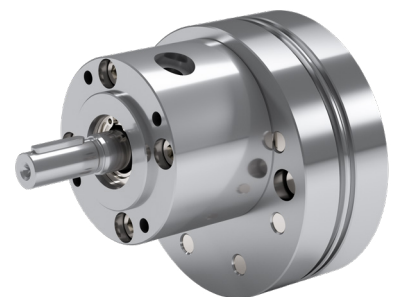


Gear metering pumps  
**ADP**



**KRACHT**®

FLUID TECHNOLOGY AND SYSTEMS

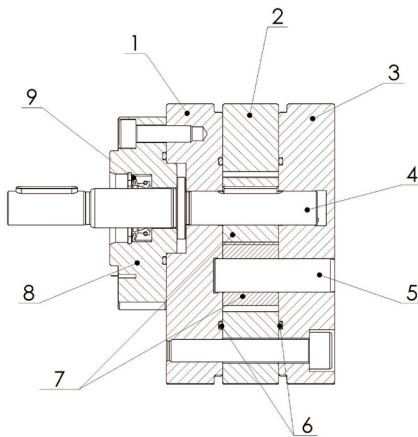
## Content

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## General characteristics / Technical data

### I Construction



- 1 Front plate
- 2 Center plate
- 3 Rear plate
- 4 Drive shaft
- 5 Arbor
- 6 O-rings
- 7 Gears
- 8 Seal carrier
- 9 Shaft sealing

### I Description

The ADP is a high precision external gear metering pump. With extremely small clearances and an optimal gear geometry the ADP has a very high volumetric efficiency also at difficult combinations e.g. high pressure together with low turning speed and low viscosities.

The main parts of the pump are made of stainless steel. Because of that a wide range of fluids can be pumped. For various kinds of applications different types of radial lip-type seals, a stuffing box packing or a magnetic coupling are available. On request the ADP can be supplied as a pump-motor unit.

### I Materials

Pump plates	Stainless steel 1.4112
Gears	Stainless steel 1.4112
Drive shaft and arbor	Stainless steel 1.4112
O-rings	FKM, PTFE

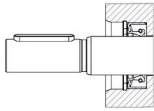
### I Overview

Nominal size in cm <sup>3</sup> /rev	ADP-1 0.1 · 0.3 · 0.6 · 1.2 · 1.8 · 2.4 · 3.0 · 4.8 · 6.0 ADP-2 12.0 · 20.0
Clearance group	S small clearance M medium clearance L large clearance
Direction of rotation	clockwise (facing shaft end)
Max. Operating pressure (Outlet side)	p <sub>B</sub> max. 150 bar / 2176 psi (depending on viscosity, speed and motor power)
Speed range	10 ... 200 1/min (depending on pressure, viscosity and motor power)
Viscosity	v <sub>min</sub> 1.0 cSt (depending on pressure and speed) v <sub>max</sub> depending on inlet conditions, speed and motor power
Media temperature	-20 ... 200 °C / -4 ... 392 °F
Ambient temperature	-30 ... 120 °C / -22 ... 248 °F

## Shaft end seals

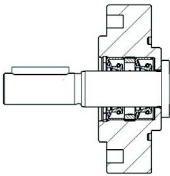
### I Variants

#### Single radial lip-type seal



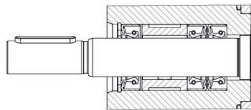
Materials	Pressure inlet side	Media temperature
FKM	0 ... 10 bar / 0 ... 145 psi	-20 ... 150 °C / -4 ... 302 °F
PTFE	0 ... 5 bar / 0 ... 73 psi	-20 ... 200 °C / -4 ... 392 °F

#### Double radial lip-type seal



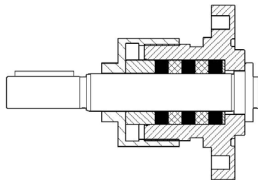
Materials	Pressure inlet side	Media temperature
FKM	0 ... 10 bar / 0 ... 145 psi	-20 ... 150 °C / -4 ... 302 °F
PTFE	0 ... 5 bar / 0 ... 73 psi	-20 ... 200 °C / -4 ... 392 °F

