

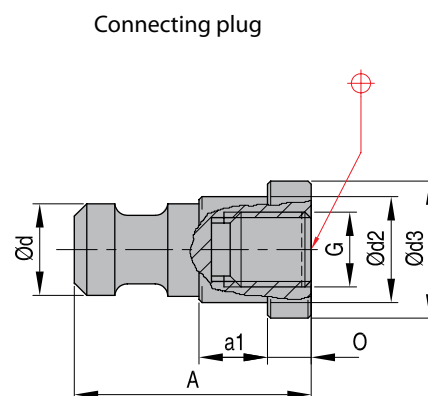
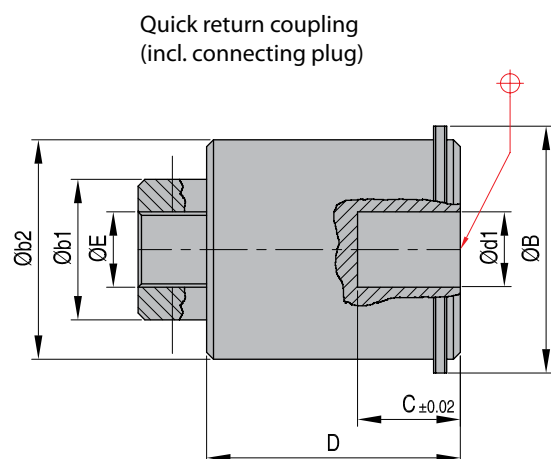


Other Technical Solutions



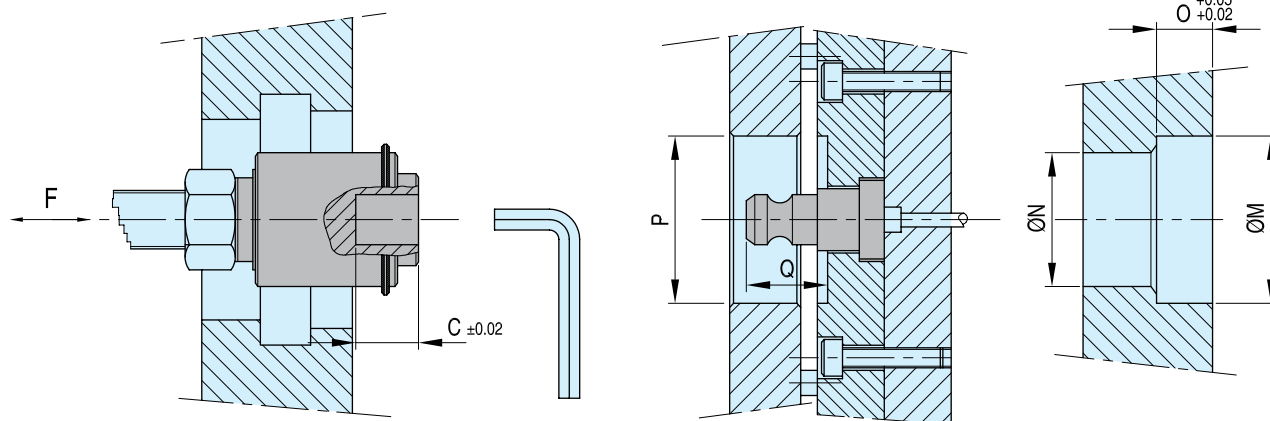
AR

Quick action ejector return couplings for presses with hydraulic ejection



REF	Description	A	B	b1	b2	d1	C	D	E	M	N	O
AR 01	coupling + plug	38	43	24	38	15	18	43,5	M16	23	18	7
AR 02	coupling + plug	43	73	42	67	30	24	75,5	M20	42	32	8
AR 01 P	plug	38								23	18	7
AR 02 P	plug	43								42	32	8

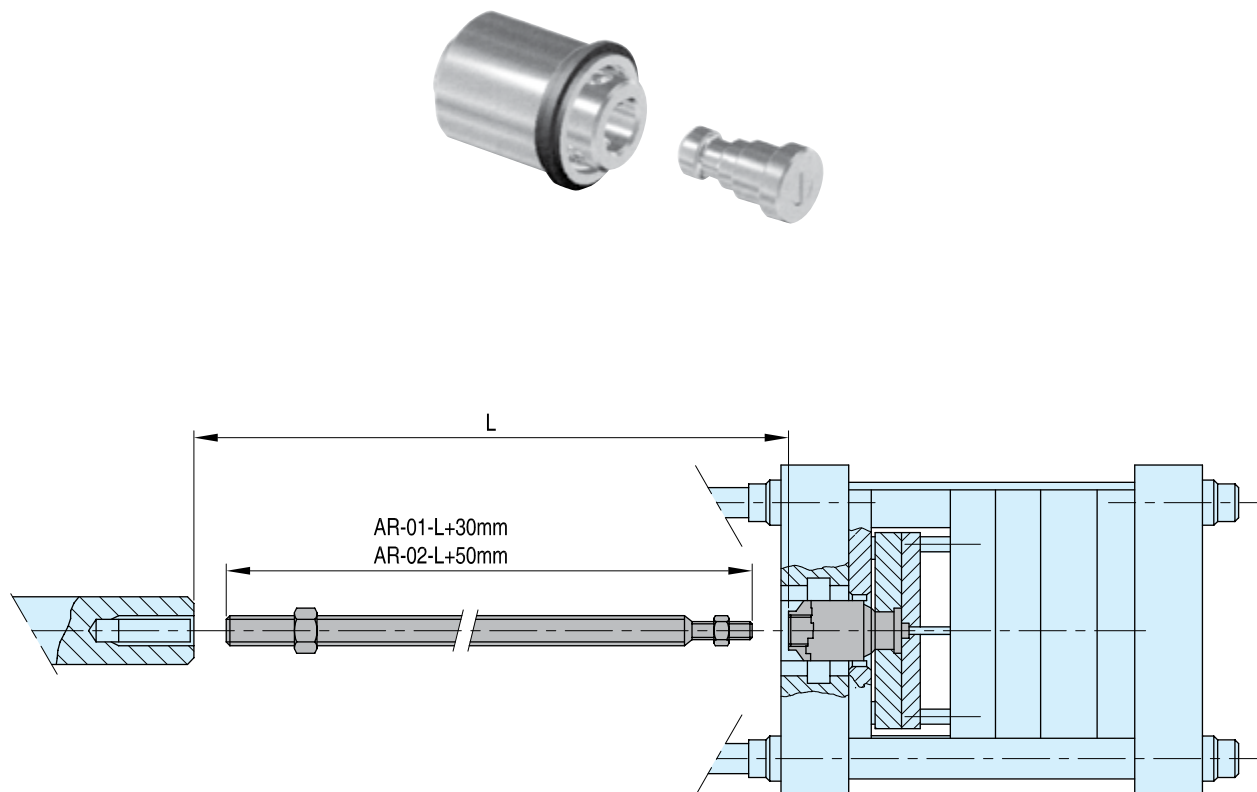
Installation



REF	Pmin.	Qmin.	a1	d	d2	d3	G	F	SW
AR 01	48	C+1	11	14,7	17,4	22,5	M12	40 kN	19
AR 02	80	C+1	14	29,5	29,4	40,0	M16	140 kN	32
AR 01 P			11	14,7	17,4	22,5	M12		
AR 02 P			14	29,5	29,4	40,0	M16		

Quick action ejector return couplings for presses with hydraulic ejection

Info AR



Economical
shortens mold change-over times only one unit required per injection molding machine

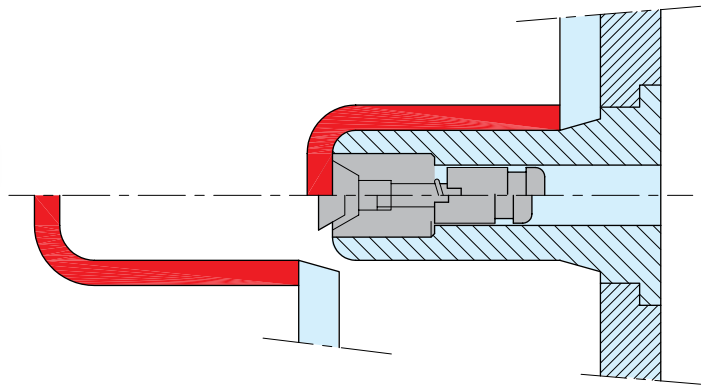
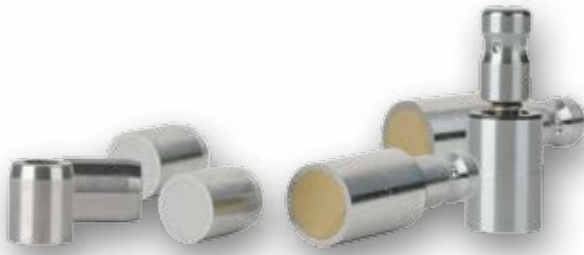
Universal
can be put into existing molds to save time and money hydraulic return by means of fixed coupling pulsating ejection possible

Installation

1. Move the ejector plate to the molding position (mold closed).
 2. Move also the ejector cylinder rod to the fully retracted position. It is important to check by hand, that the rod is fully pushed back to the fully retracted position before measuring.
 3. Measure the distance between the coupling and the ejector cylinder rod.
 4. Extend the ejector cylinder rod with an extra knock-out rod of the measured length + 30 mm for AR-01 and 50 mm for AR-02.
 5. Move the mold ejector plates to the forward position (mold open).
 6. Lock both the extra knock-out rod and at the other end the quick coupling.
 7. Move the mold ejector plates back to the mold closed position and make the coupling between ejector plate and ejector cylinder rod. Make sure that the ejector plate and ejector cylinder rod are both in the mold closed position as soon as the coupling is made, if not, adjust.
- Do not use with quick mold change systems.

Info Air Valve

Air valves improved for fast running applications



DME's team of experts has re-engineered the "long" type air valves resulting in increased strength and guaranteed reliability. Improvements to the internal design ensure strong, long-lasting function and flash-free shut-off. The same technology and know-how is applied to our new "short" type air valves ensuring high quality despite the economical price.

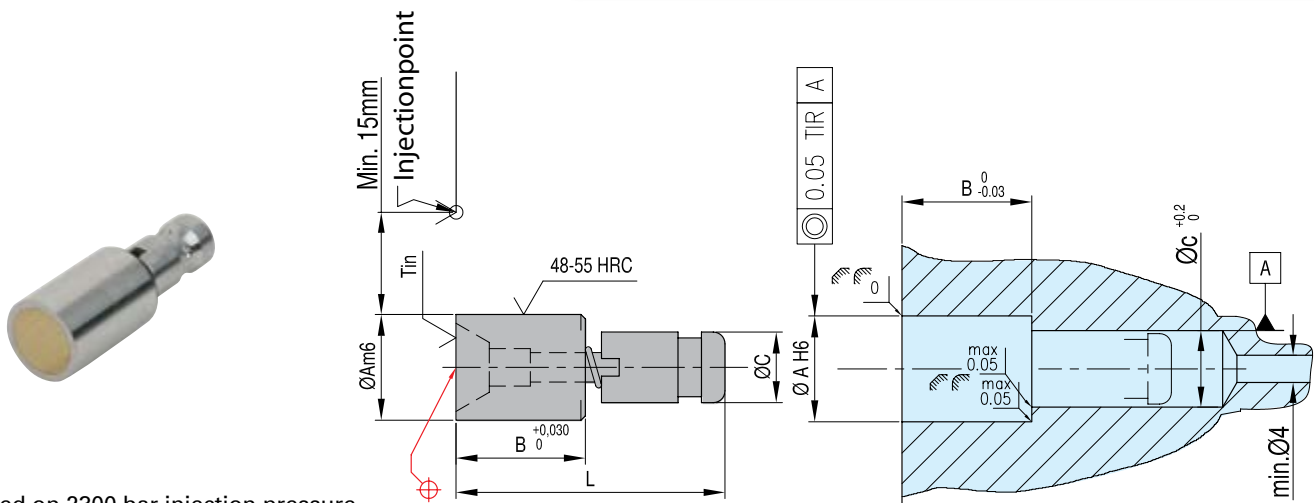
The "long" type air valves have been popular and successful for many years. they are used to remedy the vacuum problem often encountered when molding deep

or thin walled parts (flower pots, buckets, ...). At ejection, a blast of air opens the valve to break the vacuum and facilitate part ejection (see diagram).

DME now offers a range of valves suitable for all applications. Where space is limited the "short" type offers a compact solution. For more demanding applications, the "long" type offers excellent performance. Both types are of the highest quality and have been tested in extreme circumstances of temperature, pressure and cycle time.

