

Hydraulic Cylinders

Double Active



HVB Series

Standard CNOMO 05.07.65 à 05.07.70

Maximum Service Pressure: 200 bar

Bore : Ø25 to 125 mm





■ GENERAL CHARACTERISTICS

- Service Pressure : 200 bar max
 - Test Pressure : 300 bar
 - Fluids : Hydraulic Mineral Oils HM–HL
10 to 40 Cst at 50 °C
Non-inflammable Fluids Class C or D
 - Temperature : from -20 to +80 °C : Seals Type H
up to +200 °C : Seals Type V
Water-glycol max 90 °C : Seals Type G
- Stroke Tolerance ; + 2 mm
 - Standard Strokes :
5-10-16-25-40-63-100-160 mm
 - Filtration : Oil pollution limited to class
9-10 acc NAS 1638 to achieve with filter
β25 = 75
 - Fluid : Mineral Oil and fluids HFA/B/C/D
 - Viscosity: 12 at 90 mm²/s

■ MAXIMUM SPEED

Bore Ø	25	32	40	50	63	80	100	125
Meters/second	0,2					0,1		

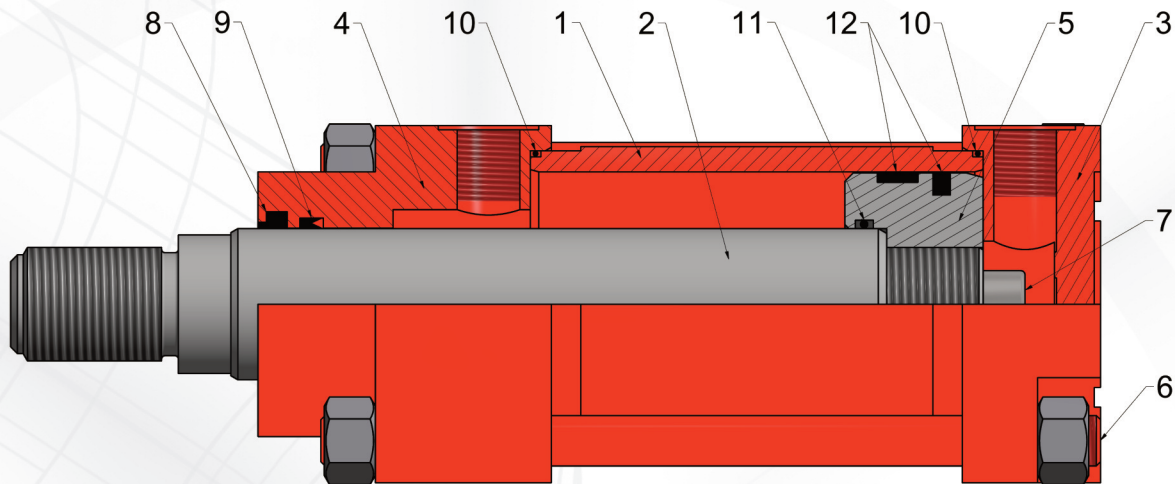
■ Stroke

Bore Ø	Stroke							
25	5	10	16	25	40	63	100	160
32	•	•	•	•	•	•		
40	•	•	•	•	•	•	•	
50	•	•	•	•	•	•	•	•
63	•	•	•	•	•	•	•	•
80	•	•	•	•	•	•	•	•
100	•	•	•	•	•	•	•	•
125	•	•	•	•	•	•	•	•

■ Tightening Torque

Bore Ø	25	32	40	50	63	80	100	125
Assembly cylinder / bottom	0,65	1,6	3,1	3,5	6	9	20	32