#### Triple radial lip-type seal



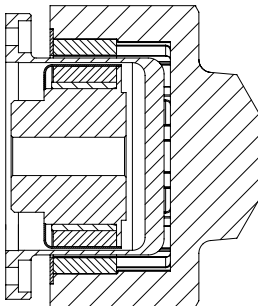
Materials	Pressure inlet side	Media temperature
FKM	0 ... 10 bar / 0 ... 145 psi	-20 ... 150 °C / -4 ... 302 °F
PTFE	0 ... 5 bar / 0 ... 73 psi	-20 ... 200 °C / -4 ... 392 °F

#### Gland Packing



Materials	Pressure inlet side	Media temperature
PTFE/Graphite	0 ... 50 bar / 0 ... 725 psi	-20 ... 200 °C / -4 ... 392 °F

#### Magnetic coupling



Materials	Pressure inlet side	Media temperature
Stainless steel	0 ... 10 bar / 0 ... 145 psi	-20 ... 150 °C / -4 ... 302 °F

## Versions

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### I Available types

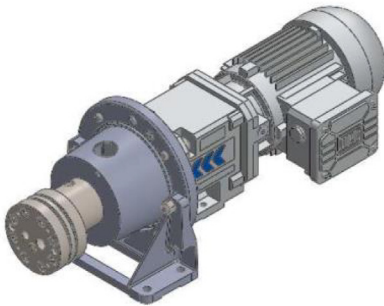
Pump with free shaft end



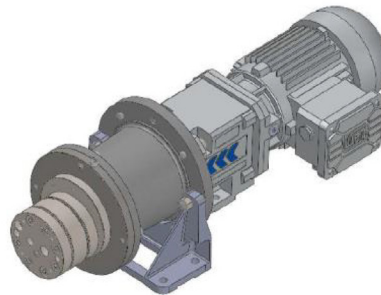
Pump with free shaft end plus connection block



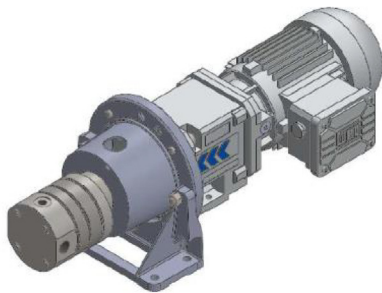
Motor-pump unit with mechanical coupling



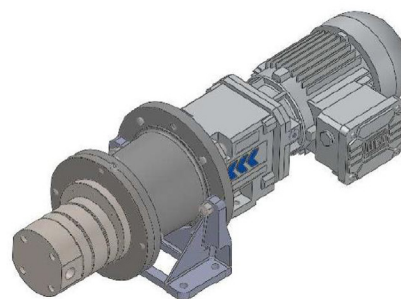
Motor-pump unit with magnetic coupling



Motor-pump unit with mechanical coupling  
(pump with connection block)



Motor-pump unit with magnetic coupling  
(pump with connection block)



## Type key

### Example

**ADP - 1 0.1 S R F A EEF N 1W**

1 2 3 4 5 6 7 8 9 10

1 Product	
ADP	

2 Series	
1	ADP-1
2	ADP-2

3 Nominal size	
0.1	ADP-1
0.3	ADP-1
0.6	ADP-1
1.2	ADP-1
1.8	ADP-1
2.4	ADP-1
3.0	ADP-1
4.8	ADP-1
6.0	ADP-1
12.0	ADP-2
20.0	ADP-2

