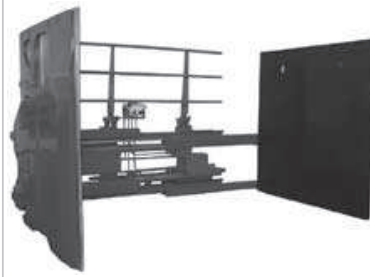


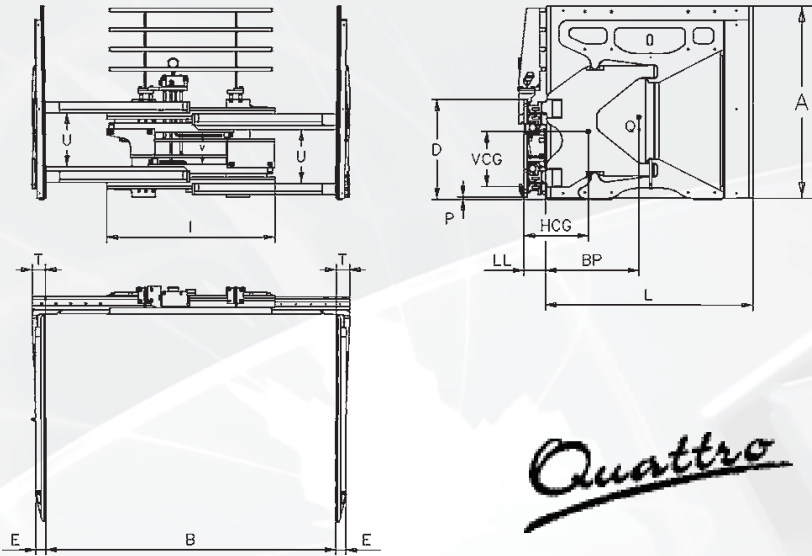
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Carton Clamps



Sideshifting Carton and Appliances Clamps

Models KS-Z



- Used in the white ware industry and for high-volume carton handling.
- Strong double T-profiles.
- Aluminum arm pads with rubber lining.
- Both arm pads oscillating.
- Pads 4-ways reversible, to ensure an even wear to the 4 corners of the rubber.
- Arms with rigid structure, for an uniform clamping force.
- Load backrest, to avoid damage to the load.
- Check valve and a pressure-relief valve with gauge.
- Integral sideshift.
- Excellent visibility.
- Minimized weight, effective thickness and centre of gravity.

Model	Code	Capacity	Load Centre		Opening Range	Arm Dimensions			Frame Width	Minimum Carriage Width	Height	Weight	Centre of Gravity Horizontal	Centre of Gravity Vertical	Effective Thickness	Side Visibility	Central Visibility	Ground Clearance	Mounting Class
			Q	BP		B	L	A											
		kg	mm	mm	mm	mm	mm	mm	mm	mm	kg	mm	mm	mm	mm	mm	mm	mm	2328
KS09Z4A	39-162	900	540	390-1620	1070X1220X65	1050	750	634	610	425	420	137	342	200	17	2			
KS09Z5A	38-161	900	610	380-1610	1220X1220X65	1050	750	634	645	451	428	137	342	200	17	2			
KS09Z6A	38-161	900	660	380-1610	1320X1220X65	1050	750	634	665	480	434	137	342	200	17	2			
KS09Z4A	50-184	900	540	500-1840	1070X1220X65	1050	750	634	615	425	420	137	342	200	17	2			
KS09Z5A	49-183	900	610	490-1830	1220X1220X65	1050	750	634	650	451	428	137	342	200	17	2			
KS09Z6A	49-183	900	660	490-1830	1320X1220X65	1050	750	634	670	480	434	137	342	200	17	2			
KS09Z4A	59-195	900	540	590-1950	1070X1220X65	1020	750	634	615	425	420	137	342	200	17	2			
KS09Z5A	58-194	900	610	580-1940	1220X1220X65	1020	750	634	650	451	428	137	342	200	17	2			
KS09Z6A	58-194	900	660	580-1940	1320X1220X65	1020	750	634	670	480	434	137	342	200	17	2			
KS09Z5A	51-227	900	610	510-2270	1220X1220X65	1450	750	634	680	440	430	137	342	200	17	2			
KS09Z6A	51-227	900	660	510-2270	1320X1220X65	1450	750	634	700	470	440	137	342	200	17	2			
KS12Z5A	56-202	1200	610	560-2020	1220X1220X65	1100	750	634	710	445	435	146	338	195	17	2			
KS12Z6A	56-202	1200	660	560-2020	1320X1220X65	1100	750	634	730	475	445	146	338	195	17	2			
KS14Z6A	56-202	1400	660	560-2020	1320X1220X65	1100	750	634	730	475	445	146	338	195	17	2			
KS14Z7A	56-202	1400	690	560-2020	1370X1220X65	1100	750	634	745	490	450	146	338	195	17	2			
KS16Z7A	56-202	1600	690	560-2020	1370X1220X65	1100	750	634	745	490	450	146	338	195	17	2			
KS16Z8A	56-202	1600	690	560-2020	1370X1370X65	1100	750	634	760	505	465	146	338	195	17	2			
KS16Z7A	56-229	1600	690	560-2290	1370X1220X65	1370	750	634	745	490	450	146	338	195	17	2			
KS16Z8A	56-229	1600	690	560-2290	1370X1370X65	1370	750	634	760	505	465	146	338	195	17	2			

