

Gear pumps BT, BTH









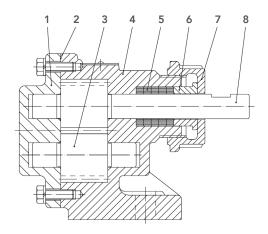
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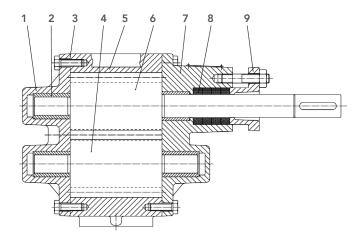
Construction BT

I BT 0 – without heating chamber



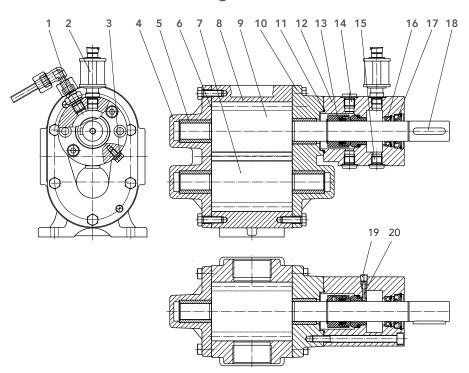
- 1 Housing cover
- 2 Liquid gasket
- 3 Driven shaft
- 4 Housing
- 5 Packing ring
- 6 Gland compression ring
- 7 Cap nut
- 8 Driving shaft

I BT 1 ... 7 – without heating chamber



- 1 Housing cover
- 2 Plain bearing bush
- 3 Liquid gasket
- 4 Driven shaft
- 5 Housing
- 6 Driving shaft
- 7 Gland cap
- 8 Packing ring
- 9 Gland follower

I BT 3 ... 7 – without heating chamber / ATEX



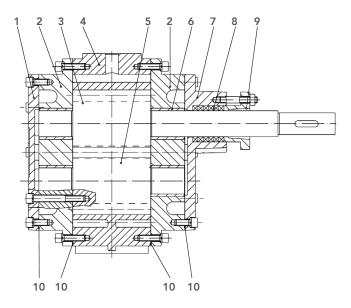
- 1 Overflow
- 2 Container for the preliminary fluid
- 3 Earth connection
- 4 Housing cover
- 5 Plain bearing bush
- 6 Liquid gasket
- 7 Driven shaft8 Housing
- 9 Driving shaft
- 10 Cover

- 11 O-ring
- 12 Seal retainer
- 13 Mechanical seal
- 14 Vent screw
- 15 Drain plug
- 16 Bearing
- 17 Rotary shaft seal
- 18 Parallel key
- 19 Screw plug
- 20 Antitwist protection



Construction BTH

I BTH – with heating chamber



- Housing cover
- Bearing cover
- 3 Driving shaft
- Housing
- Driven shaft
 Plain bearing bush
- Gland cap
- 8 Packing ring
- Gland follower
- 10 Liquid gasket



General

I Description

Pumps series BT and BTH are low speed gear pumps for transfering medium and high viscosity fluids, provided they have certain minimum amount of lubricating property, do not contain any solids and are chemically compatable with the materials of construction. The standard material of construction for housing, bearing cover and stuffing box cover is grey cast iron. The shafts and gears are manufactured from case hardening steel, hardened and ground. The shafts are carried in plain bearings manufactured in bronze, with an option of sintered iron.

The rotary shaft seal is a packed gland consisting of PTFE fillied aramid yarn, and the static sealing between mating parts is by means of either, liquid sealant or gaskets. All sealing materials are asbestos free. External axial loads are not permissable, restricted radial loads can be absorbed, dependant on their magnetude and direction.

Driving by flexible shaft coupling is preferred. In the case of fluids which require elevated temperatures to flow i. e. bitumen, wax etc. the BTH series pump should be used. In this model the housing is double walled to provide a heating jacked.

The pump transfer chamber is heated by circulating heat transfer fluid or steam through the jacket. The standard range of models is complimented by a range of a special models described below. The pump size BT 2 can be supplied in a corrosion and acid – resistant construction (stainless steel body and gear) with carbone plain bearings bushes; the operating pressure of this pump is limited to 5 bars. BT 1 up to BT 4 pumps can be manufactured with bronze housing and with further combinations of stainless steel gears and shafts or bronze gears and stainless steel shafts.

For use on liquids with an abrasive nature and high corrosive effects like resins, certain paints and varnishes as well as glues a special construction, Code No. / 04, is recommended, which is available for pump sizes BT 1 up to BT 7.

In this model all pump parts which are in contact with the transfering fluid are protected from wear and corrosion by a chemically deposited Ni/SiC- dispersion layer. This treatment substantially extends the service life compared with that of a standard model when used in these types of fluid.



Technical data

I Characteristics

BT

Series	0	1	2	3	4	5	6	7
Nominal size in cm ³ /rev	6.9	32	43	91	197	254	352	494

BTH

Series	1/55	1/105	2/100	2/130	3/150
Nominal size in cm ³ /rev	97	186	393	510	1056

Fixing type	Foot mounting							
Pipe connection	BT Whitworth-pipe thread BTH Whitworth-pipe thread, flange, flange with counterflange							
Direction of rotation	BT Clockwise and anticlockwise BTH Clockwise or anticlockwise							
Dimensions and weight	See pages 15 19							
Fitting position	Horizontal							
Ambient temperature	-10 60 °C							

I Hydraulic characteristics

Operating pressure Inlet port	min	-0,4 bar								
Operating pressure										
Outlet port	max	BT 1 7 8 bar								
		BT 0 1 bar								
		BT 2 stainless steel 5 bar								
		Higher operating pressure on request								
Pressure in the heating	jacket									
	max	10 bar								
Media temperature		-10 220 °C								
Viscosity		76 30 000 mm ² /s Other viscosities on request								
Required drive power		See technical data on pages 8 and 9								
Speed		100 750 1/min								

I Other Types

Pump with electric motor, coupling and coupling guard mounted on a common base plate.

