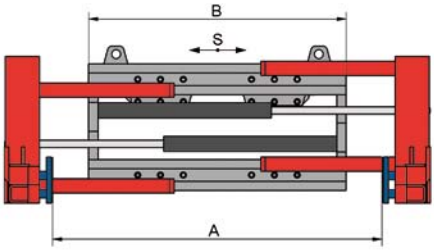
with **independent sideshift** - with mechano-hydraulic equilibration pistons - 2 hydraulic functions

The Clamp Arm is formed as a chamber that is filled with grease. Small pistons which are spring-loaded for retaining them in a zero position plunge into these chambers. Any dimensional variations of the load are compensated for among one another by the opposite motions of the pistons. Both material and geometrical shape of the buffers can easily be adapted to the particular load and readily be replaced.

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G[1)] mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 412 H	1.250/500	± 100	265-1.445	970	80	195	1.007	2	133	264	387
2 T 412 H	2.000/500	± 100	280-1.580	1.130	80	195	1.171	2/3	143	291	458
3 T 412 H	2.500/500	± 100	230-1.530	1.130	80	205	1.253	3	152	297	559
			230-1.860	1.460						286	590
4,5 T 412 H	3.200/600	± 100	240-1.740	1.330	80	205	1.253	3	188	274	720
			240-1.870	1.460						269	740
5 T 412 H	3.500/600	± 160	220-1.850	1.550	80	205	1.253	4	176	230	920

Preferential range HG = Rubber coating Ø 75, HV = Polyurethane coating Ø 75, HS = steel disc Ø 60
Also available without sideshift, model T402H.
[1)] Fig „G“ depends on the number of pistons ( ), available arm length 925 (11), 1007 (12), 1089 (13), 1171 (14), 1253 (15)
Load Backrest Model T479 s. page 91. Available with cylinder- and sideshift protection upon request.





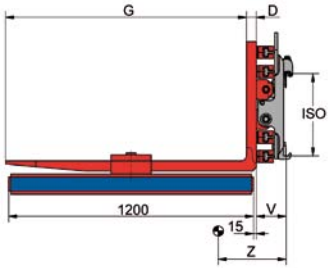
Block Clamp T412HP

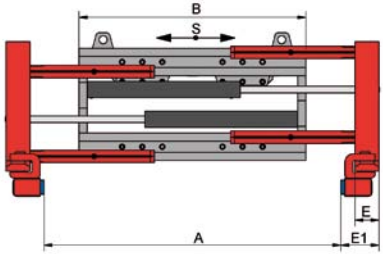
with **independent sideshift** - with mechano-hydraulic equilibration plates - 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 412 HP	2.000/500	± 100	280-1.580	1.130	1.200	2/3	143	382	568
3 T 412 HP	2.500/500	± 100	280-1.580	1.130	1.200	3	153	373	633
4,5 T 412 HP	3.200/600	± 100	310-1.710	1.330	1.200	3	189	322	914
5 T 412 HP	3.500/600	± 160	200-1.800	1.460	1.200	4	178	287	1.009
5 T 412 BHP	3.900/600	VSS[1)]	300-1.600	1.300	1.200	4	211	285	1.212

Preferential range

Also available without sideshift – model T402HP.
Load Backrest Model T479 see page 91. Available with cylinder- and sideshift protection upon request.
[1)] VSS = Valveblock sideshift dependent on opening range (see page 9).



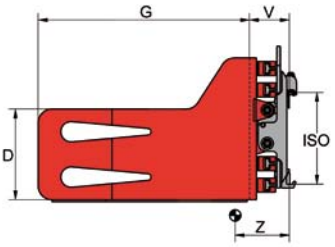


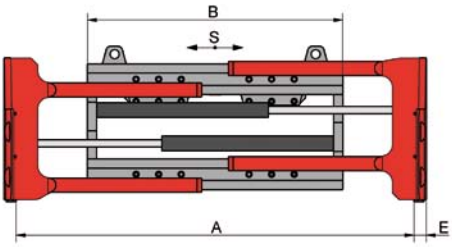
Block Clamp T412UVP

with **independent sideshift** - with slip-on underslung arms - to handle building material - 2 hydraulic functions

Model	Capacity on forks kg/mm	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	E1 mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T 412 UVP	2.300/500	1.250/500	± 100	180-1.360 320-1.500[1)]	970	45	120	190	1.200	2	133	400	451
2 T 412 UVP	2.800/500	2.000/500	± 100	180-1.480 320-1.620[1)]	1.130	50	120	190	1.200	2/3	143	376	522
3 T 412 UVP	3.600/500	2.500/500	± 100	120-1.420 260-1.560[1)]	1.130	50	150	220	1.200	3	152	354	625
3 T 412 UVP	3.600/500	2.500/500	± 100	120-1.620 260-1.760[1)]	1.330	50	150	220	1.200	3	152	350	644
3 T 412 UVP	3.600/500	2.500/500	± 100	120-1.750 260-1.890[1)]	1.460	50	150	220	1.200	3	152	348	656
4,5T 412 UVP	5.000/500	3.200/600	± 100	70-1.570 220-1.720[1)]	1.460	60	150	225	1.200	3	188	351	895
5 T 412 UVP	6.200/600	3.500/600	± 160	130-1.760 280-1.910[1)]	1.550	70	150	225	1.200	4	176	327	1.055

Preferential range [1)] Distance between forks without slip-on arms. Load Backrest Model T479 s. page 91. Available with cylinder- and sideshift protection. Variations in fork lengths and arm dimensions available upon request. Also available with bolt-on forks.
Also available without sideshift – model T402UVP.





Bale Clamp, Pulp Bale Clamp T413

with **independent sideshift** – 2 hydraulic functions

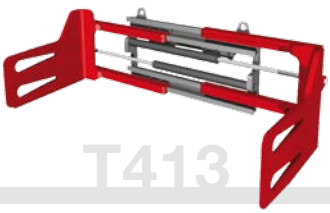
Bale Clamps allow palletless handling of bales, e.g. pulp, paper, recycled paper or bales of tobacco. The inner side of the arms are designed to meet the exact transportation requirements. As a rule, both arms of the Bale Clamp are fixed, whereby at least one arm of the larger Pulp Bale Clamps is swivelling. The fixed arms are designed with toe-in (approx. 30 mm per 1.000 mm arm length) i.e. the distance between the tips of the arms is approx. 30 mm less than at the rear side of arm connection (see page 8).

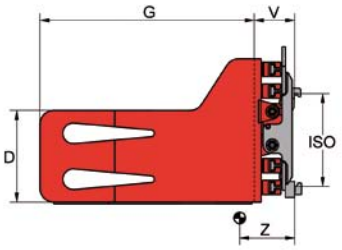
Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 413	1.400/500	± 100	495-1.675	970	440	37	800	2	158	227	354
							1.000			289	390
							1.200			359	436
1,5 T 413	1.400/500	± 100	565-1.815	970	440	37	800	2	158	226	355
							1.000			288	391
							1.200			358	437
1,5 T 413	1.400/500	± 100	425-1.605	1.040	440	37	800	2	158	225	358
							1.000			287	394
							1.200			356	440
1,5 T 413	1.400/500	± 100	495-1.745	1.040	440	37	800	2	158	225	359
							1.000			286	395
							1.200			356	441
1,5 T 413	1.400/500	± 100	480-1.880	1.200	440	37	800	2	158	218	377
							1.000			277	413
							1.200			345	459
2 T 413	2.100/500	± 100	575-1.875	1.040	440	42	800	2/3	173	226	430
							1.000			286	472
							1.200			356	531
2 T 413	2.100/500	± 100	675-2.075	1.040	440	42	800	2/3	173	225	432
							1.000			285	475
							1.200			355	533
2 T 413	2.100/500	± 100	485-1.785	1.130	440	42	800	2/3	173	224	435
							1.000			284	477
							1.200			353	536
2 T 413	2.100/500	± 100	585-1.985	1.130	440	42	800	2/3	173	223	437
							1.000			283	480
							1.200			352	538
2 T 413	2.100/500	± 100	485-1.985	1.330	440	42	800	2/3	173	219	450
							1.000			277	493
							1.200			346	551
2 T 413	2.100/500	± 100	595-2.395	1.520	440	42	800	2/3	173	207	490
							1.000			262	533
							1.200			327	591
3 T 413	2.500/500	± 100	475-1.775	1.130	500	47	1.000	2/3	187	287	612
							1.200			322	636
3 T 413	2.500/500	± 100	575-1.975	1.130	500	47	1.000	2/3	187	286	614
							1.200			322	638
3 T 413	2.500/500	± 100	475-1.975	1.330	500	47	1.000	2/3	187	281	631
							1.200			315	655
3 T 413	2.500/500	± 100	605-2.235	1.330	500	47	1.000	2/3	187	280	634
							1.200			315	658
3 T 413	2.500/500	± 100	475-2.105	1.460	500	47	1.000	2/3	187	277	644
							1.200			311	667
3 T 413	2.500/500	± 100	645-2.445	1.460	500	47	1.000	2/3	187	276	647
							1.200			310	671

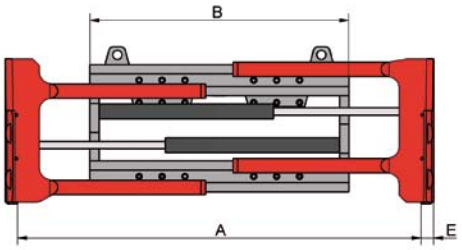
Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
4 T 413	3.000/500	± 100	575-1.975	1.130	500	47	1.000	3	197	269	671
							1.200			312	705
4 T 413	3.000/500	± 100	375-1.775	1.330	500	47	1.000	3	197	265	688
							1.200			306	722
4 T 413	3.000/500	± 100	475-1.975	1.330	500	47	1.000	3	197	264	690
							1.200			306	724
4 T 413	3.000/500	± 100	605-2.235	1.330	500	47	1.000	3	197	263	692
							1.200			305	727
4 T 413	3.000/500	± 100	345-1.845	1.460	500	47	1.000	3	197	261	700
							1.200			302	735
4 T 413	3.000/500	± 100	475-2.105	1.460	500	47	1.000	3	197	261	703
							1.200			302	737
4 T 413	3.000/500	± 100	635-2.435	1.460	500	47	1.000	3	197	260	707
							1.200			301	741
4 T 413	3.000/500	± 100	385-2.015	1.550	500	47	1.000	3	197	255	755
							1.200			294	789
4,5 T 413	3.200/600	± 100	595-1.995	1.200	500	52	1.200	3	228	311	833
							1.400			375	902
							1.600			448	943
4,5 T 413	3.200/600	± 100	465-1.865	1.330	500	52	1.200	3	228	307	849
							1.400			369	917
							1.600			442	959
4,5 T 413	3.200/600	± 100	695-2.325	1.330	500	52	1.200	3	228	305	856
							1.400			369	925
							1.600			440	965
4,5 T 413	3.200/600	± 100	435-1.935	1.460	500	52	1.200	3	228	302	868
							1.400			365	936
							1.600			435	978
4,5 T 413	3.200/600	± 100	565-2.195	1.460	500	52	1.200	3	228	301	872
							1.400			363	941
							1.600			435	981
4,5 T 413	3.200/600	± 100	765-2.595	1.460	500	52	1.200	3	228	300	878
							1.400			362	947
							1.600			433	986
5 T 413	3.900/600	± 160	640-2.270	1.460	500	52	1.200	4	216	298	1.026
							1.400			329	1.063
						57	1.600			418	1.204
5 T 413	3.900/600	± 160	550-2.180	1.550	500	52	1.200	4	216	295	1.036
							1.400			327	1.073
						57	1.600			415	1.214
5 T 413	3.900/600	± 160	550-2.450	1.820	500	52	1.200	4	216	287	1.078
							1.400			317	1.115
						57	1.600			404	1.236
5 T 413	3.900/600	± 160	750-2.850	1.820	500	52	1.200	4	216	286	1.085
							1.400			316	1.122
						57	1.600			402	1.263

Preferential range

Also available without sideshift, model T403.
Available with cylinder- and sideshift protection upon request.
Bale clamps with higher capacities available upon request (see page 55).
Variations in width, opening ranges and arm dimensions available upon request.
Special version for Big Bags, based on the KAUP Bale Clamp, are also available.
Load Backrest Model T479 s. page 91.







Bale Clamp, Pulp Bale Clamp T413

with **valveblock sideshift** dependent on opening range – 2 hydraulic functions

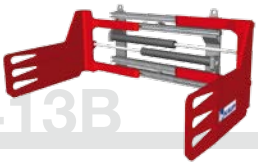
Model	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 413	1.400/500	495-1.675	970	440	37	800	2	156	225	352
						1.000			288	388
						1.200			359	433
1,5 T 413	1.400/500	565-1.815	970	440	37	800	2	156	225	353
						1.000			288	389
						1.200			358	434
1,5 T 413	1.400/500	425-1.605	1.040	440	37	800	2	156	224	356
						1.000			286	392
						1.200			356	437
1,5 T 413	1.400/500	495-1.745	1.040	440	37	800	2	156	223	357
						1.000			285	393
						1.200			355	438
1,5 T 413	1.400/500	480-1.880	1.200	440	37	800	2	156	218	368
						1.000			280	404
						1.200			348	449
2 T 413	2.100/500	575-1.875	1.040	440	42	800	2/3	171	224	430
						1.000			285	473
						1.200			355	532
2 T 413	2.100/500	675-2.075	1.040	440	42	800	2/3	171	223	432
						1.000			284	475
						1.200			354	534
2 T 413	2.100/500	485-1.785	1.130	440	42	800	2/3	171	222	435
						1.000			282	478
						1.200			352	537
2 T 413	2.100/500	585-1.985	1.130	440	42	800	2/3	171	221	437
						1.000			282	480
						1.200			351	539
2 T 413	2.100/500	485-1.985	1.330	440	42	800	2/3	171	217	451
						1.000			276	494
						1.200			344	552
2 T 413	2.100/500	595-2.395	1.520	440	42	800	2/3	171	203	490
						1.000			259	533
						1.200			325	592
3 T 413	2.500/500	475-1.775	1.130	500	47	1.000	2/3	185	303	592
						1.200			340	615
3 T 413	2.500/500	575-1.975	1.130	500	47	1.000	2/3	185	303	594
						1.200			339	617
3 T 413	2.500/500	475-1.975	1.330	500	47	1.000	2/3	185	296	611
						1.200			332	634
3 T 413	2.500/500	605-2.235	1.330	500	47	1.000	2/3	185	295	613
						1.200			331	637
3 T 413	2.500/500	475-2.105	1.460	500	47	1.000	2/3	185	292	623
						1.200			327	647
3 T 413	2.500/500	645-2.445	1.460	500	47	1.000	2/3	185	291	626
						1.200			326	650
4 T 413	3.000/500	575-1.975	1.130	500	47	1.000	3	195	268	674
						1.200			311	709
4 T 413	3.000/500	375-1.775	1.330	500	47	1.000	3	195	263	691
						1.200			305	725
4 T 413	3.000/500	475-1.975	1.330	500	47	1.000	3	195	262	693
						1.200			304	727

Model	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
4 T 413	3.000/500	605-2.235	1.330	500	47	1.000	3	195	262	696
						1.200			304	730
4 T 413	3.000/500	345-1.845	1.460	500	47	1.000	3	195	259	704
						1.200			301	738
4 T 413	3.000/500	475-2.105	1.460	500	47	1.000	3	195	259	706
						1.200			300	741
4 T 413	3.000/500	635-2.435	1.460	500	47	1.000	3	195	258	710
						1.200			299	744
4 T 413	3.000/500	385-2.015	1.550	500	47	1.000	3	195	252	758
						1.200			292	793
4,5 T 413	3.200/600	595-1.995	1.200	500	52	1.200	3	226	309	838
						1.400			374	907
						1.600			447	949
4,5 T 413	3.200/600	465-1.865	1.330	500	52	1.200	3	226	305	854
						1.400			368	923
						1.600			441	965
4,5 T 413	3.200/600	695-2.325	1.330	500	52	1.200	3	226	303	862
						1.400			366	930
						1.600			439	970
4,5 T 413	3.200/600	435-1.935	1.460	500	52	1.200	3	226	300	873
						1.400			362	942
						1.600			434	983
4,5 T 413	3.200/600	565-2.195	1.460	500	52	1.200	3	226	299	877
						1.400			361	946
						1.600			433	986
4,5 T 413	3.200/600	765-2.595	1.460	500	52	1.200	3	226	297	884
						1.400			359	953
						1.600			431	991
5 T 413	3.900/600	640-2.270	1.460	500	52	1.200	4	221	311	990
						1.400			344	1.027
					57	1.600		226	434	1.168
5 T 413	3.900/600	550-2.180	1.550	500	52	1.200	4	221	308	1.001
						1.400			341	1.038
					57	1.600		226	431	1.179
5 T 413	3.900/600	550-2.450	1.820	500	52	1.200	4	221	299	1.042
						1.400			330	1.080
					57	1.600		226	418	1.221
5 T 413	3.900/600	750-2.850	1.820	500	52	1.200	4	221	298	1.049
						1.400			329	1.086
					57	1.600		226	417	1.227
5,5 T 413 B	4.400/600	625-2.525	1.740	400	52	1.600	4	254	338	1.490
						1.800			392	1.572
6 T 413 B	4.000/800	615-2.245	1.550	500	52	1.600	4	259	436	1.475
6 T 413 B	5.300/600	715-2.615	1.740	500	52	1.400	4	259	339	1.423
						1.600			396	1.511
6 T 413 B	5.300/600	600-2.500	1.860	500	52	1.400	4	259	324	1.497
						1.600			379	1.585
6 T 413 B	5.300/600	630-2.730	2.030	500	52	1.400	4	259	311	1.498
						1.600			366	1.586
6 T 413 B	5.300/600	525-2.865	2.400	500	52	1.400	4	259	307	1.615
						1.600			359	1.704
6,5 T 413 B	6.000/800	615-2.515	1.860	500	62	1.600	4	279	393	1.806
						1.800			451	1.894
6,5 T 413 B	6.000/800	645-2.745	2.030	500	62	1.600	4	279	380	1.805
						1.800			438	1.884
6,5 T 413 B	6.000/800	600-3.000	2.400	500	62	1.600	4	279	374	1.925
						1.800			429	2.014
8 T 413 B	8.000/800	700-3.100	2.200	560	82	1.400	4	340	395	2.699
						1.700			483	2.897

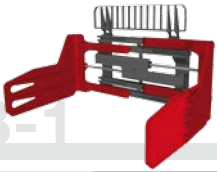
Preferential range

Also available without sideshift, model T 403.

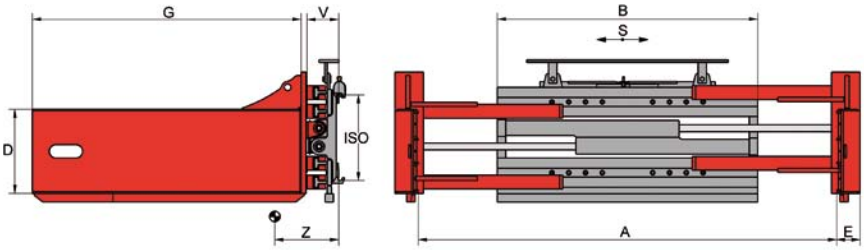
Also available with 1 arm oscillating, model T413B-1. Available with cylinder- and sideshift protection upon request. Bale Clamps with higher capacities available upon request. Variations in width, opening ranges and arm dimensions available upon request. Special version for Big Bags, based on the KAUP Bale Clamp, are also available. Load Backrest Model T479 s. page 91.



T413B



T413B-1

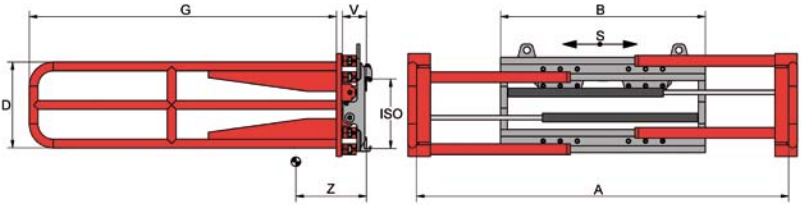


Recycling Bale Clamp T413RC

with **independent sideshift** – with cylinder- and sideshift protection - 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 413 RC	2.100/500	± 100	575-1.875	1.040	440	42	1.000	2/3	143	280	573
							1.200			346	628
2 T 413 RC	2.100/500	± 100	485-1.785	1.130	440	42	1.000	2/3	143	277	580
							1.200			343	635
2 T 413 RC	2.100/500	± 100	595-2.395	1.520	440	42	1.000	2/3	143	258	641
							1.200			319	696
3 T 413 RC	2.500/500	± 100	465-1.765	1.130	500	130	1.400	2/3	153	371	811
							1.600			422	847
3 T 413 RC	2.500/500	± 100	605-2.235	1.330	500	130	1.400	2/3	153	361	840
							1.600			410	875
4 T 413 RC	3.000/500	± 100	565-1.965	1.130	500	130	1.400	3	163	370	919
							1.600			419	955
4 T 413 RC	3.000/500	± 100	595-2.225	1.330	500	130	1.400	3	163	354	975
							1.600			401	1.011
4,5 T 413 RC	2.200/800	± 100	550-1.950	1.200	500	130	1.600	3	188	391	1.025
							2.000			489	1.095
4,5 T 413 RC	2.200/800	± 100	650-2.280	1.330	500	130	1.600	3	188	383	1.051
							2.000			479	1.122
4,5 T 413 RC	2.200/800	± 100	700-2.330	1.460	500	130	1.600	3	188	377	1.072
							2.000			471	1.142
4,5 T 413 RC	2.200/800	± 100	870-2.500	1.550	500	130	1.600	3	188	372	1.092
							2.000			465	1.162

Also available without sideshift, model T403RC.
Load Backrest Model T479 s. page 91.