CONSTRUCTION CHARACTERISTICS



- (1) cylinder

(2) Piston Rod

(3) Cylinder bottom

(4) Piston Head

(5) Piston

(6) Tie Rod Screw
- (7) Mounting Screw

(8) Wiper Seal

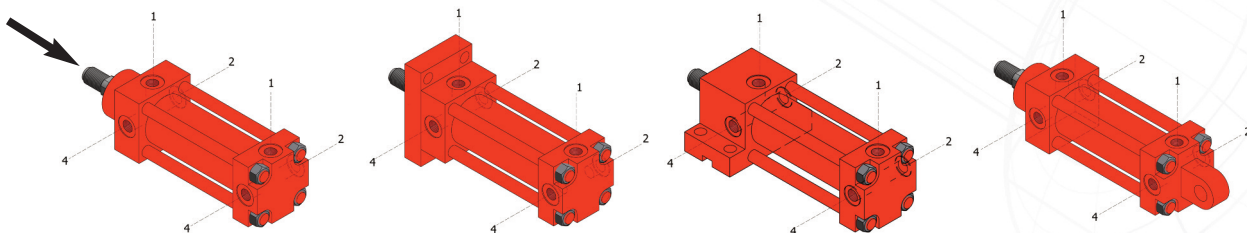
(9) Rod Seals

(10) Cylinder Seals

(11) Piston Rod Seals

(12) Segment/Piston Seal

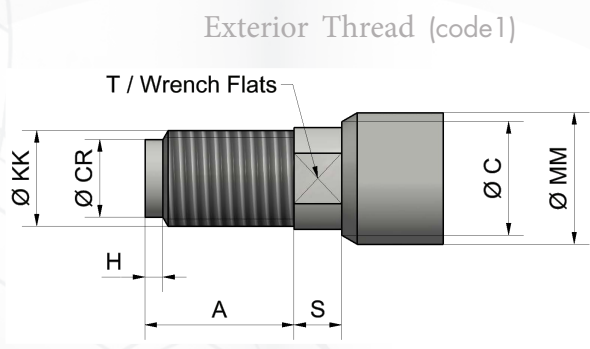
Location of the Holes



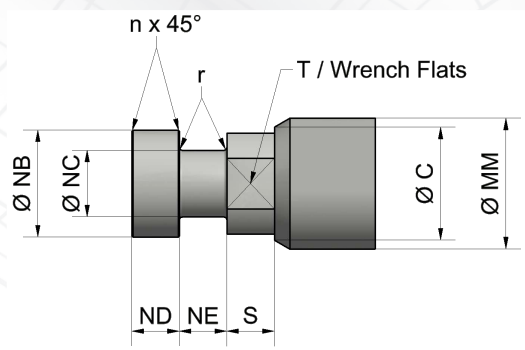
Standard position is position 1 signed by the arrow. Is it possible to do also other positions with the following configurations:

Location	Position n°			
	Standard position	Front Plate	Front Lugs	Rear Tenon
Head	1 - 2 - 4	1 - 2 - 4	1 - 2 - 4	1 - 2 - 4
Bottom	1 - 2 - 4	1 - 2 - 4	1 - 2 - 4	1 - 2 - 4

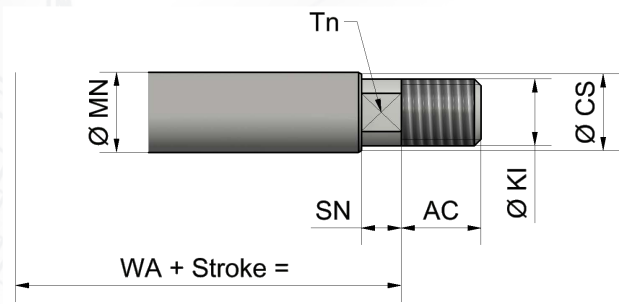
ROD END



TENON (code3)



INFORMATION ROD (codeD)