Accessories

Flexible coupling



Technical data BT

I Required drive power

			BT 0		ВТ	Г1			ВТ	2			ВТ	3			ВТ	4			ВТ	5			ВТ	6			ВТ	7	
	Discharge	e flow in I/min	-		2	.5			4	.0			8.	0			16	0			24	.0			34	1.0			48	3.0	
		sure in bar	1	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
E.		76	-	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.15	0.15	0.15	0.15	0.22	0.30	0.22	0.30	0.37	0.44	0.30	0.44	0.60	0.66	0.37	0.52	0.66	0.8
2	sity 12/s	760	-	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.15	0.15	0.15	0.15	0.22	0.22	0.30	0.37	0.37	0.37	0.44	0.52	0.60	0.52	0.66	0.74	0.88	0.66	0.88	1.03	1.1
	Viscosity in mm ² /s	3800	-	0.07	0.07	0.07	0.07	0.15	0.15	0.15	0.15	0.22	0.22	0.30	0.30	0.37	0.44	0.52	0.60	0.66	0.74	0.81	0.88	0.88	1.03	1.18	1.25	1.25	1.47	1.62	1.7
	-	7600	_	0.07		0.07	_																1.03			1.40	1.47	1.55	1.77	1.90	2.0
	Discharg	e flow in I/min	1.2		5	.0			8	.0			16	.0			32	0			48	.0			68	3.0			96	0.0	
	Press	sure in bar	1	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
		76	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.15	0.15	0.15	0.15	0.22	0.30	0.22	0.37	0.44	0.60	0.44	0.60	0.74	0.88	0.60	0.88	1.10	1.33	0.74	1.10	1.47	1.7
1	Viscosity in mm ² /s	760	0.07	0.07	0.07	0.15	0.15	0.15	0.15	0.22	0.22	0.22	0.30	0.37	0.37	0.44	0.60	0.66	0.74	0.74	0.88	1.10	1.25	0.96	1.25	1.47	1.70	1.33	1.77	2.06	2.3
	Visc in m	3800	0.15	0.15	0.15	0.15	0.22	0.22	0.30	0.30	0.37	0.44	0.44	0.52	0.60	0.81	0.86	1.03	1.10	1.25	1.47	1.70	1.84	1.77	2.06	2.28	2.50	2.40	2.90	3.20	3.5
		7600	-	0.15	0.22	0.22	0.22	0.30	0.37	0.37	0.37	0.52	0.60	0.60	0.66	1.03	1.18	1.25	1.33	1.55	1.77	2.00	2.13	2.20	2.50	2.70	2.95	3.00	3.50	3.80	5.0
ļ		e flow in I/min		_		.5			12				24				48				72				10				14		
ŀ	Press	sure in bar	1	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
	رز ارد	76				0.15							-										1.25					0.96		2.06	
	Viscosity in mm ² /s	760				0.15	_																1.90					2.06		3.20	
	.≘. ≷	3800	0.15		-	0.30						-	-				-				2.30		2.70				3.80			4.80	
		7600	-	0.22	0.30	0.30	0.30	0.44	0.52	0.52	0.60	0.74	0.88	0.96	1.03	1.47	1.70	1.84	2.00	2.40	2.70	2.90	3.30	3.30	3.80	4.10	4.40	4.70	5.20	5.70	6.1
	Discharg	e flow in I/min	2.5		10	0.0			16	5.0			32	.0			64	0			96	.0			136	6.0			19:	2.0	
		sure in bar	1	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
		76	0.07	0.07	0.15	0.15	0.22	0.15	0.22	0.30	0.30	0.22	0.37	0.44	0.52	0.44	0.66	0.88	1.03	0.66	1.03	1.40	1.70	0.88	1.47	1.90	2.40	1.30	2.00	2.70	3.3
	sit n ² /																						_								4.7
=	Ω E	760	0.15	0.15	0.22	0.22	0.30	0.30	0.37	0.37	0.44	0.44	0.60	0.66	0.74	0.88	1.18	1.33	1.55	1.40	1.80	2.20	2.50	1.90	2.50	3.00	3.40	2.70	3.60	4.20	
	Viscosity in mm²/s	760 3800				0.22												-					-						_		8.10
	Visco in mr																	-					-						_		8.1
			-		0.37					0.74				1.25				2.43				3.90	-			5.40			_	7.60	8.1
	Discharg	3800	3.1	0.30	0.37	0.37	0.44	0.60	0.66	0.74	0.96	1.03	40	1.25	1.33	2.00	2.20	0	2.58	3.20	3.50 120 4	3.90	4.20	4.40	5.00 170 4	5.40 0.0 6	6.00	6.10	6.90 24	7.60 0.0 6	8
	Dischargo Press	3800 e flow in I/min	3.1 1 0.15	0.30 2 0.07	0.37 12 4 0.15	0.37 2.5 6 0.20	0.44 8 0.22	0.60 2 0.15	0.66 20 4 0.27	0.74 0.0 6 0.34	0.96 8 0.37	1.03 2 0.30	40 4 0.44	1.25 .0 6 0.60	1.33 8 0.66	2.00 2 0.52	2.20 80 4 0.88	2.43 0 6 1.10	2.58 8 1.33	3.20 2 0.81	3.50 120 4 1.33	3.90 0.0 6 1.77	4.20 8 2.14	2 1.10	5.00 170 4 1.90	5.40 0.0 6 2.40	8 3.00	6.10 2 1.60	6.90 24 4 2.60	7.60 0.0 6 3.40	8 4.0
	Dischargo Press	3800 e flow in l/min sure in bar	3.1 1 0.15	0.30 2 0.07	0.37 12 4 0.15	0.37	0.44 8 0.22	0.60 2 0.15	0.66 20 4 0.27	0.74 0.0 6 0.34	0.96 8 0.37	1.03 2 0.30	40 4 0.44	1.25 .0 6 0.60	1.33 8 0.66	2.00 2 0.52	2.20 80 4 0.88	2.43 0 6 1.10	2.58 8 1.33	3.20 2 0.81	3.50 120 4 1.33	3.90 0.0 6 1.77	4.20 8 2.14	2 1.10	5.00 170 4 1.90	5.40 0.0 6 2.40	8 3.00	6.10 2 1.60	6.90 24 4 2.60	7.60 0.0 6 3.40	8 4.0
