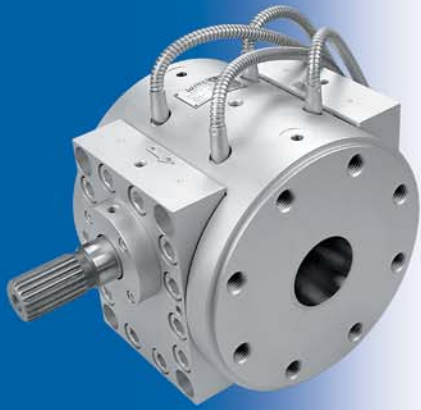
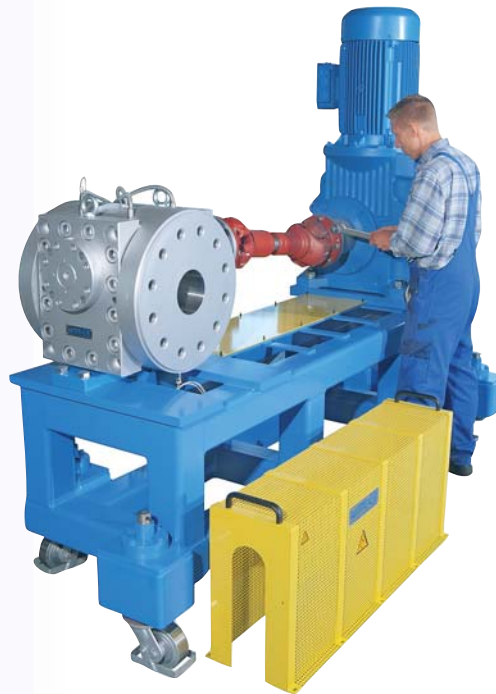


EXTRU - the reliable extrusion gear pump



The **EXTRU** is mainly used in conjunction with extruders or kneaders. It reduces the natural pulsation and irregular conveyance, particularly in single-screw extruders, added to which, the build up of pressure in the gear pump is more efficient in comparison to the extruder. Because of this, less energy or heat is transferred into the polymer and the product is conveyed in a gentler manner. The EXTRU is indispensable for the manufacture of precision films or micro granulate.

The robust construction and low wear materials make the EXTRU indispensable for



extrusions. Special versions are available for conveying natural rubber and soft PVC. The WITTE - quick colour change version lends itself particularly to master batch applications with frequent changes of colour.

In order to prevent the pump's drive shaft from being driven/pushed out of the housing when there is a high pressure on the suction side (extruder conveying pressure), the drive shaft must be relieved. It protrudes from both sides of the housing and is sealed, so that atmospheric pressure predominates on both sides of the drive shaft. The shaft is thus relieved.

Technical Features

Housing

Heat resistant carbon steel, e.g. 1.6582 · rust-free stainless steel 1.4313 · with optional coating

Gears

Tool steel · nitrated steel · special steel · with optional surface coating · helical gearing · herringbone gearing (for extremely low-pulsation conveyance)

Friction Bearings

Tool steel · NiAg (nickel-silver) · Al-bronze · special materials · with optional surface coating

Shaft Seal

Viscoseal · stuffing box

Heating Systems

Electrically, by means of heating cartridges · optional cover heating

Operating Parameters

Viscosity

up to 40000 Pas

Temperature

up to 400°C (752° F)

Inlet pressure

Up to max. 120 bar (1740 psig)

Differential Pressure

Up to 250 bar (3625 psig) · special models also available for higher pressure differentials

The values listed are maximum values and must not coincide under certain circumstances.

Pump Sizes

From 22/22 (4.7 cm³/U – 10 kg/h) up to 280/280 (12000 cm³/U). Intermediate sizes, with narrower gear wheels for higher differential pressure, are possible, e.g. 140/90 (690 cm³/U)

EXTRU

Extrusion gear pump

Application Examples

Polymers

PS · PET · PVC · PC · PA* PMMA · HDPE · LDPE · LLDPE · PP · Polysulphones · PEEK

Foodstuffs

Liquorice · chewing gum

Viscoseal (VS)

