

Piston Pumps





Technical Data

Size	23	32	45	63	80	107
Displacement (cm ³)	22.9	32	45.6	63	80.4	106.7
Max Speed (rpm)	2920	2900	2560	2300	2130	1860
Max Flow (/min)	65	90	113	141	166	193
Max Drive Power *(kW)	32.5	45	56.5	70.5	83	96.5
Torque at 300 bar (Nm)	109	153	218	301	384	509
Torque at 350 bar (Nm)	128	178	254	351	448	594
Rotary Stiffness (Nm/rad)	304	304	435	520	771	806
Moment of inertia (kgm ²)	0.0012	0.0012	0.003	0.0042	0.0072	0.0116
Weight (Kg)	5.8	5.8	8.0	9.0	11.6	14.5

1) These values apply at absolute pressures at suction opening »S« and operating on mineral oil (at 0.8 bar at suction port S reduced technical data)

2) 3% flow loss included

Pump Drive

Permissible axial load of the drive shaft

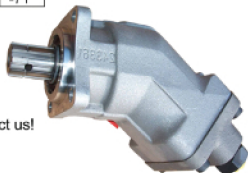
Size		23	32	45	63	80	107
Permissible axial load/ +F (N/bar)		+5.2	+5.2	+7.0	+8.7	+10.6	+12.9
bar operating pressure -F (N/bar)		-24	-33	-43	-53	-60	-71



-F_{ax} = increases bearing life

+F_{ax} = reduces bearing life

For drives with radial force load (pinion, V-belts), please contact us!



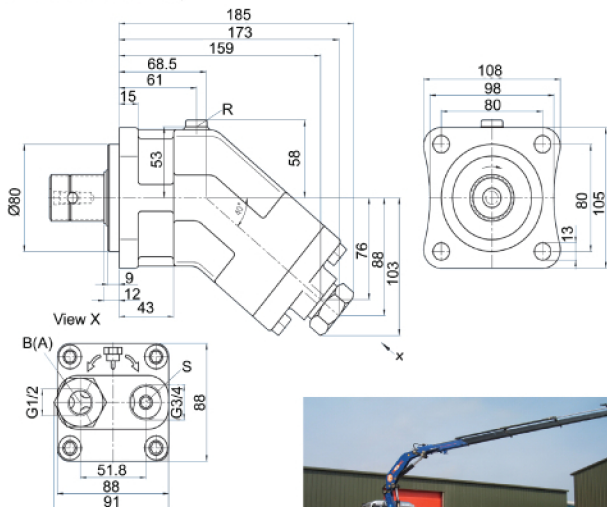
Calculation of size

Flow	$q_v = \frac{V_g \cdot n \cdot \eta_v}{1000}$	in L/min	V_g = geom. displacement per revolution in cm ³
Torque	$T = \frac{V_g \cdot \Delta p}{20 \cdot \pi \cdot \eta_m}$	in Nm	Δp = differential pressure in bar n = speed in rpm η_v = volumetric efficiency
Power	$P = \frac{2\pi \cdot T \cdot n}{60000} = \frac{q_v \cdot \Delta p}{600 \cdot \eta_T}$	in kW	η_m = mech-hydraulic efficiency η_T = overall efficiency ($\eta_T = \eta_v \cdot \eta_m$)



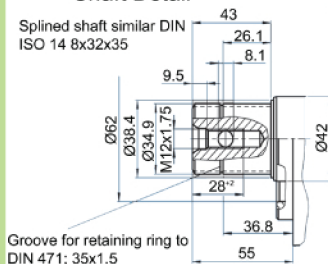
KFA Piston Pumps

Unit Dimensions 23, 32



Shaft Detail

Splined shaft similar DIN
ISO 14 8x32x35

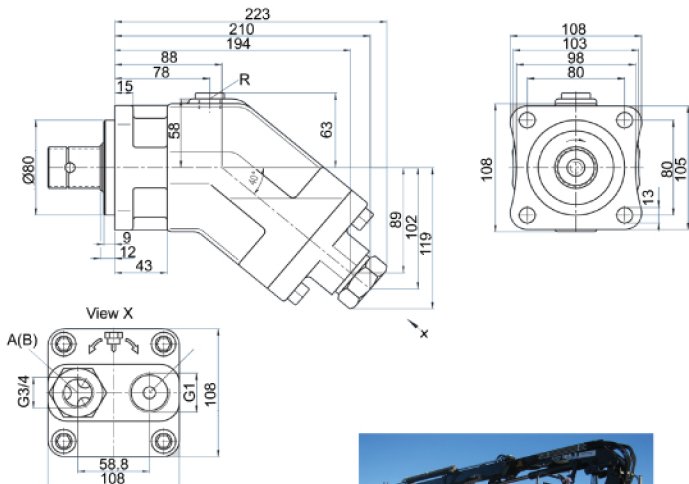


A or B Service Line Port	DIN ISO 228	G1/2; 14 deep	200 Nm
S - Suction port for operation fluid	DIN ISO 228	G3/4; 16 deep	330 Nm
R - Air Bleed (plugged, leakage returned internally)	DIN 3852	M10x1; 8 deep	30 Nm

