

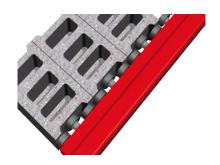
Helping hands for your Forklift truck



Block & Brick Clamps

KAUP Block & Brick Clamps are used worldwide for the non-palletised transport of industrially manufactured building blocks and bricks of any type. The large variety of Block & Brick Clamps offered, as well as the option of individually adapting the attachment to meet the specifications of a particular application, allow the ideal clamp to be configured for almost every single task.

The design of the Block & Brick Clamp components has been developed using the latest 3-D technology to meet the specific requirements. As a result, the units feature high stability along with optimised tare weight, low projection and thus a very good residual capacity, excellent visibility because the design was optimised with regard to visibility, minimised wear, service-optimised construction, and thus low maintenance and operating costs.



Appropriate clamp for each handling task

Criteria for selecting the optimum KAUP Block & Brick Clamp according to the particular application:

T412V

Block Clamp with Vulkollan bars and parallel compensation

This Clamp is particularly suited for handling upright format blocks with plane surfaces like hollow, lime sand and concrete blocks as well as curb stones that have a high dimensional accuracy.

The arms have a central swinging support to uniformly distribute the pressure and are provided with flexible Vulkollan bars to compensate for variations in dimensional accuracy.



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T412H

Block & Brick Clamp with mechano-hydraulic equilibration pistons

T412H is used for handling small format blocks, clay bricks and interlocking paving stones, as the arms even adapt to irregularly shaped loads by means of mechanohydraulic equilibration pistons. For obtaining optimum friction, the cushion pads are selected individually.

Steel plates are used for handling rough, hard heavy concrete blocks. For picking up soft blocks, e.g. aerated-concrete blocks, rubber pads are used. Vulkollan as a general purpose pad material provides good friction along with low abrasion.

Square-shaped buffers are used for plane surfaces and circularly-shaped ones are used for irregular surfaces.



T412V-3

Block Clamp with mechanical equilibration plates with Vulcollan coating

Preferably the T412V-3 is used for handling stacks of concrete blocks with dimensions $400 \times 200 \times 200$ mm. The clamping arm consists of 3 plates (395 x 180 mm) coated with polyurethane.

Behind the plates is a spring-loaded 3-point-compensation mechanism. This enables the three plates to equilibrate any unevenness and irregularities of the surface of the stacks. Moreover the pick up of individual block rows is possible with this clamp.



Block & Brick Clamps



T412HP

Block Clamp with mechano-hydraulic equilibration plates

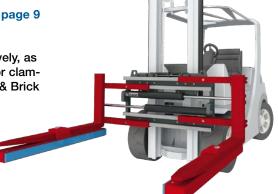
Block Clamp T412HP is primarily used for handling blocks having the popular dimensions of 400 x 200 x 200 mm. Each of the clamp arms consists of three mechano-hydraulic equilibration plates (400 x 200 mm). Typically, they are manufactured from bulb plate. Depending on the particular application, polyurethane coated contact surfaces are available.



T412UVP

Block Clamp with underslung Block & Brick arms and Vulkollan bars

Block Clamp T412UVP can be used as a Block & Brick Clamp and, alternatively, as a Fork Clamp. It is used for both transporting pallets and grate boxes and for clamping block stacks. This unit is primarily used in construction industry. Block & Brick Clamp characteristics are identical to those of T412V.



T412UH

Block & Brick Clamp with underslung Block & Brick Arms and mechano-hydraulic equilibration pistons

Block & Brick Clamp T412UH can be used as a Block & Brick Clamp and, alternatively, as a Fork Clamp. It is used for both transporting pallets and grate boxes and for clamping stacks of blocks or bricks. This unit is primarily used in construction industry. Block & Brick Clamp characteristics are identical to those of T412H.



