

Peristaltic pumps SERIES ASH

Design ID



Applications

In wastewater and clarification plants; the chemical and petrochemical industry; pulp, paper, and textile industry; soap and grease industry; construction; ceramics and montan industry; paints; meat and fish processing industry; tanneries, cosmetics, etc.

Suitable for pumping and metering low-viscosity and high-viscosity liquids, neutral or aggressive liquids, undiluted or abrasive liquids, liquids containing gases, liquids prone to foaming, also liquids with fibrous or solid particles.

Functionality

Dry self-priming displacement pump without gaskets or valves.

Pumping elements are the pump hose and rotor with sliders.

As the rotor turns, two sliders (aligned at 180-degree from each other) alternately compress the pump hose and move the pumped liquid incrementally from the suction to the pressure side.

The thick-wall, fabric-reinforced pump hose subsequently opens automatically, creating an underpressure situation that effects continuous suction.

The pumped liquid passes through the pump hose without contacting mechanical components. The smooth flow results in a gentle pumping action without turbulence and emulsification.

The direction of rotation can be reversed, thereby reversing the pumping direction.

Structural design

Glands and packing rings elastically clamp the hose (placed between the pump housing and the rotor) onto the pump connectors in the pump housing.

The bearings of the asymmetrical rotor are arranged inside the compact pump housing.

The pump housing is sealed by means of a ventilated cover that is equipped with grease and coolant level indicators.

The short and elastic clamping of the pump hose ① and the asymmetrically-shaped rotor with the corresponding pump housing shape ② extend the life of the pump hose, reduce the pump's working temperature, and reduce the quantity of grease, coolant, and pumped liquid that will mix in the pump housing if the pump hose breaks.

The drive torque is transferred from the one-piece rotor through its shaft to the sliders, which are adjustable by means of adjuster panels.

Grease and coolant in the pump housing lubricate and cool the pump hose, the rotor, and the sliders.

Shaft seal ring(s) separate the pump area and bearing from each other and keep these areas sealed.

① European patent No. 0 569 875 and US patent 5,350,384

② European patent No. 0 577 946 and US patent 5,375,984

Technical specifications

Please refer to the diagram on page 2 or the separate individual diagrams for pump capacities, permissible speed ranges, and required drives.

Output	Q	m³/h	to	60
		l/min		1000
Temperature of pumped liquid	t	°C	to	80
Differential pressure	Δp	bar	to	15
Maximum pump pressure	p _d	bar	to	16
Achievable underpressure	p _s	bar	①	to 0.95
Viscosity	ν	mPa·s	①	to 100000
Permissible solids content	Vol %		to	20

The specified performance data are intended to provide only an overview of the product and its performance! The data are influenced by the parameters: speed, operational mode, the elastomer used, type and temperature of the pumped liquid, and the pump size.

Refer to the respective proposal and order confirmation for exact operational limits.

Maximum permissible grain sizes and fiber lengths

Size	15	25	32	40
Max. grain size mm	5	8	11	13
Max. fiber length mm	150	200	250	330

Size	50	65	80	100
Max. grain size mm	17	22	27	33
Max. fiber length mm	430	550	680	820

The pump speed must be reduced as the proportion of solids and the viscosity of the liquid increase.

① Without using a supplemental vacuum up to 0.65 bar / up to 40,000 mPa·s

Materials

Description	Material type
Pump housing	ASH 15 ... 80: EN-GJL-250 ASH 100: EN-GJS-400-15
Pump cover	ASH 15: acrylic glass ASH 25 ... 100: QSt 52-3
Pump connector	see page 3 "Type key"
Rotor	EN-GJS-600-3
Slider	aluminum alloy, optional EN-GJS-400-15
Pump hose	see page 3 "Type key"

Drive unit

See page 10 for the drive options.

Drives from any manufacturer can be used. Refer to the manufacturer's documentation for technical specifications and dimensions.

Setting up the pump

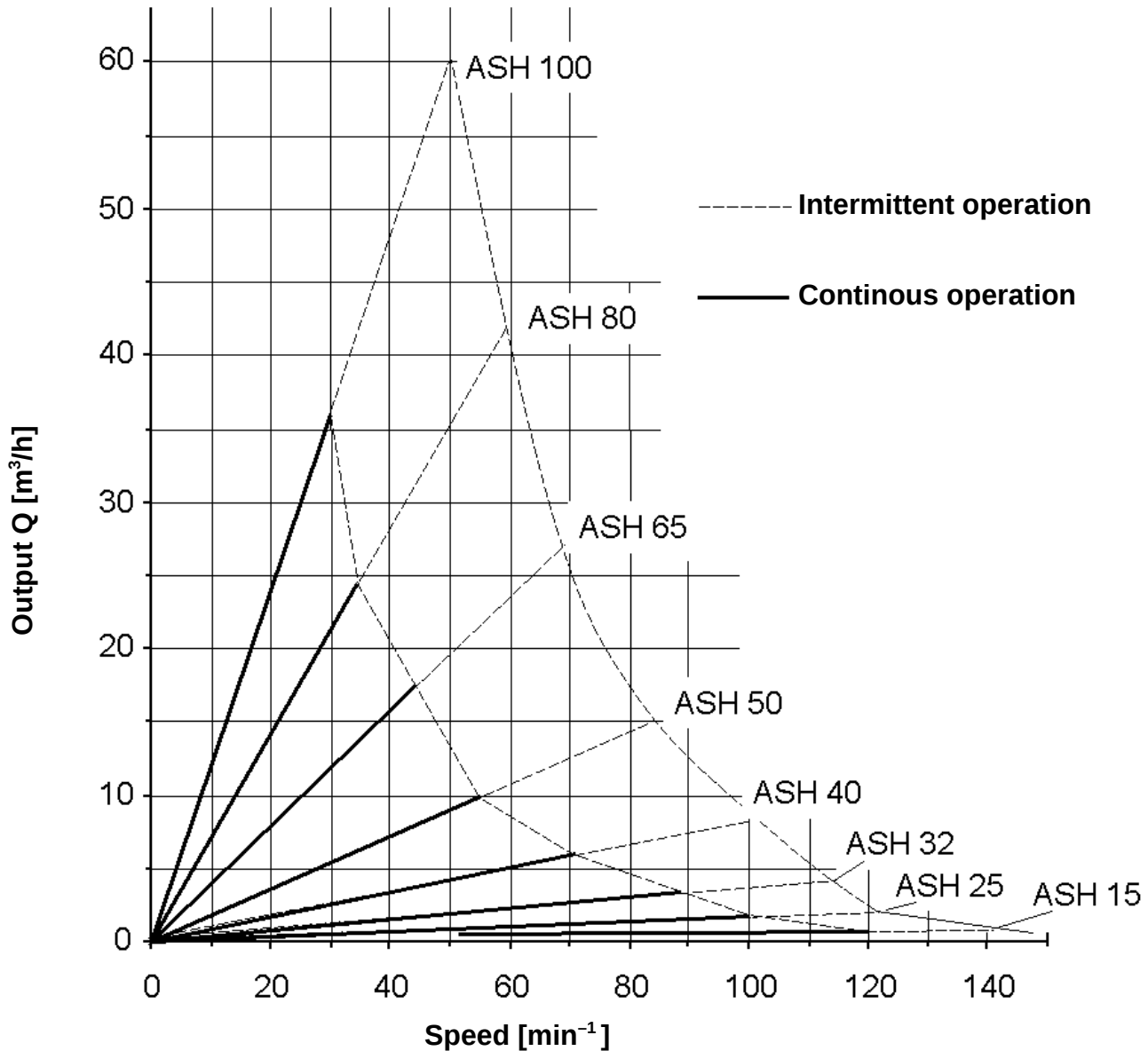
ASH peristaltic pumps are set up horizontally.

