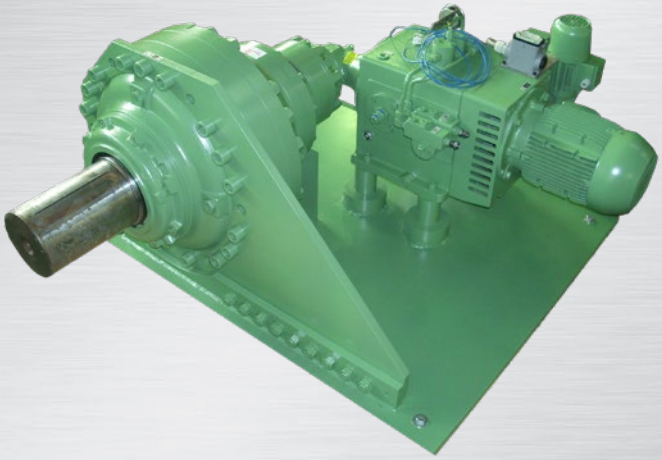
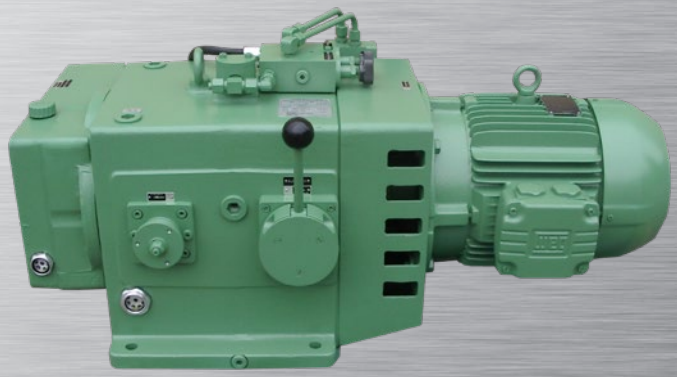
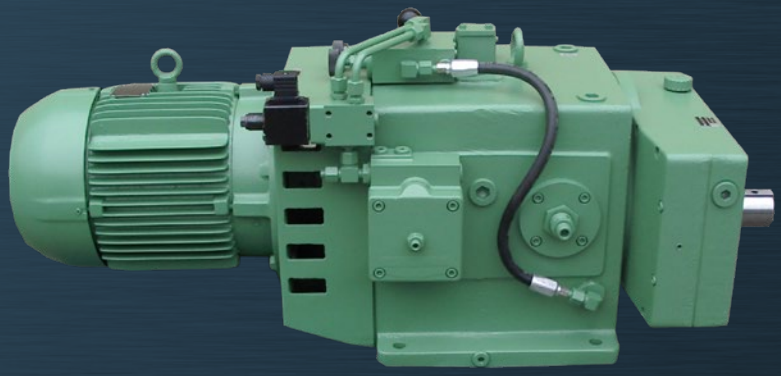
SPITZNAS
CUSTOMIZED POWER SOLUTIONS





