

**Medium to heavy load range**

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**Right angle tube connector.....Page 64**

**Axially parallel tube connector.....Page 142**

**Hinge tube connector.....Page 178**

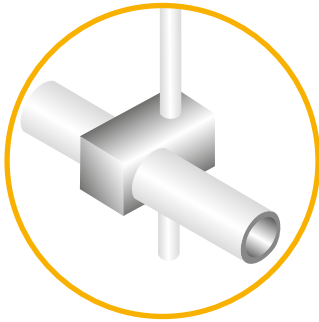
**Accessories.....Page 230**

## Solid Clamps

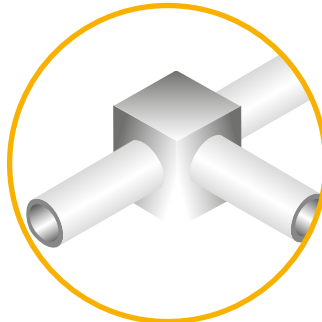
# Medium to heavy load range

...the precise connecting technology made of aluminium

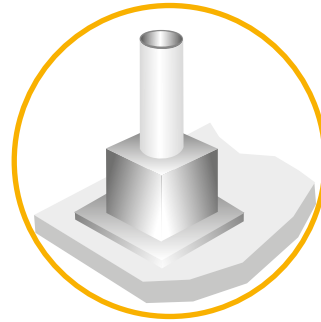
- Right angle tube connector



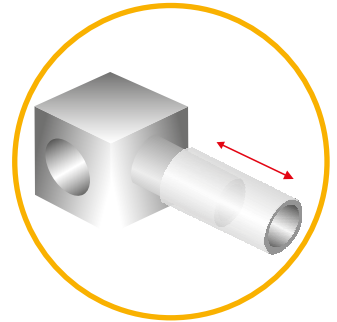
Cross clamps



Angle clamps

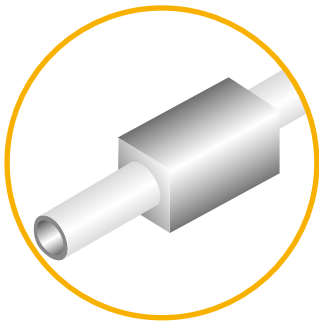


Base clamps

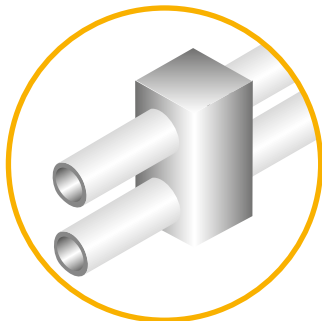


Insert clamps

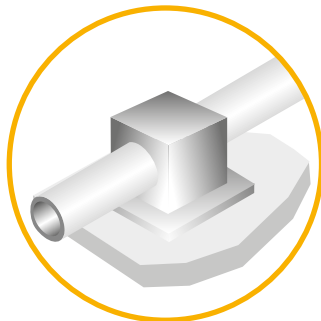
- Axially parallel tube connector



Sleeve clamps

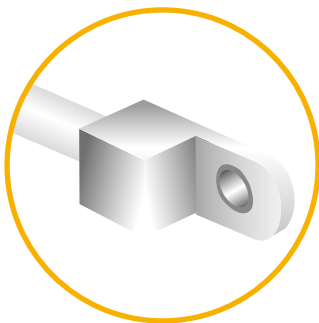


Parallel clamps

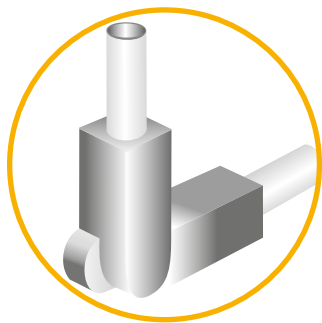


Flange clamps

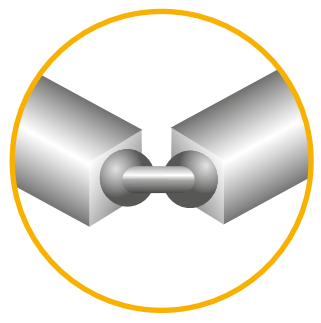
- Hinge tube connector



Strap clamps



Hinge clamps



Ball joint clamps

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### Axially parallel tube connector (Single-piece and multi-piece elements)

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### Hinge tube connector (Single-piece and multi-piece elements)

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### Accessories

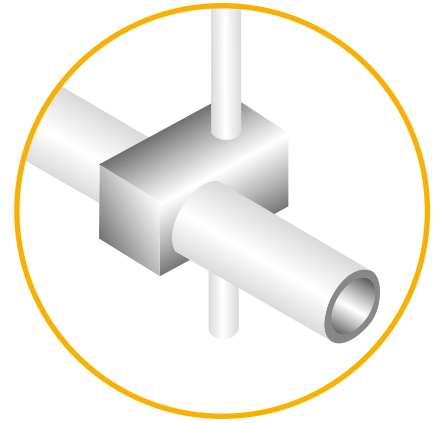
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**Solid Clamps**

# Cross clamps

Version:

- Cross clamps



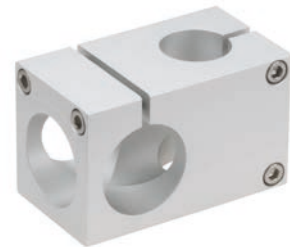
Single-piece elements

- For the quick and inexpensive installation



**Industrial design**

- Cast aluminium
- Great variety
- Single-piece elements



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



**Block form**

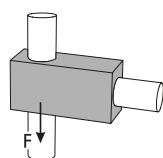
- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements



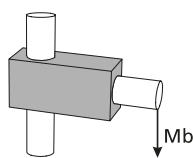
## Loads cross clamps

### Attention!

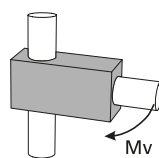
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

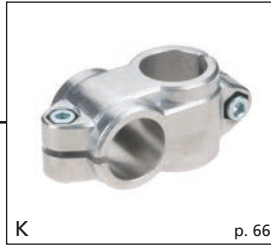
Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
K	2,2	126	24	5,8	368	84	4,8	750	43	12,7	1025	368	16	1900	497			
KD				6,9	420	92	9,0	1148	103	2	948	63	16	1900	359			
KR				7,0	396	49	5,5	866	43									
KVR						49	5,0	335	43									
KRR				6,7	713	93	5,5	1131	84									
KV				3,0	393	280	2,8	338	692									
KDVR				6,7	328	249	6,3	198	118									

Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
KR										9,4	1250	253						
KVR										9,4	1250	253						
KRR				5,1	831	99	5,7	512	114	9,4	1270	254	12,5	1625	261	11	1750	594
KV				2,6	425	429	3,1	512	698	5,9	823	743	7,8	1390	1208	18	1535	2183
KVRR				2,6	831	421	5,7	512	114	13,7	1270	254	7,6	1433	1191	18	1601	2275

Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
quad® elements																		
K				2	738	51	4,0	960	59	6,9	1250	167						
KD				1	847	61	5,3	1075	62	3,9	1250	59						
KRR				6	1139	50	7,6	1125	121	11,5	1250	272						
KRD				6	1045	41	7,6	1125	121	7,6	1250	121						
KVR				5	854	50	8,1	1001	121	7,5	1750	272						
KV				5	754	303	8,1	804	375	7,5	960	1207						

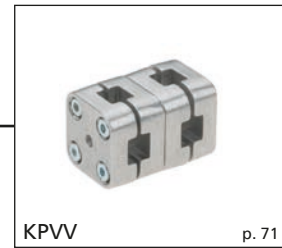
# Cross clamps

Right angle tube connector

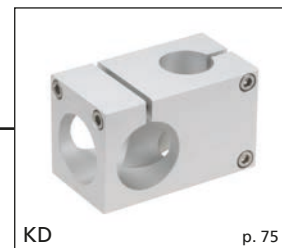
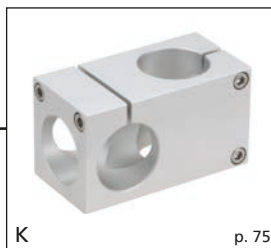


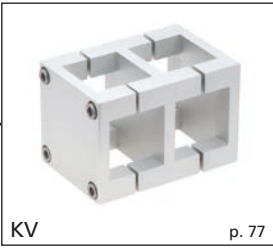
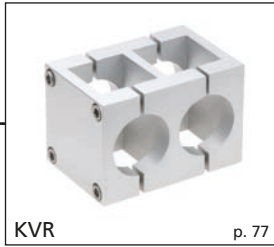
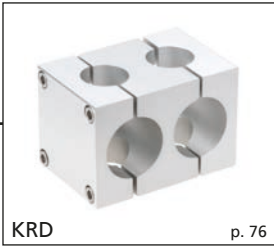
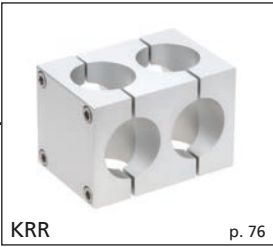
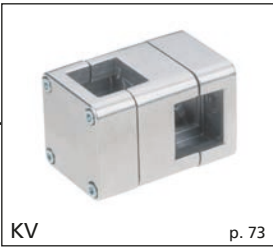
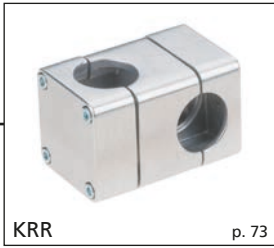
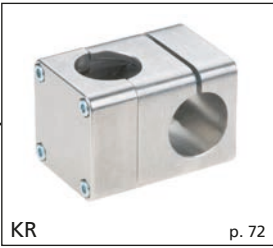
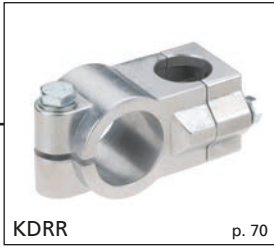
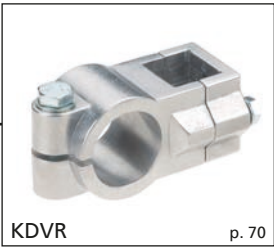
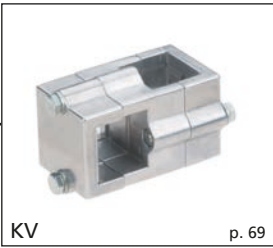
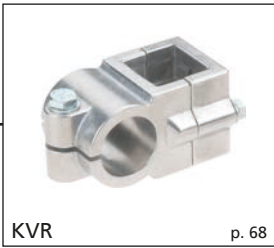
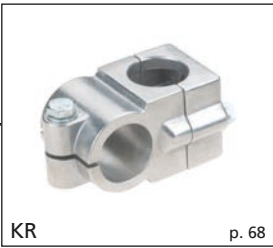
Industrial design

Block form



quad® elements





## Solid Clamps

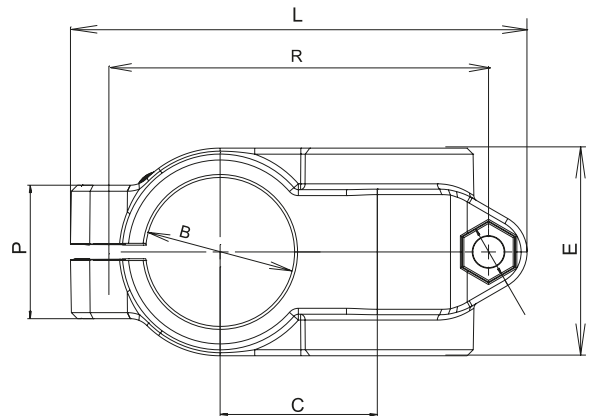
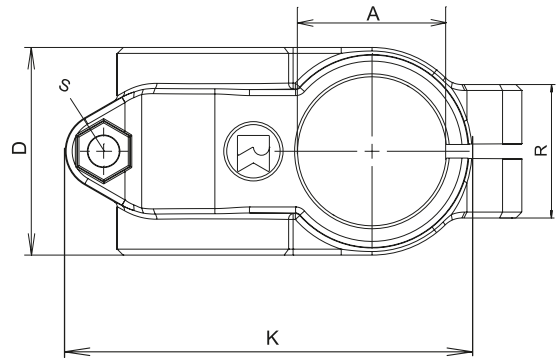
# Cross clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

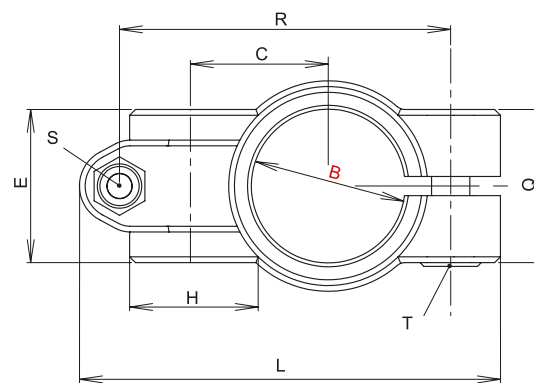
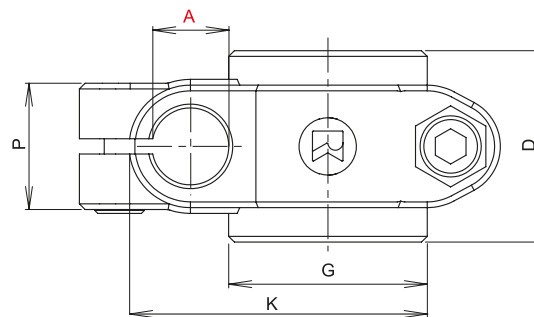
- Stainless steel screws
- Ball-polished
- Colour



## K - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	K	L	P	R	m [g]	Clamping lever S Code No.
101200000200	K 12	12,1	12,1	20	25,5	25,5	43,5	67	23	49	75	90209
101400000200	K 14	14,1	14,1								70	
101500000200	K 15	15,1	15,1								67	
101600000200	K 16	16,1	16,1								64	
101800000200	K 18	18,1	18,1								57	
102000000200	K 20	20,1	20,1	33	40	40	73	101	33	78	252	9022201
102500000200	K 25	25,1	25,1								217	
	K 28*	*With adapter sleeve R28, see accessories page 245										
103000000200	K 30	30,1	30,1	33	40	40	73	101	33	78	173	9022201
103020000200	K 30x20		20,1								195	
103025000200	K 30x25		25,1								195	
103002000200	K 30x32	30,1	30,1	45	60	60	100	137	40	111	665	90250
103200000200	K 32	32,17	32,17								665	
103500000200	K 35	35,17	35,17								617	
104000000200	K 40	40,17	40,17	53	70	70	118	154	45	128	527	90251
104200000200	K 42	42,22	42,22								907	
104800000200	K 48	48,22	48,22								755	
105000000200	K 50	50,2	50,2								699	
105040000200	K 50/40	50,22	40,17								827	
106000000200	K 60	60,27	60,25	65	80	80	142,5	190	58	158	1101	9025301
108000000200	K 80	80,35	80,35	90	120	120	200	255	82	210	3870	9027001



[mm]



**KD - Industrial design**

Code No.	Type	A	B	C	D	E	G	H	K	L	P	Q	R	m [g]	Clamping lever Code No.	
															S	T
102012010200	KD 20x12	12,1	20,1	27	40	33	40	26	59	84	21	33	65	175	90209	9022201
102014010200	KD 20x14	14,1												172		
102015010200	KD 20x15	15,1												170		
102016010200	KD 20x16	16,1												168		
102018010200	KD 20x18	18,1												163		
102512010200	KD 25x12	12,1	25,1	27	40	33	40	26	59	84	21	33	65	154	90209	9022201
102514010200	KD 25x14	14,1												154		
102515010200	KD 25x15	15,1												152		
102516010200	KD 25x16	16,1												150		
102518010200	KD 25x18	18,1												146		
	KD 28x18*	With adapter sleeve R28, see accessories page 245														
103012010200	KD 30x12	12,1	30,1	27	40	33	40	26	59	84	21	33	65	135	90209	9022201
103014010200	KD 30x14	14,1												132		
103015010200	KD 30x15	15,1												130		
103016010200	KD 30x16	16,1												128		
103018010200	KD 30x18	18,1												124		
103220010200	KD 32x20	20	32,2	36	50	40	52	32	78	110	33	40	86,5	283	9022201	90250
103520010200	KD 35x20		35,2						78	98	28	43	80	257		
104020010200	KD 40x20	20,1	40,17	45	65	65	65	45	60	137,5	44	44	108,5	250	90251	90251
104030010200	KD 40(42)x30	30,1	40,17											45		
104230010200	KD 42x30	30,1	42,2	45	65	65	66	48	102	126	43	58	102	640	90251	90251
105025010200	KD 50x25	25,1	50,22	45	65	49	65	45	60	137,5	44	44	108,5	576	90251	90251
105030010200	KD 50x30	30,1												564		
106040010200	KD 60x40	40,22	60,27	60	80	70	75	65	130	180	58	53	148	1163	9025501	9025301
106048010200	KD 60x48	48,27	1059													
106050010200	KD 60x50	50,27	1027													
106250010200	KD 62x50		1027													

## Solid Clamps

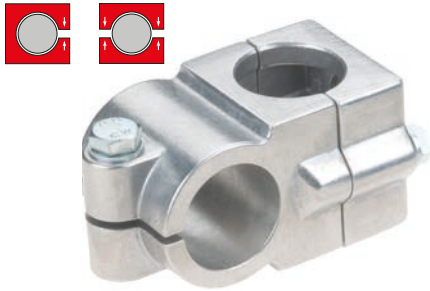
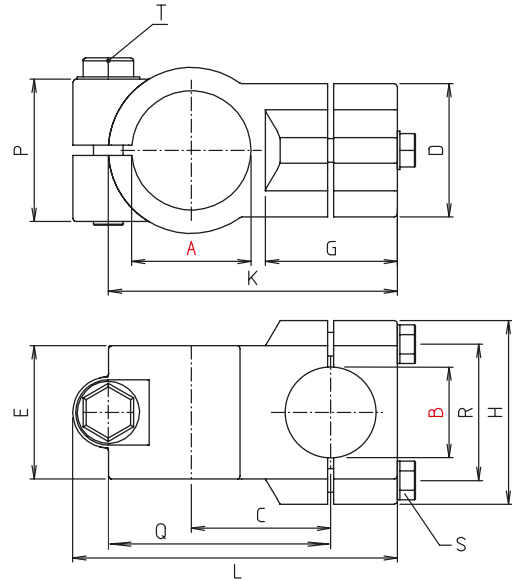
# Cross clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately.  
Delivery unassembled See table last column and page 244

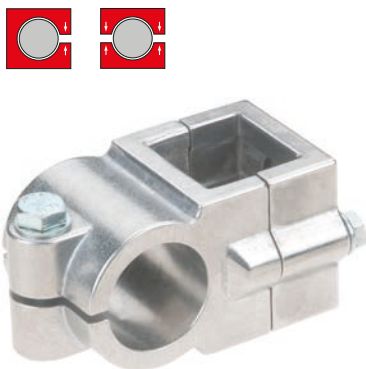
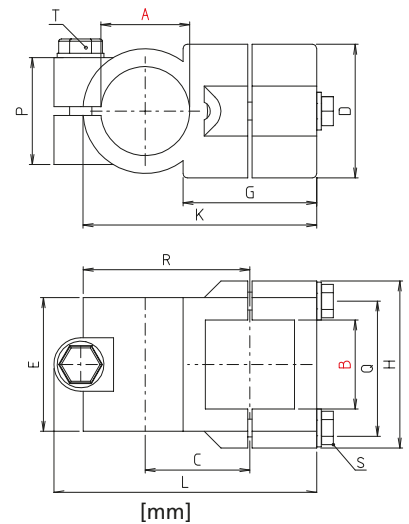
### On request:

- Stainless steel screws
- Ball-polished
- Colour



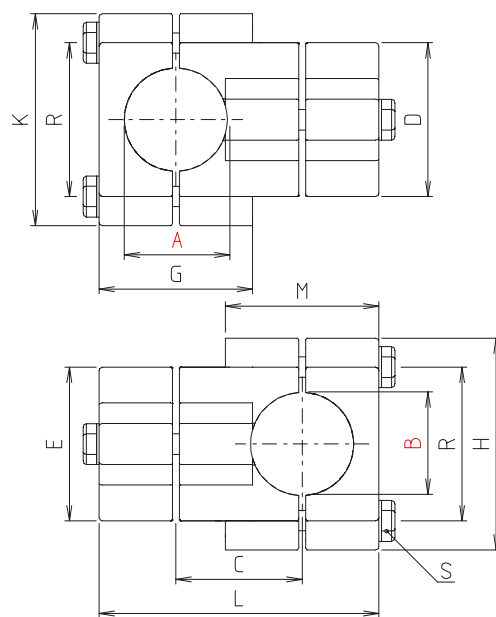
### KR - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	P	Q	R	m [g]	[mm]	
															S	T
															Clamping lever Code No.	
102000020200	KR 20	20,1	20,1	33	45	45	40	62	76	86	33	55	46	338	9022401	9022401
102500020200	KR 25	25,1	25,1													
	KR 28*		30,1	*With adapter sleeve R28, see accessories page 245												
103000020200	KR 30	30,1	30,1	33	45	45	40	62	76	86	33	55	46	257	9022401	9022401
103500020200	KR 35	35,2	35,2	47	60	60	60	75	105	117	48	75	57	622	9022501	9024301
104000020200	KR 40	40,2	40,2											557		



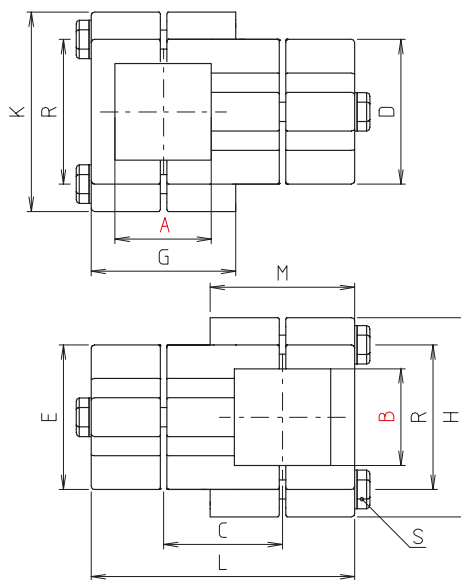
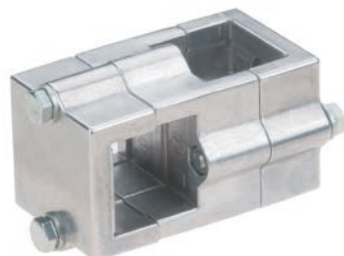
### KVR - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	P	Q	R	m [g]	[mm]	
															S	T
															Clamping lever Code No.	
102000040200	KVR 20	20,1	20,2	33	45	45	40	62	76	86	33	46	55	332	9022401	9022401
102500040200	KVR 25	25,1	25,2													
	KVR 28*		30,2	*With adapter sleeve R28, see accessories page 245												
103000040200	KVR 30	30,1	30,2	33	45	45	40	62	76	86	33	46	55	245	9022401	9022401
103500040200	KVR 35	35,2	35,3	47	60	60	60	75	105	117	48	57	75	599	9022501	9024301
104000040200	KVR 40	40,2	40,3											525		



### KRR - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	R	m [g]	Clamping lever S Code No.
102500030200	KRR 25	25,2	25,2	38	45	45	45	64	64	83	45	46	369	9022501
103000030200	KRR 30	30,2	30,2										352	
103500030200	KRR 35	35,2	35,2	50	60	60	61	77	77	111	61	57	668	9022801
104000030200	KRR 40	40,2	40,2										645	



### KV - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	R	m [g]	Clamping lever S Code No.
102000050200	KV 20	20,3	20,3	38	45	45	44	64	64	83	44	46	385	9022601
102500050200	KV 25	25,2	25,2										353	9022501
103000050200	KV 30	30,2	30,2	50	60	60	61	77	77	111	61	57	637	9022801
103500050200	KV 35	35,3	35,3										584	
104000050200	KV 40	40,3	40,3											

## Solid Clamps

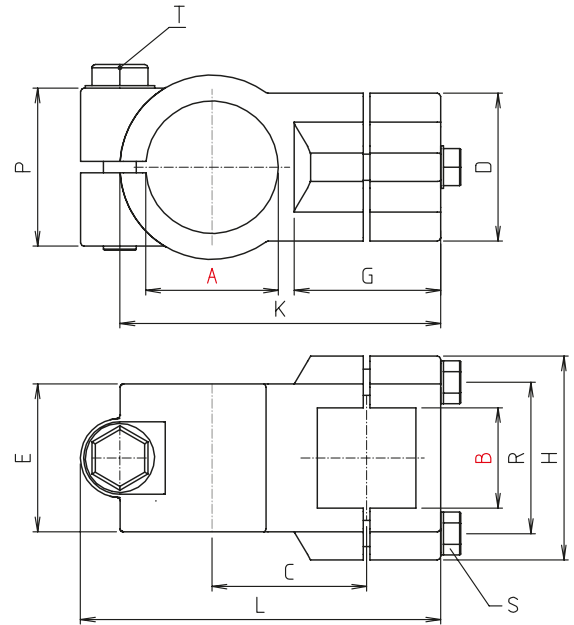
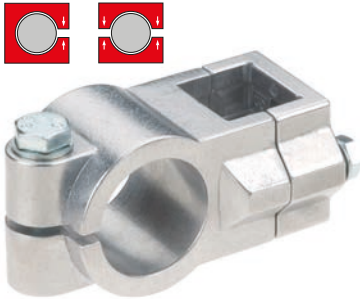
# Cross clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

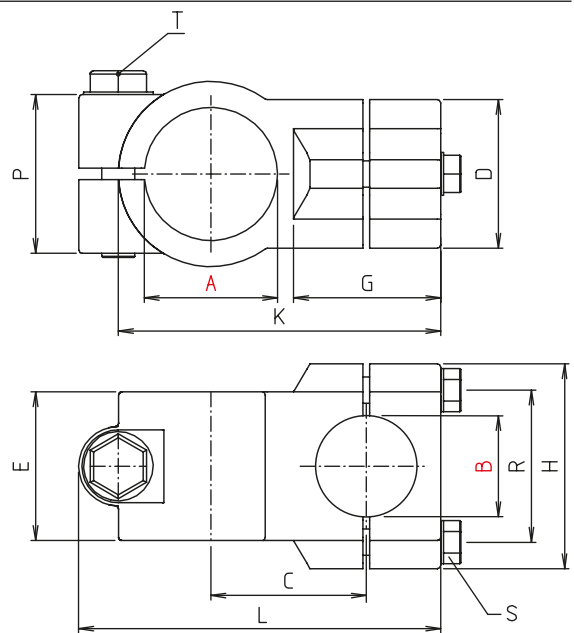
- Stainless steel screws
- Ball-polished
- Colour



### KDVR - Industrial design

[mm]

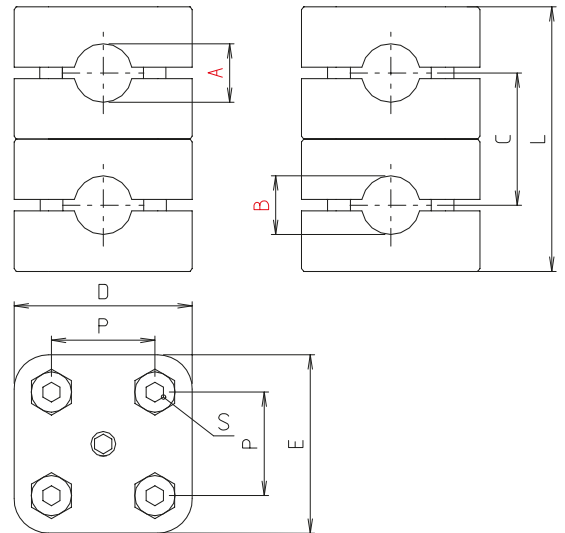
Code No.	Type	A	B	C	D	E	G	H	K	L	P	R	m [g]	Clamping lever Code No.	
														S	T
104020090200	KDVR 20-40	40,3	20,2	47	45	45	45	62	98	110	48	46	408	9022401	9024301
104025090200	KDVR 25-40		25,2												
104030090200	KDVR 30-40		30,2												



### KDRR - Industrial design

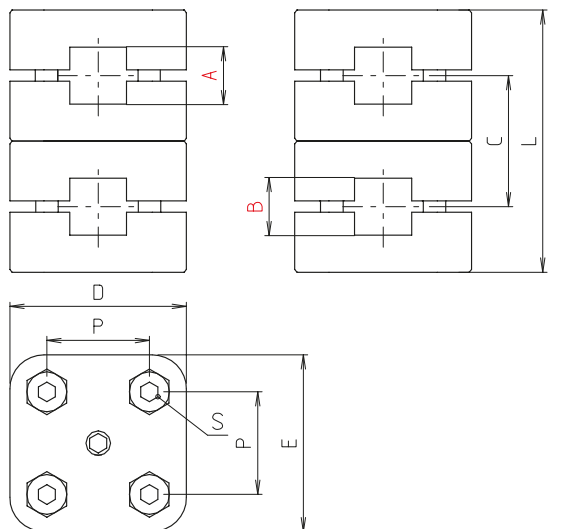
[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	P	R	m [g]	Clamping lever Code No.	
														S	T
102040110200	KDRR 20-40	40,3	20	47	45	45	45	62	98	110	48	46	452	9022401	9024301
102540110200	KDRR 25-40		25,1												



### KPRR - Block form

Code No.	Type	A	B	C	D	E	L	P	S	m [g]
290800000266	KPRR 8	8	8	23	31	31	46	18	M4x18	97
291000000266	KPRR 10	10	10							93



### KPVV - Block form

Code No.	Type	A	B	C	D	E	L	P	S	m [g]
291000010266	KPVV 10	10	10	23	31	31	46	18	M4x18	88

## Solid Clamps

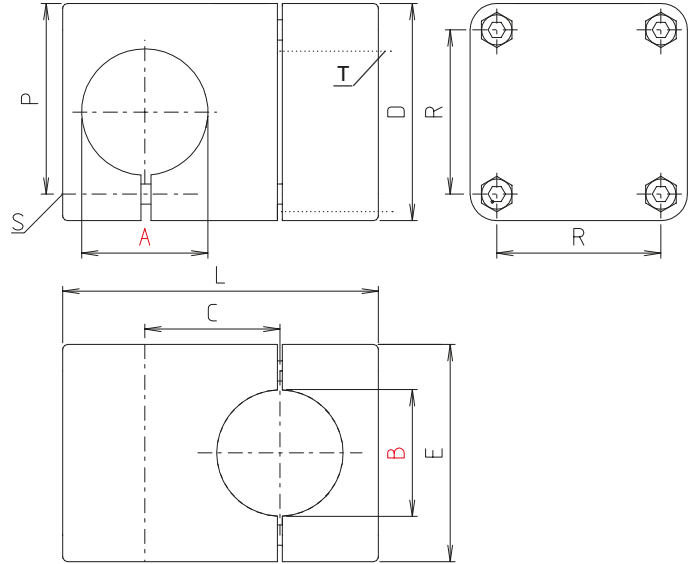
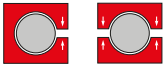
# Cross clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

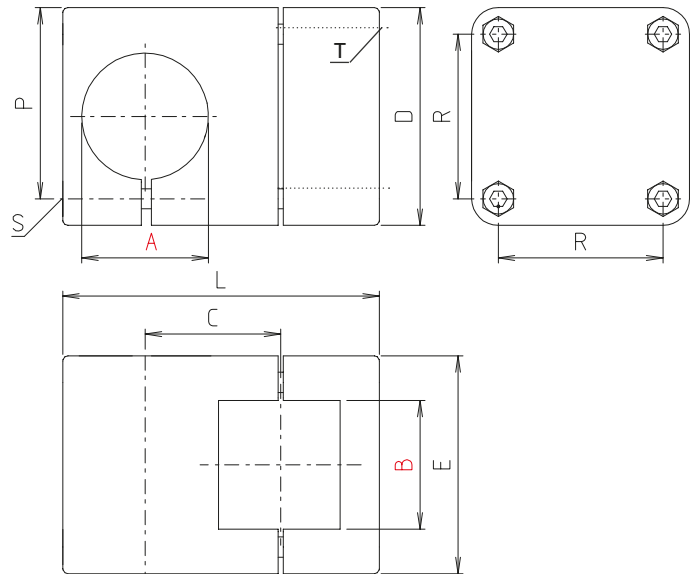
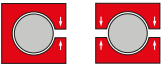
### On request:

- Stainless steel screws
- Ball-polished
- Colour



### KR - Block form

Code No.	Type	A	B	C	D	E	L	P	R	m [g]	[mm]		
											S	T	
												Clamping lever Code No.	
204200020266	KR 42	42,2	42,2	53	86	86	126	73	65	1367	9022601	9022701	
204500020266	KR 45	45,2	45,2							1310			
204800020266	KR 48	48,2	48,2							1264			
205000020266	KR 50	50,2	50,2							1213			

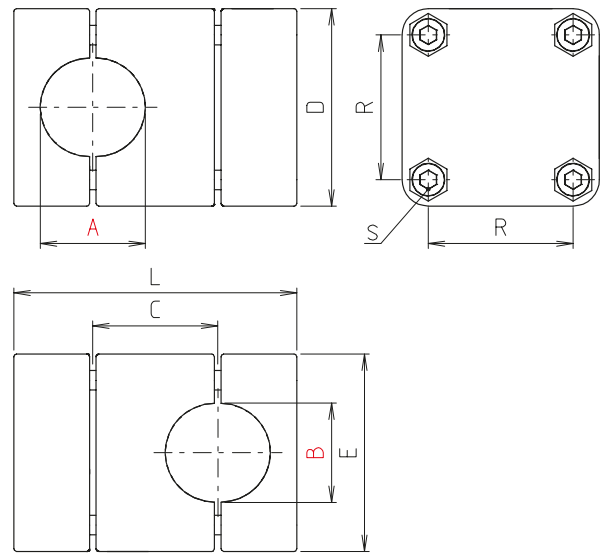


### KVR - Block form

Code No.	Type	A	B	C	D	E	L	P	R	m [g]	[mm]		
											S	T	
												Clamping lever Code No.	
204850040266	KVR 48/50	48,2	50,5	53	86	86	126	73	65	1199	9022601	9022701	
205000040266	KVR 50	50,2								1182			

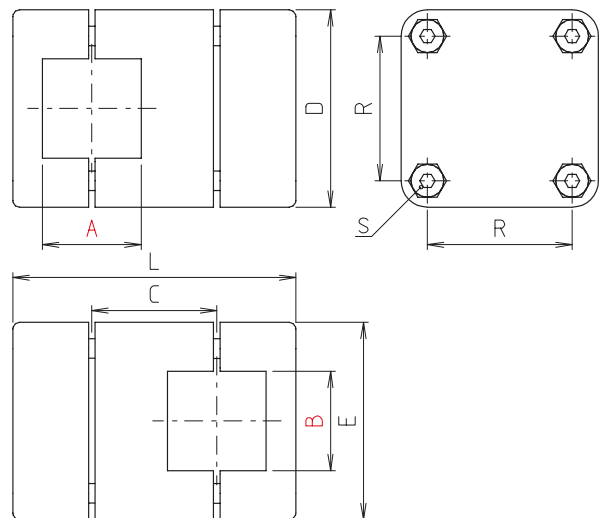


### KRR - Block form



[mm]

Code No.	Type	A	B	C	D	E	L	R	m [g]	Clamping lever S Code No.
203000030266	KRR 30	30,2	30,2	38	60	60	86	44	450	9021301
204000030266	KRR 40	40,3	40,3	50	70	70	112	53	688	9021501
204200030266	KRR 42	42,3	42,3	70	86	86	149	65	1614	9022801
204500030266	KRR 45	45,3	45,3						1579	
204800030266	KRR 48	48,3	48,3						1550	
205000030266	KRR 50	50,3	50,3						1520	
206000030266	KRR 60	60,4	60,4	80	100	100	170	78	2048	
208000030266	KRR 80	80,5	80,5	122	130	130	244	100	5075	9024601



[mm]

### KV - Block form

Code No.	Type	A	B	C	D	E	L	R	m [g]	Clamping lever S Code No.
203000050266	KV 30	30,2	30,2	38	60	60	86	44	329	9021301
204000050266	KV 40	40,4	40,4	50	70	70	112	53	661	9021501
205000050266	KV 50	50,5	50,5	70	86	86	149	65	1427	9022801
206000050266	KV 60	60,6	60,6	80	100	100	170	78	1950	
208000050266	KV 80	80,7	80,7	122	130	130	244	100	4850	9024601

## Solid Clamps

# Cross clamps

### Order instruction:

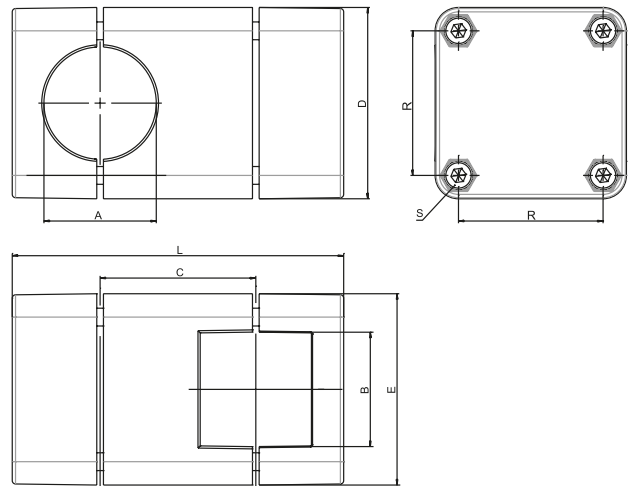
- Block form zinc plated screws Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

### On request quad®:

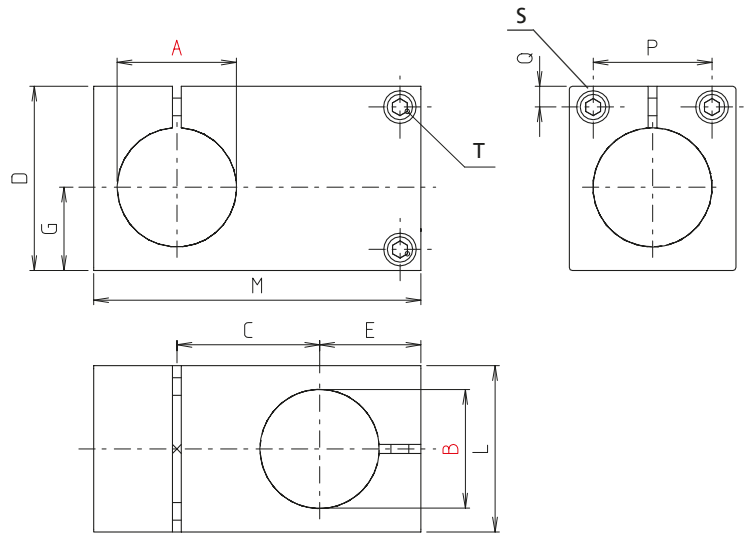
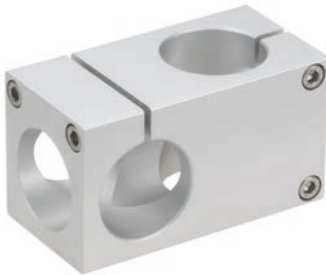
- Black anodized



## KVRR - Block form

[mm]

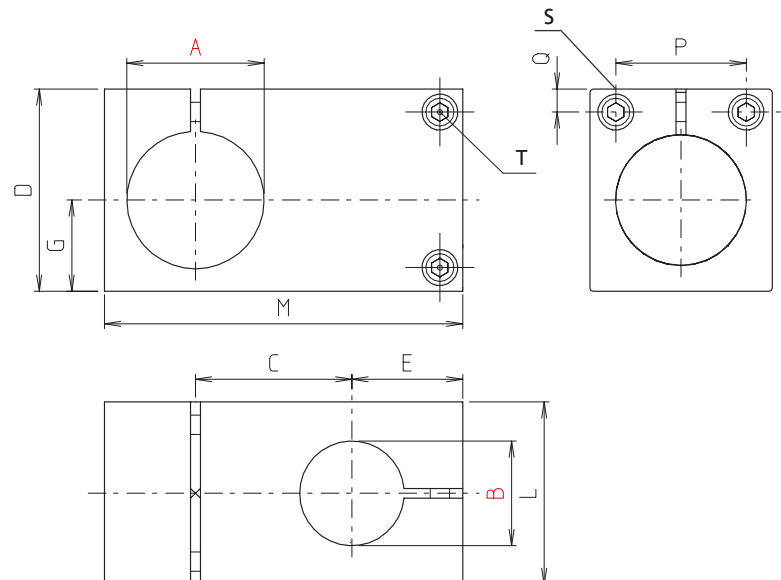
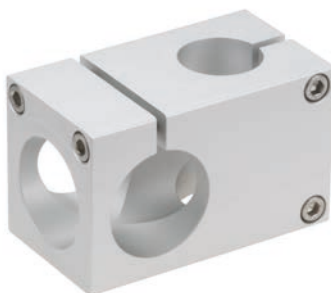
Code No.	Type	A	B	C	D	E	L	R	m [g]	Clamping lever S Code No.
203000080266	KVRR 30	30,2	30,2	38	60	60	86	44	441	9021301
204000080266	KVRR 40	40,4	40,3	50	70	70	112	53	671	9021501
205000080266	KVRR 50	50,5	50,3	70	86	86	149	65	1477	9022801
206000080266	KVRR 60	60,6	60,4	80	100	100	170	78	1987	9022801
208000080266	KVRR 80	80,7	80,5	122	130	130	244	100	5075	9024601



### K - quad®

[mm]

Code No.	Type	A	B	C	D	E	G	L	M	P	Q	m [g]	S	T
													Clamping lever Code No.	
503000000300	K 30	30,1	30,1	36	49	28	21	42	85	28	7	236	9301401	9300101
504000000300	K 40	40,1	40,1	48	62	34	28	56	110	42	7	490	9301701	9301401



### KD - quad®

[mm]

Code No.	Type	A	B	C	D	E	G	L	M	P	Q	m [g]	S	T
													Clamping lever Code No.	
503020010300	KD 30x20	30,1	20,1	31	49	23	21	42	75	28	7	229	9301401	9300101
504030010300	KD 40x30	40,1	30,1	43	62	29	28	56	100	42	7	477	9301701	9301401
505040010300	KD 50x40	50,2	40,2	55	77	37	35	70	127	52	9	926	9300401	9300401

## Solid Clamps

# Cross clamps

### Order instruction:

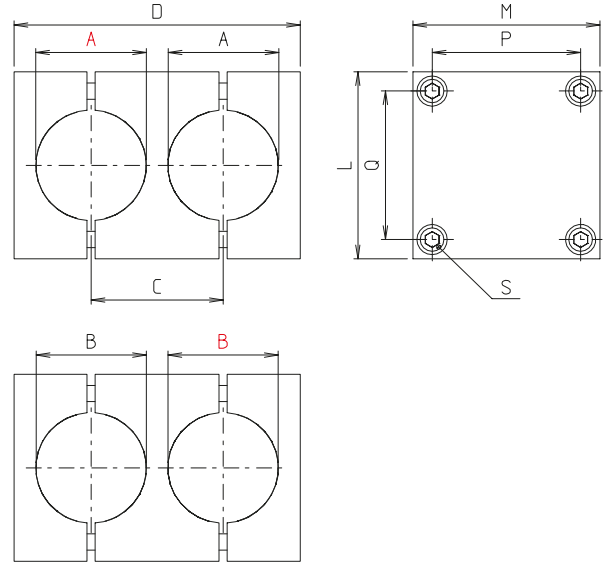
- Block form zinc plated screws Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled. See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

### On request quad®:

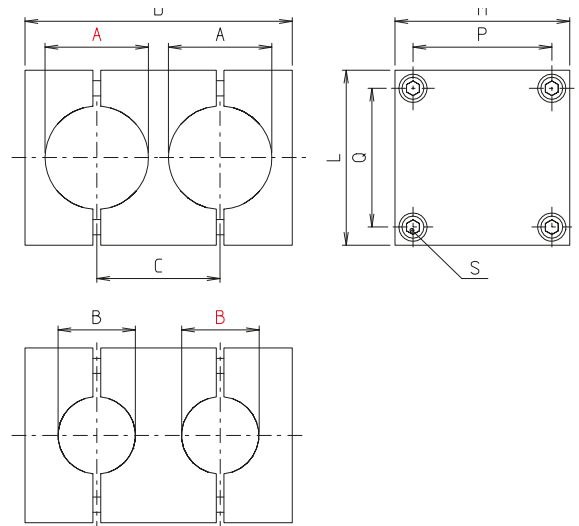
- Black anodized



### KRR - quad®

[mm]

