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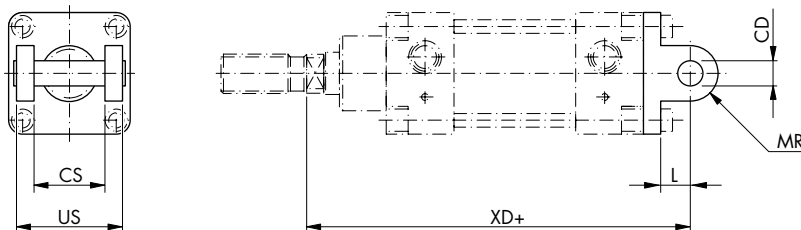
### Important Note

The information shown in these documents is for guidance only. No liability is accepted for any errors or omissions. The designer or user is solely responsible for the safe and proper application of the parts, assemblies or equipment described.

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Schwenklager mit Bolzen

Female swivel bearing with bolt



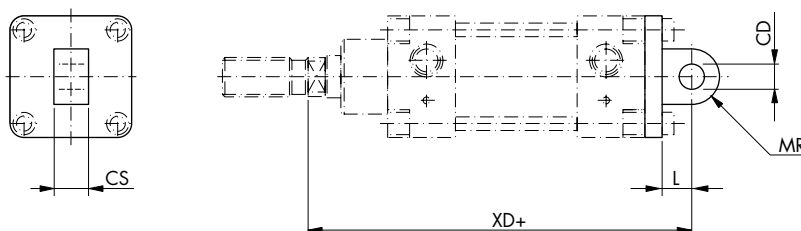
Bestell-Nr./Order No.	∅	CS	US	L	XD	CD	MR
18.001.01	32	26	45	13	142	10	11
18.001.02	40	28	52	16	160	12	13
18.001.03	50	32	60	16	170	12	13
18.001.04	63	40	70	21	190	16	17
18.001.05	80	50	90	22	210	16	17
18.001.06	100	60	110	27	230	20	21
18.001.07	125	70	130	30	275	25	26
18.001.08	160	90	170	35	315	30	31
18.001.09	200	90	170	35	335	30	31

+ = Hub hinzurechnen

+ = add stroke

Schwenklager

Male swivel bearing

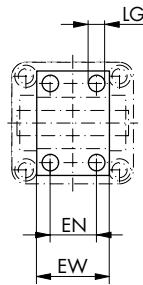


Bestell-Nr./Order No.	∅	CS	L	XD	CD	MR
18.002.01	32	26	13	142	10	11
18.002.02	40	28	16	160	12	13
18.002.03	50	32	16	170	12	13
18.002.04	63	40	21	190	16	17
18.002.05	80	50	22	210	16	17
18.002.06	100	60	27	230	20	21
18.002.07	125	70	30	275	25	26
18.002.08	160	90	35	315	30	31
18.002.09	200	90	35	335	30	31

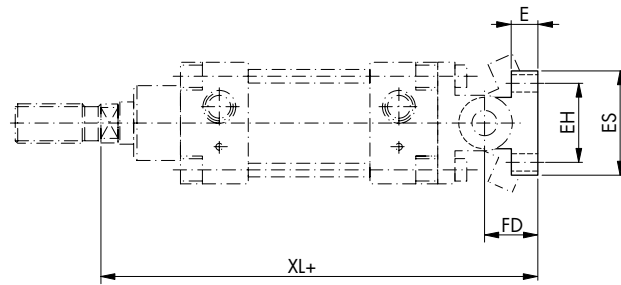
+ = Hub hinzurechnen

+ = add stroke

Montageflansch für Schwenklager  
mit Bolzen



Mounting flange for female clevis

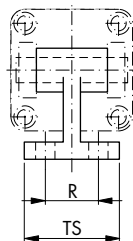


Bestell-Nr./Order No.	Ø	LG	EN	EW	XL	FD	EH	ES	E
18.003.01	32	7		25	160	18	28	40	8
18.003.02	40	9	16	28	186	26	38	52	10
18.003.03	50	9	16	32	196	26	38	52	10
18.003.04	63	11	25	40	224	34	54	75	12
18.003.05	80	11	25	50	244	34	54	75	12
18.003.06	100	14	32	60	271	41	90	115	16
18.003.07	125	14	32	70	316	41	90	115	16
18.003.08	160	18	43	90	370	55	150	180	20
18.003.09	200	18	43	90	390	55	150	180	20

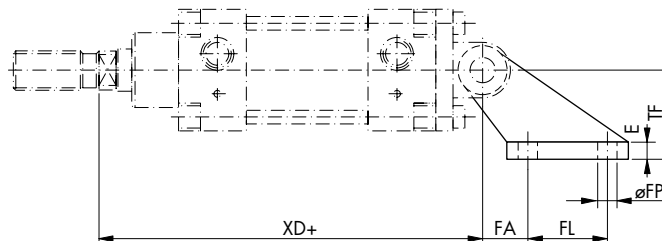
+ = Hub hinzurechnen

+ = add stroke

Montageflange 90° für Schwenklager  
mit Bolzen\*



Mounting flange 90° for female clevis\*



Bestell-Nr./Order No.	Ø	R	TS	FP	XD	FA	FL	TF	E
18.004.01	32	25	41	7	142	18	20	32	8
18.004.02	40	32	52	9	160	25	32	45	10
18.004.03	50	32	52	9	170	25	32	45	10
18.004.04	63	40	63	11	190	32	50	63	12
18.004.05	80	40	63	11	210	32	50	63	12
18.004.06	100	50	80	14	230	40	70	90	16
18.004.07	125	50	80	14	275	40	70	90	16
18.004.08	160	63	110	18	315	50	110	140	20
	200	63	110	18	335	50	110	140	20

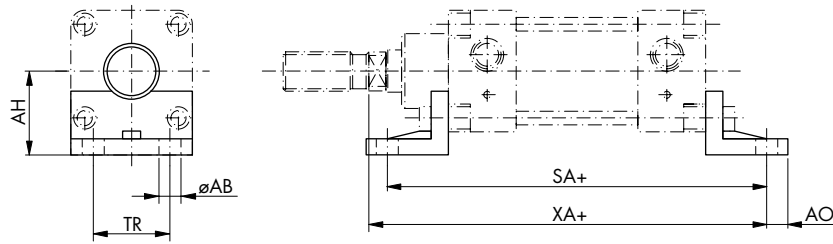
+ = Hub hinzurechnen

+ = add stroke

\* Fällt nicht unter den ISO 15552 Standard

\* Not covered by ISO 15552 standard

1 Montagewinkel  
und 2 Schrauben



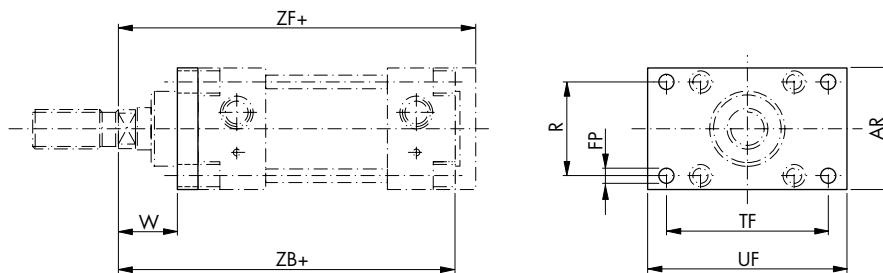
1 Mounting bracket  
and 2 screws

Bestell-Nr./Order No.	Ø	AH	TR	AB	SA	XA	AO
18.005.01	32	32	32	7	142	144	11
18.005.02	40	36	36	9	161	163	8
18.005.03	50	45	45	9	170	175	15
18.005.04	63	50	50	9	185	190	13
18.005.05	80	63	63	12	210	215	14
18.005.06	100	71	75	14	220	230	16
18.005.07	125	90	90	16	250	270	25
18.005.08	160	115	115	18	300	320	15
18.005.09	200	135	135	22	320	345	30

+ = Hub hinzurechnen

+ = add stroke

Flanschplatte



Mounting plate

Bestell-Nr./Order No.	Ø	W	ZF	R	FP	TF	UF	ZB	AR
18.006.01	32	16	130	32	7	64	80	120	45
18.006.02	40	20	145	36	9	72	90	135	52
18.006.03	50	25	155	45	9	90	110	143	65
18.006.04	63	25	170	50	9	100	120	158	75
18.006.05	80	30	190	63	12	126	150	174	95
18.006.06	100	35	205	75	14	150	170	189	115
18.006.07	125	45	245	90	16	180	205	225	140
18.006.08	160	60	280	115	18	230	260	260	180
18.006.09	200	70	300	135	22	270	300	275	220

+ = Hub hinzurechnen

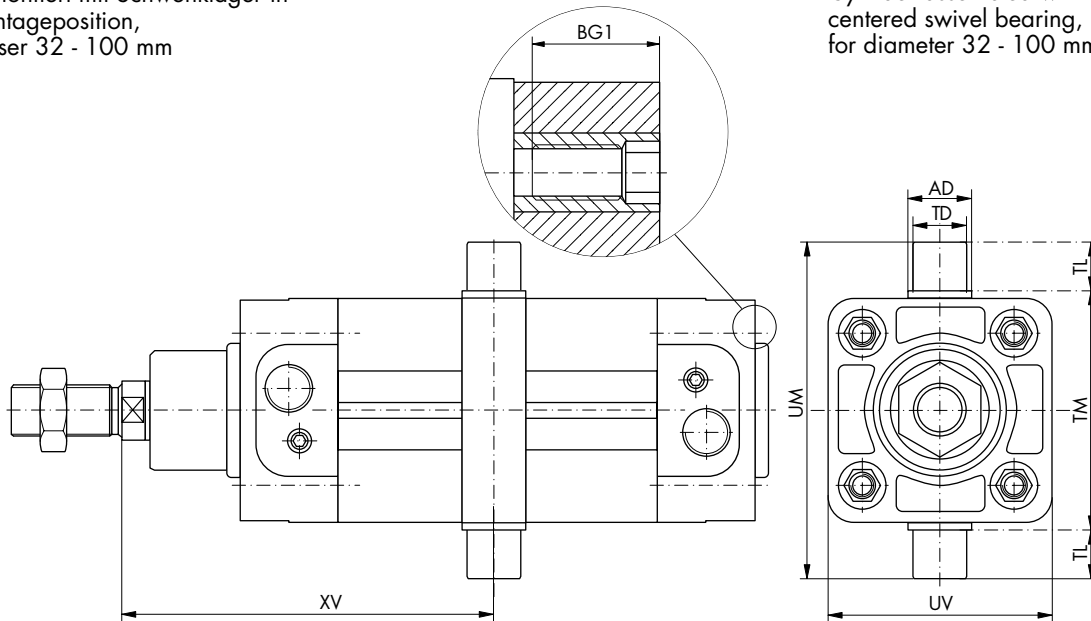
+ = add stroke

Zylinder  
ISO 15552  
Zubehör  
Kolben Ø 32 - 100 mm

Cylinders  
ISO 15552  
Accessories  
Piston Diameters 32 - 100 mm

Zylinder montiert mit Schwenklager in fester Montageposition, Durchmesser 32 - 100 mm

Cylinder assembled with not adjustable centered swivel bearing, for diameter 32 - 100 mm



**Maßtabelle**

**Dimensions**

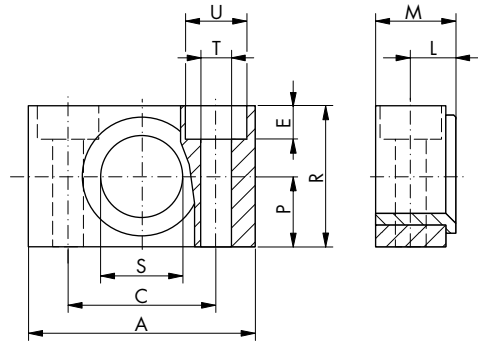
Ø	AD	TD e9	TL h14	TM h14	BG1	UM	UV	XV	
								min.	max. +
32	15	12	12	50	13	74	50	59	88
40	20	16	16	63	13	95	59	68	97
50	20	16	16	75	15	107	69	77	103
63	25	20	20	90	15	130	84	87	109
80	25	20	20	110	18	150	102	96	124
100	30	25	25	132	18	182	125	106	134

Diese Version wird wie im Beispiel angegeben bestellt.