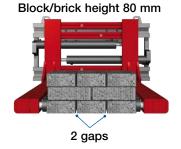
Toe-in

Clearance between Clamp Arms at the tips differs from that at the back. This is called toe-in. The Clamp clearance value given in our documents always refers to the clearance measured at the back. Toe-in is required to compensate for resilient deformation under load.

Notice on usage

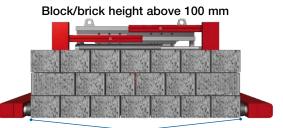
Intrinsic stability of the block packages is also decisive for using Block & Brick Clamps. Intrinsic stability substantially results from package inherent friction and thus from the block / brick height to number of gaps ratio. Therefore, the maximum allowable number of gaps is to be determined from the height of the blocks / bricks in a package to ensure safe clamping operation. Each layer of small format blocks should be strapped to prevent single blocks / bricks from falling off the package while the layer is being picked up.

Reference value and load bearing scheme



Block/brick height 80 to 100 mm

3 gaps



Package width 1.200 mm max.



KAUP high quality Block Clamps · The advantages at a glance

Quick & Easy

Installation on the forklift truck

Version with independent sideshift: the guide rail for the sideshifter housings locates on the upper bar of the fork carriage and locks into the centre notch. The complete attachment is mounted onto this guide rail and secured by bolting the bottom mounting brackets (1) to the carriage. These are needle bearing guided bottom brackets (SMOOTHROLL) (2); attachments with capacities above 3,5 t feature tandem rollers (3). Once the hydraulic hose lines from the attachment to the truck are connected the attachment is ready for operation.

If required, KAUP quick release brackets (4) can be supplied. These allow the clamp to be mounted/dismounted quickly without any tool.

Excellent

High visibility

KAUP Clamps set high standards with regards to visibility. Optimized design ensures excellent visibility for the driver and allows quick and precise operation of the clamp guaranteeing high working performance and reducing accident risk significantly.

Simple

Handling with KAUP Clamps

KAUP Clamps are generally supplied with sideshift function which simplifies operation for the truck driver.

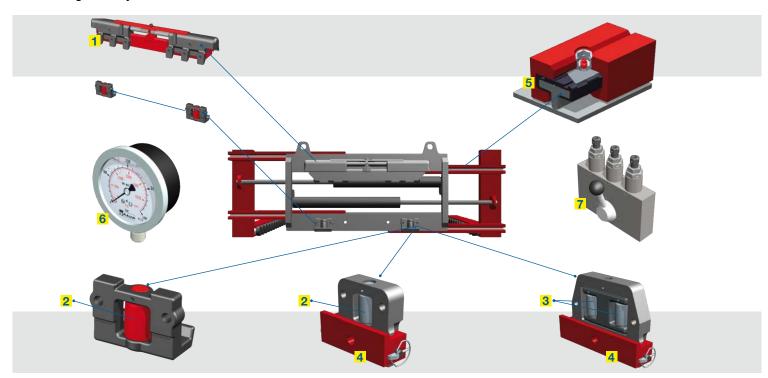
Especially independent sideshift system (1-4) permits sideshifting without restriction under safety regulations and allows utilization of the entire opening range for shifting loads sidewards. All sideshift housings feature (SOFTSTOP), end-of-stroke-slow-down.

If required all KAUP Clamps can be fitted with valve block sideshift system which uses the residual stroke of the clamp cylinders to achieve lateral arm movement.

Strong

The KAUP Clamp profile (5)

A combination of T and C profiles is used on KAUP Clamps characterised by favourable weight with very compact dimensions providing high stability. An extremely robust sliding profile to improve gliding and to reduce wear and tear is found between the profiles.



Reliable

Top speed service

KAUP Clamps are synonymous to trouble free operation. As the components used have been proven thousands of times, servicing is simple and can be carried out without requiring any special skills. In conjunction with the KAUP modular built system the availability of replacements parts at reasonable prices is second to none. Approximately 95 percent of all wear and tear parts can be shipped ex stock within a maximum of 24 hours. Our efficient service network assures qualified service on short call-out to ensure that your attachment is back in operation within a short time.