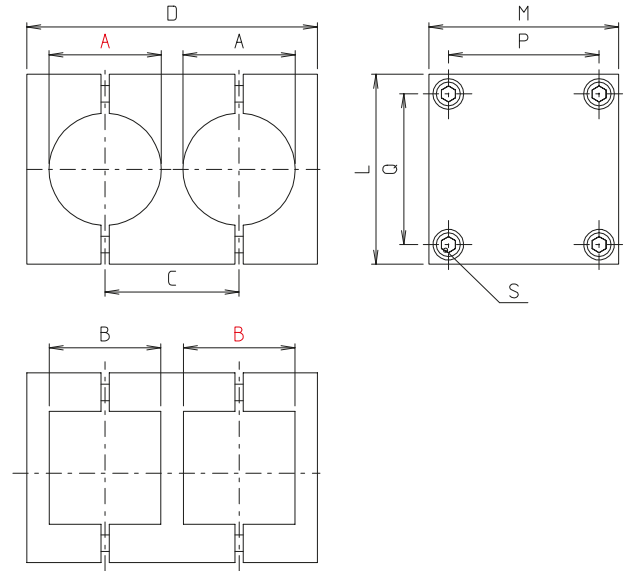
Code No.	Type	A	B	C	D	L	M	P	Q	m [g]	Clamping lever S Code No.
504000030300	KRR 40	40,2	40,2	48	104	68	68	54	54	615	9301401
505000030300	KRR 50	50,3	50,3	60	130	85	85	67	67	1241	9300401
506000030300	KRR 60	60,3	60,3	72	169	105	105	85	85	-	9022801



### KRD - quad®

[mm]

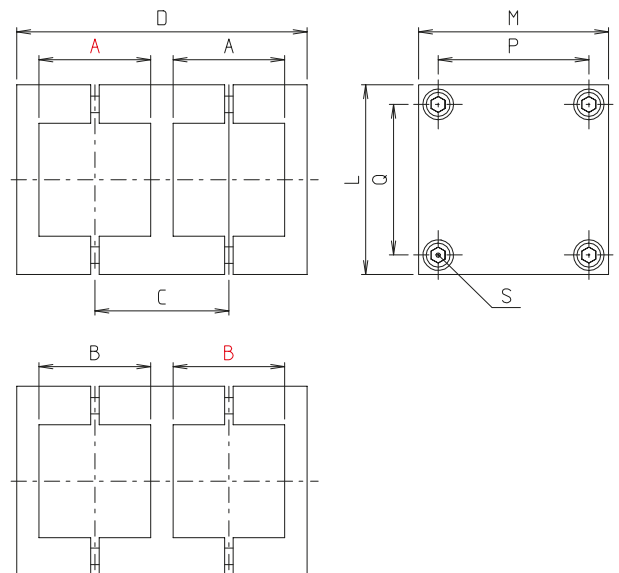
Code No.	Type	A	B	C	D	L	M	P	Q	m [g]	Clamping lever S Code No.
504030060300	KRD 40x30	40,2	30,1	48	104	68	68	54	54	723	9301401
505040060300	KRD 50x40	50,3	40,2	60	130	85	85	67	67	1411	9300401
506050060300	KRD 60x50	60,3	50,4	72	169	105	105	85	85	-	9022801



### KVR - quad®

[mm]

Code No.	Type	A	B	C	D	L	M	P	Q	m [g]	Clamping lever S Code No.
504000040300	KVR 40	40,2	40,3	48	104	68	68	54	54	527	9301401
505000040300	KVR 50	50,3	50,4	60	130	85	85	67	67	1080	9300401
506000040300	KVR 60	60,3	60,4	72	169	105	105	85	85	-	9022801



### KV - quad®

[mm]

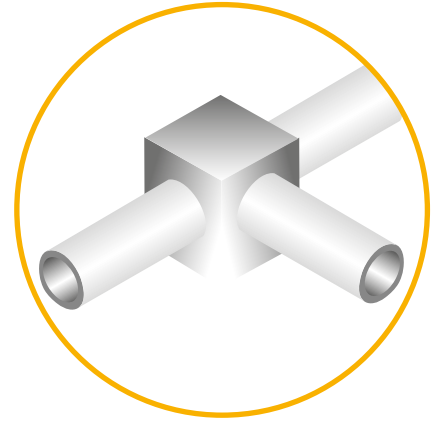
Code No.	Type	A	B	C	D	L	M	P	Q	m [g]	Clamping lever S Code No.
503000050300	KV 30	30,2	30,2	36	78	56	56	42	42	277	9300101
504000050300	KV 40	40,3	40,3	48	104	68	68	54	54	477	9301401
505000050300	KV 50	50,4	50,4	60	130	85	85	67	67	961	9300401
506000050300	KV 60	60,4	60,4	72	169	105	105	85	85	-	9022801

**Solid Clamps**

# Angle clamps

Version:

- Angle clamps



Single-piece elements

- For the quick and inexpensive installation



**Industrial design**

- Cast aluminium
- Great variety
- Single-piece elements



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



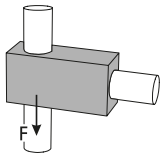
**Block form**

- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements

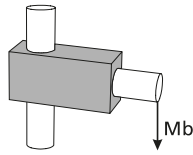
## Loads angle clamps

### Attention!

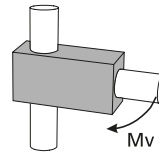
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
W	1,1	189	20	6,6	447	104	4,3	1365	104	12,1	900	217	10,7	1388	299			
WV				3,3	413	345	4,3	464	546									
WR				5,1	870	59	5,1	1174	158									
WE				6,6	494	41	6,6	300	300	10,6	409	217						
WVT				3,3	144	345	2,6	765	546									
WRT				5,1	141	63	5,1	1174	120									

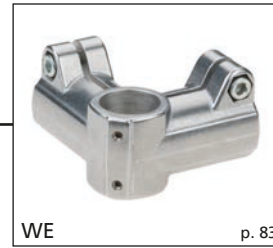
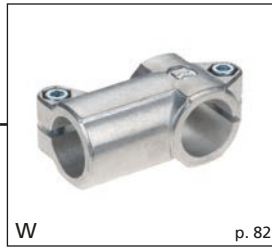
Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
WV				3,6	383	283	3,3	528	847	3	600	425	7,8	1197	917	11	3038	2400
WR				5,1	809	66	6,2	1560	44	9,8	1200	262	12,3	1500	255	19	950	601
WVT				3,6	149	283	3,3	793	847									
WRT				5,1	136	66	6,2	1560	44									
WK				4,9	594	41	4,9	1388	139	10	750	179	11,4	650	315			
WEV							1,2	493	844	5,9		678						
WER							0,7	883	37	8,7	1280	131						
WKR							6,1	1361	93	8,7	1250	272						
WERT							0,7	883	37	8,7	1280	131						
WEVT							1,2	686	844	5,9		678						

Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
quad® elements																		
W	4	634	61	7,8	960	68	5,8	1788	159									
WR	5	1650	168	7,6	960	128	11,8	2200	272									
WRT	5,7	1475	166	7,6	960	128	11,8	2200	272									
WKR	5,7	1365	172	7,5	1050	510	11,8	2200	272									
WVR	6,1	618	70	8,4	1050	128	7,5	1800	1800									
WRV	6,2	1000	325	7,5	1200	46	7,5	2200	272									
WER	6,1	1139	49	2,7	1020	450	11,8	2200	272									
WV	5	410	534	8,1	1212	450	7,5	2022	1800	20,1								
WVT	5,1	411	524	6,3	1229	450	7,5	2022	1800	20,1								
WKV	5,7	781	350	8,1	1256	459	7,5	2022	1800									
WEV	4,5	527	350	2,8	897		7,5	2022	1800									

## Solid Clamps

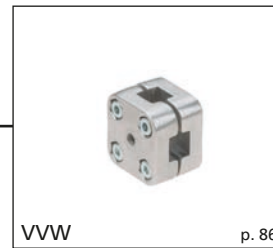
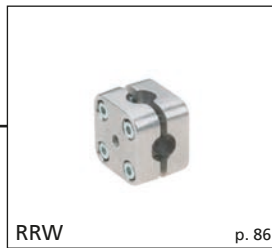
# Angle clamps

### Right angle tube connector

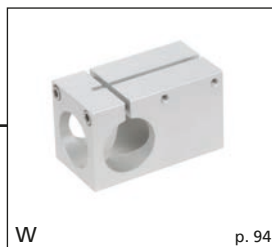


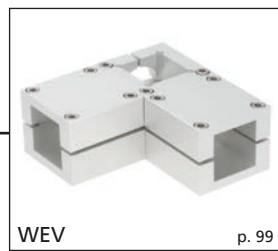
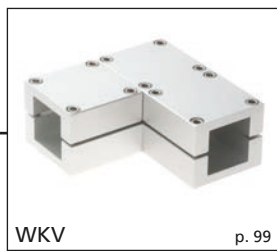
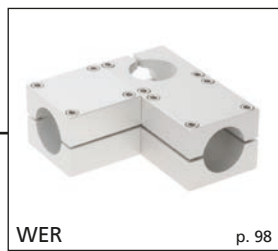
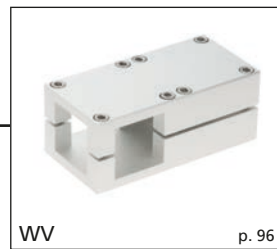
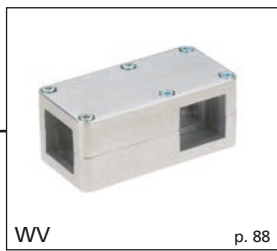
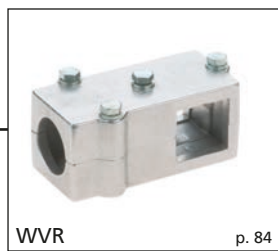
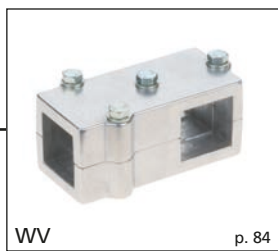
### Industrial design

### Block form



### quad® elements





## Solid Clamps

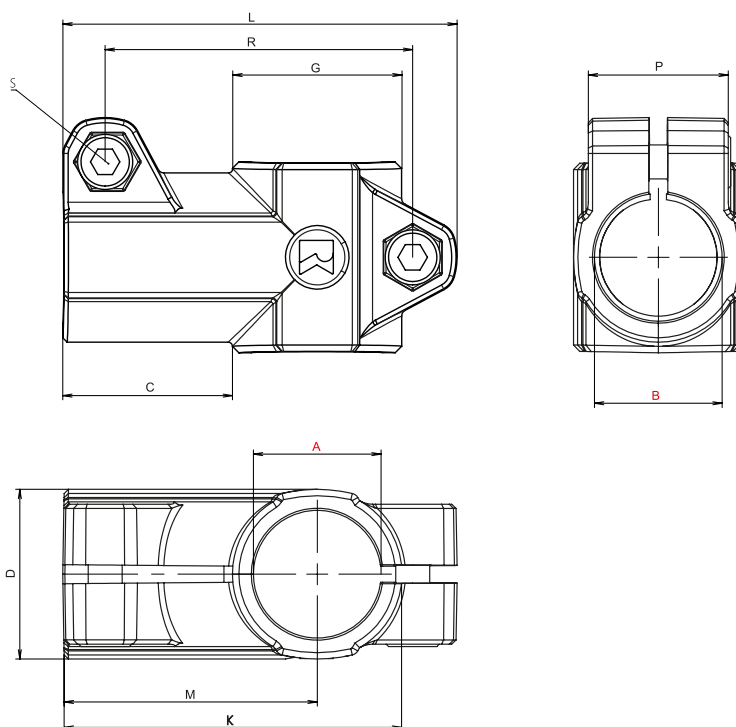
# Angle clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

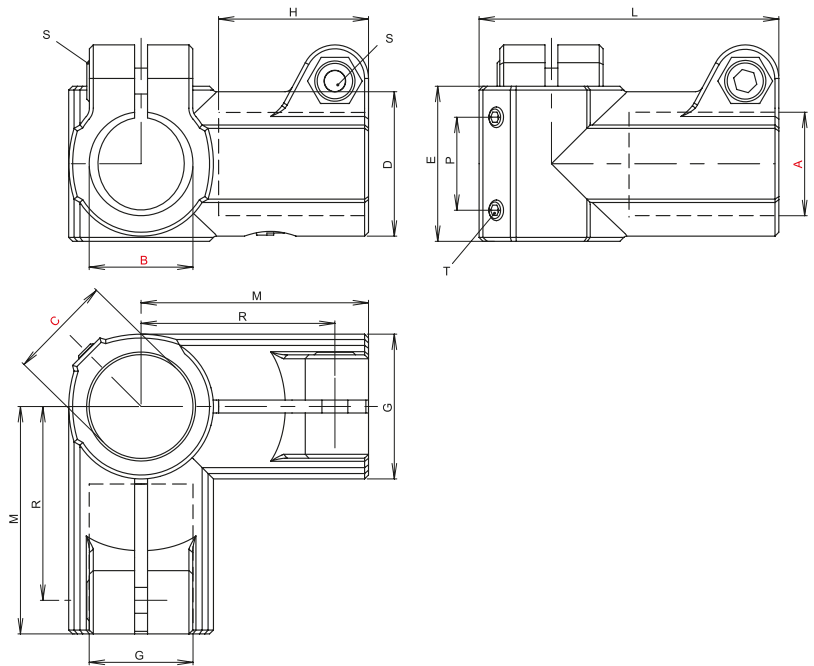
- Stainless steel screws
- Ball-polished
- Colour



## W - Industrial design

[mm]

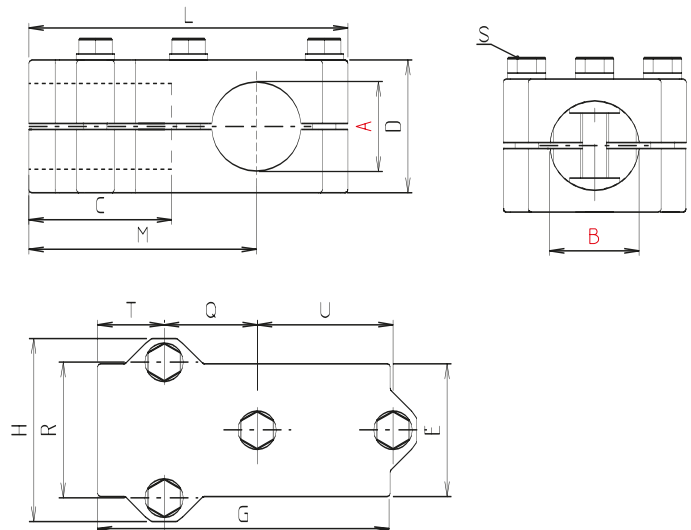
Code No.	Type	A	B	C	D	E	G	K	L	M	P	R	m [g]	Clamping lever S Code No.
111200000200	W 12	12,1	12,1	28	25	23	25	56	66	43	23	49	97	90209
111400000200	W 14	14,1	14,1										90	
111500000200	W 15	15,1	15,1										87	
111600000200	W 16	16,1	16,1										83	
111800000200	W 18	18,1	18,1										75	
112000000200	W 20	20,1	20,1	38	40	33	40	80	93	60	33	278	9022201	
112500000200	W 25	25,1	25,1									240		
	W 28*	*With adapter sleeve R28, see accessories page 245												
113000000200	W 30	30,1	30,1	38	40	33	40	80	93	60	33	72,5	192	9022201
113200000200	W 32	32,2	32,2	55	56	40	56	116	134	88	40	108	680	90250
113500000200	W 35	35,15	35,15										623	
114000000200	W 40	40,15	40,15										530	
114800000200	W 48	48,22	48,22	63	66	45	66	131	149	98	45	123	759	90251
115000000200	W 50	50,22	50,22										705	
116000000200	W 60	60,27	60,27	78	80	58	80	160	183	120	58	151	1340	9025301
118000000200	W 80	80,35	80,35	121,7	110	123	110	231,7	259	176,8	82	214	3750	9027001



## WE - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	R	m [g]	T	Clamping lever S Code No.	
	WE28*			30	*With adapter sleeve R28, see accessories page 245										
1130000602005	WE 30	30,1	30,1	30	40	45	40	38	80	60	49	250	M8x15	9022201	
1140000602005	WE 40	40,15	40,15	40,15	56	60	56	58	116	88	70	708	M8x10	90250	
1150000602005	WE 50	50,22	50,22	50,22	66	70	66	70	136	108	90	710	M10x15	90251	



## WR - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	Q	R	T	U	m [g]	Clamping lever S Code No.
112500030200	WR 25	25,2	25,2	46	45	45	100	62	108	77	31,5	46	23	46	418	9022501
113000030200	WR 30	30,2	30,2												388	
113500030200	WR 35	35,2	35,2	60	60	60	129	75	136	99	40	57	30	57	770	9022801
114000030200	WR 40	40,2	40,2												738	

## Solid Clamps

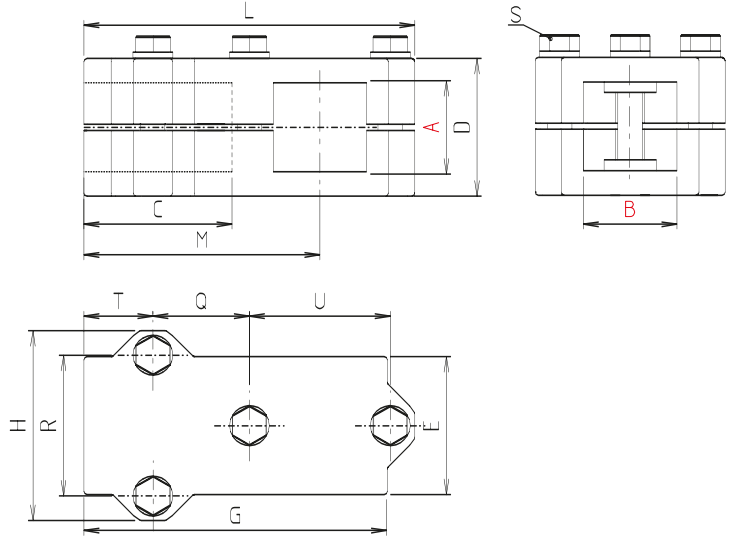
# Angle clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

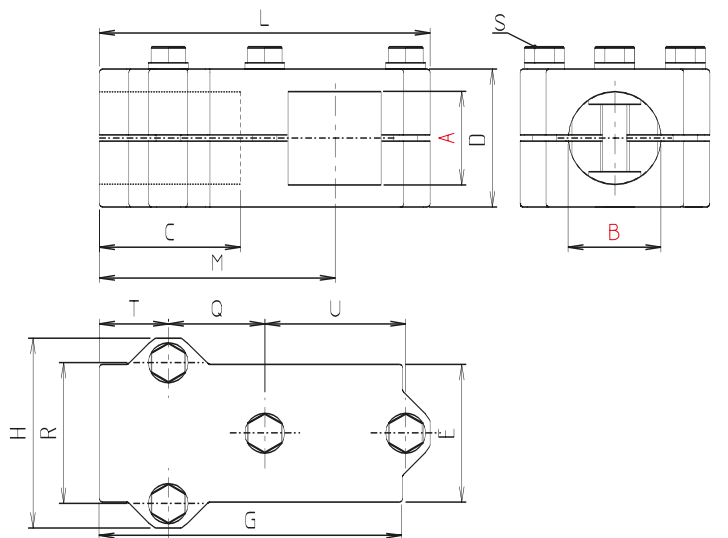
### On request:

- Stainless steel screws
- Ball-polished
- Colour



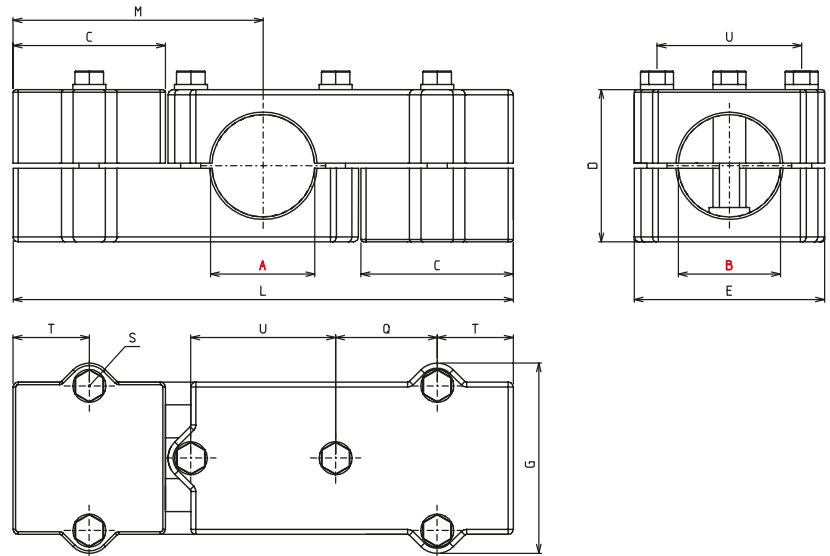
### WV - Industrial design

Code No.	Type	A	B	C	D	E	G	H	L	M	Q	R	T	U	m [g]	Clamping lever S Code No.
112500050200	WV 25	25,3	25,3	46	45	45	100	62	108	77	31,5	46	23	46	389	9022501
113000050200	WV 30	30,3	30,3												361	
113500050200	WV 35	35,4	35,4	60	60	60	129	75	136	99	40	57	30	57	731	9022801
114000050200	WV 40	40,4	40,4												722	



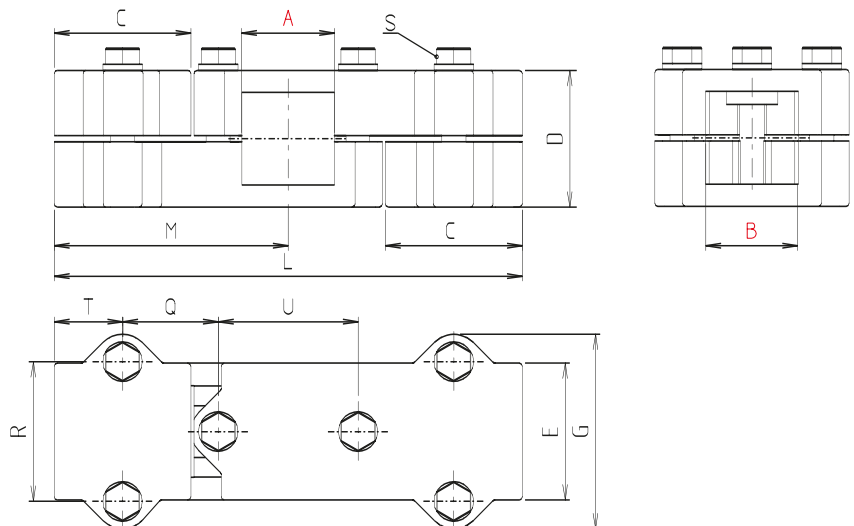
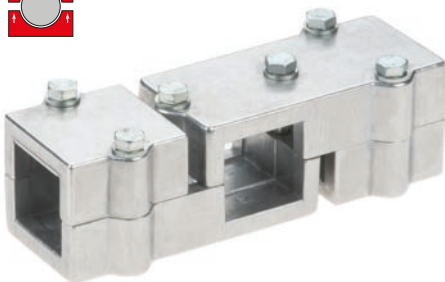
### WVR - Industrial design

Code No.	Type	A	B	C	D	E	G	H	L	M	Q	R	T	U	m [g]	Clamping lever S Code No.
113000040200	WVR 30	30,3	30,2	46	45	45	100	62	108	77	31,5	46	23	46	358	9022501
114000040200	WVR 40	40,4	40,2	60	60	60	129	75	136	99	40	57	30	57	698	9022801



### WRT - Industrial design

Code No.	Type	A	B	C	D	E	G	L	M	Q	R	T	U	m [g]	Clamping lever S Code No.
1125001002000	WRT 25	25,2	25,2	46	45	45	62	154	77	31,5	46	23	46	621	9022501
1130001002000	WRT 30	30,2	30,2											585	
1135001002000	WRT 35	35,2	35,2	60	60	60	75	196	99	40	57	30	57	1148	9022801
1140001002000	WRT 40	40,2	40,2											1104	



### WVT - Industrial design

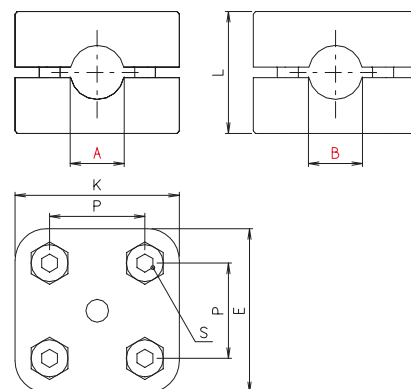
Code No.	Type	A	B	C	D	E	G	L	M	Q	R	T	U	m [g]	Clamping lever S Code No.
1125001102000	WVT 25	25,3	25,3	46	45	45	62	154	77	31,5	46	22,5	46	601	9022501
1130001102000	WVT 30	30,3	30,3											549	
1135001102000	WVT 35	35,4	35,4	60	60	60	75	196	99	40	57	30	57	1084	9022801
1140001102000	WVT 40	40,4	40,4											1044	

## Solid Clamps

# Angle clamps

### Order instruction:

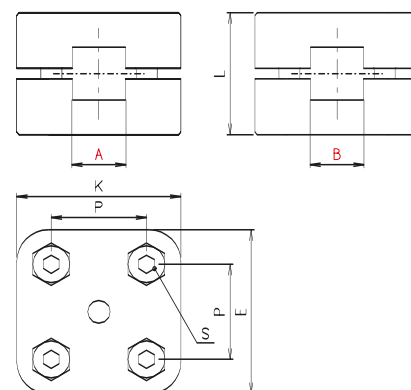
- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244
- Stainless steel screws
- Ball-polished
- Colour



### RRW - Block form

[mm]

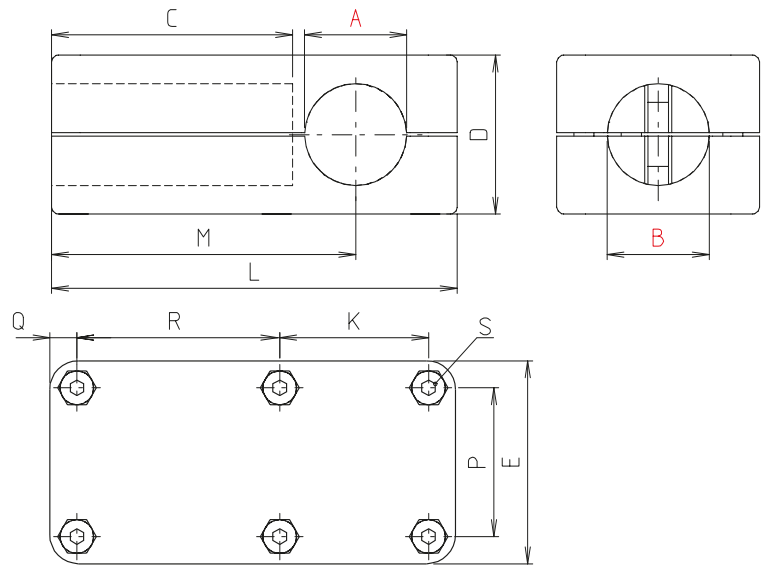
Code No.	Type	A	B	E	K	L	P	S	m [g]
290800040266	RRW 8	8	8	31	31	23	18	M4x18	47
291000040266	RRW 10	10	10						46



### VVW - Block form

[mm]

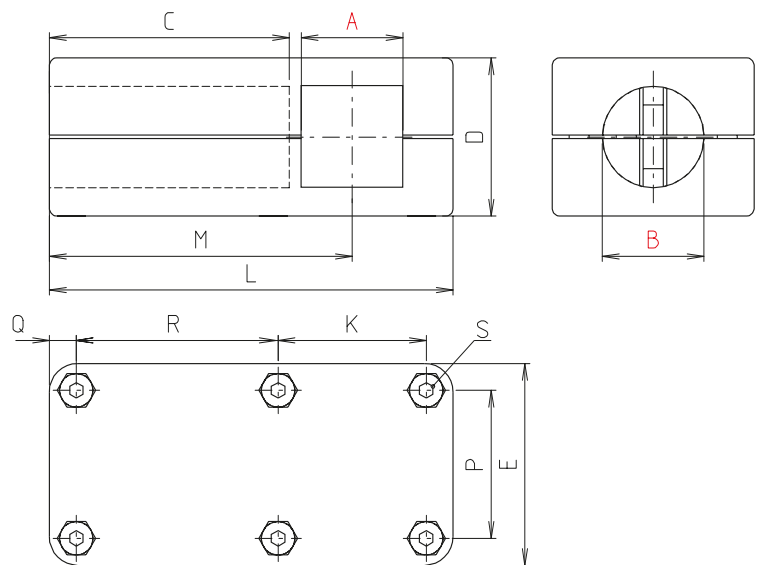
Code No.	Type	A	B	E	K	L	P	S	m [g]
291000050266	VVW 10	10	10	31	31	23	18	M4x18	42



### WR - Block form

[mm]

Code No.	Type	A	B	C	D	E	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
213000030266	WR 30	30,2	30,2	60	48	60	44	120	90	44	8	60	499	9021401
213500030266	WR 35	35,3	35,3	70	62	70	53	140	105	53	9	70	782	9021601
214000030266	WR 40	40,2	40,2										750	
214200030266	WR 42	42,3	42,3	86	79	86	70	161	118	65	11		1579	9022901
214500030266	WR 45	45,3	45,3	86	79	86	70	161		65	11		1535	
214800030266	WR 48	48,3	48,3										1528	
215000030266	WR 50	50,3	50,3						1490					
216000030266	WR 60	60,4	60,4	100	90	100	84	190	140	78	11	84	2015	9023001
218000030266	WR 80	80,5	80,5	130	122	130	100	260	195	115	15	115	5030	9024601



### WVR - Block form

[mm]

Code No.	Type	A	B	C	D	E	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
215000150266	WVR 50	50,3	50,3	86	79	86	70	161	118	65	11	70	1410	9022901
216000150266	WVR 60	60,4	60,4	100	90	100	84	190	140	78	11	84	1920	9023001

## Solid Clamps

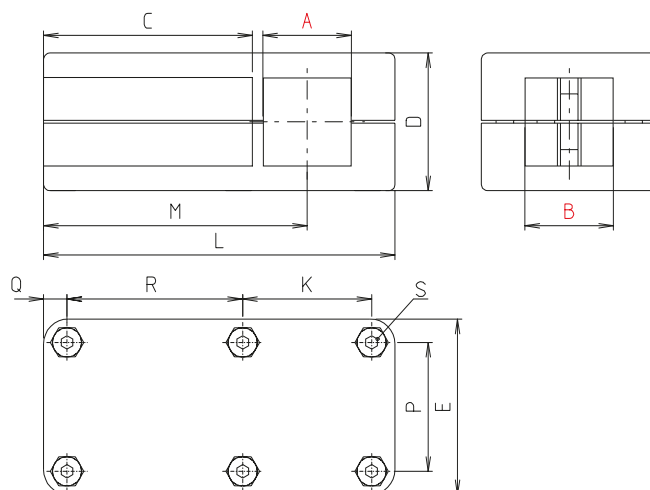
# Angle clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

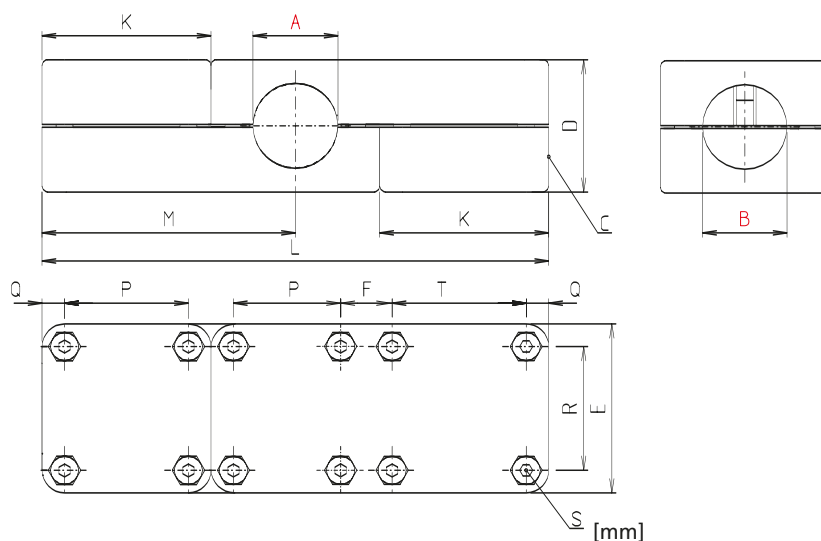
### On request:

- Stainless steel screws
- Ball-polished
- Colour



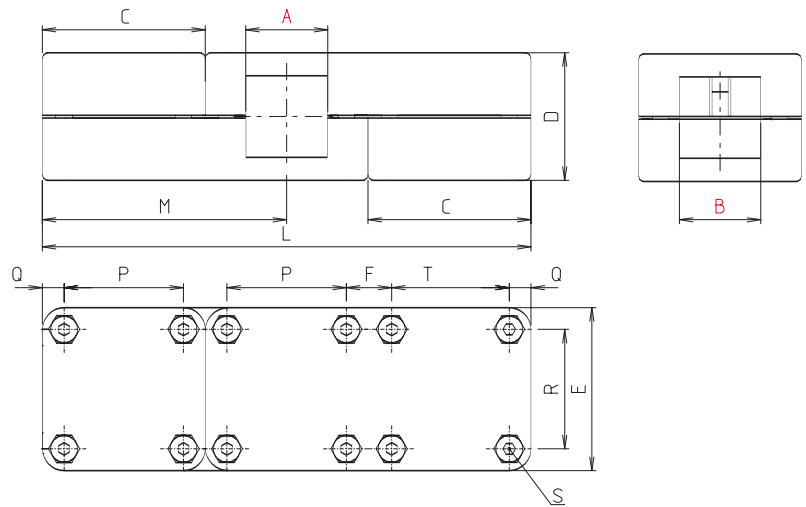
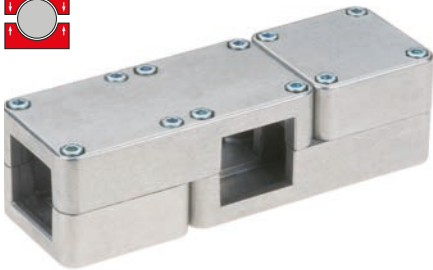
### WV - Block form

Code No.	Type	A	B	C	D	E	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
213000050266	WV 30	30,3	30,3	60	48	60	44	120	90	44	8	60	482	9021401
213500050266	WV 35	35,4	35,4	70	62	70	53	140	105	53	9	70	765	9021601
214000050266	WV 40	40,4	40,4										716	
215000050266	WV 50	50,5	50,5	86	79	86	70	161	118	65	11	70	1406	9022901
216000050266	WV 60	60,6	60,6	100	90	100	84	190	140	78		84	1925	9023001
218000050266	WV 80	80,7	80,7	130	122	130	115	260	195	100	15	115	4680	9024601



### WRT - Block form

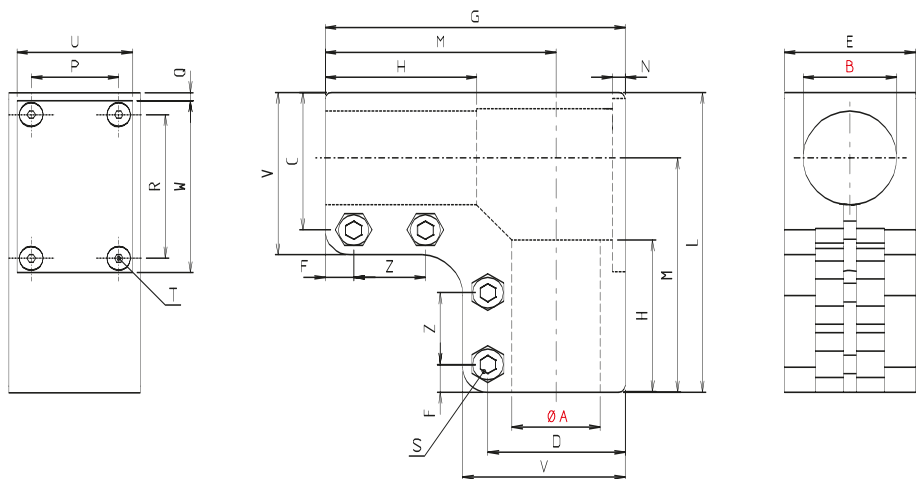
Code No.	Type	A	B	C	D	E	F	K	L	M	P	Q	R	T	m [g]	Clamping lever S Code No.
213000100266	WRT 30	30,2	30,2	30	48	60	15	60	180	90	44	8	44	44	753	9021401
214000100266	WRT 40	40,2	40,2	40	62	70	0	70	210	105	53	9	53	53	1151	9021601



### WVT - Block form

[mm]

Code No.	Type	A	B	C	D	E	F	L	M	P	Q	R	T	m [g]	Clamping lever S Code No.
2130001102666	WVT 30	30,3	30,3	60	48	60	15	180	90	44	8	44	44	732	9021401
2140001102666	WVT 40	40,4	40,4	70	62	70	0	210	105	53	9	53	53	1080	9021601



### WK - Block form

[mm]

Code No.	Type	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	R	U	V	W	Z	T	m [g]	Clamping lever S Code No.
213000090266	WK 30	30,1	30,1	44	44	42	9	96	48	48	96	75	1	28	2,5	46	37	52	55	32	M4x6	449	9021301
214000090266	WK 40	40,2	40,2	70	70	54	12	128	65	65	128	100	2,5	38		61	49	70	74	43		1008	9022501
214800090266	WK 48	48,2	48,2	70	70	65	12	148	75	75	148	115	2,5	49	2,5	71	60	80	84	58	M4x6	1533	9022701
215000090266	WK 50	50,2	50,2																			1474	9022801
216000090266	WK 60	60,3	60,3	80	80	80	25	170	110	110	170	130	4	-	-	-	-	80	-	0	-	2232	9024501

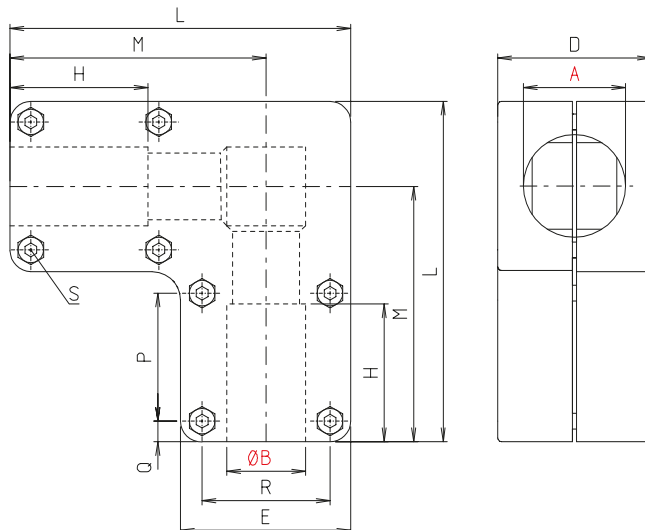
## Solid Clamps

# Angle clamps

### Order instruction:

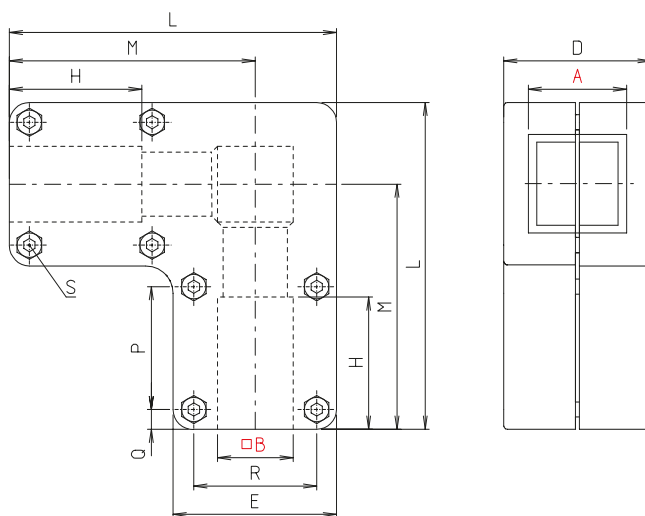
- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

- Stainless steel screws
- Ball-polished
- Colour



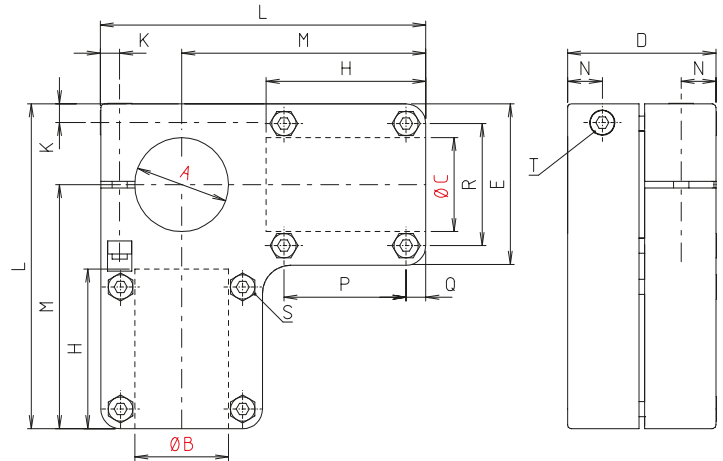
### WKR - Block form

Code No.	Type	A	B	D	E	H	L	M	P	Q	R	m [g]	Clamping lever S Code No.
213200010266	WKR 32	32,2	32,2	62	70	70	141	106	53	8,5	53	1667	9021601
213500010266	WKR 35	35,2	35,2									1328	
214000010266	WKR 40	40,2	40,2									1230	
214200010266	WKR 42	42,3	42,3	76	86	85	173	130	65	10,5	65	2639	9022901
214800010266	WKR 48	48,3	48,3									2595	
215000010266	WKR 50	50,3	50,3									2380	



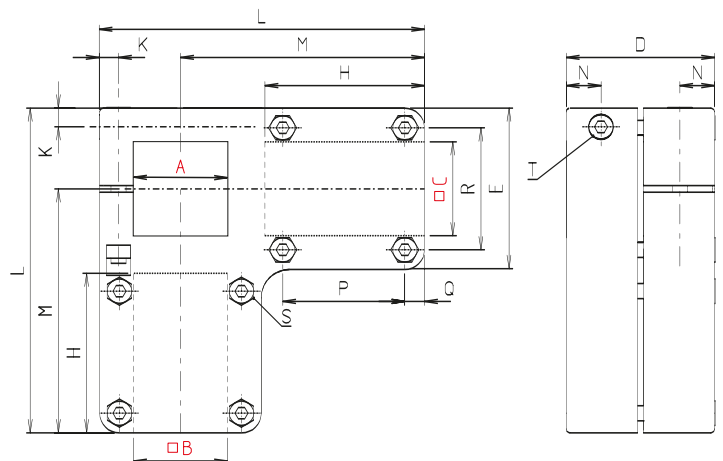
### WKV - Block form

Code No.	Type	A	B	D	E	H	L	M	P	Q	R	m [g]	Clamping lever S Code No.
213500020266	WKV 35	35,4	35,4	62	70	70	141	106	53	8,5	53	1258	9021601
214000020266	WKV 40	40,4	40,4									1192	
215000020266	WKV 50	50,5	50,5	76	86	95	173	130	65	10,5	65	2320	9022901



