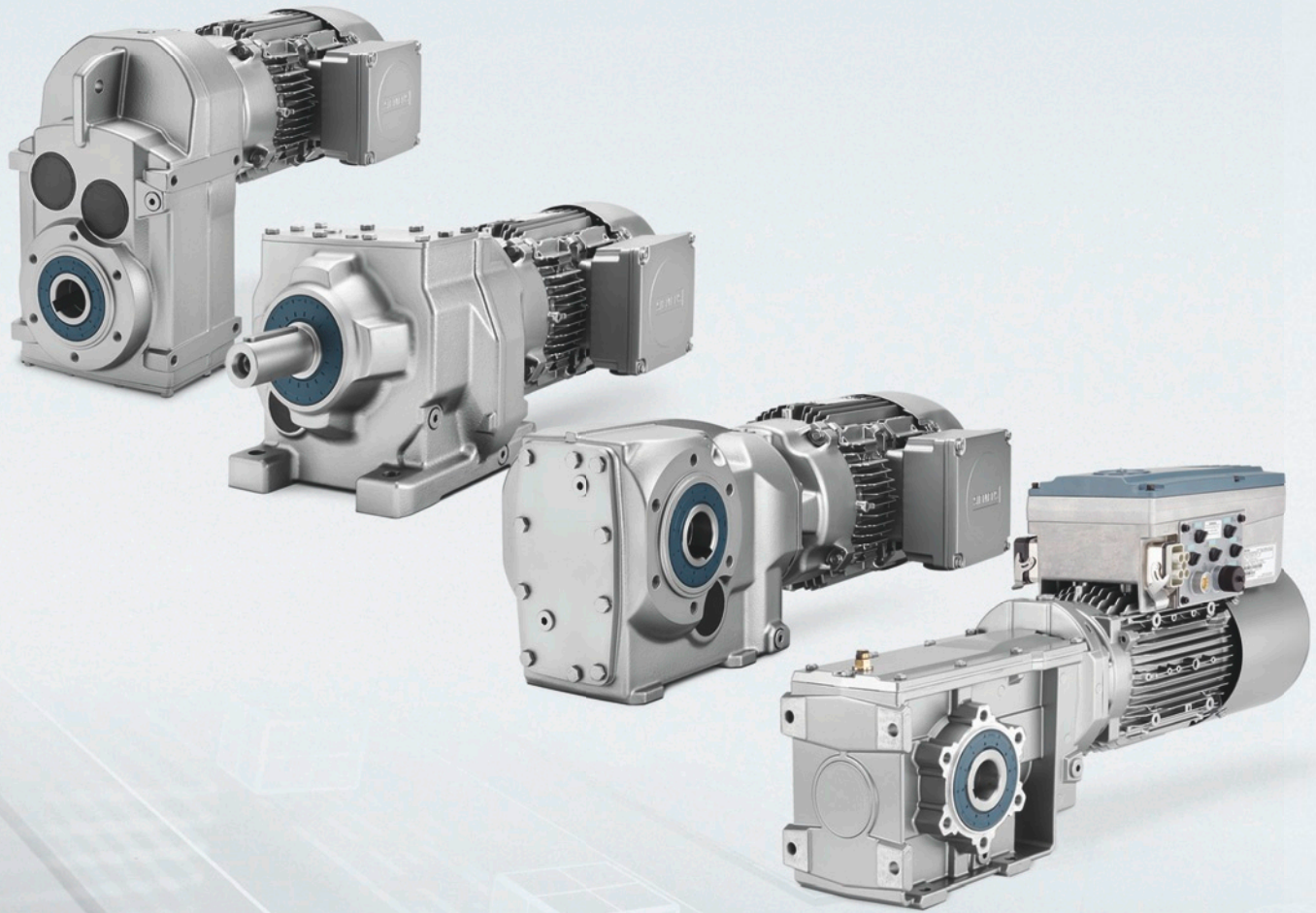


SIEMENS



Motion Control

SIMOGEAR Geared Motors

Helical, parallel shaft, bevel, helical worm
and worm geared motors



product
design award

2013

Catalog
MD 50.1

Edition
2017

siemens.com/gearedmotors

SIMOGEAR helical worm geared motors C

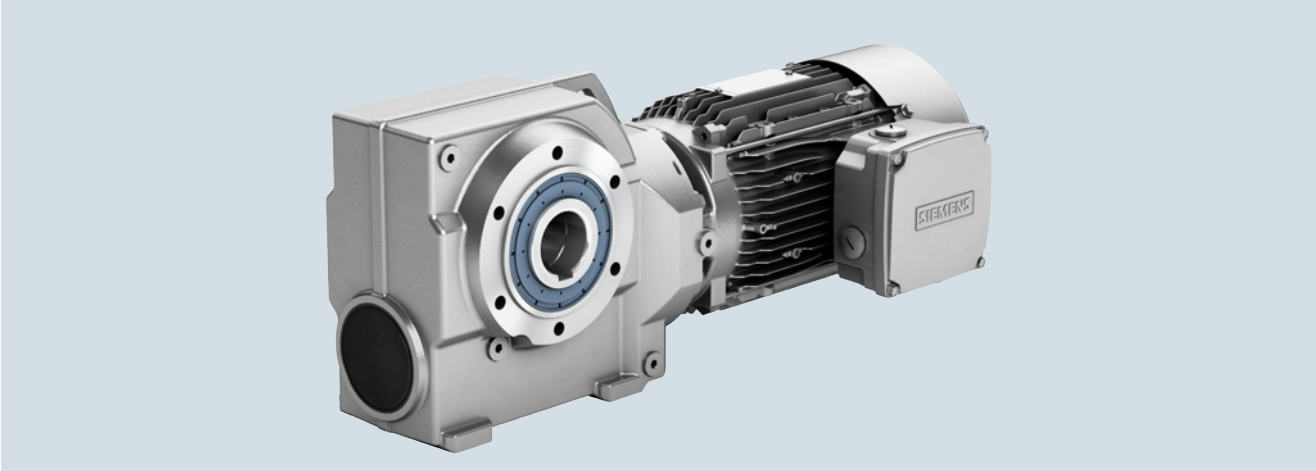


Fig. 6/1 Helical worm gearbox C

6

Gearbox designation	Number of sizes	Maximum output torque	Transmission ratio	Maximum motor power
		T_{2N} Nm	i -	P_1 kW
C29 ... C89 (2-stage)	5	82 ... 1 450	6.48 ... 363	7.5
C.29-D/Z19 ... C.89-D/Z39 (4-stage or 5-stage)	5	80 ... 1 310	270 ... 19 000	7.5

SIMOGEAR helical worm geared motors are available in the following versions:

Transmission stages

- 2-stage helical worm geared motors
- 4-stage or 5-stage helical worm geared motors for very low output speeds

Designs

- Shaft-mounted design
- Flange-mounted design
- Design with integrated housing flange
- Foot-mounted design

Mounting

- Hollow shaft design with feather key
- Hollow shaft design with shrink disk
- Hollow shaft design with SIMOLOC assembly system
- Solid shaft design with and without feather key (at one end or both ends)

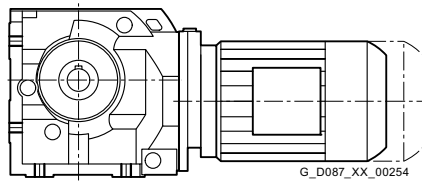
For helical worm gearboxes, the torque arm is supplied loose to enable it to be mounted as required on site. The position of the torque arm can be freely selected.

Dimensional drawing overview

Information about dimensional drawings can be found in chapter [Introduction on page 1/21](#).

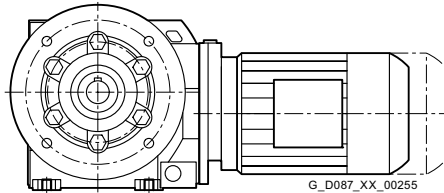
Design	Size	Dimensional drawing on page
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Foot-mounted design



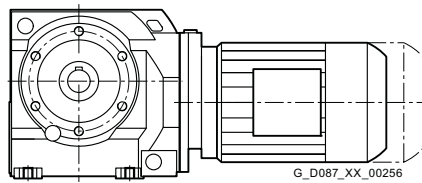
C..29	6/42
C..39	6/46
C..49	6/50
C..69	6/54
C..89	6/58

Flange-mounted design



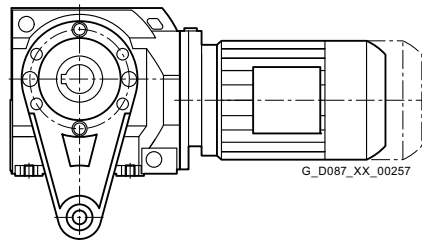
C.F.29	6/43
C.F.39	6/47
C.F.49	6/51
C.F.69	6/55
C.F.89	6/59

Housing flange design



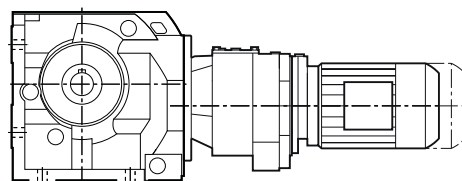
C.Z.29	6/44
C.Z.39	6/48
C.Z.49	6/52
C.Z.69	6/56
C.Z.89	6/60

Shaft-mounted design



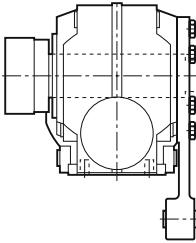
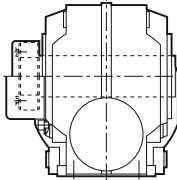
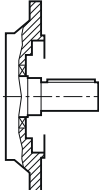
CAD.29	6/45
CAD.39	6/49
CAD.49	6/53
CAD.69	6/57
CAD.89	6/61