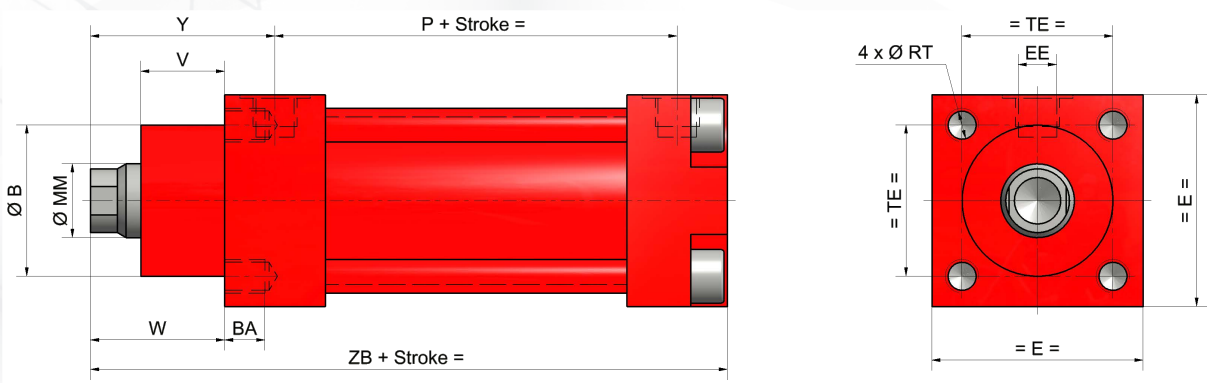


Bore Ø	25	32	40	50	63	80	100	125
Ø MM (Rod Ø)	16	18	22	28	36	45	56	70
Ø MN - AC	10	10	12	12	12	12	16	16
A	20	20	25	32	40	50	63	80
Ø C	14	15	19	25	33	42	53	67
Ø CR	9,5	9,5	13	17	23,5	29,5	38,5	48,5
Ø CS	9,5	9,5	11,5	11,5	11,5	11,5	15	15
H	2,5	2,5	3	3	3	4	5	5
Ø KK	M12x1,25	M12x1,25	M16x1,5	M20x1,5	M27x2	M33x2	M42x2	M56x2
Ø KI	M8x1,25	M8x1,25	M10x1,5	M10x1,5	M10x1,5	M10x1,5	M12x1,25	M12x1,25
n	0,2	0,2	0,2	0,2	0,3	0,3	0,5	0,5
Ø NB	14	15	18	22,4	28	35,5	45	56
Ø NC	8	9	11,2	14	18	22,4	28	35,5
ND - NE	6	6	8	10	12,5	16	20	25
r	0,3	0,3	0,5	0,5	0,8	0,8	1,2	1,2
S	8	8	8	8	12,5	12,5	14	14
SN	5	5	6	6	6	6	8	8
T	12	13	17	22	30	36	46	60
Tn	8	8	10	10	10	10	13	13