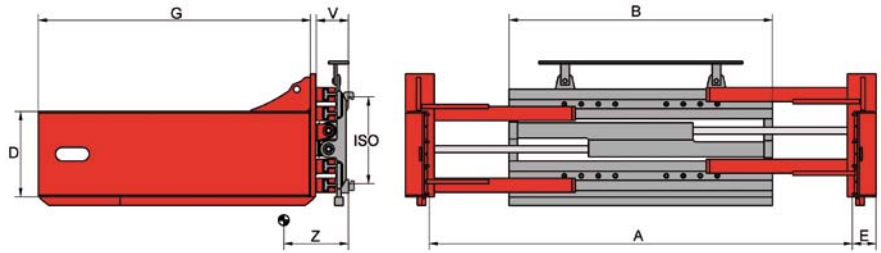


Foam Rubber Clamp T413R

with **independent sideshift** – 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 413 R	500/1.000	± 100	750-2.250	1.130	500	1.500	2	133	266	355
			850-2.470	1.330	500	1.500	2	133	259	368
			850-2.470	1.330	500	1.800	2	133	303	378
2 T 413 R	800/1.000	± 100	600-1.900	1.040	500	1.800	2	143	313	377
			600-2.450	1.600	500	1.800	2	143	279	438

Also available without sideshift, model T403R.
Load Backrest Model T479 s. page 91. Variations in width, opening ranges and arm dimensions available upon request.

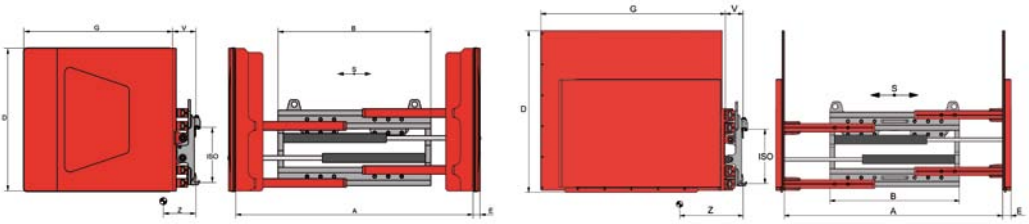


Recycling Bale Clamp T413RC with **valveblock sideshift** dependent on opening range

with cylinder- and sideshift protection - 2 hydraulic functions

Model	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 413 RC	2.100/500	575-1.875	1.040	440	42	1.000	2/3	136	277	566
						1.200			344	620
2 T 413 RC	2.100/500	485-1.785	1.130	440	42	1.000	2/3	136	274	573
						1.200			340	628
2 T 413 RC	2.100/500	595-2.395	1.520	440	42	1.000	2/3	136	255	634
						1.200			316	689
3 T 413 RC	2.500/500	465-1.765	1.130	500	130	1.400	2/3	145	379	778
						1.600			432	804
3 T 413 RC	2.500/500	605-2.235	1.330	500	130	1.400	2/3	145	368	807
						1.600			419	843
4 T 413 RC	3.000/500	565-1.965	1.130	500	130	1.400	3	155	355	907
						1.600			402	942
4 T 413 RC	3.000/500	595-2.225	1.330	500	130	1.400	3	155	340	962
						1.600			385	998
4,5 T 413 RC	2.200/800	550-1.950	1.200	500	130	1.600	3	181	396	1.013
						2.000			495	1.083
4,5 T 413 RC	2.200/800	650-2.280	1.330	500	130	1.600	3	181	388	1.040
						2.000			485	1.110
4,5 T 413 RC	2.200/800	700-2.330	1.460	500	130	1.600	3	181	382	1.060
						2.000			477	1.130
4,5 T 413 RC	2.200/800	870-2.500	1.550	500	130	1.600	3	181	376	1.080
						2.000			470	1.151
4,8 T 413 BRC	3.300/800	650-2.280	1.330	500	160	1.600	3	206	374	1.480
						2.000			466	1.573
5,5 T 413 BRC	3.300/800	650-2.280	1.330	500	160	1.600	4	206	371	1.499
	.					2.000			460	1.594
6 T 413 BRC	4.000/800	600-2.230	1.550	600	160	1.600	4	211	330	1.602
						2.000			425	1.705
6 T 413 BRC	4.000/800	560-2.460	1.860	600	160	1.600	4	211	357	1.750
						2.000			438	1.916
6 T 413 BRC	4.000/800	730-2.630	1.860	600	160	1.600	4	211	357	1.752
						2.000			438	1.918
6 T 413 BRC	4.000/800	590-2.690	2.030	600	160	1.600	4	211	345	1.818
						2.000			438	1.990
6 T 413 BRC	4.000/800	485-2.825	2.400	600	160	1.600	4	211	357	1.907
						2.000			438	2.080
6,5 T 413 BRC	6.000/800	680-2.310	1.550	600	160	1.600	4	221	366	1.745
		640-2.540	1.860			1.600			340	1.936
		610-2.710	2.030			1.600			334	1.963
		580-2.980	2.400			1.600			323	2.053
8 T 413 BRC	8.000/800	640-2.270	1.550	600	160	1.600	4	258	367	2.064
						2.000			457	2.191
8 T 413 BRC	8.000/800	560-2.660	2.000	600	160	1.600	4	258	348	2.223
						2.000			433	2.350
8 T 413 BRC	8.000/800	685-2.785	2.000	600	160	1.600	4	258	348	2.223
						2.000			433	2.350
8 T 413 BRC	8.000/800	585-2.985	2.200	600	160	1.600	4	258	340	2.301
						2.000			423	2.428

Also available without sideshift, model T403RC.
Load Backrest Model T479 s. page 91.



valid for arms longer than 1.000 mm

Appliance Clamp T413G

with **independent sideshift** – rubber coated arms – both arms fix - 2 hydraulic functions

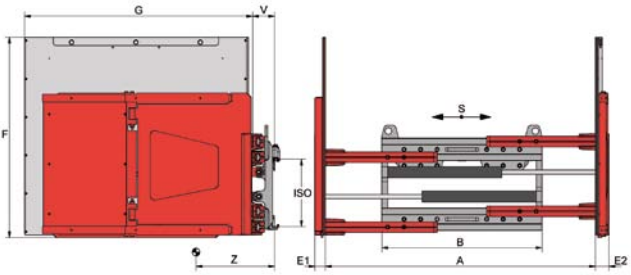
Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 413 G	700/500	± 100	500-1.680	970	700	23	690	2	153	207	275
					1.000	23	690		153	248	332
					1.200	23	690		153	250	353
1 T 413 G	700/500	± 100	350-1.450	1.040	700	23	690	2	153	206	270
					1.000	23	690		153	249	323
					1.200	23	690		153	253	342
1 T 413 G	700/500	± 100	550-1.850	1.040	700	23	690	2	153	203	280
					1.000	23	690		153	245	337
					1.200	23	690		153	247	359
1 T 413 G	700/500	± 100	460-1.760	1.130	700	23	690	2	153	201	285
					1.000	23	690		153	242	342
					1.200	23	690		153	245	364
1 T 413 G	700/500	± 100	490-1.890	1.200	700	23	690	2	153	199	290
					1.000	23	690		153	240	347
					1.200	23	690		153	243	368
1 T 413 G	700/500	± 100	495-2.345	1.660	700	23	690	2	158	206	388
					1.000	23	690		153	206	399
					1.200	23	690		153	227	432
1,5 T 413 G	1.250/500	± 100	515-1.695	970	700	28	690	2	158	221	351
					1.000	23	690		153	220	362
					1.200	23	690		153	241	395
1,5 T 413 G	1.250/500	± 100	475-1.655	970	1.000	63	1.000	2	133	365	440
					1.000	63	1.200		133	421	453
					1.200	63	1.200		133	491	508
1,5 T 413 G	1.250/500	± 100	365-1.465	1.040	700	28	690	2	158	221	346
					1.000	23	690		153	221	353
					1.200	23	690		153	240	398
1,5 T 413 G	1.250/500	± 100	325-1.425	1.040	1.000	63	1.000	2	133	364	442
					1.000	63	1.200		133	420	455
					1.200	63	1.200		133	491	510
1,5 T 413 G	1.250/500	± 100	445-1.625	1.040	700	28	690	2	158	221	347
					1.000	23	690		153	221	354
					1.200	23	690		153	243	384
1,5 T 413 G	1.250/500	± 100	405-1.585	1.040	1.000	63	1.000	2	133	364	442
					1.000	63	1.200		133	420	455
					1.200	63	1.200		133	491	510
1,5 T 413 G	1.250/500	± 100	475-1.775	1.130	700	28	690	2	158	216	361
					1.000	23	690		153	216	373
					1.200	23	690		153	237	406
1,5 T 413 G	1.250/500	± 100	485-1.835	1.130	1.000	63	1.000	2	133	361	452
					1.000	63	1.200		133	417	465
					1.200	63	1.200		133	487	520
1,5 T 413 G	1.250/500	± 100	505-1.905	1.200	700	28	690	2	158	214	367
					1.000	23	690		153	214	378
					1.200	23	690		153	235	411
1,5 T 413 G	1.250/500	± 100	465-1.865	1.200	1.000	63	1.000	2	133	360	461
					1.000	63	1.200		133	415	474
					1.200	63	1.200		133	485	529
2 T 413 G	2.000/500	± 100	550-1.850	1.040	1.000	63	1.000	2/3	143	355	520
					1.000	63	1.200			411	538
					1.200	63	1.200			481	593
2 T 413 G	2.000/500	± 100	460-1.760	1.130	1.000	63	1.000	2/3	143	353	525
					1.000	63	1.200			409	543
					1.200	63	1.200			478	598
2 T 413 G	2.000/500	± 100	460-1.960	1.330	1.000	63	1.000	2/3	143	339	549
					1.000	63	1.200			395	567
					1.200	63	1.200			464	622

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 413 G	2.000/500	± 100	570-2.370	1.520	1.000	63	1.000	2/3	143	332	573
					1.000	63	1.200			388	591
					1.200	63	1.200			457	646

Preferential range

Also available without sideshift, model T403G.

Possible with automatic pressure selection (upon request). Load Backrest Model T479 s. page 91. For contact pad coatings s. page 95.



Carton Clamp T413G-1L

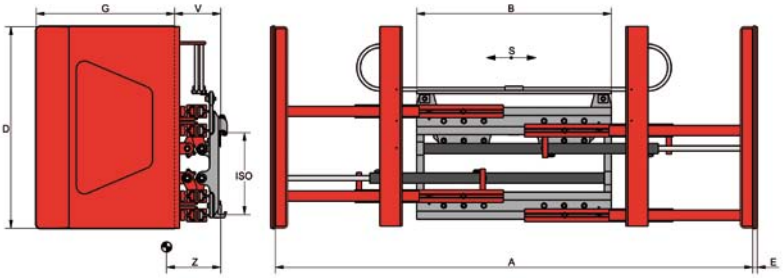
with **independent sideshift** – rubber coated arms – one arm fix, one arm swivelling – 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	E1 mm	E2 mm	F mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T413G-1L	1.250/500	± 100	475-1.655	970	63	55	1.000	1.000	2	133	340	423
					63	55	1.000	1.200			396	463
					63	55	1.200	1.200			467	527
					63	55	1.200	1.380			487	575
1,5T413G-1L	1.250/500	± 100	325-1.425	1.040	63	55	1.000	1.000	2	133	339	425
					63	55	1.000	1.200			395	465
					63	55	1.200	1.200			466	529
					63	55	1.200	1.380			486	577
1,5T413G-1L	1.250/500	± 100	405-1.585	1.040	63	55	1.000	1.000	2	133	339	425
					63	55	1.000	1.200			395	465
					63	55	1.200	1.200			466	529
					63	55	1.200	1.380			486	577
1,5T413G-1L	1.250/500	± 100	485-1.835	1.130	63	55	1.000	1.000	2	133	336	435
					63	55	1.000	1.200			392	475
					63	55	1.200	1.200			462	539
					63	55	1.200	1.380			481	587
1,5T413G-1L	1.250/500	± 100	465-1.865	1.200	63	55	1.000	1.000	2	133	335	444
					63	55	1.000	1.200			390	484
					63	55	1.200	1.200			460	548
					63	55	1.200	1.380			479	596
2T413G-1L	2.000/500	± 100	520-1.720	970	63	60	1.000	1.000	2/3	143	332	493
					63	60	1.000	1.200			392	538
					63	60	1.200	1.200			423	602
					63	60	1.200	1.380			476	659
2T413G-1L	2.000/500	± 100	550-1.850	1.040	63	60	1.000	1.000	2/3	143	330	498
					63	60	1.000	1.200			390	543
					63	60	1.200	1.200			421	607
					63	60	1.200	1.380			474	664
2T413G-1L	2.000/500	± 100	460-1.760	1.130	63	60	1.000	1.000	2/3	143	328	503
					63	60	1.000	1.200			387	548
					63	60	1.200	1.200			418	612
					63	60	1.200	1.380			471	669
2T413G-1L	2.000/500	± 100	460-1.960	1.330	63	60	1.000	1.000	2/3	143	314	527
					63	60	1.000	1.200			373	572
					63	60	1.200	1.200			404	636
					63	60	1.200	1.380			457	693
2T413G-1L	2.000/500	± 100	570-2.370	1.520	63	60	1.000	1.000	2/3	143	307	551
					63	60	1.000	1.200			366	596
					63	60	1.200	1.200			397	660
					63	60	1.200	1.380			450	717

Preferential range

Also available without sideshift, model T403G-1L.

In addition available with automatic pressure selection (upon request). Also available with 2 contact pads on the swivelling arm - model T413G-2L / T403G-2L. Load Backrest Model T479 s. page 91. For contact pad coatings see page 95.



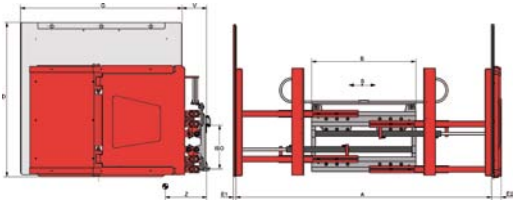
Telescopic Appliance Clamp T413GT

with **independent sideshift** - rubber coated arms – both arms fix - 2 hydraulic functions

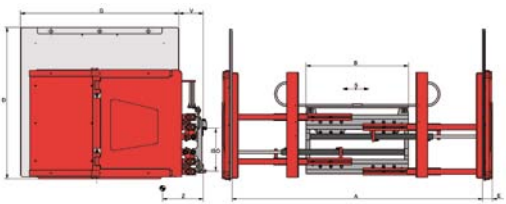
Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 413 GT	700/500	± 100	380-2.380	970	1.000	28	690	2	232	270	435
1,5 T 413 GT	1.250/500	± 100	440-2.440	970	1.000	28	690	2	242	285	470
1,5 T 413 GT	1.250/500	± 100	410-2.610	1.200	1.000	28	690	2	242	285	486
1,5 T 413 GT	1.250/500	± 100	440-2.440	970	1.200	28	690	2	242	300	515
1,5 T 413 GT	1.250/500	± 100	410-2.610	1.200	1.200	28	690	2	242	295	530
2 T 413 GT	1.250/700	± 100	475-2.475	1.130	1.050	78	1.380	2	281	438	830
2 T 413 GT	1.250/700	± 100	450-2.750	1.330	1.050	78	1.380	2	281	429	871
3 T 413 GT	1.800/700	± 100	475-2.475	1.130	1.050	78	1.380	3	281	424	854
3 T 413 GT	1.800/700	± 100	450-2.750	1.330	1.050	78	1.380	3	281	416	895

Also available without sideshift, model T403 GT.
In addition available with automatic pressure selection and sensor technology.

For contact pad coatings see page 95.



T413GT-1L



T414GT-1L

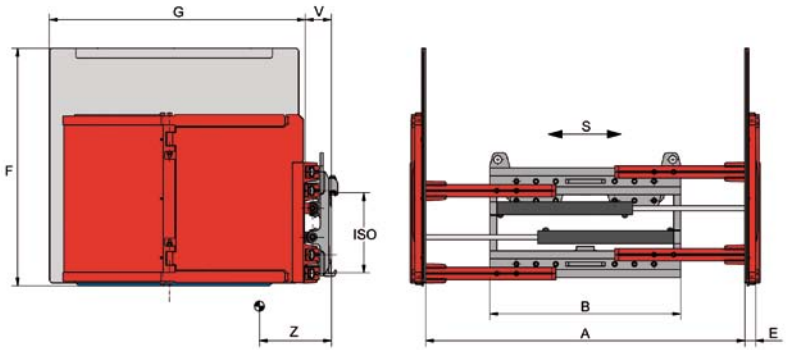
Telescopic Appliance- / Carton Clamp

T413GT-1L / T414GT-1L with **independent sideshift** - rubber coated arms - one arm fix, one arm swivelling (T413GT-1L) - both arms swivelling (T414GT-1L) - 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	D mm	E mm	E2 mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2T 413GT-1L	1.250/700	± 100	480-2.740	1.330	1.050	60	60	1.380	2	276	411	864
3T 413GT-1L	1.800/700	± 100	480-2.740	1.330	1.050	60	60	1.380	3	276	405	889
2T 414GT-1L	1.250/700	± 100	480-2.740	1.330	1.050	60	60	1.380	2	276	401	930
3T 414GT-1L	1.800/700	± 100	480-2.740	1.330	1.050	60	60	1.380	3	276	395	955

Also available without sideshift, model T403GT-1L / T404GT-1L.
In addition available with automatic pressure selection and sensor technology.

For contact pad coatings see page 95.

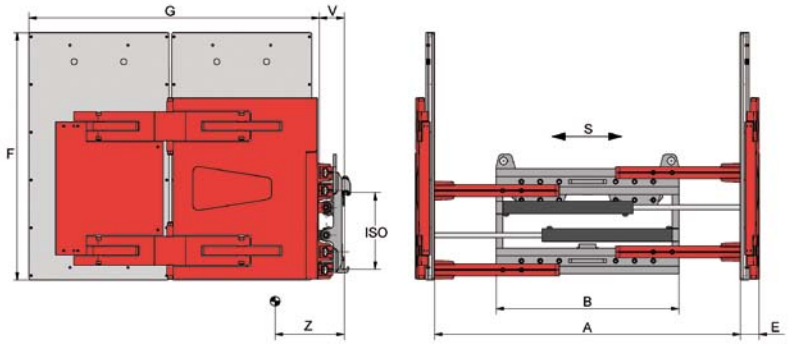


Appliance- / Carton Clamp T414-1L

with **independent sideshift** - rubber coated aluminium arms - both arms swivelling - 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	E mm	F mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 414-1L	1.250/500	± 100	480-1.660	970	55	1.000	1.000	2	133	311	441
						1.000	1.200			367	481
						1.200	1.200			438	545
						1.200	1.380			458	593
1,5 T 414-1L	1.250/500	± 100	330-1.430	1.040	55	1.000	1.000	2	133	310	443
						1.000	1.200			366	483
						1.200	1.200			437	547
						1.200	1.380			456	595
1,5 T 414-1L	1.250/500	± 100	410-1.590	1.040	55	1.000	1.000	2	133	310	443
						1.000	1.200			366	483
						1.200	1.200			437	547
						1.200	1.380			456	595
1,5 T 414-1L	1.250/500	± 100	490-1.840	1.130	55	1.000	1.000	2	133	307	453
						1.000	1.200			363	493
						1.200	1.200			433	557
						1.200	1.380			452	605
1,5 T 414-1L	1.250/500	± 100	470-1.870	1.200	55	1.000	1.000	2	133	306	462
						1.000	1.200			361	502
						1.200	1.200			431	566
						1.200	1.380			450	614
2 T 414-1L	2.000/500	± 100	525-1.725	970	60	1.000	1.000	2/3	143	303	511
						1.000	1.200			363	556
						1.200	1.200			394	620
						1.200	1.380			447	677
2 T 414-1L	2.000/500	± 100	555-1.855	1.040	60	1.000	1.000	2/3	143	301	516
						1.000	1.200			361	561
						1.200	1.200			392	625
						1.200	1.380			445	682
2 T 414-1L	2.000/500	± 100	465-1.765	1.130	60	1.000	1.000	2/3	143	299	521
						1.000	1.200			358	566
						1.200	1.200			389	630
						1.200	1.380			442	687
2 T 414-1L	2.000/500	± 100	465-1.965	1.330	60	1.000	1.000	2/3	143	285	545
						1.000	1.200			344	590
						1.200	1.200			375	654
						1.200	1.380			428	711
2 T 414-1L	2.000/500	± 100	575-2.375	1.520	60	1.000	1.000	2/3	143	278	569
						1.000	1.200			337	614
						1.200	1.200			368	678
						1.200	1.380			421	735

Preferential range In addition available with automatic pressure selection and sensor technology.
For contact pad coatings see page 95. Load Backrest Model T479 s. page 91.
Also available without sideshift, model T404-1L.



