



160 bar standard cylinder

Dimensions acc. to ISO 6020-1

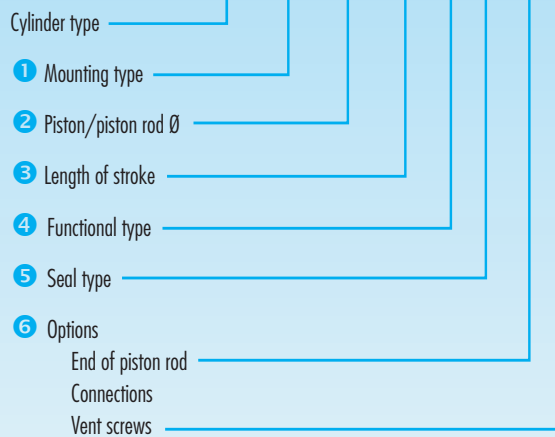
Piston Ø 25-100 mm

Lengths of stroke at your option (take account of the buckling strength, see page 35)

- Round design; black blued
- Piston rod hard chromium plated; with dust seal
- Particularly suited for installation into machines and appliances

Determine your 160 bar standard cylinder:

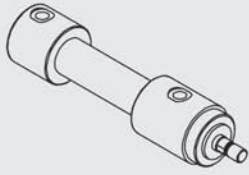
Ordering example: **ZISO/T-RFv 32/18/250 Dbb-H03 E22 ES**



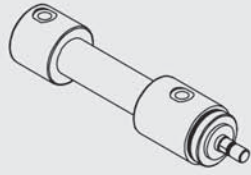
Special versions upon request

1 Mounting types

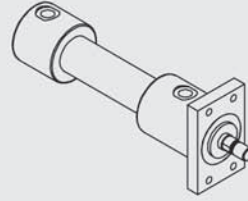
A Basic design



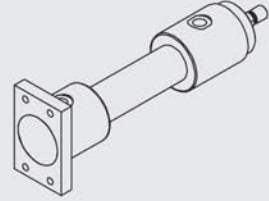
Gv Front thread mounting



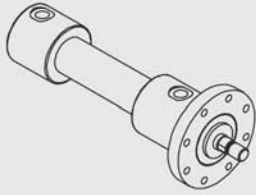
EFv Square front flange



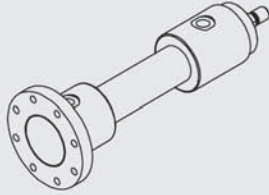
EFh Square back flange



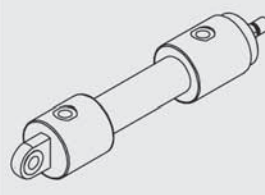
RFv Round front flange



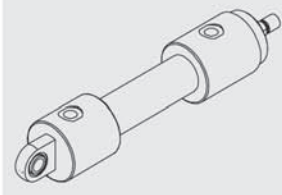
RFh Round back flange



Si Swivelling support

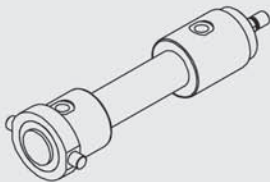


Sk Hinged support

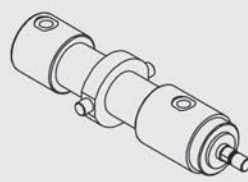


Special mounting types: (upon request)

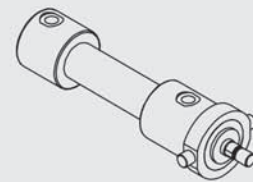
Sh Back support bolt



Sm Centered support bolt



Sv Front support bolt



2 Piston Ø

Piston Ø (mm)	25		32		40		50		63		80		100	
Piston rod Ø	14	18	18	22	22	28	28	36	36	45	45	56	56	70
Piston surface pushing (cm ²)	4.9		8.0		12.6		19.6		31.2		50.3		78.5	
Piston surface pulling (cm ²)	3.4	2.4	5.5	4.2	8.8	6.4	13.5	9.5	21.8	15.3	34.4	25.8	53.9	40.1

3 Length of stroke

Lengths of stroke at your option: We manufacture any length of stroke you desire.