This version is to be ordered as shown in the example.

Bestellformel	20.	1	7	4.	0100.	0150	Ordercode
GeräteKennziffer	20						Type No.
Kolbendurchmesser							Piston diameter
Ø 32		1					Ø 32
Ø 40		2					Ø 40
Ø 50		3					Ø 50
Ø 63		4					Ø 63
Ø 80		5					Ø 80
Ø 100		6					Ø 100
Schwenklager Version			7				Swivel bearing version
Kolbenausführung							Piston version
mit Magnetkolben				4			with magnetic piston
ohne Magnetkolben				6			without magnetic piston
Hub					XXXX		Stroke
Länge des Maßes XV						XXXX	Length of dimension XV

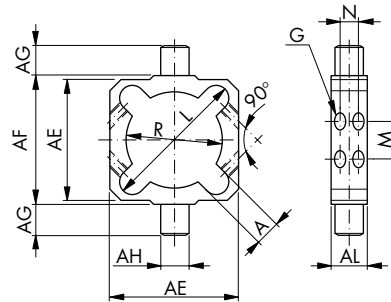
Schwenklager Gegenstück  
Verpackungseinheit 2 Stck.



Support for centered swivel bearing  
supplied as 2 pcs.

Bestell-Nr./Order No.	Ø	A	M	R	P	C	S	L	U	T	E
20.007.11	32	46	18	30	15	32	12	10,5	11	6,6	7
20.007.12	40-50	55	21	36	18	36	16	12	15	9	9
20.007.14	63-80	65	23	40	20	42	20	13	18	11	11
20.007.16	100-125	75	28,5	50	25	50	25	16	20	14	13
20.007.18	160-200	92	40	60	30	60	32	22,5	26	18	17

Schwenklager  
für Durchmesser 125 mm

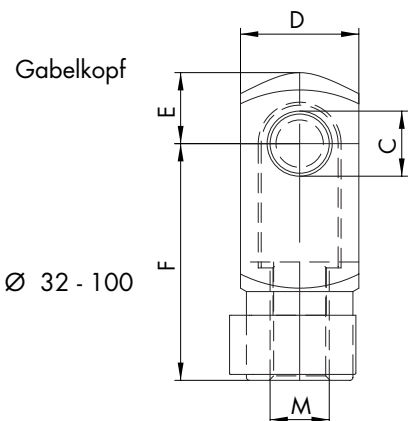


Centered swivel bearing  
for 125 mm diameter

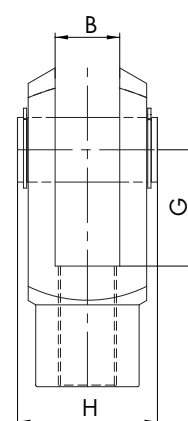
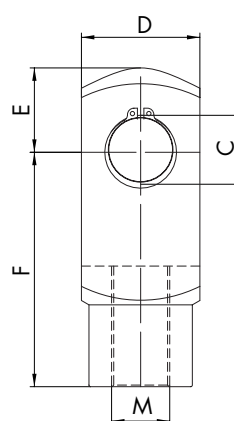
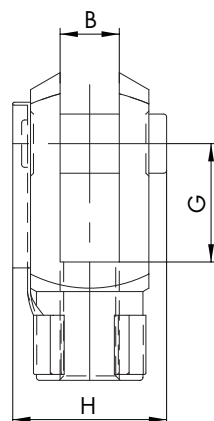
Bestell-Nr./Order No.	Ø	A	AE	AL	AH	AG	AF	R	L	G	M	N
18.007.07	125	18	154	33	25	25	160	133	181	M8	59,5	15

Für eine Lösung für Ø 160 - 200 mm  
kontaktieren Sie bitte unser technisches  
Büro.

For centered swivel bearing applications  
Ø 160 - 200 mm please contact our  
technical office.



Ø 32 - 100



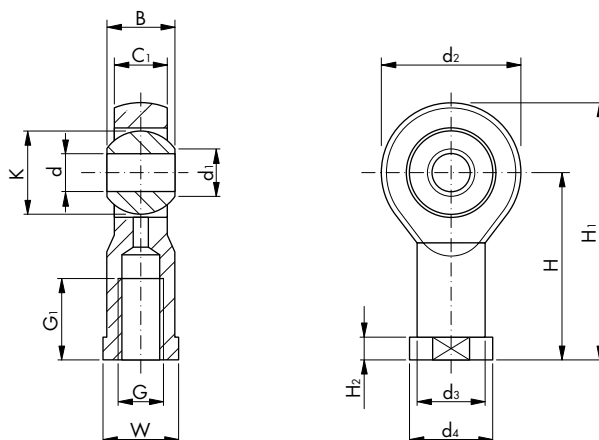
Ø 125 - 200

Clevis

Bestell-Nr./Order No.	Ø	M	B	C	D	E	F	G	H
18.008.01	32	M10 X 1,25	10	10	20	12	40	20	26
18.008.02	40	M12 X 1,25	12	12	24	14	48	24	32
18.008.03	50/63	M16 X 1,5	16	16	32	19	64	32	40
18.008.04	80/100	M20 X 1,5	20	20	40	25	80	40	48
18.008.05	125	M27 X 2	30	30	55	38	110	54	65
18.008.06	160/200	M36 X 2	35	35	70	44	144	72	84

Gelenkkopf

Ball ended clevis



Bestell-Nr./Order No.	Ø	G	dH7	B	C1	d1	d2	d3	d4	H	H1	H2	G1	K	W
18.009.01	32	M10 X 1,25	10	14	10,5	10	28	15	19	43	57	85	20	19	17
18.009.02	40	M12 X 1,25	12	16	12	12	32	17,5	22	50	66	85	22	22,2	19
18.009.03	50/63	M16 X 1,5	16	21	15	16	42	22	27	64	85	88	28	28,6	22
18.009.04	80/100	M20 X 1,5	20	25	18	20	50	27,5	34	77	102	100	33	35	30
18.009.05	125	M27 X 2	30	37	25	30	70	40	50	110	145	120	51	50,8	41
18.009.06	160/200	M36 X 2	35	43	28	35	80	46	58	125	165	120	56	57,1	50

Sensornutabdeckung  
für Ø 32 - 100 mm

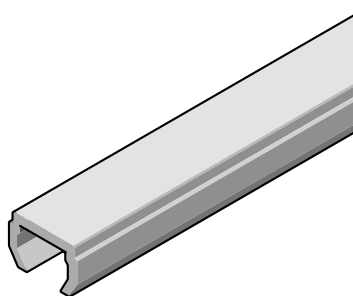
Sensor groove cover  
for Ø 32 - 100 mm

Bestell-Nr.	
20.001	für Nut mit Kabel

Order No.	
20.001	for groove with cable

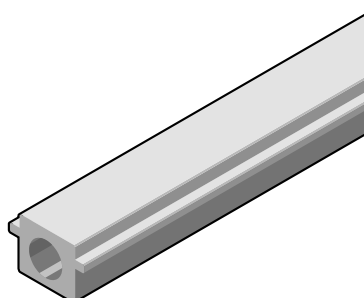
Länge 2000 mm

Length 2000 mm



Bestell-Nr.	
20.002	für nicht benutzte Nuten

Order No.	
20.002	for unused grooves



Zylinder  
ISO 15552

Zubehör

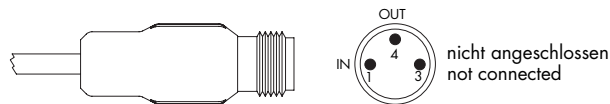
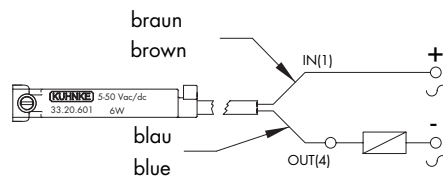
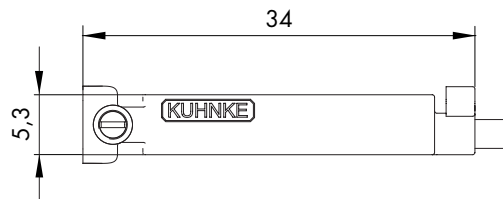
Positionsgeber Reed (2-adrig)

Kolben Ø 32 - 100 mm

**Technische Daten:**

Schaltausgang: Schließer  
Schaltleistung: max. 6 W  
Schaltspannung: 5 - 50 V AC/DC  
Schaltstrom: max. 200 mA  
Spannungsabfall: 3 V  
Schaltzeit: 0,1 ms  
Schaltfrequenz: max. 400 Hz  
Lebensdauer: 10<sup>7</sup> Schaltungen je nach Lastbedingungen

Umgebungs-  
temperatur: - 5 °C bis + 75 °C  
Schutzart: IP 67  
Schaltzustands-  
anzeige: LED  
Gehäusematerial: Kunststoff



Kabel 2 x 0,14 mm<sup>2</sup>, 2000 mm lang

<b>Bestell-Nr.</b>	33.20.601
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Stecker 2-polig, M8, 300 mm Kabel

<b>Bestell-Nr.</b>	33.20.681
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Cylinders  
ISO 15552

Accessories

Position Transmitters REED (2 pole)

Piston Diameters 32 - 100 mm

**Technical Data:**

Switching output: closing contact  
Switching capacity: max. 6 W  
Switching voltage: 5 - 50 V AC/DC  
Switching current: max. 200 mA  
Voltage drop: 3 V  
Switching time: 0.1 ms  
Switching rate: max. 400 Hz  
Service life: 10<sup>7</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 75 °C  
Protection class: IP 67

Status indicator: LED  
Housing material: plastic



Zylinder  
ISO 15552

Zubehör

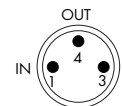
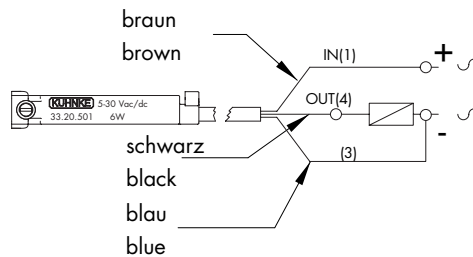
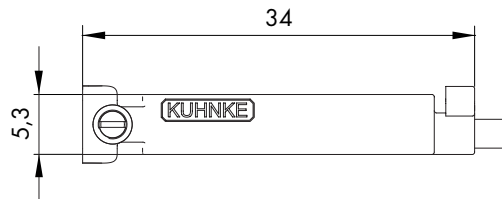
Positionsgeber Reed (3-adrig)

Kolben Ø 32 - 100 mm

**Technische Daten:**

Schaltausgang: Schließer  
Schaltleistung: max. 6 W  
Schaltspannung: 5 - 30 V AC/DC  
Schaltstrom: max. 500 mA  
Spannungsabfall: 0,1 V  
Schaltzeit: 0,1 ms  
Schaltfrequenz: max. 400 Hz  
Lebensdauer: 10<sup>7</sup> Schaltungen je nach Lastbedingungen

Umgebungs-  
temperatur: - 5 °C bis + 75 °C  
Schutzart: IP 67  
Schaltzustands-  
anzeige: LED  
Gehäusematerial: Kunststoff



