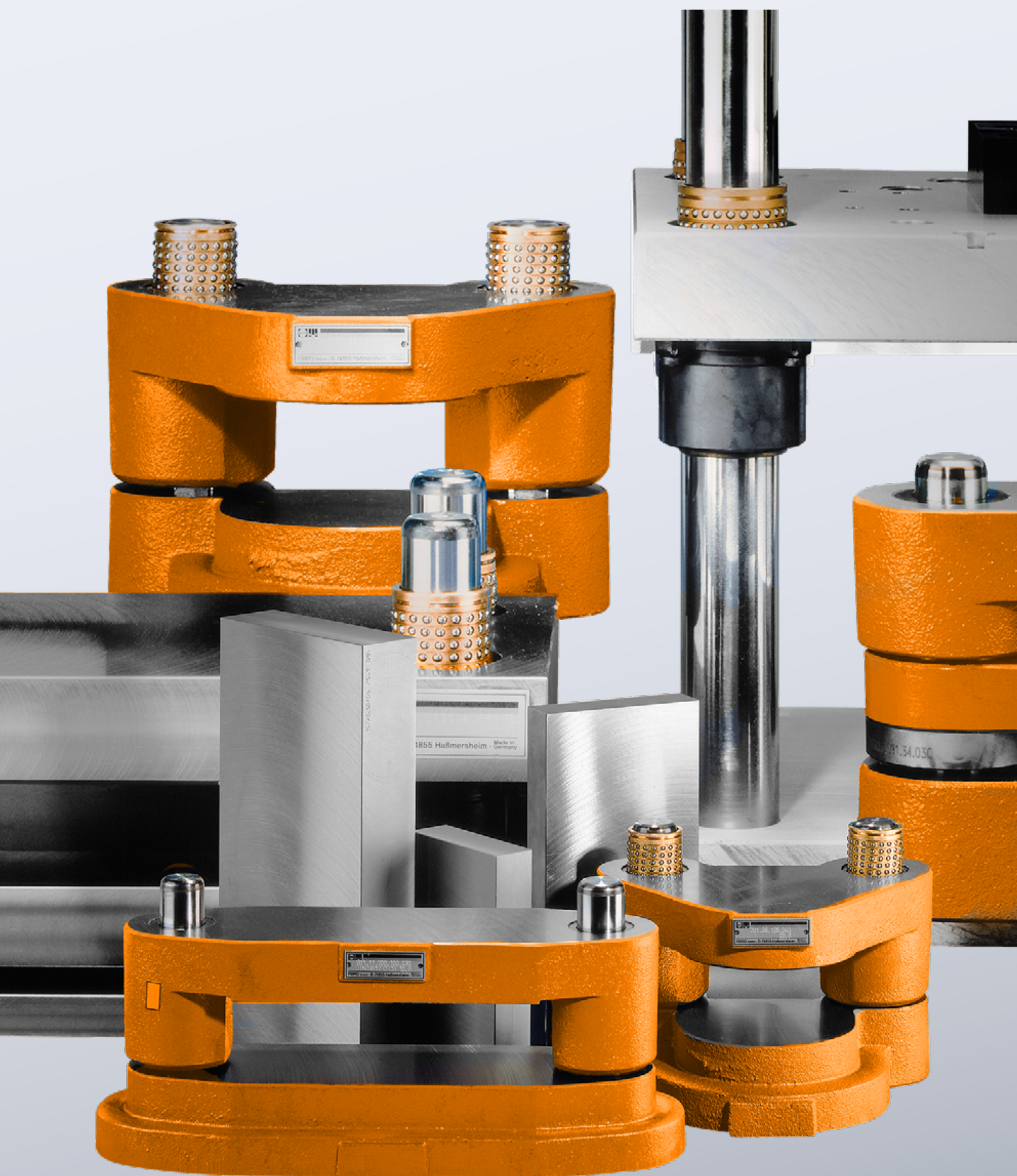


DIE SETS



DIE SETS

Execution

The contour faces of FIBRO Steel Die Sets are fully machined. Contour faces of Aluminium Die Sets are sawn, as are those of Aluminium Plates. However, these contour faces can also be machined on request. Plate thickness tolerance ± 2 mm.

Guide elements

Guide pillars DIN 9825/ISO 9182 (202.19.) and headed guide bushes DIN 9831/ISO 9448 (2081.) are normal equipment on all-steel die sets. Please see the "Guide elements" section for technical specifications.

Lifting Aids on Die Sets

For a plate dimension of $a_1+b_1 \geq 1000$ mm and a plate weight of ≥ 100 kg, 2 lifter eyebolts per plate are to be used.

Special Die Sets and Plates to Customers' Drawings

Die sets and plates up to size 2200 x 1100 mm (external dims.) will be made to customer's drawings, with any special features and highest precision.

Special Machining Features

Wherever possible, all larger apertures or holes should be done by FIBRO before final machining of die sets, for their application at the customer's works must result in die set distortion and impairment of accuracy.

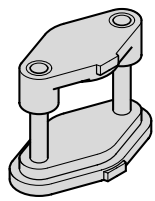
Enquiry Forms for Special Die Sets

(see also pages A32 – A35)

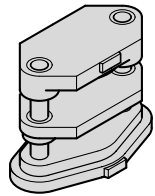
For custom sizes and special versions, pre-printed enquiry and order forms are available on request.

All you need to do is enter your desired measurements, custom designs and the guide type.

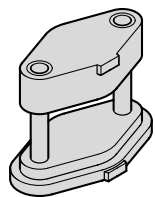
CONTENTS



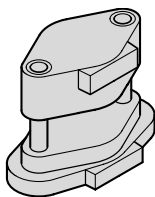
201.01. **A8**
Die set DIN 9812 Type D/DG



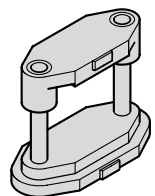
201.03. **A9**
Die set DIN 9814 Shape D/DG



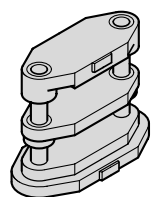
201.05. **A10**
Die set DIN 9816 Shape D



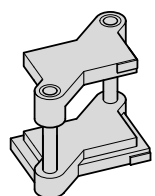
201.07. **A11**
Die set ~DIN 9816 Shape D



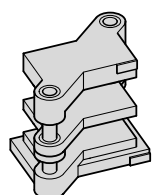
201.11. **A12**
Die set DIN 9812 Shape C/CG



201.13. **A13**
Die set DIN 9814 Shape C/CG



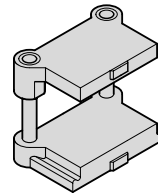
201.21. **A14**
Die set DIN 9819 Shape C/CG



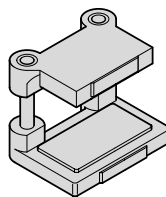
201.23. **A15**
Die set



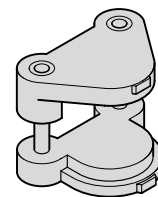
201.26. **A16**
Die set



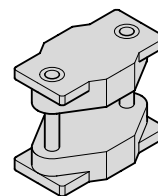
201.31. **A17**
Die set DIN 9822 Shape C



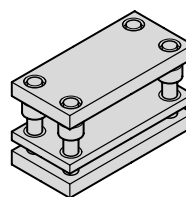
201.33. **A18**
Die set



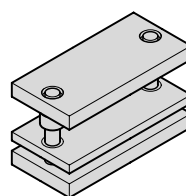
201.36. **A19**
Die set



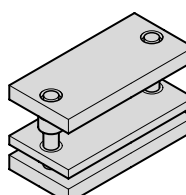
201.39. **A20**
Fine blanking die set



2010. **A22-29**
Die set ~DIN 9868/ISO 11415

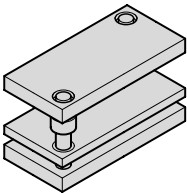
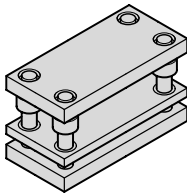
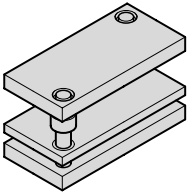
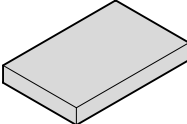
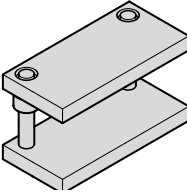
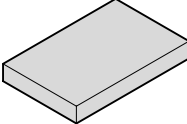
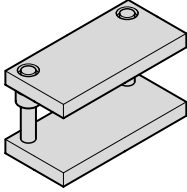
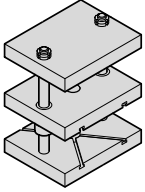
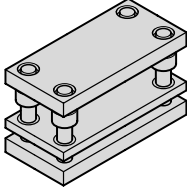
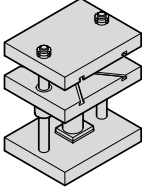
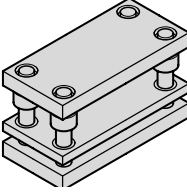
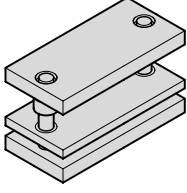
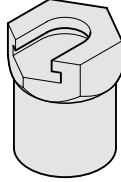
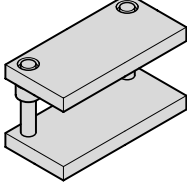
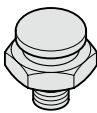


201.45. **A30**
Pillar frame to customer specifications in steel

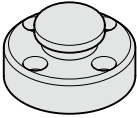
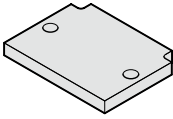
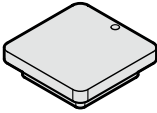
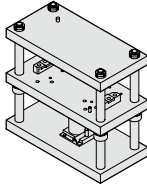
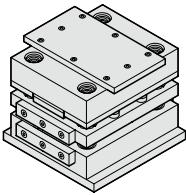
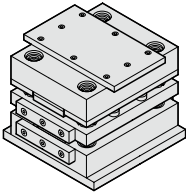
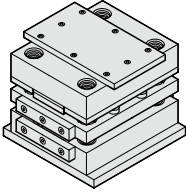
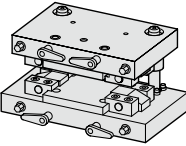


201.65. **A30**
Pillar frame to customer specifications in aluminium

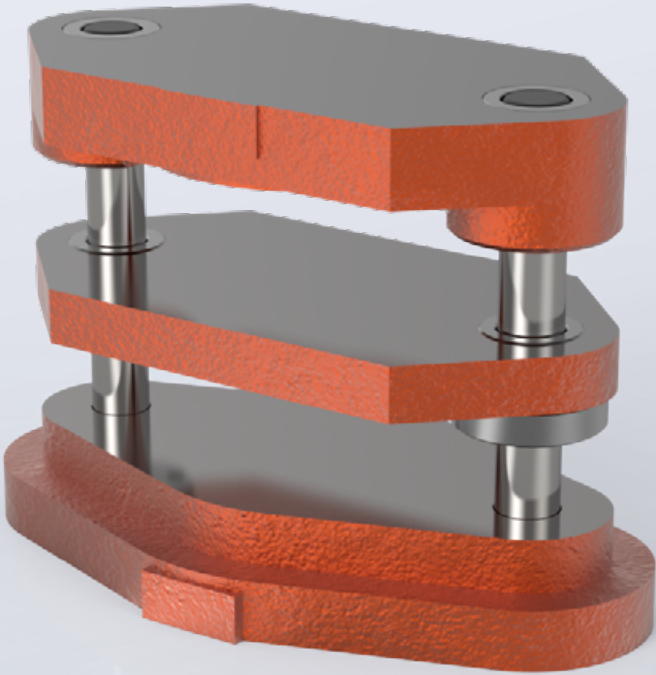
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	201.46. Pillar frame to customer specifications in steel	A31		2010.59. Pillar frame ECO-LINE	A34-35
	201.66. Pillar frame to customer specifications in aluminium	A31		2900. Steel plate ISO 6753-1	A36
	201.47. Pillar frame to customer specifications in steel	A32		2910. Aluminium plate ~ISO 6753-1	A37
	201.67. Pillar frame to customer specifications in aluminium	A32		2011.45. / 2011.49. Die set press unit	A38
	201.49. Pillar frame to customer specifications in steel	A33		201.145. / 201.149. Die set press unit, manual actuation	A39
	201.69. Pillar frame to customer specifications in aluminium	A33	Die Set Press Unit-Accessories:		
	2010.55. Pillar frame ECO-LINE	A34-35		212.16.1 Spigot holder	A40
	2010.57 Pillar frame ECO-LINE	A34-35		212.11. Coupling spigot with thread	A40

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	Special Die Set (All-Steel) to Customers' Specification	A41-44		201.97. Bolster insert plate	A56
	201.50. Progression Lamination Die Set Unit	A46-47		201.98. Aligning- and Tryout Press Unit	A57
	201.50.xx20. Progression lamination die set unit	A48			
	201.50.xx25. Progression lamination die set unit	A49			
	201.50.xx30. Progression lamination die set unit	A50			
	201.95. Tooling pallet die set	A52-55			
	Fast Exchange System for Pallet Tooling - accessories:	A56			

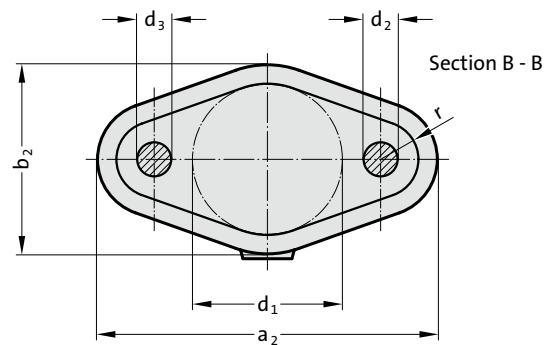
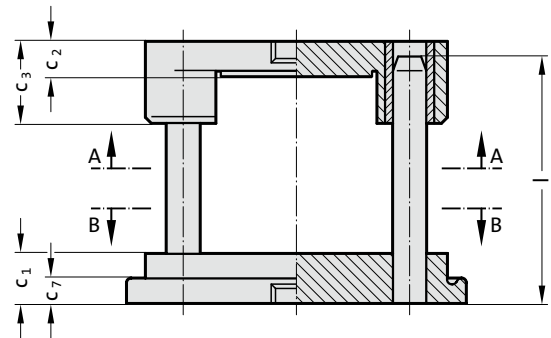
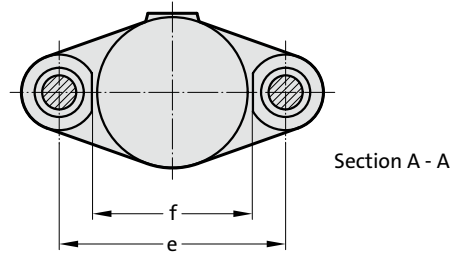
CAST IRON DIE SETS



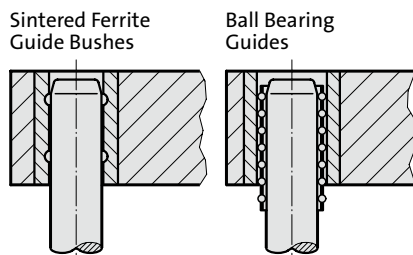
DIE SET DIN 9812 TYPE D/DG



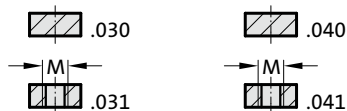
201.01.



Guide Elements



Order No (part II)
Available without or
with shank thread
in top bolster



201.01. Die set DIN 9812 Type D/DG

Order No part 1*	Work area													
	d ₁	a ₂	b ₂	c ₁	c ₂	c ₃	c ₇	d ₂	d ₃	e	f	l	r	M
201.01.063.	63	182	100	40	25	60	20	16	15	106	73	140	20	16x1,5
201.01.080.	80	236	120	50	30	80	30	20	19	140	90	160	28	20x1,5
201.01.100.	100	275	140	50	30	80	30	25	24	165	110	160	35	20x1,5
201.01.125.	125	300	165	50	30	80	30	25	24	190	139	160	35	20x1,5
201.01.160.	160	360	200	56	40	90	30	32	30	240	174	180	40	24x1,5
201.01.180.	180	380	220	56	40	90	30	32	30	260	194	180	40	24x1,5
201.01.200.	200	400	240	56	40	90	30	32	30	280	218	180	40	24x1,5
201.01.250.	250	496	300	56	50	100	30	40	38	350	268	200	48	30x2
201.01.315.	315	563	365	63	50	100	30	40	38	417	333	224	48	30x2

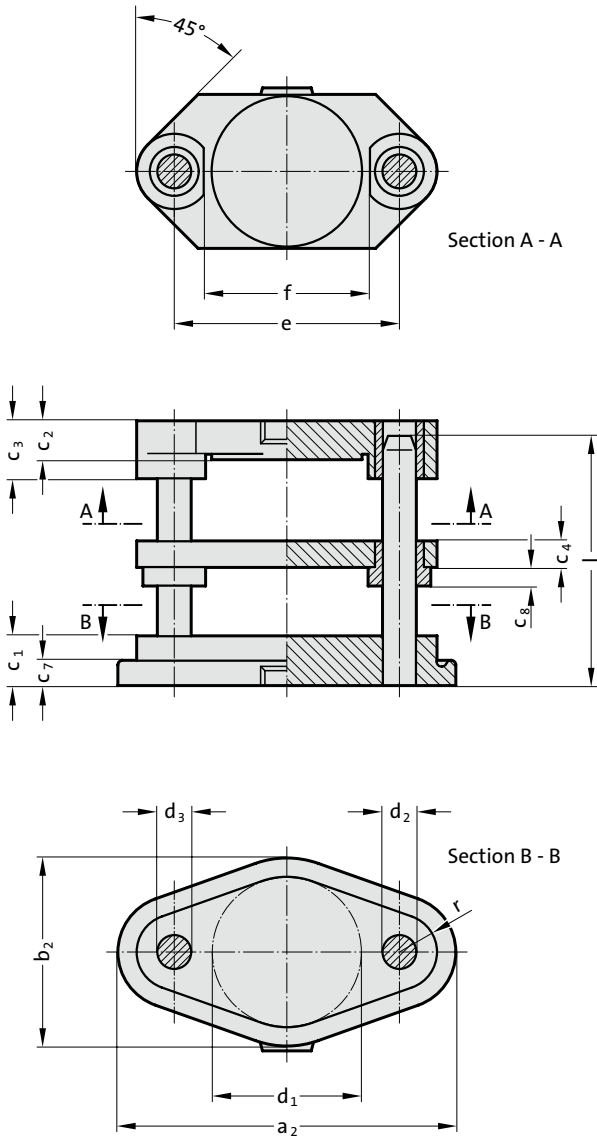
*Order No Part 2 = complete guide type

Ordering Code (example):

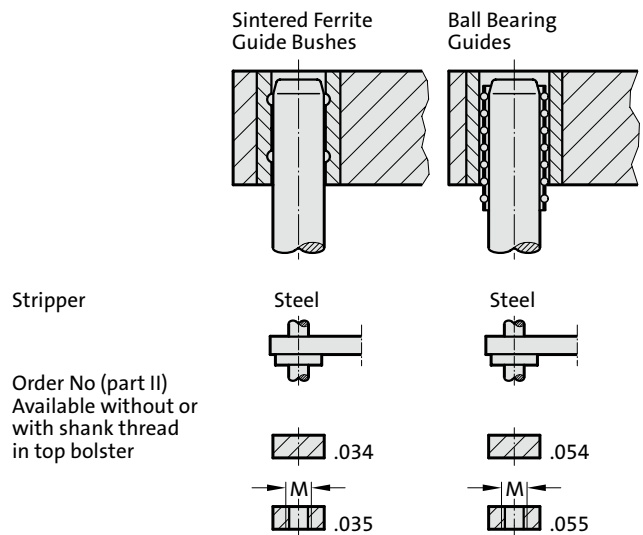
Die set DIN 9812 Type D/DG	=	201.01.
Work area D1	160 mm	= 160.
Guide type FA	Sintered ferrite	= 03
Trunnion thread ZG	without	= 0
Order No		= 201.01. 160.030

DIE SET DIN 9814 SHAPE D/DG

201.03.



Guide Elements



201.03. Die set DIN 9814 Shape D/DG

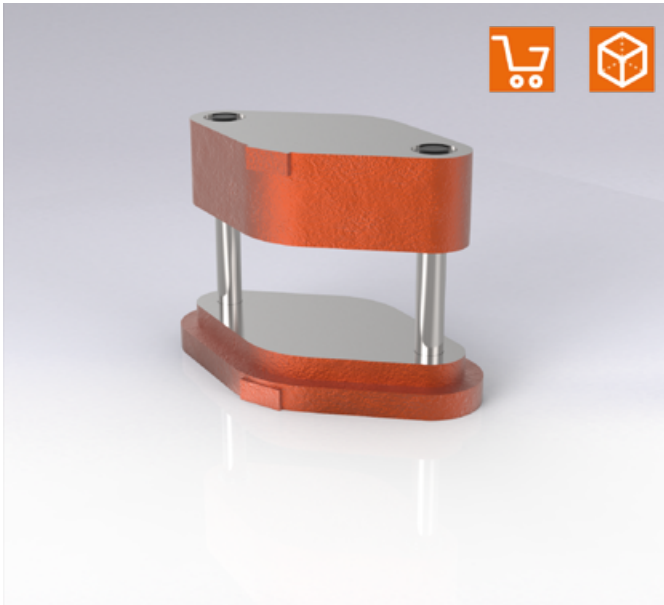
Order No part 1*	Work area															
	d ₁	a ₂	b ₂	C ₁	C ₂	C ₃	C ₄	C ₇	C ₈	d ₂	d ₃	e	f	l	r	M
201.03.100.	100	275	140	50	30	50	22	30	18	25	24	165	119	160	35	20x1.5
201.03.125.	125	300	165	50	30	50	22	30	18	25	24	190	144	160	35	20x1.5
201.03.160.	160	360	200	56	40	60	27	30	18	32	30	240	184	180	40	24x1.5

*Order No Part 2 = complete guide type

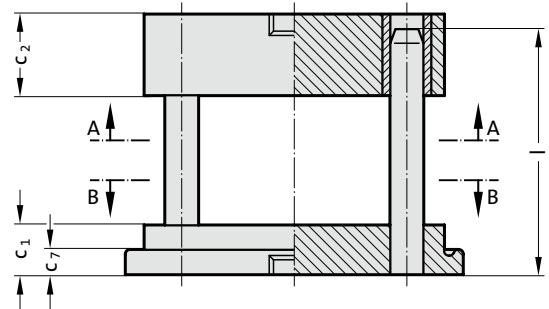
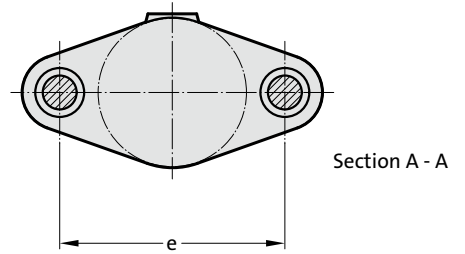
Ordering Code (example):

Die set DIN 9814 Shape D/DG	=	201.03.
Work area D1	125 mm	= 125.
Guide type FA	Sintered ferrite	= 03
Trunnion thread ZG	without	= 4
Order No		= 201.03. 125. 034

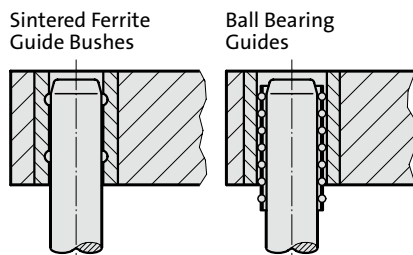
DIE SET DIN 9816 SHAPE D



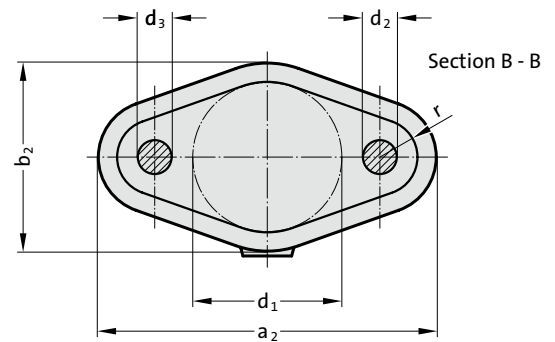
201.05.



Guide Elements



Order No (part II)
Without shank thread
in top bolster



201.05. Die set DIN 9816 Shape D

Order No part 1*	Work area										
	d ₁	a ₂	b ₂	c ₁	c ₂	c ₇	d ₂	d ₃	e	l	r
201.05.063.	63	182	100	40	65	20	16	15	106	140	20
201.05.080.	80	236	120	50	70	30	20	19	140	160	28
201.05.100.	100	275	140	50	75	30	25	24	165	180	35
201.05.125.	125	300	165	50	80	30	25	24	190	180	35
201.05.160.	160	360	200	56	90	30	32	30	240	224	40
201.05.200.	200	400	240	56	100	30	32	30	280	224	40

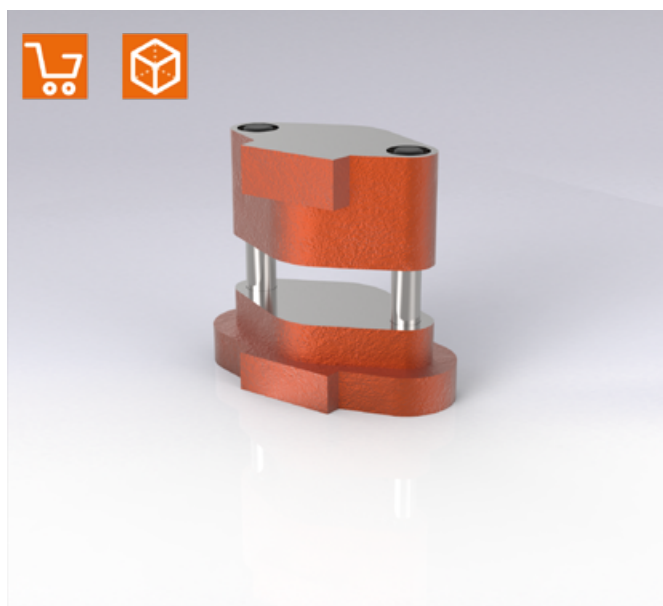
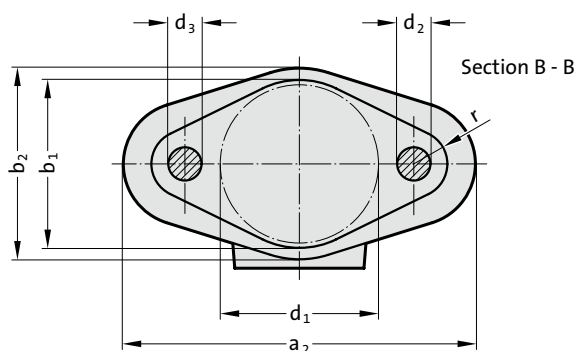
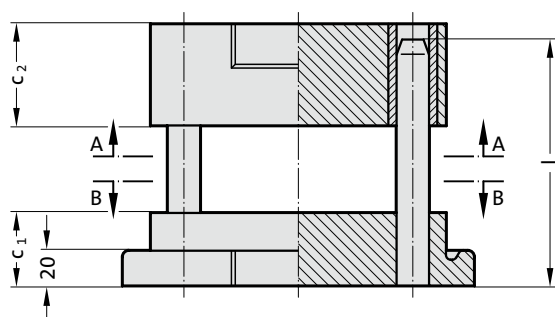
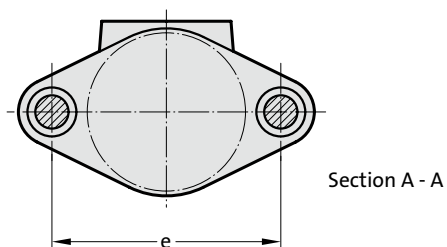
*Order No Part 2 = complete guide type

Ordering Code (example):

Die set DIN 9816 Shape D	=	201.05.
Work area D1	125 mm	= 125.
Guide type FA	Sintered ferrite	= 030
Order No		= 201.05. 125.030

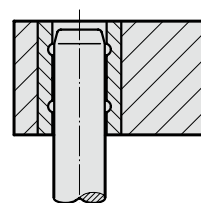
DIE SET ~DIN 9816 SHAPE D

201.07.



Guide Elements

Sintered Ferrite
Guide Bushes



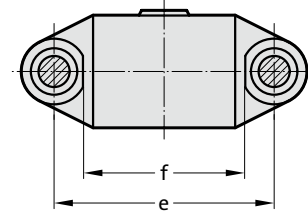
201.07. Die set ~DIN 9816 Shape D

Order No	Work area										
	d ₁	a ₂	b ₁	b ₂	c ₁	c ₂	d ₂	d ₃	e	l	r
201.07.040.030	40	112	45	55	36	40	16	15	66	100	13
201.07.063.030	63	142	68	78	40	55	16	15	90	125	14

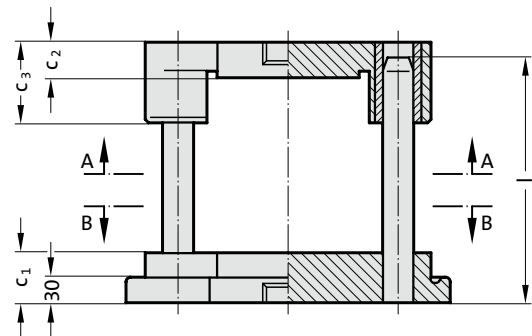
DIE SET DIN 9812 SHAPE C/CG



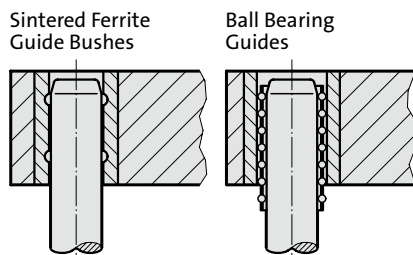
201.11.



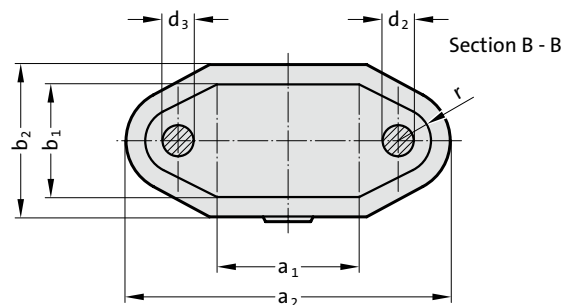
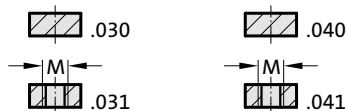
Section A - A



Guide Elements



Order No (part II)
Available without or
with shank thread
in top bolster



Section B - B

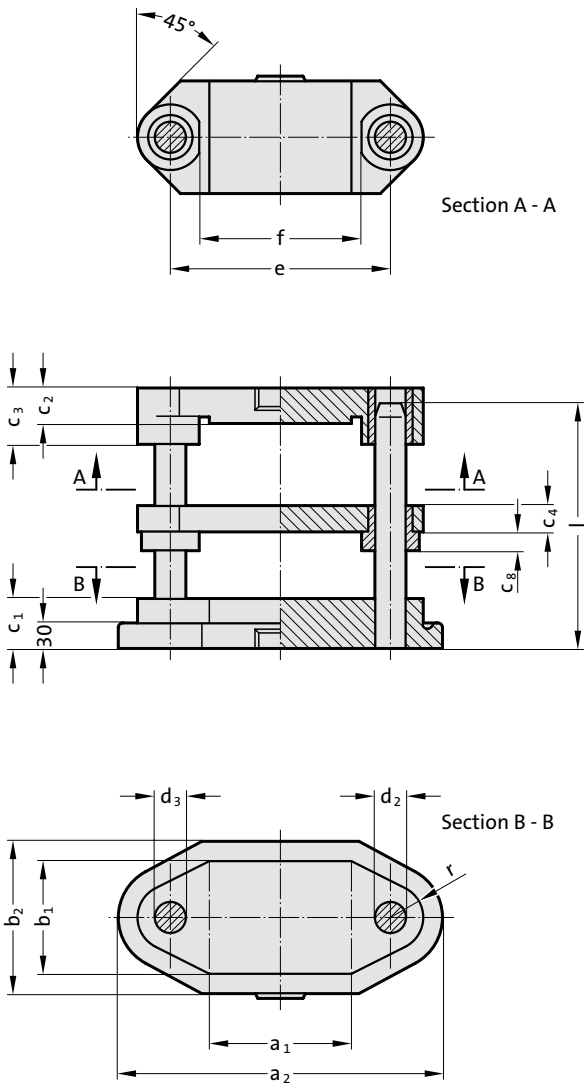
201.11. Die set DIN 9812 Shape C/CG

Order No part 1*	Work area												
	a ₁ x b ₁	a ₂	b ₂	c ₁	c ₂	c ₃	d ₂	d ₃	e	f	l	r	M
201.11.070.050.	70 x 50	170	70	40	22	50	20	19	110	73	140	20	20x1.5
201.11.080.063.	80 x 63	235	103	50	30	80	20	19	140	90	160	27	20x1.5
201.11.100.063.	100 x 63	253	103	50	30	80	20	19	158	110	160	27	20x1.5
201.11.100.080.	100 x 80	265	120	50	30	80	25	24	165	110	160	30	20x1.5
201.11.125.080.	125 x 80	290	120	50	30	80	25	24	190	139	160	30	20x1.5
201.11.160.080.	160 x 80	325	120	50	30	80	25	24	225	174	160	30	20x1.5
201.11.200.080.	200 x 80	365	120	50	30	80	25	24	265	218	160	30	20x1.5
201.11.125.100.	125 x 100	290	140	50	40	90	25	24	190	139	160	30	24x1.5
201.11.160.100.	160 x 100	325	140	50	40	90	25	24	225	174	160	30	24x1.5
201.11.200.100.	200 x 100	395	140	56	40	90	32	30	280	218	180	37	24x1.5
201.11.160.125.	160 x 125	355	165	56	40	90	32	30	240	174	180	37	24x1.5
201.11.200.125.	200 x 125	395	165	56	40	90	32	30	280	218	180	37	24x1.5
201.11.250.125.	250 x 125	445	165	56	40	90	32	30	330	268	180	37	24x1.5
201.11.315.125.	315 x 125	510	165	56	40	90	32	30	395	333	180	37	24x1.5
201.11.200.160.	200 x 160	395	200	56	50	100	32	30	280	218	200	37	30x2
201.11.250.160.	250 x 160	445	200	56	50	100	32	30	330	268	200	37	30x2
201.11.250.200.	250 x 200	496	250	63	50	100	40	38	350	268	224	48	30x2
201.11.315.200.	315 x 200	563	250	63	50	100	40	38	417	333	224	48	30x2
201.11.315.250.	315 x 250	563	300	63	50	100	40	38	417	333	224	48	30x2

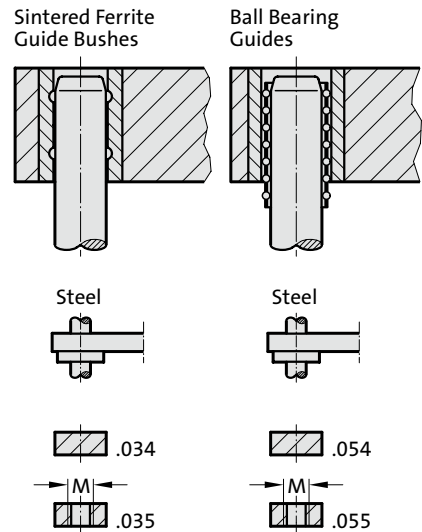
*Order No Part 2 = complete guide type

DIE SET DIN 9814 SHAPE C/CG

201.13.