4 Functional types

D Double - effect



pushing and pulling

E Single - effect



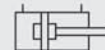
pushing

Ez Single - effect



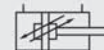
pulling

Dbb Double - effect



with end position damping on both sides (piston-Ø 25-32 mm)

Dbb Double - effect



with end position damping on both sides (piston-Ø 40-100 mm)

Special functional types: (upon request)

Dd Double - effect



with through piston rod

Dbv Double - effect



with end position damping at the front

Dbh Double - effect



with end position damping at the back

F Single - effect



pushing with spring return mechanism

Fz Single - effect



pulling with spring return mechanism

5 Seal types

Standard version: H03 für hydraulic fluid (mineral oil). Seal types für other pressure media upon request.

Seal types	H00	H03	H06	H11
Piston seal, grooved ring	●			
Piston seal, PTFE gliding ring		●	●	●
Rod seal, grooved ring	●	●		
Rod seal, PTFE gliding ring			●	●
Dust seal	●	●	●	●
O-rings Nitril	●	●	●	
O-rings Viton				●
	piston speed			
max. 0.5 m/s	●	●		
max. 10 m/s			●	●
	temperature range			
-20/+100 °C	●	●	●	
-20/+200 °C				●

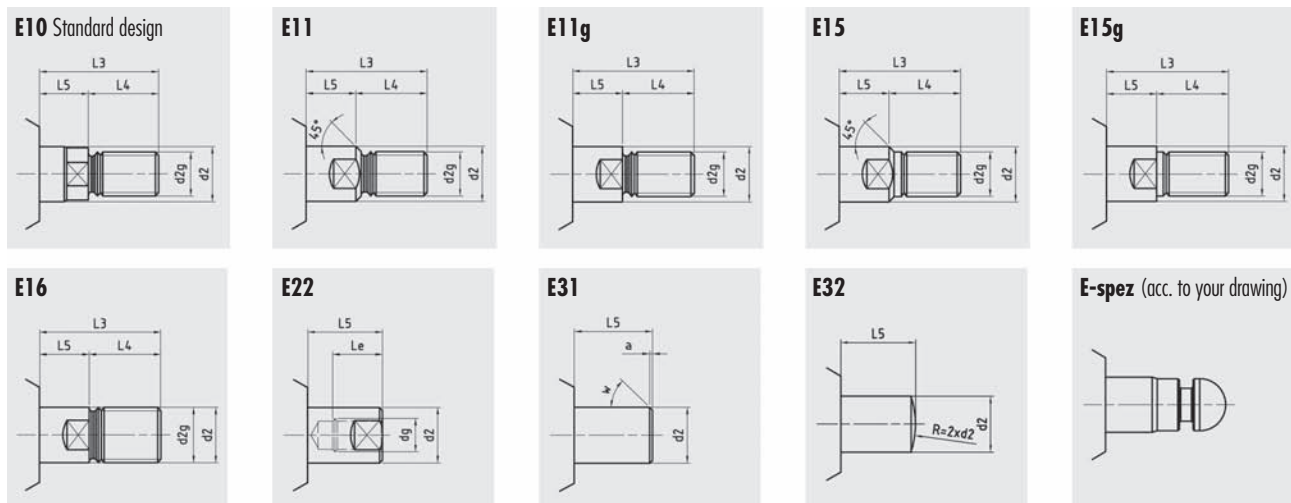
6 Options

End of piston rod:

Standard version: E10

Additional versions as shown in the illustrations are manufactured based on the catalog if not otherwise specified by the customer .

Tailor-made versions are available upon request.



Connections:

are manufactured based on the catalog if not otherwise specified by the customer.