We also carry out complex repairs and maintenance work at our factory service centre. Annually approximately 800 attachments are repaired, maintained or generally refurbished at our service centre in Aschaffenburg.

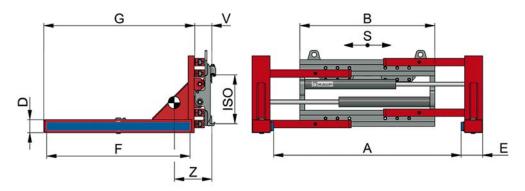
Flexible

A large range of accessories

Pressure reduction valve and manometer gauge: KAUP Clamps are fitted for the function "open clamp" with a preset pressure reduction valve to prevent damage on the clamp arms by lateral pushing of the loads with arm outsides. In order to regulate the closing force when handling pressure sensitive loads a pressure reduction valve is fitted generally. If required three different force levels can be pre-set and controlled, either manually (7) or by solenoid valve. A manometer gauge (6) mounted in good view of the driver provides a ready check on the hydraulic operation pressure of the clamp.

Load backrest: KAUP Clamps feature mounting lugs as standard enabling a backrest to be fitted conveniently without drilling or any other modifications. Parts required for mounting, such as spacers and screws, are included in KAUP's supply.











Block Clamp T412V

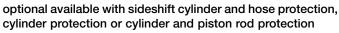
with $independent \ \bar{s} ideshift \cdot with polyurethane lining and parallel compensation \cdot 2 hydraulic functions$

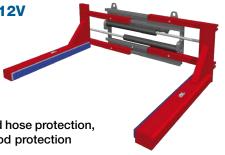
Block stacks are clamped from the sides. In order to reduce pressure to the load as well as spot load on the blocks, which often have not completely dried, the arms of this type are provided with an easy-to-replace Vulkollan bar suspended swivelling in the centre to compensate for dimensional variations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

Model	Capacity kg	LCD mm	S mm	A mm	B mm	D mm	E mm	F mm	G mm	ISO class	V mm	CofG Z mm	Weight kg
1,5T 412 V	1.250	500	± 100	220-1.400	970	110	180	1.200	1.265	2	133	335	420
2T 412 V	2.000	500	± 100	270-1.570	1.130	110	180	1.200	1.265	2/3	143	314	475
3T 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
4,5T 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
5T 412 V	3.500	600	± 160	230-1.860	1.550	110	180	1.200	1.265	4	176	219	825











optional with Load Backrest T479

Estimated residual capacities for FLTs with standard mast in combination with KAUP Block Clamp T412V

			Mode	el and capacity of the	clamp	
Nominal capacity	/	1,5 T 412 V	2 T 412 V	3 T 412 V	4,5 T 412 V	5 T 412 V
of FLT at		1.250 kg/500	2.000 kg/500	2.500 kg/500	3.200 kg/600	3.500 kg/600
load centre	ISO	_	Resid	dual capacity at load c	entre:	
kg/mm	class	600 mm	600 mm	600 mm	600 mm	600 mm
1.600/500	2	1.040*				
1.800/500	2	1.040*	1.235			
2.000/500	2		1.410			
2.500/500	2		1.665*	1.775		
3.000/500	3		1.665*	2.080*		
3.500/500	3			2.080*	2.490	
4.000/500	3				2.905	
4.500/500	3				3.200*	
5.000/500	3				3.200*	
5.000/600	4					3.500*

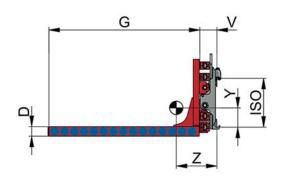
optimal combination of FLT and attachment