HYDROSTATIC COMPACT DRIVES SERIES - E

THE SPECIALIST‘S DRIVE



HYDRAULIC

SYSTEM CONCEPT

DESIGN CONCEPT AND OPERATING CONCEPT

1. DESIGN

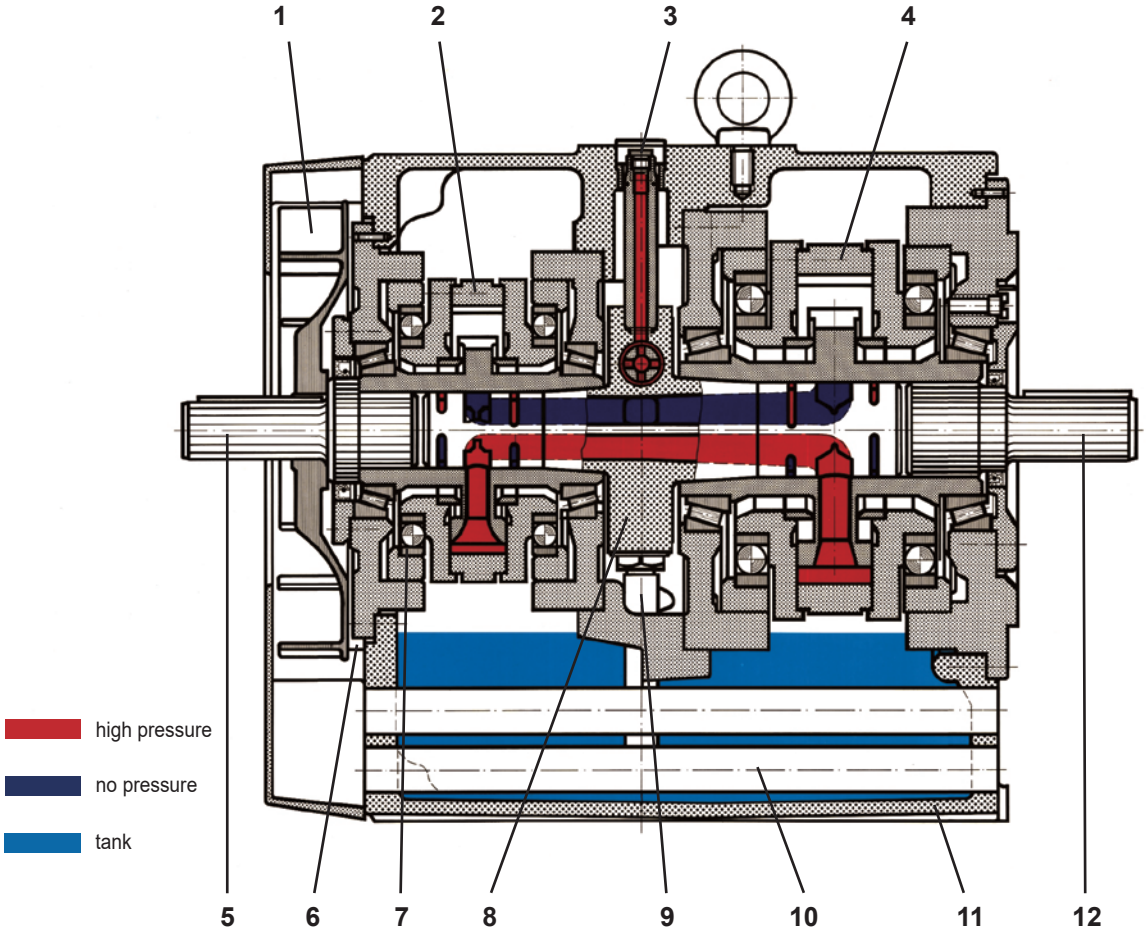
The hydrostatic compact drive consists of a pump, a motor and a pintle located in a common housing which also serves as an oil tank. Both, the pump and the motor are vane type units with variable displacement volumes.
There are cooling pipes and an impeller integrated to ensure the optimal working temperature.