The position of the connections can be specified by the customer.

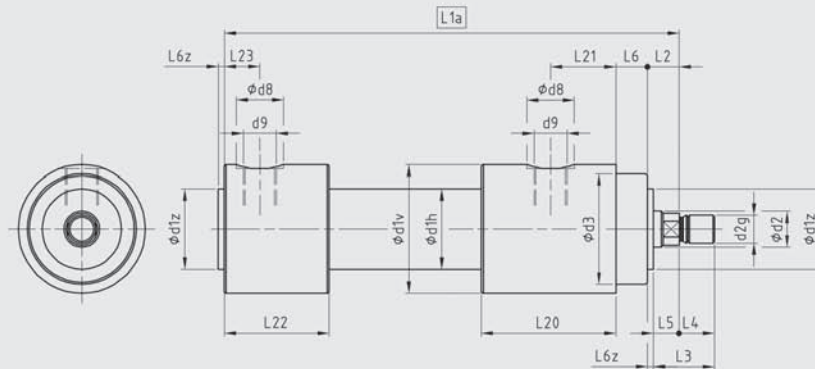
Larger and other (metric) connections are available upon request.

Vent screws (ES):

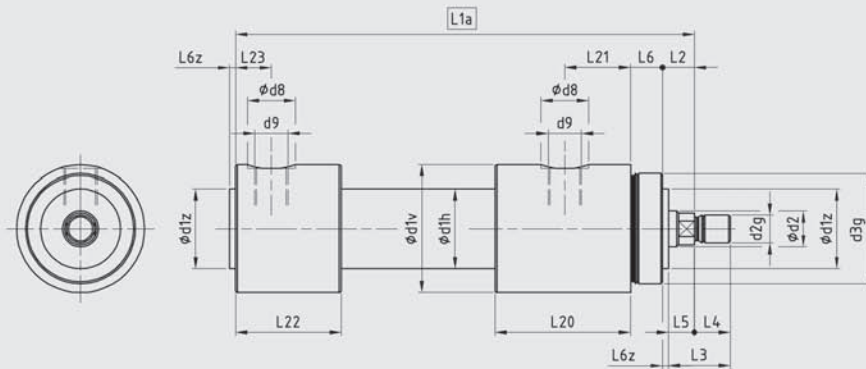
are attached to order and in accordance with the position specified by the customer.