Notes:

E= arm thickness, including rubber.
T= arm thickness at the arm base, including rubber,
85 mm for all models.

Standard fittings:

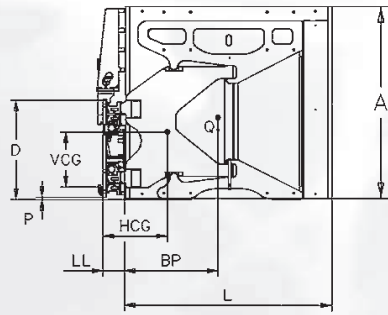
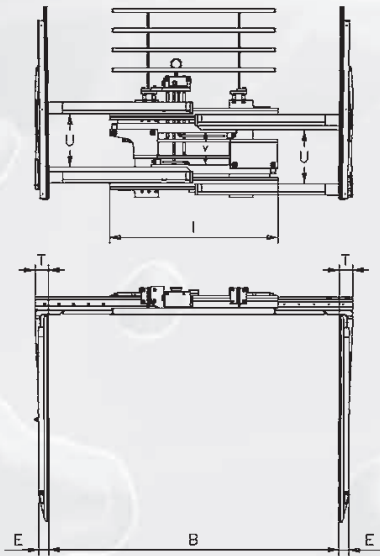
Two hydraulic functions required.
Arms welded directly to the guides.
Pressure adjuster.
Pressure gauge.

On request:

Special opening ranges.
Arm dimensions other than those indicated
(max. L= 1400 and A=1450 mm).
Rigid arms, without oscillation.
Pressure-relief valve with four pre-set positions
(see page 6-8)
Flow divider valve for synchronized arm movement.
Separate sideshift, models AS-K (see page 6-7).
Double oscillating arm pad.

“Intelligent” Carton and Appliances Clamps

Models ETX-635



- Used in the white ware industry and for high-volume carton handling.
- Strong double T-profiles.
- Aluminum arm pads with rubber lining.
- Both arm pads oscillating.
- Microprocessor control system to control the clamping force. Minimized clamping force prevents load damages.
- Possibility to load data directly on the PC (optional).
- Automatic load weight and dimensions check.

