DKA – Serie

HKS Unternehmensgruppe

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Technical Information DKA 40

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

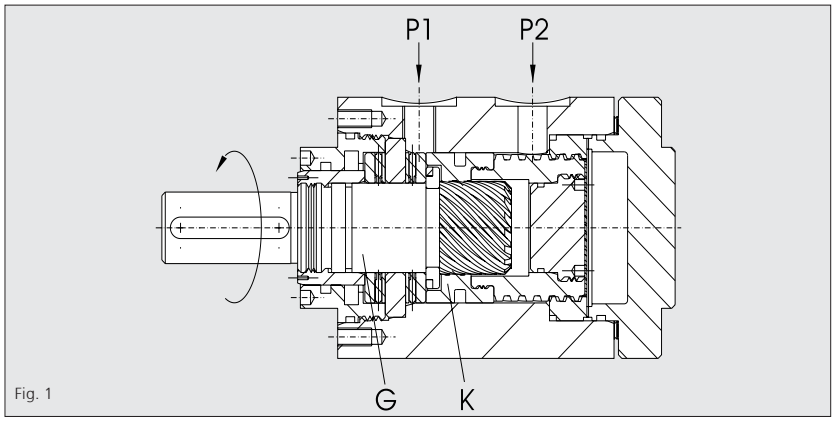

Fig. 1

Technical data Type DKA 40

Max. nominal torque at 100 bars		Nm	36
Nominal torque		Nm/bar	0,36
max. working pressure		bar	100
max. radial load		N	730
max. axial load		N	2400
Absorption volume	Angle 90°	dm^3	0,0082
	Angle 180°	dm^3	0,0164
	Angle 360°	dm^3	0,0328
Weight	Angle 90°	kg	2,1
	Angle 180°	kg	2,5
	Angle 360°	kg	3,3

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 40

Hydraulic rotary actuator with shortened installation space

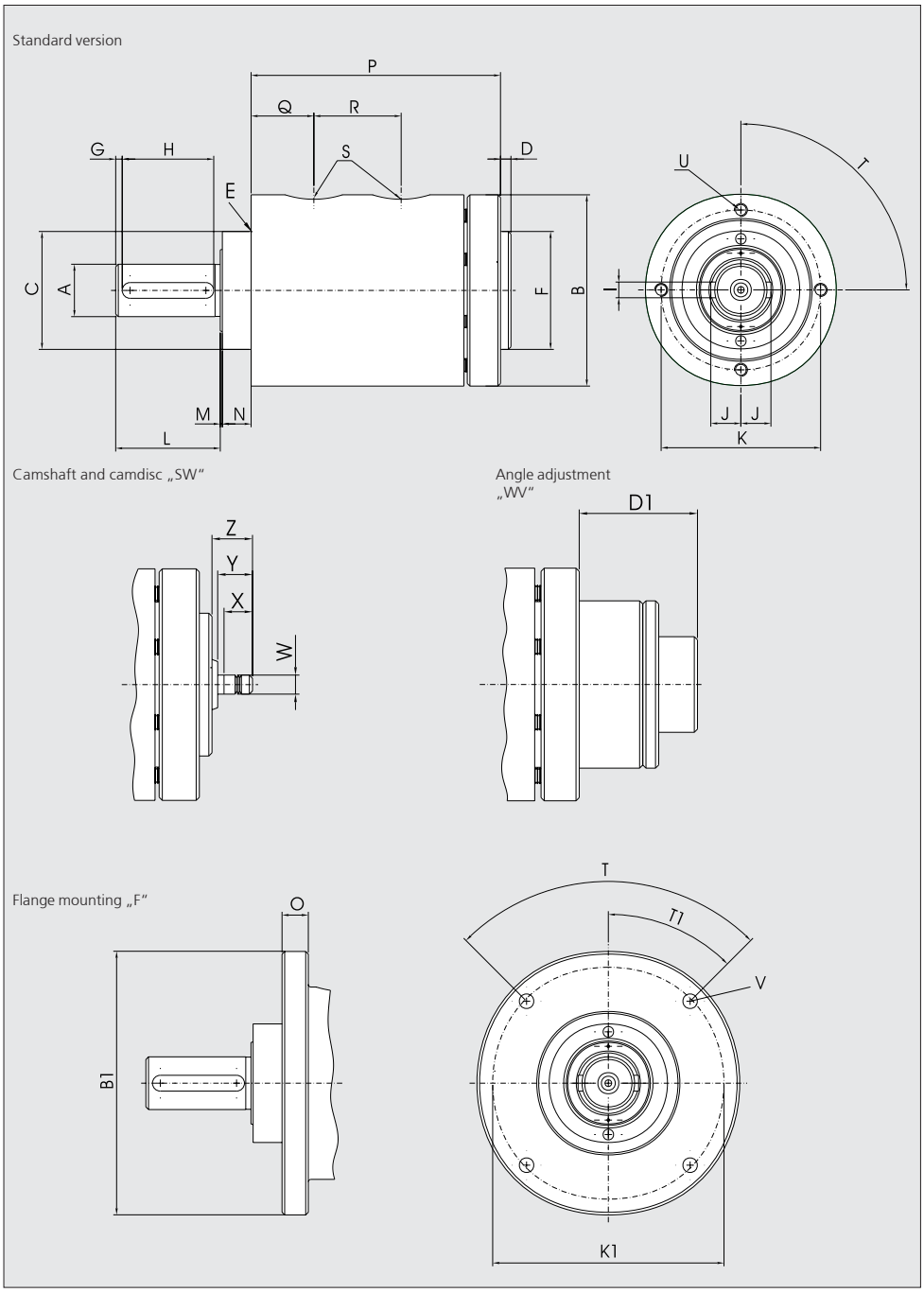

Table of dimensions

Typ		DKA 40
A k6	ø	15
B	ø	63
B1	ø	90
C h6	ø	35
D		4
D1	90°	20
	180°	26
	360°	38
E	(R)	1
F	ø	35
G		2,5
H		25
I		5
J		8,6
K	ø	51
K1	ø	78
L		30
M		0,8
N		9
O		10
P	90°	91
	180°	120
	360°	156
Q	90°	28
	180°	30
	360°	30
R	90°	30
	180°	32
	360°	50
S		G 1/8"
T		45°
T1		90°
U	ø	5,5
U Number		4
V		M 5
W		M 5
X		6,5
Y		11
Z		12

HKS Unternehmensgruppe

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Technical Information DKA 50

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

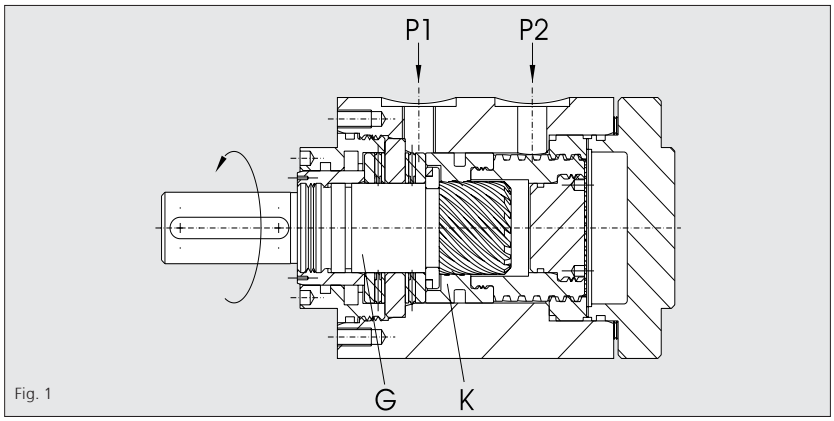

Fig. 1

Technical data Type DKA 50

Max. nominal torque at 100 bars		Nm	72
Nominal torque		Nm/bar	0,72
max. working pressure		bar	100
max. radial load		N	1080
max. axial load		N	6400
Absorption volume	Angle 90°	dm^3	0,0168
	Angle 180°	dm^3	0,0336
	Angle 360°	dm^3	0,0672
Weight	Angle 90°	kg	2,5
	Angle 180°	kg	3,2
	Angle 360°	kg	4,4