Helical worm tandem geared motors



C.29-D/Z19 ... C.89-D/Z39	6/62
---------------------------	------

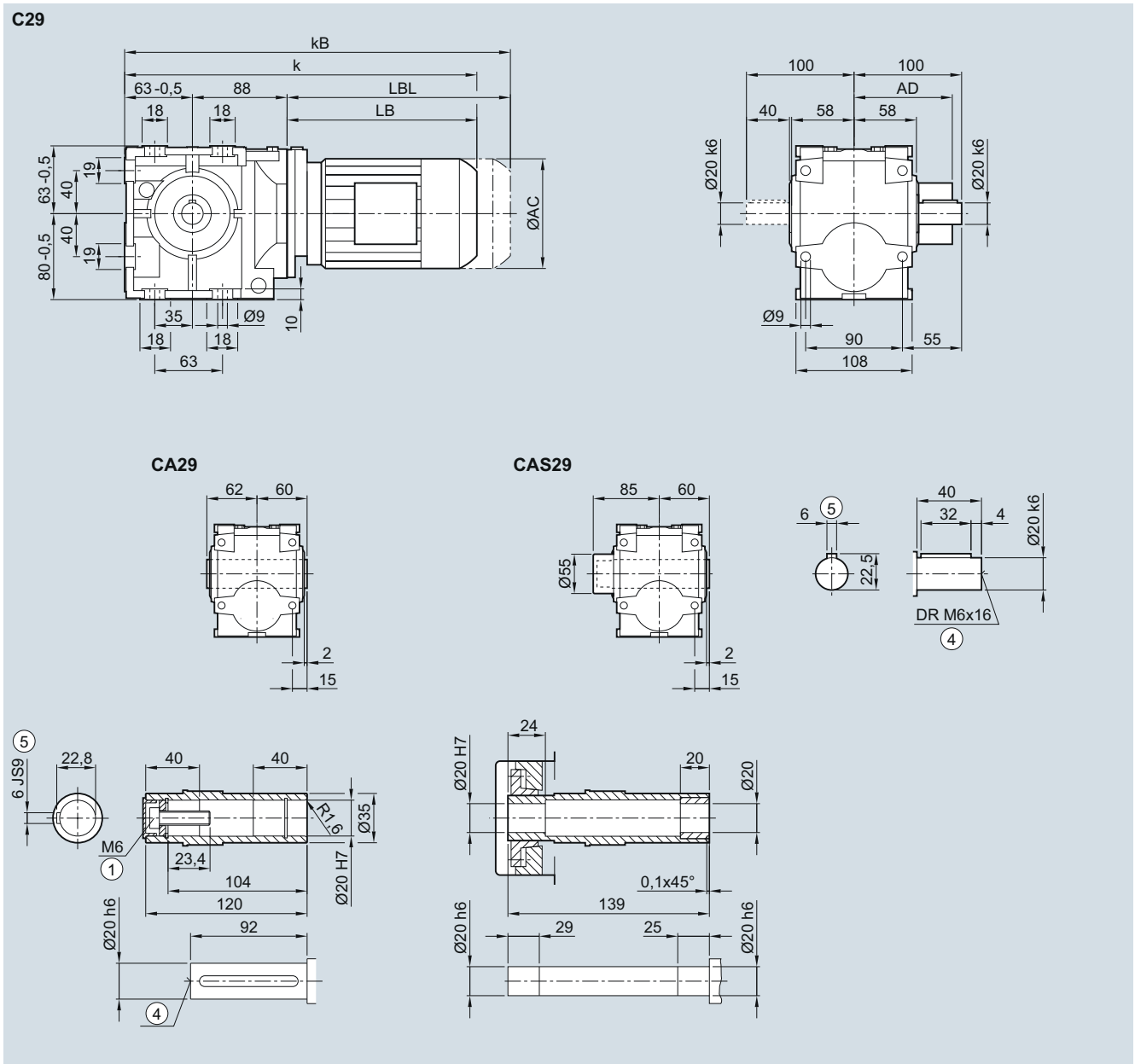
Dimensional drawing overview (continued)

Design	Size	Dimensional drawing on page
Additional versions and options		
<i>SIMOLOC assembly system</i>		
	CADR.29 ... CADR.89	6/63
Protection covers		
	CA.29 ... CA.89 CA.S29 ... CA.S89 CADR29 ... CADR89	6/64
Inner contour of the flange design		
	CF29 ... CF89 CAF.29 ... CAF.89	6/65

C..29 gearbox in a foot-mounted design

C030, CA030, CAS030

6



Motor	LA 63	71	71Z	LE 80	80Z	90	90Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	377.0	396.0	441.0	476.0	502.5	542.5
kB	389.5	432.0	451.0	501.0	536.0	572.5	612.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5

① ISO 4014

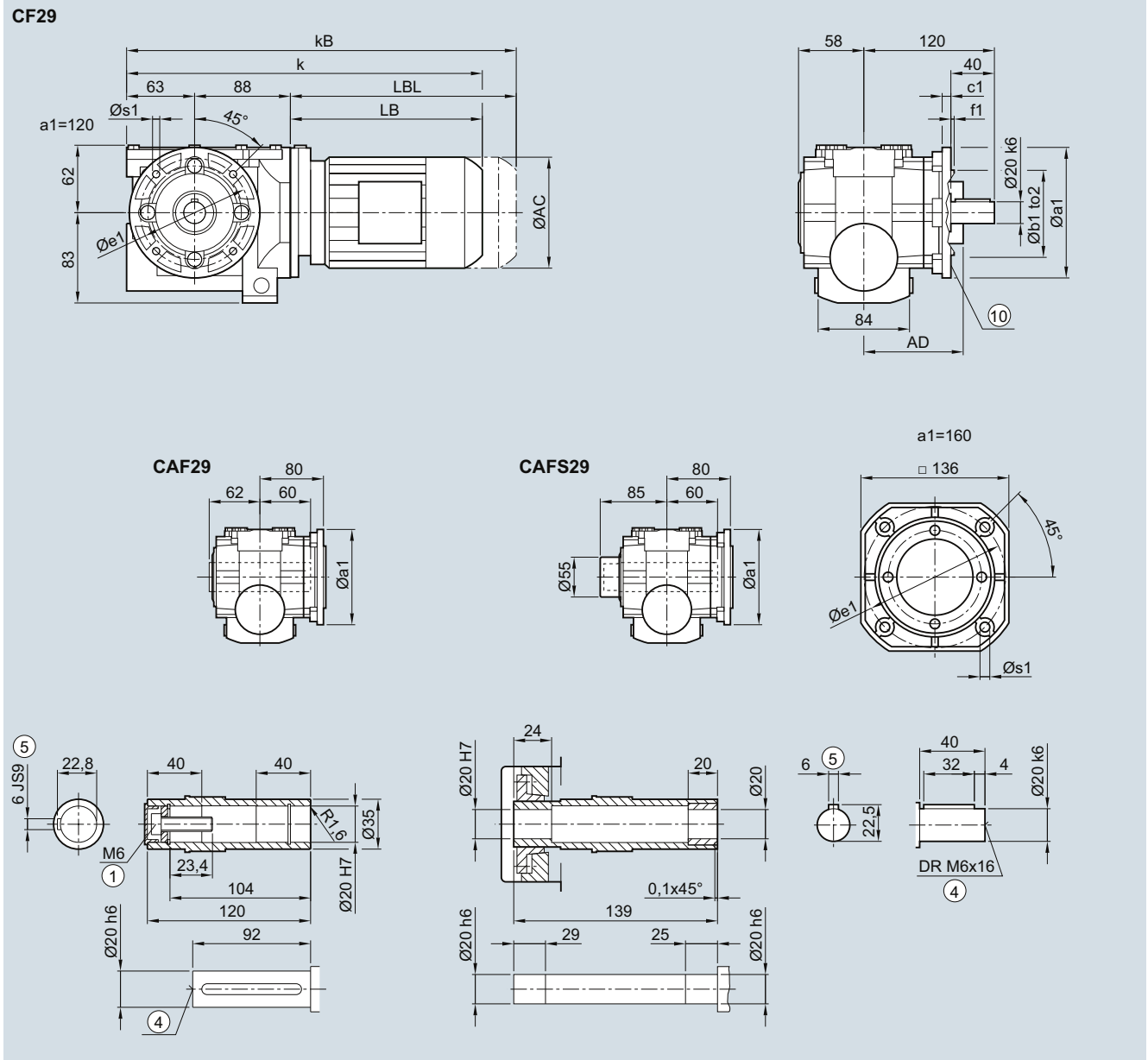
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C.F.29 gearbox in a flange-mounted design

CF030, CAF030, CAFS030



Flange	a1	b1	c1	f1	e1	s1	to2
	120	80	8	3.0	100	6.6	j6
	160	110	9	3.5	130	9.0	j6
Motor	LA	71	71Z	LE	80Z	90	90Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	377.0	396.0	441.0	476.0	502.5	542.5
kB	389.5	432.0	451.0	501.0	536.0	572.5	612.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

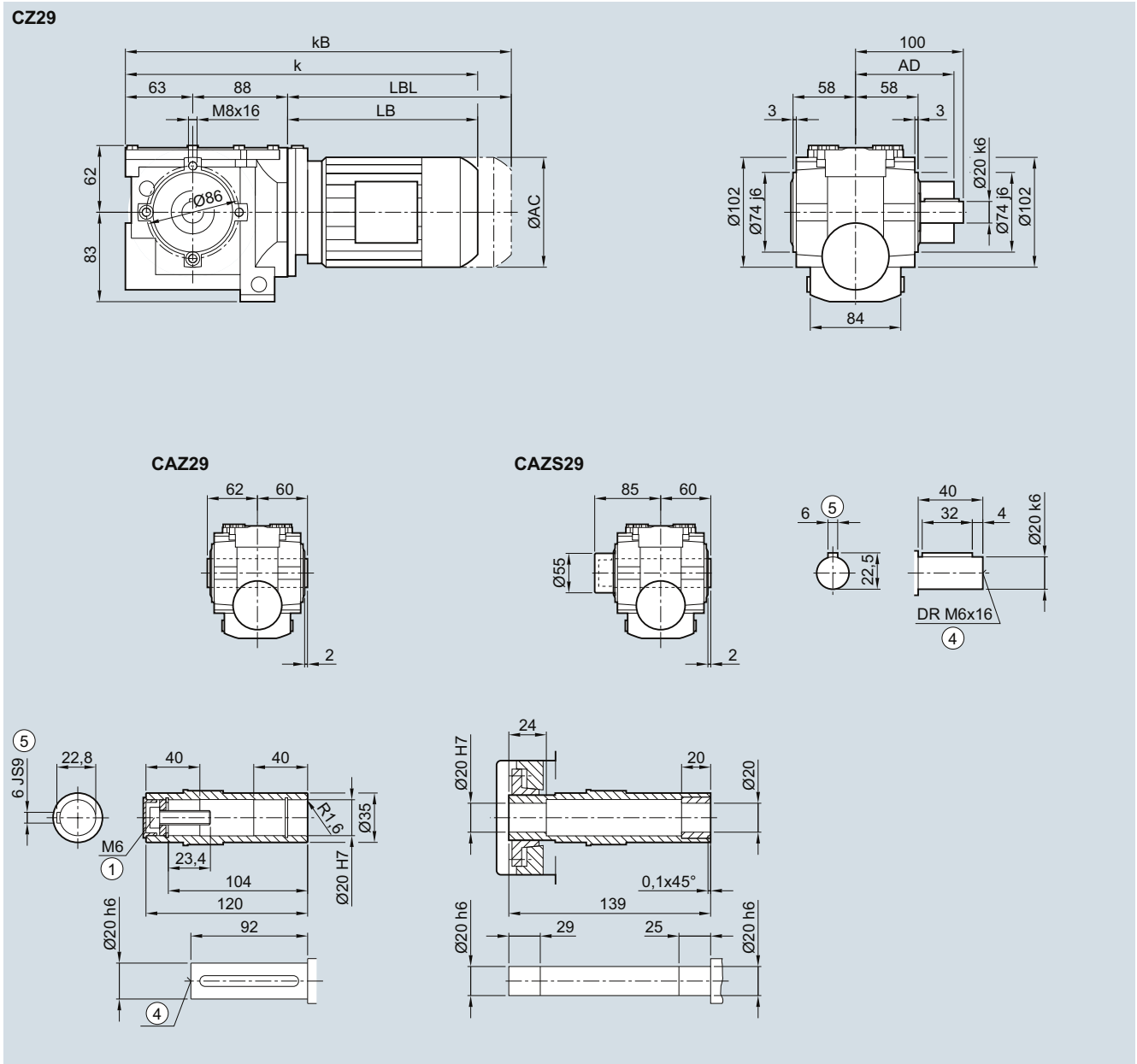
¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

⑩ For inner contour see page 6/65.

