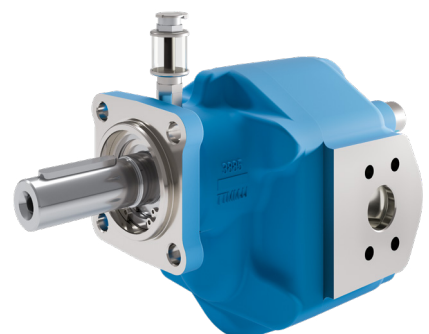


Gear pumps
DT DuroTec[®]



KRACHT®
FLUID TECHNOLOGY AND SYSTEMS

Content

Description Construction	4
Materials Characteristics	5
Type key	6
Technical drawings DT (Dimensions)	7 – 9
Technical drawings / data motor-pump assemblies	10 – 11

General

I Description

DuroTec® Gear Pumps DT for abrasive and poor lubricating fluids.

In the year 1990, KRACHT initiated the development of Gear Pumps for abrasive and poor lubricating fluids. Since then, this development has been subsequently improved.

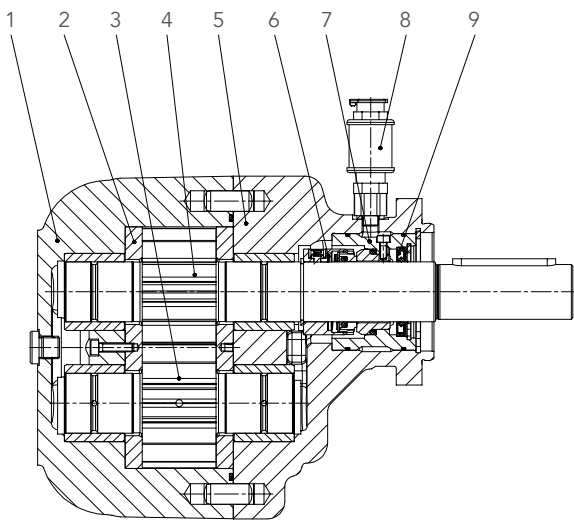
The limit of applications of Gear Pumps has been reached when the transfer medium does not have the required lubricity for a proper function of the pump and a high working pressure is needed at the same time. Such problematic fluids are for example silicates (sodium silicate), isocyanates and polyols with hard

fillers as can be found in the PUR-technology. Under air or humidity influence, crystallisation of these fluids occurs and aggravates the lack of lubricity.

The gear (gear wheel and shafts) is surrounded by SIC bearing bush. The gear is high-rigid protected against wear, taken the requirements regarding material, heat treatment, surface geometry into consideration when using this coating technology.

Highest demands have been fulfilled by our own manufacturing quality and the involved coating specialists.

I Construction DT 3



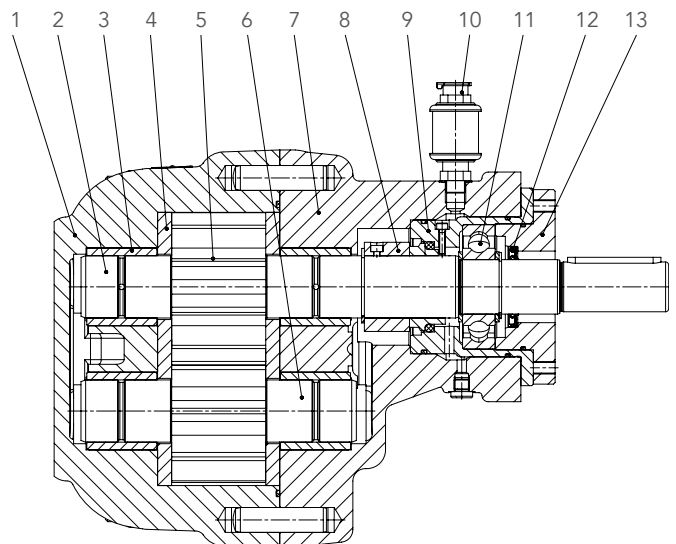
- 1 Housing
- 2 Sliding plate
- 3 Bolt
- 4 Shaft
- 5 Flange cover
- 6 Mechanical seal
- 7 Seal holder
- 8 Quench tank
- 9 Shaft seal

Depending on the medium to be transferred, working pressures up to 100 bar are possible with driving speeds of about 1000 rpm.

Solid body parts with a size < 50 µm and a hardness acc. to Vickers < 2500 will be accepted in the transfer medium.

The main field of application for the new DuroTec®

I Construction DT 5



- 1 Housing
- 2 Shaft
- 3 Bearing bush
- 4 Sliding plate
- 5 Gearing
- 6 Bolt
- 7 Flange cover
- 8 Mechanical seal
- 9 Mounting mechanical seal
- 10 Quench tank
- 11 Roller bearing
- 12 Shaft seal
- 13 Centering disc

Gear Pumps DT are mainly multicomponent-systems in the PUR-technology.

Everywhere where standards Gear Pumps do not reach a satisfying lifetime, e.g. where polyols with hard fillers have to be handled, this Gear Pump offers a reliable alternative.