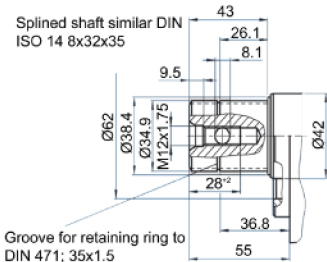


KFA Piston Pumps

Unit Dimensions 45



Shaft Detail

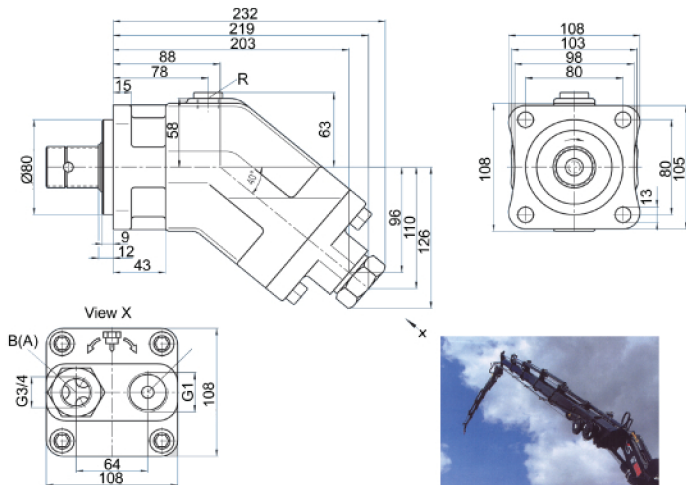


A or B Service Line Port	DIN ISO 228	G3/4; 16 deep	330 Nm
S - Suction port for operation fluid	DIN ISO 228	G1; 18 deep	480 Nm
R - Air Bleed (plugged, leakage returned internally)	DIN 3852	M10x1; 8deep	30 Nm



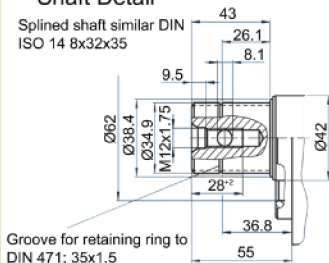
KFA Piston Pumps

Unit Dimensions 63



Shaft Detail

Splined shaft similar DIN ISO 14 8x32x35

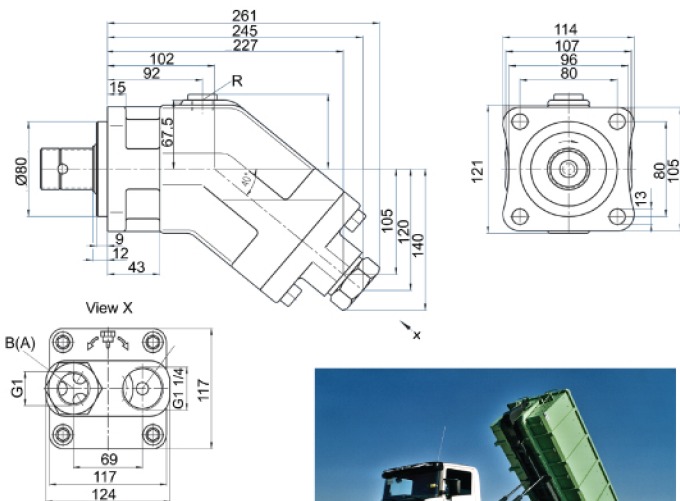


A or B Service Line Port	DIN ISO 228	G3/4; 16 deep	330 Nm
S - Suction port for operation fluid	DIN ISO 228	G1; 18 deep	480 Nm
R - Air Bleed (plugged, leakage returned internally)	DIN 3852	M10x1; 8 deep	30 Nm



KFA Piston Pumps

Unit Dimension 80



Shaft Detail

Splined shaft similar DIN
ISO 14 8x32x35



A or B Service Line Port	DIN ISO 228	G1; 18 deep	480 Nm
S - Suction port for operation fluid	DIN ISO 228	G1 1/4; 20 deep	720 Nm
R - Air Bleed (plugged, leakage returned internally)	DIN 3852	M10x1; 8 deep	30 Nm

Groove for retaining ring to
DIN 471; 35x1.5

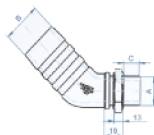


Universal Suction Fittings

These high quality suction fittings help installation by allowing the suction pipe to be positioned in the most appropriate position and preventing pump cavitation.

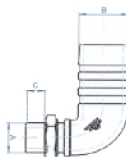
45° Elbow

Part No	(A) BSP	(B)	(C)	Material
9034816	3/4"	1 1/2"	18	Brass
9034916	1"	1 1/2"	18	
9035016	1"	2"	18	
9025416	1 1/4"	1 1/2"	18	
9035116	1 1/4"	2"	18	
9035216	1 1/4"	2 1/2"	18	



90° Elbow

Part No	(A) BSP	(B)	(C)	Material
9034116	3/4"	1 1/4"	18	Brass
9034216	3/4"	1 1/2"	18	
9034316	1"	1 1/2"	18	
9034416	1"	1 3/4"	18	
9034516	1"	2"	18	
9034616	1 1/4"	2"	18	
9034716	1 1/2"	2"	20	



Straight Adaptor

Part No	(A) BSP	(B)	(C)	(D)	Material
9035316	3/4"	1"	18	70	Steel
9035416	1"	1 1/4"	18	82	
9035816	1"	1 3/4"	18	82	Brass
9035516	1 1/4"	1 1/4"	18	70	Steel
9035616	1 1/4"	1 1/2"	18	72	
9035916	1 1/4"	2"	18	82	Brass
9035716	1 1/4"	1 1/2"	18	72	Steel
9036016	1 1/4"	2"	18	82	Brass
9036116	1 1/4"	2"	18	82	
9036216	1 1/4"	2 1/2"	18	82	Steel