C.Z.29 gearbox in a housing flange design

CZ030, CAZ030, CAZS030

6



Motor	LA 63	71	71Z	LE 80	80Z	90	90Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	377.0	396.0	441.0	476.0	502.5	542.5
kB	389.5	432.0	451.0	501.0	536.0	572.5	612.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5

① ISO 4014

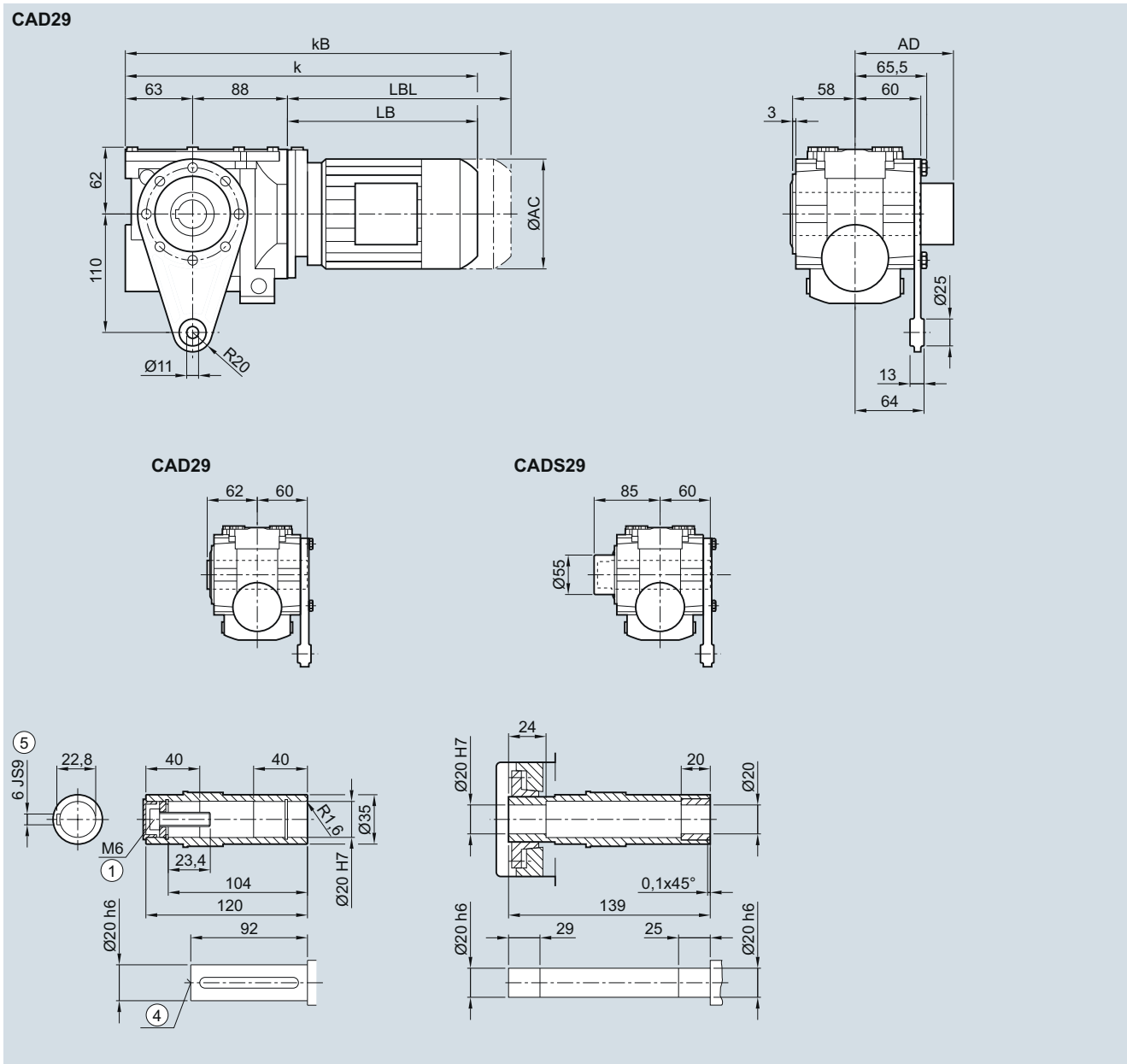
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

CAD.29 gearbox in a shaft-mounted design

CAD030, CADS030



Motor	LA 63	71	71Z	LE 80	80Z	90	90Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2
k	345.0	377.0	396.0	441.0	476.0	502.5	542.5
kB	389.5	432.0	451.0	501.0	536.0	572.5	612.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5

① ISO 4014

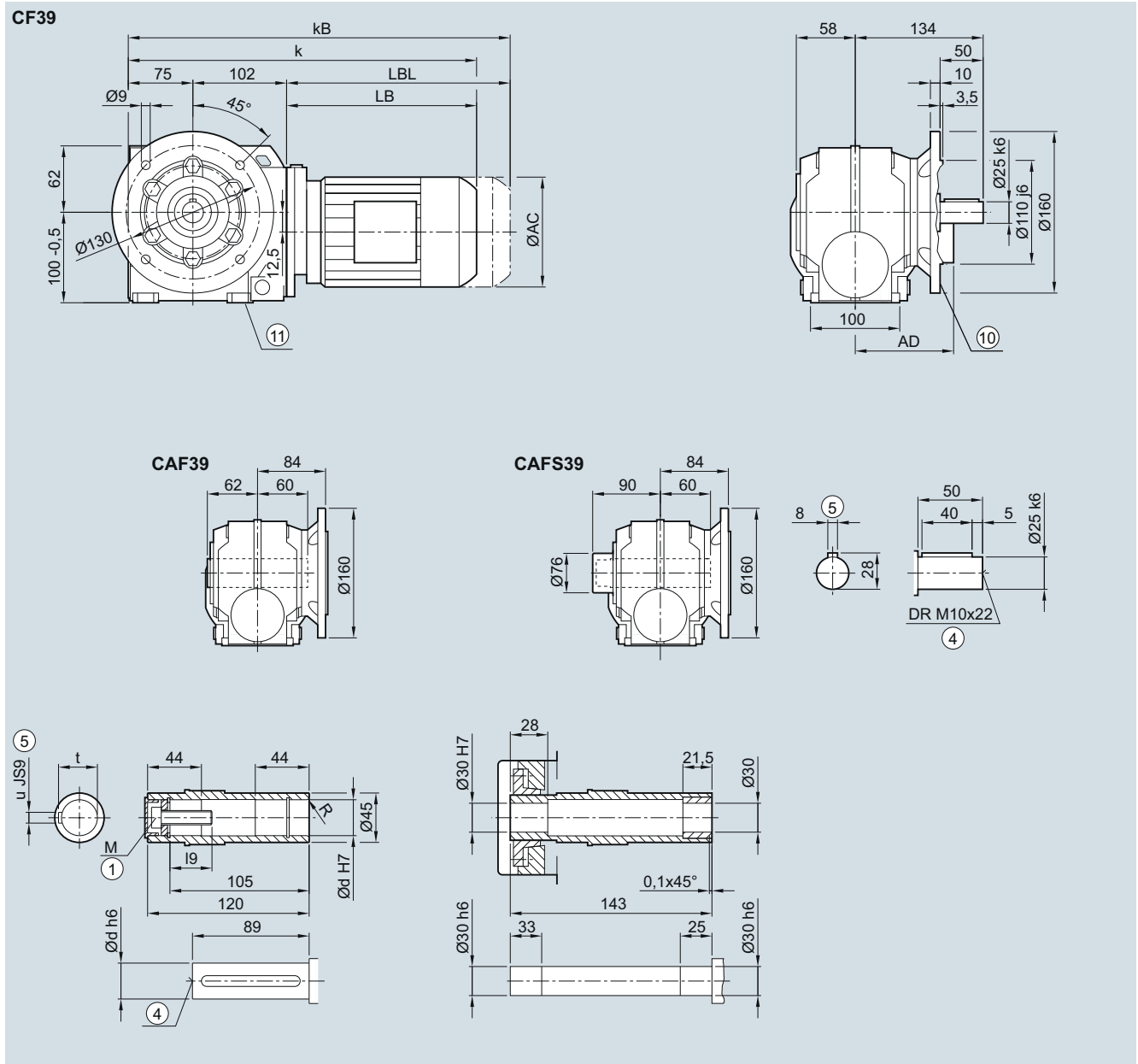
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C.F.39 gearbox in a flange-mounted design

CF030, CAF030, CAFS030



Shaft	d	I9	M	R	t	u
	25	32.6	M10	1.6	28.3	8
	30	32.6	M10	3.0	33.3	8

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	403.0	422.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	458.0	477.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour see page 6/65

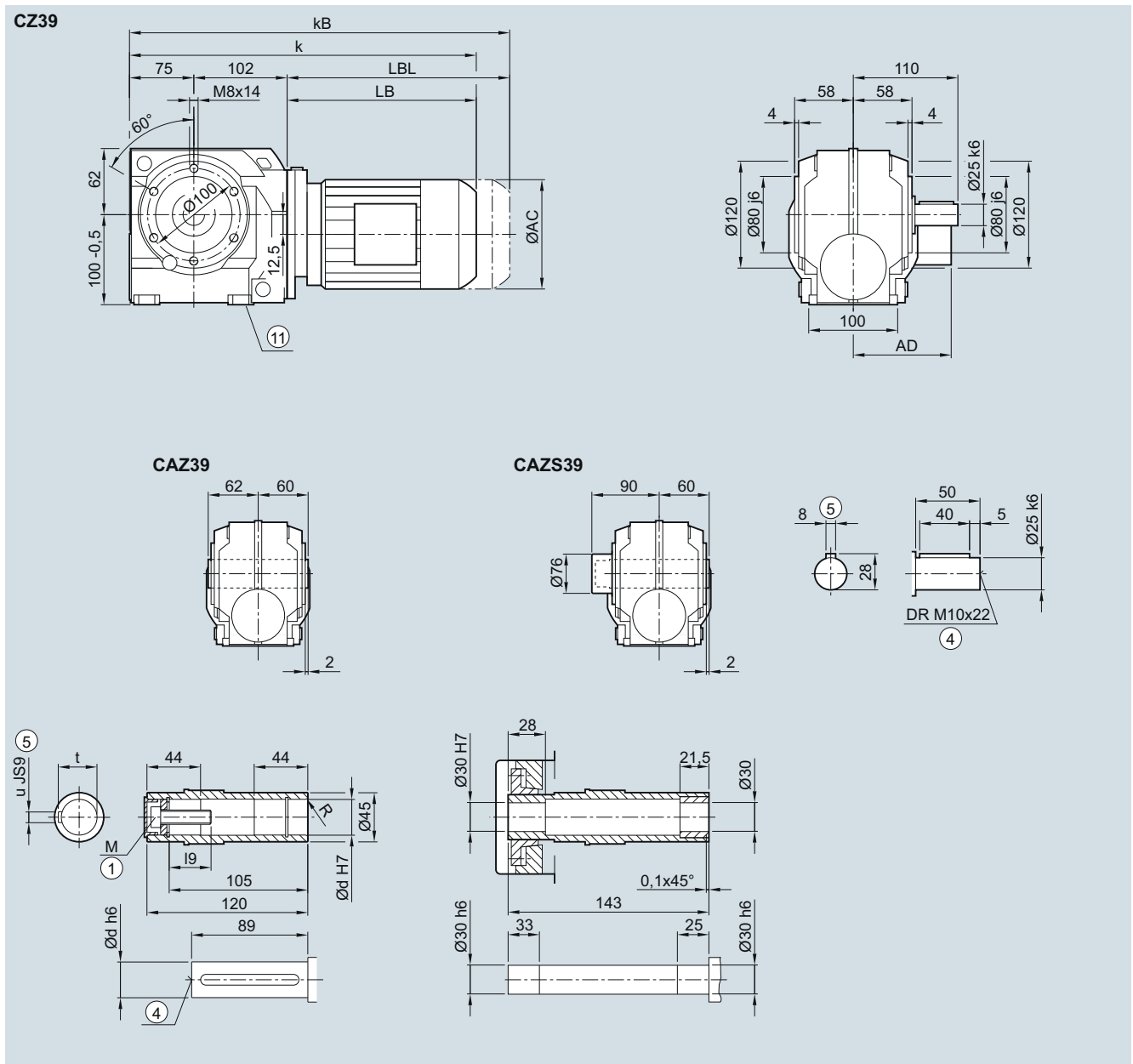
⑪ Use bores only for foot-mounted design