2. OPERATION

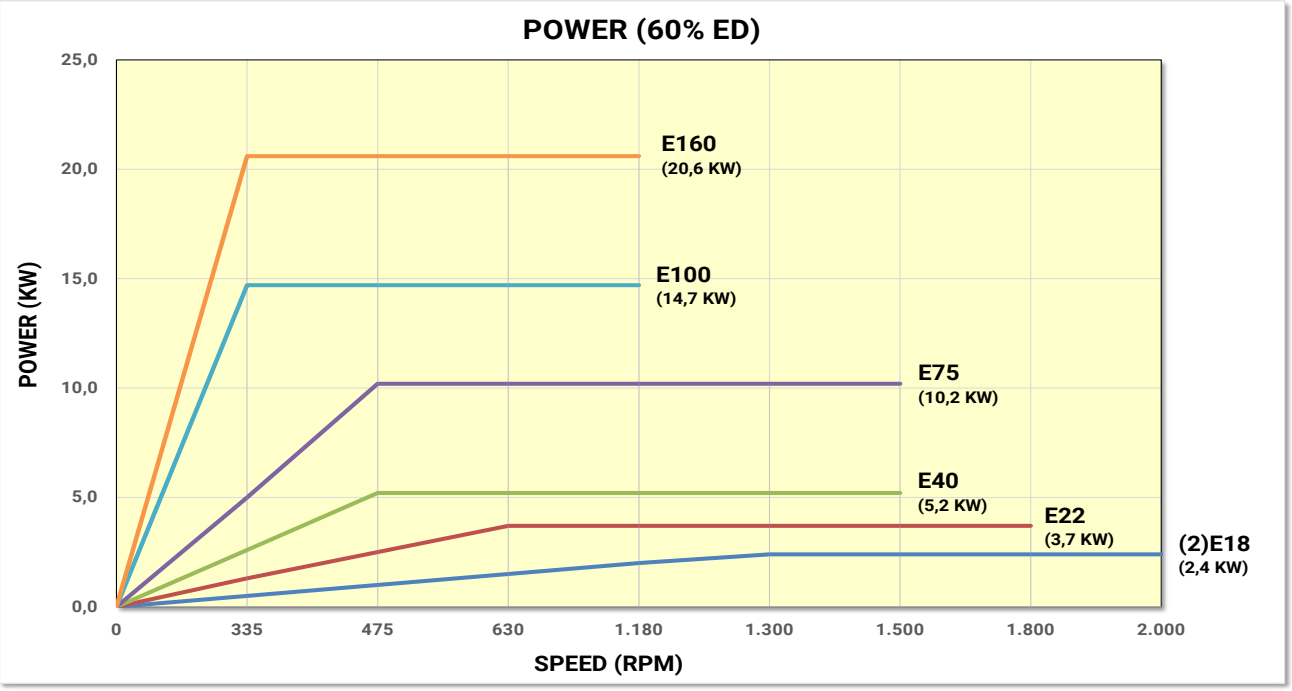
The compact drive operates in a closed hydraulic circuit. The hydraulic oil is displaced from the pump (high pressure side) to the motor (sucking side) through the pressure oil pipe and pressure pintle passage. This generates a rotation of the motor shaft. The oil is returning to the pump through the suction pipe and a second pintle passage. The adjusting devise controls the eccentricity and this governs the output of the pump. Thus, the continously variable speed setting as well as the rotation direction is generated.
When the compact drive starts, the vane pump is in a centric position and does not produce any oil flow (hydraulic "0" flow) that means no rotation. Maximum eccentricity adjustment of the pump generates maximum rotation speed.
There can be mounted additionally another adjusting devise on the vane motor side.
This permits a supplementary adjustment of the torque.
Maximum eccentricity adjustment of the motor generates maximum torque.

