

**GRIPPERS: ANGULAR, SEMI-PARALLEL, 180° ANGULAR, PARALLEL,
THREE FINGER ANGULAR**

SECTION 4



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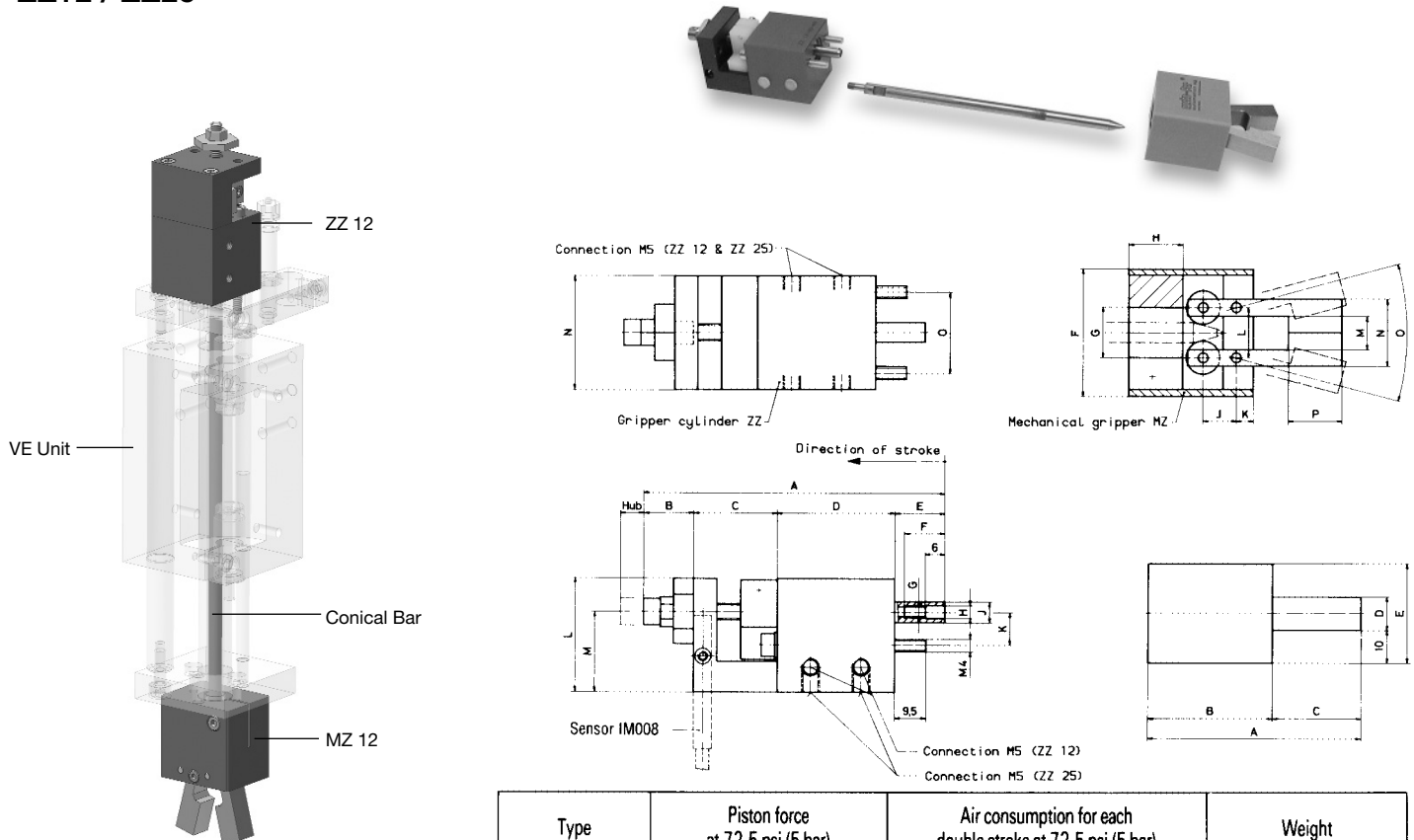
mf automation, inc.

www.meto-fer.com

1-888-638-6337

Mechanical Gripper (use with Hollow Shaft Units)

ZZ12 / ZZ25



Type	Piston force at 72.5 psi (5 bar)	Air consumption for each double stroke at 72.5 psi (5 bar)	Weight
ZZ 12	7 lb (31 N)	.00025 scf (0,007 NL)	.4 lb (0,2 kg)
ZZ 25	35 lb (154 N)	.00177 scf (0,05 NL)	1.1 lb (0,5 kg)

Type	Stroke	A	B	C	D	E	F	G	Ø H	Ø J	K	L	M	N	O
ZZ 12	0–7	90	15	25	35	15	12	M4	4 +0.06 +0.04	6 -0.010 -0.025	—	34	24	34	24
ZZ 25	0–10	94	9,5	29	45	10,5	14	M5	6 +0.04 +0.02	10 -0.005 -0.020	10	46	29	48	40

Order No. ZZ12 ZZ25

Sensor IM-008-NS-U2L (1 pc. to sense when gripper is closed)
Order No. IM-008-PS-U2L

Technical data:

- Operating medium Compressed air
oiled / not oiled
- Operating pressure 42.5–116 psi (3–8 bar)
- Air connection M5

Mechanical gripper MZ

Typ	A	B	C	D	E	F	ØG	H	J	K	L	M	N	O	P	Weight	Clamping force at 72.5 psi (5 bar)	Order No.
MZ 12	63.5	37	26.5	10	30	38	15 - H7	16	10	5	15	10	20	29°	16	0.27 lb (0.12 kg)	4 lb (18 N)	MZ 12
MZ 25	114	57	57	20	40	60	20 - H7	19	20	6	30	20	40	23°	36	1.45 lb (0.66 kg)	20 lb (90 N)	MZ 25

Mechanical gripper for vertical units

Order No.

