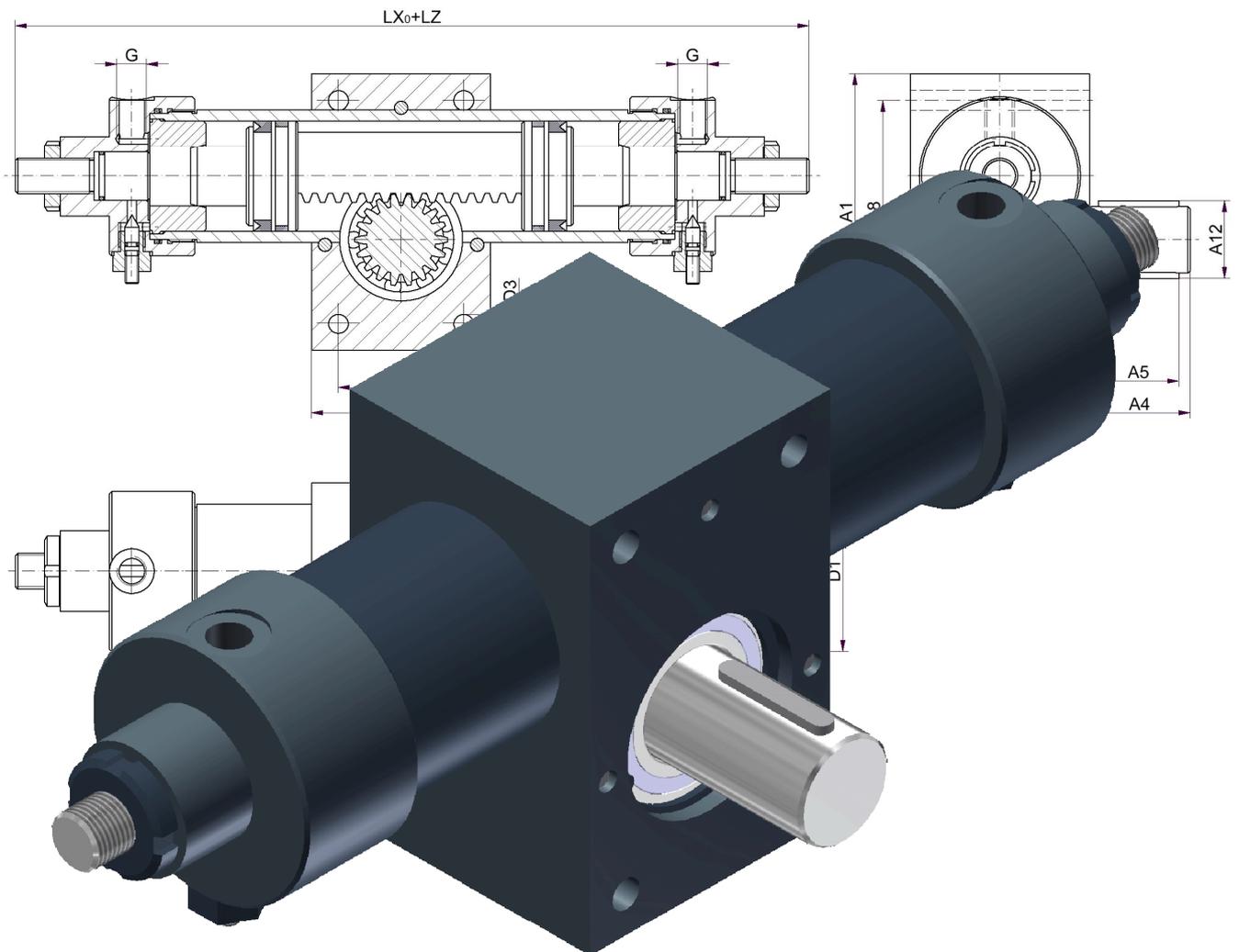
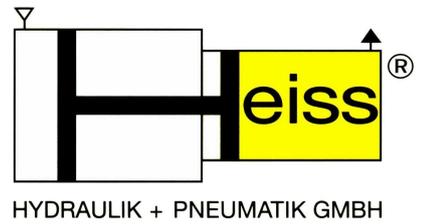
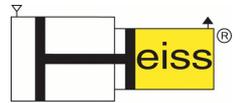