Kabel 3 x 0,14 mm<sup>2</sup>, 2000 mm lang

<b>Bestell-Nr.</b>	33.20.501
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Stecker 3-polig, M8, 300 mm Kabel

<b>Bestell-Nr.</b>	33.20.581
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Cylinders  
ISO 15552

Accessories

Position Transmitters REED (3 pole)

Piston Diameters 32 - 100 mm

**Technical Data:**

Switching output: closing contact  
Switching capacity: max. 6 W  
Switching voltage: 5 - 30 V AC/DC  
Switching current: max. 500 mA  
Voltage drop: 0.1 V  
Switching time: 0.1 ms  
Switching rate: max. 400 Hz  
Service life: 10<sup>7</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 75 °C  
Protection class: IP 67

Status indicator: LED  
Housing material: plastic

Zylinder  
ISO 15552

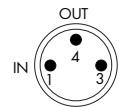
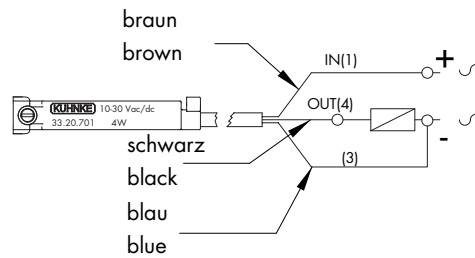
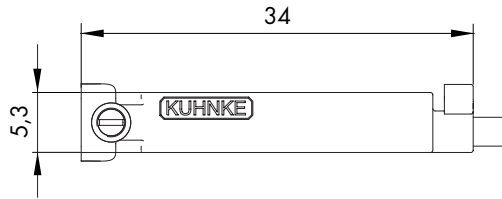
Zubehör

Positionsgeber elektronisch  
Kolben Ø 32 - 100 mm

**Technische Daten:**

Schaltausgang: PNP Schließer  
Schaltleistung: max. 4 W  
Schaltspannung: 10 - 30 V AC/DC  
Schaltstrom: max. 200 mA  
Spannungsabfall: 0,7 V  
Schaltzeit: 0,8 ms  
Schaltfrequenz: max. 1 KHz  
Lebensdauer: 10<sup>11</sup> Schaltungen je nach Lastbedingungen

Umgebungs-  
temperatur: - 5 °C bis + 75 °C  
Schutzart: IP 67  
Schaltzustands-  
anzeige: LED  
Gehäusematerial: Kunststoff



Kabel 3 x 0,14 mm<sup>2</sup>, 2000 mm lang

Bestell-Nr.	33.20.701
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Stecker 3-polig, M8, 300 mm Kabel

Bestell-Nr.	33.20.781
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Cylinders  
ISO 15552  
Accessories

Electronic Position Transmitters  
Piston Diameters 32 - 100 mm

**Technical Data:**

Switching output: PNP closing contact  
Switching capacity: max. 4 W  
Switching voltage: 10 - 30 V AC/DC  
Switching current: max. 200 mA  
Voltage drop: 0.7 V  
Switching time: 0.8 ms  
Switching rate: max. 1 KHz  
Service life: 10<sup>11</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 75 °C  
Protection class: IP 67

Status indicator: LED  
Housing material: plastic

Cable 3 x 0.14 mm<sup>2</sup>, 2000 mm

Order No.	33.20.701
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Socket 3 pole, M8, 300 mm cable

Order No.	33.20.781
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1. Stecken Sie den Sensor in die Nut wie rechts dargestellt.



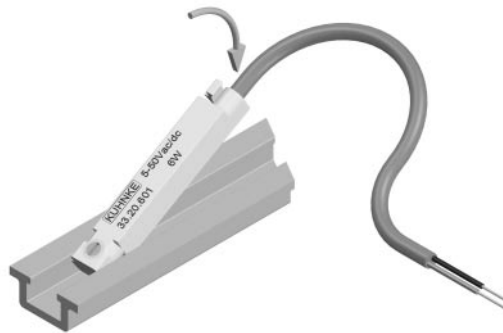
1. Put the sensor into the groove as indicated.

2. Drehen Sie den Sensor um 90° im Uhrzeigersinn.



2. Turn the sensor 90° clockwise.

3. Legen Sie den Sensor in die Nut und stellen Sie dabei sicher, dass die Verriegelung korrekt einrastet.



3. Lay the sensor on the groove making sure that the locking tooth is well fixed.

4. Ziehen Sie die Schraube (mit max. 0,3 Nm) in der korrekten Position an.



4. Fix the screw (max. 0.3 Nm) at the right position.

1. Lösen Sie die Schraube.



1. Loosen the screw.

2. Haken Sie die Verriegelung aus der Nut aus.



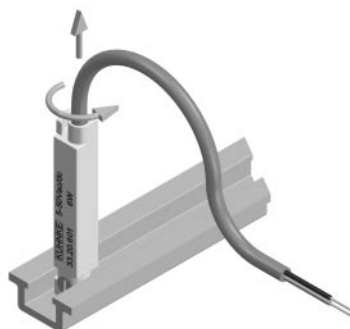
2. Unlock the tooth from the groove.

3. Heben Sie den Sensor aus der Nut.



3. Lift the sensor from the groove.

4. Drehen Sie den Sensor um 90° gegen den Uhrzeigersinn und ziehen Sie ihn aus der Nut heraus.



4. Turn the sensor 90° anti clockwise and pull it out.

Zylinder  
ISO 15552

Zubehör

Positionsgeber mit Reed-Sensor

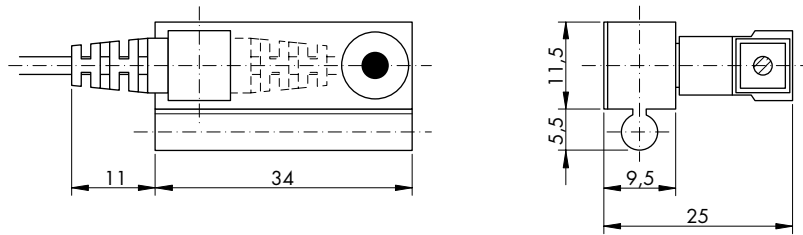
Kolben Ø 125 - 200 mm

Cylinders  
ISO 15552

Accessories

Position Transmitter with REED Sensor

Piston Diameters 125 - 200 mm



<b>Bestell-Nr.</b>	<b>33.18.115</b>
Schaltbild	

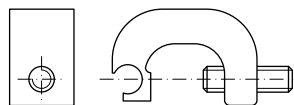
<b>Order No.</b>	<b>33.18.115</b>
Circuit diagram	

Eigenschaften			Features
Betriebstemperatur	-20 +50	°C	Operating temperature
Schutzart	IP 67		Protection class
Kabel Länge - Querschnitt	3000/0,35	mm/mm <sup>2</sup>	Cable length - section
Max. Spannung	250	V <sub>≅</sub>	Max. voltage
Max. Schaltstrom bei 25° C (Widerstandslast)	0,5	A	Max. switching current at 25 °C (resistive load)
Schalteleistung	10	W/VA	Switching capacity
Reproduzierbarkeit	± 0,02	mm	Repeatability
Max. Geschwindigkeit des Kolbens	1	m/sec.	Max. speed of the piston
Auslösezeit	≤ 0,1	ms	Switching time
Einschaltzeit	≤ 2	ms	Switching time
Elektrische Lebensdauer mit Widerstand	10 <sup>7</sup>	N°	Electrical life with resistive load

Adapter

Zylinder ISO 15552

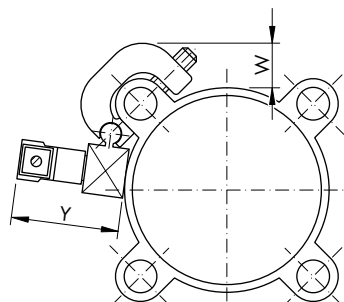
Bestell-Nr.	Ø	Y	W
<b>33.009.07</b>	125	25	15
<b>33.009.19</b>	160 - 200	25	23



Fastening Clamps

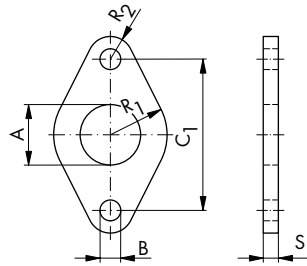
Cylinders ISO 15552

Order No.	Ø	Y	W
<b>33.009.07</b>	125	25	15
<b>33.009.19</b>	160 - 200	25	23



**Befestigungsflansch\***

Werkstoff: Stahl, Oberfläche schwarz



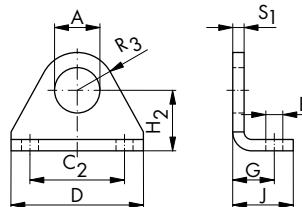
**Mounting Flange\***

Materials: steel, black surface

Best.-Nr. Order No.	Kolben Ø Piston dia.	A	B	C1	C2	D	E	F	G	H1	H2	J	P	R1	R2	R3	S1	T	U	V	W	X	Z	
23.305	8, 10	12	4,5	30										11	5		3							
26.305	12, 16	16	5,5	40										15	6		4							
28.305	20, 25	22	6,6	50										20	8		5							

**Befestigungswinkel\***

Werkstoff: Stahl, Oberfläche schwarz



**Mounting Bracket\***

Materials: steel, black surface

Best.-Nr. Order No.	Kolben Ø Piston dia.	A	B	C1	C2	D	E	F	G	H1	H2	J	P	R1	R2	R3	S1	T	U	V	W	X	Z	
23.312	8, 10	12	4,5		25	35			11		16	16				10	3							
26.302	12, 16	16	5,5		32	42			14		20	20				12,5	4							
28.302	20, 25	22	6,6		40	54			17		25	25				18	5							

\* Empfehlung:  
Bei 1 Befestigungswinkel/Flansch nur bis  
Hub<sub>max</sub> = 50 mm.

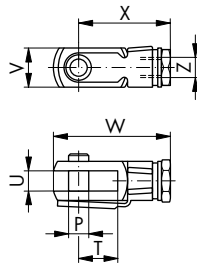
\* Recommendation:  
When using one mounting bracket/flange to  
strokemax = 50 mm only.

