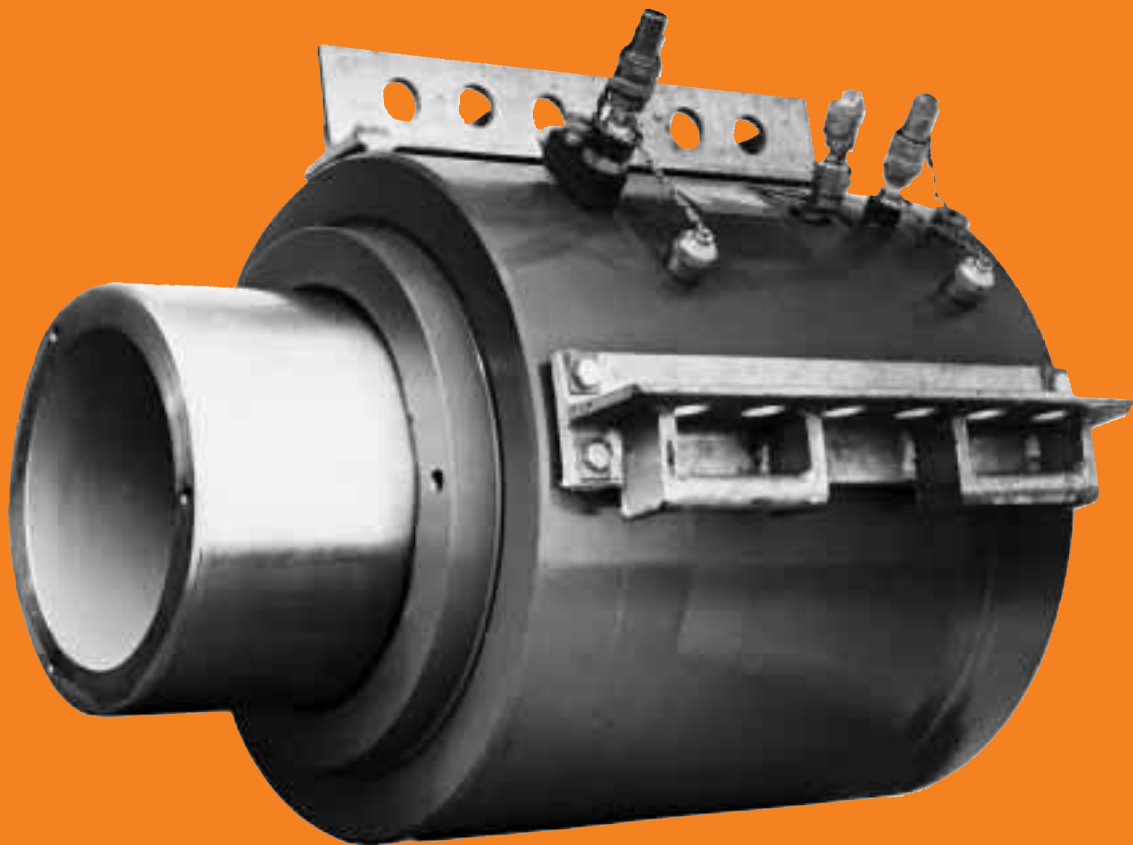




# ***Eberspächer high-pressure hydraulics***

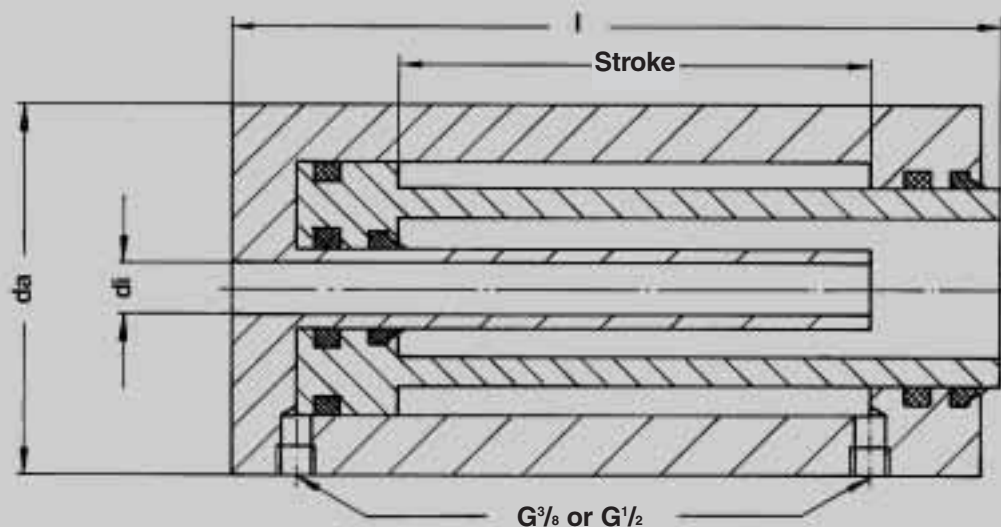
## ***Centre-hole cylinders***



**70 – 700 bar**

**100 – 12500 kN; stroke: 25 – 1000 mm**

## Centre-hole cylinders: Selection of types produced



Force kN	$d_i$ mm	Stroke mm	Pressure bar	$l$ mm	$d_a$ mm	G kg	Type	Remarks
100	20	200	318	395	100	21	ZD 8112	
100	36	100	130	250	130	17	ZD 861	
102	61,5	50	200	159	185	18	ZD 8095	
160	18	280	300	475	120	33	ZD 8087	P
160	28	500	256	700	125	48	ZD 895	
200	28	200	320	430	125	25	ZD 805	
200	135	500	146	715	220	94	ZD 888	
250	70	400	387	1006	178	109	ZD 8103	
250	75	700	335	906	170	107	ZD 8050	
300	25	100	710	230	108	12	ZD 898	
300	75	200	265	430	180	63	ZD 8111	
400	54	80	475	200	150	17	ZD 865	
400	60	50	250	250	195	44	ZD 8049	
400	310	1000	140	1315	445	650	ZD 8040	
408	90	200	265	388	210	66	ZD 8138	
450	90	280	235	506	250	135	ZD 8021	
468	32	125	710	260	130	20	ZD 873	
500	60	25	380	183	178	28	ZD 813	
500	75	500	410	753	190	112	ZD 8041	
600	58	180	546	345	170	45	ZD 8174	
600	85	200	500	332	185	41	ZD 871	
630	50	150	400	327	193,7	63	ZD 811	
630	50	200	435	331	175	40	ZD 881	
630	56	250	500	425	180	58	ZD 802	
650	89	80	530	303	200	42	ZD 8084	Special cyl.
657	90	100	300	240	226	45	ZD 874	P
700	75	250	320	448	220	84	ZD 8113	
750	70,5	220	400	380	220	75	ZD 848	
1000	54	80	724	245	190	45	ZD 851	
1000	70,5	100	400	275	244	70	ZD 8108	
1000	70,5	160	400	335	244	80	ZD 8109	
1000	75	200	290	357	280	105	ZD 8048	
1000	82	200	505	357	212	58	ZD 8156	
1000	84	180	674	351	196	45	ZD 8172	

Force kN	di mm	Stroke mm	Pressure bar	l mm	da mm	G kg	Type	Remarks
1000	90	100	450	240	226	45	ZD 815	
1000	120	200	625	406	238	82	ZD 8102	
1000	230	200	300	600	419	391	ZD 8046	
1065	45	200	575	337	195	48	ZD 8089	
1065	80	200	648	344	203	55	ZD 8161	
1100	80	180	645	305	220	60	ZD 8018	