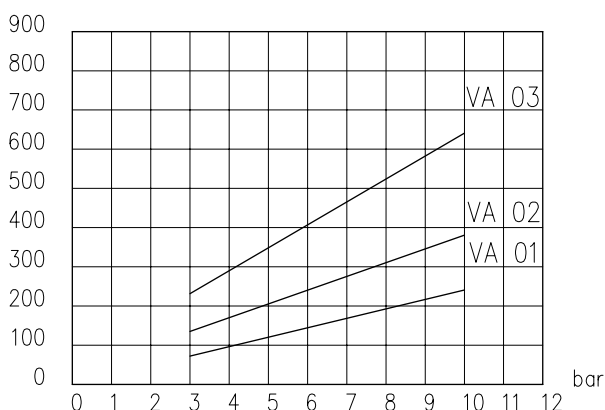
VA- i

Vacuum-/ Compressed air-valves "long" type Mat.: 1.4034 - 150°C - 3-10 bar



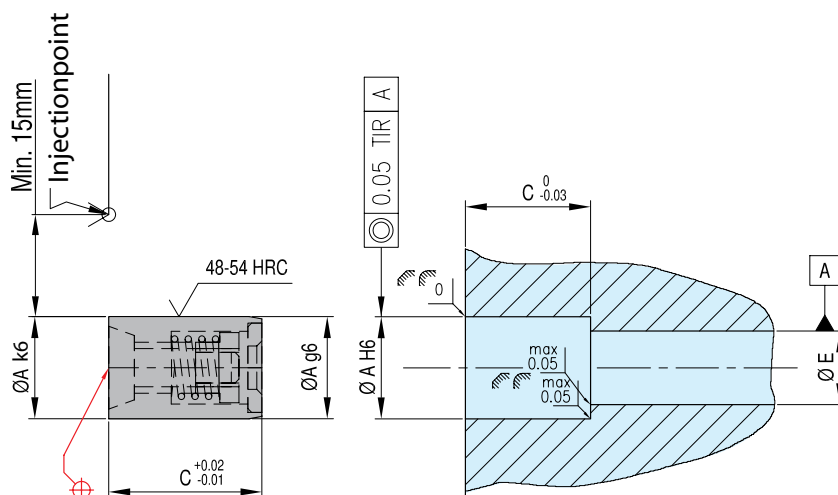
Tested on 2300 bar injection pressure

REF	A	B	C	L	c ^{+0.2} / ₋₀
VA-01 i	8	11	6	24,0	6,75
VA-02 i	12	18	8	34,0	9,00
VA-03 i	18	22	12	45,5	14,00



Vacuum-/ Compressed air-valves "short" type Mat.: 1.4034 - 150°C - 3-10 bar

VA



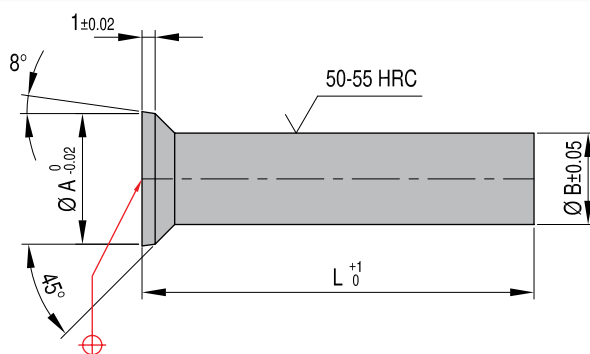
Tested on 2300 bar injection pressure

REF	A	C	E min
VA-08	8	12	4
VA-10	10	12	4
VA-12	12	12	4
VA-16	16	20	4
VA-20	20	20	4

Air-pins for Vacuum-/ Compressed air-valves

Mat.: WAS ~1.2344

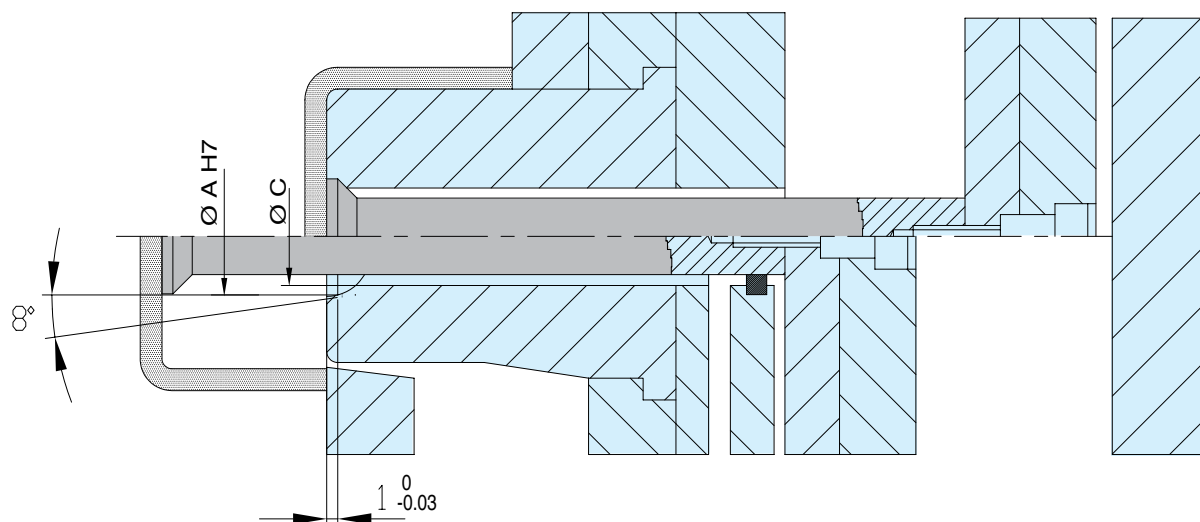
LS



These pins avoid ejection problems due to a vacuum occurring in long, closed products. A blast of compressed air can be used in order to eject the moldings. Can be cut to required length and tapped for securing to ejector plates.

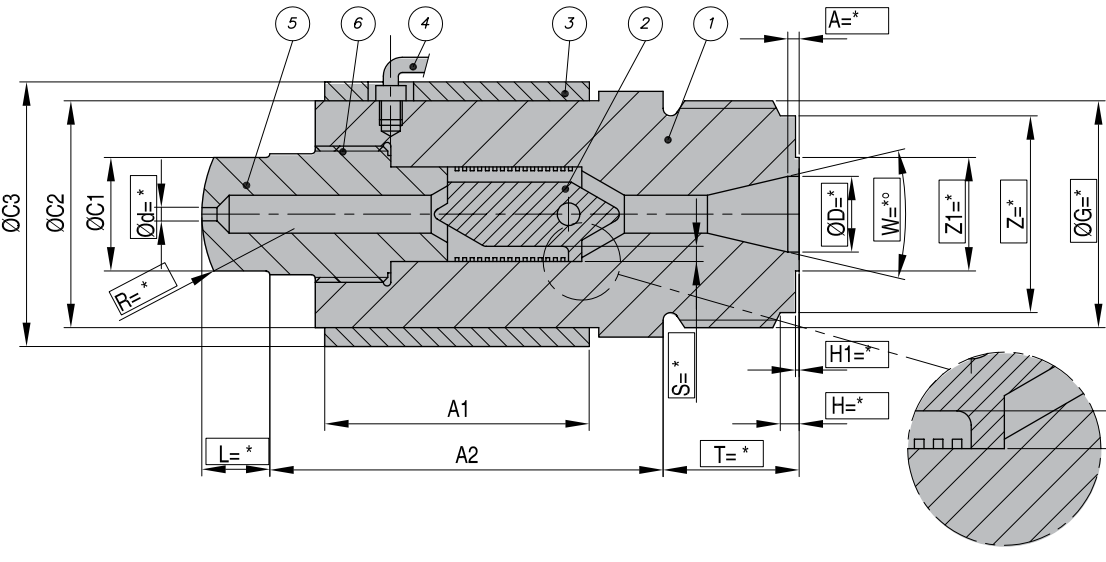
REF	L	A	B	C	Thread
LS-10	300	10	7	8	M5
LS-15	400	15	10	11	M6

Installation instructions



OKW-UR

Machine filter



- 1. Nozzle body
 - 2. Torpedo
 - 3. Heater band
 - 4. Thermocouple
 - 5. Nozzle tip
 - 6. Filter adjustment indicator
- S = Filter opening
* = Required customer information

REF	Type	A1	A2	C1	C2	C3	d	R	L	T	D	W°	G	S	A	H	Z	H1	Z1
OKW-UR1	I = 300gr	89	102	30	60	70	*	*	*	*	*	*	*	*	*	*	*	*	*
OKW-UR2	II = 1200gr	120	138	30	80	90	*	*	*	*	*	*	*	*	*	*	*	*	*
OKW-UR3	III = 2500gr	150	170	40	100	110	*	*	*	*	*	*	*	*	*	*	*	*	*

Machinefilter

OKW-UR

The new OKW-UR Machine Filter Nozzle is an economical way to improve molding efficiency and part quality. Capable of easily processing recycled material, the OKW-UR Machine Filter Nozzle prevents gate obstructions that may occur with foreign materials. Filter sizes from 0,2mm are available. The various filter gaps are obtained by changing the insert. Smooth and quick cleaning is accomplished by simply unscrewing the nozzle tip 4-8mm, purging to clean the filter, refasten tip and tighten nozzle tip.

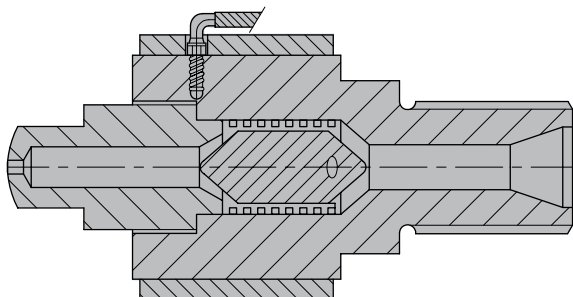
The new OKW-UR Machine Filter Nozzle is appropriate for all unfilled plastics (e.g. PE, PP, PS, ABA and PA). Material flow has been thoroughly computed for minimal pressure loss and minimal heat increase. By avoiding sharp corners, material is not degraded by frictional heat or shear stress.

Part weight is dependent upon material type, flow volume, injection time and filter size. The OKW-UR Filter Nozzle is available in three sizes: 300 grams, 1200 grams and 2500 grams. A smooth flow channel enables fast color or material changes. A band heater on the filter body prevents material heat loss during filtration. The OKW-UR Machine Filter Nozzle has an average payback period of six months.

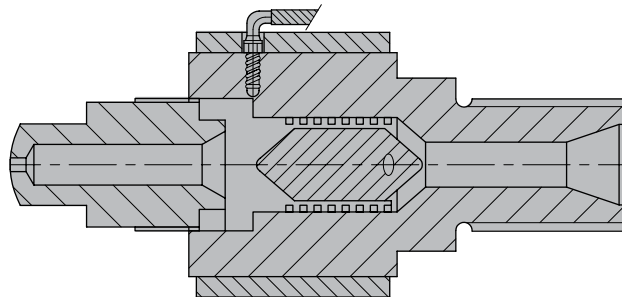


Instructions for use

Filter position



Cleaning position



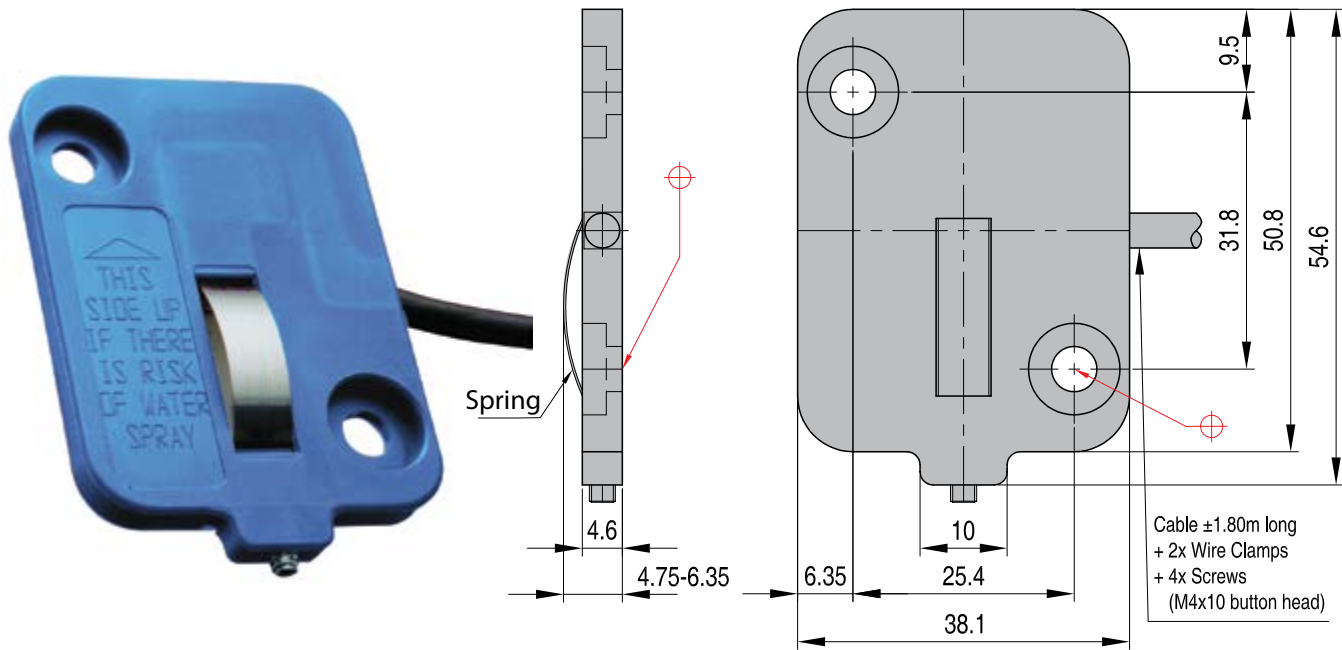
1. For depressurization of the screw, use screw pullback. Or, if there is no decompression available, leave screw in forward position.
2. Unscrew tip to end of thread (dependent on nozzle - typically 4-8mm).
3. Obeying safety rules, air purge one or two times with reduced injection pressure.
4. Fasten tip and tighten.
5. Resume normal information.

Included in the order

Heater band
Thermocouple
Ringwrench (for cleaning)
Directions for use

TSW2220 EU

Thinswitch™ Limit Switch



REF	
TSW2220 EU	

Specially designed to verify ejector plate return before permitting the mold to close in injection molding machines.

Thin enough to fit inside the ejector plate, it can also be used for core slides, or any place space is limited.

The Thinswitch Limitswitch has been tested for reliability over 10 million cycles without failure. Two switches can be used in series for larger molds to ensure the ejector plate return, preventing costly mold damage.

Prevents costly damage by ensuring the ejector assembly is fully returned.

Adjustable operating point allows actuation between 4.75 and 6.35 mm from the base.

To be fitted behind the ejector plate in the space provided by stop button.

Included mounting hardware allows easy installation of the Thinswitch Limit Switch.

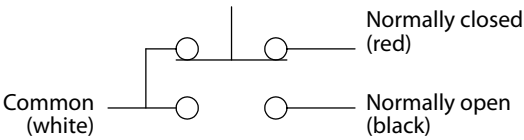
Stripped and tinned 1.80 m wire leads make the switch ready to install without modification.

79°C standard temperature rating enables use for most molding applications.

Quality tested over 10 million cycles to provide long dependable service.