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C.Z.39 gearbox in a housing flange design

CZ030, CAZ030, CAZS030

6



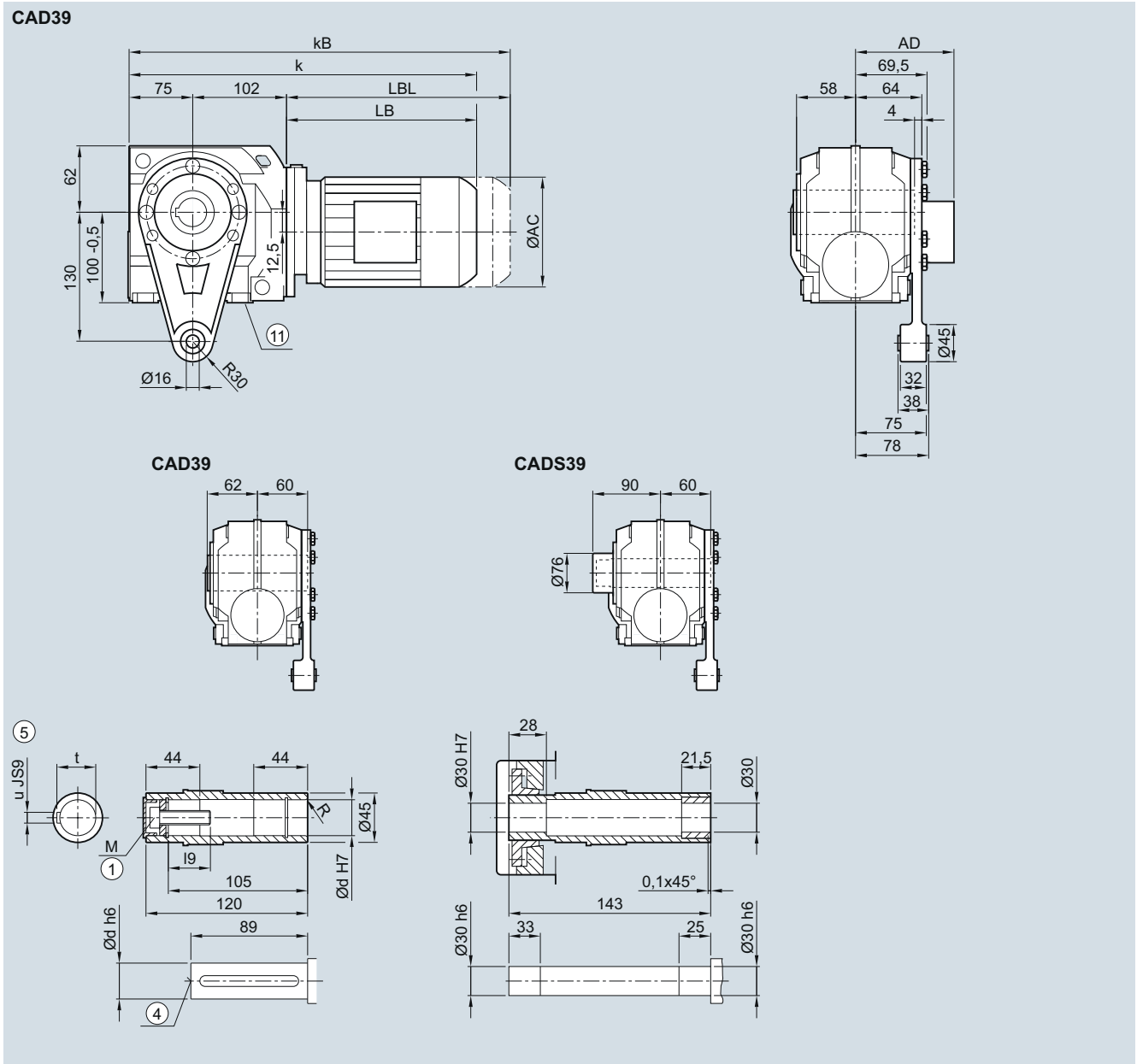
Shaft	d	I9	M	R	t	u
	25	32.6	M10	1.6	28.3	8
	30	32.6	M10	3.0	33.3	8

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	403.0	422.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	458.0	477.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑩ Use bores only for foot-mounted design
 1) AD depends on the motor options, for other dimensions see page 8/36.

CAD.39 gearbox in a shaft-mounted design

CAD030, CADS030



Shaft	d	I9	M	R	t	u
	25	32.6	M10	1.6	28.3	8
	30	32.6	M10	3.0	33.3	8

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5
k	371.0	403.0	422.0	467.0	502.0	528.5	568.5	585.0	620.0
kB	415.5	458.0	477.0	527.0	562.0	598.5	638.5	663.5	698.5
LB	194.0	226.0	245.0	290.0	325.0	351.5	391.5	408.0	443.0
LBL	238.5	281.0	300.0	350.0	385.0	421.5	461.5	486.5	521.5

① ISO 4014

④ DIN 332

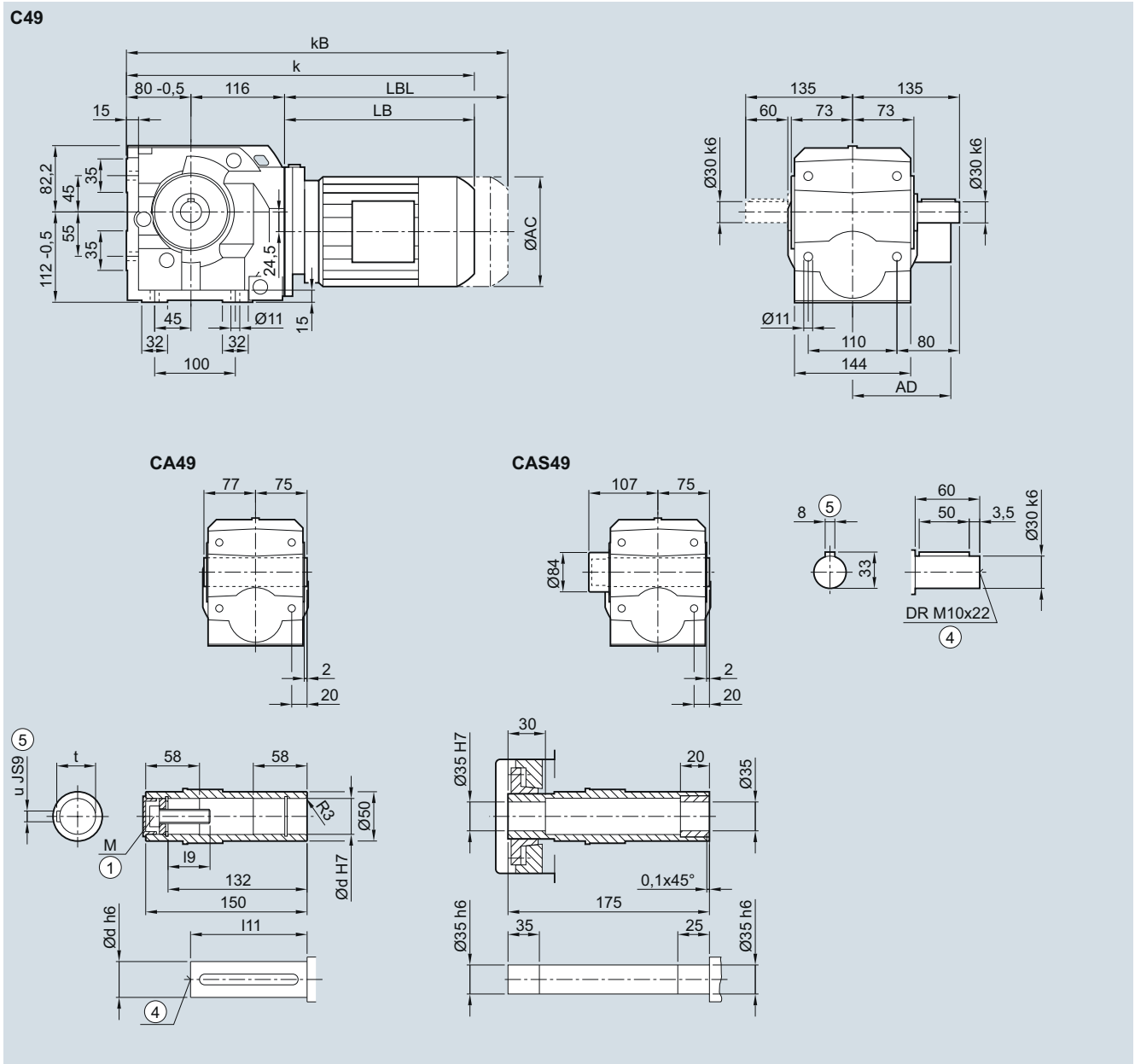
⑤ Feather key/keyway DIN 6885-1 ⑩ Use bores only for foot-mounted design

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C..49 gearbox in a foot-mounted design

C030, CA030, CAS030

6



Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	412.5	431.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	467.5	486.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	216.5	235.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	271.5	290.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

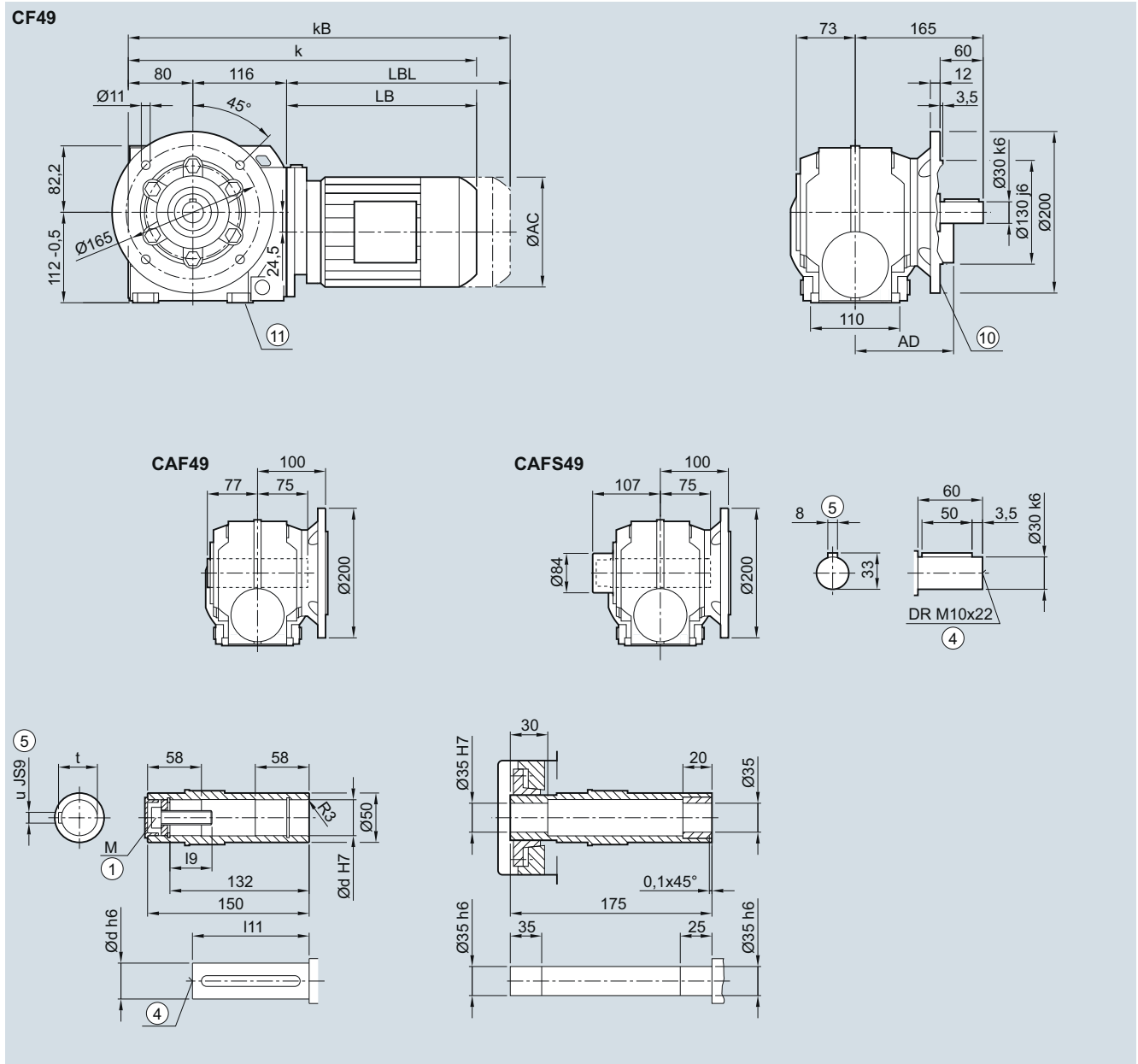
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

1) AD depends on the motor options, for other dimensions see page 8/36.