Guide Elements



Stripper

Order No (part II)
Available without or
with shank thread
in top bolster

201.13. Die set DIN 9814 Shape C/CG

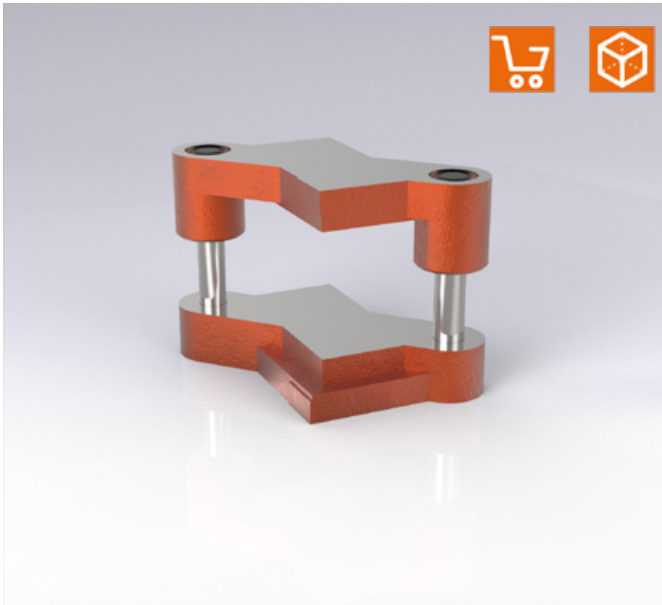
Order No part 1*	Work area														
	a ₁ x b ₁	a ₂	b ₂	C ₁	C ₂	C ₃	C ₄	C ₈	d ₂	d ₃	e	l	r	M	
201.13.080.063.	80 x 63	235	103	50	30	50	18	14	20	19	140	160	27	20x1.5	
201.13.100.080.	100 x 80	265	120	50	30	50	22	18	25	24	165	160	30	20x1.5	
201.13.125.100.	125 x 100	290	140	50	40	60	22	18	25	24	190	160	30	24x1.5	
201.13.160.125.	160 x 125	355	165	56	40	60	27	18	32	30	240	180	37	24x1.5	
201.13.200.160.	200 x 160	395	200	56	50	70	27	18	32	30	280	200	37	30x2	

*Order No Part 2 = complete guide type

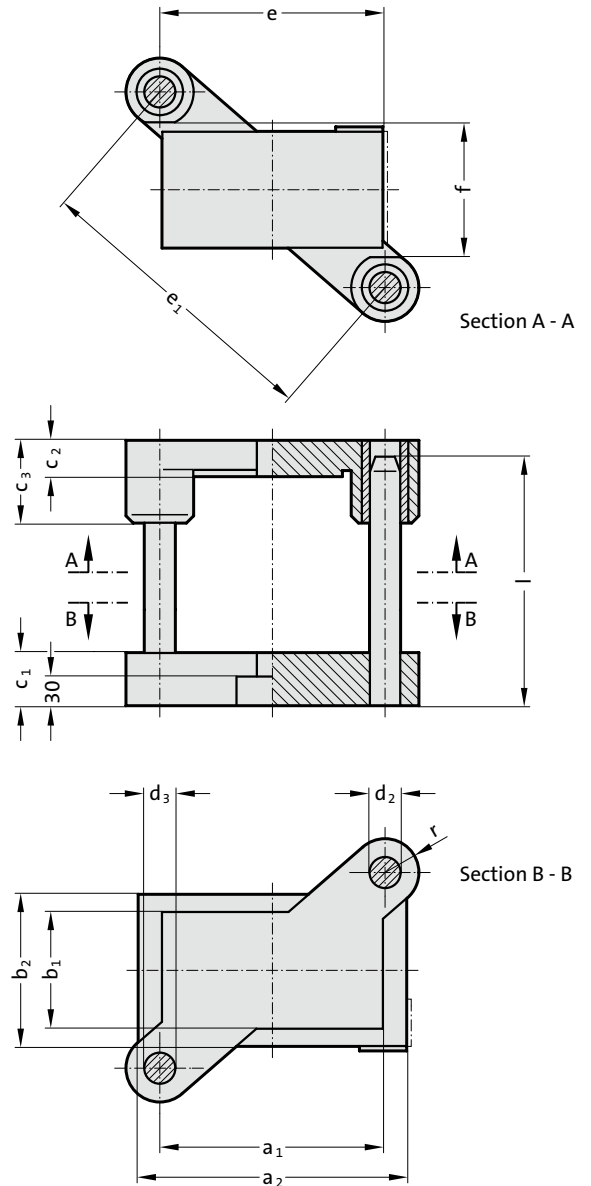
Ordering Code (example):

Die set DIN 9814 Shape C/CG	=	201.13.
Working area length A1	125 mm	= 125.
Working area width B1	100 mm	= 100.
Guide type FA	Sintered ferrite	= 03
Trunnion thread ZG	without	= 4
Order No		= 201.13.125. 100.03 4

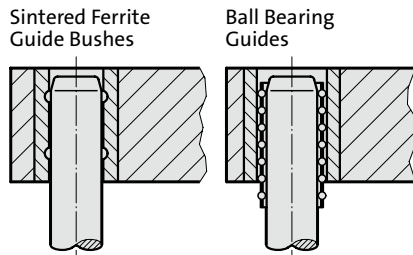
DIE SET DIN 9819 SHAPE C/CG



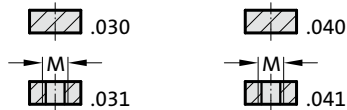
201.21.



Guide Elements



Order No (part II)
Available without or
with shank thread
in top bolster



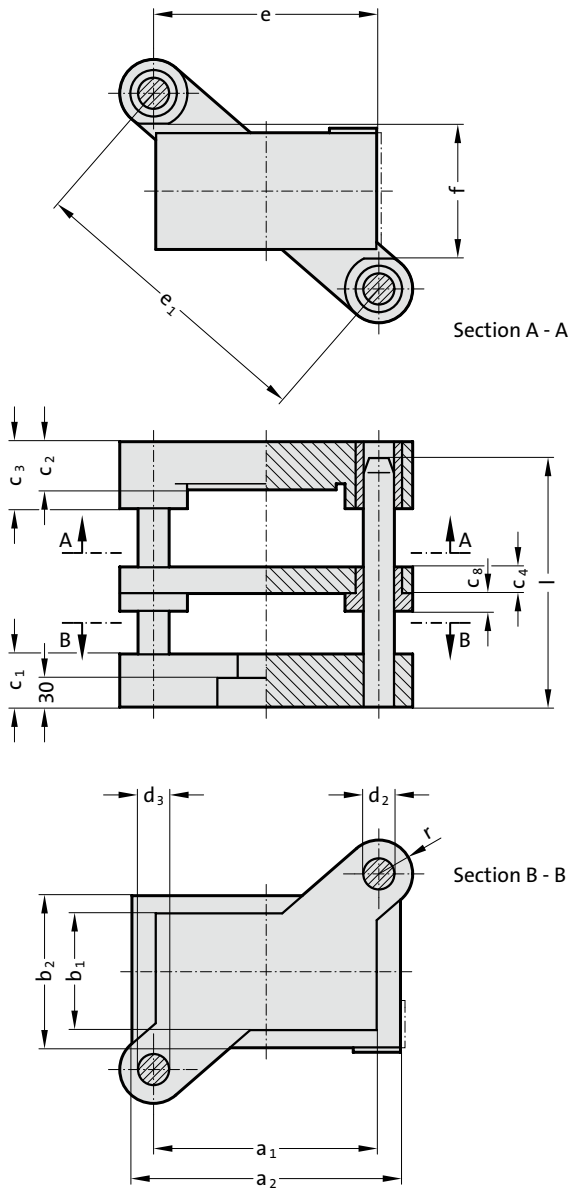
201.21. Die set DIN 9819 Shape C/CG

Order No part 1*	Work area		a ₂	b ₂	c ₁	c ₂	c ₃	d ₂	d ₃	e	e ₁	f	l	r	M
	a ₁	b ₁													
201.21.080.063.	80	63	120	103	50	30	80	20	19	80	145	73	160	27	20x1.5
201.21.100.063.	100	63	140	103	50	30	80	20	19	100	157	73	160	27	20x1.5
201.21.100.080.	100	80	140	120	50	30	80	25	24	100	175	90	160	30	20x1.5
201.21.125.080.	125	80	165	120	50	30	80	25	24	125	191	90	160	30	20x1.5
201.21.125.100.	125	100	165	140	50	40	90	25	24	125	206	110	160	30	24x1.5
201.21.160.100.	160	100	200	140	50	40	90	25	24	160	229	110	160	30	24x1.5
201.21.200.100.	200	100	240	140	56	40	90	32	30	200	268	110	180	37	24x1.5
201.21.160.125.	160	125	200	165	56	40	90	32	30	160	259	139	180	37	24x1.5
201.21.200.125.	200	125	240	165	56	40	90	32	30	200	286	139	180	37	24x1.5
201.21.250.125.	250	125	290	165	56	40	90	32	30	250	323	139	180	37	24x1.5
201.21.315.125.	315	125	355	165	56	40	90	32	30	315	375	139	180	37	24x1.5
201.21.200.160.	200	160	240	200	56	50	100	32	30	200	312	174	200	37	30x2
201.21.250.160.	250	160	290	200	56	50	100	32	30	250	346	174	200	37	30x2
201.21.250.200.	250	200	300	250	63	50	100	40	38	250	392	218	224	48	30x2
201.21.315.200.	315	200	365	250	63	50	100	40	38	315	436	218	224	48	30x2
201.21.315.250.	315	250	365	300	63	50	100	40	38	315	472	268	224	48	30x2

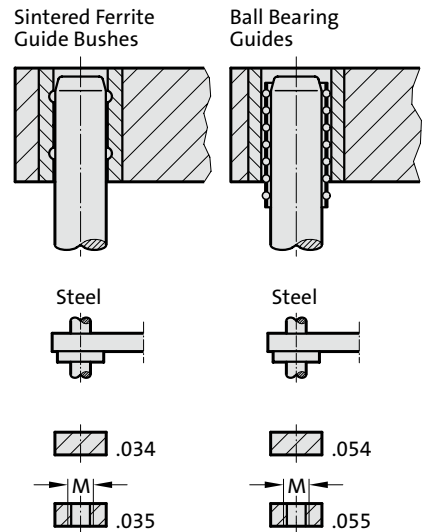
*Order No Part 2 = complete guide type

DIE SET

201.23.



Guide Elements



Stripper

Order No (part II)
Available without or
with shank thread
in top bolster

201.23. Die set

Order No part 1*	Work area															
	a ₁ x b ₁	a ₂	b ₂	c ₁	c ₂	c ₃	c ₄	c ₈	d ₂	d ₃	e	e ₁	f	l	r	M
201.23.100.080.	100 x 80	140	120	50	30	50	22	15	25	24	100	175	98	160	30	20x1.5
201.23.125.100.	125 x 100	165	140	50	40	60	22	15	25	24	125	206	118	160	30	24x1.5
201.23.160.100.	160 x 100	200	140	50	40	60	22	15	25	24	160	229	118	160	30	24x1.5
201.23.160.125.	160 x 125	200	165	56	40	60	27	15	32	30	160	259	148	180	37	24x1.5
201.23.200.125.	200 x 125	240	165	56	40	60	27	15	32	30	200	286	148	180	37	24x1.5
201.23.250.160.	250 x 160	290	200	56	50	70	27	15	32	30	250	346	184	200	37	30x2

*Order No Part 2 = complete guide type

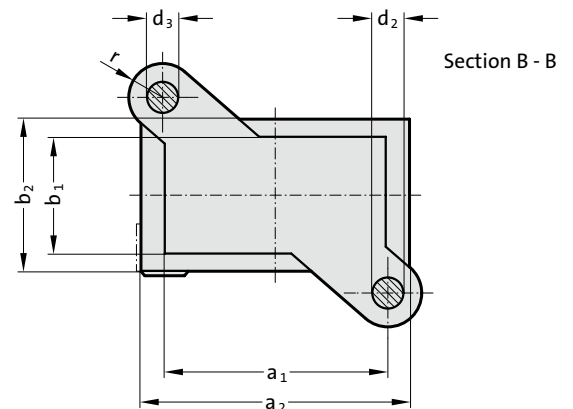
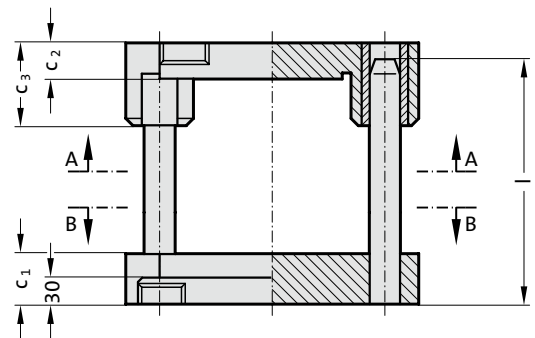
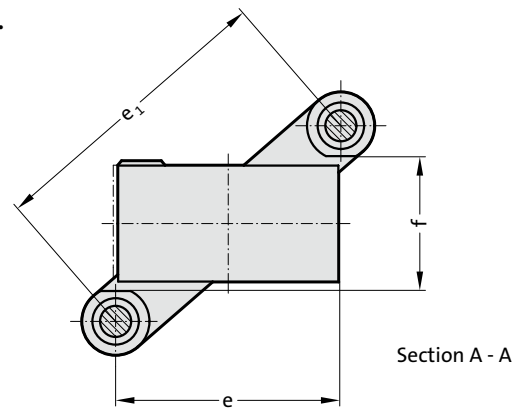
Ordering Code (example):

Die set	=	201.23.
Working area length a ₁	160 mm	= 160.
Working area width b ₁	125 mm	= 125.
Guide type FA	Sintered ferrite	= 03
Trunnion thread ZG	without	= 4
Order No	=	201.23. 160. 125. 03 4

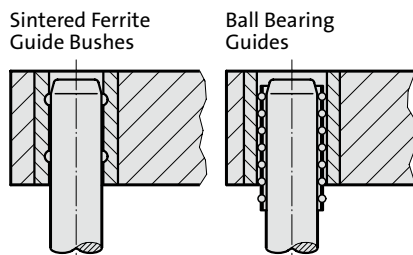
DIE SET



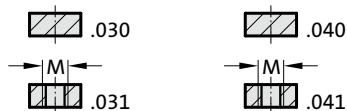
201.26.



Guide Elements



Order No (part II)
Available without or
with shank thread
in top bolster



201.26. Die set

Order No part 1*	Work area														
	$a_1 \times b_1$	a_2	b_2	c_1	c_2	c_3	d_2	d_3	e	e_1	f	l	r	M	
201.26.125.	125 x 100	165	140	50	40	90	25	24	125	206	110	160	30	24x1.5	
201.26.160.	160 x 100	200	140	50	40	90	25	24	160	229	110	160	30	24x1.5	
201.26.200.	200 x 125	240	165	56	40	90	32	30	200	286	139	180	37	24x1.5	

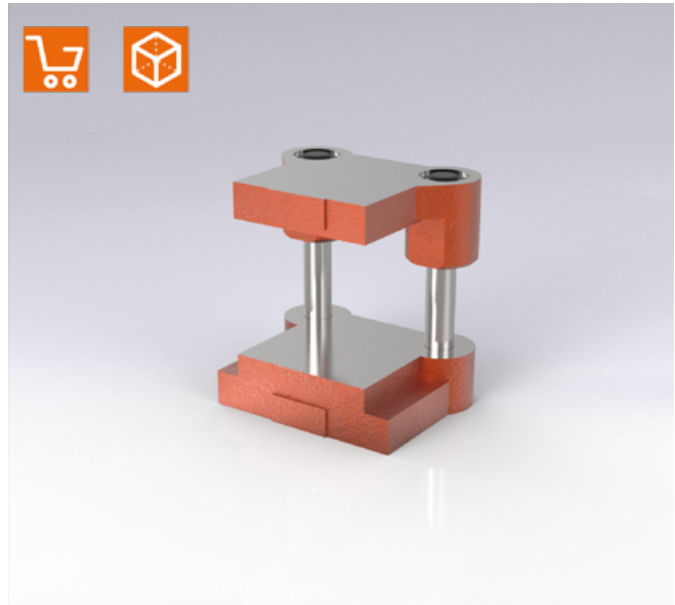
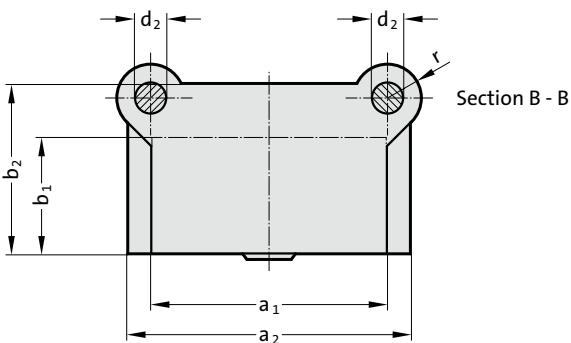
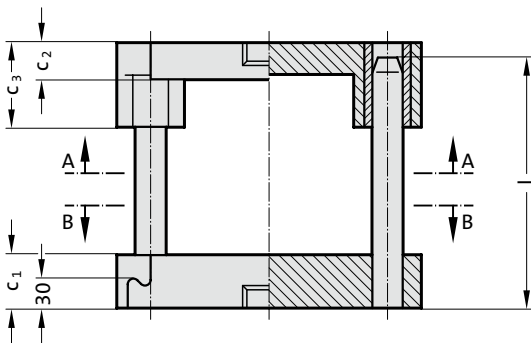
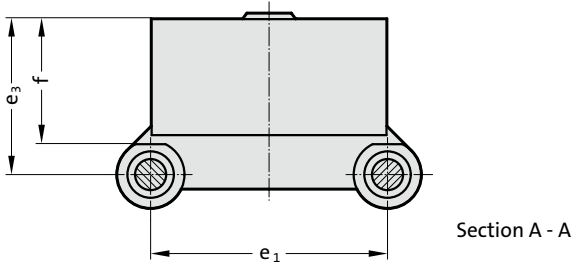
*Order No Part 2 = complete guide type

Ordering Code (example):

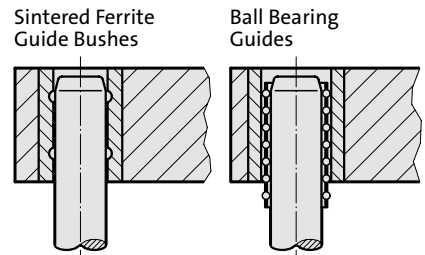
Die set	=	201.26.
Working area length a_1	160 mm	= 160.
Working area width b_1	125 mm	= 125.
Guide type FA	Sintered ferrite	= 03
Trunnion thread ZG	without	= 0
Order No	=	201.26. 160. 125. 03 0

DIE SET DIN 9822 SHAPE C

201.31.



Guide Elements



Order No (part II)
Without shank thread
in top bolster

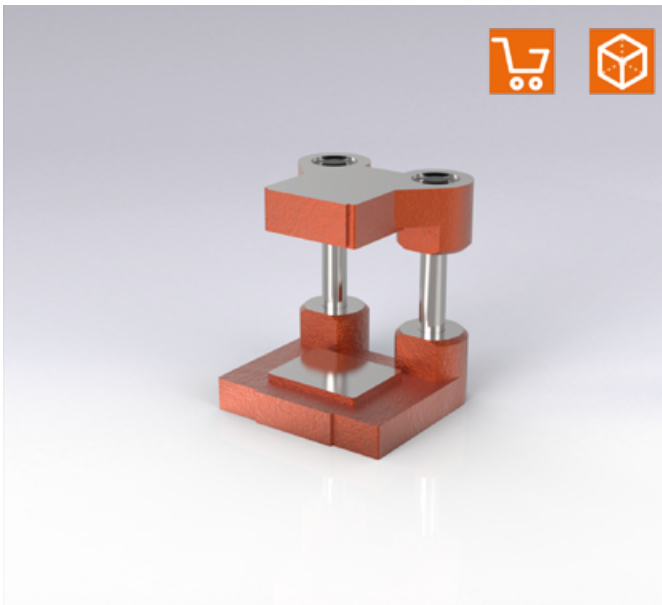


201.31. Die set DIN 9822 Shape C

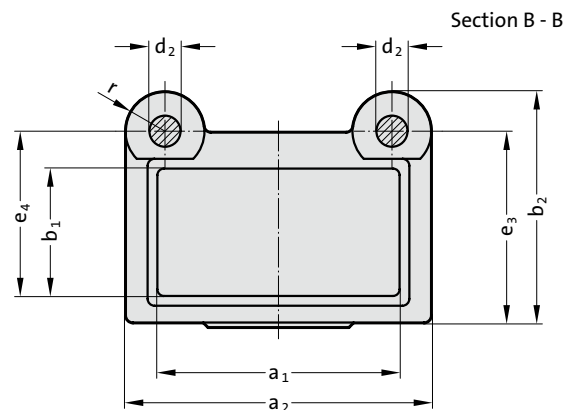
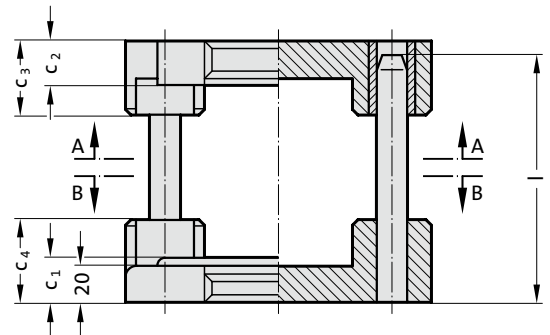
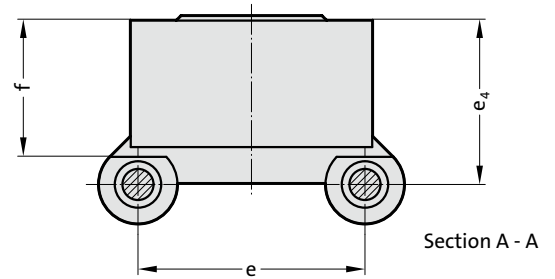
Order No part 1*	Work area											
	a ₁ x b ₁	a ₂	b ₂	c ₁	c ₂	c ₃	d ₂	e ₁	e ₃	f	l	r
201.31.063.050.	63 x 50	95	84	40	25	50	20	72	77	55	140	22
201.31.080.063.	80 x 63	125	105	45	30	60	20	80	92	68	160	27
201.31.100.063.	100 x 63	145	105	45	30	60	20	100	92	68	160	27
201.31.100.080.	100 x 80	145	130	50	30	70	25	100	112	87	160	30
201.31.125.080.	125 x 80	170	130	50	30	70	25	125	112	87	160	30
201.31.160.080.	160 x 80	205	130	50	30	70	25	160	112	87	160	30
201.31.125.100.	125 x 100	170	150	56	40	90	32	125	140	107	180	37
201.31.160.100.	160 x 100	205	150	56	40	90	32	160	140	107	180	37
201.31.200.100.	200 x 100	245	150	56	40	90	32	200	140	107	180	37
201.31.160.125.	160 x 125	215	180	56	40	90	32	160	165	132	180	37
201.31.200.125.	200 x 125	255	180	56	40	90	32	200	165	132	180	37
201.31.250.125.	250 x 125	305	180	56	40	90	32	250	165	132	180	37
201.31.200.160.	200 x 160	255	225	63	50	120	40	200	210	167	224	48
201.31.250.160.	250 x 160	305	225	63	50	120	40	250	210	167	224	48
201.31.250.200.	250 x 200	305	270	63	50	120	50	250	260	207	224	56
201.31.315.250.	315 x 250	370	320	63	50	120	50	315	310	257	224	56

*Order No Part 2 = complete guide type

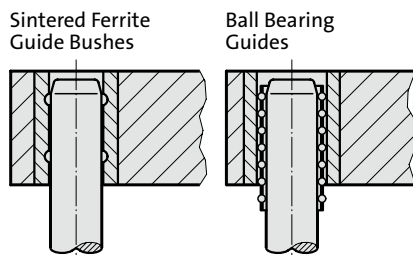
DIE SET



201.33.



Guide Elements



Order No (part II)
Without shank thread
in top bolster



201.33. Die set

Order No part 1*	Work area														
	$a_1 \times b_1$	a_2	b_2	C_1	C_2	C_3	C_4	d_2	e	e_3	e_4	f	l	r	
201.33.063.050.	63 x 50	116	110	25	25	40	45	16	72	88	74	57	125	22	
201.33.080.060.	80 x 60	116	117	25	25	40	45	20	72	95	81	62	160	22	

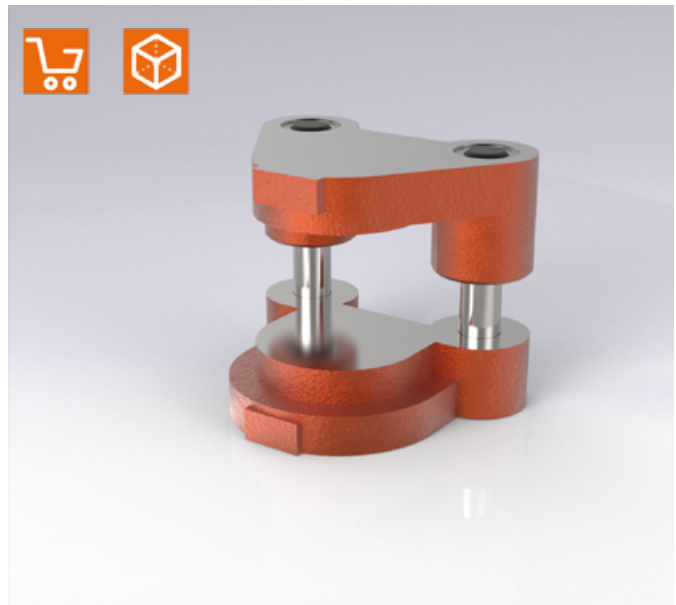
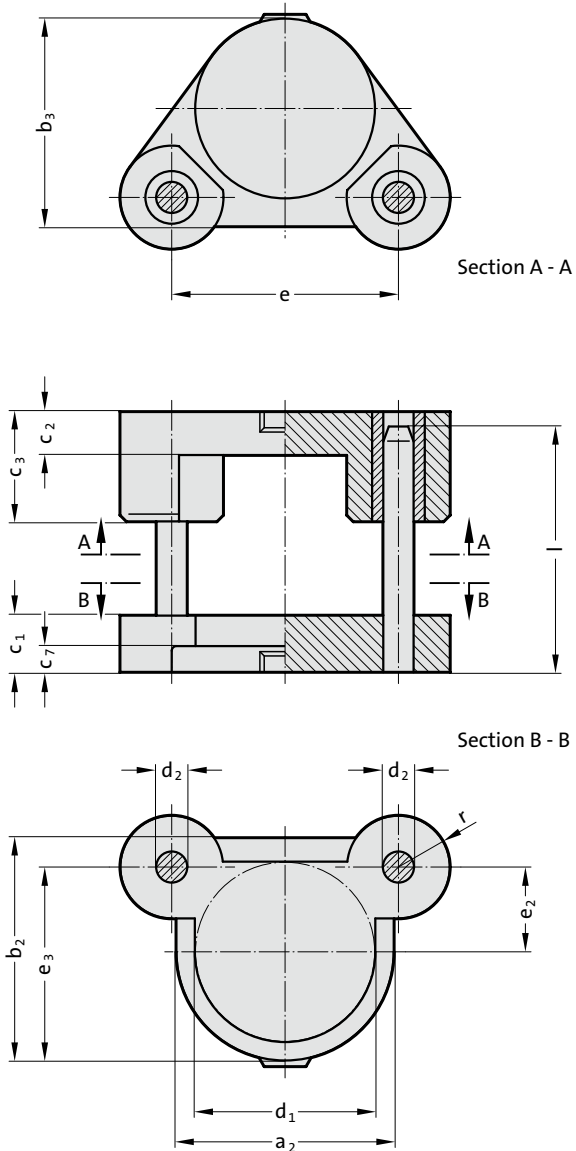
*Order No Part 2 = complete guide type

Ordering Code (example):

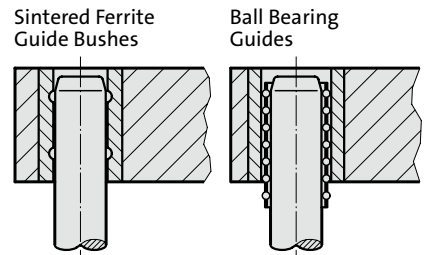
Die set	=	201.33.
Working area length a_1	80 mm	= 080.
Working area width b_1	60 mm	= 060.
Guide type FA	Sintered ferrite	= 030
Order No		= 201.33. 080. 060. 030

DIE SET

201.36.



Guide Elements



Order No (part II)
Without shank thread
in top bolster

.030

.040

201.36. Die set

Order No part 1*	Work area													
	d ₁	a ₂	b ₂	b ₃	c ₁	c ₂	c ₃	c ₇	d ₂	e	e ₂	e ₃	l	r
201.36.050.	50	80	80	65	40	30	50	25	20	66	33	73	125	20
201.36.063.	63	94	94	78	45	30	60	25	20	82	41	88	125	25
201.36.080.	80	110	110	95	50	30	70	30	25	105	52	107	160	30
201.36.100.	100	140	140	120	50	30	70	30	25	125	57	127	160	30
201.36.125.	125	166	166	145	56	40	90	30	32	157	73	156	180	38
201.36.160.	160	200	200	180	63	50	120	30	40	200	85	185	224	48
201.36.180.	180	220	220	200	63	50	120	30	40	224	90	200	224	48
201.36.200.	200	250	250	225	63	50	120	30	50	250	95	220	224	56
201.36.250.	250	300	300	275	63	50	120	30	50	300	120	270	224	56

*Order No Part 2 = complete guide type

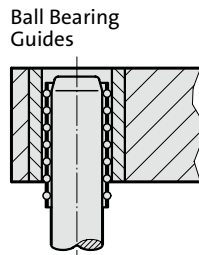
Ordering Code (example):

Die set	=	201.36.
Work area d ₁	125 mm	= 125.
Guide type FA	Sintered ferrite	= 030
Order No	=	201.36. 125. 030

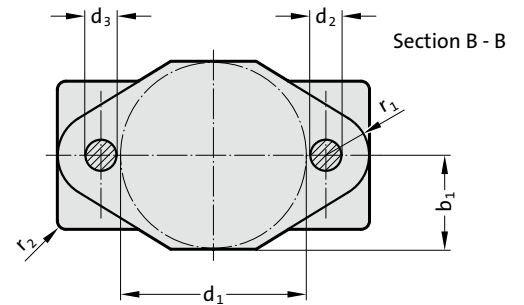
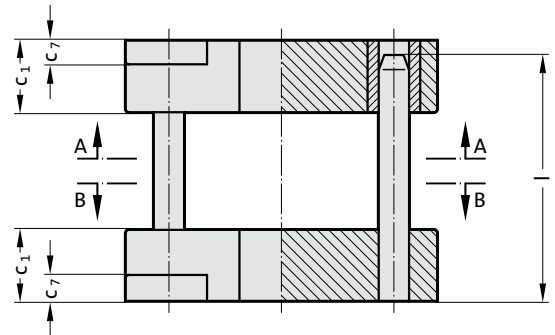
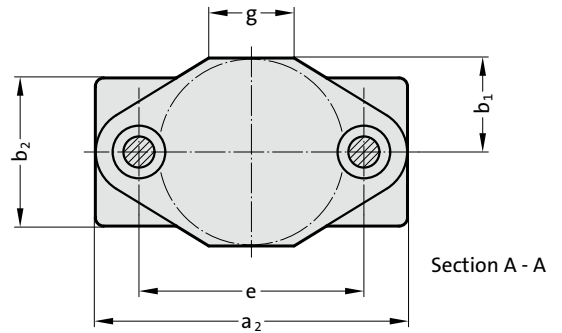
FINE BLANKING DIE SET



Guide Elements



201.39.