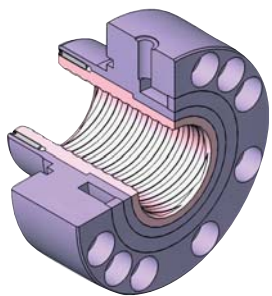
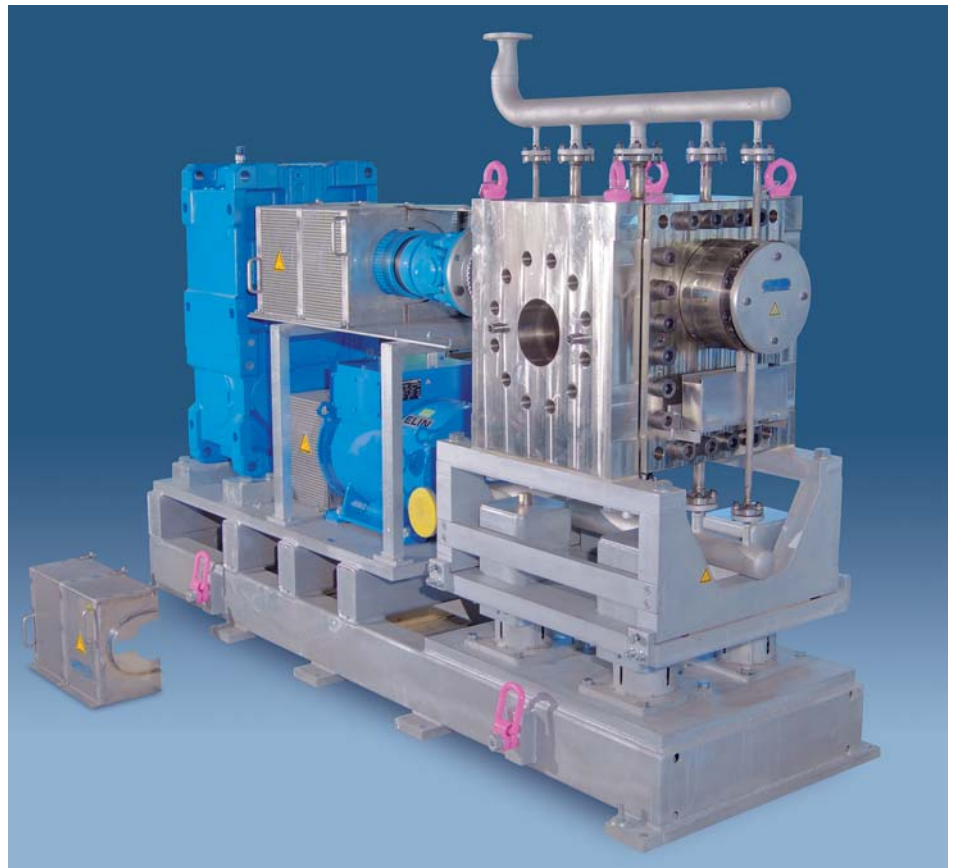
The viscoseal is the standard seal for WITTE EXTRU- and BOOSTER- pumps. This is a dynamic seal for high viscosities and suction pressures. It can be provided with heating or cooling. The dynamic seal is suitable for high pressures and temperatures. Its range of use is limited by the suction pressure and the viscosity of the medium being conveyed (at least 10 Pas). The viscosity can be increased by an additional cooling system if necessary.

Stuffing Box

The stuffing box is a simple (static) seal for WITTE gear pumps. It can be provided with buffering if so desired. The range of application is similar to that of the viscoseal. The standard material used for the packing is made of expanded pure graphite with structural textile fibres. But it goes without saying, that other materials are also available.

max. temperature: 350°C (660 °F)

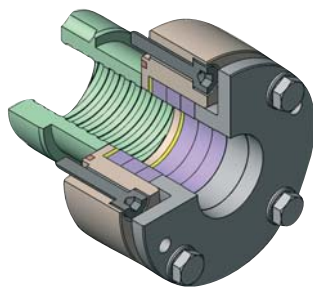
Viscosity: up to 40000000 mPas (cP)



Viscoseal (VS)

max. temperature: 450°C (850°F)