The pump and the drive are bound together by means of an elastic coupling; they are mounted on a shared base plate. See pages 8 and 9 for configuration, dimensions, and weight of pump units without a drive.

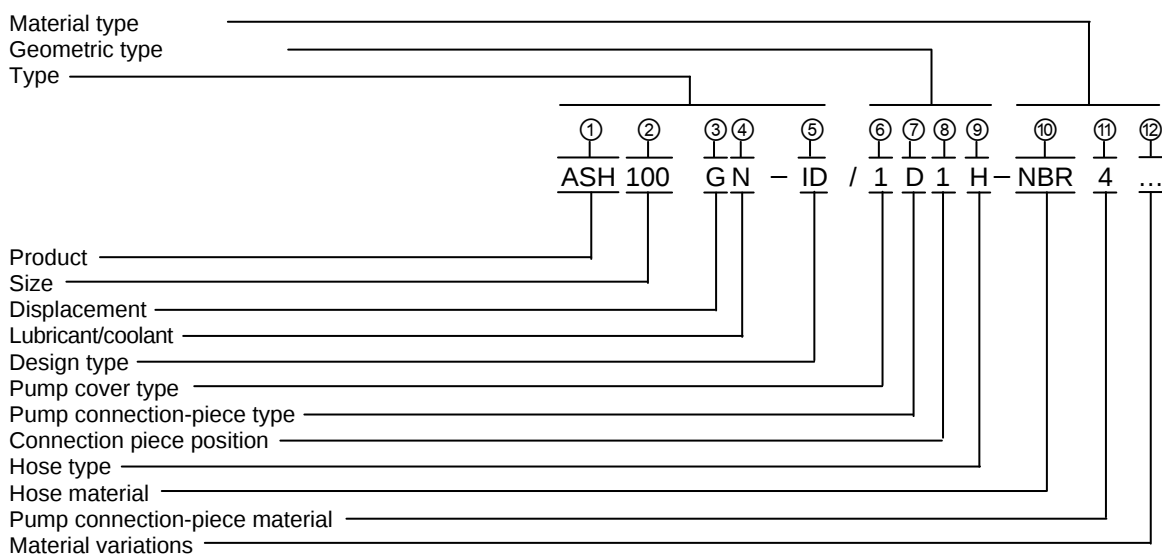
Dimensions and weights for pump units with drives are available upon request.

Diagram

Used for rough selection of the pump size and rotational speed in dependence of the desired flow rate. Refer to the individual diagram fields for the exact design data.