3. LEGEND

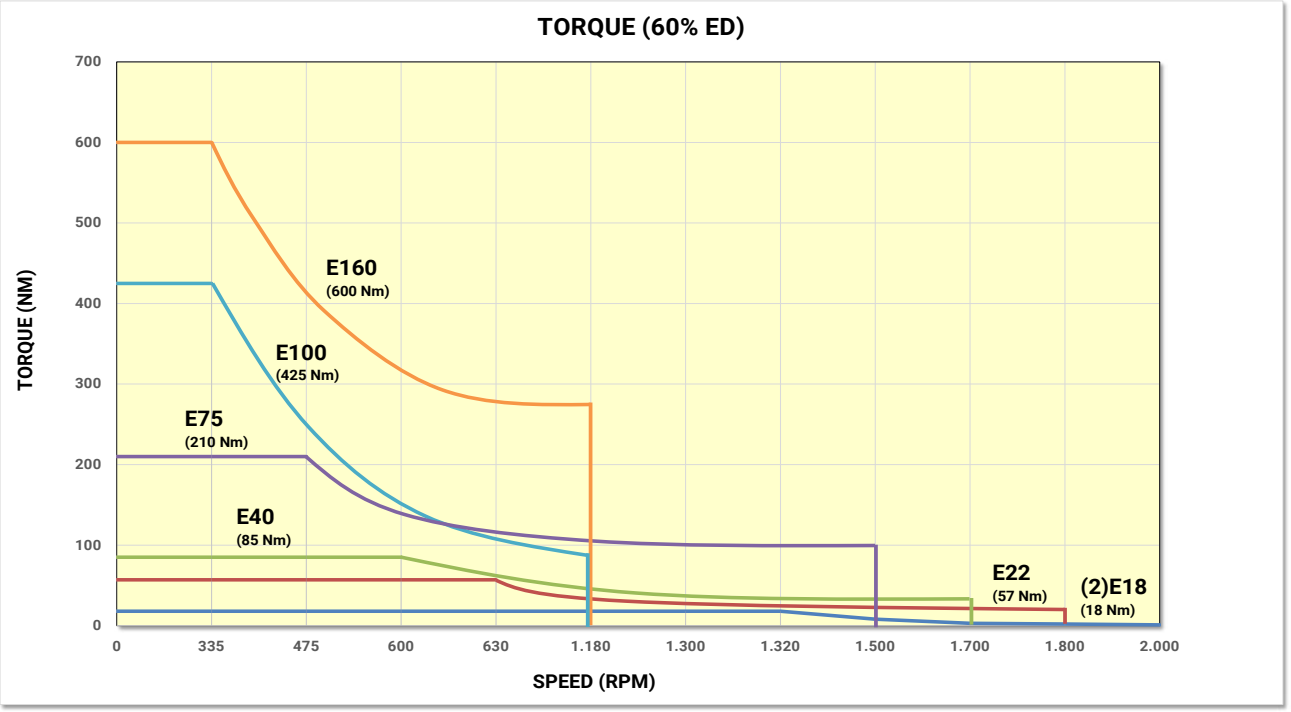
1. Impeller
2. Vane pump
3. Pressure pipe
4. Vane motor
5. Input shaft (pump)
6. Flange
7. Bearing
8. Pintle
9. Oil suction tube
10. Cooling tube
11. Housing
12. Output shaft (motor)



POWER



TORQUE

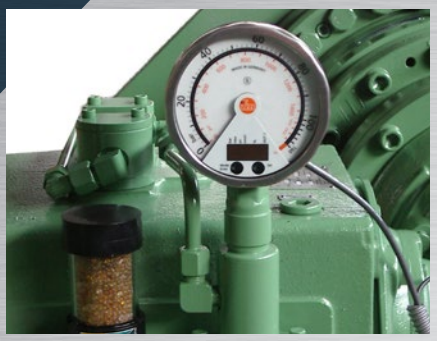


TECHNICAL DATA

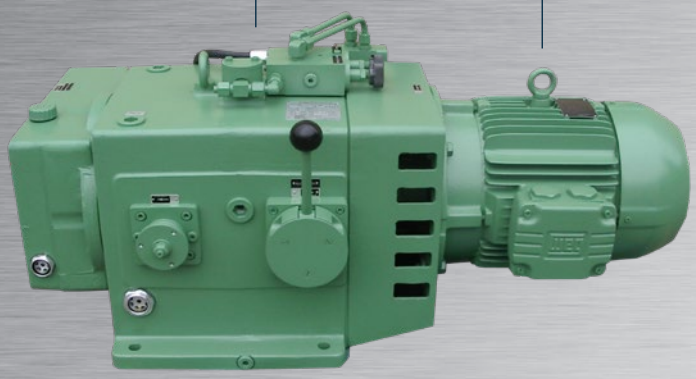
SYSTEM CONCEPT

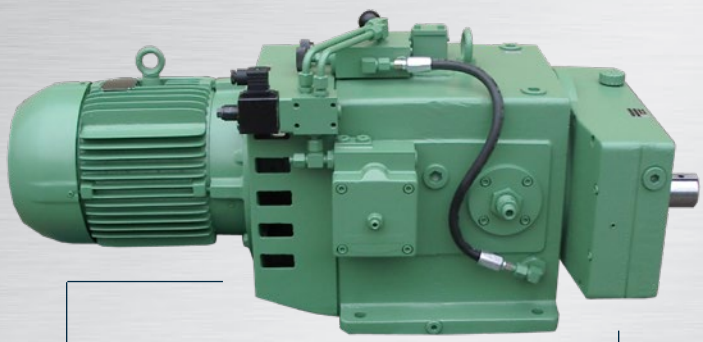
Hand operated control or electrical control available