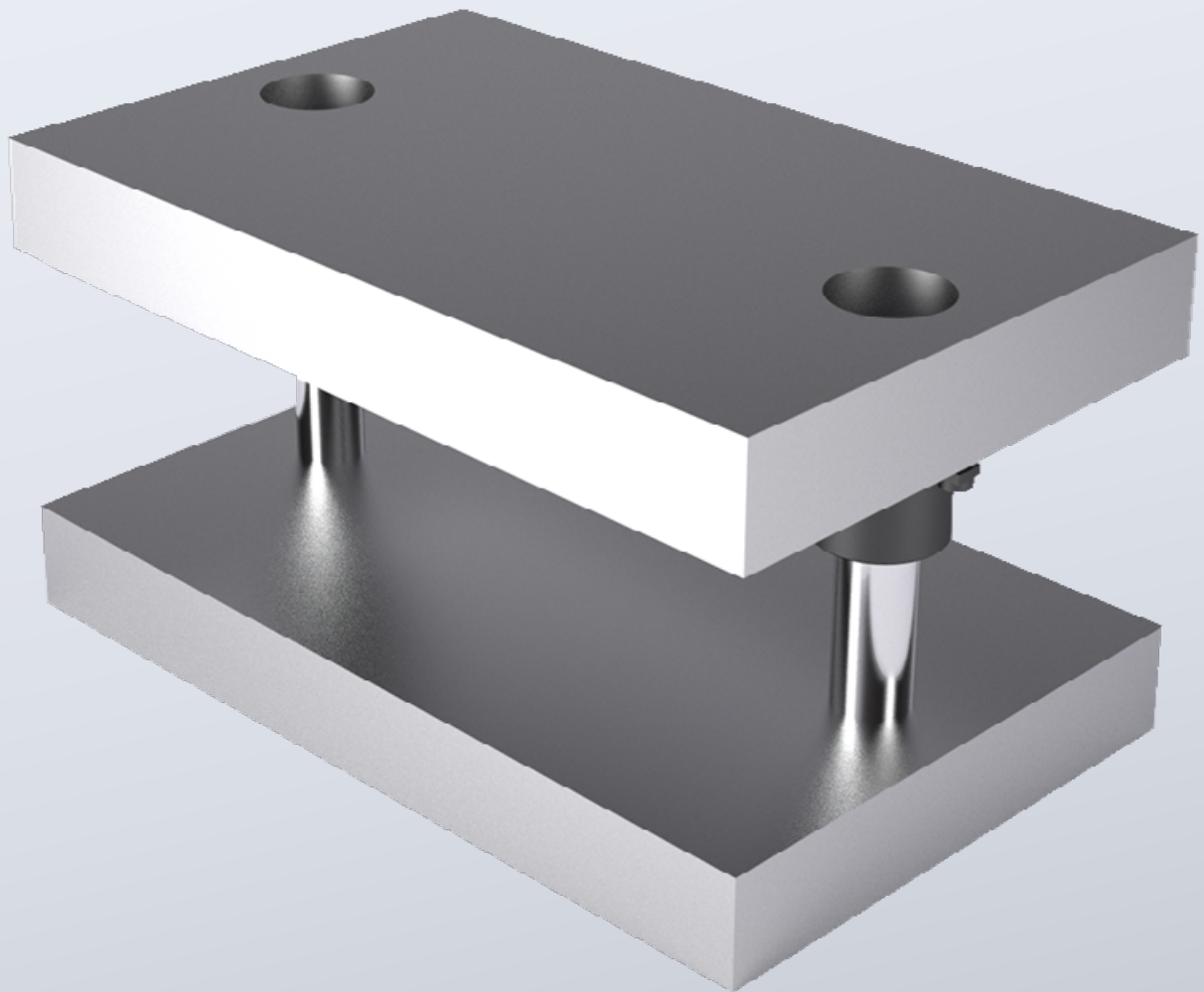


Faces front and rear fine machined after assembly – their perfect alignment permits use as datum reference.

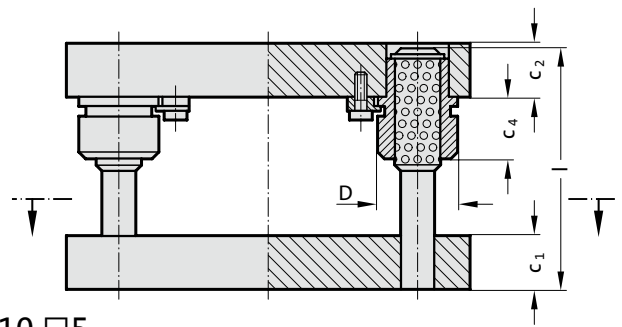
201.39. Fine blanking die set

Order No	Work area												
	d ₁	a ₂	b ₁	b ₂	c ₁	c ₇	d ₂	d ₃	g	e	l	r ₁	r ₂
201.39.100.040	100	220	50	85	75	22	25	24	60	140	140	27	6
201.39.125.040	125	245	62	100	75	25	25	24	80	165	140	27	6
201.39.160.040	160	290	80	140	75	25	32	30	80	200	140	35	6
201.39.200.040	200	340	100	160	80	30	40	38	90	250	160	45	8
201.39.250.040	250	400	125	200	85	32	40	38	100	300	180	50	10

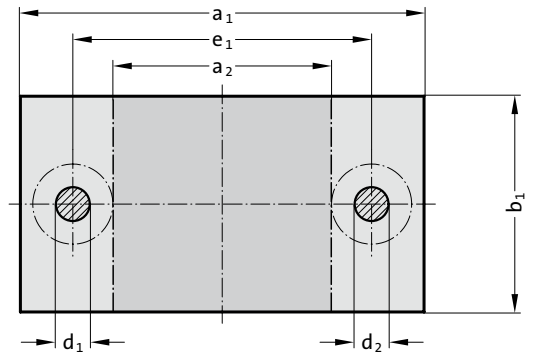
ALL-STEEL- AND ALUMINIUM DIE SETS



DIE SET WITHOUT STRIPPER ~DIN 9868/ISO 11415

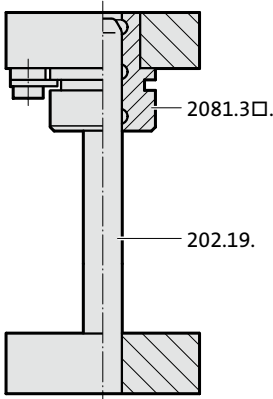


2010.□5.

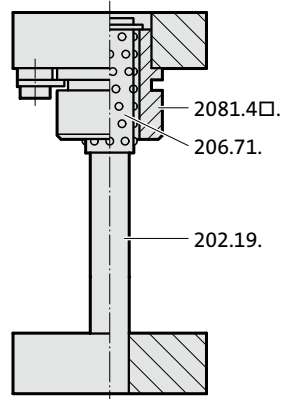


Standard Guide Systems

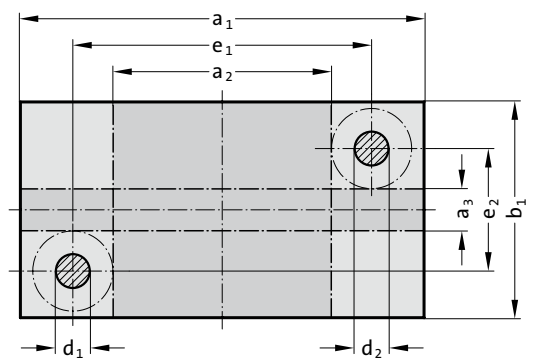
Headed Sintered Ferrite Bushes, carbonitrided = .834.



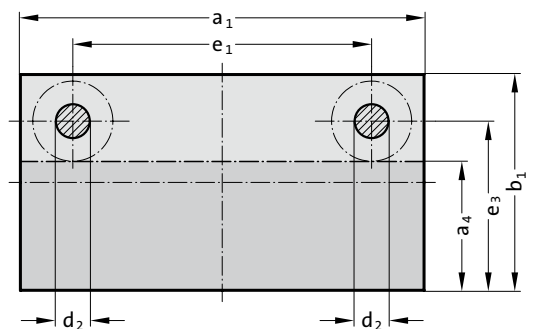
Headed Ball Bearing Bushes = .862.



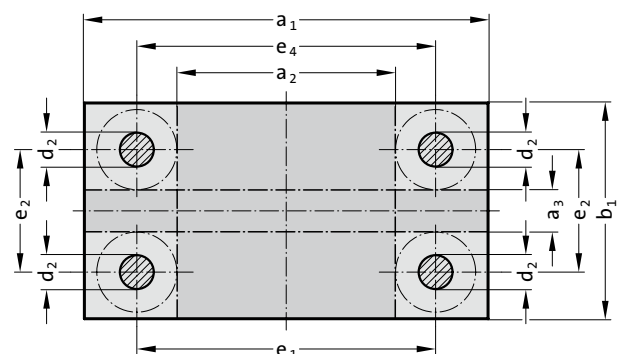
2010.□6.



2010.□7.



2010.□9.



Description:

FIBRO Die Sets offer the choice between sintered ferrite sliding guides and those of the ball bearing type to DIN-ISO. Both come with headed guide bushes. These are seated in push-fit bolster bores and retained there by screw clamps.

Execution:

Steel: External contours milled, thickness surfaces ground

a_1 or $b_1 \leq 630 = +0.2/+0.4$

a_1 or $b_1 > 630 = +0.2/+0.6$

Aluminium: External contours sawn, thickness surfaces ground

a_1 or $b_1 = +1/+4$

Order note:

Hole pattern for the screw clamps depends on positioning of working surface:

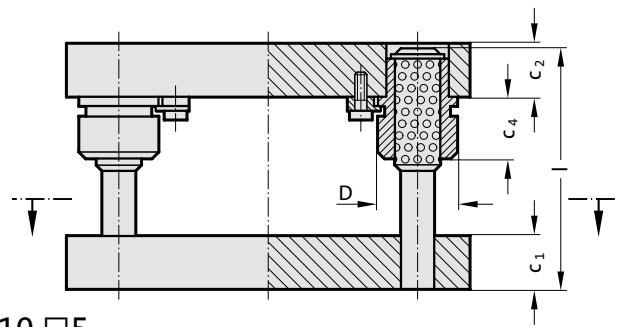
e.g. 2010.49.2520.4.862.1 : : lengthwise

e.g. 2010.49.2520.4.862.2 : : crosswise

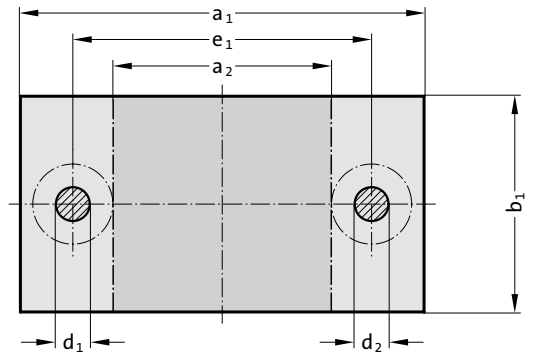
Note:

On request, Standard Die Sets can also be fitted with any other FIBRO Guide Elements (see die sets to customers' drawings). FIBRO will furthermore supply die sets with special machining features.

DIE SET WITHOUT STRIPPER ~DIN 9868/ISO 11415

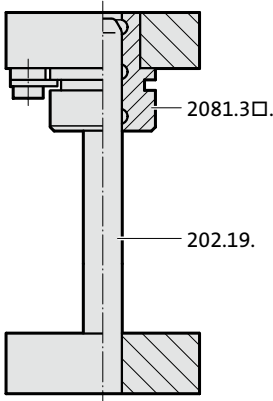


2010.□5.

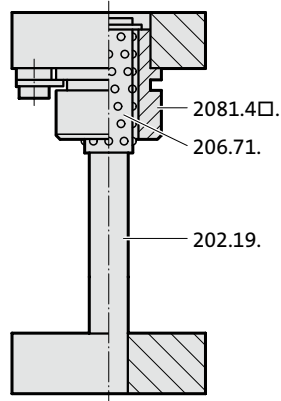


Standard Guide Systems

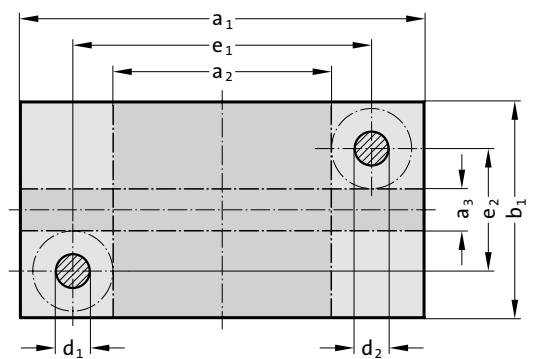
Headed Sintered Ferrite Bushes, carbonitrided = .834.



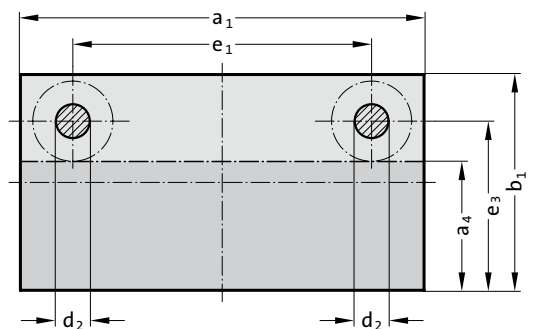
Headed Ball Bearing Bushes = .862.



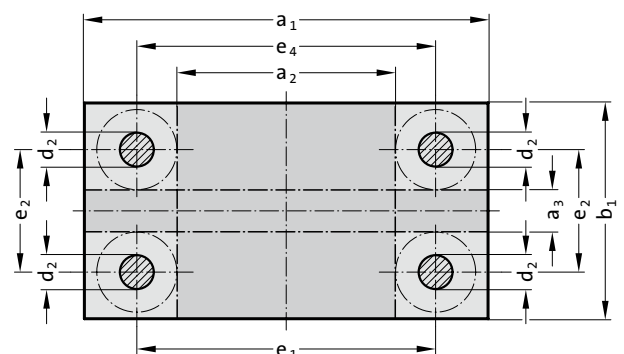
2010.□6.



2010.□7.



2010.□9.



Description:

FIBRO Die Sets offer the choice between sintered ferrite sliding guides and those of the ball bearing type to DIN-ISO. Both come with headed guide bushes. These are seated in push-fit bolster bores and retained there by screw clamps.

Execution:

Steel: External contours milled, thickness surfaces ground

a_1 or $b_1 \leq 630 = +0.2/+0.4$

a_1 or $b_1 > 630 = +0.2/+0.6$

Aluminium: External contours sawn, thickness surfaces ground

a_1 or $b_1 = +1/+4$

Order note:

Hole pattern for the screw clamps depends on positioning of working surface:

e.g. 2010.49.2520.4.862.1 : : lengthwise

e.g. 2010.49.2520.4.862.2 : : crosswise

Note:

On request, Standard Die Sets can also be fitted with any other FIBRO Guide Elements (see die sets to customers' drawings). FIBRO will furthermore supply die sets with special machining features.

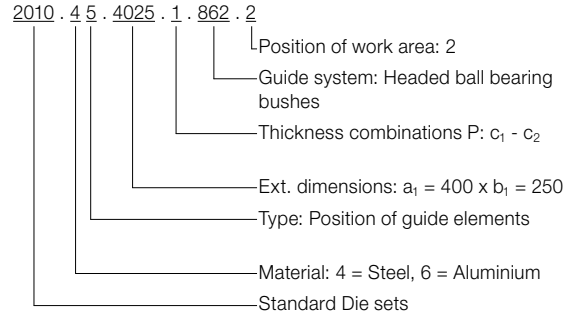
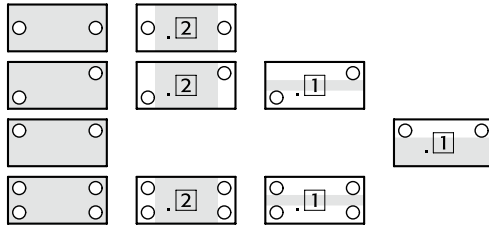
DIE SET WITHOUT STRIPPER ~DIN 9868/ISO 11415

2010. □□ .

Ordering Code (principle):

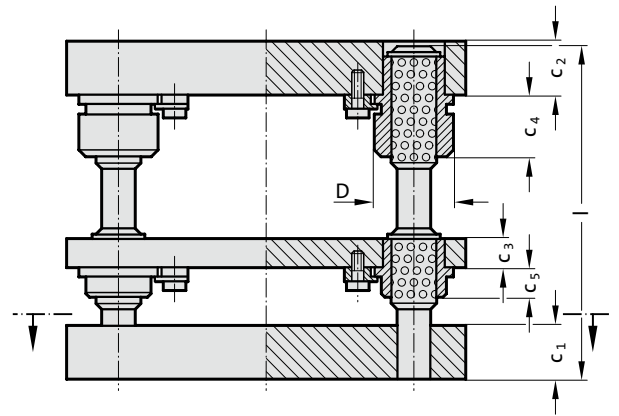
Type

2010.□5.
2010.□6.
2010.□7.
2010.□9.

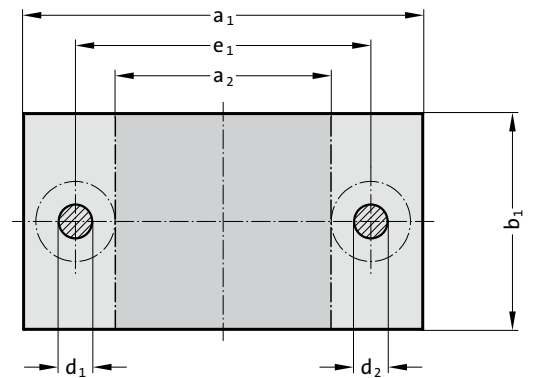


Order No					external dimensions a ₁ × b ₁	Work area crosswise a ₂ × b ₁	Work area along a ₁ × a ₃	Work area along a ₁ × a ₄	.834. .862.				D	e ₁	e ₂	e ₃	e ₄	
									c ₁ ≠ 2	c ₂ ≠ 2	c ₄	c ₄						
2010.	.4031.	3.			400 × 315	250 × 315	400 × 165	400 × 240	40	50	45	63	30/32 × 200	53	310	225	270	313
2010.	.4031.	4.			400 × 315	250 × 315	400 × 165	400 × 240	40	40	45	63	30/32 × 200	53	310	225	270	313
2010.	.4040.	1.			400 × 400	250 × 400	400 × 250	400 × 325	50	50	45	63	30/32 × 200	53	310	310	355	313
2010.	.4040.	2.			400 × 400	250 × 400	400 × 250	400 × 325	50	40	45	63	30/32 × 200	53	310	310	355	313
2010.	.4040.	3.			400 × 400	250 × 400	400 × 250	400 × 325	40	50	45	63	30/32 × 200	53	310	310	355	313
2010.	.4040.	4.			400 × 400	250 × 400	400 × 250	400 × 325	40	40	45	63	30/32 × 200	53	310	310	355	313
2010.	.5025.	1.			500 × 250	330 × 250	500 × 80	500 × 165	50	50	45	71	38/40 × 200	63	400	150	200	403
2010.	.5025.	2.			500 × 250	330 × 250	500 × 80	500 × 165	50	40	45	71	38/40 × 200	63	400	150	200	403
2010.	.5025.	3.			500 × 250	330 × 250	500 × 80	500 × 165	40	50	45	71	38/40 × 200	63	400	150	200	403
2010.	.5025.	4.			500 × 250	330 × 250	500 × 80	500 × 165	40	40	45	71	38/40 × 200	63	400	150	200	403
2010.	.5031.	1.			500 × 315	330 × 315	500 × 145	500 × 230	50	50	45	71	38/40 × 200	63	400	215	265	403
2010.	.5031.	2.			500 × 315	330 × 315	500 × 145	500 × 230	50	40	45	71	38/40 × 200	63	400	215	265	403
2010.	.5031.	3.			500 × 315	330 × 315	500 × 145	500 × 230	40	50	45	71	38/40 × 200	63	400	215	265	403
2010.	.5031.	4.			500 × 315	330 × 315	500 × 145	500 × 230	40	40	45	71	38/40 × 200	63	400	215	265	403
2010.	.5040.	1.			500 × 400	330 × 400	500 × 230	500 × 315	50	50	45	71	38/40 × 200	63	400	300	350	403
2010.	.5040.	2.			500 × 400	330 × 400	500 × 230	500 × 315	50	40	45	71	38/40 × 200	63	400	300	350	403
2010.	.5040.	3.			500 × 400	330 × 400	500 × 230	500 × 315	40	50	45	71	38/40 × 200	63	400	300	350	403
2010.	.5040.	4.			500 × 400	330 × 400	500 × 230	500 × 315	40	40	45	71	38/40 × 200	63	400	300	350	403
2010.	.5050.	1.			500 × 500	330 × 500	500 × 330	500 × 415	50	50	45	71	38/40 × 200	63	400	400	450	403
2010.	.5050.	2.			500 × 500	330 × 500	500 × 330	500 × 415	50	40	45	71	38/40 × 200	63	400	400	450	403
2010.	.5050.	3.			500 × 500	330 × 500	500 × 330	500 × 415	40	50	45	71	38/40 × 200	63	400	400	450	403
2010.	.5050.	4.			500 × 500	330 × 500	500 × 330	500 × 415	40	40	45	71	38/40 × 200	63	400	400	450	403
2010.	.6331.	1.			630 × 315	430 × 315	630 × 115	630 × 215	63	63	50	80	48/50 × 250	77	510	195	255	513
2010.	.6331.	2.			630 × 315	430 × 315	630 × 115	630 × 215	63	50	50	80	48/50 × 250	77	510	195	255	513
2010.	.6331.	3.			630 × 315	430 × 315	630 × 115	630 × 215	50	63	50	80	48/50 × 224	77	510	195	255	513
2010.	.6331.	4.			630 × 315	430 × 315	630 × 115	630 × 215	50	50	50	80	48/50 × 224	77	510	195	255	513
2010.	.6340.	1.			630 × 400	430 × 400	630 × 200	630 × 300	63	63	50	80	48/50 × 250	77	510	280	340	513
2010.	.6340.	2.			630 × 400	430 × 400	630 × 200	630 × 300	63	50	50	80	48/50 × 250	77	510	280	340	513
2010.	.6340.	3.			630 × 400	430 × 400	630 × 200	630 × 300	50	63	50	80	48/50 × 224	77	510	280	340	513
2010.	.6340.	4.			630 × 400	430 × 400	630 × 200	630 × 300	50	50	50	80	48/50 × 224	77	510	280	340	513
2010.	.6350.	1.			630 × 500	430 × 500	630 × 300	630 × 400	63	63	50	80	48/50 × 250	77	510	380	440	513
2010.	.6350.	2.			630 × 500	430 × 500	630 × 300	630 × 400	63	50	50	80	48/50 × 250	77	510	380	440	513
2010.	.6350.	3.			630 × 500	430 × 500	630 × 300	630 × 400	50	63	50	80	48/50 × 224	77	510	380	440	513
2010.	.6350.	4.			630 × 500	430 × 500	630 × 300	630 × 400	50	50	50	80	48/50 × 224	77	510	380	440	513
2010.	.6363.	1.			630 × 630	430 × 630	630 × 430	630 × 530	63	63	50	80	48/50 × 250	77	510	510	570	513
2010.	.6363.	2.			630 × 630	430 × 630	630 × 430	630 × 530	63	50	50	80	48/50 × 250	77	510	510	570	513
2010.	.6363.	3.			630 × 630	430 × 630	630 × 430	630 × 530	50	63	50	80	48/50 × 224	77	510	510	570	513
2010.	.6363.	4.			630 × 630	430 × 630	630 × 430	630 × 530	50	50	50	80	48/50 × 224	77	510	510	570	513
2010.	.7140.	1.			710 × 400	510 × 400	710 × 200	710 × 300	63	63	50	80	48/50 × 250	77	590	280	340	593
2010.	.7140.	2.			710 × 400	510 × 400	710 × 200	710 × 300	63	50	50	80	48/50 × 250	77	590	280	340	593
2010.	.7140.	3.			710 × 400	510 × 400	710 × 200	710 × 300	50	63	50	80	48/50 × 224	77	590	280	340	593
2010.	.7140.	4.			710 × 400	510 × 400	710 × 200	710 × 300	50	50	50	80	48/50 × 224	77	590	280	340	593
2010.	.7150.	1.			710 × 500	510 × 500	710 × 300	710 × 400	63	63	50	80	48/50 × 250	77	590	380	440	593
2010.	.7150.	2.			710 × 500	510 × 500	710 × 300	710 × 400	63	50	50	80	48/50 × 250	77	590	380	440	593
2010.	.7150.	3.			710 × 500	510 × 500	710 × 300	710 × 400	50	63	50	80	48/50 × 224	77	590	380	440	593
2010.	.7150.	4.			710 × 500	510 × 500	710 × 300	710 × 400	50	50	50	80	48/50 × 224	77	590	380	440	593
2010.	.7163.	1.			710 × 630	510 × 630	710 × 430	710 × 530	63	63	50	80	48/50 × 250	77	590	510	570	593
2010.	.7163.	2.			710 × 630	510 × 630	710 × 430	710 × 530	63	50	50	80	48/50 × 250	77	590	510	570	593
2010.	.7163.	3.			710 × 630	510 × 630	710 × 430	710 × 530	50	63	50	80	48/50 × 224	77	590	510	570	593
2010.	.7163.	4.			710 × 630	510 × 630	710 × 430	710 × 530	50	50	50	80	48/50 × 224	77	590	510	570	593
2010.	.8040.	1.			800 × 400	600 × 400	800 × 200	800 × 300	63	63	50	80	48/50 × 250	77	680	280	340	683
2010.	.8040.	2.			800 × 400	600 × 400	800 × 200	800 × 300	63	50	50	80	48/50 × 250	77	680	280	340	683
2010.	.8040.	3.			800 × 400	600 × 400	800 × 200	800 × 300	50	63	50	80	48/50 × 224	77	680	280	340	683
2010.	.8040.	4.			800 × 400	600 × 400	800 × 200	800 × 300	50	50	50	80	48/50 × 224	77	680	280	340	683
2010.	.8050.	1.			800 × 500	600 × 500	800 × 300	800 × 400	63	63	50	80	48/50 × 250	77	680	380	440	683
2010.	.8050.	2.			800 × 500	600 × 500	800 × 300	800 × 400	63	50	50	80	48/50 × 250	77	680	380	440	683
2010.	.8050.	3.			800 × 500	600 × 500	800 × 300	800 × 400	50	63	50	80	48/50 × 224	77	680	380	440	683
2010.	.8050.	4.			800 × 500	600 × 500	800 × 300	800 × 400	50	50	50	80	48/50 × 224	77	680	380	440	683
2010.	.8063.	1.			800 × 630	600 × 630	800 × 430	800 × 530	63	63	50	80	48/50 × 250	77	680	510	570	683
2010.	.8063.	2.			800 × 630	600 × 630	800 × 430	800 × 530	63	50	50	80	48/50 × 250	77	680	510	570	683
2010.	.8063.	3.			800 × 630	600 × 630	800 × 430	800 × 530	50	63	50	80	48/50 × 224	77	680	510	570	683
2010.	.8063.	4.			800 × 630	600 × 630	800 × 430	800 × 530	50	50	50	80	48/50 × 224	77	680	510	570	683

PILLAR FRAME WITH STAMP GUIDE PLATE ~DIN 9868/ISO 11415

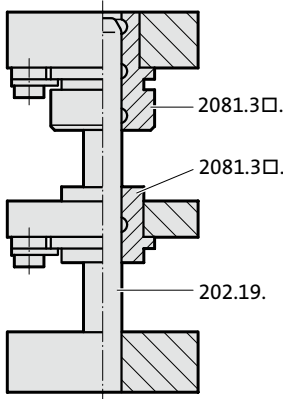


2010.□5.

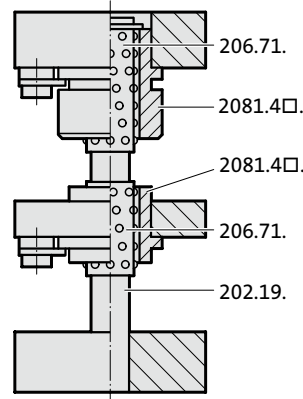


Standard Guide Systems

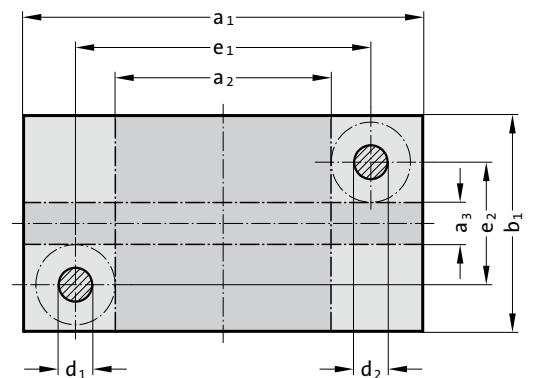
Headed Sintered Ferrite Bushes, carbonitrided = .835.



Headed Ball Bearing Bushes = .865.



2010.□6.



Description:

FIBRO Die Sets offer the choice between sintered ferrite sliding guides and those of the ball bearing type to DIN-ISO. Both come with headed guide bushes. These are seated in push-fit bolster bores and retained there by screw clamps.

Execution:

Steel: External contours milled, thickness surfaces ground

a_1 or $b_1 \leq 630 = +0.2/+0.4$

a_1 or $b_1 > 630 = +0.2/+0.6$

Aluminium: External contours sawn, thickness surfaces ground

a_1 or $b_1 = +1/+4$

Order note:

Hole pattern for the screw clamps depends on positioning of working surface:

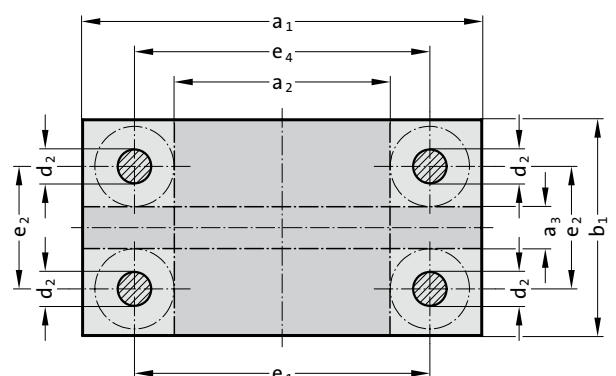
e.g. 2010.49.2520.4.865.1 : : lengthwise

e.g. 2010.49.2520.4.865.2 : : crosswise

Note:

On request, Standard Die Sets can also be fitted with any other FIBRO Guide Elements (see die sets to customers' drawings). FIBRO will furthermore supply die sets with special machining features.

2010.□9.



PILLAR FRAME WITH STAMP GUIDE PLATE ~DIN 9868/ISO 11415

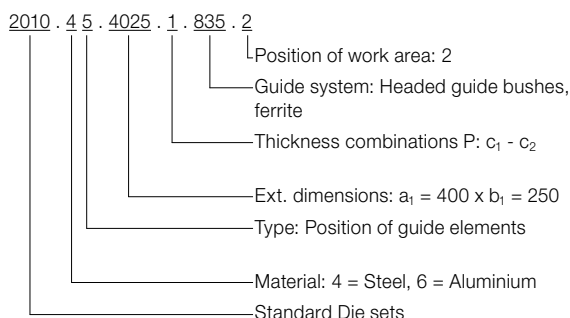
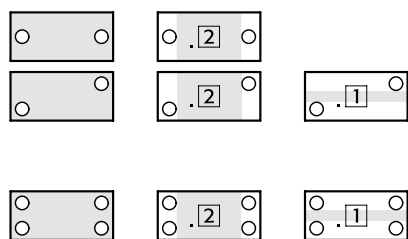
2010. □□ .

Ordering Code (principle):

Type

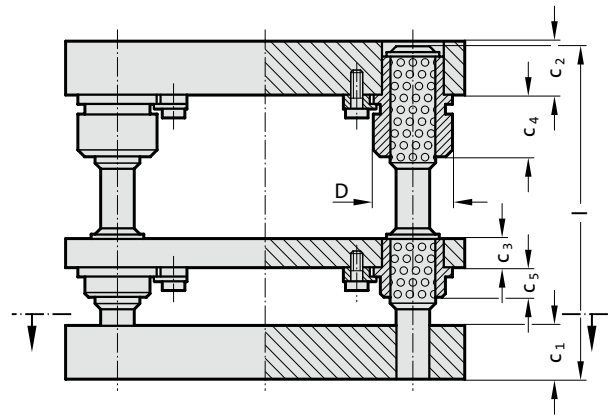
2010.□5.
2010.□6.

2010.□9.