1100	115	180	645	305	236	60	ZD 8012	
1130	105	250	500	412	252	120	ZD 8031	
1130	120	300	500	466	252	111	ZD 899	
1150	56	250	710	431	190	65	ZD 876	
1250	80	250	530	457	265	150	ZD 860	
1284	120	300	570	466	252	135	ZD 8032	
1450	165	250	300	492	390	306	ZD 8039	
1500	65	200	568	374	232	85	ZD 8151	P
1500	80,2	200	370	400	320	185	ZD 814	
1500	100	250	644	488	255	135	ZD 8192	P
1700	68	200	400	355	280	100	ZD 818	
1700	108	150	516	382	280	116	ZD 8170	
1800	68	250	420	405	280	130	ZD 844	
1800	115	250	540	416	290	122	ZD 8044	
1827	110	200	554	366	276	96	ZD 8067	
1890	64	200	575	366	258	97	ZD 8090	
1920	240	250	300	540	480	442	ZD 8051	P
2000	70	200	700	355	250	85	ZD 8036	
2000	70	250	700	405	250	95	ZD 8009	
2000	120	250	500	392	302	134	ZD 8118	
2000	145	180	545	320	316	120	ZD 8011	
2000	145	300	545	460	316	174	ZD 8045	
2000	160	250	500	381	336	190	ZD 8115	
2000	240	250	312	540	480	478	ZD 8110	
2500	75	200	700	350	276	90	ZD 8001	
2500	160	100	700	230	330	98	ZD 8026	
2600	150	250	520	473	366	253	ZD 8169	
2840	290	250	315	565	580	655	ZD 8063	
3000	230	520	315	950	550	1500	ZD 8060	P
3500	200	300	664	534	447	474	ZD 8124	
3600	202	250	500	509	446	395	ZD 8145	
4680	170	200	686	485	468	435	ZD 8149	
4800	220	100	630	485	540	740	ZD 8024	
5000	200	200	560	585	550	760	ZD 8034	
5000	200	350	559	608	505	573	ZD 8101	
5000	235	50	400	383	640	630	ZD 8081	
5000	235	345	513	624	541	645	ZD 8177	
6000	215	250	615	635	600	800	ZD 8033	P
6600	220	200	677	496	552	630	ZD 8146	
6700	223	200	500	600	590	820	ZD 8037	
8000	240	400	340	1530	920	4550	ZD 8080	Special cyl.
9000	310	250	625	783	720	1400	ZD 862	
10000	260	200	560	615	780	1884	ZD 869	
10000	260	300	560	807	780	2260	ZD 870	
10000	270	200	560	615	790	1820	ZD 8035	
10000	270	500	560	1007	790	2700	ZD 8010	
12000	400	800	700	1400	830	4200	ZD 8020	P
12500	270	250	600	660	795	1770	ZD 8072	