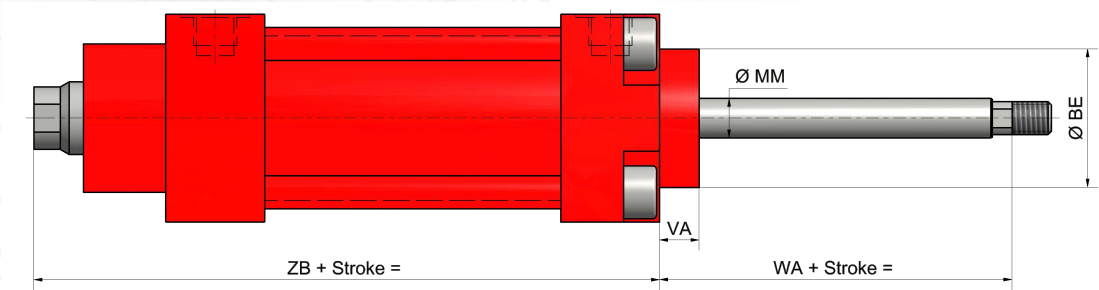
All dimensions are in mm

HVB Series

RAW CYLINDER



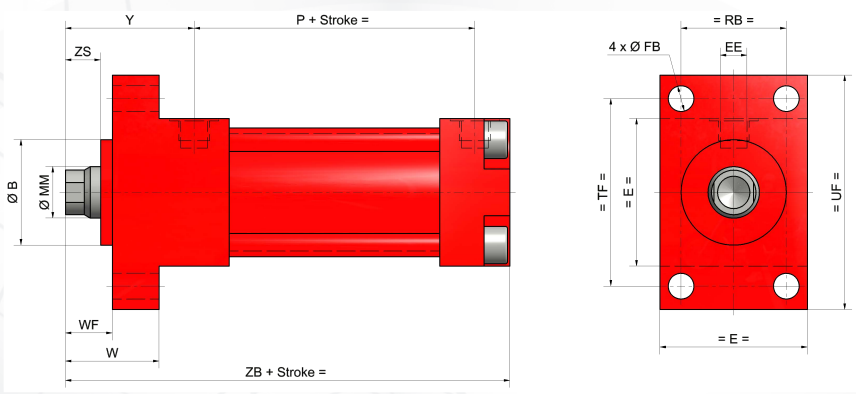
INFORMATION ROD



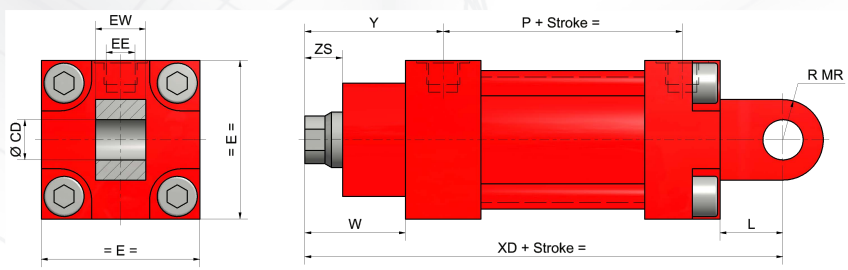
Bore Ø	25	32	40	50	63	80	100	125
Ø MM (Rod Ø)	16	18	22	28	36	45	56	70
Ø B	36	40	45	56	63	80	100	125
BA	12	12	12	12	18	18	24	24
Ø BE	36	36	42	42	63	63	80	80
E	45	56	63	75	85	106	125	160
EE	1/8	1/8	1/4	1/4	3/8	3/8	1/2	1/2
Ø MN	10	10	12	12	12	12	16	16
P	34	45	45	53	56	63	70	80
Ø RT	M6x1	M8x1,25	M10x1,5	M10x1,5	M12x1,75	M16x2	M18x2,5	M20x2,5
TE	34	42	45	56	65	80	97,5	125
V	16	20	25	28	28	32	38	40
VA	8	8	12	12	12	12	15	15
W	28	32	40	40	45	50	58	63
WA	20	20	32	32	32	32	35	35
Y	46	48	55	57	71	74	81	93
ZB	92	102	115	125	145	152	177	198

All dimensions are in mm

FRONT PLATE



REAR JOINT

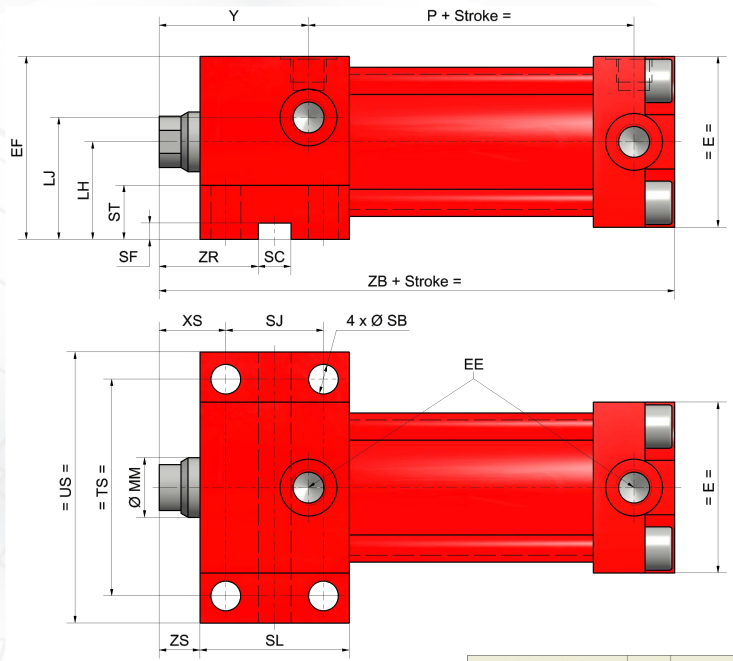


Bore Ø	25	32	40	50	63	80	100	125
Ø MM (Rod Ø)	16	18	22	28	36	45	56	70
Ø B	36	40	45	56	63	80	100	125
Ø CD	12	12	16	20	25	32	40	50
E	45	56	63	75	85	106	125	160
EE	1/8	1/8	1/4	1/4	3/8	3/8	1/2	1/2
EW	16	16	20	25	32	40	50	63
Ø FB	6,6	9	11	11	14	18	20	22
L	20	20	25	25	32	40	56	63
R MR	14	14	16	20	25	32	40	50
P	34	45	45	53	56	63	70	80
RB	34	36	45	50	65	80	97,5	125
TF	56	71	80	95	104	132	155	195
UF	70	86	100	115	124	160	185	230
W	28	32	40	40	45	50	58	63
WF	16	16	20	16	21	22	24	27
XD	112	122	140	150	177	192	233	261
Y	46	48	55	57	71	74	81	93
ZB	92	102	115	125	145	152	177	198
ZS	12	12	15	12	17	18	20	23