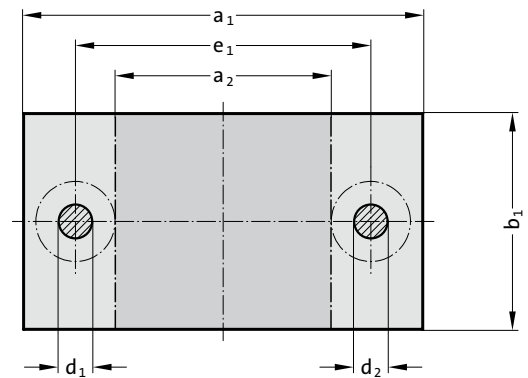


Order No	external dimensions $a_1 \times b_1$	Work area crosswise $a_2 \times b_1$	Work area along $a_1 \times a_3$	$c_1 \pm 2$	$c_2 \pm 2$	$c_3 \pm 2$	c_4	c_5	$d_1/d_2 \times l$	D	e_1	e_2	e_4	
2010.	.1608. 1.	160 x 80	60 x 80	-	32	32	25	12	12	19/20 x 180	39	100	-	-
2010.	.1610. 1.	160 x 100	60 x 100	-	32	32	25	12	12	19/20 x 180	39	100	-	-
2010.	.1612. 1.	160 x 125	60 x 125	-	32	32	25	12	12	19/20 x 180	39	100	-	-
2010.	.1616. 1.	160 x 160	60 x 160	160 x 60	32	32	25	12	12	19/20 x 180	39	100	100	103
2010.	.2010. 1.	200 x 100	70 x 100	-	40	40	25	25	12	24/25 x 200	46	120	-	-
2010.	.2010. 2.	200 x 100	70 x 100	-	40	32	25	25	12	24/25 x 200	46	120	-	-
2010.	.2010. 3.	200 x 100	70 x 100	-	32	40	25	25	12	24/25 x 200	46	120	-	-
2010.	.2010. 4.	200 x 100	70 x 100	-	32	32	25	25	12	24/25 x 200	46	120	-	-
2010.	.2012. 1.	200 x 125	70 x 125	-	40	40	25	25	12	24/25 x 200	46	120	-	-
2010.	.2012. 2.	200 x 125	70 x 125	-	40	32	25	25	12	24/25 x 200	46	120	-	-
2010.	.2012. 3.	200 x 125	70 x 125	-	32	40	25	25	12	24/25 x 200	46	120	-	-
2010.	.2012. 4.	200 x 125	70 x 125	-	32	32	25	25	12	24/25 x 200	46	120	-	-
2010.	.2016. 1.	200 x 160	70 x 160	-	40	40	25	25	12	24/25 x 200	46	120	-	-
2010.	.2016. 2.	200 x 160	70 x 160	-	40	32	25	25	12	24/25 x 200	46	120	-	-
2010.	.2016. 3.	200 x 160	70 x 160	-	32	40	25	25	12	24/25 x 200	46	120	-	-
2010.	.2016. 4.	200 x 160	70 x 160	-	32	32	25	25	12	24/25 x 200	46	120	-	-
2010.	.2020. 1.	200 x 200	70 x 200	200 x 70	40	40	25	25	12	24/25 x 200	46	120	120	123
2010.	.2020. 2.	200 x 200	70 x 200	200 x 70	40	32	25	25	12	24/25 x 200	46	120	120	123
2010.	.2020. 3.	200 x 200	70 x 200	200 x 70	32	40	25	25	12	24/25 x 200	46	120	120	123
2010.	.2020. 4.	200 x 200	70 x 200	200 x 70	32	32	25	25	12	24/25 x 200	46	120	120	123
2010.	.2512. 1.	250 x 125	120 x 125	-	40	40	25	25	12	24/25 x 200	46	170	-	-
2010.	.2512. 2.	250 x 125	120 x 125	-	40	32	25	25	12	24/25 x 200	46	170	-	-
2010.	.2512. 3.	250 x 125	120 x 125	-	32	40	25	25	12	24/25 x 200	46	170	-	-
2010.	.2512. 4.	250 x 125	120 x 125	-	32	32	25	25	12	24/25 x 200	46	170	-	-
2010.	.2516. 1.	250 x 160	120 x 160	-	40	40	25	25	12	24/25 x 200	46	170	-	-
2010.	.2516. 2.	250 x 160	120 x 160	-	40	32	25	25	12	24/25 x 200	46	170	-	-
2010.	.2516. 3.	250 x 160	120 x 160	-	32	40	25	25	12	24/25 x 200	46	170	-	-
2010.	.2516. 4.	250 x 160	120 x 160	-	32	32	25	25	12	24/25 x 200	46	170	-	-
2010.	.2520. 1.	250 x 200	120 x 200	250 x 70	40	40	25	25	12	24/25 x 200	46	170	120	173
2010.	.2520. 2.	250 x 200	120 x 200	250 x 70	40	32	25	25	12	24/25 x 200	46	170	120	173
2010.	.2520. 3.	250 x 200	120 x 200	250 x 70	32	40	25	25	12	24/25 x 200	46	170	120	173
2010.	.2520. 4.	250 x 200	120 x 200	250 x 70	32	32	25	25	12	24/25 x 200	46	170	120	173
2010.	.2525. 1.	250 x 250	120 x 250	250 x 120	40	40	25	25	12	24/25 x 200	46	170	170	173
2010.	.2525. 2.	250 x 250	120 x 250	250 x 120	40	32	25	25	12	24/25 x 200	46	170	170	173
2010.	.2525. 3.	250 x 250	120 x 250	250 x 120	32	40	25	25	12	24/25 x 200	46	170	170	173
2010.	.2525. 4.	250 x 250	120 x 250	250 x 120	32	32	25	25	12	24/25 x 200	46	170	170	173
2010.	.3116. 1.	315 x 160	165 x 160	-	50	50	32	32	12	30/32 x 224	53	225	-	-
2010.	.3116. 2.	315 x 160	165 x 160	-	50	40	32	32	12	30/32 x 224	53	225	-	-
2010.	.3116. 3.	315 x 160	165 x 160	-	40	50	32	32	12	30/32 x 224	53	225	-	-
2010.	.3116. 4.	315 x 160	165 x 160	-	40	40	32	32	12	30/32 x 224	53	225	-	-
2010.	.3120. 1.	315 x 200	165 x 200	315 x 50	50	50	32	32	12	30/32 x 224	53	225	110	228
2010.	.3120. 2.	315 x 200	165 x 200	315 x 50	50	40	32	32	12	30/32 x 224	53	225	110	228
2010.	.3120. 3.	315 x 200	165 x 200	315 x 50	40	50	32	32	12	30/32 x 224	53	225	110	228
2010.	.3120. 4.	315 x 200	165 x 200	315 x 50	40	40	32	32	12	30/32 x 224	53	225	110	228
2010.	.3125. 1.	315 x 250	165 x 250	315 x 100	50	50	32	32	12	30/32 x 224	53	225	160	228
2010.	.3125. 2.	315 x 250	165 x 250	315 x 100	50	40	32	32	12	30/32 x 224	53	225	160	228
2010.	.3125. 3.	315 x 250	165 x 250	315 x 100	40	50	32	32	12	30/32 x 224	53	225	160	228
2010.	.3125. 4.	315 x 250	165 x 250	315 x 100	40	40	32	32	12	30/32 x 224	53	225	160	228
2010.	.3131. 1.	315 x 315	165 x 315	315 x 165	50	50	32	32	12	30/32 x 224	53	225	225	228
2010.	.3131. 2.	315 x 315	165 x 315	315 x 165	50	40	32	32	12	30/32 x 224	53	225	225	228
2010.	.3131. 3.	315 x 315	165 x 315	315 x 165	40	50	32	32	12	30/32 x 224	53	225	225	228
2010.	.3131. 4.	315 x 315	165 x 315	315 x 165	40	40	32	32	12	30/32 x 224	53	225	225	228
2010.	.4020. 1.	400 x 200	250 x 200	400 x 50	50	50	32	32	12	30/32 x 224	53	310	110	313
2010.	.4020. 2.	400 x 200	250 x 200	400 x 50	50	40	32	32	12	30/32 x 224	53	310	110	313
2010.	.4020. 3.	400 x 200	250 x 200	400 x 50	40	50	32	32	12	30/32 x 224	53	310	110	313
2010.	.4020. 4.	400 x 200	250 x 200	400 x 50	40	40	32	32	12	30/32 x 224	53	310	110	313
2010.	.4025. 1.	400 x 250	250 x 250	400 x 100	50	50	32	32	12	30/32 x 224	53	310	160	313
2010.	.4025. 2.	400 x 250	250 x 250	400 x 100	50	40	32	32	12	30/32 x 224	53	310	160	313
2010.	.4025. 3.	400 x 250	250 x 250	400 x 100	40	50	32	32	12	30/32 x 224	53	310	160	313
2010.	.4025. 4.	400 x 250	250 x 250	400 x 100	40	40	32	32	12	30/32 x 224	53	310	160	313
2010.	.4031. 1.	400 x 315	250 x 315	400 x 165	50	50	32	32	12	30/32 x 224	53	310	225	313
2010.	.4031. 2.	400 x 315	250 x 315	400 x 165	50	40	32	32	12	30/32 x 224	53	310	225	313

PILLAR FRAME WITH STAMP GUIDE PLATE ~DIN 9868/ISO 11415

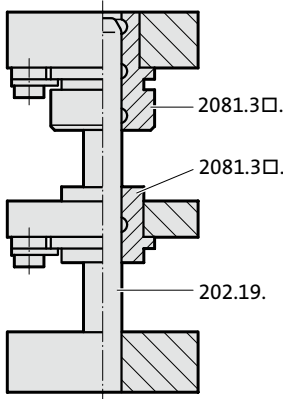


2010.□5.

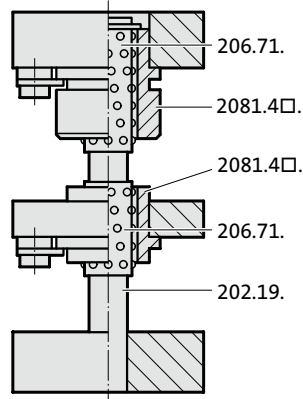


Standard Guide Systems

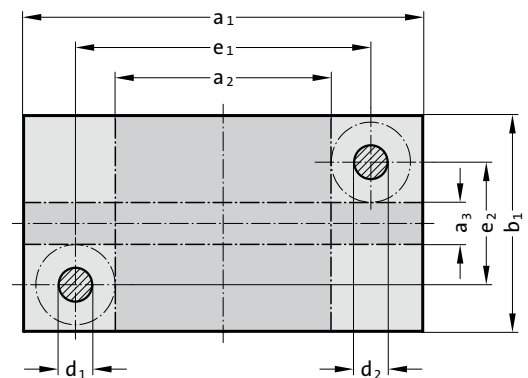
Headed Sintered Ferrite Bushes, carbonitrided = .835.



Headed Ball Bearing Bushes = .865.



2010.□6.



Description:

FIBRO Die Sets offer the choice between sintered ferrite sliding guides and those of the ball bearing type to DIN-ISO. Both come with headed guide bushes. These are seated in push-fit bolster bores and retained there by screw clamps.

Execution:

Steel: External contours milled, thickness surfaces ground

a_1 or $b_1 \leq 630 = +0.2/+0.4$

a_1 or $b_1 > 630 = +0.2/+0.6$

Aluminium: External contours sawn, thickness surfaces ground

a_1 or $b_1 = +1/+4$

Order note:

Hole pattern for the screw clamps depends on positioning of working surface:

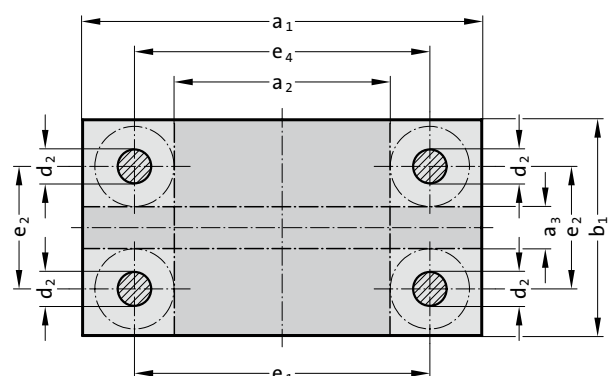
e.g. 2010.49.2520.4.865.1 : : lengthwise

e.g. 2010.49.2520.4.865.2 : : crosswise

Note:

On request, Standard Die Sets can also be fitted with any other FIBRO Guide Elements (see die sets to customers' drawings). FIBRO will furthermore supply die sets with special machining features.

2010.□9.



PILLAR FRAME WITH STAMP GUIDE PLATE ~DIN 9868/ISO 11415

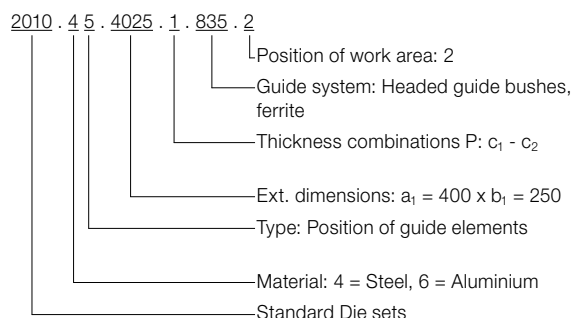
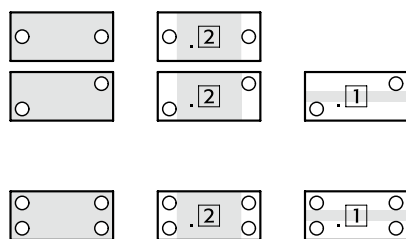
2010. □□.

Ordering Code (principle):

Type

2010.□5.
2010.□6.

2010.□9.



Order No	external dimensions		Work area crosswise	Work area along	c ₁ ± 2	c ₂ ± 2	c ₃ ± 2	c ₄	c ₅	d ₁ /d ₂ x l	D	e ₁	e ₂	e ₄	
	a ₁ × b ₁	a ₂ × b ₁	a ₁ × a ₃												
2010.	.4031.	3.	400 x 315	250 x 315	400 x 165	40	50	32	32	12	30/32 x 224	53	310	225	313
2010.	.4031.	4.	400 x 315	250 x 315	400 x 165	40	40	32	32	12	30/32 x 224	53	310	225	313
2010.	.4040.	1.	400 x 400	250 x 400	400 x 250	50	50	32	32	12	30/32 x 224	53	310	310	313
2010.	.4040.	2.	400 x 400	250 x 400	400 x 250	50	40	32	32	12	30/32 x 224	53	310	310	313
2010.	.4040.	3.	400 x 400	250 x 400	400 x 250	40	50	32	32	12	30/32 x 224	53	310	310	313
2010.	.4040.	4.	400 x 400	250 x 400	400 x 250	40	40	32	32	12	30/32 x 224	53	310	310	313
2010.	.5025.	1.	500 x 250	330 x 250	500 x 80	50	50	32	32	15	38/40 x 224	63	400	150	403
2010.	.5025.	2.	500 x 250	330 x 250	500 x 80	50	40	32	45	15	38/40 x 224	63	400	150	403
2010.	.5025.	3.	500 x 250	330 x 250	500 x 80	40	50	32	32	15	38/40 x 224	63	400	150	403
2010.	.5025.	4.	500 x 250	330 x 250	500 x 80	40	40	32	45	15	38/40 x 224	63	400	150	403
2010.	.5031.	1.	500 x 315	330 x 315	500 x 145	50	50	32	32	15	38/40 x 224	63	400	215	403
2010.	.5031.	2.	500 x 315	330 x 315	500 x 145	50	40	32	45	15	38/40 x 224	63	400	215	403
2010.	.5031.	3.	500 x 315	330 x 315	500 x 145	40	50	32	32	15	38/40 x 224	63	400	215	403
2010.	.5031.	4.	500 x 315	330 x 315	500 x 145	40	40	32	45	15	38/40 x 224	63	400	215	403
2010.	.5040.	1.	500 x 400	330 x 400	500 x 230	50	50	32	32	15	38/40 x 224	63	400	300	403
2010.	.5040.	2.	500 x 400	330 x 400	500 x 230	50	40	32	45	15	38/40 x 224	63	400	300	403
2010.	.5040.	3.	500 x 400	330 x 400	500 x 230	40	50	32	32	15	38/40 x 224	63	400	300	403
2010.	.5040.	4.	500 x 400	330 x 400	500 x 230	40	40	32	45	15	38/40 x 224	63	400	300	403
2010.	.5050.	1.	500 x 500	330 x 500	500 x 330	50	50	32	32	15	38/40 x 224	63	400	400	403
2010.	.5050.	2.	500 x 500	330 x 500	500 x 330	50	40	32	45	15	38/40 x 224	63	400	400	403
2010.	.5050.	3.	500 x 500	330 x 500	500 x 330	40	50	32	32	15	38/40 x 224	63	400	400	403
2010.	.5050.	4.	500 x 500	330 x 500	500 x 330	40	40	32	45	15	38/40 x 224	63	400	400	403
2010.	.6331.	1.	630 x 315	430 x 315	630 x 115	63	63	40	36	18	48/50 x 280	77	510	195	513
2010.	.6331.	2.	630 x 315	430 x 315	630 x 115	63	50	40	50	18	48/50 x 280	77	510	195	513
2010.	.6331.	3.	630 x 315	430 x 315	630 x 115	50	63	40	36	18	48/50 x 250	77	510	195	513
2010.	.6331.	4.	630 x 315	430 x 315	630 x 115	50	50	40	50	18	48/50 x 250	77	510	195	513
2010.	.6340.	1.	630 x 400	430 x 400	630 x 200	63	63	40	36	18	48/50 x 280	77	510	280	513
2010.	.6340.	2.	630 x 400	430 x 400	630 x 200	63	50	40	50	18	48/50 x 280	77	510	280	513
2010.	.6340.	3.	630 x 400	430 x 400	630 x 200	50	63	40	36	18	48/50 x 250	77	510	280	513
2010.	.6340.	4.	630 x 400	430 x 400	630 x 200	50	50	40	50	18	48/50 x 250	77	510	280	513
2010.	.6350.	1.	630 x 500	430 x 500	630 x 300	63	63	40	36	18	48/50 x 280	77	510	380	513
2010.	.6350.	2.	630 x 500	430 x 500	630 x 300	63	50	40	50	18	48/50 x 280	77	510	380	513
2010.	.6350.	3.	630 x 500	430 x 500	630 x 300	50	63	40	36	18	48/50 x 250	77	510	380	513
2010.	.6350.	4.	630 x 500	430 x 500	630 x 300	50	50	40	50	18	48/50 x 250	77	510	380	513
2010.	.6363.	1.	630 x 630	430 x 630	630 x 430	63	63	40	36	18	48/50 x 280	77	510	510	513
2010.	.6363.	2.	630 x 630	430 x 630	630 x 430	63	50	40	50	18	48/50 x 280	77	510	510	513
2010.	.6363.	3.	630 x 630	430 x 630	630 x 430	50	63	40	36	18	48/50 x 250	77	510	510	513
2010.	.6363.	4.	630 x 630	430 x 630	630 x 430	50	50	40	50	18	48/50 x 250	77	510	510	513
2010.	.7140.	1.	710 x 400	510 x 400	710 x 200	63	63	40	36	18	48/50 x 280	77	590	280	593
2010.	.7140.	2.	710 x 400	510 x 400	710 x 200	63	50	40	50	18	48/50 x 280	77	590	280	593
2010.	.7140.	3.	710 x 400	510 x 400	710 x 200	50	63	40	36	18	48/50 x 250	77	590	280	593
2010.	.7140.	4.	710 x 400	510 x 400	710 x 200	50	50	40	50	18	48/50 x 250	77	590	280	593
2010.	.7150.	1.	710 x 500	510 x 500	710 x 300	63	63	40	36	18	48/50 x 280	77	590	380	593
2010.	.7150.	2.	710 x 500	510 x 500	710 x 300	63	50	40	50	18	48/50 x 280	77	590	380	593
2010.	.7150.	3.	710 x 500	510 x 500	710 x 300	50	63	40	36	18	48/50 x 250	77	590	380	593
2010.	.7150.	4.	710 x 500	510 x 500	710 x 300	50	50	40	50	18	48/50 x 250	77	590	380	593
2010.	.7163.	1.	710 x 630	510 x 630	710 x 430	63	63	40	36	18	48/50 x 280	77	590	510	593
2010.	.7163.	2.	710 x 630	510 x 630	710 x 430	63	50	40	50	18	48/50 x 280	77	590	510	593
2010.	.7163.	3.	710 x 630	510 x 630	710 x 430	50	63	40	36	18	48/50 x 250	77	590	510	593
2010.	.7163.	4.	710 x 630	510 x 630	710 x 430	50	50	40	50	18	48/50 x 250	77	590	510	593
2010.	.8040.	1.	800 x 400	600 x 400	800 x 200	63	63	40	36	18	48/50 x 280	77	680	280	683
2010.	.8040.	2.	800 x 400	600 x 400	800 x 200	63	50	40	50	18	48/50 x 280	77	680	280	683
2010.	.8040.	3.	800 x 400	600 x 400	800 x 200	50	63	40	36	18	48/50 x 250	77	680	280	683
2010.	.8040.	4.	800 x 400	600 x 400	800 x 200	50	50	40	50	18	48/50 x 250	77	680	280	683
2010.	.8050.	1.	800 x 500	600 x 500	800 x 300	63	63	40	36	18	48/50 x 280	77	680	380	683
2010.	.8050.	2.	800 x 500	600 x 500	800 x 300	63	50	40	50	18	48/50 x 280	77	680	380	683
2010.	.8050.	3.	800 x 500	600 x 500	800 x 300	50	63	40	36	18	48/50 x 250	77	680	380	683
2010.	.8050.	4.	800 x 500	600 x 500	800 x 300	50	50	40	50	18	48/50 x 250	77	680	380	683
2010.	.8063.	1.	800 x 630	600 x 630	800 x 430	63	63	40	36	18	48/50 x 280	77	680	510	683
2010.	.8063.	2.	800 x 630	600 x 630	800 x 430	63	50	40	50	18	48/50 x 280	77	680	510	683
2010.	.8063.	3.	800 x 630	600 x 630	800 x 430	50	63	40	36	18	48/50 x 250	77	680	510	683
2010.	.8063.	4.	800 x 630	600 x 630	800 x 430	50	50	40	50	18	48/50 x 250	77	680	510	683

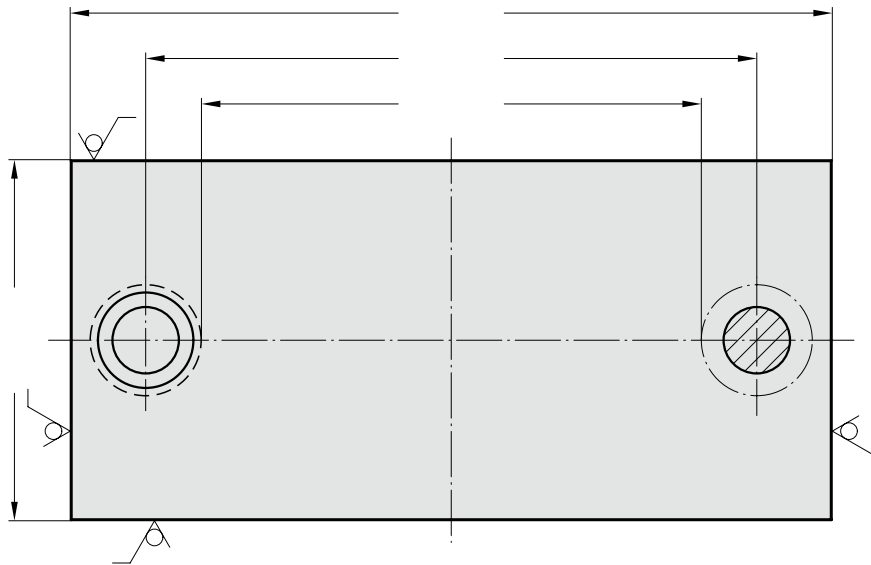
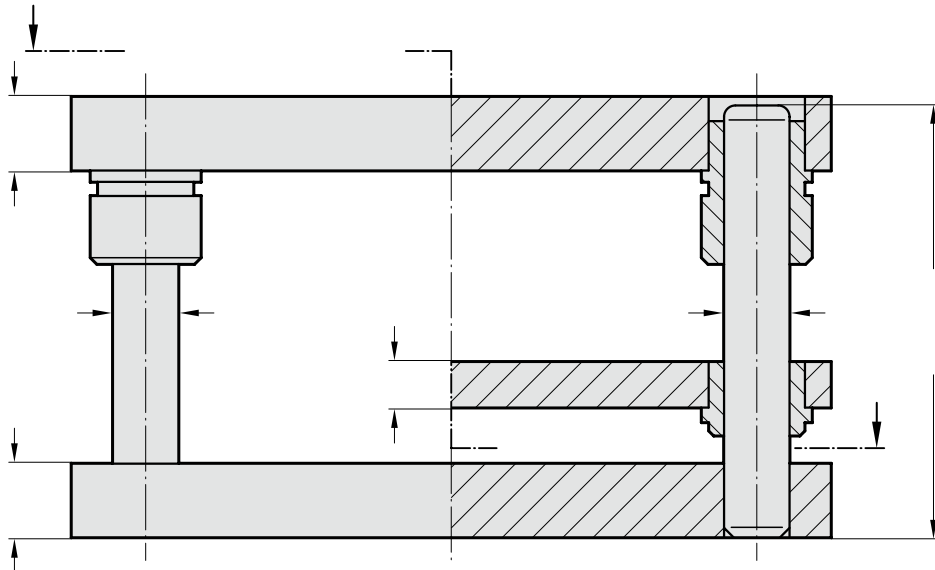
PILLAR FRAME ACCORDING TO CUSTOMER SPECIFICATIONS. PLEASE COPY THIS PAGE, COMPLETE, AND SEND TO FIBRO.

201.45. Pillar frame to customer specifications in steel

201.65. Pillar frame to customer specifications in aluminium

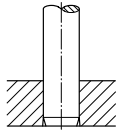
Without die riser

With die riser

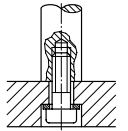


Guide pillars

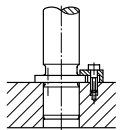
202.19. Guide Pillar
DIN 9825/ISO 9182-2



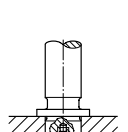
202.21. Guide Pillar
endwise bolt-on type



201.46. Demountable Pillars
with collar, push fit,
screw clamp retention

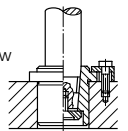


201.46. Demountable Pillars
with collar, push fit,
screw clamp retention
201.43. Disc and screw

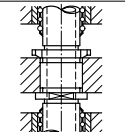


201.50. Demountable Pillar,
conical, central screw
retention

201.39. Liner Bush
201.53. Disc and Screw

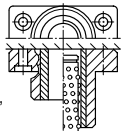


202.60. Stripper-Mounted
Pillars with Collar,
demountable, push fit,
ring nut retention

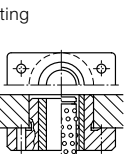


Guide bushes

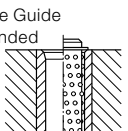
2031.34. Mounting
Flanges, rectangular;
sintered guide bush,
carbonitrided
2031.42. Guide bearing,
ball guide
206.71. Ball cage



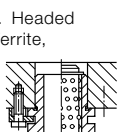
2031.38. Shallow Mounting
Flanges, rectangular;
sintered guide
bush, carbonitrided
2031.44. Guide
bearing, ball guide
206.71. Ball cage



2051.32. Sintered Ferrite Guide
Bush, carbonitrided, bonded
2061.44. Guide Bush
for Ball Bearing Guide
206.71. Ball cage



2081.31./32./33./34./35. Headed
guide bushes, sintered ferrite,
carbonitrided
2081.44./45./46./
47./49. Guide buses for
roller bearing
206.71. Ball cage



2091.31./32./34. Flanged Guide
Bushes, Sintered Ferrite,
carbonitrided
2091.44./45./46. Guide bushes for ball
bearing guide, push fit
206.71. Ball cage



Enquiry Order

Material: Aluminium 201.65. Steel 201.45.

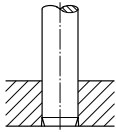
Company Phone

In the event of queries: Name Stamp/signature

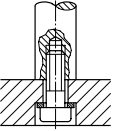
PILLAR FRAME ACCORDING TO CUSTOMER SPECIFICATIONS. PLEASE COPY THIS PAGE, COMPLETE, AND SEND TO FIBRO.

Guide pillars

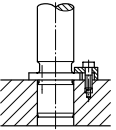
202.19. Guide Pillar
DIN 9825/ISO 9182-2



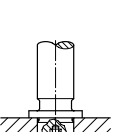
202.21. Guide Pillar
endwise bolt-on type



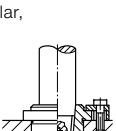
201.46. Demountable Pillars
with collar, push fit,
screw clamp retention



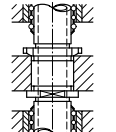
201.46. Demountable Pillars
with collar, push fit,
screw clamp retention
201.43. Disc and screw



201.50. Demountable Pillar,
conical, central screw
retention
201.39. Liner Bush
201.53. Disc and Screw

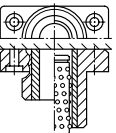


202.60. Stripper-Mounted
Pillars with Collar,
demountable, push fit,
ring nut retention

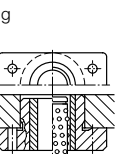


Guide bushes

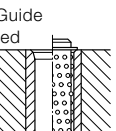
2031.34. Mounting
Flanges, rectangular;
sintered guide bush,
carbonitrided
2031.42. Guide bearing,
ball guide
206.71. Ball cage



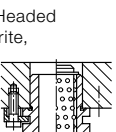
2031.38. Shallow Mounting
Flanges, rectangular;
sintered guide
bush, carbonitrided
2031.44. Guide
bearing, ball guide
206.71. Ball cage



2051.32. Sintered Ferrite Guide
Bush, carbonitrided, bonded
2061.44. Guide Bush
for Ball Bearing Guide
206.71. Ball cage



2081.31./32./33./34./35. Headed
guide bushes, sintered ferrite,
carbonitrided
2081.44./45./46./
47./49. Guide buses for
roller bearing
206.71. Ball cage



2091.31./32./34. Flanged Guide
Bushes, Sintered Ferrite,
carbonitrided
2091.44./45./46. Guide bushes for ball
bearing guide, push fit
206.71. Ball cage

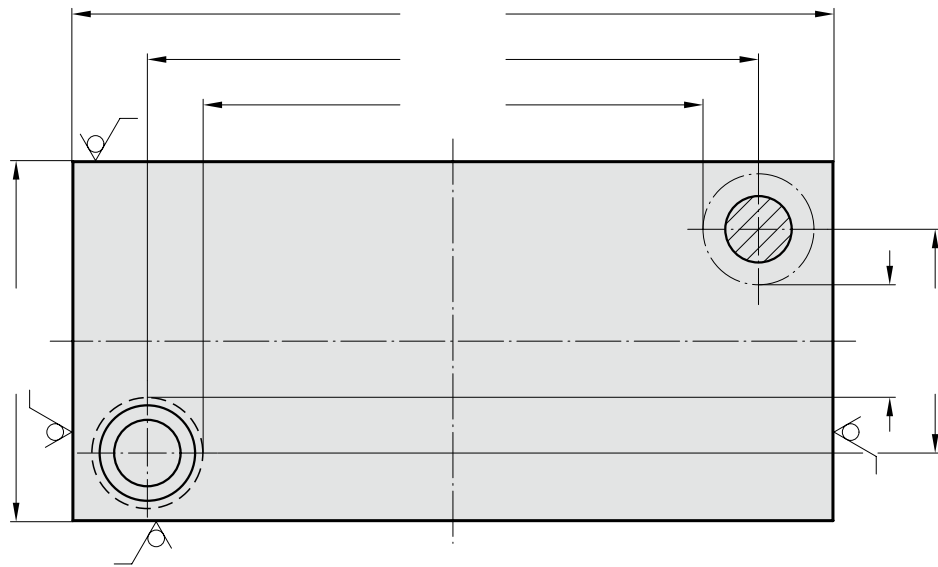
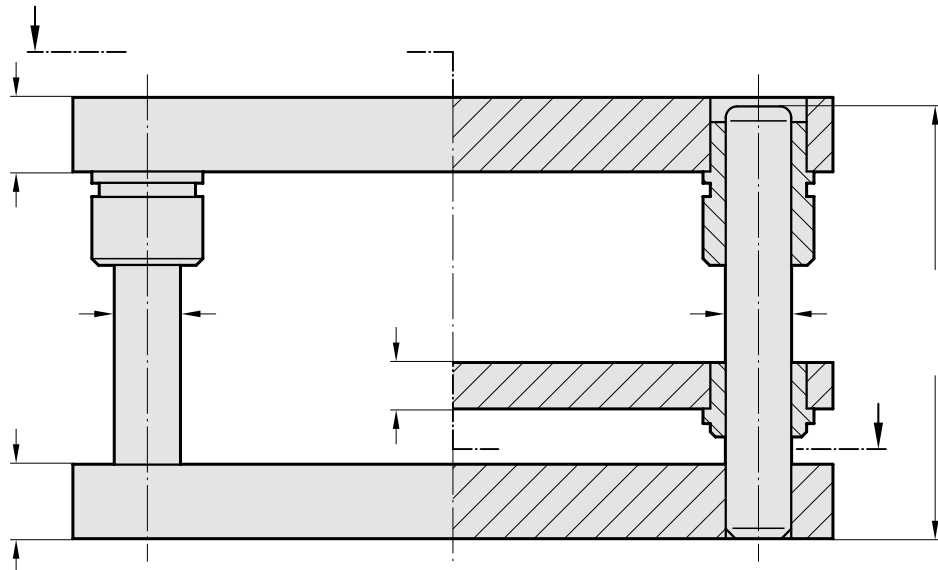


201.46. Pillar frame to customer specifications in steel

201.66. Pillar frame to customer specifications in aluminium

Without die riser

With die riser



Enquiry Order
Material: Aluminium 201.66. Steel 201.46.

