

## **Booster Pump—— High-pressure, Full Jacket**

### **HS series melt gear pump**

HS 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, chemical fiber and other industries. They are generally installed in the melt pipeline and used as a booster pump; 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

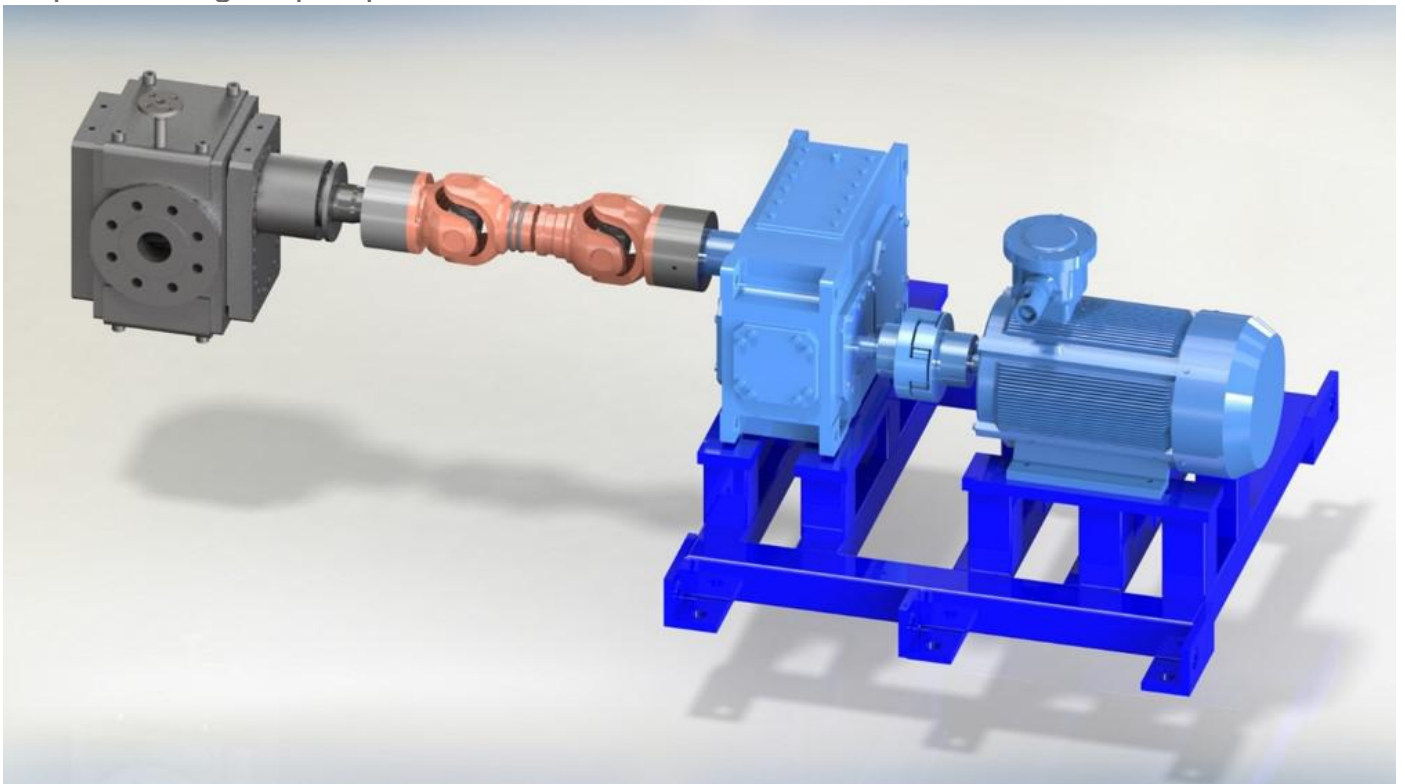
Temperature : ≤350℃

Heating : Fully Jacketed

HT medium pressure : ≤1.6MPa

#### Installation method

HS 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 <sup>3</sup> /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			
HS-5				5	Vacuum -0.05 ~16.0	≤35.0	0.041	0.027	0.019	0.012	≤350℃
HS-10				10			0.081	0.054	0.038	0.024	
HS-20				20			0.162	0.108	0.076	0.049	
HS-32				32			0.259	0.173	0.121	0.078	
HS-50				50			0.405	0.270	0.189	0.122	
HS-75				75			0.527	0.365	0.243	0.162	
HS-100				100			0.702	0.486	0.324	0.216	
HS-160				160			1.123	0.778	0.518	0.346	
HS-200				200			1.404	0.972	0.648	0.432	
HS-250				250			1.620	1.080	0.675	0.473	
HS-355				355			2.3	1.5	0.9	0.7	
HS-500				500			3.2	2.2	1.2	0.9	
HS-750				750			4.9	3.2	1.8	1.4	
HS-1000				1000			5.4	3.8	2.2	1.9	

HS-1200	1200			6.5	4.5	2.6	2.3		
HS-1600	1600			8.6	6.0	3.5	3.0		
HS-2000	2000			10.8	7.6	4.3	3.8		
HS-2500	2500			10.8	8.1	4.7	4.1		
HS-3150	3150			13.6	10.2	6.0	5.1		
HS-4000	4000			13.0	10.8	7.6	6.5		
HS-6300	6300			20	17	10	9		
HS-8000	8000			22	17	13	12		
HS-9000	9000			24	19	15	13		
HS-12000	1200 0			32	26	18	16		
HS-18000	1800 0			49	39	27	24		
HS-25000	2500 0			68	54	38	34		
HS-38000	3800 0			103	82	57	51		
HS-54000	5400 0			146	117	82	73		
HS-80000	8000 0			216	173	121	108		