Dimension drawings/Dimensions

A Basic design



Gv Front thread mounting

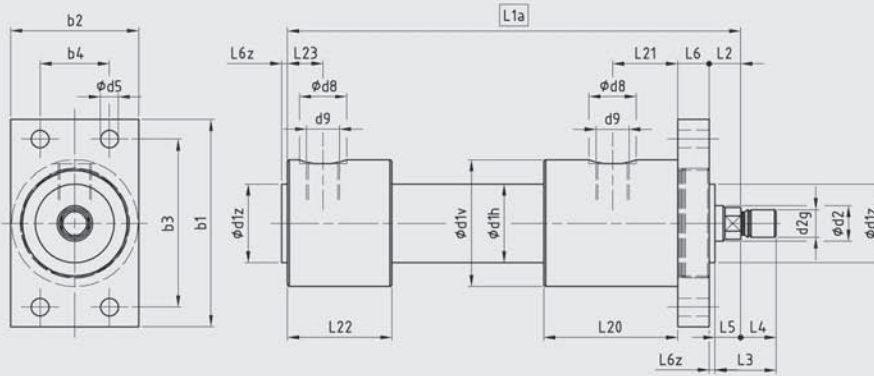


Piston Ø	25		32		40		50		63		80		100	
Piston rod Ø d2-f7	14	18	18	22	22	28	28	36	36	45	45	56	56	70
d2g	M12x1,25	M14x1,5	M14x1,5	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2	M33x2	M33x2	M42x2	M42x2	M48x2
L3	29	31	31	35	35	41	42	50	52	61	63	74	76	83
L4	16	18	18	22	22	28	28	36	36	45	45	56	56	63
L5		13		13		13		14		16		18		20
d1v		54		64		74		93		103		128		148
d1h		33		40		50		65		80		100		124
d1z-f8		32		40		50		60		70		85		106
d3		48		55		65		80		90		110		125
d3g		M48x1,5		M55x1,5		M65x1,5		M80x1,5		M90x2		M110x2		M125x2
d8		20		24		28		28		34		34		42
d9		G 1/4"		G 3/8"		G 1/2"		G 1/2"		G 3/4"		G 3/4"		G 1"
L2		16		16		16		18		20		22		25
L6		12		16		16		20		25		32		32
L6z		3		3		3		4		4		4		5
L20		61		68		88		95		102		112		145
L21		30		33		41		45		50		55		76
L22		46		53		69		72		77		82		98
L23		15		18		22		22		25		25		29

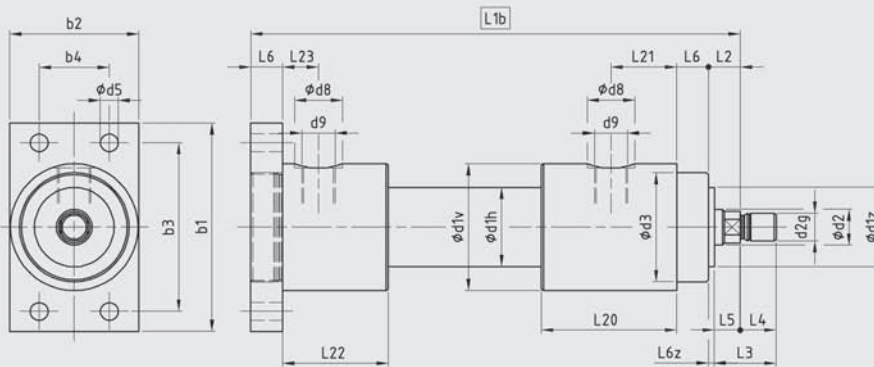
Functional type	Length measurements L1a							
D/E/Ez/Dbb	L1a=stroke+	150	170	190	205	224	250	300