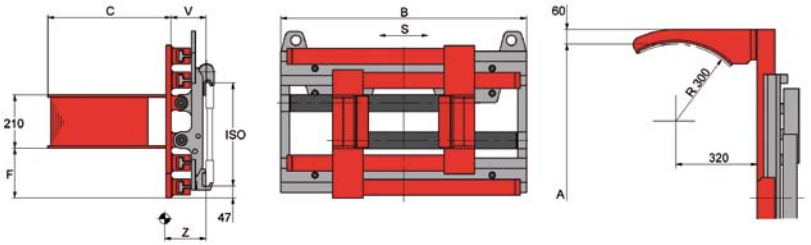
Appliance- / Carton Clamp T414-2L

with **independent sideshift** - rubber coated arms - two contact pads per swivelling arm - 2 hydraulic functions

Model	Capacity as clamp kg/mm	S mm	A mm	B mm	E mm	F mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 414-2L	1.250/500	± 100	480-1.660	970	60	1.000	1.000	2	133	345	495
						1.000	1.200			401	535
						1.200	1.200			472	599
						1.200	1.380			492	647
1,5 T 414-2L	1.250/500	± 100	330-1.430	1.040	60	1.000	1.000	2	133	344	497
						1.000	1.200			400	538
						1.200	1.200			470	602
						1.200	1.380			490	649
1,5 T 414-2L	1.250/500	± 100	410-1.590	1.040	60	1.000	1.000	2	133	344	697
						1.000	1.200			400	538
						1.200	1.200			470	602
						1.200	1.380			490	649
1,5 T 414-2L	1.250/500	± 100	490-1.840	1.130	60	1.000	1.000	2	133	341	507
						1.000	1.200			397	547
						1.200	1.200			467	611
						1.200	1.380			486	659
1,5 T 414-2L	1.250/500	± 100	470-1.870	1.200	60	1.000	1.000	2	133	340	516
						1.000	1.200			395	556
						1.200	1.200			465	620
						1.200	1.380			484	668
2 T 414-2L	2.000/500	± 100	525-1.725	970	60	1.000	1.000	2/3	143	337	565
						1.000	1.200			397	610
						1.200	1.200			428	674
						1.200	1.380			481	731
2 T 414-2L	2.000/500	± 100	555-1.855	1.040	60	1.000	1.000	2/3	143	335	570
						1.000	1.200			395	615
						1.200	1.200			426	679
						1.200	1.380			479	736
2 T 414-2L	2.000/500	± 100	465-1.765	1.130	60	1.000	1.000	2/3	143	333	575
						1.000	1.200			392	620
						1.200	1.200			423	684
						1.200	1.380			476	741
2 T 414-2L	2.000/500	± 100	465-1.965	1.330	60	1.000	1.000	2/3	143	319	599
						1.000	1.200			378	644
						1.200	1.200			409	708
						1.200	1.380			462	765
2 T 414-2L	2.000/500	± 100	575-2.375	1.520	60	1.000	1.000	2/3	143	312	623
						1.000	1.200			371	668
						1.200	1.200			402	732
						1.200	1.380			455	789

Preferential range

Also available without sideshift, model T404-2L.
In addition available with automatic pressure selection and sensor technology.
For contact pad coatings see page 95. Load Backrest Model T479 see page 91.



Drum Clamp T415-1

with **independent sideshift** - rubber coated arms - for cylindrical steel drums - 2 hydraulic functions

The Drum Clamp can transport 1 or 2 drums palletless and safely. The arms are coated with Remagrip (see coatings page 91). Fitted with pressure reduction valve and manometer gauge.

Model	Number of drums	Capacity kg/mm	S mm	A mm	B mm	C mm	F mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 415-1	1 - 2	700/320	± 100	420-1.600	970	485	146	2	133	113	196
1,5 T 415-1	1 - 2	1.250/320	± 100	440-1.620	970	485	195	2/3	133	108	228

Also available without sideshift, model T405-1.
Load Backrest Model T479 s. page 91. Model T415-2 for handling 2 or 4 drums available upon request.
Available with slip-on arms for plastic drums

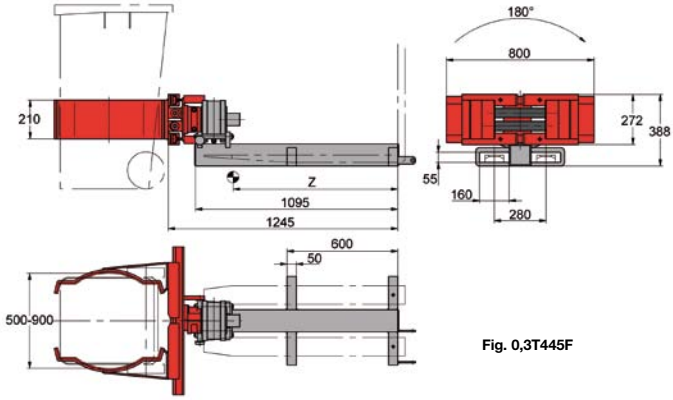


Fig. 0,3T445F

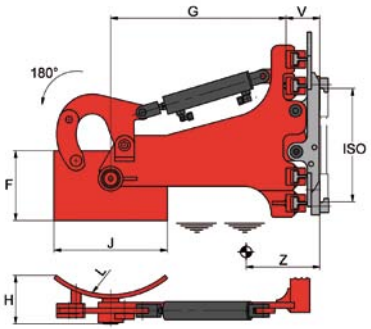
Mini Drum Clamp T445F slip-on version

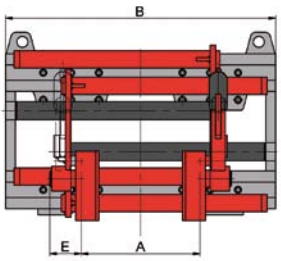
with rubber coated arms - for cylindrical steel drums and garbage bins – 2 hydraulic functions

Quick easy mounting of the Mini Drum Clamp onto the forklift truck is the trade mark of this attachment. It is simply slipped on the forks, tightened, connected hydraulically to the truck and is then operational. As it is easy to mount, it is usually used when drums or garbage bins are transported only occasionally. The clamping arms are designed to fit cylindrical drums and garbage bins with up to 240 l capacity.

Model	Capacity kg/mm	Opening range mm	Rotation angle °	Md Δp=125bar Nm	CofG Z mm	Weight kg
0,3 T 445 F	300/320	500-900	180°	1.625	1.087	218
0,8 T 445 F	700/320	500-900	360°	2.570	1.256	270

Available with slip-on arms for plastic drums. Also available as 90° forward tippling clamp or without rotation upon request.





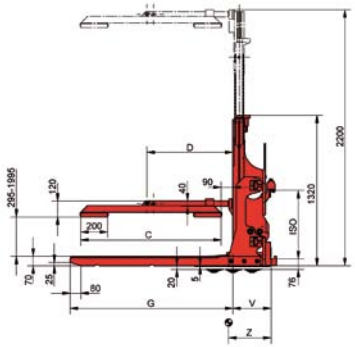
Drum Tippling Clamp T406H/-2H

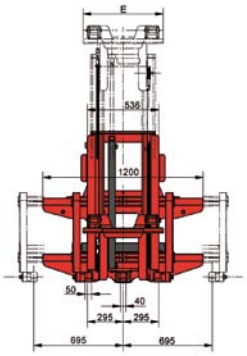
without sideshift - with hydraulically tiltable clamp arms 180° forward - 2 hydraulic functions

The Drum Tippling Clamp is used for emptying cylindrical steel drums (with special arms also other containers) by tilting in forward direction. Drums lying in a horizontal position can be picked up with this clamp and put upright. However this is only possible when both arms feature a hydraulic cylinder (-2H). Drum Tippling arms are also available as slip-on version for KAUP Fork Clamps (see page 49).

Model	Capacity kg/mm	A mm	B mm	E mm	F mm	G mm	H mm	J mm	L mm	ISO cl.	CofG V mm	CofG Z mm	Weight kg
1,5 T 406 H	300/630	430-1.610	970	113	250	630	181	400	300	2	126	247	290
1,5 T 406-2H	300/630	430-1.610	970	113	250	630	181	400	300	2	126	268	312
2 T 406 H	1.250/630	180-1.480	1.130	113	250	630	181	400	300	2	136	217	366
2 T 406-2H	1.250/630	180-1.480	1.130	113	250	630	181	400	300	2	136	240	386

Single arm drive = H, Dual arm drive = 2H.
With one tilt cylinder drums can only be handled in vertical position. With two cylinders drums can be handled in vertical or horizontal position. Also available with sideshift function, model T416H (2H).
Tippling Clamps for specific purpose (garbage bins, containers) and higher capacities available upon request.





Beer Keg Clamp T415

with **independent sideshift** - to handle KEGs - 2 hydraulic functions + solenoid valve

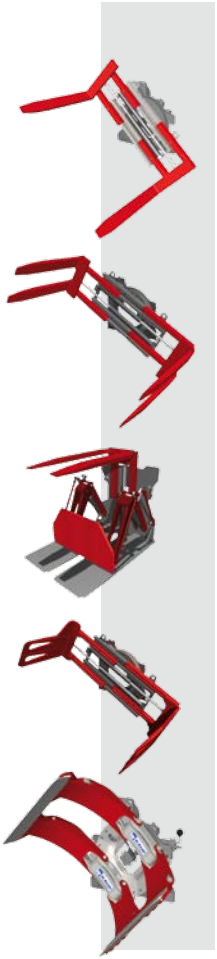
Model	Capacity kg/mm	S mm	C mm	D mm	E mm	G mm	ISO class	CofG V mm	CofG Z mm	Weight kg
2 T 415 TB	1.680/635	± 100	1.050	645	600	1.220	2/3	290	305	690
2 T 415 CT	1.680/635	± 100	1.110	645	555	1.350	2/3	290	320	705
2 T 415 SC	1.680/635	± 100	1.050	600	595	1.170	2/3	290	320	705

Model without sideshift T405.

Recommended Oil flow rates and Pressures

Rotating Clamps – Rotating Roll Clamps

Model	Page	Oil volume (l/min) min.	optimum	max.	Pressure (bar) maximum
1,5 T 450 A / T 451	66-67	15	20	25	160
2 T 450 A / T 451	66-67	15	20	25	160
3 T 450 A / T 451	66-67	25	40	50	160
4 T 450 A / T 451	66-67	25	40	50	160
4,8 T 450 A / T 451	66-67	25	40	50	160
5 T 450 A / T 451	66-67	30	50	70	160
6 T 450 A / T 451	66-67	30	50	70	160
1,5 T 451 D	67	15	20	25	160
2 T 451 D	67	15	20	25	160
1,5 T 451 W	68	15	20	25	160
2 T 451 W	68	15	20	25	160
3 T 451 W	68	25	40	50	160
4 T 451 W	68	25	40	50	160
5 T 451 W	68	30	50	70	160
2 T 451 WA	69	15	20	25	160
3 T 451 WA	69	25	40	50	160
4 T 451 WA	69	25	40	50	160
1,5 T 453	69	15	20	25	160
2 T 453	69	15	20	25	160
3 T 453	69	25	40	50	160
4 T 453	69	25	40	50	160
1 T 455-1	70	15	20	25	160
2 T 456 Z	66	15	20	25	160
3 T / 4 T 456 Z	66	25	40	50	160
1 T 458 / -2	72-74	15	20	25	180
2 T 458 / -2	72-74	15	20	25	180
3 T 458 / -2	72-74	25	40	50	180
4 T / 4,8 T 458 / -2	72-74	25	40	50	180
5 T 458 / -2	72-74	30	50	70	180
6 T 458 / -2	72-74	40	60	75	180

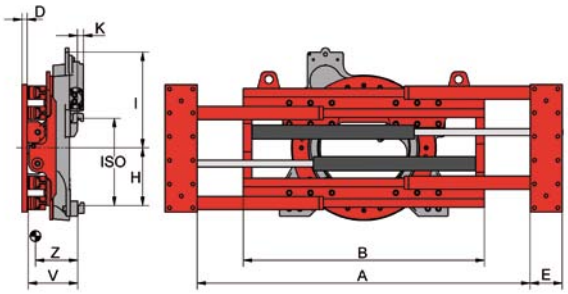


Rotating Clamps

Due to the KAUP Modular System which is consequently followed and includes Rotators as well as Clamps and Sideshifters, all Clamps shown on pages 44 to 64 can be combined with a Rotator. Naturally this does not make sense with every version of Clamp. The best known Rotating Clamps are Roll Clamps, Fork Clamps, Bale Clamps and Pallet Turnover Clamps. If required for the operation all Rotating Clamps can be designed with sideshift function.

Fitting a Rotating Clamp with sideshift

In order to equip a Rotating Clamp with sideshift function, a solenoid valve with matching assembly kit is necessary. Lifting heights of more than 3.750 mm require an electric spring cable drum (see page 97). Model code for each respective Clamp changes to T491...T498.

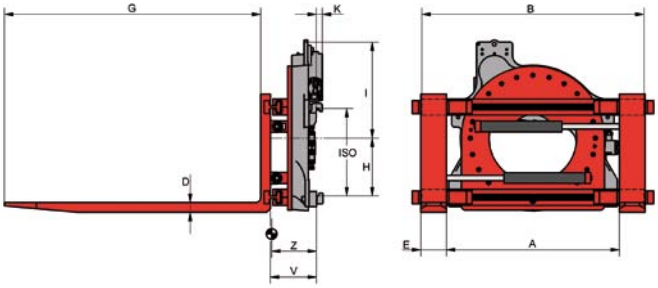


Rotating Clamp with bolt-on plates T450A

without arms[1] – rotation 360° continuous – 2 hydraulic functions

Model	Capacity of forks kg/mm	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	H mm	I mm	K mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T450A	1.900/500	1.250/500	300-1.480	970	25	120	213	478	33	6.013	7,6	2	216	125	299
			20-920	970										123	288
2T450A	2.300/500	2.000/500	280-1.480	1.040	25	150	269	457	32	7.700	9,7	2/3	232	136	402
			290-1.590	1.130										137	410
			40-1.090	1.130										136	404
			290-1.790	1.330										138	425
3T450A	3.000/500	2.500/500	260-1.560	1.130	25	150	338	395	40	8.950	11,3	3	279	164	576
			260-1.760	1.330										165	595
4T450A	3.600/500	2.900/500	260-1.760	1.330	25	150	338	395	40	8.950	11,3	3	289	161	650
			130-1.630	1.460										162	660
			260-1.890	1.460										162	662
4,8T450A	4.500/500	3.500/500	250-1.650	1.330	25	150	338	395	40	8.950	11,3	3	314	180	783
			120-1.520	1.460										180	799
			220-1.720	1.460										181	802
5T450A	4.500/600	3.500/600	220-1.620	1.330	40	200	345	445	48	13.434	15,7	4	360	220	1.087
			230-1.860	1.550										222	1.134
			230-2.130	1.820										223	1.176

[1] Suitable forks or arms available upon request. Also available with sideshift, model T490A, see page 65. Forks see page 94.



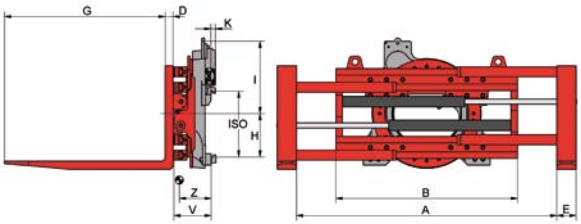
EX

Rotating Fork Positioner T456Z

Rotation 360° continuous – 2 hydraulic functions

Model	Capacity of forks kg/mm	A mm	B mm	D mm	E mm	G mm	H mm	I mm	K mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
2T456 Z	2.300/500	250-810	1.040	45	120	1.200	269	457	33	7.700	9,7	2/3	216	273	435
3T456 Z	3.000/500	190-880	1.150	50	150	1.200	338	395	40	8.950	11,3	3	249	287	590
4T456 Z	4.000/500	190-1.090	1.350	50	150	1.200	338	395	40	8.950	11,3	3	249	280	690
5T456 ZG*	5.000/600	260-1.260	1.700	60	150	1.200	345	445	40	13.434	15,7	4	345	300	1.090
8T456 ZG*	5.500/810	240-1.240	1.700	70	160	1.200	396	480	40	21.679	18,8	4	402	318	1.705

Also available with sideshift, model T496Z, see page 65. Also available with bolt-on forks.
Larger models and different widths available upon request. ***ZG = foundry version.**



EX

Rotating Fork Clamp T451

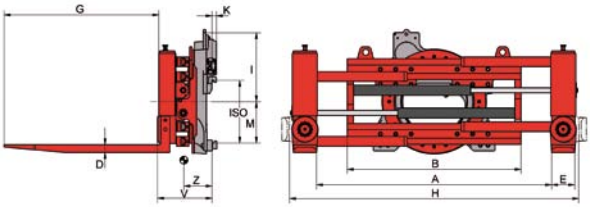
Rotation 360° continuous – 2 hydraulic functions

Model	Capacity of forks kg/mm	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	H mm	I mm	K mm	Md[2] Nm	Vol[3] ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1,5 T 451	1.900/500	1.250/500	300-1.480	970	45	120	213	478	33	6.013	7,6	2	216	284	425
			20- 920	970										286	413
			310-1.660	1.130										280	436
			70-1.250	1.200										280	438
			290-1.690	1.200										279	441
2 T 451	2.600/500	2.000/500	310-1.510	1.040	50	120	269	457	33	7.700	9,7	2/3	232	273	529
			320-1.620	1.130										271	536
			70-1.120	1.130										272	531
			120-1.420	1.330										269	547
			320-1.820	1.330										268	551
3 T 451	3.000/500	2.500/500	260-1.560	1.130	50	150	338	395	40	8.950	11,3	3	279	290	750
			260-1.760	1.330										288	770
4 T 451	3.600/500	2.900/500	260-1.760	1.330	50	150	338	395	40	8.950	11,3	3	289	279	820
			130-1.630	1.460										278	830
			260-1.890	1.460										278	835
4,8 T 451	4.500/500	3.500/500	250-1.650	1.330	60	150	338	395	40	8.950	11,3	3	314	294	990
			120-1.520	1.460										293	995
			220-1.720	1.460										293	1.000
5 T 451	4.500/600	3.500/600	270-1.670	1.330	70	150	345	445	48	13.434	15,7	4	360	325	1.246
			280-1.910	1.550										322	1.293
			550-2.450[1]	1.550										322	1.302
			280-2.180	1.820										320	1.335
6 T 451 B	6.000/600	4.200/600	490-2.390[1]	1.550	60	180	345	510	46	17.157	20,7	4	433	332	1.856

Preferential range

Fork length 'G' = 1.200 mm. Also available with sideshift, model T491, see page 65. Also available with bolt-on forks

[1] Handling of europallets lengthwise not possible. [2] Md: Torque Δ P = 125 bar. [3] Oil volume required per rev.



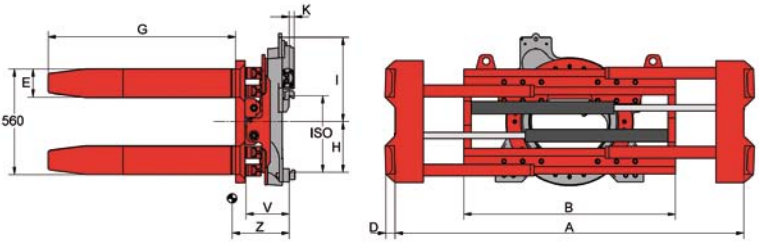
Rotating Fork Clamp with Turnable Forks T451D

Rotation 360° continuous – fork length max. 1300 mm – 2 hydraulic functions

Model	Capacity of forks kg/mm	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	H mm	I mm	K mm	M mm	Md[1] Nm	Vol[2] ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T451D	1.900/500	1.250/500	90-1.090	970	40	120	380-1.380	478	33	213	6.013	7,6	2	331	286	433
			270-1.450	970			560-1.740								285	436
			260-1.660	1.200			550-1.950								281	452
2T451D	2.300/500	2.000/500	130-1.330	1.130	50	150	510-1.710	457	32	269	7.700	9,7	2/3	356	312	602
			230-1.530	1.130			610-1.910								312	605
			230-1.730	1.330			610-2.110								308	620

Preferential range

[1] Md: Torque Δ P = 125 bar. [2] Oil volume required per rev. Fork lenght 'G' = 1.200 mm. Also available with sideshift, model T491D, see page 65.

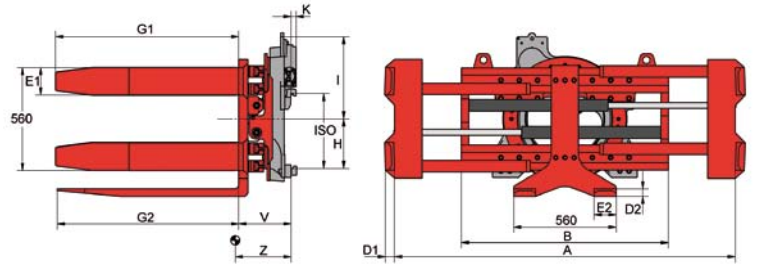


Pallet Turnover Clamp T451W

Rotation 360° continuous – **with two movable fork pairs** – 2 hydraulic functions

Model	Capacity as clamp kg/mm	A mm	B mm	D mm	E mm	G mm	H mm	I mm	K mm	Md[1] Nm	Vol[2] ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T451W	1.250/500	540-1.720	970	45	125	1.200	213	432	33	6.013	7,6	2	216	383	531
		530-1.930	1.200											376	547
2T451W	2.000/500	560-1.860	1.130	50	150	1.200	269	515	33	7.700	9,7	2/3	232	385	725
		560-2.060	1.330											381	740
3T451W	2.500/500	560-1.860	1.130	50	150	1.200	338	395	40	8.950	11,3	3	279	373	869
		560-2.060	1.330											369	888
4T451W	2.900/500	560-2.060	1.330	60	160	1.200	338	395	40	8.950	11,3	3	289	380	1.029
		560-2.190	1.460											378	1.041
4,5T451W	2.900/500	560-2.060	1.330	60	160	1.200	328	675	36	14.823	17,4	4	291	364	1.155
		560-2.180	1.460											362	1.169
5T451W	3.500/600	580-2.210	1.550	60	200	1.200	345	455	40	13.434	15,7	4	360	403	1.523
		850-2.750	1.550											399	1.587

Also available with sideshift, model T491W, see page 65. [1] Md: Torque ∆ P = 125 bar. [2] Oil volume required per rev.