### WER - Block form

Code No.	Type	A	B	C	D	E	H	K	L	M	N	P	Q	R	m [g]	S	T
																Clamping lever Code No.	
2132000702666	WER 32	32,2	32,2	32	62	70	70	9	141	106	16	53	8,5	53	1448	9021601	9021601
2135000702666	WER 35	35,2	35,2	35													
2140000702666	WER 40	40,2	40,2	40													
2148000702666	WER 48	48,2	48,3	48	76	86	85	10	173	130	19	65	11	65	2644	9022901	9022901
2150000702666	WER 50	50,2	50,3	50													



### WEV - Block form

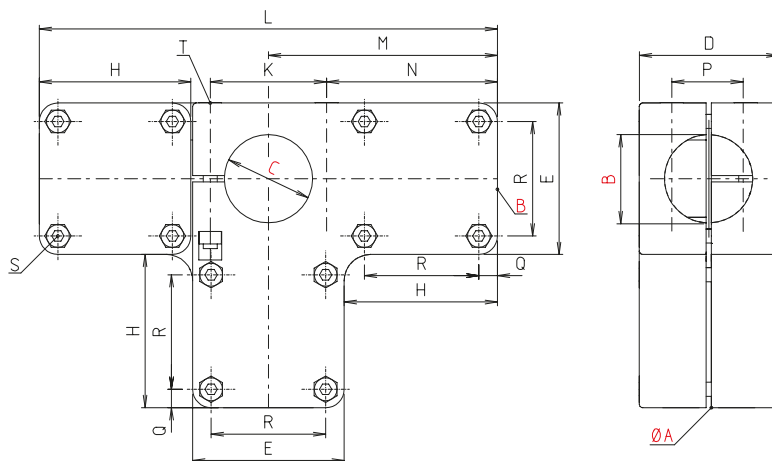
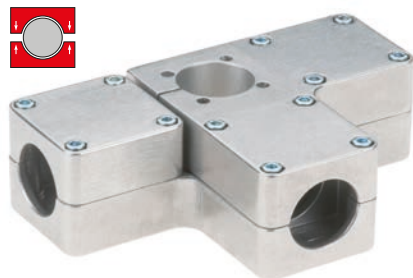
Code No.	Type	A	B	C	D	E	H	L	M	P	Q	R	m [g]	S	T
														Clamping lever Code No.	
2135000802666	WEV 35	35,4	35,4	35	62	70	70	141	106	53	9	53	1286	9021601	9021601
2140000802666	WEV 40	40,4	40,4	40											
2150000802666	WEV 50	50,5	50,5	51											

## Solid Clamps

# Angle clamps

### Order instruction:

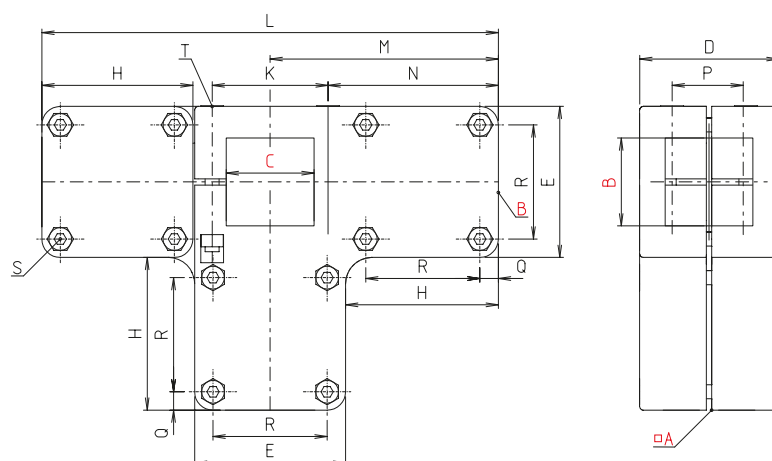
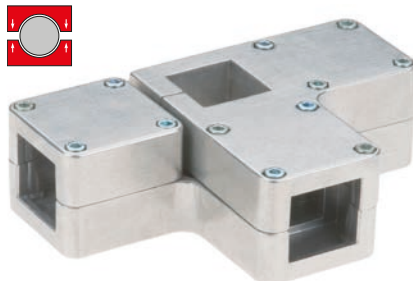
- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244
- Stainless steel screws
- Ball-polished
- Colour



## WERT - Block form

[mm]

Code No.	Type	A	B	C	D	E	H	K	L	M	N	P	Q	R	m [g]	Clamping lever S Code No.
2132001202666	WERT 32	32,2	32,2	32	62	70	70	53	212	106	80	33,5	8,5	53	1864	9021601
2135001202666	WERT 35	35,2	35,2	35											1738	
2140001202666	WERT 40	40,2	40,2	40											1678	
2148001202666	WERT 48	48,3	48,3	48	76	86	86	66	260	130	97	41	10,5	65	3512	9022901
2150001202666	WERT 50	50,3	50,3	50											3360	



## WEVT - Block form

[mm]

Code No.	Type	A	B	C	D	E	H	K	L	M	N	P	Q	R	m [g]	Clamping lever S Code No.
2135001302666	WEVT 35	35,4	35,4	35	62	70	70	53	212	106	80	33,5	8,5	53	1673	9021601
2140001302666	WEVT 40	40,4	40,4	40											1573	
2150001302666	WEVT 50	50,5	50,5	51	76	86	95	66	260	130	97	41	10,5	65	3100	9022901



## Solid Clamps

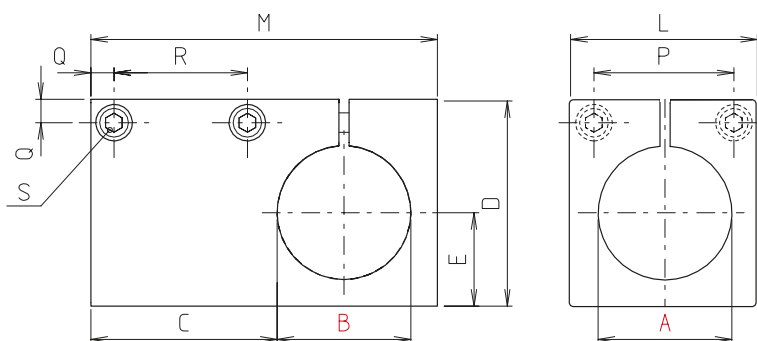
# Angle clamps

### Order instruction:

- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

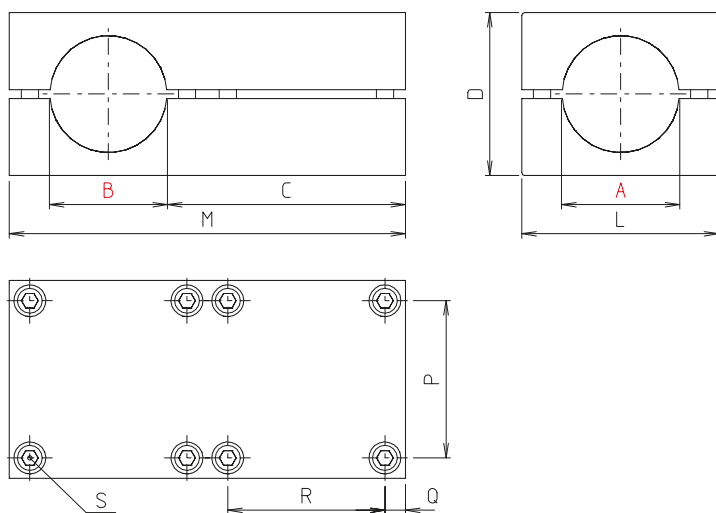
### On request quad®:

- Black anodized



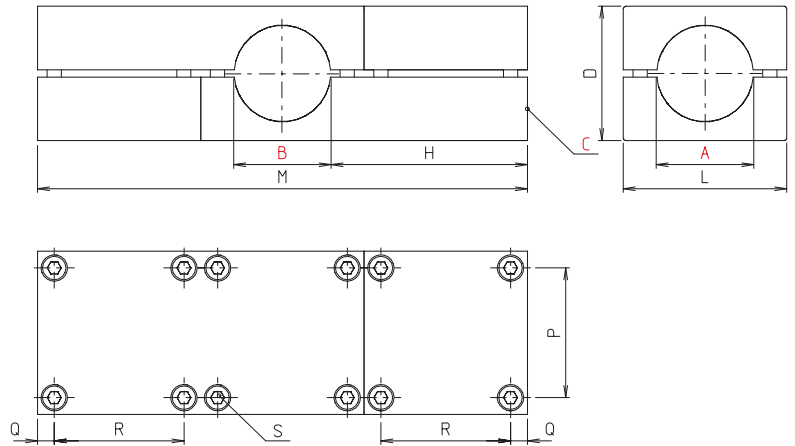
### W - quad®

Code No.	Type	A	B	C	D	E	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000000300	W 30	30,1	30,1	42	49	21	42	78	28	7	26	251	9300101
514000000300	W 40	40,1	40,1	56	62	28	56	104	42	7	40	544	9301401



### WR - quad®

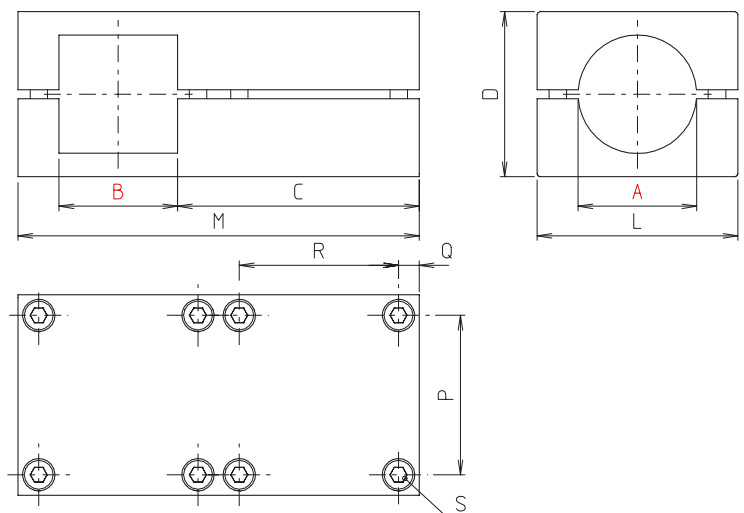
Code No.	Type	A	B	C	D	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000030300	WR 30	30,1	30,1	69	42	56	112	42	7	42	450	9300101
514000030300	WR 40	40,2	40,2	82	56	68	136	54	7	54	812	9301401
515000030300	WR 50	50,3	50,3	102	70	85	170	67	9	67	1633	9300401
516000030300	WR 60	60,3	60,3	127	97	105	210	85	10	85	-	9022801



## WRT - quad®

[mm]

Code No.	Type	A	B	C	D	H	L	M	P	Q	R	m [g]	Clamping lever S Code No.
5130001003000	WRT 30	30,1	30,1	30,1	42	69	56	168	42	7	42	702	9300101
5140001003000	WRT 40	40,2	40,2	40,2	56	82	68	204	54	7	54	1257	9301401
5150001003000	WRT 50	50,3	50,3	50,3	70	102	85	255	67	9	67	2563	9300401



## WVR - quad®

[mm]

Code No.	Type	A	B	C	D	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000150300	WVR 30	30,2	30,1	69	42	56	112	42	7	42	430	9300101
514000150300	WVR 40	40,3	40,2	82	56	68	136	54	7	54	772	9301401
515000150300	WVR 50	50,4	50,3	102	70	85	170	67	9	67	1580	9300401

## Solid Clamps

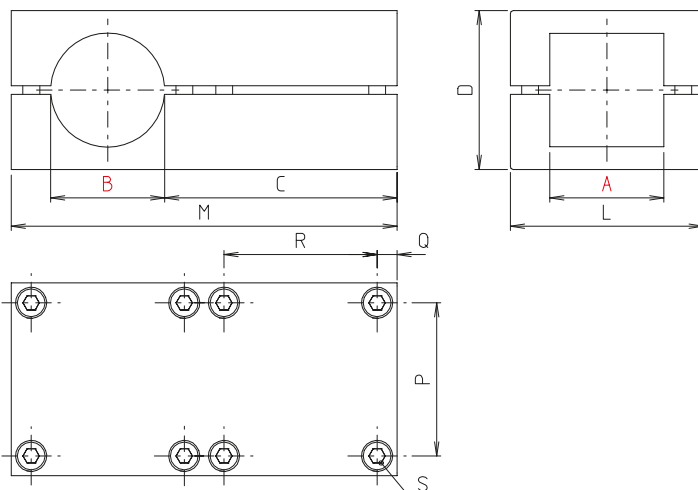
# Angle clamps

### Order instruction:

- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled  
See table last column and page 244

### On request quad®:

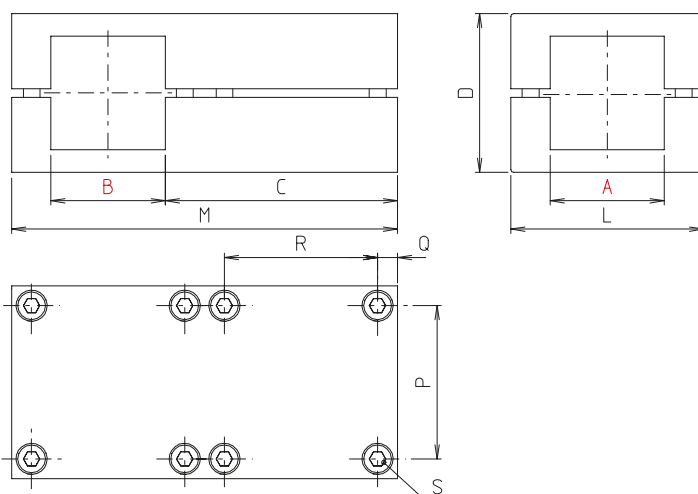
- Black anodized



### WRV - quad®

[mm]

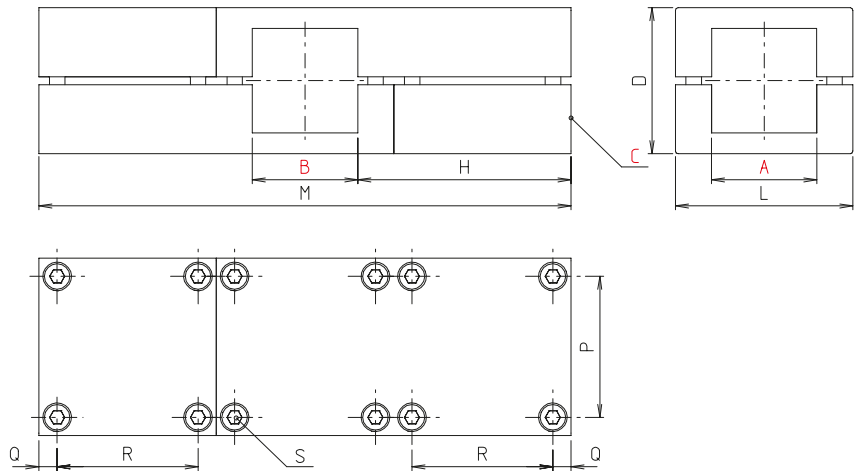
Code No.	Type	A	B	C	D	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000140300	WRV 30	30,1	30,2	69	42	56	112	42	7	42	400	9300101
514000140300	WRV 40	40,2	40,3	82	56	68	136	54	7	54	702	9301401
515000140300	WRV 50	50,3	50,4	102	70	85	170	67	9	67	1412	9300401
516000140300	WRV 60	60,3	60,3	127	97	105	210	85	10	85	-	9022801



### WV - quad®

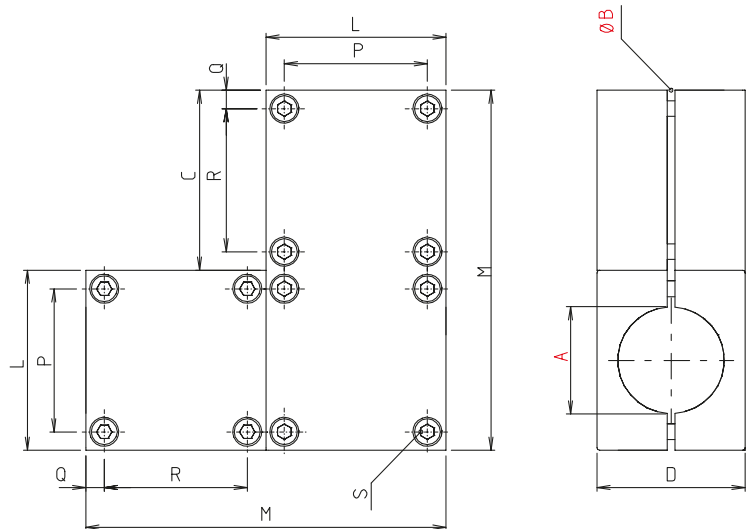
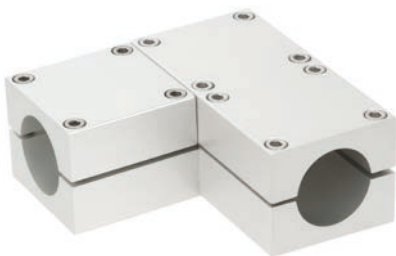
[mm]

Code No.	Type	A	B	C	D	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000050300	WV 30	30,2	30,2	69	42	56	112	42	7	42	387	9300101
514000050300	WV 40	40,3	40,3	82	56	68	136	54	7	54	693	9301401
515000050300	WV 50	50,4	50,4	102	70	85	170	67	9	67	1370	9300401
516000050300	WV 60	60,4	60,4	127	97	105	210	85	10	85	-	9022801
518000050300	WV 80	80,4	80,4	149	112	126	252	100	13	100	4200	9300801


**WVT - quad®**

[mm]

Code No.	Type	A	B	C	D	H	L	M	P	Q	R	m [g]	Clamping lever S Code No.
5130001103000	WVT 30	30,2	30,2	30,2	42	69	56	168	42	7	42	667	9300101
5140001103000	WVT 40	40,3	40,3	40,3	56	82	68	204	54	7	54	1168	9301401
5150001103000	WVT 50	50,4	50,4	50,4	70	102	85	255	67	9	67	2155	9300401
5180001103000	WVT 80	80,4	80,4	80,4	112	159	126	378	100	13	100	6782	9300801


**WKR - quad®**

[mm]

Code No.	Type	A	B	C	D	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000010300	WKR 30	30,1	30,1	56	42	56	112	42	7	42	702	9300101
514000010300	WKR 40	40,2	40,2	68	56	68	136	54	7	54	1257	9301401
515000010300	WKR 50	50,3	50,3	85	70	85	170	67	9	67	2563	9300401

## Solid Clamps

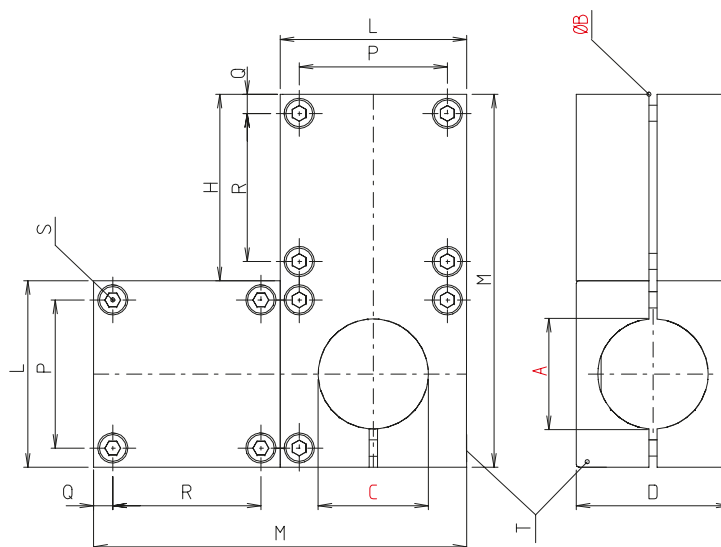
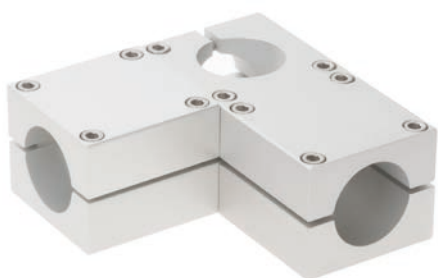
# Angle clamps

### Order instruction:

- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request quad®:

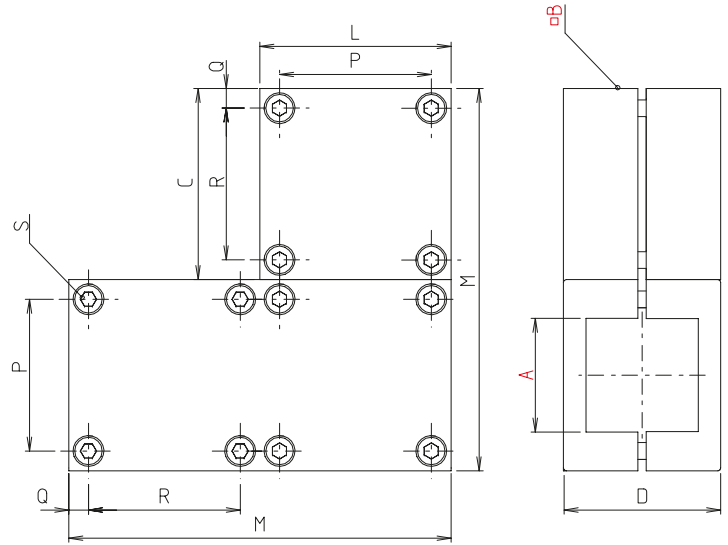
- Black anodized



## WER - quad®

[mm]

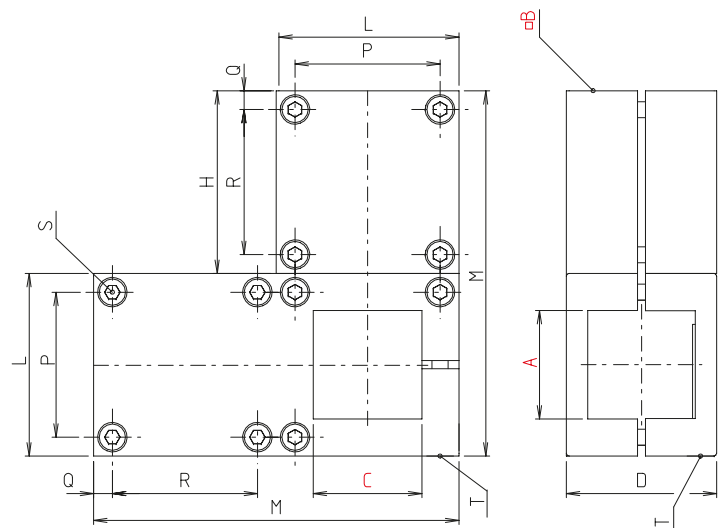
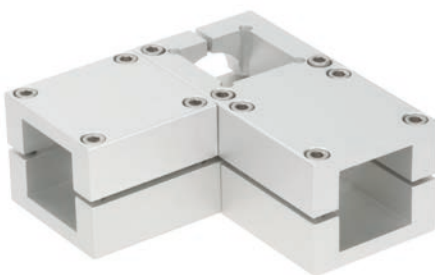
Code No.	Type	A	B	C	D	H	L	M	P	Q	R	m [g]	S	T
													Clamping lever Code No.	
5130000703000	WER 30	30,1	30,1	30,1	42	56	56	112	42	7	42	725	9300101	9300101
5140000703000	WER 40	40,2	40,2	40,2	56	68	68	136	54	7	54	1311	9301401	9301401
5150000703000	WER 50	50,3	50,3	50,3	70	85	85	170	67	9	67	2627	9300401	902161



### WKV - quad®

[mm]

Code No.	Type	A	B	C	D	L	M	P	Q	R	m [g]	Clamping lever S Code No.
513000020300	WKV 30	30,2	30,2	56	42	56	112	42	7	42	634	9300101
514000020300	WKV 40	40,3	40,3	68	56	68	136	54	7	54	1133	9301401
515000020300	WKV 50	50,4	50,4	85	70	85	170	67	9	67	2274	9300401



### WEV - quad®

[mm]

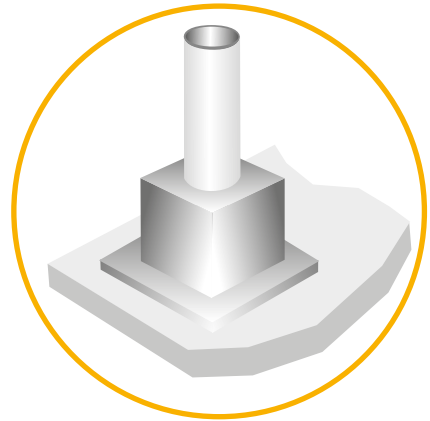
Code No.	Type	A	B	C	D	H	L	M	P	Q	R	m [g]	S	T
													Clamping lever Code No.	
5130000803000	WEV 30	30,2	30,2	30,2	42	56	56	112	42	7	42	634	9300101	9300101
5140000803000	WEV 40	40,3	40,3	40,3	56	68	68	136	54	7	54	1133	9301401	9301401
5150000803000	WEV 50	50,4	50,4	50,4	70	85	85	170	67	9	67	2274	9300401	902161

**Solid Clamps**

**Base clamps**

Version:

- Base clamps



Single-piece elements

- For the quick and inexpensive installation



**Industrial design**

- Cast aluminium
- Great variety
- Single-piece elements

**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements

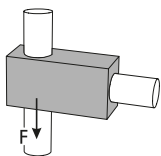
**Block form**

- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements

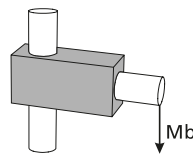
## Loads base clamps

### Attention!

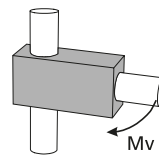
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

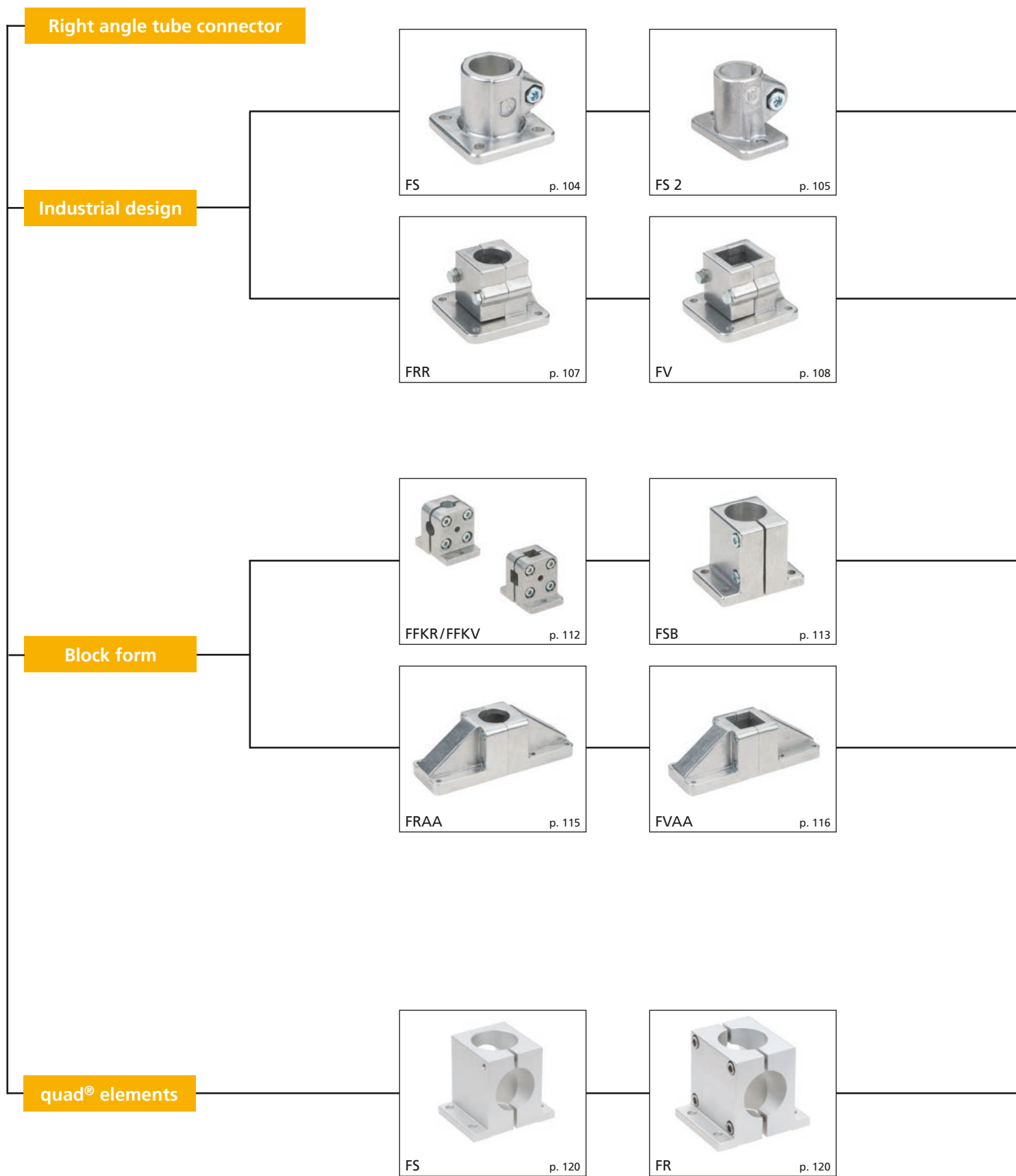
Size	18			30			40			50			60			80		
Type	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
FS				5,7	302	87	7,5	418	121	8,7	1375	150	16	1250	374			
FR							4,5	738	96	5,4	1395	207						
FV				5,6	125	296	2,9	290	623									
FRR				6,7	555	108	5,9	743	91									
FRA										5	600	250	12	1297	256			
FVA										5,9	1015	726	8	1750	1155			
FRAA										7,7	971	257	12	1750	263			

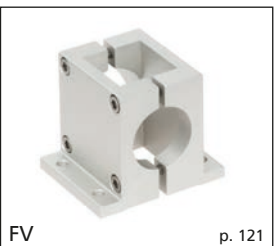
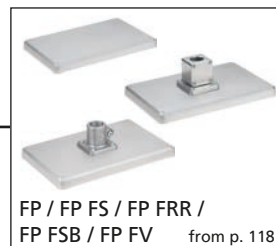
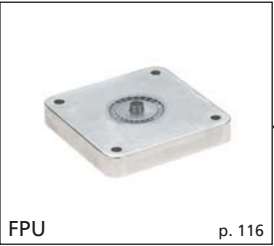
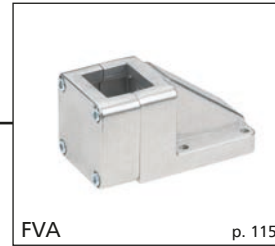
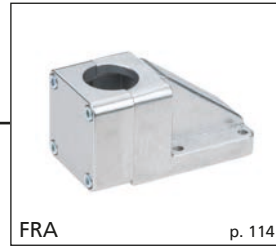
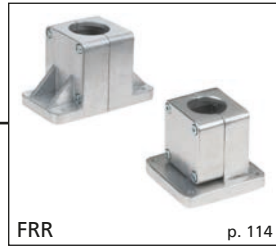
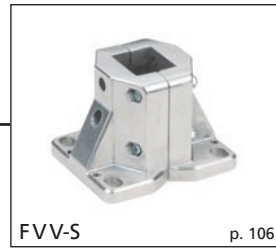
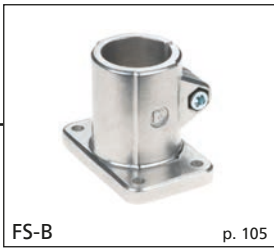
Size	18			30			40			50			60			80		
Type	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
FV				3,0	441	213	3,1	811	855	5,9	600	726				18	2125	2250
FRR				4,5	433	80	5,7	838	58	7,7	600	257				10	2250	692

Size	18			30			40			50			60			80		
Type	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
quad® elements																		
FS	2,1	418	39	3,9	703	81	5,8	1960	118									
FR	5,6	548	65	7,4	744	121	11,5	1960	272	21,5		950						
FV	3,2	541	338	7,1	881	540	7,5	1960	50	20,1								

# Solid Clamps

## Base clamps





## Solid Clamps

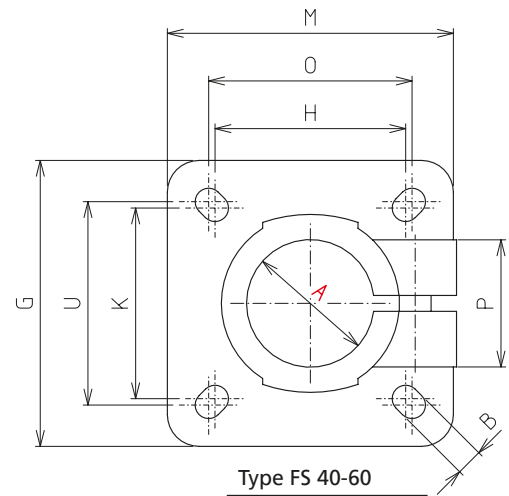
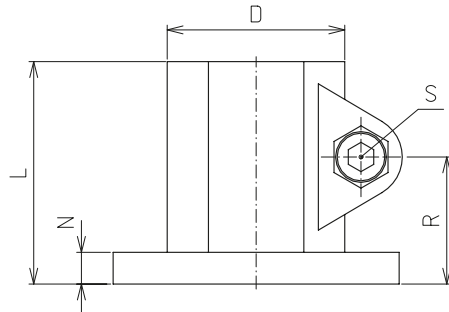
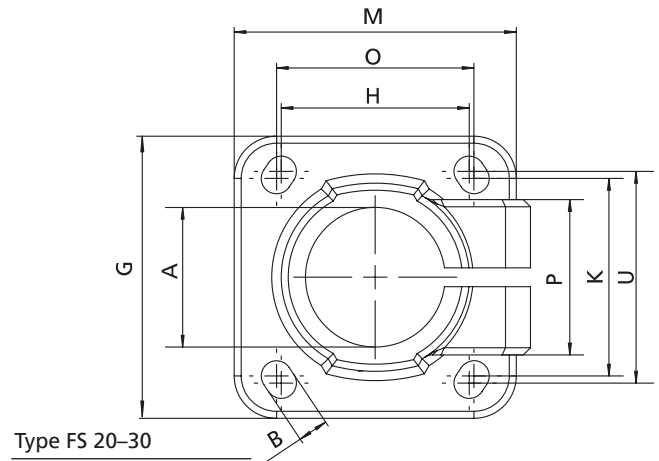
# Base clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

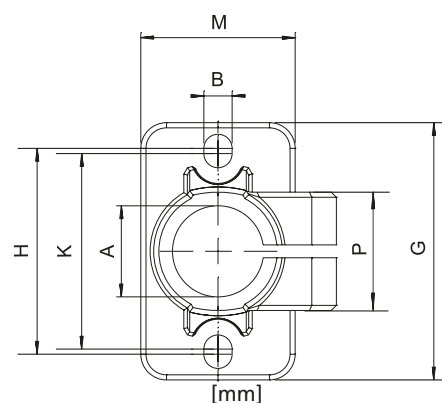
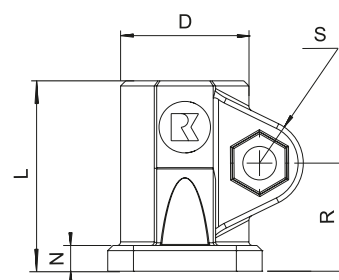
- Stainless steel screws
- Ball-polished
- Colour



## FS - Industrial design

Code No.	Type	A	B	D	G	H	K	L	M	N	O	P	R	U	[mm]	Clamping lever S Code No.
13120000020	FS 12	12,1	6	25	42	28	28	37	42	5	30	23	21	30	65	90209
13140000020	FS 14	14,1													61	
13150000020	FS 15	15,1													58	
13160000020	FS 16	16,1													57	
13180000020	FS 18	18,1													52	
13200000020	FS 20	20,1	7	40	60	40	42	50	60	8	42	33	29	45	186	9022201
13250000020	FS 25	25,1													164	
	FS 28*	*With adapter sleeve R28, see accessories page 245														
13300000020	FS 30	30,1	7	40	60	40	42	50	60	8	42	33	29	45	137	9022201
13320000020	FS 32	32,17	9	56	90	60	60	70	90	10	64	40	40	64	465	90250
13300200020	FS 30(32)	30,1													465	
13350000020	FS 35	35,17													450	
13400000020	FS 40	40,17													385	
13400200020	FS 40(42)	40,17	11	66	105	74	74	85	105	14	80	45	49,5	80	758	90251
13420000020	FS 42	42,22													720	
13480000020	FS 48	48,22													636	
13500000020	FS 50	50,22													603	
13600000020	FS 60	60,27	11	80	120	80	80	100	120	15	89	58	57,5	89	935	9025301
13800000020	FS 80**	80,35	17,5	110	170	120	120	141,4	174,5	22	-	82	119	-	2770	9027001

\*\*Type FS 80 with round hole



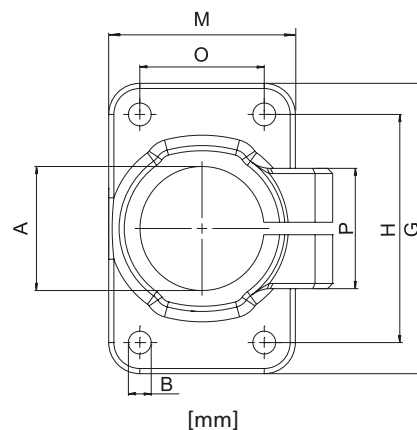
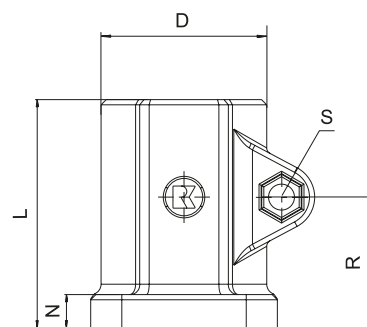
### FS 2 - Industrial design

Code No.	Type	A	B	D	G	H	K	L	M	N	P	R	m [g]	Clamping lever S Code No.
13120300020	FS 12-2	12,1	5,5	25	50	40	38	37	30	5	23	21	65	90209
13140300020	FS 14-2	14,1											61	
13150300020	FS 15-2	15,1											58	
13160300020	FS 16-2	16,1											57	
13180300020	FS 18-2	18,1											52	



### FS-B - Industrial design

Code No.	Type	A	B	D	G	H	L	M	N	O	P	R	m [g]	Clamping lever S Code No.
13600200020	FS-B 60	60,27	11	80	140	110	110	90	16	60	58	63	920	9025301



## Solid Clamps

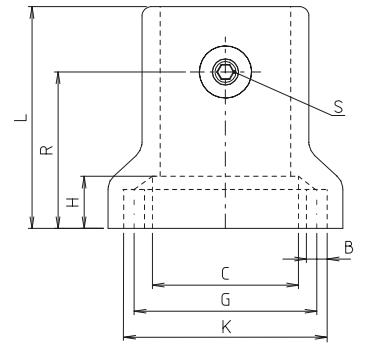
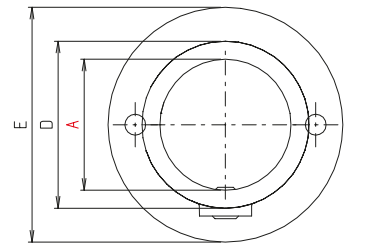
# Base clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

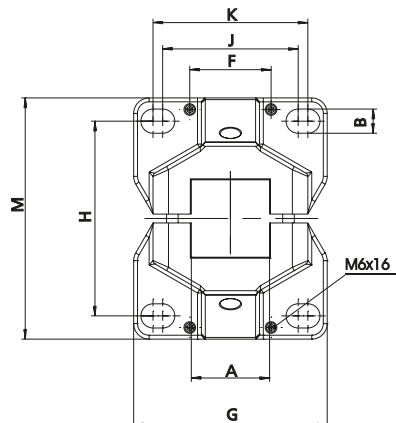
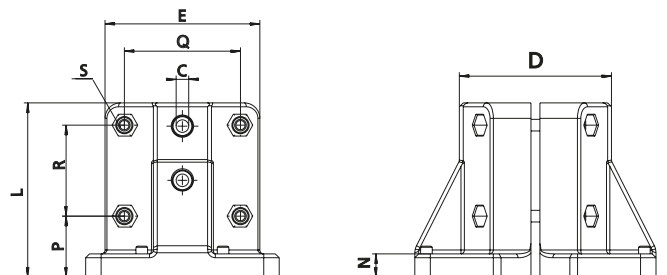
### On request:

- Stainless steel screws
- Ball-polished
- Colour



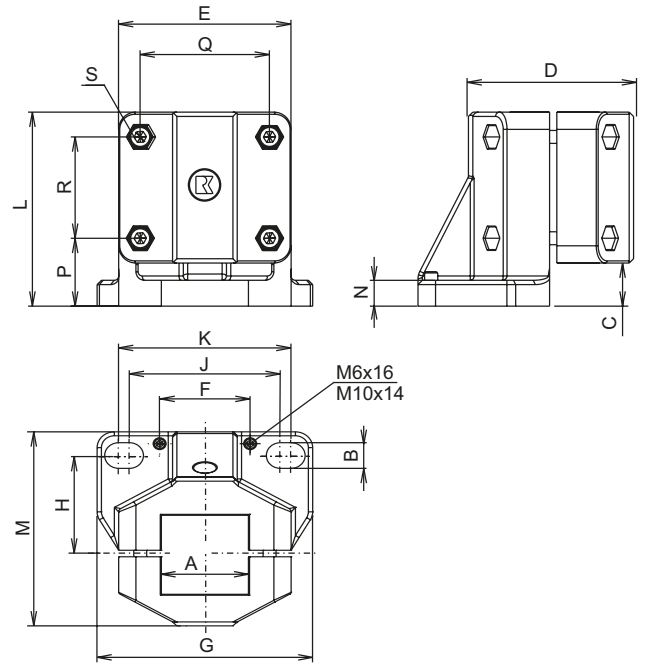
### FR - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	R	m [g]	Clamping lever S Code No.
13400009020	FR 40	40,2	M8	56	64	90	69	20	77	85	60	474	9024101
13500009020	FR 50	50,2	M8	56	64	90	69	20	77	85	60	359	9024101



### FVV-S - Industrial design

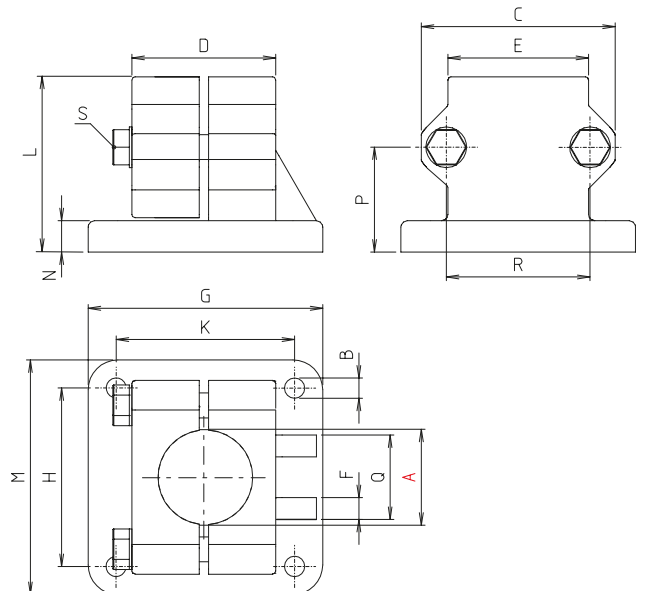
Code No.	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	S	m [g]
4014312	FVV-S 40	40,4	12,5	7	79	80	42	100	100	70	80	90	125	12	31,5	60	M6x45	805



### FVV-D - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	m [g]
4014313	FVV-D 40	40,4	12,5	20	75	80	42	100	50	70	80	90	98	12	31,5	60	47	M6x45	633



### FRR - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	R	m [g]	Clamping lever S Code No.
13250003020	FRR 25	25,2	7	62	45	45	5	75	57	57	56	75	10	33,5	25	46	303	9022501
13300003020	FRR 30	30,2															287	
13350003020	FRR 35	35,2	9	75	60	60	5	100	76	76	71	100	10	43	25	57	612	9022801
13400003020	FRR 40	40,2															597	

## Solid Clamps

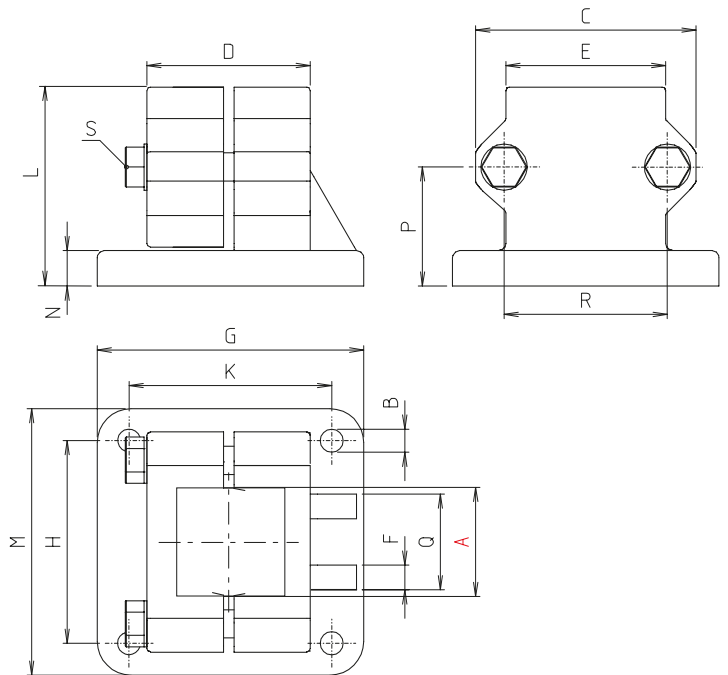
# Base clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour



## FV - Industrial design

Code No.	Type	[mm]															m [g]	Clamping lever S Code No.
		A	B	C	D	E	F	G	H	K	L	M	N	P	Q	R		
13200005020	FV 20	20,5	7	62	45	45	5	75	57	57	56	75	10	33,5	25	46	320	9022501
13250005020	FV 25	25,3															292	
13300005020	FV 30	30,3															278	
13350005020	FV 35	35,4	9	75	60	60	5	100	76	76	73	100	12	43	32	57	587	9022801
13400005020	FV 40	40,4															581	



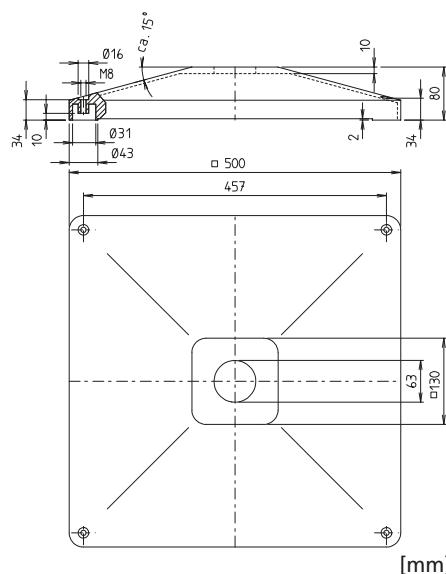
The fitting dimensions are largely adjusted to our profile technology BLOCAN®.