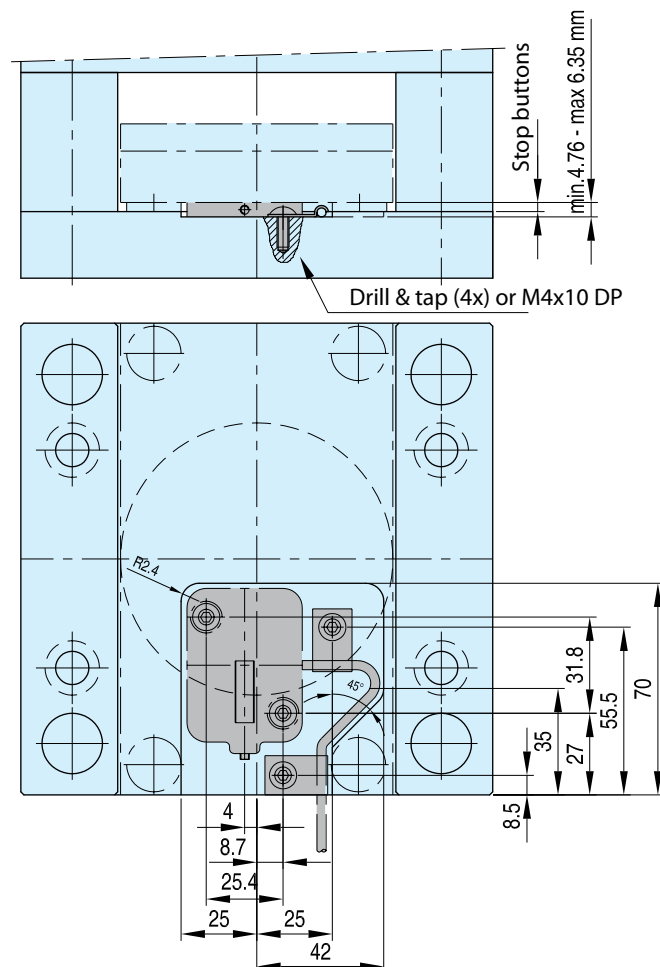
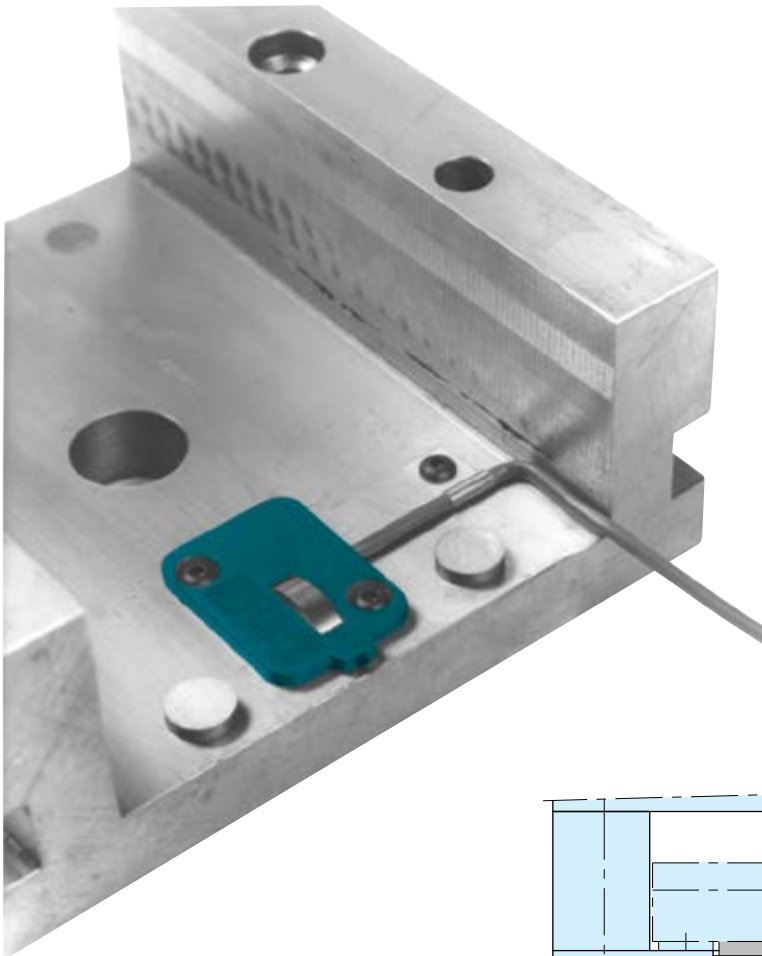
48 VAC	1 Amps resistive
	1 Amps inductive
40 VDC (sea level)	1 Amps resistive
	1 Amps inductive
Operating Temperature	79°C
Switching	SPDT
Material Body	Fiberglass-reinforced nylon
Material Spring	Stainless Steel
Back Cover	Polyester film
Wire leads	0.5 mm stranded, 3-conductor, shielded cable, 1.80 m long, ends stripped and tinned
Safety class	IP 31
The Thinswitch™ Limit Switch is designed for use in very low power mold protection control circuits. It is not intended to switch heavy loads in power applications.	

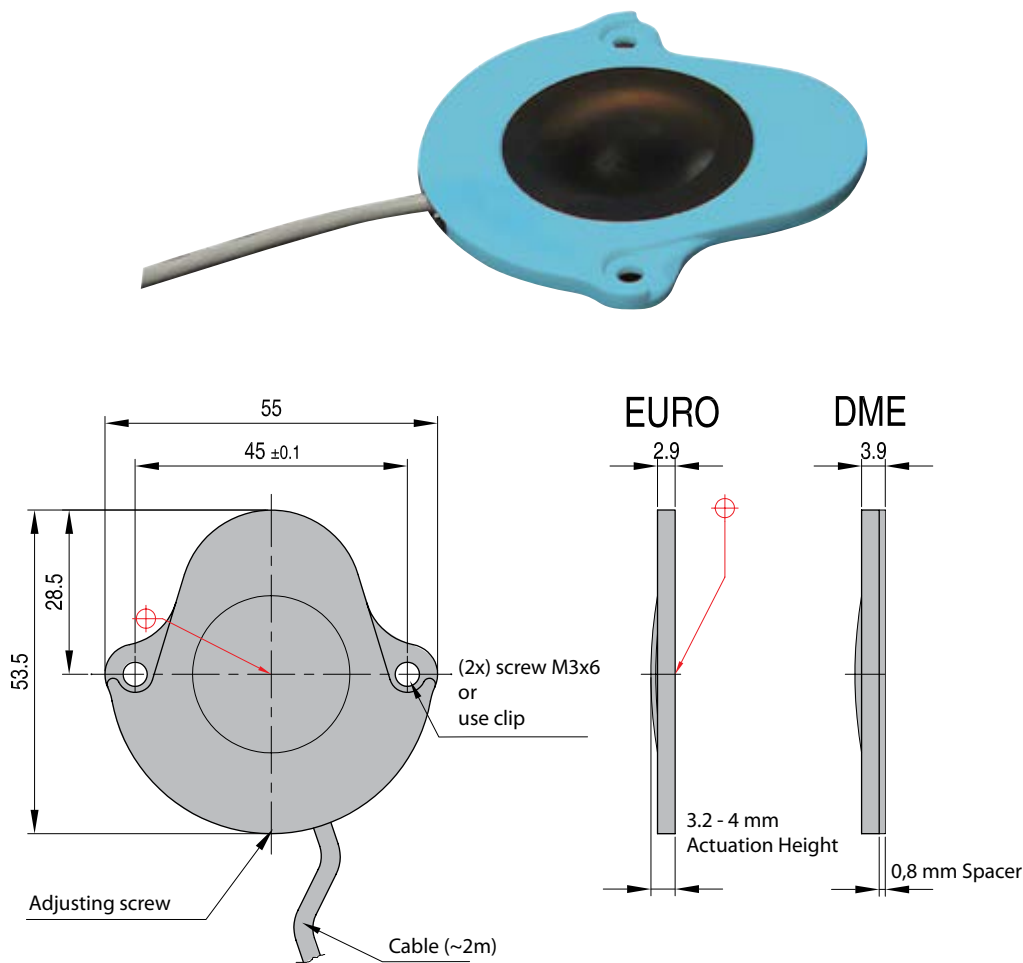
Schematic Diagram



Thinswitch™ Limit Switch

TSW2220 EU





REF	
TSW2222	

A limit switch specially designed for use in injection molds with 3mm and 4mm rest buttons to verify that the ejector plate assembly is fully returned before allowing a mold to close after part ejection.

Switch mounting is accomplished using integral mounting holes, or by using a special bracket (included) that allows the switch to slide into place from the edge of the mold base without disassembling the mold.

A polyurethane dome and wire seal protect the internal switch mechanism from water or oil contamination, providing a longer switch life. Reliability for over 14 million cycles without failure.

Prevents expensive mold repair and maximizes uptime.

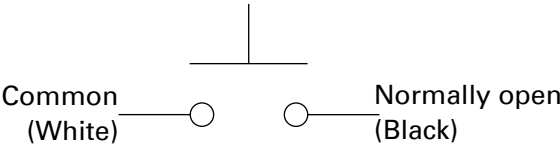
Suitable for use in environments up to 80°C

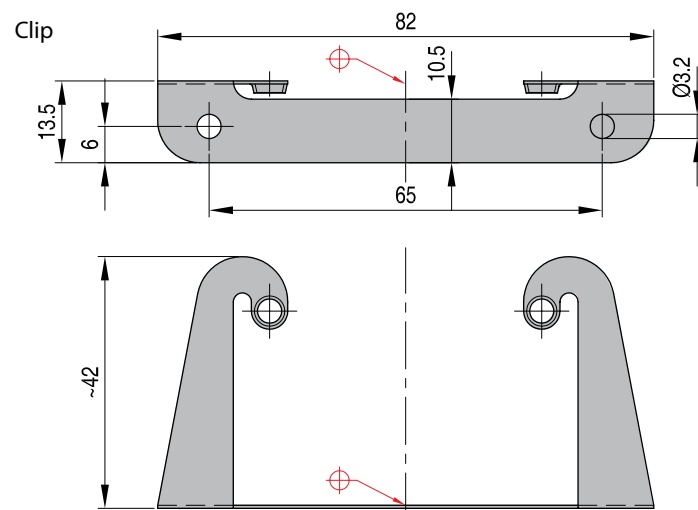
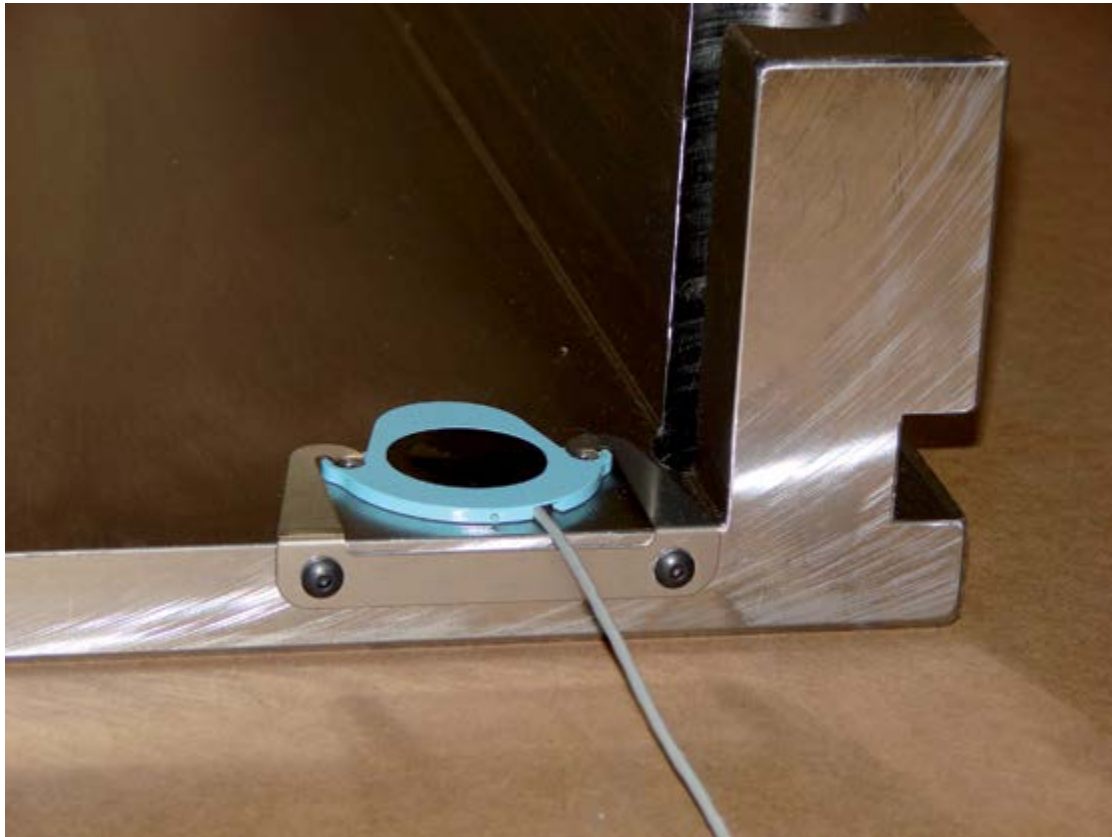
SPST Switching action, with gold-plated internal contacts for reliable operation.

Comes with wire leads (28 gauge stranded) and 2-conductor shielded cables, 2m long.

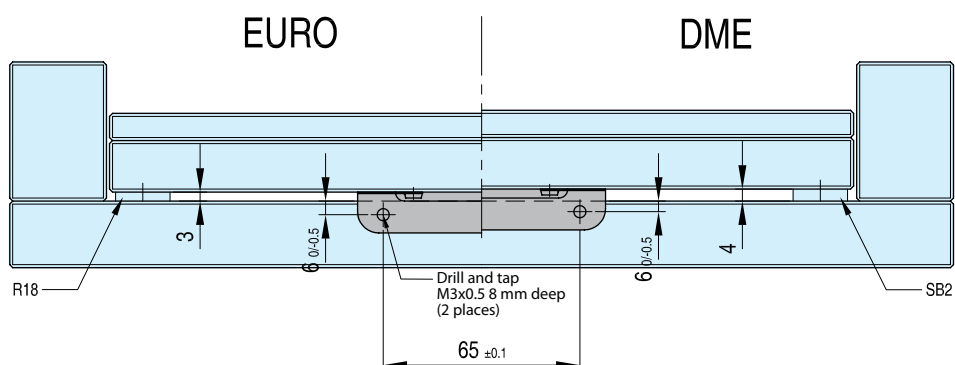
Max T	80°C
Switching	SPST
Mat body	Fiberglass-reinforced nylon
Mat dome	Polyurethane
Back cover	Polyester film
Rated current (resistive) at 24VDC:	
mAmps	°C
100	30
90	50
80	68
70	80
Not intended for inductive loads	

Schematic Diagram





Installation instructions for bracket



CV

CounterView® mold counter, 100-200 series

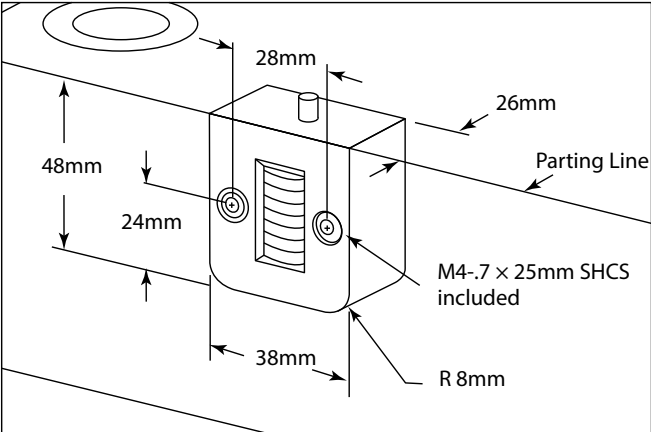


Accurately monitors mold operation, validates process monitoring data, and assists mold maintenance procedures.