Zylinder  
ISO 6432  
Zubehör  
Befestigungszubehör Zylinder

Cylinders  
ISO 6432  
Accessories  
Mounting Accessories Cylinders

**Gabelkopf**

Werkstoffe: Gabelkopf:  
Stahl, verzinkt  
Sicherungsbolzen:  
Stahl, phosphatiert



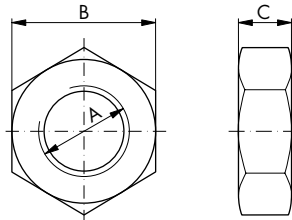
**Clevis**

Materials: clevis:  
steel, galvanized  
safety bolt:  
steel, phosphorized

Best.-Nr. Order No.	Kolben Ø Piston dia.	A	B	C1	C2	D	E	F	G	H1	H2	J	P	R1	R2	R3	S1	T	U	V	W	X	Z
23.314	8, 10												4					8	4	8	23,2	18,2	M4
19.008.07	12, 16												6					12	6	12	34	27	M6
19.008.08	20												8					16	8	16	42	32	M8
18.008.01	25												10					20	10	20	52	40	M10x1,25

**Befestigungsmutter**

Werkstoffe: Stahl, verzinkt



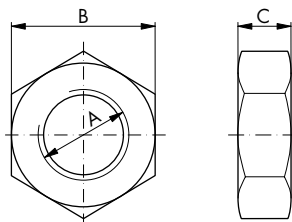
**Fixing Nut**

Materials: steel, galvanized

Best.-Nr. Order No.	Kolben Ø Piston dia.	A	B	C
JB2200007	8, 10	M12x1,25	19	7
JB2200002	12, 16	M16x1,5	24	8
JB5270001	20, 25	M22x1,5	32	10

**Kolbenstangenmutter**

Werkstoffe: Stahl, verzinkt



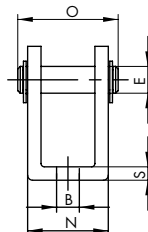
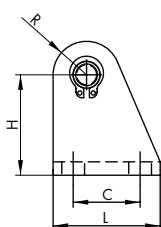
**Rod Nut**

Materials: steel, galvanized

Best.-Nr. Order No.	Kolben Ø Piston dia.	A	B	C
JB2200025	8, 10	M4	7	3
JB2200051	12, 16	M6	10	4
JB2200022	20	M8	13	5
JB2200001	25	M10x1,25	17	8

**Lagerbock**

Werkstoffe: Lagerbock:  
 Stahl, Oberfläche  
 schwarz  
 Bolzen:  
 Stahl, korrosions-  
 beständig  
 Sicherung:  
 Stahl, phosphatiert



**Trunnion**

Materials: trunnion:  
 steel, black surface  
 bolt:  
 steel, corrosion-  
 resistant  
 safety:  
 steel, phosphorized

Best.-Nr. /Order No.	Ø	B	E	C	H	L	N	O	R	S
23.313	8, 10	4,5	4	12,5	24	20	8,1	17	5	2,5
26.313	12, 16	5,5	6	16	27	25	12,1	23	7	3
28.313	20, 25	6,8	8	20	30	32	16,1	29,5	10	4



Zylinder  
ISO 6432  
Zubehör  
Positionsgeber Reed (2-adrig)

Cylinders  
ISO 6432  
Accessories  
Position Transmitters REED (2 pole)

**Technische Daten:**

Schaltausgang: Schließer  
Schaltleistung: max. 6 W  
Schaltspannung: 5 - 50 V AC/DC  
Schaltstrom: max. 200 mA  
Spannungsabfall: 3 V  
Schaltzeit: 0,1 ms  
Schaltfrequenz: max. 400 Hz  
Lebensdauer: 10<sup>7</sup> Schaltungen je nach Lastbedingungen

Umgebungs-  
temperatur: - 5 °C bis + 75 °C  
Schutzart: IP 67  
Schaltzustands-  
anzeige: LED  
Gehäusematerial: Kunststoff

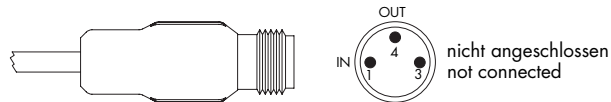
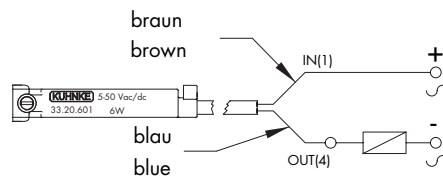
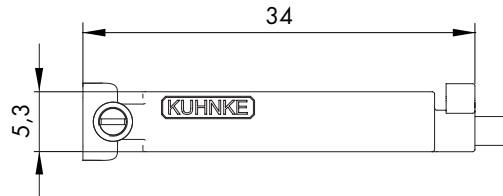


**Technical Data:**

Switching output: closing contact  
Switching capacity: max. 6 W  
Switching voltage: 5 - 50 V AC/DC  
Switching current: max. 200 mA  
Voltage drop: 3 V  
Switching time: 0.1 ms  
Switching rate: max. 400 Hz  
Service life: 10<sup>7</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 75 °C  
Protection class: IP 67

Status indicator: LED  
Housing material: plastic



Kabel 2 x 0,14 mm<sup>2</sup>, 2000 mm lang

Bestell-Nr.	33.20.601
-------------	-----------

Cable 2 x 0.14 mm<sup>2</sup>, 2000 mm

Order No.	33.20.601
-----------	-----------

Stecker 2-polig, M8, 300 mm Kabel

Bestell-Nr.	33.20.681
-------------	-----------

Socket 2 pole, M8, 300 mm cable

Order No.	33.20.681
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Zylinder  
ISO 6432  
Zubehör  
Positionsgeber Reed (3-adrig)

Cylinders  
ISO 6432  
Accessories  
Position Transmitters REED (3 pole)

**Technische Daten:**

Schaltausgang: Schließer  
Schaltleistung: max. 6 W  
Schaltspannung: 5 - 30 V AC/DC  
Schaltstrom: max. 500 mA  
Spannungsabfall: 0,1 V  
Schaltzeit: 0,1 ms  
Schaltfrequenz: max. 400 Hz  
Lebensdauer: 10<sup>7</sup> Schaltungen je nach Lastbedingungen

Umgebungs-  
temperatur: - 5 °C bis + 75 °C  
Schutzart: IP 67  
Schaltzustands-  
anzeige: LED  
Gehäusematerial: Kunststoff

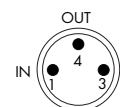
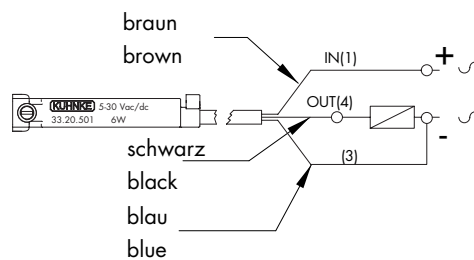
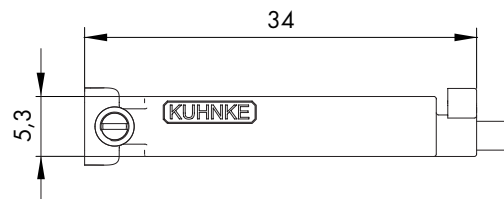


**Technical Data:**

Switching output: closing contact  
Switching capacity: max. 6 W  
Switching voltage: 5 - 30 V AC/DC  
Switching current: max. 500 mA  
Voltage drop: 0.1 V  
Switching time: 0.1 ms  
Switching rate: max. 400 Hz  
Service life: 10<sup>7</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 75 °C  
Protection class: IP 67

Status indicator: LED  
Housing material: plastic



Kabel 3 x 0,14 mm<sup>2</sup>, 2000 mm lang

<b>Bestell-Nr.</b>	33.20.501
--------------------	-----------

Cable 3 x 0.14 mm<sup>2</sup>, 2000 mm

<b>Order No.</b>	33.20.501
------------------	-----------

Stecker 3-polig, M8, 300 mm Kabel

<b>Bestell-Nr.</b>	33.20.581
--------------------	-----------

Socket 3 pole, M8, 300 mm cable

<b>Order No.</b>	33.20.581
------------------	-----------

Zylinder  
ISO 6432  
Zubehör  
Positionsgeber elektronisch

Cylinders  
ISO 6432  
Accessories  
Electronic Position Transmitters

**Technische Daten:**

Schaltausgang: PNP Schließer  
Schaltleistung: max. 4 W  
Schaltspannung: 10 - 30 V AC/DC  
Schaltstrom: max. 200 mA  
Spannungsabfall: 0,7 V  
Schaltzeit: 0,8 ms  
Schaltfrequenz: max. 1 KHz  
Lebensdauer: 10<sup>11</sup> Schaltungen je nach Lastbedingungen

Umgebungs-  
temperatur: - 5 °C bis + 75 °C  
Schutzart: IP 67  
Schaltzustands-  
anzeige: LED  
Gehäusematerial: Kunststoff

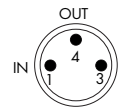
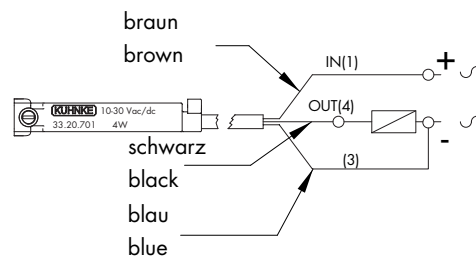
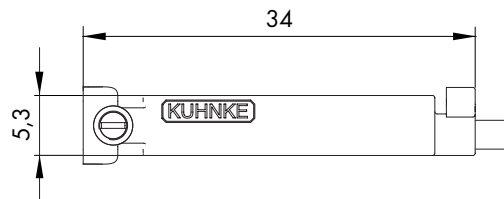


**Technical Data:**

Switching output: PNP closing contact  
Switching capacity: max. 4 W  
Switching voltage: 10 - 30 V AC/DC  
Switching current: max. 200 mA  
Voltage drop: 0.7 V  
Switching time: 0.8 ms  
Switching rate: max. 1 KHz  
Service life: 10<sup>11</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 75 °C  
Protection class: IP 67

Status indicator: LED  
Housing material: plastic



Kabel 3 x 0,14 mm<sup>2</sup>, 2000 mm lang

Bestell-Nr.	33.20.701
-------------	-----------

Cable 3 x 0.14 mm<sup>2</sup>, 2000 mm

Order No.	33.20.701
-----------	-----------

Stecker 3-polig, M8, 300 mm Kabel

Bestell-Nr.	33.20.781
-------------	-----------

Socket 3 pole, M8, 300 mm cable

Order No.	33.20.781
-----------	-----------

Zylinder  
 ISO 6432  
 Zubehör Positionsgeber  
 Befestigungsschellen

Cylinders  
 ISO 6432  
 Accessories Position Transmitter  
 Fastening-Clamps

**Befestigungsschellen für  
 Zylinder DIN ISO 6432**

Befestigungsschellen für die  
 Elektronischen Positionsgeber  
 33.20.701/781  
 REED-Positionsgeber  
 33.20.601/681/501/581

Bestell-Nr.	Kolben Ø
33.008.23.01	8
33.008.24.01	10
33.008.25.01	12
33.008.26.01	16
33.008.27.01	20
33.008.28.01	25

(inkl. Befestigungsschraube)



**Fastening-Clamps for  
 Cylinder DIN ISO 6432**

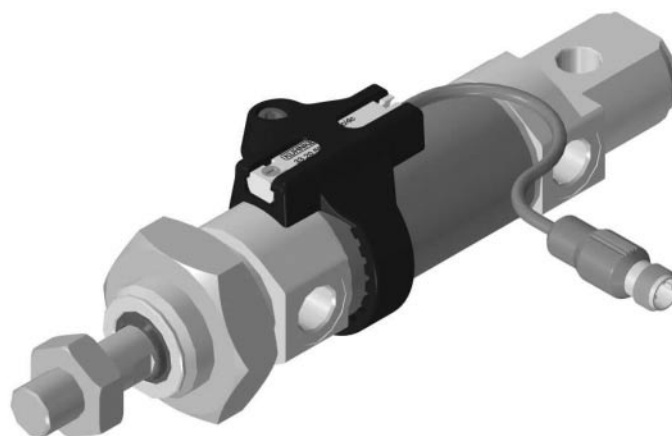
Fastening-clamps for  
 electronic position transmitter  
 33.20.701/781  
 REED-position transmitter  
 33.20.601/681/501/581

Order No.	Piston dia.
33.008.23.01	8
33.008.24.01	10
33.008.25.01	12
33.008.26.01	16
33.008.27.01	20
33.008.28.01	25

(incl. mounting screw)