Hydraulic Rotational Drive Cylinder HDZ 120



- Maximum operating pressure up to 120 bar with smallest installation dimensions
- Choice of 8 different piston sizes providing torque up to 6750 Nm
- Angle of rotation according to customers request with or without fine tuning option for angle of rotation
- Functional mode: double acting, optional with or without end-of-stroke damper
- Seal groove and diameter according to ISO 5597/1 and DIN ISO 7425/1
- Available for use with water

Hydraulic Rotational Drive Cylinder HDZ 120



General Information

The rotational drive HDZ 120 generates torque via the transversal movement of the pistons and a rack and pinion. Depending on the application the play between rack and pinion needs to be considered in particular when conditions of load reversal are encountered.

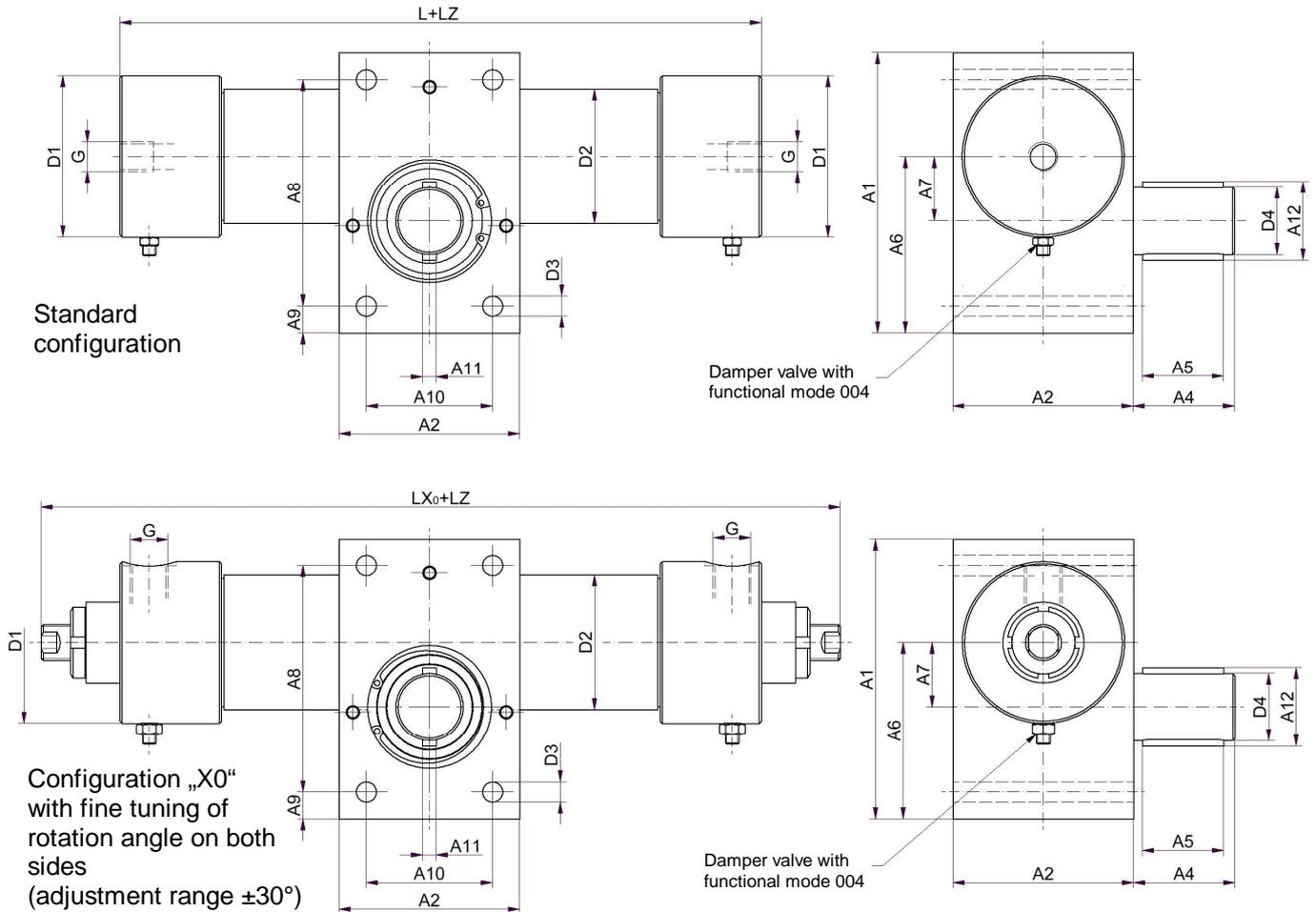
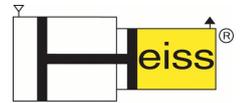
Upon request the cylinder can be equipped with vent valves. Please indicate the desired position for the vents when ordering.