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 50

Hydraulic rotary actuator with shortened installation space

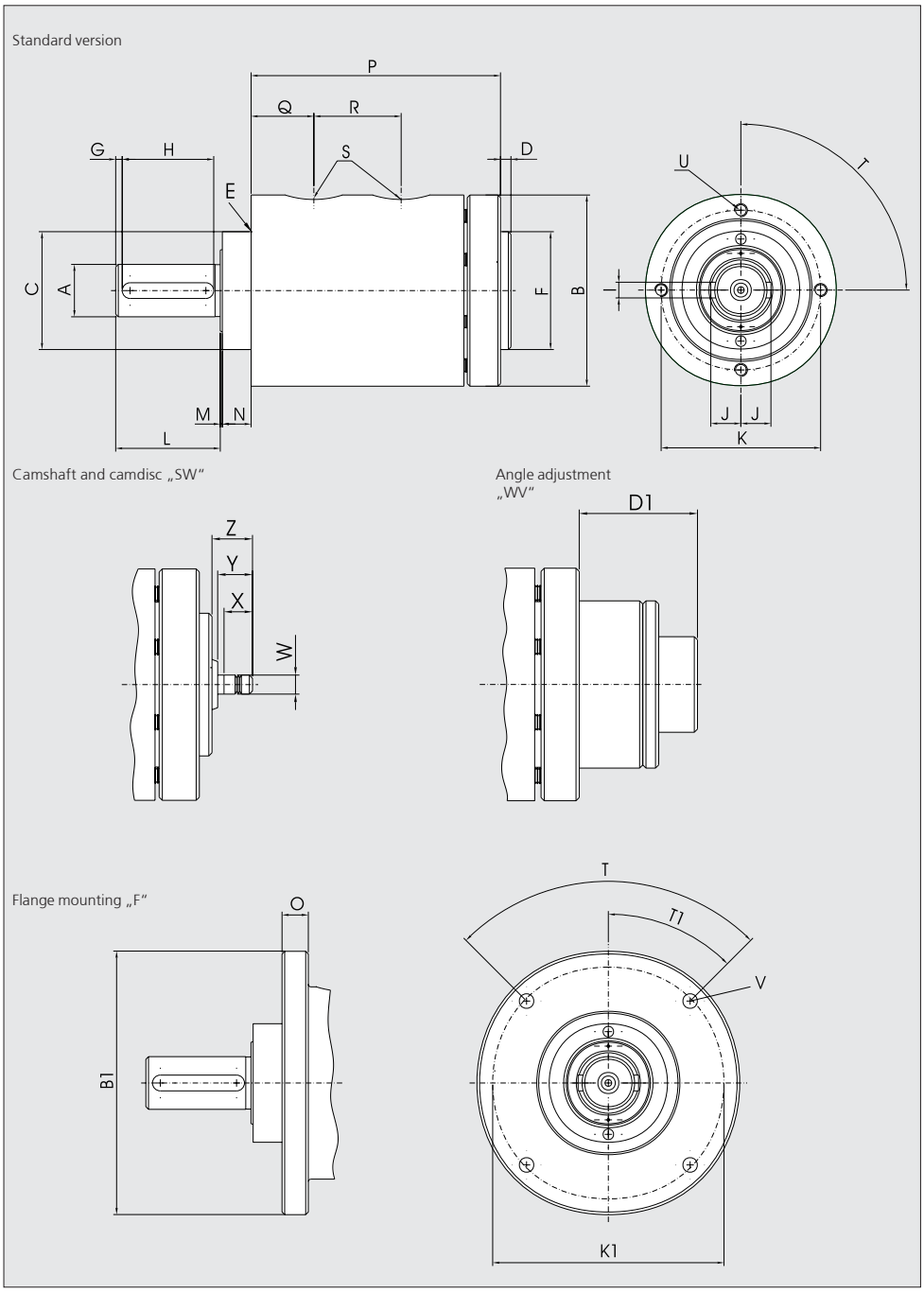

Table of dimensions

Typ		DKA 50
A k6	ø	20
B	ø	73
B1	ø	100
C h6	ø	45
D		4
D1	90°	37,6
	180°	36
	360°	52
E	(R)	1
F	ø	45
G		2,5
H		35
I		6
J		11,5
K	ø	61
K1	ø	88
L		40
M		0,8
N		11
O		10
P	90°	100
	180°	119
	360°	169
Q	90°	30
	180°	43,8
	360°	43,8
R	90°	27
	180°	32,6
	360°	66
S		G 1/8"
T		45°
T1		90°
U	ø	5,5
U Number		4
V		M 5
W		M 6
X		6,5
Y		11
Z		13

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Technical Information DKA 63

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

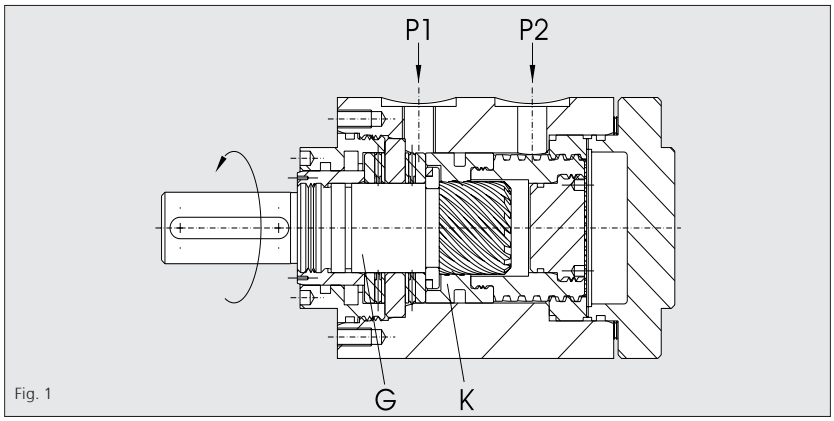

Fig. 1

Technical data Type DKA 63

Max. nominal torque at 100 bars		Nm	162
Nominal torque		Nm/bar	1,62
max. working pressure		bar	100
max. radial load		N	2083
max. axial load		N	8000
Absorption volume	Angle 90°	dm^3	0,033
	Angle 180°	dm^3	0,066
	Angle 360°	dm^3	0,132
Weight	Angle 90°	kg	3,8
	Angle 180°	kg	4,6
	Angle 360°	kg	6,2