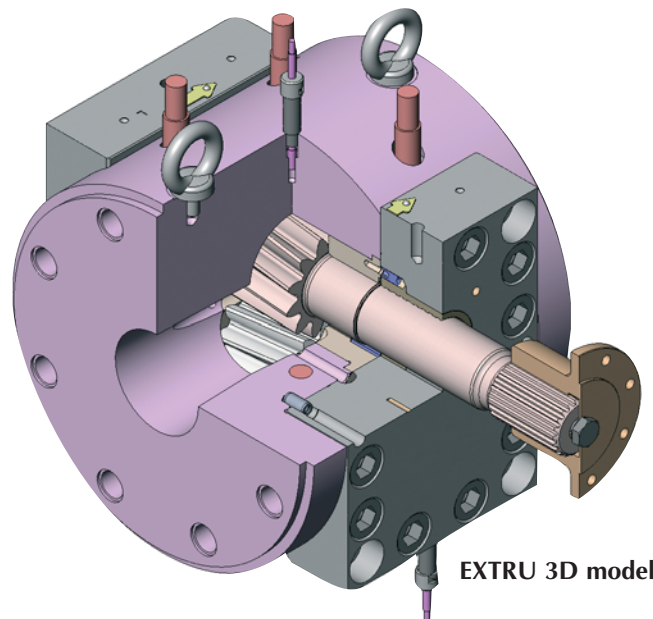
Viscosity: 10000 to 40000000 mPas (cP)

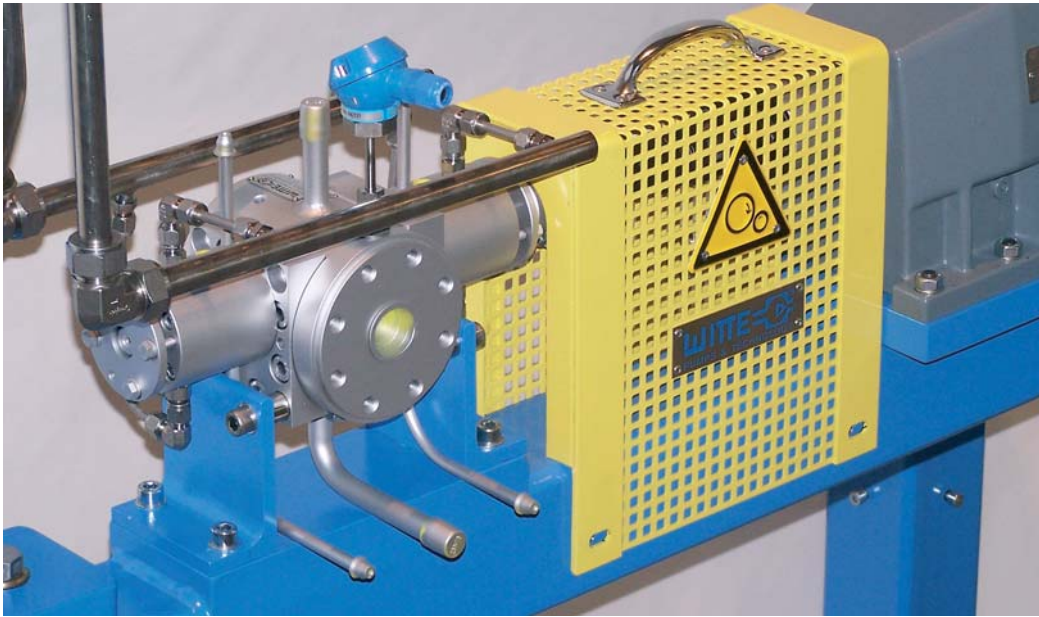


Stuffing Box

max. temperature: 350°C (660 °F)

Viscosity: up to 40000000 mPas (cP)



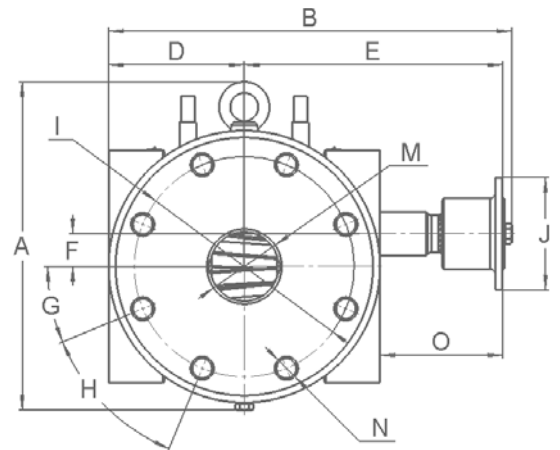
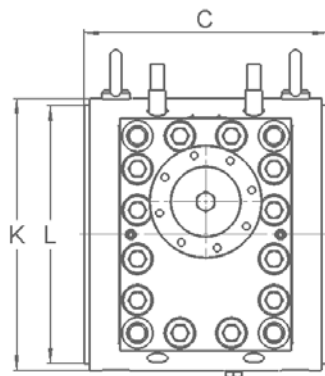


Size (axial distance width)

Spec. displacement volume (ccm/U)

