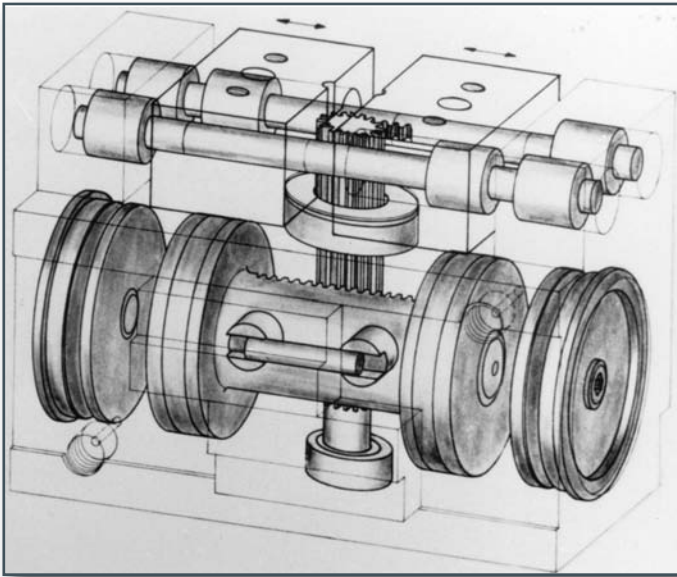


Pneumatic Parallel Gripper PSM, PSMU



picture 2

PTM-Parallel Grippers are based on the rack-and-pinion principle like our rotating actuators. (picture 2) This fact allows for a compact design with small dimensions and low weight while still offering a high grip force.

The rack and pinion design produces an even clamping force over the whole range. The clamping jaws are absolutely centered in each position. Shortest clamping times are possible.

Each base jaw is connected tightly with one rack. This creates the great advantage that the jaws are firmly guided over the whole length of the gripper.

This long jaw guidance guarantees close tolerance, high precision and long life.

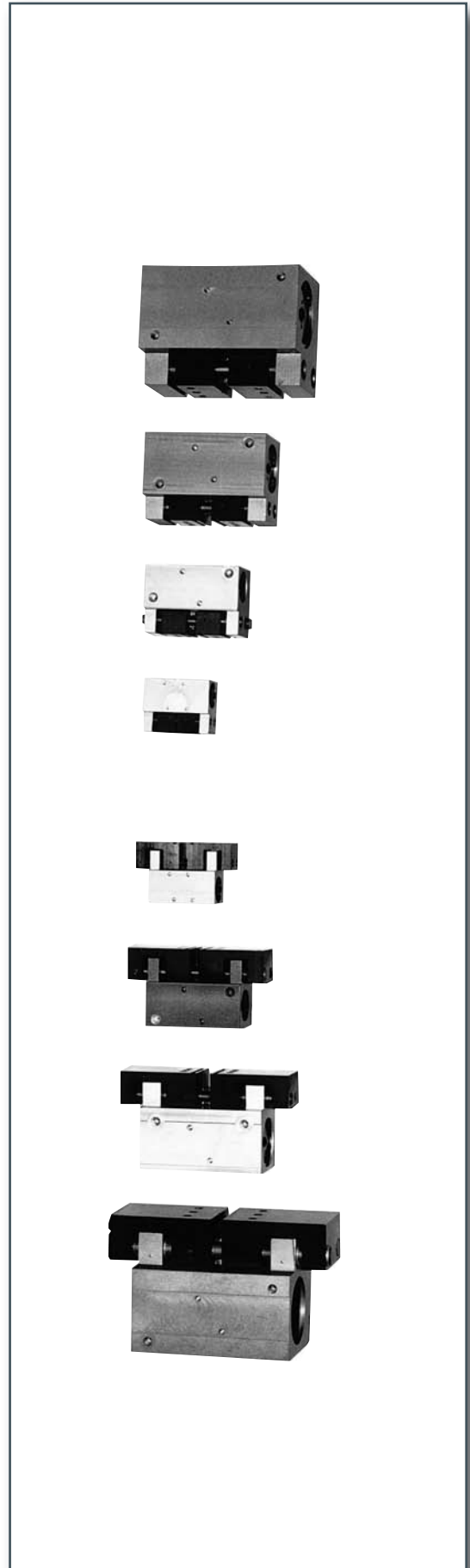
It is possible to work with very long clamping fingers without any problems.

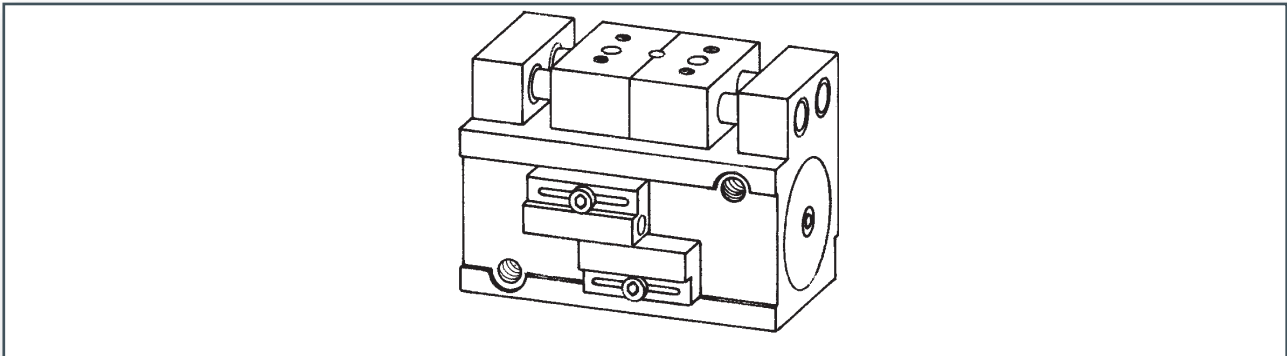
This advantages are enhanced in the alternative -PSMU- the PTM-Parallel Gripper with u-shaped jaws.