NW ... VE ...

Vertical unit VE 22, VE 52, VE 82

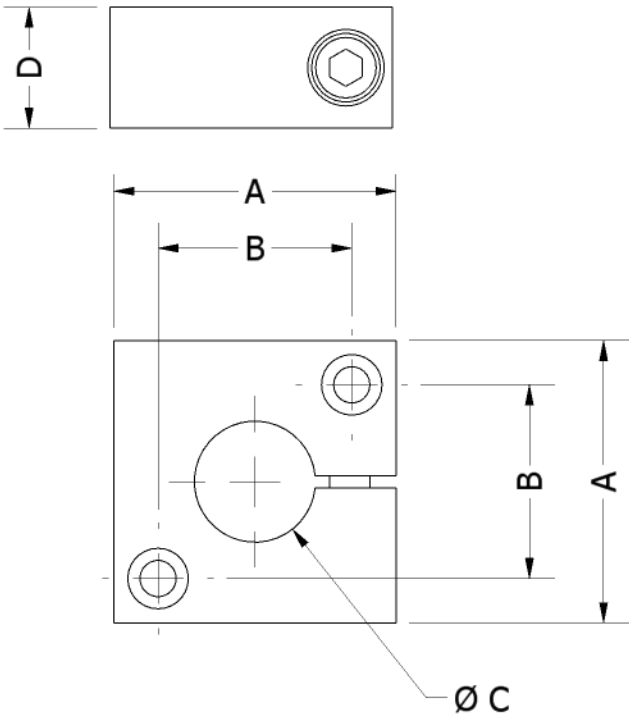
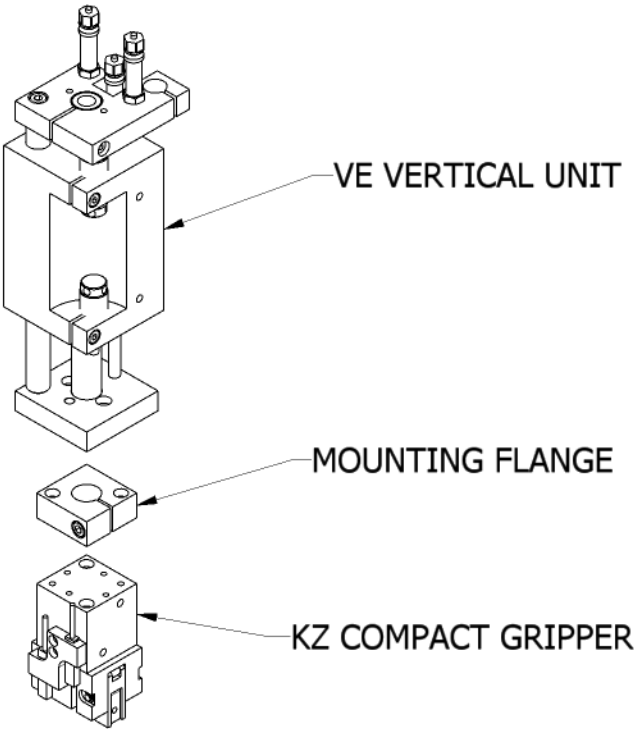
Gripper cylinder ZZ12 or ZZ 25

Ordering example:

NW 12 VE 22 NW 12 consists of:
MZ 12, ZZ 12 and Conical bar

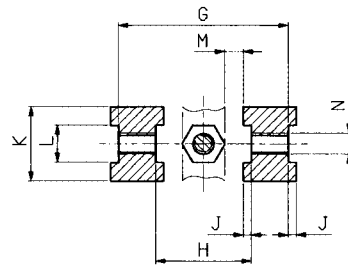
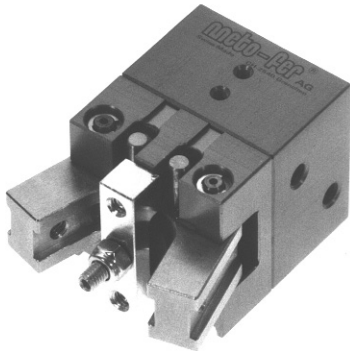
NW 25 VE 22 NW 25 consists of:
MZ 25, ZZ 25 and Conical bar,
Adapter ZB 02.011 and
Gripper bracket ZB 02.012