## Solid Clamps

### Base clamps



Plate without base clamp

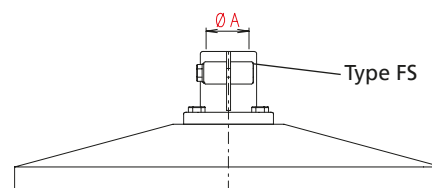


### FP - Industrial design

Code No.	Type	m [g]
130000100_ _ _ _	FP	4440



Plate with base clamp Type FS

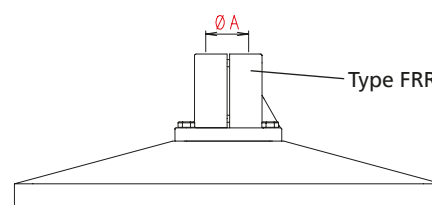


### FP FS - Industrial design

Code No.	Type	A	m [g]
133200120_ _ _ _	FP FS 32	32,15	4946
134000120_ _ _ _	FP FS 40	40,15	4881
134800120_ _ _ _	FP FS 48	48,2	5141
135000120_ _ _ _	FP FS 50	50,2	5111



Plate with base clamp Type FRR

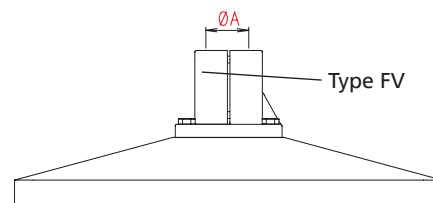


### FP FRR - Industrial design

Code No.	Type	A	m [g]
134000130_ _ _ _	FP FRR 40	40,2	5037
134200130_ _ _ _	FP FRR 42	42,3	5854
134500130_ _ _ _	FP FRR 45	45,3	5799
134800130_ _ _ _	FP FRR 48	48,3	5783
135000130_ _ _ _	FP FRR 50	50,3	579



Plate with base clamp Type FV



### FP FV - Industrial design

[mm]

Code No.	Type	A	m [g]
133500150_	FP FV 35	35,4	5027
134000150_	FP FV 40	40,4	5010

### Code No. +

#### Surface:

- 2 = nature
- A = RAL 7035, light grey
- B = RAL 7030, stone grey
- C = RAL 9005, jet black
- D = RAL 1021, yellow

#### Variants for clamping A:

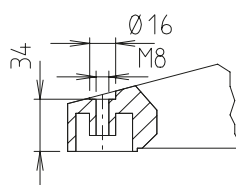
- 0 = screws
- 1 = 1 lever
- 2 = 2 levers
- 3 = 3 levers
- 4 = 4 levers

#### Version:

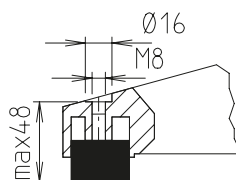
- F = Bore hole

#### Filling:

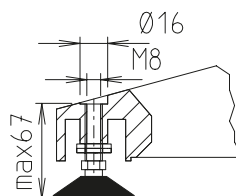
- 0 = without filling dump moment 15 Nm



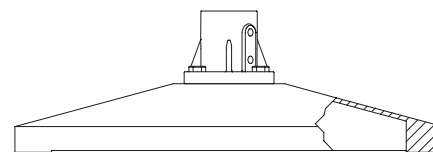
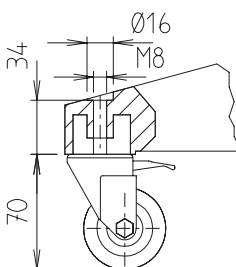
- 2 = Rubber foot



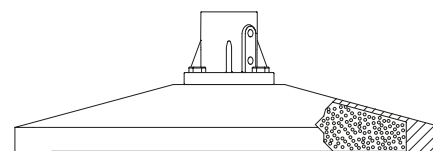
- 3 = Adjustable foot



- 4 = Castor with brake



- X = hollow space with concrete plate (m = 14 kg) dump moment 65 Nm



#### Order example:

Plate FP with base clamp FS 50, ground finish surface, equipped with screws, version with rubber foot, filled with concrete plate

**135000120 2 0 2 X**

## Solid Clamps

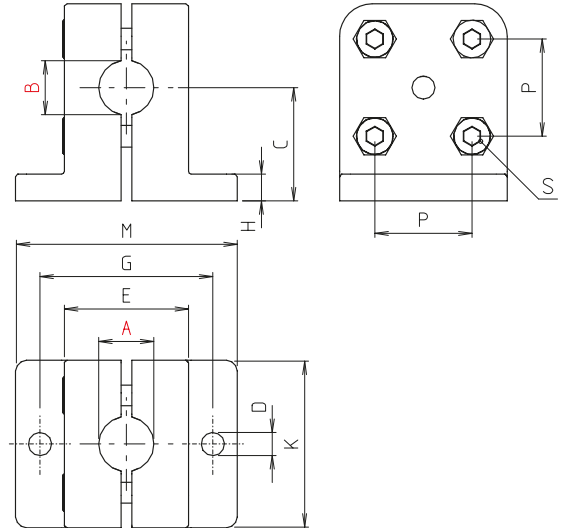
# Base clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

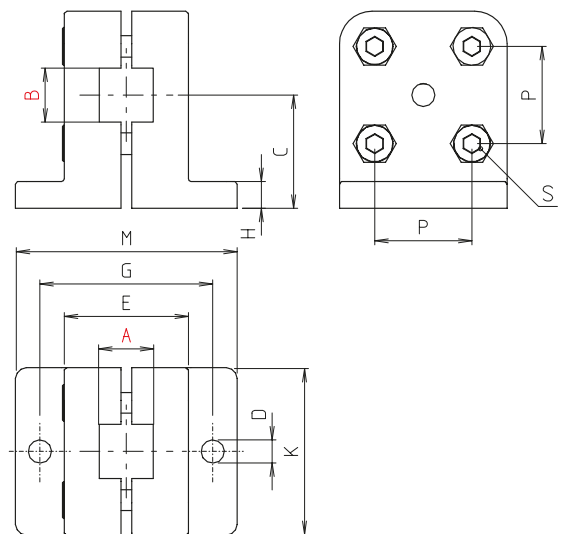
- Stainless steel screws
- Ball-polished
- Colour



### FFKR - Block form

[mm]

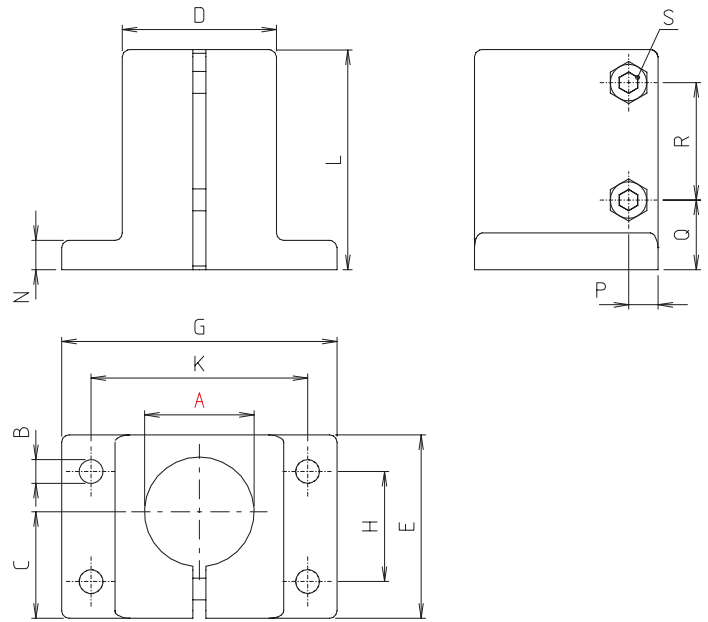
Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	S	m [g]
291000020266	FFKR 10	10	10	21	4	23	32	5	31	36	41	18	M4x18	58



### FFKV - Block form

[mm]

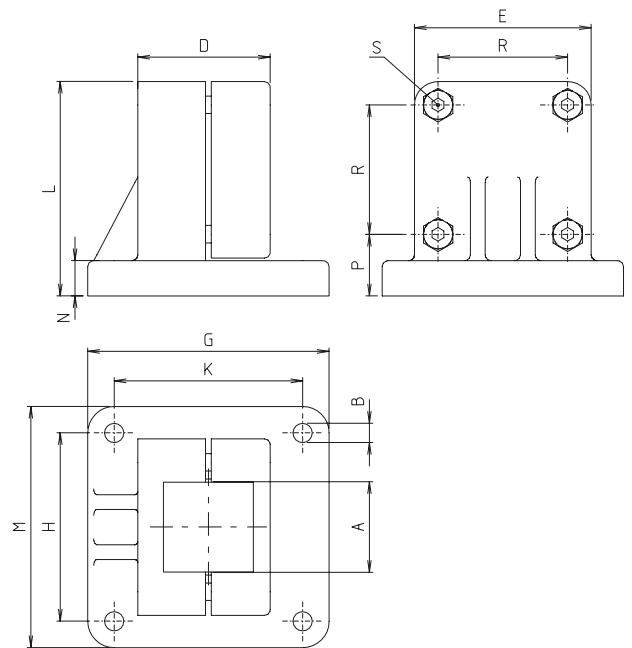
Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	S	m [g]
291000030266	FFKV 10	10	10	21	4	23	32	5	31	36	41	18	M4x18	5



### FSB - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	N	P	Q	R	m [g]	Clamping lever S Code No.
2340000026	FSB 40	40,15	9	38	53	65	92	42	74	75	11	9,5	24	40	500	9022501



### FV - Block form

[mm]

Code No.	Type	A	B	D	E	G	H	K	L	M	N	P	R	m [g]	Clamping lever S Code No.
23300005026	FV 30	30,3	6,5	48	60	82	64	64	73	82	12	21	44	403	9021401
23400005026	FV 40	40,4	6,5	62	70	95	76	76	85	95	14	23,5	53	600	9021601
23500005026	FV 50	50,5	9	79	86	125	98	98	102	125	15	26,5	65	1333	9022901
23800005026	FV 80*	80,7	11	122	130	240	100	190	150	130	20	35	100	3741	9024601

\* With split flange plate

## Solid Clamps

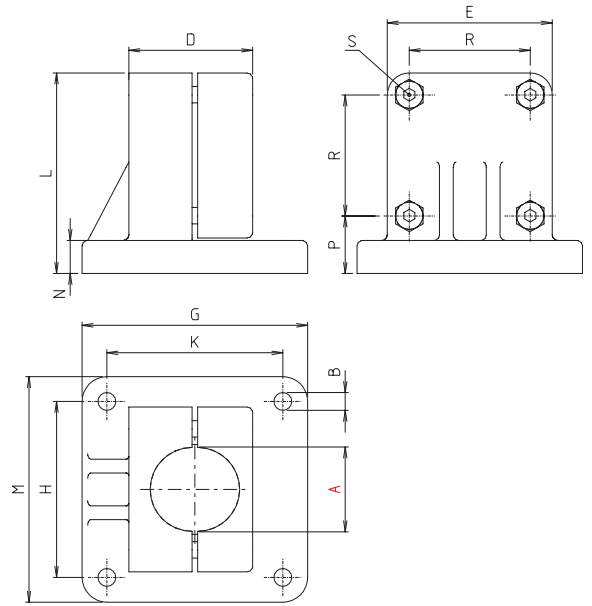
# Base clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

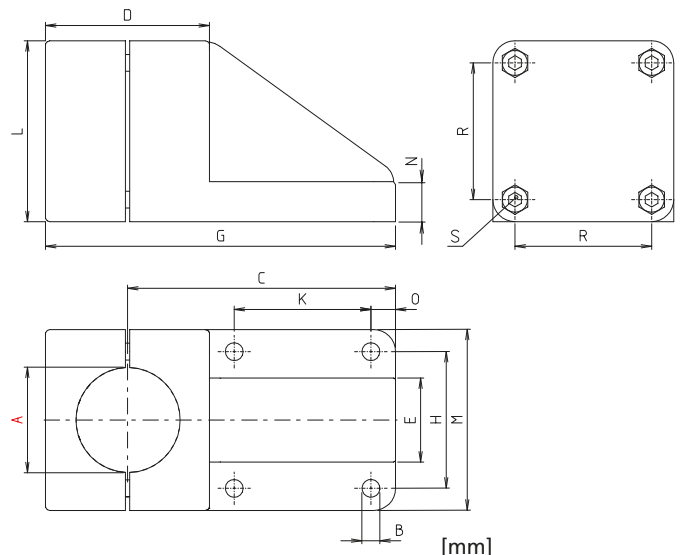


## FRR - Block form

[mm]

Code No.	Type	A	B	D	E	G	H	K	L	M	N	P	R	m [g]	Clamping lever S Code No.
23300003026	FRR 30	30,2	7	48	60	82	64	64	73	82	12	21	44	414	9021601
23400003026	FRR 40	40,2	7	62	70	95	76	76	85	95	14	24	53	613	9021601
23420003026	FRR 42	42,3	9	79	86	125	98	98	102	125	15	27	65	1414	9022901
23450003026	FRR 45	45,3												1359	
23480003026	FRR 48	48,3												1343	
23500003026	FRR 50	50,3												1332	
23800003026	FRR 80*	80,7	11	120	130	240	100	190	150	130	20	35	100	3928	9024601

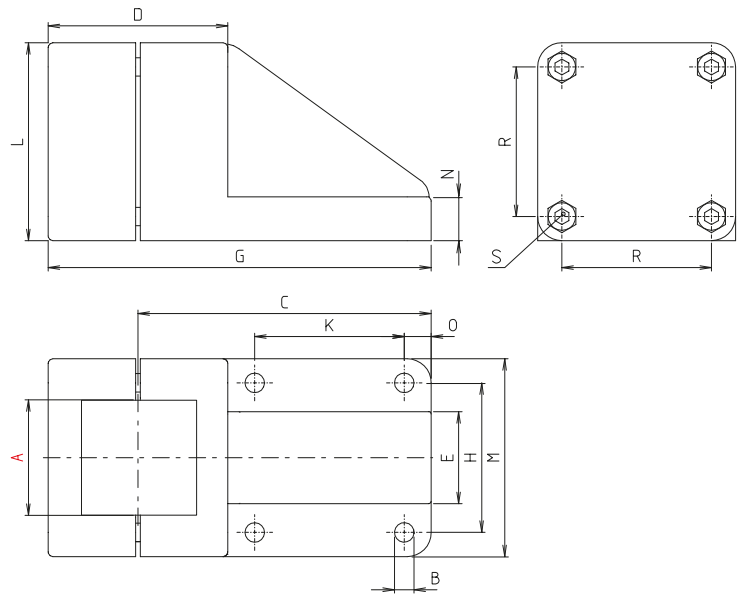
\*With split flange plate



## FRA - Block form

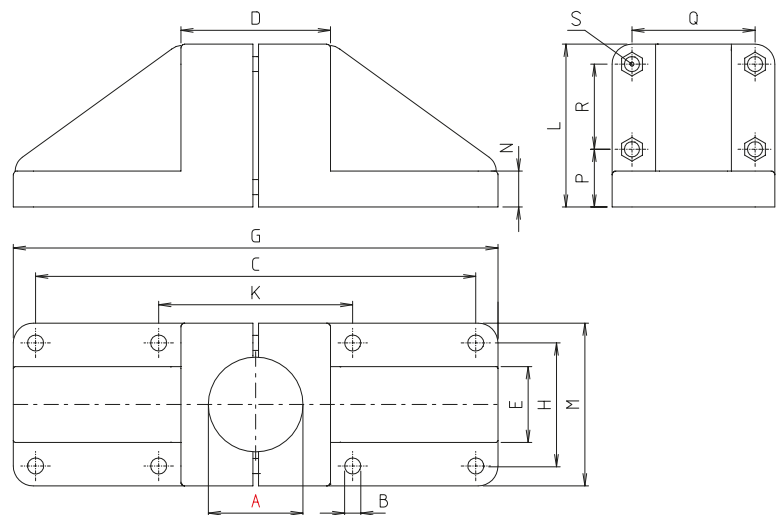
[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	O	R	m [g]	Clamping lever S Code No.
23420002026	FRA 42	42,3	9	128	79	40	167	65	65	86	86	19	10,5	65	1198	9022901
23450002026	FRA 45	45,3													1217	
23480002026	FRA 48	48,3													1231	
23500002026	FRA 50	50,3													1205	
23600002026	FRA 60	60,4	9	147	90	46	192	78	78	100	100	22	11	78	1690	9021401


**FVA - Block form**

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	O	R	m [g]	Clamping lever S Code No.
23500007026	FVA 50	50,5	9	127,5	79	40	167	65	65	86	86	19	10,5	65	1146	9022901
23600007026	FVA 60	60,6	9	147	90	46	192	78	78	100	100	22	11	78	1635	9023001


**FRAA - Block form**

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	P	Q	R	m [g]	Clamping lever S Code No.
23420016026	FRAA 42	42,3	9	235	79	40	256	65	105	86	86	19	28,5	65	47	1570	9022901
23450016026	FRAA 45	45,3														1250	
23480016026	FRAA 48	48,3														1231	
23500016026	FRAA 50	50,3														1518	
23600016026	FRAA 60	60,4	9	272	90	46	294	78	116	100	100	22	30,5	78	58,5	2253	9023001

## Solid Clamps

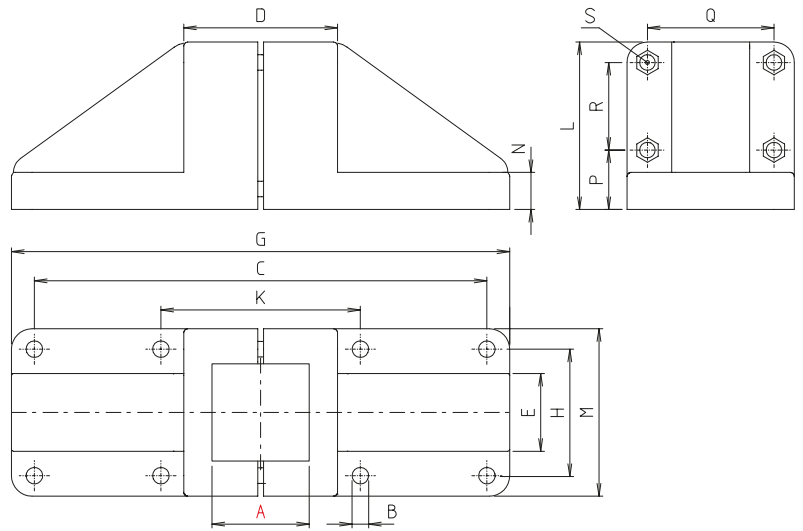
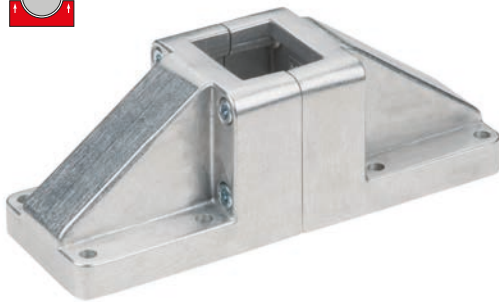
# Base clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

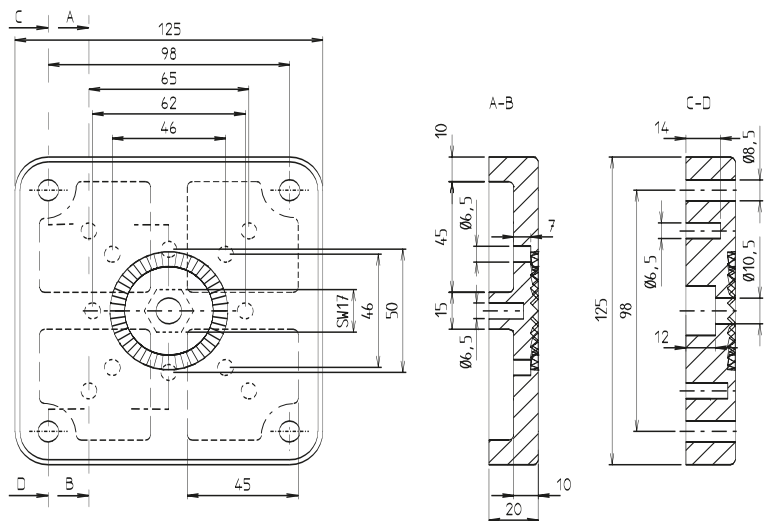
- Stainless steel screws
- Ball-polished
- Colour



## FVAA - Block form

[mm]

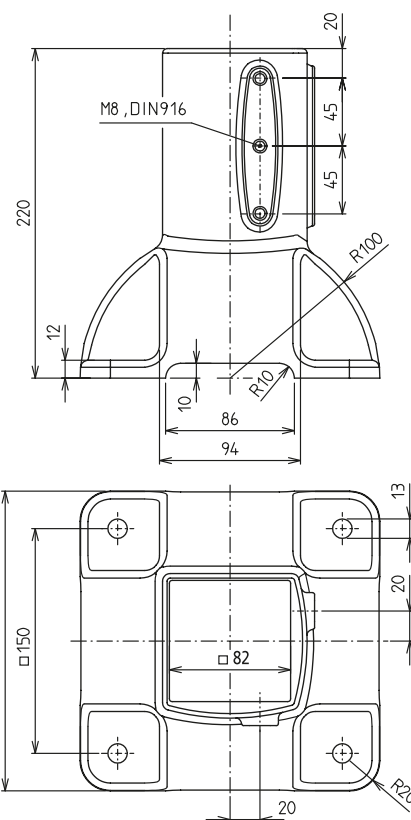
Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	P	Q	R	m [g]	Clamping lever S Code No.
23500017026	FVAA 50	50,5	9	235	79	40	256	65	105	86	86	19	28,5	65	47	1479	9022901
23600017026	FVAA 60	60,6	9	272	90	46	294	78	116	100	100	22	30,5	78	58,5	2220	9023001



## FPU - Block form

[mm]

Code No.	Type	m [g]
2340001902	FPU 40	60



### BAK-80 - Block form

[mm]

Code No.	Type	m [g]
4040501	BAK-80	1880

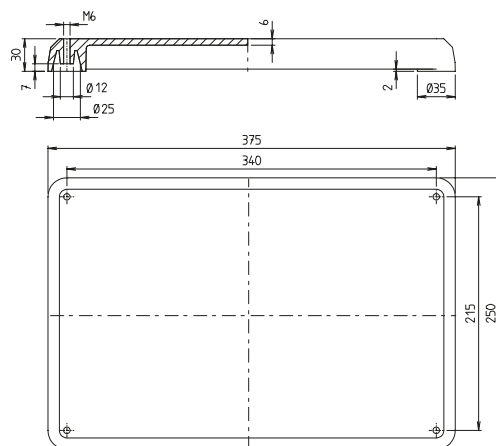


## Solid Clamps

### Base clamps



Plate without base clamp



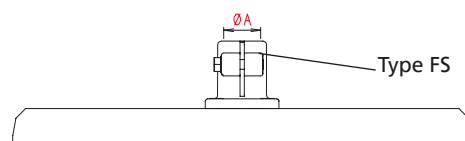
### FP - Block form

[mm]

Code No.	Type	m [g]
230000100_ _ _	FP	1960



Plate with base clamp Type FS



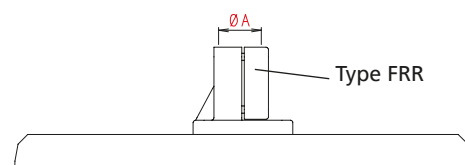
### FP FS - Block form

[mm]

Code No.	Type	A	m [g]
232000120_ _ _	FP FS 20	20	2141
233000120_ _ _	FP FS 30	30,1	2400
233200120_ _ _	FP FS 32	32,15	2459
233500120_ _ _	FP FS 35	35,15	2434
234000120_ _ _	FP FS 40	40,15	2391



Plate with base clamp Type FRR



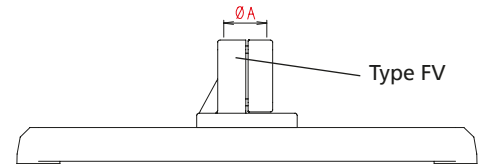
### FP FRR - Block form

[mm]

Code No.	Type	A	m [g]
233000130_ _ _	FP FRR 30	30,15	2364
234000130_ _ _	FP FRR 40	40,2	2573



Plate with base clamp Type FV



## FP FV - Block form

[mm]

Code No.	Type	A	m [g]
233000150_ _ _ _	FP FV 30	30,3	2353
234000150_ _ _ _	FP FV 40	40,4	2550

## Code No. +

### Surface:

- 2 = nature
- A = RAL 7035, light grey
- B = RAL 7030, stone grey
- C = RAL 9005, jet black
- D = RAL 1021, yellow

### Variants for clamping A:

- 6 = screws
- 1 = 1 lever
- 2 = 2 levers
- 3 = 3 levers
- 4 = 4 levers
- Not applicable: 230000100

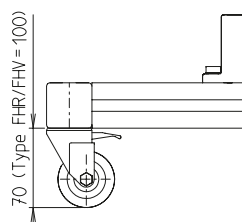
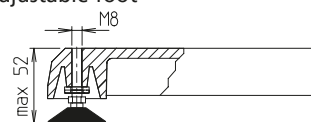
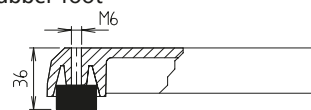
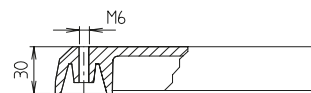
### Version:

F = Bore hole

2 = Rubber foot

3 = Adjustable foot

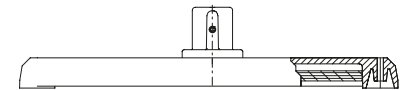
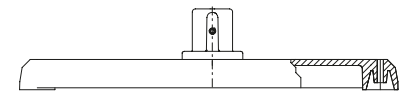
4 = Castor with brake



### Filling:

0 = without filling dump moment 3 Nm

y = hollow space with steel plate  
(m=4,6 kg)  
dump moment 6 Nm



### Order example:

Plate FP with base clamp FS 40,  
ground finish surface,  
equipped with screws,  
version with rubber foot,  
filled with steel plate

**234000120 2 6 2 Y**

## Solid Clamps

# Base clamps

### Order instruction:

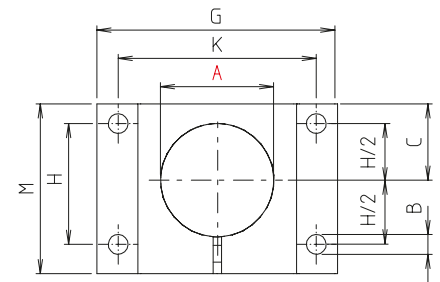
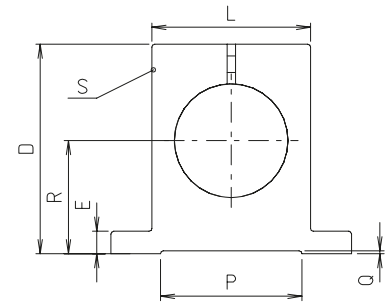
- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page

### On request quad®:

- Black anodized

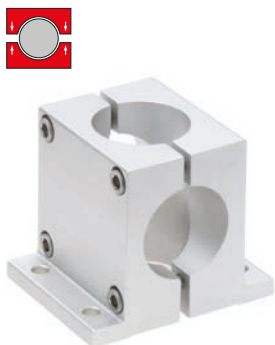


FS - quad®

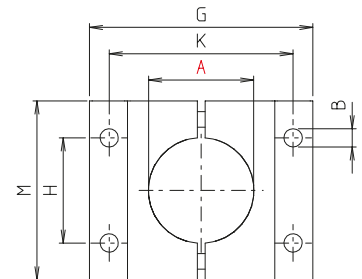
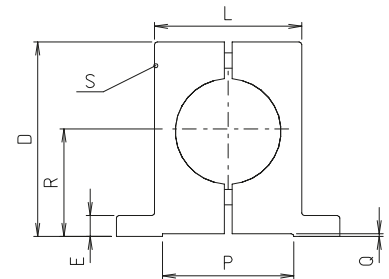


[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
53300000030	FS 30	30,1	7	21	58	6	70	28	56	42	49	35	1	30	182	9300101
53400000030	FS 40	40,1	7	28	74	8	85	40	70	56	62	50	1	40	369	9301401
53500000030	FS 50	50,2	9	35	92	10	110	50	90	70	77	60	1	50	738	9300401



FR - quad®

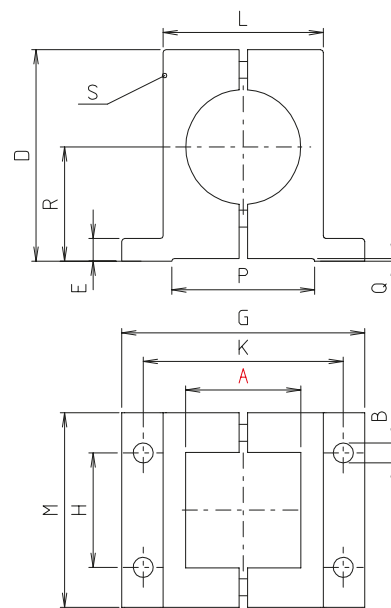


[mm]

Code No.	Type	A	B	D	E	G	H	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
53300009030	FR 30	30,1	7	58	6	70	28	56	42	56	35	1	30	223	9300101
53400009030	FR 40	40,2	7	74	8	85	40	70	56	68	50	1	40	431	9301401
53500009030	FR 50	50,3	9	92	10	110	50	90	70	84	60	1	50	857	9300401
53600009030	FR 60	60,2	9	112,5	12	137	80	120	97	105	71	2	60	-	9301101
53800009030	FR 80	80,6	11	142	16	156	80	135	112	126	80	2	80	2858	9300801



FV - quad®



[mm]

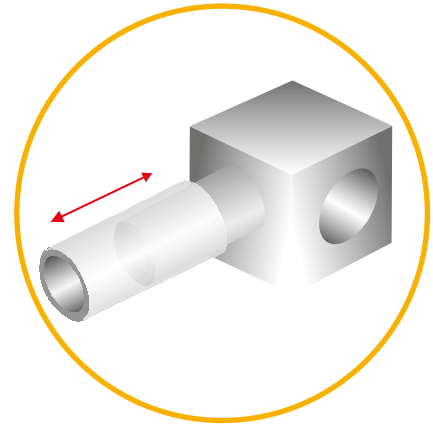
Code No.	Type	A	B	D	E	G	H	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
53300005030	FV 30	30,2	7	58	6	70	28	56	42	56	35	1	30	197	9300101
53400005030	FV 40	40,3	7	73,5	8	85	40	70	56	68	50	1	40	375	9301401
53500005030	FV 50	50,4	9	92	10	110	50	90	70	84	60	1	50	750	9300401
53600005030	FV 60	60,4	9	112,5	12	137	80	120	97	105	71	2	60	-	9022801
53800005030	FV 80	80,4	11	142	16	156	80	135	112	126	80	2	80	2508	9300801

## Solid Clamps

# Insert clamps

Version:

- Insert clamps



Single-piece elements

- For the quick and inexpensive installation



### Industrial design

- Cast aluminium
- Great variety
- Single-piece elements

### quad® elements

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



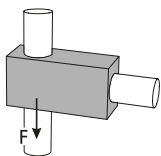
### Block form

- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements

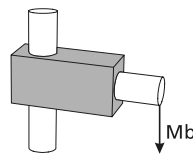
## Loads insert clamps

### Attention!

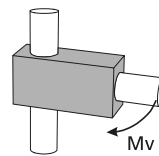
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

Size	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
S	1,1	38	18	4	316	87	4,7	605	79	5	850	363	13	1500				

Size	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
SR													8,1	441	255			
SV													5,9	471	329			

Size	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
quad® elements																		
SW	2,7	182	58	3,3	352	68	5,8	994	147									
SK	2,2	188	51	1,5	291	59	6,9	994	167									
SFK	1,6	188	33	1,1	295	89	6,3	994	159									

# Insert clamps

Right angle tube connector

Industrial design



Block form



quad® elements



## Solid Clamps

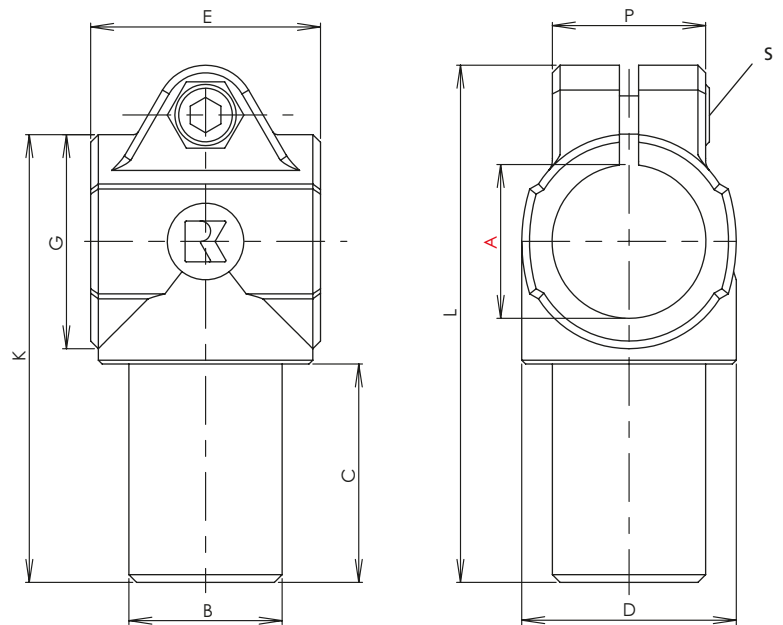
# Insert clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244
- Stainless steel screws
- Ball-polished
- Colour



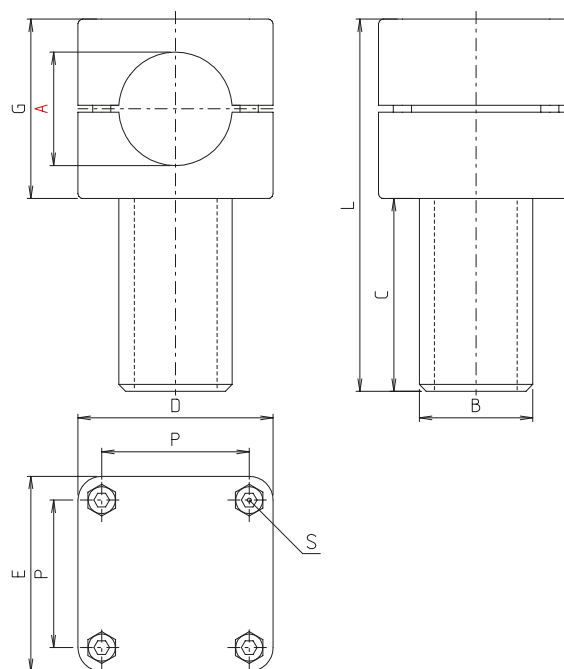
Type: S 18/18, S 25/25, S 30/30,  
S 40/40, S 50/50, S 60/60



## S - Industrial design

[mm]

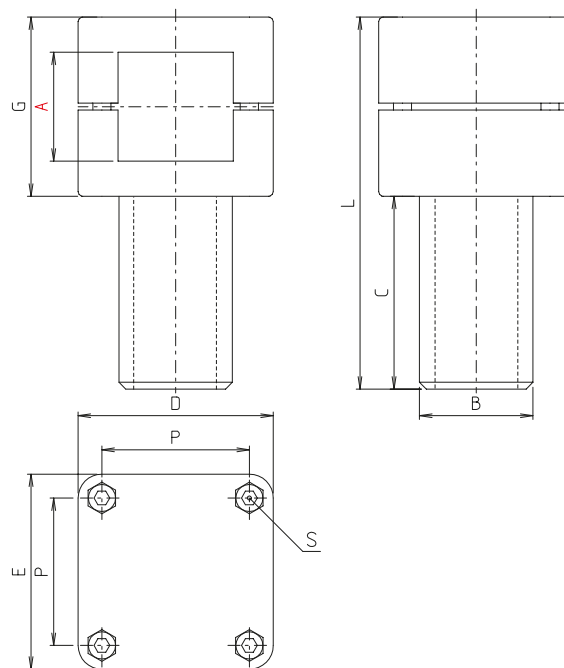
Code No.	Type	A	B	C	D	E	G	K	L	P	m [g]	Clamping lever S Code No.
16181800020	S 18/18	18,1	18,1	33	26	32	26	62	72,5	21	56	90209
16252500020	S 25/25	25,1	25,1	42	40	45	40	87	100	33	188	9022201
	S 28/30*	*With adapter sleeve R28, see accessories page 245										
16303000020	S 30/30	30,1	30,1	42	40	45	40	87	100	33	174	9022201
16404000020	S 40/40	40,17	40,17	57	56	60	56	117	135	40	484	90250
16505000020	S 50/50	50,2	50					137	154	45	623	90251
16606000020	S 60/60	60,27	60,1	82	80	85	80	165	188	58	1128	9025301



### SR - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	L	P	m [g]	Clamping lever S Code No.
26500003026	SR 50	50,3	50	85	86	86	79	164	65	1116	9022901



### SV - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	L	P	m [g]	Clamping lever S Code No.
26500005026	SV 50	50,5	50	85	86	86	79	164	65	1058	9022901

## Solid Clamps

# Insert clamps

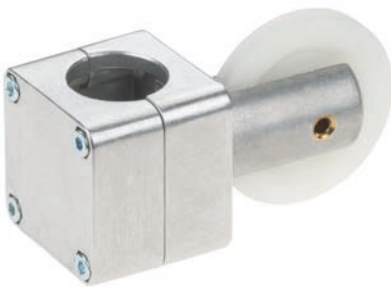
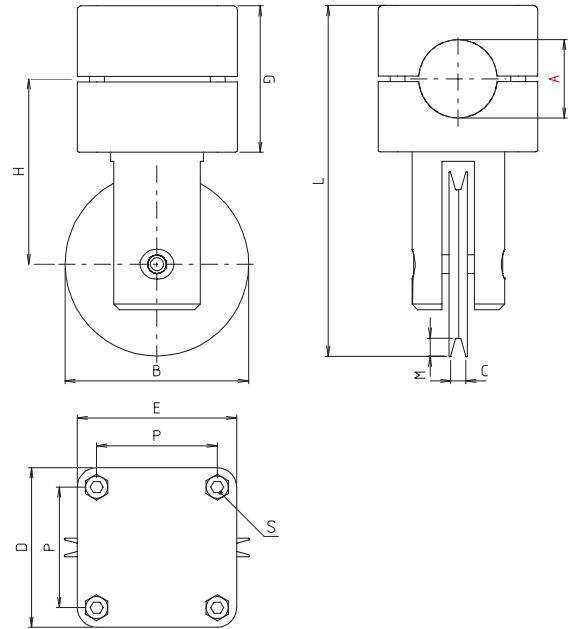
### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

- Rope pulley: polyamide
- max. load 560 N

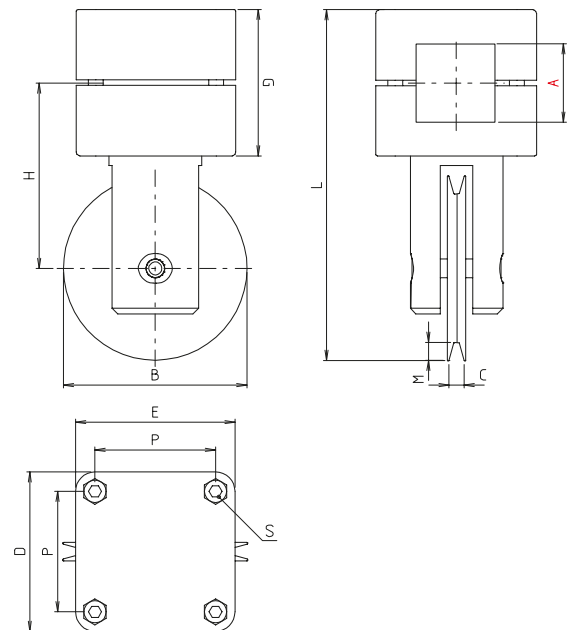
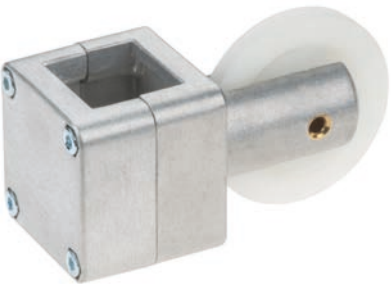


### SRO - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	P	m [g]	Clamping lever S Code No.
26420007026	SRO 42	42,3	100	8	86	86	79	100	189,5	10	65	1170	9022901
26450007026	SRO 45	45,3										1180	
26500007026	SRO 50	50,3										1200	