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 63

Hydraulic rotary actuator with shortened installation space

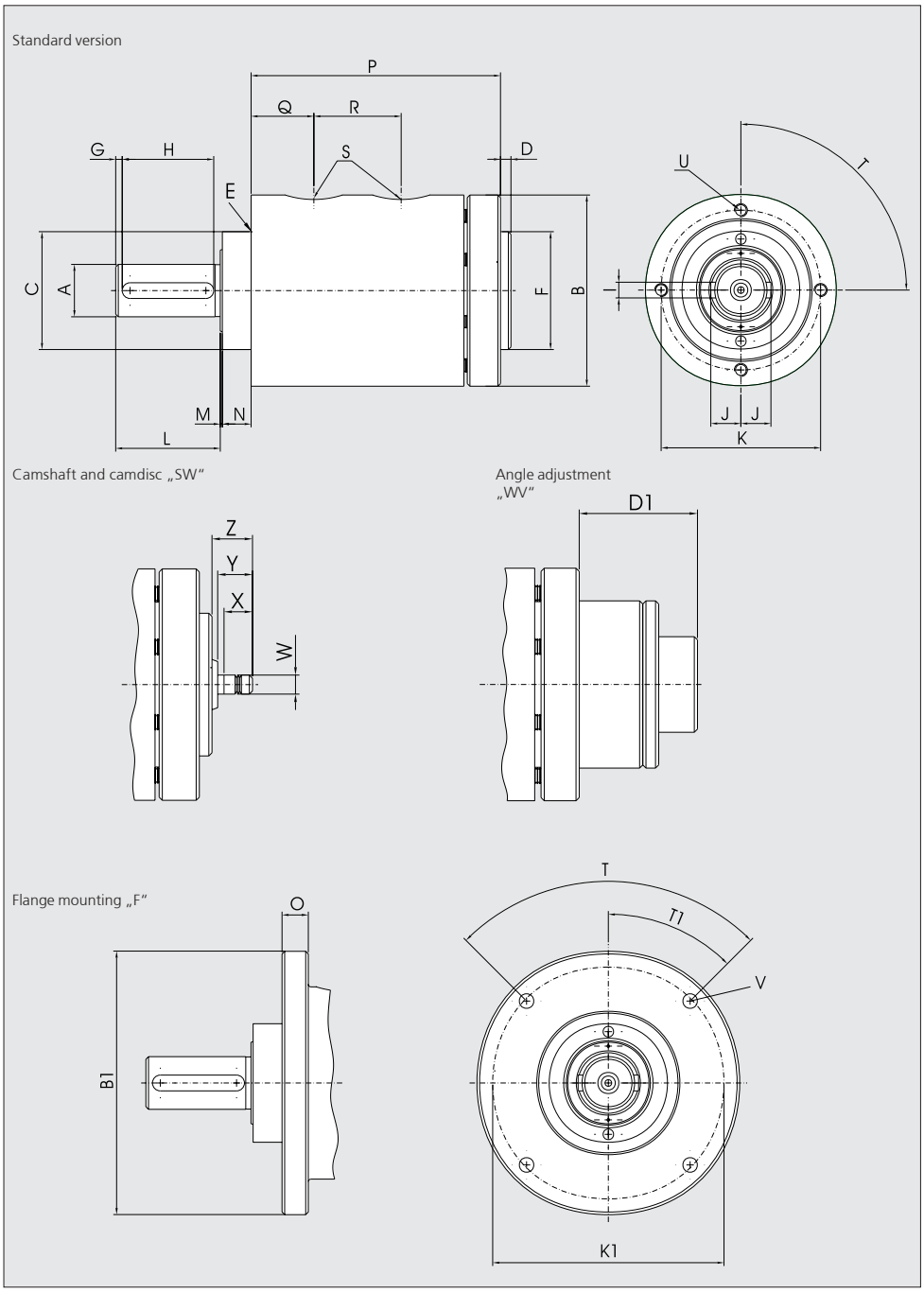

Table of dimensions

Typ		DKA 63
A k6	ø	25
B	ø	88
B1	ø	120
C h6	ø	50
D		4
D1	90°	29,5
	180°	39,5
	360°	59,5
E	(R)	1,5
F	ø	50
G		2,5
H		45
I		8
J		14,5
K	ø	75
K1	ø	106
L		50
M		0,8
N		17
O		12
P	90°	111
	180°	147
	360°	198
Q	90°	32,5
	180°	32,5
	360°	32,5
R	90°	34
	180°	48
	360°	75
S		G 1/8"
T		45°
T1		90°
U	ø	6,6
U Number		4
V		M 5
W		M 8
X		9
Y		16
Z		18

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Technical Information DKA 80

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

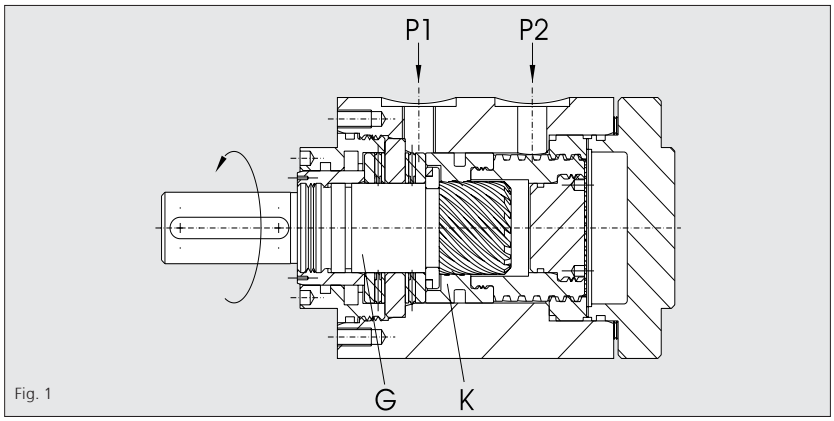

Fig. 1

Technical data Type DKA 80

Max. nominal torque at 100 bars		Nm	310
Nominal torque		Nm/bar	3,1
max. working pressure		bar	100
max. radial load		N	3054
max. axial load		N	10000
Absorption volume	Angle 90°	dm^3	0,066
	Angle 180°	dm^3	0,131
	Angle 360°	dm^3	0,262
Weight	Angle 90°	kg	7,5
	Angle 180°	kg	9
	Angle 360°	kg	12