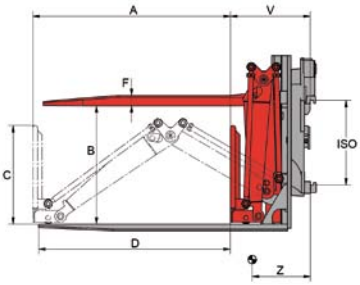


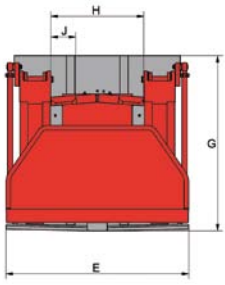
Pallet Turnover Clamp T451W/180

Rotation 360° continuous – **with additional pair of forks to empty various boxes** – 2 hydraulic functions

Model	Capacity as clamp kg/mm	A mm	B mm	Fork dimensions E1 mm	D1 mm	G1 mm	Add forks E2 mm	D2 mm	G2 mm	Md[1] Nm	Vol[2] ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T451W/180	1.250/500	540-1.720	970	125	45	1.200	125	45	1.200	6.013	7,6	2B	267	431	678
		530-1.930	1.200											425	694
2T451W/180	2.000/500	560-1.860	1.130	150	50	1.200	150	50	1.200	7.700	9,7	2/3B	285	437	905
		560-2.060	1.330											432	920
3T451W/180	2.500/500	560-1.860	1.130	150	50	1.200	150	50	1.200	8.950	11,3	3B	333	423	1.083
		560-2.060	1.330											419	1.102

Attention: Additional forks exclusively possible with underclearance according to ISO class »B« version. [1] Md: Torque ∆ P = 125 bar. [2] Oil volume required per rev. Also available with sideshift, model T491W/180, see page 65. **Note:** Container must have insertion slots from all sides.





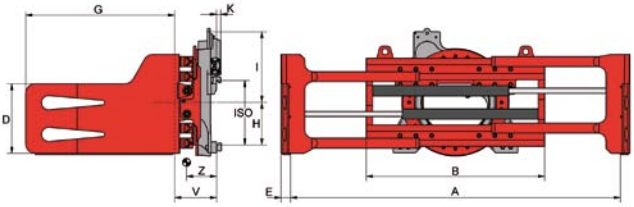
Pallet Turnover Clamp with Pusher T451WA

360° rotation continuous – 2 hydraulic functions plus solenoid valve

Pallet Turnover Clamps with Pusher are put into operation when loads have to be transferred from a production pallet to a cheaper transport pallet (one way pallet) or directly loaded into containers, onto lorries or railway wagons. The palletized goods are picked up with the forks, clamped and turned 180°. When the clamp is opened, the load rests on both carrying plates and then can be pushed off onto the transport pallet into the container or directly onto the lorry or railway wagon.

Model	Capacity on forks kg/mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	ISO cl.	CofG V mm	CofG Z mm	Weight kg
2 T 451 WA	1.400/600	1.250	700-1.200	565	1.200	1.100	50	1.045	650	150	2/3	422	280	1.150
3 T 451 WA	2.000/600	1.250	1.050-1.675	735	1.200	1.300	60	1.135	650	160	3	509	320	1.550
3 T 451 WA	2.000/600	1.250	1.050-1.675	735	1.200	1.300	60	1.135	650	160	4	481	300	1.620
4 T 451 WA	2.500/600	1.250	1.050-1.675	735	1.200	1.300	60	1.135	650	160	4	490	320	1.755

Also available with sideshift, model T491WA, solenoid valve required, see page 65. Increased sideshift for container stuffing upon request. Lateral supporting plate upon request.



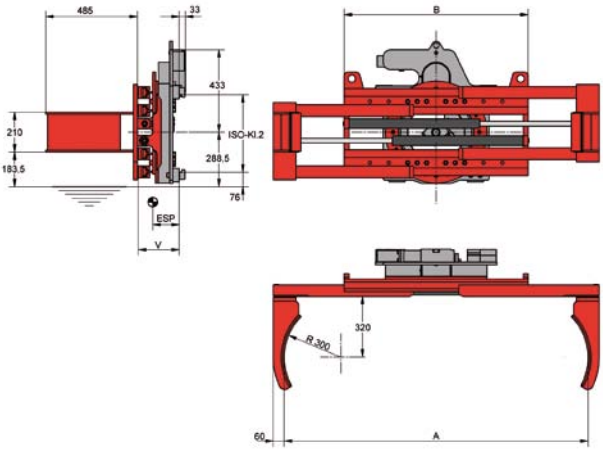
Rotating Bale Clamp T453

360° rotation continuous - 2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	D mm	E mm	G mm	H mm	I mm	K mm	Md[1] Nm	Vol[2] ltr.	ISO cl.	CofG V mm	CofG Z mm	Weight kg
1,5 T 453	1.250/500	475-1.655	970	440	37	1.000	213	478	33	6.013	7,6	2	246	312	462
		475-1.725	1.040											308	475
		465-1.865	1.200											305	485
2 T 453	2.000/500	575-1.875	1.040	440	42	1.000	269	457	32	7.700	9,7	2/3	266	304	606
		675-2.075	1.040											303	609
		485-1.785	1.130											303	611
		585-1.985	1.130											302	614
		485-1.985	1.330											300	627
		595-2.395	1.520											291	667
2,5 T 453	2.300/500	475-1.775	1.130	500	47	1.000	269	457	32	7.700	9,7	2/3	280	380	761
		475-1.975	1.330											377	780
3 T 453	2.500/500	475-1.775	1.130	500	47	1.000	338	395	40	8.950	11,3	3	319	326	854
		475-1.975	1.330											323	873
		475-2.105	1.460											322	886
4 T 453	2.900/500	375-1.775	1.330	500	47	1.000	338	395	40	8.950	11,3	3	329	314	928
		475-1.975	1.330											314	930
		605-2.235	1.330											314	933
		475-2.105	1.460											313	943
		385-2.105	1.550											312	991
4,8 T 453	3.500/500	465-1.865	1.330	500	52	1.000	338	395	40	8.950	11,3	3	359	313	1.089
		695-2.325	1.330											313	1.096
		565-2.195	1.460											311	1.112

Preferential range

Also available with sideshift, model T493, see page 65. Also available with additional pair of forks – model T453/180. Variations in width, opening ranges and arm dimensions available upon request. [1] Md: Torque Δ P=125 bar. [2] Oil volume required per rev.



EX

Rotating Drum Clamp T455-1

360° rotation continuous – to transport cylindrical steel drums – arms covered with Remagrip
2 hydraulic functions

Model	Capacity kg/mm	A mm	B mm	Torque Δp= 125 bar Nm	ISO class	V mm	CofG Z mm	Weight kg
1 T 455-1	700/320	420-1.600	970	6.013	2	216	146	305

Available with sideshift model T495-1, see page 65.

Rotating Wire Coil Clamp

360° rotation continuous – to transport wire coils

KAUP has designed a variety of different versions of Rotating Clamps specially for transportation of steel coils, wire coils, cable reels etc.

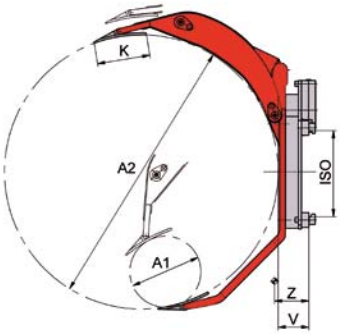
Due to the complexity of the scope (e.g. details regarding clamp body width, contact pads, coatings etc.) it is advisable to contact our specialists directly for an individual quotation.

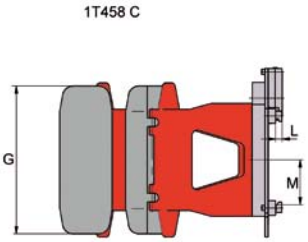
Rotating Roll Clamps

T458

T458C

T458S



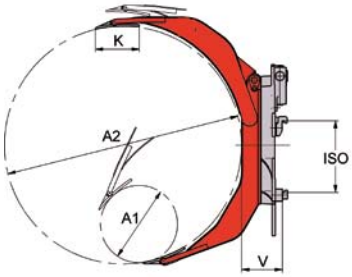


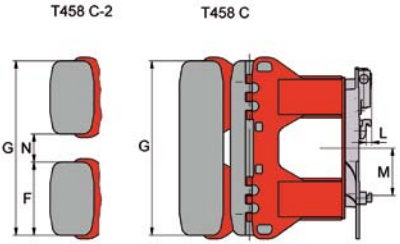
Rotating Roll Clamp T458C

360° rotation continuous - short arm fixed - continuous contact pads on both arms - 2 hydraulic functions

Model	Capacity kg	A1-A2 mm	G mm	K mm	L mm	M mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 458 C	1.200	360-1.300	700	250	33	213	6.013	7,6	2	147	272	358
2 T 458 C	2.200	480-1.350	1.000	250	32	269	7.700	9,7	2/3	230	320	560
2 T 458 C	2.000	530-1.600	1.000	250	32	269	7.700	9,7	2/3	213	361	616
3 T 458 C	2.800	350-1.450	1.000	250	40	338	8.950	11,3	3	252	359	720
3 T 458 C	2.800	530-1.600	1.000	250	40	338	8.950	11,3	3	255	353	725
4 T 458 C[1]	3.600	475-1.450	1.000	300	36	381	11.815	13,8	3/4	233	345	955
4 T 458 C[1]	3.500	530-1.600	1.000	300	36	381	11.815	13,8	3/4	233	345	960

Preferential range Available with sideshift model T498C, see page 65, Capacity related to max. roll diameter. For taking up horizontal rolls, 5-degree mast forward tilt is required. For contact pad coatings see page 95. [1] Contact pads only available rubber coated.



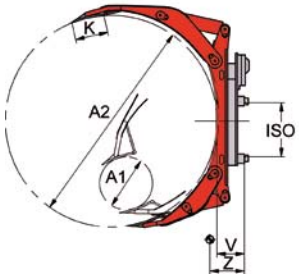


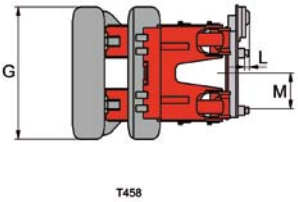
Rotating Roll Clamp T458C-2

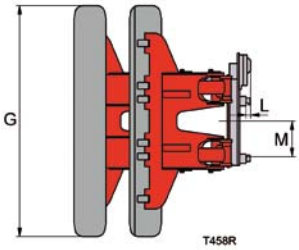
360° rotation continuous - short arm fixed - split contact pads on long pivoting arm - 2 hydraulic functions

Model	Capacity kg	A1-A2 mm	F mm	G mm	K mm	L mm	M mm	N mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 458 C-2	2.200	480-1.350	415	1.000	250	32	269	170	7.700	9,7	2/3	230	315	560
2 T 458 C-2	2.000	530-1.600	415	1.000	250	32	269	170	7.700	9,7	2/3	213	355	615
3 T 458 C-2	2.800	350-1.450	415	1.000	250	40	338	170	8.950	11,3	3	252	352	715
3 T 458 C-2	2.800	530-1.600	415	1.000	250	40	338	170	8.950	11,3	3	255	347	720
4 T 458 C-2[1]	3.600	475-1.450	420	1.000	300	36	381	160	11.815	13,8	3/4	233	342	950
4 T 458 C-2[1]	3.500	530-1.600	420	1.000	300	36	381	160	11.815	13,8	3/4	233	345	955

Preferential range Available with sideshift model T498C-2, see page 65, Capacity related to max. roll diameter. For taking up horizontal rolls, 5-degree mast forward tilt is required. For contact pad coatings see page 95. [1] Contact pads only available rubber coated.







Rotating Roll Clamp T458

360° rotation continuous - short arm adjustable in 45° position (1) fixed) - continuous contact pads - 2 hydraulic functions

Model	Capacity kg	A1-A2 mm	G mm	K mm	L mm	M mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 458[1)]	800	350- 900	700	250	33	208	6.013	7,6	2	165	227	295
1 T 458	800	250-1.600	700	250	33	208	6.013	7,6	2	150	331	365
1 T 458[1)]	1.200	250-1.150	700	250	33	208	6.013	7,6	2	147	290	345
1 T 458[1)]	1.200	400-1.300	700	250	33	208	6.013	7,6	2	147	281	345
1 T 458	1.200	250-1.300	700	250	33	208	6.013	7,6	2	147	280	350
1 T 458[1)]	1.400	250-1.150	700	250	33	208	6.013	7,6	2	147	297	400
1 T 458[1)]	1.400	400-1.300	700	250	33	208	6.013	7,6	2	147	292	400
1 T 458	1.400	250-1.300	700	250	33	208	6.013	7,6	2	147	291	405
2 T 458	2.200	250-1.350	1.000	250	32	270	7.700	9,7	2/3	232	317	611
2 T 458	2.000	250-1.450	1.000	250	32	270	7.700	9,7	2/3	218	369	656
2 T 458	2.000	250-1.600	1.000	250	32	270	7.700	9,7	2/3	218	375	670
2 T 458	2.000	400-1.600	1.000	250	32	270	7.700	9,7	2/3	218	361	660
2 T 458	1.700	350-1.830	1.000	250	32	270	7.700	9,7	2/3	218	396	702
2 T 458	1.600	700-2.100	1.000	250	32	270	7.700	9,7	2/3	218	420	773
3 T 458	2.800	250-1.350	1.000	250	40	338	8.950	11,3	3	265	311	712
3 T 458	2.800	250-1.600	1.000	250	40	338	8.950	11,3	3	251	360	770
3 T 458	2.800	400-1.600	1.000	250	40	338	8.950	11,3	3	251	352	760
3 T 458	2.500	350-1.830	1.000	250	40	338	8.950	11,3	3	251	385	801
3 T 458	2.200	700-2.100	1.000	250	40	338	8.950	11,3	3	251	411	869
4 T 458	3.600	250-1.450	1.000	300	36	381	11.815	13,8	3/4	237	341	984
4 T 458	3.500	250-1.600	1.000	300	36	381	11.815	13,8	3/4	237	353	1.095
4 T 458	3.400	350-1.830	1.000	300	36	381	11.815	13,8	3/4	237	378	1.110
4 T 458	3.000	700-2.100	1.000	300	36	381	11.815	13,8	3/4	237	405	1.120
5 T 458	4.500	250-1.600	1.200	400	40	345	13.434	15,7	4	294	394	1.297
5 T 458	4.000	350-1.830	1.200	400	40	345	13.434	15,7	4	302	413	1.389
5 T 458	4.000	800-1.900	1.200	400	40	345	13.434	15,7	4	302	423	1.377
5 T 458	3.900	700-2.100	1.200	400	40	345	13.434	15,7	4	302	438	1.423
5 T 458	3.500	850-2.400	1.200	400	40	345	13.434	15,7	4	302	484	1.495
5 T 458	3.500	650-2.400	1.200	400	40	345	13.434	15,7	4	302	485	1.499
5 T 458	3.200	900-2.500	1.200	400	40	345	13.434	15,7	4	302	543	1.544
6 T 458[1)]	4.800	1.000-1.800	1.200	400	40	396	21.679	18,8	4	391	438	1.677
6 T 458	4.800	700-1.800	1.200	400	40	396	21.679	18,8	4	391	437	1.712
6 T 458[1)]	5.000	1.250-2.200	1.200	400	40	396	21.679	18,8	4	381	493	1.874
6 T 458	5.000	850-2.200	1.200	400	40	396	21.679	18,8	4	381	492	1.909

Preferential range

Available with sideshift model T498, see page 65.

Rotating Tyre Clamp T458R

360° rotation continuous - short arm adjustable in 45° position (1) fixed) - continuous contact pads - 2 hydraulic functions

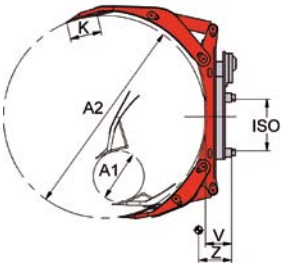
Model	Capacity kg	A1-A2 mm	G mm	K mm	L mm	M mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 458 R[1)]	1.200	400-1.300	1.200	200	33	213	6.013	7,6	2	147	326	376
1 T 458 R[1)]	1.150	650-1.350	1.200	200	33	213	6.013	7,6	2	147	375	420
2 T 458 R	2.200	250-1.350	2.000	250	32	269	7.700	9,7	2/3	233	372	688
2 T 458 R	2.000	400-1.600	2.000	250	32	269	7.700	9,7	2/3	220	425	737
2 T 458 R	1.700	350-1.830	2.000	250	32	269	7.700	9,7	2/3	222	466	780

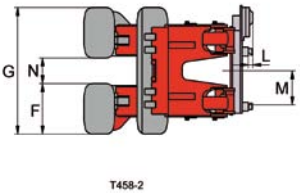
[1)] Version with fixed short arm.

Available with sideshift model T498R, see page 65. Capacity related to max. roll diameter. For taking up horizontal rolls, 5-degree mast forward tilt is required. For contact pad coatings see page 95. **Options:** All models available restricted to 180°.

Rotating Roll Clamp T458-2

360° rotation continuous - Short arm
adjustable in 45° position (1) fixed)
split contact pads on long pivoting arm
2 hydraulic functions





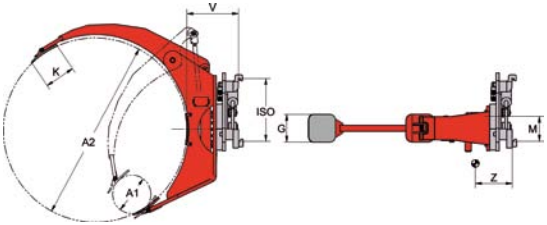
Model	Capacity kg	A1-A2 mm	F mm	G mm	K mm	L mm	M mm	N mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 458-2[1)]	800	350- 900	300	700	250	33	208	100	6.013	6,1	2	165	231	337
1 T 458-2[1)]	1.400	250-1.150	300	700	250	33	208	100	6.013	6,1	2	147	294	399
1 T 458-2[1)]	1.400	400-1.300	300	700	250	33	208	100	6.013	6,1	2	147	288	399
1 T 458-2	1.400	250-1.300	300	700	250	33	208	100	6.013	6,1	2	147	287	404
2 T 458-2	2.200	250-1.350	415	1.000	250	32	270	170	7.700	9,7	2/3	232	312	606
2 T 458-2	2.000	250-1.450	415	1.000	250	32	270	170	7.700	9,7	2/3	218	362	651
2 T 458-2	2.000	250-1.600	415	1.000	250	32	270	170	7.700	9,7	2/3	218	367	666
2 T 458-2	2.000	400-1.600	415	1.000	250	32	270	170	7.700	9,7	2/3	218	355	656
2 T 458-2	1.700	350-1.830	415	1.000	250	32	270	170	7.700	9,7	2/3	218	389	696
2 T 458-2	1.600	700-2.100	415	1.000	250	32	270	170	7.700	9,7	2/3	218	413	768
3 T 458-2	2.800	250-1.350	415	1.000	250	40	338	170	8.950	11,3	3	265	306	707
3 T 458-2	2.800	250-1.600	415	1.000	250	40	338	170	8.950	11,3	3	251	354	764
3 T 458-2	2.800	400-1.600	415	1.000	250	40	338	170	8.950	11,3	3	251	346	754
3 T 458-2	2.500	350-1.830	415	1.000	250	40	338	170	8.950	11,3	3	251	379	796
3 T 458-2	2.200	700-2.100	415	1.000	250	40	338	170	8.950	11,3	3	251	404	864
4 T 458-2	3.600	250-1.450	420	1.000	300	36	516	160	11.815	13,8	3/4	237	336	980
4 T 458-2	3.500	250-1.600	420	1.000	300	36	516	160	11.815	13,8	3/4	237	348	1.091
4 T 458-2	3.400	350-1.830	420	1.000	300	36	516	160	11.815	13,8	3/4	237	373	1.106
4 T 458-2	3.000	700-2.100	420	1.000	300	36	516	160	11.815	13,8	3/4	237	399	1.116
5 T 458-2	4.500	250-1.600	500	1.200	400	40	345	200	13.434	15,7	4	302	387	1.287
5 T 458-2	4.000	350-1.830	500	1.200	400	40	345	200	13.434	15,7	4	302	406	1.379
5 T 458-2	4.000	800-1.900	500	1.200	400	40	345	200	13.434	15,7	4	302	412	1.396
5 T 458-2	3.900	700-2.100	500	1.200	400	40	345	200	13.434	15,7	4	302	431	1.414
5 T 458-2	3.500	850-2.400	500	1.200	400	40	345	200	13.434	15,7	4	302	476	1.485
5 T 458-2	3.500	650-2.400	500	1.200	400	40	345	200	13.434	15,7	4	302	477	1.489
5 T 458-2	3.200	900-2.500	500	1.200	400	40	345	200	13.434	15,7	4	302	477	1.534
6 T 458-2[1)]	4.800	1.000-1.800	500	1.200	400	40	396	200	21.679	18,8	4	391	424	1.657
6 T 458-2	4.800	700-1.800	500	1.200	400	40	396	200	21.679	18,8	4	391	424	1.692
6 T 458-2[1)]	5.000	1.250-2.200	500	1.200	400	40	396	200	21.679	18,8	4	381	476	1.850
6 T 458-2	5.000	850-2.200	500	1.200	400	40	396	200	21.679	18,8	4	381	475	1.885

Preferential range

1) Version with fixed short arm. Available with sideshift model T498-2, see page 65. Capacity related to max. roll diameter. Tissue-version, short arm with split contact pad. For taking up horizontal rolls, 5-degree mast forward tilt is required. For contact pad coatings see page 95. **Options:** All models available restricted to 180°.