Technical data

I Materials

Housing	EN-GJL-300 (GG 30)
Flange cover	EN-GJL-300 (GG 30)
Gearing	Steel, hard material coated
Sliding plates	Steel, hardened and nitrated
Bearing	SIC
Shaft sealing	Mechanical seal with quench chamber incl. quench tank

I Characteristics

Geometrical displacement	V_g DT 3 = 63, 100, 125 cm ³ /rev DT 5 = 150, 200, 250 cm ³ /rev
Mounting position	horizontal
Fixing type	DT 3 = flange (4-hole flange, DIN ISO 7653) DT 5 = flange (SAE-C 2-hole-flange)
Inlet port	SAE 1½" – 2" – 2½" flange
Outlet port	SAE 1¼" – 2" flange
Max. working pressure	100 bar
Max. inlet pressure	20 bar
Viscosity	ν 500 up to 50 000 mPas (higher viscosities on request)
Media temperature	ϑ_{max} 150 °C
Ambient temperature	ϑ_{min} - 20 °C ϑ_{max} 60 °C
Shaft end	Cylindrical shaft

Type key

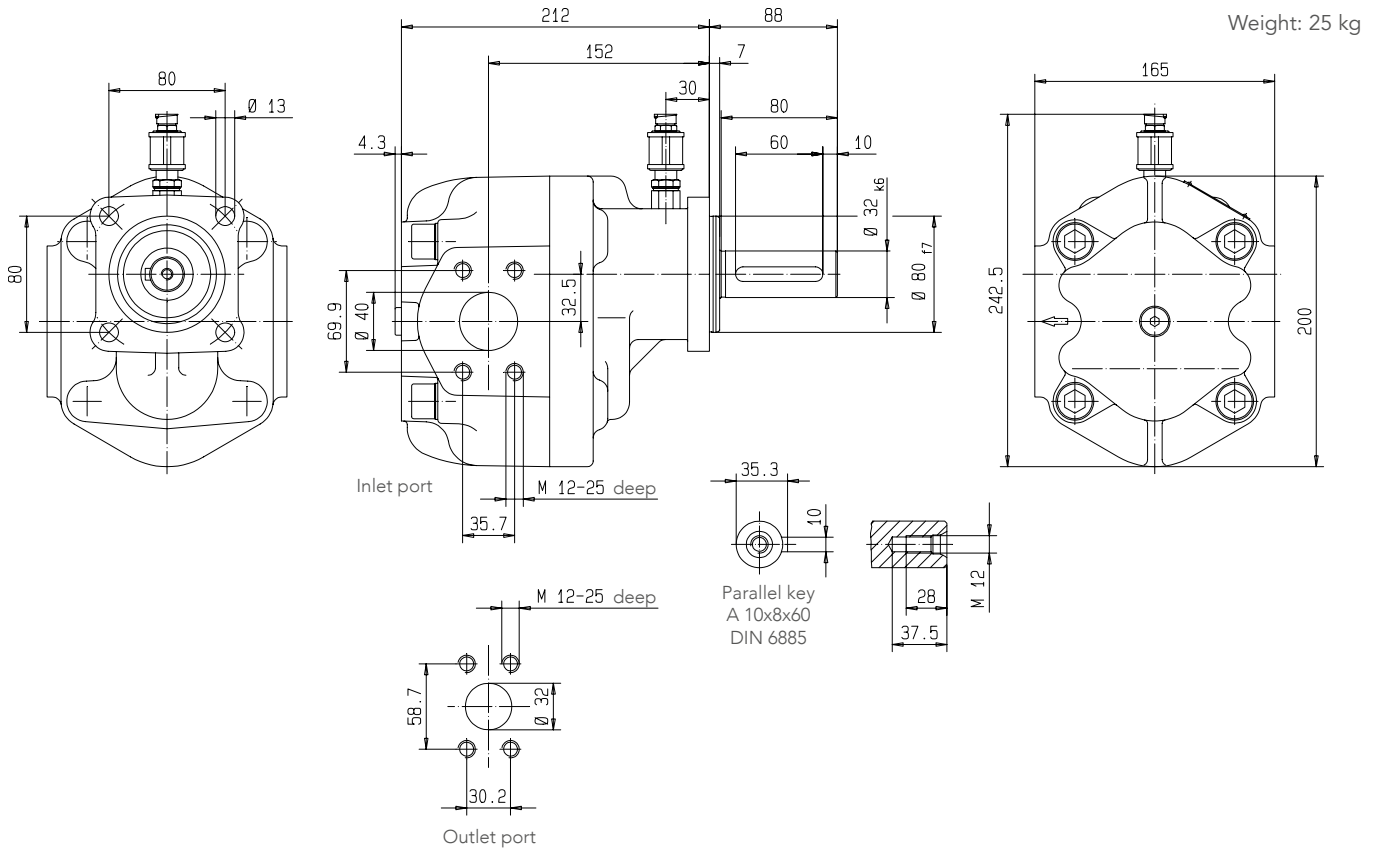
Ordering example

DT	5/	250	H	1	0	K	Z	0	0	0	Y	Q	70
1	2	3	4	5	6	7	8	9	10	11	12	13	14

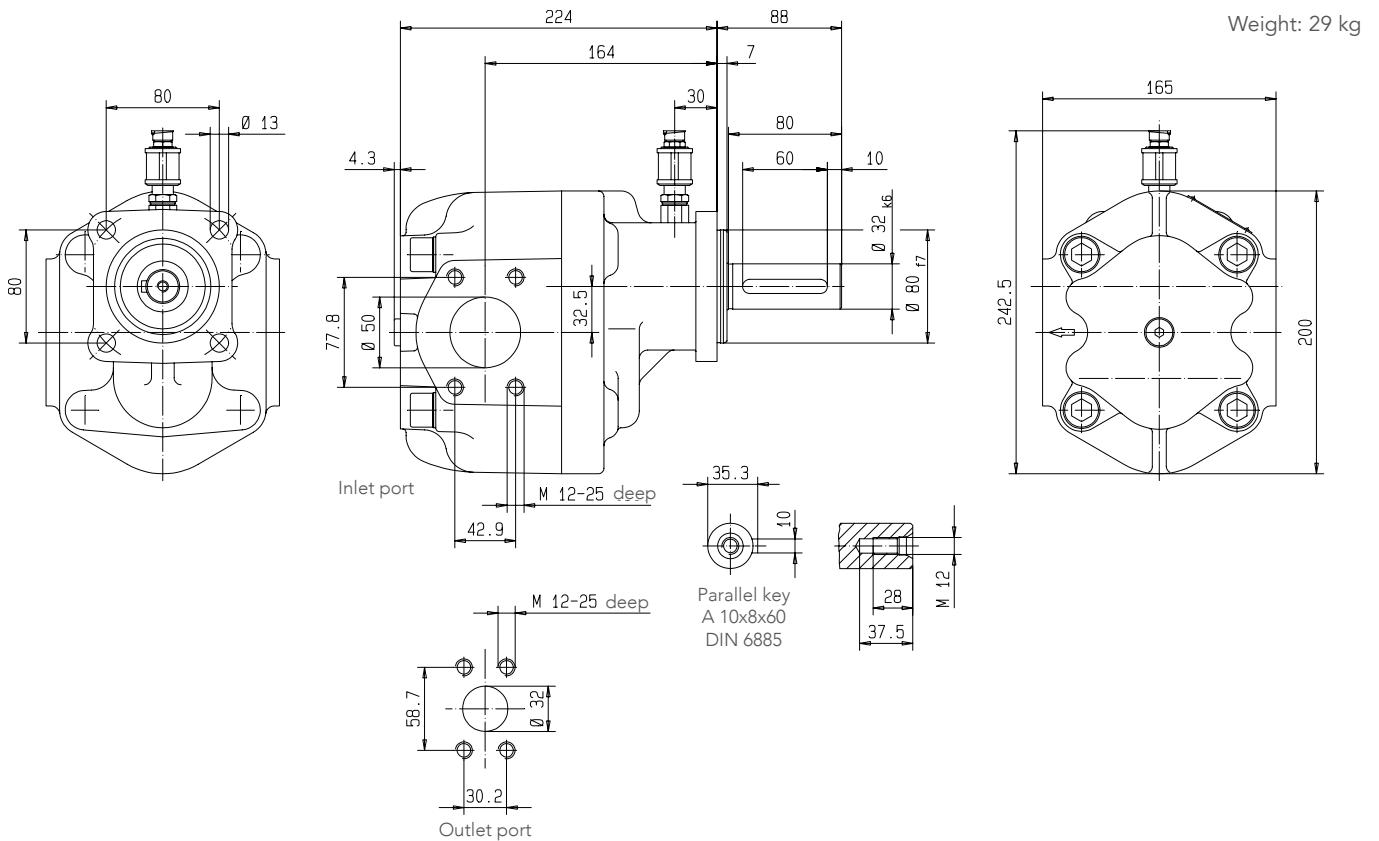
1 Product	
2 Size	
3 · 5	
3 Nominal displacement	
63 · 100 · 125 · 150 · 200 · 250	