Mounting flange for compact grippers

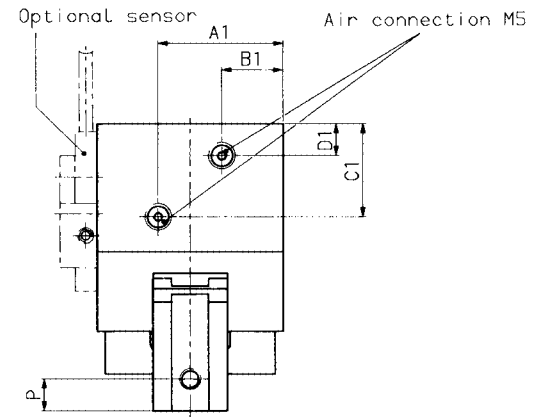
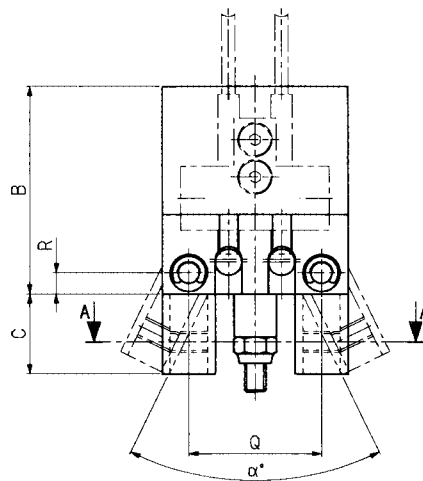
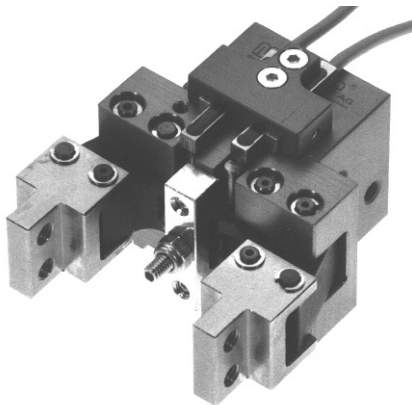
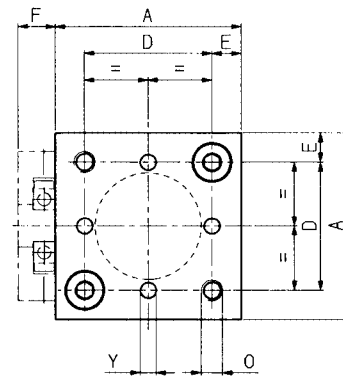


GRIPPER	A	B	C	D	ORDER NO.
...12	28	20	15-H7	12	ZB.08.010
...20	35	24	15-H7	15	ZB.08.001
...25	40	30	15-H7	15	ZB.08.002
...32	60	40	15-H7	15	ZB.08.003
...50	70	50	15-H7	15	ZB.08.008

Angular Gripper KZ



Section A-A



Mounting flange for KZ see sheet 4.013

Dimensions for air connections				
Type	A1	B1	C1	D1
KZ 12	18.25	9.75	14.5	6
KZ 20	23.5	11.5	17.5	6
KZ 25	26	14	19.5	5
*KZ 32	30	30	34	8
*KZ 50	35	35	33	8

*for these types, the dimensions A1 & B1 are equal

Type	Clamping force at 72.5 psi (5 bar)	Air consumption for each double stroke at 5 bar	Weight
KZ 12	4 lb (19 N)	.0002 scf (0.004 NL)	0.3 lb (0.12 kg)
KZ 20	7 lb (30 N)	.0005 scf (0.014 NL)	0.6 lb (0.25 kg)
KZ 25	11 lb (48 N)	.0010 scf (0.027 NL)	0.8 lb (0.35 kg)
KZ 32	19 lb (85 N)	.0025 scf (0.072 NL)	2.4 lb (1.10 kg)
KZ 50	49 lb (220 N)	.0079 scf (0.224 NL)	3.6 lb (1.65 kg)

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	Y	α
KZ12	28	31.5	14.5	20	4	7	25	16	1.5	12	6-H7	3	M3	M4/8	5	20	3.5	ø2-EF7/5	52°
KZ20	35	39	15	24	5.5	7	32	18	1.5	14	7-H7	3.5	M4	M4/12	6	25	4	ø3-EF7/5	52°
KZ25	40	44	20	30	5	7	37	23	1.5	14	7-H7	5	M4	M5/15	8	30	4	ø4-EF7/5	58°
KZ32	60	72	32	40	10	8	56	32	2	25	12-H7	9	M6	M6/15	10	45	7	ø5-EF7/4	56°
KZ50	70	72	40	50	10	8	66	38	2	30	15-H7	9.5	M6	M8/17	15	55	9	ø5-EF7/4	60°