Rotating Roll Clamp T458S

Short arm fixed - 2 hydraulic functions
Especially designed for extreme narrow rolls (width from 150 mm)

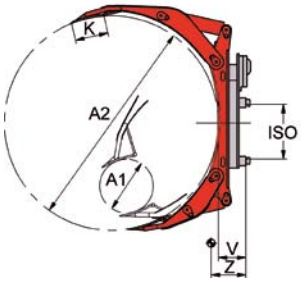


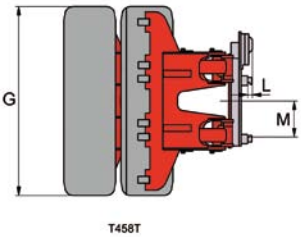
Model	Capacity kg	Rotation°	A1-A2 mm	G mm	K mm	M mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 458 S	350	90°	250-1.200	180	200	84	1.950	--	2	340	258	245
		360°					4.200	4,3		320	222	260

Capacity related to max. roll diameter. For taking up horizontal rolls, 5-degree mast forward tilt is required. For contact pad coatings see accessories page 95.

Rotating Tissue Roll Clamp T458T

360° rotation continuous - Short arm adjustable in 45° position (1) fixed)
continuous rounded tissue contact pads
2 hydraulic functions



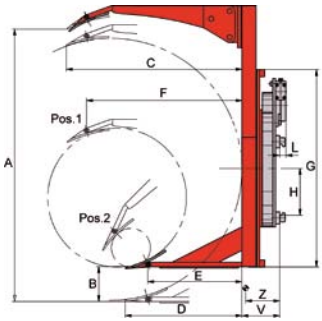


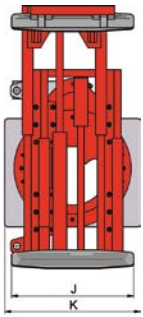
Model	Capacity kg	A1-A2 mm	G mm	K mm	L mm	M mm	Torque Δp= 125 bar Nm	Oil volume required per rev. ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 458 T[1)]	1.200	400-1.300	850	300	33	213	6.013	7,6	2	147	290	340
1 T 458 T[1)]	1.400	400-1.300	850	300	33	213	6.013	7,6	2	147	300	406
2 T 458 CT[1)]	2.000	530-1.600	1.400	350	32	269	7.700	9,7	2/3	218	394	662
2 T 458 T	2.000	400-1.600	1.400	350	32	269	7.700	9,7	2/3	218	393	699
2 T 458 T	1.700	350-1.830	1.400	350	32	269	7.700	9,7	2/3	228	430	740
3 T 458 T	2.500	350-1.830	1.400	350	40	338	8.950	11,3	3	253	417	842
3 T 458 T	2.200	700-2.100	1.400	350	40	338	8.950	11,3	3	253	445	910
4 T 458 T	3.400	350-1.830	1.800	400	40	516	11.815	13,8	3/4	237	456	1.255
4 T 458 T	3.000	700-2.100	1.800	400	40	516	11.815	13,8	3/4	237	493	1.267
5 T 458 T	3.900	700-2.100	1.800	400	40	345	13.434	15,7	4	303	304	1.525
5 T 458 T	3.500	650-2.400	1.800	400	40	345	13.434	15,7	4	303	302	1.605

1) Version with fixed short arm. Available with sideshift model T498T, see page 65. Capacity related to max. roll diameter. For taking up horizontal rolls, 5-degree mast forward tilt is required. For contact pad coatings see page 95. Recommended lenght of contact pads: 70 % of roll width. **Options:** All models available restricted to 180°.

Rotating Roll Clamp parallel guided T458P/T258

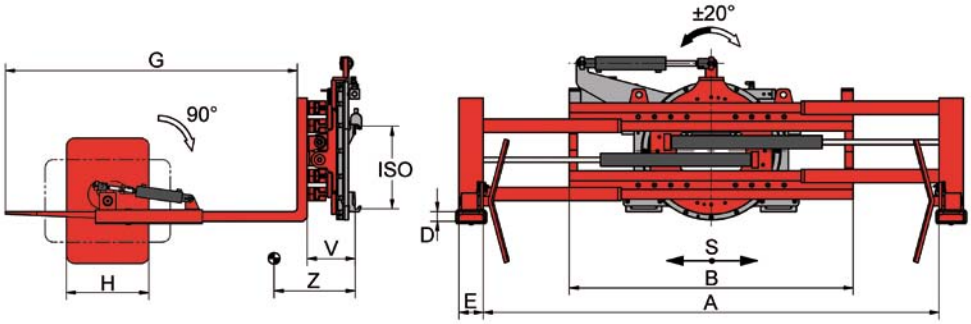
360° rotation continuous - 2 hydraulic functions





Model	Cap. kg	Roll dia-meter mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	K mm	L mm	Md[2)] Nm	Vol[1)] ltr.	ISO cl.	V mm	CofG Z mm	Weight kg
1T458P	1.200	350-1.200	1.315	200	855	510	380	740	850	213	700	560	33	6.013	7,6	2	215	259	407
1,5T458P	1.200	300-1.350	1.425	200	925	580	450	810	970	213	700	560	33	6.013	7,6	2	215	272	421
2T458P	2.000	300-1.500	1.570	200	1.005	670	540	890	1.130	269	700	790	33	7.700	9,7	2/3	232	279	543
3T458P	2.500	300-1.500	1.600	200	995	655	540	890	1.130	338	990	1.010	40	8.950	11,3	3	279	335	885
4T458P	3.200	430-1.870	1.985	200	1.290	865	750	1.155	1.330	328	800	870	36	8.950	11,3	3	292	346	1.128
5T258	4.200	530-2.100	2.400	300	1.285	910	-	-	1.500		900	970	40	13.434	15,7	4	342	270	2.000
7T258	6.000	850-2.200	2.400	300	1.285	910	-	-	1.700		1.000	1.070	-	13.030	17,8	-	350	320	3.100
10T258	8.200	900-2.300	2.700	300	1.485	1.010	-	-	1.800		1.050	1.120	-	23.000	32,8	-	360	350	3.500
15T258	11.000	900-2.300	2.700	400	1.485	1.010	-	-	2.230		1.500	1.120	-	23.000	32,8	-	450	500	8.200
20T258	15.000	900-2.300	2.700	400	1.485	1.010	-	-	2.230		1.500	1.350	-	34.500	46,2	-	520	600	9.500

1) Oil volume required per rev. 2) Md: Torque Δ P = 125 bar. Available with sideshift model T498P, see page 65. Available as non rotating clamp model T418. Capacity related to max. roll diameter. Long arm mechanically adjustable. For contact pad coatings see accessories page 95.



Tyre Handler T421SV

with **independent sideshift** - 2 hydraulic functions + 2 solenoid valves

Tyre handling arms in slip-on design. When removed, the attachment can be used for multiple handling purposes.

Model	Capacity on forks kg/mm	Capacity as clamp kg/mm	S mm	A mm	Tyre-diameter mm	B mm	D mm	E mm	G mm	H mm	ISO cl.	V mm	CofG Z mm	Weight kg
2T421SV	2.300/500	1.200/1.000	± 100	1.020-2.420	1.000-1.900	1.720	50	150	1.200	500	2/3	241	437	885
3T421SV	3.000/500	1.400/1.100	± 100	980-2.610	1.000-2.100	1.730	50	150	1.400	500	2/3	276	471	1.225
4T421SV	3.600/500	1.600/1.200	± 100	1.180-2.810	1.200-2.300	1.750	60	150	1.400	500	3/4	291	486	1.350
5T421SV	4.500/600	2.000/1.450	± 160	1.300-3.200	1.200-2.700	2.600	60	200	1.700	500	4	375	587	2.094
6T421BSV	6.600/600	2.700/1.550	± 160	1.300-3.500	1.200-2.900	2.900	70	200	1.800	600	4	385	620	2.555
6,5T421BSV	7.600/600	3.000/1.525	± 160	1.440-3.640	1.340-3.040	2.800	70	200	2.000	600	4	465	652	2.980
8T421BSV	10.000/600	4.000/1.600	± 160	1.400-3.600	1.300-3.000	2.800	80	200	2.000	600	4	520	658	3.600
8T421BSV	10.000/600	3.800/1.750	± 160	1.400-3.900	1.300-3.300	3.200	80	200	2.000	600	4	520	640	3.795
10T421BSV	15.000/600	4.000/1.800	± 200	1.210-4.010	1.390-3.340	3.200	90	250	2.100	600	--	515	620	5.000
15T221SV	16.000/600	4.700/1.900	± 200	1.500-4.000	1.400-3.400	3.200	90	250	2.200	550	--	520	650	5.200
30T221SV	15.000/1.200	5.000/2.250	± 150	2.870-4.970	2.700-4.200	3.850	100	300	2.400	ø700	--	825	820	8.370

Pin-type mounting on request.

Tyre Handler in various capacities and versions on request.

Fig. Tyre Handler 20T221SV

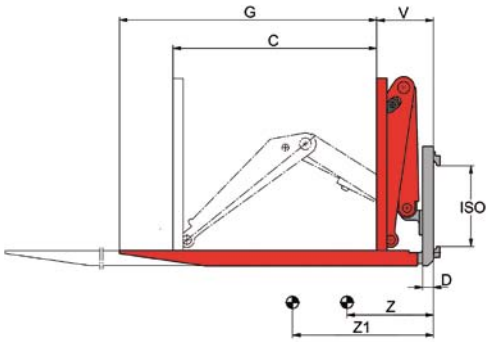
Recommended Oil flow rates and Pressures

Reach Forks - Telescopic Forks - Pantographs - Push-Pulls
Bucket Discharging Devices - Load Stabilizers - Loading Buckets

Model	Page	Oil volume (l/min) min.	optimum	max.	Pressure (bar) maximum
2 T 140 + SV + E	77	20	30	40	150
2 T 140 E / 2 + 4 T 163	78	20	30	40	150
3 T 140 E / 4,5 T 163	78	20	30	40	150
2 T 149	78	15	20	30	150
3 T 149	78	20	30	40	150
4 T 149	78	20	30	40	150
2 T 149 Z	78	15	20	30	150
3 T 149 Z	78	20	30	40	150
2,5 T 180 T	79	15	25	30	150
3,5 T 180 T	79	15	25	30	150
4,5 T 180 T	79	15	25	30	150
2 T 466 / 2,5 T 180 T	80	15	25	30	150
2 T 466 / 2,5 T 180 T.1	80	15	25	30	150
4,8 T 466 B / 3,5 T 180 T	80	15	25	30	150
4,8 T 466 B / 3,5 T 180 T.1	80	15	25	30	150
4,8 T 466 B / 4,5 T 180 T	80	15	25	30	150
4,8 T 466 B / 4,5 T 180 T.1	80	15	25	30	150
2 T 141.1 / T 142.1	81	15	20	30	150
3 T 141.1 / T 142.1	81	15	20	30	150
2 T 143 S / T 143 SA	81-82	20	30	40	150
2 T 144 S	82	20	30	40	150
2 T 145 S / T 145 SA	81, 83	20	30	40	150
2 T 146 S	83	20	30	40	150
1 T 124 ST	84	10	15	20	120
1 T 129 ST	84	10	15	20	120
1 T 155 ST	85	10	15	20	150
2 T 167 C	85	15	30	40	150
3 T 167 C	85	15	30	40	150
4 T 167 C	85	20	40	50	150
2 T 184	89	8	15	25	150
3 T 184	89	12	25	40	150
4 T 184	89	15	30	50	150
6 T 184	89	35	60	75	150

Reach Forks - Telescopic Forks - Pantographs

These attachments allow loading of lorries or railway waggons from one side. The load can be carried to the opposite side of the loading platform. Reach Forks are mainly used for palletized goods or where it is possible to slip the forks in beneath the load. Reach Forks and Telescopic Forks are often combined with a Fork Positioner (KAUP range T163 or T466). The Pantograph is normally found where Clamps or Multi Pallet Handlers are mounted onto its fork carriage.



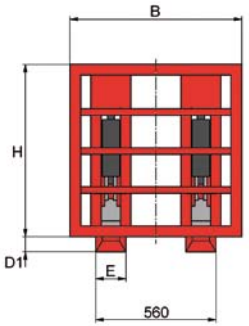


Fig. T140

Reach Fork T140 with fix pair distance - 1 hydraulic function

Model	Capacity extended kg/mm	Capacity retracted kg/mm	B mm	C mm	D mm	D1 mm	E mm	G mm	H mm	ISO cl.	V mm	CofG Z1 mm	CofG Z mm	Weight kg
2 T 140	2.000/600	2.500/600	800	950	50	70	140	1.200	800	2/3	268	692	357	405

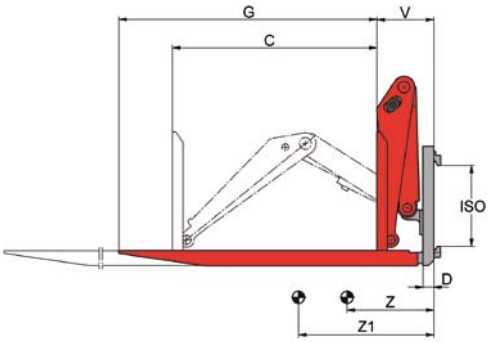
Max. distance from fork tip to mast = G + V + C + thickness of FLT carriage.

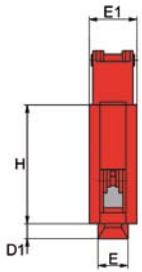
Reach Fork T140SV with **independent sideshift** - fix pair distance - 2 hydraulic functions

Model	Capacity extended kg/mm	Capacity retracted kg/mm	S mm	B mm	C mm	D mm	D1 mm	E mm	G mm	H mm	ISO cl.	V mm	CofG Z1 mm	CofG Z mm	Weight kg
2 T 140 SV	2.000/600	2.500/600	± 100	800	950	50	70	140	1.200	800	2	310	685	373	430
2 T 140 SV	2.000/600	2.500/600	± 100	800	950	50	70	140	1.200	800	3	310	607	332	490

Preferential range

Max. distance from fork tip to mast = G + V + C + thickness of FLT carriage.



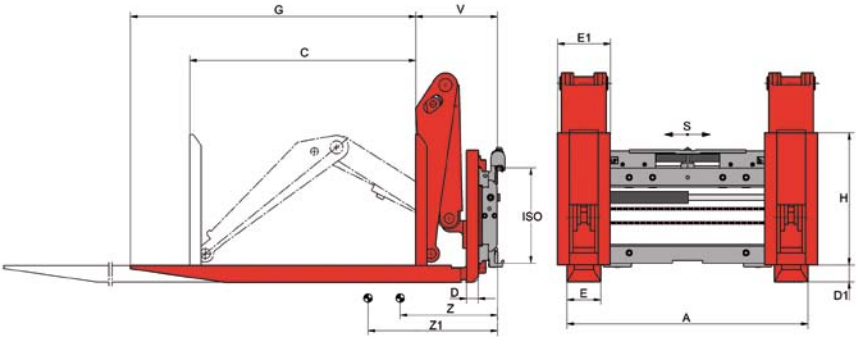


Reach Fork T140E individually placable on the fork carriage - 1 hydraulic function

Model	Capacity extended kg/mm	Capacity retracted kg/mm	C mm	D mm	D1 mm	E mm	E1 mm	G mm	H mm	ISO cl.	V mm	CofG Z1 mm	CofG Z mm	Weight kg
2 T 140 E	2.000/600	2.500/600	950	50	70	140	220	1.200	550	2/3	268	696	387	355

Technical data per pair.

Max. distance from fork tip to mast = G + V + C + thickness of FLT carriage.

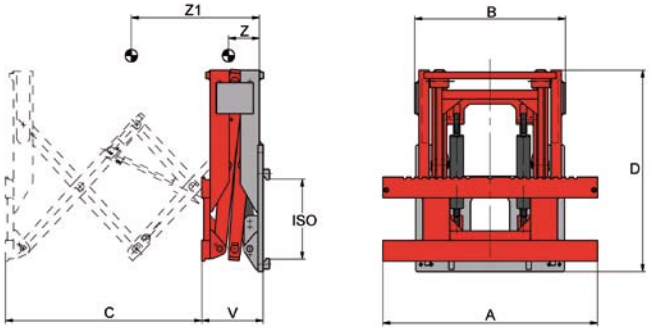


Reach Fork with Fork Positioner T140E/T163

with **independent sideshift** - 2 hydraulic functions + solenoid valve

Model	Capacity extended kg/mm	Capacity retracted kg/mm	S mm	C mm	D mm	D1 mm	E mm	E1 mm	G mm	H mm	A mm	ISO cl.	V mm	CofG Z1 mm	CofG Z mm	Weight kg
2T140E/2T 163	800/600	1.600/600	± 100	950	50	70	140	220	1.200	550	370-1.090	2	350	609	369	460
2T140E/4T163	1.150/600	2.300/600	± 100	950	50	70	140	220	1.200	550	450-1.180	3	350	536	327	528
3T140E/4,5T163	1.500/600	3.000/600	± 100	950	50	73	175	220	1.200	550	455-1.385	3	370	554	345	620

Max. distance from fork tip to mast = G + V + C + thickness of FLT carriage.

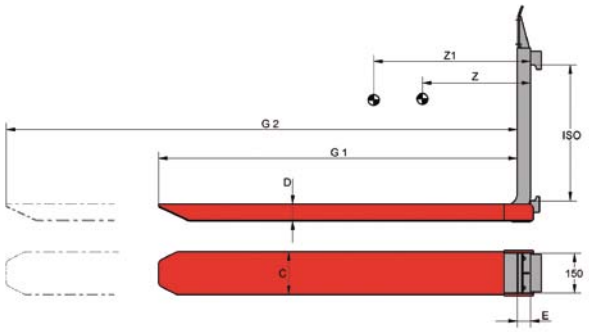


Pantograph T149/T149Z 1 hydraulic function

Model	Capacity kg/mm	A mm	B mm	C mm	D mm	ISO cl.	V mm	CofG Z mm	CofG1 Z1 mm	Weight kg
2 T 149	2.000/600	1.040	730	950	970	2/3	310	146	609	450
2 T 149.1	1.200/600	1.040	730	1200	1.060	2/3	310	141	711	458
3 T 149	3.000/600	1.150	980	800	970	3	435	198	565	680
4 T 149	3.500/600	1.350	980	800	970	4	435	189	539	745
2 T 149 Z	3.000/500	1.100	890	620	1.170	2/3	354	149	436	470
3 T 149 Z	3.500/600	1.150	1.120	750	1.290	3/4	350	167	526	710
8 T 149 Z	6.000/600	1.500	1.050	1.045	1.538	4	465	236	741	1.320

Preferential range

2/3T149Z suitable to attach clamps and multi pallet handlers.
The capacities are related to the extended pantograph. Available with sideshift function upon request.
Max. distance from fork tip to mast = V + C + thickness of FLT carriage + fork lenght.
Other fork carriage widths available upon request.



Telescopic Fork T180T 1 hydraulic function

Model	Capacity (kg) at a LCD (mm) 600	1.450	1.750	C mm	D mm	G1 mm	G2 mm	E mm	ISO cl.	CofG Z mm	CofG Z1 mm	Weight kg/pair
2,5 T 180 T	2.500	1.025	---	165	56	1.200	2.050	45	2	395	605	205
2,5 T 180 T.1	2.500	1.025	850	165	56	1.350	2.350	45	2	465	710	220
3,5 T 180 T	3.500	1.450	---	165	56	1.200	2.050	50	3	400	595	210
3,5 T 180 T.1	3.500	1.450	1.200	165	56	1.350	2.350	50	3	465	700	230
4,5 T 180 T	4.500	1.850	---	165	56	1.200	2.050	45	3	370	565	215
4,5 T 180 T.1	4.500	1.850	1.550	165	56	1.350	2.350	45	3	435	670	235

Other capacities, profiles or lengths upon request.

Accessories for Telescopic Forks T180T

Wear and tear bar

The bottoms of the outer forks are fitted with hardox steel plates to prevent wear and tear. Additionally a 5 mm high hardox wear and tear bar can be fitted which considerably extends the durability of the telescopic forks.

Load Stop A1, A2 and A3

Pallet stop A1

to confine the useable length of the forks for pick up of one pallet. In retracted position the pallet stop A1 is flush with the fork shank.