C.F.49 gearbox in a flange-mounted design

CF030, CAF030, CAFS030



Shaft	d	l9	l11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	412.5	431.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
k _B	425.0	467.5	486.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	216.5	235.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	271.5	290.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour see page 6/65

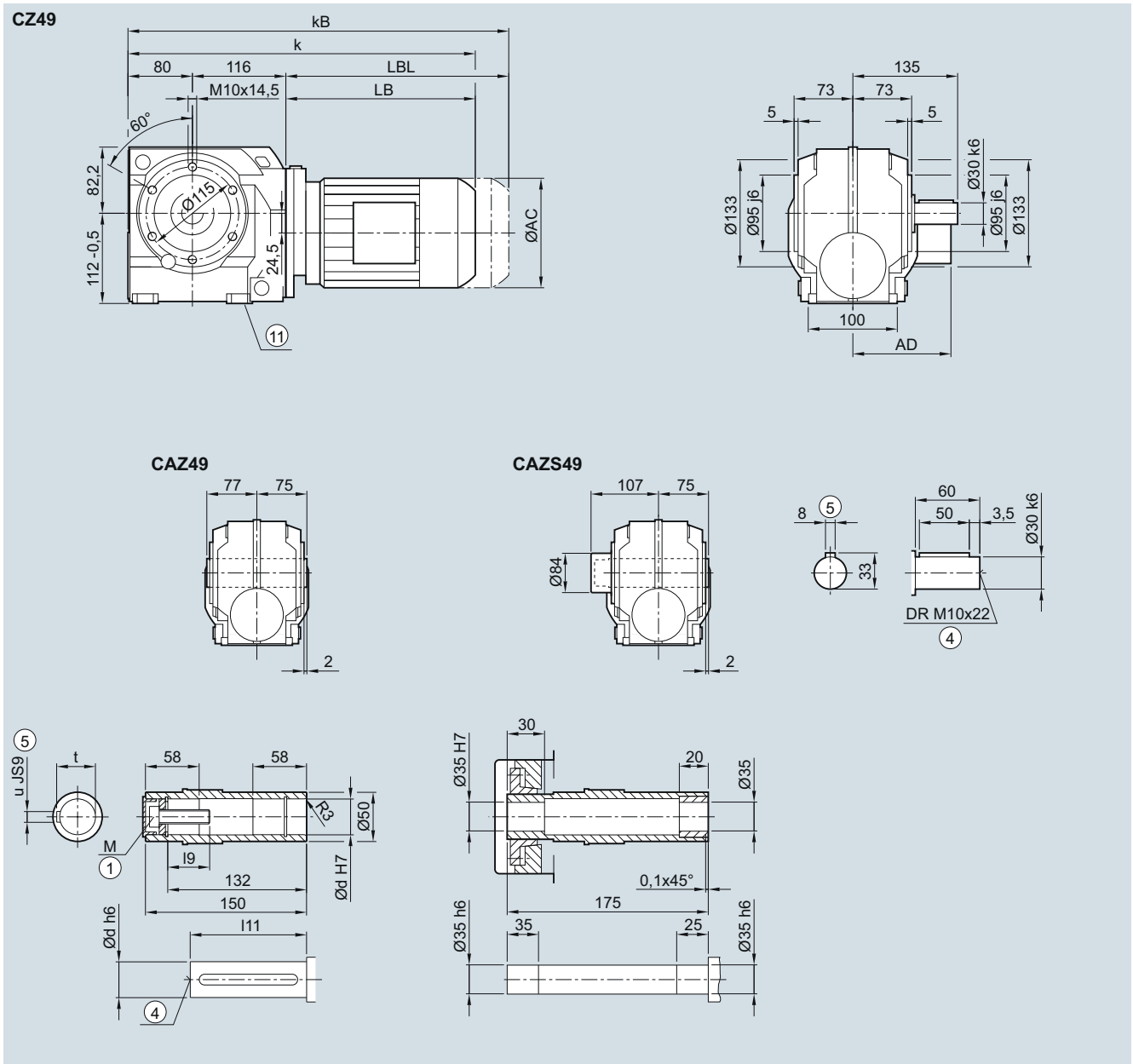
⑪ Use bores only for foot-mounted design

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C.Z.49 gearbox in a housing flange design

CZ030, CAZ030, CAZS030

6



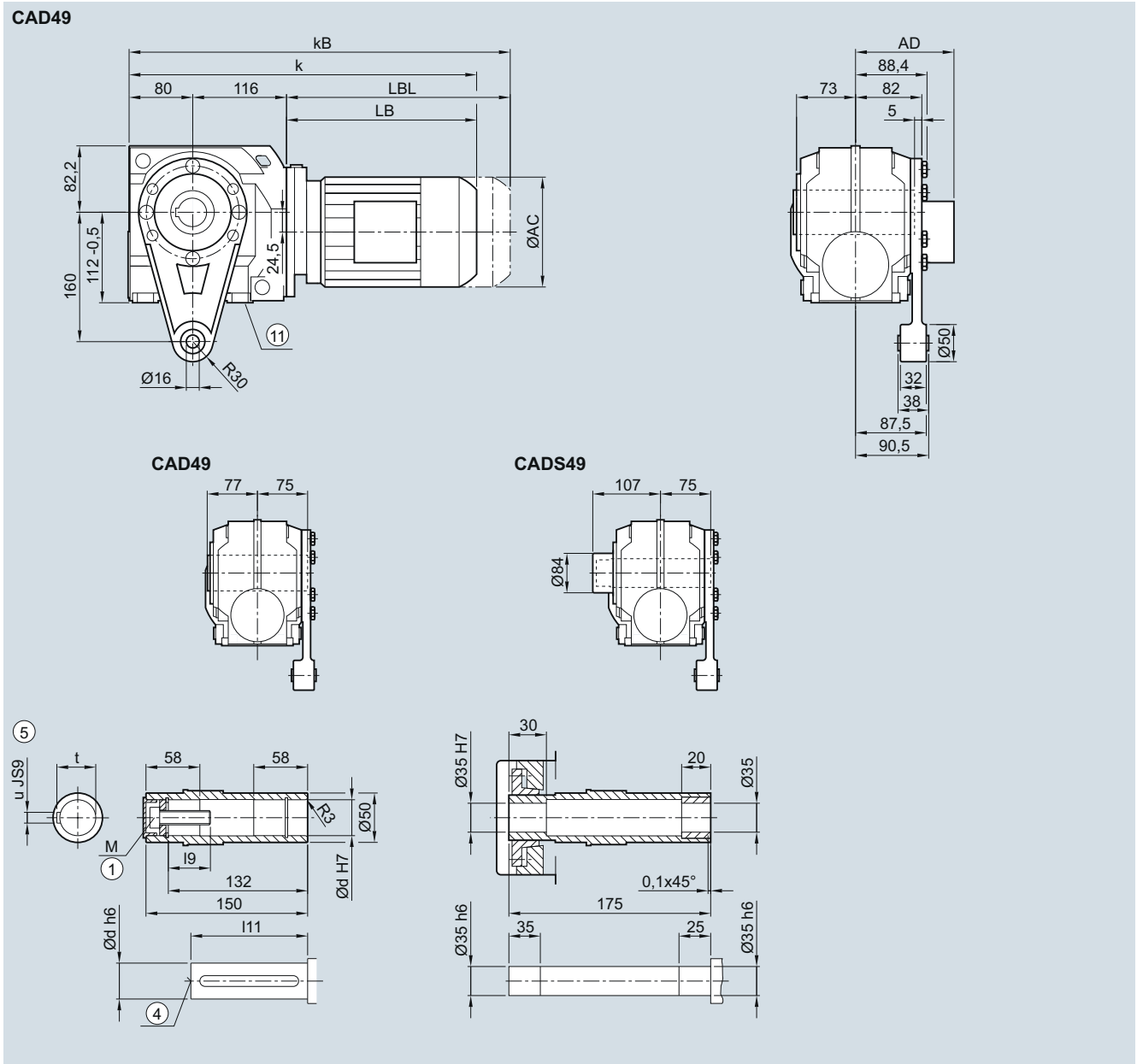
Shaft	d	I9	I11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	412.5	431.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	467.5	486.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	216.5	235.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	271.5	290.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑥ Use bores only for foot-mounted design
 1) AD depends on the motor options, for other dimensions see page 8/36.