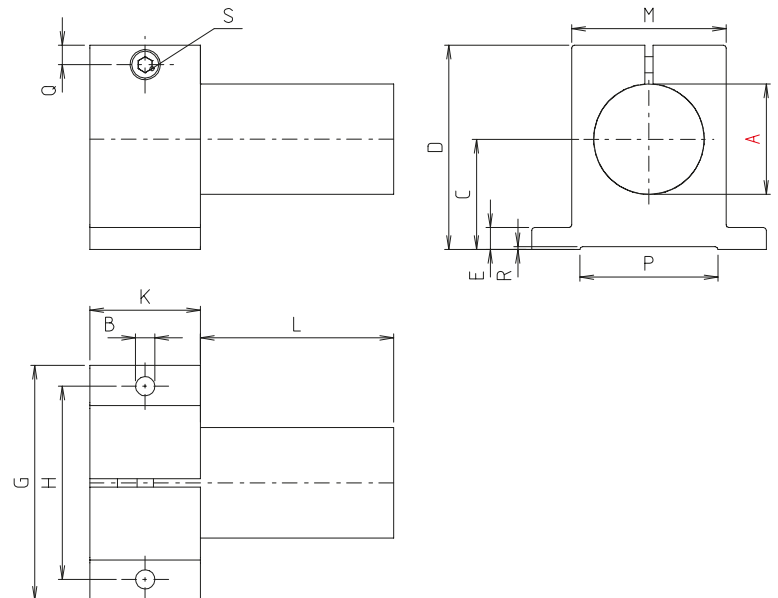
- Rope pulley: polyamide
- max. load 560 N



### SVO - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	P	m [g]	Clamping lever S Code No.
26500008026	SVO 50	50,5	100	8	86	86	79	100	189,5	10	65	1190	9022901



### SFK - quad®

[mm]

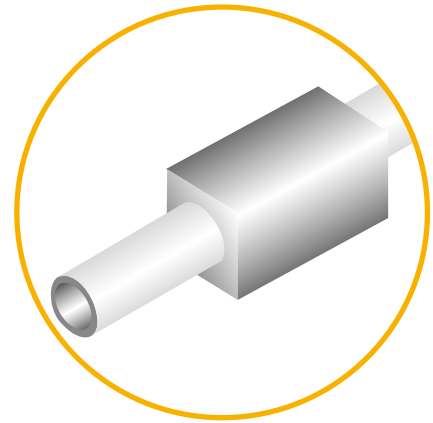
Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
56300015030	SFK 30	30	7	30	58	6	70	56	30	42	42	35	7	1	187	9300101
56400015030	SFK 40	40	7	40	74	8	85	70	40	56	56	50	7	1	427	9301401
56500015030	SFK 50	50	9	50	92	10	110	90	50	70	70	60	9	1	820	9300401

## Solid Clamps

# Sleeve clamps

Version:

- Sleeve clamps



Single-piece elements

- For the quick and inexpensive installation



**Industrial design**

- Cast aluminium
- Great variety
- Single-piece elements



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



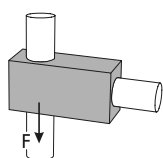
**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements

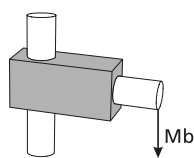
## Loads sleeve clamps

### Attention!

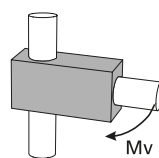
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

Size	10			18			30			40			50			60		
Type	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
M							1,9	435		4,7	698		2,8	1000		15	2400	
MD							2,7	440		5	994		2,7	1000				
MH							4,7			10			9,4					

Size	30			40			50			80		
Type	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
quad® elements												
M	11,2	352		8,0	619		11,8	1267				
MD	6,2	324		7,8	612		8	1267				
MH	2,6			3,4			7,8					
MR	9	810		4,5	1024		12,6	1596				
MV	7,8	433		2,5	1074		7,4	1568				
MVR	3,6	491		1,9	975		7,4	1568				

# Solid Clamps

## Sleeve clamps

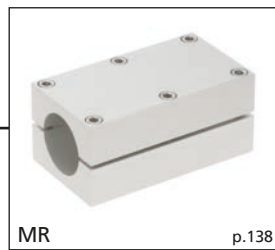
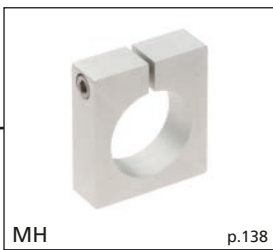
Axially parallel tube connector

Industrial design



quad® elements





## Solid Clamps

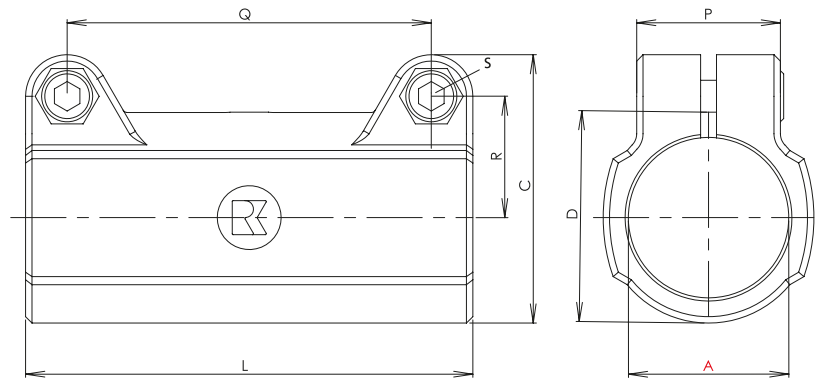
# Sleeve clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassbled See table last column and page 244

### On request:

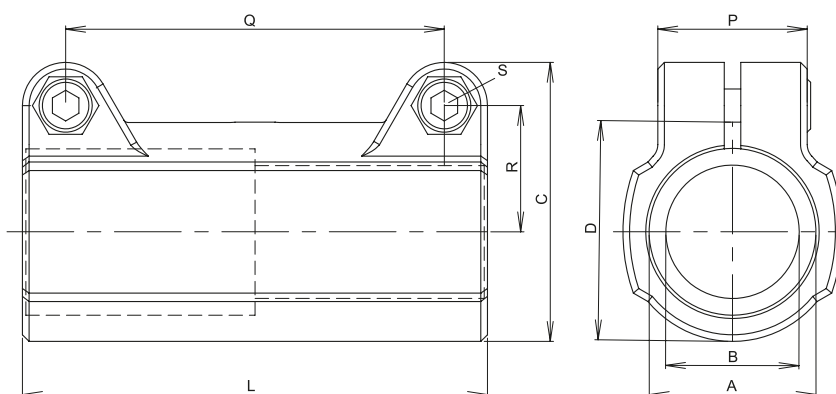
- Stainless steel screws
- Ball-polished
- Colour



## M - Industrial design

[mm]

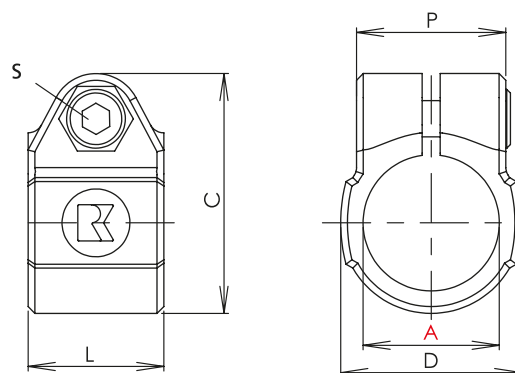
Code No.	Type	A	C	D	L	P	Q	R	m [g]	Clamping lever S Code No.
142000000200	M 20	20,1	53	40	80	33	60	22,5	256	9022201
142500000200	M 25	25,1							220	
	M 28*	*With adapter sleeve R28, see accessories page 245								
143000000200	M 30	30,1	53	40	80	33	60	22,5	176	9022201
144000000200	M 40	40,17	73	56	120	40	94	32	501	90250
145000000200	M 50	50,22	84	66	140	45	114	38	650	90251
146000000200	M 60	60,27	103	80	150	58	118	47	1092	9025301



### MD - Industrial design

[mm]

Code No.	Type	A	B	C	D	L	P	Q	R	m [g]	Clamping lever S Code No.
	MD 28x25*	*With adapter sleeve R28, see accessories page 245									
143025010200	MD 30x25	30,1	25,1	53	40	80	33	60	22,5	176	9022201
144032010200	MD 40x32	40,17	32,15	73	56	120	40	94	32	501	90250
145040010200	MD 50x40	50,22	40,17	84	66	140	45	114	38	822	90251
146048010200	MD 60x48	60,27	48,27	103	80	150	58	118	47	1288	9025301



### MH - Industrial design

[mm]

Code No.	Type	A	C	D	L	P	m [g]	Clamping lever S Code No.
14300002020	MH 30	30,1	53	40	30	33	80	9022201
14400002020	MH 40	40,15	73	56	40	40	200	90250
14500002020	MH 50	50,22	84	66	42	45	240	90251

## Solid Clamps

# Sleeve clamps

### Order instruction:

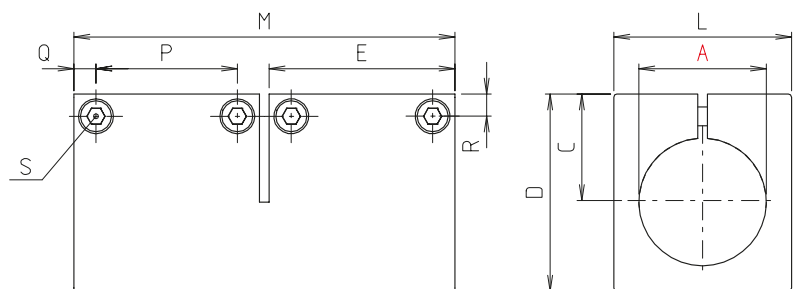
- Block form zinc plated screws Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

### On request quad®:

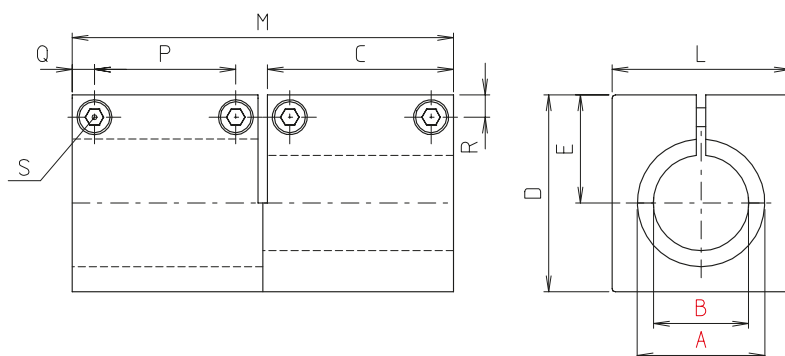
- Black anodized



## M - quad®

[mm]

Code No.	Type	A	C	D	E	L	M	P	Q	R	m [g]	Clamping lever S Code No.
543000000300	M 30	30,1	28	49	44	42	90	30	7	7	326	9300101
544000000300	M 40	40,1	34	62	58,5	56	120	44,5	7	7	703	9301401



### MD - quad®

[mm]

Code No.	Type	A	B	C	D	E	L	M	P	Q	R	m [g]	Clamping lever S Code No.
543020010300	MD 30x20	30,1	20,1	44	49	28	42	90	30	7	7	371	9300101
544030010300	MD 40x30	40,1	30,1	58,5	62	34	56	120	44,5	7	7	789	9301401



Roller block made from quad® clamp connectorp. Individually adjustable.

## Solid Clamps

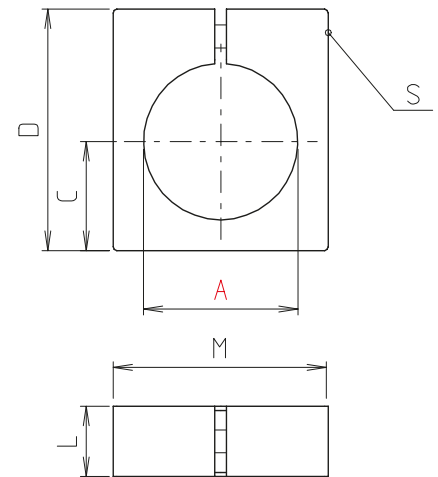
# Sleeve clamps

### Order instruction:

- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page

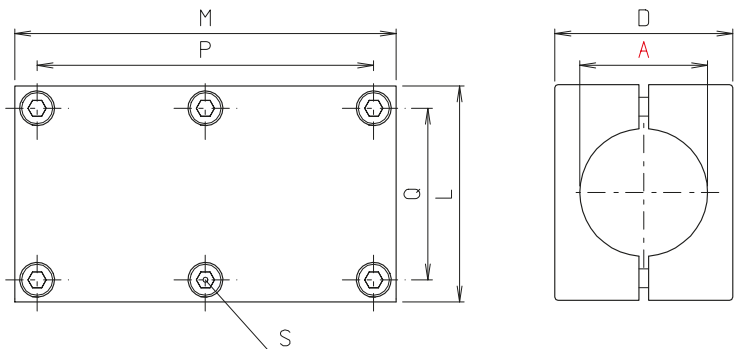
### On request quad®:

- Black anodized



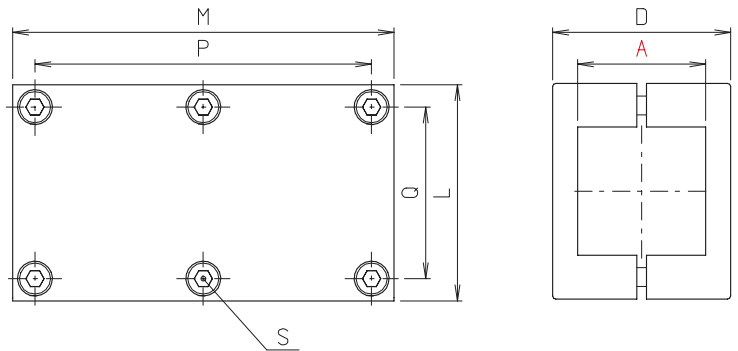
### MH - quad®

Code No.	Type	A	C	D	L	M	R	m [g]	Clamping lever S Code No.
54300002030	MH 30	30,1	21	49	16	42	7	59	9300101
54400002030	MH 40	40,1	28	62	18	56	7	108	9301401



### MR - quad®

Code No.	Type	A	D	L	M	P	Q	m [g]	Clamping lever S Code No.
54300003030	MR 30	30,1	42	56	90	76	42	404	9300101
54400003030	MR 40	40,2	56	68	120	106	54	800	9301401
54500003030	MR 50	50,3	70	85	140	120	67	1523	9300401
54600003030	MR 60	60,3	97	105	200	180	85	3943	9022801



## MV - quad®

[mm]

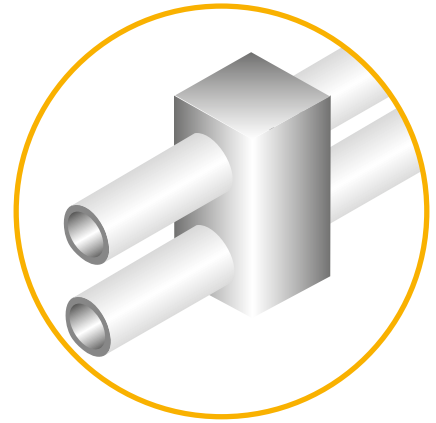
Code No.	Type	A	D	L	M	P	Q	m [g]	Clamping lever S Code No.
54300004030	MV 30	30,2	42	56	90	76	42	355	9300101
54400004030	MV 40	40,3	56	68	120	106	54	705	9301401
54500004030	MV 50	50,4	70	85	140	120	67	1302	9300401
54600004030	MV 60	60,4	97	105	200	180	85	3500	9022801

## Solid Clamps

# Parallel clamps

Version:

- Parallel clamps



Single-piece elements

- For the quick and inexpensive installation



### Industrial design

- Cast aluminium
- Great variety
- Single-piece elements



### Block form

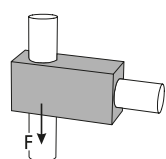
- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements



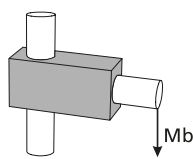
## Loads parallel clamps

### Attention!

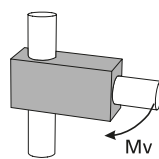
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

- M6: 10 Nm
- M8: 25 Nm
- M10: 50 Nm

Material data sheet available upon request.

Size Type	10			18			30			40			50			60		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
P							2,7	100	40	12,2	700	317	8,9	1250	243			

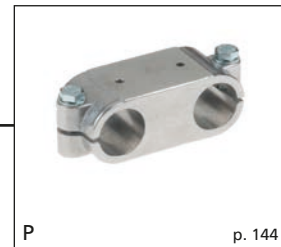
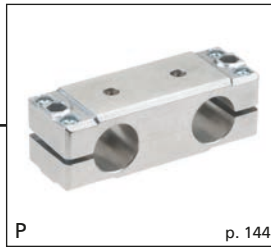
Size Type	10			18			30			40			50			60		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
P				3,6	201	19	6	1210	97	11,5	1395	316	11,5	1250	181	13,5	1500	

## Solid Clamps

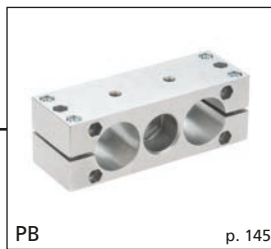
# Parallel clamps

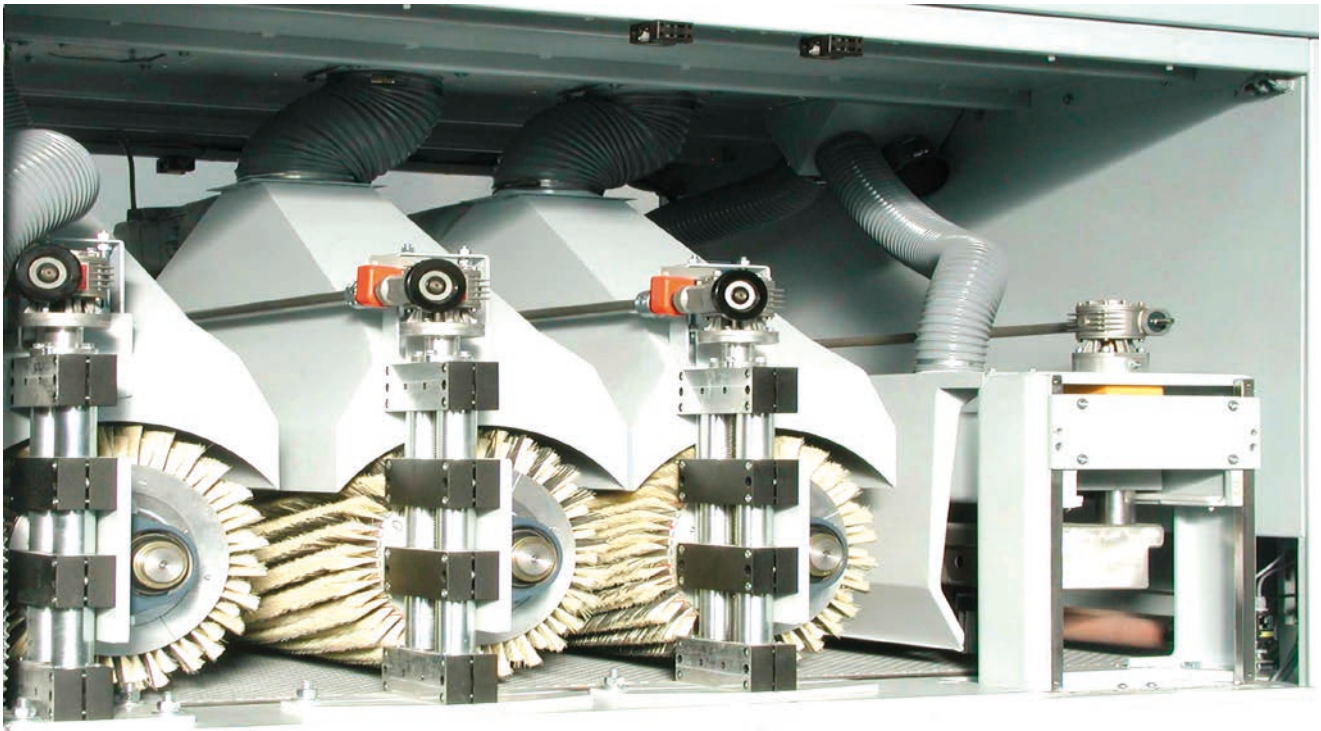
Axially parallel tube connector

Industrial design



Block form





Height adjustment of a system for surface processing.

## Solid Clamps

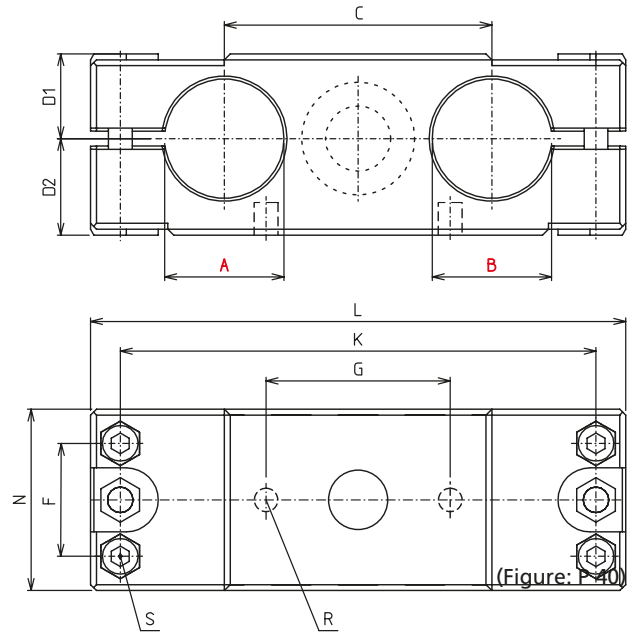
# Parallel clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

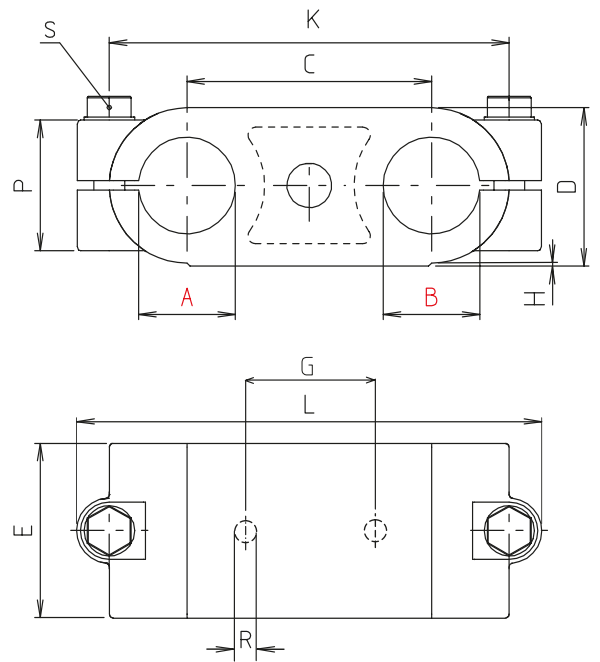
### On request:

- Stainless steel screws
- Ball-polished
- Colour



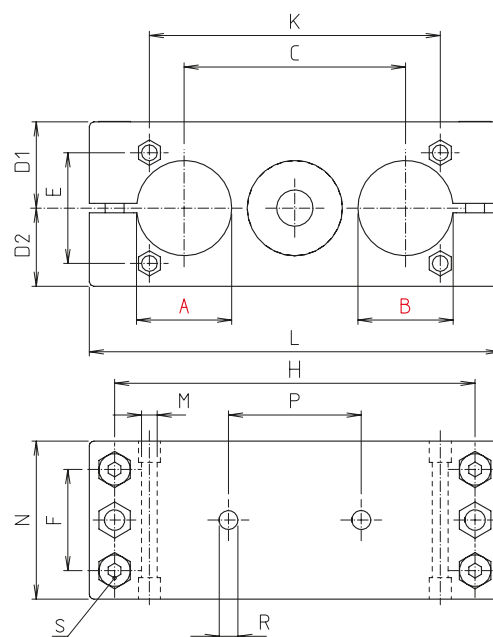
### P - Industrial design

Code No.	Type	A	B	C	D1	D2	F	G	H	K	L	N	P	R	m [g]	Clamping lever S Code No.
151200000200	P 12	12,1	12,1	40	13,6	15	-	18	-	68	82	28,5	-	M5	140	9020101
151400000200	P 14	14,1	14,1											M5	134	
151600000200	P 16	16,1	16,1											M5	128	
154000000200	P 40	40,17	40,17	90	28,5	31,5	38	62	-	160	180	60	-	M8	1307	9022501



### P - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	N	P	R	m [g]	Clamping lever S Code No.
152000000200	P 20	20,1	20,1	63	41	45	41	1	103	120	45	33	M5	367	9022401
152500000200	P 25	25,1	25,1											330	
153000000200	P 30	30,1	30,1											269	



**PB - Block form**

Code No.	Type	A	B	C	D1	D2	E	F	G	H	K	L	M	N	O	P	R	X	m [g]	Clamping lever S Code No.
252000000266	PB 20	20,1	20,1	70	27	25	35	32	40x30	114	92	130	5,3*	50	4,2-10 prof	42	M6	28	733	9021501
253000000266	PB 30	30,1	30,1																622	
254800000266	PB 48	48,2	48,2	100	36,5	35	50	50	46	206	150	206	8,5	72	5,5	62	M8	38	1799	9022801
255000000266	PB 50	50,2	50,2																1794	
256000000266	PB 60	60,3	60,25	130	44	42	60	56	55	216	185	240	8,5	80	6,5	74	M10	45	2727	-

\* Counterbore 20 deep, without hexagonal.

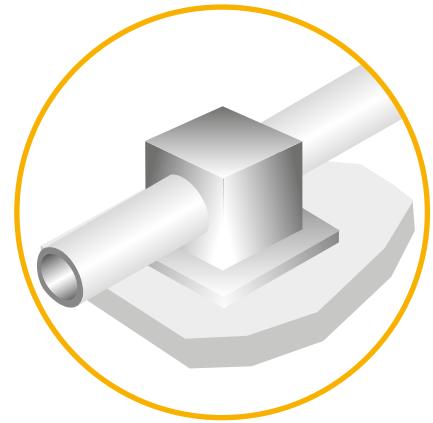
The type 12-18 and 40 are no longer available. They are replaced by industrial design. See page 138

**Solid Clamps**

# Flange clamps

Version:

- Flange clamps



Single-piece elements

- For the quick and inexpensive installation



**Industrial design**

- Cast aluminium
- Great variety
- Single-piece elements



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



**quad® elements**

- Extruded aluminium
- Maximum torque loads
- High-quality anodized surface
- Single- and Multi-piece elements



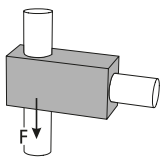
**Block form**

- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements

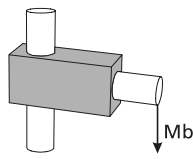
## Loads flange clamps

### Attention!

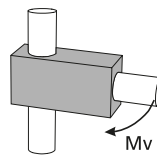
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
FK	1,1	128	21	4,9	200	95	8,9	504	254	11,6	750	1025	9,9	1393	253			
FKR				6,8	429	117	6	1190	152									
FKV				5,2	270	381	3	1247	955									
R				6,8			6											
V				5,2			3											
RH				4,0			6,1			4,9			5,1			6,3		
VH				1,7			2,5			3			4			10		

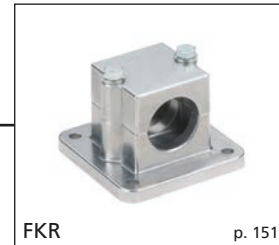
Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
FKR				4,3	438	96	2,5	450	700	8,2	1465	260	12,2	1456	255	10	2500	602
FKV				3,5	304	372	1,5	450	320	5,9	937	1250	7,8	1688	1203	20	2500	2250
R				4,3			5,7			9,4			12,2			10		
V				3,5			2,8			5,9			7,9			19		
RH				4,0			6,1			4,9			5,1			6,3		
VH				1,7			2,5			3			4			10		

Size Type	18			30			40			50			60			80		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
quad® elements																		
R				6,2			7,1			11,8						19,4		
RH				3,1			3,5			5,8						7,5		
V				5			7,4			7,5						20,1		
VH				1,9			4,2			2,6						7,7		
FK				2,5	484	59	4,9	750	89	6,3	1620	159						
FKH				2,7	96	48	3,2	102	62	5,6	230	86						
FKR				6,2	657	90	7,1	786	121	11,9	2146	272				19,4		950
FKRH				3,1	105	47	3,5	110	87	5,8	287	70				7,5		243
FKV				5	590	338	7,4	682	743	7,5	1904	1100				20,1		
FKVH				2,5	109	134	4,2	102	451	2,6	297	563				7,7		

# Flange clamps

Axially parallel tube connector

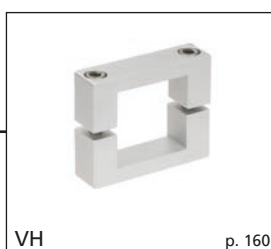
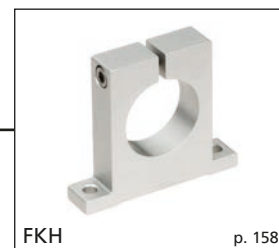
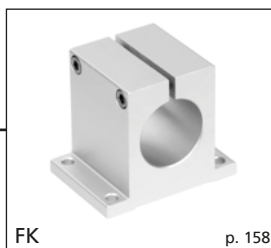
Industrial design

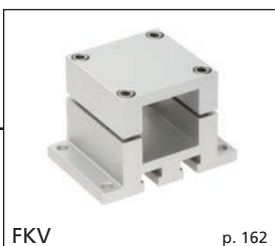
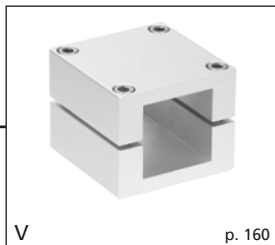
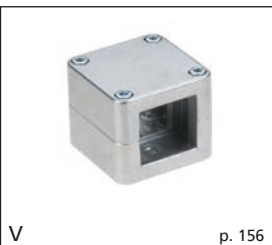
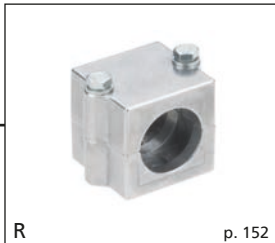


Block form



quad® elements





## Solid Clamps

# Flange clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

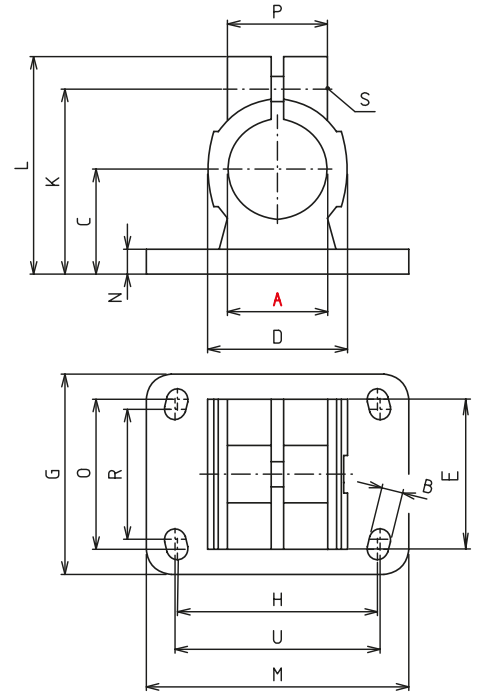
- Stainless steel screws
- Ball-polished
- Colour



FK 30-4 - 80  
(4 drills, 20-60 with slotted hole)

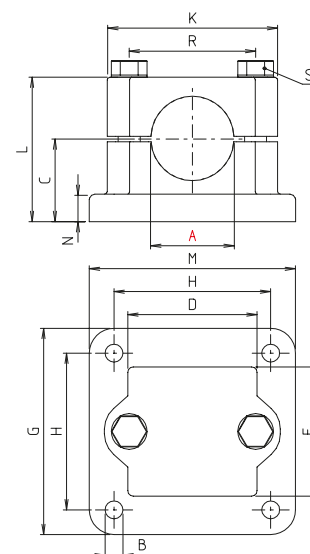


FK 12-30  
(2 central holes)



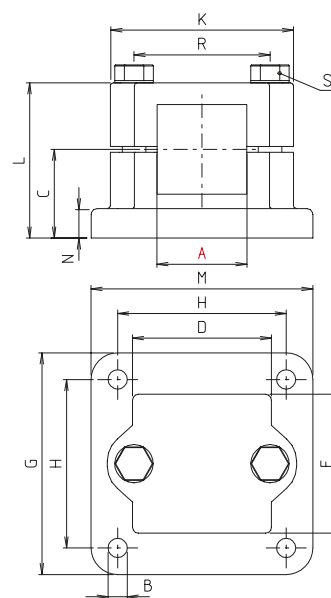
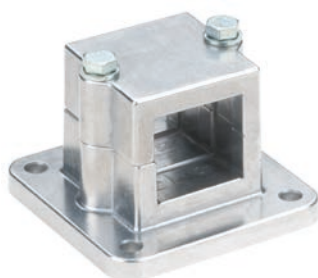
## FK - Industrial design

Code No.	Type	A	B	C	D	E	G	H**	K	L	M	N	O*	P	R	U	m [g]	Clamping lever S Code No.
12120000020	FK 12	12,1	6	18	25	35	35	38	32,5	41	50	5	-	23	-	40	67	90209
12140000020	FK 14	14,1															64	
12150000020	FK 15	15,1															62	
12160000020	FK 16	16,1															60	
12180000020	FK 18	18,1															56	
12200000020	FK 20	20,1	7	30	40	40	55	53	53	63	78	7	-	33	-	60	202	9022201
12200100020	FK 20-4	20,1															205	
12250000020	FK 25	25,1															184	
12250100020	FK 25-4	25,1															188	
	FK 28*	*With adapter sleeve R28, see accessories page 245																
12300000020	FK 30	30,1	7	30	40	40	55	53	53	63	78	7	-	33	-	60	162	9022201
12300100020	FK 30-4	30,1															166	
12300200020	FK30(32)	30,1	9	42	56	60	80	80	74	87	105	10	60	40	52	82	489	90250
12320000020	FK 32	32,17															473	
12350000020	FK 35	35,15															449	
12400000020	FK 40	40,17															404	
12400200020	FK40(42)	40,17	11	50	66	65	90	98	85	98	128	14	62	45	60	100	703	90251
12420000020	FK 42	42,22															682	
12480000020	FK 48	48,22															610	
12500000020	FK 50	50,22															585	
12600000020	FK 60	60,27	11	60	80	80	110	100	107	123	150	15	80	58	74	118	1048	9025301
12800000020	FK 80	80,35	17,5	80	110	123	164,7	140	140	162,5	180	20	120	82	-	-	2930	9027001



### FKR - Industrial design

Code No.	Type	[mm]													m [g]	Clamping lever S Code No.
		A	B	C	D	E	G	H	K	L	M	N	R			
12200003020	FKR 20	20,2	7	30	45	45	75	57	62	52,5	75	10	46	314	9022601	
12250003020	FKR 25	25,2												301		
12300003020	FKR 30	30,2												285		
12350003020	FKR 35	35,2	9	40	60	60	100	76	75	70	100	10	57	569	9022901	
12400003020	FKR 40	40,2												545		



### FKV - Industrial design

Code No.	Type	[mm]													m [g]	Clamping lever S Code No.
		A	B	C	D	E	G	H	K	L	M	N	R			
12200005020	FKV 20	20,2	7	30	45	45	75	57	62	52,5	75	10	46	302	9022601	
12250005020	FKV 25	25,3												292		
12300005020	FKV 30	30,3												273		
12350005020	FKV 35	35,4	9	40	60	60	100	76	75	70	100	10	57	555	9022901	
12400005020	FKV 40	40,4												530		

## Solid Clamps

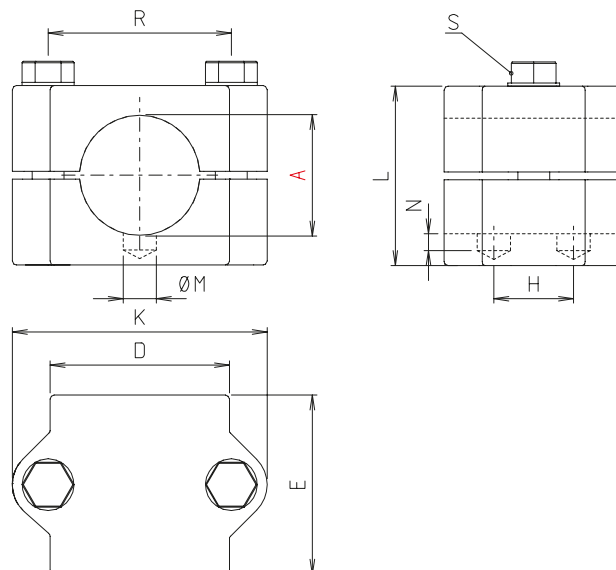
# Flange clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

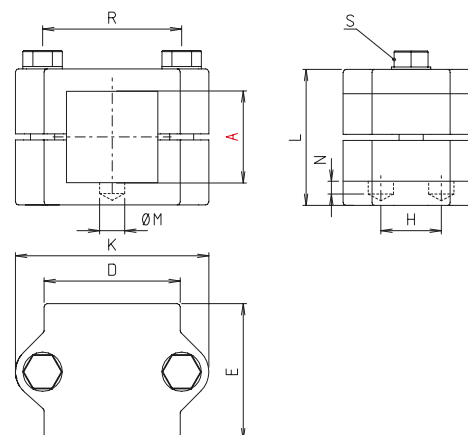
- Stainless steel screws
- Ball-polished
- Colour



### R - Industrial design

[mm]

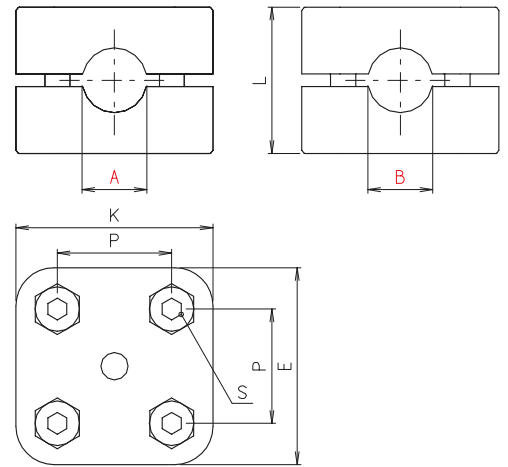
Code No.	Type	A	D	E	H	K	L	M	N	R	m [g]	Clamping lever S Code No.
12200007020	R 20	20,1	45	45	20	62	45	10	3	46	211	9022501
12250007020	R 25	25,2									210	
12300007020	R 30	30,2									194	
12350007020	R 35	35,2	60	60	26	75	60	14	5,5	57	376	9022801
12400007020	R 40	40,2									360	



### V - Industrial design

[mm]

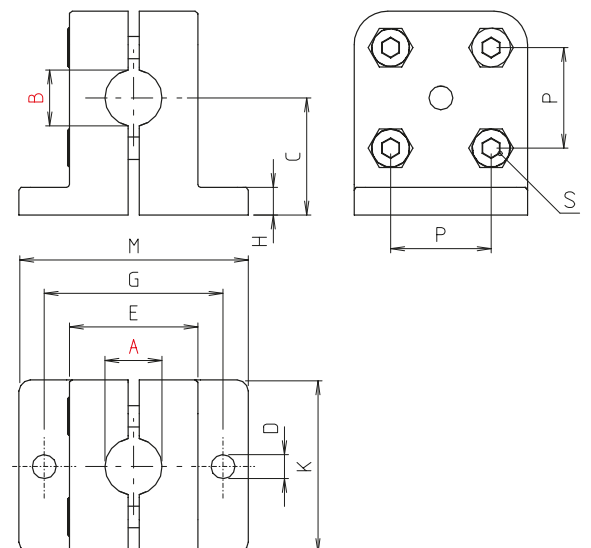
Code No.	Type	A	D	E	H	K	L	M	N	R	m [g]	Clamping lever S Code No.
12200008020	V 20	20,3	45	45	20	62	45	10	3	46	202	9022501
12250008020	V 25	25,3									197	
12300008020	V 30	30,3									187	
12350008020	V 35	35,4	60	60	26	75	60	14	5,5	57	361	9022801
12400008020	V 40	40,4									334	



### RRW - Block form

[mm]

Code No.	Type	A	B	E	K	L	P	S	m [g]
290800040266	RRW 8*	8	8	31	31	23	18	M4x18	47
291000040266	RRW 10	10	10						46



### FFKR - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	S	m [g]
290800020266	FFKR 8*	8	8	21	4	23	32	5	31	36	41	18	M4x18	62
291000020266	FFKR 10	10	10											58

\* Ø 8 is achieved by means of a clamping sleeve

## Solid Clamps

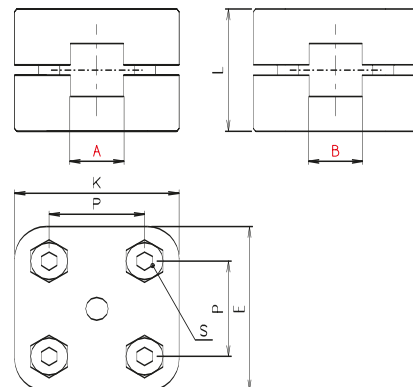
# Flange clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

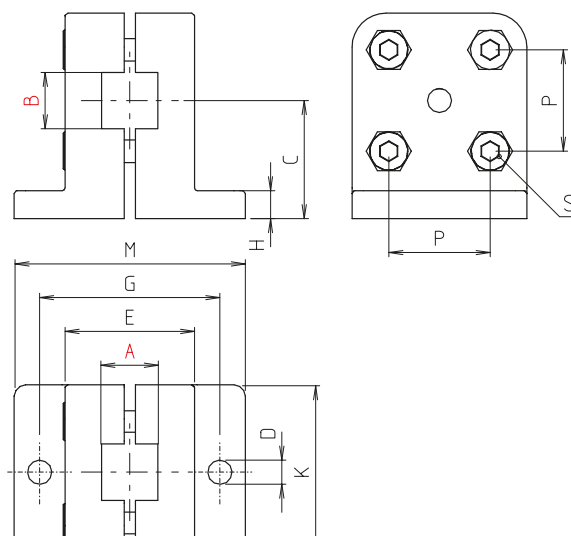
- Stainless steel screws
- Ball-polished
- Colour



### VVW - Block form

Code No.	Type	A	B	E	K	L	P	S	m [g]
291000050266	VVW 10	10	10	31	31	23	18	M4x18	42

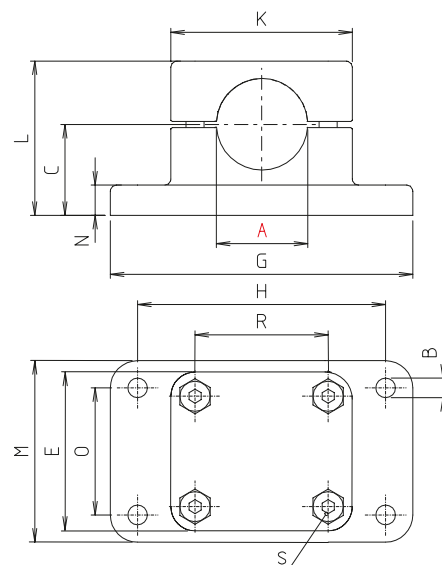
[mm]



### FFKV - Block form

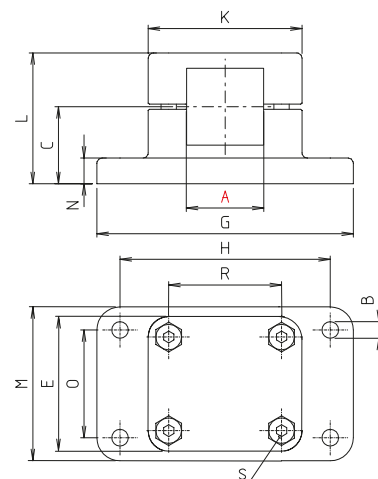
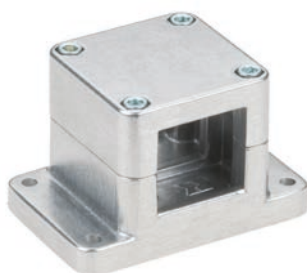
Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	S	m [g]
291000030266	FFKV 10	10	10	21	4	23	32	5	31	36	41	18	M4x18	60

[mm]