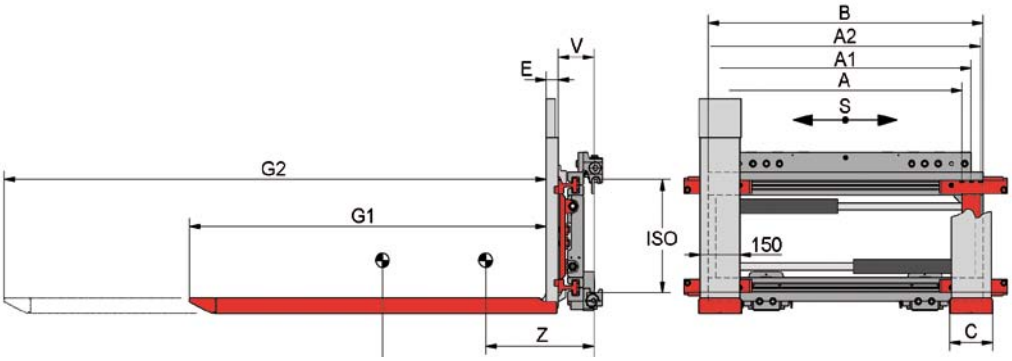
Load stop A2

to confine the useable length of the forks. Use of the load stop reduces the useable length of the forks by 50 mm. Height of load stop A2 is 400 mm.

Load backrest A3

to confine the useable length of the forks and to support the load. Use of the load backrest reduces the useable length of the forks by 50 mm. Height of load backrest A3 is 850 mm.

Additional accessories for telescopic forks upon request.
Fork positioner T466 with telescopic forks T180T see page 80.



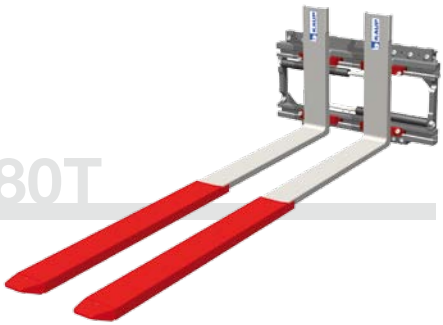
Fork Positioner with Telescopic Fork T466B/T180T

with **independent sideshift** - 2 hydraulic functions + solenoid valve

Model	Capacity (kg) at a LCD (mm) 600	1.450	1.750	A2* mm	B mm	C mm	D mm	G1 mm	G2 mm	E mm	S mm	ISO cl.	V mm	CofG Z mm	CofG Z1 mm	Weight kg
2T466B	2.020	850	---	320-1.020	1.040	165	56	1.200	2.050	45	± 100	2	138	335	458	350
/2,5T180T				320-1.120	1.150									330	451	357
				320-1.320	1.350									321	438	369
2T466B	2.020	850	700	320-1.020	1.040	165	56	1.350	2.350	45	± 100	2	138	386	533	365
/2,5T180T.1				320-1.120	1.150									380	525	372
				320-1.320	1.350									370	510	384
4,8T466B	3.500	1.450	---	320-1.120	1.150	165	56	1.200	2.050	50	± 100	3	153	297	389	446
/3,5T180T				320-1.320	1.350									286	373	468
				320-1.500	1.550									280	365	480
4,8T466B	3.500	1.450	1.200	320-1.120	1.150	165	56	1.350	2.350	50	± 100	3	153	340	456	466
/3,5T180T.1				320-1.320	1.350									327	438	488
				320-1.500	1.550									320	429	500
4,8T466B	4.500	1.850	---	320-1.120	1.150	165	56	1.200	2.050	45	± 100	3	153	285	378	451
/4,5T180T				320-1.320	1.350									275	363	473
				320-1.500	1.550									269	356	485
4,8T466B	4.500	1.850	1.550	320-1.120	1.150	165	56	1.350	2.350	45	± 100	3	153	328	445	471
/4,5T180T.1				320-1.320	1.350									316	428	493
				320-1.500	1.550									309	419	505

***A = A2 - 140 mm / A1 = A2 - 70 mm**

Incl. solenoid valve and accessory kit. For triplex mast an electric spring cable drum is necessary (see page 97).
Load Backrest for fork positioner model T479 s. page 91. Load stop see accessories for telescopic forks on page 79.



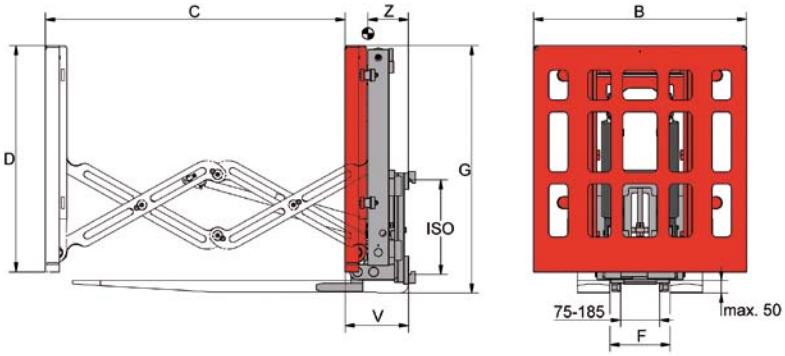


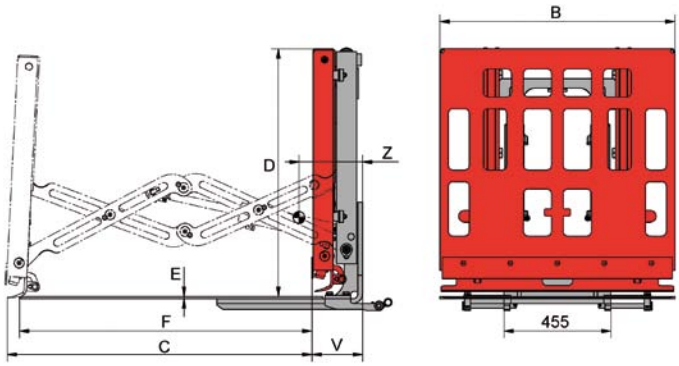
Fig. T142S

Pusher T141S 1 hydraulic function

Pusher with pallet retainer T142S 2 hydraulic functions

Model	Pushing ability kg	B mm	C mm	D mm	F mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 141 S	2.000	800	850	945	260	1.020	2/3	280	165	285
2 T 142 S	2.000	800	850	970	260	1.090	2/3	287	165	340
2 T 141 S	2.000	800	1.300	945	260	1.020	2/3	280	165	285
2 T 142 S	2.000	800	1.300	970	260	1.090	2/3	287	165	340
3 T 142 S	3.000	800	1.300	970	260	1.090	2/3	287	165	340

Forks are not included. For forks see page 92 and 93.
To choose the right fork length please consider dimension „V“ of the pusher.



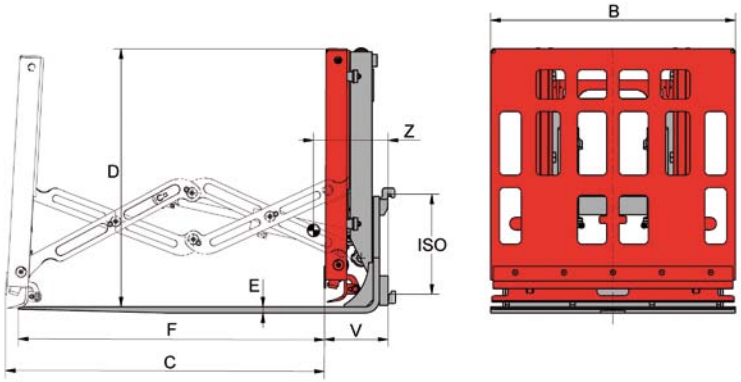
Push-Pull T143SA slip-on-fork version - 1 hydraulic function

Push-Pull with sheet saver T145SA

slip-on-fork version - 1 hydraulic function - and built in solenoid valve with accessory kit

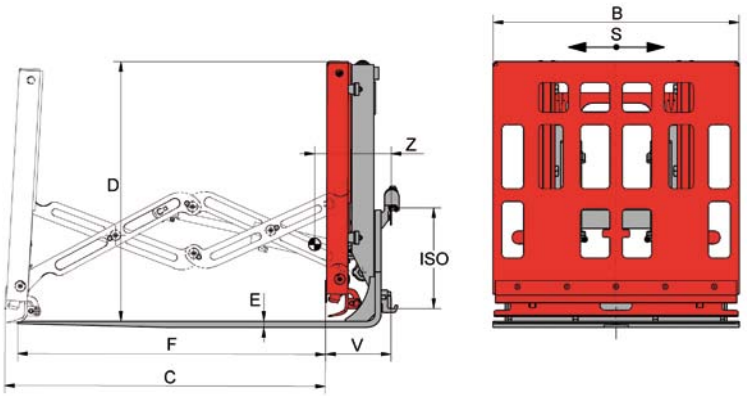
Model	Capacity kg	B mm	C mm	D mm	E mm	F mm	V mm	CofG Z mm	Weight kg
2 T 143 SA	1.700	1.000	1.300	1.035	10	1.250	215	275	450
2 T 145 SA	1.700	1.000	1.300	1.035	10	1.250	225	265	500

Preferential range



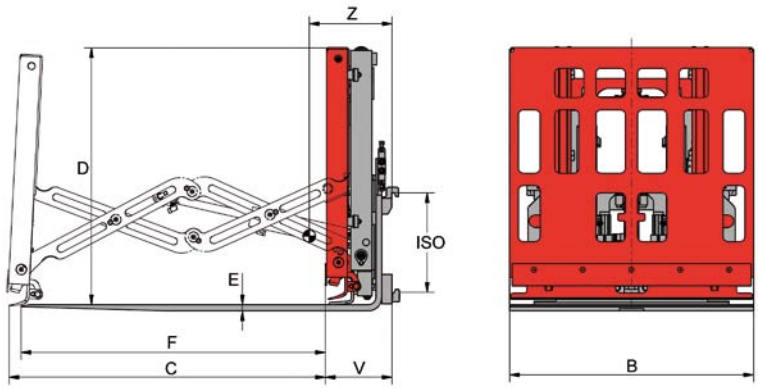
Push-Pull T143S 1 hydraulic function

Model	Capacity kg	B mm	C mm	D mm	E mm	F mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 143 S	1.000	1.000	1.300	1.035	20	1.250	2	250	340	535
2 T 143 S	1.700	1.000	1.300	1.035	25	1.250	2/3	255	360	590
3 T 143 S	2.400	1.000	1.300	1.035	30	1.250	3	260	370	655



Push-Pull with sideshift T144S 2 hydraulic functions

Model	Capacity kg	B mm	C mm	D mm	E mm	F mm	S mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 144 S	1.000	1.000	1.300	1.035	20	1.250	± 100	2	257	340	545
2 T 144 S	1.700	1.000	1.300	1.035	25	1.250	± 100	2/3	262	360	600
3 T 144 S	2.400	1.000	1.300	1.035	30	1.250	± 100	3	267	375	665

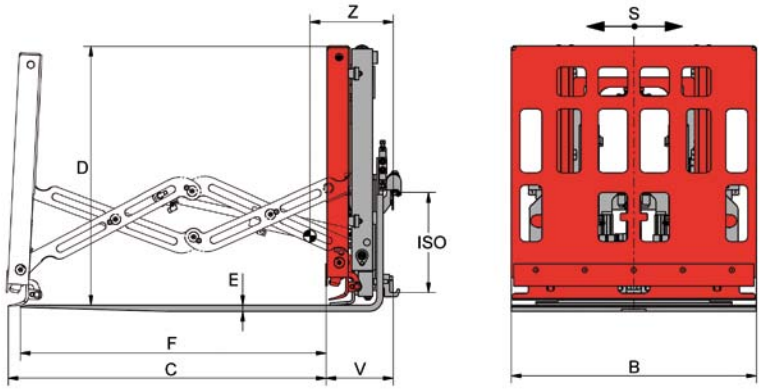


Push-Pull with sheet saver T145S

1 hydraulic function - and built in solenoid valve with accessory kit

Model	Capacity kg	B mm	C mm	D mm	E mm	F mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 145 S	1.000	1.000	1.300	1.035	20	1.250	2	260	330	575
2 T 145 S	1.700	1.000	1.300	1.035	25	1.250	2/3	265	345	635
3 T 145 S	2.400	1.000	1.300	1.035	30	1.250	3	270	365	690

Lifting heights of more than 3.750 mm require an electric spring cable drum (see page 97).

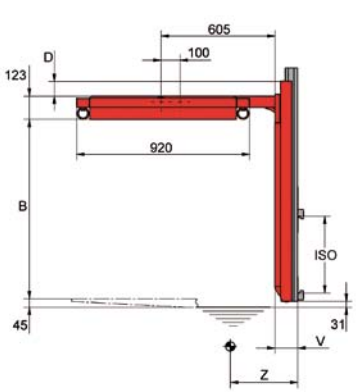


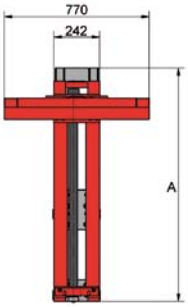
Push-Pull with sideshift and sheet saver T146S

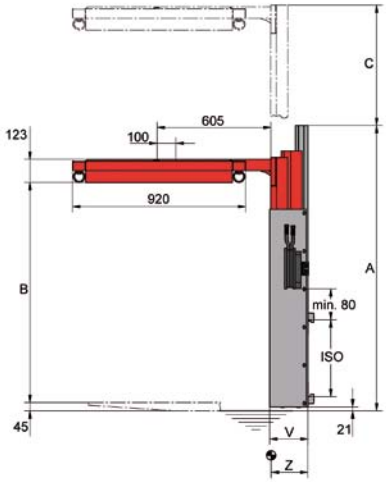
2 hydraulic functions - and built in solenoid valve with accessory kit

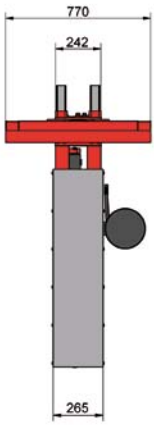
Model	Capacity kg	B mm	C mm	D mm	E mm	F mm	S mm	ISO cl.	V mm	CofG Z mm	Weight kg
1 T 146 S	1.000	1.000	1.300	1.035	20	1.250	± 100	2	268	320	585
2 T 146 S	1.700	1.000	1.300	1.035	25	1.250	± 100	2/3	273	335	645
3 T 146 S	2.400	1.000	1.300	1.035	30	1.250	± 100	3	278	345	710

Lifting heights of more than 3.750 mm require an electric spring cable drum (see page 97).









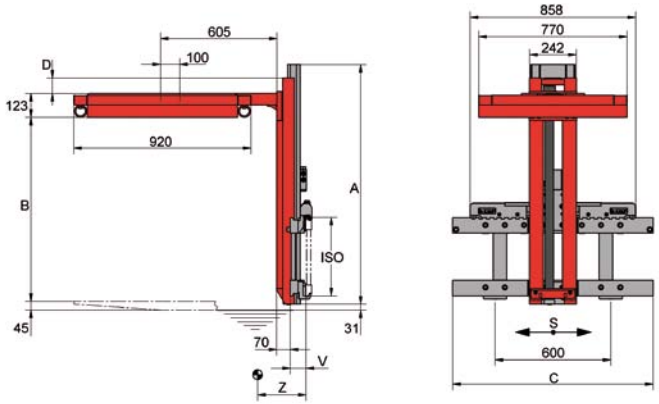
Load Stabilizer T129ST 1 hydraulic function

Telescopic Load Stabilizer T124ST 1 hydraulic function

Model	A mm	B mm	C mm	D mm	Closing force at 120 bar N	ISO cl.	V mm	CofG Z mm	Weight mm
1 T 129 ST	1.240	960-1.970	---	70	3.700	2/3	122	242	172
1 T 129.1 ST	1.240	960-1.770	---	0	3.700	2/3	122	246	168
1 T 129.2 ST	920	760-1.350	---	0	3.700	2/3	122	272	150
1 T 129.3 ST	1.495	960-2.170	---	270	3.700	2/3	122	225	188
1 T 129.4 ST	1.240	1.070-2.080	---	0	3.700	2/3	122	240	174
1 T 129.5 ST	1.495	1.200-2.210	---	0	3.700	2/3	122	227	186
1 T 124 ST	1.515	1.175-2.995	1.650	---	3.700	2/3	204	209	285
1 T 124.1 ST	1.190	950-2.570	1.550	---	3.700	2/3	204	224	255
1 T 124.2 ST	940	750-1.930	1.160	---	3.700	2/3	204	244	222

Preferential range

The total height is the result of adding fig. A + C (T124) or B + D + 123 mm (T129).
To choose the right fork length please consider dimension V.
The standard contact pad frame is alternatively available in 770 x 920 mm or 800 x 1.000 mm.



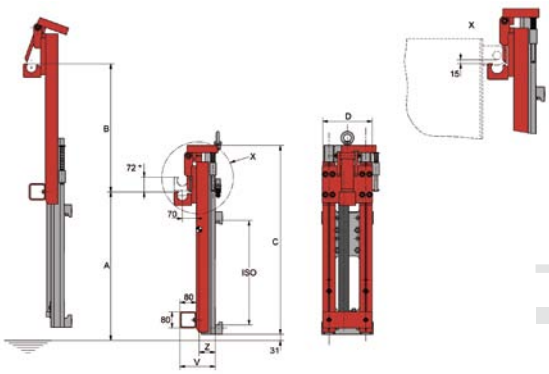
Load Stabilizer with Sideshift T155ST

Capacity 2.500 kg/500 mm LCD – 2 hydraulic functions

Model	A mm	B mm	C mm	D mm	Closing force at 120 bar N	ISO cl.	S mm	V mm	CofG Z mm	Weight kg
1 T 155 ST	1.240	960-1.970	890	70	3.700	2	± 100	82	205	237
1 T 155.1 ST	1.240	960-1.770	890	0	3.700	2	± 100	82	207	233
1 T 155.2 ST	920	760-1.350	890	0	3.700	2	± 100	82	218	215
1 T 155.3 ST	1.495	960-2.170	890	270	3.700	2	± 100	82	197	252
1 T 155.4 ST	1.240	1.070-2.080	890	0	3.700	2	± 100	82	203	239
1 T 155.5 ST	1.495	1.200-2.210	890	0	3.700	2	± 100	82	199	250

Preferential range

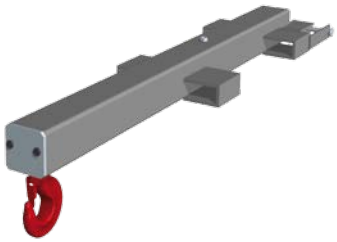
The standard contact pad frame frame is alternatively available in 770 x 920 mm or 800 x 1.000 mm.

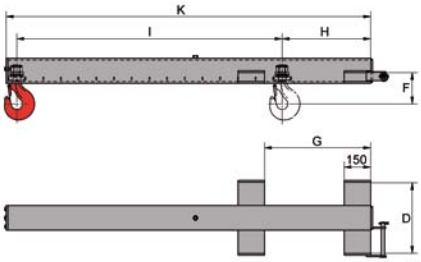


Bucket Discharging Device T167C

hydraulically operated for drop bottom buckets – 1 hydraulic function

Model	Capacity kg	A mm	B mm	C mm	D mm	ISO cl.	V mm	CofG Z mm	Weight kg
2 T 167 C	1.500	725	590	920	242	2/3	171	55	95
3 T 167 C	2.500	715	650	970	242	2/3	181	59	118
4 T 167 C	3.500	730	1.050	1.320	283	3	196	62	210

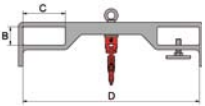




CofG ~ K/2

Crane Jib T183G slip-on-fork version

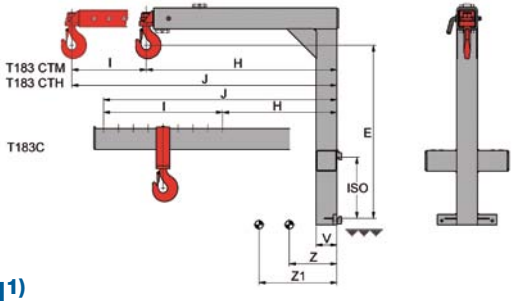
Model	Capacity kg/mm	A mm	B mm	C mm	D mm	F mm	G mm	H mm	I mm	K mm	Weight kg
1 T 183 G	1.500/500	120	50	120	400	183	600	300	12 x 100	1.560	68
2 T 183 G	2.500/500	140	50	150	480	187	600	300	12 x 100	1.560	90
3 T 183 G	4.000/500	160	60	150	500	187	600	300	12 x 100	1.560	116
5 T 183 G	6.000/600	200	70	150	550	255	600	300	8 x 150	1.585	165
7 T 183 G	8.000/600	260	80	150	530	265	600	300	8 x 150	1.585	170
10 T 183 G	10.000/600	260	80	210	730	325	600	345	7 x 165	1.595	315



Crane Hook T183G/S

slip-on-fork version

Model	Capacity kg	B mm	C mm	D mm	Weight kg
1 T 183 G/S	1.500	60	140	585	23
2 T 183 G/S	2.500	60	140	585	29

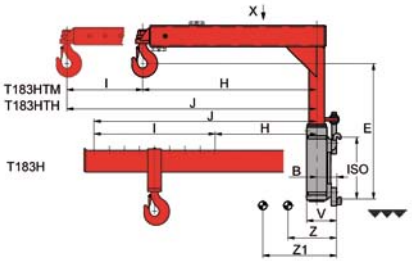


Crane Jib T183C, T183CTM, T183CTH[1)]

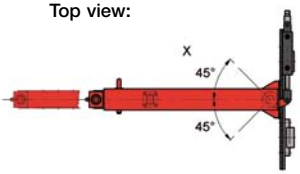
Model	Capacity kg/mm	H-J mm	I mm	E mm	ISO cl.	V mm	CofG Z mm	CofG Z1 mm	Weight kg
1 T 183 C	1.500/500	500-1.200	7 x 100	1.110	2	120	358	--	115
2 T 183 C	2.500/500	500-1.200	7 x 100	1.080	2/3	140	368	--	158
3 T 183 C	4.000/500	500-1.200	7 x 100	1.365	3	160	310	--	210
5 T 183 C	6.000/600	600-1.200	4 x 150	1.255	4	200	359	--	270
7 T 183 C	8.000/600	600-1.200	4 x 150	1.250	4	260	372	--	262
10 T 183 C	6.600/1.200	1.175-2.000	5 x 165	1.165	4	260	685	--	585
1 T 183 CTM	820/1.200	1.200-2.000	8 x 100	1.135	2	120	390	587	150
2 T 183 CTM	1.470/1.200	1.200-2.000	8 x 100	1.230	2/3	140	359	537	181
3 T 183 CTM	2.350/1.200	1.200-2.000	8 x 100	1.310	3	160	349	524	245
5 T 183 CTM	3.650/1.350	1.350-2.150	8 x 100	1.265	4	200	440	663	349
7 T 183 CTM	5.000/1.350	1.350-2.150	8 x 100	1.265	4	220	433	631	373
1 T 183 CTH	820/1.200	1.200-2.000	-	1.220	2	120	390	609	150
2 T 183 CTH	1.470/1.200	1.200-2.000	-	1.230	2/3	140	359	570	181
3 T 183 CTH	2.350/1.200	1.200-2.000	-	1.320	3	160	349	543	245
5 T 183 CTH	3.650/1.350	1.350-2.150	-	1.280	4	200	440	684	349
7 T 183 CTH	5.000/1.350	1.350-2.150	-	1.270	4	260	433	672	373

[1)] T183C = hook manually adjustable
T183CTM = mechanical telescope
T183CTH = hydraulic telescope – 1 hydraulic function

Higher capacities upon request.