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 80

Hydraulic rotary actuator with shortened installation space

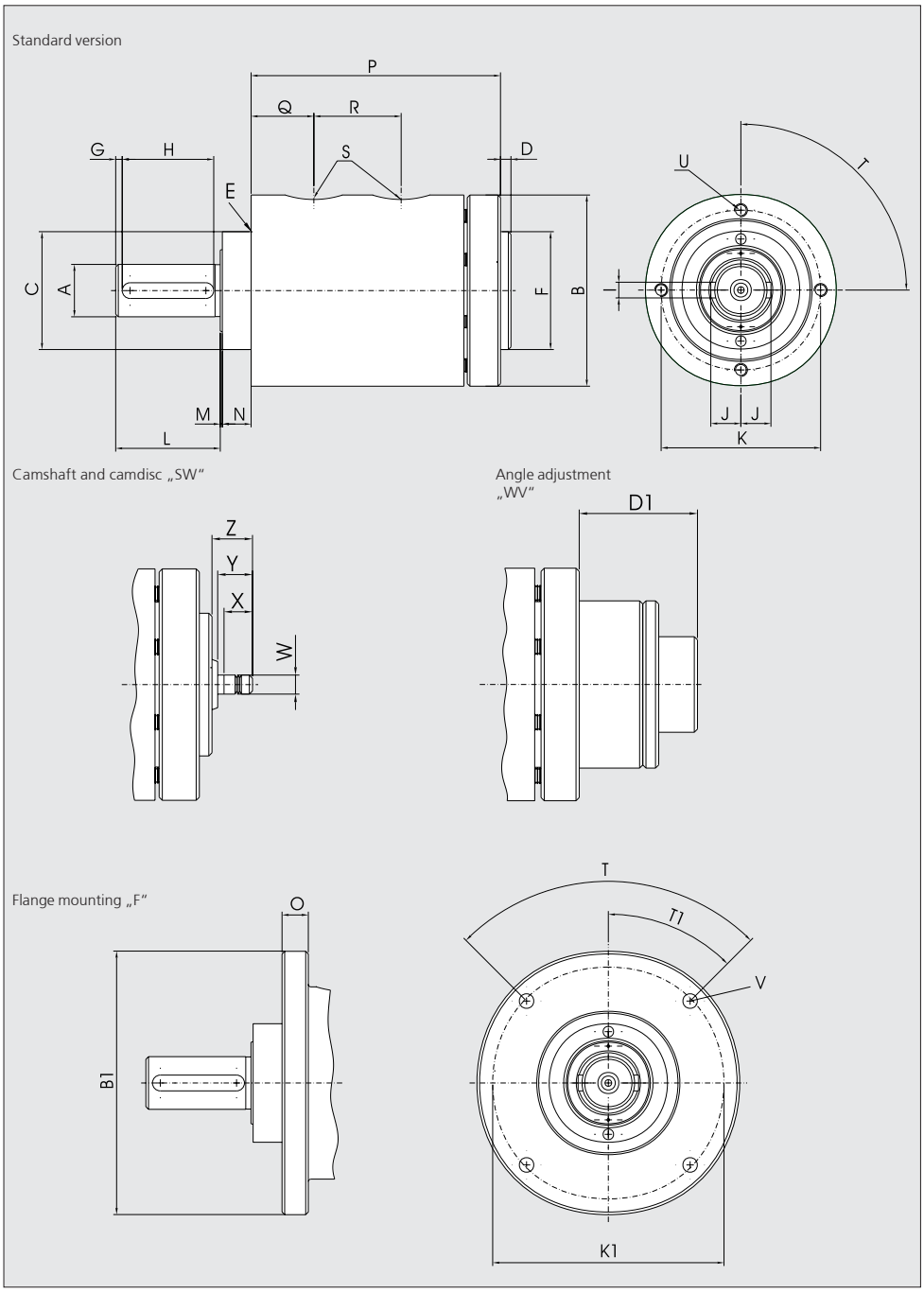

Table of dimensions

Typ		DKA 80
A k6	ø	35
B	ø	113
B1	ø	150
C h6	ø	70
D		5
D1	90°	42
	180°	56
	360°	84
E	(R)	2
F	ø	70
G		5
H		60
I		10
J		19,8
K	ø	96
K1	ø	132
L		70
M		0,8
N		17
O		16
P	90°	135
	180°	175
	360°	266
Q	90°	45
	180°	45
	360°	45
R	90°	28
	180°	56
	360°	98
S		G 1/4"
T		45°
T1		90°
U	ø	9
U Number		4
V		M 8
W		M 10
X		10,5
Y		19
Z		21

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Technical Information DKA 100

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

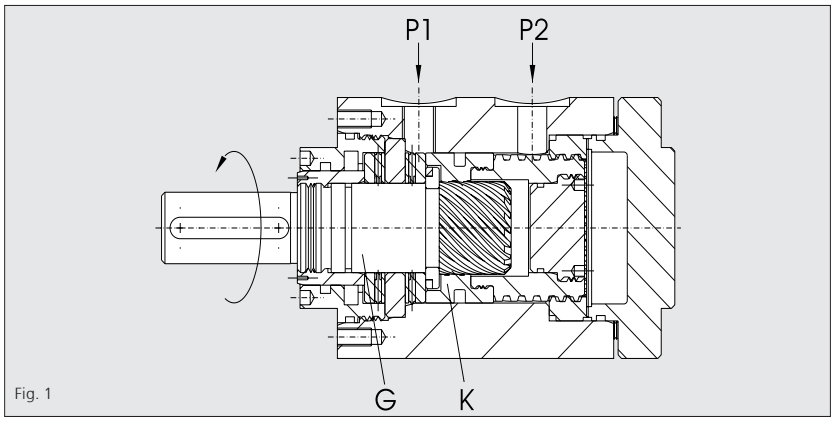

Fig. 1

Technical data Type DKA 100

Max. nominal torque at 100 bars		Nm	620
Nominal torque		Nm/bar	6,2
max. working pressure		bar	100
max. radial load		N	4725
max. axial load		N	14500
Absorption volume	Angle 90°	dm^3	0,131
	Angle 180°	dm^3	0,262
	Angle 360°	dm^3	0,521
Weight	Angle 90°	kg	13
	Angle 180°	kg	15,4
	Angle 360°	kg	22,2

