

Booster Pump—— High-pressure, Channel Heating

DHS series melt gear pump

DHS series melt gear pumps are especially suitable for the reactive transportation and pressurization of high-temperature and high-viscosity polymer melts that require high output pressure, such as resin and chemical fiber industries. They are generally installed in melt pipelines and used as booster pumps; also It can be installed in the extruder system that needs heating medium to be used as a metering pump. This series of melt gear pumps have a certain self-priming performance, and can be used for conveying and pressurizing polymer materials under lower vacuum suction conditions. The main materials that can be conveyed by the melt gear pump are:

Polymer melt

PET PBT PTT

PA6 PA66 PA12

PE LDPE LLDPE HDPE HMWPE

PP EVA PB

PB PS HIPS ABS SAN

PC PEK PMMA POM

TPU PLA PBS

Other stock solutions, solutions, glues, oligomers, prepolymers, etc. in the polymer

material industry;

It can also be used to transport hot melt adhesives, asphalt, paints, adhesives, pharmaceuticals, food, grease, fuels, oils, dyes, coatings, lubricants, polyols and other materials that do not contain particulate impurities.

Technical data:

Viscosity : 1~30, 000Pa•s (1,000~30,000,000cP)

Suction side pressure : (-0.00~-0.03MPa) ~16MPa

Discharge side pressure : 0~35MPa

Differential pressure : 25MPa

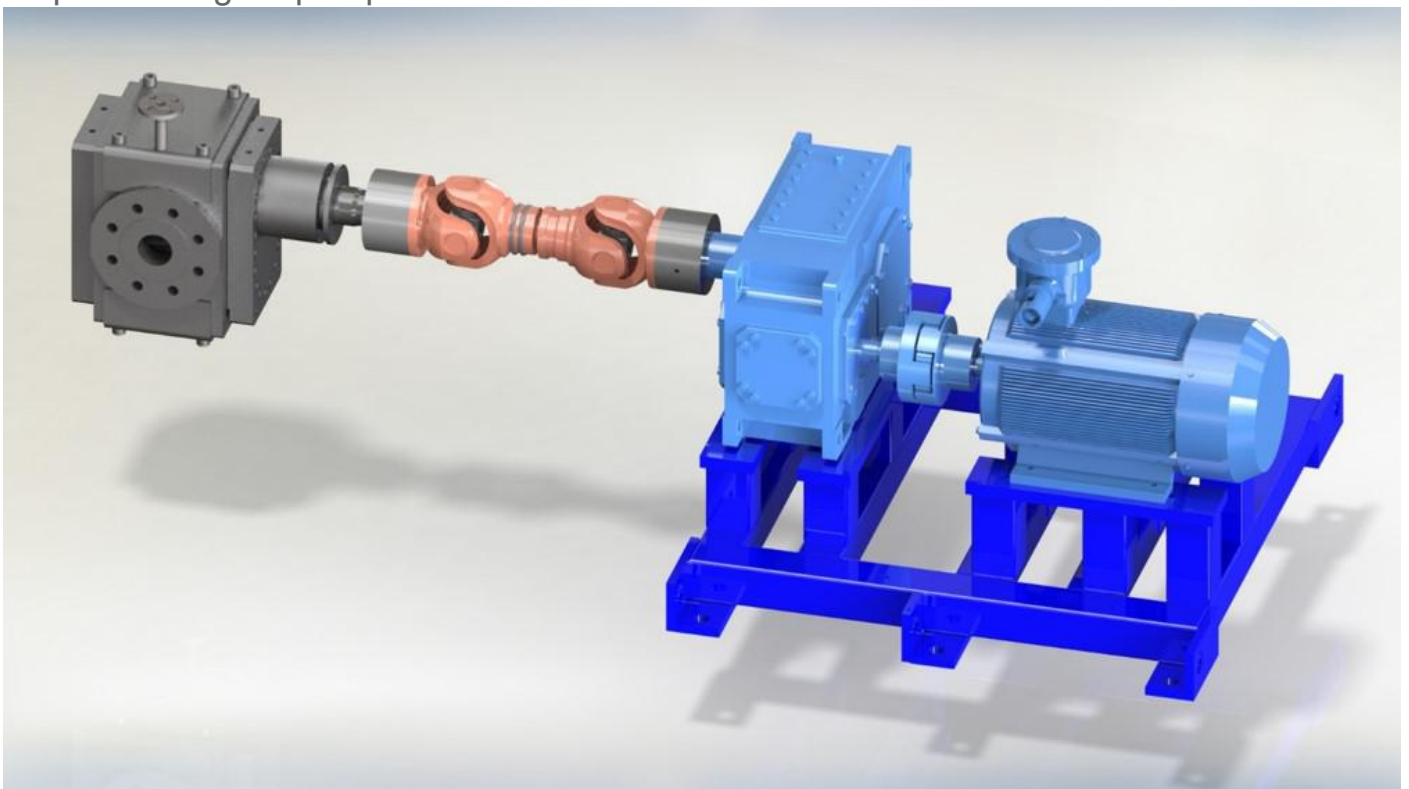
Temperature : $\leq 350^{\circ}\text{C}$