4 Flange mounting cover (LA = Hole spacing / Z = Centering diameter)	
X	DT 3 = 4 hole flange, LA = Ø 113 mm, Ø _z = 80 mm
H	DT 5 = SAE-C-2 hole flange, LA = 181 mm, Ø _z = 127 mm
5 Direction of rotation	
1	clockwise
6 Outboard flanges or bearing	
0	without
7 Housing connection	
G	Inlet port 1 1/2" SAE-connection (Ø 40 mm) Outlet port 1 1/4" SAE-connection (Ø 32 mm) (Nominal displacement 63)
J	Inlet port 2" SAE-connection (Ø 50 mm) Outlet port 1 1/4" SAE-connection (Ø 32 mm) (Nominal displacement 100 and 125)
K	Inlet port 2 1/2" SAE-connection (Ø 65 mm) Outlet port 2" SAE-connection (Ø 50 mm) (Nominal displacement 150 ... 250)
8 Shaft end	
Y	Cylindrical shaft Ø 32 mm – DT 3
Z	Cylindrical shaft Ø 32 mm – DT 5
9 Second shaft end	
0	without
10 Adaptor pieces	
0	without
11 Design serial no.	
0	Specified by KRACHT
12 Code for materials (Housing and bearing execution)	
Y	Gray cast iron housing, SIC bearing bush
13 Type of gearing	
Q	Steel, hard material coated
14 Seal	
70	Mechanical seal with quench chamber incl. quench tank