Model	Code	Capacity		Opening Range	Arm Dimensions			Frame Width	Minimum Carriage Width	Height	Weight	Centre of Gravity Horizontal	Centre of Gravity Vertical	Effective Thickness	Side Visibility	Central Visibility	Ground Clearance	Mounting Class
		Q kg	BP mm		B mm	L mm	A mm											
ETX09Z4A	39-162	900	540	390-1620	1070	1220	65	1050	750	634	610	425	420	137	342	200	17	2
ETX09Z5A	38-161	900	610	380-1610	1220	1220	65	1050	750	634	645	451	428	137	342	200	17	2
ETX09Z6A	38-161	900	660	380-1610	1320	1220	65	1050	750	634	665	480	434	137	342	200	17	2
ETX09Z4A	50-184	900	540	500-1840	1070	1220	65	1050	750	634	615	425	420	137	342	200	17	2
ETX09Z5A	49-183	900	610	490-1830	1220	1220	65	1050	750	634	650	451	428	137	342	200	17	2
ETX09Z6A	49-183	900	660	490-1830	1320	1220	65	1050	750	634	670	480	434	137	342	200	17	2
ETX09Z4A	59-195	900	540	590-1950	1070	1220	65	1020	750	634	615	425	420	137	342	200	17	2
ETX09Z5A	58-194	900	610	580-1940	1220	1220	65	1020	750	634	650	451	428	137	342	200	17	2
ETX09Z6A	58-194	900	660	580-1940	1320	1220	65	1020	750	634	670	480	434	137	342	200	17	2
ETX09Z5A	51-227	900	610	510-2270	1220	1220	65	1450	750	634	680	440	430	137	342	200	17	2
ETX09Z6A	51-227	900	660	510-2270	1320	1220	65	1450	750	634	700	470	440	137	342	200	17	2
ETX12Z5A	56-202	1200	610	560-2020	1220	1220	65	1100	750	634	710	445	435	146	338	195	17	2
ETX12Z6A	56-202	1200	660	560-2020	1320	1220	65	1100	750	634	730	475	445	146	338	195	17	2
ETX14Z6A	56-202	1400	660	560-2020	1320	1220	65	1100	750	634	730	475	445	146	338	195	17	2
ETX14Z7A	56-202	1400	690	560-2020	1370	1220	65	1100	750	634	745	490	450	146	338	195	17	2
ETX16Z7A	56-202	1600	690	560-2020	1370	1220	65	1100	750	634	745	490	450	146	338	195	17	2
ETX16Z8A	56-202	1600	690	560-2020	1370	1370	65	1100	750	634	760	505	465	146	338	195	17	2
ETX16Z7A	56-229	1600	690	560-2290	1370	1220	65	1370	750	634	745	490	450	146	338	195	17	2
ETX16Z8A	56-229	1600	690	560-2290	1370	1370	65	1370	750	634	760	505	465	146	338	195	17	2

Notes:

E= arm thickness, including rubber.
T= arm thickness at the arm base, including rubber,
85 mm for all models.

Standard fittings:

One hydraulic function required.
Arms welded directly to the guides.
Load backrest.

On request:

Special opening ranges.
Flow divider valve for synchronized arm movement.
Separate sideshift, models AS-K (see page 6-7).

Note: ETX clamps require special installation.

Carton and Appliance Clamps

Intelligent Carton Clamps - Series ETX-G3S



Invented by Bolzoni Auramo: the new Bolzoni Auramo's ETX-G3S intelligent carton and appliances clamps combine more than 10 year intelligent clamp experience with the superior paper handling technology.

The ETX-G3S intelligent clamps use the latest microprocessor technology to control the clamp operation.



The ETX-G3S series carton roll clamps enable safe, non-damaging and effective carton and appliances handling also with sensitive loads.



- Automatic clamping force control.
- Minimized clamping force, regardless of load size, weight, properties or handling conditions.
- Eliminates the risk of load damage.
- Modular design fits to different lift truck and application requirements.
- Easy and fast to install.