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 100

Hydraulic rotary actuator with shortened installation space

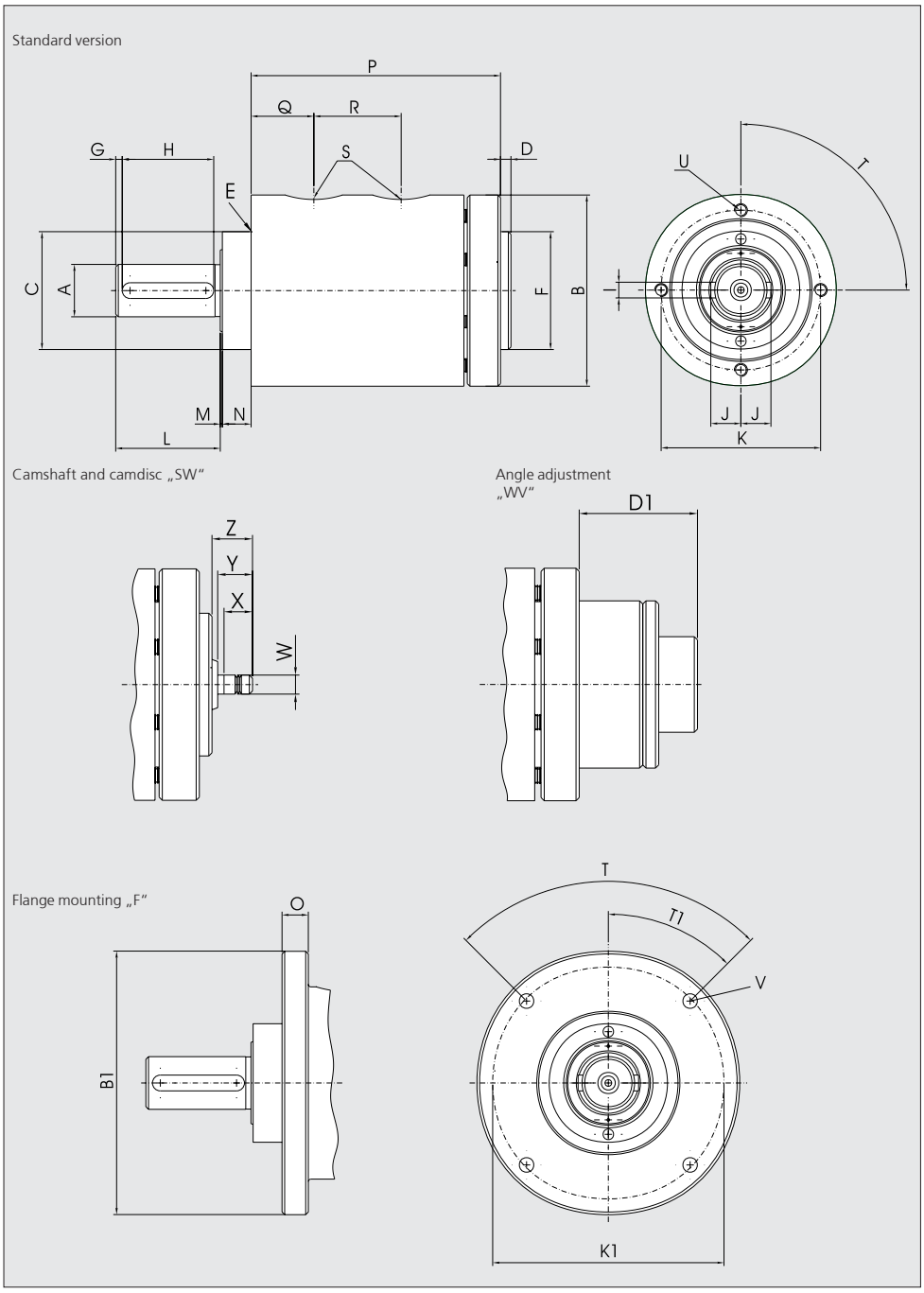

Table of dimensions

Typ		DKA 100
A k6	ø	40
B	ø	133
B1	ø	170
C h6	ø	80
D		6
D1	90°	51,5
	180°	67,5
	360°	99,5
E	(R)	2
F	ø	80
G		5
H		70
I		12
J		22,1
K	ø	116
K1	ø	152
L		80
M		2
N		21
O		16
P	90°	156
	180°	210
	360°	308
Q	90°	41
	180°	41
	360°	41
R	90°	40
	180°	67
	360°	118
S		G 1/4"
T		36°
T1		72°
U	ø	9
U Number		5
V		M 8
W		M 12
X		13
Y		23
Z		26

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Technical Information DKA 125

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

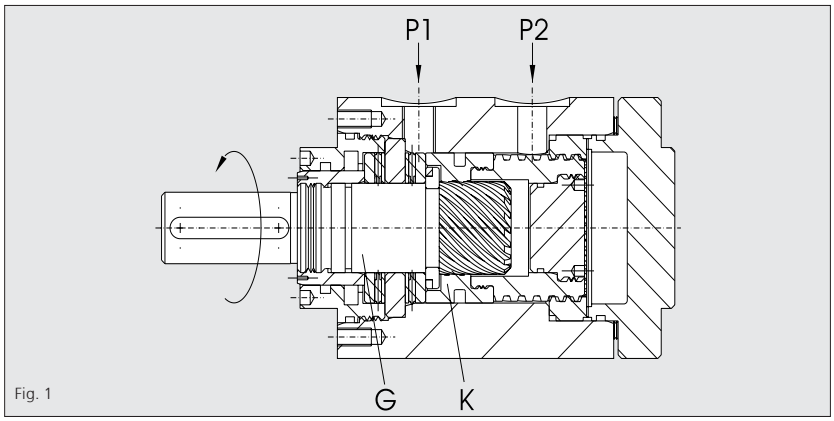

Fig. 1

Technical data Type DKA 125

Max. nominal torque at 100 bars		Nm	1334
Nominal torque		Nm/bar	13,34
max. working pressure		bar	100
max. radial load		N	7590
max. axial load		N	18000
Absorption volume	Angle 90°	dm^3	0,255
	Angle 180°	dm^3	0,509
	Angle 360°	dm^3	1,018
Weight	Angle 90°	kg	22
	Angle 180°	kg	27
	Angle 360°	kg	37

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 125

Hydraulic rotary actuator with shortened installation space

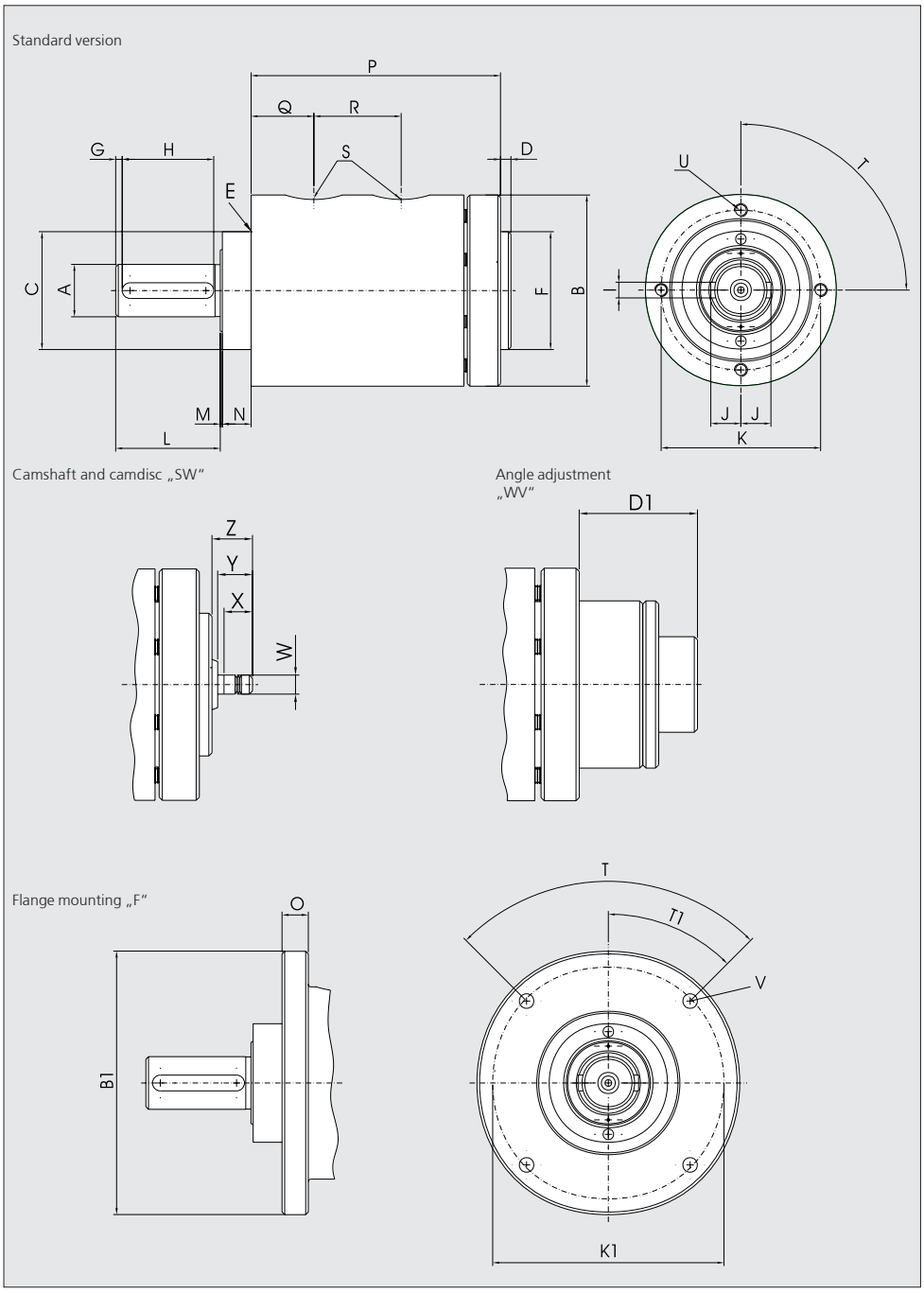

Table of dimensions

Typ		DKA 125
A k6	ø	50
B	ø	164
B1	ø	210
C h6	ø	100
D		8
D1	90°	63
	180°	83
	360°	123
E	(R)	2
F	ø	100
G		5
H		90
I		14
J		27
K	ø	144
K1	ø	188
L		100
M		2
N		27
O		20
P	90°	168
	180°	241
	360°	374
Q	90°	40
	180°	40
	360°	40
R	90°	52
	180°	84
	360°	147
S		G 3/8"
T		36°
T1		72°
U	ø	11
U Number		5
V		M 10
W		M 16
X		16
Y		29
Z		32