### FKR - Block form

Code No.	Type	A	B	C	E	G	H	K	L	M	N	O	R	m [g]	Clamping lever S Code No.
22300003026	FKR 30	30,2	7	30	60	100	82	60	54	60	10	42	44	349	9021501
22350003026	FKR 35	35,4	7	40	70	110	92	70	73	71	12	52	53	552	
22400003026	FKR 40	40,2		80	90	100	88	78	75	72	14	54	54	521	
22480003026	FKR 48	48,3	9	50	86	125	98	86	90	125	12	98	65	1191	9023001
22500003026	FKR 50	50,3		100	110	120	100	90	95	120	12	98	65	1190	
22600003026	FKR 60	60,4	9	60	100	144	122	100	105	100	16	78	78	1489	9023101
22800003026	FKR 80	80,5	11	80	130	200	170	130	141	130	20	100	100	4050	9024601



### FKV - Block form

Code No.	Type	A	B	C	E	G	H	K	L	M	N	O	R	m [g]	Clamping lever S Code No.
22300005026	FKV 30	30,3	7	30	60	100	82	60	54	60	10	42	44	341	9021501
22400005026	FKV 40	40,4	7	42	70	110	92	70	73	70	12	52	53	511	9021701
22500005026	FKV 50	50,5	9	50	86	125	98	86	90	125	12	98	65	1124	9023001
22600005026	FKV 60	60,6	9	60	100	144	122	100	105	100	16	78	78	1428	9023101
22800005026	FKV 80	80,7	11	80	130	200	170	130	141	130	20	100	100	3878	9024601

## Solid Clamps

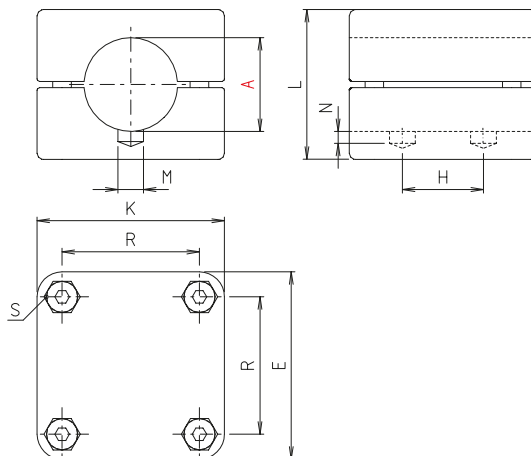
# Flange clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

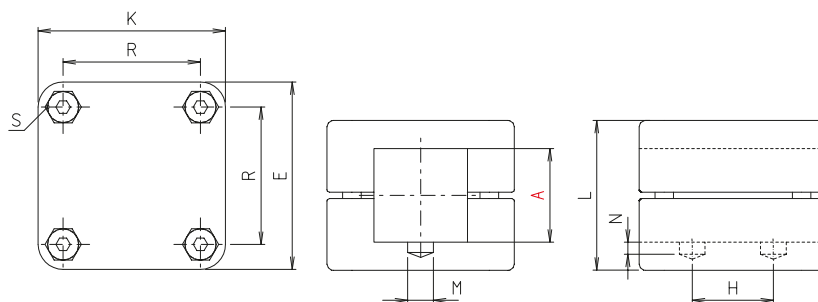
- Stainless steel screws
- Ball-polished
- Colour



### R - Block form

[mm]

Code No.	Type	A	E	H	K	L	M	N	R	m [g]	Clamping lever S Code No.
22300007026	R 30	30,1	60	26	60	48	11	5,5	44	256	9021401
22320007026	R 32	32,2	70	26	70	62	14	6	53	420	9021601
22350007026	R 35	35,2								410	
22400007026	R 40	40,2								395	
22420007026	R 42	42,3	86	50	86	79	14	8,5	65	914	9022901
22450007026	R 45	45,3								870	
22480007026	R 48	48,3								878	
22500007026	R 50	50,3								873	
22600007026	R 60	60,4	100	50	100	90	14	9	78	1136	9023001
22800007026	R 80	80,5	130	70	130	122	8,5	5,5	100	2560	9024601



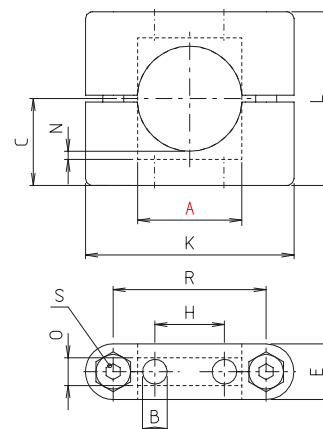
### V - Block form

[mm]

Code No.	Type	A	E	H	K	L	M	N	R	m [g]	Clamping lever S Code No.
22300008026	V 30	30,3	60	26	60	48	11	5,5	44	249	9021401
22350008026	V 35	35,4	70	26	70	62	14	6	53	390	9021601
22400008026	V 40	40,4								404	
22500008026	V 50	50,5	86	50	86	79	14	8,5	65	811	9022901
22600008026	V 60	60,6	100	50	100	90	14	9	78	1064	9023001
22800008026	V 80	80,7	130	70	130	122	8,5	5,5	100	2380	9024601



**RH - Block form**

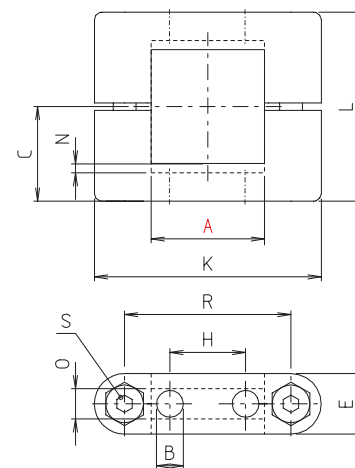


[mm]

Code No.	Type	A	B	C	E	H	K	L	N	O	R	m [g]	Clamping lever S Code No.
22200002026	RH 20	20,1	6	25	16	20	60	50	5	8,1	44	92	9021401
22250002026	RH 25	25,1										84	
22300002026	RH 30	30,1										72	
22350002026	RH 35	35,2	7	34	20	26	75	68	7	10,1	55	198	9022801
22400002026	RH 40	40,2										192	
22420002026	RH 42	42,3		40	20	26	86	79	7,5	10,1	65	256	9022901
22450002026	RH 45	45,3										242	
22480002026	RH 48	48,3										239	
22500002026	RH 50	50,3		45	22	26	100	90	6	10,1	78	236	9022301
22600002026	RH 60	60,4										318	
22800002026	RH 80	80,5	9	61	30	50	130	122	11	13,1	100	775	9024601



**VH - Block form**



[mm]

Code No.	Type	A	B	C	E	H	K	L	N	O	R	m [g]	Clamping lever S Code No.							
22250004026	VH 25	25,3	6	25	16	20	60	50	5	8,1	44	85	9021401							
22300004026	VH 30	30,3										72								
22350004026	VH 35	35,4	7	34	20	26	75	68	7	10,1	55	184	9022801							
22400004026	VH 40	40,4										172								
22500004026	VH 50	50,5		40	20	26	86	79	7,5	10,1	65	217	9022901							
22600004026	VH 60	60,6										45		22	100	90	6	78	286	9023001
22800004026	VH 80	80,9																	9	

## Solid Clamps

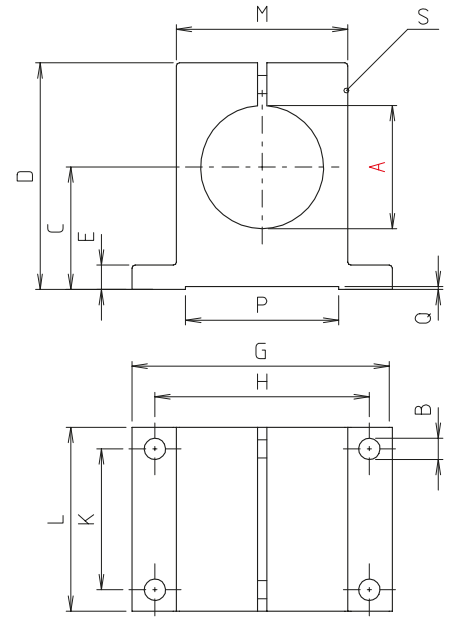
# Flange clamps

### Order instruction:

- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page

### On request quad®:

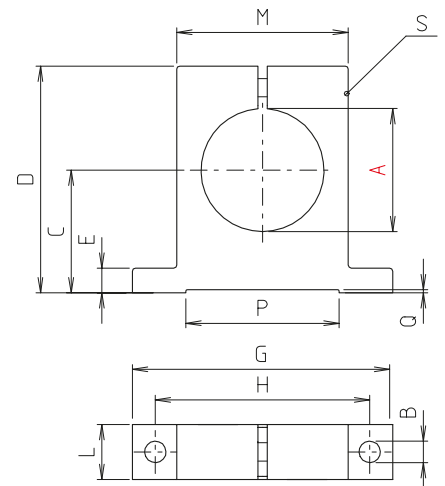
- Black anodized



## FK - quad®

[mm]

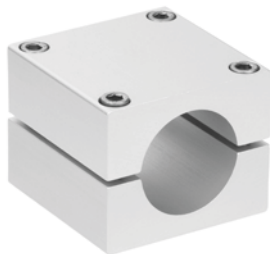
Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	Q	m [g]	Clamping lever S Code No.
52300000030	FK 30	30,1	7	30	58	6	70	56	36	50	42	35	1	246	9300101
52400000030	FK 40	40,1	7	40	74	8	85	70	46	60	56	50	1	490	9301401
52500000030	FK 50	50,2	9	50	92	10	110	90	50	77	70	60	1	911	9300401



## FKH - quad®

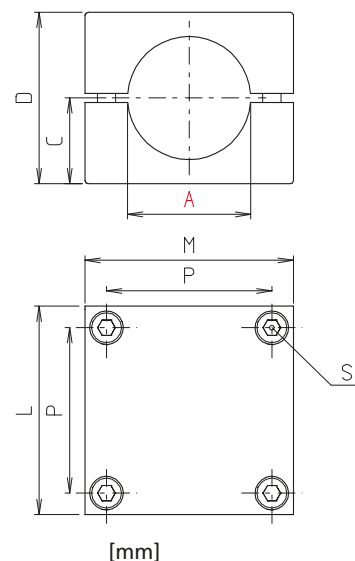
[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	P	Q	m [g]	Clamping lever S Code No.
52300011030	FKH 30	30,1	7	30	58	6	70	56	16	42	35	1	80	9300101
52400011030	FKH 40	40,1	7	40	74	8	85	70	18	56	50	1	147	9301401
52500011030	FKH 50	50,2	9	50	92	10	110	90	20	70	60	1	262	9300401



### R - quad®

Code No.	Type	A	C	D	L	M	P	m [g]	Clamping lever S Code No.
52300007030	R 30	30,1	21	42	56	56	42	252	9300101
52400007030	R 40	40,2	28	56	68	68	54	459	9301401
52500007030	R 50	50,3	35	70	85	85	67	927	9300401
52600007030	R 60	60,3	48,5	97	105	105	85	2083	9022801
52800007030	R 80	80,6	56	112	126	126	100	3000	9300801

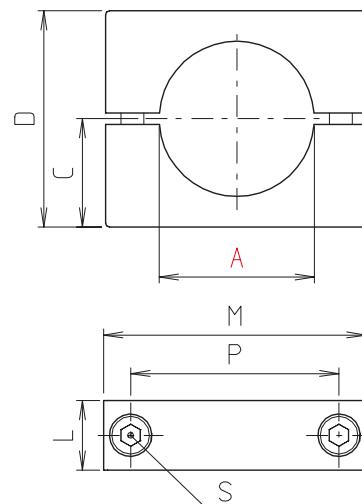


[mm]



### RH - quad®

Code No.	Type	A	C	D	L	M	P	m [g]	Clamping lever S Code No.
52300002030	RH 30	30,1	21	42	16	56	42	74	9300101
52400002030	RH 40	40,2	28	56	18	68	54	122	9301401
52500002030	RH 50	50,3	35	70	20	85	67	229	9300401
52600002030	RH 60	60,3	48,5	97	22	105	85	455	9022801
52800002030	RH 80	80,6	56	112	24	126	100	608	9300801



[mm]

## Solid Clamps

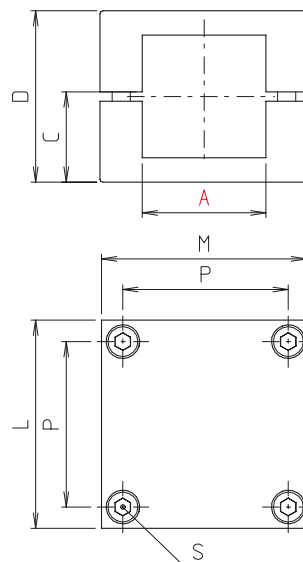
# Flange clamps

### Order instruction:

- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page

### On request quad®:

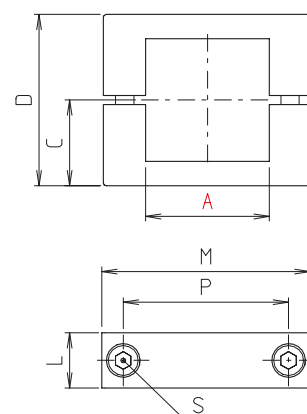
- Black anodized



## V - quad®

[mm]

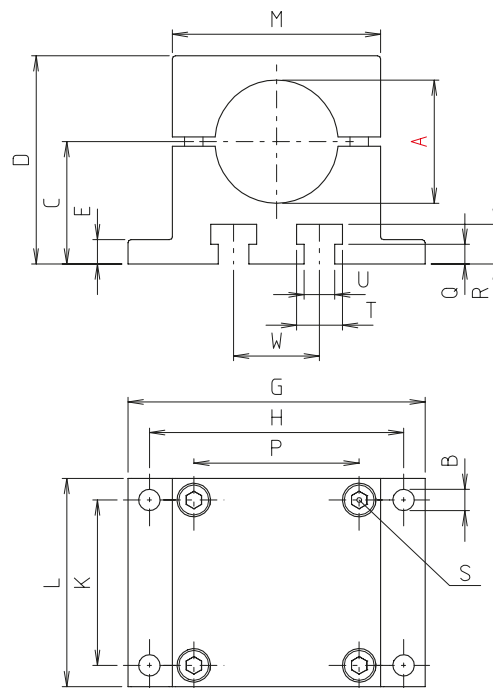
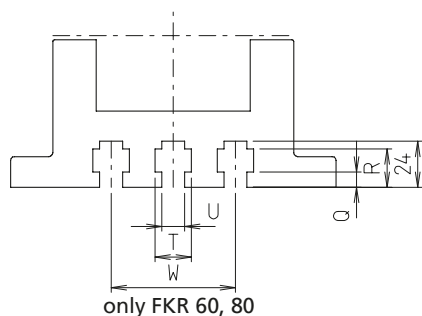
Code No.	Type	A	C	D	L	M	P	m [g]	Clamping lever S Code No.
52300008030	V 30	30,2	21	42	56	56	42	220	9300101
52400008030	V 40	40,3	28	56	68	68	54	401	9301401
52500008030	V 50	50,4	35	70	85	85	67	785	9300401
52600008030	V 60	60,3	48,5	97	105	105	85	1851	9022801
52800008030	V 80	80,4	56	112	126	126	100	2540	9300801



## VH - quad®

[mm]

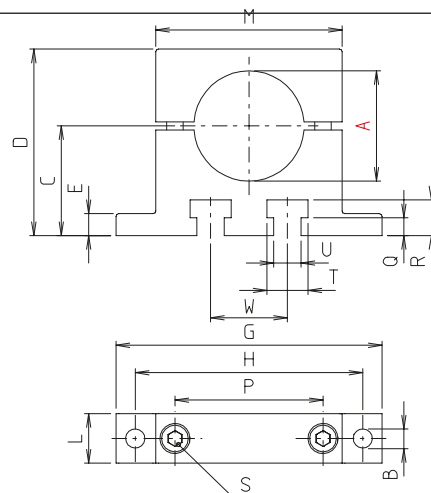
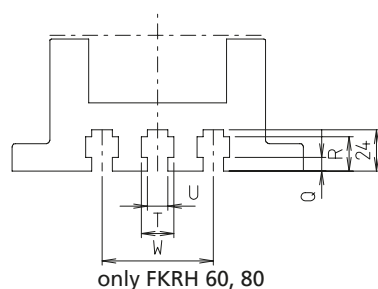
Code No.	Type	A	C	D	L	M	P	m [g]	Clamping lever S Code No.
52300004030	VH 30	30,2	21	42	16	56	42	65	9300101
52400004030	VH 40	40,3	28	56	18	68	54	109	9301401
52500004030	VH 50	50,4	35	70	20	85	67	197	9300401
52600004030	VH 60	60,4	48,5	97	22	105	85	406	9022801
52800004030	VH 80	80,4	56	112	24	126	100	522	9300801



**FKR - quad®**

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	Q	R	T	U	W	m [g]	Clamping lever S Code No.
52300003030	FKR 30	30,1	7	30	51	6	84	70	42	56	56	42	4,5	9	10	6	20	329	9300101
52400003030	FKR 40	40,2	7	40	68	8	97	83	54	68	68	54	6,5	13	15	10	28	586	9301401
52500003030	FKR 50	50,3	9	50	85	10	125	105	65	85	85	65	7	14	20	10	30	1204	9300401
52600003030	FKR 60	60,3	9	62,5	111	12	145	120	80	105	105	80	7	14	20	10	65	2456	9022801
52800003030	FKR 80	80,4	11	80	136	16	170	148	80	126	126	100	8	20	19	12	65	3876	9300801



**FKRH - quad®**

[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	P	Q	R	T	U	W	m [g]	Clamping lever S Code No.
52300009030	FKRH 30	30,1	7	30	51	6	84	70	16	56	42	4,5	9	10	6	20	96	9300101
52400009030	FKRH 40	40,2	7	40	68	8	97	83	18	68	54	6,5	13	15	10	28	158	9301401
52500009030	FKRH 50	50,3	9	50	85	10	125	105	20	85	65	7	14	20	10	30	293	9300401
52600009030	FKRH 60	60,3	9	62,5	111	12	145	120	22	105	80	7	14	20	10	65	532	9022801
52800009030	FKRH 80	80,4	11	80	136	16	170	148	24	126	100	8	20	19	12	65	783	9300801

## Solid Clamps

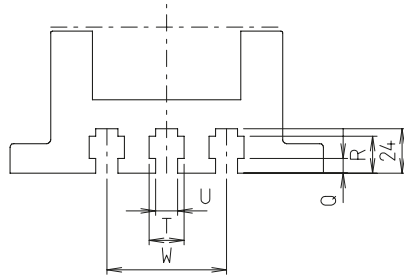
# Flange clamps

### Order instruction:

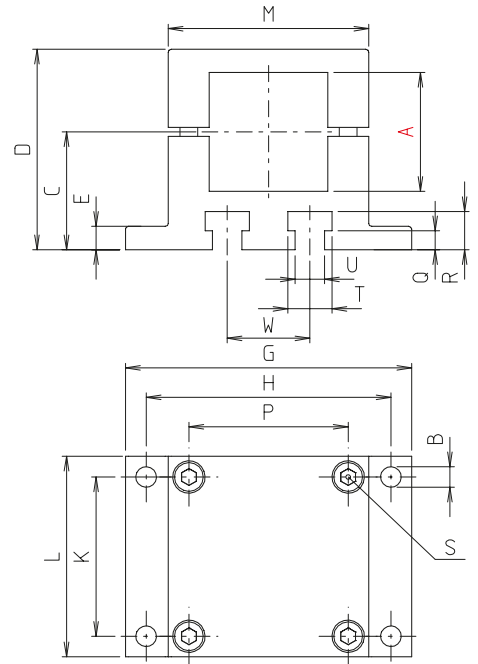
- Quad® with stainless steel screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page

### On request quad®:

- Black anodized



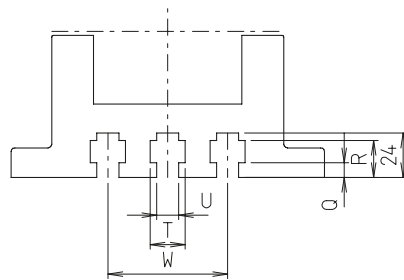
only FKV 60, 80



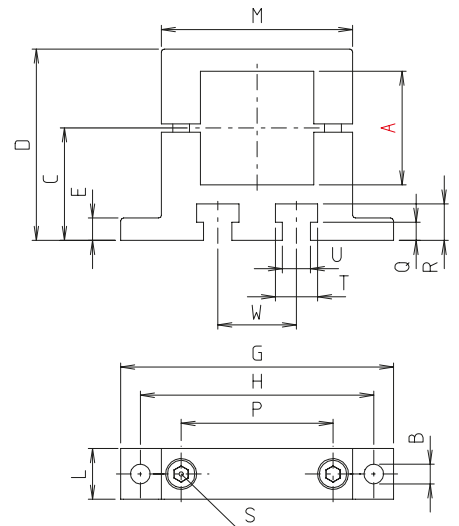
## FKV - quad®

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	Q	R	T	U	W	m [g]	Clamping lever S Code No.
52300005030	FKV 30	30,2	7	30	51	6	84	70	42	56	56	42	4,5	9	10	6	20	303	9300101
52400005030	FKV 40	40,3	7	40	68	8	97	83	54	68	68	54	6,5	13	15	10	28	525	9301401
52500005030	FKV 50	50,4	9	50	85	10	125	105	65	85	85	65	7	14	20	10	30	1065	9300401
52600005030	FKV 60	60,3	9	62,5	111	12	145	120	80	105	105	80	7	14	20	10	65	2224	9022801
52800005030	FKV 80	80,4	11	80	136	16	170	148	100	126	126	100	8	20	19	12	65	3440	9300801



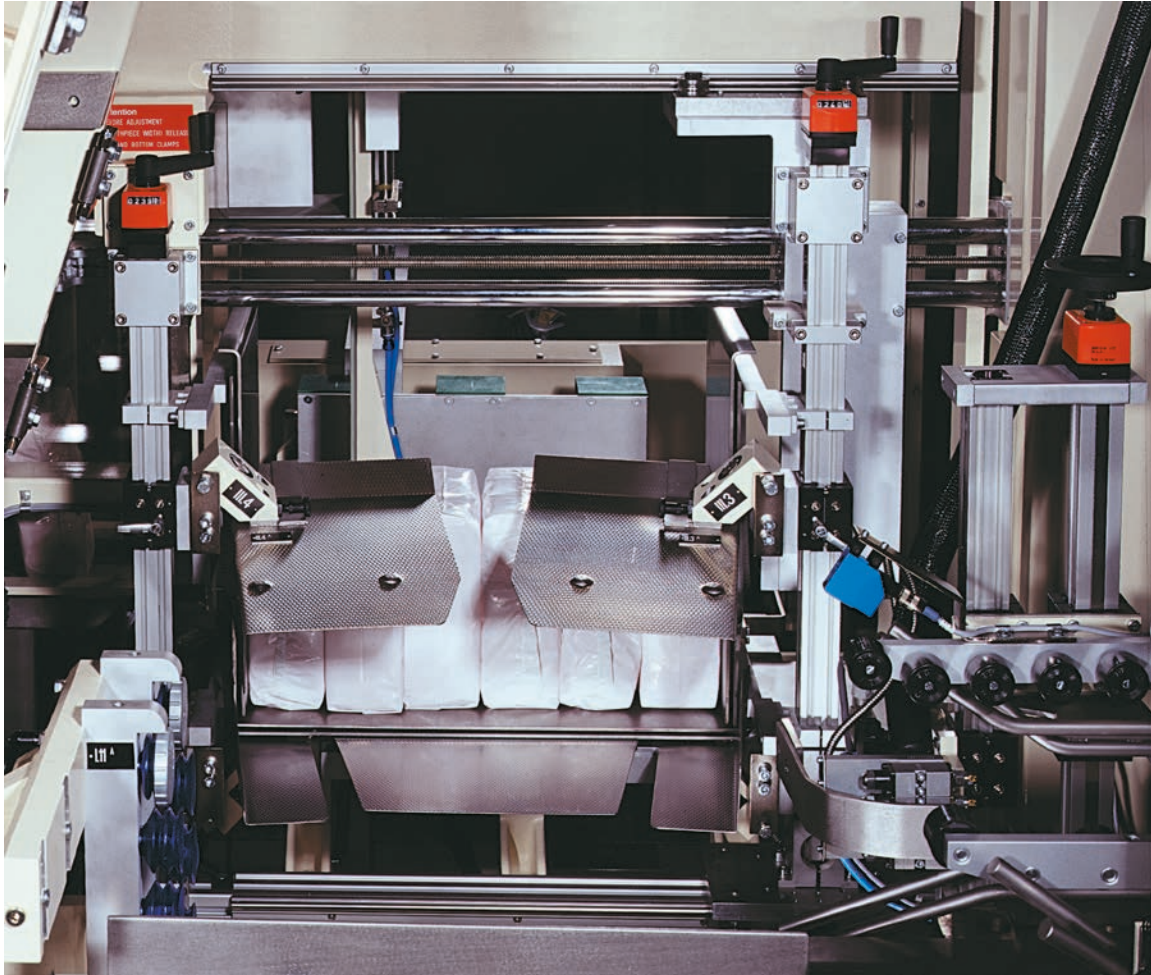
only FKVH 60, 80



## FKVH - quad®

[mm]

Code No.	Type	A	B	C	D	E	G	H	L	M	P	Q	R	T	U	W	m [g]	Clamping lever S Code No.
52300010030	FKVH 30	30,2	7	30	51	6	84	70	16	56	42	4,5	9	10	6	20	86	9300101
52400010030	FKVH 40	40,3	7	40	68	8	97	83	18	68	54	6,5	13	15	10	28	141	9301401
52500010030	FKVH 50	50,4	9	50	85	10	125	105	20	85	65	7	14	20	10	30	259	9300401
52600010030	FKVH 60	60,4	9	62,5	111	12	145	120	22	105	80	7	14	20	10	65	484	9022801
52800010030	FKVH 80	80,4	11	80	136	16	170	148	24	126	100	8	20	19	12	65	690	9300801



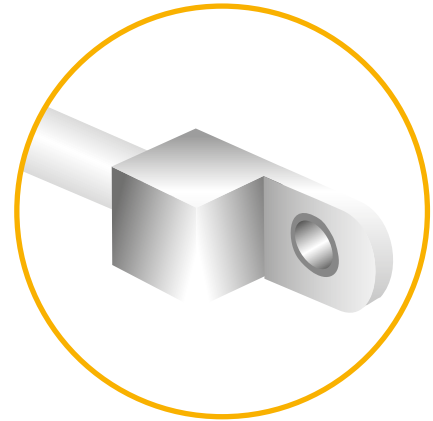
Simple fixation of linear units (for format adjustment) on a packaging machine.

## Solid Clamps

# Strap clamps

Version:

- Strap clamps



Single-piece elements

- For the quick and inexpensive installation



### Industrial design

- Cast aluminium
- Great variety
- Single-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



### Block form

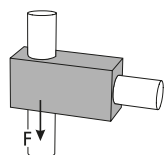
- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements



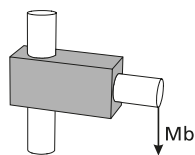
## Loads strap clamps

### Attention!

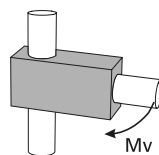
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

**Tightening torque of clamping screws:**

M6: 10 Nm

M8: 25 Nm

M10: 50 Nm

Size	10			18			30			40			50			60		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
<b>Industrial design</b>																		
LW				2,7	38	15	6	133	85	5,8	264	138	12	274	358			
LP				3,6	28	9	4,9	91	94	6	267	181	12,1	332	387			
LQ				2,7	28	15	4,9	83	94	5,8	231	138	12,1	346	133			
LF					40	50		110	101		562	635		349	377			

Size	10			18			30			40			50			60		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
<b>Block form</b>																		
LWR										7,1	397	107						
LWV										3,2	333	287						
LPR										7,1	598	107						
LPV										3,2	405	438						
LQR										7,1	593	107						
LQV										3,2	738	653						
LF																		

# Strap clamps

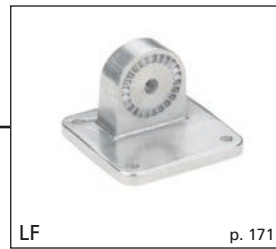
Hinge tube connector

Industrial design



Block form





## Solid Clamps

# Strap clamps

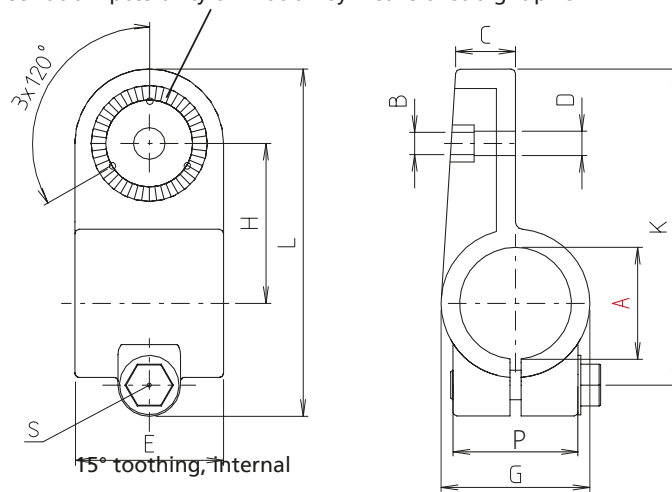
### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

serration: possibility of fixation by means of straight pins



Type LW 12-18



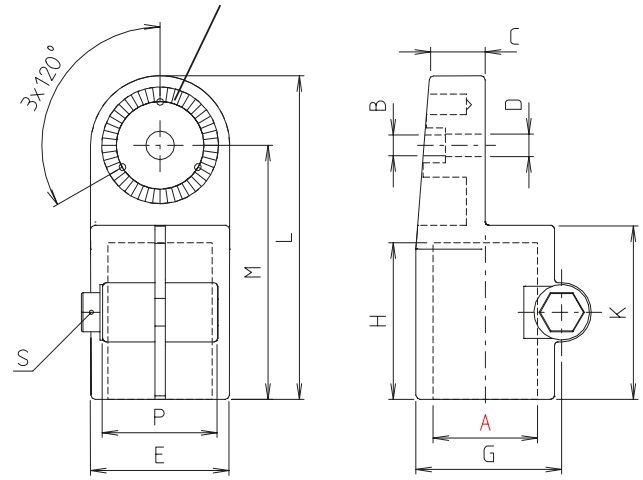
Type LW 20-60

## LW - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	P	m [g]	Clamping lever S Code No.
17120000020	LW 12	12,1	M6	10,5	7,5	30	26	27	51,5	64,5	21	62	90210
17140000020	LW 14	14,1										59	
17160000020	LW 16	16,1										56	
17180000020	LW 18	18,1										52	
17200000020	LW 20	20	M8	16	9	40	40	43	85	93	33	169	9022401
17250000020	LW 25	25,1										150	
17300000020	LW 30	30,1										131	
17320000020	LW 32	32,2	M10	22	11	56	56	60	116	128	48	428	9024301
17350000020	LW 35	35,2										400	
17400000020	LW 40	40,2										366	
17420000020	LW 42	42,2	M10	25	11	66	66	70	136	148	58	586	9024401
17450000020	LW 45	45,2										547	
17480000020	LW 48	48,2										519	
17500000020	LW 50	50,2										488	
17600000020	LW 60	60,2	M12	30	13,5	80	80	85	165	178	68	820	9024401

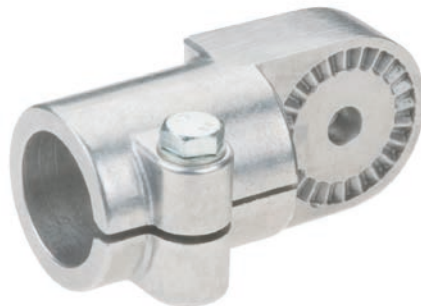
serration: possibility of fixation by means of straight pins



15° toothing internal



Type LP 12–18



Type LP 20–60

## LP - Industrial design

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	m [g]	Clamping lever S Code No.
17120001020	LP 12	12,1	M6	10,5	7,5	26	29,4	25	30	57	44	21	62	90210
17140001020	LP 14	14,1											59	
17160001020	LP 16	16,1											56	
17180001020	LP 18	18,1											52	
17200001020	LP 20	20	M8	16	9	40	40	45	50	93	73	33	198	9022401
17250001020	LP 25	25,1											179	
17300001020	LP 30	30,1											150	
17320001020	LP 32	32,2	M10	22	11	56	56	60	68	128	100	48	498	9024301
17350001020	LP 35	35,2											460	
17400001020	LP 40	40,2											410	
17420001020	LP 42	42,2	M10	25	11	66	66	70	78	148	115	58	690	9024401
17450001020	LP 45	45,2											653	
17480001020	LP 48	48,2											609	
17500001020	LP 50	50,2											586	
17600001020	LP 60	60,2	M12	30	13,5	80	80	78	90	174	135	68	940	9024401

## Solid Clamps

# Strap clamps

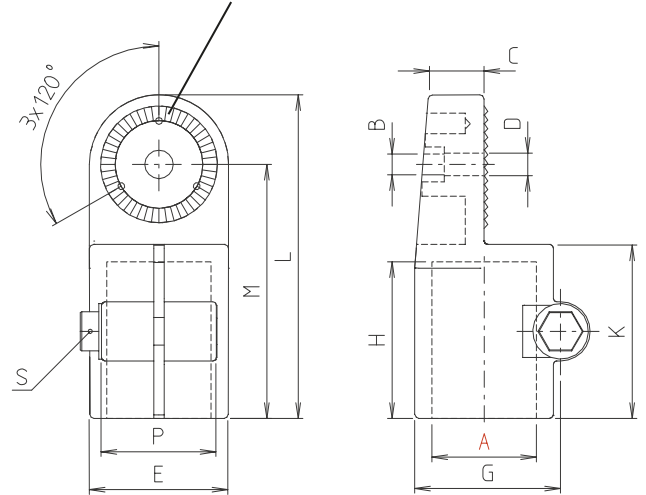
### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

serration: possibility of fixation by means of straight pins



15° toothing external



Type LPZ 12-18



Type LPZ 20-60

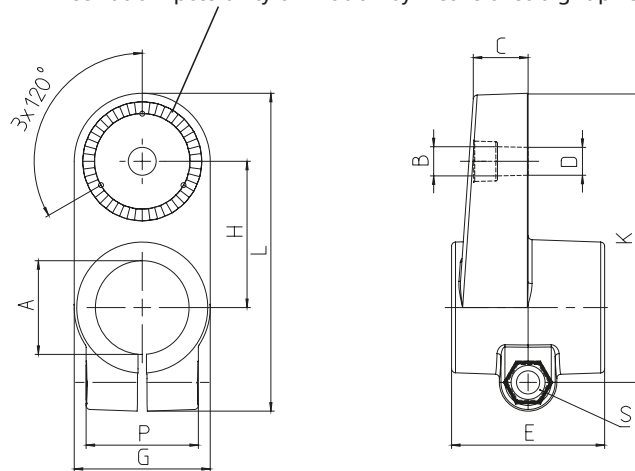
## LPZ - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	m[g]	Clamping lever S Code No.
17120010020	LPZ 12	12,1	M6	10,5	7,5	26	29,4	25	30	57	44	21	62	90210
17140010020	LPZ 14	14,1											59	
17160010020	LPZ 16	16,1											56	
17180010020	LPZ 18	18,1											52	
17200010020	LPZ 20	20	M8	16	9	40	40	45	50	93	73	33	198	9022401
17250010020	LPZ 25	25,1											179	
17300010020	LPZ 30	30,1											150	
17320010020	LPZ 32	32,2	M10	22	11	56	56	60	68	128	100	48	498	9024301
17350010020	LPZ 35	35,2											460	
17400010020	LPZ 40	40,2											410	
17420010020	LPZ 42	42,2	M10	25	11	66	66	70	78	148	115	58	690	9024401
17450010020	LPZ 45	45,2											653	
17480010020	LPZ 48	48,2											609	
17500010020	LPZ 50	50,2											586	
17600010020	LPZ 60	60,2	M12	30	13,5	80	80	78	90	174	135	68	940	9024401



Type LQ 20-50

serration: possibility of fixation by means of straight pins



15° toothing internal

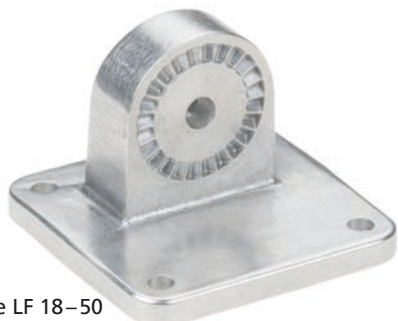
**LQ - Industrial design**

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	P	m [g]	Clamping lever S Code No.	
17200003020	LQ 20	20	M8	16	9	45	40	43	85	93	33	102	9022401	
17250003020	LQ 25	25										120		
17300003020	LQ 30	30,1										145		
17320003020	LQ 32	32,2	M10	22	11	60	56	60	116	128	48	470		9024301
17350003020	LQ 35	35,2										421		
17400003020	LQ 40	40,2										375		

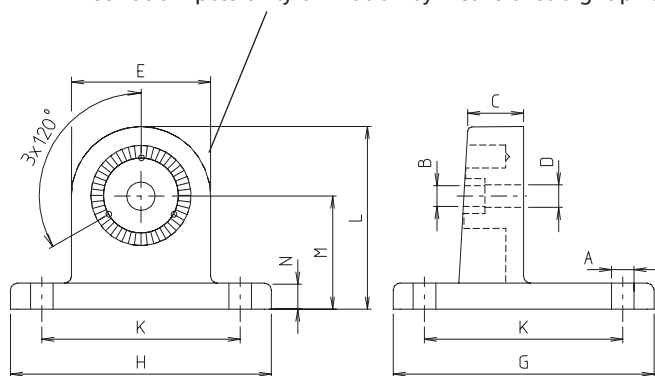


Type LF 18



Type LF 18-50

serration: possibility of fixation by means of straight pins



15° toothing internal

**LF - Industrial design**

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	m [g]
1718000202	LF 18	5,3	M6	13	7	25	50	35	38-40	32,5	20	5	38
1730000202	LF 30	6,5	M8	16	9	40	75	75	57	52,5	33	7,5	151
1740000202	LF 40	8,5	M10	22	11	56	100	100	76	72	44	10	375
1750000202	LF 50	8,5		25		66	125	125	98	85	52	12	582

## Solid Clamps

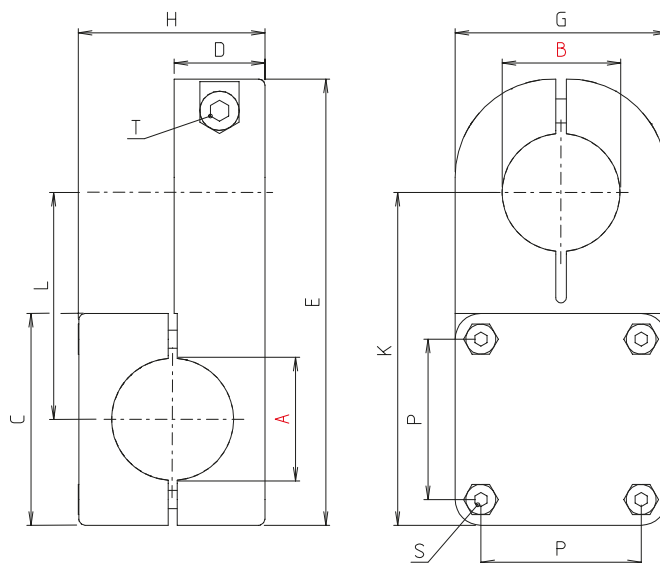
# Strap clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

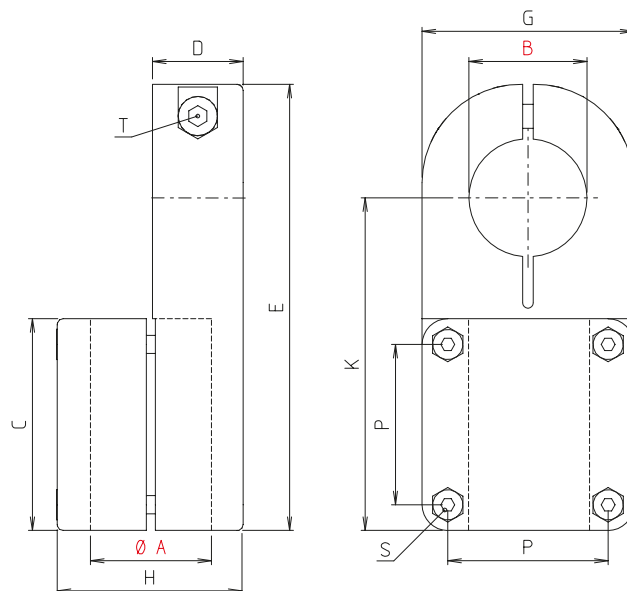
- Stainless steel screws
- Ball-polished
- Colour



### LWR - Block form

[mm]

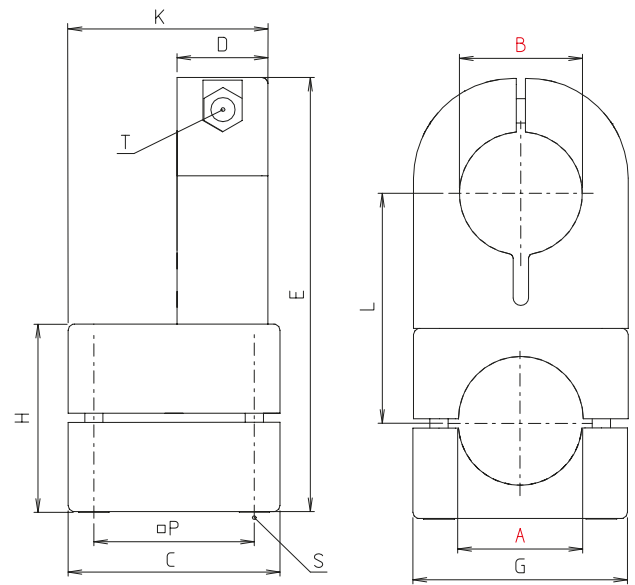
Code No.	Type	A	B	C	D	E	G	H	K	L	P	m [g]	S	T
													Clamping lever Code No.	
274000040266	LWR 40	40,2	40,2	70	30	146	70	62	110	75	55	654	9021601	9022601



### LPR - Block form

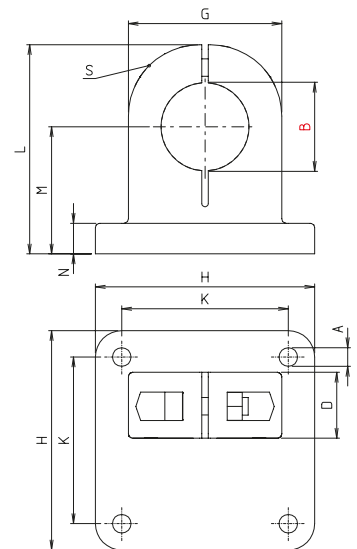
[mm]

Code No.	Type	A	B	C	D	E	G	H	K	P	m [g]	S	T
												Clamping lever Code No.	
274000050266	LPR 40	40,2	40,2	70	30	146	70	62	110	53	551	9021601	9022601


**LQR - Block form**

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	L	P	m [g]	S	T
													Clamping lever Code No.	
274000060266	LQR 40	40,2	40,2	70	30	142	70	62	66	75	53	694	9021601	9021601


**LFR - Block form**

[mm]

Code No.	Type	A	B	D	G	H	K	L	M	N	m [g]	Clamping lever S Code No.
27400002026	LFR 40	8,5	40,2	30	70	100	76	90	58	14	55	9022601

## Solid Clamps

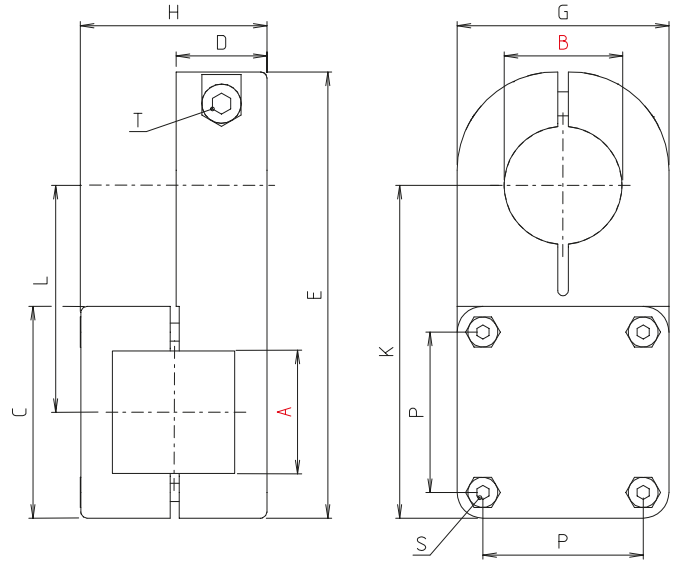
# Strap clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

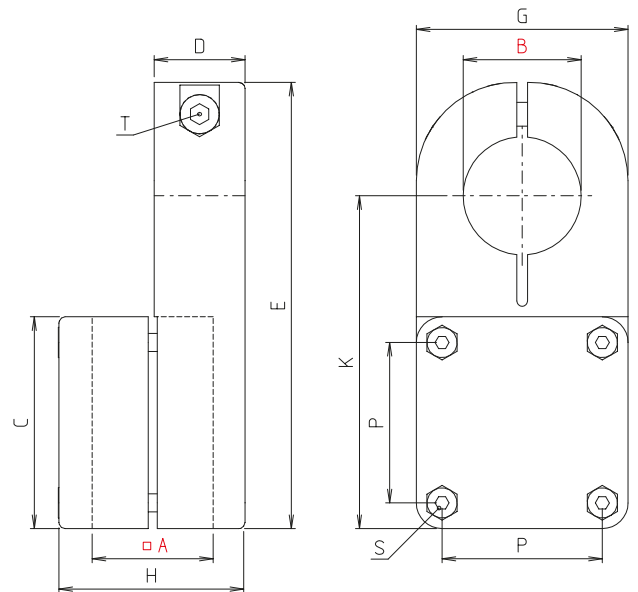
- Stainless steel screws
- Ball-polished
- Colour



### LWV - Block form

[mm]

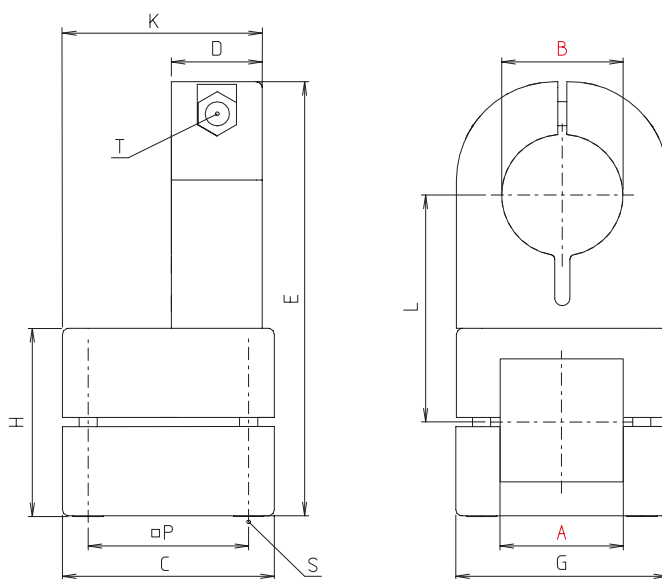
Code No.	Type	A	B	C	D	E	G	H	K	L	P	T	m [g]	Clamping lever S Code No.
274000070266	LWV 40	40,4	40,2	70	30	146	70	62	110	75	53	M8x30	636	9021601



### LPV - Block form

[mm]

Code No.	Type	A	B	C	D	E	G	H	K	P	T	m [g]	Clamping lever S Code No.
274000080266	LPV 40	40,4	40,2	70	30	146	70	62	110	53	M8x30	632	9021601



### LQV - Block form

[mm]

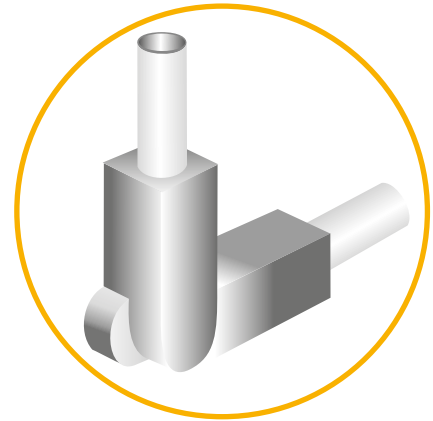
Code No.	Type	A	B	C	D	E	G	H	K	L	P	T	m [g]	Clamping lever S Code No.
274000090266	LQV 40	40,4	40,2	70	30	142	70	62	66	75	53	M8x30	668	9021601

## Solid Clamps

# Hinge clamps

Version :

- Hinge clamps



Single-piece elements

- For the quick and inexpensive installation



### Industrial design

- Cast aluminium
- Great variety
- Single-piece elements



Multi-piece elements

- Also suitable for subsequent assembly and expansion



### Block form

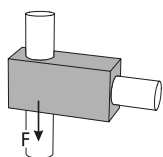
- Cast aluminium
- Higher torque loads
- Plain surface
- Multi-piece elements



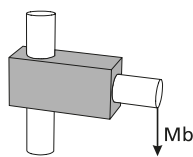
## Loads hinge clamps

### Attention!

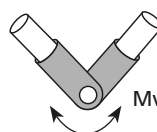
The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.