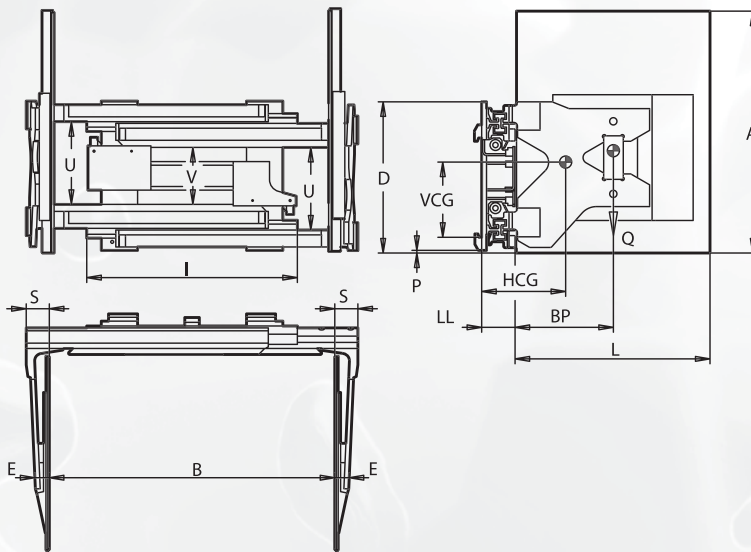
The CTX control technology is available for many of the Bolzoni Auramo carton clamp models.

Please, consult Bolzoni Auramo for details.



Sideshifting Carton and Appliances Clamps, single oscillating pad on both arms

Models KS-CD



- Used in the white ware industry and for high-volume carton handling.
- Strong double T-profiles.
- Both arm pad are oscillating for a better contact with load.
- Maximum visibility due to the compact structure.
- Pads covered with rubber with high friction coefficient.
- Load backrest, to avoid damage to the load.
- Check valve and a pressure-relief valve with gauge.
- Integral sideshift.
- Excellent visibility.
- Minimized weight, effective thickness and centre of gravity.

Model	Capacity		Opening Range	Arm Dimensions			Frame Width	Minimum Carriage Width		Height	Weight	Centre of Gravity Horizontal	Centre of Gravity Vertical	Effective Thickness	Side Visibility	Central Visibility	Ground Clearance	Arm Thickness	Mounting Class
	Q kg	BP mm		B mm	L	A		E	I										
KS08CD1A	800	300	440-1540	600	600	65	870	750	622	356	200	267	135	343	202	18	80	2 A	
KS08CD2A	800	325	440-1540	650	800	65	870	750	622	366	210	280	135	343	202	18	80	2 A	
KS08CD3A	800	350	440-1540	700	700	65	870	750	622	365	240	273	135	343	202	18	80	2 A	
KS08CD4A	800	400	440-1540	800	600	65	870	750	622	366	250	267	135	343	202	18	80	2 A	
KS08CD5A	800	400	440-1540	800	1000	65	870	750	622	405	250	293	135	343	202	18	80	2 A	
KS08CD6A	800	400	440-1540	800	1300	65	870	750	622	420	255	312	135	343	202	18	80	2 A	

Notes:

E = arm thickness, including rubber.

T = arm thickness at the arm base, including rubber.

Standard fittings:

Two hydraulic functions required.

Arms welded directly to the guides.

Pressure gauge.

On request:

Special opening ranges.

Arm dimensions other than those indicated (max. L= 1370 and A=1370 mm).

Pressure-relief valve with four pre-set positions (see page 6-8)

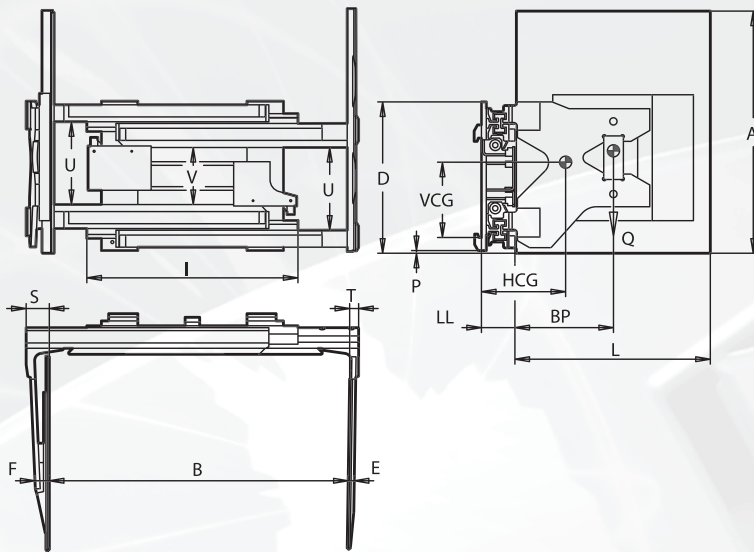
Flow divider valve for synchronized arm movement.