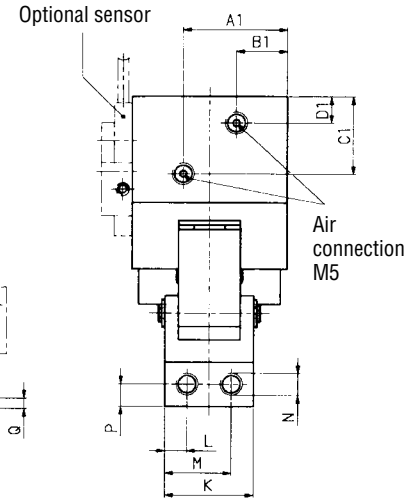
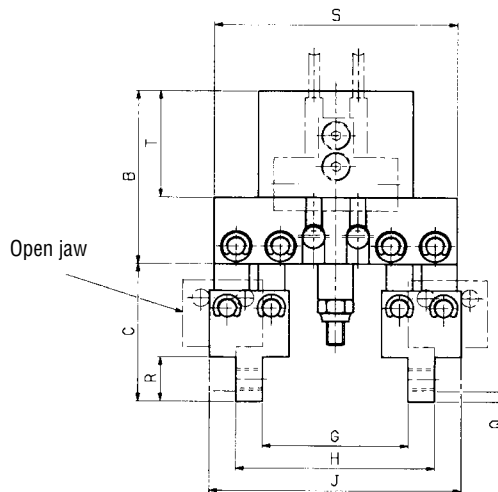
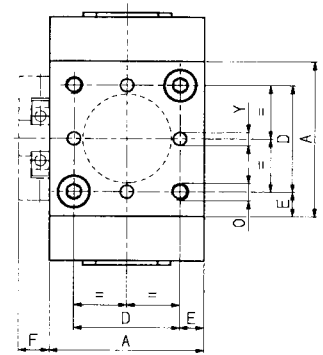
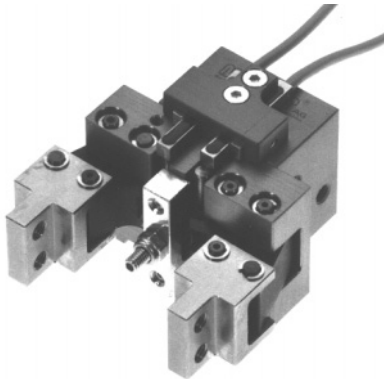
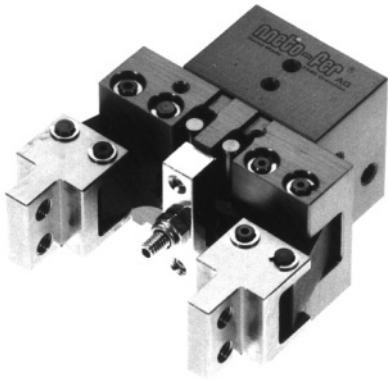
Order No.	KZ12	KZ20	KZ25	KZ32	KZ50	without sensor bracket
	KZ12D	KZ20D	KZ25D	KZ32D	KZ50D	D = with sensor bracket
						(IM... sensors not included)

Order No.	KZ12D	KZ25D	KZ25D	Order No.	KZ32D	KZ50D
(Sensors)	IM-004-NS-U2L (NPN)			(Sensors)	IM-006-NS-U2L (NPN)	
	IM-004-PS-U2L (PNP)				IM-006-PS-U2L (PNP)	

Technical data:

- Operating medium: Compressed air oiled/ not oiled
- Operating pressure: 43.5 - 116 psi (3 - 8 bar)
- Air connection: M5
- Sensor option: Two IM...proximity sensors...gripper open/ gripper closed

Semi-Parallel Gripper KZP



Mounting flange for KZP see sheet 4.013

Dimensions for air connections				
Type	A1	B1	C1	D1
KZP 12	18.25	9.75	14.5	6
KZP 20	23.5	11.5	17.5	6
KZP 25	26	14	19.5	5
*KZP 32	30	30	34	8
*KZP 50	35	35	33	8

*For these types, the dimensions A1 & B1 are equal.

Type	Clamping force at 72.5 psi (5 bar)	Air consumption for each double stroke at 5 bar	Weight
KZP 12	4 lb (19 N)	.0002 scf (0.004 NL)	0.4 lb (0.18 kg)
KZP 20	7 lb (30 N)	.0005 scf (0.014 NL)	0.7 lb (0.30 kg)
KZP 25	11 lb (48 N)	.0010 scf (0.027 NL)	1.0 lb (0.45 kg)
KZP 32	19 lb (85 N)	.0025 scf (0.072 NL)	3.7 lb (1.70 kg)
KZP 50	49 lb (220 N)	.0079 scf (0.224 NL)	5.1 lb (2.30 kg)

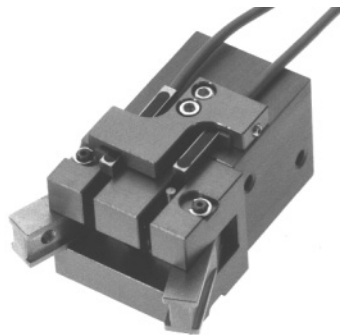
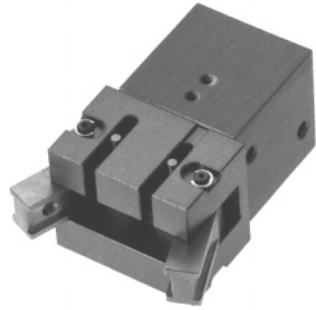
Type	A	B	C	D	E	F	G min.	G max.	H min.	H max.	J min.	J max.	K	L	M	N	O	P	Q	R	S	T	Y
KZP12	28	31.5	20.5	20	4	7	22.5	31	33.5	42	41.5	50	17	3.5	13.5	M4	M4/8	4	1.1	8	41	19.5	ø2-EF7/5
KZP20	35	39	31	24	5.5	7	33	45	45	57	57	69	20	5	15	M5	M4/12	5	2.3	10	55	24	ø3-EF7/5
KZP25	40	44	31	30	5	7	38	51.5	50	63.5	62	75.5	20	5	15	M5	M5/15	5	2.7	10	60	28	ø4-EF7/5
KZP32	60	72	49	40	10	8	47	68	75	96	95	116	35	10	25	M6	M6/15	7.5	2.7	15	95	44	ø5-EF7/4
KZP50	70	72	47	50	10	8	50	74	82	106	102	126	40	10	30	M6	M8/17	7.5	3	15	105	42	ø5-EF7/4