Another option is the use of a spring in our Parallel Grippers, model ZFS, to secure the grip force during air pressure failure. With this it is possible to work only with one air connection.

Our Multi Position Cylinders -ZMZ- offer as many as two additional stops or additional strokes, which is very important in case of space restrictions.

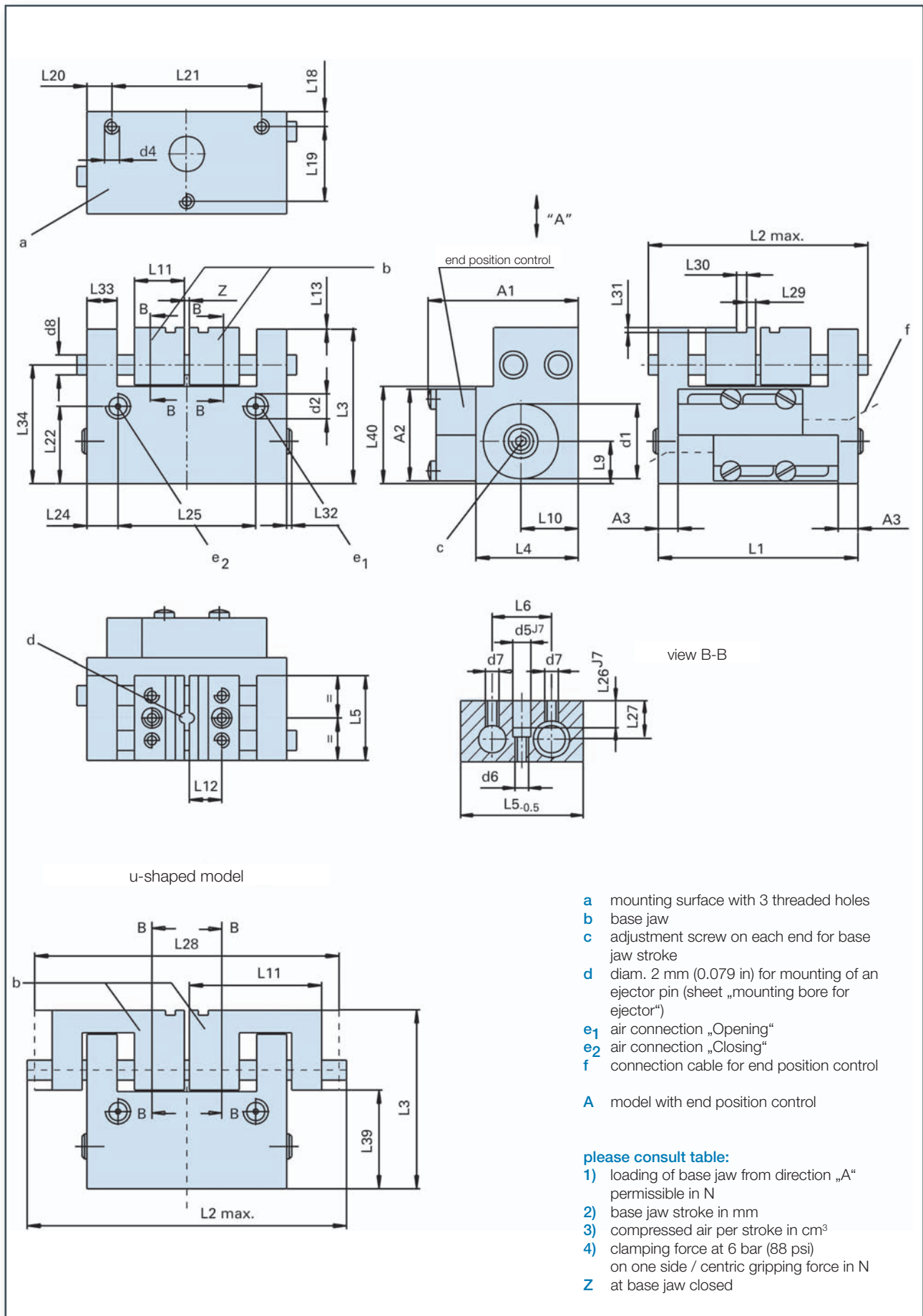
The „Attachment for centering“ guarantees an exact exchange or a quick change position of the Parallel Gripper.