	Discharg	3800 e flow in I/min sure in bar 76	3.1 1 0.15	0.30 2 0.07 0.20	0.37 12 4 0.15 0.25	0.37 2.5 6 0.20	0.44 8 0.22 0.35	0.60 2 0.15 0.37	0.66 20 4 0.27 0.44	0.74 0.0 6 0.34 0.52	0.96 8 0.37 0.26	1.03 2 0.30 0.60	40 4 0.44 0.74	1.25 .0 6 0.60 0.88	8 0.66 0.96	2.00 2 0.52 1.10	2.20 80 4 0.88 1.47	2.43 0 6 1.10	2.58 8 1.33 1.90	2 0.81 1.80	3.50 120 4 1.33 2.30	3.90 0.0 6 1.77 2.70	8 2.14 3.10	2 1.10 2.40	5.00 170 4 1.90 3.20	5.40 0.0 6 2.40 3.80	8 3.00 4.30	6.10 2 1.60 3.40	6.90 24 4 2.60 4.40	7.60 0.0 6 3.40 5.20	8 4.00 6.00
	Press Aisoosi Aisoo Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoosi Aisoo Aisoosi Aisoosi Aisoosi Aisoo Aisoosi Aisoosi Aisoosi Aisoosi Aisoo Ai	3800 e flow in I/min sure in bar 76 760 3800	3.1 1 0.15 0.15	0.30 2 0.07 0.20	0.37 4 0.15 0.25 0.40	0.37 2.5 6 0.20 0.30 0.45	0.44 8 0.22 0.35	0.60 2 0.15 0.37	0.66 20 4 0.27 0.44 0.74	0.74 0.0 6 0.34 0.52 0.81	0.96 8 0.37 0.26	1.03 2 0.30 0.60	40 4 0.44 0.74 1.18	1.25 .0 6 0.60 0.88 1.33	8 0.66 0.96	2.00 2 0.52 1.10	2.20 80 4 0.88 1.47 2.36	2.43 0 6 1.10 1.70 2.58	2.58 8 1.33 1.90	2 0.81 1.80	3.50 120 4 1.33 2.30 3.80	3.90 0.0 6 1.77 2.70 4.20	8 2.14 3.10	2 1.10 2.40	5.00 170 4 1.90 3.20 5.20	5.40 0.0 6 2.40 3.80 5.80	8 3.00 4.30	6.10 2 1.60 3.40	24 4 2.60 4.40 7.20	7.60 0.0 6 3.40 5.20 8.00	8 4.0 6.0
	Press AisoosiA	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min	3.1 1 0.15 0.15	0.30 2 0.07 0.20 0.35	0.37 12 4 0.15 0.25 0.40	0.37 2.5 6 0.20 0.30 0.45	0.44 8 0.22 0.35 0.50	0.60 2 0.15 0.37 0.66	0.66 20 4 0.27 0.44 0.74	0.74 0.0 6 0.34 0.52 0.81	0.96 8 0.37 0.26 1.03	1.03 2 0.30 0.60 1.10	1.10 40 4 0.44 0.74 1.18	1.25 .0 6 0.60 0.88 1.33	8 0.66 0.96 1.40	2.00 2 0.52 1.10 2.06	2.20 80 4 0.88 1.47 2.36	2.43 0 6 11.10 11.70 0	2.58 8 1.33 1.90 2.80	2 0.81 1.80 3.30	3.50 120 4 1.33 2.30 3.80	3.90 0.0 6 1.77 2.70 4.20	8 2.14 3.10 4.60	2 1.10 2.40 4.60	5.00 170 4 1.90 3.20 5.20	5.40 0.0 6 2.40 3.80 5.80	8 3.00 4.30 6.20	6.10 2 1.60 3.40 6.20	6.90 24 4 2.60 4.40 7.20	7.60 0.0 6 3.40 5.20 8.00	8 4.0 6.0 8.7
	Press Atisopsiy	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min	3.1 1 0.15 0.15 -	0.30 2 0.07 0.20 0.35	0.37 12 4 0.15 0.25 0.40	0.37 6 0.20 0.30 0.45 5.0	0.44 8 0.22 0.35 0.50	0.60 2 0.15 0.37 0.66	0.66 20 4 0.27 0.44 0.74	0.74 0.00 6 0.34 0.52 0.81	0.96 8 0.37 0.26 1.03	1.03 2 0.30 0.60 1.10	1.10 40 4 0.44 0.74 1.18	1.25 .0 6 0.60 0.88 1.33	1.33 8 0.66 0.96 1.40	2.00 2 0.52 1.10 2.06	80 4 0.88 1.47 2.36	2.43 00 6 11.10 11.70 0	2.58 8 1.33 1.90 2.80	2 0.81 1.80 3.30	3.50 120 4 1.33 2.30 3.80	3.90 6 1.77 2.70 4.20	8 8 2.14 3.10 4.60	2 1.10 2.40 4.60	5.00 170 4 1.90 3.20 5.20	5.40 0.0 6 2.40 3.80 5.80	6.00 8 3.00 4.30 6.20	6.10 2 1.60 3.40 6.20	6.90 244 4 2.60 4.40 7.20	7.60 0.0 6 3.40 5.20 8.00	8 4.0 6.0 8.7
	Press Atisopsiy	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76	3.1 1 0.15 0.15 - 3.8 1 0.15	0.30 2 0.07 0.20 0.35	0.37 12 4 0.15 0.25 0.40 15 4 0.18	0.37 6 0.20 0.30 0.45 6 0.24	0.44 8 0.22 0.35 0.50	0.60 2 0.15 0.37 0.66	0.66 20 4 0.27 0.44 0.74 4 0.32	0.74 0.00 6 0.34 0.52 0.81 6 0.40	0.96 8 0.37 0.26 1.03	2 0.30 0.60 1.10	400.44 0.74 1.18 48 4 0.53	1.25 6 0.60 0.88 1.33	8 0.66 0.96 1.40	2.00 2 0.52 1.10 2.06	2.20 80 4 0.88 1.47 2.36 4 1.05	2.43 0 6 11.10 11.70 0 6 11.32	2.58 8 1.33 1.90 2.80	2 0.81 1.80 3.30	3.50 120 4 1.33 2.30 3.80 144 4 1.60	3.90 6 1.77 2.70 4.20 6 2.10	8 2.14 3.10 4.60	2 1.10 2.40 4.60	170 4 1.90 3.20 5.20 20.4 2.30	5.40 0.0 6 2.40 3.80 5.80 4.0 6	8 3.00 4.30 6.20	2 1.60 3.40 6.20	244 4 2.60 4.40 7.20 28 4 3.10	7.60 6 3.40 5.20 8.00 6 4.10	8 4.0 6.0 8.7
	Press AisoosiA	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76 760	3.1 1 0.15 0.15 - 3.8 1 0.15	0.30 2 0.07 0.20 0.35 2 0.08 0.20	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30	0.37 6 0.20 0.30 0.45 6 0.24 0.36	0.44 8 0.22 0.35 0.50 8 0.26 0.38	0.60 2 0.15 0.37 0.66 2 0.18 0.37	0.66 2C 4 0.27 0.44 0.74 4 0.32 0.51	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59	0.96 8 0.37 0.26 1.03 8 0.45 0.64	2 0.30 0.60 1.10	40 4 0.44 0.74 1.18 48 4 0.53	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72	8 0.66 0.96 1.40 8 0.80	2.00 2 0.52 1.10 2.06 2 0.63 1.11	80 4 0.88 1.47 2.36 96 4 1.05 1.53	2.43 0 6 11.10 11.70 0 6 6 11.32	2.58 8 1.33 1.90 2.80 8 1.60 2.08	2 0.81 1.80 3.30 2 1.00 2.20	3.50 120 4 1.33 2.30 3.80 144 4 1.60 2.80	3.90 6 1.77 2.70 4.20 6 2.10 3.30	8 2.14 3.10 4.60 8 8 2.60 3.80	2 1.10 2.40 4.60 2 1.30 2.90	170 4 1.90 3.20 5.20 204 4 2.30 3.90	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50	8 3.00 4.30 6.20 8 3.60 5.20	2 1.60 3.40 6.20 2 1.90 4.20	244 4 2.60 4.40 7.20 28 4 3.10 5.40	7.60 6 3.40 5.20 8.00 6 4.10 6.40	8 4.0 6.0 8.7 4.8 7.1