Order No.	KZP12	KZP20	KZP25	KZP32	KZP50	without sensor bracket
	KZP12D	KZP20D	KZP25D	KZP32D	KZP50D	D = with sensor bracket
						(IM... sensors not included)
Order No.	KZP12D	KZP20D	KZP25D	Order No.	KZP32D	KZP50D
(Sensors)	IM-004-NS-U2L (NPN)			(Sensors)	IM-006-NS-U2L (NPN)	
	IM-004-PS-U2L (PNP)				IM-006-PS-U2L (PNP)	

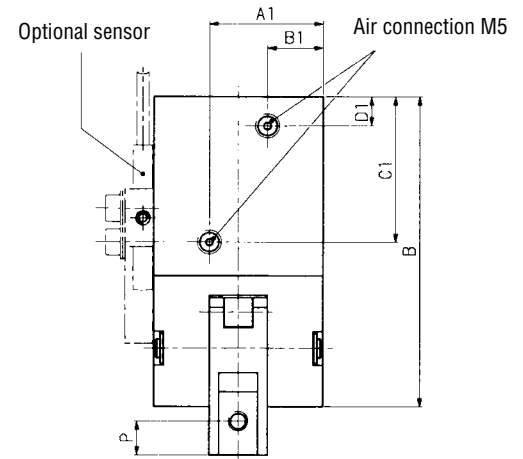
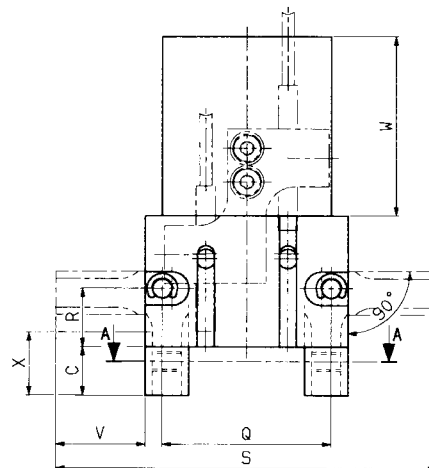
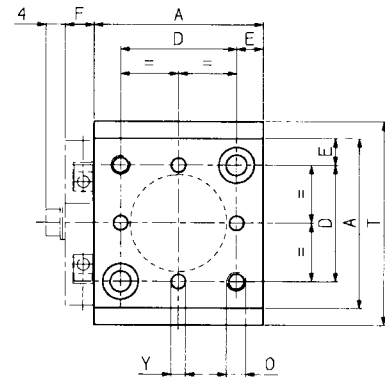
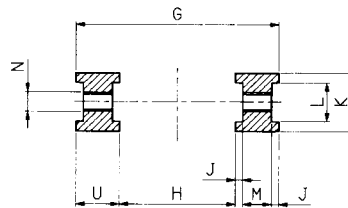
Technical data:

- Operating medium: Compressed air oiled/ not oiled
- Operating pressure: 43.5 - 116 psi (3 - 8 bar)
- Air connection: M5
- Sensor option: Two IM...proximity sensors...gripper open/ gripper closed

180° Angular Gripper KZ 180



Section A-A



Mounting flange for KZ 180 see sheet 4.013

Dimensions for air connections				
Type	A1	B1	C1	D1
KZ 180/12	18.25	9.75	24.5	6
KZ 180/20	23.5	11.5	30	6
KZ 180/25	26	14	35	5
*KZ 180/32	30	30	50.5	7.2
*KZ 180/50	35	35	58.5	8.5

*for these types, the dimensions A1 & B1 are equal

Type	Clamping force at 72.5 psi (5 bar)	Air consumption for each double stroke at 5 bar	Weight
KZ 180/12	4 lb (16 N)	.0006 scf (0.016 NL)	0.3 lb (0.15 kg)
KZ 180/20	11 lb (49 N)	.0022 scf (0.063 NL)	0.7 lb (0.30 kg)
KZ 180/25	20 lb (87 N)	.0038 scf (0.108 NL)	1.0 lb (0.45 kg)
KZ 180/32	30 lb (135 N)	.0095 scf (0.269 NL)	2.6 lb (1.25 kg)
KZ 180/50	65 lb (291 N)	.0276 scf (0.782 NL)	4.5 lb (2.05 kg)