Material:	<ul style="list-style-type: none"> - aluminum hard or black anodized - steel parts of stainless material or corrosion resistant - shorttime gas nitration
Operating or mounting position:	<ul style="list-style-type: none"> - any position desired
Operating temperature:	<ul style="list-style-type: none"> - -10° to +80° C (14° to 176° F)
Operating media:	<ul style="list-style-type: none"> - filtered oiled air, or filtered oil-free air - Attention: only oil-free air should be used at low movements as interruptions could harm the smooth process.
Operating pressure:	<ul style="list-style-type: none"> - maximum 6 bar (specs are based on 6 bar = 88 psi)
Maintenance:	<ul style="list-style-type: none"> - all PSM units are maintenance-free
Base jaw guide:	<ul style="list-style-type: none"> - bronze bushings, self lubrication - each base jaw is connected tightly with one rack - therefore each jaw is guided over the whole length of the gripper - this guarantees high accuracy and long life
Clamping force:	<ul style="list-style-type: none"> - constant over the whole stroke
Jaw stroke:	<ul style="list-style-type: none"> - can be adjusted by both cylinder head plates, if necessary, with adjustment screws
Ejection:	<ul style="list-style-type: none"> - all PSM units are provided with an ejector pin with a spring, which can be mounted in the pinion, if necessary
End position control with LED:	<ul style="list-style-type: none"> - please see our sheet „end position control“ (Page 44)
Cover:	<ul style="list-style-type: none"> - possible for all PSM units with the smallest stroke
Clamping components:	<ul style="list-style-type: none"> - are generally manufactured by the customer for external or internal gripping
Installation of clamping comp:	<ul style="list-style-type: none"> - the connection between base jaw and clamping components is adjustable - for this reason each base jaw has a fitted bore, two threaded holes and a keyway (view B-B)
Installation recommendation:	<ul style="list-style-type: none"> - to ensure long life of our devices the use of throttle valves is highly recommended

Parallel Gripper PSM 0030, PSMU 0030



model	PSM 0030-007	PSM 0030-030	PSM 0030-052	PSMU 0030-007	PSMU 0030-030	PSMU 0030-052
ø d1	15 J7	15 J7	15 J7	15 J7	15 J7	15 J7
d2	M5x4,5	M5x4,5	M5x4,5	M5x4,5	M5x4,5	M5x4,5
d3	—	—	-	—	—	-
d4	M3x4	M3x4	M3x4	M3x4	M3x4	M3x4
ø d5	4 J7	4 J7	4 J7	4 J7	4 J7	4 J7
d6	M3x6,5	M3x6,5	M3x6,5	M3x6,5	M3x6,5	M3x6,5
d7	M3x4	M3x4	M3x4	M3x4	M3x4	M3x4
ø d8	4	4	4	4	4	4
d9	—	—	—	—	—	—
L1	40	63	98,5	40	63	98,5
max. L2	40	87	150,5	60,5	136,5	215
L3	31,3	31,3	31,3	35,8	35,8	35,8
L4	20,5	20,5	20,5	20,5	20,5	20,5
L5	17	17	17	17	17	17
L6	9	9	9	9	9	9
L9	8,5	8,5	8,5	8,5	8,5	8,5
L10	11,5	11,5	11,5	11,5	11,5	11,5
L11	10	10	10	26,5	38	49
L12	6,5	6,5	6,5	6,5	6,5	6,5
L13	0,3	0,3	0,3	—	—	—
L18	3	3	3	3	3	3
L19	15	15	15	15	15	15
L20	5	5	4,5	5	5	4,5
L21	30	53	89,9	30	53	89,9
L22	15,5	15,5	15,5	15,5	15,5	15,5
L23	—	—	—	—	—	—
L24	6,2	6,2	11,9	6,2	6,2	11,9
L25	27,6	50,6	74,7	27,6	50,6	74,7
L26	4	4	4	4	4	4
L27	5	5	5	5	5	5
L28	—	—	—	60,5	106,5	163,5
L29	1,8	1,8	1,8	1,8	1,8	1,8
L30	2 F9	2 F9	2 F9	2 F9	2 F9	2 F9
L31	1	1	1	1	1	1
L32	1	1	—	1	1	—
L33	6	6	6	6	6	6
L34	23,8	23,8	23,8	23,8	23,8	23,8
L39	—	—	-	19,8	19,8	19,8
L40	19,5	19,5	19,5	19,5	19,5	19,5
A1	30	30	30	30	30	30
A2	18,4	18,4	18,4	18,4	18,4	18,4
A3 min.	3	8	20	3	8	20
1)	65	50	50	90	75	75
2)	2x3,5	2x15	2x26	2x3,5	2x15	2x26
3)	0,6	2,6	5,0	0,6	2,6	5,0
4)	60/30	60/30	60/30	60/30	60/30	60/30
weight in kg	0,065	0,09	0,12	0,09	0,13	0,17
Z	0,5	0,5	13,5	0,5	0,5	13,5