	Press Atisopsiy	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76	3.1 1 0.15 0.15 - 3.8 1 0.15	0.30 2 0.07 0.20 0.35 2 0.08 0.20	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30	0.37 6 0.20 0.30 0.45 6 0.24	0.44 8 0.22 0.35 0.50 8 0.26 0.38	0.60 2 0.15 0.37 0.66 2 0.18 0.37	0.66 2C 4 0.27 0.44 0.74 4 0.32 0.51	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59	0.96 8 0.37 0.26 1.03 8 0.45 0.64	2 0.30 0.60 1.10	40 4 0.44 0.74 1.18 48 4 0.53	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72	8 0.66 0.96 1.40 8 0.80	2.00 2 0.52 1.10 2.06 2 0.63 1.11	80 4 0.88 1.47 2.36 96 4 1.05 1.53	2.43 0 6 11.10 11.70 0 6 6 11.32	2.58 8 1.33 1.90 2.80 8 1.60 2.08	2 0.81 1.80 3.30 2 1.00 2.20	3.50 120 4 1.33 2.30 3.80 144 4 1.60 2.80	3.90 6 1.77 2.70 4.20 6 2.10 3.30	8 2.14 3.10 4.60 8 8 2.60 3.80	2 1.10 2.40 4.60 2 1.30 2.90	170 4 1.90 3.20 5.20 204 4 2.30 3.90	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50	8 3.00 4.30 6.20 8 3.60 5.20	2 1.60 3.40 6.20 2 1.90 4.20	244 4 2.60 4.40 7.20 28 4 3.10 5.40	7.60 6 3.40 5.20 8.00 6 4.10 6.40	8 4.0 6.0 8.7 4.8 7.1
	Press AtjscostA AtjscostA Press S/2mm ui Press AtjscostA AtjscostA	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76 760	3.1 1 0.15 0.15 - 3.8 1 0.15 -	0.30 2 0.07 0.20 0.35 2 0.08 0.20	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30 0.44	0.37 6 0.20 0.30 0.45 6 0.24 0.36	0.44 8 0.22 0.35 0.50 8 0.26 0.38	0.60 2 0.15 0.37 0.66 2 0.18 0.37	0.66 2CC 4 0.27 0.44 0.74 4 0.32 0.51 0.62	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59	0.96 8 0.37 0.26 1.03 8 0.45 0.64	2 0.30 0.60 1.10	40 4 0.44 0.74 1.18 48 4 0.53	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72 1.10	8 0.66 0.96 1.40 8 0.80	2.00 2 0.52 1.10 2.06 2 0.63 1.11	80 4 0.88 1.47 2.36 96 4 1.05 1.53	2.43 0 6 11.10 11.70 22.58 0 6 11.32 11.80 22.95	2.58 8 1.33 1.90 2.80 8 1.60 2.08	2 0.81 1.80 3.30 2 1.00 2.20	3.50 120 4 1.33 2.30 3.80 144 4 1.60 2.80	3.90 6 11.77 2.70 4.20 6 2.10 3.30 4.50	8 2.14 3.10 4.60 8 8 2.60 3.80	2 1.10 2.40 4.60 2 1.30 2.90	170 4 1.90 3.20 5.20 204 4 2.30 3.90	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50 6.40	8 3.00 4.30 6.20 8 3.60 5.20	2 1.60 3.40 6.20 2 1.90 4.20	244 4 2.60 4.40 7.20 28 4 3.10 5.40	7.60 6 3.40 5.20 8.00 6 4.10 6.40 9.00	8 4.0 6.0 8.7 4.8 7.1
	Press AjsoosiA Press AjsoosiA AjsoosiA Press AjsoosiA Discharge	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76 760 3000	3.1 1 0.15 0.15 - 3.8 1 0.15 -	0.30 2 0.07 0.20 0.35 2 0.08 0.20	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30 0.44	0.37 6 0.20 0.30 0.45 6 0.24 0.36 0.50	0.44 8 0.22 0.35 0.50 8 0.26 0.38	0.60 2 0.15 0.37 0.66 2 0.18 0.37	0.66 2CC 4 0.27 0.44 0.74 4 0.32 0.51 0.62	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59 0.80	0.96 8 0.37 0.26 1.03 8 0.45 0.64	2 0.30 0.60 1.10	40 0.44 0.74 1.18 48 4 0.53 0.91 1.35	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72 1.10	8 0.66 0.96 1.40 8 0.80	2.00 2 0.52 1.10 2.06 2 0.63 1.11	80 4 0.88 1.47 2.36 4 1.05 1.53 2.68	2.43 0 6 11.10 11.70 22.58 0 6 11.32 11.80 22.95	2.58 8 1.33 1.90 2.80 8 1.60 2.08	2 0.81 1.80 3.30 2 1.00 2.20	3.50 120 4 1.33 2.30 3.80 144 4 1.60 2.80 4.00	3.90 6 11.77 2.70 4.20 6 2.10 3.30 4.50	8 2.14 3.10 4.60 8 8 2.60 3.80	2 1.10 2.40 4.60 2 1.30 2.90	5.00 170 4 1.90 3.20 5.20 20.4 2.30 3.90 5.80	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50 6.40	8 3.00 4.30 6.20 8 3.60 5.20	2 1.60 3.40 6.20 2 1.90 4.20	244 2.60 4.40 7.20 28 4 3.10 5.40 8.00	7.60 6 3.40 5.20 8.00 6 4.10 6.40 9.00	8 4.00 6.00 8.70 8 4.80 7.10