4 Clearance group	
S	Small clearance
M	Medium clearance
L	Large clearance

5 Direction of rotation	
R	Clockwise (facing shaft end)

6 Type of fixation	
F	Flange

7 Type of pipe connection		
A	In: rear G 3/8" Out: rear G 1/4"	ADP-1
B	In: rear G 1/2" Out: rear G 1/2"	ADP-2

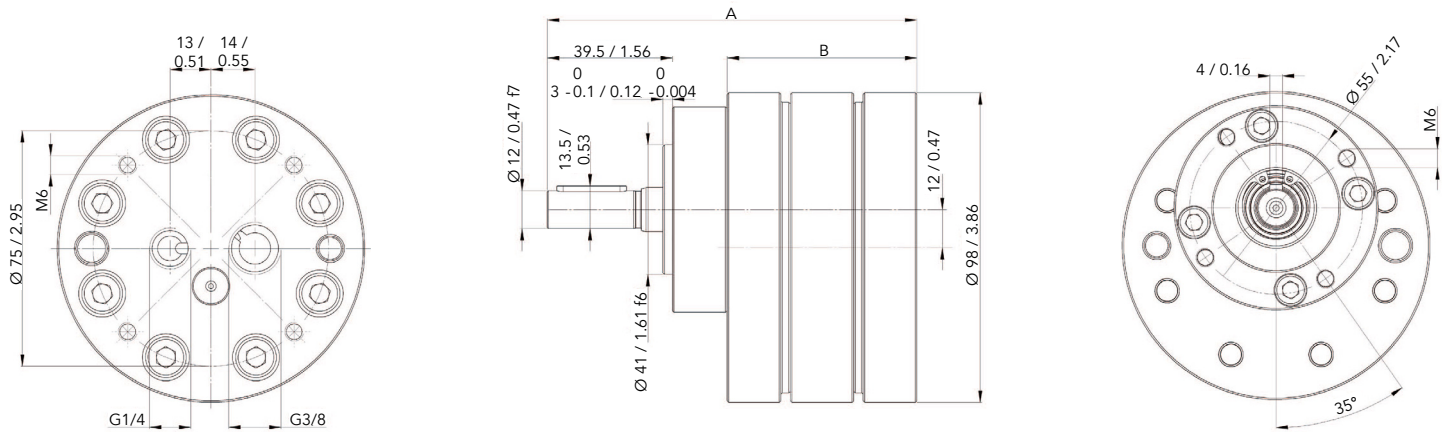
8 Material code			
EEF	Plates / Gears: stainless steel	Sealings: FKM	Without coating
EEP	Plates / Gears: stainless steel	Sealings: PTFE	Without coating
BEF	Plates / Gears: stainless steel	Sealings: FKM	With coating for fluids with poor lubricity
BEP	Plates / Gears: stainless steel	Sealings: PTFE	With coating for fluids with poor lubricity
BBF	Plates / Gears: stainless steel	Sealings: FKM	With coating for abrasive fluids
BBP	Plates / Gears: stainless steel	Sealings: PTFE	With coating for abrasive fluids

9 Bearing	
N	Without bearing bushing
M	With bearing bushing

10 Shaft sealing		
1W	Single radial lip-type seal	ADP-1/2
2W	Double radial lip-type seal	ADP-2
3W	Triple radial lip-type seal	ADP-1
PA	Gland packing	ADP-1/2
MK	Prepared for magnetic coupling	ADP-1/2