All dimensions in mm

Ordering Code

PSM **XXXX** - **XXX** - **XXX** - **X**

0 = basic model
 — 1 = with end position control
 (sheet "end position control")

model code

base jaw stroke
in mm

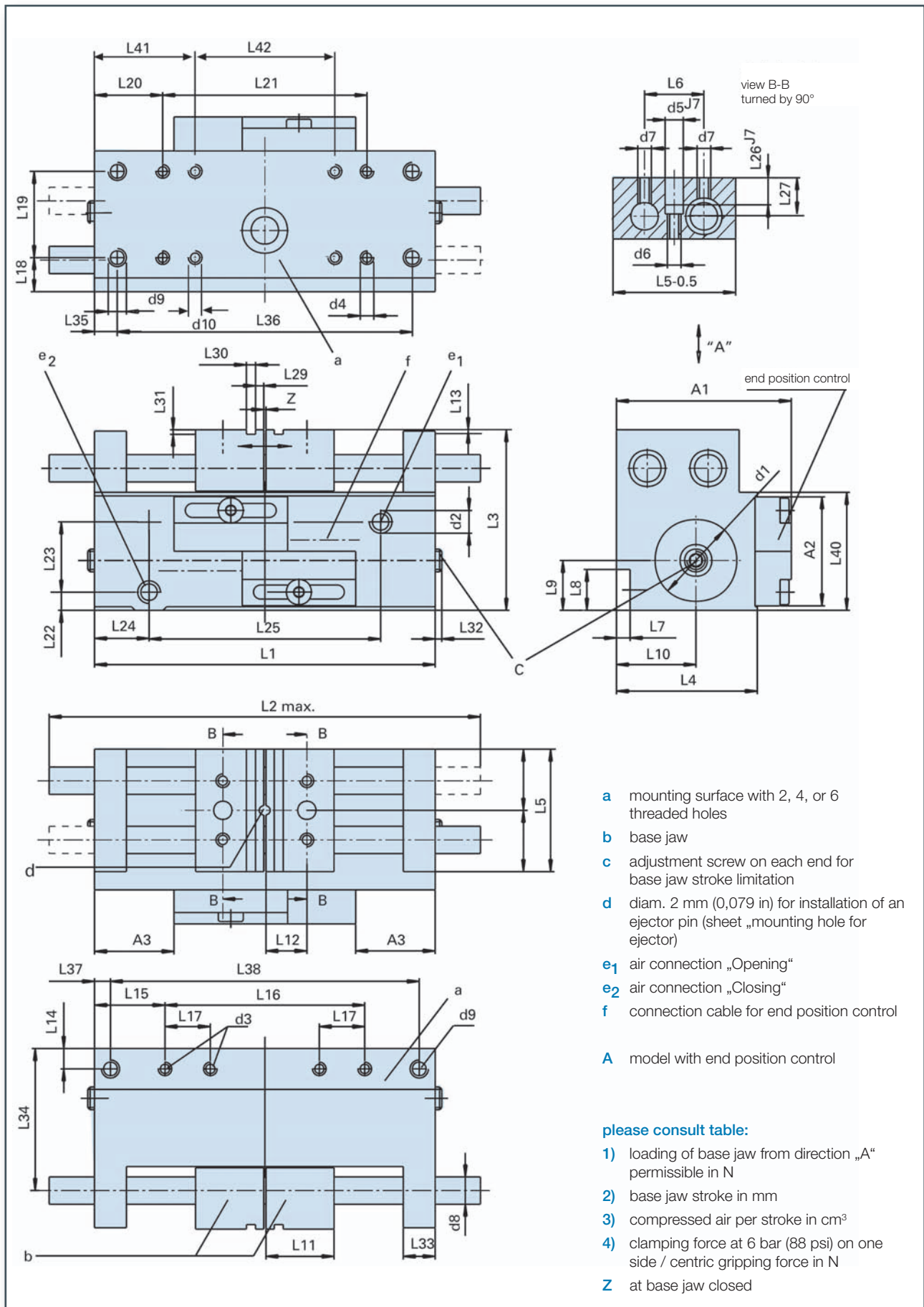
clamping force
in N

Ordering Example **you order :**

PSM 0030 - 030 - 060 - 1

we deliver :
 Parallel Gripper PSM 0030
 base jaw stroke 30 mm,
 — clamping force 60 N,
 with end position control