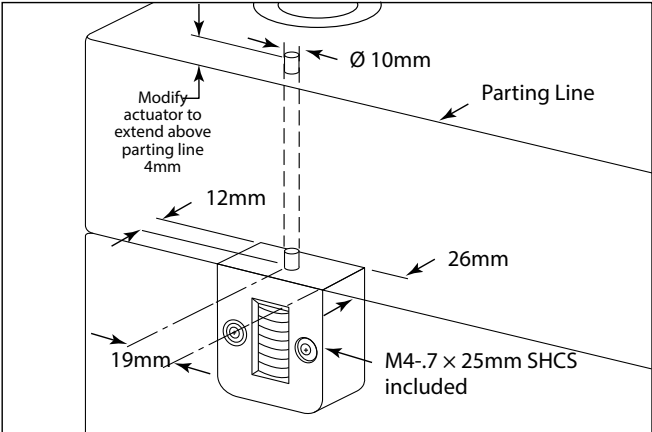
With a maximum operating temperature of 250°F (121°C), this precise device uses a non-resettable, mechanical, 7-digit counter to record the number of times a mold closes. Easily mountable to accommodate changeovers for different mold insert heights, the unit's counting mechanism relies on a sensor that detects when the mold has closed.

Benefits

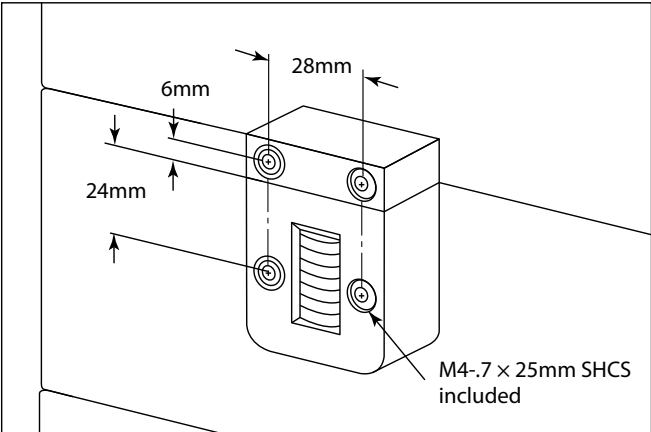
- Positively monitors mold activity
- Confirms process monitoring data
- Maximizes mold maintenance procedures
- Enables access to mold information online at www.moldmonitor.com
- Glass-filled nylon housing for rugged durability



Parting Line Mount	
Parting line mount makes unit easily visible.	
CVPL100D	Inch Standard
CVPL200D	Metric Standard



Internal Extension Mount	
Machinable 8" (203mm) extension enables support plate or rail installation.	
CVIN100D	Inch Standard
CVIN200D	Metric Standard



External Mount	
Pocket machining not necessary. Designed specifically for retrofit applications.	
CVEX100D	Inch Standard
CVEX200D	Metric Standard

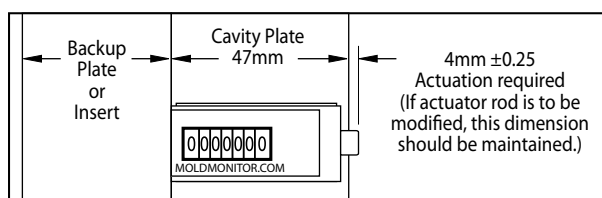
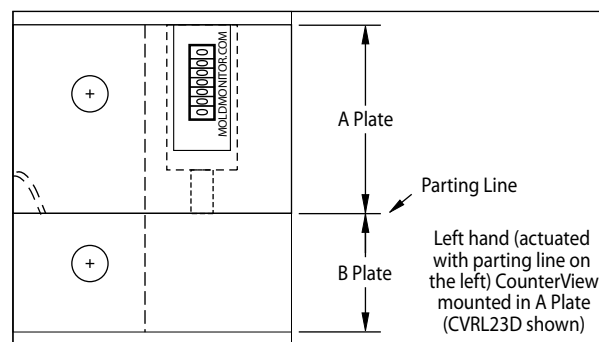
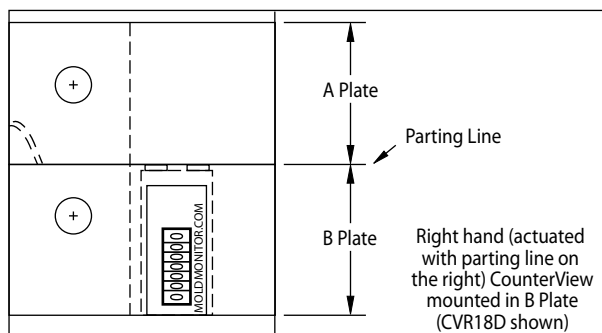
Each CounterView has a unique serial number that allows users to view mold information online at moldmonitor.com.

CounterView is a registered trademark of Progressive Components.
U.S.# 5,571,539
Others issued and pending

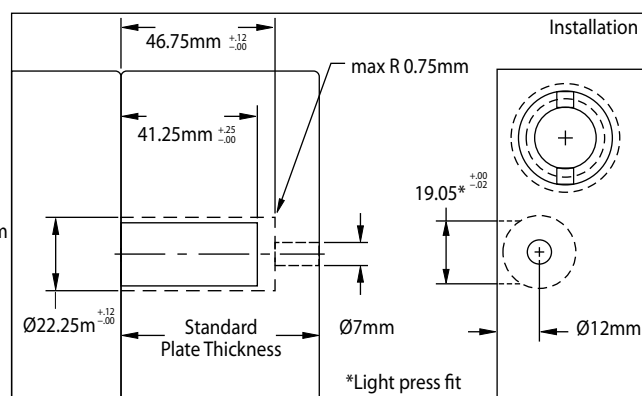
CounterView® mold counter, R series

CV

The CounterView accurately monitors mold operation, validates process monitoring data, and assists mold maintenance procedures. With a maximum operating temperature of 121°C, this precise unit has a non-resettable, mechanical, 7-digit counter and a glass-filled nylon housing for rugged durability.



The R-Series CounterView can be installed in the A or B plates with a minimum thickness of 47mm. Larger plates utilize a threaded rod (included with each) that is pre-machined to the appropriate length for standard plate thicknesses to provide consistent actuation.



Parting Line at Left



Parting Line at Right



REF	Nominal plate thickness	REF	Nominal plate thickness
CVRL56D	56	CVR56D	56
CVRL66D	66	CVR66D	66
CVRL76D	76	CVR76D	76
CVRL96D	96	CVR96D	96

Inch Standards upon request

Inch Standards upon request

Each R-Series CounterView includes the actuator. All require attachment of the actuator rod to the threaded unit.

Replacement actuator rods

REF	Round CV Rod Length
RCV56	8.38mm
RCV66	18.39mm
RCV76	28.37mm
RCV96	48.38mm

Inch Standards upon request

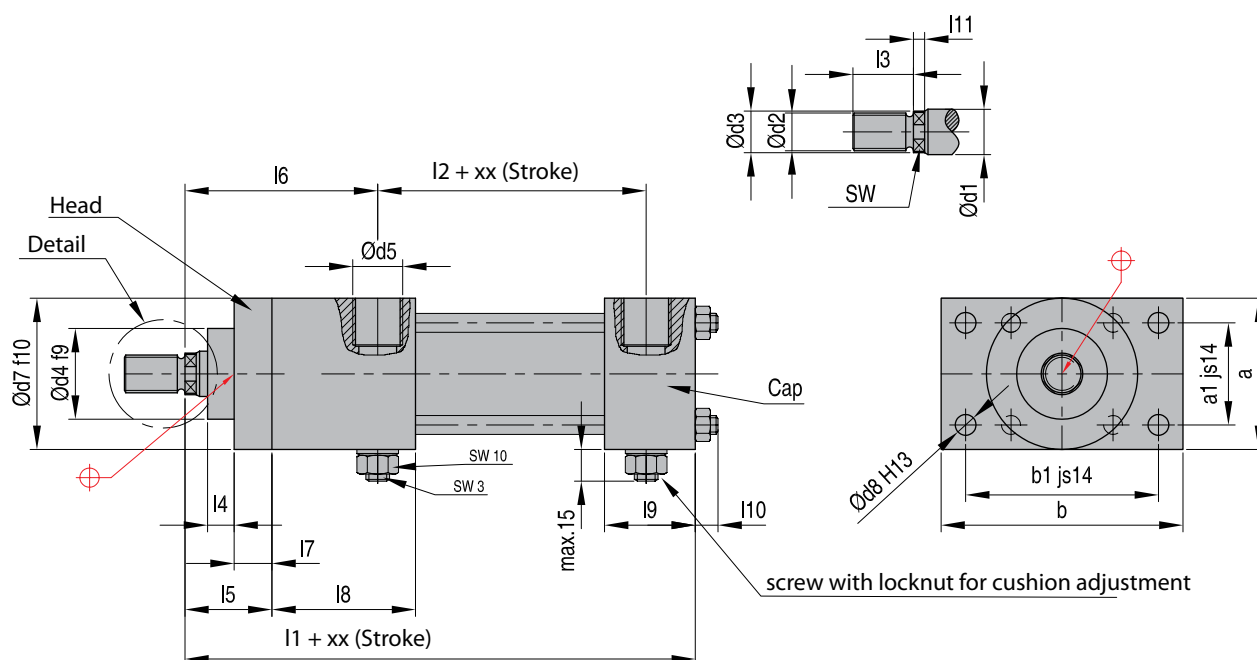
HZ160R

Hydraulic cylinder



Interchangeability acc. to ISO 6020/2-1981
 Symbolization acc. to ISO 6099
 Standardized accessories acc. to ISO 8133
 Installation only with fasteners from property class 10.9
 All **DME** HZ cylinders are fitted with magnets mounted on the piston to enable use of magnetic switches.
 Magnetic switches offer more straightforward installation than mechanical switches, simplifying setup and maintenance costs.

$P_{max} = 160$ bar (for size 50 only 120 bar)
 $T_{max} = 80^{\circ} C$ (max working temperature)
 Head + rear cushioning and air bleed
 Max piston speed: $V_{max} = 0,7 - 0,8$ m/s



REF	d1	d2	d3	d4	d5	d7*	d8	l1	l2	l3	l4	l5	l6	l7	l8	l9	l10	l11	a	a1	b	b1	SW	S
HZ160R-25-xx	12	M10x1,25	11	24	R1/4"	44	5,5	114	51	14	7	25	51	10	38	24	8	5	40	27,0	64	51	10	16
HZ160R-32-xx	14	M12x1,25	13	26	R1/4"	50	6,5	128	55	16	9	35	61	10	38	25	10	8	46	33,2	70	58	11	17
HZ160R-40-xx	18	M14x1,50	17	30	R3/8"	57	11,0	153	68	18	8	35	63	10	43	37	12	6	60	41,0	109	87	15	20
HZ160R-50-xx	22	M16x1,50	21	34	R1/2"	70	13,5	159	72	22	9	41	67	16	43	37	16	8	75	52,0	128	105	18	20

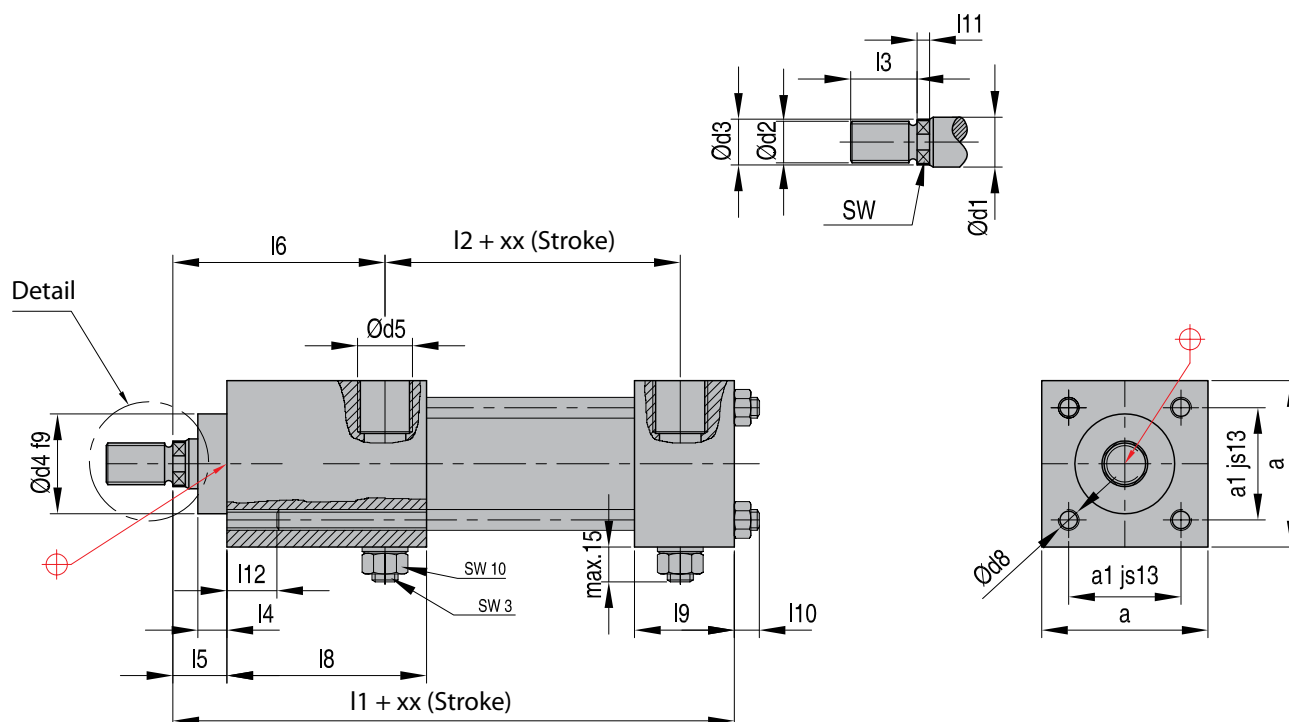
FD=thrust in kg FZ=traction force in kg	P bar												xx(Stroke)												
	80		90		100		120		125		160														
d	FD	FZ	FD	FZ	FD	FZ	FD	FZ	FD	FZ	FD	FZ	20	50	80	100	125	160	200	250	300	350	400	500	600
25	392	302	442	340	490	377	589	453	613	471	785	603	S	S	S	S	S	S	S	UR					
32	643	520	724	585	804	650	965	780	1005	812	1286	1040	S	S	S	S	S	S	S	UR	UR				
40	1004	800	1131	902	1256	1001	1508	1203	1570	1251	2009	1601	S	S	S	S	S	S	S	UR	UR	UR	UR		
50	1570	1265	1767	1425	1963	1582	2356	1900					S	S	S	S	S	S	S	UR	UR	UR	UR	UR	UR

S = Standard
 UR = Upon request



All **DME** HZ cylinders are fitted with magnets mounted on the piston to enable use of magnetic switches. Magnetic switches offer more straightforward installation than mechanical switches, simplifying setup and maintenance costs.