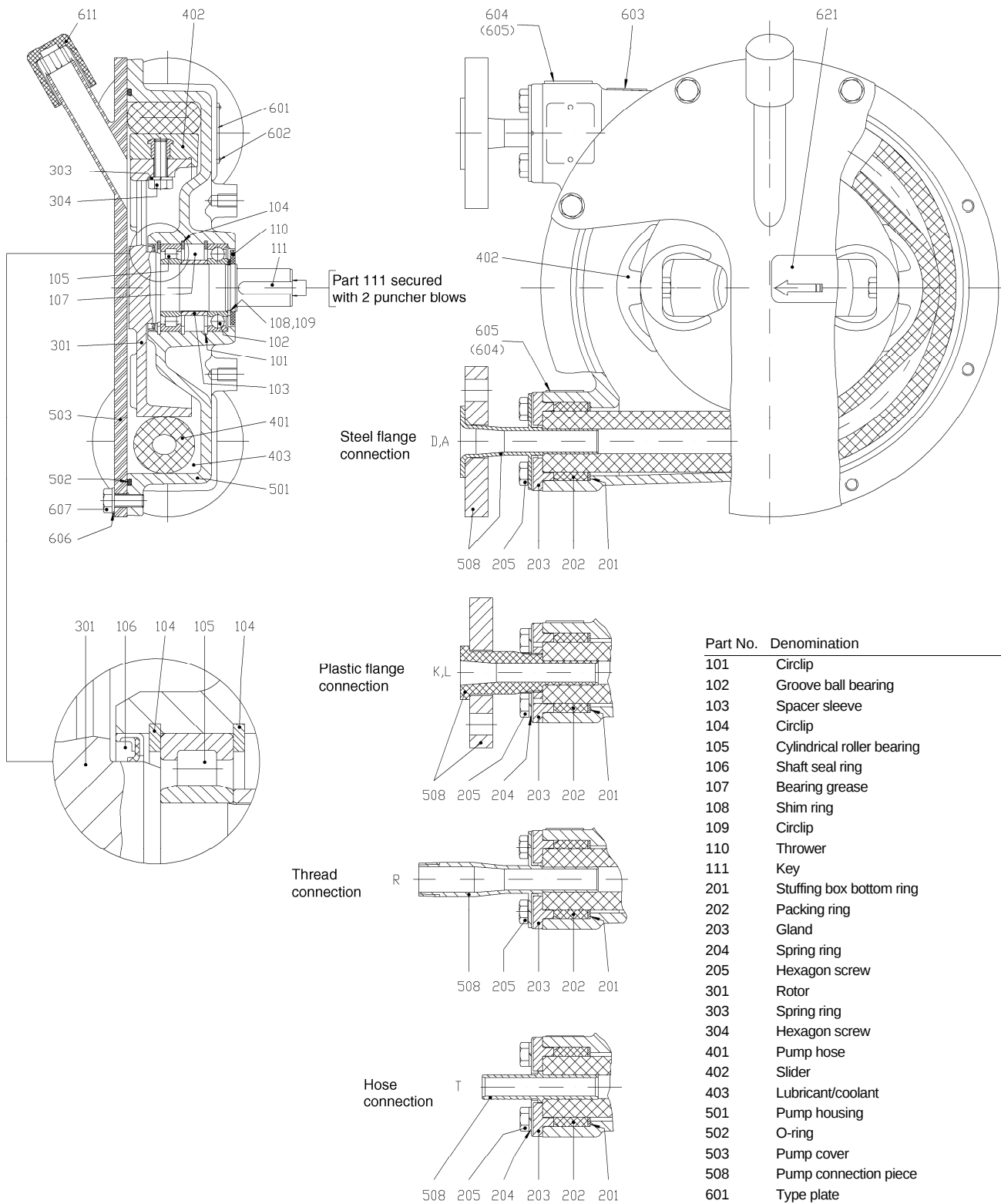
Type key



Explanations for the type key

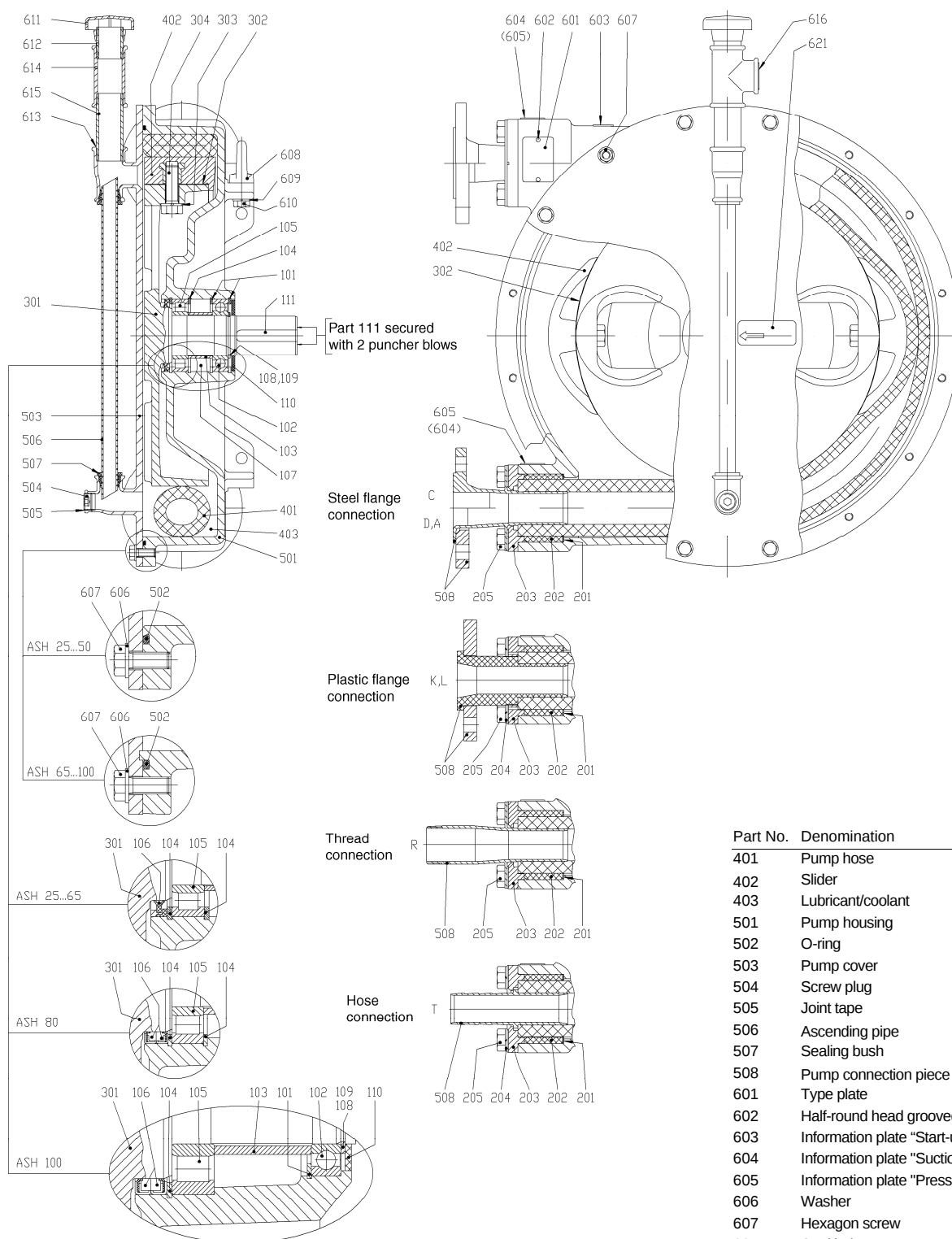
Position in type key	Designation	Type
①	Product	ASH = ALLWEILER – peristaltic pump
②	Size	Possible sizes: 15, 25, 32, 40, 50, 65, 80, 100 The numbers represent the inner diameter of the pump hose in mm.
③	Displacement	G = Slider
④	Lubricant/coolant	N = Glycerin X = Special variations
⑤	Design type	ID = Industrial design type with internal bearings
⑥	Pump cover type	1 = Pressureless, ventilated/vacuum resistant X = Special type of pump lid
⑦	Pump connection-piece type	D = Raised edge EN 1092-1/33/PN10 with lapped flange, connection dimensions according to DIN 2501-PN10 C = Flange with sealing strip shape according to C DIN2633-PN16 A = Raised edge with lapped flange, connection dimensions according to ANSI B16.5 class 150 K = Collar bush DIN 8063-7 (plastic) with lapped flange, connection dimensions according to DIN 2501-PN10 L = Smooth shoulder (plastic) with lapped flange (plastic) according to DIN8063-4-PN10, Connection dimensions according to ANSI B16.5 class150 R = Pipe outer threads according to DIN 2999 T = Nozzle X = Special pump connection-piece type
⑧	Connection piece position	1 = Top 2 = Left 3 = Bottom 4 = Right } as viewed from the drive
⑨	Hose type	H = High-pressure hose with two doubled fabric inserts M = Medium-pressure hose with one doubled fabric insert X = Special variations
⑩	Hose material	NR = Isoprene rubber (natural rubber) NBR = Acrylonitrile-butadiene rubber CSM = Chlorosulfonated polyethylene EPDM = Ethylene propylene diene terpolymer X = Hose material in special version
⑪	Pump connection-piece material	3 = Polyethylene 4 = 1.4571 X = Pump connection-piece material in special version
⑫	Material variations	X = Special variations