	Press Atisoosiy Press Atisoosiy Press Press	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76 760 3000	3.1 1 0.15 0.15 - 3.8 1 0.15 - 4.4	0.30 2 0.07 0.20 0.35 2 0.08 0.20 0.34	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30 0.44 17	0.37 2.5 6 0.20 0.30 0.45 6 0.24 0.36 0.50	0.44 8 0.22 0.35 0.50 8 0.26 0.38 0.52	0.60 2 0.15 0.37 0.66 2 0.18 0.37 0.48	0.66 20 4 0.27 0.44 0.74 4 0.32 0.51 0.62	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59 0.80	0.96 8 0.37 0.26 1.03 8 0.45 0.64 0.85	2 0.30 0.60 1.10 2 0.36 0.74 1.18	1.10 40 4 0.44 0.74 1.18 48 4 0.53 0.91 1.35	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72 1.10 1.54	8 0.66 0.96 1.40 8 0.80 1.18 1.62	2.00 0.52 1.10 2.06 2 0.63 1.11 2.26	2.20 80 4 0.88 1.47 2.36 4 1.05 1.53 2.68	2.43 0 6 11.10 11.70 0 6 11.32 11.80 22.95	2.58 8 1.33 1.90 2.80 8 1.60 2.08 3.23	2 0.81 1.80 3.30 2 1.00 2.20 3.40	3.50 120 4 1.33 2.30 3.80 144 4 1.60 2.80 4.00	3.90 6 1.77 2.70 4.20 6 2.10 3.30 4.50	8 8 2.14 3.10 4.60 8 8 2.60 3.80 5.00	2 1.10 2.40 4.60 2 1.30 2.90 4.80	5.00 170 4 1.90 3.20 5.20 200 4 2.30 3.90 5.80	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50 6.40	8 3.00 4.30 6.20 8 3.60 7.10	2 1.60 3.40 6.20 2 1.90 4.20 6.80	244 4 2.60 4.40 7.20 28 4 3.10 5.40 8.00	7.60 6 3.40 5.20 8.00 6 4.10 6.40 9.00 6	8 4.00 6.00 8.70 8 4.80 7.11 9.70
	Press Atisoosiy Press Atisoosiy Press Press	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76 760 3000 e flow in I/min	3.1 1 0.15 0.15 - 3.8 1 0.15 - 4.4 1 0.15	2 0.07 0.20 0.35 2 0.08 0.20 0.34	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30 0.44 4 0.21	0.37 6 0.20 0.30 0.45 6 0.24 0.36 0.50 7.5 6 0.28	0.44 8 0.22 0.35 0.50 8 0.26 0.38 0.52	0.60 2 0.15 0.37 0.66 2 0.18 0.37 0.48	0.66 20 4 0.27 0.44 0.74 4 0.32 0.51 0.62 28 4 0.37	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59 0.80 6 0.47	0.96 8 0.37 0.26 1.03 8 0.45 0.64 0.85	2 0.30 0.60 1.10 2 0.36 0.74 1.18	40.44 0.74 1.18 48 4 0.53 0.91 1.35	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72 1.10 1.54 .0 6	8 0.66 0.96 1.40 8 0.80 1.18 1.62	2.00 2 0.52 1.10 2.06 2 0.63 1.11 2.26	2.20 80 4 0.88 1.47 2.36 4 1.05 1.53 2.68 112 4 1.23	2.43 0 6 1.10 1.70 0 6 1.32 1.80 2.95	2.58 8 1.33 1.90 2.80 8 1.60 2.08 3.23	2 0.81 1.80 3.30 2 1.00 2.20 3.40	120 4 1.33 2.30 3.80 144 4 1.60 2.80 4.00	3.90 6 1.77 2.70 4.20 6 2.10 3.30 4.50 6 2.50	8 2.14 3.10 4.60 8 2.60 3.80 5.00	2 1.10 2.40 4.60 2 1.30 2.90 4.80	5.00 177 4 1.90 3.20 5.20 20.4 2.30 3.90 5.80 23:4 4 2.70	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50 6.40 8.0 6 3.40	8 3.00 4.30 6.20 8 3.60 7.10	2 1.60 3.40 6.20 2 1.90 6.80	244 4 2.60 4.40 7.20 28 4 3.10 5.40 8.00	7.60 6 3.40 5.20 8.00 6 4.10 6.40 9.00 6 4.70	8 4.00 6.00 8.70 8 4.80 7.10 9.70
	Press AjsoosiA Press AjsoosiA AjsoosiA Press AjsoosiA Discharge	3800 e flow in I/min sure in bar 76 760 3800 e flow in I/min sure in bar 76 760 3000 e flow in I/min sure in bar 76 760 760 760 760	3.1 1 0.15 0.15 - 3.8 1 0.15 - 4.4 1 0.15	0.30 2 0.07 0.20 0.35 2 0.08 0.20 0.34	0.37 12 4 0.15 0.25 0.40 15 4 0.18 0.30 0.44 4 0.21 0.35	0.37 6 0.20 0.30 0.45 6 0.24 0.36 0.50	0.44 8 0.22 0.35 0.50 8 0.26 0.38 0.52	0.60 2 0.15 0.37 0.66 2 0.18 0.37 0.48	0.66 20 4 0.27 0.44 0.74 4 0.32 0.51 0.62 28 4 0.37 0.59	0.74 0.00 6 0.34 0.52 0.81 6 0.40 0.59 0.80 6 0.47 0.69	0.96 8 0.37 0.26 1.03 8 0.45 0.64 0.85 8 0.53 0.75	2 0.30 0.60 1.10 2 0.36 0.74 1.18	40.44 0.74 1.18 48 4 0.53 0.91 1.35 56 4 0.62 1.07	1.25 .0 6 0.60 0.88 1.33 .0 6 0.72 1.10 1.54 .0 6 0.84 1.29	8 0.66 0.96 1.40 8 0.80 1.18 1.62 8 0.93 1.38	2.00 2 0.52 1.10 2.06 2 0.63 1.11 2.26 2 0.74 1.64	2.20 80 4 0.88 1.47 2.36 4 1.05 1.53 2.68 112 4 1.23 2.13	2.43 0 6 11.10 11.70 22.58 0 6 11.32 11.80 22.95	2.58 8 1.33 1.90 2.80 2.80 3.23 8 8 1.87 2.77	2 0.81 1.80 3.30 2 1.00 2.20 3.40 2 1.20 2.50	1.33 2.30 3.80 144 4 1.60 2.80 4.00 168 4 1.90 3.20	3.90 6 1.77 2.70 4.20 6 2.10 3.30 4.50 6 2.50 3.80	8 2.14 3.10 4.60 8 8 2.60 3.80 5.00	2 1.10 2.40 4.60 2 1.30 2.90 4.80	5.00 170 4 1.90 3.20 5.20 200 4 2.30 3.90 5.80 233 4 2.70 4.60	5.40 0.0 6 2.40 3.80 5.80 4.0 6 2.90 4.50 6.40 8.0 6 3.40 5.30	8 3.00 4.30 6.20 8 3.60 5.20 7.10	2 1.60 3.40 6.20 2 1.90 4.20 6.80	244 4 2.60 4.40 7.20 28 4 3.10 5.40 8.00 33. 4 3.60 6.30	7.60 6 3.40 5.20 8.00 6 4.10 6.40 9.00 6 4.70 7.40	8 4.00 6.00 8.70 8 4.80 7.11 9.70 8 5.66 8.30