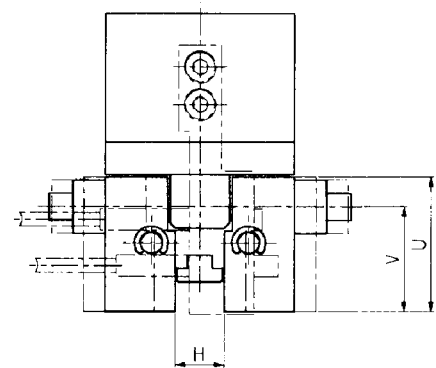
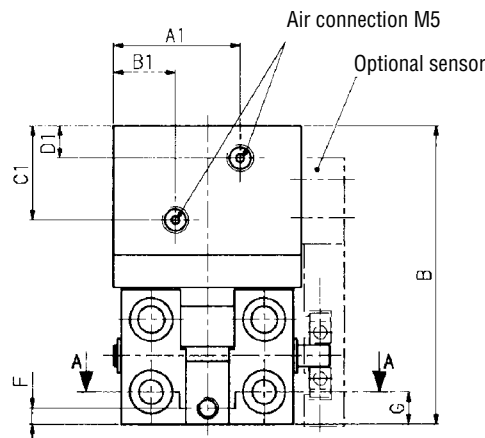
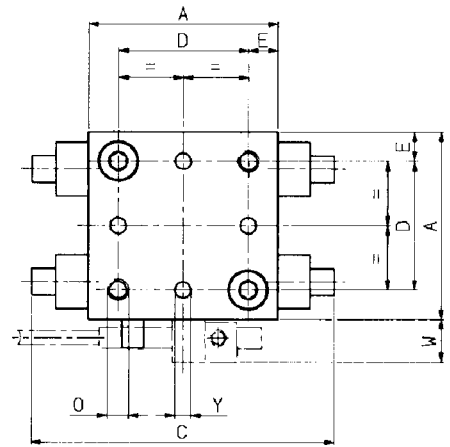
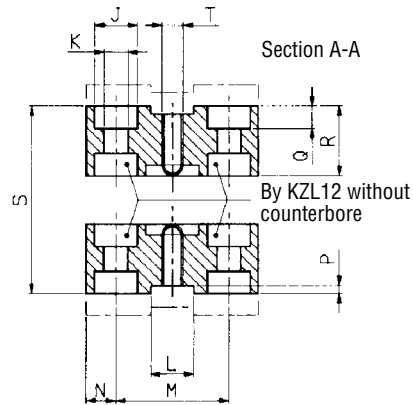
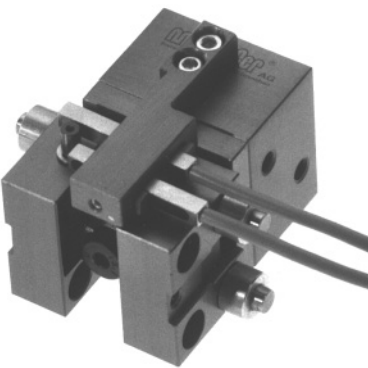
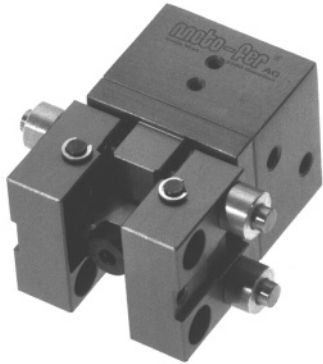
Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
KZ180/12	28	52	10	20	4	6	30	18	1	12	8-H7	4	M4	M4/8	5	25	9	63	30	6	16	29.5	10.5	ø2-EF7/5
KZ180/20	35	64	10	24	5.5	6	42	24	1.5	12	8-H7	6	M4	M4/12	7	35	12	79	42	9	18.5	37	13	ø3-EF7/5
KZ180/25	40	76.5	13	30	5	6	47	29	1.5	14	10-H7	6	M5	M5/15	8	40	13.5	93	50	9	21.5	43.5	15	ø4-EF7/5
KZ180/32	60	108.5	20	40	10	8	65	39	2	25	12-H7	9	M6	M6/15	10	55	20	135	68	13	33.5	59.5	24	ø5-EF7/4
KZ180/50	70	125.5	33	50	10	8	77	47	2.5	30	15-H7	10	M6	M8/17	15	65	23.5	178	80	15	49	67.5	35	ø5-EF7/4

Order No.	KZ180/12	KZ180/20	KZ180/25	KZ180/32	KZ180/50	without sensor bracket
	KZ180/12D	KZ180/20D	KZ180/25D	KZ180/32D	KZ180/50D	D = with sensor bracket
Order No.	KZ180/12D	KZ180/20D	KZ180/25D			(IM... sensors not included)
(Sensors)	IM-004-NS-U2L (NPN)					
	IM-004-PS-U2L (PNP)					
Order No.						KZ180/32D KZ180/50D
(Sensors)						IM-006-NS-U2L (NPN)
						IM-006-PS-U2L (PNP)

Technical data:

- Operating medium: Compressed air oiled/ not oiled
- Operating pressure: 43.5 - 116 psi (3 - 8 bar)
- Air connection: M5
- Sensor option: Two IM...proximity sensors...gripper open/ gripper closed