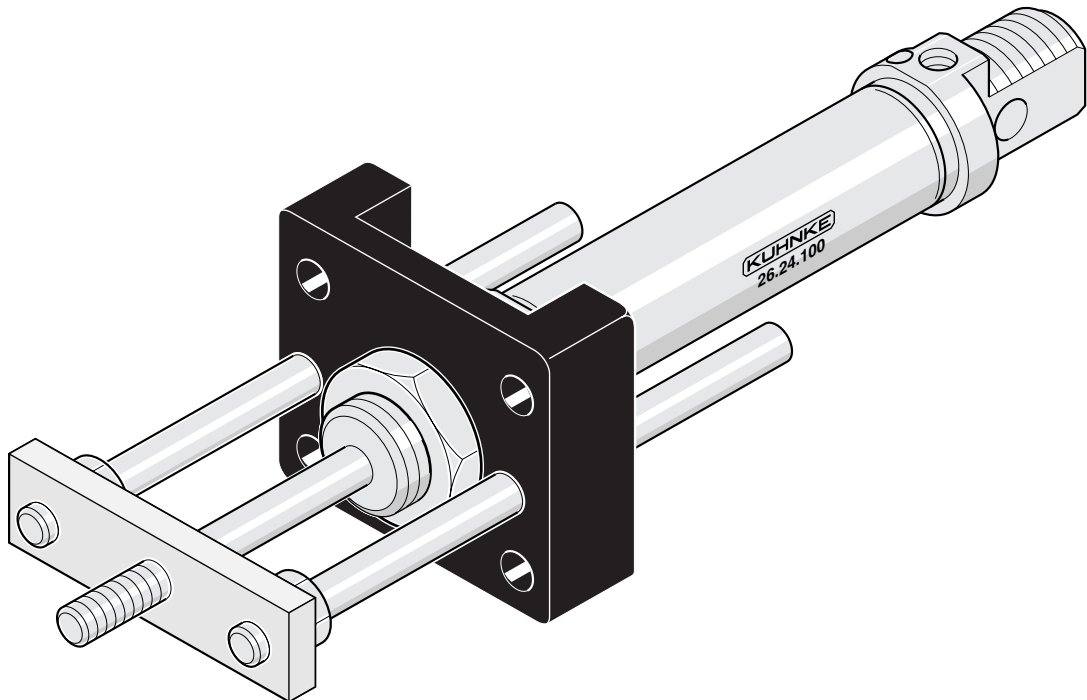
**Sensormontage**

**Sensor Assembly**



Zylinder  
 ISO 6432  
 Zubehör Linearführungseinheiten  
 Ø 8 ... 25 mm  
 Mini-Verdrehsicherung

Cylinders  
 ISO 6432  
 Accessories Linear Guide Units  
 Diameter 8 ... 25 mm  
 Mini Torsion Protection



Die Kuhnke-Verdrehsicherung mit exzellenten Eigenschaften eignen sich zur Schnellmontage an verschiedene Zylinderbauarten, z.B. DIN ISO 6432 Kuhnke-Messing Zylinder u. a. Eine elegante Lösung zur Ausstattung und Umrüstung von Rundzylindern auf eine praktikable Verdrehsicherung bieten diese robusten Verdrehsicherungseinheiten. Gemessen an den unkomplizierten Einsetzbarkeiten bauen die Verdrehsicherungen klein und sind wegen ihrer kleinen Baugröße leicht.

#### Technische Daten:

##### Werkstoffe:

Flanschsockel (Führungsrahmen):	Aluminiumdruckguss
Lagerung:	Sinterbronzebuchsen
Befestigungsplatte:	Messing
Führungsstangen:	Stahl, korrosionsbeständig, geschliffen

Kuhnke's torsion protection have got excellent features and are suited for being quickly mounted on various cylinder versions, e. g. DIN ISO 6432 Kuhnke's brass cylinders. Kuhnke's sturdy torsion protection units constitute an elegant solution when rotary cylinders are to be supplied with such extensions. Kuhnke's torsion protection units are particularly small and very light, but can be used for nearly any application.

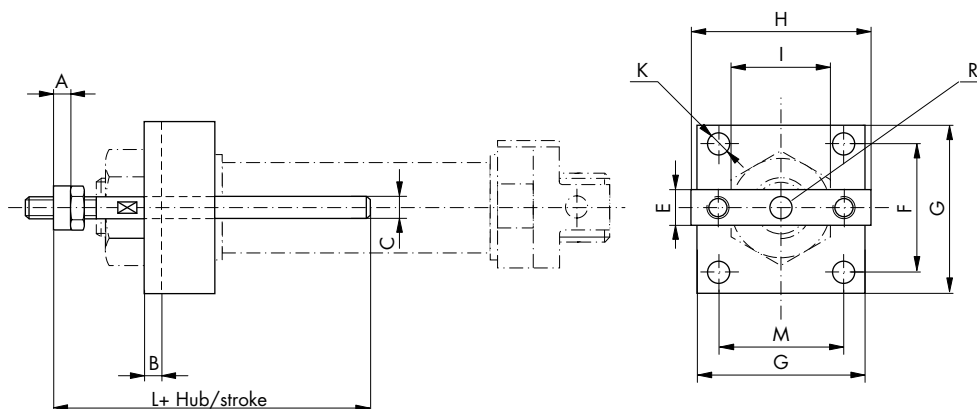
#### Technical Data:

##### Materials:

Flange base (control frame):	die-cast aluminium
Bearing:	sintered bronze sleeves
Mounting plate:	brass
Control rails:	stainless steel, corrosion resistant, polished

Zylinder  
 ISO 6432  
 Zubehör Linearführungseinheiten  
 Ø 8 ... 25 mm  
 Mini-Verdrehsicherung

Cylinders  
 ISO 6432  
 Accessories Linear Guide Units  
 Diameter 8 ... 25 mm  
 Mini Torsion Protection



Maßtabelle

Dimensions

Kolben Ø* Piston dia.* mm	A	B	C	E	F	G	H	I	K	L + Hub/Stroke	M	Z	R
8/10	4	4	4	8	25	35	33	19	4,5	30	25	17	M4
12/16	6	5	6	12	31	45	43	24	5,5	40	32,5	19	M6
20	6	5	6	16	40	55	52	32	6,5	52	41,5	22	M8
25	65	5	6	16	40	55	52	32	6,5	52	41,5	22	M10x1,25

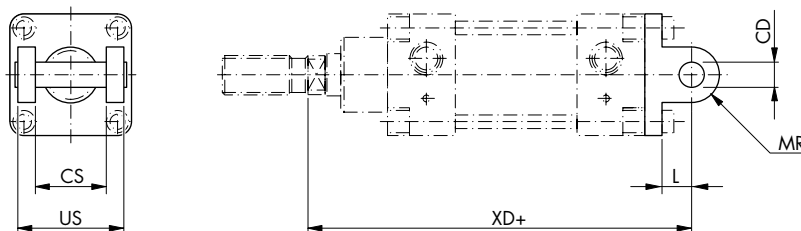
Kolben Ø* Piston dia.* mm	Bestell-Nr. *) Standard-Hübe (mm)				Order No. *) Standard strokes (mm)								
	50	100	160	200									
8/10	23.315.050	23.315.100	23.315.160										
12/16	26.315.050	26.315.100	26.315.160	26.315.200									
20	27.315.050	27.315.100	27.315.160	27.315.200									
25	28.315.050	28.315.100	28.315.160	28.315.200									

\* Nach DIN ISO 6432

\* For DIN ISO 6432

Schwenklager mit Bolzen

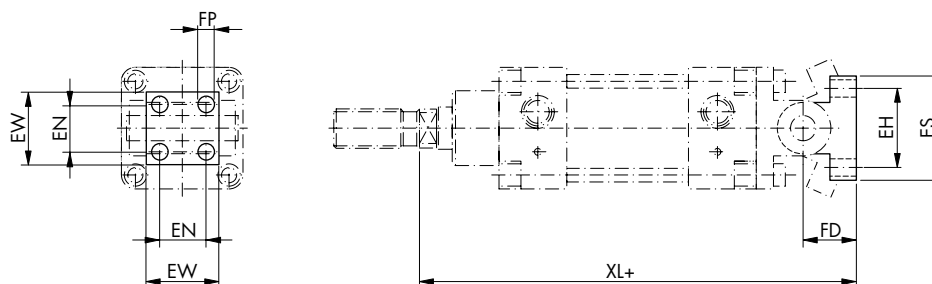
Female swivel bearing with bolt



Bestell-Nr./Order No.	Ø	CS	UB	L	XD	CD	MR
16.001.01	32	26	45	10	123	8	9
16.001.02	40	33	52	16	168	12	12
16.001.03	50	33	60	16	170	12	12
16.001.04	63	47	70	20	194	16	17
16.001.05	80	47	90	20	196	16	17
16.001.06	100	57	110	25	229	20	21
16.001.07	125	57	140	30	233	25	24
16.001.08	160	72	170	35	285	25	30
16.001.09	200	72	170	35	285	25	30

Montageflansch für Schwenklager  
 mit Bolzen

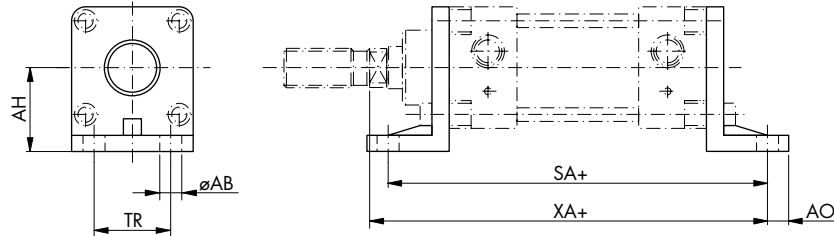
Mounting flange for female clevis



Bestell-Nr./Order No.	Ø	LG	EN	EW	XL	FD	EH	ES	E
16.003.01	32	7		25	141	18	28	40	8
16.003.02	40	9	16	32	194	26	38	52	10
	50	9	16	32	196	26	38	52	10
16.003.04	63	11	25	46	228	34	54	75	12
	80	11	25	46	230	34	54	75	12
16.003.06	100	14	32	56	270	41	90	115	16
	125	14	32	56	274	41	90	115	16
16.003.08	160	18	43	71	340	55	150	180	20
	200	18	43	71	340	55	150	180	20

Montagewinkel  
(1 Stück)

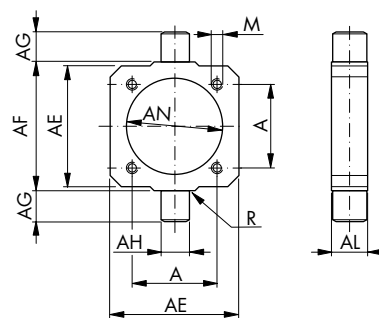
Mounting bracket  
(1 piece)



Bestell-Nr./Order No.	∅	AH	TR	AB	SA	XA	AO
16.005.01	32	32	28	7	134	132	8
16.005.02	40	36	36	7	164	171	8
16.005.03	50	45	45	9	180	179	8
16.005.04	63	50	55	9	195	199	10
16.005.05	80	63	70	11	211	207	12
16.005.06	100	73	90	11	231	235	12
16.005.07	125	90	100	14	249	244	16
16.005.08	160	115	130	18	304	292	18
16.005.09	200	135	170	18	304	292	28

Mittelschwenklager einstellbar\*

Adjustable centered swivel bearing\*



Bestell-Nr./Order No.	∅	A	AE	AL	AH	AG	AF	AN	R	M
16.017.01	32	33	46	15	12	12	50	37	1	M6
16.017.02	40	40	59	20	16	16	63	46	1,5	M6
16.017.03	50	49	69	20	16	16	75	56	1,6	M8
16.017.04	63	59	84	25	20	20	90	69	1,6	M8
16.017.05	80	75	102	25	20	20	110	87	1,6	M10
16.017.06	100	90	125	30	25	25	132	107	2	M10
16.017.07	125	110	155	32	25	25	160	133	2	M12
16.007.08	160	140	190	40	32	32	200	170	2,5	M16
16.007.09	200	175	240	40	32	32	250	211	2,5	M16