CAD.49 gearbox in a shaft-mounted design

CAD030, CADS030



Shaft	d	I9	I11	M	t	u
	30	32.6	114	M10	33.3	8
	35	42	116	M12	38.3	10

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5
k	380.5	412.5	431.5	476.5	511.5	538.0	578.0	594.5	629.5	604.5	639.0
kB	425.0	467.5	486.5	536.5	571.5	608.0	648.0	673.0	708.0	677.5	712.0
LB	184.5	216.5	235.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443.0
LBL	229.0	271.5	290.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516.0

① ISO 4014

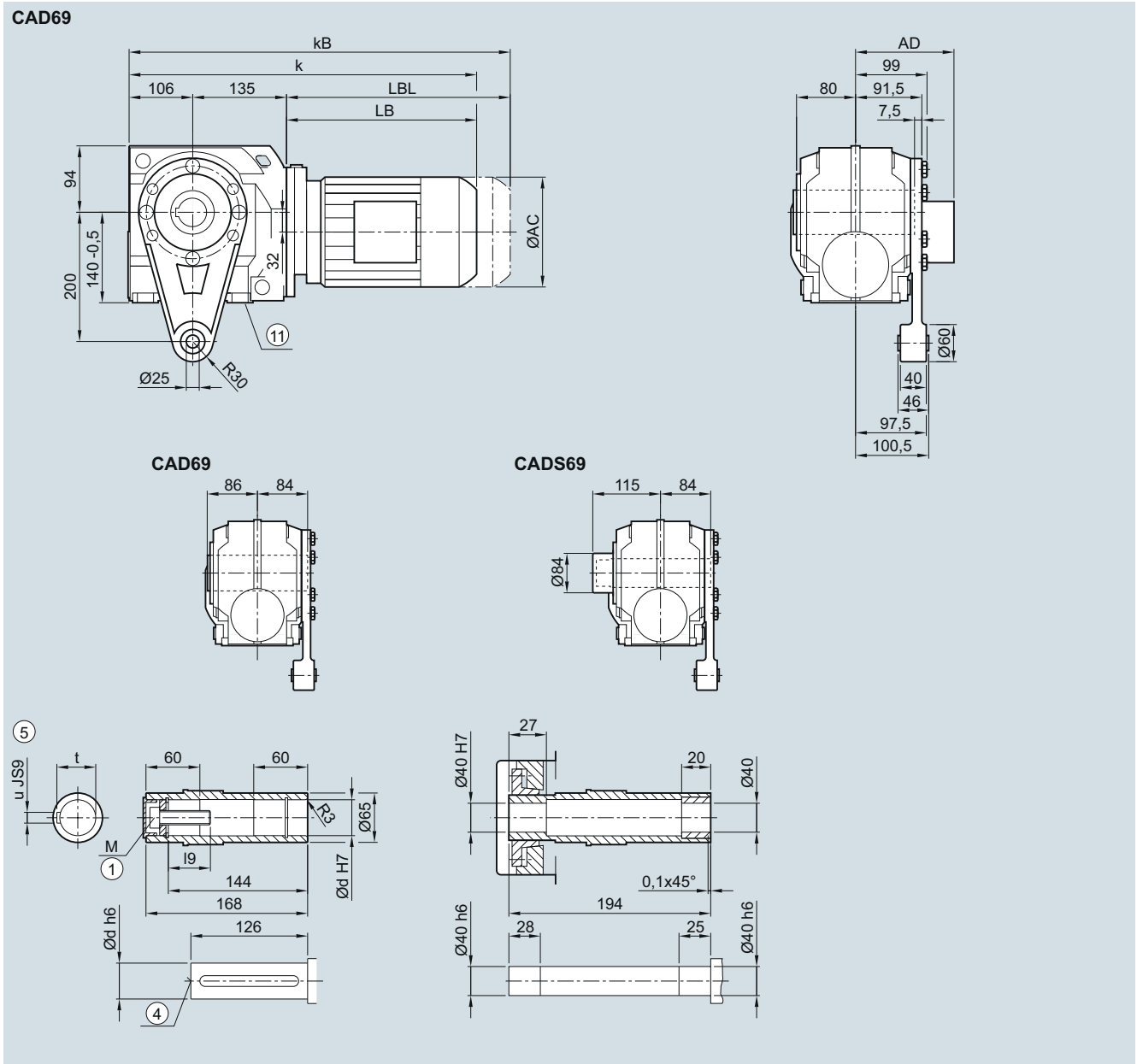
④ DIN 332

⑤ Feather key/keyway DIN 6885-1 ⑩ Use bores only for foot-mounted design

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

CAD.69 gearbox in a shaft-mounted design

CAD030, CADS030



Shaft	d	i9	M	t	u
	40	47.75	M16	43.3	12
	45	48.75	M16	48.8	14

Motor	LA 63	71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	117.8	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD ¹⁾	124.0	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	425.5	457.5	476.5	521.5	556.5	583.0	623.0	639.5	674.5	649.5	684	702.5	752.5
kB	470.0	512.5	531.5	581.5	616.5	653.0	693.0	718.0	753.0	722.5	757	807.0	857.0
LB	184.5	216.5	235.5	280.5	315.5	342.0	382.0	398.5	433.5	408.5	443	461.5	511.5
LBL	229.0	271.5	290.5	340.5	375.5	412.0	452.0	477.0	512.0	481.5	516	566.0	616.0

① ISO 4014

④ DIN 332

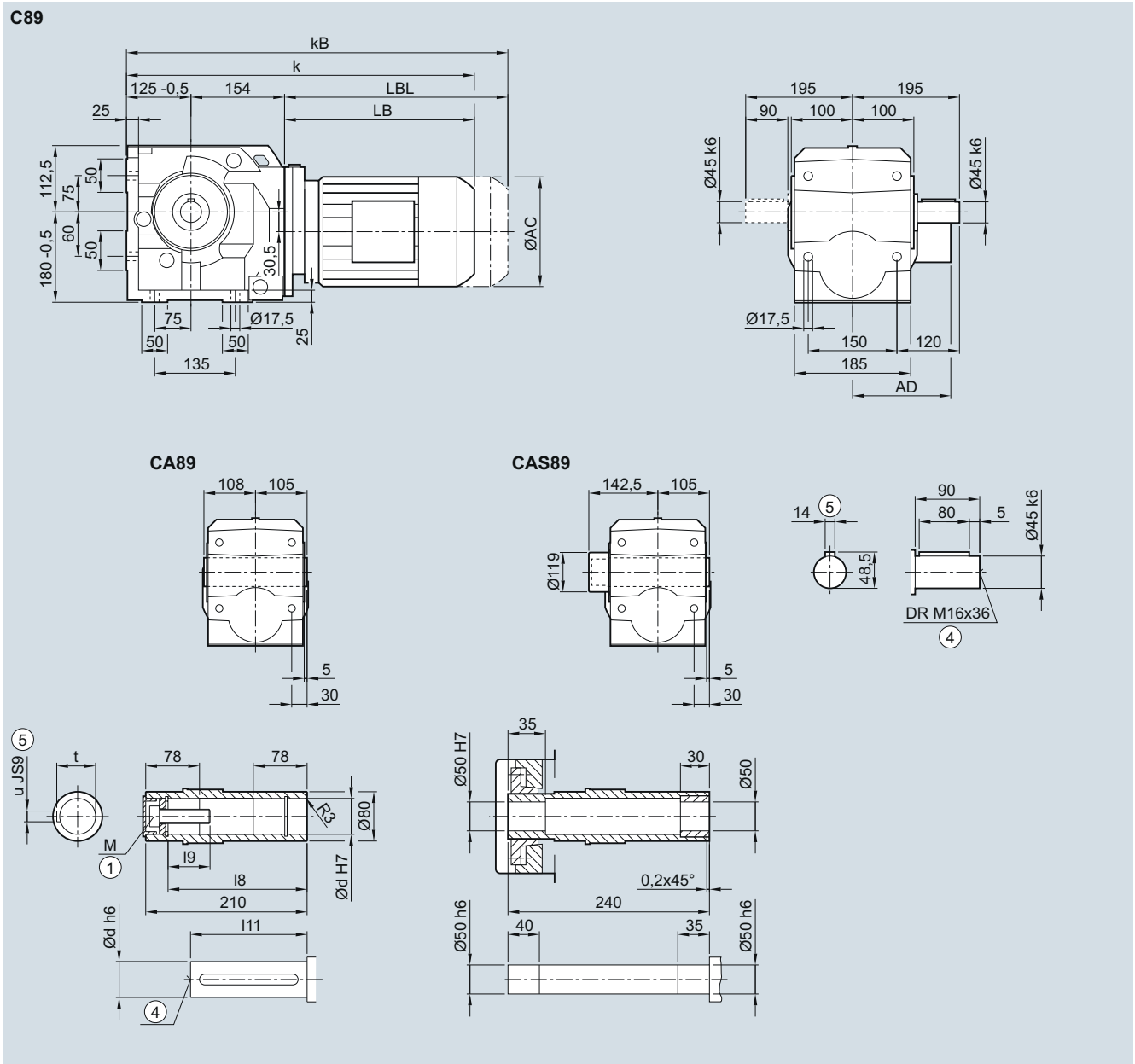
⑤ Feather key/keyway DIN 6885-1 ⑩ Use bores only for foot-mounted design

1) AD depends on the motor options, for other dimensions see page 8/36.

C..89 gearbox in a foot-mounted design

C030, CA030, CAS030

6



Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

Motor	LA 71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD ¹⁾	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

① ISO 4014

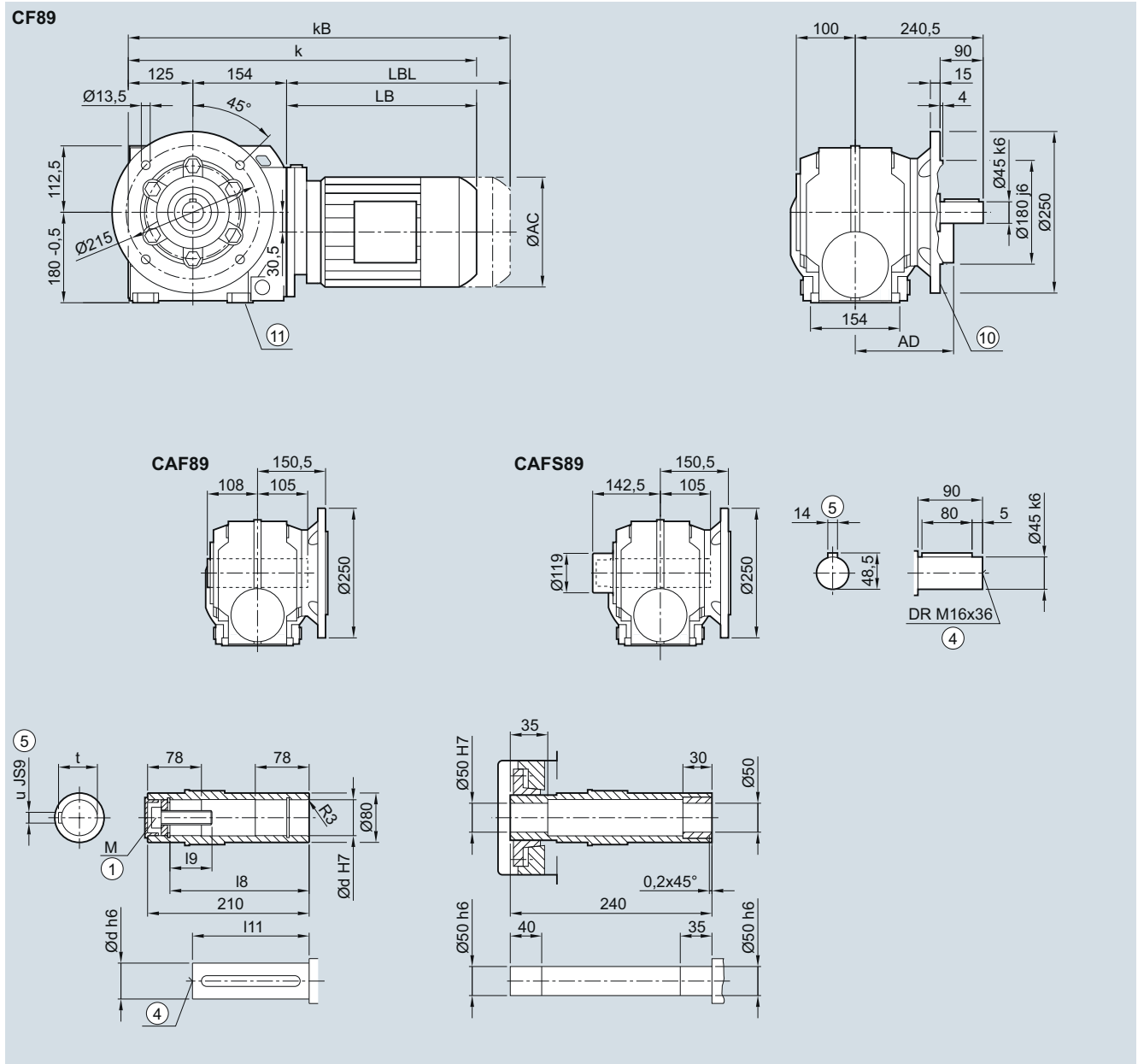
④ DIN 332

⑤ Feather key/keyway DIN 6885-1

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C.F.89 gearbox in a flange-mounted design