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Technical Information DKA 140

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

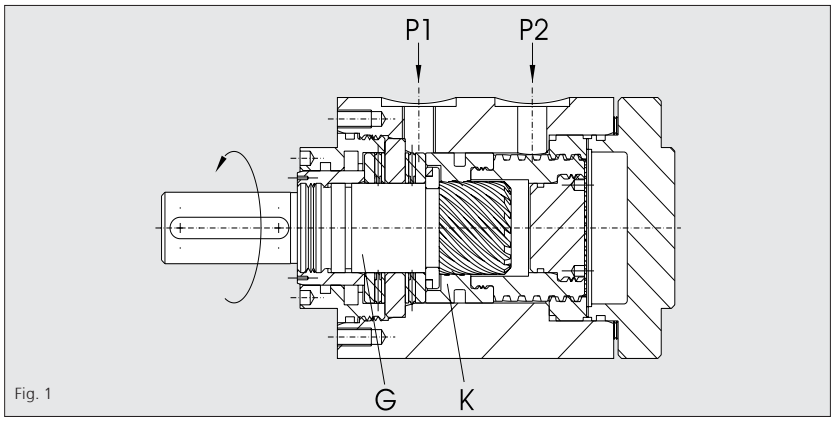

Fig. 1

Technical data Type DKA 140

Max. nominal torque at 100 bars		Nm	1820
Nominal torque		Nm/bar	18,2
max. working pressure		bar	100
max. radial load		N	8140
max. axial load		N	19400
Absorption volume	Angle 90°	dm^3	0,366
	Angle 180°	dm^3	0,732
	Angle 360°	dm^3	1,464
Weight	Angle 90°	kg	34
	Angle 180°	kg	42
	Angle 360°	kg	58

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 140

Hydraulic rotary actuator with shortened installation space

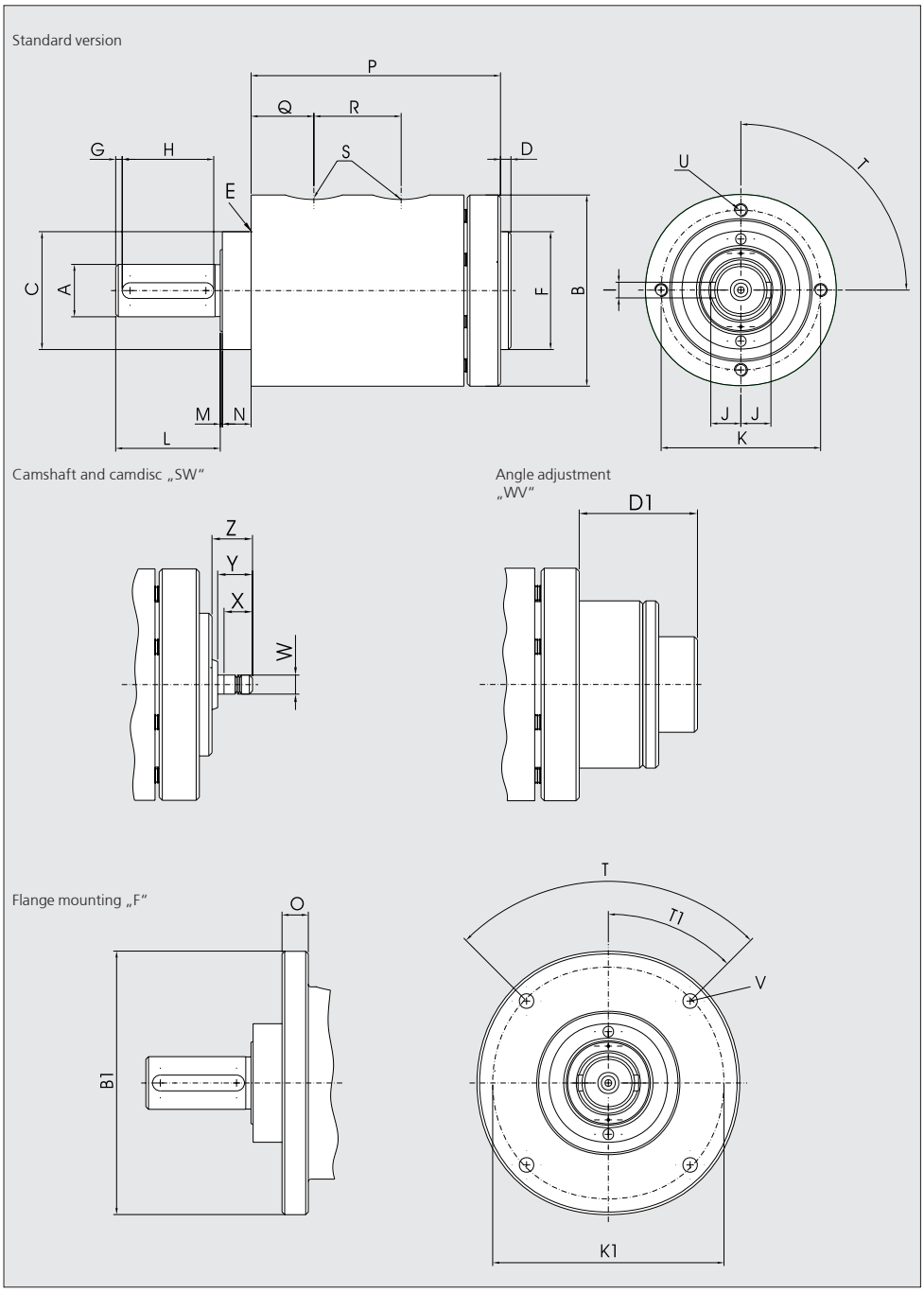

Table of dimensions

Typ		DKA 140
A k6	ø	60
B	ø	180
B1	ø	235
C h6	ø	110
D		10
D1	90°	77
	180°	101
	360°	149
E	(R)	3
F	ø	110
G		5
H		110
I		18
J		32,2
K	ø	160
K1	ø	210
L		120
M		2
N		37
O		20
P	90°	227
	180°	312
	360°	477
Q	90°	59
	180°	59
	360°	59
R	90°	71
	180°	113
	360°	201
S		G 3/8"
T		30°
T1		60°
U	ø	11
U Number		6
V		M 10
W		M 18
X		19
Y		35
Z		38

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Technical Information DKA 160