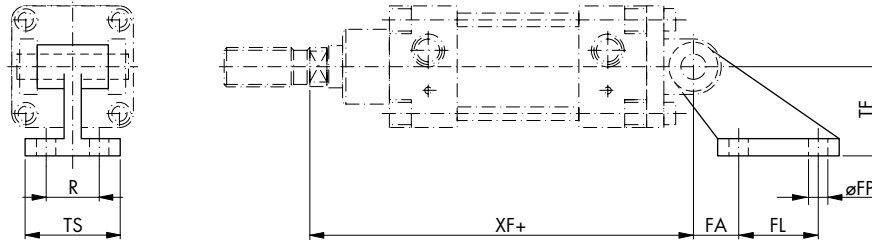
\* ∅ 160 und 200 sind nur für feste Montageposition lieferbar

\* d 160 and d 200 are supplied in not adjustable version only



Montageflansch 90° für Schwenklager  
 mit Bolzen

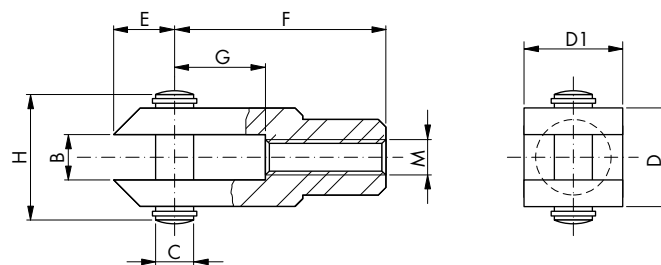
Mounting flange 90° for female clevis



Bestell-Nr./Order No.	Ø	R	TS	FP	XF	FA	FL	TF
16.004.01	32	25	41	7	123	18	20	32
16.004.02	40	32	52	9	168	25	32	45
	50	32	52	9	170	25	32	45
16.004.04	63	40	63	11	194	32	50	63
	80	40	63	11	196	32	50	63
16.004.06	100	50	80	14	229	40	70	90
	125	50	80	14	233	40	70	90
16.004.08	160	63	110	18	285	50	110	140
	200	63	110	18	285	50	110	140

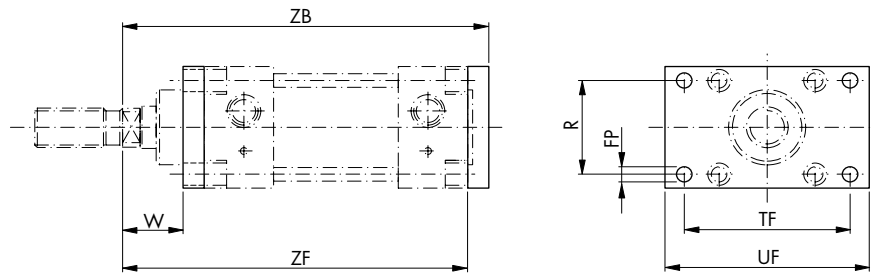
Gabelkopf

Clevis



Bestell-Nr./Order No.	Ø	M	B	C	D	E	F	G	H
16.008.01	32	M10 X 1,5	11	8	22/22	9	36	16	30
16.008.02	40/50	M16 X 1,5	18	12	36/26	13	51	25	45
16.008.03	63/80	M20 X 1,5	22	16	45/34	17	63	33	55
16.008.04	100/125	M27 X 2	30	20	63/42	20	85	40	75
16.008.05	160/200	M36 X 2	40	25	80/50	25	115	40	95

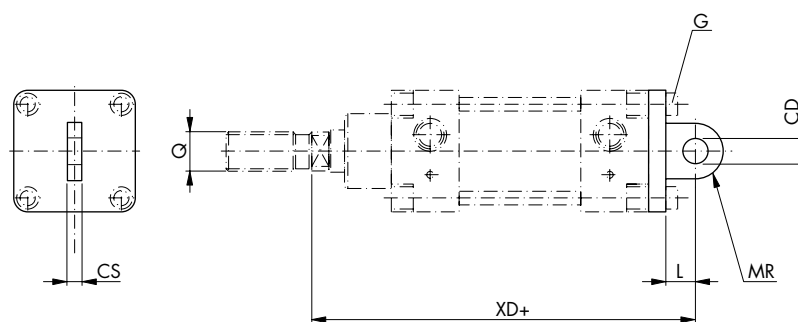
Flanschplatte



Mounting plate

Bestell-Nr./Order No.	Ø	W	ZB	R	FP	TF	UF
16.006.01	32	17	113	33	9	68	80
16.006.02	40	26	152	40	9	78	90
16.006.03	50	24	154	49	11	94	110
16.006.04	63	29	174	59	11	104	120
16.006.05	80	27	176	75	14	130	150
16.006.06	100	39	204	90	14	150	170
16.006.07	125	31	208	110	18	180	205
16.006.08	160	30	250	140	22	228	260
16.006.09	200	30	250	175	22	268	300

Schwenklager

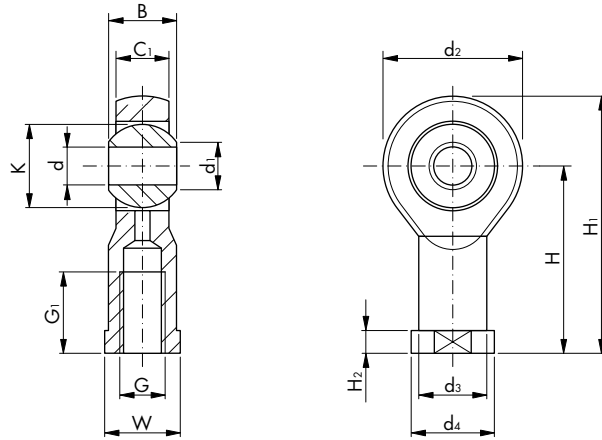


Male swivel bearing

Bestell-Nr./Order No.	Ø	CB	L	XD	CD	MR	ZF
16.002.01	32	26	12	142	10	11	105
16.002.02	40	28	15	160	12	13	144
16.002.03	50	32	15	170	12	13	144
16.002.04	63	40	20	190	16	17	164
16.002.05	80	50	20	210	16	17	164
16.002.06	100	60	25	230	20	21	192
16.002.07	125	70	30	275	25	26	192
16.002.08	160	90	35	315	30	31	230
16.002.09	200	90	35	335	30	31	230

Gelenkkopf

Ball ended clevis

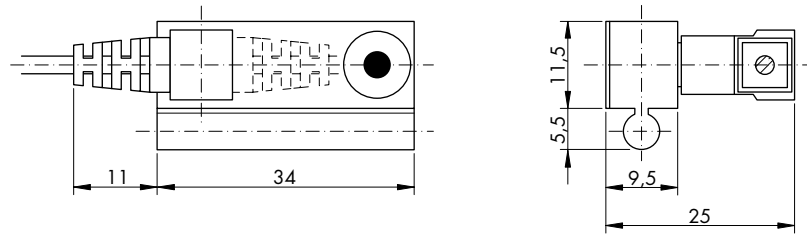


	Ø	G	dH7	B	C1	d1	d2	d3	d4	H	H1	H2	G1	K	W
Bestell-Nr./Order No.		E		V	L	Y	D	B	A	X	U	Z	P	J	CH
16.009.01	32	M10 X 1,5	10	14	10,5	10	28	15	19,5	43	57	6,5	20	19	17
16.009.02	40-50	M16 X 1,5	16	21	15	16	32	22	27	64	85	8	28	28,6	19
16.009.03	63-80	M20 X 1,5	20	25	18	20	42	27,5	34	77	102	10	33	35	22
16.009.04	100-125	M27 X 2	30	37	25	30	50	40	50	110	145	15	51	50,8	30
16.009.05	160-200	M36 X 2	35	43	28	35	70	46	58	125	165	17	56	57,1	41

Zylinder  
CNOMO-Zylinder  
Zubehör  
Positionsgeber mit Reed-Sensor

Cylinders  
CNOMO Cylinders  
Accessories

Position Transmitter with REED Sensor



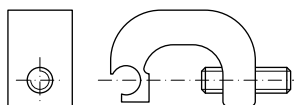
<b>Bestell-Nr.</b>	<b>33.18.115</b>
Schaltbild	

<b>Order No.</b>	<b>33.18.115</b>
Circuit diagram	

Eigenschaften			Features
Betriebstemperatur	-20 +50	°C	Operating temperature
Schutzart	IP 67		Protection class
Kabel Länge – Querschnitt	3000/0,35	mm/mm <sup>2</sup>	Cable length – section
Max. Spannung	* 110/220	V <sub>≅</sub>	Max. voltage
Max. Schaltstrom bei 25° C (Widerstandslast)	0,5	A	Max. switching current at 25 °C (resistive load)
Schalteleistung	10	W/VA	Switching capacity
Reproduzierbarkeit	± 0,02	mm	Repeatability
Max. Geschwindigkeit des Kolbens	1	m/sec.	Max. speed of the piston
Auslösezeit	≤ 0,1	ms	Switch of time
Einschaltzeit	≤ 2	ms	Switch on time
Elektrische Lebensdauer mit Widerstand	10 <sup>7</sup>	N°	Electrical life with resistive load

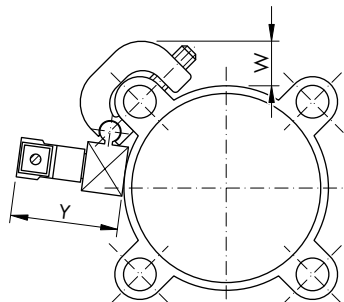
**Adapter**  
CNOMO-Zylinder

Bestell-Nr.	Ø	Y	W
<b>33.009.08</b>	32 - 63	25	
<b>33.009.09</b>	80 - 200	25	



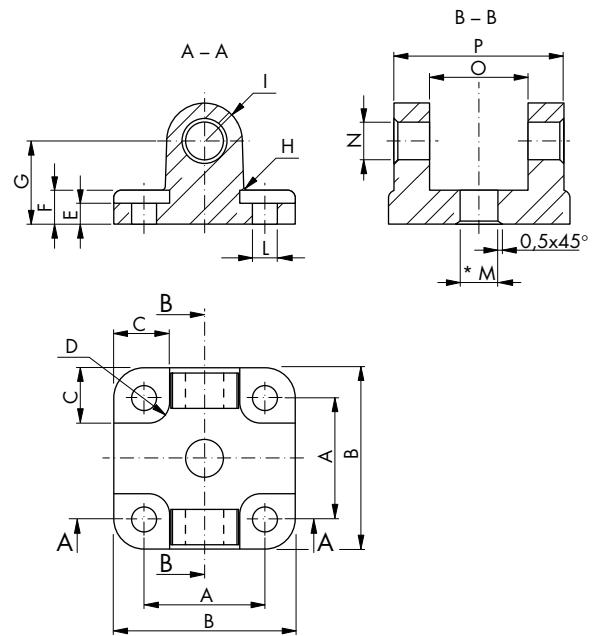
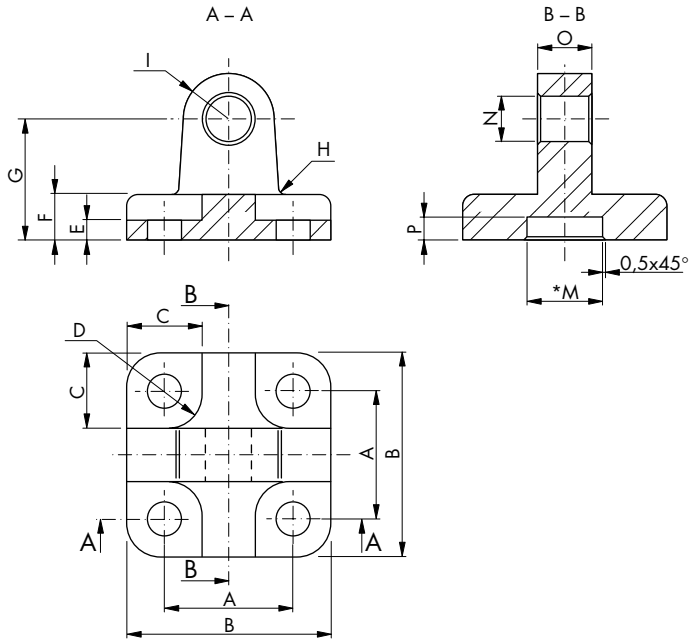
**Fastening Clamps**  
CNOMO Cylinders