Top view:

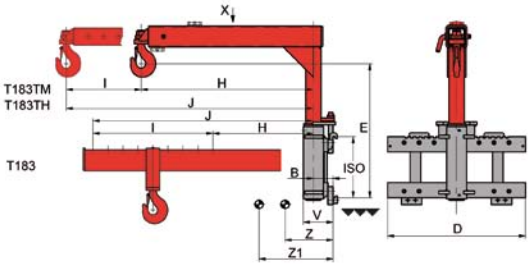


Crane Jib T183H, T183HTM, T183HTH[1)]

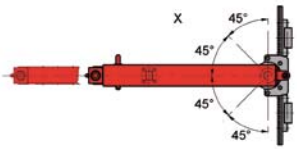
Model	Capacity kg/mm	B mm	D mm	H-J mm	I mm	E mm	ISO cl.	V mm	CofG Z mm	CofG Z1 mm	Weight kg
1 T 183 H	1.500/500	125	920	500-1.200	7 x 100	945	2	186	267	--	203
2 T 183 H	2.500/500	132	920	500-1.200	7 x 100	915	2	198	315	--	232
2 T 183 H	2.500/500	142	920	500-1.200	7 x 100	1.015	3	208	293	--	260
3 T 183 H	4.000/500	155	1.150	500-1.200	7 x 100	1.155	3	234	265	--	349
5 T 183 H	6.000/600	187	1.220	600-1.200	4 x 150	950	4	284	268	--	555
2 T 183 HTM	1.530/1.150	132	920	1.150-1.950	8 x 100	1.065	2	198	311	436	252
2 T 183 HTM	1.530/1.150	142	920	1.150-1.950	8 x 100	1.165	3	208	292	403	281
3 T 183 HTM	2.475/1.140	155	1.150	1.140-1.940	8 x 100	1.160	3	234	290	398	386
5 T 183 HTM	3.850/1.280	145	1.220	1.280-2.080	8 x 100	940	4	242	329	469	546
2 T 183 HTH	1.525/1.155	132	920	1.155-1.965	-	1.065	2	198	330	471	268
2 T 183 HTH	1.525/1.155	142	920	1.155-1.965	-	1.165	3	208	310	437	296
3 T 183 HTH	2.480/1.135	155	1.150	1.135-1.945	-	1.160	3	234	332	424	420
5 T 183 HTH	3.910/1.260	145	1.220	1.260-2.070	-	950	4	242	370	502	585

[1)] T183H = hydraulic swivel ± 45° – hook mechanically adjustable – 1 hydraulic function
T183HTM = hydraulic swivel ± 45° and mechanical telescope – 1 hydraulic function
T183HTH = hydraulic swivel ± 45° and hydraulic telescope – 2 hydraulic functions

Higher capacities upon request.



Top view:

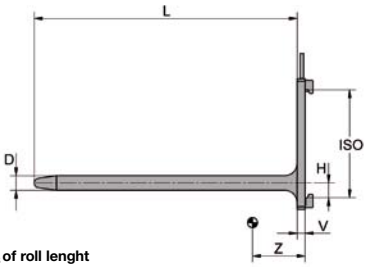


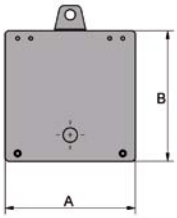
Crane Jib T183, T183TM, T183TH[1)]

Model	Capacity kg/mm	B mm	D mm	H-J mm	I mm	E mm	ISO cl.	V mm	CofG Z mm	CofG Z1 mm	Weight kg
1 T 183	1.500/500	125	920	500-1.200	7 x 100	945	2	186	271	--	201
2 T 183	2.500/500	132	920	500-1.200	7 x 100	915	2	198	320	--	230
2 T 183	2.500/500	142	920	500-1.200	7 x 100	1.015	3	208	296	--	259
3 T 183	4.000/500	155	1.150	500-1.200	7 x 100	1.155	3	234	258	--	356
5 T 183	6.000/600	187	1.220	600-1.200	4 x 150	950	4	284	270	--	553
2 T 183 TM	1.470/1.200	132	920	1.150-1.950	8 x 100	1.065	2	198	314	441	251
2 T 183 TM	1.470/1.200	142	920	1.150-1.950	8 x 100	1.165	3	208	294	407	279
3 T 183 TM	2.350/1.200	155	1.150	1.190-1.990	8 x 100	1.160	3	234	295	402	404
5 T 183 TM	3.650/1.350	187	1.220	1.350-2.150	8 x 100	970	4	284	346	471	636
2 T 183 TH	1.410/1.250	132	920	1.250-2.050	-	1.065	2	198	360	535	272
2 T 183 TH	1.410/1.250	142	920	1.250-2.050	-	1.165	3	208	338	470	301
3 T 183 TH	2.480/1.135	155	1.150	1.135-1.945	-	1.170	3	234	327	417	427
5 T 183 TH	3.880/1.270	187	1.220	1.270-2.080	-	970	4	284	368	483	668

[1)] T183 = mechanical swivel ± 90° – hook mechanically adjustable
T183TM = mechanical swivel ± 90° and mech. telescope
T183TH = mechanical swivel ± 90° and hydraulic telescope – 1 hydraulic function

Higher capacities upon request.

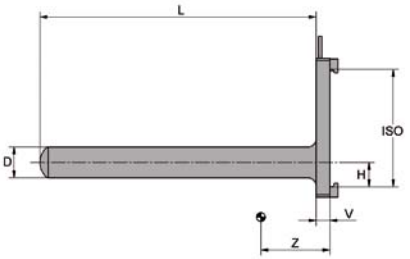


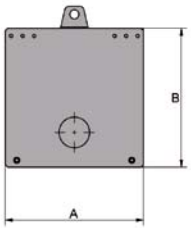


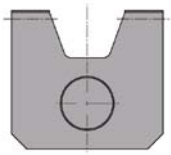
Ram lenght to be at least ⅔ of roll lenght

Carpet Carrying Ram T185T

Model	D mm	A/B mm	H mm	L mm	Capacity in kg at mm LCD 500	750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	V mm	CofG Z mm	Weight kg	add-on weight per 100mm kg
1T185T	45	500/500	55	1.000	530	350	260	210	170	150	130	110	100	30	93	76	1,25
1T185T	50	500/500	55	1.000	736	490	368	294	245	210	184	163	147	30	114	78	1,54
1T185T	55	500/500	55	1.000	980	653	490	392	326	280	245	218	196	30	128	81	1,86
1,5T185T	60	500/500	55	1.000	1.272	848	636	509	424	363	318	282	254	50	113	124	2,22
1,5T185T	65	500/500	55	1.000	1.614	1.076	807	645	538	461	403	358	323	50	123	128	2,6
2T185T	70	500/500	55	1.000	2.020	1.347	1.010	808	673	577	505	449	404	50	133	132	3,02
2T185T	75	500/500	55	1.000	2.484	1.656	1.242	993	828	708	621	552	497	50	143	135	3,46
3T185T	80	600/600	55	1.000	3.012	2.008	1.506	1.206	1.004	860	753	669	602	50	119	190	3,94
3T185T	85	600/600	55	1.000	3.618	2.412	1.809	1.447	1.206	1.034	905	804	723	50	139	197	4,45
4T185T	90	600/600	55	1.000	4.284	2.863	2.147	1.717	1.431	1.227	1.074	954	859	60	139	230	4,99
4T185T	95	600/600	55	1.000	5.050	3.367	2.525	2.020	1.683	1.443	1.263	1.122	1.010	60	147	235	5,56
5T185T	100	600/760	50	1.000	5.890	3.927	2.945	2.356	1.963	1.683	1.473	1.309	1.178	60	155	240	6,16
6T185T	110	600/760	50	1.000	6.100	4.066	3.050	2.440	2.033	1.743	1.525	1.355	1.220	60	146	300	7,46
7T185T	120	600/760	120	1.000	7.868	5.245	3.934	3.147	2.623	2.248	1.967	1.748	1.573	80	136	382	8,88
8T185T	130	600/760	120	1.000	10.066	6.710	5.033	4.026	3.355	2.876	2.517	2.237	2.013	80	154	400	10,42





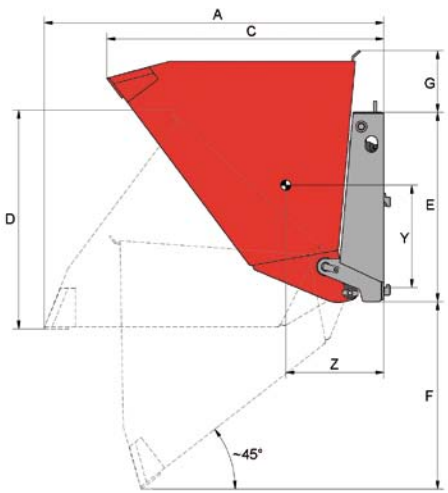


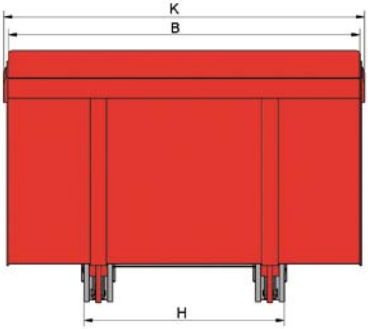
valid from 10T185 upwards

Carrying Ram T185 steel tube version

Model	D mm	A/B mm	H mm	L mm	Capacity in kg at mm LCD 500	600	700	800	900	1.000	1.100	ISO cl.	V mm	CofG Z mm	Weight kg	add-on weight per 100mm kgt
4 T 185	160	500/600	150	1.000	4.000	3.333	2.857	2.500	2.222	2.000	1.818	3	60	190	210	6,09
5 T 185	195	600/750	150	1.000	6.000	5.000	4.285	3.750	3.333	3.000	2.727	4	60	177	305	7,59
8 T 185	195	600/750	150	1.000	9.600	8.000	6.857	6.000	5.333	4.800	4.363	4	80	172	380	8,57
10 T 185	220	600/900		1.000	12.000	10.000	8.571	7.500	6.666	6.000	5.454		90	176	510	12,00
15 T 185	300	800/1.000		1.000	18.000	15.000	12.857	11.250	10.000	9.000	8.181		100	138	760	11,80
20 T 185	360	900/1.000		1.000	24.000	20.000	17.142	15.000	13.333	12.000	10.909		100	147	860	14,60
25 T 185	360	1.000/1.000		1.000	30.000	25.000	21.428	18.750	16.666	15.000	13.636		100	166	1.000	20,50
40 T 185	360	1.000/1.100		1.000	48.000	40.000	34.285	30.000	26.666	24.000	21.818		140	200	1.560	34,40
60 T 185	420	1.000/1.200		1.000	80.000	66.666	57.142	50.000	44.444	40.000	36.363		140	210	1.730	41,50
80 T 185	510	1.200/1.400		1.000	100.800	84.000	72.000	63.000	56.000	50.400	45.820		160	205	2.700	56,50

Terminal West / Pin-Type mounting upon request.
From 10T185 upwards the basic plate measurement A/B is only expemplary and should be adapted to the truck mounting.





T184

Loading Bucket T184

1 hydraulic function

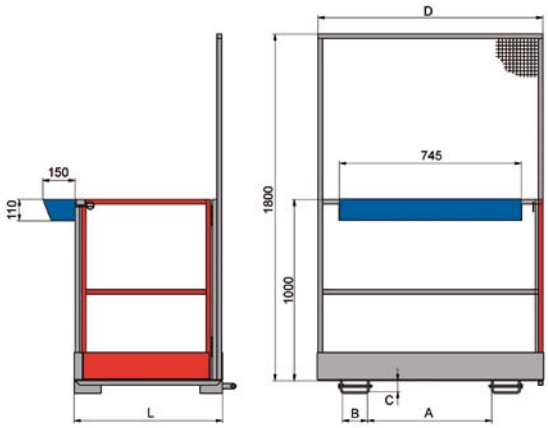
Loose goods such as sand, gravel, coal, grain, fertilizer, cement, clay, concrete etc. can be transported with the Loading Bucket (see approx. specific weights in table below). The Loading Bucket is tilted forward to the ground by means of hydraulic cylinders.

Important: ensure that **the Loading Bucket is at least 100 mm wider** than the forklift truck width, measured over the front axle, so that the wheels do not touch the goods to be scooped up.

Model	Capacity kg	Cubic Capacity Loose goods m³	Water m³	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	LCD mm	CofG Z mm	CofG Y mm	Weight kg
	Loose weight to 2.500 kg/m³															
2 T 184.2	1.760	0,8	0,7	1.610	1.300	1.245	955	925	805	280	980	1.346	830	515	420	530
2 T 184.2	2.200	1,0	0,9	1.610	1.650	1.245	955	925	805	280	980	1.696	830	525	435	590
2 T 184.2	2.420	1,1	1,0	1.610	1.800	1.245	955	925	805	280	980	1.846	830	530	445	615
	Loose weight to 2.200 kg/m³															
3 T 184.4	2.420	1,1	0,9	1.660	1.300	1.350	1.070	925	915	300	980	1.346	830	463	504	560
3 T 184.4	2.640	1,2	1,0	1.660	1.500	1.350	1.070	925	915	300	980	1.546	830	474	508	594
3 T 184.4	2.860	1,3	1,1	1.660	1.650	1.350	1.070	925	915	300	980	1.696	830	481	511	620
3 T 184.4	3.080	1,4	1,2	1.660	1.800	1.350	1.070	925	915	300	980	1.846	830	487	514	646
	Loose weight to 2.500 kg/m³															
4 T 184.1	5.000	2,0	1,4	1.780	2.000	1.410	1.135	1.230	810	210	1.004	2.046	890	548	561	835
	Loose weight to 2.200 kg/m³															
6 T 184.4	6.600	3,0	2,4	2.250	2.400	1.990	1.370	1.265	1.190	245	1.143	2.484	1.125	700	595	1.620
6 T 184.4	7.920	3,6	2,8	2.250	2.800	1.990	1.370	1.265	1.190	245	1.143	2.884	1.125	720	603	1.730

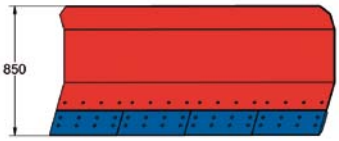
A few specific weights of loads (kg/m³)

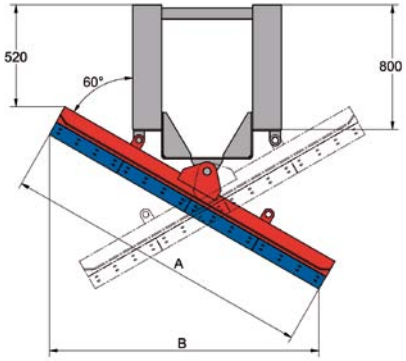
coal.....700
grain, pulses 750
potatoes, turnips 750
wet pit coal 1.000
fertilizer 1.200
powder cement, unpacked 1.800
sand, wet gravel..... 2.000
mud, clay 2.100
Thomasmeal 2.200
concrete 2.200

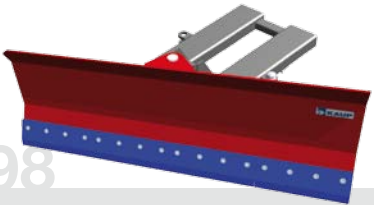


Working Platform T197P with fork pockets, safety grate and tool box

Model	D mm	L mm	A mm	B mm	C mm	Capacity kg	Weight kg
T 197 P	1.200	800	600	200	80	300	120







Snow Plough Blade T198G1/T198FG1

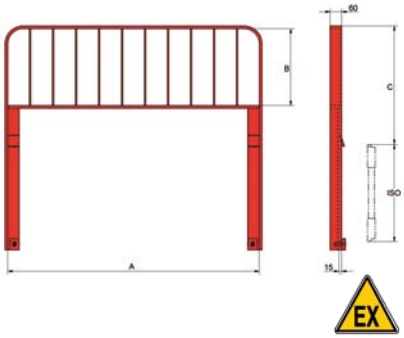
mechanically tiltable – with fork pockets – to clear to right or left side

Model	Clearance width B mm	Width A mm	Weight kg
T 198 G 1 with polyurethane ridge	1.700	2.000	220
T 198 FG 1 with spring flaps (steel)	1.700	2.000	320

Load Backrest T179

for sideshifter and fork carriages - bracket mounted version

Model	A mm	B mm	C mm	ISO cl.	Weight kg
1 T 179	892	410	600	2	45
2 T 179	1.042	410	600	2	48
4 T 179	1.152	310	500	3	50
6 T 179	1.802	480	735	4	142

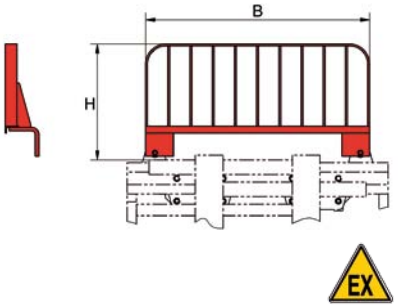


Sideshifters see pages 12 up to 17.

Load Backrest T479

screw-on-body version
for KAUP ranges T160, T410, T411, T411R, T411Z, T411D, T412, T413, T414, T415, T406, T466

Model	B mm	H mm	Weight kg
1 T 479	970	500	26
1,5 T 479	970	500	26
2 T 479	1.130	500	28
3 T 479	1.130	500	28
4 T 479	1.130	500	32
5 T 479	1.330	500	37
6 T 479	1.550	500	48
8 T 479	1.860	500	55
10 T 479	2.060	500	78

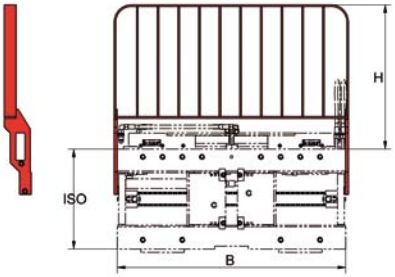


The related attachments can be found on the pages 20 up to 26 (T160, T466, T411R and T411Z) and 41 up to 60 (T410, T411, T411D, T412, T413, T414, T415, T406).

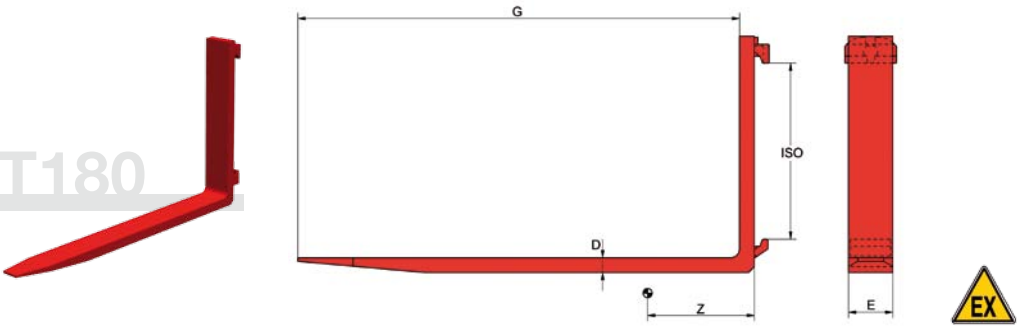
Load Backrest T173

for fork positioner T163N/SN - screw-on-carriage version

Model	B mm	H mm	ISO cl.	Weight kg
2 T 173	1.040	470	2	30
4 T 173	1.160	430	3	34
6 T 173	1.400	730	4	87



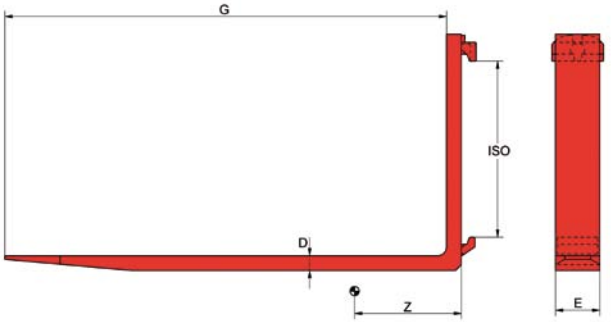
Fork Positioner T163N/SN see page 19.