Capacity (l/h) (Dependent on the fluid characteristics and operating conditions)

1	(22/22)	4,7	3 - 56
2	(28/28)	10,2	6 - 92
3	(36/36)	25,6	15 - 230
4	(45/45)	46,3	28 - 417
5	(56/56)	92,6	55 - 722
6	(70/70)	176	105 - 1370
7	(90/90)	371	222 - 2890
8	(110/110)	716	430 - 4700
9	(140/140)	1.482	900 - 8850
10	(180/180)	3.200	1920 - 17000
11	(224/224)	6.100	3660 - 32000
12	(280/280)	12.000	6590 - 5800

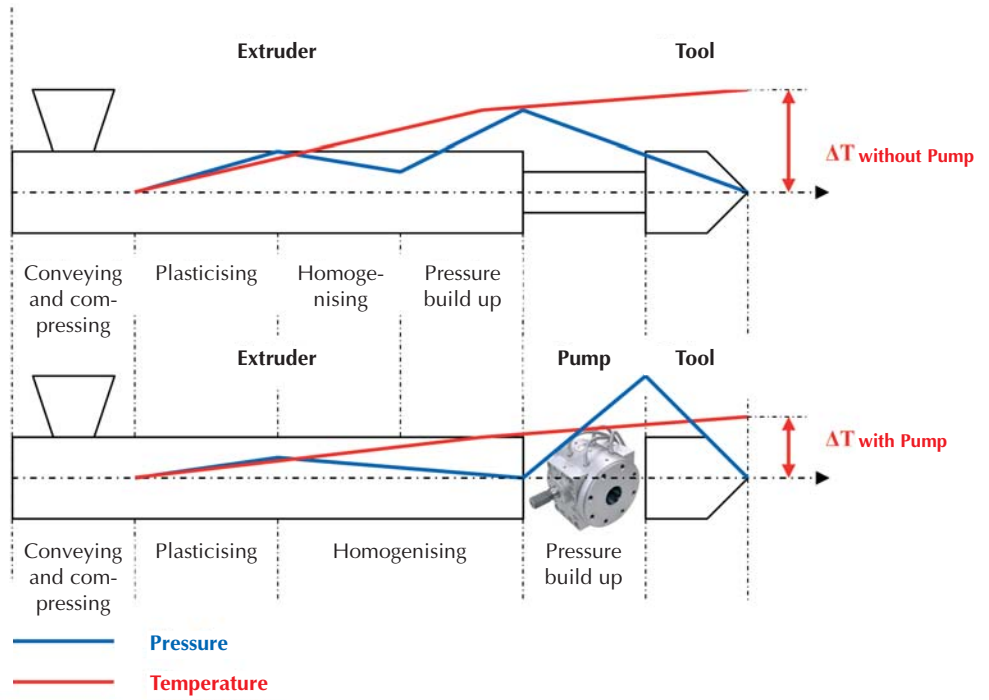
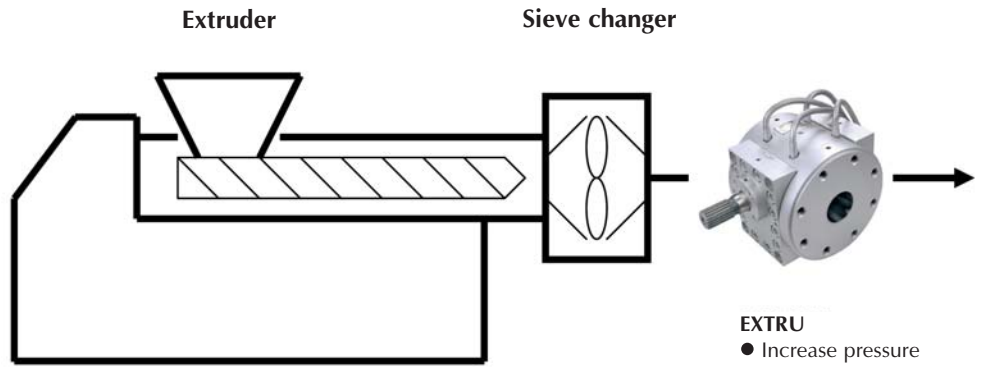