Dimensions

I DT 3/63



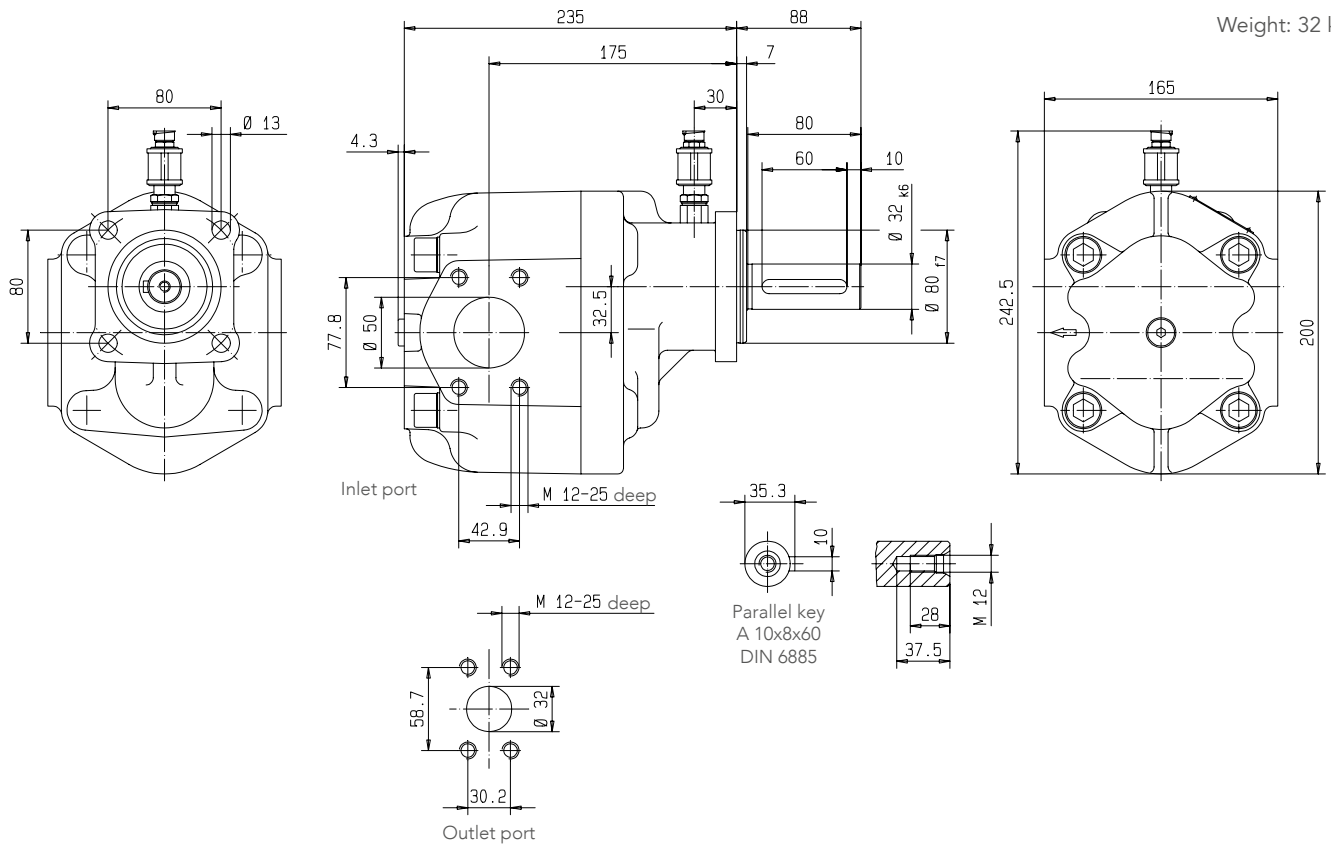
I DT 3/100



Dimensions

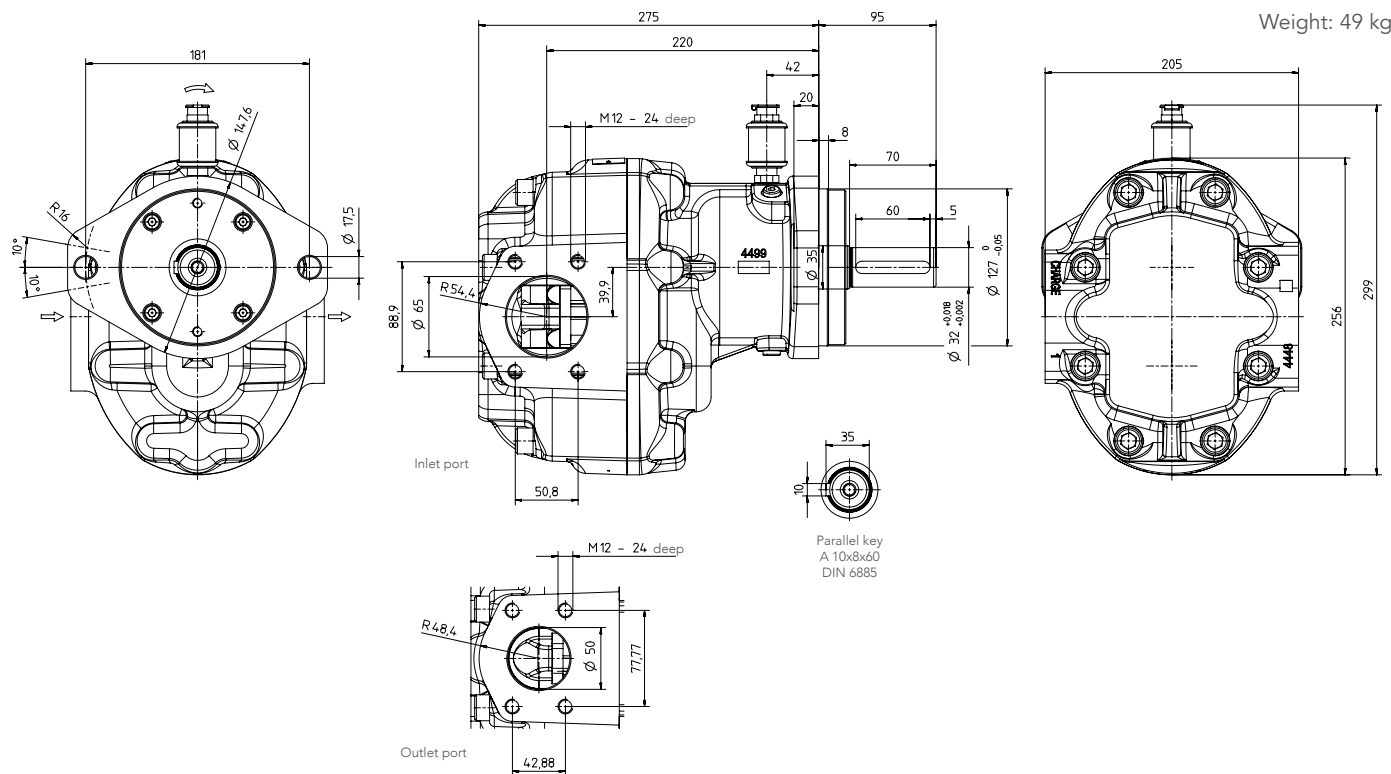
I DT 3/125

Weight: 32 kg



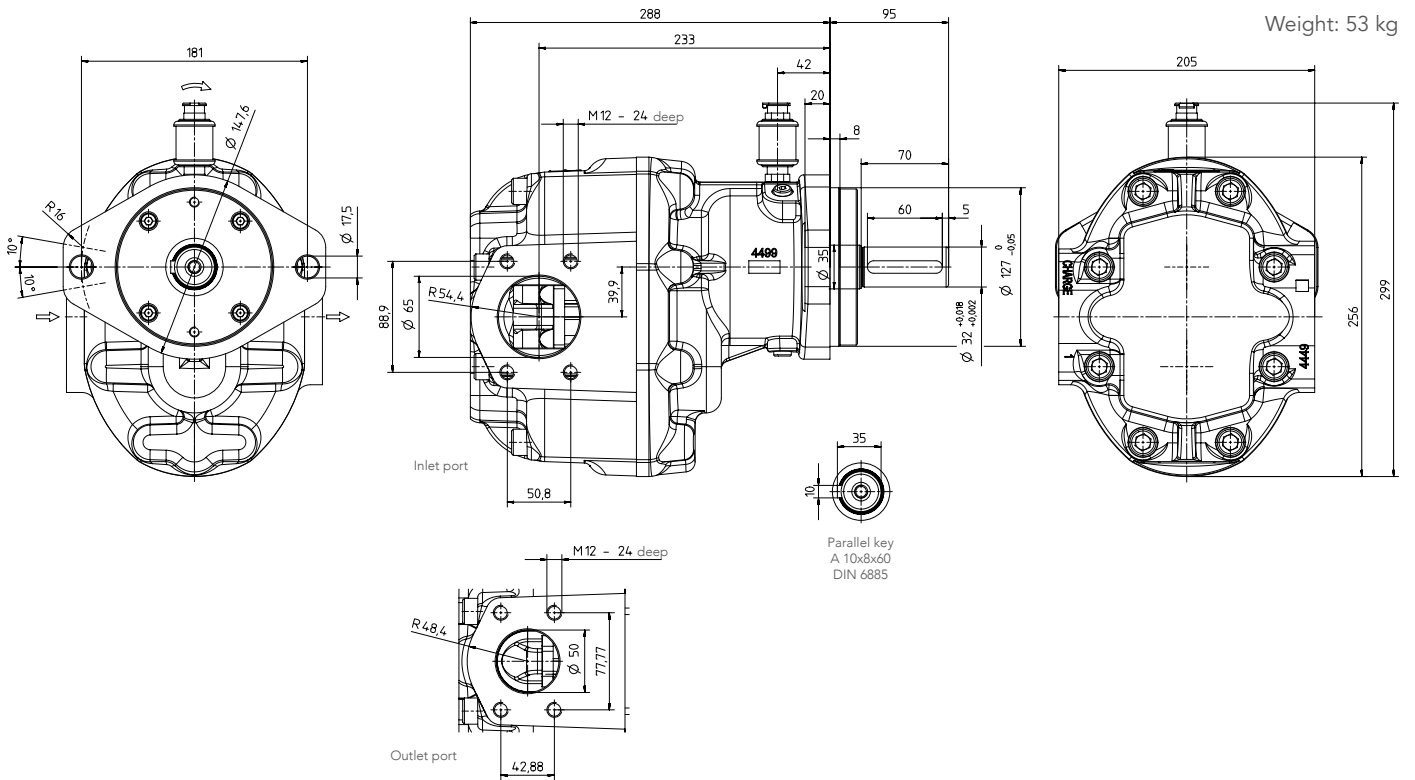
I DT 5/150

Weight: 49 kg