Electrical drive

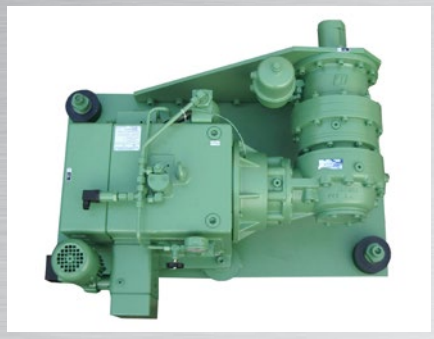


Pressure gauge (optional)

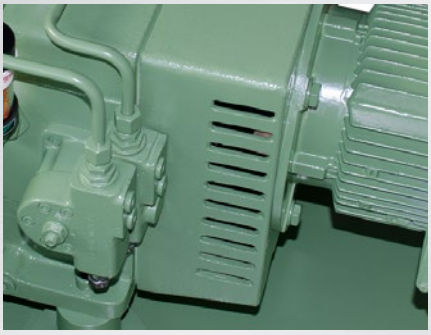




Customized mounting platform



Built-in Air-/Oil-cooling-system



Speed sensor (optional)

INPUT

The generally permissable input direction of the rotation is clockwise with line of vision towards input shaft only.
For reverse rotation direction please ask for detailed information.

TYPE	Maximum Power	Input speed at 50 Hz	Input speed at 60 Hz
	KW	rpm	rpm
E 18	2.2	1,500	1,800
2 E 18	2.2	1,500	1,800
E 22	4.0	1,500	1,800
E 40	5.5	1,500	1,800
E 75	11.0	1,500	1,800
E 100	15.0	1,500	1,800
E 160	22.0	1,500	1,800

Subject to technical change.

OUTPUT

In combination with different planetary gears, the compact drive could be modified to special characteristics.

TYPE	Speed range Adjustable motor	Constant motor		Power output		Torque		Starting moment
	rpm	rpm		kW	rpm	Nm	rpm	Nm
E 18	0 up to 2,000	0 up to 1,320	ED 100% ED 60%	1.80 2.40	1,000 up to 2,000 1,300 up to 2,000	18 18	0 up to 1,000 0 up to 1,320	24
2 E 18	0 up to 2,000	0 up to 1,320	ED 100% ED 60%	1.80 2.40	1,000 up to 2,000 1,300 up to 2,000	18 18	0 up to 1,000 0 up to 1,320	24
E 22	0 up to 1,800	0 up to 630	ED 100% ED 60%	3.00 3.70	630 up to 1,800 630 up to 1,800	45 57	0 up to 630 0 up to 630	65
E 40	0 up to 1,700	0 up to 600	ED 100% ED 60%	4.00 5.20	460 up to 1,700 600 up to 1,700	85 85	0 up to 460 0 up to 600	100
E 75	0 up to 1,500	0 up to 475	ED 100% ED 60%	7.50 10.20	335 up to 1,500 475 up to 1,500	210 210	0 up to 355 0 up to 475	260
E 100	0 up to 1,180	0 up to 335	ED 100% ED 60%	10.20 14.70	236 up to 1,180 335 up to 1,180	425 425	0 up to 236 0 up to 335	710
E 160	0 up to 1,180	0 up to 335	ED 100% ED 60%	16.00 20.60	260 up to 1,180 335 up to 1,180	600 600	0 up to 260 0 up to 335	710

Subject to technical change.

OIL CAPACITY (STANDARD OIL HLP 68)

The hydro-pump and hydro-motor system is using one hydraulic circuit.
If there is no oil filter, do not use detergent hydraulic oil.
The ambient temperature range is -20°C / +40°C.
The oil fluid temperature range is -20°C / +90°C.