Company _____ Phone _____

In the event of queries: Name _____ Stamp/signature _____

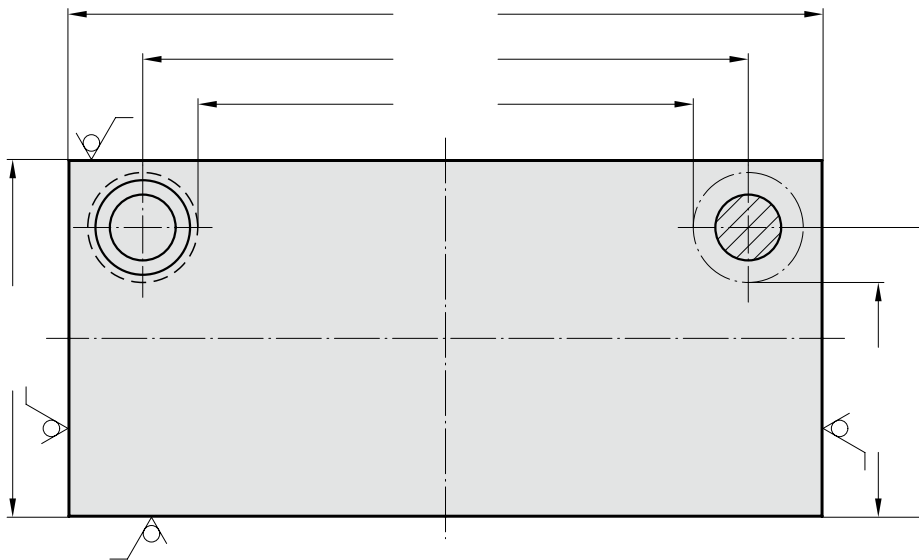
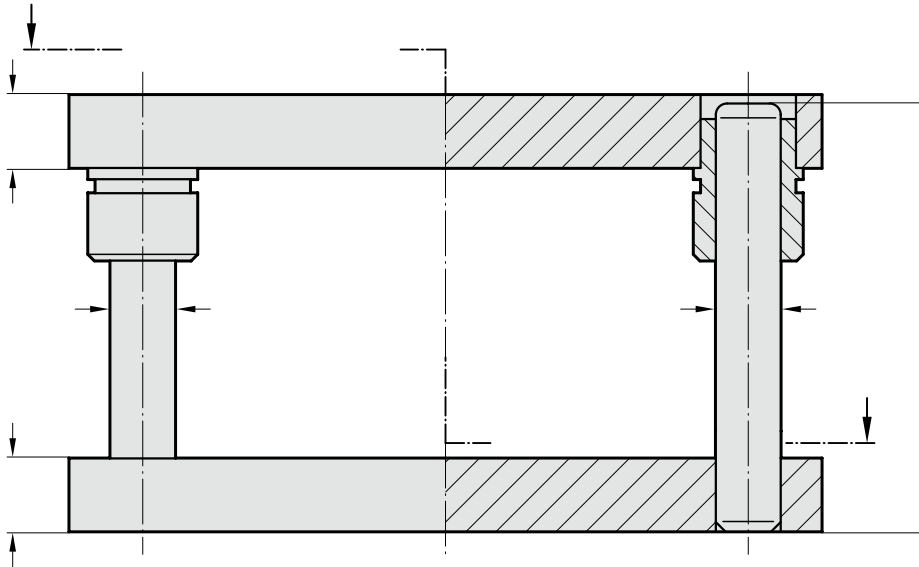
PILLAR FRAME ACCORDING TO CUSTOMER SPECIFICATIONS. PLEASE COPY THIS PAGE, COMPLETE, AND SEND TO FIBRO.

201.47. Pillar frame to customer specifications in steel

201.67. Pillar frame to customer specifications in aluminium

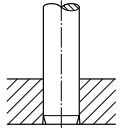
Without die riser

With die riser

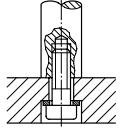


Guide pillars

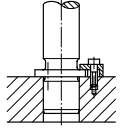
202.19. Guide Pillar
DIN 9825/ISO 9182-2



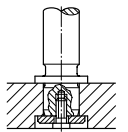
202.21. Guide Pillar
endwise bolt-on type



201.46. Demountable Pillars
with collar, push fit,
screw clamp retention

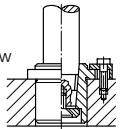


201.46. Demountable Pillars
with collar, push fit,
screw clamp retention
201.43. Disc and screw



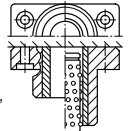
201.50. Demountable Pillar,
conical, central screw
retention

201.39. Liner Bush
201.53. Disc and Screw

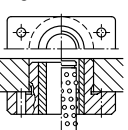


Guide bushes

2031.34. Mounting
Flanges, rectangular;
sintered guide bush,
carbonitrided
2031.42. Guide bearing,
ball guide
206.71. Ball cage

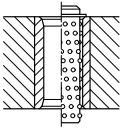


2031.38. Shallow Mounting
Flanges, rectangular;
sintered guide
bush, carbonitrided
2031.44. Guide
bearing, ball guide
206.71. Ball cage



2051.32. Sintered Ferrite Guide
Bush, carbonitrided, bonded

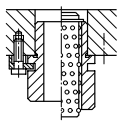
2061.44. Guide Bush
for Ball Bearing Guide
206.71. Ball cage



2081.31./32./33./34./35. Headed
guide bushes, sintered ferrite,
carbonitrided

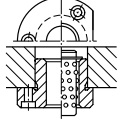
2081.44./45./46./
47./49.

Guide buses for
roller bearing
206.71. Ball cage



2091.31./32./34. Flanged Guide
Bushes, Sintered Ferrite,
carbonitrided

2091.44./45./46.
Guide bushes for ball
bearing guide, push fit
206.71. Ball cage



Enquiry Order

Material: Aluminium 201.67. Steel 201.47.

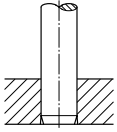
Company Phone

In the event of queries: Name Stamp/signature

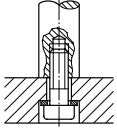
PILLAR FRAME ACCORDING TO CUSTOMER SPECIFICATIONS. PLEASE COPY THIS PAGE, COMPLETE, AND SEND TO FIBRO.

Guide pillars

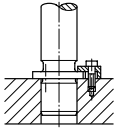
202.19. Guide Pillar
DIN 9825/ISO 9182-2



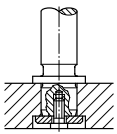
202.21. Guide Pillar
endwise bolt-on type



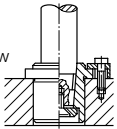
201.46. Demountable Pillars
with collar, push fit,
screw clamp retention



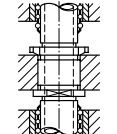
201.46. Demountable Pillars
with collar, push fit,
screw clamp retention
201.43. Disc and screw



201.50. Demountable Pillar,
conical, central screw
retention
201.39. Liner Bush
201.53. Disc and Screw

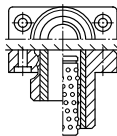


202.60. Stripper-Mounted
Pillars with Collar,
demountable, push fit,
ring nut retention

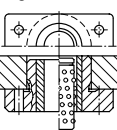


Guide bushes

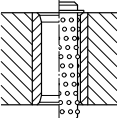
2031.34. Mounting
Flanges, rectangular;
sintered guide bush,
carbonitrided
2031.42. Guide bearing,
ball guide
206.71. Ball cage



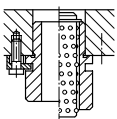
2031.38. Shallow Mounting
Flanges, rectangular;
sintered guide
bush, carbonitrided
2031.44. Guide
bearing, ball guide
206.71. Ball cage



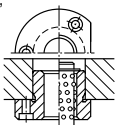
2051.32. Sintered Ferrite Guide
Bush, carbonitrided, bonded
2061.44. Guide Bush
for Ball Bearing Guide
206.71. Ball cage



2081.31./32./33./34./35. Headed
guide bushes, sintered ferrite,
carbonitrided
2081.44./45./46./
47./49. Guide buses for
roller bearing
206.71. Ball cage



2091.31./32./34. Flanged Guide
Bushes, Sintered Ferrite,
carbonitrided
2091.44./45./46. Guide bushes for ball
bearing guide, push fit
206.71. Ball cage

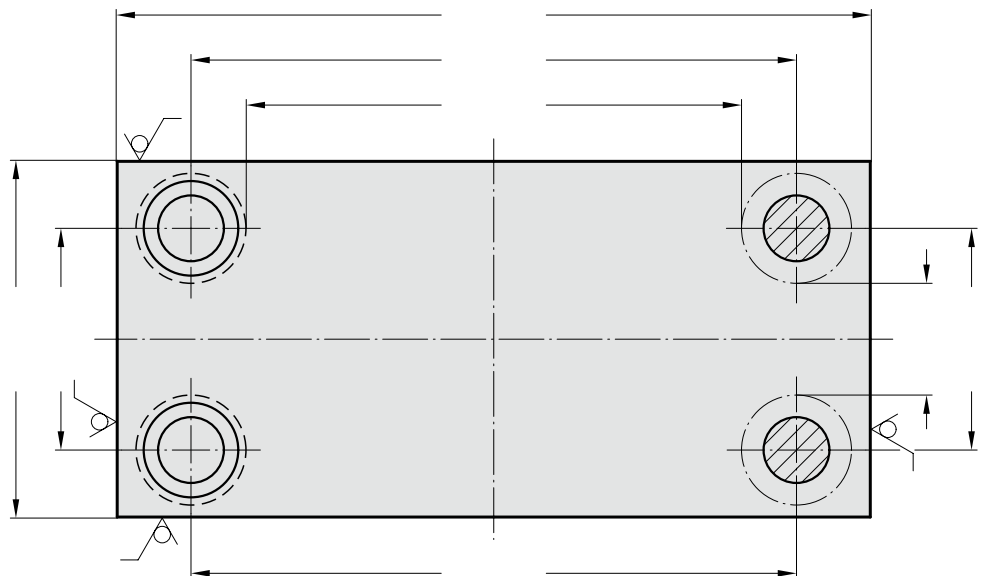
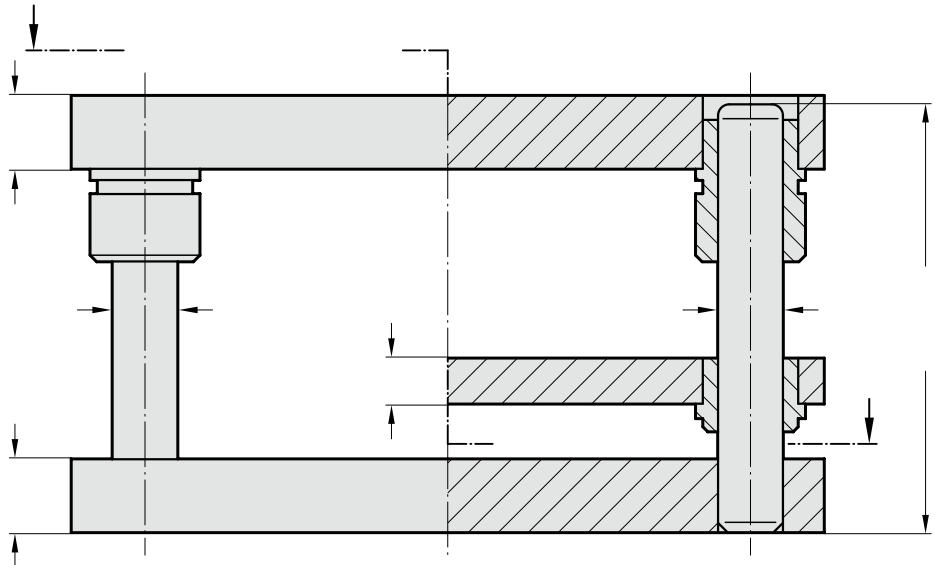


201.49. Pillar frame to customer specifications in steel

201.69. Pillar frame to customer specifications in aluminium

Without die riser

With die riser

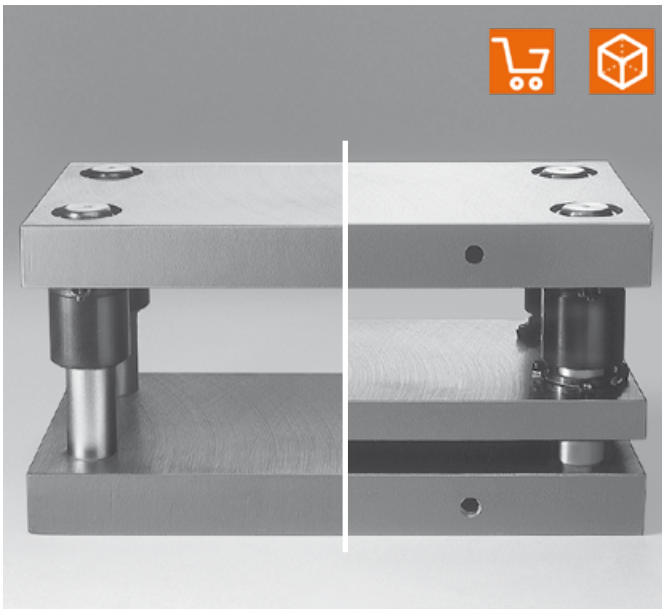


Enquiry Order
Material: Aluminium 201.69. Steel 201.49.

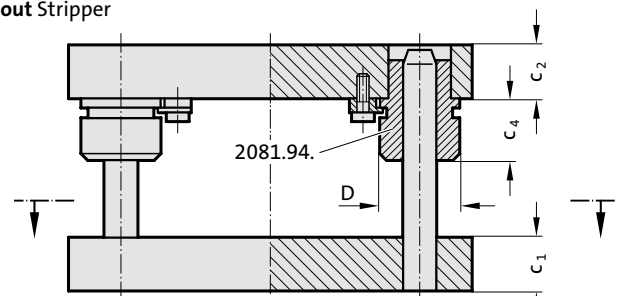
Company _____ Phone _____

In the event of queries: Name _____ Stamp/signature _____

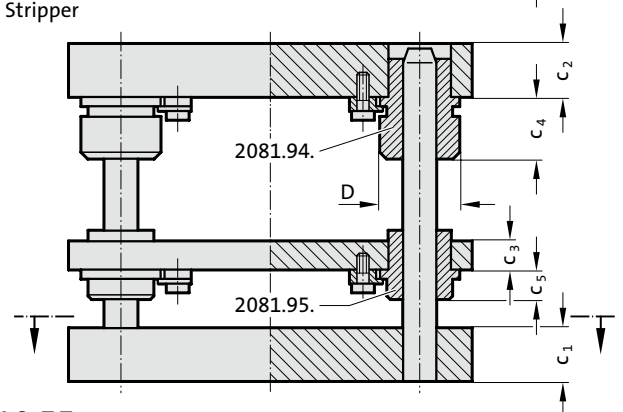
DIE SET WITHOUT / WITH STRIPPER ECO-LINE



without Stripper



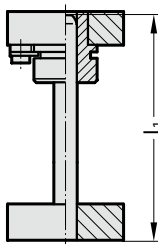
with Stripper



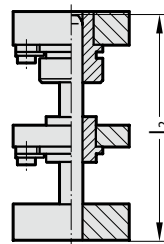
Executions:

With press-fitted guide pillars 202.29.

Headed Guide Bushes bronze plated **without** stripper



2010.5□.□□□□.□.894

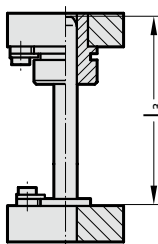


2010.5□.□□□□.□.895

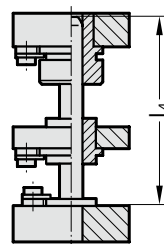
Headed Guide Bushes bronze plated **with** stripper

With demountable guide pillars 2021.29.***

Headed Guide Bushes bronze plated **without** stripper



2010.5□.□□□□.□.894.29



2010.5□.□□□□.□.895.29

Headed Guide Bushes bronze plated **with** stripper

Description:

FIBRO steel die sets 2010.5x are supplied with bronze-plated guide bushes. These are seated in push-fit bolster bores and retained there by screw clamps.

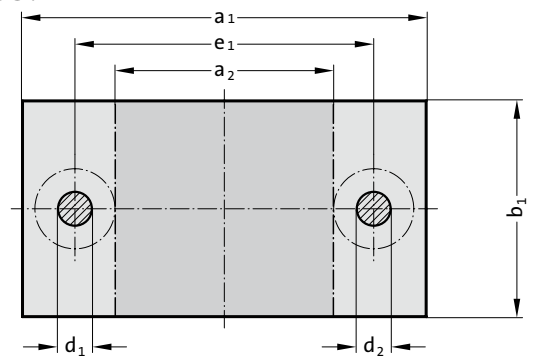
Execution:

External contours milled
Thickness surfaces ground

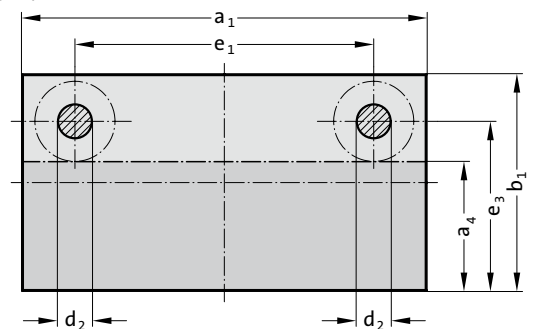
Note:

*** to be fixed only with screw clamps

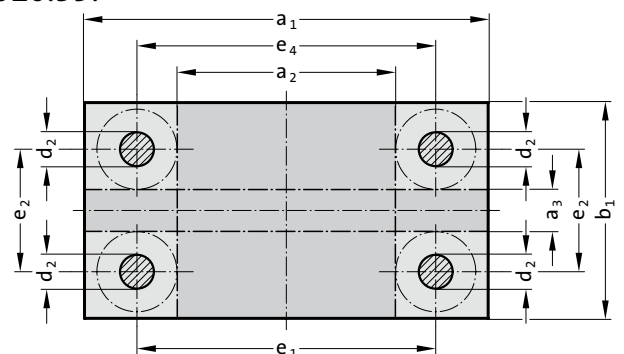
2010.55.



2010.57.



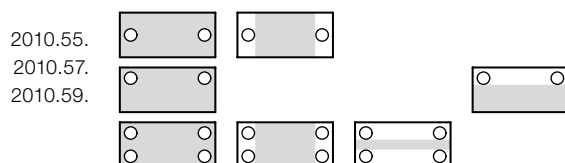
2010.59.



DIE SET WITHOUT / WITH STRIPPER ECO-LINE

2010.5□.

Type



Order No.	external dimensions		Work area(s)**		c ₁	c ₂	c ₃	c ₄	c ₅	d ₁ /d ₂	l ₁ /l ₂	l ₃ /l ₄	D	e ₁	e ₂	e ₃	e ₄				
	Type	Size	P*	Execution														Execution***	a ₁ x b ₁	a ₂ x b ₁	a ₁ x a ₃
2010.55.	2512.	1.			250 x 125	120 x 125	-	-	40	40	32	36	12	24/25	180/200	140/180	46	170	-	-	-
2010.55.	2512.	4.			250 x 125	120 x 125	-	-	32	32	32	36	12	24/25	180/200	140/180	46	170	-	-	-
2010.57.	2520.	1.	894		250 x 200	-	-	250 x 135	40	40	-	36	-	-/25	180/-	140/-	46	170	-	160	-
2010.57.	2520.	4.	894		250 x 200	-	-	250 x 135	32	32	-	36	-	-/25	180/-	140/-	46	170	-	160	-
2010.59.	2520.	4.			250 x 200	120 x 200	250 x 50	-	32	32	32	36	12	-/25	180/200	140/180	46	170	120	-	173
2010.59.	2525.	4.			250 x 250	120 x 250	250 x 100	-	32	32	32	36	12	-/25	180/200	140/180	46	170	170	-	173
2010.55.	3116.	1.			315 x 160	165 x 160	-	-	50	50	32	45	12	30/32	200/224	160/200	53	225	-	-	-
2010.55.	3116.	4.			315 x 160	165 x 160	-	-	40	40	32	45	12	30/32	200/224	160/200	53	225	-	-	-
2010.55.	3120.	4.			315 x 200	165 x 200	-	-	40	40	32	45	12	30/32	200/224	160/200	53	225	-	-	-
2010.57.	3120.	4.	894		315 x 200	-	-	315 x 125	40	40	-	45	12	-/32	200/-	160/-	53	225	-	155	-
2010.59.	3120.	4.			315 x 200	165 x 200	315 x 30	-	40	40	32	45	12	-/32	200/224	160/200	53	225	110	-	228
2010.57.	3125.	1.	894		315 x 250	-	-	315 x 175	50	50	-	45	-	-/32	200/-	160/-	53	225	-	205	-
2010.59.	3125.	1.			315 x 250	165 x 250	315 x 80	-	50	50	32	45	12	-/32	200/224	160/200	53	225	160	-	228
2010.59.	3125.	4.			315 x 250	165 x 250	315 x 80	-	40	40	32	45	12	-/32	200/224	160/200	53	225	160	-	228
2010.59.	3131.	1.			315 x 315	165 x 315	315 x 145	-	50	50	32	45	12	-/32	200/224	160/200	53	225	225	-	228
2010.55.	4020.	4.			400 x 200	250 x 200	-	-	40	40	32	45	12	30/32	200/224	160/200	53	310	-	-	-
2010.59.	4020.	4.			400 x 200	250 x 200	400 x 30	-	40	40	32	45	12	-/32	200/224	160/200	53	310	110	-	313
2010.55.	4025.	1.			400 x 250	250 x 250	-	-	50	50	32	45	12	30/32	200/224	160/200	53	310	-	-	-
2010.57.	4025.	1.	894		400 x 250	-	-	400 x 175	50	50	-	45	-	-/32	200/-	160/-	53	310	-	205	-
2010.59.	4025.	1.			400 x 250	250 x 250	400 x 80	-	50	50	32	45	12	-/32	200/224	160/200	53	310	160	-	313
2010.59.	4025.	4.			400 x 250	250 x 250	400 x 80	-	40	40	32	45	12	-/32	200/224	160/200	53	310	160	-	313
2010.57.	4031.	4.	894		400 x 315	-	-	400 x 240	40	40	-	45	-	-/32	200/-	160/-	53	310	-	270	-
2010.59.	4031.	1.			400 x 315	250 x 315	400 x 145	-	50	50	32	45	12	-/32	200/224	160/200	53	310	225	-	313
2010.59.	4040.	1.			400 x 400	250 x 400	400 x 230	-	50	50	32	45	12	-/32	200/224	160/200	53	310	310	-	313
2010.59.	4040.	4.			400 x 400	250 x 400	400 x 230	-	40	40	32	45	12	-/32	200/224	160/200	53	310	310	-	313
2010.55.	5025.	1.			500 x 250	325 x 250	-	-	50	50	32	45	15	38/40	200/224	160/200	63	400	-	-	-
2010.59.	5025.	1.			500 x 250	325 x 250	500 x 75	-	50	50	32	45	15	-/40	200/224	160/200	63	400	150	-	403
2010.59.	5025.	4.			500 x 250	325 x 250	500 x 75	-	40	40	32	45	15	-/40	200/224	160/200	63	400	150	-	403
2010.55.	5031.	1.			500 x 315	325 x 315	-	-	50	50	32	45	15	38/40	200/224	160/200	63	400	-	-	-
2010.59.	5031.	1.			500 x 315	325 x 315	500 x 140	-	50	50	32	45	15	-/40	200/224	160/200	63	400	215	-	403
2010.59.	5040.	1.			500 x 400	325 x 400	500 x 225	-	50	50	32	45	15	-/40	200/224	160/200	63	400	300	-	403
2010.59.	5050.	1.			500 x 500	325 x 500	500 x 325	-	50	50	32	45	15	-/40	200/224	160/200	63	400	400	-	403

*Thickness combinations

**Work area dimensions are not affected by the positions of the screw clamps that retain the bushes!

***With demountable guide pillars 2021.29.

Next day delivery!

Ordering Code (example):

Type of Die Set (external dimensions

a₁ x b₁ = 400 x 250; c₁ = c₂ = 50) = 2010.55.4025.1.

Execution with stripper = 895.

With demountable guide pillars 2021.29. = 29

Order No = 2010.55.4025.1.895.29

Ordering Code (example):

Type of Die Set (external dimensions

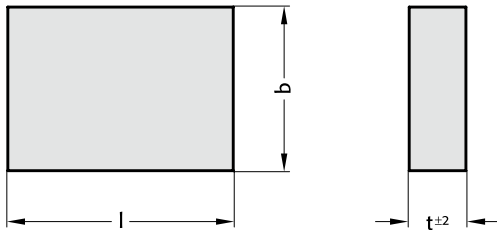
a₁ x b₁ = 400 x 250; c₁ = c₂ = 50) = 2010.55.4025.1.

Execution with stripper = 895

Order No = 2010.55.4025.1.895

STEEL PLATE ISO 6753-1

2900.



Execution:

External contours milled. Thickness surfaces ground

Note:

l or b ≤ 630 = +0,2 / +0,4

l or b > 630 = +0,2 / +0,6

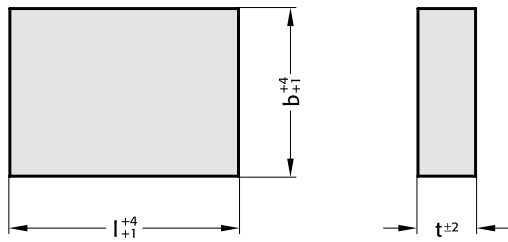
Plates from 500 × 500 mm on are manufactured with lifting thread.

2900. Steel plate ISO 6753-1

Order No	Size l x w x d	Order No	Size l x w x d	Order No	Size l x w x d
2900.1608.25	160 x 80 x 25	2900.3120.40	315 x 200 x 40	2900.6340.32	630 x 400 x 32
2900.1608.32	160 x 80 x 32	2900.3120.50	315 x 200 x 50	2900.6340.40	630 x 400 x 40
2900.1610.25	160 x 100 x 25	2900.3125.32	315 x 250 x 32	2900.6340.50	630 x 400 x 50
2900.1610.32	160 x 100 x 32	2900.3125.40	315 x 250 x 40	2900.6340.63	630 x 400 x 63
2900.1612.25	160 x 125 x 25	2900.3125.50	315 x 250 x 50	2900.6350.32	630 x 500 x 32
2900.1612.32	160 x 125 x 32	2900.3131.32	315 x 315 x 32	2900.6350.40	630 x 500 x 40
2900.1616.25	160 x 160 x 25	2900.3131.40	315 x 315 x 40	2900.6350.50	630 x 500 x 50
2900.1616.32	160 x 160 x 32	2900.3131.50	315 x 315 x 50	2900.6350.63	630 x 500 x 63
2900.2010.25	200 x 100 x 25	2900.4020.32	400 x 200 x 32	2900.6363.32	630 x 630 x 32
2900.2010.32	200 x 100 x 32	2900.4020.40	400 x 200 x 40	2900.6363.40	630 x 630 x 40
2900.2010.40	200 x 100 x 40	2900.4020.50	400 x 200 x 50	2900.6363.50	630 x 630 x 50
2900.2012.25	200 x 125 x 25	2900.4025.32	400 x 250 x 32	2900.6363.63	630 x 630 x 63
2900.2012.32	200 x 125 x 32	2900.4025.40	400 x 250 x 40	2900.7140.32	710 x 400 x 32
2900.2012.40	200 x 125 x 40	2900.4025.50	400 x 250 x 50	2900.7140.40	710 x 400 x 40
2900.2016.25	200 x 160 x 25	2900.4031.32	400 x 315 x 32	2900.7140.50	710 x 400 x 50
2900.2016.32	200 x 160 x 32	2900.4031.40	400 x 315 x 40	2900.7140.63	710 x 400 x 63
2900.2016.40	200 x 160 x 40	2900.4031.50	400 x 315 x 50	2900.7150.32	710 x 500 x 32
2900.2020.25	200 x 200 x 25	2900.4040.32	400 x 400 x 32	2900.7150.40	710 x 500 x 40
2900.2020.32	200 x 200 x 32	2900.4040.40	400 x 400 x 40	2900.7150.50	710 x 500 x 50
2900.2020.40	200 x 200 x 40	2900.4040.50	400 x 400 x 50	2900.7150.63	710 x 500 x 63
2900.2512.25	250 x 125 x 25	2900.5025.32	500 x 250 x 32	2900.7163.32	710 x 630 x 32
2900.2512.32	250 x 125 x 32	2900.5025.40	500 x 250 x 40	2900.7163.40	710 x 630 x 40
2900.2512.40	250 x 125 x 40	2900.5025.50	500 x 250 x 50	2900.7163.50	710 x 630 x 50
2900.2516.25	250 x 160 x 25	2900.5031.32	500 x 315 x 32	2900.7163.63	710 x 630 x 63
2900.2516.32	250 x 160 x 32	2900.5031.40	500 x 315 x 40	2900.8040.32	800 x 400 x 32
2900.2516.40	250 x 160 x 40	2900.5031.50	500 x 315 x 50	2900.8040.40	800 x 400 x 40
2900.2520.25	250 x 200 x 25	2900.5040.32	500 x 400 x 32	2900.8040.50	800 x 400 x 50
2900.2520.32	250 x 200 x 32	2900.5040.40	500 x 400 x 40	2900.8040.63	800 x 400 x 63
2900.2520.40	250 x 200 x 40	2900.5040.50	500 x 400 x 50	2900.8050.32	800 x 500 x 32
2900.2525.25	250 x 250 x 25	2900.5050.32	500 x 500 x 32	2900.8050.40	800 x 500 x 40
2900.2525.32	250 x 250 x 32	2900.5050.40	500 x 500 x 40	2900.8050.50	800 x 500 x 50
2900.2525.40	250 x 250 x 40	2900.5050.50	500 x 500 x 50	2900.8050.63	800 x 500 x 63
2900.3116.32	315 x 160 x 32	2900.6331.32	630 x 315 x 32	2900.8063.32	800 x 630 x 32
2900.3116.40	315 x 160 x 40	2900.6331.40	630 x 315 x 40	2900.8063.40	800 x 630 x 40
2900.3116.50	315 x 160 x 50	2900.6331.50	630 x 315 x 50	2900.8063.50	800 x 630 x 50
2900.3120.32	315 x 200 x 32	2900.6331.63	630 x 315 x 63	2900.8063.63	800 x 630 x 63

ALUMINIUM PLATE ~ISO 6753-1

2910..0



Execution:

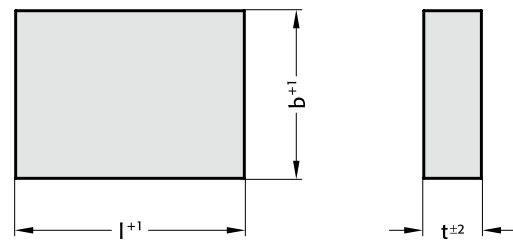
2910.□□□□.□□.0

External contours sawed. Thickness surfaces ground.

Note:

Plates from 500 x 500 mm on are manufactured with lifting thread.

2910..2



Execution:

2910.□□□□.□□.2

Two external contours milled. Thickness surfaces ground.

Note:

Plates from 500 x 500 mm on are manufactured with lifting thread.