All dimensions are in mm

HVB Series

FRONT LUGS

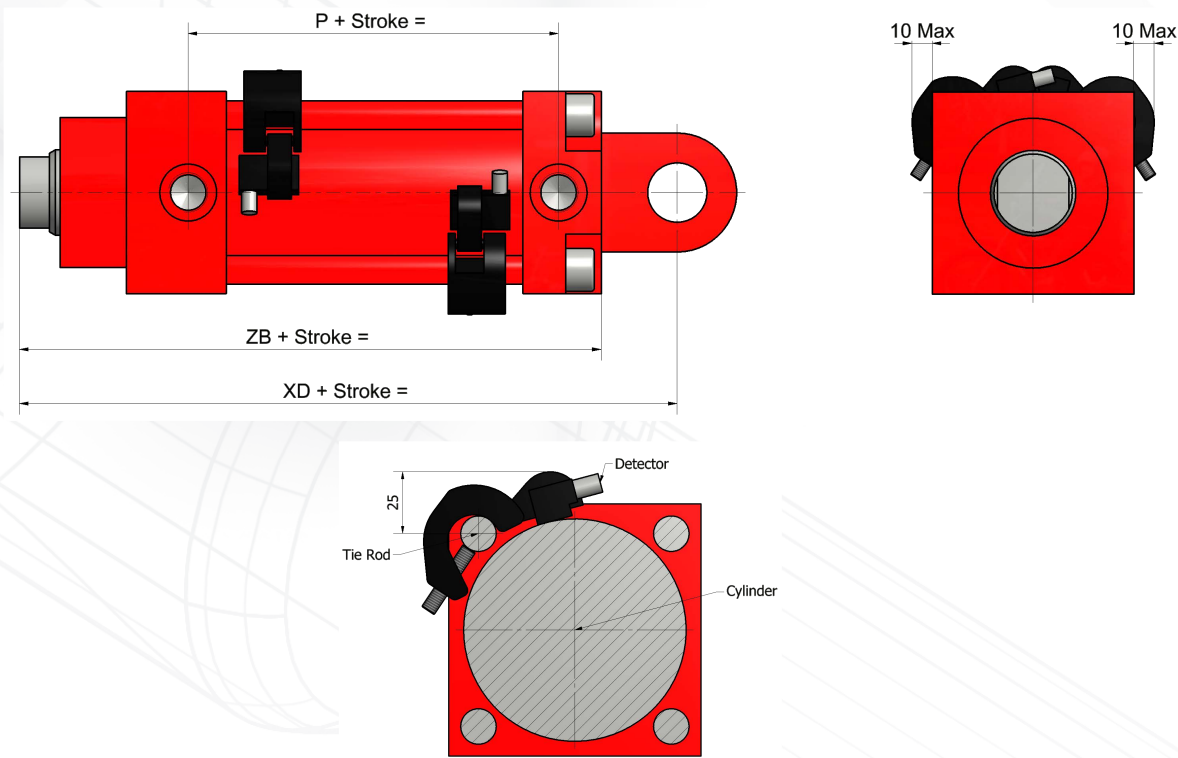


Bore Ø	25	32	40	50	63	80	100	125
Ø MM (Rod Ø)	16	18	22	28	36	45	56	70
E	45	56	63	75	85	106	125	160
EE	1/8	1/8	1/4	1/4	3/8	3/8	1/2	1/2
EF	47,5	59	67,5	80	87,5	109	129,5	162
LH	25	31	36	42,5	45	56	67	82
LJ	30	32	45	44,5	57	60	70	82
P	34	45	45	53	56	63	70	80
Ø SB	6,6	9	11	11	14	18	20	22
SC	12	12	12	12	16	16	16	20
SF	4	4	6	6	6	6	6	6
SJ	32	32	36	40	45	50	56	63
SL	45	50	55	60	70	80	90	100
ST	12	12	20	20	25	25	32	36
TS	56	71	80	95	104	132	155	195
US	70	86	100	115	124	160	185	230
XS	18,5	21	24,5	22	29,5	33	37	41,5
Y	46	48	55	57	71	74	81	93
ZB	92	102	115	125	145	152	177	198
ZR	28,5	31	36,5	36	44	50	57	63
ZS	12	12	15	12	17	18	20	23