Parallel Gripper PSM 0050, PSM 0200, PSM 0600



PSM	0050-011	0050-029	0050-052	0200-013	0200-027	0200-052	0200-105	0600-016	0600-030	0600-060
ø d1	18 J7	18 J7	18 J7	28 J7	28 J7	28 J7	28 J7	38 J7	38 J7	38 J7
d2	M5x4,5	M5x4	M5x4	M5x4,5	M5x4,5	M5x4,5	M5x4,5	M5x5	M5x5	M5x5
d3	M3x5,5	M3x5,5	M3x5,5	M3x5	M3x5	M3x5	M3x5	M4x8	M4x8	M4x8
d4	M3x5,5	M3x4	M3x4	M3x5,5	M3x5	M3x5	M3x5	M4x8	M4x8	M4x8
ø d5	4 J7	4 J7	4 J7	4 J7	4 J7	4 J7	4 J7	5 J7	5 J7	5 J7
d6	M3x5,5	M3x5,5	M3x5,5	M3x5,5	M3x5,5	M3x9,5	M3x9,5	M4x6	M4x6	M4x6
d7	M3x4	M3x4	M3x4	M3x4	M3x4	M4x5,5	M4x5,5	M4x4	M4x4	M4x4
ø d8	6	6	6	6	6	8	8	10	10	10
d9	—	—	—	—	M4x5,5	M4x7	M4x7	—	—	—
d10	—	—	—	M4x5	—	—	—	M5x10	M5x10	M5x10
L1	56	75	135	72	86	138	219	92	106	156
L2 max.	65,5	103	160	74,5	105,5	172	302,5	96	128	186
L3	39,8	39,8	39,8	49,8	49,8	54	54	66,5	66,5	66,5
L4	31	31	31	37,5	37,5	37,5	37,5	59	59	59
L5	27	27	27	30	30	30	30	44,2	44,2	44,2
L6	13	13	13	13	13	15	15	26,1	26,1	26,1
L7	3	3	3	3	3	3	3	5	5	5
L8	9	9	9	9	9	9	9	15	15	15
L9	11	11	11	16	16	16	16	24	21	24
L10	17,5	17,5	17,5	19	19	19	19	35	35	35
L11	15	15	20	18	18	18	18	23	23	23
L12	9	9	10	10	10	10	10	16	16	16
L13	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,5	0,5	0,5
L14	4,5	4,5	4,5	4,5	4,5	4,5	4,5	7,5	7,5	7,5
L15	6	3,5	33,5	10	17	43	83,5	10	17	42
L16	44	68	68	52	52	52	52	72	72	72
L17	—	12	12	10	10	10	10	15	15	15
L18	7,5	7,5	7,5	6,5	6,5	6,5	6,5	10,5	10,5	10,5
L19	19	19	19	26	26	26	26	43	43	43
L20	11,5	7	17,5	3,5	10,5	36,5	77	17,5	24,5	20
L21	33	61	100	65	65	65	65	57	57	116
L22	4,5	4,5	4,5	4,5	4,5	4,5	4,5	7,5	4,5	7,5
L23	15	15	15	23,5	23,5	23,5	23,5	33	33	33
L24	6	12	29	10	15	28	42,5	10	13	13
L25	44	51	77	52	56	82	134	72	80	130
L26	6	6	6	6	6	6	6	10	10	10
L27	8	8	8	8	8	8	8	12	12	12
L29	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
L30	2 F9	2 F9	2 F9	2 F9	2 F9	2 F9	2 F9	3 F9	3 F9	3 F9
L31	1	1	1	1	1	1	1	1,5	1,5	1,5
L32	1,7	—	—	—	—	—	—	—	—	—
L33	7	7	21	11	11	24,5	24,5	14,5	14,5	24,5
L34	31,3	31,3	31,3	41,3	41,3	42,8	42,8	55,5	55,5	55,5
L35	—	—	—	—	3,5	6	6	—	—	—
L36	—	—	—	—	79	126	207	—	—	—
L37	—	—	—	—	—	12	12	—	—	—
L38	—	—	—	—	—	114	195	—	—	—
L40	26	26	26	36	36	36	36	48	48	48
L41	—	—	—	15,5	—	—	—	32,5	39,5	30
L42	—	—	—	41	—	—	—	27,0	27,0	96,0
A 1	38,5	38,5	38,5	45	45	45	45	66,5	66,5	66,5
A 2	24	24	24	24	24	24	24	24	24	24
A 3	2 min.	10 min.	31 min.	9 min.	17 min.	32 min.	57 min.	18 min.	23 min.	45 min.
1)	100	75	50	100	75	150	200	500	300	200
2)	2x5,5	2x14,5	2x26	2x6,5	2x13,5	2x26	2x52,5	2x8	2x15	2x30
3)	1,4	3,7	6,6	4,0	8,3	16,0	39,7	9,1	17,0	34,0
4)	100/50	100/50	100/50	250/125	250/125	250/125	250/125	500/250	500/250	500/250
weight kg	0,18	0,23	0,39	0,31	0,35	0,55	0,89	0,91	1,0	1,4
Z	0,5	0,5	0,5	0,5	0,5	0,5	28,5	0,5	0,5	0,5