Order No.	Ø	Y	W
<b>33.009.08</b>	32 - 63	25	
<b>33.009.09</b>	80 - 200	25	



Schwenklager/swivel bearing I  
Kolben/piston Ø 12 - 25 mm

Schwenklager/swivel bearing II  
Kolben/piston Ø 32 - 100 mm



Maßtabelle I

Dimensions

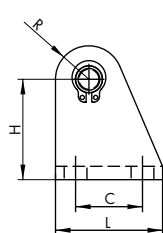
Bestell-Nr./Order No.	Kolben/piston	A	B	C	D	E	F	G	H	I	L	M	N	O	P
19.002.07	12-16	18	27	10	4,5	2,6	6	16	2	6	4,5	10	6	12	3
19.002.09	20	22	34	11	5	2,6	6	20	2	8	5,5	12	8	16	3
19.002.00	25	26	38	11	5	2,6	6	20	2	8	5,5	12	8	16	3

Maßtabelle II

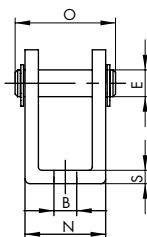
Dimensions

Bestell-Nr./Order No.	Kolben/piston	A	B	C	D	E	F	G	H	I	L	M	N	O	P
19.001.01	32	32	48	13,5	5,5	5,5	9	22	2,5	10	6,6	14	10	26	45
19.001.02	40	42	58	13,5	5,5	5,5	9	25	2,5	12,5	6,6	14	12	28	52
19.001.03	50	50	66	15,5	7,5	6,5	11	27	2,5	12,5	9	18	12	32	60
19.001.04	63	62	83	18	9	6,5	11	32	4	15	11	18	16	40	70
19.001.05	80	82	102	19	9	10	13	36	4	15	11	23	16	50	90
19.001.06	100	103	123	19	9	10	15	41	4	20	11	28	20	60	110

**Lagerbock**

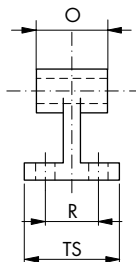


**Trunnion**

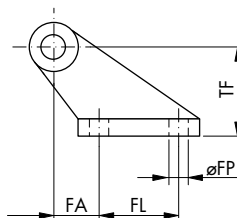


Best.-Nr. /Order No.	Ø	B	E	C	H	L	N	O	R	S
26.313	12, 16	5,5	6	16	27	25	12,1	23	7	3
28.313	20, 25	6,8	8	20	30	32	16,1	29,5	10	4

Montageflansch 90° für Schwenklager  
 mit Bolzen  
 Kolben Ø 32 - 100 mm



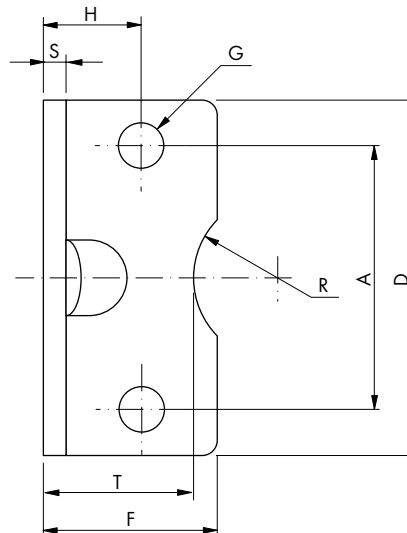
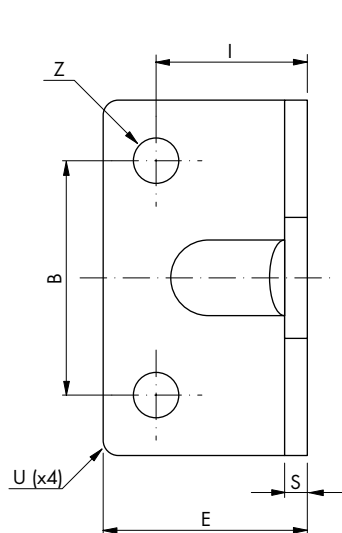
Mounting flange 90° for female clevis  
 piston Ø 32 - 100 mm



Bestell-Nr./Order No.	Ø	R	TS	FP	FA	FL	TF	N	O
18.004.01	32	25	41	7	18	20	32	10	26
18.004.02	40	32	52	9	25	32	45	12	28
18.004.03	50	32	52	9	25	32	45	12	32
18.004.04	63	40	63	11	32	50	63	16	40
18.004.05	80	40	63	11	32	50	63	16	50
18.004.06	100	50	80	14	40	70	90	20	60

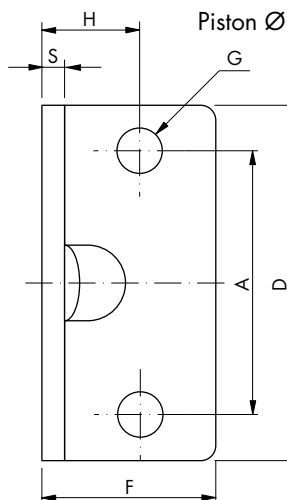
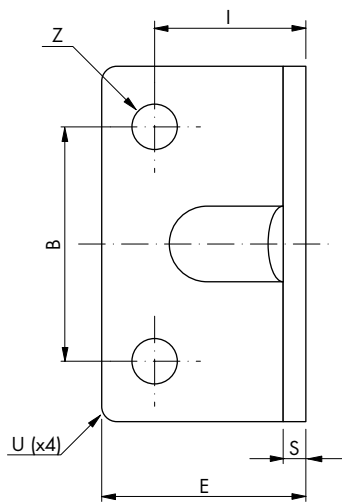
Fußbefestigung (2 Stck)  
Kolben Ø 12 - 32 mm

Mounting brackets (2 pcs)  
Piston Ø 12 - 32 mm



Fußbefestigung (2 Stck)  
Kolben Ø 40 - 100 mm

Mounting brackets (2 pcs)  
Piston Ø 40 - 100 mm



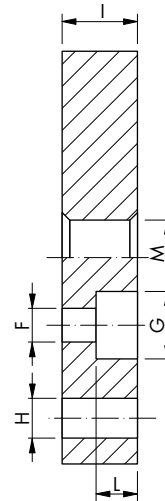
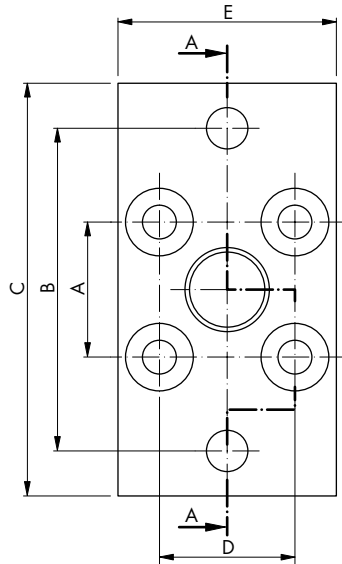
**Maßtabelle**

**Dimensions**

Bestell-Nr./Order No.	Kolben/piston	B	C	D	E	F	G	H	I	S	T	R	U	Z
19.005.07	12-16	18	18	30	17,5	17,5	4,4	13	13	3	15	9	2	5,5
19.005.09	20	22	22	36	22	22	5,4	16	16	4	17	10	2	6,6
19.005.00	25	26	26	40	22	23	5,4	17	16	4	19	11	2	6,6
19.005.01	32	32	32	50	26	24	6,6	16	18	5	20	12	2	6,6
19.005.02	40	42	42	60	28	29,5	6,6	21,5	20	5	-	-	5	9
19.005.03	50	50	50	68	32	30	9	22	24	6	-	-	5	9
19.005.04	63	62	62	84	39	39	11	28,5	27	6	-	-	5	11
19.005.05	80	82	82	102	42	36,5	11	24,5	30	8	-	-	5	11
19.005.06	100	103	103	123	45	38,5	11	26,5	33	8	-	-	5	13,5

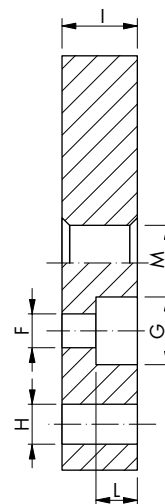
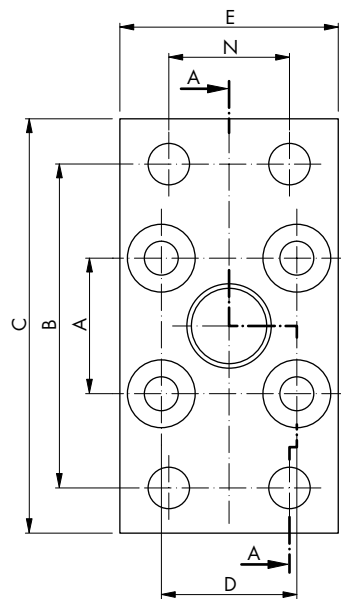
Flanschbefestigung  
Kolben Ø 12 - 25 mm

Mounting plate  
Piston Ø 12 - 25 mm



Flanschbefestigung  
Kolben Ø 32 - 100 mm

Mounting plate  
Piston Ø 32 - 100 mm



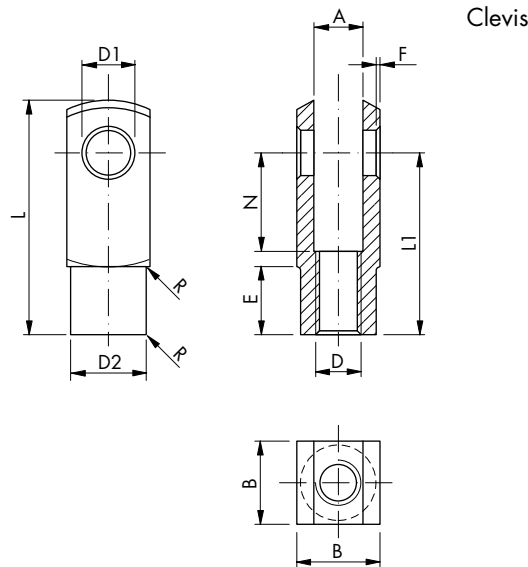
Maßtabelle

Dimensions

Bestell-Nr./Order No.	Kolben/piston	A	B	C	D	E	F	G	H	I	L	M	N
19.006.07	12-16	18	43	55	18	29	4,5	9	5,5	10	5,4	10	-
19.006.09	20	22	55	70	22	36	5,5	10	6,6	10	5,4	12	-
19.006.00	25	26	60	76	26	40	5,5	10	6,6	10	5,4	12	-
19.006.01	32	32	65	80	32	50	6,6	11	7	10	6,4	14	32
19.006.02	40	42	82	102	42	60	6,6	11	9	10	6,4	14	36
19.006.03	50	50	90	110	50	68	9	15	9	12	8,6	18	45
19.006.04	63	62	110	130	62	87	11	18	9	15	10,6	18	50
19.006.05	80	82	135	160	82	107	11	18	12	15	10,6	23	63
19.006.06	100	103	163	190	103	128	11	18	14	15	10,6	28	75