Sectional drawing and parts index ASH 15 GN-ID



Part No.	Denomination
101	Circlip
102	Groove ball bearing
103	Spacer sleeve
104	Circlip
105	Cylindrical roller bearing
106	Shaft seal ring
107	Bearing grease
108	Shim ring
109	Circlip
110	Thrower
111	Key
201	Stuffing box bottom ring
202	Packing ring
203	Gland
204	Spring ring
205	Hexagon screw
301	Rotor
303	Spring ring
304	Hexagon screw
401	Pump hose
402	Slider
403	Lubricant/coolant
501	Pump housing
502	O-ring
503	Pump cover
508	Pump connection piece
601	Type plate
602	Half-round head grooved pin
603	Information plate "Start-up"
604	Information plate "Suction"
605	Information plate "Pressure"
606	Washer
607	Hexagon screw
611	Ventilation cover
621	Information plate "Min. fill height"

Sectional drawing and parts index ASH 25 ... 100 GN-ID



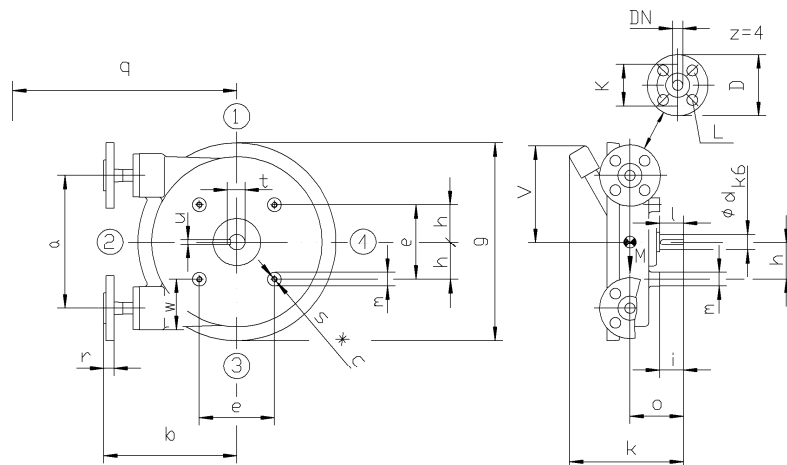
Part No.	Denomination
101	Circlip
102	Groove ball bearing
103	Spacer sleeve
104	Circlip
105	Cylindrical roller bearing
106	Shaft seal ring
107	Bearing grease
108	Shim ring
109	Circlip
110	Thrower

Part No.	Denomination
111	Key
201	Stuffing box bottom ring
202	Packing ring
203	Gland
204	Spring ring
205	Hexagon screw
301	Rotor
302	Plate
303	Spring ring
304	Hexagon screw

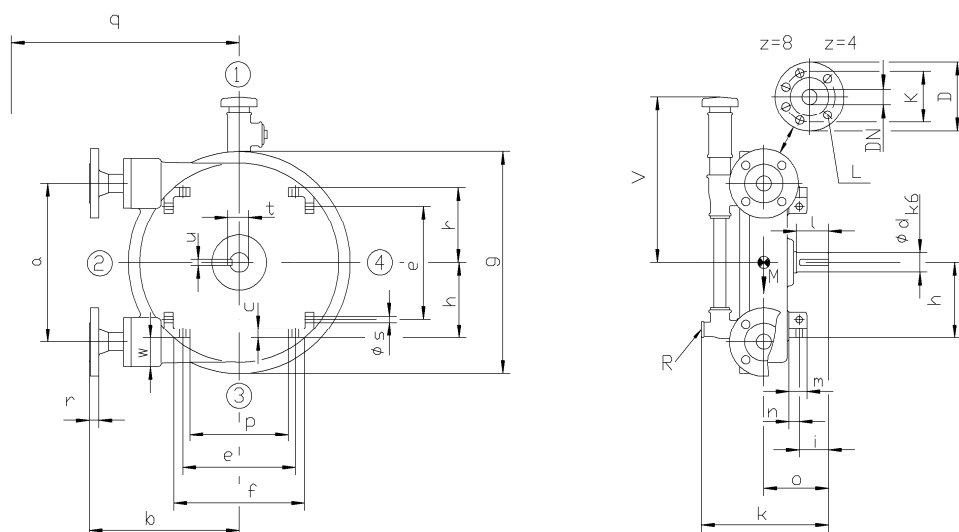
Part No.	Denomination
401	Pump hose
402	Slider
403	Lubricant/coolant
501	Pump housing
502	O-ring
503	Pump cover
504	Screw plug
505	Joint tape
506	Ascending pipe
507	Sealing bush
508	Pump connection piece
601	Type plate
602	Half-round head grooved pin
603	Information plate "Start-up"
604	Information plate "Suction"
605	Information plate "Pressure"
606	Washer
607	Hexagon screw
607	Stud bolt
607	Hexagon nut
607	Sealing material
608	Ring nut
609	Spring ring
610	Hexagon screw
611	Ventilation cover
612	Pipe nipple
613	Joint tape
614	T-piece
615	Pipe double nipple
616	Screw plug
621	Information plate "Min. fill height"

Pump dimensions, connector locations, weights for pump connector versions D, A, K, L