All dimensions in mm

Ordering Code

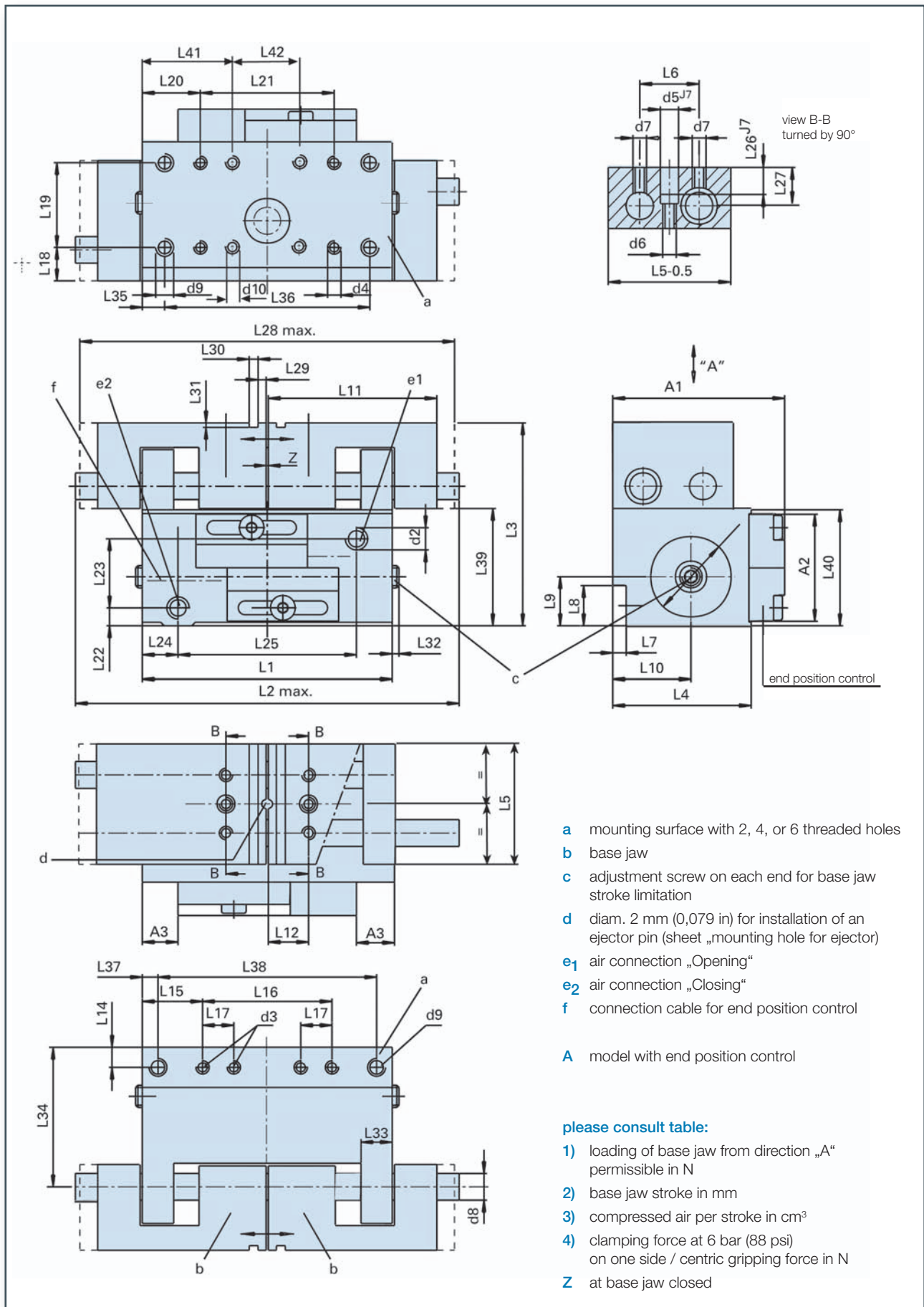
PSM	XXXX	-XXX	-XXX	-X
model code	base jaw stroke in mm	clamping force in N		

0 = basic model
 1 = with end position control
 5 = with cover only for:
PSM0050-011-100
PSM0200-013-250
 6 = with 1 and 5 PSM0600-016-500

Ordering Example you order :
PSM 0200 - 013 - 250 - 1

we deliver :
 Parallel Gripper model PSM 0200,
 with base jaw stroke 13 mm,
 clamping force 250 N, with end pos. control