CF030, CAF030, CAFS030



Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

Motor	LA 71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD ¹⁾	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

① ISO 4014

④ DIN 332

⑤ Feather key/keyway DIN 6885-1

⑩ For inner contour see page 6/65

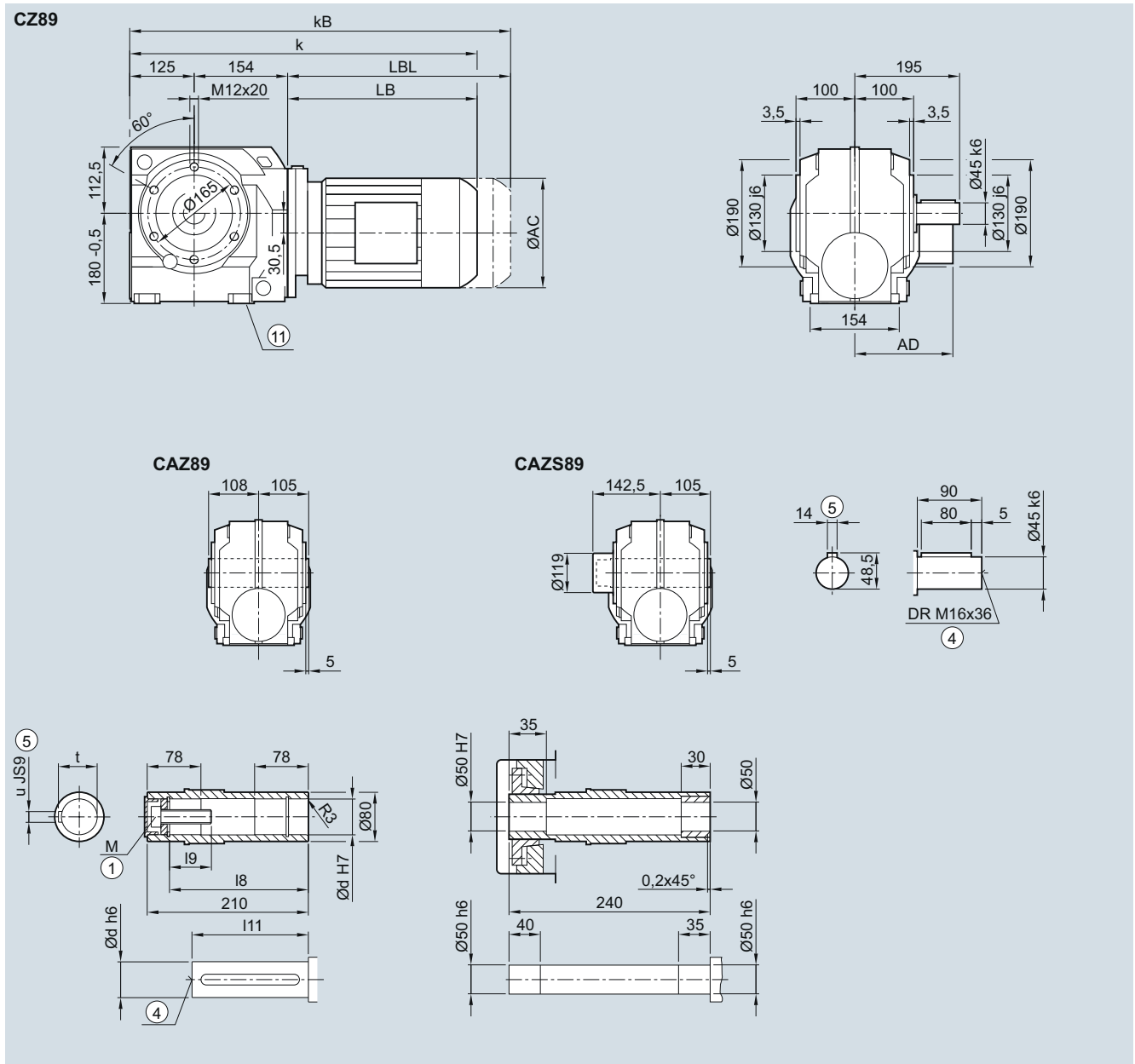
⑪ Use bores only for foot-mounted design

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

C.Z.89 gearbox in a housing flange design

CZ030, CAZ030, CAZS030

6



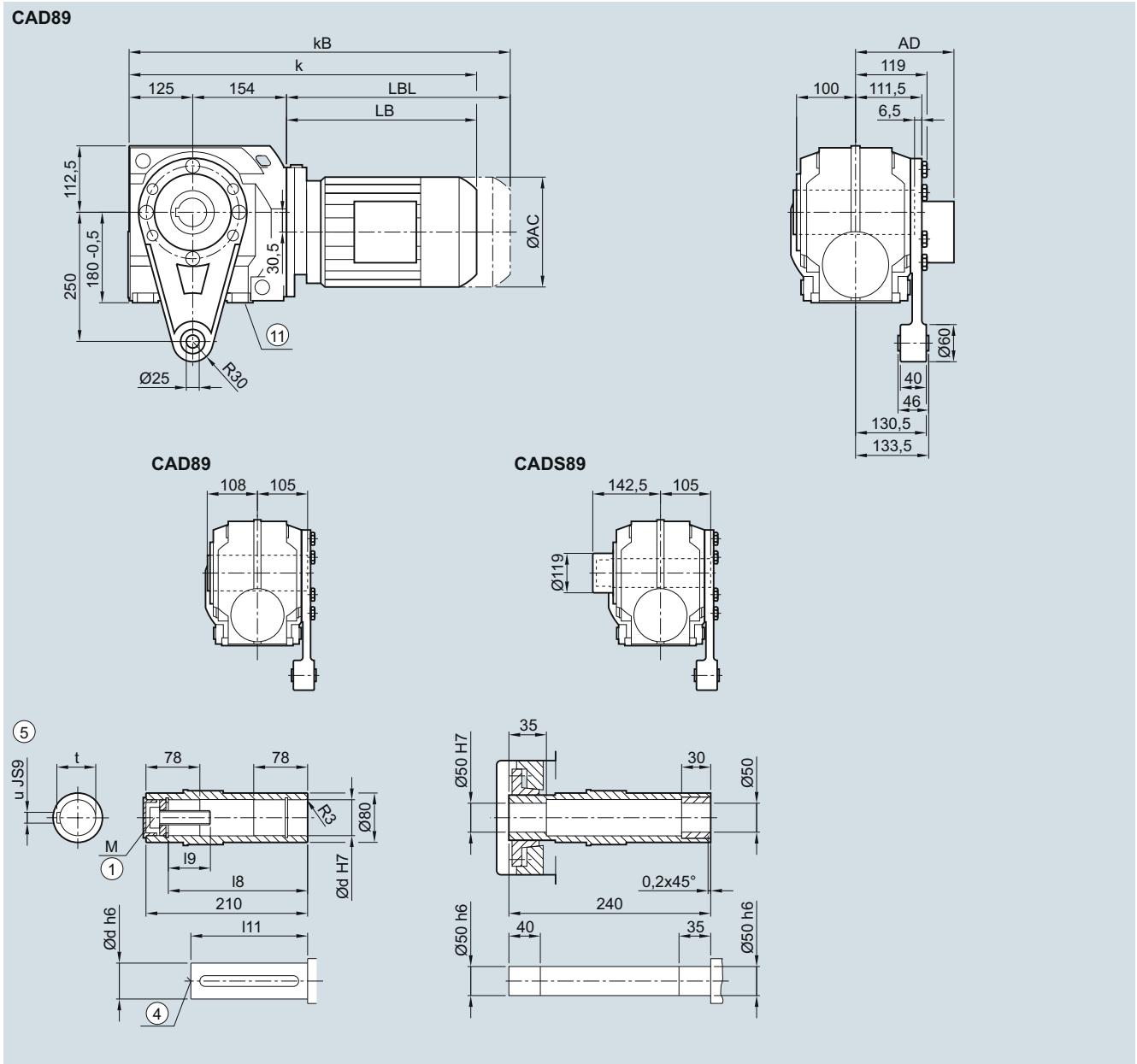
Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

Motor	LA 71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD ¹⁾	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
k _B	548.5	567.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

① ISO 4014 ④ DIN 332 ⑤ Feather key/keyway DIN 6885-1 ⑥ Use bores only for foot-mounted design
 1) AD depends on the motor options, for other dimensions see page 8/36.

CAD.89 gearbox in a shaft-mounted design

CAD030, CADS030



Shaft	d	l8	l9	l11	M	t	u
	50	183	44.5	165	M16	53.8	14
	60	180	57	158	M20	64.4	18

Motor	LA 71	71Z	LE 80	80Z	90	90Z	100	100Z	112	112Z	132	132Z
AC	138.8	138.8	156.3	156.3	173.8	173.8	198.0	198.0	222.0	222.0	264.0	264.0
AD ¹⁾	134.0	134.0	149.2	149.2	154.2	154.2	170.5	170.5	181.5	181.5	207.0	207.0
k	493.5	512.5	553.5	588.5	615.0	655.0	671.5	706.5	681.5	706.5	734.5	784.5
kB	548.5	567.5	613.5	648.5	685.0	725.0	750.0	785.0	754.5	779.5	839.0	889.0
LB	214.5	233.5	274.5	309.5	336.0	376.0	392.5	427.5	402.5	427.5	455.5	505.5
LBL	269.5	288.5	334.5	369.5	406.0	446.0	471.0	506.0	475.5	500.5	560.0	610.0

⑤ ISO 4014

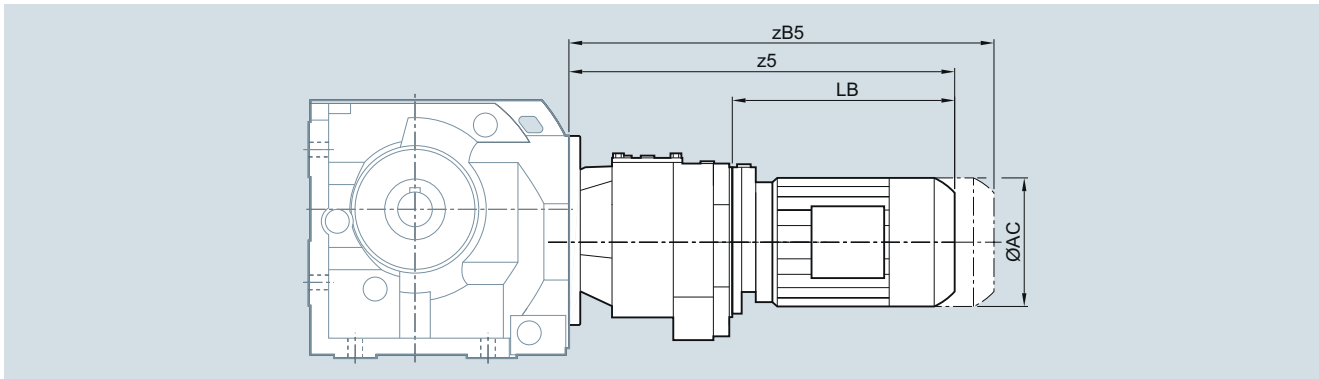
④ DIN 332

⑥ Feather key/keyway DIN 6885-1

⑩ Use bores only for foot-mounted design

¹⁾ AD depends on the motor options, for other dimensions see page 8/36.