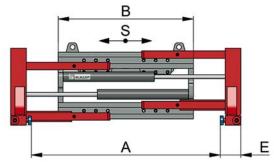
*Residual capacity restricted to capacity of the attachment











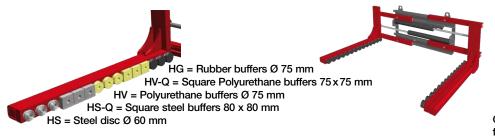
Block & Brick Clamp T412H

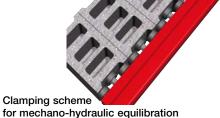
with independent sideshift · with mechano-hydraulic equilibration pistons · 2 hydraulic functions

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 kg	LCD mm	S mm	A mm	B mm	D mm	E mm	G ¹⁾ mm	ISO class	V mm	CofG Z mm	CofG _V Y mm	Weight kg
1,5T 412 H	1.250	500	± 100	260-1.440	970	80	175	1.024	2	133	287	161	422
2T 412 H	2.000	500	± 100	270-1.570	1.130	80	175	1.188	2/3	143	310	160	481
								1.270			334	156	492
3T 412 H	2.500	500	± 100	230-1.530	1.130	80	195	1.270	3	152	333	170	609
				230-1.860	1.460						323	173	636
4,5T 412 H	3.200	600	± 100	240-1.740	1.330	80	195	1.270	3	188	297	187	770
				240-1.870	1.460						291	190	795
5T 412 H	3.500	600	± 160	220-1.850	1.550	80	205	1.270	4	176	230	276	920

¹⁾ Fig "G" depends on the number of pistons (), available arm length 942 (11), 1.024 (12), 1.106 (13), 1.188 (14), 1.270 (15)





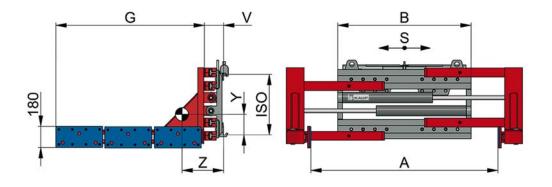
Estimated residual capacities for FLTs with standard mast in combination with KAUP Block & Brick Clamp T412H

			Mod	el and capacity of the	clamp	
Nominal capacity	/	1,5 T 412 H	2 T 412 H	3 T 412 H	4,5 T 412 H	5 T 412 H
of FLT at		1.250 kg/500	2.000 kg/500	2.500 kg/500	3.200 kg/600	3.500 kg/600
load centre	ISO		Resi	dual capacity at load c	entre:	
kg/mm	class	500 mm	600 mm	600 mm	600 mm	600 mm
1.600/500	2	1.215				
1.800/500	2	1.250*	1.210			
2.000/500	2		1.375			
2.500/500	2		1.665*	1.715		
3.000/500	3		1.665*	2.085*	1.990	
3.500/500	3			2.085*	2.420	
4.000/500	3				2.835	
4.500/500	3				3.200*	
5.000/500	3				3.200*	
5.000/600	4					3.500*

optimal combination of FLT and attachment

*Residual capacity restricted to capacity of the attachment









Block Clamp T412V-3

with independent sideshift · with mechanical equilibration plates with Vulcollan coating · 2 hydraulic functions

The arm of the T412V-3 is equipped with three plates featuring a spring-loaded 3-point-balancing mechanism which enables to equilibrate uneven and irregular surfaces of block stacks. In addition to the pick up of whole block stacks, also the pick up of individual rows is enabled.

Model	Capacity kg	LCD mm	S mm	A mm	B mm	G mm	ISO class	V mm	CofG Z mm	CofG _V Y mm	Weight kg
2T 412 V-3	2.000	500	± 100	275 - 1.575	1.130	1.260	2/3	143	365	160	560
3T 412 V-3	2.500	500	± 100	295 - 1.595	1.130	1.260	3	152	338	176	630

Variations in arm dimensions upon request. Also available without sideshift, model T402V-3.