Parallel Gripper PSMU 0050, PSMU 0200, PSMU 0600



PSMU	0050-011	0050-029	0050-052	0200-013	0200-027	0200-052	0200-105	0600-016	0600-030	0600-060
ø d1	18 J7	18 J7	18 J7	28 J7	28 J7	28 J7	28 J7	38 J7	38 J7	38 J7
d2	M5x4,5	M5x4	M5x4	M5x4,5	M5x4,5	M5x4,5	M5x4,5	M5x5	M5x5	M5x5
d3	M3x5,5	M3x5,5	M3x5,5	M3x5	M3x5	M3x5	M3x5	M4x8	M4x8	M4x8
d4	M3x5,5	M3x4	M3x4	M3x5,5	M3x5	M3x5	M3x5	M4x8	M4x8	M4x8
ø d5	4 J7	4 J7	4 J7	4 J7	4 J7	4 J7	4 J7	5 J7	5 J7	5 J7
d6	M3x11	M3x11	M3x11	M3x11	M3x11	M3x16	M3x5	M4x14	M4x14	M4x14
d7	M4x10	M4x10	M4x10	M4x10	M4x10	M4x12,5	M4x10	M5x13	M5x13	M5x13
ø d8	6	6	6	6	6	8	8	10	10	10
d9	—	—	—	—	M4x5,5	M4x7	M4x7	—	—	—
d10	—	—	—	M4x5	—	—	—	M5x10	M5x10	M5x10
L1	56	75	135	72	86	138	219	92	106	156
L2	86,5	144,5	254	106,5	150,5	258	442,5	137	185	296
L3	45,3	45,3	45,3	55,3	55,3	62	64	74,5	74,5	74,5
L4	31	31	31	37,5	37,5	37,5	37,5	59	59	59
L5	27	27	27	30	30	30	30	44,2	44,2	44,2
L6	13	13	13	13	13	13	13	26,1	26,1	26,1
L7	3	3	3	3	3	3	3	5	5	5
L8	9	9	9	9	9	9	9	15	15	15
L9	11	11	11	16	16	16	16	24	21	24
L10	17,5	17,5	17,5	19	19	19	19	35	35	35
L11	38	47,5	78	46	53,5	82	108,5	60,5	67,5	92,5
L12	9	9	10	10	10	10	10	16	16	16
L14	4,5	4,5	4,5	4,5	4,5	4,5	4,5	7,5	7,5	7,5
L15	6	3,5	33,5	10	17	43	83,5	10	17	42
L16	44	68	68	52	52	52	52	72	72	72
L17	—	12	12	10	10	10	10	15	15	15
L18	7,5	7,5	7,5	6,5	6,5	6,5	6,5	10,5	10,5	10,5
L19	19	19	19	26	26	26	26	43	43	43
L20	11,5	7	17,5	3,5	10,5	36,5	77	17,5	24,5	20
L21	33	61	100	65	65	65	65	57	57	116
L22	4,5	4,5	4,5	4,5	4,5	4,5	4,5	7,5	4,5	7,5
L23	15	15	15	23,5	23,5	23,5	23,5	33	33	33
L24	6	12	29	10	15	28	42,5	10	13	13
L25	44	51	77	52	56	82	134	72	80	130
L26	6	6	6	6	6	6	6	10	10	10
L27	8	8	8	8	8	8	8	12	12	12
L28	87,5	124,5	208,5	105,5	134,5	216,5	350,5	137,5	165,5	245,5
L29	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8
L30	2 F9	2 F9	2 F9	2 F9	2 F9	2 F9	2 F9	3 F9	3 F9	3 F9
L31	1	1	1	1	1	1	1	1,5	1,5	1,5
L32	1,7	—	—	—	—	—	—	—	—	—
L33	7	7	21	11	11	24,5	24,5	14,5	14,5	24,5
L34	31,3	31,3	31,3	41,3	41,3	42,8	42,8	55,5	55,5	55,5
L35	—	—	—	—	3,5	6	6	—	—	—
L36	—	—	—	—	79	126	207	—	—	—
L37	—	—	—	—	—	12	12	—	—	—
L38	—	—	—	—	—	114	195	—	—	—
L39	26,3	26,3	26,3	36,3	36,3	36,3	36,3	48,5	48,5	48,5
L40	26	26	26	36	36	36	36	48	48	48
L41	—	—	—	15,5	—	—	—	32,5	39,5	30,0
L42	—	—	—	41	—	—	—	27,0	27,0	96,0
A1	38,5	38,5	38,5	45	45	45	45	66,5	66,5	66,5
A2	24	24	24	24	24	24	24	24	24	24
A3 min.	2	10	31	9	17	32	57	18	23	45
1)	150	110	75	150	110	225	300	750	450	300
2)	2x5,5	2x14,5	2x26	2x6,5	2x13,5	2x26	2x52,5	2x8	2x15	2x30
3)	1,4	3,7	6,6	4,0	8,3	16,0	39,7	9,1	17,0	34,0
4)	100/50	100/50	100/50	250/125	250/125	250/125	250/125	500/250	500/250	500/250
weight kg	0,24	0,30	0,48	0,45	0,5	0,75	1,16	1,13	1,2	1,6
Z				0,5			28,5		0,5	