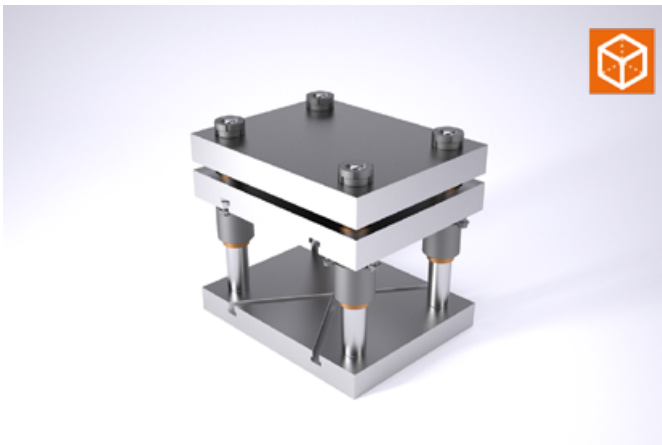
2910. Aluminium plate ~ISO 6753-1

Order No	Size l x w x d	Order No	Size l x w x d	Order No	Size l x w x d
2910.1608.25.□	160 x 80 x 25	2910.3120.40.□	315 x 200 x 40	2910.6340.32.□	630 x 400 x 32
2910.1608.32.□	160 x 80 x 32	2910.3120.50.□	315 x 200 x 50	2910.6340.40.□	630 x 400 x 40
2910.1610.25.□	160 x 100 x 25	2910.3125.32.□	315 x 250 x 32	2910.6340.50.□	630 x 400 x 50
2910.1610.32.□	160 x 100 x 32	2910.3125.40.□	315 x 250 x 40	2910.6340.63.□	630 x 400 x 63
2910.1612.25.□	160 x 125 x 25	2910.3125.50.□	315 x 250 x 50	2910.6350.32.□	630 x 500 x 32
2910.1612.32.□	160 x 125 x 32	2910.3131.32.□	315 x 315 x 32	2910.6350.40.□	630 x 500 x 40
2910.1616.25.□	160 x 160 x 25	2910.3131.40.□	315 x 315 x 40	2910.6350.50.□	630 x 500 x 50
2910.1616.32.□	160 x 160 x 32	2910.3131.50.□	315 x 315 x 50	2910.6350.63.□	630 x 500 x 63
2910.2010.25.□	200 x 100 x 25	2910.4020.32.□	400 x 200 x 32	2910.6363.32.□	630 x 630 x 32
2910.2010.32.□	200 x 100 x 32	2910.4020.40.□	400 x 200 x 40	2910.6363.40.□	630 x 630 x 40
2910.2010.40.□	200 x 100 x 40	2910.4020.50.□	400 x 200 x 50	2910.6363.50.□	630 x 630 x 50
2910.2012.25.□	200 x 125 x 25	2910.4025.32.□	400 x 250 x 32	2910.6363.63.□	630 x 630 x 63
2910.2012.32.□	200 x 125 x 32	2910.4025.40.□	400 x 250 x 40	2910.7140.32.□	710 x 400 x 32
2910.2012.40.□	200 x 125 x 40	2910.4025.50.□	400 x 250 x 50	2910.7140.40.□	710 x 400 x 40
2910.2016.25.□	200 x 160 x 25	2910.4031.32.□	400 x 315 x 32	2910.7140.50.□	710 x 400 x 50
2910.2016.32.□	200 x 160 x 32	2910.4031.40.□	400 x 315 x 40	2910.7140.63.□	710 x 400 x 63
2910.2016.40.□	200 x 160 x 40	2910.4031.50.□	400 x 315 x 50	2910.7150.32.□	710 x 500 x 32
2910.2020.25.□	200 x 200 x 25	2910.4040.32.□	400 x 400 x 32	2910.7150.40.□	710 x 500 x 40
2910.2020.32.□	200 x 200 x 32	2910.4040.40.□	400 x 400 x 40	2910.7150.50.□	710 x 500 x 50
2910.2020.40.□	200 x 200 x 40	2910.4040.50.□	400 x 400 x 50	2910.7150.63.□	710 x 500 x 63
2910.2512.25.□	250 x 125 x 25	2910.5025.32.□	500 x 250 x 32	2910.7163.32.□	710 x 630 x 32
2910.2512.32.□	250 x 125 x 32	2910.5025.40.□	500 x 250 x 40	2910.7163.40.□	710 x 630 x 40
2910.2512.40.□	250 x 125 x 40	2910.5025.50.□	500 x 250 x 50	2910.7163.50.□	710 x 630 x 50
2910.2516.25.□	250 x 160 x 25	2910.5031.32.□	500 x 315 x 32	2910.7163.63.□	710 x 630 x 63
2910.2516.32.□	250 x 160 x 32	2910.5031.40.□	500 x 315 x 40	2910.8040.32.□	800 x 400 x 32
2910.2516.40.□	250 x 160 x 40	2910.5031.50.□	500 x 315 x 50	2910.8040.40.□	800 x 400 x 40
2910.2520.25.□	250 x 200 x 25	2910.5040.32.□	500 x 400 x 32	2910.8040.50.□	800 x 400 x 50
2910.2520.32.□	250 x 200 x 32	2910.5040.40.□	500 x 400 x 40	2910.8040.63.□	800 x 400 x 63
2910.2520.40.□	250 x 200 x 40	2910.5040.50.□	500 x 400 x 50	2910.8050.32.□	800 x 500 x 32
2910.2525.25.□	250 x 250 x 25	2910.5050.32.□	500 x 500 x 32	2910.8050.40.□	800 x 500 x 40
2910.2525.32.□	250 x 250 x 32	2910.5050.40.□	500 x 500 x 40	2910.8050.50.□	800 x 500 x 50
2910.2525.40.□	250 x 250 x 40	2910.5050.50.□	500 x 500 x 50	2910.8050.63.□	800 x 500 x 63
2910.3116.32.□	315 x 160 x 32	2910.6331.32.□	630 x 315 x 32	2910.8063.32.□	800 x 630 x 32
2910.3116.40.□	315 x 160 x 40	2910.6331.40.□	630 x 315 x 40	2910.8063.40.□	800 x 630 x 40
2910.3116.50.□	315 x 160 x 50	2910.6331.50.□	630 x 315 x 50	2910.8063.50.□	800 x 630 x 50
2910.3120.32.□	315 x 200 x 32	2910.6331.63.□	630 x 315 x 63	2910.8063.63.□	800 x 630 x 63

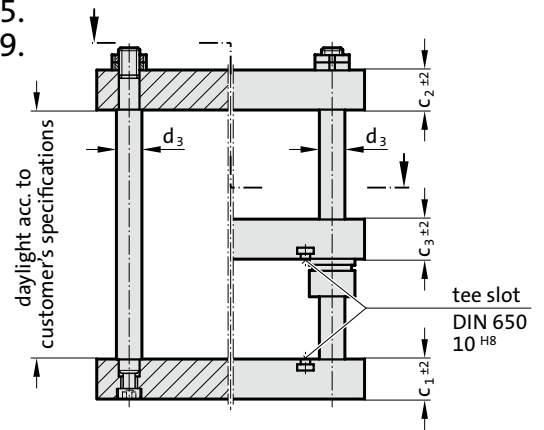
Ordering Code (example):

Aluminium plate ~ISO 6753-1	=	2910.
Length L	400 mm =	40
Width B	400 mm =	40.
Thickness T	40 mm =	40.
Execution FORM	sawn =	0
Order No	=	2910. 40 40. 40. 0

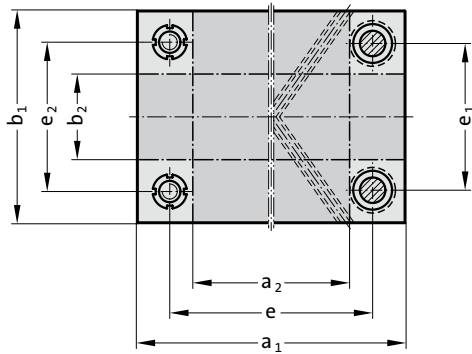
DIE SET PRESS UNIT



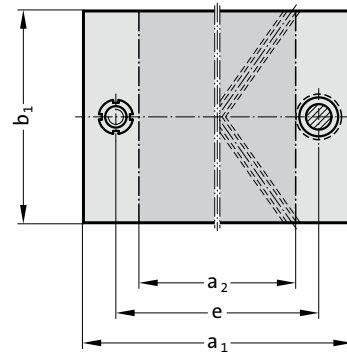
2011.45.
2011.49.



2011.49.



2011.45.

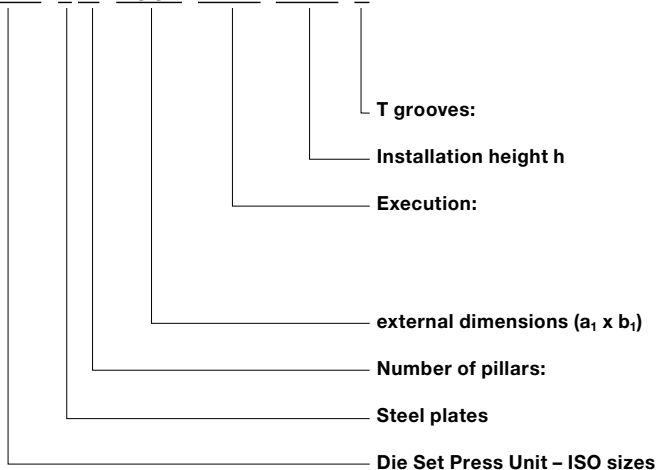


2011.45. / 2011.49. Die set press unit

Order No	Work area		max. press thrust kN	a ₁	b ₁	c ₁	c ₂	c ₃	d ₃	e	e ₁	e ₂
	a ₁ x b ₂	a ₁ x b ₂										
2011.4□.2020.□□□□.□□□□.□	84 x 200	200 x 62	20	200	200	32	32	32	25	132	132	129
2011.4□.2520.□□□□.□□□□.□	134 x 200	250 x 62	20	250	200	32	32	32	25	182	132	129
2011.4□.2525.□□□□.□□□□.□	118 x 250	250 x 97	40	250	250	40	40	40	32	174	174	171
2011.4□.3125.□□□□.□□□□.□	185 x 250	315 x 97	40	315	250	40	40	40	32	239	174	171
2011.4□.3131.□□□□.□□□□.□	183 x 315	315 x 162	40	315	315	40	40	40	32	239	239	236
2011.4□.4031.□□□□.□□□□.□	268 x 315	400 x 162	80	400	315	50	50	50	32	324	239	236
2011.4□.4040.□□□□.□□□□.□	268 x 400	400 x 247	80	400	400	50	50	50	32	324	324	321

Ordering Code (principle):

2011.4□.4031.□□□□.□□□□.1



Coupling spigots and -holders between cylinder and tool: see next page but one.

.0 = without

.1 = in top bolster and intermediate plate

000. = without guide bolster

001. = without guide bolster – tension rod not hardened

831. = Guide bolster with plain bearing

862. = Guide bolster with ball bearing guide

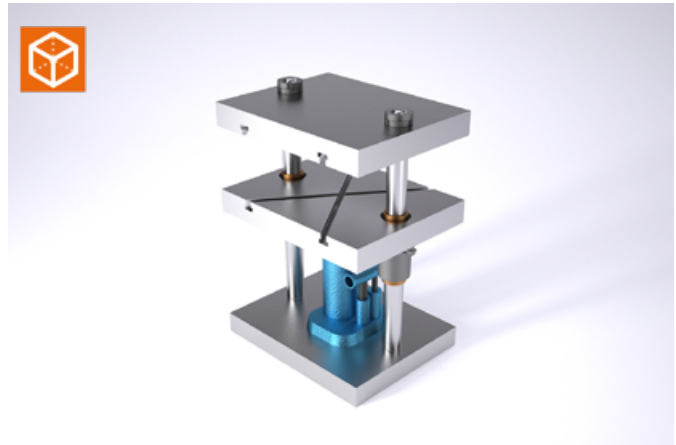
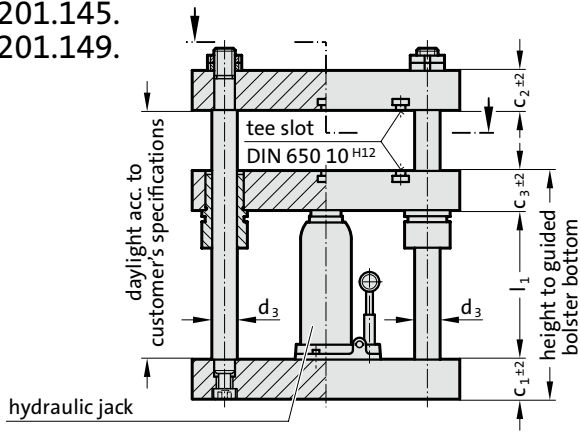
40: a₁ = 400 mm; 31: b₁ = 315 mm

5. = two guide pillars

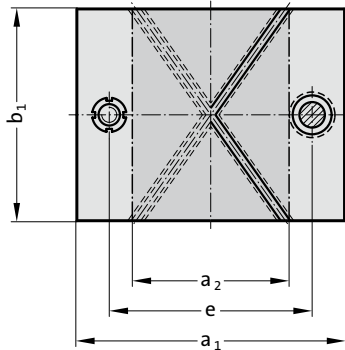
9. = four guide pillars

DIE SET PRESS UNIT, MANUAL ACTUATION

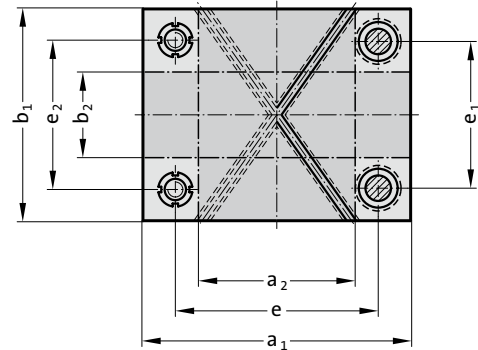
201.145.
201.149.



201.145.



201.149.

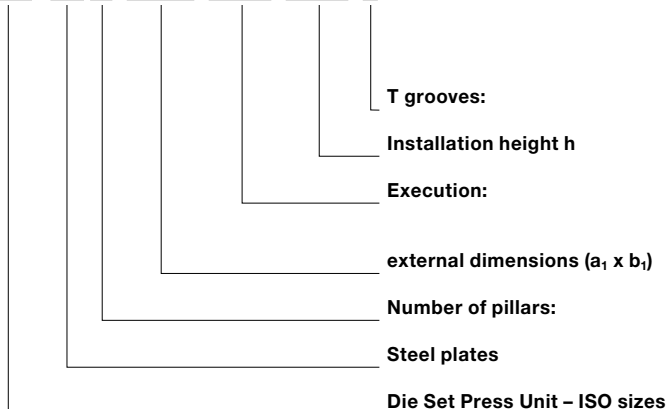


201.145. / 201.149. Die set press unit, manual actuation

Order No	Work area		max. press thrust kN													Stroke _{max.}
	a ₁ x b ₂	a ₁ x b ₂		a ₁	b ₁	C ₁	C ₂	C ₃	d ₃	e	e ₁	e ₂	I ₁			
201.14□.2020.□□□.□□□.□	84 x 200	200 x 62	20	200	200	32	32	32	25	132	132	129	200	130		
201.14□.2520.□□□.□□□.□	134 x 200	250 x 62	20	250	200	32	32	32	25	182	132	129	200	130		
201.14□.2525.□□□.□□□.□	118 x 250	250 x 97	40	250	250	40	40	40	32	174	174	171	200	130		
201.14□.3125.□□□.□□□.□	183 x 250	315 x 97	40	315	250	40	40	40	32	239	174	171	200	130		
201.14□.3131.□□□.□□□.□	283 x 315	315 x 162	40	315	315	40	40	40	32	239	239	236	200	130		
201.14□.4031.□□□.□□□.□	268 x 315	400 x 162	80	400	315	50	50	50	32	324	239	236	245	160		
201.14□.4040.□□□.□□□.□	268 x 400	400 x 247	80	400	400	50	50	50	32	324	324	321	245	160		

Ordering Code (principle):

201.14□.4031.□□□.□□□.1



Execution: Headed guide bushes, hydraulic jack.

.0 = without
.1 = in top bolster and intermediate plate

831. = Guide bolster with plain bearing
862. = Guide bolster with ball bearing guide

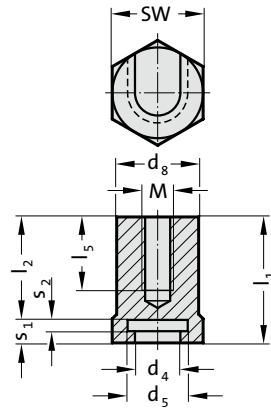
40: a₁ = 400 mm; 31: b₁ = 315 mm

5. = two guide pillars
9. = four guide pillars

DIE SET PRESS UNIT-ACCESSORIES: SPIGOT HOLDER COUPLING JOURNAL



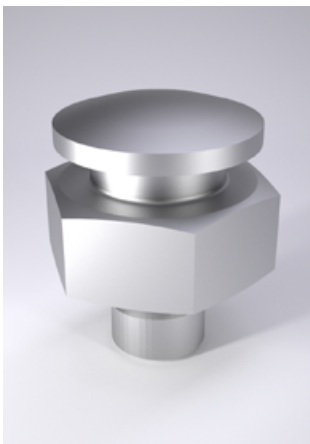
212.16.1.



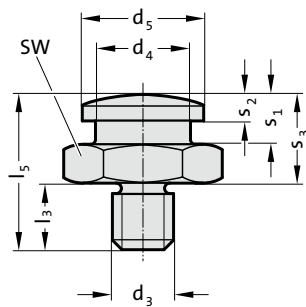
212.16.1 Spigot holder

Order No	d ₄	d ₅	d ₈	SW	l ₁	l ₃	l ₅ *	M*	s ₁	s ₂
212.16.1.026	26	33	45	50	70	40			12.6	7
212.16.1.033	33	49	60	65	86	50			18.6	10

* upon customer's specification



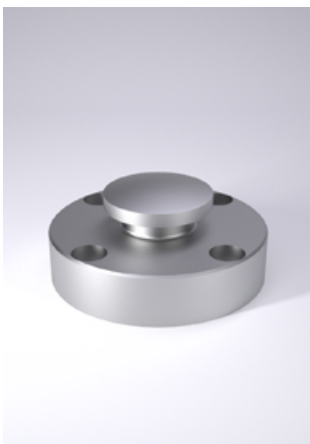
212.11.



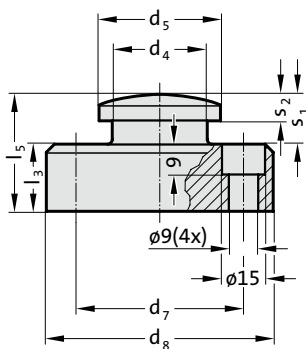
212.11. Coupling spigot with thread

Order No	d ₃	d ₄	d ₅	l ₃	l ₅	SW*
212.11.016	M16x1,5	25	32	18	41	36
212.11.020	M20x1,5	32	48	23	64	50
212.11.024	M24x1,5	32	48	23	64	50
212.11.030	M30x2	32	48	23	66	60

* SW = Width across flats



212.15.

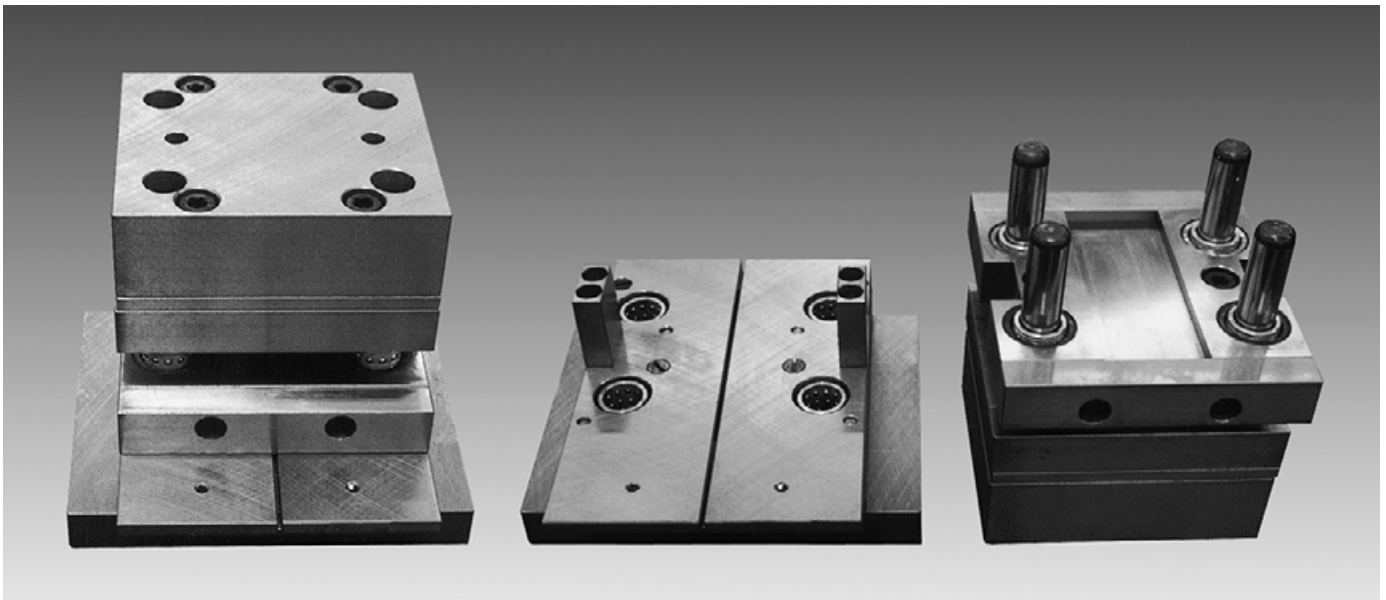
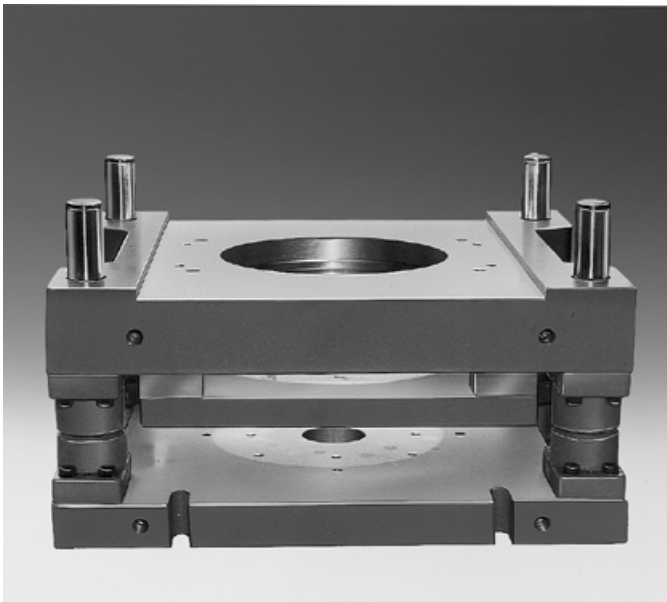
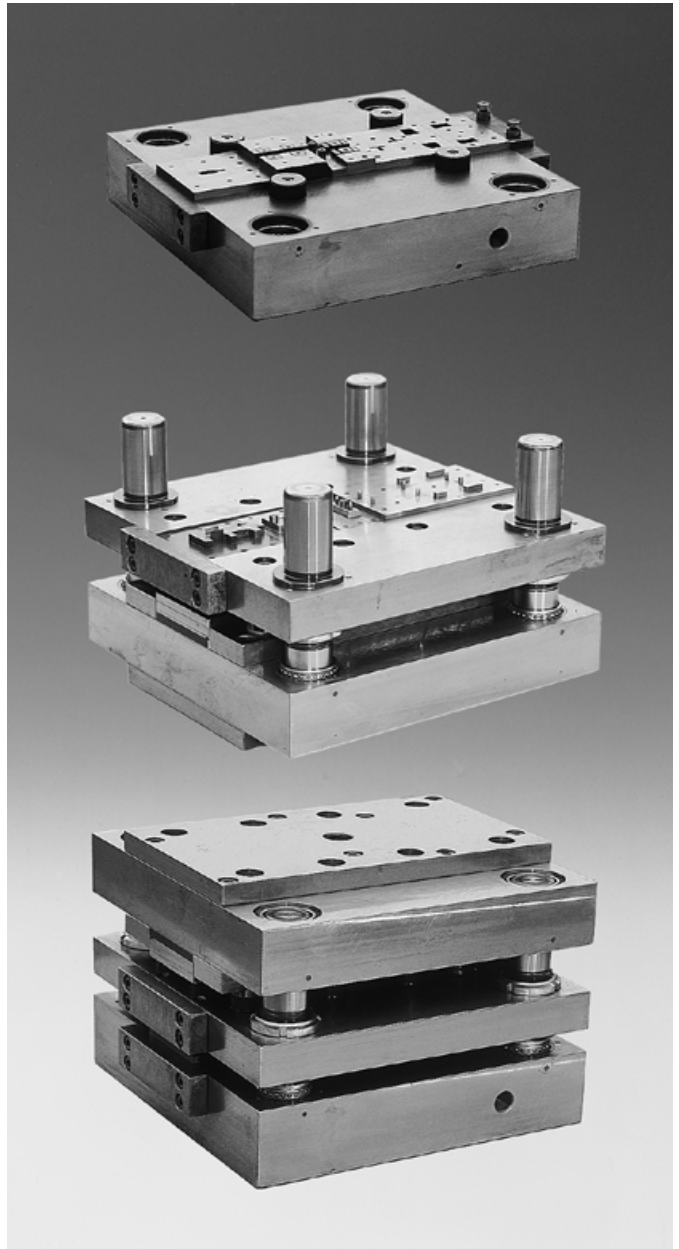
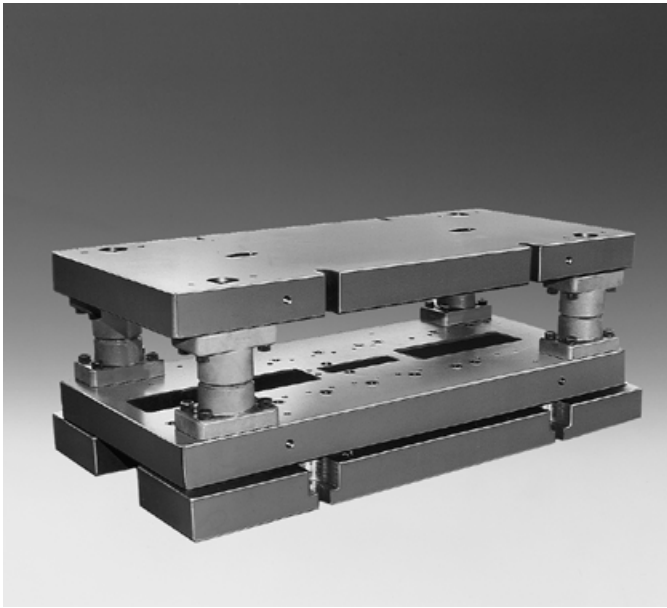


212.15. Coupling spigot with flange

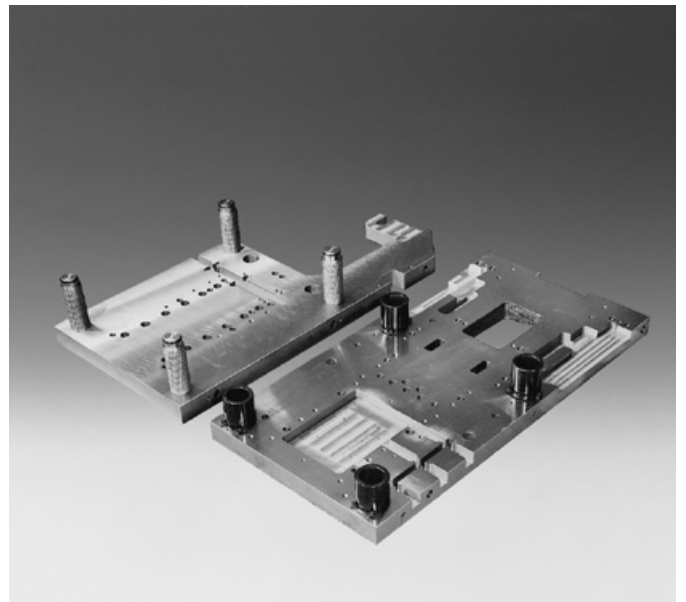
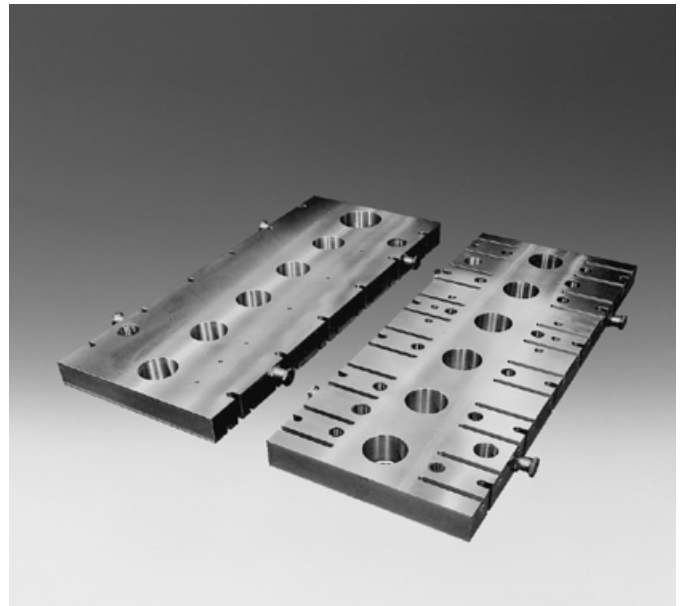
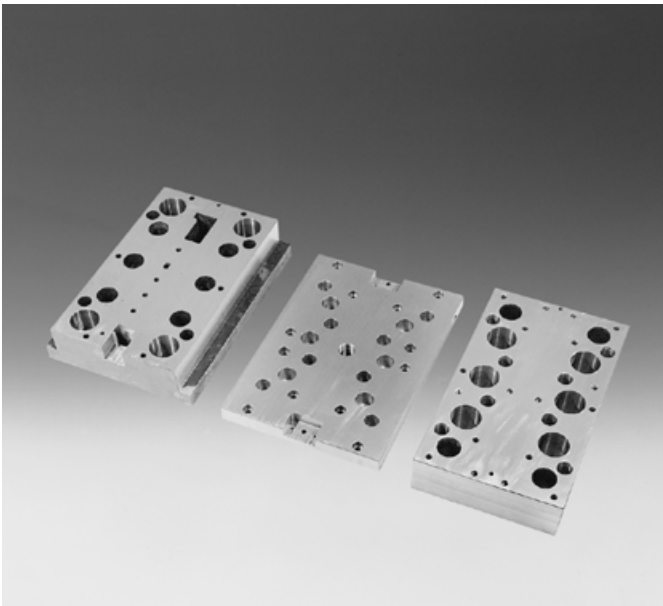
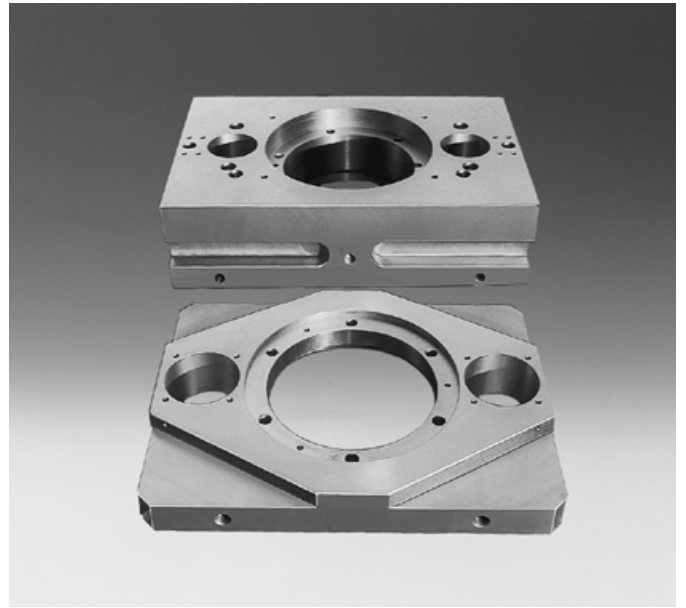
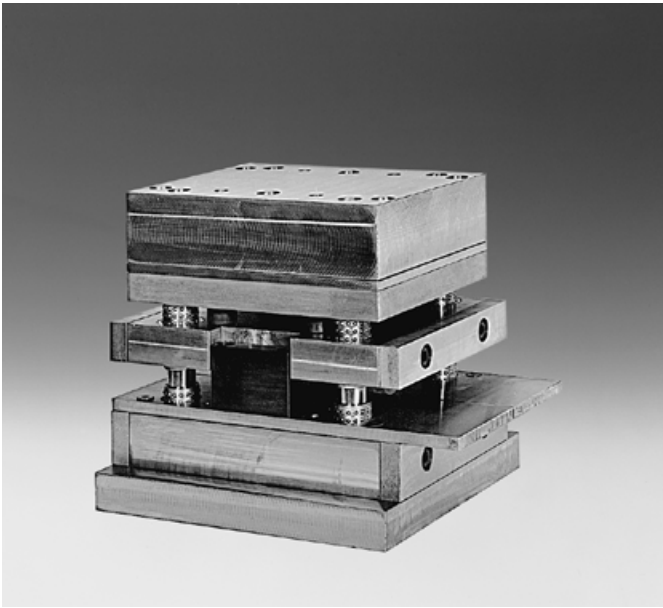
Order No	d ₄	d ₅	d ₈	d ₇	l ₃	l ₅
212.15.063	25	32	63	46	18	31
212.15.080	32	48	80	63	18	37
212.15.097	32	48	97	80	23	42
212.15.122	32	48	122	105	23	42



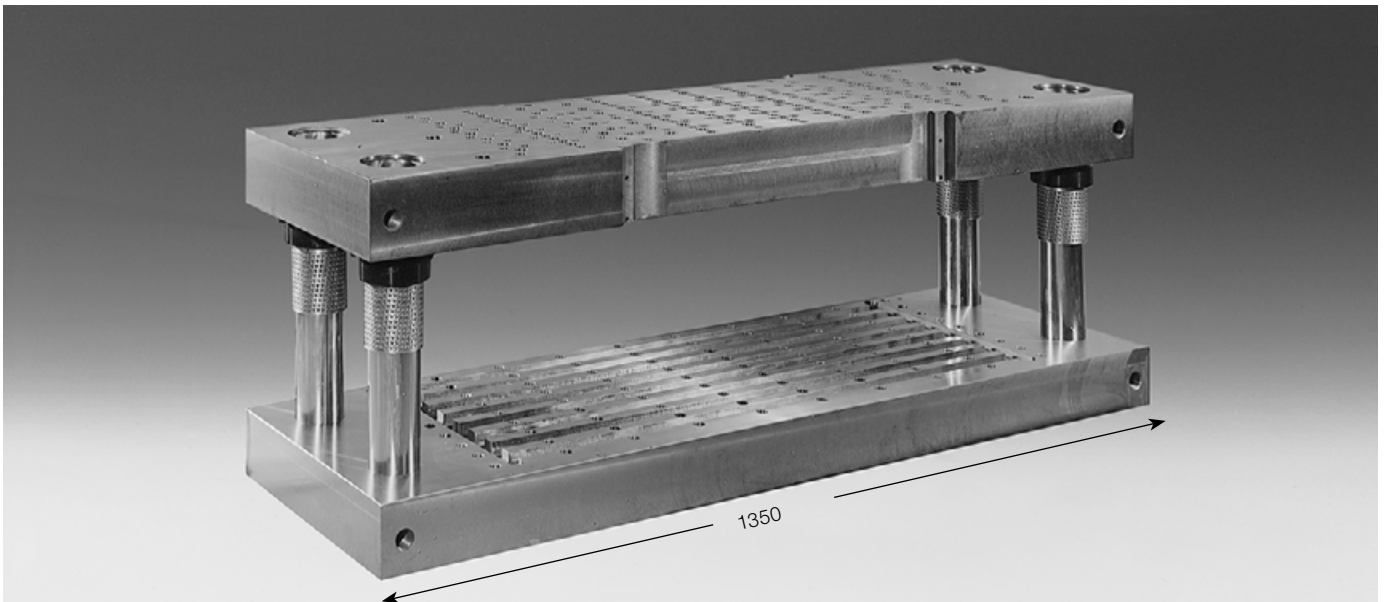
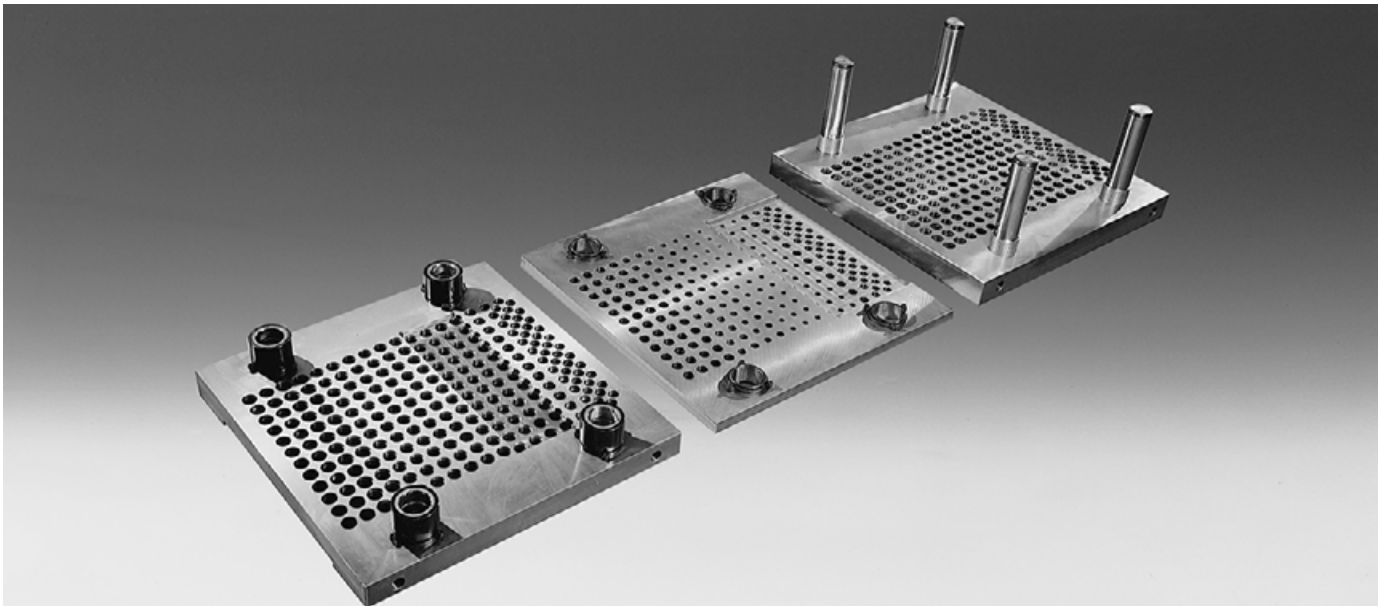
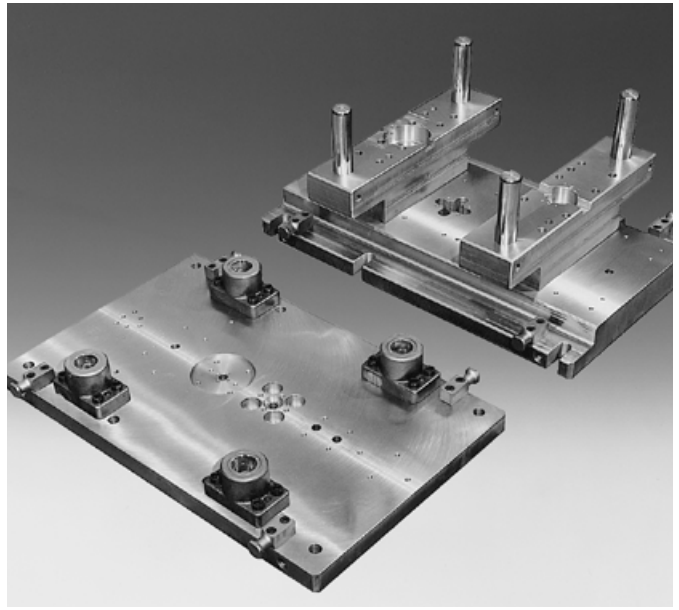
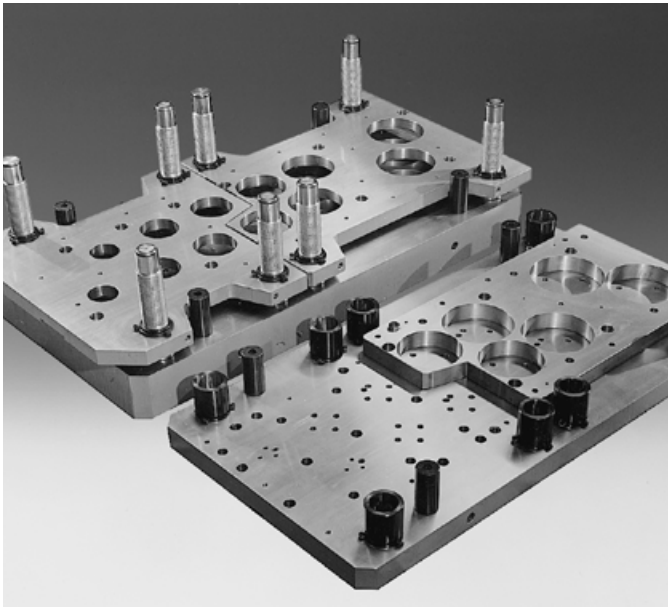
SPECIAL DIE SET (ALL-STEEL) TO CUSTOMERS' SPECIFICATION