Drive power required at high viscosities

See page 10

Drive power in kW



Technical data BTH

I Required drive power

				втн	1/55			втн	1/105			втн	2/100			втн :	2/130			втн :	3/150	
	Discharge	e flow in I/min		9	.5			17	7.0			38	3.0			50).0			10	0.0	
-	Press	sure in bar	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
n = 100 min ⁻¹		76	0.07	0.15	0.15	0.22	0.15	0.22	0.30	0.37	0.30	0.44	0.60	0.66	0.37	0.52	0.66	0.88	0.88	1.18	1.47	1.84
= 10	Viscosity in mm ² /s	760	0.15	0.22	0.22	0.22	0.30	0.37	0.40	0.44	0.52	0.66	0.81	0.88	0.66	0.88	1.03	1.18	1.47	1.84	2.14	2.43
_	Visc m	3800	0.30	0.30	0.30	0.37	0.52	0.60	0.62	0.66	0.96	1.10	1.25	1.33	1.25	1.47	1.62	1.77	2.60	3.00	3.30	3.60
		7600	0.30	0.37	0.37	0.44	0.60	0.66	0.74	0.81	1.18	1.33	1.47	1.55	1.55	1.77	1.90	2.10	3.20	3.60	3.80	4.20
	Discharge	e flow in I/min	19.0					34.0				76	5.0		100.0				200.0			
		sure in bar	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
min.		76	0.15	0.22	0.30	0.44	0.30	0.44	0.60	0.74	0.60	0.88	1.10	1.33	0.74	1.10	1.50	1.80	1.50	2.40	3.00	3.70
n = 200 min	sity 1 ² /s	760	0.30	0.37	0.44	0.52	0.52	0.66	0.81	0.88	1.03	1.33	1.62	1.84	1.30	1.80	2.10	2.40	2.90	3.70	4.30	4.90
Ë	Viscosity in mm ² /s	3800	0.52	0.60	0.66	0.74	0.96	1.10	1.25	1.33	1.84	2.14	2.43	2.65	2.40	2.90	3.20	3.50	5.10	6.00	6.50	7.10
		7600	0.66	0.74	0.77	0.81	1.18	1.33	1.47	1.55	2.30	2.60	2.90	3.10	3.00	3.50	3.80	4.00	6.30	7.10	7.70	8.30
		e flow in I/min			3.5				1.0				4.0				0.0			30		
nin-1	Press	sure in bar	2	4	6	8	2	4	6	8	2	4	4 55	1.00	2	4	6	8	2	2.20	6	8
n = 300 min ⁻¹	's 's	76 760	0.22	0.37	0.44	0.52	0.37	1.03	1.18	0.96	0.74	1.18	1.55	1.90 2.70	1.00	2.70	2.10	3.60	2.20 4.40	3.30 5.50	4.20 6.40	5.10
=	Viscosity in mm ² /s	3800		0.88	0.86	1.10	1.40		1.80		1.60	2.00	2.40	3.90	2.10	4.30	3.20	5.30				7.30
	≥. ≤	7600	0.81	1.10	1.18	1.10	1.40	2.00	2.20	2.00	3.60	3.20 4.00	3.60 4.30	4.70	3.70 4.70	5.30	4.80 5.80	6.20	7.70 9.40	8.80	9.70	10.60
		7000	0.70	1.10	1.10	1.20	1.00	2.00	2.20	2.40	0.00	4.00	4.00	4.70	4.70	3.30	3.00	0.20	7.40	10.70	11.00	12.40
	Discharge	e flow in I/min		38	3.0			68	3.0			15	2.0			20	0.0			40	0.0	
min-1	Press	sure in bar	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
n = 400 min ⁻¹	sity 2/s	76	0.30	0.44	0.60	0.66	0.52	0.81	1.03	1.25	0.96	1.55	2.10	2.50	1.30	2.10	2.70	3.30	2.80	4.40	5.60	6.80
= =	Viscosity in mm ² /s	760	0.60	0.74	0.88	0.96	1.10	1.40	1.60	1.80	2.10	2.70	3.20	3.70	2.80	3.60	4.20	4.70	5.80	7.40	8.60	9.70 14.10
		3800	1.25	1.40	1.55	1.70	2.40	2.60	2.90	3.10	4.70	5.30	5.80	6.20	6.10	6.90	7.60	8.10	10.20	11.80	13.00	14.10
	Discharge	e flow in I/min		47	7.5			85	5.0		190.0			250.0				500.0				
1-nin	Press	sure in bar	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
= 500 min	ry s/	76	0.37	0.60	0.74	0.88	0.66	1.03	1.33	1.60	1.20	1.90	2.60	3.20	1.60	2.60	3.40	4.10	3.50	5.50	7.00	7.70
==	Viscosity in mm ² /s	760	0.74	0.96	1.10	1.25	1.30	1.70	2.00	2.30	2.60	3.30	4.00	4.60	3.40	4.40	5.30	6.00	7.20	9.20	10.70	
	≥.⊆	3800	1.30	1.50	1.70	1.80	2.40	2.80	3.10	3.40	4.70	5.50	6.10	6.60	6.20	7.20	8.00	8.70	12.70	14.70	16.20	17.70
	Discharge	e flow in I/min		57	7.0			10	2.0			22	8.0			30	0.0			40	0.0	
L_u		sure in bar	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8	2	4	6	8
n = 600 min ⁻¹		76	0.44	0.72	0.89	1.06	0.79	1.24	1.59	1.92	1.40	2.30	3.10	3.80	1.90	3.10	4.10	4.90	4.20	6.60	8.50	
9 = u	Viscosity in mm ² /s	760	0.90	1.18	1.35	1.52	1.60	2.10	2.40	2.70	3.20	4.10	4.90	5.60	4.30	5.50	6.50	7.30	9.00	11.40	13.30	9.20 14.00
	i. Ki	3000	1.40	1.70	1.90	2.00	2.50	3.00	3.30	3.70	5.30	6.20	7.00	7.70	7.00	8.20	9.20	10.00	14.40	16.80	18.70	19.40
		<u>'</u>																				
7		e flow in I/min	2	4	5.5	_0	2	11 4	9.0		2	26 4	6.0 6	8	2	35 4	0.0		2	70 4	0.0	8
n = 700 min ⁻¹		sure in bar 76	0.52	0.84	1.04	1.23	0.92	1.45	1.86	2.23	1.70	2.60	3.60	4.50	2.20	3.60	4.80	5.80	4.90	7.70	6 9.90	
ı = 70	Viscosity in mm ² /s	760	1.05	1.37	1.57	1.76	1.90	2.40	2.80	3.20	3.80	4.70	5.70	6.60	5.00	6.40	7.60	8.60	10.50	13.30	15.50	16.30
_	Visc m	2000	1.40	1.70	1.57	2.10	2.50	3.00	3.40	3.20	5.20	6.10	7.10	8.00	6.80	8.20	9.40	10.40	14.00	16.80	19.00	10.70 16.30
		2000	1.40	1.70	1.70	2.10	2.50	3.00	3.40	3.00	J.20	0.10	/.10	0.00	0.00	0.20	7.40	10.40	14.00	10.00	17.00	17.00

Drive power required at high viscosities

See page 10



Technical data

I Drive power required at high viscosities

Viscosities above values specified in the tables on the pages 8 and 9 require a higher power input. In such cases the drive power of the pump P_{1Pu} can be determined by means of the viscosity factor f_{ν} (see table on the right) as follows:

$$P_{1Pu} = P_{Tab 76} + f_{v} \cdot Q_{Tab}$$

Example

Specifications:

BT 4

n = 200 1/min

 $v = 10 000 \text{ mm}^2/\text{s}$

p = 8 bar

 $P_{\text{Tab }76}$ 0.6 kW (table value at 76 mm²/s)

 $f_{y} = 27 \times 10^{-3} \text{ kW min/l}$

Q_{Tab} 32 l/min

 P_{1Pu} 0.6 kW + 27 x 10⁻³ kW min/l x 32 l/min

= 1.46 kW

Kinematic viscosity v in mm²/s	Speed n _{max} in 1/min	Viscosity factor f_{ν} in 10^{-3} kW min/l				
1 000	750	9.5				
2 000	600	14.0				
3 000	500	17.0				
6 000	400	22.5				
10 000	300	27.0				
20 000	200	34.0				
30 000	100	38.0				

Note

Spread of output: \pm -5 % of table values Q. Viscosities below 76 mm²/s effect a decrease of output flow values, Q. The power output of driving motor must exceed the table values P by about 20 %.

Important: When determining the power input required always consider the max. operating viscosity (e.g. in the starting situation)!



Type key BT



1 Produc

BT | Pump without heating jacket (cylindrical shaft end without step bearing, with packing and threaded pipe connection)

2 Serie	2 Series									
0	Displacement: 6.9 cm ³ /rev									
1	Displacement: 32 cm ³ /rev									
2	Displacement: 43 cm ³ /rev									
3	Displacement: 91 cm ³ /rev									
4	Displacement: 197 cm ³ /rev									
5	Displacement: 254 cm ³ /rev									
6	Displacement: 352 cm ³ /rev									
7	Displacement: 494 cm ³ /rev									

3 Direction of rotation

B Clockwise and anticlockwise, flow direction alternating

4 Pipe connection

Z Whitworth pipe thread

5 Design code

O Specified by KRACHT

6 Cons	6 Construction of housing and bearing									
Α	EN-GJL-200 without bearing bush									
В	EN-GJL-200 with bronze bearing bush									
С	EN-GJL-200 with sintered iron bearing bushes									
U	Bronze without bearing bush									
R	Stainless steel with carbon bearing bush (material No.1.4308)									

7 Cons	7 Construction of gear unit									
С	Steel shafts and gear unhardened									
K	Steel shafts and gear hardened									
S	Stainless steel shaft (material No. 1.4057), bronze gear									

8 Kind of sealing (packing)

51 Arolan

9 Code-No. for special construction

04 Wear and corrosion protected model

I Available pump types

		7 Construction of gear unit												
		С	K	S	Т									
<u> </u>	Α	BT 0	-	-	-									
ing ring	В	-	BT 1 7	-	-									
onstruction f housing d bearing	С	-	BT 1 7	-	-									
Con of h and	U	-	-	BT 1 4	BT 1 4									
9	R	-	-	-	BT 2									

Stainless steel shafts and gear heat treated (material No. 1.4057)