All dimensions in mm

Ordering Code

PSMU XXXX - XXX - XXX - X

|
|
|

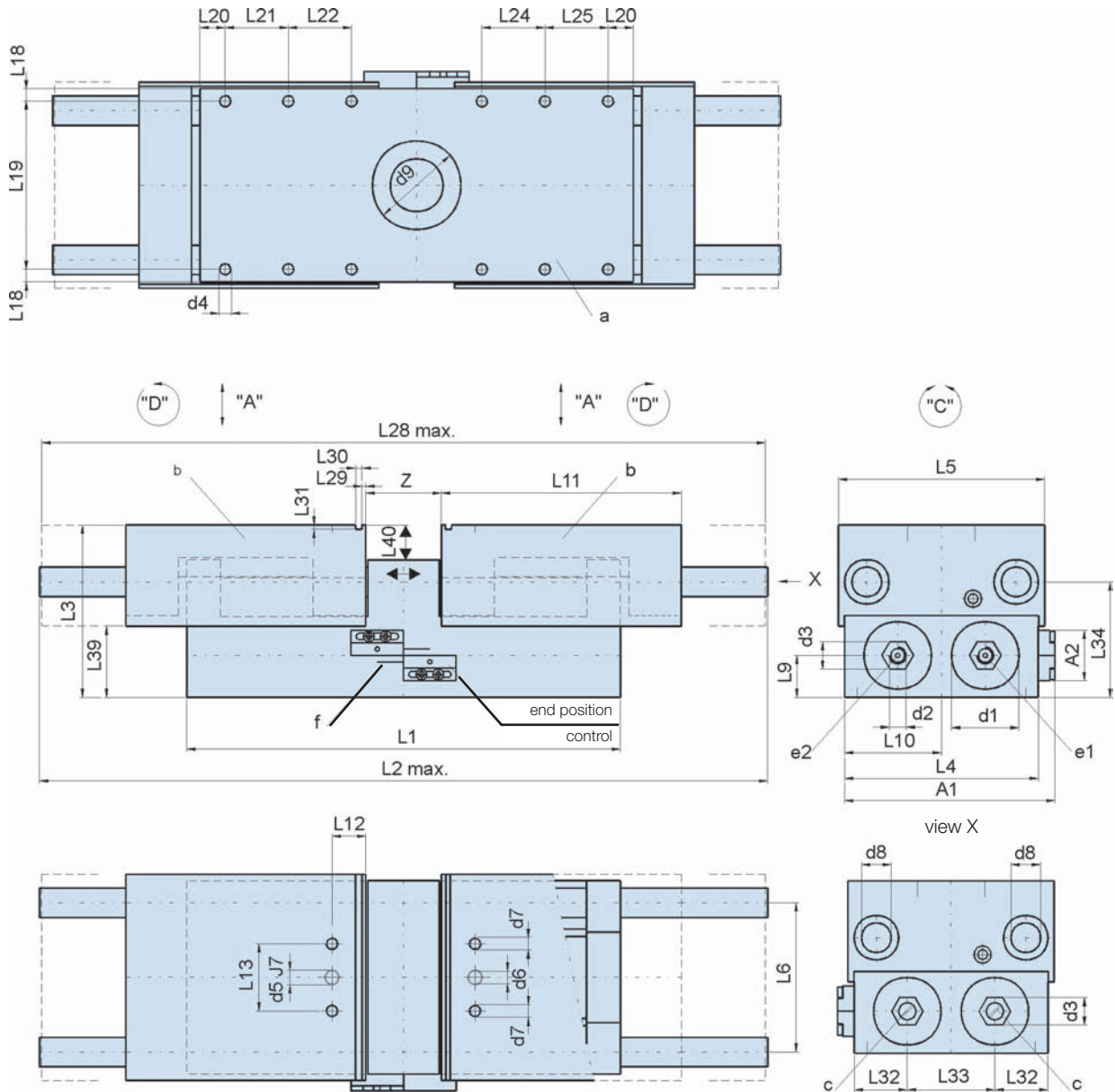
model code
base jaw stroke in mm
clamping force in N

Ordering Example you order : PSMU 0200 - 013 - 250 - 1

— 0 = basic model
 1 = with end position control (sheet end pos. control)

we deliver :
 Parallel Gripper with u-shaped jaws,
 model PSMU 0200,
 — with base jaw stroke 13 mm,
 clamping force 250 N, with end pos. control

Parallel Gripper PSMU 1200, PSMU 3000



- a** mounting surface with 12 threaded holes
- b** base jaw
- c** adjustment screws, for base jaw stroke limitation
- e₁** air connection „Opening“
- e₂** air connection „Closing“
- f** connection cable for end position control

- A** model with end position control

model	PSMU 1200-080	PSMU 3000-080
ø d1	33.0	53.0
d2	R1/8x8	R1/4x10
d3	6kt SW13	6kt SW 19
d4	M6x12	M8x12
ø d5	6.0 J7 x12	8.0 J7 x20
d6	M5x10	M6x10
d7	M6x18	M8x20
ø d8	14.0	20.0
ø d9	42.0x1.0	62.0
L1	243.0	318.0
max. L2	384.0	464.0
L3	82.0	125.0
L4	92.0	134.0
L5	98.0	141.0
L6	71.0	100.0
L9	20.0	37.6
L10	46.0	67.0
L11	114.0	122.0
L12	44.0	25.0
L13	32.0	46.0
L18	6.0	8.0
L19	80.0	118.0
L20	12.0	15.0
L21	30.0	50.0
L22	30.0	50.0
L24	30.0	50.0
L25	30.0	50.0
max. L28	381.0	460.0
L29	29.8	10.8
L30	3.0 F9	4.0 F9
L31	1.5	1.8
L32	25.2	36.1
L33	41.6	61.8
L34	55.0	105.0
L39	34.0	61.5
L40	16,5	20,0
A1	100.0	146.0
A2	24.0	24.0
Z at base jaw closed	73.0	136.0
base jaw stroke in mm	2 x 40.0	2 x 40.0
compressed air per stroke in cm ³	100.9	319.2
clamping force at 6bar (88psi) on one side/centric gripping force in N	1200/600	3000/1500
weight in kg	4.9	ca. 5.4
loading of base jaw from direction "A"	2x 2000 N	2x 3000 N
torque Md "C"	2x 150 Nm	2x 310 Nm
torque "D"	2x 180 Nm	2x 290 Nm

All dimensions in mm

Ordering Code

PSMU XXXX - XXX - XXXX - X

model code base jaw stroke in mm clamping force in N

0 = basic model
1 = with end position control (sheet end position control)

Ordering Example

you order :
PSMU 1200 - 080 - 1200 - 1

we deliver :
Parallel Gripper with u-shaped jaws,
model PSMU 1200,
with base jaw stroke 80 mm,
clamping force 1200 N,
with end position control