EXTRU-Dimensions

Pump size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Weight
1 (22/22)	99,6	142,1	100	48	90	11	22,5	8x45	66	58	92	84	28	8xM8	40,5	6 Kg
2 (28/28)	134,9	173	135	59	109	14	22,5	8x45	90	65	116	108	32	8xM10	50	15 Kg
3 (36/36)	185,9	215	150	76	134	18	22,5	8x45	110	75	145	136	42	8xM12	58	20 Kg
4 (45/45)	235,9	316,7	204	104,5	203,5	22,5	22,5	8x45	750	90	195	185	55	8xM16	99	50 Kg
5 (56/56)	281,5	368	230	120	239	28	22,5	8x45	185	100	230	218	68	8xM20	119	80 Kg
6 (70/70)	350,4	430,8	260	145	276	35	22,5	8x45	235	120	290	275	80	8xM24	131	150 Kg
7 (90/90)	430,4	505,3	335	181	312	45	15	12x30	300	150	362	346	100	12xM24	147	280 Kg
8 (110/110)	495,9	563	420	215	335	55	15	12x30	340	180	430	400	125	12xM30	120	500 Kg
9 (140/140)	620	800	550	300	485	70	15	12x30	390	225	550	530	150	12xM39	235	1000 Kg
10 (180/180)	817	1040	680	418	617	90	11,25	16x22,5	440	250	700	680	200	16xM39	297	1830 Kg