Accessories for Block Clamp T412V-3



optional available with sideshift cylinder and hose protection, cylinder protection or cylinder and piston rod protection



optional with Load Backrest T479

Estimated residual capacities for FLTs with standard mast in combination with KAUP Block Clamp T412V-3



		Model and capa	city of the clamp
Nominal capacity	,	2 T 412 V-3	3 T 412 V-3
of FLT at		2.000 kg/500	2.500 kg/500
load centre	ISO	Residual capacit	ty at load centre:
kg/mm	class	600 mm	600 mm
1.800/500	2	1.160	
2.000/500	2	1.320	1.280
2.500/500	2	1.665*	1.700
3.000/500	3	1.665*	2.085*
3.500/500	3		2.085*

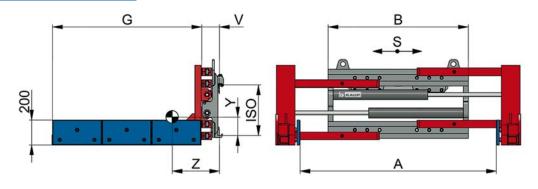
optimal combination of FLT and attachment

*Residual capacity restricted to capacity of the attachment









Block Clamp T412HP

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

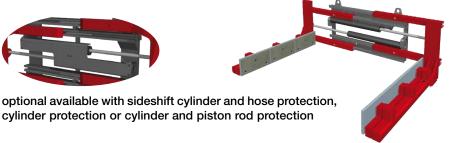
Each of the Clamp Arms consists of three mechano-hydraulic equilibration plates (400 x 200 mm). Typically, they are manufactured from bulb plate. Thus, the clamp is excellently suited for handling 400 x 200 x 200 mm blocks. Depending on the particular application, polyurethane coated contact surfaces are available.

Model	Capacity kg	LCD mm	S mm	A mm	B mm	G mm	ISO class	V mm	CofG Z mm	CofG _V Y mm	Weight kg
2T 412 HP	2.000	500	± 100	260-1.560	1.130	1.200	2/3	143	394	145	585
3T 412 HP	2.500	500	± 100	280-1.580	1.130	1.200	3	152	373	152	633
4,5T 412 HP	3.200	600	± 100	310-1.710	1.330	1.200	3	189	322	189	914
5T 412 HP	3.500	600	± 160	200-1.800	1.460	1.200	4	178	287	248	1.009
5T 412 BHP	3.900	600	VSS ¹⁾	300-1.600	1.300	1.200	4	211	285	293	1.212

¹⁾ VSS = Valveblocksideshift, dependent on opening range

Accessories for Block Clamp T412HP







optional with Load Backrest T479

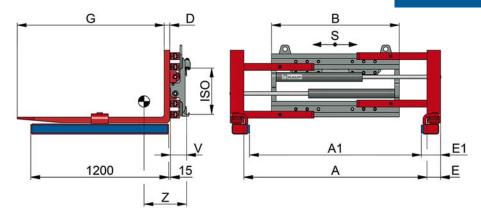
Estimated residual capacities for FLTs with standard mast in combination with KAUP Block Clamp T412HP

			Mod	el and capacity of the o	clamp	
Nominal capacity	,	2 T 412 HP	3 T 412 HP	4,5 T 412 HP	5 T 412 HP	5 T 412 BHP
of FLT at		2.000 kg/500	2.500 kg/500	3.200 kg/600	3.500 kg/600	3.900 kg/600
load centre	ISO		Resi	dual capacity at load c	entre:	
kg/mm	class	600 mm	600 mm	600 mm	600 mm	600 mm
1.800/500	2	1.125				
2.000/500	2	1.300				
2.500/500	2	1.665*	1.675			
3.000/500	3	1.665*	2.085*			
3.500/500	3		2.085*	2.325		
4.000/500	3			2.740		
4.500/500	3			3.160		
5.000/500	3			3.200*		
5.000/600	4				3.500*	3.850
6.000/600	4				3.500*	3.900*

optimal combination of FLT and attachment

*Residual capacity restricted to capacity of the attachment









Block Clamp T412UVP

with independent sideshift · with slip-on underslung Block & Brick Arms with Vulkollan bars · 2 hydraulic functions