Pmax = 160 bar (for size 50 only 120 bar)
Tmax = 80° C (max working temperature)
Head + rear cushioning and air bleed
Max piston speed: Vmax = 0,7 - 0,8 m/s



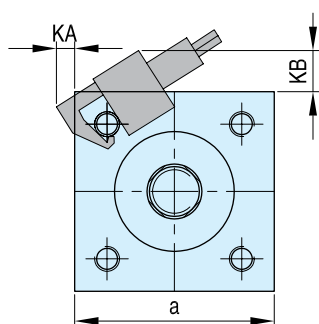
REF	d1	d2	d3	d4	d5	d8	11	12	13	14	15	16	18	19	110	111	112	a	a1	SW	S
HZ160S-25-xx	12	M10x1,25	11	24	R1/4"	M5x0,80	114	51	14	7	15	51,0	48	24	8	5	12	40	28,3	10	16
HZ160S-32-xx	14	M12x1,25	13	26	R1/4"	M6x1,00	128	55	16	9	25	60,5	48	25	10	8	15	46	33,2	11	17
HZ160S-40-xx	18	M14x1,50	17	30	R3/8"	M8x1,00	153	68	18	8	25	63,0	53	37	12	6	20	60	41,7	15	20
HZ160S-50-xx	22	M16x1,50	21	34	R1/2"	M12x1,25	159	72	22	9	25	67,0	59	37	16	8	25	75	52,3	18	20

FD=thrust in kg FZ=traction force in kg	P bar												xx(Stroke)													
	80		90		100		120		125		160															
d	FD	FZ	FD	FZ	FD	FZ	FD	FZ	FD	FZ	FD	FZ	20	50	80	100	125	160	200	250	300	350	400	500	600	
25	392	302	442	340	490	377	589	453	613	471	785	603	S	S	S	S	S	S	S	UR						
32	643	520	724	585	804	650	965	780	1005	812	1286	1040	S	S	S	S	S	S	S	UR	UR					
40	1004	800	1131	902	1256	1001	1508	1203	1570	1251	2009	1601	S	S	S	S	S	S	S	UR	UR	UR	UR			
50	1570	1265	1767	1425	1963	1582	2356	1900					S	S	S	S	S	S	S	UR	UR	UR	UR	UR	UR	

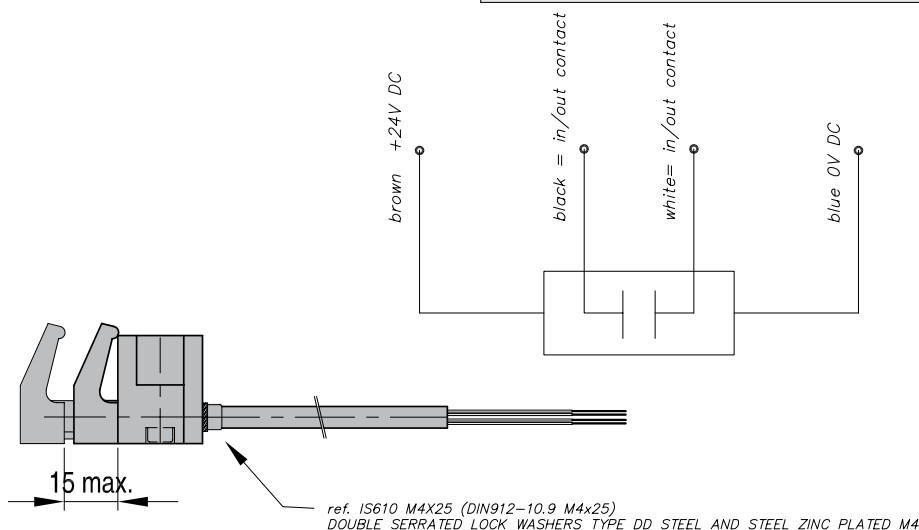
S = Standard
UR = Upon request

HZ161U

Magnetic-switches for hydraulic cylinder HZ 160



DME introduces the new "Universal" sensor HZ161U as replacement for the REED-switch HZ161U. The universal sensor combines the functionality of REED magnetic sensor with an inductive magnetic sensor, greatly reducing the interference caused by ferrous objects (such as steel mold plates). This gives more accurate readings than the old REED sensor. Typically 2 sensors per cylinder; to be ordered separately.



	REF
HZ161U	

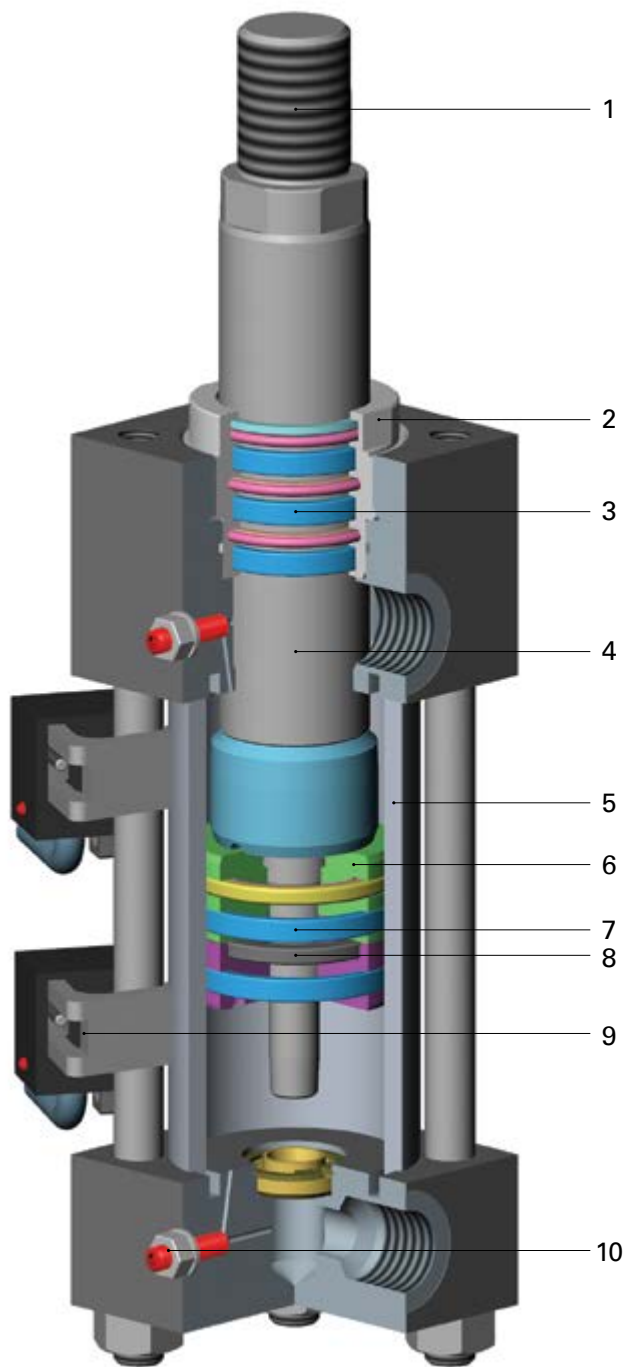
For	a	KA	KB
HZ160 25	40	9,2	23,2
HZ160 32	46	9	23,5
HZ160 40	60	8	21
HZ160 50	75	7,7	18,5

Technical specification	
Supply	24 VDC \pm 10%
Protection	polarity inversion
Output	clean contact 0V
Max. switching voltage	125 VAC
Max. switching current	800 mA
Max. switching frequency	60 Hz
Max. switching power	20 W
Electric life at rated power (operations)	10,000,000
Hysteresis	\pm 0,02 mm typical
24 volt disconnection delay	15 m sec.
Max. working temperature	+80° C - +176° F
Cable (Extraflex armoured + transp. PVC sheath)	mm \varnothing 6 x 3000
Section wires	4x0,25 mm ²
Serial signal connection	ok, max 6 switches
Switch type	magnet-resistive
Repeatability	> 0,05 mm.
ON minimum time	3 msec.
Max. flow speed	15 mt/sec.
Degree of protection against liquids	IP 67 (DIN 40050)
Dimensions	39x24x28 mm

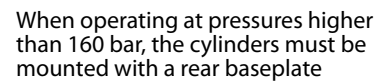
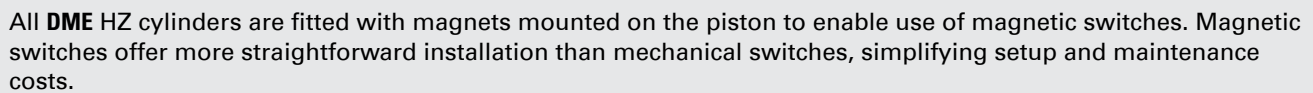
Spare parts

HZ160 Spare parts

1. Rod end
2. Rod cartridge
3. Rod cartridge seals (kit)
4. Rod
5. Tube
6. Piston
7. Piston seals (kit)
8. Piston magnet (for magnetic cylinder)
9. Magnetic switch with bracket
10. Screw with locknut for cushion adjustment



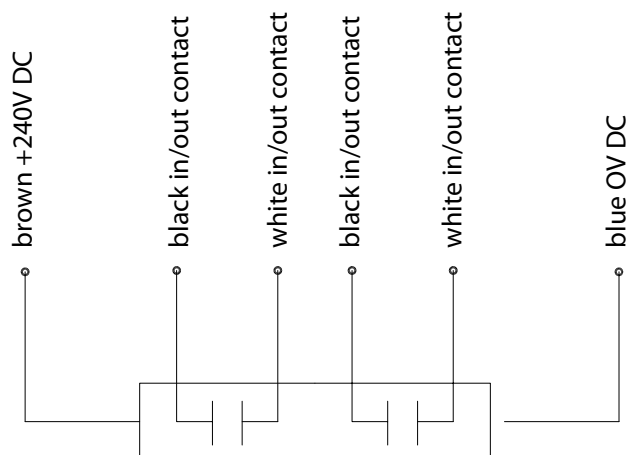
REF (3) ROD CARTRIDGE SEAL	FOR	REF (7) PISTON SEALS	FOR
V160-25-12-KITC	HZ160 25	V160-25-12-KITP	HZ160 25
V160-32-14-KITC	HZ160 32	V160-32-14-KITP	HZ160 32
V160-40-18-KITC	HZ160 40	V160-40-18-KITP	HZ160 40
V160-50-22-KITC	HZ160 50	V160-50-22-KITP	HZ160 50
V160-63-28-KITC	HZ160 63	V160-63-28-KITP	HZ160 63
V160-80-36-KITC	HZ160 80	V160-80-36-KITP	HZ160 80



FD = thrust in kg FZ = traction force in kg	P bar											
	80		100		125		160		200		250	
d	FD	FZ	FD	FZ	FD	FZ	FD	FZ	FD	FZ	FD	FZ
25	392	189	491	236	613	295	785	378	981	473	1227	591
32	643	339	804	424	1005	530	1286	678	1608	848	2010	1060
40	1005	701	1256	876	1570	1095	2010	1402	2512	1752	3140	2190
50	1570	1078	1963	1347	2453	1684	3140	2155	3925	2694	4906	3388

Reed-switches for hydraulic cylinder HZ260

HZ261



DME introduces this new “Universal” sensor as replacement for the REED-switch HZ261. The Universal sensor combines the functionality of REED magnetic sensor with an inductive magnetic sensor, greatly reducing the interference caused by ferrous objects (such as steel mold plates). This gives more accurate readings than the old REED sensor.

HZ261U is produced in 2 versions with different cable lengths between sensor and connection box. The table indicates the version suitable for each cylinder.