E 18	E 22	E 40	E 75	E 100	E 160
1.7 l	3.5 l	5.5 l	9.0 l	16.0 l	16.0 l

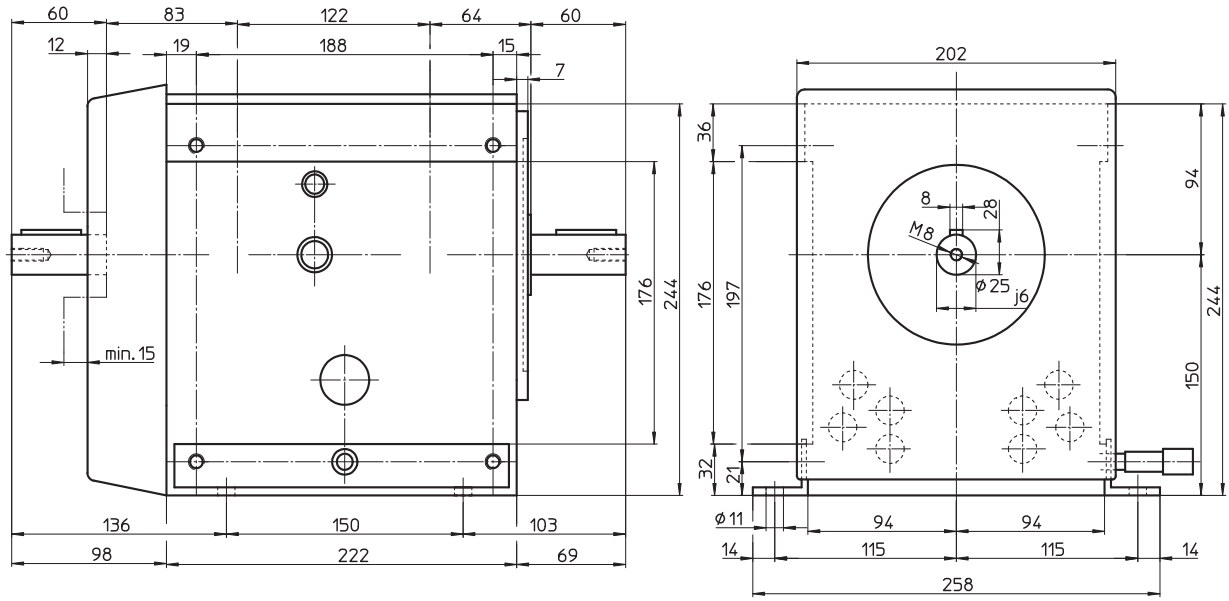
Subject to technical change.