Hook-on Forks T180 standard forks for ISO carriage

Model	Capacity per pair kg/mm	E mm	D mm	G mm	ISO cl.	CofG Z mm	Weight per piece kg	Add-on Weight per 100mm kg
2 T 180	1.950/500	80	40	1.000	2	294	38	2,5
				1.100		336	41	
				1.150		358	42	
				1.200		380	43	
2,5 T 180	2.450/500	100	40	1.000	2	294	48	3,1
				1.100		336	51	
				1.150		358	53	
				1.200		380	54	
				1.400		422	60	
				1.600		510	67	
2,5 T 180	2.500/500	120	40	1.000	2	294	57	3,8
				1.100		336	61	
				1.150		358	63	
				1.200		380	65	
				1.400		422	72	
				1.600		510	80	
				1.800		601	87	
				2.000		693	95	
3 T 180	3.000/500	100	45	1.000	3	286	58	3,5
				1.100		327	62	
				1.150		348	63	
				1.200		369	65	
				1.400		417	72	
				1.600		503	79	
				1.800		592	86	
				2.000		683	93	
4,5 T 180	4.500/500	120	50	1.000	3	281	76	4,7
				1.100		322	81	
				1.150		343	83	
				1.200		364	85	
				1.400		450	95	
				1.600		539	104	
				1.800		630	114	
				2.000		722	123	
				2.200		815	132	
				2.400		909	142	

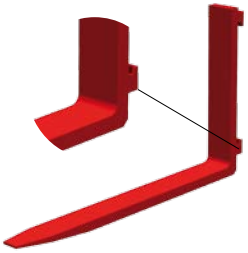
Forks for KAUP Rotators (lower brackets strengthened) see page 94.



Hook-on Forks T180 standard forks for ISO carriage

Model	Capacity per pair kg/mm	E mm	D mm	G mm	ISO cl.	CofG Z mm	Weight per piece kg	Add-on Weight per 100mm kg
5 T 180	5.000/500	150	50	1.000	3	281	94	5,9
				1.100		322	100	
				1.150		343	103	
				1.200		364	106	
				1.400		450	118	
				1.600		539	129	
				1.800		630	141	
				2.000		722	153	
				2.200		815	165	
				2.400		909	177	
7 T 180	6.450/600	150	60	1.200	4	327	135	7,1
				1.400		408	149	
				1.600		493	163	
				1.800		581	178	
				2.000		670	192	
				2.200		761	206	
				2.400		853	220	
9 T 180	8.800/600	150	70	1.200	4	343	160	8,2
				1.400		397	176	
				1.600		481	193	
				1.800		568	209	
				2.000		657	226	
				2.200		747	242	
				2.400		838	258	
10 T 180	10.000/600	150	75	1.200	4	341	170	8,8
				1.400		392	188	
				1.600		475	205	
				1.800		562	223	
				2.000		650	240	
				2.200		740	258	
				2.400		831	276	
12 T 180	12.000/600	200	70	1.200	4	343	215	11,0
				1.400		397	237	
				1.600		481	259	
				1.800		568	281	
				2.000		657	303	
				2.200		747	325	
				2.400		838	347	

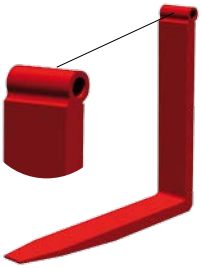
Higher capacities and specific dimensions, tiltable forks and special height of fork shank upon request.



Forks for Rotators

lower brackets strengthened

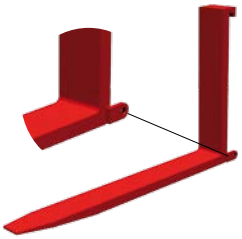
When forks are used in combination with a Rotator extremely high strain is applied to the lower fork angle when rotating a load which in turn strains the lower brakkets. For this type of operation KAUP recommends forks with strengthened lower brackets. Strengthened lower brackets can be ordered for all ISO forks on pages 92 and 93.



Pin-Type Forks

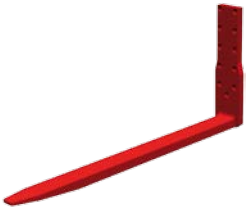
shaft mounting

KAUP offers nearly every type of Pin-Type forks (shaft guided forks). As the dimensions are not standardized, and as these are mounted on a wide variety of high capacity forklift trucks and construction machines, we require detailed information before quoting such forks.



Forks with quick release system 'Terminal West'

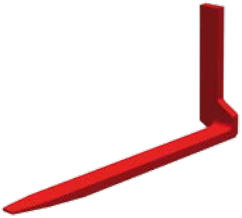
KAUP's programme includes forks, up to high capacities, with quick release system "Terminal West". A quotation to exact customer's requirements can be made upon request.



Bolt-on (Screw-on) Forks

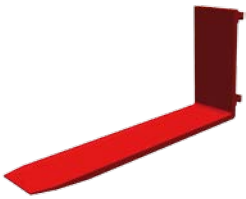
for attachments with bolt-on plates

Screw-on forks are fitted to the attachment by screws. As drill patterns are not standardized and may vary according to the manufacturer of the lift truck or the attachment we require detailed information before quoting such forks.



Special Forks

KAUP's programme includes nearly every type of special fork available on the market e.g. forks with offset shank, knife forks (full taper), folding forks, inverted forks, double forks (fork pairs), etc.



Forks with special dimensions

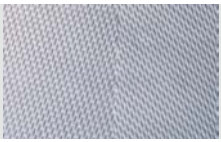
KAUP forks are available with fork sections ranging from 80 x 40 mm up to 400 x 120 mm.
Fork lengths of up to 3.000 mm and fork shank heights of 2.000 mm are available.

For projects with KAUP special forks it is advisable to contact our specialists directly for a specific quotation.

Contact pad coatings for KAUP Roll Clamps and for Appliance- and Carton Clamps

The inner surface of the contact pads is very important on Roll Clamps as well as on Appliance- and Carton Clamps as it is in direct contact with the load to be handled. These KAUP Clamps can be fitted with different types of contact pad surfaces specifically suited to the application.

1



Cast contact pads
with fish bone pattern are standard. These can be applied universally and are suitable for most applications.

1

Bulb plate pads
are an alternative to cast contact pads when special shapes and sizes are to be manufactured individually. Suitable for a multitude of applications.

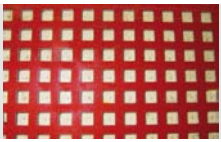
1

Polyurethane coating
bonded in several layers in a costly and complex process, distinguishes itself through excellent friction. It is extremely durable, leaves no marks or streaks and can be used universally.

1 & 2

Rubber lining
vulcanised onto the contact pads, is an alternative to Polyurethane. It is characterized through excellent friction and moulds to the surface of the load. This lining can be used for most applications.

1 & 2



Secutex lining
is made of Polyurethane cast around a metal grid. It is screwed onto the contact pads and can be exchanged easily if necessary. It distinguishes itself through excellent friction and durability.

1

Quartz sand coating
is chosen for loads with a very hard top surface which requires strong friction.

1

Metal spray surface
contact pads with a metal spray surface distinguish themselves by having a low build-up and excellent friction. This surface should only be chosen for loads with a very hard top surface.

1

SIC surface
is also used for loads with a very hard top surface and characterizes excellent friction.

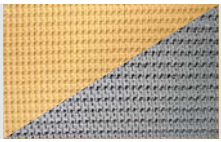
2

Cellasto coating
this soft polyurethane foam coating distinguishes itself through excellent friction and the way it moulds to the surface of the load. This coating is mostly used for handling white goods.

1 & 2

Remagrip coating
this diamond shaped soft rubber coating is used as standard on drum clamps. It is to a certain degree acid resistant.

2



Gripping nap strap coating
the yellow coating is very soft, leaves no marks on the load and distinguishes itself through excellent friction. The black coating has low wear and tear qualities.

1 & 2

Round nap strap coating
is excellent for handling white and brown goods. It distinguishes itself through excellent friction and has low wear and tear qualities.

1 for use on KAUP Roll Clamps T458 - T498.
2 for use on KAUP Appliance and Large Surface Clamps T413G - T414-2.

Accessories for KAUP Attachments

KAUP has an extensive program of accessories for forklift truck attachments. Following is an excerpt of the most common accessories. If your required part is not listed please contact us directly. We will be pleased to assist you.

To order parts or accessories please note that we need the exact type of attachment and the correct serial number. This information can be found on the identification plate attached to the unit. This information is additionally engraved into the attachment's body.

Please consider that the shown prices are based on the purchasing conditions for spare parts.

Accessories mechanical

Quick release bottom hooks

for quick assembling and disassembling of attachments without tool.
The hooks can be used left and right.

Version for attachments
with sideshift
ISO class 3 (4T version)
and ISO class 4

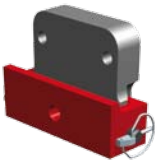
For attachments with sideshift

Part Number	ISO class
012 015 2101	ISO class 2
012 015 2201	ISO class 3
012 015 0501	ISO class 3 (4T)
012 014 8101	ISO class 4

Version for attachments
with sideshift
ISO class 2 and 3
(cl. 3 only 3T version)

For attachments without sideshift (for clamps)

Part Number	ISO class
012 015 1101	ISO class 2
012 015 2601	ISO class 3
012 014 8301	ISO class 4



Version for attachments
without sideshift

For attachments without sideshift
(Rotators, rotating combinations, rams)

Part Number	ISO class
012 015 1201	ISO class 2
012 015 2801	ISO class 3

Quick coupler systems

Are used on forklift trucks which carry out a large variety of applications requiring frequent change of attachments. The attachment is fitted in the top take-up of the quick coupler system and locked hydraulically or manually on the bottom take-up. Regardless if handling palletized goods or transporting non-palletized goods - the forklift truck can be optimally adapted for a wide range of different applications within a short period of time.

Further technical details available upon request.

Accessories hydraulical

Part Number	Name of the item		
048 099 0040 re	Double hose reel	Length 2.800 mm	
048 099 0041 li	nominal hose diameter DN 10	2.800 mm	
048 000 3001 re	nominal pressure PN 225 bar	4.500 mm	
048 000 3002 li		4.500 mm	
048 000 3003 re		5.500 mm	
048 000 3004 li		5.500 mm	
048 000 3005 re		6.500 mm	
048 000 3006 li		6.500 mm	
048 099 0007	Quadruple Hose Reel Δ p max. working pressure 350 bar hose length 5.000 mm for lift hight Duplex 8.000 mm, Triplex 7.000 mm,	DN 10 right and left	

*li = left / re = right

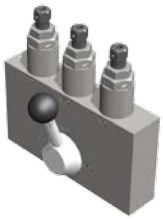
048 099 0043	Crocodile joint		

042 096 0008	Swivel joint w/o clutch for Double hose reel w/o closing valve		

042 021 0078	Solenoid valve for further circuits, DN 10	12 Volt	
042 021 0079		24 Volt	
042 021 0080		36 Volt	
042 099 0022		48 Volt	
042 099 0035		72 Volt	
042 021 0081		80 Volt	
042 021 0061	Solenoid valve for further circuits, DN 13	12 Volt	
042 098 0020	Solenoid valve for further circuits, DN 13	24 Volt	

042 021 0015	Manometer Gauge for pressure reducing valve 0-400 bar		

042 099 0097	Two Stage Pressure Limiting Valve adjustable for two different pressures	DN 9	
042 098 0053	Three Stage Pressure Limiting Valve adjustable for three different pressures	DN 9	



042 095 0007	Flow Divider (Gear Pump Design)	Q = 5,6 - 27 l	
042 096 0086	Flow Divider (Gear Pump Design)	Q = 9 - 36 l	
042 095 0052	Flow Divider (Gear Pump Design)	Qmax = 100 l	

Accessories electrical

Accessory Kit for Solenoid Valve

(not suitable for use on FLT's with joystick control)

Part Number	Name of the item		
026 099 0401	Pressure Button	cable length 7 m	
026 098 0801	Pressure Button	cable length 12 m	
026 099 0077	Pressure Button & Electric Cable Drum	cable length 8 m	
026 199 0001	Seesaw Switch	cable length 7 m	
026 199 0002	Seesaw Switch	cable length 12 m	
026 199 0003	Seesaw Switch & Electric Cable Drum	cable length 8 m	
026 098 0007	Rocker Switch & Electric Cable Drum	cable length 6,5 m	

Accessories electrical

Electric Spring Cable Drum for electricity feed over Triplex mast

Part Number	Name of the item	
048 099 0066	Electric Spring Cable Drum incl. holder	3 pole 8 m
048 099 1001	Electric Spring Cable Drum	6 pole 4 m
048 099 0601	Electric Spring Cable Drum	9 pole 12 m

Radio solenoid valve for wireless control of hydraulic functions

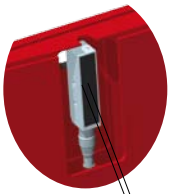
Part Number	Name of the item
042 093 0011	Radio solenoid valve 12 V with radio remote control and visual indicator of set valve position. Including transmitter, battery charger and 2 rechargeable batteries (12VDC)

Light column display for preselected pressure range (traffic light design)

Part Number	Name of the item
026 099 0083	Light column display 12 Volt
026 099 0099	Light column display 24 Volt
026 099 0034	Light column display 48 Volt
026 099 0084	Control panel with light display 12 Volt
026 098 0001	Control panel with light display 24 Volt
026 099 0036	Control panel with light display 48 Volt
042 001 7001	Pressure Relief Valve for two additional pressures (= total 3) 12 Volt switched by solenoid valve
042 001 7002	Pressure Relief Valve 24 Volt switched by solenoid valve
042 001 7004	Pressure Relief Valve 48 Volt switched by solenoid valve
026 099 0035	Accessory Kit

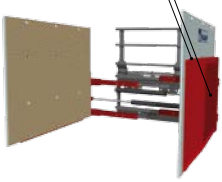
Optical / audible sensor

rotating attachments can be fitted with a sensor which signals, optically and/or audibly, the exact 180° position.
Further technical details available upon request.



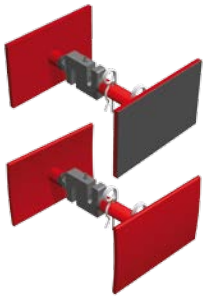
Sensor technology for Appliance- and Large Surface Clamps

The clamping arms of KAUP Appliance and Large Surface Clamps can be fitted with sensors so that these identify the load pattern i.e. one or two high / one or two deep. Preset pressures required to pick up the load are automatically adjusted by the sensor control system.
Further technical details available upon request.



Check device for Appliance- and Large Surface Clamps / Roll Clamps

Used for checking and adjusting of predefined pressures on the clamp. With the help of the check device and the corresponding analysis and adjustment the exact clamping pressure can be set so that damage to sensitive loads e.g. white or brown goods or paper rolls can be minimised.
Further technical details available upon request.



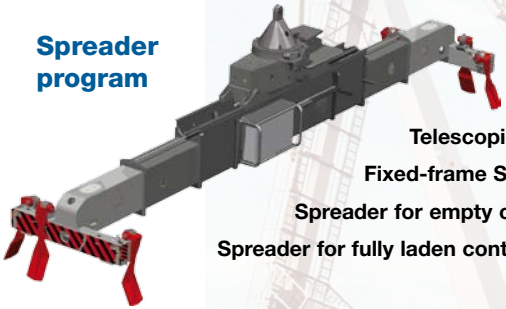
Further accessories and optional fittings available upon request.

KAUP Container Spreaders

KAUP Crane Spreaders have been in operation world wide for more than 25 years. By using the KAUP Modular Build System KAUP Spreaders have a favourable relation of weight to carrying capacity and can be designed to meet individual requirements such as capacity, lifting speed and size of container to be picked up.

KAUP Spreaders operate at a maximum speed of 120 m/min and can pick up weights of up to 60 tons. An excellent view of the container corner castings enables the crane operator to position quickly and exactly guaranteeing a maximum turnover rate.

Spreader program



Telescopic Spreader

Fixed-frame Spreader

Spreader for empty containers

Spreader for fully laden containers

For operation on

- gantry container bridges
- portal cranes
- forklift trucks
- luffing cranes
- mobile harbour cranes
- ship to shore cranes
- reach stackers
- straddle carriers

Technical options available

- telescopic range from 20' to 24' - 30' - 35' - 40' - 43' - 45' - 48'
- width adjustment to compensate difference between ISO and Sealand containers
- level compensation from 600 mm to 1.200 mm
- flippers: 4 or 6 as required
- slewing gear 270° or 360° endless
- trim and list control
- Piggy Back arms
- emergency lifting hooks 4 x 10.000 kg on central frame
  4 x 10.000 kg on crosshead
- tropical or sea water resistant versions available

Project planning:

In order to draw up an exact quotation for a container or forklift truck spreader to meet your requirements we require detailed information regarding type, mounting, load weight, details regarding containers to be transported etc.

Therefore it is advisable to contact our spreader specialists directly for a quotation.

KAUP Stationary Material Handling Equipment

KAUP Stationary Material Handling Equipment are project related system solutions which can be integrated into any production line. Their versatility is based on the modular built system of our renown forklift truck attachments. Therefore they can usually be delivered and put into operation within a short time.

Our equipment is put into operation for handling bagged goods and powder containers. Our practice orientated equipment is also in high demand for the handling of goods, storage of food and beverages or for turning sheet metal or paper sheets for their processing on both sides. Our main customers are to be found in food and beverage industries as well as chemical and automobile manufacturing industries. The majority of our equipment has its own power unit using hydraulic aggregates. Control of the equipment is available in automatic or semi-automatic and manual versions which optimally meets the requirements of the user.

KAUP system solutions are based on the modular built system – but are in their own way special custom-made products. Before finding the most suitable solution for your handling operation a thorough analysis of each application case and the task to be mastered is carried out. In our Design Department the equipment is optimised and adapted to the specific requirements with the help of state of the art CAD-CAM systems.

Contact us! We analyse your material handling needs.

20T251W/099 – Inverter for steel sheets

Optimise your material flow ..... with KAUP system solutions

25T251W/099 – Inverter for steel sheets

1,6T451W/099 – Inverter for Sparkling Wine

1,6T451W/099 – Pallet changer

Residual capacity calculation for forklift trucks with attachments

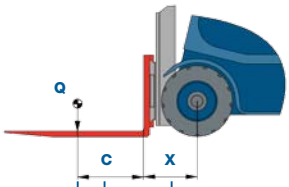
Please consider that a calculation according to this form will only show you an estimated residual capacity. Various factors influencing the residual capacity, such as extreme lift hights or load centre distances are not considered in this calculation. Please contact your forklift truck supplier for exact values. The nominal capacity of the attachment may not be exceeded. An online-calculation can be found on our website **www.kaup.de**

Forklift truck		KAUP attachment	
Brand:		Model:	
Model:		Capacity:	[kg]
Nominal capacity Q:	[kg]	Load centre:	[mm]
Load centre distance C:	[mm]	Lost load V*):	[mm]
Thickness of fork shank S:	[mm]	Centre of gravity CofG:	[mm]
Measurement X:	[mm]	Weight G:	[kg]

*) Please consider additionally measurement „V“ acc. to our indexes the thickness of the shank of clamping arms or forks.

Calculation scheme

Nominal momentum of truck



Distance from centre of front axle to front face fork shank → mm

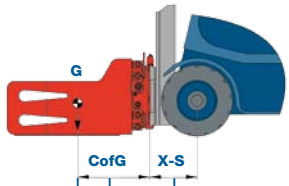
+

Load centre distance from front face fork shank C → mm

=

Nominal truck load → kg × mm = kg mm

Momentum of attachment

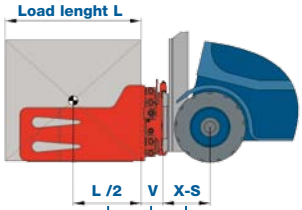


mm + mm = mm

Weight of attachment → kg × mm = kg mm

kg mm − kg mm = **Residual momentum** kg mm

Residual capacity of the forklift truck



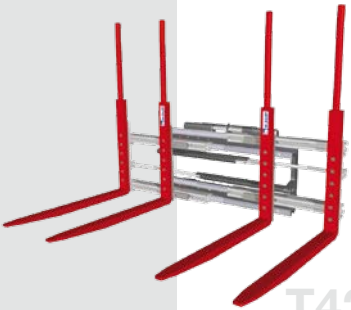
Residual momentum kg mm / (X-S)+V+(L/2) mm = kg

Residual capacity of the forklift truck

Distance from centre of front axle to front face of carriage → mm

+ mm + mm + mm

Online calculation see **www.kaup.de**



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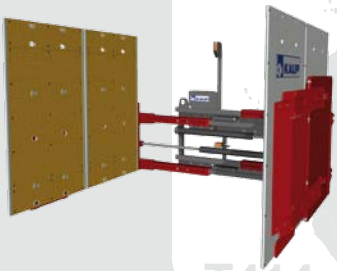
KAUP

Helping hands for your Forklift truck

High-Visibility Forklift Truck Attachments
Container Spreaders for Cranes
Stationary Handling Equipment

T160BZ



T414-2L

KAUP attachments correspond to the requirements of the valid EC regulations regarding quality, safety and technical documentation. All technical data are subject to alteration.

KAUP is certified acc. to DIN EN ISO 9001

KAUP

Helping hands for your Forklift truck

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PP en. 7.000.07.2010.Ku-17662