ASH 15 GN-ID



ASH 25 ... 100 GN-ID



Type	a	c	d	e	f	g	h	i	k	l	m	n	o	p	q 5)	s	t	u	v	w	R 3)	M 1)
ASH 15 GN-ID	195	12	24	110	-	290	55	35	167	35	20	-	78.5	-	400	M8	27	8	160	74	-	13
ASH 25 GN-ID	264	15	32	188	218	370	125	49	214	55	30	17	108	164	530	11	35	10	308	49	Rp ½	37
ASH 32 GN-ID	330	20	38	234	264	460	155	50	230.5	60	32	17	116	202	650	14	41	10	343	60	Rp ½	65
ASH 40 GN-ID	430	20	48	305	345	575	190	69	265.3	75	32	17	142.8	273	810	14	51.5	14	394	80	Rp ½	104
ASH 50 GN-ID	554	24	60	392	430	720	250	89	323	90	38	20	176	355	1030	18	64	18	507	88	Rp 1	179
ASH 65 GN-ID	746	30	75	532	580	940	325	117	381.8	110	38	20	220.8	490	1360	18	79.5	20	605	120	Rp 1	359
ASH 80 GN-ID	876	40	90	610	688	1100	385	142	446	130	44	24	267.5	554	1670	22	95	25	672	141	Rp 1	535
ASH100 GN-ID	1042	45	110	730	817	1300	460	139	508	140	57	30	291	674	1930	26	116	28	787	168	Rp 1	835

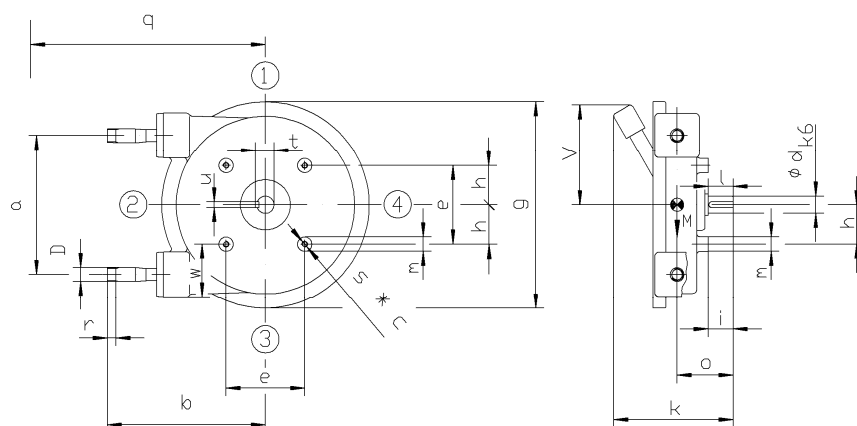
Type	Pump connection-piece types																											
	D = DIN 2642-PN10 Connector dimensions according to DIN 2501-PN16							A = ANSI B16.5 class 150 lapped							K ⁴⁾ = DIN 8063-4-PN10 Connector dimensions according to DIN 2501-PN16							L ⁴⁾ = DIN 8063-4-PN10 Connector dimensions according to ANSI B16.5 class 150						
	DN	b	D	L	K	r	z2)	DN	b	D	L	K	r	z2)	DN	b	D	L	K	r	z2)	DN	b	D	L	K	r	z2)
ASH 15 GN-ID	15	195	95	14	65	15	4	½"	195	88,9	15,7	60,5	13,7	4	15	195	95	13,5	65	18	4	1½"	195	95	15,7	60,5	17	4
ASH 25 GN-ID	25	250	115	14	85	20	4	1"	250	108	15,7	79,2	17,2	4	25	243	115	14	85	23,5	4	1"	243	115	15,7	79,2	21	4
ASH 32 GN-ID	32	296	140	18	100	20,5	4	1¼"	296	117,3	15,7	88,9	18,7	4	32	291	140	18	100	25	4	1¼"	291	140	15,7	88,9	23	4
ASH 40 GN-ID	40	340	150	18	110	21,5	4	1½"	340	127	15,7	98,6	20,5	4	40	335	150	18	110	26,5	4	1½"	335	150	15,7	98,6	24	4
ASH 50 GN-ID	50	415	165	18	125	24	4	2"	415	152,4	19,1	120,7	22,1	4	50	410	165	18	125	29,5	4	2"	410	165	19,1	120,7	27	4
ASH 65 GN-ID	65	508	185	18	145	26,5	4	2½"	508	177,8	19,1	139,7	25,4	4	65	507	185	18	145	32,5	4	2½"	503	185	19,1	139,7	30	4
ASH 80 GN-ID	80	615	200	18	160	27	8	3"	615	190,5	19,1	152,4	27,4	4	80	605	200	18	160	34,5	8	3"	605	200	19,1	152,4	33	4
ASH100 GN-ID	100	720	220	18	180	28,5	8	4"	720	228,6	19,1	190,5	27,4	8	100	705	220	18	180	36,5	8	4"	705	229	19,1	190,5	36	8

1) Maximum mass: kg 2) z = quantity 3) DIN 2999 4) Smooth shoulder (plastic) 5) Space for assembly ① ... ④ Connector position

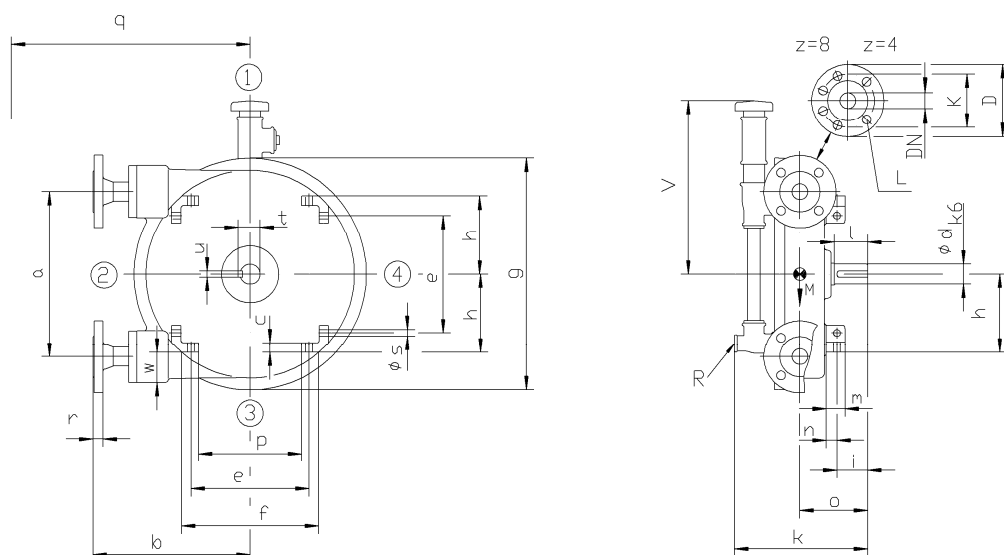
Dimensions in mm, standard widths of the ANSI flanges (DN) in inches, subject to change