Type key BTH



1 Product

BTH Pump with heating jacket (cylindrical shaft end without step bearing, with packing, threated pipe- or flange connection)

	2 Series										
1/55	Displacement: 97 cm ³ /rev										
1/105	5 Displacement: 186 cm³/rev										
2/100	Displacement: 393 cm³/rev										
2/130	30 Displacement: 510 cm ³ /rev										
3/150	Displacement: 1056 cm ³ /rev										

3 Dire	ction of rotation
R	Clockwise
1	Anticlockwice

4 Pipe connection											
Z	/hitworth pipe thread										
F	Flange										
G	Flange with counter flange										

5 Design code0 Specified by KRACHT

6 Construction of housing and bearing								
В	EN-GJL-200 with bronze bearing bush							
С	EN-GJL-200 with sintered iron bearing bushes							

7 Construction of gear unit												
K	Steel shafts and gear hardened (driving shaft one-piece)											
F	Steel shafts and gear hardened (driving shaft two-piece)											

8 Kind	of sealing (packing)
51	Arolan

9	Code	e-No. for special construction
	04	Wear and corrosion protected model

I Available pump types

		7 Construction of gear unit									
		K	F								
nstruction housing bearing	В	BTH 1 / BTH 2	BTH 3								
6 Const of ho	С	BTH 1 / BTH 2	BTH 3								



BT - ATEX

General

Pumps of the series BT are also available in ATEX design. The pumps can be used as follows:

- a. In zone 2 (Gas-@, category 3G) in explosion groups IIA and IIB and IIC
- b. In zone 1 (Gas-®, category 2G) in explosion groups IIA and IIB and IIC

Qualification with regard to surface temperature is T4. For all gases, vapours, mists with an ignition temperature > 135 °C, the pumps are not an ignition source.

Permissible temperature: -20 ... 60 °C.

I Identification in accordance with EC directive RL 94/9/EG

Manufacturer: Kracht GmbH

58791 Werdohl, Germany

Type designation: BT ...

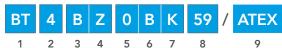
Job No., production date: xxxxxx/xx-xxx xx.xx

Tech. File Ref.: TFR: 07.01X

Ignition protection

The ATEX design BT pumps are equipped with a mechanical seal with a fluid receiver. In the area of the fluid receiver the BT-ATEX has a connection for a container for filling the receiver fluid. An overflow serves to monitor the amount which leaks from mechanical seal.

Type key



1 Prod	uct
BT	Pump without heating jacket

2 Series												
3	Displacement: 91 cm ³ /rev											
4	Displacement: 197 cm ³ /rev											
5	Displacement: 254 cm ³ /rev											
6	Displacement: 352 cm ³ /rev											
7	Displacement: 494 cm ³ /rev											

3 Direction of rotation

B Clockwise and anticlockwise

4 Pipe connection

Z Whitworth pipe thread

5 Design code

O Specified by KRACHT

6 Construction of housing and bearing

B EN-GJL-200 with bronze bearing bush

7 Construction of gear unit

K Steel shafts and gear hardened

8 Sealing types

59	Mechanical seal with liquid seal, shaft seal: FKM
76	Mechanical seal with liquid seal shaft seal: PTFF

97 Double-acting mechanical seal with sealing liquid (available for series 4 ... 7)

9 Code for special construction

ATEX



BT - ATEX

I General characteristics

Design

Serie

Pipe connection

Mounting position

Fixing type

Direction of rotation

Ambient temperature

External gear pump

3 ... 7

Whitworth pipe thread

Horizontal

Foot mounting

Clockwise and anticlockwise

-10 ... 40 °C

I Hydraulic characteristics

Media temperature

Speed

Viscosity

Operating pressure inlet port

Operating pressure

outlet port

max

-10 ... 60 °C

100 ... 750 1/min

76 ... 20 000 mm²/s

-0,4 ... 8 bar

8 bar

Materials

Housing, bearings, gears

Mechanical sealing

Other media-side seals

Uni-oiler

Type plate

Notched nail

Gasket ring screw-plugs

Other parts

See type key or type plate at pump

SiC-SiC, FFKM, stainless steel

Loctite 510, FEP with FKM-core

Ms, Plexiglas

Stainless steel

Al (Mg portion < 7,5 %)

Cu

St

Other information

Filtering

Permissible media

Axial and centrifugal forces on shaft end





Filter fineness 60 μm (if required, install a suction filter to prevent the pump from being jammed by foreign particles).

Inflammable and non-inflammable liquids without abrasive ingredients which are compatible with the materials of which the pump is made. The liquid must not be static charged. Flame point and minimum ignition temperature must be observed by the operator. Media-specific characteristics must be taken into consideration. The fluid must have a minimum amount of lubricity.

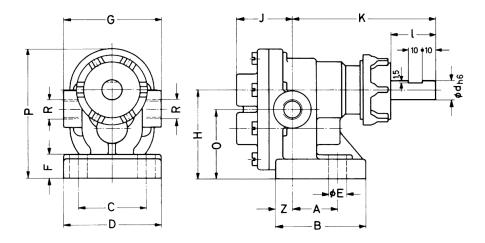
Not allowed

For certain operating conditions, the stated minimum and maximum values are not valid! Thus, for example, the maximum operating pressure is not permissible in conjunction with low rpm and minimum viscosity.

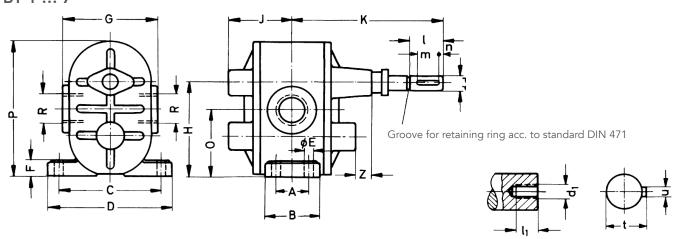
Media-specific characteristics must be observed, e.g. in the case of emulsions and solutions containing water, the maximum operating temperature is 50 °C, the pump must be located beneath the level of the liquid.



BT 0



I BT 1 ... 7



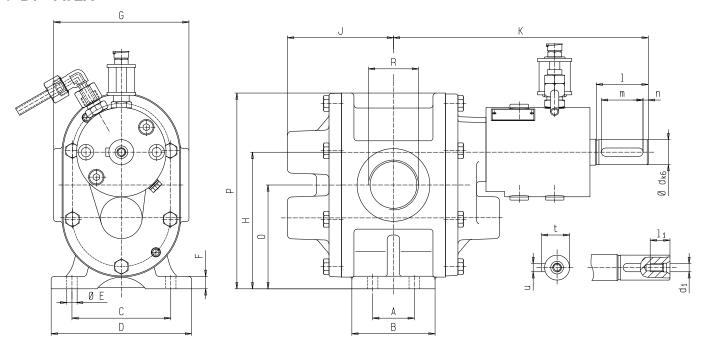
Inlet and outlet ports equally sized

Parallel key acc. to DIN 6885

Pump										Di	nensi	ons											Weight
type														Shaft end									
	R A B C D ØE F G H O J K P									ød	1	m	n	u	t	d ₁	I ₁	Z					
BT 0	G 1/4	30	60	45	65	11	15	65	60.0	47.0	38	95	88	13	22	-	-	-	-	-	-	11	2
BT 1	G ½	-	45	55	75	9	12	85	69.0	54.0	48	150	100	13	40	15	10	5	15.0	M6	15	20	3
BT 2	G 3/4	35	55	65	90	10	12	90	88.5	71.0	65	165	125	15	45	25	5	5	17.0	M6	15	20	5
BT 3	G 1	40	65	85	105	10	12	100	111.0	88.5	70	190	155	18	50	30	5	6	20.5	M6	15	23	7
BT 4	G 1½	40	80	95	135	10	12	130	131.5	100.0	102	245	189	25	50	40	5	8	28.0	M8	20	28	15
BT 5	G 1½	35	75	140	180	14	20	150	145.0	103.0	98	250	213	25	50	40	5	8	28.0	M8	20	29	20
BT 6	G 2	35	75	185	225	14	28	175	175.0	126.0	106	245	252	25	50	40	5	8	28.0	M8	20	29	29
BT 7	G 2	60	100	185	225	14	28	240	175.0	126.0	123	260	252	25	50	40	5	8	28.0	M8	20	29	37