For CAD data please request our electronic catalogue on CD or download it from the download page on www.heiss.de.

Operating conditions

- Operating pressure:** 120 bar, please contact us for higher operating pressures.
- Operating fluids:** Hydraulic oils on the basis of mineral oils, for example H, HL, HLP-oils per DIN 51524/51525. Other operating fluids like fire resisting fluids or water may be used upon request.
- Operating temperature:** By default the Hydraulic Rotational Drive Cylinder is equipped with seals for a temperature range from -20°C to +80°C. High temperature resistant seals can be fitted without changes in design. If required, please, add order-index "X6" when ordering (see special designs – type designations).
- Piston travel speed:** Maximum 0,5 m/s, please contact us for higher speeds.
- Angle of rotation:** Optional, up to max. $2 \times 360^\circ = 720^\circ$
Upon request with or without fine tuning option of angle of rotation on both sides
- Position of key:** By default the position of the key is vertical at the end-of-stroke position (as shown on dimension sheet). Rotation is in clockwise direction. Should a different position be required for the key, please indicate this with the order-index "X" (for example "key vertical in mid-of-stroke position")
- Torque:** The torques listed on the data sheet must not be exceeded. The listed torques take an efficiency of $\eta = 0,9$ into account
- Special designs:** The most common special equipment with the related order-index "X" is mentioned in the type designation section.
Additional piston sizes, multi-position Rotational Drive Cylinders or Rotational Drive Cylinders with position sensing option and other configurations are available on request.

Hydraulic Rotational Drive Cylinder HDZ 120

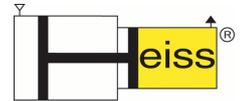


Piston-ø	25	32	40	50	63	80	100	125
L at rotational angle 0°	118	124	148	168	170	207	234	300
LX ₀ at rotational angle 0°	174	182	232	257	292	386	479	603
LZ allowance / 10° rot. angle	3,92	3,92	5,24	6,28	7,96	10,48	13,1	20,96
MD allowance for damper 004	30	30	40	50	50	60	70	80
Port size G	G1/4"	G1/4"	G1/4"	G3/8"	G1/2"	G1/2"	G1/2"	G3/4"
A1	68	70	90	125	136	160	200	300
A2	50	55	70	80	90	110	130	180
A4	25	30	35	45	55	65	85	120
A5	16	20	25	35	40	50	70	100
A6	34,5	39,25	56,5	78,75	78,75	89	106,5	174,7
A7	14	16,75	23,5	28,75	34,5	43,5	55	84,7
A8	56	58	72	101	112	130	160	255
A9	6	6	9	12	12	15	20	22,5
A10	32	35	48	56	60	70	100	130
A11	4	4	6	6	8	10	14	22
A12	15	19	24	36	36	42	57	90
D1 (D1 with fine tuning of rot. angle)	39 (48)	48	58	72	90	110	135	170
D2	32	38	48	60	75	92	115	145
D3	7	7	9	9	13	13	18	25
shaft-ø D4 (j6)	12	15	20	30	30	35	50	80
Oil volume per 10° / side [cm ³]	0,97	1,58	3,29	6,42	12,41	26,34	51,45	128,6
max. torque at 100bar [Nm]	50	81	169	337	648	1350	2700	6750