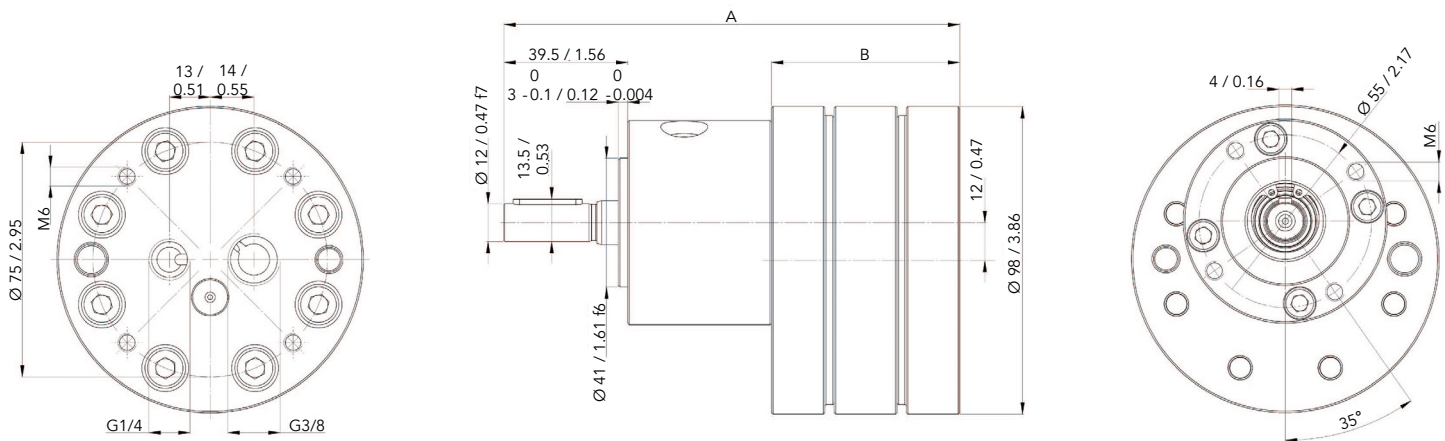
## Dimensions

### I ADP-1 – Single radial lip-type seal (1W)



Nominal size	A	B
ADP-1-0.1	99 / 3.90	42 / 1.65
ADP-1-0.3	103 / 4.06	46 / 1.81
ADP-1-0.6	109 / 4.29	52 / 2.05
ADP-1-1.2	105 / 4.13	48 / 1.89
ADP-1-1.8	109 / 4.29	52 / 2.05
ADP-1-2.4	113 / 4.45	56 / 2.20
ADP-1-3.0	117 / 4.61	60 / 2.36
ADP-1-4.8	118 / 4.65	61 / 2.40
ADP-1-6.0	123 / 4.84	66 / 2.60

### I ADP-1 – Triple radial lip-type seal (3W)



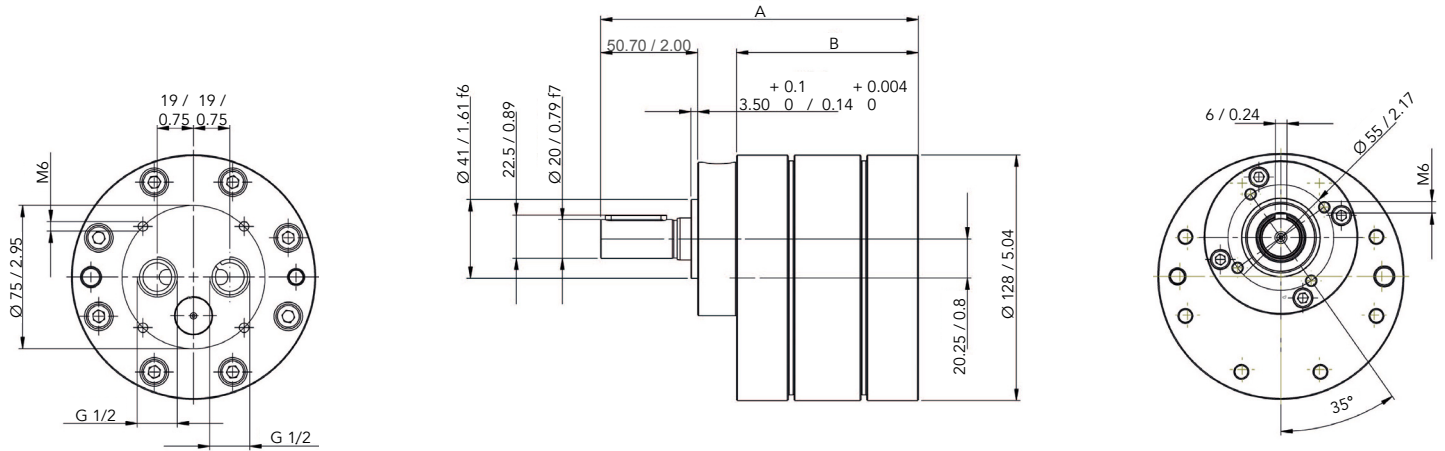
Nominal size	A	B
ADP-1-0.1	127 / 5.0	42 / 1.65
ADP-1-0.3	131 / 5.16	46 / 1.81
ADP-1-0.6	137 / 5.39	52 / 2.05
ADP-1-1.2	133 / 5.24	48 / 1.89
ADP-1-1.8	137 / 5.39	52 / 2.05
ADP-1-2.4	141 / 5.55	56 / 2.20
ADP-1-3.0	145 / 5.71	60 / 2.36
ADP-1-4.8	146 / 5.75	61 / 2.40
ADP-1-6.0	151 / 5.94	66 / 2.60

Dimensions in mm / inch



**Dimensions**

**I ADP-2 – Single radial lip-type seal (1W) / Double radial lip-type seal (2W)**



Nominal size	A	B
ADP-2-12.0	152 / 5.98	81 / 3.19
ADP-2-20.0	166 / 6.54	95 / 3.74

**Notes**

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**Notes**

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**KRACHT®**

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