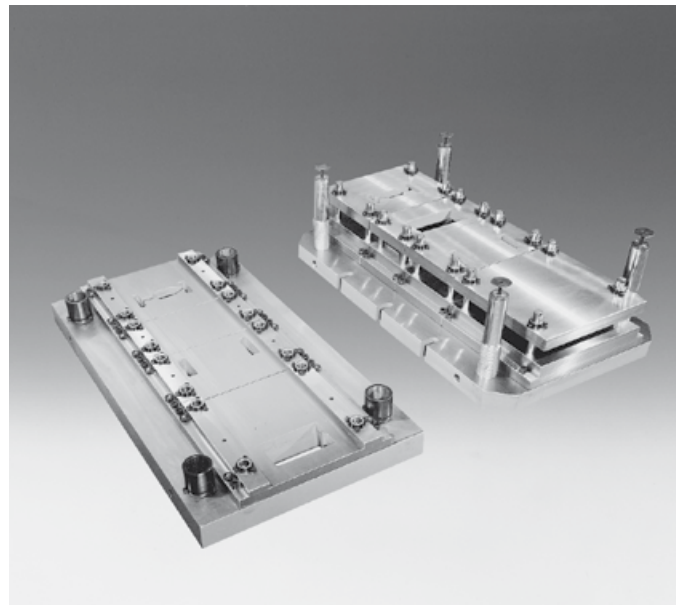
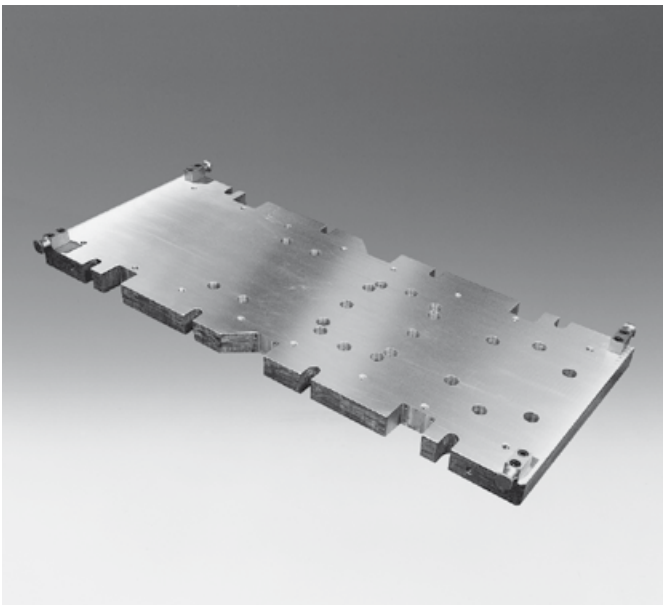
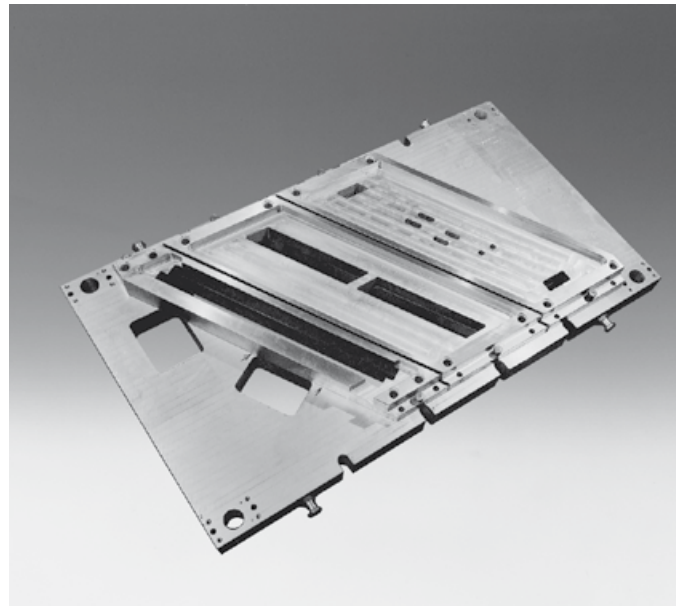
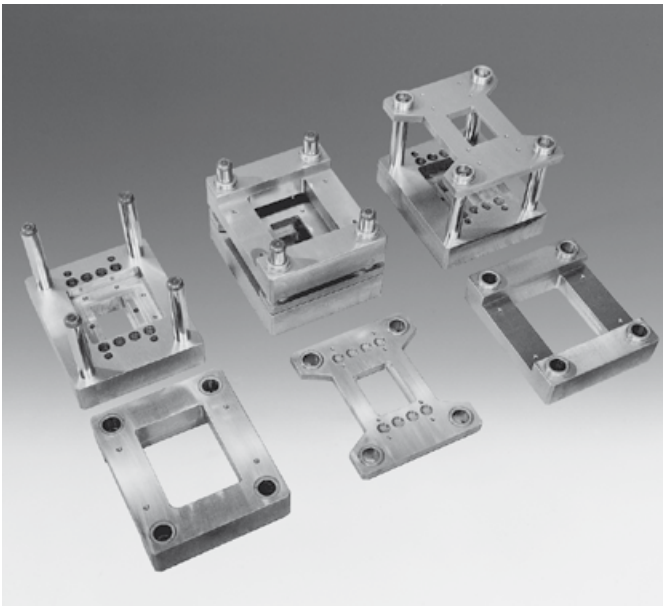
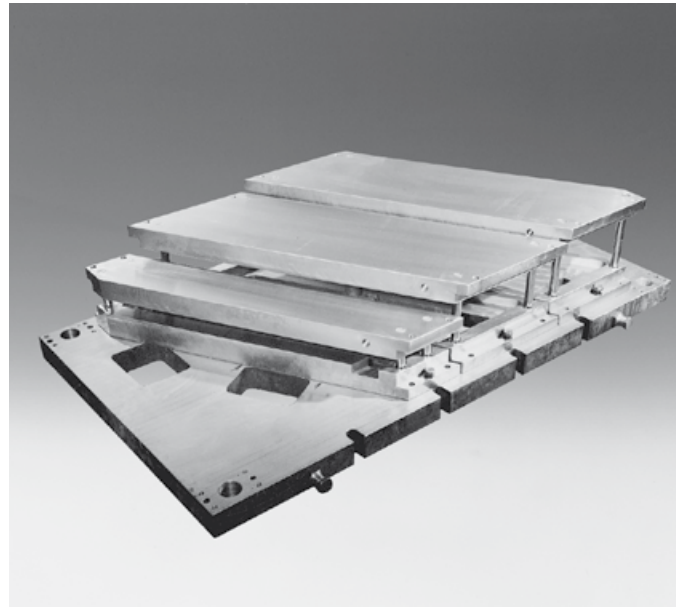
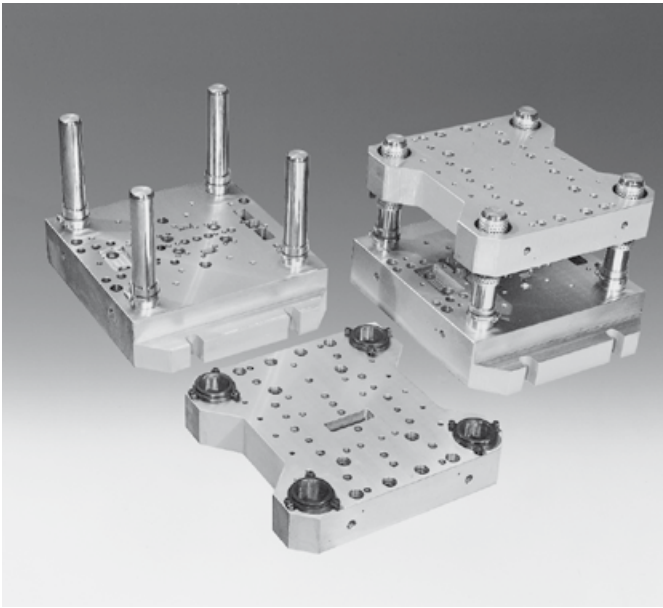
SPECIAL DIE SET (ALL-STEEL) TO CUSTOMERS' SPECIFICATION



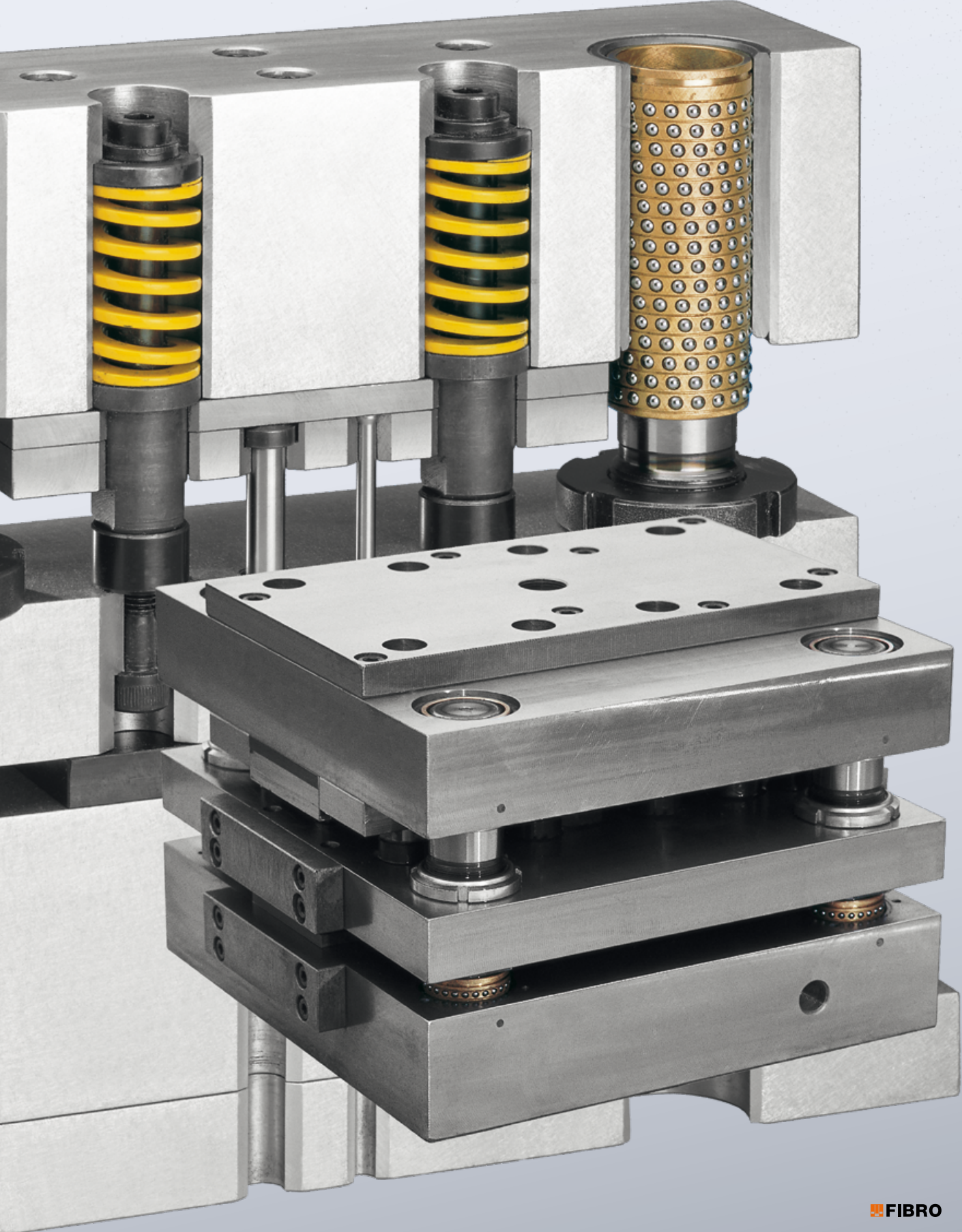
SPECIAL DIE SET (ALL-STEEL) TO CUSTOMERS' SPECIFICATION



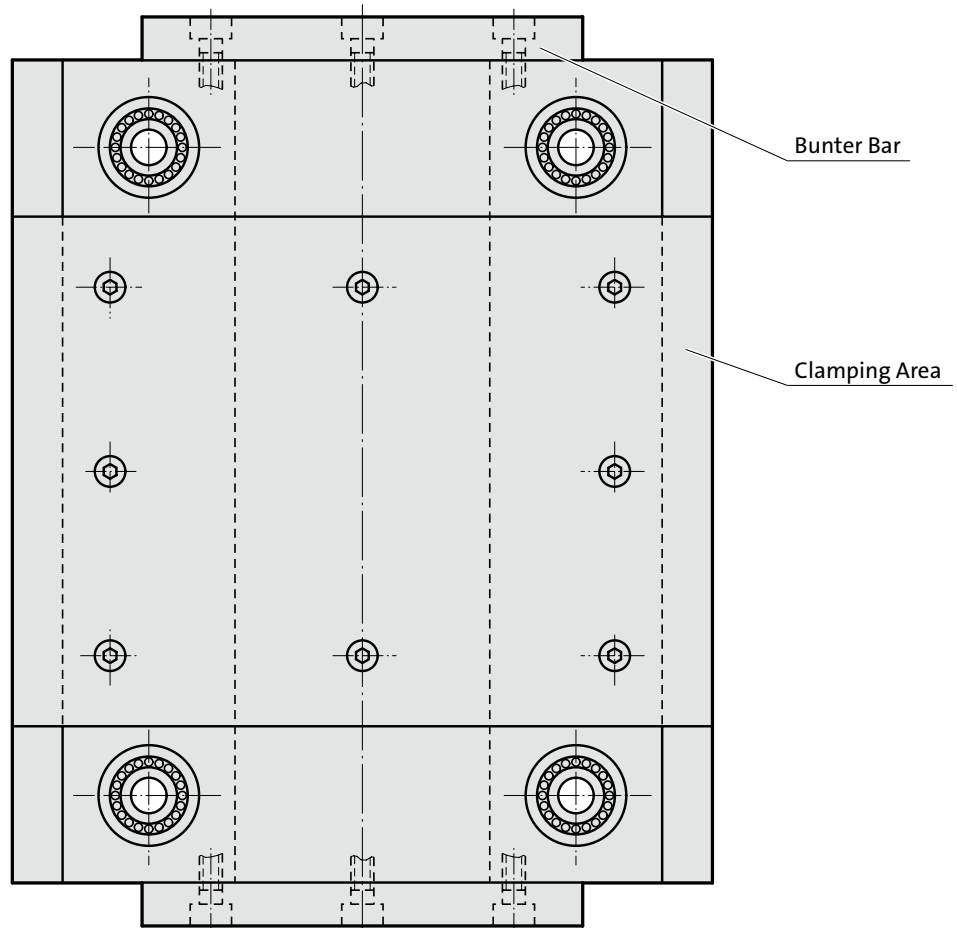
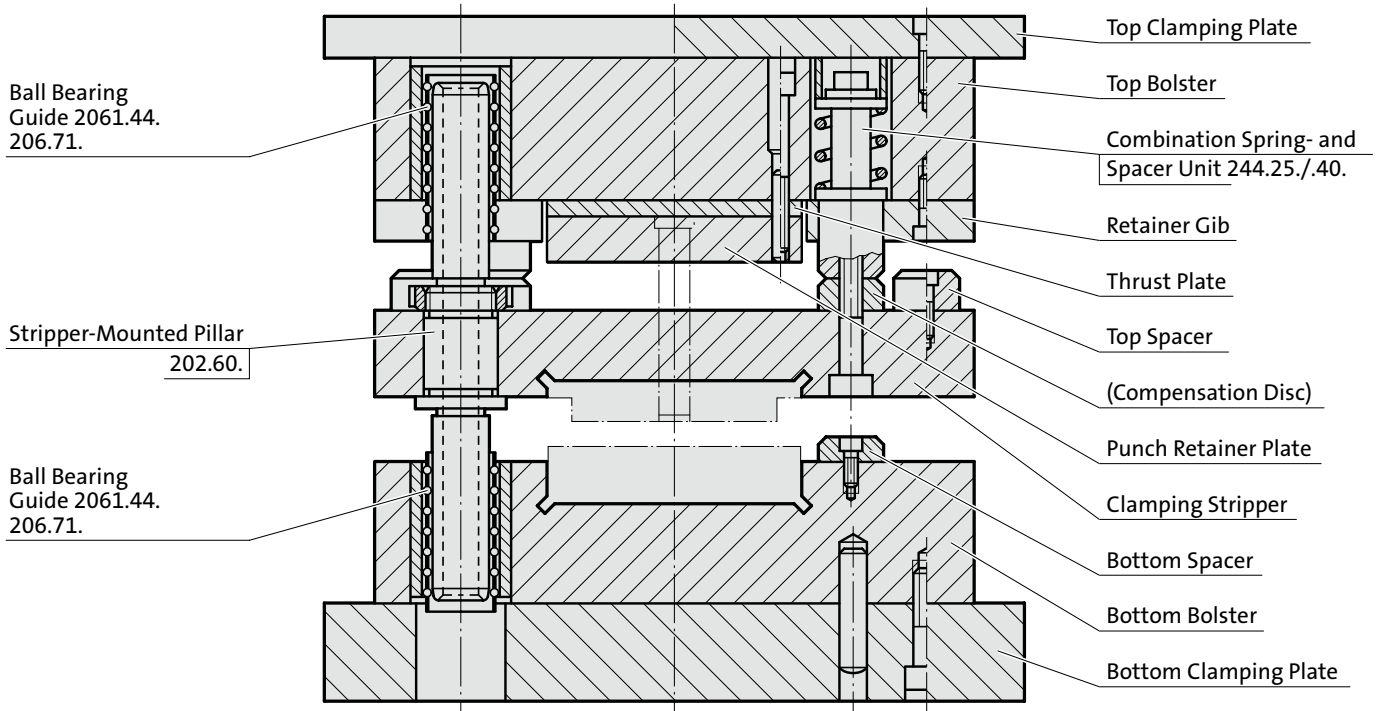
SPECIAL DIE SET (ALL-STEEL) TO CUSTOMERS' SPECIFICATION



PROGRESSION LAMINATION DIE SET UNITS



PROGRESSION LAMINATION DIE SET UNIT



PROGRESSION LAMINATION DIE SET UNIT

Die set units for progression/lamination dies

The accuracy of a stamping die starts with the die set. When we designed these new units, special attention was paid to the stability and load capacity of the guide pillars. The eventual introduction of the stripper-mounted pillar in its present form brought an eightfold increase in transverse load-carrying capacity.

It is known that a ball or roller bearing guide is less resistant to lateral forces than a plain bearing guide and therefore could not be used in every case up to now for these reasons.

At the same time, however, high-speed punching machines require the use of ball-guided tool guides.

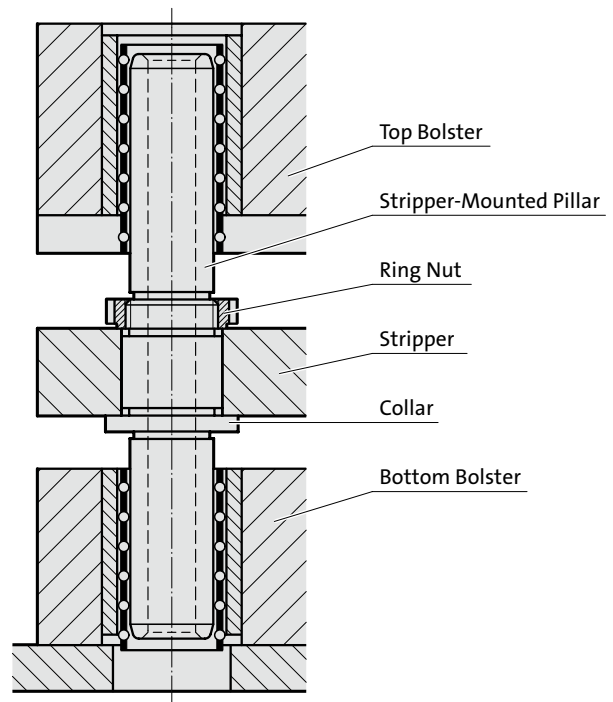
Application consequences

Considerations such as these formed the basis for the development of our new die set units with stripper-mounted pillars – a concept that has resulted in greatly improved accuracy, overall stability and speed capacity.

Stroke speed

The upper die section, equipped with full-core guide pillars, generates increased mass forces at higher stroke speeds over 500 stroke/min due to the dynamic forces.

In order to keep these harmful forces to a minimum, FIBRO Stripper-Mounted Pillars are provided with hollow cores.



Combination spring/spacer units

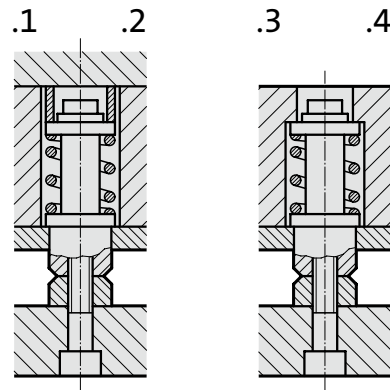
The punch guide plate is fitted with pre-clamped spring and spacer units with a compact design.

The advantages of these compact units, in accordance with executions 1 to 4, are as follows:

- a) compactness – the combination of both spring- and spacer functions saves die space
- b) Ease of die maintenance – punch regrinding and replacement, as well as dimensional adaptation, can be done without dismantling the stripper.

Note: regrinding of punches = regrinding of spacer!

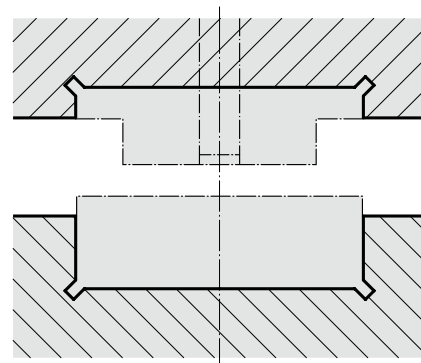
- c) Ease of springs maintenance – after removal of only the top clamping plate, the complete spring/spacer unit can be taken out for replacement etc. This feature applies to executions 1 and 2 only.



Retaining slots for matrices and guiding-stripper plate

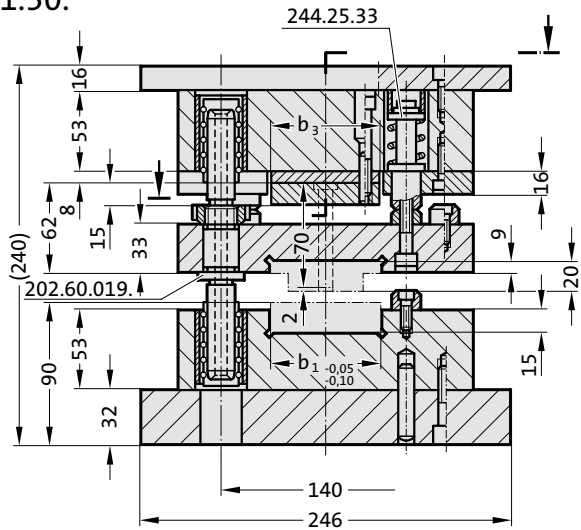
It is of paramount importance to the accuracy of the final die assembly that both these slots are in perfect vertical alignment, to within a few mm. From long experience we know that all heavy machining of die set apertures must precede the finish-machining of the two retainer slots for the matrix inserts and the guiding/clamping stripper plate.

Whenever the machining of such apertures is not entrusted to us we will supply our die set units with pre-ground slots only.



PROGRESSION LAMINATION DIE SET UNIT

201.50.



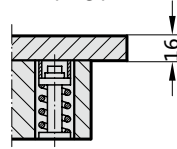
* For the sizes 201.50.2520 and 3020 guide pillars 202.60.025

Executions

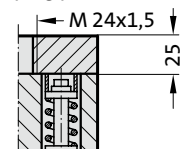
(mounting of top bolster to ram of press)



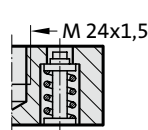
201.50.
□□□□.□□□□.□□□□.1
with projecting top
clamping plate



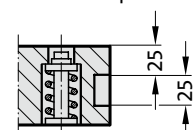
201.50.
□□□□.□□□□.□□□□.2
with threaded hole in top clamping
plate, for threaded shank



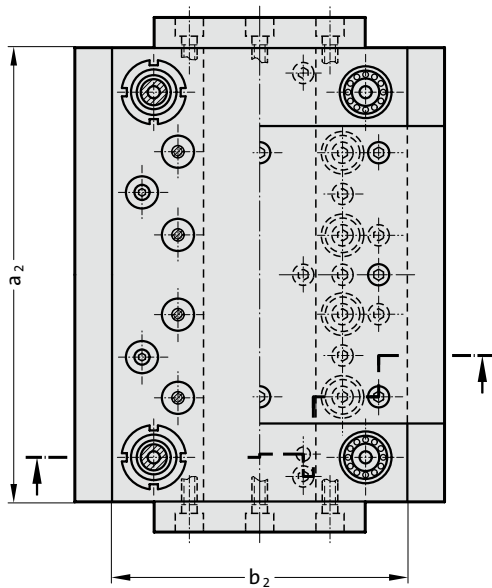
201.50.
□□□□.□□□□.□□□□.3
with threaded hole in top bolster,
for threaded shank



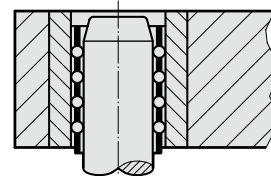
201.50.
□□□□.□□□□.□□□□.4
with clamping pockets
milled in top bolster



Guide Elements



Ball Bearing Guides



Width of slot b_1 to be determined by customer!

2D-CAD data are available on request for each Die Set Unit. The designer need only draw the active die elements. Prints can be taken from this master.

Die daylight and strip height can be reduced by up to 3 mm through a reduction in the thickness of the Bottom Clamping Plate.

201.50.xx20. Progression lamination die set unit

Order No. Type	Size	b_1	Spring Type Exec.	external dimensions $a_2 \times b_2$	b_1 max.	Comb. spring+ spacer unit	b_3	max. working stroke of spring 241...			Spring preload path	preloading in N (per spring unit) 241.□□.25.032				Spring rate R in N/mm 241.□□.25.032				
								14	15	16		14	15	16	17	14	15	16	17	
201.50.	1320.	□□□.	□□.	□	126 x 196	40	4	40	6,0	6,0	5,0	3	241	354	891	-	80,3	118,1	297	-
201.50.	1620.	□□□.	□□.	□	156 x 196	50	4	50	6,0	6,0	5,0	3	241	354	891	-	80,3	118,1	297	-
201.50.	2020.	□□□.	□□.	□	196 x 196	60	6	60	6,0	6,0	5,0	3	241	354	891	-	80,3	118,1	297	-
201.50.	2520.	□□□.	□□.	□	246 x 196	75	8	75	6,0	6,0	5,0	3	241	354	891	-	80,3	118,1	297	-
201.50.	3020.	□□□.	□□.	□	296 x 196	75	8	75	6,0	6,0	5,0	3	241	354	891	-	80,3	118,1	297	-

Ordering Code (example):

Progression lamination die set unit	=	201.50.
$a_2 \times b_2 = 296 \times 196$	=	3020.
$b_1 = 75$ mm	=	075.
Spring type 241.15.	=	15.
With projecting top clamping plate	=	1
Order No.	=	201.50.3020.075.15.1

Die Set Units 201.50. can also be supplied in special sizes as well as special executions, acc. to customers' specifications.

PROGRESSION LAMINATION DIE SET UNIT

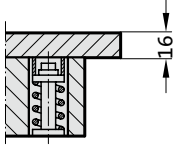
Executions

(mounting of top bolster to ram of press)



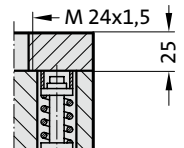
201.50.

□□□□.□□□□.□□□□.1
with projecting top
clamping plate



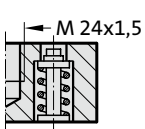
201.50.

□□□□.□□□□.□□□□.2
with threaded hole in top clamping
plate, for threaded shank



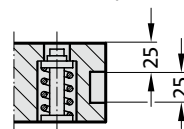
201.50.

□□□□.□□□□.□□□□.3
with threaded hole in top bolster,
for threaded shank

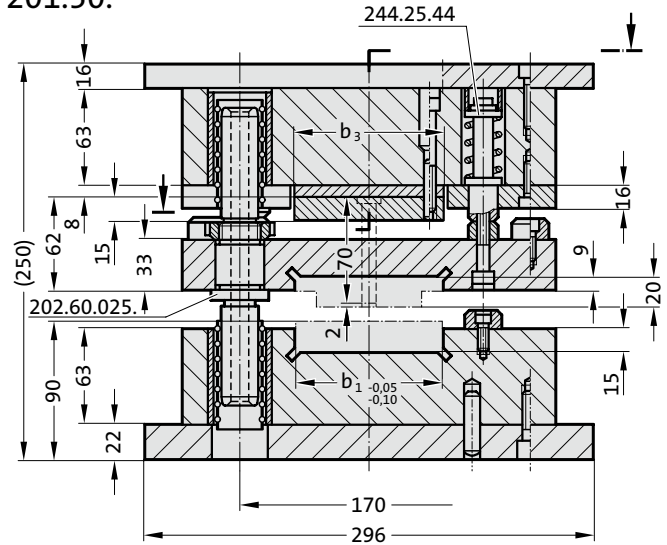


201.50.

□□□□.□□□□.□□□□.4
with clamping pockets
milled in top bolster

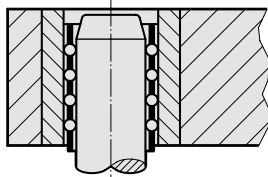


201.50.



