

Booster Pump—— Low-pressure, Channel Heating

DLS Series Polymer Melts Gear Pump

DLS series melt gear pumps are suitable for reaction delivery and pressurization of high-temperature and high-viscosity polymer melts with lower output pressure, such as resin, chemical fiber and other industries. They are generally installed in melt pipelines and used as booster pumps; The body gear pump has a certain self-priming performance, and can be used to transport and pressurize 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 : $1\text{E-}3 \sim 30,000\text{Pa}\cdot\text{s}$ ($1 \sim 30,000,000\text{cP}$)

Suction side pressure : $(-0.00 \sim -0.03\text{MPa}) \sim 5\text{MPa}$

Discharge side pressure : $0 \sim 5\text{MPa}$

Differential pressure : 5MPa

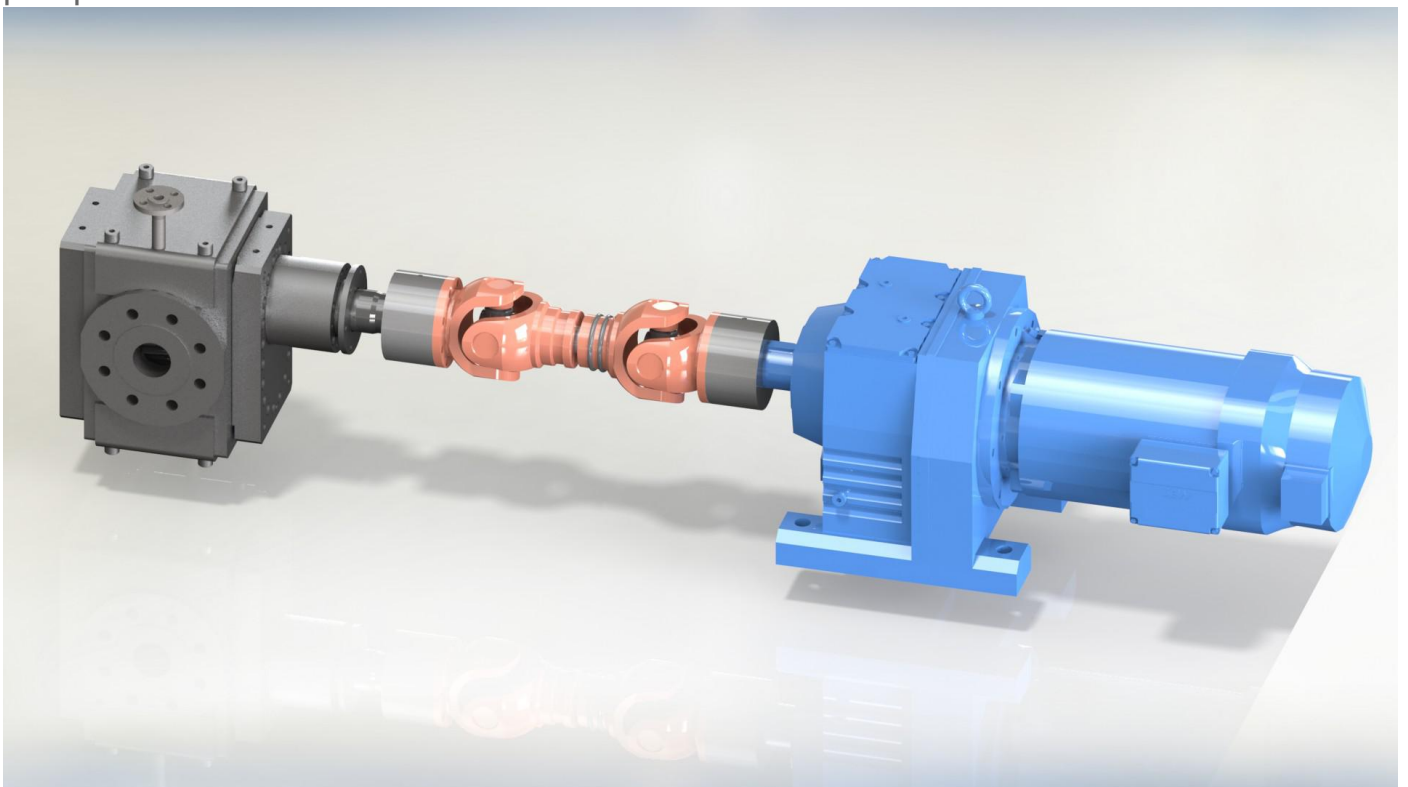
Temperature : $\leq 350^\circ\text{C}$

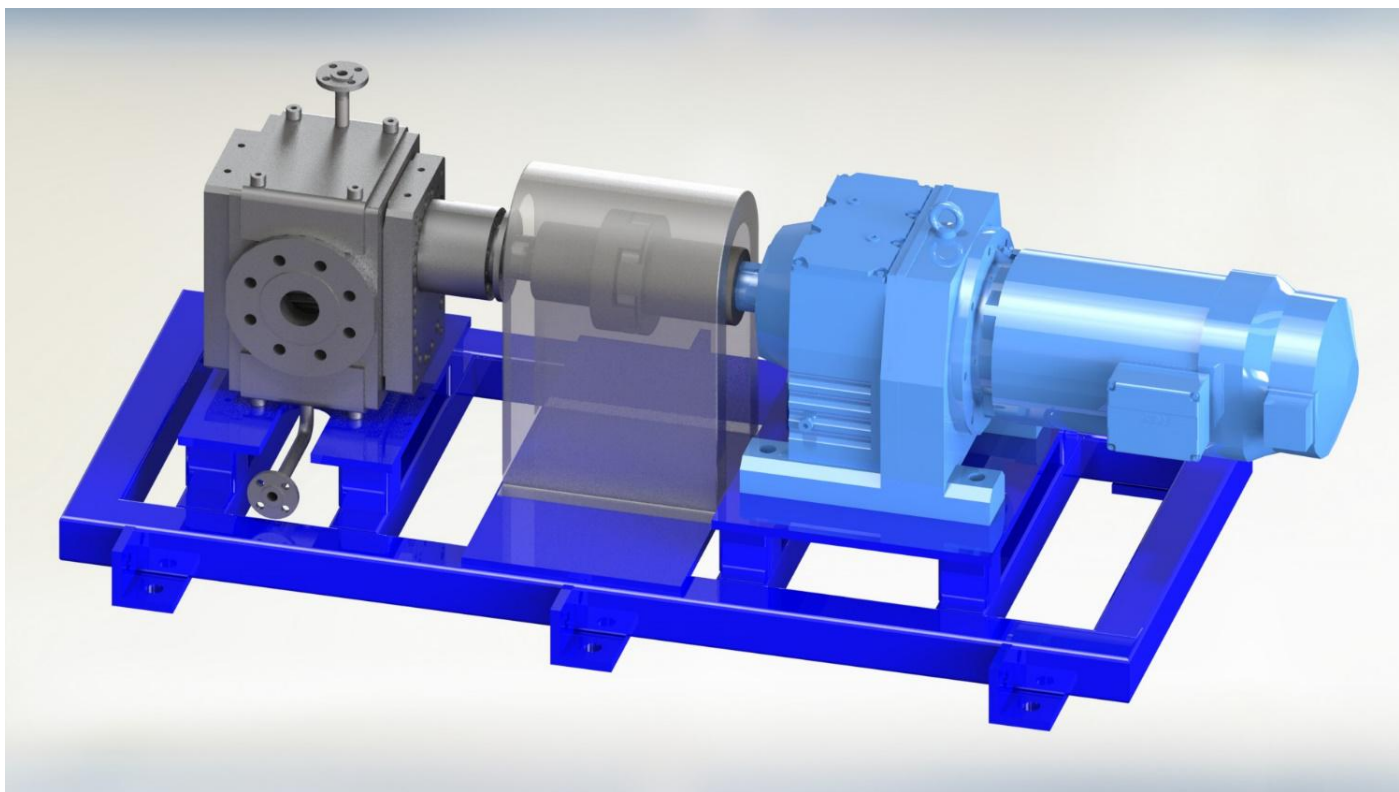
Heating : Fully Jacketed

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

Installation method

DLS 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, or motor + reducer + flexible coupling. Shaft drive. Melt gear pump is a positive displacement forced delivery pump. 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		
DLS-5	5	Vacuum -0.05~ 5.0	≤5.0	0.041	0.027	0.019	0.012	≤350℃	
DLS-10	10			0.081	0.054	0.038	0.024		
DLS-20	20			0.162	0.108	0.076	0.049		
DLS-32	32			0.259	0.173	0.121	0.078		
DLS-50	50			0.405	0.270	0.189	0.122		