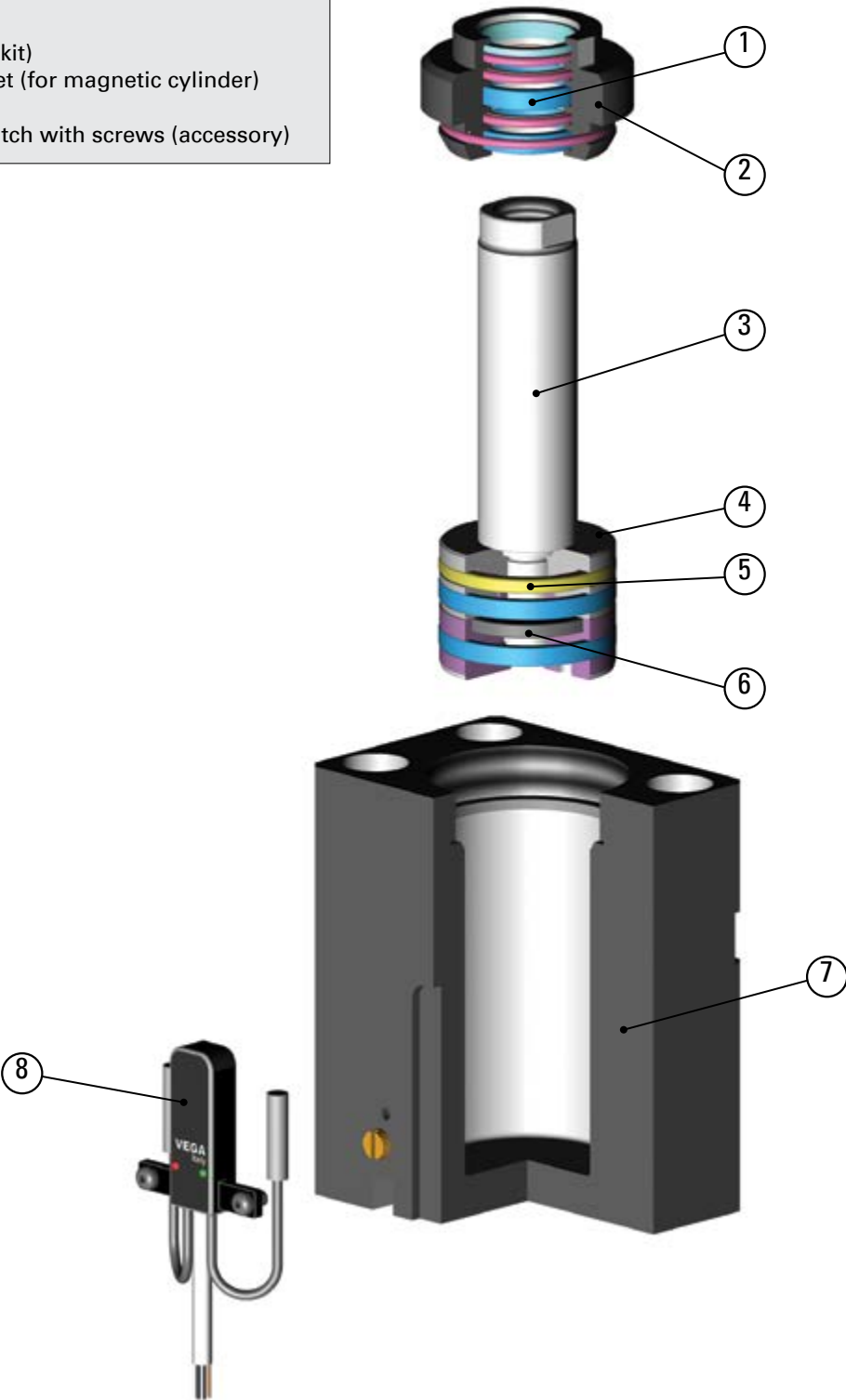
Bore Ø	Stroke	
	20 mm	50 mm
25	HZ261 U1	HZ261 U1
32	HZ261 U1	HZ261 U1
40	HZ261 U1	HZ261 U2
50	HZ261 U1	HZ261 U2
63	HZ261 U2	HZ261 U2
80	HZ261 U2	HZ261 U2
100	HZ261 U2	HZ261U 2

Technical Specifications	
Max switching voltage	125V AC
Max current (resistive load)	800 mA
Max switching power	300 W
Operating temperature	-20 - -> +80°C

HZ261

Interlocking cylinder

- 1. Rod seals (kit)
- 2. Rod cartridge
- 3. Rod
- 4. Piston
- 5. Piston seals (kit)
- 6. Piston magnet (for magnetic cylinder)
- 7. Body
- 8. Magnetic switch with screws (accessory)



REF (1) Rod cartridge seals	FOR	REF (5) Piston seals	FOR
HZ262 25 G	HZ260 25	HZ262 25 K	HZ260 25
HZ262 32 G	HZ260 32	HZ262 32 K	HZ260 32
HZ262 40 G	HZ260 40	HZ262 40 K	HZ260 40
HZ262 50 G	HZ260 50	HZ262 50 K	HZ260 50

Interlocking cylinder

VZ1000

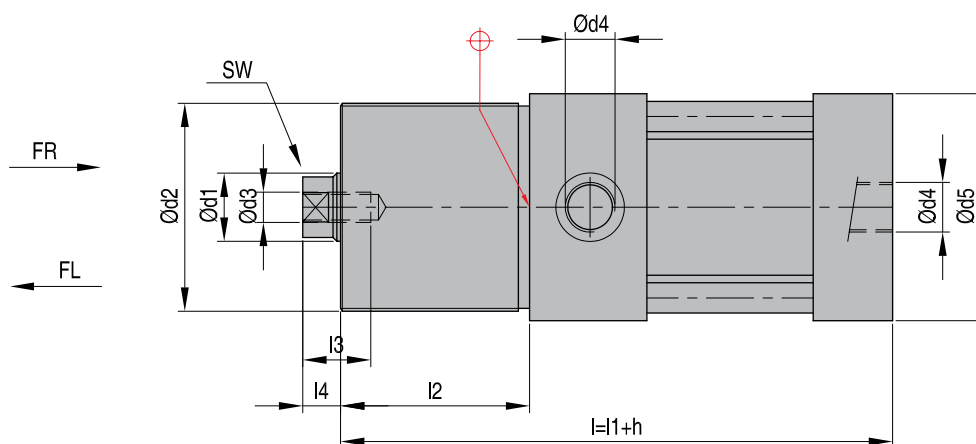


Interlocking cylinder

Stroke $h = 10, 50, 100$ mm

Special length on request.

The returnpipes must be unobstructed and vent directly to the tank.



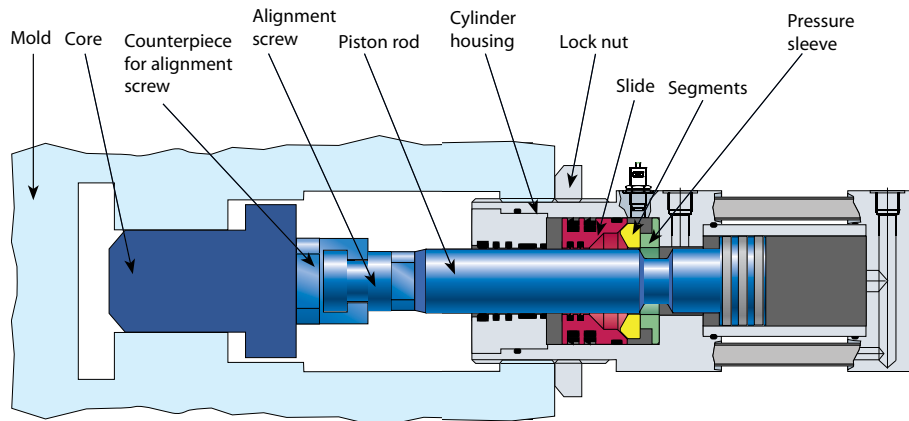
PISTON- \varnothing d	Holding force {kN} Type HT	Stroke force {kN}/100 bar	Retraction force {kN}/100 bar
25	20	4,9	2,9
32	60	6,8	4,9
40	88	12,6	6,4
50	140	19,6	9,5
63	224	31,2	15,3
80	360	50,3	25,6
100	564	78,5	40,1
125	880	122,7	59,1

REF piston \varnothing	d1	d2	d3	d4	d5	l1	l2	l3	l4	SW
Vz1000 25	16	M55 x 2	M8	1/4"	60	140	50	18	10	14
Vz1000 32	20	M65 x 2	M10	1/4"	70	150	60	20	12	17
Vz1000 40	28	M85 x 2	M16	1/4"	95	150	70	25	15	22
Vz1000 50	36	M90 x 2	M20	3/8"	100	160	80	33	21	27
Vz1000 63	45	M110 x 2	M27	3/8"	120	187	90	41	25	36
Vz1000 80	56	M140 x 2	M30	1/2"	150	222	100	43	28	46
Vz1000 100	70	M160 x 3	M42	1/2"	170	248	110	45	33	55
Vz1000 125	90	M170 x 3	M56	3/4"	190	256	120	50	33	70

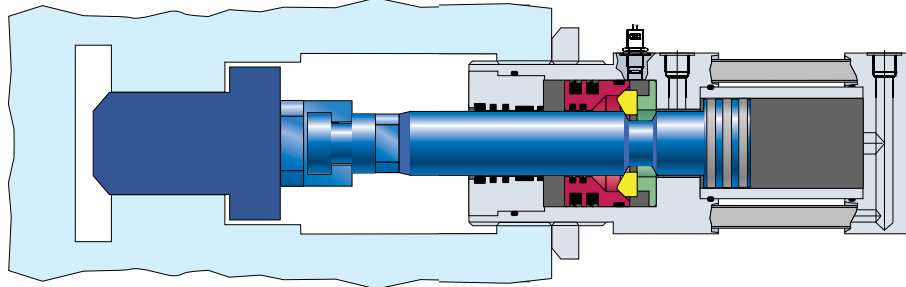
How to order (cylinder without sensor):

VZ1000 25 / h10 (10, 50, 100)
REF piston stroke

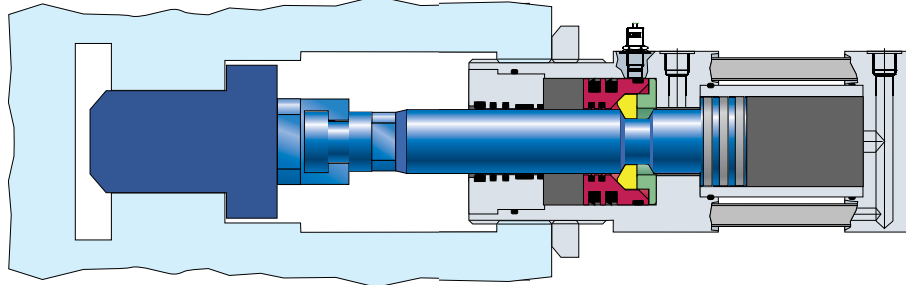
Released position



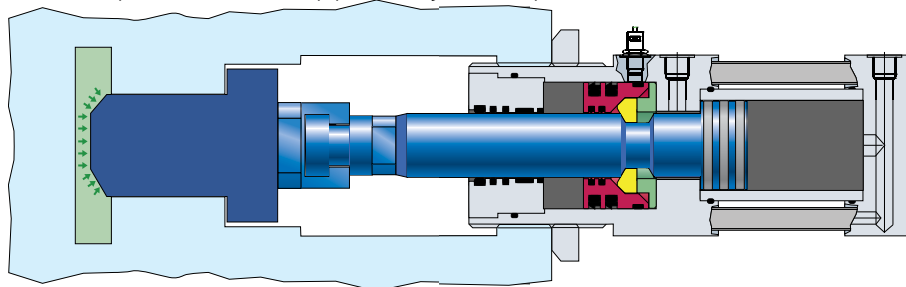
Start of locking



Completely locked position



Locked position with applied injection pressure



Functional process

VZ1000 double acting cylinders whose piston rod is extended by applying hydraulic pressure. When the final position of the piston rod is reached the locking slide moves and presses the locking segments into the annular groove of the piston rod. The segments are fixed in radial and axial position, that means: the piston rod is positively locked.

The hydraulic pressure can be switched off. The retraction of the piston rod is operated by pressurising the rod

sided piston surface. This counter pressure pushes the slide off its locking position and the segments move out of the annular groove while the piston rod retracts. The slide is locked with spring operation and released hydraulically.

The piston rod always reaches one defined final position without the possibility to compensate tolerances or elasticities. The lock proceeds with positive lock without pre-load.

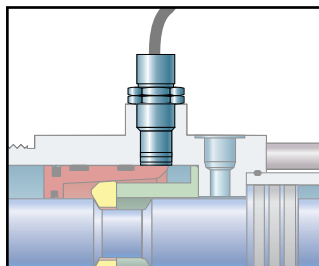
Interlocking cylinder

Info VZ1000

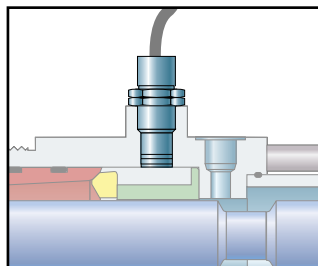
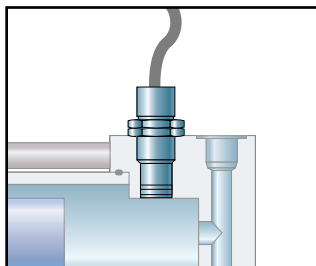
Inductive proximity switches enable the electronic sensing of the locked condition and core position respectively. The cylinders can be equipped with two sensors each.

Two types of inductive sensors are available:

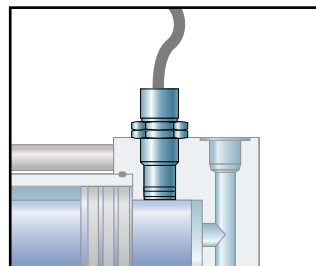
- 3-wire DC PNP, positive switching
- 2-wire DC NAMUR in two designs each: with cable or with angled plug



Core in - Piston rod extended and locked



Core out - Piston rod retracted and unlocked



PNP Sensor

Three wires are connected directly with the machine. A direct voltage of 10 - 30 V is necessary

Technical data	
Admissible ambient temperature range:	up to +70°
Function of switching element:	PNP-norm. open (all series except B6) PNP-normally shut (only B6)
Operational voltage range:	10 ... 30 VDC
Protection class according to DIN 40050:	IP 67
Connection cable:	2m PVC-cable 3 x Ø 0,5mm ²
Smallest allowed bending radius of cable:	50mm

NAMUR Sensor

The NAMUR sensor is designed to be used in hazardous areas and is "intrinsically safe". These sensors are wired to an amplifier (included in delivery together with the sensors) which is connected to the control panel of the moulding machine. Normally the sensors are driven with 230 V AC, optional amplifiers of 110 V AC and 24 V DC are also available.