Pump dimensions, connector positions, weights for pump connector types C, R, T

ASH 15 GN-ID
Pump connection-piece type R

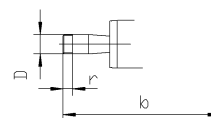


ASH 25 ... 100 GN-ID
Pump connection-piece type C

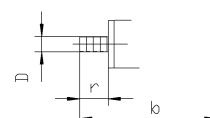


Type	Pump connection-piece types													
	C = DIN 2633-PN 16							R = DIN 2999			T = Nozzle			
	DN	b	D	L	K	r	z 2)	b	D 3)	r	b	D 4)	r	
ASH 15 GN-ID	-	-	-	-	-	-	-	221	R ½	13.2	181	15	31	
ASH 25 GN-ID	25	250	115	14	85	16	4	275	R1	16.8	240	25	50	
ASH 32 GN-ID	32	296	140	18	100	16	4	331	R1¼	19.1	293	32	62	
ASH 40 GN-ID	40	340	150	18	110	16	4	373	R1½	19.1	343	38	70	
ASH 50 GN-ID	50	415	165	18	125	18	4	447	R2	23.4	420	50	75	
ASH 65 GN-ID	65	508	185	18	145	18	4	545	R2½	26.7	-	-	-	
ASH 80 GN-ID	80	615	200	18	160	20	8	630	R3	29.8	-	-	-	
ASH100 GN-ID	100	720	220	18	180	20	8	-	-	-	-	-	-	

Pump connection-piece type R



Pump connection-piece type T



Type	a	c	d	e	f	g	h	i	k	l	m	n	o	p	q 5)	s	t	u	v	w	R 3)	M 1)
ASH 15 GN-ID	195	12	24	110	-	290	55	35	167	35	20	-	78.5	-	400	M8	27	8	160	74	-	13
ASH 25 GN-ID	264	15	32	188	218	370	125	49	214	55	30	17	108	164	530	11	35	10	308	49	Rp ½	37
ASH 32 GN-ID	330	20	38	234	264	460	155	50	230.5	60	32	17	116	202	650	14	41	10	343	60	Rp ½	65
ASH 40 GN-ID	430	20	48	305	345	575	190	69	265.3	75	32	17	142.8	273	810	14	51.5	14	394	80	Rp ½	104
ASH 50 GN-ID	554	24	60	392	430	720	250	89	323	90	38	20	176	355	1030	18	64	18	507	88	Rp 1	179
ASH 65 GN-ID	746	30	75	532	580	940	325	117	381.8	110	38	20	220.8	490	1360	18	79.5	20	605	120	Rp 1	359
ASH 80 GN-ID	876	40	90	610	688	1100	385	142	446	130	44	24	267.5	554	1670	22	95	25	672	141	Rp 1	535
ASH100 GN-ID	1042	45	110	730	817	1300	460	139	508	140	57	30	291	674	1930	26	116	28	787	168	Rp 1	835