Separate sideshift, models AS-K (see page 6-7).

Sideshifting Carton and Appliances Clamps, with one rigid and one oscillating pad



Models KS-CO



- Used in the white ware industry and for high-volume carton handling.
- Strong double T-profiles.
- One thin rigid pad for easier knifing-in and one oscillating pad for a better contact with load.
- Maximum visibility due to the compact structure.
- Pads covered with rubber with high friction coefficient.
- Load backrest, to avoid damage to the load.
- Check valve and a pressure-relief valve with gauge.
- Integral sideshift.
- Excellent visibility.
- Minimized weight, effective thickness and centre of gravity.

Model	Capacity kg	Load Centre		Opening Range mm	Arm Dimensions			Frame Width mm	Minimum Carriage Width mm	Height mm	Weight kg	Centre of Gravity		Effective Thickness mm	Side Visibility mm	Central Visibility mm	Ground Clearance		Arm Thickness mm	Mounting Class
		Q	BP		L	A	E/F					HCG	VCG				P	T/S		
KS08CO1A	800	300	470-1570	600	600	25/65	870	750	622	356	200	270	135	343	202	18	50/80	2	A	
KS08CO2A	800	325	470-1570	650	800	25/65	870	750	622	366	210	283	135	343	202	18	50/80	2	A	
KS08CO3A	800	350	470-1570	700	700	25/65	870	750	622	365	240	276	135	343	202	18	50/80	2	A	
KS08CO4A	800	400	470-1570	800	600	25/65	870	750	622	366	250	270	135	343	202	18	50/80	2	A	
KS08CO5A	800	400	470-1570	800	1000	25/65	870	750	622	405	250	296	135	343	202	18	50/80	2	A	
KS08CO6A	800	400	470-1570	800	1300	25/65	870	750	622	420	255	315	135	343	202	18	50/80	2	A	

Notes:

E/F = arm thickness, including rubber.

T/S = arm thickness at the arm base, including rubber.

Standard fittings:

Two hydraulic functions required.

Arms welded directly to the guides.

Pressure-relief adjuster.

Pressure gauge.

On request:

Special opening ranges.

Arm dimensions other than those indicated

(max. L= 1370 and A=1370 mm).

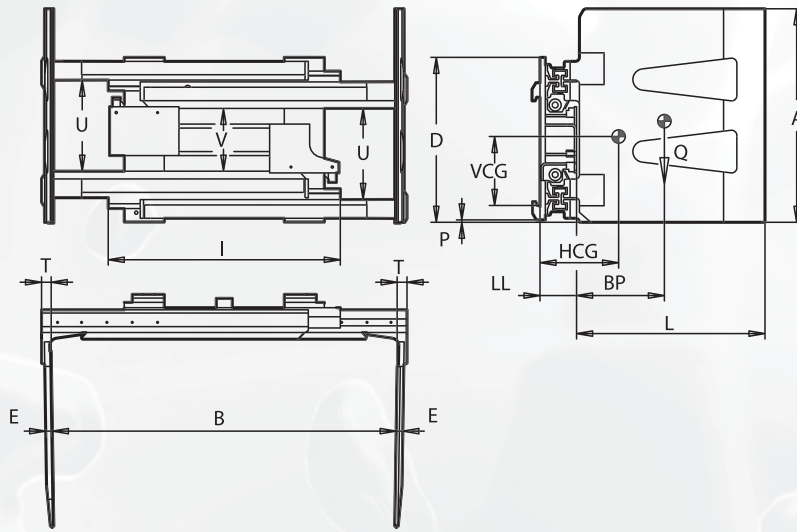
Pressure-relief valve with four pre-set positions (see page 6-8)

Flow divider valve for synchronized arm movement.