This Clamp is primarily intended to be used in the construction industry, where picking up pallets and handling block stacks frequently alternate. Underslung Block & Brick Clamp arms are mounted to the fork by means of bolts in a way that they can swivel. The arms can readily be dismounted by pulling out the bolts so that the clamp is ready for handling pallets.

Model	Capa of forks kg	acity as clamp kg	LCD mm	S mm	A1 mm	A mm	B mm	D mm	E mm	E1 mm	G mm	ISO cl.	V mm	CofG Z mm	Weight kg
1,5T 412UVP	2.300	1.250	500	± 100	180-1.360	320-1.500	970	45	120	190	1.200	2	133	400	451
2T 412UVP	2.800	2.000	500	± 100	180-1.480	320-1.620	1.130	50	120	190	1.200	2/3	143	376	522
3T 412UVP	3.600	2.500	500	± 100	120-1.420	260-1.560	1.130	50	150	220	1.200	3	152	354	625
3T 412UVP	3.600	2.500	500	± 100	120-1.620	260-1.760	1.330	50	150	220	1.200	3	152	350	644
3T 412UVP	3.600	2.500	500	± 100	120-1.750	260-1.890	1.460	50	150	220	1.200	3	152	348	656
4,5T 412UVP	5.000	3.200	600	± 100	70-1.570	220-1.720	1.460	60	150	225	1.200	3	188	351	895
5T 412UVP	6.200	3.500	600	± 160	130-1.760	280-1.910	1.550	70	150	225	1.200	4	176	327	1.055

Estimated residual capacities for FLTs with standard mast in combination with KAUP Block Clamp T412UVP

Nominal capac	ity				Mode	and capa	city of the c	lamp			
of FLT at		1,5 T 41	12 UVP	2 T 41	2 UVP	3 T 41	2 UVP	4,5 T 4	12 UVP	5 T 41	2 UVP
load centre		1.250kg/500	2.300kg/500	2.000kg/500	2.800kg/500	2.500kg/500	3.600kg/500	3.200kg/600	5.000kg/500	3.500kg/600	6.200kg/600
kg/mm	ISO				Residual	capacity at	load centre	e 600mm:			
	class	clamp	forks	clamp	forks	clamp	forks	clamp	forks	clamp	forks
1.600/500	2	1.035	1.115								
1.800/500	2	1.040*	1.295	1.175	1.240						
2.000/500	2	1.040*	1.455	1.350	1.400						
2.500/500	2	1.040*	1.865	1.665*	1.800						
3.000/500	3			1.665*	2.215	2.080*	2.155				
3.500/500	3			1.665*	2.335*	2.080*	2.570	2.315	2.670		
4.000/500	3					2.080*	2.985	2.730	2.765		
4.500/500	3					2.080*	3.000*	3.155	3.175		
5.000/500	3							3.200*	3.595		
5.000/600	4									3.500*	3.945
6.000/600	4									3.500*	4.855
7.000/600	4									3.500*	5.830
8.000/600	4									3.500*	6.200

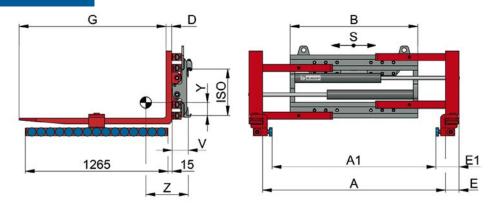
optimal combination of FLT and attachment

*Residual capacity restricted to capacity of the attachment









Block & Brick Clamp T412UH

with independent sideshift · with slip-on underslung Block & Brick Arms with mechano-hydraulic equilibration · 2 hydraulic functions

This Clamp is primarily intended to be used in the construction industry, where picking up pallets and handling block stacks frequently alternate. The underslung Block & Brick Arms with mechano-hydraulic equilibration are suited for handling small format blocks and arms are mounted to the fork by means of bolts in a way that they can swivel. The arms can readily be dismounted by pulling out the bolts so that the clamp is ready for handling pallets.