Parallel Gripper KZL



Mounting flange for KZL see sheet 4.013

Dimensions for air connections				
Type	A1	B1	C1	D1
KZL 12	18.25	9.75	14.5	6
KZL 20	23.5	11.5	17.5	6
KZL 25	26	14	19.5	5
*KZL 32	30	30	34	8
*KZL 50	35	35	33	8

*for these types, the dimensions A1 & B1 are equal

Type	Clamping force at 72.5 psi (5 bar)	Air consumption for each double stroke at 5 bar	Weight
KZL 12	7 lb (31 N)	.0002 scf (0.004 NL)	0.3 lb (0.15 kg)
KZL 20	20 lb (88 N)	.0005 scf (0.014 NL)	0.4 lb (0.20 kg)
KZL 25	31 lb (137 N)	.0010 scf (0.027 NL)	0.8 lb (0.35 kg)
KZL 32	51 lb (225 N)	.0025 scf (0.072 NL)	2.1 lb (0.95 kg)
KZL 50	124 lb (550 N)	.0079 scf (0.224 NL)	3.3 lb (1.50 kg)

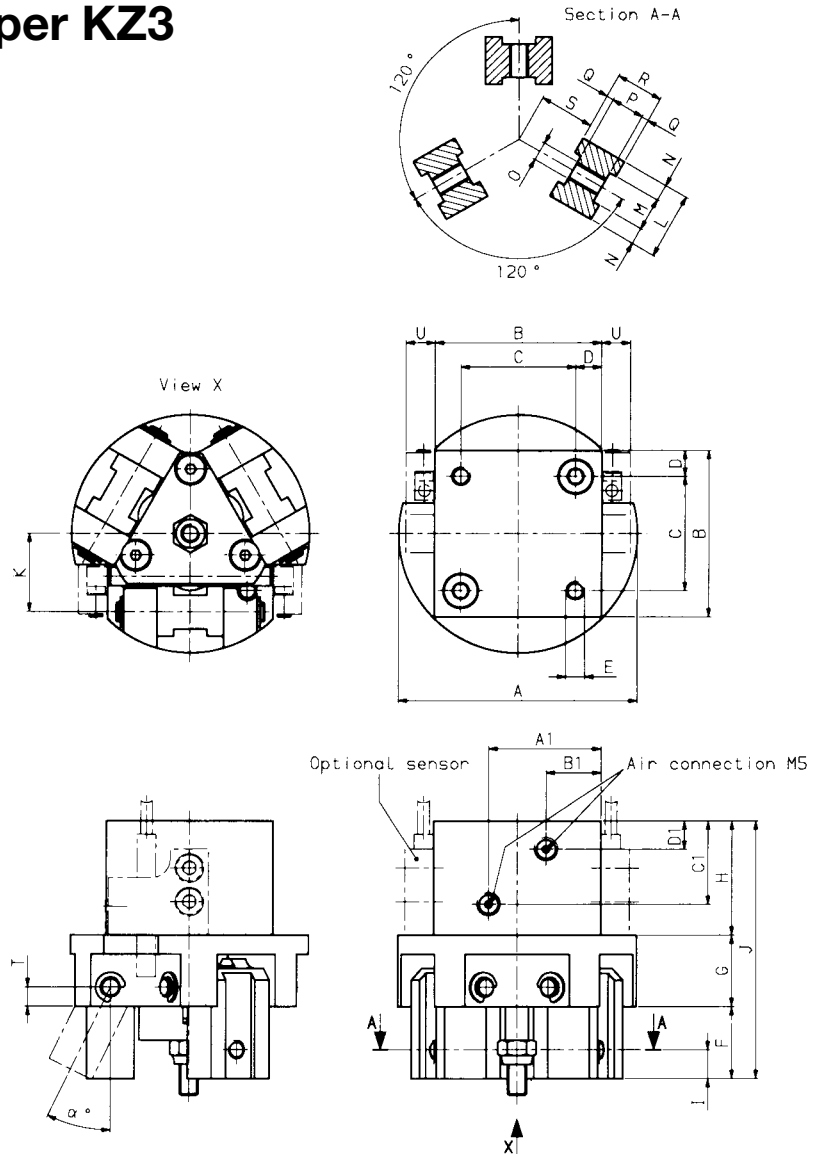
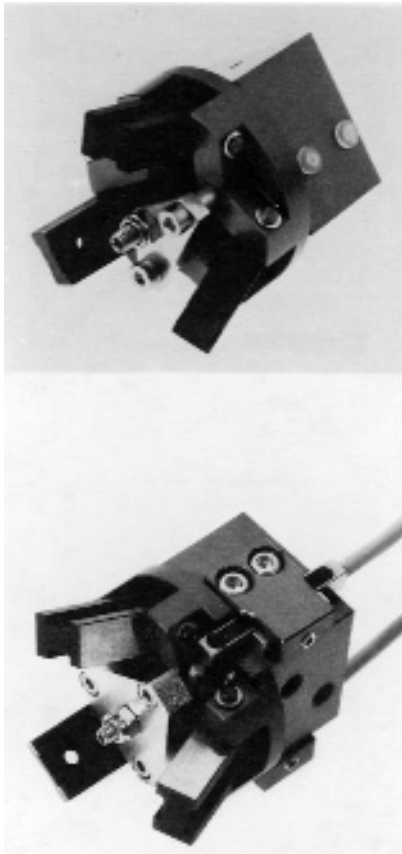
Type	A	B	C	D	E	F	G	H min.	H max.	J	K	L	M	N	O	P	Q	R	S min.	S max.	T	U	V	W	Y
KZL12	28	49.5	48	20	4	7.5	7.5	8	15	6	3.5	6-H7	17	5.5	M4/8	1.2	3.2	10	28	35	M3	25	20	8	ø2-EF7/5
KZL20	35	55.5	56	24	5.5	3	6	9.5	17.5	8	4.5	8-H7	21	5.5	M4/12	1.5	4.2	13	35.5	43.5	M4	25	19.5	8	ø3-EF7/5
KZL25	40	65.5	60	30	5	4	7	10	20	8	4.5	10-H7	26	5.2	M5/15	1.5	4.2	15	40	50	M5	30	22.5	8	ø4-EF7/5
KZL32	60	87.5	90	40	10	8	8	15	31	10	5.5	12-H7	28	14	M6/15	2.5	5.2	22.5	60	76	M6	35	26.5	9.5	ø5-EF7/4
KZL50	70	102	107	50	10	16	16	20	40	11	6.6	15-H7	40	13	M8/17	2.5	6.2	25	70	90	M6	50	39	9.5	ø5-EF7/4