Separate sideshift, models AS-K (see page 6-7).

Sideshifting Carton and Appliances Clamps, two rigid pads

Models KS-CF



- Used in the white ware industry and for high-volume carton handling.
- Strong double T-profiles.
- Two slim rigid arm pads, for easier knifing-in between loads.
- Maximum visibility due to the compact structure.
- Pads covered with rubber with high friction coefficient.
- Load backrest, to avoid damage to the load.
- Built-in check valve and a pressure-relief valve with gauge.
- Integral sideshift.
- Excellent visibility.
- Minimized weight, effective thickness and centre of gravity.

Model	Capacity	Load Centre		Opening Range	Arm Dimensions			Frame Width	Minimum Carriage Width	Height	Weight	Centre of Gravity Horizontal	Centre of Gravity Vertical	Effective Thickness	Side Visibility	Central Visibility	Ground Clearance	Arm Thickness	Mounting Class
	Q kg	BP mm	B mm		L	A	E	I	FL	D	W	HCG	VCG	LL	U	V	P	T	ISO
KS04CF0A	400	300	500-1600		600	550	25	870	750	622	278	175	270	135	343	202	18	50	2 A
KS04CF8A	400	330	500-1600		650	1200	25	870	750	622	416	245	411	135	343	202	18	50	2 A
KS04CF1A	400	350	500-1600		700	800	25	870	750	622	342	155	286	135	343	202	18	50	2 A
KS04CF2A	400	400	500-1600		800	600	25	870	750	622	306	215	273	135	343	202	18	50	2 A
KS04CF3A	400	400	500-1600		800	900	25	870	750	622	380	310	292	135	343	202	18	50	2 A
KS04CF4A	400	400	500-1600		800	1000	25	870	750	622	450	285	299	135	343	202	18	50	2 A
KS08CF5A	800	500	500-1600		1000	850	25	870	750	622	455	335	290	135	343	202	18	50	2 A
KS08CF6A	800	500	500-1600		850	1200	25	870	750	622	461	290	312	135	343	202	18	50	2 A
KS05CF7A	500	500	500-1600		1200	800	25	870	750	622	450	375	286	135	343	202	18	50	2 A

Notes:

E = arm thickness, including rubber.

T= arm thickness at the arm base, including rubber.

Standard fittings:

Two hydraulic functions required.

Arms welded directly to the guides.

Pressure adjuster.

Pressure gauge.

On request:

Special opening ranges.

Arm dimensions other than those indicated (max. L= 1370 and A=1370 mm).

Pressure-relief valve with four pre-set positions (see page 6-8)

Flow divider valve for synchronized arm movement.

Separate sideshift, models AS-K (see page 6-7).

Carton Clamps

Technical Information

Oil flow rate recommendations

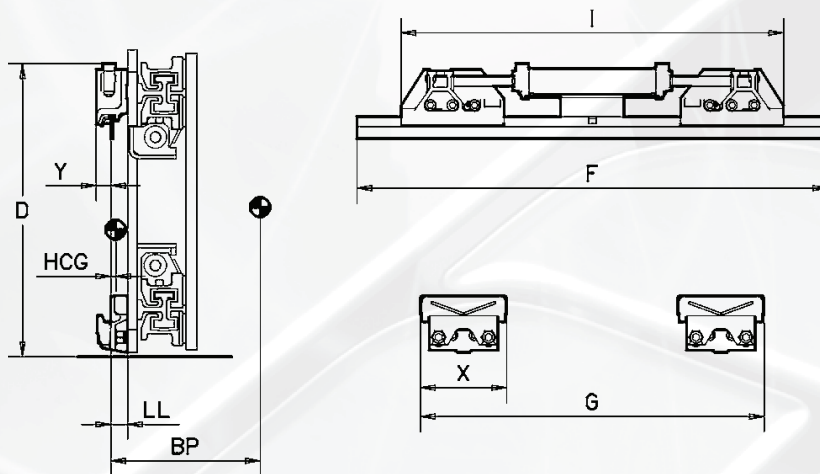
Model	Oil Flow Rate, Clamp			Oil Flow Rate, Sideshifter		
	Minimum l/min	Recommended l/min	Maximum l/min	Minimum l/min	Recommended l/min	Maximum l/min
KS 04-08	12	20	25	-	-	-
KS 09-12	12	20	25	-	-	-
KS 14-16	15	25	30	-	-	-
ETXS	X	X	X	-	-	-