Dimension drawings/Dimensions

EFv Square front flange



EFh Square back flange

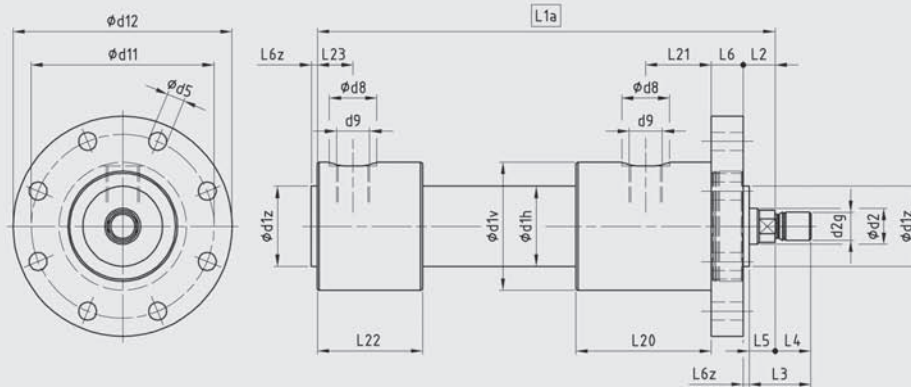


Piston Ø	25		32		40		50		63		80		100	
Piston rod Ø d2-f7	14	18	18	22	22	28	28	36	36	45	45	56	56	70
d2g	M12x1,25	M14x1.5	M14x1.5	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2	M27x2	M33x2	M33x2	M42x2	M42x2	M48x2
L3	29	31	31	35	35	41	42	50	52	61	63	74	76	83
L4	16	18	18	22	22	28	28	36	36	45	45	56	56	63
L5		13		13		13		14		16		18		20
d1v		54		64		74		93		103		128		148
d1h		33		40		50		65		80		100		124
d1z-f8		32		40		50		60		70		85		106
d3		48		55		65		80		90		110		125
d5		6,6		9		9		11		13,5		17,5		22
d8		20		24		28		28		34		34		42
d9		G 1/4"		G 3/8"		G 1/2"		G 1/2"		G 3/4"		G 3/4"		G 1"
b1		85		105		120		140		160		185		225
b2		55		65		80		100		110		130		150
b3		69,2		85		98		116,4		134		152,5		184,8
b4		28,7		35,2		40,6		48,2		55,5		63,1		76,5
L2		16		16		16		18		20		22		25
L6		12		16		16		20		25		32		32
L6z		3		3		3		4		4		4		5
L20		61		68		88		95		102		112		145
L21		30		33		41		45		50		55		76
L22		46		53		69		72		77		82		98
L23		15		18		22		22		25		25		29

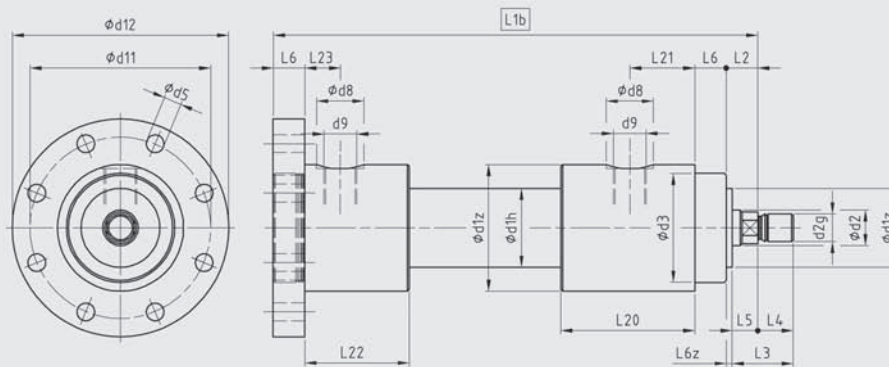
Functional type		Length measurements L1a and length measurements L1b												
D/E/Ez/Dbb	L1a = stroke +	150	170	190	205	224	250	300						
	L1b = stroke +	162	186	206	225	249	282	332						