I BT - ATEX



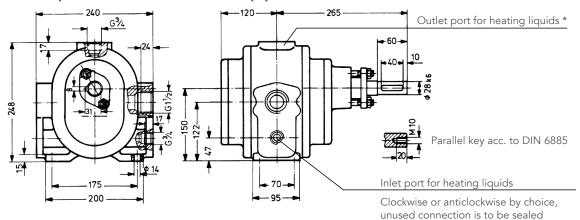
Inlet and outlet ports equally sized

Pump	Dimensions										Weight											
type	Shaft end																					
	R	Α	В	С	D	øΕ	F	G	Н	0	J	K	Р	ød	1	m	n	u	t	d_1	l ₁	
BT 4	G 2	40	80	95	135	10	12	130	131.5	100	102	245	189	24	50	40	5	8	27	M8	19	18.5
BT 6	G 2	35	75	185	225	14	28	175	175.0	126	106	245	252	24	50	40	5	8	27	M8	19	33.0

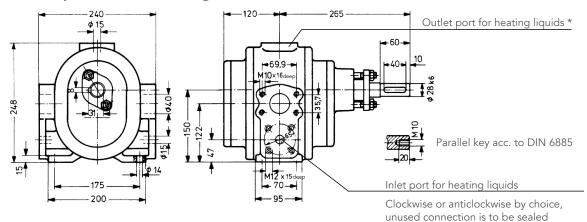
Dimensions / weights of sizes 3, 5 and 7 on request.



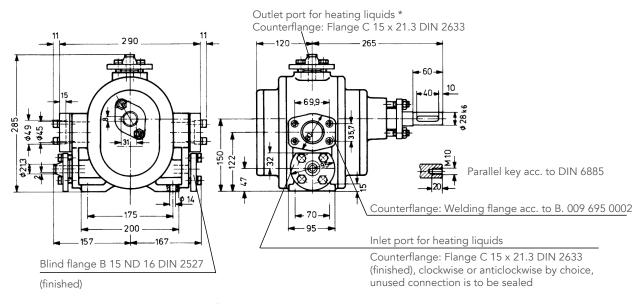
I BTH 1 – Pipe connection whitworth pipe thread (Z)



I BTH 1 – Pipe connection flange (F)



I BTH 1 – Pipe connection flange with counter flange (G)

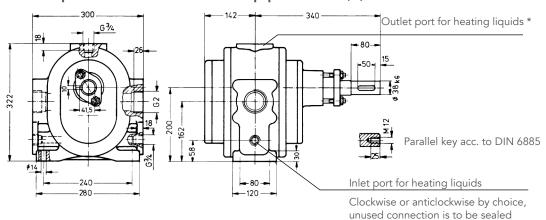


^{*} Hole pattern dimensionally identical to inlet port for heating liquids

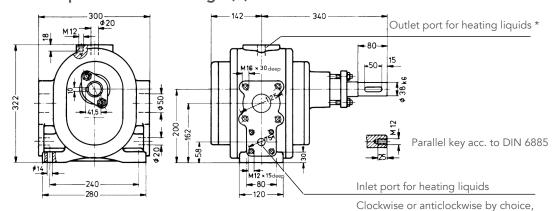
Pipe connection	Z	F	G
BTH 1/55	45 kg	45 kg	48 kg
BTH 1/105	46 kg	46 kg	49 kg



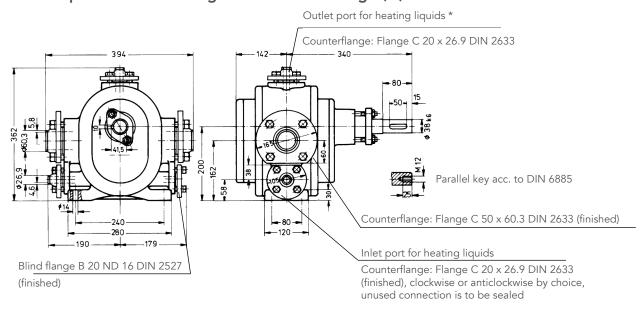
I BTH 2 - Pipe connection whitworth pipe thread (Z)



I BTH 2 - Pipe connection flange (F)



I BTH 2 - Pipe connection flange with counter flange (G)



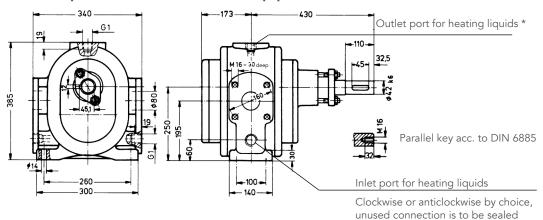
^{*} Hole pattern dimensionally identical to inlet port for heating liquids

Pipe connection	Z	F	G		
BTH 2/100	84 kg	84 kg	93 kg		
BTH 2/130	85 kg	85 kg	94 kg		

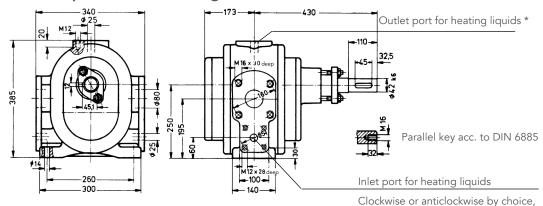
unused connection is to be sealed



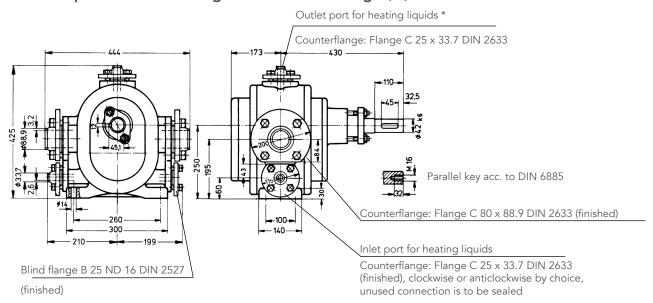
I BTH 3 – Pipe connection whitworth pipe thread (Z)



I BTH 3 – Pipe connection flange (F)



I BTH 3 – Pipe connection flange with counter flange (G)



unused connection is to be sealed

^{*} Hole pattern dimensionally identical to inlet port for heating liquids

Pipe connection	Z	F	G
BTH 3/150	142 kg	142 kg	155 kg



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BT-BTH/EN/04.2024 Errors and technical changes reserved