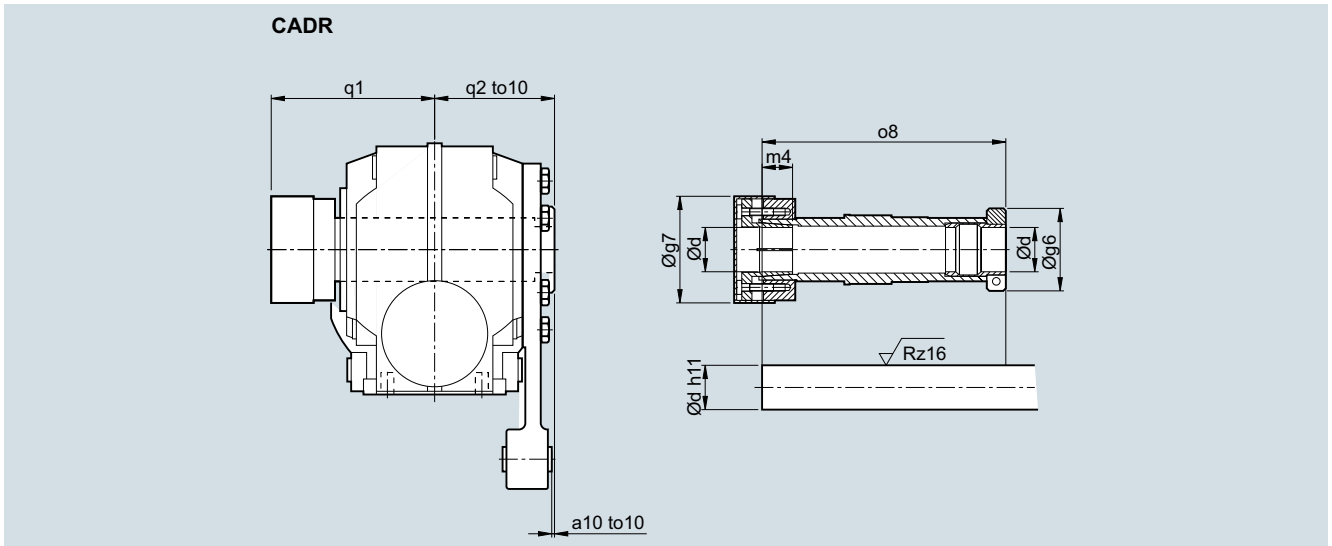
Helical worm tandem geared motors



6

Gearbox	Motor	AC	z5	zB5	LB
C.29-D/Z19	LA63	117.8	331.0	375.5	160.5
C.39-D/Z19	LA63	117.8	331.0	375.5	160.5
	LA71	138.8	363.0	418.0	184.5
	LE71Z	138.8	382.0	437.0	203.5
C.49-D/Z19	LA63	117.8	322.0	366.5	160.5
	LA71	138.8	354.0	409.0	184.5
	LA71Z	138.8	373.0	428.0	203.5
	LE80	156.3	410.0	470.0	240.0
	LE80Z	156.3	445.0	505.0	275.0
C.69-D/Z19	LA63	117.8	322.0	366.5	160.5
	LA71	138.8	354.0	409.0	184.5
	LA71Z	138.8	373.0	428.0	203.5
	LE80	156.3	410.0	470.0	240.0
	LE80Z	156.3	445.0	505.0	275.0
C.89-D/Z39	LA63	117.8	373.5	418.0	194.0
	LA71	138.8	405.5	460.5	226.0
	LA71Z	138.8	424.5	479.5	245.0
	LE80	156.3	469.5	529.5	290.0
	LE80Z	156.3	504.5	564.5	325.0
	LE90	173.8	531.0	601.0	351.5
	LE90Z	173.8	571.0	641.0	391.5

SIMOLOC assembly system



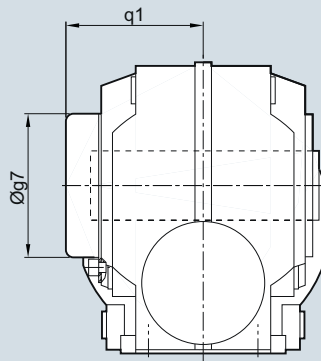
Note mounting tolerance to10 when positioning the torque arm.

d	g6	g7	m4	o8	q1	q2	a10	to10
CADR.29								
20	58.5	56	18.5	151.0	102	75	11	+2.1
1"								+0.6
0.75"								
CADR39								
30	62.0	76	22	160.5	106	75	39	+2.2
25								+0.7
1.25"								
1.1875"								
1"								
CADR49								
35	65.0	84	24	192.0	124	90	35	+2.6
30								+0.8
1.4375"								
1.375"								
1.25"								
1.1875"								
CADR69								
40	79.5	94	30	217.5	138	102	39	+2.5
35								+0.7
1.5"								
1.4375"								
1.375"								
1.625"								
CADR89								
50	89.0	114	32	264.0	171	124	45	+3.4
40								+1.5
2"								
1.9375"								
1.75"								
1.625"								

Protection covers

Protection cover for hollow shaft

CAF, CAZ, CAD

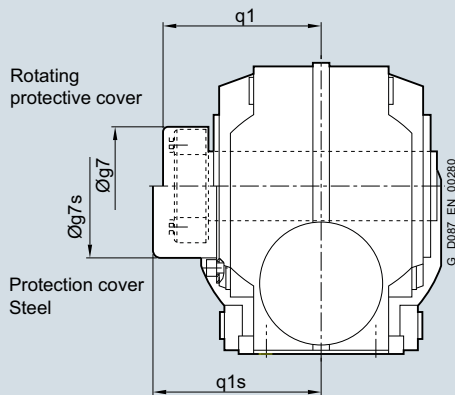


Gearbox type	CA.29	CA.39	CA.49	CA.69	CA.89
Protection cover					
g7	67.0	82.5	80.0	99.0	137.0
q1	76.0	73.0	99.0	95.5	124.5

6

Protection covers for hollow shaft with shrink disk

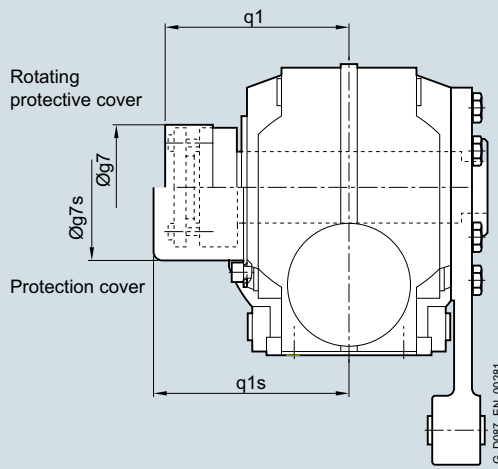
CAS, CAFS, CAZS, CADS



Gearbox type	CA.S29	CA.S39	CA.S49	CA.S69	CA.S89
Rotating protective cover with shrink disk version					
g7	55.0	76.0	84.0	84.0	94.0
q1	85.0	89.5	107.0	115.0	125.5
Protection cover					
g7s	58.0	82.5	86.0	99.0	137.0
q1s	91.0	109.0	122.0	126.5	176.5

Protection covers for hollow shaft with SIMOLOC assembly system

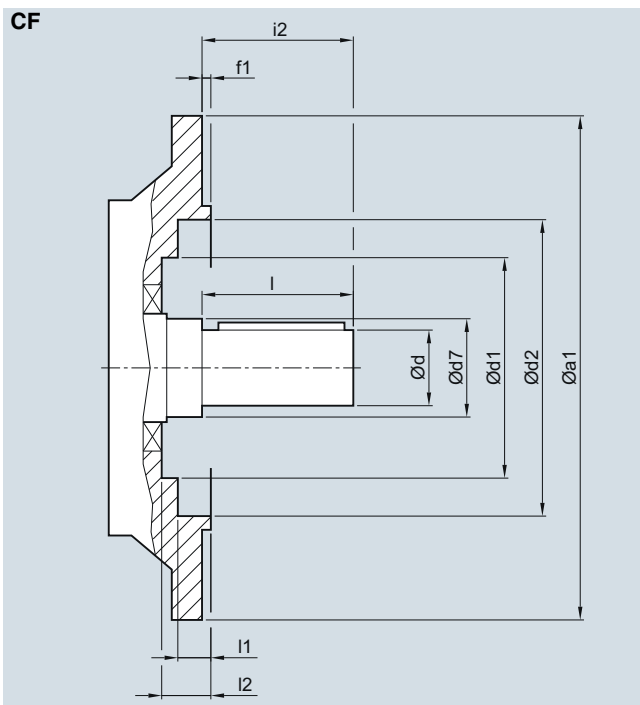
CADR



Gearbox type	CADR29	CADR39	CADR49	CADR69	CADR89
Rotating protective cover					
g7	56.0	76.0	84.0	94.0	114.0
q1	101.5	106.0	124.0	144.0	171.0
Protection cover					
g7s	58.0	82.5	86.0	99	137.0
q1s	102.0	109.0	126.0	145.5	176.5

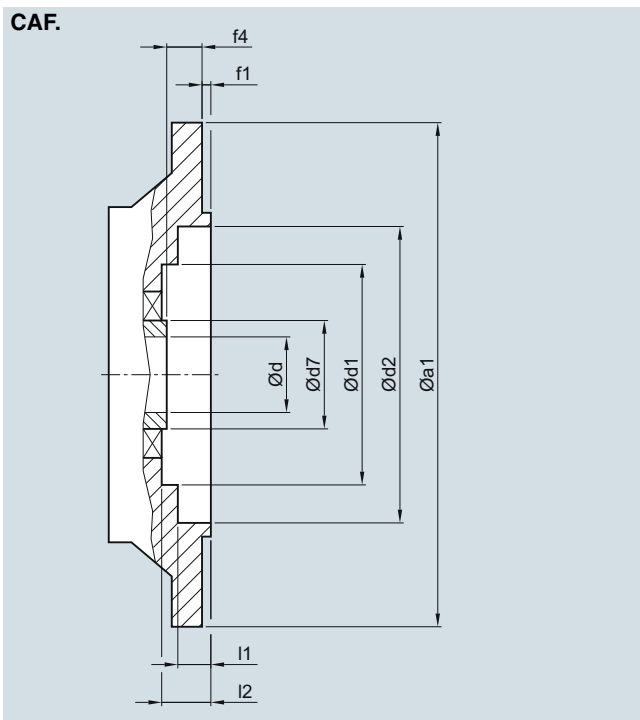
Inner contour of the flange design

Notes regarding the design of the customer's interface for the solid shaft design



Gearbox type	a1	d	d7	d1	d2	f1	i2	l	l1	l2
CF29	120	20	40	-	70	3.0	40	40	24.0	-
	160			70	101	3.5			8.5	24.5
CF39	160	25	30	-	100	3.5	50	50	5.0	-
CF49	200	30	35	-	118	3.5	60	60	5.5	-
CF69	200	35	45	105	120	4.0	70	70	4.5	48.0
CF89	250	45	70	134	165	4.0	90	90	6.5	53.0

Notes regarding the design of the customer's interface for the hollow shaft design



Gearbox type	a1	d	d7	d1	d2	f1	f4	l1	l2
CAF.29	120	20	35	-	70	3.0	23.0	24.0	-
	160			70	101	3.5		8.5	24.5
CAF.39	160	25/30	45	80	102	3.5	24.0	2.0	29.5
CAF.49	200	30/35	50	90	120	3.5	25.0	4.0	30.5
CAF.69	200	40/45	65	105	120	4.0	42.0	4.5	48.0
CAF.89	250	50/60	80	134	147	4	45.5	14.0	53.0