Dimension drawings/Dimensions

RFv Round front flange



RFh Round back flange

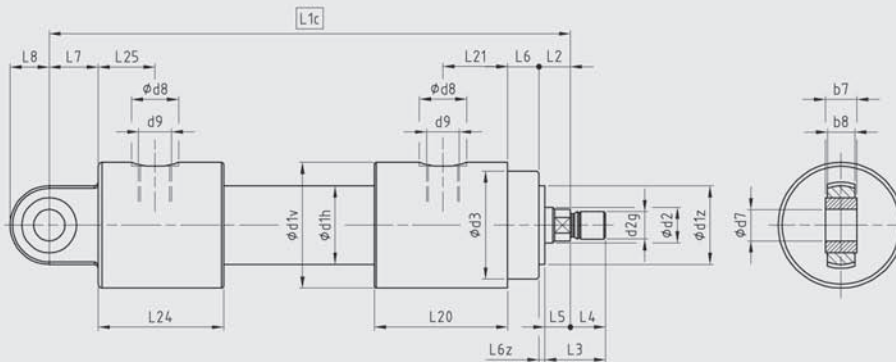


Piston Ø	25		32		40		50		63		80		100	
Piston rod Ø d2-f7	14	18	18	22	22	28	28	36	36	45	45	56	56	70
d2g	M12x1,25	M14x1,5	M14x1,5	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2	M33x2	M33x2	M42x2	M42x2	M48x2
L3	29	31	31	35	35	41	42	50	52	61	63	74	76	83
L4	16	18	18	22	22	28	28	36	36	45	45	56	56	63
L5		13		13		13		14		16		18		20
d1v		54		64		74		93		103		128		148
d1h		33		40		50		65		80		100		124
d1z-f8		32		40		50		60		70		85		106
d3		48		55		65		80		90		110		125
d5		6,6		9		9		11		13,5		17,5		22
d8		20		24		28		28		34		34		42
d9		G 1/4"		G 3/8"		G 1/2"		G 1/2"		G 3/4"		G 3/4"		G 1"
d11		75		92		106		126		145		165		200
d12		90		110		130		150		170		200		240
L2		16		16		16		18		20		22		25
L6		12		16		16		20		25		32		32
L6z		3		3		3		4		4		4		5
L20		61		68		88		95		102		112		145
L21		30		33		41		45		50		55		76
L22		46		53		69		72		77		82		98
L23		15		18		22		22		25		25		29

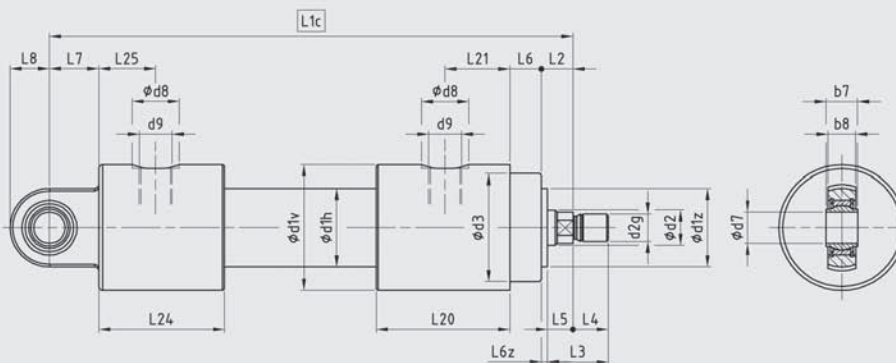
Functional type	Length measurements L1a and length measurements L1b							
D/E/Ez/Dbb	L1a = stroke +	150	170	190	205	224	250	300
	L1b = stroke +	162	186	206	225	249	282	332

Dimension drawings/Dimensions

Si Swivelling support with bronze sleeve



Sk Hinged support with steel/steel swing bearing



Piston Ø	25		32		40		50		63		80		100	
Piston rod Ø d2-f7	14	18	18	22	22	28	28	36	36	45	45	56	56	70
d2g	M12x1,25	M14x1,5	M14x1,5	M16x1,5	M16x1,5	M20x1,5	M20x1,5	M27x2	M27x2	M33x2	M33x2	M42x2	M42x2	M48x2
L3	29	31	31	35	35	41	42	50	52	61	63	74	76	83
L4	16	18	18	22	22	28	28	36	36	45	45	56	56	63
L5	13		13		13		14		16		18		20	
d1v	54		64		74		93		103		128		148	
d1h	33		40		50		65		80		100		124	
d1z-f8	32		40		50		60		70		85		106	
d3	48		55		65		80		90		110		125	
d7-H7	12		16		20		25		32		40		50	
d8	20		24		28		28		34		34		42	
d9	G 1/4"		G 3/8"		G 1/2"		G 1/2"		G 3/4"		G 3/4"		G 1"	
b7	12		16		20		25		32		40		50	
b8	11		14		18		22		28		32		40	
L2	16		16		16		18		20		22		25	
L6	12		16		16		20		25		32		32	
L6z	3		3		3		4		4		4		5	
L7	20		25		30		40		50		60		75	
L8	16		20		25		32		40		50		63	
L20	61		68		88		95		102		112		145	
L21	30		33		41		45		50		55		76	
L24	54		64		80		84		92		104		118	
L25	23		29		33		34		40		47		49	
Functional type	Length measurements L1c													
D/E/Ez/Dbb	L1c = stroke +	178	206	231	257	289	332	395						