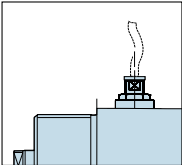
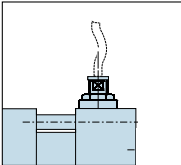
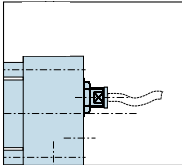
Max. temperature: 70°C

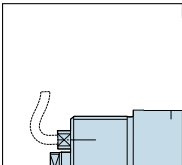
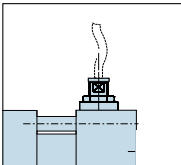
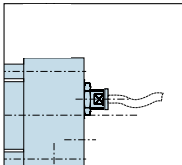
Technical data	
Admissible ambient temperature range:	up to +70°
Function of switching element:	signal change (with connection to amplifier)
Operational voltage range:	10 ... 30 VDC
Protection class according to DIN 40050:	IP 67
Connection cable:	2m PVC-cable 2 x Ø 0,5mm ²
Smallest allowed bending radius of cable:	50mm

How to order (cylinder with sensor):

VZ1000 25 / h10 (10, 50, 100) / **B8**
REF piston stroke sensor code

Switching function	PNP		NAMUR		Indication function
	cable	ang. plug	cable	ang. plug	
normally shut	B6	-	B1	-	locking axial
normally open	B7	B27	B2	B22	end of stroke axial
normally open	B8	B28	B3	B23	locking radial
normally open	B9	B29	B4	B24	end of stroke radial

Possible combinations					
					
rod sided radial		piston sided radial		piston sided axial	
PNP	B8 / B28	with	B9 / B29	or	B7 / B27
NAMUR	B3 / B23	with	B4 / B24	or	B2 / B22

Possible combinations					
					
rod sided axial		piston sided radial		piston sided axial	
PNP	B6	with	B9 / B29	or	B7 / B27
NAMUR	B1	with	B4 / B24	or	B2 / B22

Ordering advice:
Determine before ordering whether your application needs sensors for detecting the locking condition! (A retrofit is only possible with exchange of the cylinders housing parts)
Decide which position is required (locked, unlocked or both positions)
Decide on type of sensor (PNP or NAMUR)

For further information please contact **DME**

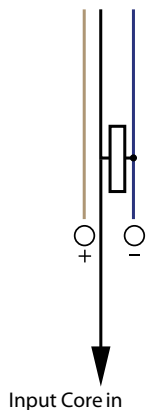
How to order (cylinder without sensor):
VZ1000 25 / h10 (10, 50, 100)
REF piston stroke

How to order (cylinder with sensor):
VZ1000 25 / h10 (10, 50, 100) / **B6**
REF piston stroke sensor code

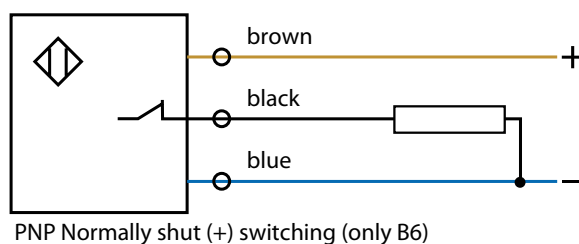
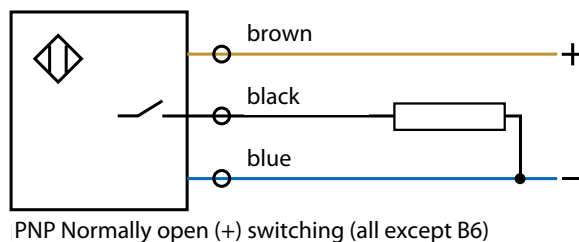
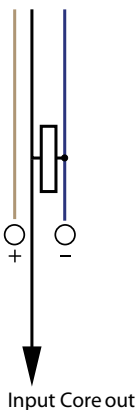
Wiring diagram

3-wire PNP

**B6 (only HX) or
B8/B28**



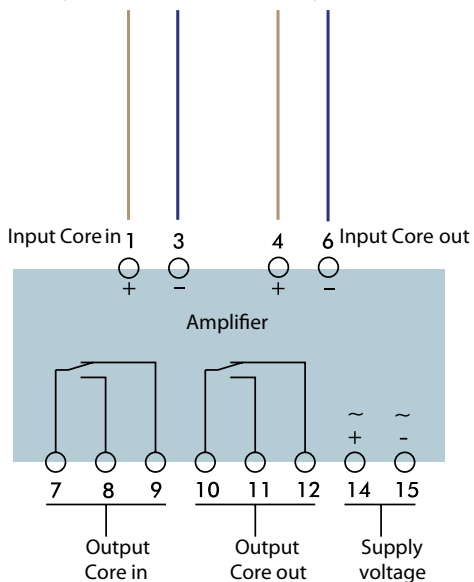
**B9/B29
B7/B27**



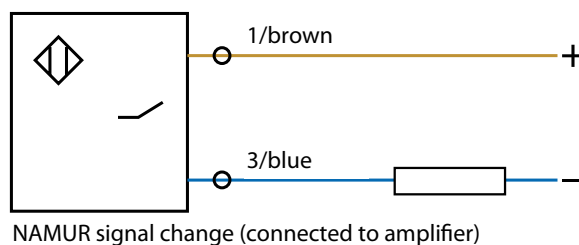
Wiring diagram

2-wire NAMUR

**B1 (only HX) or
B3/B23**

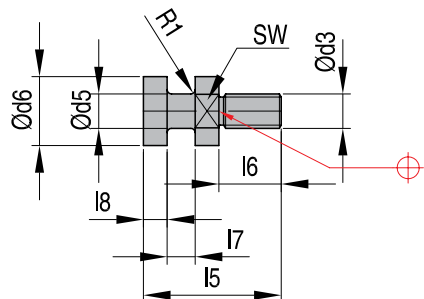


**B2/B22
B4/B24**



VZ1010

Adjusting screws

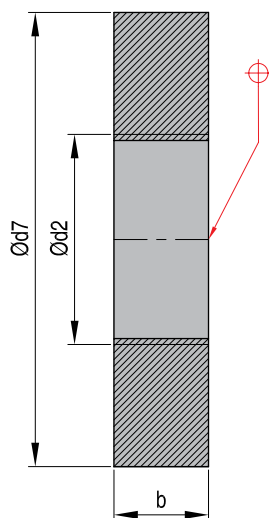


REF	M	d5	d6	l5	l6	l7	l8	r	SW	R
VZ1010 25	M8	8	16	32	14,5	6,5	5,5	1,0	14	320
VZ1010 32	M10	10	20	32	14,5	6,5	5,5	1,0	17	320
VZ1010 40	M16	16	25	40	20,0	7,0	6,0	1,0	22	400
VZ1010 50	M20	18	32	56	28,0	10,0	10,0	1,0	27	500
VZ1010 63	M27	24	40	75	39,0	13,0	12,0	1,5	36	630
VZ1010 80	M30	30	52	89	35,0	19,0	19,0	2,0	46	800
VZ1010 100	M42	40	65	115	40,0	25,0	25,0	2,0	55	1000
VZ1010 125	M56	55	80	135	45,0	30,0	30,0	2,0	70	1200



VZ1020

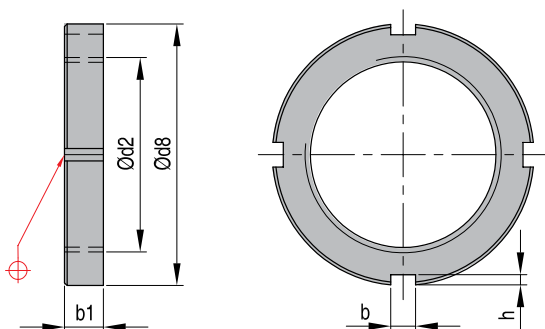
Mounting flanges



REF	M	d7	b
VZ1020 25	M55x2	120	25
VZ1020 32	M66x2	130	30
VZ1020 40	M85x2	150	30
VZ1020 50	M90x2	180	35
VZ1020 63	M110x2	210	40
VZ1020 80	M140x2	240	40
VZ1020 100	M160x3	290	45
VZ1020 125	M170x3	360	45

VZ1030

Groove nuts



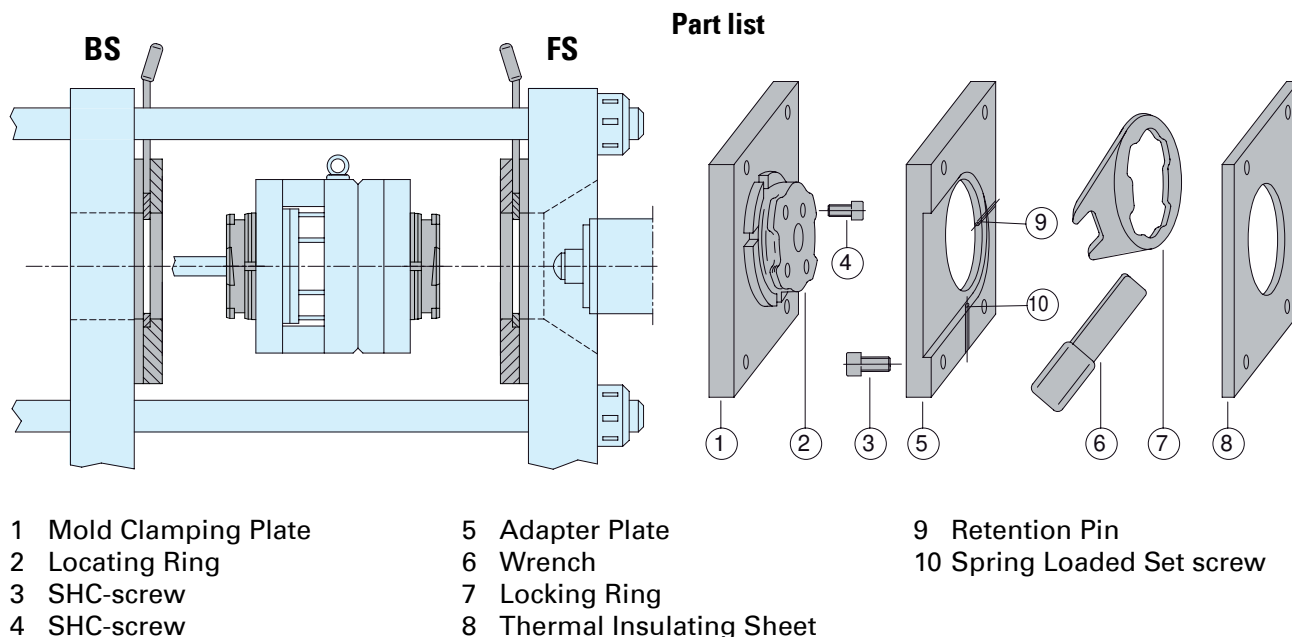
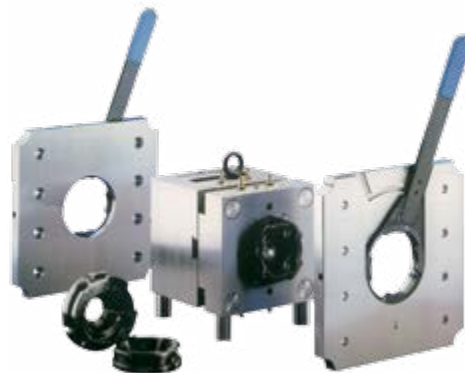
REF	M	d8	b1	b2	h
VZ1030 25	M55x2	75	11	7	3,0
VZ1030 32	M66x2	85	12	7	3,0
VZ1030 40	M85x2	110	16	8	3,5
VZ1030 50	M90x2	120	16	10	4,0
VZ1030 63	M110x2	145	19	12	5,0
VZ1030 80	M140x2	180	22	14	6,0
VZ1030 100	M160x3	210	25	16	7,0
VZ1030 125	M170x3	220	26	16	7,0



Quick-action clamping system

- Maintenance-free, selflocking bayonet type quick-action clamping system suitable for mold weights up to 1000 kg.
- Multi-purpose application suitable for all horizontal and vertical injection molding machines with 2 or 4 tiebars, as well as barless design up to approx. 1800 kN.
- Quick mold-change without requiring additional tools.
- The system only requires interchanging locating rings on the mold.
- The set also includes compact adapter plates, to be mounted on the machine with thermal insulating sheets and cooling connectors when required.
- Step-by-step refitting of molds and machines possible.

Bakra



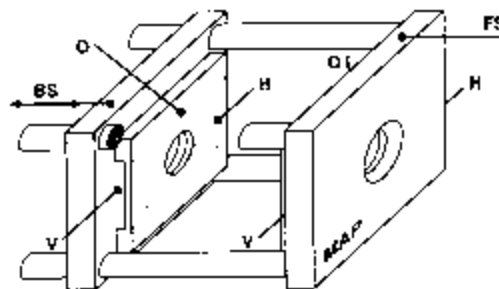
Cost-efficiency comparison for mold-change on a 1000 kN injection molding machine.

	Clamp DIN 6316 and clamping screw	Bakra
No. of mold changes / year	150	150
No. of operators / change	2	1
Hours required / change	2 x (0,5 h (= 30 Min.))	0,083 h (= 5 Min)
Purchase costs / 5-year depreciation	€ 400 (€ 80 / a)	€ 3800 (€ 760 / a)
Wages / year (€ 41 / h person)	€ 6150	€ 512,50
Machine down times / year (€ 51 / h)	€ 3825	€ 637,50
Costs / year	€ 10055	€ 1910
Savings / year		81%

The complete set contains the following items:

- 2 Adapter plates (BS/FS)
- 2 Locking rings (BS/FS)
- 1 Wrench
- 2 Locating rings (BS/FS)

Please specify type of molding machine.
Insulating sheets upon request.
Screws are included.



BS = moveable half
FS = fixed half
H = rear *

O = top*
V = front*

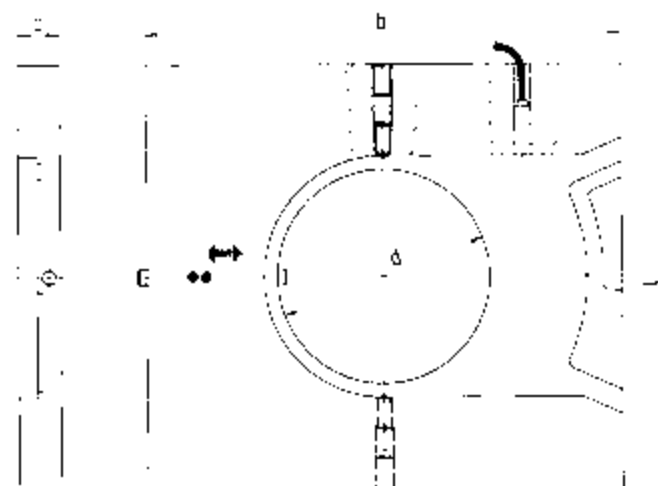
* Please specify side of locking system

AD

Adapter plates

Mat.: 1.2312
BS and FS are mirror-inverted

Mold safety device is available as option.