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

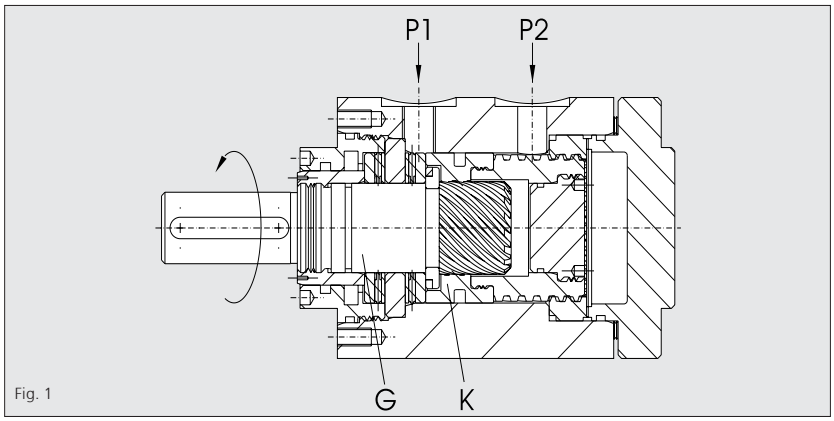

Fig. 1

Technical data Type DKA 160

Max. nominal torque at 100 bars		Nm	2476
Nominal torque		Nm/bar	24,76
max. working pressure		bar	100
max. radial load		N	12286
max. axial load		N	23000
Absorption volume	Angle 90°	dm^3	0,518
	Angle 180°	dm^3	1,036
	Angle 360°	dm^3	2,071
Weight	Angle 90°	kg	45
	Angle 180°	kg	53
	Angle 360°	kg	69

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 160

Hydraulic rotary actuator with shortened installation space

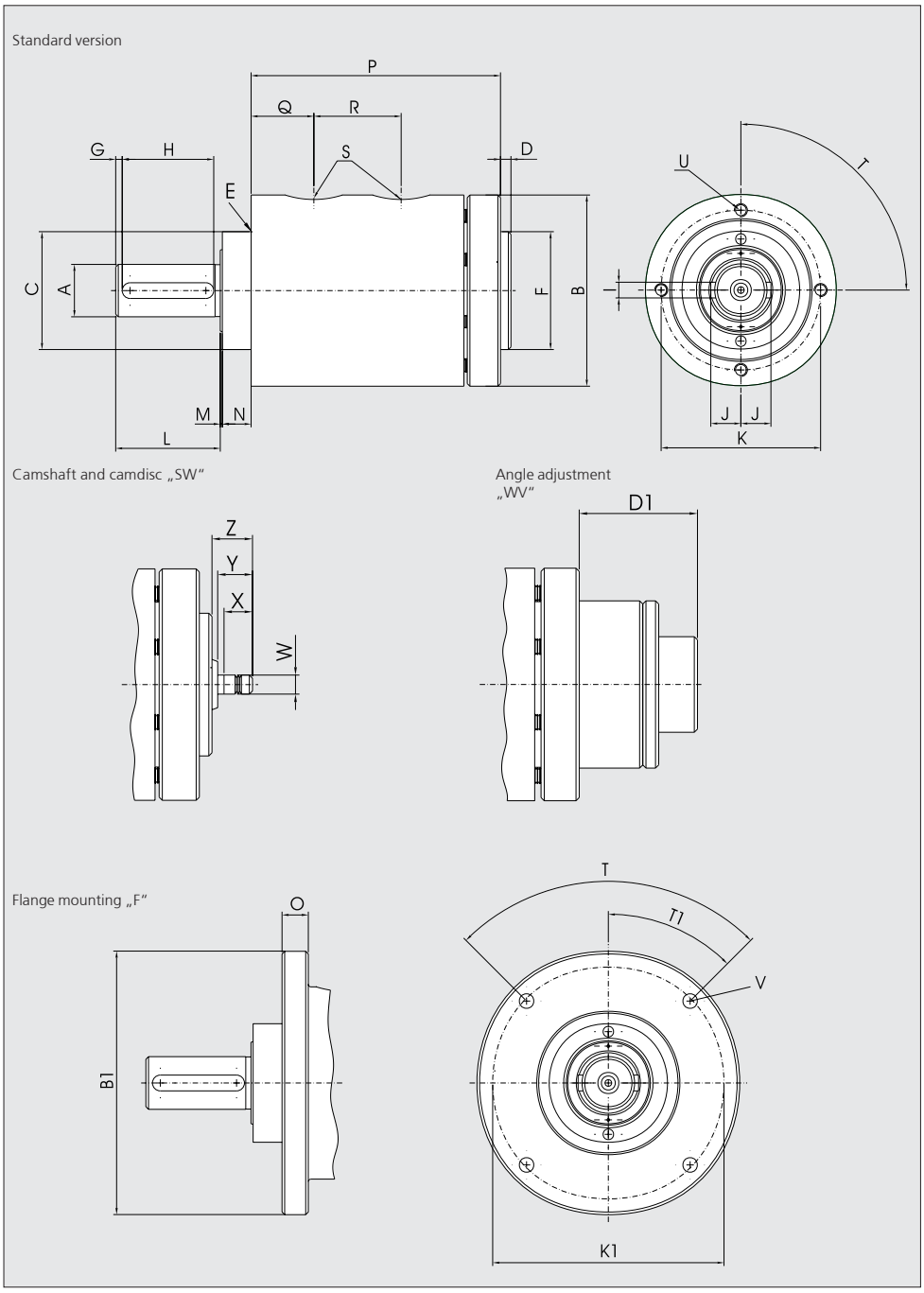

Table of dimensions

Typ		DKA 160
A k6	ø	70
B	ø	209
B1	ø	270
C h6	ø	130
D		10
D1	90°	88
	180°	116
	360°	172
E	(R)	3
F	ø	138
G		5
H		130
I		20
J		37,6
K	ø	185
K1	ø	244
L		140
M		2
N		45
O		24
P	90°	270
	180°	355
	360°	520
Q	90°	72
	180°	72
	360°	72
R	90°	77
	180°	119
	360°	207
S		G 1/2"
T		36°
T1		72°
U	ø	14
U Number		5
V		M 12
W		M 20
X		20
Y		37
Z		40

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Technical Information DKA 200

Hydraulic rotary actuator with shortened installation space

General characteristics

Rotary actuators in the DKA series are characterized by their extremely short design. They are used in preference when the use of rotary actuators in the standard DA series is not possible because of confined installation space.

HKS rotary actuators in the DKA series meet the following standards:

- 9 sizes ranging from 36 to 5380 Nm, with piston diameters ranging from Ø 40 – Ø 200 mm
- depending on size, 4 rotary angles: 90°, 180°, 270° and 360°
- actuator shaft with 2 feather keys
- tandem seals on the actuator shaft

Because of the more or less infinite design possibilities in the front area almost all connection variants can be provided with these actuators.

Auxiliary equipment

- Cushioning at both ends
- Rotary angle adjustment to ± 4°
- Camshaft

Special features

- Actuator shaft with spline profile to DIN 5463
- Actuator shaft with second drive cogs
  Actuator shaft and mounting flange to customers' requirements
  Angle adjustment over the entire rotation range
- Limit switch equipment
- Direct valve connection in 3 mounting positions
- All intermediate rotary angles can be supplied
- Rotation range exceeding 360°
- Resistant to seawater
- Additional bearing for high radial forces
- Change of direction of rotation
- Further special designs are possible
- Hollow shaft with profiles to DIN 5463, DIN 5480 and DIN 6885.