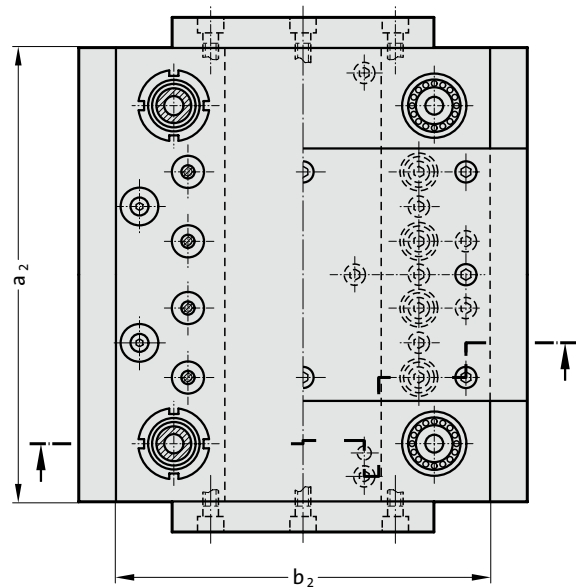
Guide Elements

Ball Bearing Guides



Width of slot b_1 to be determined by customer!

2D-CAD data are available on request for each Die Set Unit.
The designer need only draw the active die elements.
Prints can be taken from this master.



Die daylight and strip height can be reduced by up to 16 mm through a reduction in the thickness of the Bottom Clamping Plate.

201.50.xx25. Progression lamination die set unit

Order No. Type	Size	Spring Type	Exec.	external dimensions $a_2 \times b_2$	b_1 max.	Comb. spring+ spacer unit	b_3	max. working stroke of spring 241...				Spring preload path	preloading in N (per spring unit) 241.□□.25.045				Spring rate R in N/mm 25.045				
								14	15	16	17		14	15	16	17	14	15	16	17	
201.50.	1625.	□□□□.	□□□.	□	156 × 246	60	4	60	8,0	8,0	7,8	5,4	4	212	323	748	977	53	80,8	187	244,2
201.50.	2025.	□□□□.	□□□.	□	196 × 246	75	6	75	8,0	8,0	7,8	5,4	4	212	323	748	977	53	80,8	187	244,2
201.50.	2525.	□□□□.	□□□.	□	246 × 246	90	8	90	8,0	8,0	7,8	5,4	4	212	323	748	977	53	80,8	187	244,2
201.50.	3025.	□□□□.	□□□.	□	296 × 246	100	8	100	8,0	8,0	7,8	5,4	4	212	323	748	977	53	80,8	187	244,2
201.50.	3525.	□□□□.	□□□.	□	346 × 246	100	10	100	8,0	8,0	7,8	5,4	4	212	323	748	977	53	80,8	187	244,2

Ordering Code (example):

Progression lamination die set unit = 201.50.

$a_2 \times b_2 = 296 \times 246$ = 3025.

$b_1 = 100$ mm = 100.

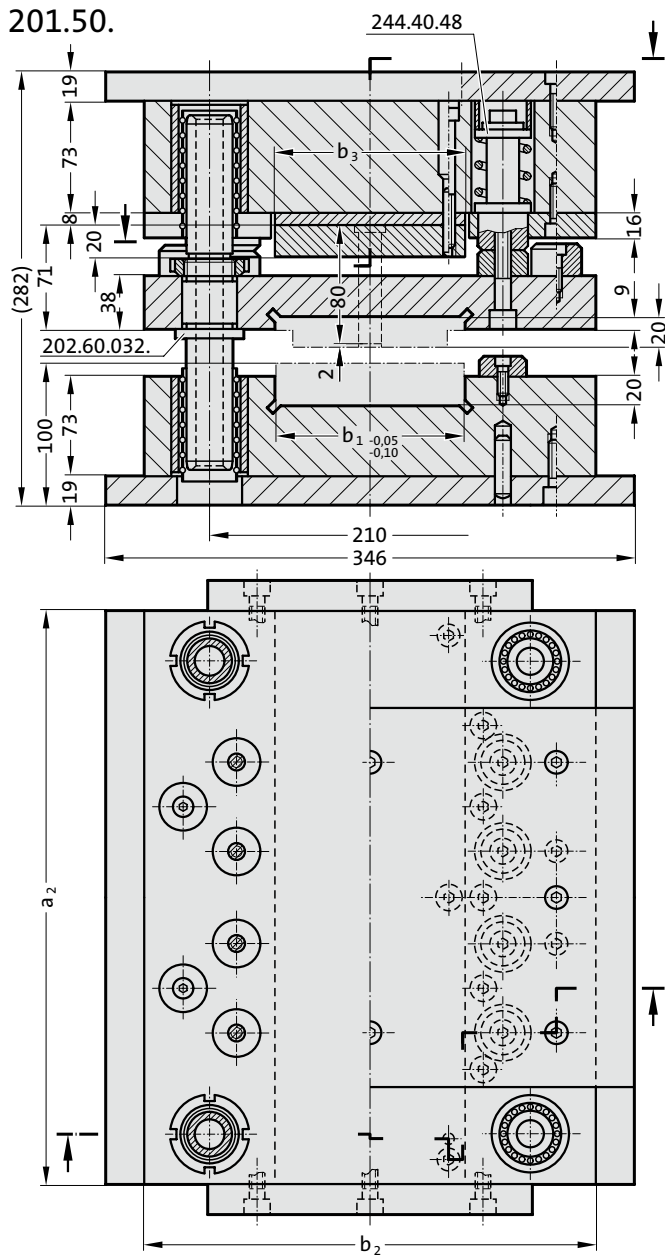
Spring type 241.15. = 15.

With projecting top clamping plate = 1

Order No. = 201.50.3025.100.15.1

Die Set Units 201.50. can also be supplied in special sizes as well as special executions, acc. to customers' specifications.

PROGRESSION LAMINATION DIE SET UNIT

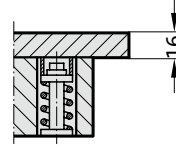


Executions

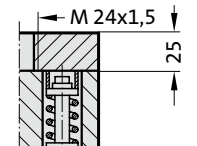
(mounting of top bolster to ram of press)



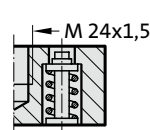
201.50.
□□□□.□□□□.□□.1
with projecting top
clamping plate



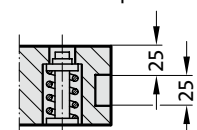
201.50.
□□□□.□□□□.□□.2
with threaded hole in top
clamping plate, for threaded shank



201.50.
□□□□.□□□□.□□.3
with threaded hole in top bolster,
for threaded shank

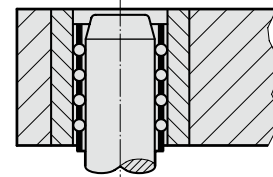


201.50.
□□□□.□□□□.□□.4
with clamping pockets
milled in top bolster



Guide Elements

Ball Bearing Guides



Width of slot b_1 to be determined by customer!

2D-CAD data are available on request for each Die Set Unit. The designer need only draw the active die elements. Prints can be taken from this master.

Die daylight and strip height can be reduced by up to 16 mm through a reduction in the thickness of the Bottom Clamping Plate.

201.50.xx30. Progression lamination die set unit

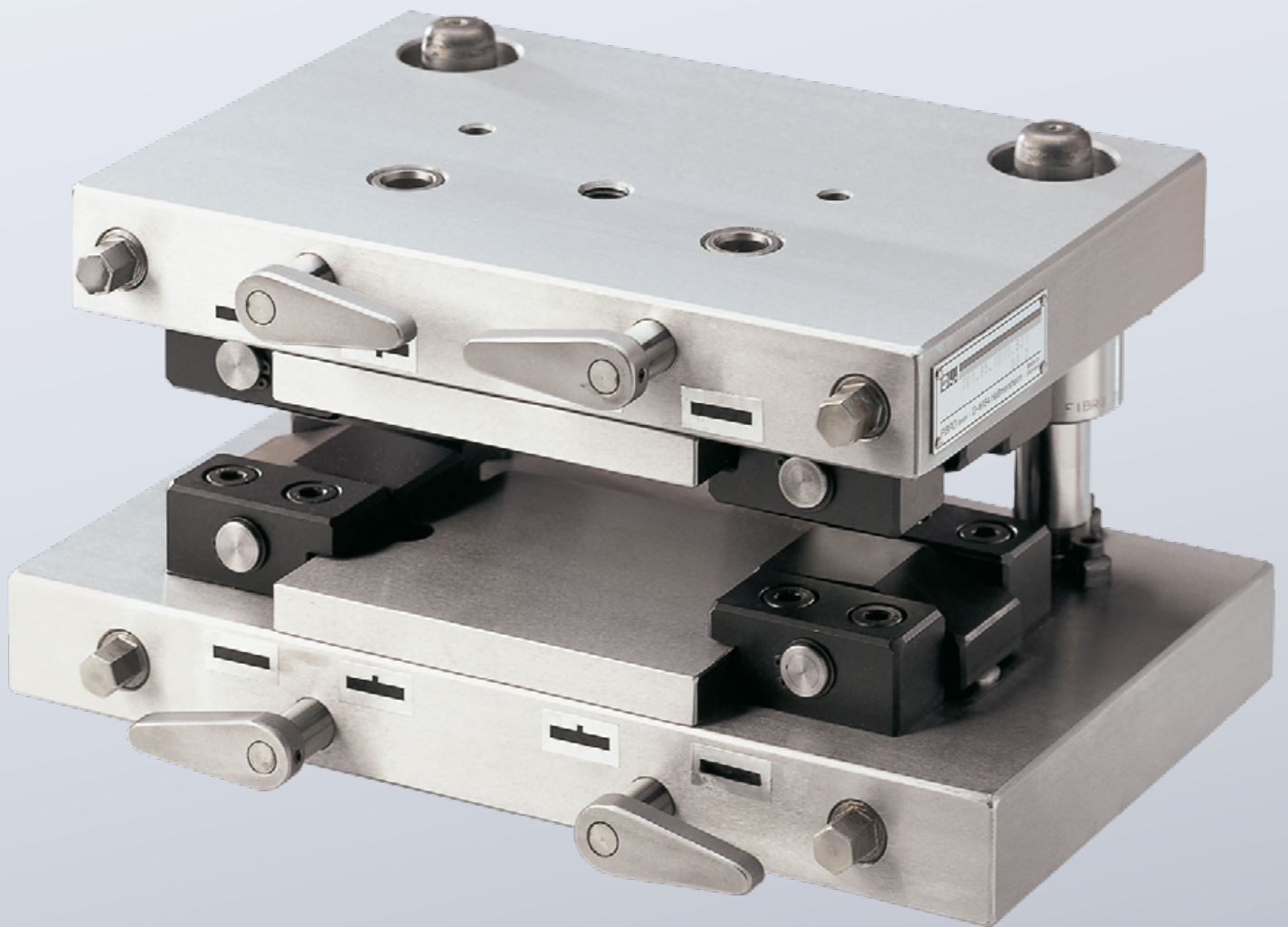
Order No. Type	Size	Spring Type	external dimensions $a_2 \times b_2$	b_1	Comb. spring+ spacer unit	b_3	max. working stroke of spring 241...				Spring preload path	preloading in N (per spring unit) 241.□□.25.045				Spring rate R in N/mm 241.□□.25.045			
							14	15	16	17		14	15	16	17	14	15	16	17
201.50. 2030.	□□□. □□□. □	□	196 × 296	75	4	75	7,0	7,0	5,0	4,2	8	736	1432	2800	5027	92	179	350	628,4
201.50. 2530.	□□□. □□□. □	□	246 × 296	100	6	100	7,0	7,0	5,0	4,2	8	736	1432	2800	5027	92	179	350	628,4
201.50. 3030.	□□□. □□□. □	□	296 × 296	100	8	100	7,0	7,0	5,0	4,2	8	736	1432	2800	5027	92	179	350	628,4
201.50. 3530.	□□□. □□□. □	□	346 × 296	125	8	125	7,0	7,0	5,0	4,2	8	736	1432	2800	5027	92	179	350	628,4
201.50. 4030.	□□□. □□□. □	□	396 × 296	125	8	125	7,0	7,0	5,0	4,2	8	736	1432	2800	5027	92	179	350	628,4

Ordering Code (example):

Progression lamination die set unit	=	201.50.
$a_2 \times b_2 = 296 \times 196$	=	3020.
$b_1 = 75$ mm	=	075.
Spring type 241.15.	=	15.
With projecting top clamping plate	=	1
Order No.	=	201.50.3020.075.15.1

Die Set Units 201.50. can also be supplied in special sizes as well as special executions, acc. to customers' specifications.

TOOLING PALLET DIE SETS



TOOLING PALLET DIE SET

Description

The fast exchange of pallet-born tooling sets, with the concept of rapid mechanical positioning, meets the demands for:

- Reduction in die costs
- Reduction in setup costs
- Faster response to market trends with small batch sizes.

Instead of a multitude of complete die set-born press tools, the new system is based on a carrier die set with rapid-exchange features. This die set can remain in the press, while any number of tooling pallet sets can be accommodated expediently and precisely, one at a time.

The insertion tools are mounted on mounting plates and are pushed into the change rack up to the stop. By turning the four front levers, the positioning pins are inserted into the mounting hole of the mounting plates. The four front hexagonal edges are then turned with the socket wrench and thus moved over the screw drive to inclined planes which actuate the claws in a self-locking manner.

Die configuration

Sets of pallet tooling can be designed as:

- Progressive die
- Compound tool
- Drawing tool
- bending tools
- Combination tool, etc.

Setting and Tryout Aids

The absence of individual guide elements is a fundamental feature of tooling pallet sets which greatly assists the overall economy of the system. In order to facilitate the aligning of top- and bottom tooling, conical centring units can be fitted, thus providing alignment between both members by direct means – even outside the carrier die set, on the toolmaker's bench.

As a further aid for setting and tryout of pallet sets we offer the FIBRO Aligning- and Tryout Press Unit 201.98. with simplified but basically similar positioning- and locking features as the carrier die set.

TOOLING PALLET DIE SET

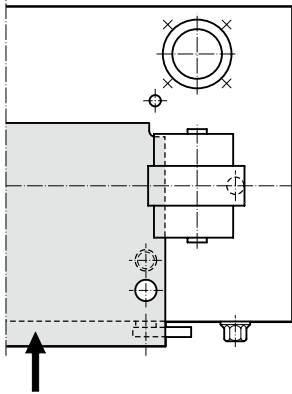
Functional structure

Setup

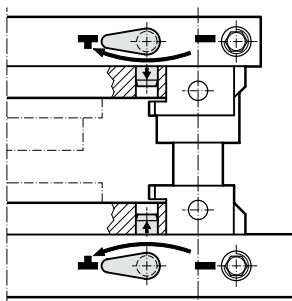
- Slide-In Insertion
- Positioning
- Clamping

These steps can be completed in a minute.

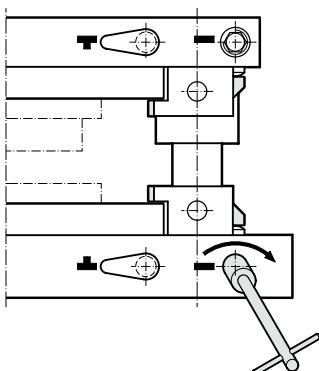
Slide-In Insertion



Positioning

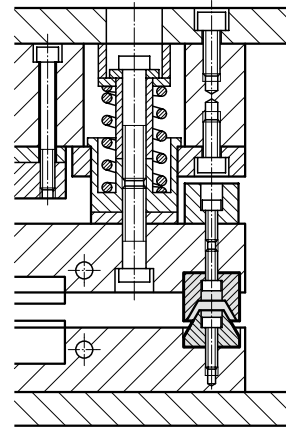


Clamping



Positioning Aids

Pallet tooling sets can be equipped with conical centring units.



Sheet thicknesses

Sheets less than 0.4 mm thick are only conditionally suitable for processing in tool change racks due to the small cutting gap.

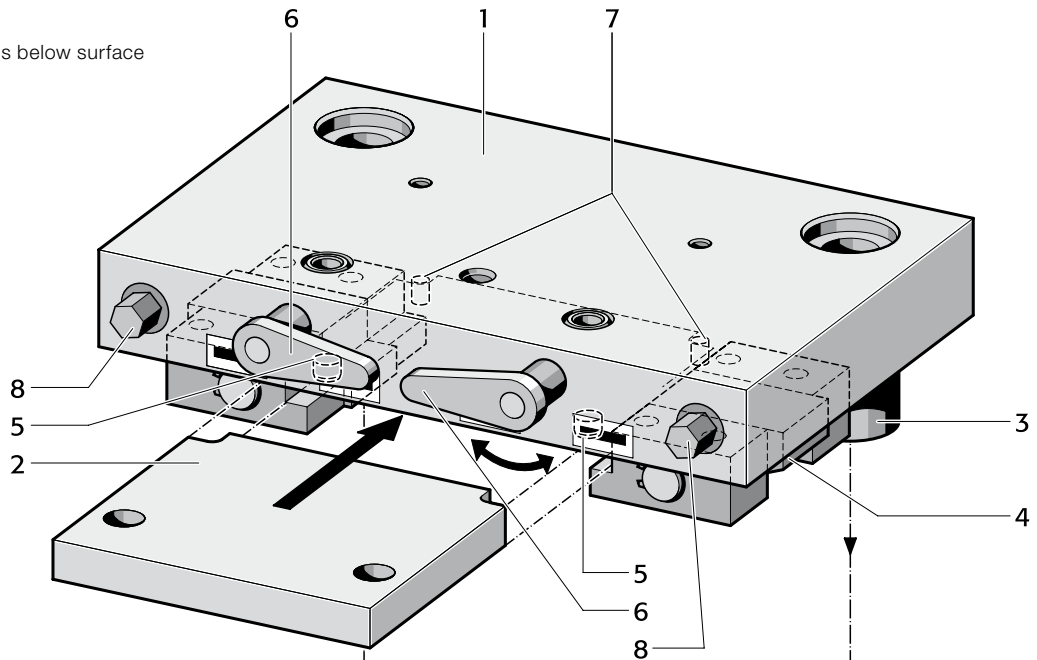
The repeat accuracy of positioning and clamping of the insertion tool is within 0.02 mm.

The alignment of the upper part to the lower part of the insertion tool can be improved by using taper centring units in such a way that sheets with a thickness of less than 0.4 mm can also be processed.

TOOLING PALLET DIE SET

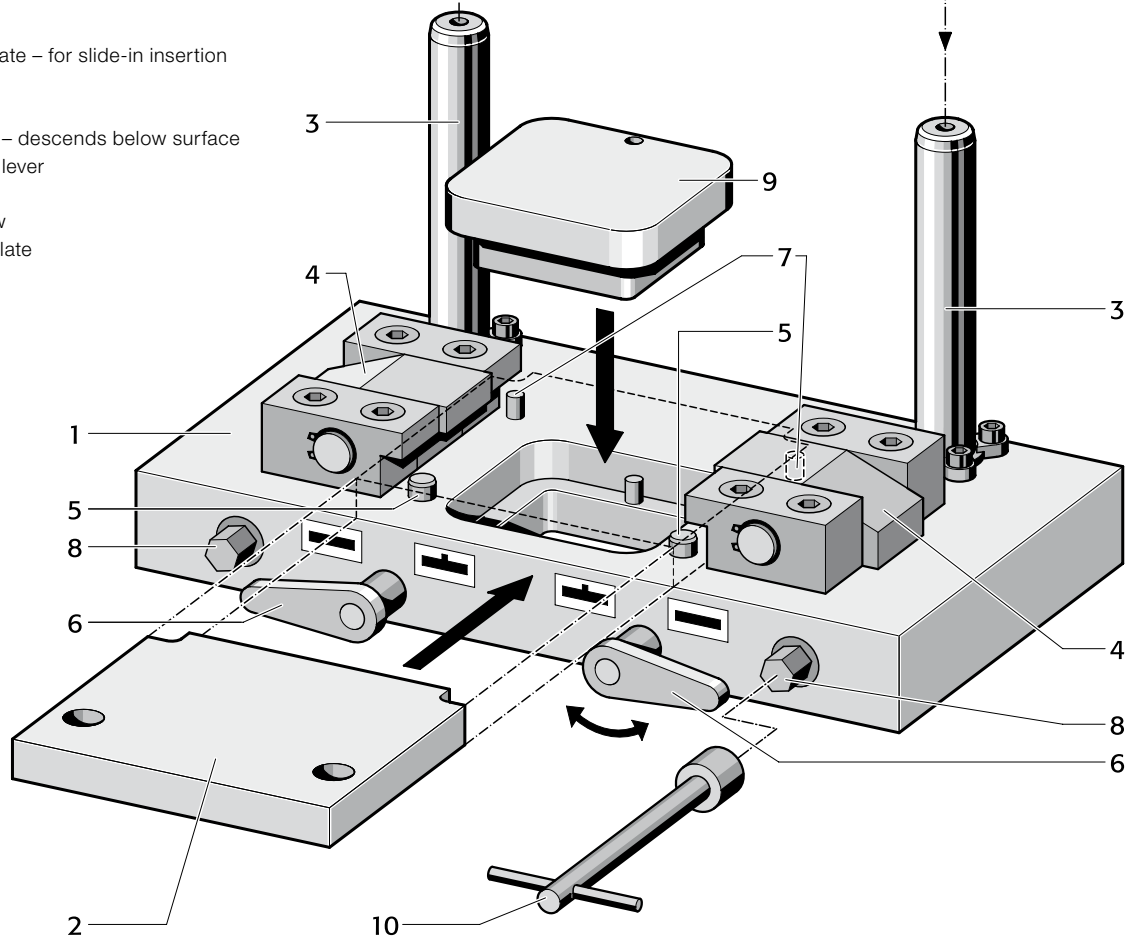
Top Bolster of Pallet Die Set

- 1 top bolster
- 2 pallet carrier plate – for slide-in insertion
- 3 guide bushes – optionally sliding – or ball bearing guides
- 4 clamp
- 5 positioning pin – descends below surface
- 6 positioning pin lever
- 7 stop pin
- 8 clamping screw



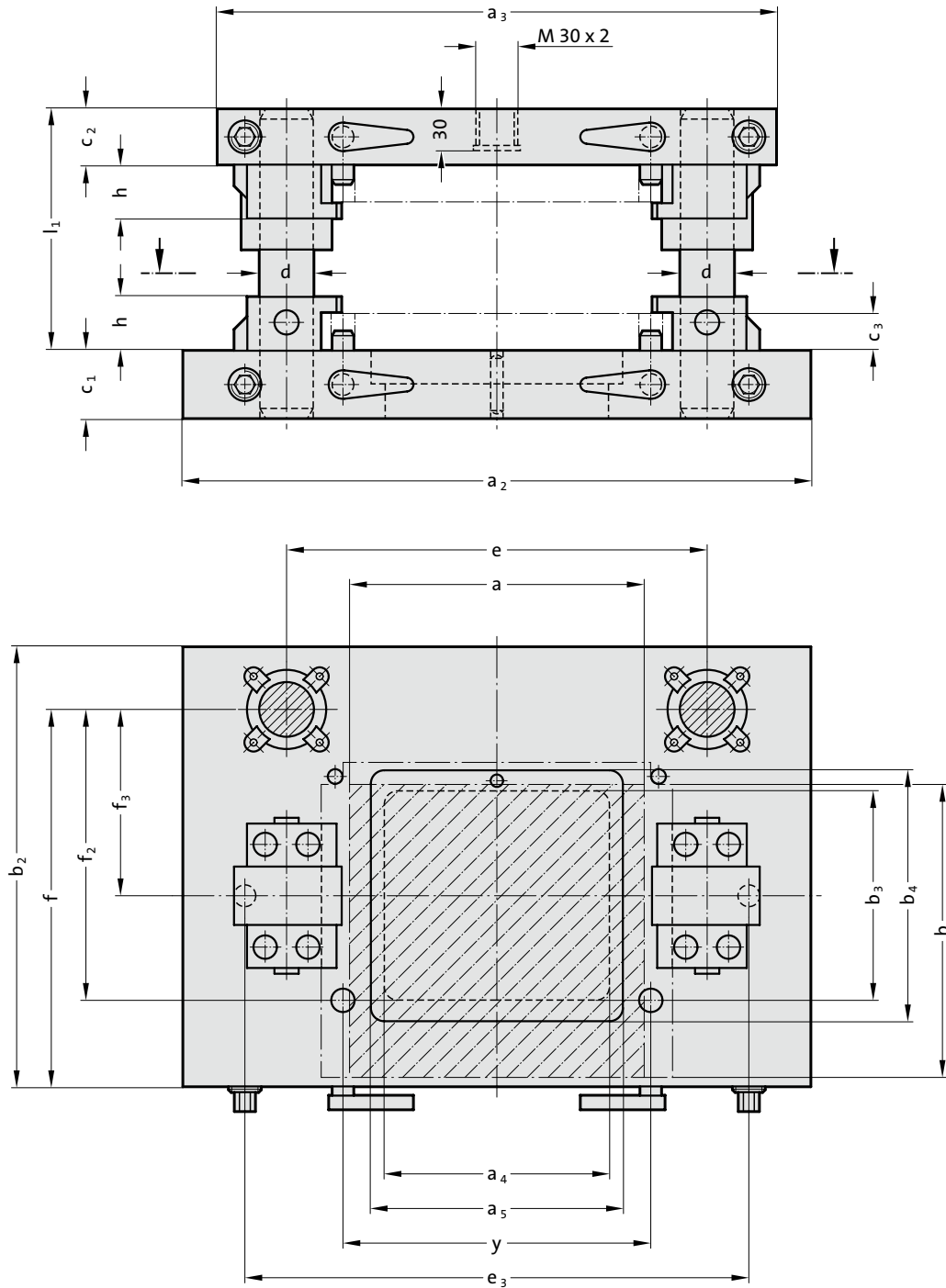
Bottom Bolster of Pallet Die Set

- 1 bottom bolster
- 2 pallet carrier plate – for slide-in insertion
- 3 guide pillar
- 4 clamp
- 5 positioning pin – descends below surface
- 6 positioning pin lever
- 7 stop pin
- 8 clamping screw
- 9 bolster insert plate
- 10 box spanner



TOOLING PALLET DIE SET

201.95.



201.95. Tooling pallet die set

Order No	Type of guides*	Work area a x b	a_2	a_3	a_4	a_5	b_2	b_3	b_4	c_1	c_2	c_3	d	e	y	e_3	f	f_2	f_3	h	l_1
201.95.1010.831		100 x 100	350	300	80.5	-	200	60	80.5	40	40	16	25	220	120	260	168	113	93	29	160
201.95.2121.831		210 x 210	450	400	161	180.2	315	150	180.2	50	40	25	40	300	220	360	270	208	133	38	180
201.95.3030.831		300 x 300	550	500	241	270.5	420	220	250.2	63	40	25	40	380	320	460	365	305	185	38	180
201.95.3521.831		350 x 210	600	550	320	-	315	120	150	50	40	25	40	450	370	510	270	208	133	38	180

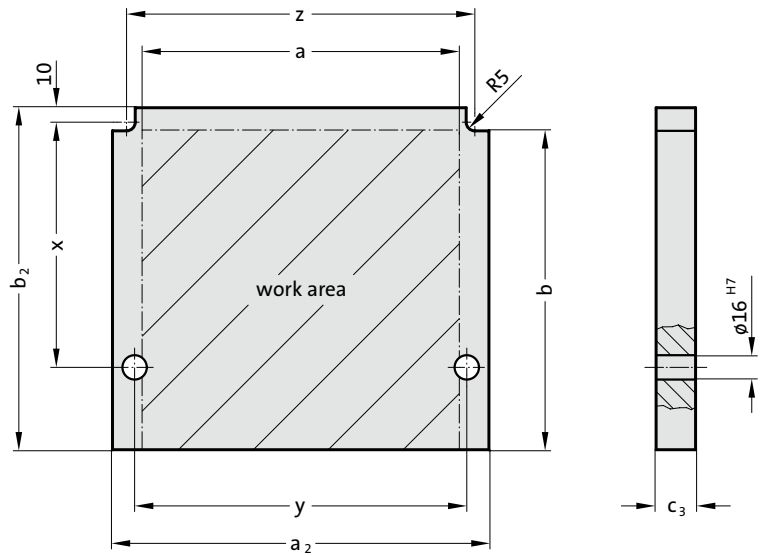
* Type of guides: 831 for sliding guides or 862 for ball guides

FAST EXCHANGE SYSTEM FOR PALLET TOOLING - ACCESSORIES: PALLET CARRIER PLATE BOLSTER INSERT PLATE

Pallet carrier plate

201.96.

Each pallet tooling set (upper and lower parts) is screwed and dowelled onto a mounting plate. The mounting plate remains part of the pallet tooling set in question.



201.96. Pallet carrier plate

Order No	Work area a x b	a ₂	b ₂	c ₃	x	y	z
201.96.1010	100 x 100	150	115	16	50.1	120	130
201.96.2121	210 x 210	250	225	25	160.1	220	230
201.96.3030	300 x 300	350	315	25	250.1	320	330
201.96.3521	350 x 210	400	225	25	160.1	370	380

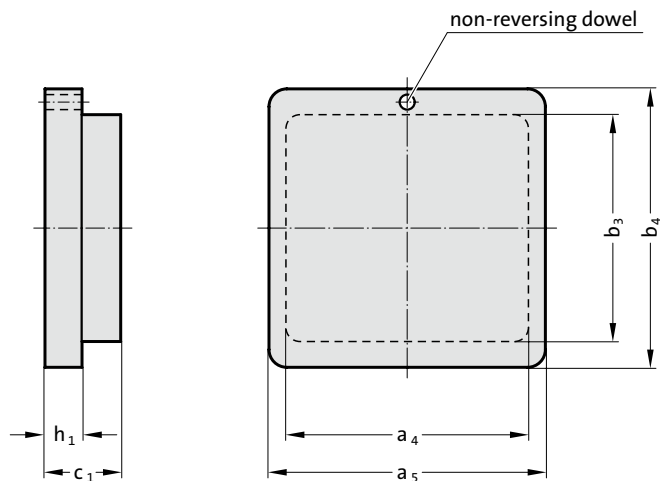
Bolster insert plate

201.97.

This insert plate has to be added to a tooling pallet set if:

- scrap holes near the centre require additional support
- spring cushions or bottom ejectors have to be employed

Bolster insert plates have a dowel that makes them non-reversible.



201.97. Bolster insert plate

Order No	Work area a x b	a ₄	a ₅	b ₃	b ₄	c ₁	h ₁
201.97.1010	100 x 100	80	80	60	80	40	20
201.97.2121	210 x 210	160	180	150	180	50	25
201.97.3030	300 x 300	240	270	220	250	63	30
201.97.3521	350 x 210	320	320	120	150	50	25

ALIGNING- AND TRYOUT PRESS UNIT

201.98.

Description:

The set-up and testing press with manual operation is used for presetting and testing the insertion tools for the quick-change tool frame. The positioning and clamping functions are the same as in the quick-change frame, but in a simplified version.

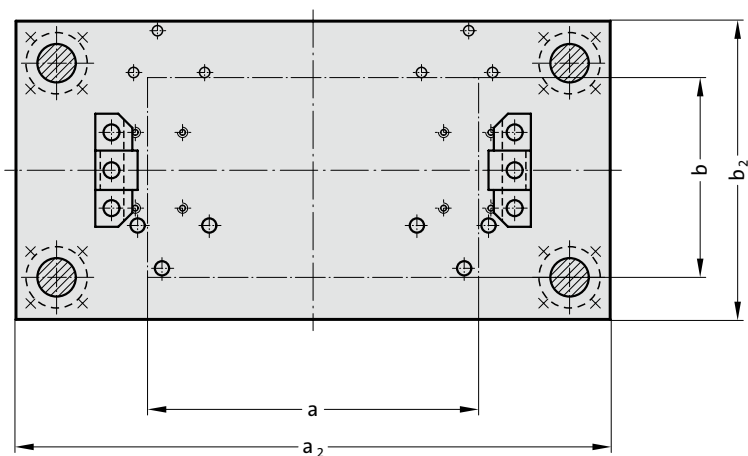
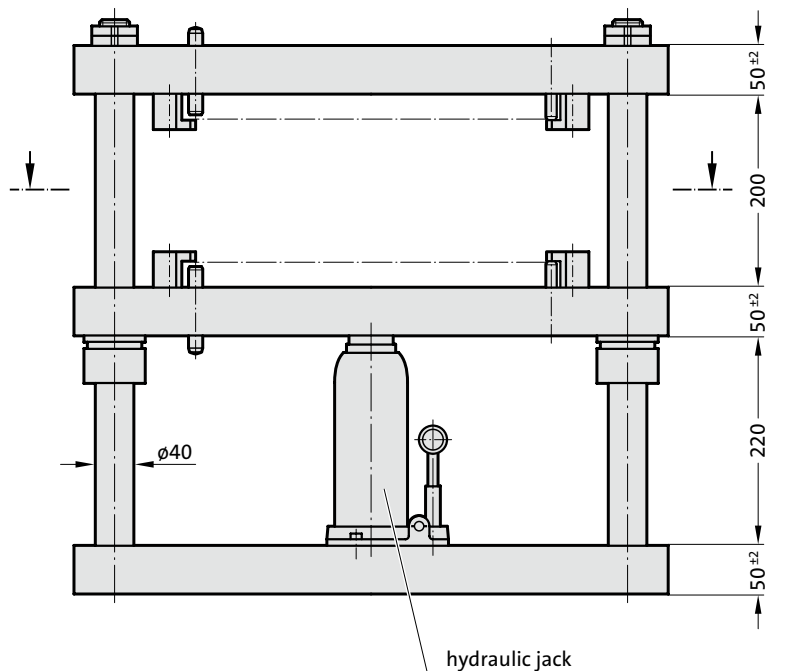
Moreover the press units provide ideal facilities for the press-fitting of pillars and bushes etc. – or their removal. For bluing-in and tryout of all sorts of press tools they soon prove themselves as an indispensable workshop facility. Pressing force up to 10 t.

Material:

Plates: St 52-2

Execution:

Headed ball bearing guide bushes,
hydraulic jack,
10 tons capacity



201.98. Aligning- and Tryout Press Unit

Order No	Work area a x b	a_2	b_2
201.98.1010.863	100 x 100	315	250
201.98.3030.863	210 x 210, 300 x 300, 350 x 210	630	315

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