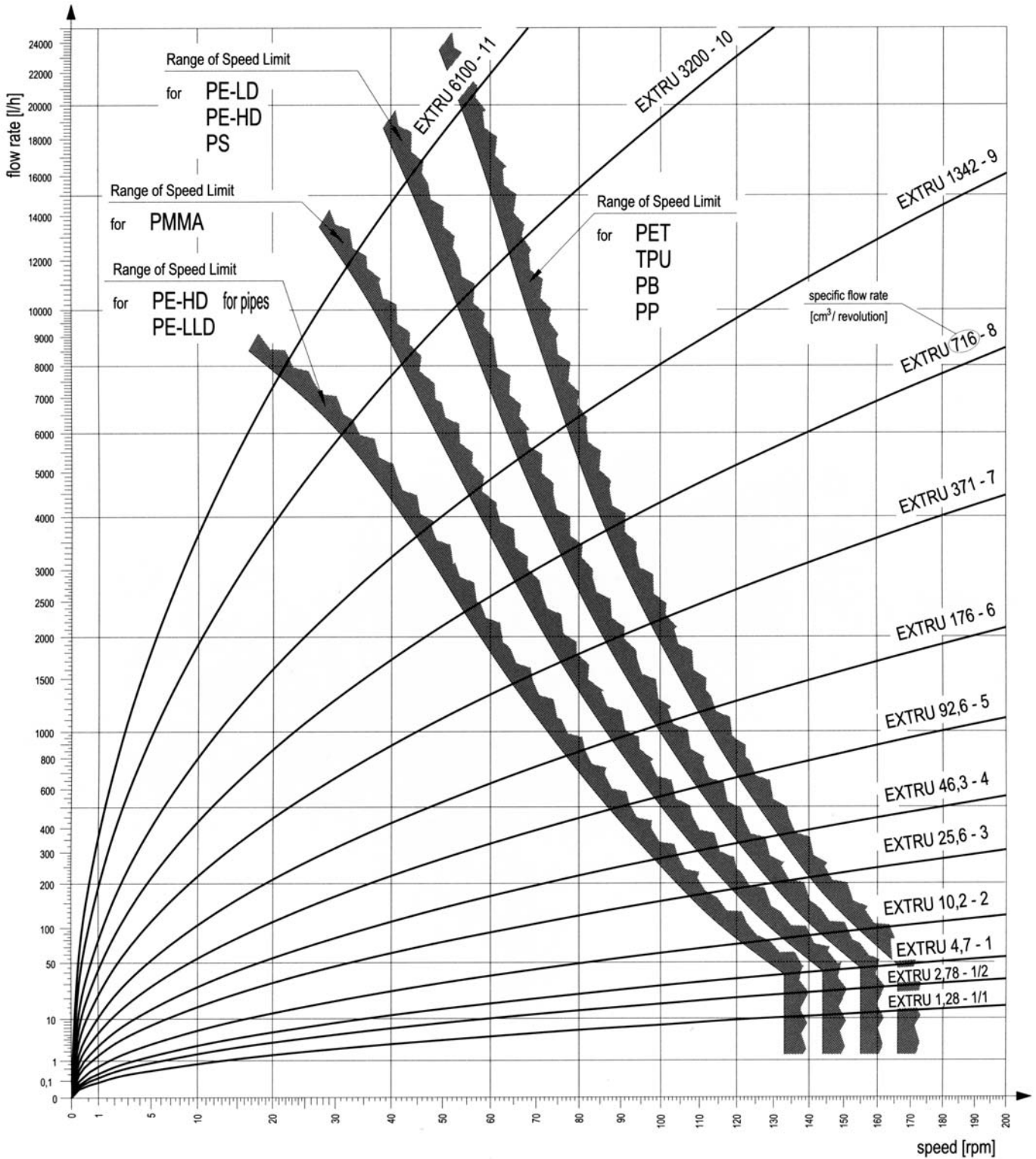
EXTRU - Application Examples



EXTRU 716-8

EXTRU

Extrusion gear pump



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POLY 6100 - 11

POLY 3200 - 10

POLY 1482 - 9/1



CHEM



EXTRU



BOOSTER

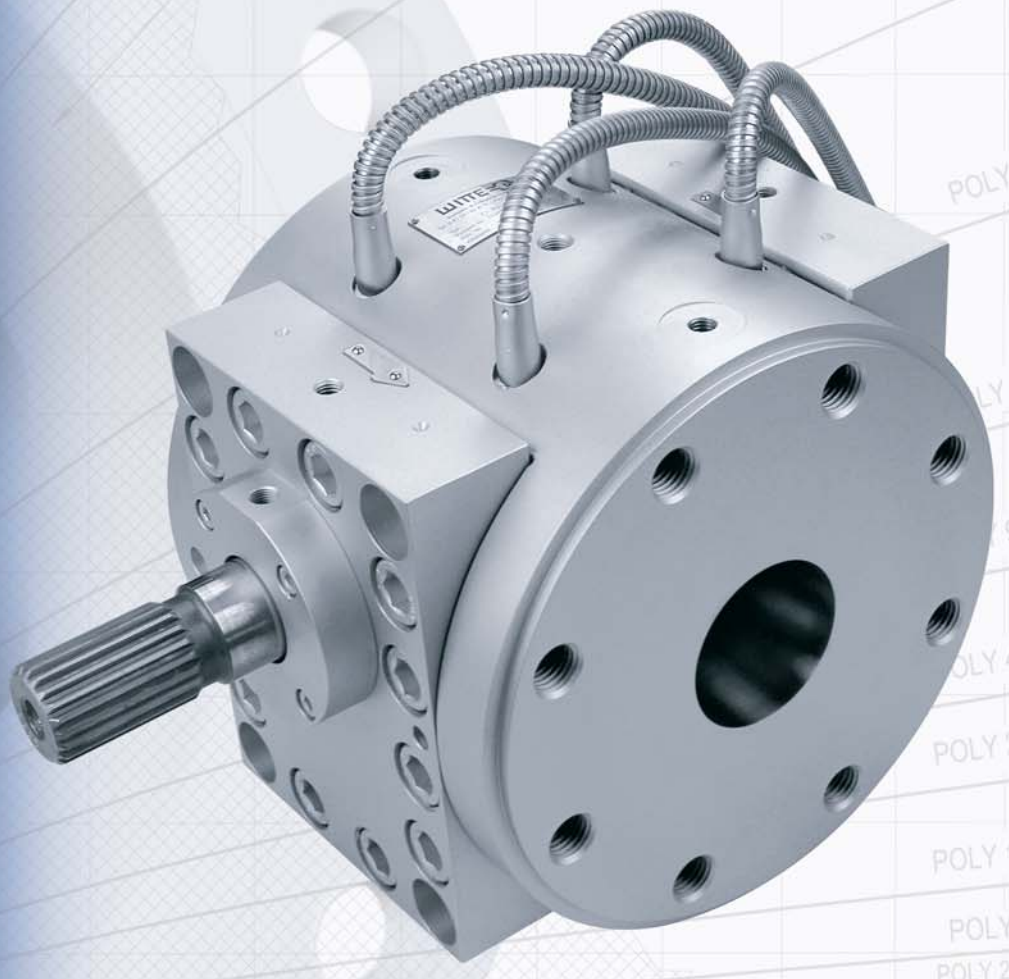


POLY

EXTRU

Extrusion gear pump

Range of speed limit
speed limit depends
on • viscosity



POLY 716 - 8

POLY 371 - 7

POLY 176 - 6

92,6 - 5

POLY 46,3 - 4

POLY 25,6 - 3

POLY 10,2 - 2

POLY 4,7 - 1

POLY 2,78 - 1/2

POLY 1,28 - 1/1

speed [rpm]