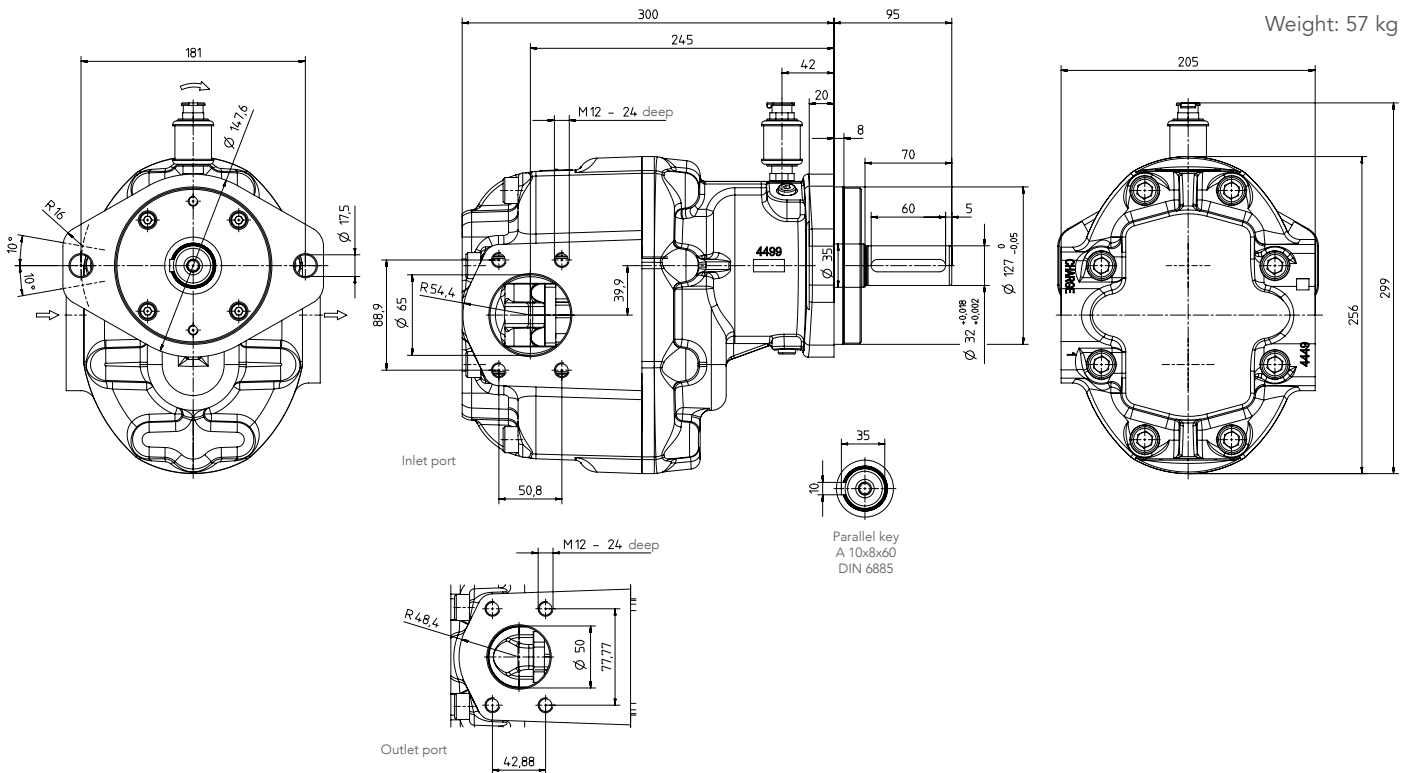


Dimensions

I DT 5/200

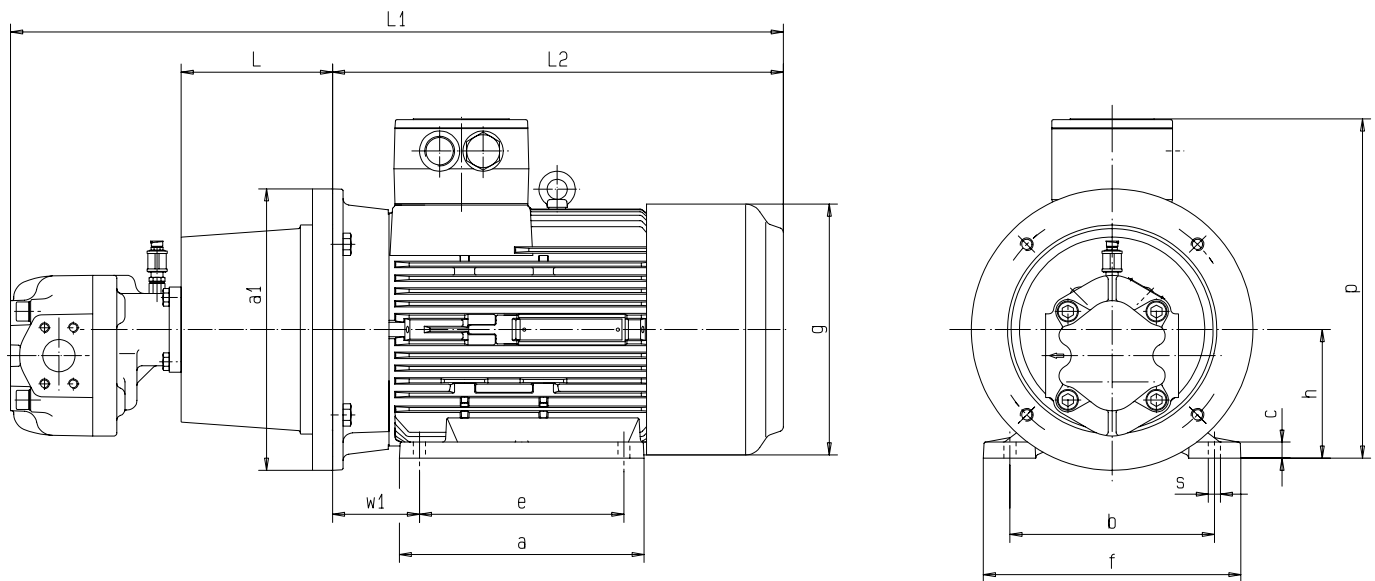


I DT 5/250



Technical data

I Motor-pump assemblies DT 3



Size	Motor 8-pole		Motor 6-pole		Motor 4-pole		Bell housing	Coupling
	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min		
132 S	2.2	710	3.0	960	5.5	1440	PL300/07/67-00	RS28/38-Z60/32-Z60/38
132 M	3.0	710	5.5	970	7.5	1440		
160 M	4.0	720	7.5	970	11.0	1460	PK350/06/58-00	RG42/55-Z50/32-Z75/42
160 L	5.5	720	11.0	970	15.0	1470		
180 M	–	–	–	–	18.5	1470		
180 L	11.0	730	15.0	970	22.0	1480	PK400/04/34-00	RG42/55-Z50/32-Z75/48
200 L	15.0	730	22.0	970	30.0	1480		
225 S	18.5	730	–	–	37.0	1480	PK450/02/55-00	BOWEX M65. 60-32
225 M	22.0	730	30.0	980	45.0	1480		