1) Maximum mass

2) z = quantity

3) DIN 2999

4) Hose inner diameter

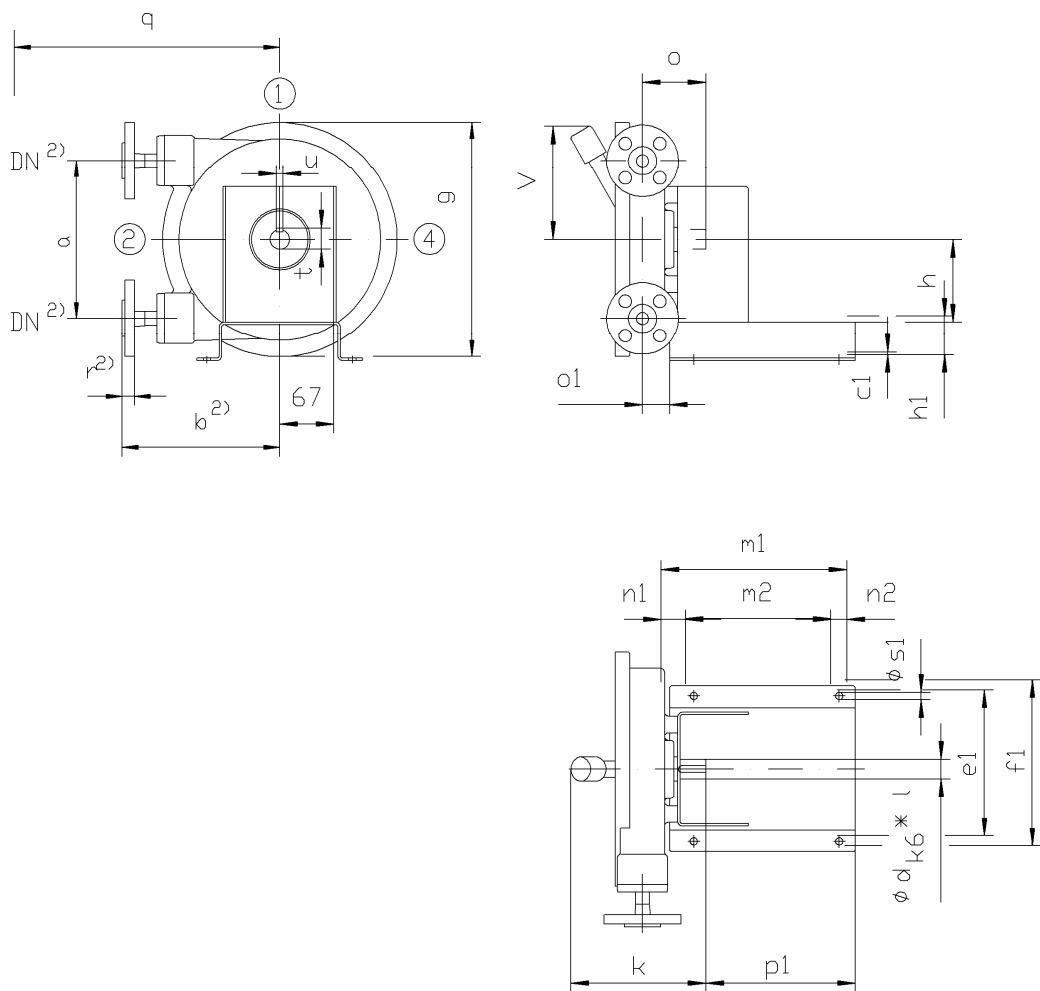
5) Space for assembly

① ... ④ Connector position

Dimensions in mm, subject to change

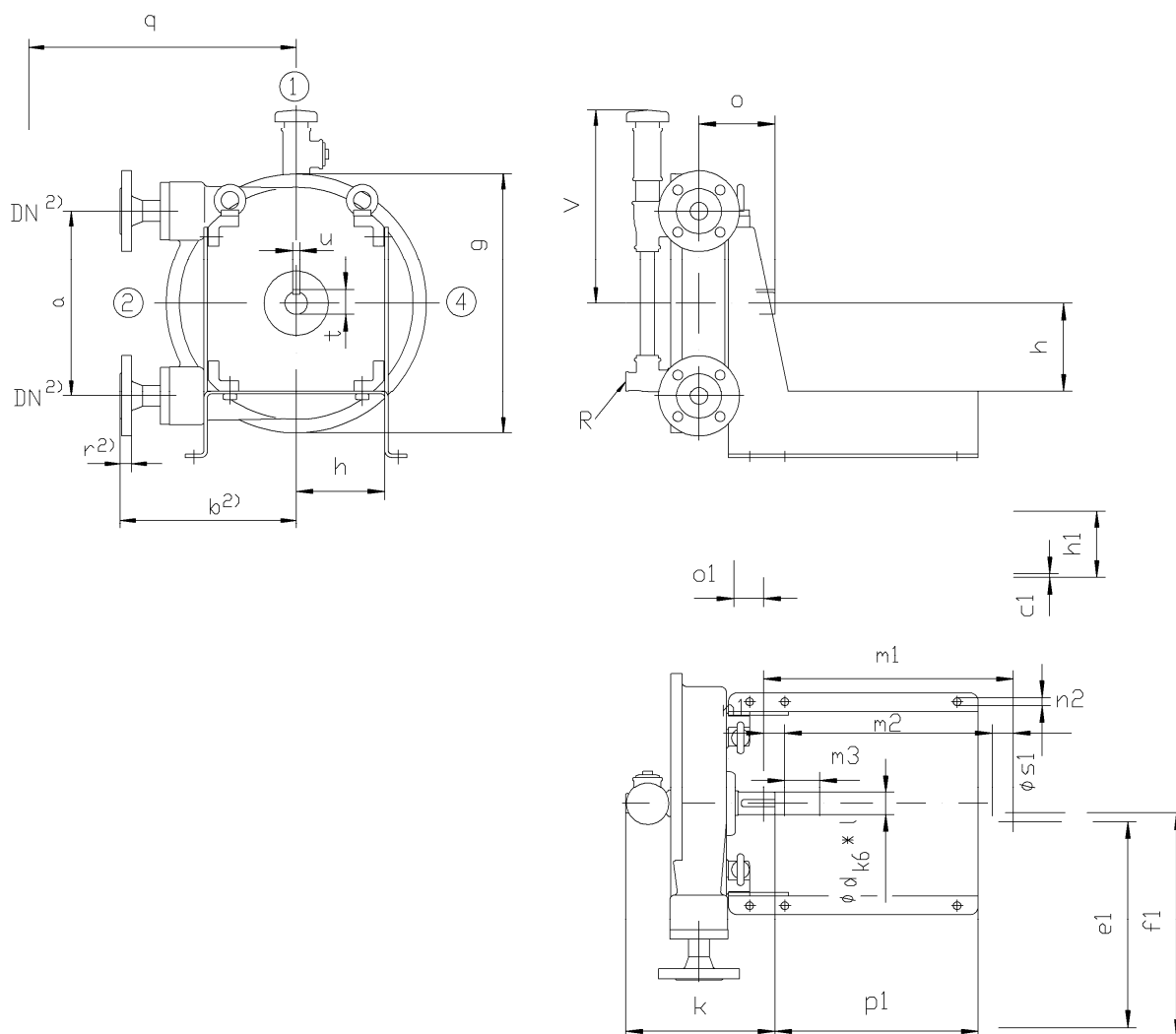
VM 766 GB/2015.08 – Ident No. 796438

Dimensions and weights for pump units without drive for ASH 15 GN-ID



See page 9 for table of dimensions.

Dimensions and weights for pump units without drive for ASH 25 ... 100 GN-ID



Type	a	c1	d	e1	f1	g	h	h1	k	l	m1	m2	m3	n1	n2	o	o1	p1	q 4)	s1	t	u	v	R 3)	M 1)
ASH 15 GN-ID	195	3	24	180	205	290	102	48	167	35	230	180	-	30	20	78.5	33.5	185	400	9	27	8	160	-	16
ASH 25 GN-ID	264	5	32	290	315	370	125	95	214	55	355	295	50	30	30	108	42	289	530	11	35	10	308	Rp ½	45
ASH 32 GN-ID	330	6	38	370	400	460	155	110	230.5	60	400	340	60	30	30	116	49	333	650	14	41	10	343	Rp ½	78
ASH 40 GN-ID	430	8	48	445	475	575	190	135	265.3	75	480	420	80	30	30	142.8	56.8	394	810	14	51.5	14	394	Rp ½	129
ASH 50 GN-ID	554	8	60	580	630	720	250	150	323	90	560	480	80	40	40	176	67	451	1030	18	64	18	507	Rp 1	217
ASH 65 GN-ID	746	10	75	750	800	940	325	190	381.8	110	720	640	100	40	40	220.8	83.8	583	1360	18	79.5	20	605	Rp 1	434
ASH 80 GN-ID	876	10	90	890	950	1100	385	210	446	130	860	780	100	40	40	267.5	101.5	694	1670	18	95	25	672	Rp 1	640
ASH100 GN-ID	1042	12	110	1040	1100	1300	460	230	508	140	980	880	120	50	50	291	122	811	1930	18	116	28	787	Rp 1	1015