Hydraulic functions and hydraulic pressure recommendations

Model	Clamping Pressure		Distributor Pressure	Sideshifting Pressure		Distributor Pressure	Hydraulic Functions
	Minimum MPa	Maximum MPa	Maximum MPa	Minimum MPa	Maximum MPa	Maximum MPa	
KS 04-08	4,0	13,0	23,0	12,0	22,0	25,0	2
KS 09-12	4,0	13,0	23,0	12,0	22,0	25,0	2
KS 14-16	4,5	13,0	23,0	12,0	22,0	25,0	2
ETXS	X	X	X	X	X	X	1

Carton Clamps

Separate Sideshift



Separate sideshift requires a sideshift device to be mounted to the clamp body. A separate sideshifter provides a fixed amount of sideshift stroke regardless of the clamp opening. This enables faster and safer handling in confined spaces.

A Bolzoni Auramo Series AS separate sideshifting mounting replaces the standard clamp mounting hooks and can be directly bolted onto the standard series KS clamps. Series AS sideshifters are light and have a minimized effective thickness. Therefore they ensure maximum lifting capacity for the lift truck. Sideshift stroke 100 + 100 mm.

Notes:

One hydraulic function is required. Available also with lower quick disconnect hooks.

Model	Capacity	Load Centre	Frame Width	Height	Centre of Gravity Horizontal	Minimum Carriage Width	Weight	Effective Thickness	Ground Clearance	Upper Hook Width	Ext. Lower Hook Width	Lower Hook Width	Rear Body Protrusion	Cylinder Body Height	Mounting Class
	Q kg	BP mm	I mm	D mm	HCG mm	FL mm	W kg	LL mm	P mm	F mm	G mm	X mm	Y mm	Z mm	ISO 2328

For Parallel Clamps

AS 22 KXA	2200	500	780	586	5	960	24	34	9	960	700	176	30	113	2 A
AS 22 KNA	2200	500	980	586	5	1100	24	34	9	1060	900	176	30	113	2 A
AS 28 KXB	2800	500	835	715	6	1050	37	43	20	1020	740	196	37	147	3 A
AS 40 KXB	4000	500	1040	715	5	1200	44	43	20	1200	1060	196	37	147	3 A

General Options

Model

Special opening ranges

Special frame widths

Special arm lengths

Special arm heights

Special arms without oscillation

Mounting Options

Non-standard or special mountings are not included in the attachment price. All mounting prices are add-on prices.

For non-standard mounting, detailed information is required from customer.

ISO 2328 Mounting, Class B

Model

On request

Quick-Change ISO 2328 Lower Mounting Hooks

Model

On request

Non-standard mounting class

Model

ISO 2328 2 -> 3

ISO 2328 3 -> 4

ISO 2328 2 -> 3 (QC)

ISO 2328 3 -> 4 (QC)

Pre-FEM hooking

Model

On request

Hydraulic Couplings

Model

On request

Installation Kit (Connection Hoses)

Model

On request

Four stage pressure-relief valve

For certain types of handling, i.e.: electrical appliances or other boxed articles, it is recommended to use a pressure-relief valve having four predetermined positions. This valve enables easy clamping force setting to suit the type of load.

Model

On request

Independent arm control valve

In some cases the arms must be capable of moving independently; this can be made possible by a special valve.

Model

On request

Flow divider valve for synchronized arm movement

Equal arm movement during clamping or opening. Provides equal oil flow to the clamping cylinders.

Model

On request