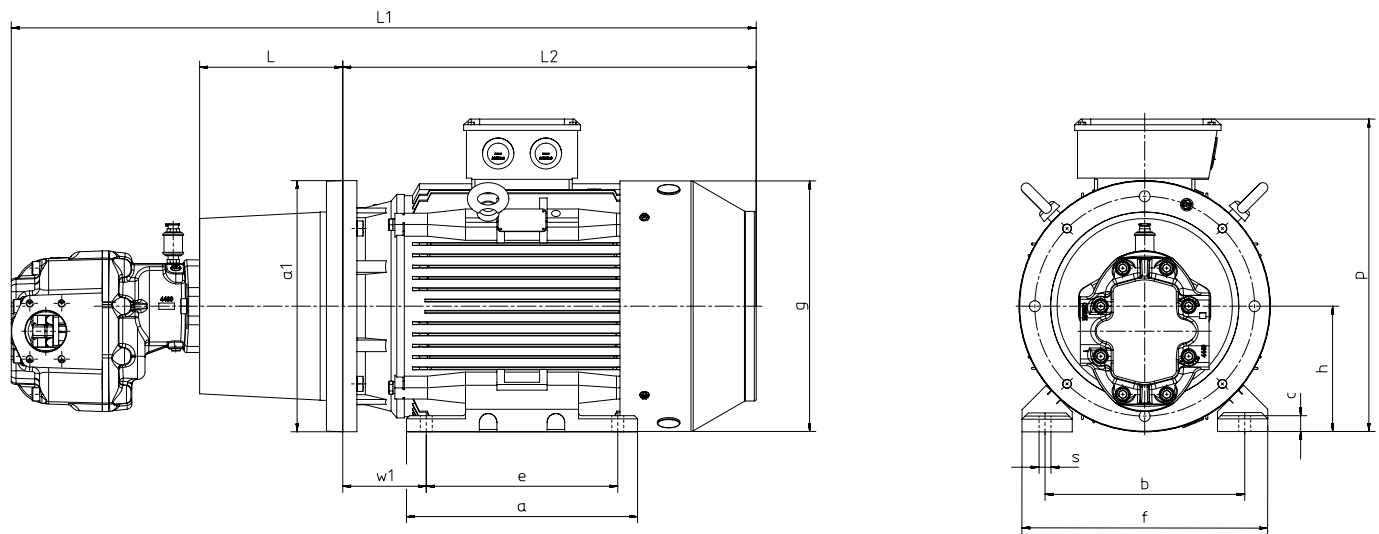
All motor dimensions and specifications refer to the motor make AC. Other motor makes on request. Motor type IMB35. The motor dimensions of other manufacturers may differ.

Size	DT 3/63	DT 3/100	DT 3/125													
	L1	L1	L1	L	a ₁	a	b	c	e	f	g	h	L ₂	p	s	w ₁
132 S	808	820	831	196	300	186	216	15	140	262	258	132	395	320	12	89
132 M	846	858	869	196	300	224	216	15	178	262	258	132	433	320	12	89
160 M	914	926	937	204	350	260	254	20	210	314	314	160	498	411	15	108
160 L	958	970	981	204	350	304	254	20	254	314	314	160	542	411	15	108
180 M	999	1011	1022	204	350	311	279	22	241	349	355	180	578	447	15	121
180 L	1037	1049	1060	204	350	349	279	22	279	349	355	180	616	447	15	121
200 L	1090	1102	1113	204	400	369	318	25	305	388	397	200	669	525	19	133
225 S	1135	1147	1158	234	450	368	356	28	286	431	446	225	684	547	19	149
225 M	1160	1172	1183	234	450	393	356	28	311	431	446	225	709	547	19	149

All pump nominal sizes and motor sizes can be combined with each other.

Technical data

I Motor-pump assemblies DT 5



Size	Motor 8-pole		Motor 6-pole		Motor 4-pole		Bell housing	Coupling
	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min		
160 M	4.0	720	7.5	970	11.0	1460	Z3/350/228-K	RA 38-Z45/32-Z45/42
160 L	5.5	720	11.0	970	15.0	1470		RA 42-Z50/32-Z50/48
180 M	–	–	–	–	18.5	1470		
180 L	11.0	730	15.0	970	22.0	1480	Z3/400/228-K	RA 42-Z50/32-Z50/55
200 L	15.0	730	22.0	970	30.0	1480	Z3/450/262-K	RG 48-Z56/32-Z56/60
225 S	18.5	730	–	–	37.0	1480		
225 M	22.0	730	30.0	980	45.0	1480	Z3/550/265-K	RG 55-Z65/32-Z65/65
250 M	30.0	730	37.0	980	55.0	1480		

All motor dimensions and specifications refer to the motor make AC. Other motor makes on request. Motor type IMB35. The motor dimensions of other manufacturers may differ.

Size	DT 5/150	DT 5/200	DT 5/250													
	L1	L1	L1	L	a ₁	a	b	c	e	f	g	h	L ₂	p	s	w ₁
160 M	1001	1014	1026	228	350	260	254	20	210	314	314	160	498	411	15	108
160 L	1045	1058	1070	228	350	304	254	20	254	314	314	160	542	411	15	108
180 M	1081	1094	1106	228	350	311	279	22	241	349	355	180	578	447	15	121
180 L	1119	1131	1143	228	350	349	279	22	279	349	355	180	616	447	15	121
200 L	1172	1185	1197	228	400	369	318	25	305	388	397	200	669	525	19	133
225 S	1221	1233	1245	262	450	368	356	28	286	431	446	225	684	547	19	149
225 M	1246	1259	1271	262	450	393	356	28	311	431	446	225	709	547	19	149
250 M	1310	1323	1335	265	550	445	406	30	349	484	485	250	770	608	24	168

All pump nominal sizes and motor sizes can be combined with each other.

KRACHT[®]

KRACHT GmbH · Gewerbestrasse 20 · 58791 Werdohl, Germany
Phone +49 2392 935 0 · E-Mail info@kracht.eu · Web www.kracht.eu

DT/EN/09.2021

Errors and technical changes reserved