Typical applications

HKS rotary actuators have proved satisfactory throughout industry. For example, they are used in construction machines, machine toils, bending machines, foundry, mining, agricultural and packing machines, transfer lines, handling equipment, armatures, as well as in ships, vehicles, assembly platforms and in ventilation engineering. HKS rotary actuators are reliable and require hardly any maintenance. This is demonstrated, for example, 2300 m below sea level, where they are used as actuators for armatures.

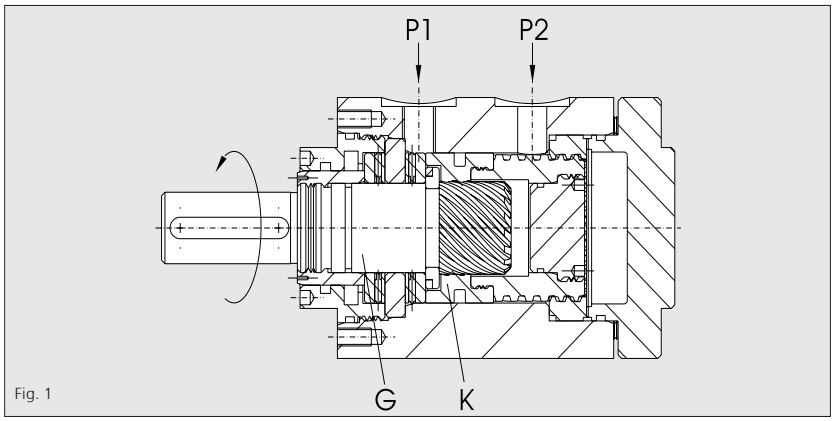

Fig. 1

Technical data Type DKA 200

Max. nominal torque at 100 bars		Nm	5380
Nominal torque		Nm/bar	53,8
max. working pressure		bar	100
max. radial load		N	17645
max. axial load		N	31000
Absorption volume	Angle 90°	dm^3	1,145
	Angle 180°	dm^3	2,290
	Angle 360°	dm^3	4,58
Weight	Angle 90°	kg	103
	Angle 180°	kg	128
	Angle 360°	kg	178

Functional description

The oil pressure supplied through connections P1 and P2 imparts a rotary movement to actuator shaft G. Here the linear movement of piston K is converted to a rotary movement by multiple helical gears in the housing, piston and shaft.

Direction of rotation

The actuator shaft rotates left from its basic position (anticlockwise) when the pressure is admitted at P1.
A change in the direction of rotation is possible as a special feature.

Normal position of the feather key

The factory setting, according to the position of piston K, is as shown in Figure 12.
Changes of position are possible.

Angle of rotation and its adjustment

In the standard design the angle of rotation can be adjusted by up to 4° in the positive range.
An exact angle of rotation may be set by means of the additional device WV.

Cushioning

The speed of rotation of actuator shaft G can be adjusted in the limit positions by non-return throttle valves. In the case of actuators with cushioning, the appearance and dimensions of the actuator change. Further information on the subject of cushioning may be requested on an additional page.

Technical Information DKA 200

Hydraulic rotary actuator with shortened installation space

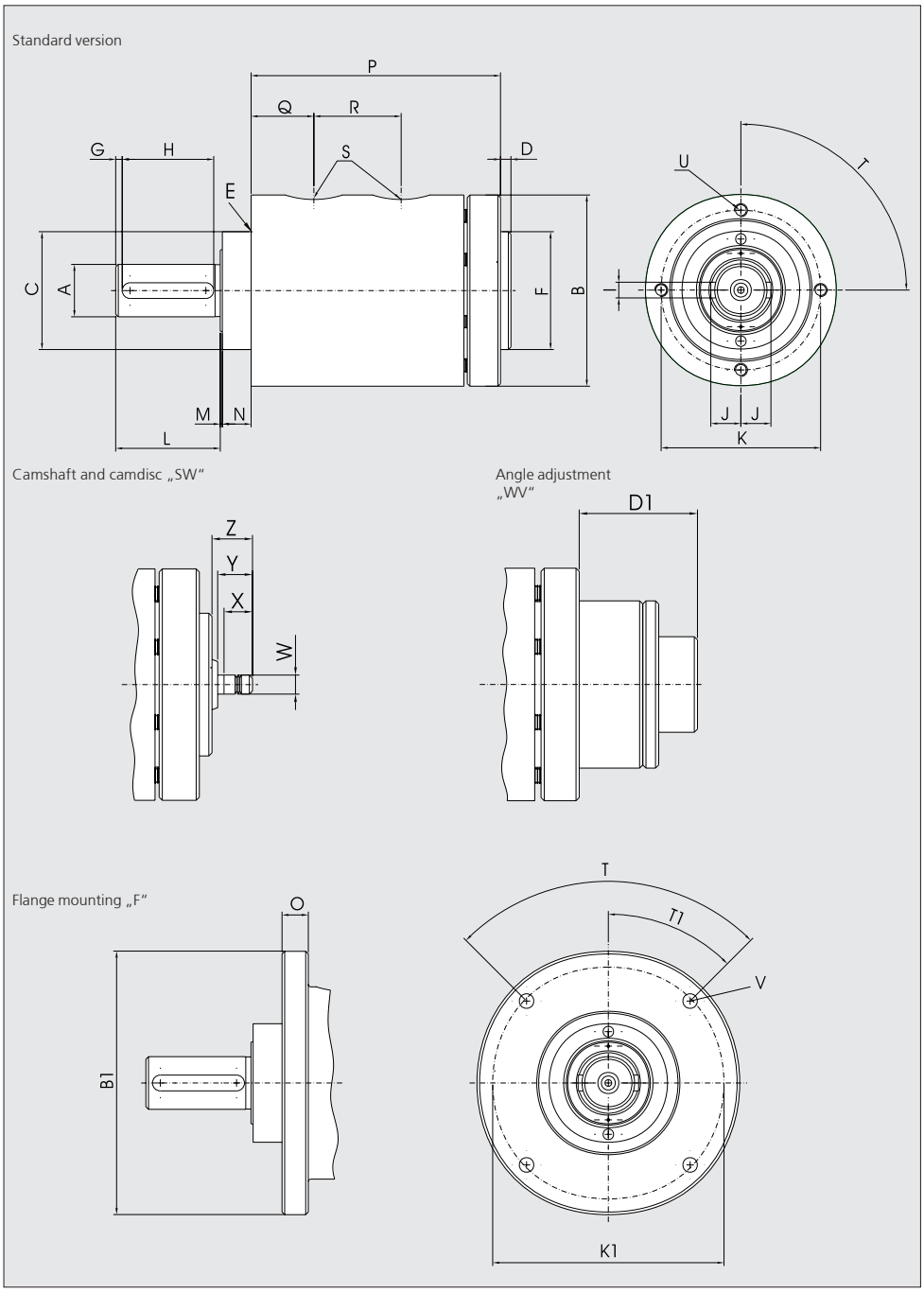

Table of dimensions

Typ		DKA 200
A k6	ø	90
B	ø	245
B1	ø	310
C h6	ø	160
D		12
D1	90°	109
	180°	145
	360°	217
E	(R)	4
F	ø	180
G		5
H		170
I		25
J		47,8
K	ø	223
K1	ø	280
L		180
M		2
N		51
O		24
P	90°	365
	180°	474
	360°	690
Q	90°	94
	180°	94
	360°	94
R	90°	110
	180°	170
	360°	285
S		G 1/2"
T		22,5°
T1		45°
U	ø	14
U Number		8
V		M 12
W		M 24
X		23
Y		42
Z		46

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