TECHNICAL DATA

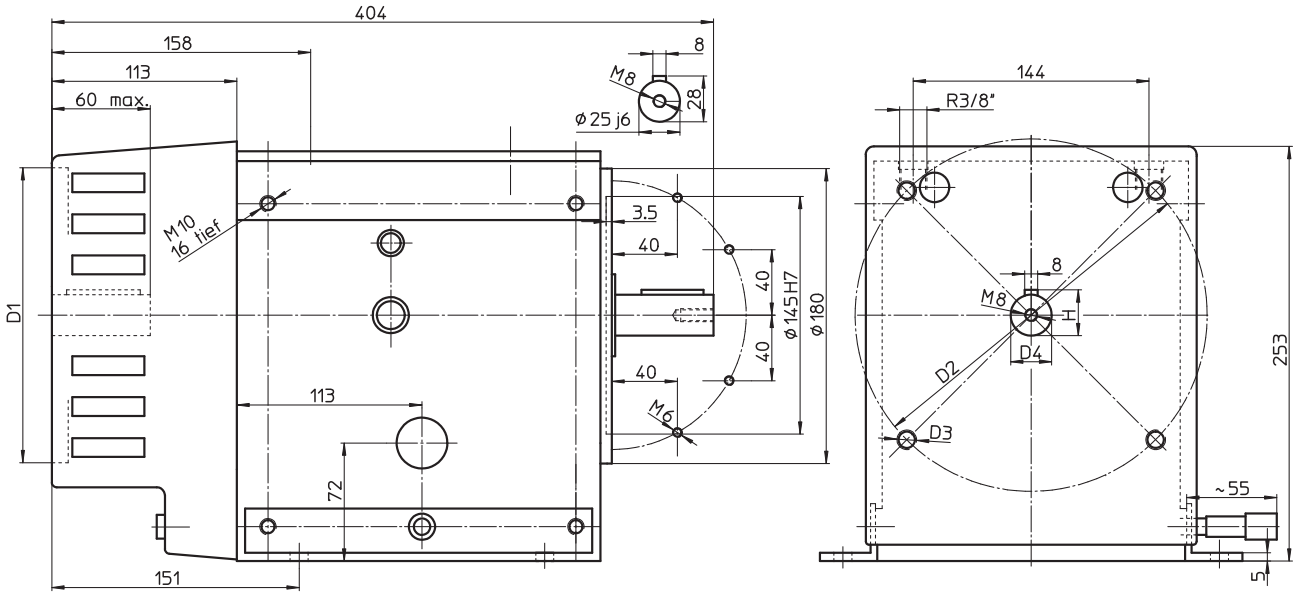
SYSTEM CONCEPT

DIMENSIONS - SERIES E 18

Type E18



Type 2E18

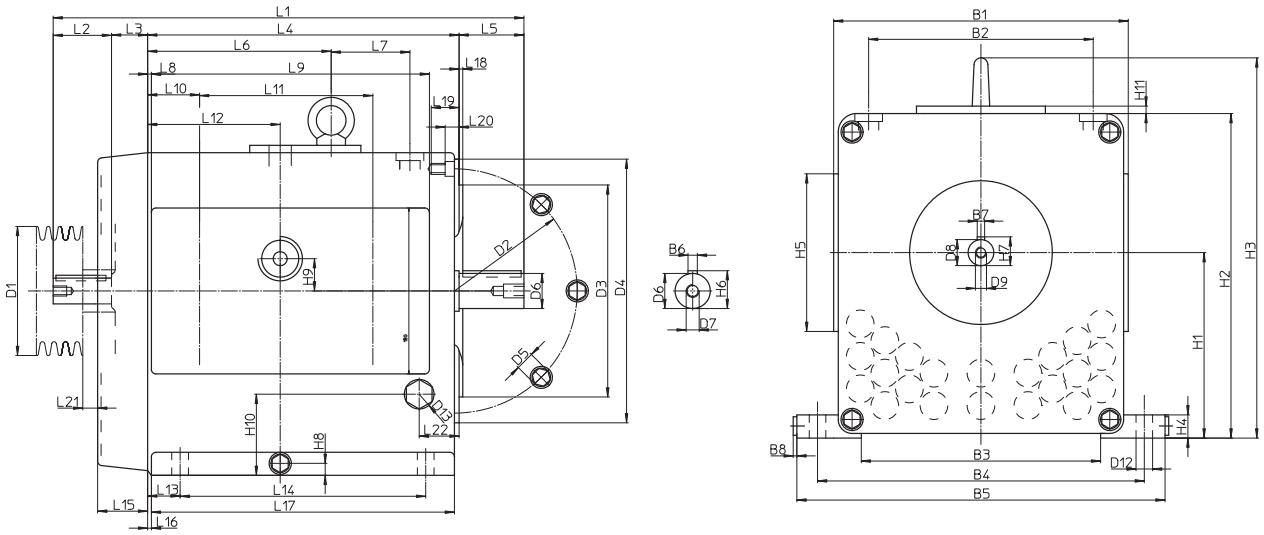


TYPE	Three-phase motor	D1 H7	D2	D3	D4 H7	H	Weight E 18 / 2E 18
	Type A according to DIN 42677	mm	mm	mm	mm	mm	kg
(2) E 18	B5 - 90S x 1.1 x 1,500	130	165	M10	24	27.3	45.0 / 52.0
(2) E 18	B5 - 90L x 1.5 x 1,500	130	165	M10	24	27.3	45.0 / 52.0
(2) E 18	B5 - 100L x 2.2 x 1,500	180	215	M12	28	31.3	45.0 / 52.0

Subject to technical change.