Heating : Fully Jacketed

HT medium pressure : $\leq 1.6\text{MPa}$

Installation method

DHS series melt gear pumps are generally installed in the melt pipeline at the bottom of the reactor and used as booster pumps or metering pumps. They are driven by motor + reducer + universal coupling. Melt gear pumps are positive displacement pumps. , The output flow of the pump can be adjusted by adjusting the speed of the pump. Frequency conversion speed regulation is recommended, which can realize the nearly linear flow output of the gear pump.



Main structure of gear pump:

Rotor type: helical or spur gear

Heating method: Heat medium heating

Sealing structure:

- Dynamic melt seal + packing seal
- Mechanical seal
- Dynamic seal with cooling melt
- High temperature resistant packing seal

Main structural materials of melt gear pump:

Pump casing: stainless steel/alloy steel/corrosion-resistant alloy

Gear: Nitrided steel/tool steel/stainless steel + coating/corrosion resistant alloy

Bearing: tool steel/copper alloy/stainless steel + coating/corrosion resistant alloy

Pump size and Technical data

Model	cc/r	Inlet pres. Mpa	Outlet pres. MPa	Max. flow rate m ³ /h				Temp	
			Low viscosity material	Medium viscosity material	High viscosity material	Ultra high viscosity material			
			<50Pa.s	50~ 200Pa.s	200~ 2000Pa.s	> 2000Pa.s			
DHS-5	5	Vacuum -0.05~ 16.0	≤35.0	0.041	0.027	0.019	0.012	≤350℃	
DHS-10	10			0.081	0.054	0.038	0.024		
DHS-20	20			0.162	0.108	0.076	0.049		
DHS-32	32			0.259	0.173	0.121	0.078		
DHS-50	50			0.405	0.270	0.189	0.122		
DHS-75	75			0.527	0.365	0.243	0.162		
DHS-100	100			0.702	0.486	0.324	0.216		
DHS-160	160			1.123	0.778	0.518	0.346		
DHS-200	200			1.404	0.972	0.648	0.432		
DHS-250	250			1.620	1.080	0.675	0.473		
DHS-355	355			2.3	1.5	0.9	0.7		
DHS-500	500			3.2	2.2	1.2	0.9		
DHS-750	750			4.9	3.2	1.8	1.4		
DHS-1000	1000			5.4	3.8	2.2	1.9		
DHS-1200	1200			6.5	4.5	2.6	2.3		
DHS-1600	1600			8.6	6.0	3.5	3.0		
DHS-2000	2000			10.8	7.6	4.3	3.8		
DHS-2500	2500			10.8	8.1	4.7	4.1		
DHS-3150	3150			13.6	10.2	6.0	5.1		
DHS-4000	4000			13.0	10.8	7.6	6.5		

DHS-6300	6300			20	17	10	9		
DHS-8000	8000			22	17	13	12		
DHS-9000	9000			24	19	15	13		
DHS-12000	12000			32	26	18	16		
DHS-18000	18000			49	39	27	24		
DHS-25000	25000			68	54	38	34		
DHS-38000	38000			103	82	57	51		
DHS-54000	54000			146	117	82	73		
DHS-80000	80000			216	173	121	108		