	Capa of	acity as												CofG	CofG,	
Model	forks kg	clamp kg	LCD mm	S mm	A1 mm	A mm	B mm	D mm	E mm	E1 mm	G mm	ISO cl.	V mm	Z mm	Y `	Weight kg
1,5T 412UH	2.300	1.250	500	± 100	140-1.320	320-1.500	970	45	120	210	1.200	2	133	456	74	500
2T 412UH	2.800	2.000	500	± 100	140-1.440	320-1.620	1.130	50	120	210	1.200	2/3	143	432	89	564
3T 412UH	3.600	2.500	500	± 100	80-1.380	260-1.560	1.130	50	150	235	1.200	3	152	406	113	679
3T 412UH	3.600	2.500	500	± 100	80-1.580	260-1.760	1.330	50	150	235	1.200	3	152	397	117	698
3T 412UH	3.600	2.500	500	± 100	80-1.710	260-1.890	1.460	50	150	235	1.200	3	152	391	120	710
4,5T 412UH	5.000	3.200	600	± 100	40-1.540	220-1.720	1.460	60	150	240	1.200	3	188	370	142	895
5T 412UH	6.200	3.500	600	± 160	100-1.730	280-1.910	1.550	70	150	240	1.200	4	176	343	201	1.060





Estimated residual capacities for FLTs with standard mast in combination with KAUP Block Clamp T412UH

Nominal capac	itv				Mode	and cana	city of the c	lamn			
of FLT at	···y	1,5 T 4	12 UH	2 T 4	12 UH		12 UH		112 UH	5 T 41	12 UH
load centre		1.250kg/500	2.300kg/500	2.000kg/500	2.800kg/500	2.500kg/500	3.600kg/500	1		3.500kg/600	6.200kg/600
kg/mm	ISO				Residual	capacity at	load centre	e 600mm:			
	class	clamp	forks	clamp	forks	clamp	forks	clamp	forks	clamp	forks
1.600/500	2	975	1.115								
1.800/500	2	1.040*	1.295	1.120	1.240						
2.000/500	2	1.040*	1.455	1.295	1.400						
2.500/500	2	1.040*	1.865	1.665*	1.800						
3.000/500	3			1.665*	2.215	2.050	2.155				
3.500/500	3			1.665*	2.335	2.080*	2.570	2.300	2.670		
4.000/500	3					2.080*	2.985	2.715	2.765		
4.500/500	3					2.080*	3.000	3.140	3.175		
5.000/500	3							3.200*	3.595		
5.000/600	4									3.500*	3.945
6.000/600	4									3.500*	4.855
7.000/600	4									3.500*	5.830
8.000/600	4									3.500*	6.200

optimal combination of FLT and attachment

*Residual capacity restricted to capacity of the attachment



Customised solutions





T412SF

T411-102AH

Beyond the large variety of standard solutions, also Block & Brick Clamps or Fork Clamps are available from KAUP which are customised to your requirements and applications.

Whether you intend to use a Fork Clamp of which the Block & Brick Arms can be hydraulically tilted down or whether you need a special Block & Brick Clamp for safely clamping single layers on all sides and commissioning them, do not hesitate to contact us. We will be happy to offer you the optimum solution for your handling needs.

Block & Brick Clamp T412V · T412H



Block & Brick Clamp T412H





Block Clamp T412HP







Block Clamp T412V-3 · T412UVP







Block & Brick Clamp T412UVP · T412UH







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