DIMENSIONS - SERIES E22 ... E 160

Type E22...E160



TYPE	B1	B2	B3	B4	B5	B6	B7	B8	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
E 22	264	190	195	290	325	8	8	3	180	310	365	22	150	31	28	15	30	92	8
E 40	320	244	260	355	400	10	8	4	200	350	410	25	170	41	31	13	35	88	8
E 75	380	290	300	425	465	12	10	5	250	425	495	32	200	45	41	16	42	125	8
E 100	430	330	350	475	525	16	12	5	315	530	610	34	220	59	45	18	54	157	8
E 160	430	330	350	475	525	16	12	5	315	530	610	34	220	59	45	18	54	157	8

TYPE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19	L20	L21 min.	L22
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
E 22	460	60	37	303	60	170	78	3	265	45	163	116	41	205	48	3	295	4	14	0	16	40
E 40	508	63	39	336	70	198	85	4	300	56	187	143	35	265	54	4	327	4	30	15	16	43
E 75	607	70	46	409	82	241	106	4	350	72	227	176	38	335	70	4	398	5	32	12	16	40
E 100	754	85	53	506	110	285	145	22	416	92	276	220	53	400	80	6	494	5	25	0	20	56
E 160	754	85	53	506	110	285	145	22	416	92	276	220	53	400	103	6	494	5	25	0	20	56

TYPE	D1 max.	D2	D3 h6	D4	D5	D6	D7-depth	D8 k6	D9-depth	D10	D11	D12	D13	Gewicht
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
E 22	110	215	180	236	M10	28	M10-22	25	M10-22	R 3/8"	M24x1.5	14	R 1/2"	85.0
E 40	140	265	230	286	M10	38	M12-28	28	M10-22	R 3/8"	M30x1.5	18	R 1"	128.0
E 75	160	300	250	318	M12	42	M16-36	38	M12-28	R 1/2"	M36x1.5	18	R 1"	227.0
E 100	200	350	300	395	M16	55	M16-36	42	M16-36	R 1/2"	M36x1.5	22	R 1"	390.0
E 160	200	350	300	395	M16	55	M16-36	42	M16-36	R 1/2"	M36x1.5	22	R 1"	395.0

Subject to technical change.

TECHNICAL DATA

TECHNICAL DEMANDS

QUESTIONNAIRE

Please answer the questions as comprehensively as possible and sketch and mark the most important dimensions.

After receiving your request we will quote the right compact drive to you.

The e-questionnaire is on **www.spitznas.com/drives/hydraulic-drives/hydro-static-compact-drives/questionnaire-hydrostatic-compact-drives**.

Additionally you can upload sketches, photos etc.

Company :		Date :	
Name :	Departement:	Phone :	
Street :		Fax :	
Country :		E-Mail :	@

For repairs or replacement drives:

To replace a compact drive, please mention the details of the data plate (type and serial no.). These details are also marked on the top surface of the housing.

Type:

Serial No.: ___ ___ – ___ – ___

For new drives:

1.	Speed range needed				n_{min}:	rpm
					n_{max}:	rpm
2.	Maximum torque needed at what speed				Mt:	Nm
					n:	rpm
3.	Direction of rotation	Input	right: ☐		left: ☐	
		Output	right: ☐		left: ☐	
	Reversing of rotation				by control: ☐	
					by electric motor: ☐	
4.	Torque limiter					☐
5.	Manual levelling device					☐
	Servo control					☐
	Adjusting time				0-max:	sec
6.	Ambient temperature				T:	°C
7.	Input shaft diameter				Ø:	mm
	Output shaft diameter				Ø:	mm
8.	Clearance dimensions	Length: mm	Width: mm		Height:	mm
9.	Enlarged zero position					☐
10.	Special features					
	Explosion proof class (ATEX)					
	Duty cycle			100%: ☐	60%:	☐
	Dust protection					☐
	Electric motor arrangement	separate (for belt drive)		flanged	above drive (with belt drive)	
		1 ☐		2 ☐	3	☐

HYDRAULIC DRIVES PROGRAM

AXIAL PISTON PUMPS

PLASTIC DOSING PUMPS

RADIAL PISTON MOTORS

0221E

SPITZNAS
CUSTOMIZED POWER SOLUTIONS

Maschinenfabrik GmbH I Fellerstrasse 4 I 42555 Velbert I Germany
Tel: +49 2052 605-0 I Fax: +49 2052 605-29
E-Mail: sales@spitznas.de I www.spitznas.com