Different dimensions on request

## Construction

High-strength steel, inside and outside dirt scrapers, exchangeable guide rings, three-stage sealings, hard-chromium-plated piston tube.  
Hydraulic return, full-force piston stop.

## Application

For central pulling and lifting, tensioning of prestressed concrete tendons, pre-tensioning of cables for suspension bridges and two-dimensional supporting structures, tightening of high-strength bolted connections and tie-bolts in steel construction and mechanical engineering. The centrally applied force simplifies the design of connected parts.  
High-precision monitoring of forces exerted by calibrated pressure gauges.

## Special features

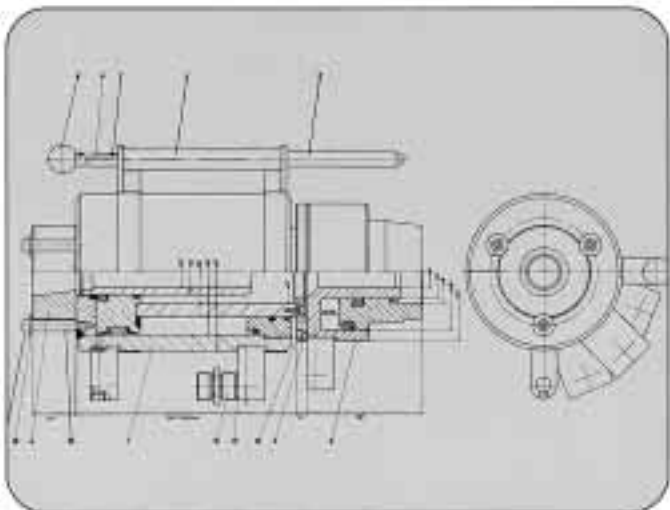
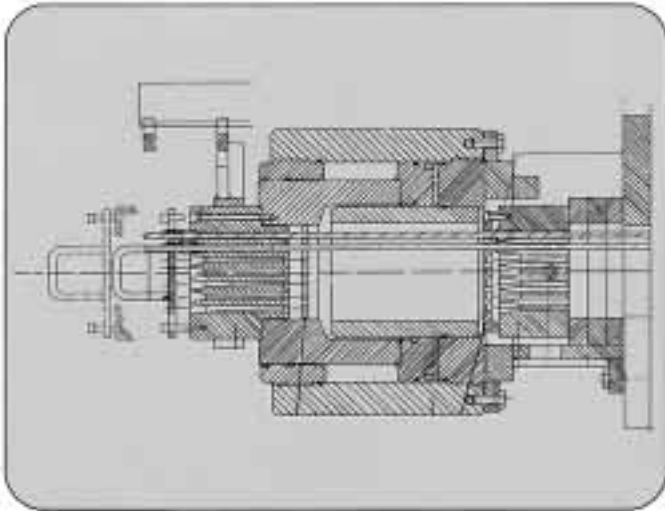
Cylinder bore hard-chromium-plated, TÜV acceptance test, calibration.

## Accessories

Adaptors and gears for turning locking nuts, wedging units, wedging parts and plates for strands and rods, pull rods, stroke measuring devices.

## Drive

Hand and motor pump units, manifold valves, tubing and hosing, couplers, etc. as specified in our data sheets, load distributors and multiple pumps for synchronous lifting and lowering of unequally loaded cylinders.



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