Adhesion force F [KN]



Bending moment Mb [Nm]



Twisting moment Mv [Nm]

### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm  
M10: 50 Nm

Material data sheet available upon request.

Size Type	10			18			30			40			50			60		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Industrial design																		
GW				2,2	25	7	5,8	85	15	6	233	38	11,9	244	143			
GP				1,1	25	7	4,8	85	15	6	233	38	12	244	143			
GQ				2,2	25	7	4,8	85	15	6	233	38	12	244	143			
GF				2,2	25	7	4,8	85	15	6	233	100	12	244	143			
GWZ				2,2	27	16	5,8	85	148	6	223	376	11,9	317	695			
GPZ				1,1	27	16	4,8	85	148	6	300	300	12	260	400			
GQZ				2,2	27	16	4,8	85	148	6	223	376	12	317	695			
GFZ				2,2	27	16	5,8	69	82	7,4	240	470	7,8	363	695			

Size Type	10			18			30			40			50			60		
	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv	F	Mb	Mv
Block form																		
GKR										5,7	253	43	9,3	563	60			
GKV										2,9	253	43	5,9	563	60			
GFKR										5,7	253	43	9,3	563	60			
GFKV										2,9	410	43	5,9	563	60			
GKRZ										5,7	343	619	9,3	444	548			
GKVZ										2,9	343	619	5,9	444	548			
GFKRZ										5,7	343	619	9,3	444	548			
GFKVZ										1,6	343	619	5,9	444	548			
GWR										5,7	306	75						
GPR										5,7	306	75						
GQR										5,7	375	75						
GFR										5,7	308	75						
GWV										2,9	306	75						
GPV										2,9	306	75						
GQV										2,9	306	75						
GFV										2,9	306	75						

# Hinge clamps

Hinge tube connector

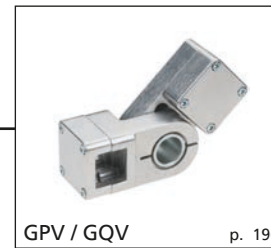
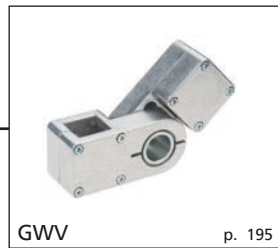
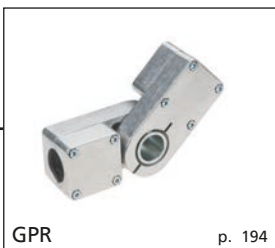
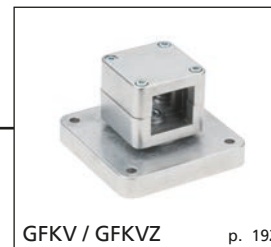
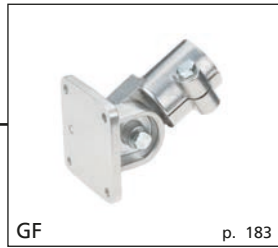


Industrial design



Block form





## Solid Clamps

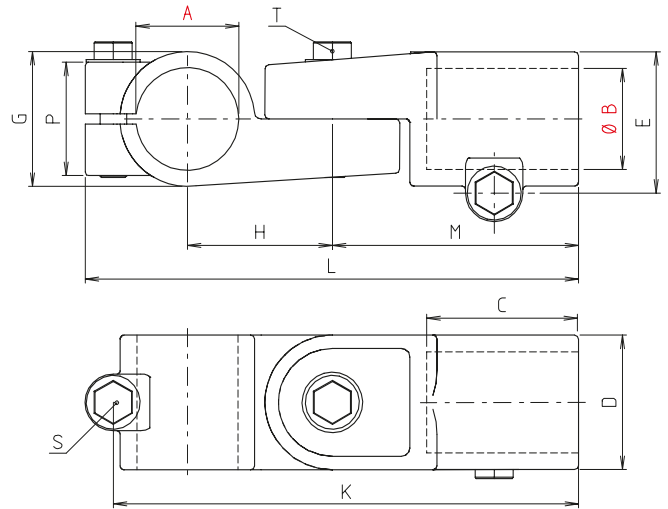
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour



Without tothing- 180° infinitely



Type GW 12-18

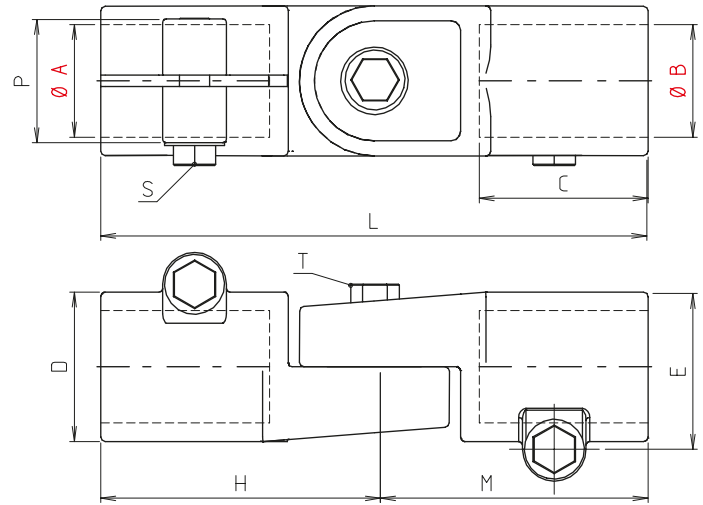


Type GW 20-60

## GW - Industrial design

[mm]

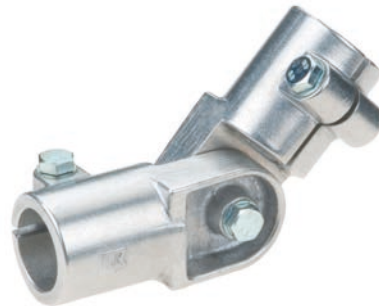
Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	m [g]	S	T
														Clamping lever Code No.	
181200010200	GW 12	12,1	12,1	25	26	29,4	26	27	87	95,5	44	21	135	90210	90210
181400010200	GW 14	14,1	14,1												
181600010200	GW 16	16,1	16,1												
181800010200	GW 18	18,1	18,1												
182000010200	GW 20	20,1	20,1	45	40	42	40	43	138	147	73	33	387	9022401	9022401
182500010200	GW 25	25,1	25,1												
183000010200	GW 30	30,1	30,1												
183200010200	GW 32	32,2	32,2	60	56	57	56	60	188	200	100	48	961	9024301	-
183500010200	GW 35	35,2	35,2												
184000010200	GW 40	40,2	40,2												
184200010200	GW 42	42,2	42,2												
184500010200	GW 45	45,2	45,2	70	66	66	66	70	218	230	115	58	1335	9024401	-
184800010200	GW 48	48,2	48,2												
185000010200	GW 50	50,2	50,2												
186000010200	GW 60	60,3	60,3												



Without toothings- 180° infinitely



Type GP 12-18



Type GP 20-60

## GP - Industrial design

Code No.	Type	A	B	C	D	E	H	L	M	P	m [g]	Clamping lever S Code No.
181200000200	GP 12	12,1	12,1	25	26	29,4	44	88	44	21	135	90210
181400000200	GP 14	14,1	14,1								129	
181600000200	GP 16	16,1	16,1								123	
181800000200	GP 18	18,1	18,1								115	
182000000200	GP 20	20,1	20,1	45	40	40	73	146	73	33	419	9022401
182500000200	GP 25	25,1	25,1								374	
183000000200	GP 30	30,1	30,1								328	
183200000200	GP 32	32,15	32,15	60	56	56	100	200	100	48	1028	9024301
183500000200	GP 35	35,15	35,15								972	
184000000200	GP 40	40,15	40,15								871	
184200000200	GP 42	42,2	42,2	70	66	66	115	230	115	58	1440	9024401
184500000200	GP 45	45,2	45,2								1355	
184800000200	GP 48	48,2	48,2								1279	
185000000200	GP 50	50,2	50,2								1213	
186000000200	GP 60	60,25	60,25	80	80	80	135	270	135	68	2200	9024401

## Solid Clamps

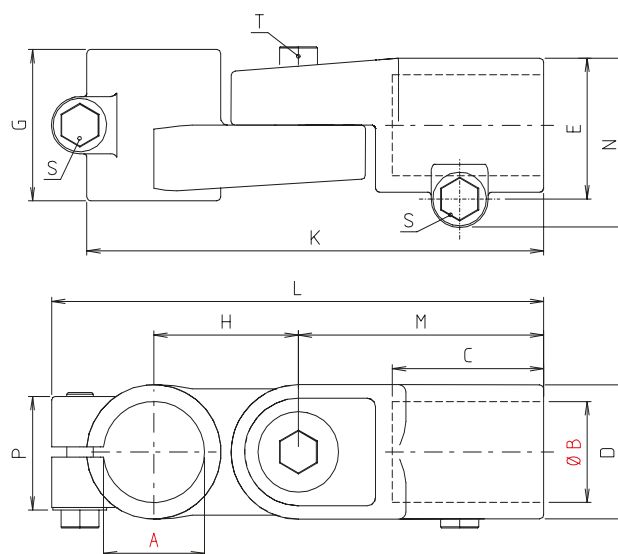
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

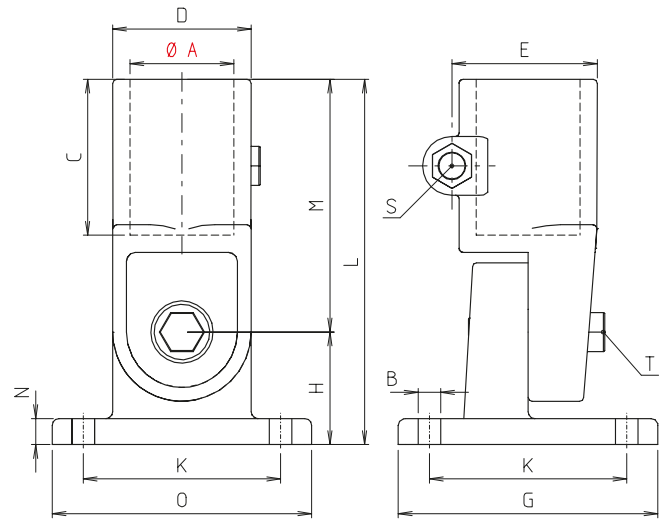


Without tothing 180° infinitely



## GQ - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	P	m [g]	[mm]	
															S	T
															Clamping lever Code No.	
182000030200	GQ 20	20,1	20,1	45	40	40	45	43	136	146	73	50	33	409	9022401	9022401
182500030200	GQ 25	25,1	25,1											369		-
183000030200	GQ 30	30,1	30,1											318		-
183200030200	GQ 32	32,2	32,2	60	56	56	60	60	188	200	100	68	48	1005	9024301	9024301
183500030200	GQ 35	35,2	35,2											922		
184000030200	GQ 40	40,2	40,2											822		



Without tothing 180° infinitely



Type GF 12-18



Type GF 20-50

## GF - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	O	m [g]	Clamping lever S Code No.
18120002020	GF 12	12,1	6	25	26	29,4	50	20	38-40	64	44	5	35	106	90210
18140002020	GF 14	14,1												103	
18160002020	GF 16	16,1												100	
18180002020	GF 18	18,1												96	
18200002020	GF 20	20,1	7	45	40	42	75	33	57	106	73	7	75	371	9022401
18250002020	GF 25	25,1												374	
18300002020	GF 30	30,1												325	
18320002020	GF 32	32,2	9	60	56	57	100	44	76	144	100	10	100	963	9024301
18350002020	GF 35	35,2												880	
18400002020	GF 40	40,2												827	
18420002020	GF 42	42,2	9	70	66	66	125	52	98	167	115	12	125	1378	9024401
18450002020	GF 45	45,2												1287	
18480002020	GF 48	48,2												1233	
18500002020	GF 50	50,2												1213	

## Solid Clamps

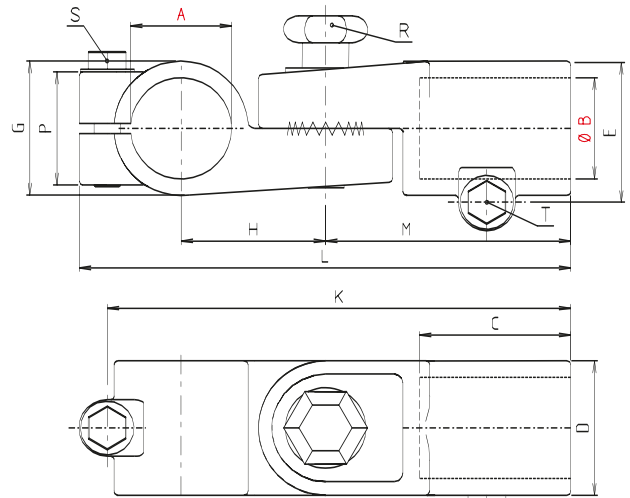
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour



With toothing - rotation of 180°, engaging at 15° intervals



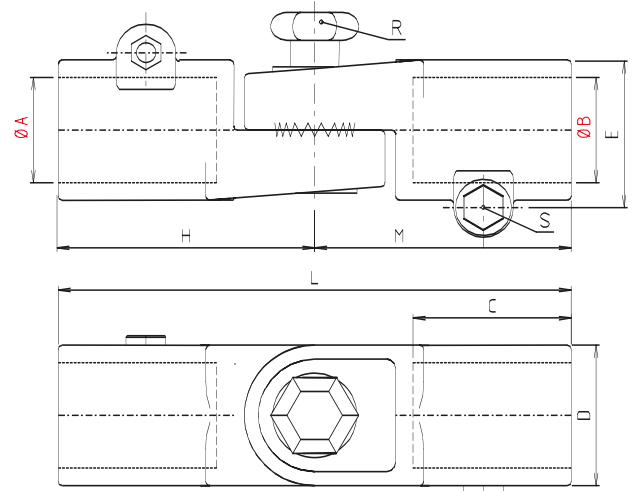
Type GWZ 12–18



Type GWZ 20–60

## GWZ - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	R	T	m [g]	Clamping lever S Code No.
181200040200	GWZ 12	12,1	12,1	25	26	29,4	26	27	84	95,5	44	21	M6x26	M6x16	135	90210
181400040200	GWZ 14	14,1	14,1												129	
181600040200	GWZ 16	16,1	16,1												123	
181800040200	GWZ 18	18,1	18,1												115	
182000040200	GWZ 20	20,1	20,1	45	40	40	40	43	136	146	73	33	M8x40	M8x35	428	9022401
182500040200	GWZ 25	25,1	25,1												391	
183000040200	GWZ 30	30,1	30,1												344	
183200040200	GWZ 32	32,2	32,2	60	56	56	56	60	188	200	100	48	M10x50	M10x50	999	9024301
183500040200	GWZ 35	35,2	35,2												943	
184000040200	GWZ 40	40,2	40,2												861	
184200040200	GWZ 42	42,2	42,2												1361	
184500040200	GWZ 45	45,2	45,2	70	66	66	66	70	218	230	115	58	M10x50	M10x60	1287	9024401
184800040200	GWZ 48	48,2	48,2												1211	
185000040200	GWZ 50	50,2	50,2												1166	
186000040200	GWZ 60	60,3	60,3												2050	
				80	80	80	85	85	260	273	135	68	M12x50	M10x60	2050	9024401



With toothing - rotation of 180°, engaging at 15° intervals



Type GPZ 12-18



Type GPZ 20-60

## GPZ - Industrial design

Code No.	Type	A	B	C	D	E	H	L	M	R	T	m [g]	Clamping lever S Code No.
181200050200	GPZ 12	12,1	12,1	25	26	29,4	44	88	44	M6x26	M6x16	135	90210
181400050200	GPZ 14	14,1	14,1									129	
181600050200	GPZ 16	16,1	16,1									123	
181800050200	GPZ 18	18,1	18,1									115	
182000050200	GPZ 20	20,1	20,1	45	40	40	73	146	73	M8x50	M8x35	460	9022401
182500050200	GPZ 25	25,1	25,1									414	
183000050200	GPZ 30	30,1	30,1									370	
183200050200	GPZ 32	32,2	32,2	60	56	56	100	200	100	M10x50	M10x50	1069	9024301
183500050200	GPZ 35	35,2	35,2									1012	
184000050200	GPZ 40	40,2	40,2									916	
184200050200	GPZ 42	42,2	42,2	70	66	66	115	230	115	M10x60	M10x60	1482	9024401
184500050200	GPZ 45	45,2	45,2									1393	
184800050200	GPZ 48	48,2	48,2									1316	
185000050200	GPZ 50	50,2	50,2									1261	
186000050200	GPZ 60	60,3	60,3	80	80	80	135	270	135	M12x50	M10x60	2200	9024401

## Solid Clamps

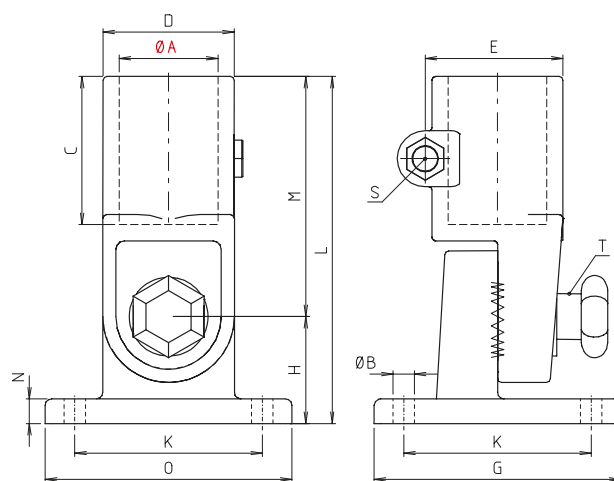
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour



With tothing - rotation of 180°, engaging at 15° intervals



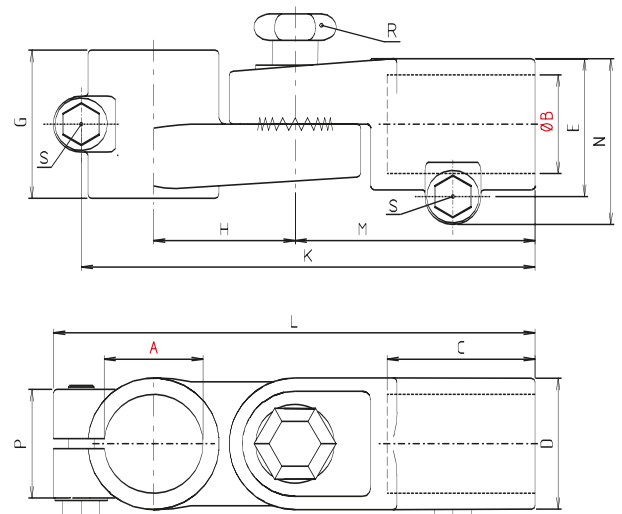
TYPE GFZ 12-18



TYPE GFZ 20-50

## GFZ - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	O	T	m [g]	Clamping lever S code No.
18120007020	GFZ 12	12,1	5,3	25	26	29,4	50	27	40	64	44	5	35	M6x26	106	90210
18140007020	GFZ 14	14,1													103	
18160007020	GFZ 16	16,1													100	
18180007020	GFZ 18	18,1													96	
18200007020	GFZ 20	20,1	7	45	40	40	75	32,5	57	105,5	73	7	75	M8x50	409	9022401
18250007020	GFZ 25	25,1													398	
18300007020	GFZ 30	30,1													368	
18320007020	GFZ 32	32,2	9	60	56	56	100	44	76	144	100	10	100	M10x52	949	9024301
18350007020	GFZ 35	35,2													923	
18400007020	GFZ 40	40,2													866	
18420007020	GFZ 42	42,2	9	70	66	66	125	52	98	167	115	12	125	M10x60	1365	9024401
18450007020	GFZ 45	45,2													1318	
18480007020	GFZ 48	48,2													1279	
18500007020	GFZ 50	50,2													1287	



With toothing - rotation of 180°, engaging at 15° intervals



## GQZ - Industrial design

Code No.	Type	A	B	C	D	E	G	H	K	L	M	N	P	R	[mm]	
															m [g]	Clamping lever S Code No.
182000060200	GQZ 20	20,1	20,1	45	40	40	45	43	136	146	73	50	33	M8x40	450	9022401
182500060200	GQZ 25	25,1	25,1												412	
183000060200	GQZ 30	30,1	30,1												358	
183200060200	GQZ 32	32,2	32,2	60	56	56	60	60	188	200	100	68	48	M10x52	1045	9024301
183500060200	GQZ 35	35,2	35,2												990	
184000060200	GQZ 40	40,2	40,2												870	

## Solid Clamps

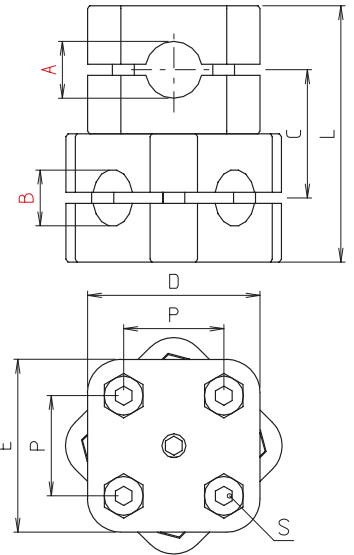
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

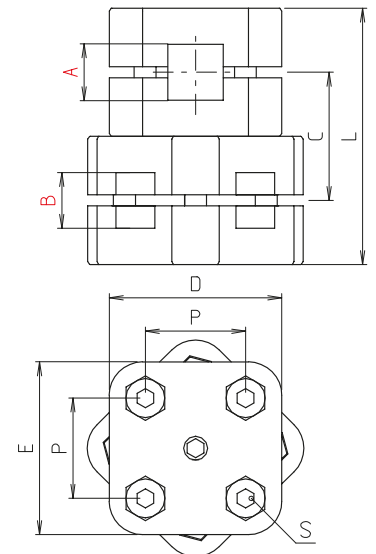


Without toothing 360° infinitely

### GKPR - Block form

[mm]

Code No.	Type	A	B	C	D	E	L	P	S	m [g]
290800080266	GKPR 8	8	8	23	31	31	46	18	M4x18	96
291000080266	GKPR 10	10	10							92

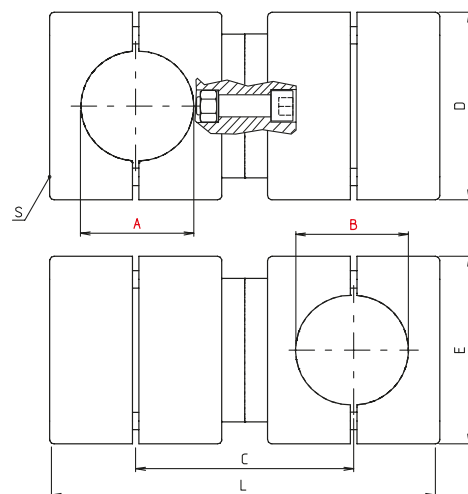


Without toothing 360° infinitely

### GKPV - Block form

[mm]

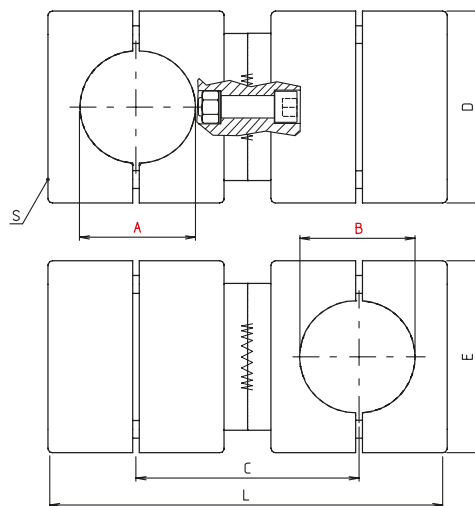
Code No.	Type	A	B	C	D	E	L	P	S	m [g]
291000090266	GKPV 10	10	10	23	31	31	46	18	M4x18	88



Without tothing 360° infinitely

GKR - Block form

								[mm]		
Code No.	Type	A	B	C	D	E	L	m [g]	Clamping lever S Code No.	
284000080266	GKR 40	40,2	40,2	75	70	70	137	899	9021601	
284800080266	GKR 48	48,3	48,3	100	88	88	179	1946	9022901	
285000080266	GKR 50	50,3	50,3					1903		



With tothing - rotation of 360°, engaging at 15° intervals

GKRZ - Block form

								[mm]		
Code No.	Type	A	B	C	D	E	L	m [g]	Clamping lever S Code No.	
284000090266	GKRZ 40	40,2	40,2	75	70	70	137	910	9021601	
284800090266	GKRZ 48	48,3	48,3	100	88	88	179	1933	9022901	
285000090266	GKRZ 50	50,3	50,3					1914		

## Solid Clamps

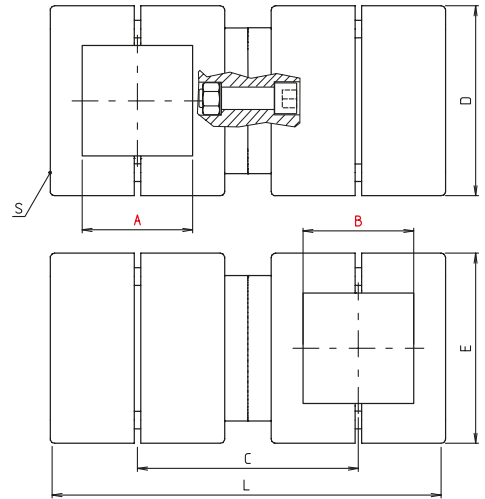
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

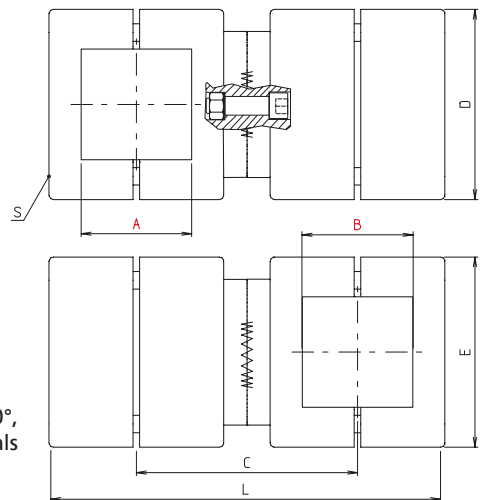


Without tothing 360° infinitely

### GKV - Block form

[mm]

Code No.	Type	A	B	C	D	E	L	m [g]	Clamping lever S Code No.
284000100266	GKV 40	40,4	40,4	75	70	70	137	827	9021601



With tothing - rotation of 180°, engaging at 15° intervals

### GKVZ - Block form

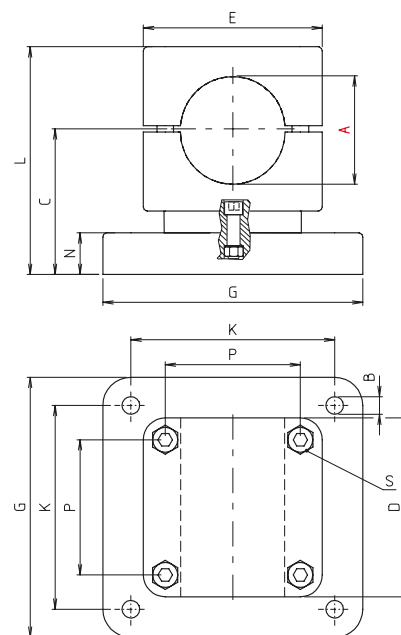
[mm]

Code No.	Type	A	B	C	D	E	L	m [g]	Clamping lever S Code No.
284000110266	GKVZ 40	40,4	40,4	75	70	70	137	834	9021601
285000110266	GKVZ 50	50,5	50,5	100	88	88	179	1826	9022901



### GFKR - Block form

Without tothing 360° infinitely



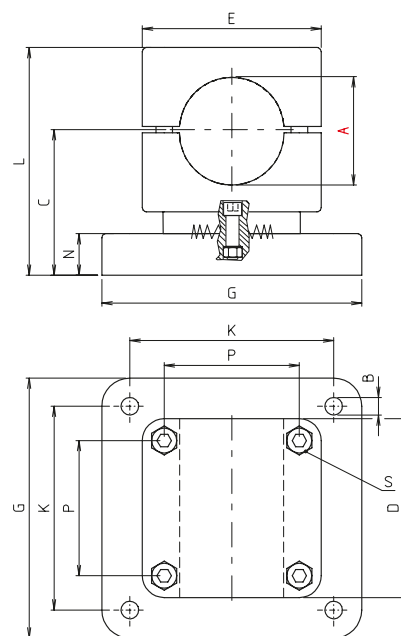
[mm]

Code No.	Type	A	B	C	D	E	G	K	L	N	P	m [g]	Clamping lever S Code No.
28400012026	GFKR 40	40,2	8,5	58	70	70	125	98	88,5	20	53	1064	9021601
28480012026	GFKR 48	48,3	8,5	70	88	88	125	98	109,5	20	65	1570	9022901
28500012026	GFKR 50	50,3										1566	



### GFKRZ - Block form

With tothing - rotation of 180°,  
engaging at 15° intervals



[mm]

Code No.	Type	A	B	C	D	E	G	K	L	N	P	m [g]	Clamping lever S Code No.
28480013026	GFKRZ 48	48,3	8,5	70	88	88	125	98	109,5	20	65	1576	9022901

## Solid Clamps

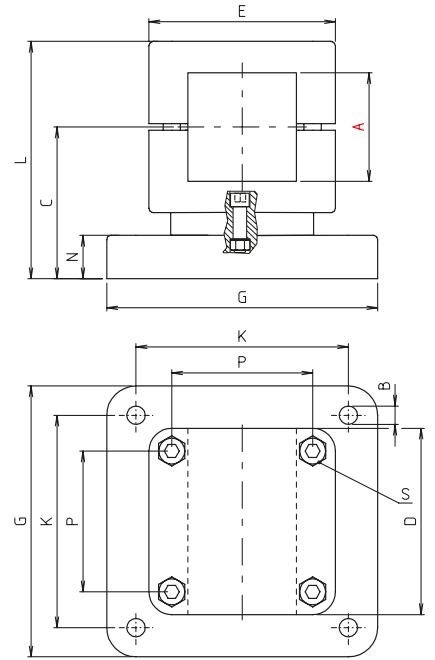
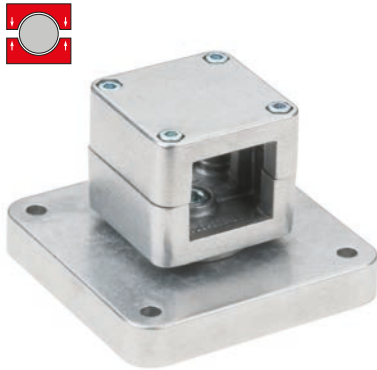
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

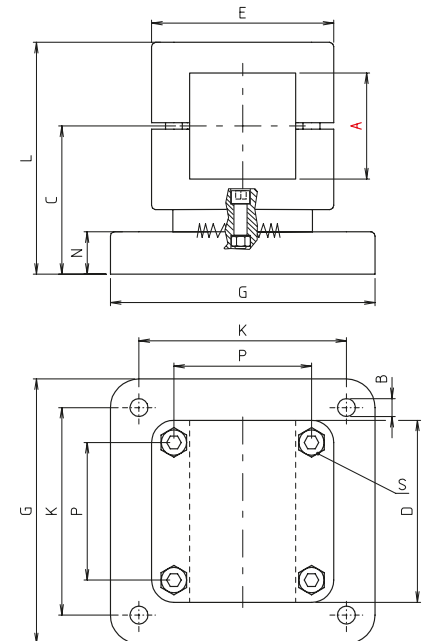
- Stainless steel screws
- Ball-polished
- Colour



Without tothing 360° infinitely

## GFKV - Block form

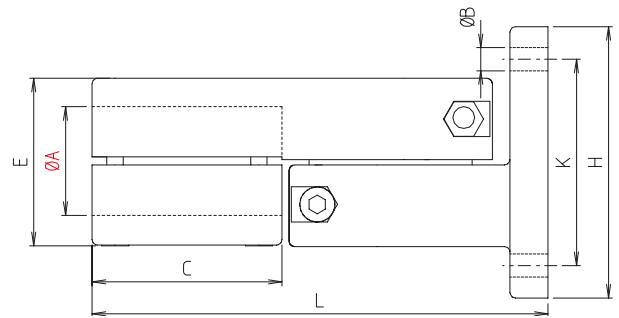
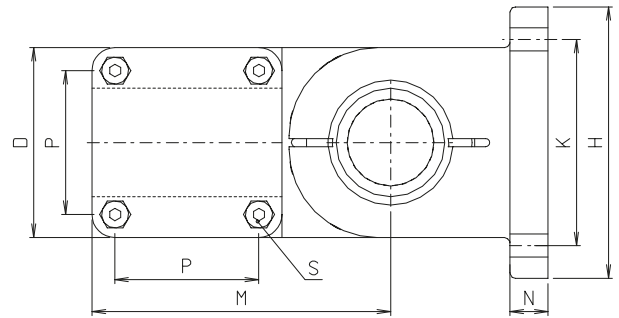
Code No.	Type	A	B	C	D	E	G	K	L	N	P	m [g]	Clamping lever S Code No.
28400014026	GFKV 40	40,4	8,5	58	70	70	125	98	88,5	20	53	1025	9021601
28500014026	GFKV 50	50,5	8,5	70	88	88	125	98	110	20	65	1515	9022901



With tothing - rotation of 180°,  
engaging at 15° intervals

## GFKVZ - Block form

Code No.	Type	A	B	C	D	E	G	K	L	N	P	m [g]	Clamping lever S Code No.
28400015026	GFKVZ 40	40,4	8,5	58	70	70	125	98	88,5	20	53	1031	9021601
28500015026	GFKVZ 50	50,5		70	88	88			109,5			65	1522

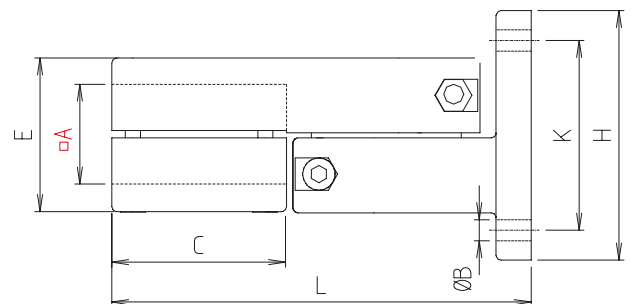
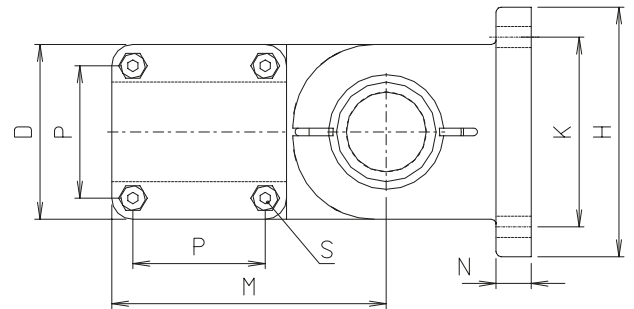


Rotation of 180°, infinitely

**GFR - Block form**

[mm]

Code No.	Type	A	B	C	D	E	H	K	L	M	N	P	m [g]	Clamping lever S Code No.
28400018026	GFR 40	40,2	8,5	70	70	62	100	76	168	110	14	53	1448	9021601



Rotation of 180°, infinitely

**GFV - Block form**

[mm]

Code No.	Type	A	B	C	D	E	H	K	L	M	N	P	m [g]	Clamping lever S Code No.
28400022026	GFV 40	40,4	8,5	70	70	62	100	76	168	110	14	53	1413	9021601

## Solid Clamps

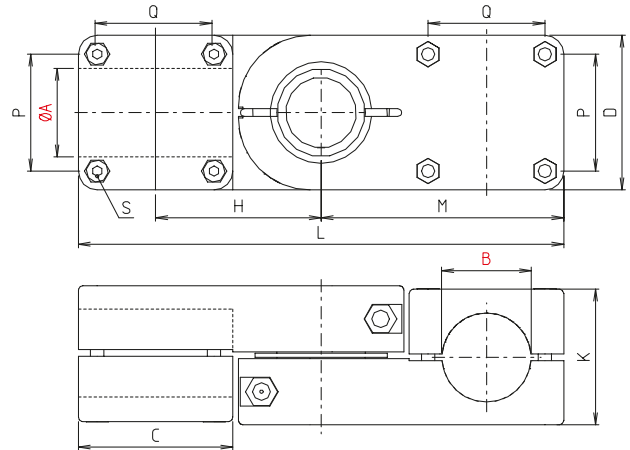
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

- Stainless steel screws
- Ball-polished
- Colour

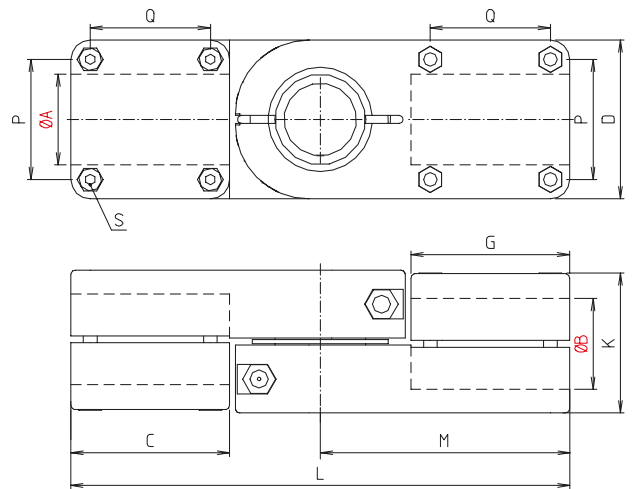


Rotation of 180°, infinitely

## GWR - Block form

[mm]

Code No.	Type	A	B	C	D	H	K	L	M	P	Q	m [g]	Clamping lever S Code No.
284000160266	GWR 40	40,2	40,2	70	70	75	62	220	110	53	53	1561	9021601

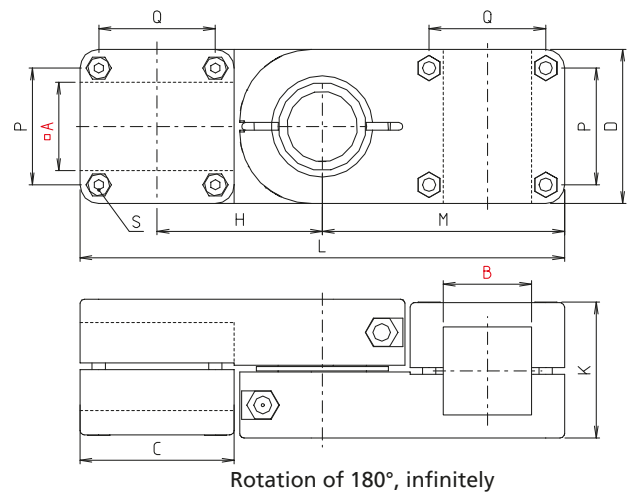


Rotation of 180°, infinitely

## GPR - Block form

[mm]

Code No.	Type	A	B	C	D	G	K	L	M	P	Q	m [g]	Clamping lever S Code No.
284000170266	GPR 40	40,2	40,2	70	70	70	62	220	110	53	53	1533	9021601



### GWV - Block form

Code No.	Type	A	B	C	D	H	K	L	M	P	Q	m [g]	Clamping lever S Code No.
284000200266	GWV 40	40,4	40,4	70	70	75	62	220	110	53	53	1473	9021601

## Solid Clamps

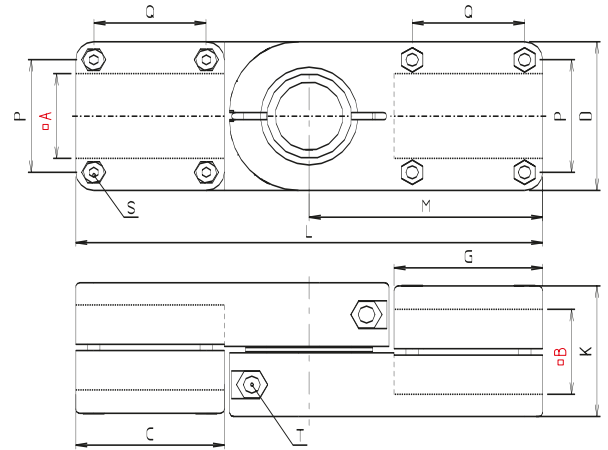
# Hinge clamps

### Order instruction:

- Standard equipment premounted zinc plated screws
- Clamping levers have to be ordered separately Delivery unassembled See table last column and page 244

### On request:

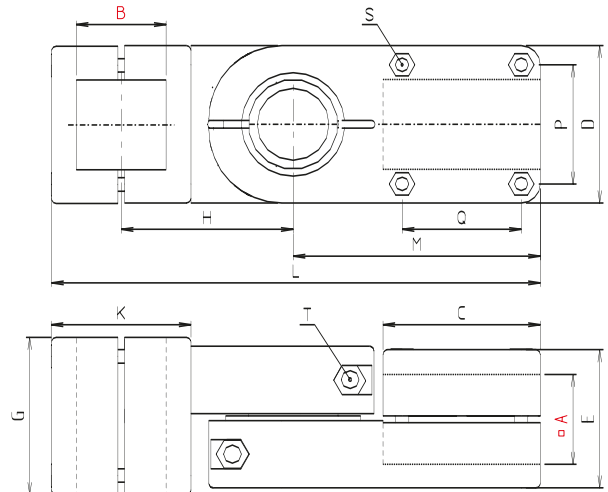
- Stainless steel screws
- Ball-polished
- Colour



Rotation of 180°, infinitely

## GPV - Block form

Code No.	Type	A	B	C	D	G	K	L	M	P	Q	R	m [g]	Clamping lever S Code No.
284000210266	GPV 40	40,4	40,4	70	70	70	62	220	110	53	53	M6x55	1486	9021601



Rotation of 180°, infinitely

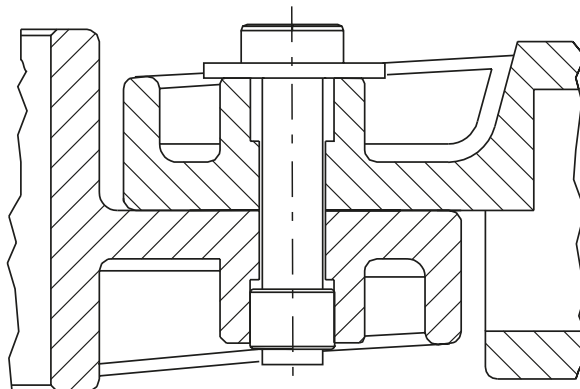
## GQV - Block form

Code No.	Type	A	B	C	D	E	G	H	K	L	M	P	Q	m [g]	Clamping lever S Code No.	Clamping lever S Code No.
284000230266	GQV 40	40,4	40,4	70	70	62	70	75	62	216	110	53	53	1523	9021601	9021601

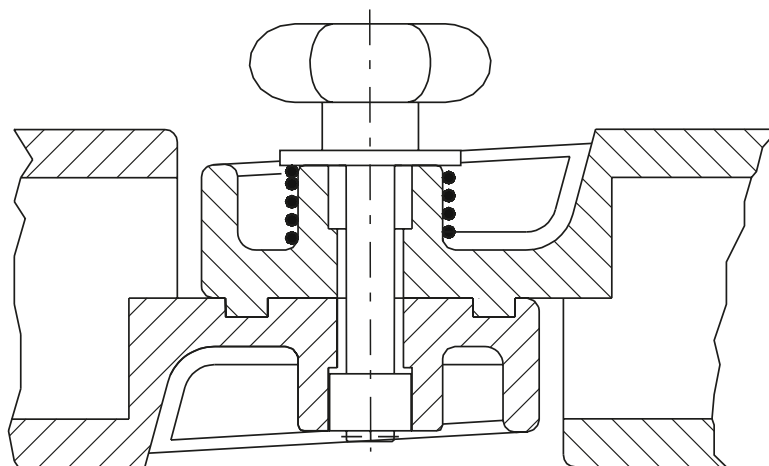


## Sectional views

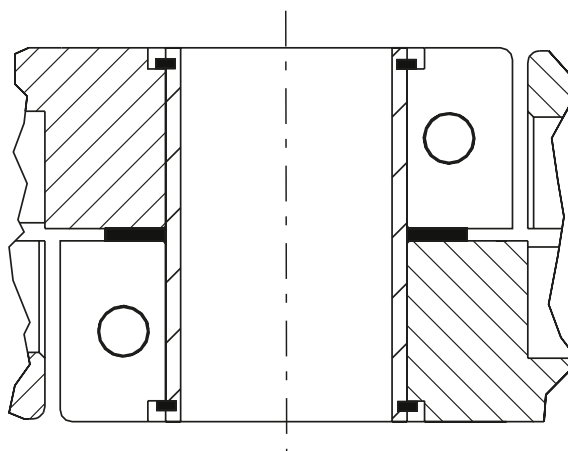
**Industrial design without  
toothing**  
Pivot connected with screw



**Industrial design with toothing**  
Pivot connected with star grip screw



**Block form - tube connector**  
Pivot connected with tube  
jointing sleeve and sliding disk



On request, all size combinations of the rated diameters A and B are available within a series.