All dimensions are in mm

MAGNETIC DETECTION AVAILABLE FOR HVBS ONLY BORE Ø25 TO 80

SERVICE PRESSURE, 160 BAR MAXIMUM



Bore Ø	25	32	40	50	63	80
P	44	59	65	65	76	82
ZB	102	116	135	137	165	171
XD	122	136	160	162	197	211

Nota : For all HVBS cylinders with magnetic detection , a minimum stroke of 15 mm is required.
Operating Temperature - 25 + 85 °C.

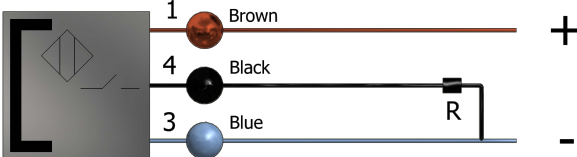
ATTENTION !!!

- To prevent measurement errors no magnetic field greater than 1 Ka/m is allowed around the cylinder.
- No ferric material is allowed in the vicinity of the magnetic sensors.
- Protection against ferric chips is highly recommended.
- Operating temperature should be below +85 °C.

HVB Series

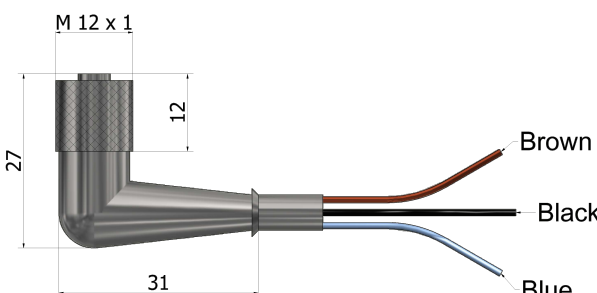
TECHNICAL SPECIFICATIONS OF THE MAGNETIC SENSOR.

PNP
contact on closing / positive **communication**



Working Tension U_b	10...30 V DC
Drop tension U_d	$\leq 3,1V$
Nominal Insulation Tension U_i	75 V DC
Nominal Working Current I_o	200 mA
Idle Current I_o max.	≤ 30 mA
Protection against polarity reversal	Yes
Protection against short-circuits	Yes
Protection against interversion	Yes
Nominal communication intensity $ H_n $	1,2 kA/m
Work Intensity $ H_o $	≥ 2 kA/m
Hysteresis of $ H_n $	$\leq 45\%$
Temperature drift $ H_n $	$\leq 0,3\%$ / $^{\circ}C$
Working Temperature Range T_o	-25 ...+ 85 $^{\circ}C$
Protection Class according CEI 60529	IP67
Homologation	CE, cULus
Housing Material	LCP
Connection	Connector M8, 3 Wires

Connector straight - 3 m of cable casted in the mass.



LED Yellow : Indicates Detection

Green : Indicates Tension

HOW TO ORDER

Series	Cylinder			HVB
Rod	Simple Rod			S
	Information Rod			D
Bore Ø	02 = 25 03 = 32 04 = 40 05 = 50	06 = 63 08 = 80 10 = 100 12 = 125	***	
Stroke	A = 5 mm B = 10 mm C = 16 mm D = 25 mm	E = 40 mm F = 63 mm G = 100 mm H = 160 mm	***	
Mounting and Rod End	Type	Thread	Tenon	***
	Raw Cylinder	1	5	
	Front Plate	2	6	
	Front Lugs	3	7	
	Rear Joint	4	8	
Sealings	Standard Seals, +80° max			H
	Viton Seals, +200° max			V
	Water-glycol Seals, +90° max			G

OPTION UNDER REQUEST

Magnetic Detection	From bore Ø25 to Ø80 Seals Type H Service Pressure : 160 bar max	DM
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EXAMPLE

Series	Rod	Bore Ø	Stroke	Mounting	Sealings	OPTION Magnetic Detection
HVB	S	02	B	2	V	DM



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