Order No.	KZL12	KZL20	KZL25	KZL32	KZL50	without sensor bracket
	KZL12D	KZL20D	KZL25D	KZL32D	KZL50D	D = with sensor bracket
						(IM... sensors not included)
Order No.	KZL12D	KZL20D	KZL25D	Order No.	KZL32D, KZL50D	
(Sensors)	IM-004-NS-U2L (NPN)			(Sensors)	IM-006-NS-U2L (NPN)	
	IM-004-PS-U2L (PNP)				IM-006-PS-U2L (PNP)	

Technical data:

- Operating medium: Compressed air oiled/ not oiled
- Operating pressure: 43.5 - 116 psi (3 - 8 bar)
- Air connection: M5
- Sensor option: Two IM...proximity sensors... gripper open / gripper closed

Three Finger Angular Gripper KZ3



Mounting flange for KZ3 see sheet 4.013

Dimensions for air connections				
Type	A1	B1	C1	D1
KZ 3/12	18.25	9.75	14.5	6
KZ 3/20	23.5	11.5	17.5	6
KZ 3/25	26	14	19.5	5
*KZ 3/32	30	30	34	8
*KZ 3/50	35	35	33	8

*for these types, the dimensions A1 & B1 are equal

Type	Clamping force at 72.5 psi (5 bar)	Air consumption for each double stroke at 5 bar	Weight
KZ 3/12	4 lb (19 N)	.0002 scf (0.004 NL)	0.3 lb (0.15 kg)
KZ 3/20	7 lb (30 N)	.0005 scf (0.014 NL)	0.6 lb (0.25 kg)
KZ 3/25	11 lb (48 N)	.0010 scf (0.027 NL)	0.9 lb (0.40 kg)
KZ 3/32	19 lb (85 N)	.0025 scf (0.072 NL)	3.1 lb (1.40 kg)
KZ 3/50	49 lb (220 N)	.0079 scf (0.224 NL)	4.4 lb (2.00 kg)

Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	α
KZ 3/12	40	28	20	4	M4/8	14.5	12	19.5	5	46	13.5	12	6-H7	3	M3	4.5	1.5	7.5	10	3.5	6	26°
KZ 3/20	50	35	24	5.5	M4/12	15	15	24	6	54	16.5	14	7-H7	3.5	M4	7	1.5	10	11.5	4	6	26°
KZ 3/25	55	40	30	5	M5/15	20	16	28	8	64	19.5	14	7-H7	3.5	M4	7	1.5	10	14.5	4	6	29°
KZ 3/32	90	60	40	10	M6/15	32	28	44	10	104	30	25	12-H7	6.5	M6	12	2	16	21.5	7	8	28°
KZ 3/50	100	70	50	10	M8/17	40	30	42	15	112	36	30	15-H7	7.5	M6	14	2	18	25.5	9	8	30°

Order No.	KZ3/12	KZ3/20	KZ3/25	KZ3/32	KZ3/50	without sensor bracket
	KZ3/12D	KZ3/20D	KZ3/25D	KZ3/32D	KZ3/50D	D = with sensor bracket
						(IM... sensors not included)
Order No.	KZ3/12D	KZ3/20D	KZ3/25D	Order No.	KZ3/32D	KZ3/50D
(Sensors)	IM-004-NS-U2L (NPN)			(Sensors)	IM-006-NS-U2L (NPN)	
	IM-004-PS-U2L (PNP)				IM-006-PS-U2L (PNP)	

Technical data:

- Operating medium: Compressed air oiled/ not oiled
- Operating pressure: 43.5 - 116 psi (3 - 8 bar)
- Air connection: M5
- Sensor option: Two IM...proximity sensors... gripper open / gripper closed