## Solid Clamps

# Ball joint

Version:

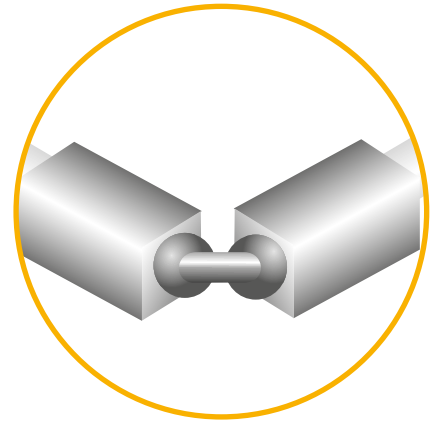
delivery  
from stock



Single-piece elements

- For the quick and inexpensive installation

- Ball joint



### Industrial design

- Cast aluminium
- Great variety
- Single-piece elements

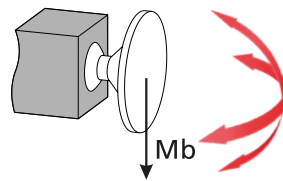
- Features:
- 60° free swivelling / can be turned through 360°
- combinable with tube connectors size 18/30
- The clamps feature a universal connecting plate for flexible integration
- high-strength clamping due to special surfaces

## Loads ball joint

### Attention!

The data in the chart do not ensure a guarantee of quality or a warrant characteristic of our products. These are nonbinding standard values which might be not reached in individual cases due to the temperature or surface finish of the clamping profile.

### Load data



Bending moment Mb [Nm]

Size	18	30
Solid Clamps (aluminium)		
KGW	9	-
KGFS-2	9	-
KGFS	-	40
KGM	-	40
KGMM	-	40
KGGPZ	9	40

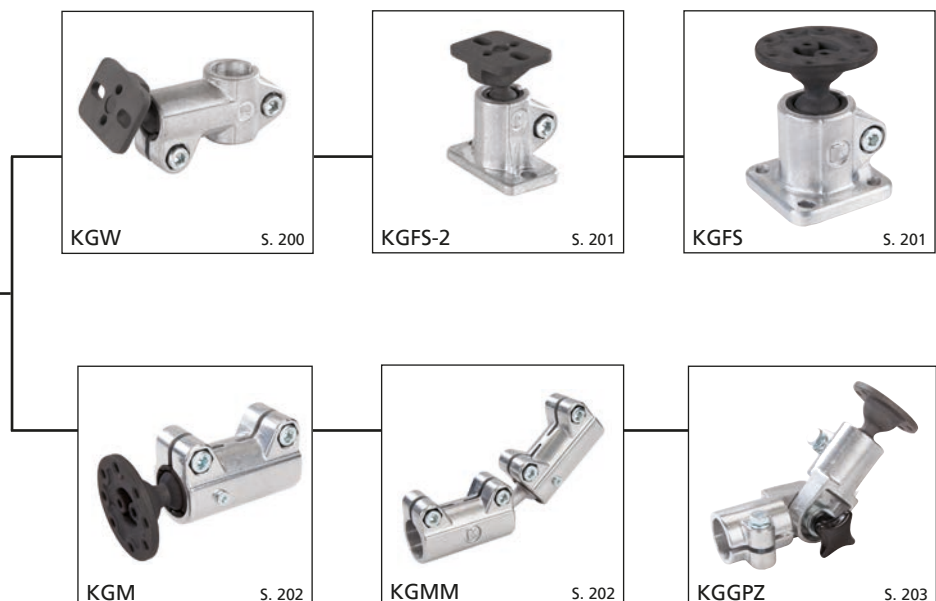
### Tightening torque of clamping screws:

M6: 10 Nm  
M8: 25 Nm

Material data sheet available upon request.

## Overview

### Ball joint tube connectors



## Solid Clamps

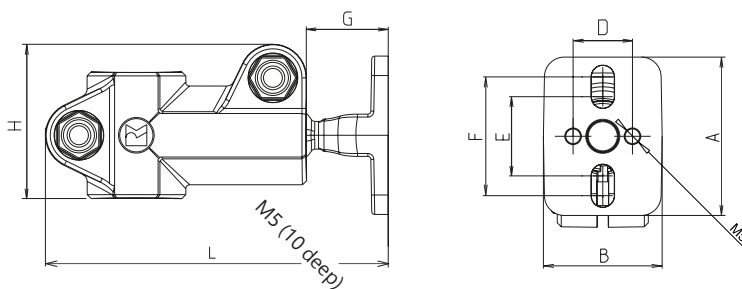
# Ball joint

### Order instruction:

- Standard equipment premounted zinc plated screws

### On request:

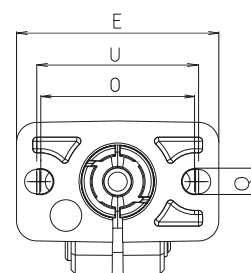
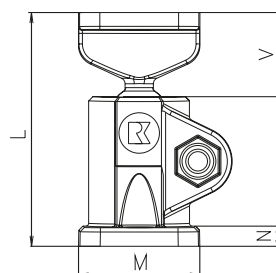
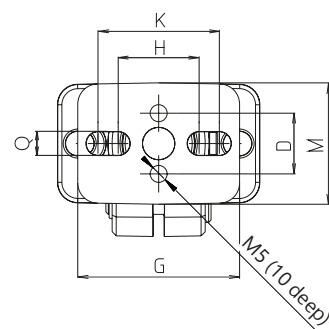
- Stainless steel screws
- Ball-polished
- Colour



## KGW 18 - Industrial design

Code No.	Type	A	D	F	G	H	K	L	M	Q	V	m [g]
111800350260	KGW 18	18,1	15	32	40	20	30	87	30	5,5	21	97

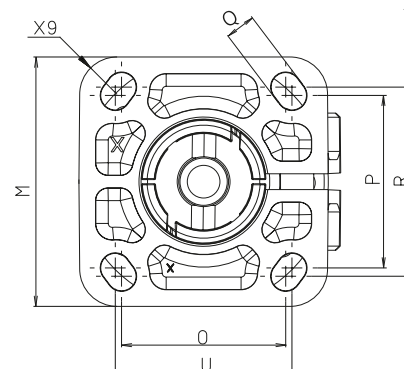
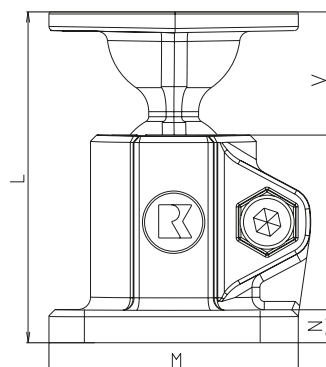
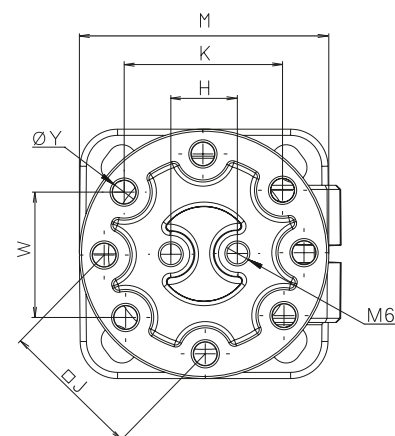
[mm]



**KGFS-2 18 - Industrial design**

[mm]

Code No.	Type	D	E	G	H	K	L	M	N	O	Q	U	V	m [g]
131800350260	KGFS-2 18	15	50	40	20	30	58	30	5	38	5,5	40	21	76



**KGFS 30 - Industrial design**

[mm]

Code No.	Type	H	J	K	L	M	N	O	P	Q	R	U	V	W	Y	m [g]
133000350260	KGFS 30	16	34	38,1	80	60	8	39,5	41,5	7	45,5	42,5	30	30,2	5,8	227

## Solid Clamps

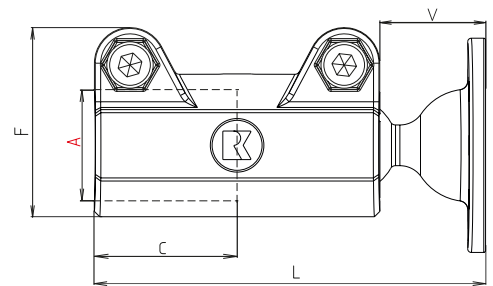
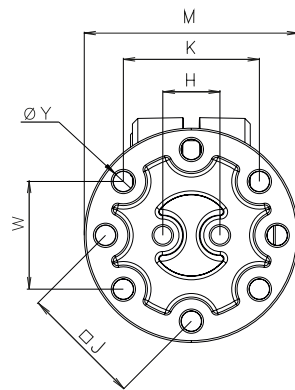
# Ball joint

### Order instruction:

- Standard equipment premounted zinc plated screws

### On request:

- Stainless steel screws
- Ball-polished
- Colour



## KGMM 30 - Industrial design

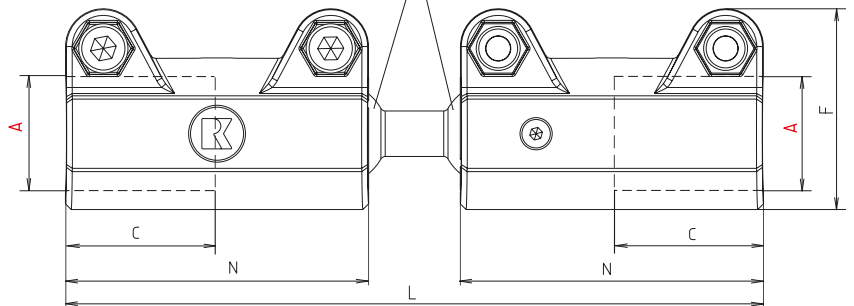
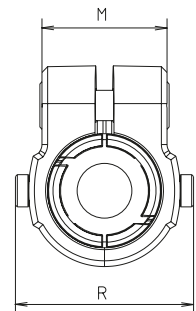
[mm]

Code No.	Type	A	C	F	H	J	K	L	M	V	W	Y	m [g]
143000350260	KGMM 30	30,1	40	53	16	34	38,1	110	60	30	30,2	5,8	258



Type KGMM 30

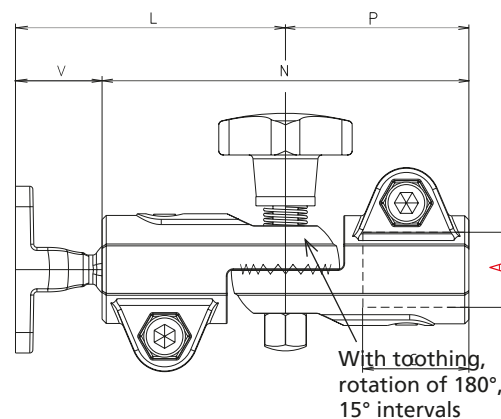
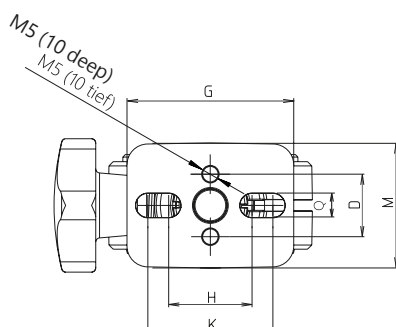
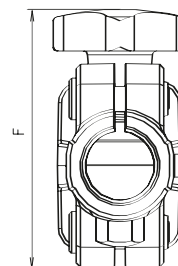
Double ball joint  
Swivel range 60°  
Schwenkbereich 60°



## KGMM 30 - Industrial design

[mm]

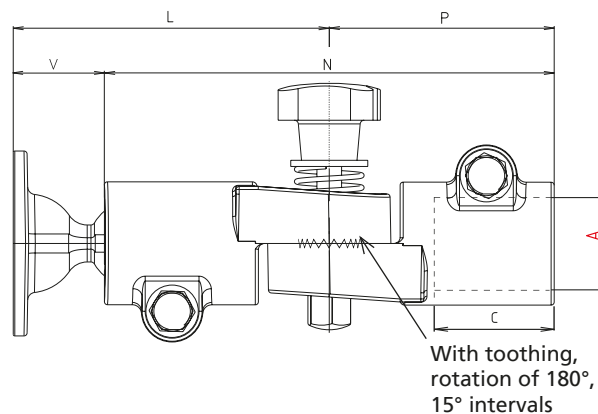
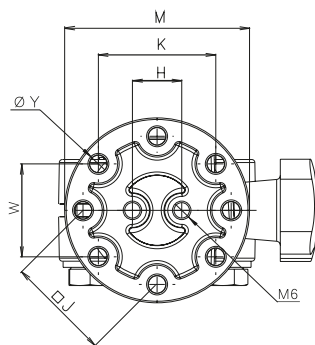
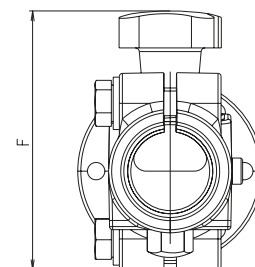
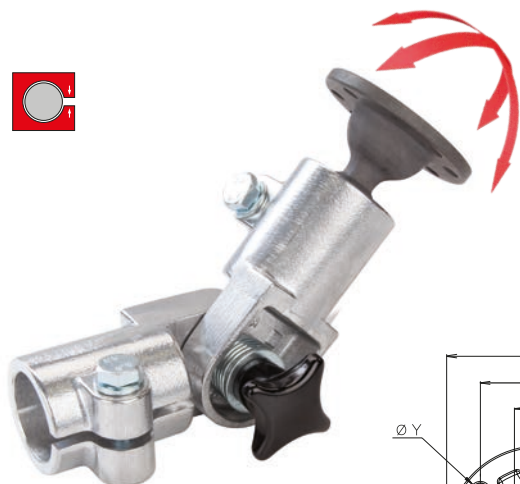
Code No.	Type	A	C	F	L	M	N	R	m [g]
143000360260	KGMM 30	30,1	40	53	184	33	80	47	445



### KGGPZ 18 - Industrial design

[mm]

Code No.	Type	A	C	D	F	G	H	K	L	M	N	P	Q	V	m [g]
181800350260	KGGPZ 18	18,1	25	15	62	40	20	30	65	30	88	44	5,5	21	151



### KGGPZ 30 - Industrial design

[mm]

Code No.	Type	A	C	F	H	J	K	L	M	N	P	V	W	Y	m [g]
183000350260	KGGPZ 30	30,1	45	84	16	34	38,1	103	60	146	73	30	30,2	5,8	436

Light-, Solid- & Robust Clamps

## Accessoires



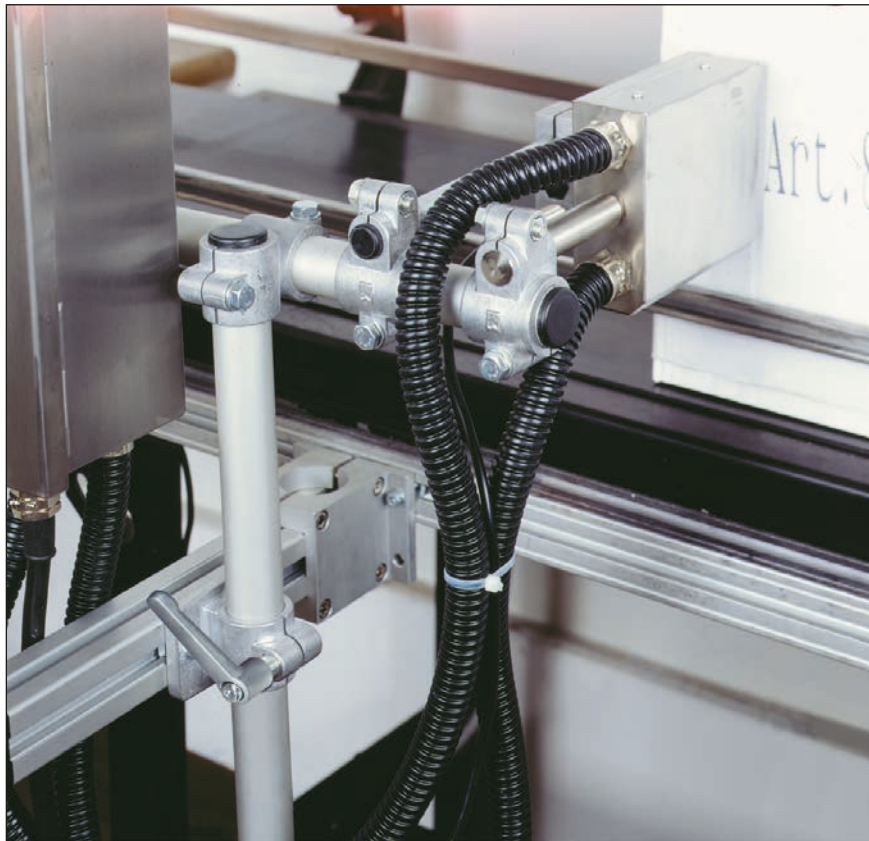


**Light-, Solid- & Robust Clamps**

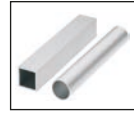
**Accessories ..... from p. 231**

Light-, Solid- & Robust Clamps

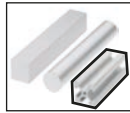
## Accessoires



Print head holder on a packaging machine – can be moved as required.



Steel-, Stainless steel-, Aluminium tubes ..... p. 234



Aluminium bars /-profiles ..... p. 237



Threaded stopper ..... p. 239



Tube stopper ..... p. 240



Special tube fittings ..... p. 241



Adjustable feet ..... p. 242



Castors ..... p. 243



Clamping levers / Insert nuts ..... from p. 244



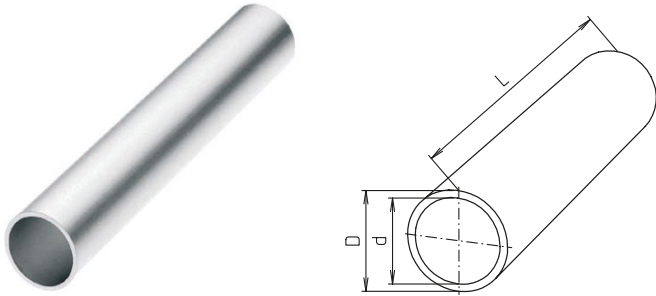
Adapter sleeve R28 ..... p. 245

## Light-, Solid- & Robust Clamps

# Accessoires

### Order instruction:

- Cut-to-length or standard lengths



## Steel-, Stainless steel tubes / round

[mm]

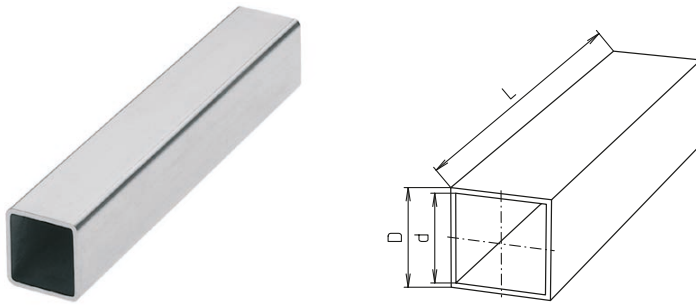
Code No.	Type	D tol. zinc-plated	L max. zinc-plated	D tol. stainless steel	L max. stainless steel	d
801215_ _ _ _ _	12x1,5	12 ± 0,1	5000	12 ± 0,12	3000	9
801415_ _ _ _ _	14x1,5	14 ± 0,1		14 ± 0,14		11
801515_ _ _ _ _	15x1,5	15 ± 0,1		15 ± 0,15		12
801615_ _ _ _ _	16 x1,5	16 ± 0,1		16 ± 0,16		13
801815_ _ _ _ _	18x1,5	18 ± 0,1		18 ± 0,12	15	
802020_ _ _ _ _	20x2	20 ± 0,1		20 ± 0,12	3000	16
802520_ _ _ _ _	25x2	25 ± 0,1		25 ± 0,25		21
803020_ _ _ _ _	30x2	30 ± 0,1		30 ± 0,10		26
803230_ _ _ _ _	32x3	32 ± 0,15		32 ± 0,15		26
803530* _ _ _ _ _	35x3	35 ± 0,15		-	-	29
804040_ _ _ _ _	40x4	40 + 0,15		40 + 0,12	3000	32
804240* _ _ _ _ _	42x4	42 ± 0,2		-	-	34
804840* _ _ _ _ _	48x4	48 ± 0,2		-	-	40
805040_ _ _ _ _	50x4	50 + 0,2		50 + 0,15	3000	42
806050_ _ _ _ _	60x5	60 + 0,25		60 + 0,20	3000	50
808050* _ _ _ _ _	80x5	80 ± 0,35		-	-	70

**Length:**  
every length is possible  
**standard lengths\*\*:**  
0500, 1000, 2000,  
3000 und 4000 mm

\* Not available in stainless steel  
\*\* **standard lengths** only for galvanized zinc-plated

**Version:**


- 0 = mill finish St 37-2
- 1 = galvanized zinc-plated St 37-2 (outer surface only)
- 2 = stainless steel VA 1.4301



## Steel / square

[mm]

Code No.	Type	D tol.	L max. zinc-plated
812010_ _ _ _ _	20x1	20 ± 0,2	5000
812515_ _ _ _ _	25x1,5	25 ± 0,25	
813020_ _ _ _ _	30x2	30 ± 0,25	
814030_ _ _ _ _	40x3	40 ± 0,3	
815030_ _ _ _ _	50x3	50 ± 0,3	
816040_ _ _ _ _	60x4	60 ± 0,35	
818050_ _ _ _ _	80x5	80 ± 0,5	


**Length:**  
 every length is possible  
**standard lengths**  
 0500, 1000, 2000, 3000 und 4000 mm

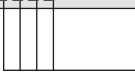
**Version:**  
 0 = mill finish St 37-2 (20x1 is not possible)  
 1 = galvanized zinc-plated St 37-2 (outer surface only)

## Stainless steel tubes / square

Standard tube has no tolerance limit

[mm]

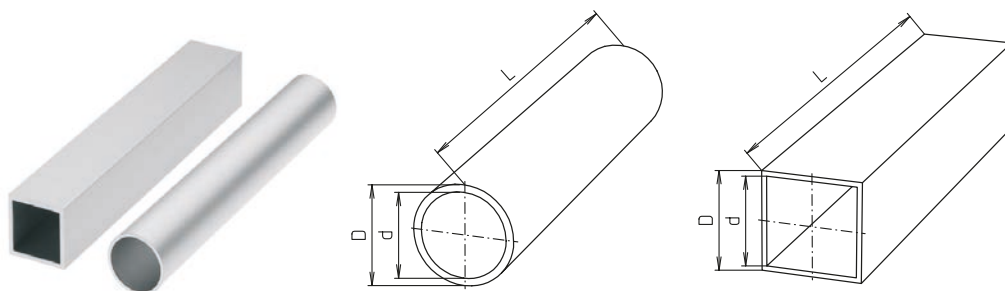
Code No.	Type	D tol.	L max.
8120102_ _ _ _ _	20x1,5	-	6000
8125152_ _ _ _ _	25x1,5	-	
8130202_ _ _ _ _	30x2	-	
8140302_ _ _ _ _	40x3	-	
8150302_ _ _ _ _	50x3	-	
8160402_ _ _ _ _	60x4	-	
8180502_ _ _ _ _	80x5	-	


**Length:**  
 every length is possible

# Accessoires

**Order instruction:**

- Cut-to-length or standard lengths



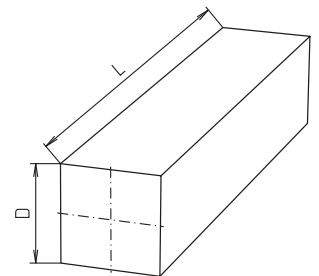
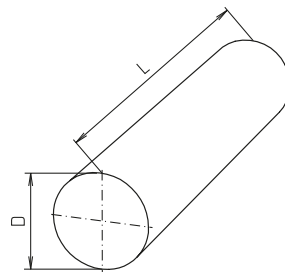
## Aluminium tubes

[mm]

Code No.	Type	D tol.	d	L max.
round				
822030_____	20x3	20 ± 0,1	14	6000
823020_____	30x2	30 ± 0,1	26	
824030_____	40x3	40 ± 0,15	34	
825030_____	50x3	50 ± 0,2	44	
826030_____	60x3	60 ± 0,2	54	
square				
832015_____	20x1,5	20 ± 0,2	17	6000
833020_____	30x2	30 ± 0,3	26	
834040_____	40x4	40 ± 0,3	32	
835040_____	50x4	50 ± 0,4	42	
836040_____	60x4	60 ± 0,4	52	

Length:  
every length is possible

Version:  
1 = natural AlMgSi0,5  
2 = clear anodized AlMgSi0,5



## Aluminium bars

[mm]

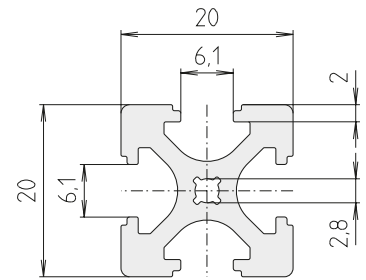
Code No.	Type	D tol.	L max.
round			
820800_	8	8	6000
821000_	10	10	6000
square			
831000	10	10	6000

**Length:**  
every length is possible

**Version:**  
1 = natural AlMgSi0,5  
2 = clear anodized AlMgSi0,5

## Light-, Solid- & Robust Clamps

# Accessoires



### Aluminium profile F-20x20

[mm]

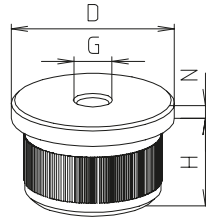
Code No.	Version		Anodized
E01000BBC	bar	max. 3000 mm	natural
E01000BBA	cut		natural
E01000BCC	bar		black
E01000BCA	cut		black

**Length:**

Standard lengths (clear and black anodized)

500, 1000 und 2000 mm

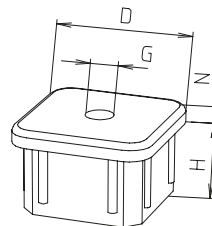
On request every cut is possible



### Round tube threaded stopper

[mm]

Code No.	Type	D	G	H	N
Aluminium					
9032101	50x4	50	M10	25	6
9032201			M16		
90323	60x5	60	M10	30	6
90324			M16		



### Square tube threaded stopper

[mm]

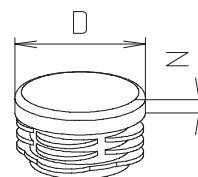
Code No.	Type	D	G	H	N
Aluminium					
90421	50x3	50x50	M10	25	6
90422			M16		
90427	60x4	60x60	M10	25	8
90425			M16		
90426			M20		

## Light-, Solid- & Robust Clamps

# Accessoires

### Order instruction:

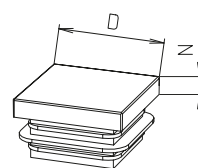
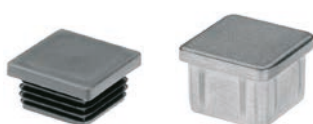
- Purchase only in lot sizes and a multiple of that, see product table below



### Round tube stopper

[mm]

Code No.	Type	lot sizes	Ø D	N
Black polyethylene				
903011	18x1,5	10, 20, 30... pcs	18	5
903021	20x2	10, 20, 30... pcs	20	5
903031	25x2	10, 20, 30... pcs	25	5
903041	30x2	10, 20, 30... pcs	30	5
90305	32x3	10, 20, 30... pcs	32	5
90312	35x3	10, 20, 30... pcs	35	5
90306	40x3	10, 20, 30... pcs	40	5
90307	40x4	10, 20, 30... pcs		5
90308	45x4	10, 20, 30... pcs	45	5
90309	48x4	10, 20, 30... pcs	48	
90310	50x3 / 50x4	10, 20, 30... pcs	50	5
90311	60x5	10, 20, 30... pcs	60	
Aluminium				
90331	50x4	-	50	6
90332	60x5		60	

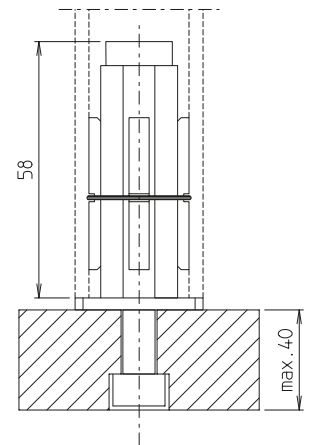


### Square tube stopper

[mm]

Code No.	Type	lot sizes	□ D	N
Black polyethylene				
90400C	20x1	10, 20, 30... pcs	20x20	5
90401	25x1,5	10, 20, 30... pcs	25x25	5
90402	30x2	10, 20, 30... pcs	30x30	
90403	35x2,5	10, 20, 30... pcs	35x35	
90404	40x3	10, 20, 30... pcs	40x40	5
	40x4			
90405	50x3	10, 20, 30... pcs	50x50	5
90406	60x4	10, 20, 30... pcs	60x60	
90407	80x5	10, 20, 30... pcs	80x80	
Aluminium				
90411	50x3	-	50x50	6

- Order instruction Steel parts galvanized zinc-plated
- Clamping element for  $\varnothing$  and  $\square$ tubes
- Clamping capacity for  $\varnothing$  21–40,5 mm
- Clamping capacity for  $\square$ 16,5–32 mm



## Special tube fittings

[mm]

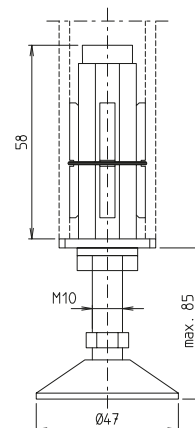
Code No. ISO 4762	Code No. ISO 10642	$\varnothing$ Type	$\square$ Type
90701	90711	25x2	–
90702	90712	30x2	25x1,5
90702	90712	32x3	–
90702	90712	35x3	–
90705	90715	40x4	30x2
90705	90715	42x4	–
90707	90717	48x4	35x2,5
90708	90718	–	40x3

## Light-, Solid- & Robust Clamps

# Accessoires

### Order instruction:

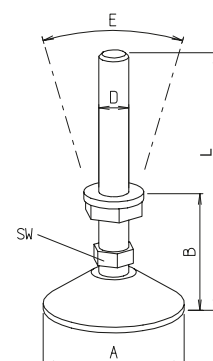
- Hinge parts PA, black
- Steel parts galvanized zinc-plated



### Adjustable feet with special tube fittings

[mm]

Code No.	Ø Type	□ Type
90601	25x2	-
90602	30x2	25x1,5
90602	32x3	-
90602	35x3	-
90605	40x4	30x2
90605	42x4	-
90607	48x4	35x2,5
90608	-	40x3



### Adjustable feet

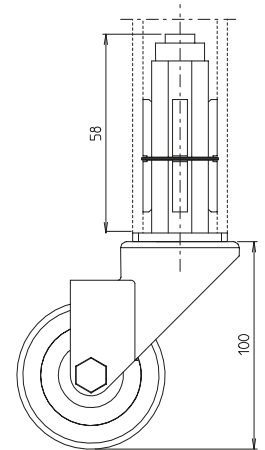
[mm]

Code No.	A	B	D	E	L	SW
90611	39	30	M10	30°	118	13
4606301	70	30	M16		130	22
4046301	60	39	M20	30°	185	16
4046311*	60	42			188	16
4046312*	123	70			216	16

\* with anti-vibration pad



- Rubber wheel, width 25 mm
- Ball bearing
- polyamide rim
- blue-grey rubber tyre
- thread guard
- load capacity 600 N



[mm]

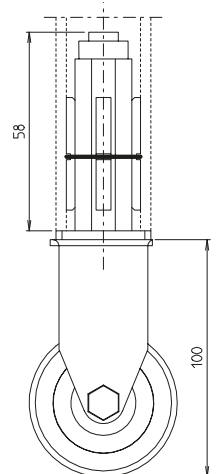
### Castors with special tube fittings and wheel brake

Code No.	Ø Type	□ Type
90501	25x2	-
90502	30x2	25x1,5
90502	32x3	-
90502	35x3	-
90505	40x4	30x2
90505	42x4	-
90507	48x4	35x2,5
90508	-	40x3

Other versions up on request



- Rubber wheel, width 25 mm
- Ball bearing
- polyamide rim
- blue-grey rubber tyre
- thread guard
- load capacity 600 N



### Fixed wheels with special tube fittings

[mm]

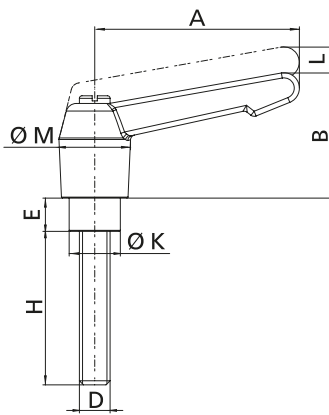
Code No.	Ø Type	□ Type
90802	30x2	25x1,5
90802	32x3	-
90802	35x3	-
90805	40x4	30x2
90805	42x4	-
90807	48x4	35x2,5
90808	-	40x

## Light-, Solid- & Robust Clamps

# Accessoires



(Symbolic representation)



### ● Instructions:

Regarding its dimensions and adjustability the lever is perfectly adapted to the RK clamp system.

The handle must be lifted high enough to disengage allowing "confined space" tightening or loosening as desired. It relocks by means of spring pressure.

### ● Materials:

Handle made of zinc pressure casting according to DIN 1743, steel parts quality class 5.8, galvanized.

## Clamping lever

Code No.	Type	A	B	D	E	H	K	L	M	m [g]
9020101	HV 5x20	40	27	M5	5,5	20	7,5	3	14	32
90211	HV 6x10	40	27	M6	6,5	10	10	3	14	30
9024901	HV 6x20	40	27	M6	6,5	20	10	3	14	-
90210	HV 6x16	40	27	M6	6,5	16	10	3	14	-
90209	HV 6x18	40	27	M6	6,5	18	10	3	14	-
9021201	HV 6x25	40	27	M6	6,5	25	10	3	14	34
9024701	HV 6x30	40	27	M6	6,5	30	10	3	14	-
9021301	HV 6x35	40	27	M6	6,5	35	10	3	14	38
9021401	HV 6x40	40	27	M6	6,5	40	10	3	14	40
9021501	HV 6x45	40	27	M6	6,5	45	10	3	14	65
9021601	HV 6x55	65	36	M6	6,5	55	10	3	19	75
9021701	HV 6x60	65	36	M6	6,5	60	10	3	19	80
90221	HV 8x15	65	36	M8	8,5	15	13	3	19	68
9022201	HV 8x25	65	36	M8	8,5	25	13	3	19	72
9300201	HV 8x30	65	36	M8	8,5	30	13	3	19	75
9022401	HV 8x35	65	36	M8	8,5	35	13	3	19	80
9022501	HV 8x45	65	36	M8	8,5	45	13	3	19	86
9022601	HV 8x50	65	36	M8	8,5	50	13	3	19	91
9022701	HV 8x55	65	36	M8	8,5	55	13	3	19	100
9022801	HV 8x60	65	36	M8	8,5	60	13	3	19	100
9022901	HV 8x70	80	44,5	M8	8,5	70	13	4	22	120
9023001	HV 8x80	80	44,5	M8	8,5	80	13	4	22	130
9023101	HV 8x90	80	44,5	M8	8,5	90	13	4	22	140
9024101	HV 10x20	80	44,5	M10	10	20	16	4	22	125
90250	HV 10x30	80	44,5	M10	11	30	16	4	22	-
90251	HV 10x35	80	44,5	M10	11	35	16	4	22	-
9024201	HV 10x45	80	44,5	M10	10	45	16	4	22	140
9024301	HV 10x50	80	44,5	M10	10	50	16	4	22	145
9024401	HV 10x60	95	53	M10	10	60	16	4,5	27,5	200
9024501	HV 10x70	95	53	M10	10	70	16	4,5	27,5	200
9024601	HV 10x110	95	53	M10	10	110	16	4,5	27,5	250
9025501	HV 12x40	95	53	M12	10	40	19	4,5	27,5	200
9025301	HV 12x45	95	53	M12	13,5	45	18	4,5	27,5	-
9025601	HV 12x80	80	44,5	M12	10	80	16	4	22	-
9027001	HV 16x72	110	60	M16	12	72	23	5	32,5	-

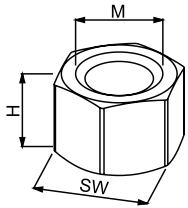
### Upon request:

- Hand levers with plastic handles
- Hand levers with stainless steel threaded fitting

**Order instruction:**

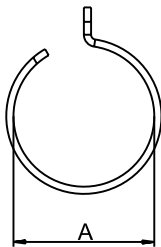
- Purchase only in lot sizes and a multiple of that, see product table below

- Steel thread insert (exchange pcs)


**Insert nut**

[mm]

Code No.	Materials	Type	lot sizes	H	M	SW
90732	steel	M6SW8	10, 20, 30... pcs	5	6	8
90733	stainless steel	M6SW8	10, 20, 30... pcs			
90734	steel	M6SW10	10, 20, 30... pcs	9	6	10
90736	steel	M8SW11H12	10, 20, 30... pcs	7	8	11
90738	steel	M8SW11H7	10, 20, 30... pcs			
90739	stainless steel	M8SW11H7	10, 20, 30... pcs	10	10	14
90740	steel	M10SW14	10, 20, 30... pcs			
90741	stainless steel	M10SW14	10, 20, 30... pcs			



- simple assembly
- axial and rotation locking
- retrofit at existing systems and structures possible

**Adapter sleeve R28**

[mm]

Code No.	Type	lot sizes	Ø A
913131	Typ 1	5, 10, 15... pcs	28,4 - 28,8
913141	Typ 2	5, 10, 15... pcs	28,0 - 28,3
913151	Typ 3	5, 10, 15... pcs	27,5 - 27,9

Following Solid Clamps / Industrial-Design can be combined with adapter sleeves.

Solid Clamps	Type
Cross clamps	K 30, 30x25, 30x20, KD 30x18, 30x16, 30x15, 30x14, 30x12, KR 30, KVR 30
Angle clamps	W30, WE 30
Base clamps	FS 30
Flange clamps	FK 30, 30-4
Sleeve clamps	M 30, MD 30x25
Insert clamps	S 30