REF	d	l x b	s	REF	d	l x b	s	REF	d	l x b	s	REF	d	l x b	s
AD	110	218 x 246	22	AD	110	410 x 446	22	AD	125	218 x 246	27	AD	125	410 x 446	27
AD	110	246 x 246	22	AD	110	446 x 446	22	AD	125	246 x 246	27	AD	125	446 x 446	27
AD	110	246 x 296	22	AD	110	496 x 496	22	AD	125	246 x 296	27	AD	125	496 x 496	27
AD	110	265 x 396	22	AD	110	496 x 546	22	AD	125	265 x 396	27	AD	125	496 x 546	27
AD	110	280 x 400	22	AD	110	520 x 520	22	AD	125	280 x 400	27	AD	125	520 x 520	27
AD	110	296 x 296	22	AD	110	530 x 530	22	AD	125	296 x 296	27	AD	125	530 x 530	27
AD	110	296 x 346	22	AD	110	546 x 596	22	AD	125	296 x 346	27	AD	125	546 x 596	27
AD	110	346 x 346	22	AD	110	580 x 580	22	AD	125	346 x 346	27	AD	125	580 x 580	27
AD	110	346 x 396	22	AD	110	596 x 596	22	AD	125	346 x 396	27	AD	125	596 x 596	27
AD	110	396 x 396	22	AD	110	596 x 646	22	AD	125	396 x 396	27	AD	125	596 x 646	27
AD	110	396 x 646	22	AD	110	646 x 646	22	AD	125	396 x 646	27	AD	125	646 x 646	27
AD	110	400 x 450	22	AD	110	646 x 696	22	AD	125	400 x 450	27	AD	125	646 x 696	27
AD	110	410 x 410	22	AD	110	696 x 696	22	AD	125	410 x 410	27	AD	125	696 x 696	27

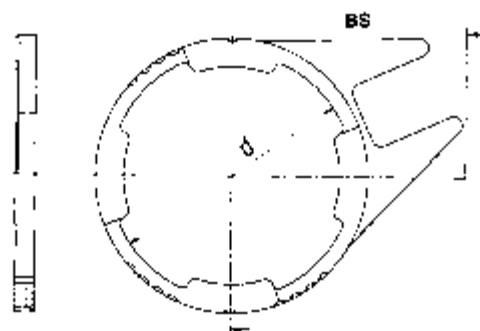
SP

Locking rings

Mat.: 1.2312 ~ 1030 N/mm²
BS and FS are mirror-inverted

REF	d	Type
SP	110	BS*
SP	110	FS*
SP	125	BS*
SP	125	FS*

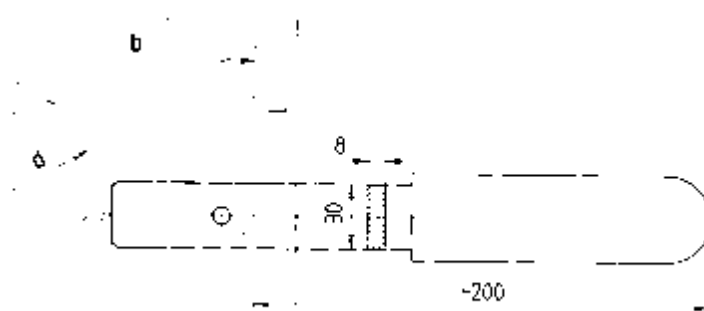
*BS = moveable half
*FS = fixed half



SPS

Wrench

Mat.: St 50
When ordering please specify:
Flange dia., size of adapter plate, wrench opening, Type of molding machine.



Centering device

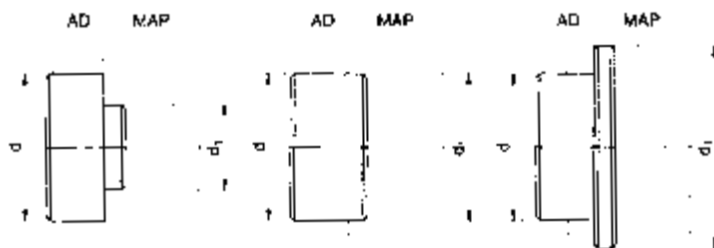
ZV

Centering Device

Mat.: 1.1730

MAP = Machine plate

REF	d x d ₁
ZV	110 x 60
ZV	110 x 80
ZV	110 x 90
ZV	110 x 100
ZV	110 x 110
ZV	110 x 125
ZV	110 x 160
ZV	110 x 175
ZV	125 x 60
ZV	125 x 80
ZV	125 x 90
ZV	125 x 100
ZV	125 x 110
ZV	125 x 125
ZV	125 x 160
ZV	125 x 175

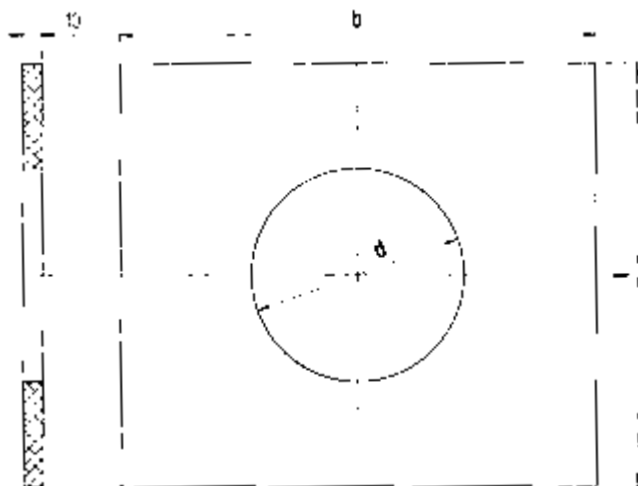


Thermal Insulating sheets

WP

Thermal conductivity λ : 0,2 W/mK
T max: 200°C
Compressive strength (20°C): 600 N/mm²

Screw holes and recesses for tiebars will be provided according to your drawing.



REF	d	l x b
WP 110	110	218 x 246
WP 110	110	246 x 246
WP 110	110	246 x 296
WP 110	110	265 x 396
WP 110	110	280 x 400
WP 110	110	296 x 296
WP 110	110	296 x 346
WP 110	110	346 x 346
WP 110	110	346 x 396
WP 110	110	396 x 396
WP 110	110	396 x 646
WP 110	110	400 x 450
WP 110	110	410 x 410

REF	d	l x b
WP 110	110	410 x 446
WP 110	110	446 x 446
WP 110	110	496 x 496
WP 110	110	496 x 546
WP 110	110	520 x 520
WP 110	110	530 x 530
WP 110	110	546 x 596
WP 110	110	580 x 580
WP 110	110	596 x 596
WP 110	110	596 x 646
WP 110	110	646 x 646
WP 110	110	646 x 696
WP 110	110	696 x 696

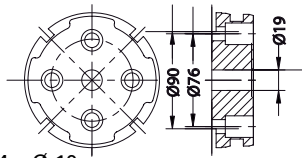
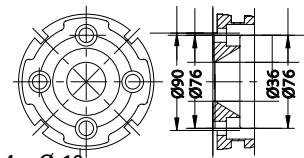
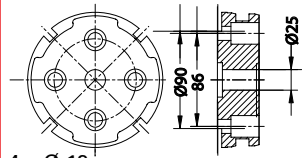
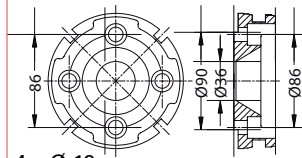
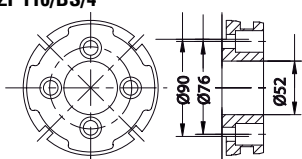
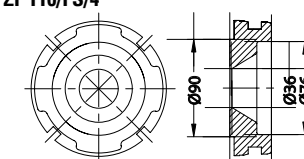
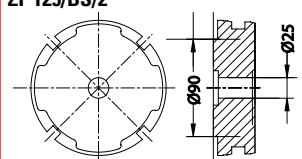
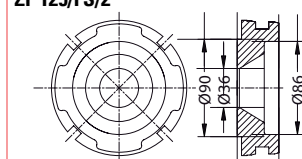
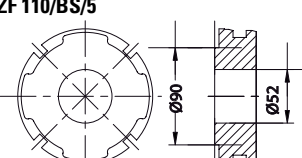
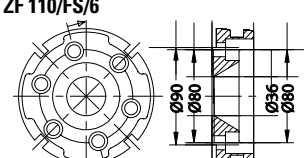
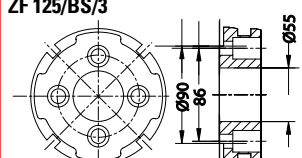
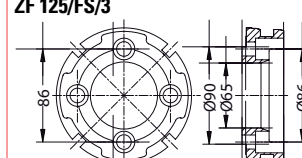
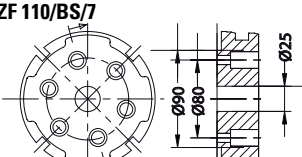
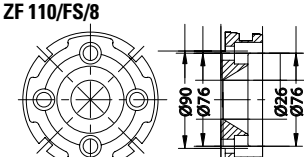
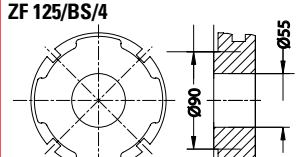
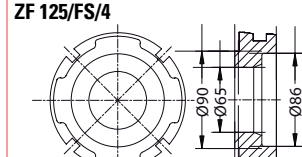
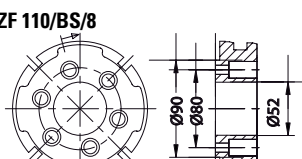
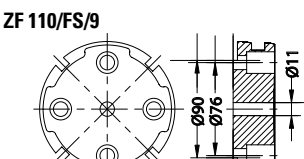
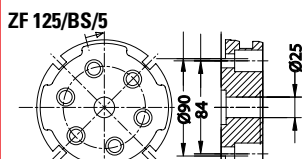
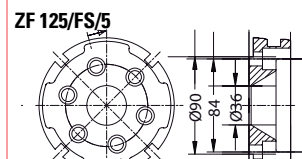
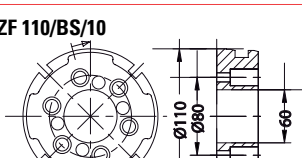
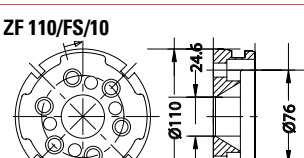
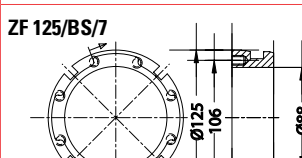
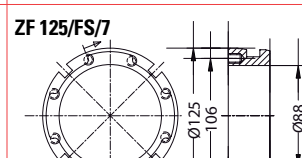
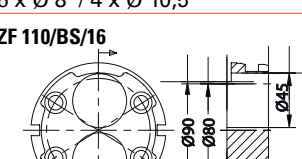
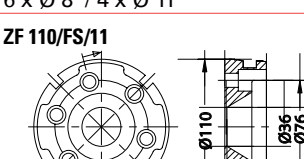
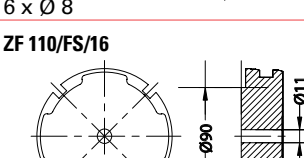
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WP 125	125	280 x 400
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WP 125	125	296 x 346
WP 125	125	346 x 346
WP 125	125	346 x 396
WP 125	125	396 x 396
WP 125	125	396 x 646
WP 125	125	400 x 450
WP 125	125	410 x 410

REF	d	l x b
WP 125	125	410 x 446
WP 125	125	446 x 446
WP 125	125	496 x 496
WP 125	125	496 x 546
WP 125	125	520 x 520
WP 125	125	530 x 530
WP 125	125	546 x 596
WP 125	125	580 x 580
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WP 125	125	646 x 696
WP 125	125	696 x 696

ZF...

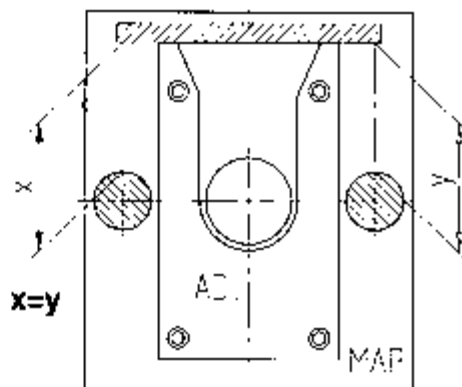
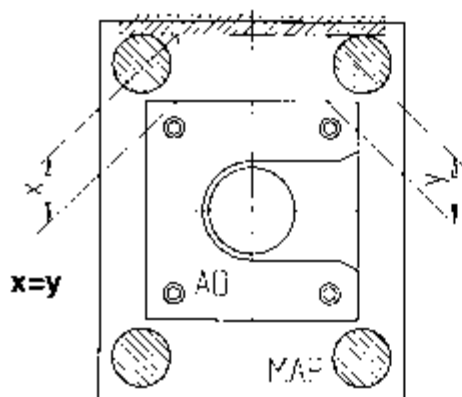
Locating rings

Mat.: 1.2312 ~ 1030 N/mm²

ZF 110		ZF 125	
Moveable half (BS)	Fixed half (FS)	Moveable half (BS)	Fixed half (FS)
ZF 110/BS/3  4 x Ø 10	ZF 110/FS/3  4 x Ø 10	ZF 125/BS/1  4 x Ø 12	ZF 125/FS/1  4 x Ø 12
ZF 110/BS/4  4 x Ø 10	ZF 110/FS/4  4 x Ø 10	ZF 125/BS/2  4 x Ø 12	ZF 125/FS/2  4 x Ø 12
ZF 110/BS/5  6 x Ø 8	ZF 110/FS/6  6 x Ø 8	ZF 125/BS/3  4 x Ø 12	ZF 125/FS/3  4 x Ø 12
ZF 110/BS/7  6 x Ø 8	ZF 110/FS/8  4 x Ø 10	ZF 125/BS/4  4 x Ø 12	ZF 125/FS/4  4 x Ø 12
ZF 110/BS/8  6 x Ø 8	ZF 110/FS/9  4 x Ø 10	ZF 125/BS/5  6 x Ø 10	ZF 125/FS/5  6 x Ø 10
ZF 110/BS/10  6 x Ø 8 / 4 x Ø 10,5	ZF 110/FS/10  6 x Ø 8 / 4 x Ø 11	ZF 125/BS/7  8 x M10 x 20	ZF 125/FS/7  6 x M10 x 20
ZF 110/BS/16  4 x Ø 10	ZF 110/FS/11  6 x Ø 8		
	ZF 110/FS/16  4 x Ø 10		

Mounting instructions

Info



1. Mount mold-specific locating rings ZF on the mold.
2. Open injection molding machine, move back injection unit and machine ejector system.
3. Mount thermal insulating sheets WP (if available) onto the adapter plates AD using small SHC-screws.
4. Push back retention pins fixed to the adapter plates.
5. Insert centering device ZV into centering hole Dia. 110 mm or 125 mm of the adapter plates.
6. Position these subgroups according to the markings FS or BS onto the machine plates and mount them with SHC-screws. Don't screw in completely so that adjustment is still possible.
7. Align horizontal position of adapter plates according to sketch above and tighten screws.
8. Remove ZV, if necessary make thread in ZV.
9. In case mold set-up in horizontal direction is required, retention pins located in the adapter plates have to be pushed back.
10. For mold set-up into the molding machine proceed as usual. With mold and machine in closed position, mold must be interlocked at the fixed and moveable half using wrench. Remove wrench from the adapter plate.