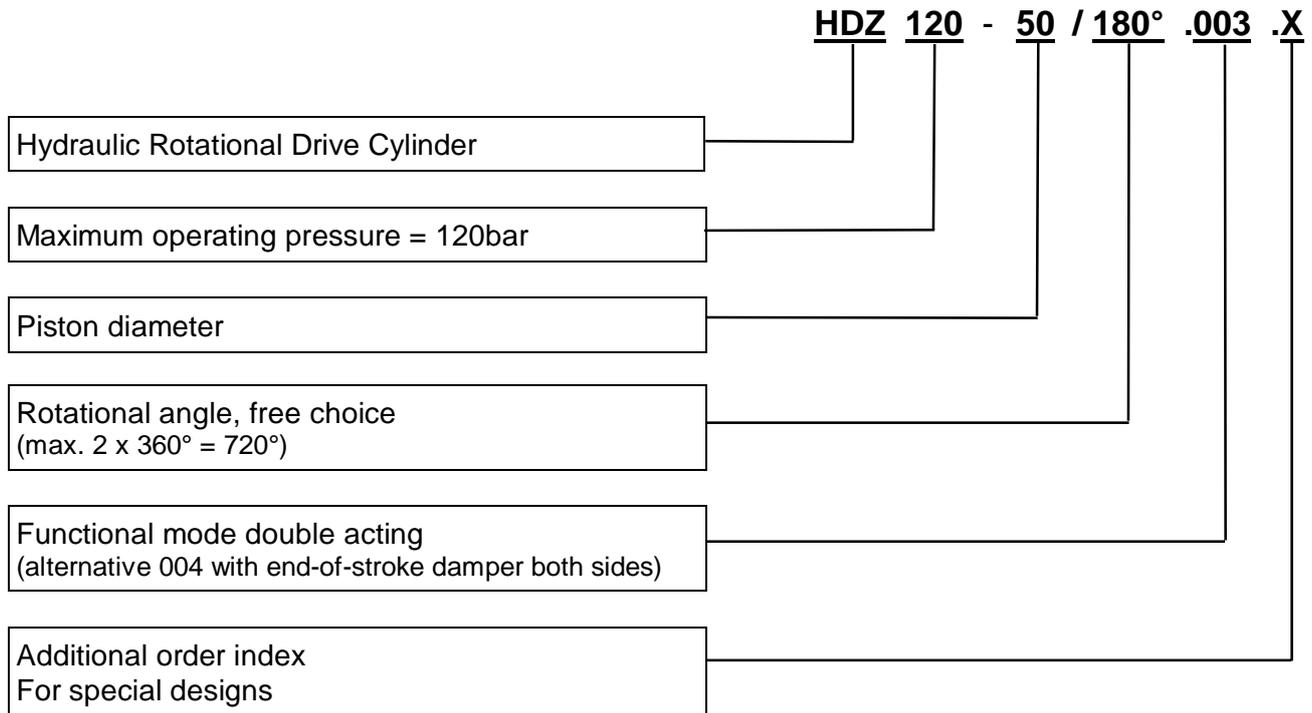
Design subject to change

Revision D* 16.10.13

Hydraulic Rotational Drive Cylinder HDZ 120



Order Designation – Type Designation



Special designs:

- X0 = Fine tuning option on both sides (adjustment range +/- 30°)
- X1 = Pinion with second shaft extension
- X2 = Pinion with spline shaft
- X3 = Pinion with hollow shaft
- X4 = Reduced or enlarged pinion shaft end
- X5 = Multi position rotational drive cylinder
Rotational angles per each position per customer request
- X6 = Heat resistant seals up to 200°C for example Viton
- X7 = Ports in radial direction (in relation to cylinder axis)
- X8 = Reduced or enlarged port sizes
- X9 = Additional vent plugs
- X10 = Corrosion resistant for operation with water (Stainless steel 1.4301)
- X11 = With inductive proximity switches for end-of-stroke sensing
- X12 = Miscellaneous

For ordering cylinder wear part kits please indicate the type designation and the commission number imprinted on the cylinder.

Please consider our additional product range:

Hydraulic short stroke cylinder	HKZ 500	Hydraulic cube cylinder	HWZ 400
Swing clamp cylinder	SSZ 250	Hydraulic block cylinder	HBZ 500
Booster cylinder	PHU / HHU	Hydraulic compact cylinder	HKZ 160
Standard cylinder series	SZ100, SZ160, SZ250 and SNZ DIN 24554		

As well as booster cylinders up to 5000 bar, cylinder strips and hydromechanical clamping units, special purpose cylinders with piston diameters up to 500 mm and strokes up to 8000 mm.