Gabelkopf

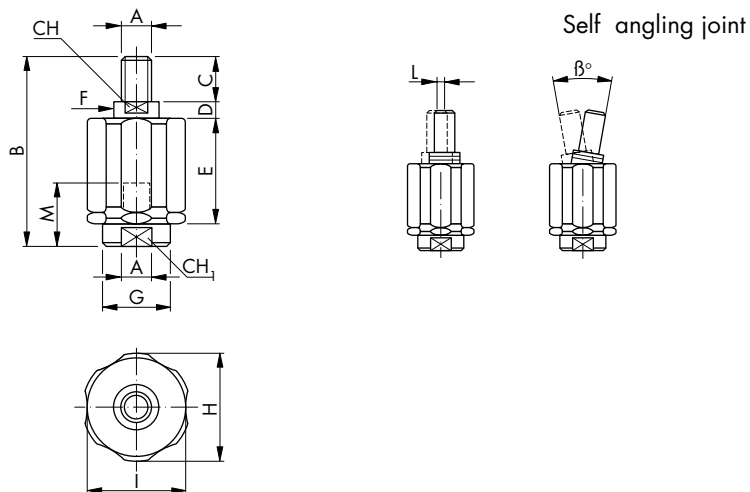


Maßtabelle

Dimensions

Bestell-Nr./Order No.	Kolben/piston	A	B	D	D <sub>1</sub>	D <sub>2</sub>	E	F	L	L <sub>1</sub>	N	R
19.008.07	12	6	12	M6	6	10	9	0,5	31	24	12	0,5
19.008.08	16	8	16	M8	8	14	12	0,5	42	32	16	0,5
18.008.01	20 - 40	10	20	M10x1,25	10	18	15	0,5	52	40	20	0,5
18.008.02	50 - 63	12	24	M12x1,25	12	20	18	0,5	62	48	24	0,5
18.008.03	80	16	32	M16x1,5	16	26	24	1	83	64	32	1
18.008.04	100	20	40	M20x1,5	20	34	30	1	105	80	40	1

Flexible Kupplung



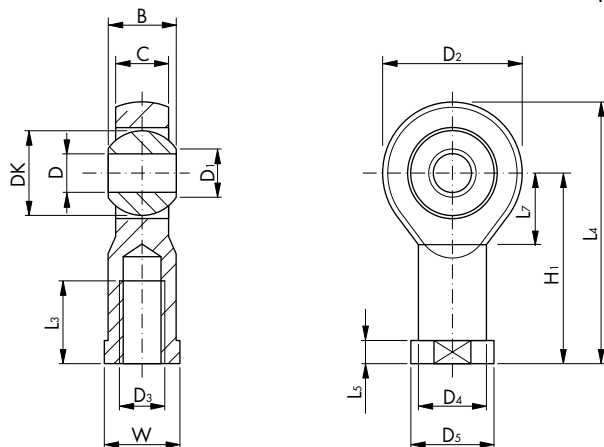
Maßtabelle

Dimensions

Bestell-Nr./Order No.	Kolben/piston	A	B	C	D	E	F	G	H	I	L	M	CH	β°	CH <sub>1</sub>
19.010.07	12	M6	35	10	3,5	17,5	6	8,5	14,5	13	1	10	5	10	7
19.010.08	16	M8	57	20	4	28,5	8	12,5	19	17	2	20	7	10	11
19.010.09	20 - 40	M10 x 1,25	71	20	5	35	14	22	32	30	2	20	12	10	19
19.010.03	50 - 63	M12 x 1,25	75	24	5	35	14	22	32	30	2	20	12	10	19
19.010.05	80	M16 x 1,5	103	32	8	54	22	32	45	41	2	32	20	10	30
19.010.06	100	M20 x 1,5	119	40	8	54	22	32	45	41	2	40	20	10	30

Gelenkkopf, wartungsfrei

Rod end, self-lubricating



Maßtabelle

Dimensions

Bestell-Nr./Order No.	Kolben/piston	B	C	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	DK	H <sub>1</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>7</sub>
19.009.07	12	9	6,75	6	8,9	20	M6	10	13	12,7	30	12	40	5	11
19.009.08	16	12	9	8	10,4	24	M8	12,5	16	15,9	36	16	48	5	13
18.009.01	20 - 40	14	10,5	10	12,9	28	M10 x 1,25	15	19	19	43	20	57	6,5	15
18.009.02	50 - 63	16	12	12	15,4	32	M12 x 1,25	17,5	22	22,2	50	22	66	6,5	17
18.009.03	80	21	15	16	19,3	42	M16 x 1,5	22	27	28,6	64	28	85	8	23
18.009.04	100	25	18	20	24,3	50	M20 x 1,5	27,5	34	35	77	33	102	10	27

Zylinder  
Compact-Zylinder  
Zubehör  
Positionsgeber

Cylinders  
Compact Cylinders  
Accessories  
Position Transmitter

**Technische Daten:**

Schaltausgang: Schließer

Schaltleistung: max. 2 VA/W (3-adrig)  
max. 0,9 VA/W (2-adrig)

Schaltspannung: 10 - 30 V AC/DC

Schaltstrom: max. 100 mA (3-adrig)  
max. 30 mA (2-adrig)

Eigenstromaufnahme: ON: typ. 12 mA bei 30 V DC

Schaltzeit: 1 ms

Rückfallzeit: 0,05 ms

Schaltfrequenz: max. 200 Hz

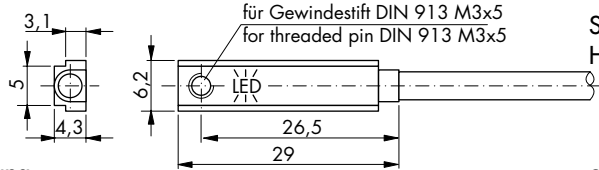
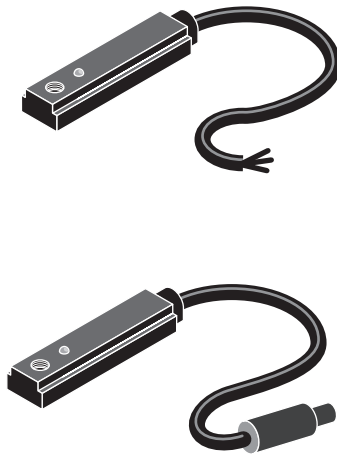
Lebensdauer: 10<sup>6</sup> bis 10<sup>7</sup> Schaltungen je nach Lastbedingungen

Umgebungstemperatur: - 5 °C bis + 70 °C

Schutzart: IP 67

Schaltzustandsanzeige: LED

Gehäusematerial: Kunststoff



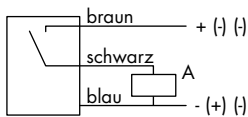
Kabel 3 x 0,14 mm<sup>2</sup>, 2500 mm lang

Bestell-Nr.	33.19.100
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Stecker 3polig, M8, 30 cm Kabel

Bestell-Nr.	33.19.200
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Schaltbild



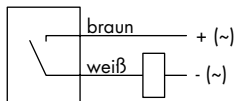
Kabel 2 x 0,14 mm<sup>2</sup>, 2500 mm lang

Bestell-Nr.	33.19.130
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Stecker 2polig, M8, 30 cm Kabel

Bestell-Nr.	33.19.140
-------------	-----------

Schaltbild



**Technical Data:**

Switching output: closing contact

Switching capacity: max. 2 VA/W (3 pole)  
max. 0.9 VA/W (2 pole)

Switching voltage: 10 - 30 V AC/DC

Switching current: max. 100 mA (3 pole)  
max. 30 mA (2 pole)

Internal power consumption: ON: typ. 12 mA at 30 V DC

Switching time: 1 ms

Drop-out time: 0.05 ms

Switching rate: max. 200 Hz

Service life: 10<sup>6</sup> to 10<sup>7</sup> switchings, depending on electrical load

Ambient temperature range: - 5 °C to + 70 °C

Protection class: IP 67

Status indicator: LED  
Housing material: plastic

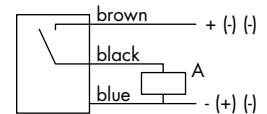
cable 3 x 0,14 mm<sup>2</sup>, 2500 mm

Order No.	33.19.100
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socket 3 polar, M8, 30 cm cable

Order No.	33.19.200
-----------	-----------

Circuit diagram



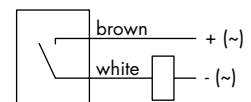
cable 2 x 0,14 mm<sup>2</sup>, 2500 mm

Order No.	33.19.130
-----------	-----------

socket 2 polar, M8, 30 cm cable

Order No.	33.19.140
-----------	-----------

Circuit diagram

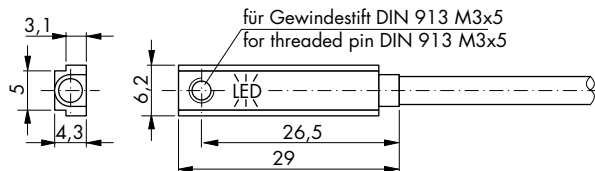
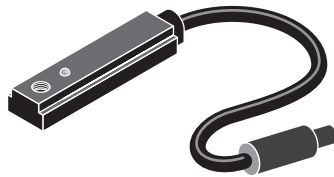
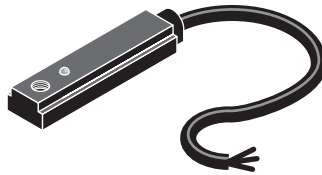


Zylinder  
Compact-Zylinder  
Zubehör  
Positionsgeber

Cylinders  
Compact Cylinders  
Accessories  
Position Transmitter

**Technische Daten:**

Überfahrlänge: abhängig von Magnetfeld und Einbaulage  
 Hysterese: abhängig von Magnetfeld und Einbaulage  
 Einbaulage: beliebig  
 Betriebsspannung: 10 - 30 VDC  
 Restwelligkeit: < 10 % von UB  
 Eigenstromaufnahme: 10 mA ohne Last  
 Kollektorwiderstand: eingebaut  
 Schaltstrom bei T = + 25 °C: max. 130 mA  
 Schaltbare Parallelkapazität: ≤ 0,01 µF  
 Spannungsabfall: ≤ 3 V bei I<sub>a</sub> = 130 mA  
 Schaltfrequenz: 2 kHz  
 Umgebungstemperatur: - 5 °C bis + 70 °C  
 Schaltausgang: PNP Schließer  
 Schutzbeschaltung: eingebaut  
 Kurzschlußfestigkeit: eingebaut  
 Schutzart: IP 67  
 Schaltzustandanzeige: LED  
 Gehäusematerial: Kunststoff



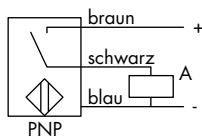
Kabel 3 x 0,14 mm<sup>2</sup>, 2500 mm lang

Bestell-Nr.	33.19.300
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Stecker 3polig, M8, 30 cm Kabel

Bestell-Nr.	33.19.400
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Schaltbild



Optional auch in NPN Version erhältlich

**Technical Data:**

Length of over-travelling: depending on magnetic field and fitting position  
 Hysteresis: depending on magnetic field and fitting position  
 Mounting position: any position  
 Operating voltage: 10 - 30 VDC  
 Residual ripple: < 10 % of UB  
 Internal power consumption: 10 mA without load  
 Collector resistor: integrated  
 Switching current T = + 25 °C: max. 130 mA  
 Switchable parallel capacity: ≤ 0,01 µF  
 Voltage drop: ≤ 3 V at I<sub>a</sub> = 130 mA  
 Switching rate: 2 kHz  
 Ambient temperature range: - 5 °C to + 70 °C  
 Output, type: PNP make contact  
 Cross connection protection: integrated  
 Short circuit protection: integrated  
 Protection class: IP 67  
 Status indicator: LED  
 Housing material: plastic

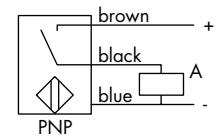
cable 3 x 0,14 mm<sup>2</sup>, 2500 mm

Order No.	33.19.300
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socket 3 polar, M8, 30 cm cable

Order No.	33.19.400
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Circuit diagram



Optional also available as NPN version