1) Maximum mass: kg

2) See dimension sheets on pages 6 and 7

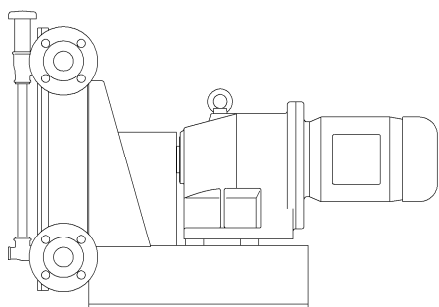
3) DIN 2999

4) Space for assembly

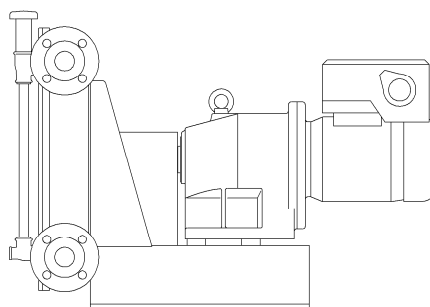
① ② ④ Connector position

Dimensions in mm, subject to change

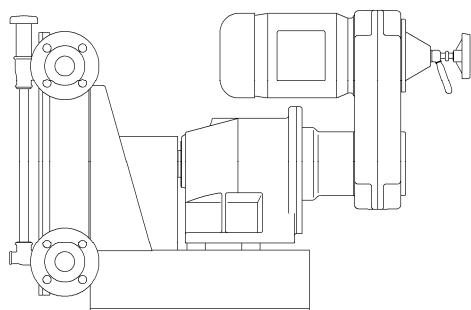
Drive options



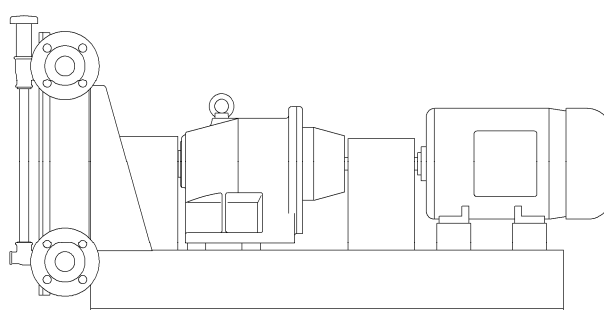
Peristaltic pump ASH ... -ID with elastic coupling and back-geared motor



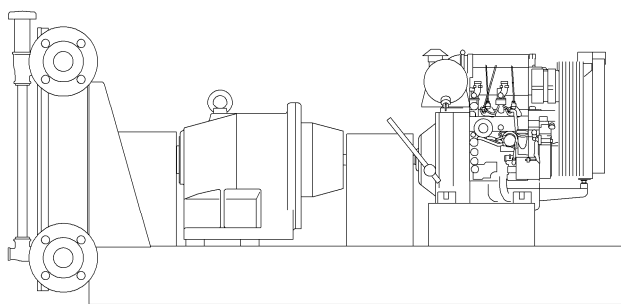
Peristaltic pump ASH ... -ID with elastic coupling and back-geared motor with integrated frequency converter



Peristaltic pump ASH ... -ID with elastic coupling and infinitely adjustable back-geared motor



Peristaltic pump ASH ... -ID with elastic coupling, transmission, elastic coupling, and motor



Peristaltic pump ASH ... -ID with elastic coupling, transmission, elastic coupling, and internal combustion engine

Other drive possibilities exist.

Standard eccentric screw pumps	Series	Number of stages	Max. flow rate at $\Delta p = 0$ bar		Max. pump pressure bar	Max. viscosity mPa·s
			m³/h	l/min		
	AE1L-ID	1	186	3100	4	200,000
	AE.E-ID	1.2	450	7500	10	300,000
	AE.N-ID	1.2	290	4850	16	270,000
	AE.H-ID	2.4	174	2900	24	270,000
	AEB1L-IE	1	186	3100	4	200,000
	AEB.E-IE	1.2	174	2900	6	300,000
	AEB.N-IE	1.2	111	1850	12	270,000
	AEB4H-IB	4	12	200	24	270,000
	AED.E-ID	1	720	12000	8	250,000
	AED.N-ID	2	450	7500	16	225,000
	AEDB.E-IE	1	258	4300	6	250,000
	AEDB.N-IE	2	174	2900	12	225,000
	AE.N...-RG	1.2.4	30	500	20	1,000,000
	TECFLOW	1	186	3100	4	200,000
	SEZP	1.2	21	350	10	1,000,000
	SNZP	1.2	45	750	12	1,000,000
	SNZBP	1.2	45	750	12	1,000,000
	SSP	1.2	48	800	12	150,000
	SSBP	1.2	48	800	12	150,000
	SETP ①	1.2	140	2350	10	300,000
	SETBP	1.2	40	670	10	150,000
	SEFBP	1	40	670	6	150,000
	SMP	1	40	670	6	150,000
	SMP2	1	5.5	92	6	11,500
	AFP	1	2.8	47	6	50,000
	ANP	2	2.5	42	12	20,000
	ANBP	2	2.5	42	12	20,000
	ASP	2	2.5	42	12	20,000
	ASBP	2	2.5	42	12	20,000
	ADP	3	0.6	10	12	20,000
	ADBP	3	0.6	10	12	20,000
	ACNP	1.2	29	480	12	150,000
	ACNBP	1.2	29	480	12	150,000

① Special higher-pressure version available

Standard peristaltic pumps	Series	Max. flow rate		Max. pump pressure bar	Max. viscosity mPa·s
		m³/h	l/min		
	ASL	2.4	40	4	40,000
	ASH	60	1000	15	100,000

Standard macerators	Series	Max. flow volume	Intrinsic pump head
		m³/h	m
	AM...S-1	80 at 3% TS	3
	ABM...S-1	80 at 3% TS	3
	AM...I-1	160 at 3% TS	-
	ABM...I-1	80 at 3% TS	-

Accessories

Pump accessories: Supplemental vacuum for peristaltic pump AVH (see technical specifications and operating instructions VM 810.0009), also with vacuum pump. Pulsed damper with and without compressed air fitting.

Drives: Back-geared motors, adjustable gear, reduction gear, internal combustion engines, hydraulic drives.

Power-transmitting parts: Couplings, other intermediate gear.

Base plates: Standard and special versions available, mobility equipment.

Safety devices: Hose-break detector ASM (see technical specifications and operating instructions VM 810.0007).

System accessories: Electric, hydraulic, or pneumatic control devices; collector systems, metering equipment, fittings, flanges, hoses

Technical alterations reserved.



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