



Universal melt gear pump

Built-in cooling channel makes temperature control more precise and faster

Optional multiple sealing methods

Suitable even at very low viscosity

Suitable for electric heating and thermal medium heating

Melt gear pumps for extrusion systems are referred to as melt pumps, also known as melt metering pumps or extrusion pumps. They can be used in various extrusion industries, such as sheet, plate, pipe, film, pelletizing, wire drawing, cable, Co-extrusion, compounding, precision extrusion and other industries

We provide a full set of solutions for melt pumps, driving devices, control systems and supporting screen changers and die heads

MEA series melt gear pump is a general-purpose melt gear pump for extrusion systems. Suitable for the extrusion and conveying of polymer melts from low viscosity to very high viscosity; generally installed between the exit of the extruder and the die as a melt metering pump; it can also be installed in the polymer melt pipeline, Used as a booster pump; this series of pump housings have built-in flow channels, which can be used for cooling or heating medium.

The main materials that can be conveyed by the melt gear pump are:

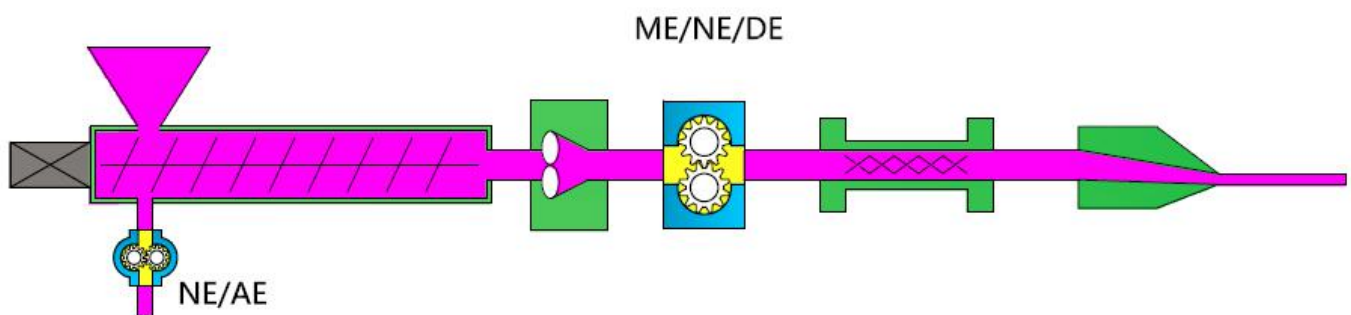
Thermoplastic materials and their blends

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

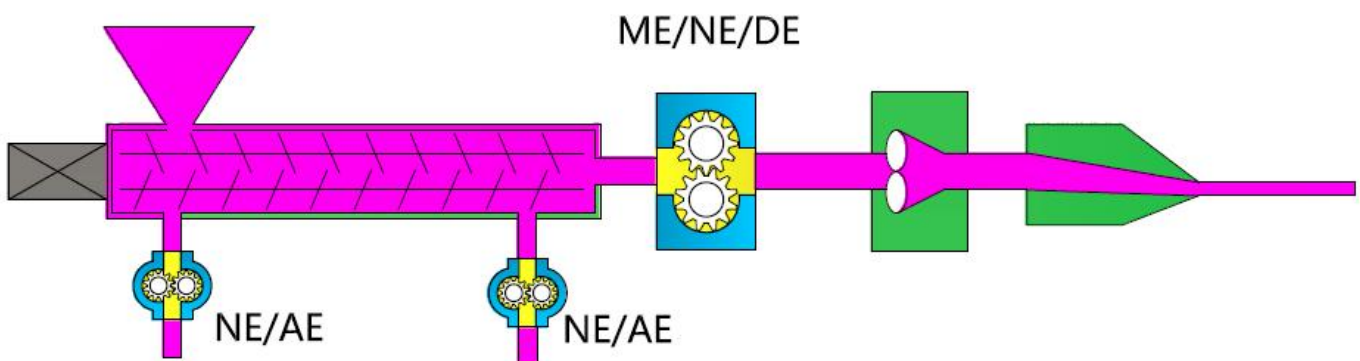
Rubber and elastomer materials

NR BR CR NBR
IR IIR
SBR HNBR
EPM EPDM
PU TPU
ACM CSM
ECO SI

The application of extrusion pump in single screw extrusion system



The application of extrusion pump in twin screw extrusion system



We provide a complete set of solutions for melt pumps, driving devices, control systems and supporting screen changers and die heads

The main function of the melt pump:

1. Significantly improve the stability of die pressure and improve product quality;
2. It can realize the nearly linear output of the flow, which is easy to control;
3. Increase the extrusion volume and increase the output;
4. Reduce the load of the extruder, save energy and reduce costs.

The main features of the company's melt gear pump:

1. Very small pressure and flow pulsation, can achieve linear output of flow, suitable for precision extrusion system;
2. Use different structures and material configurations for different working conditions to better meet the individual needs of users;
3. It can be applied to the working conditions of high temperature (350℃), high pressure (40MPa) and high viscosity (40,000Pa•s);
4. Precise structure, high precision and long life.

The main structure of MEA series melt gear pump:

Rotor type: helical or spur gear

Heating method: electric heating/heat medium heating

Sealing structure:

- Dynamic melt seal + packing seal
- Mechanical seal
- Dynamic seal with cooling melt

Material configuration of the main structure of the melt gear pump

Material group		case	gear	bush	End plate	Features and applicable working conditions	Remarks
A	Standard	Nitride d steel	Nitride d steel	Tool steel	alloy steel	Good wear resistance, high toughness, high cost performance Suitable for most working conditions with low abrasion	Spare parts support
H	High wear resistance	Nitride d steel	High speed steel /coating	High speed steel /ceramics	alloy steel	High strength, high wear resistance Suitable for abrasive wear conditions	Need to be customized
S S	Corrosion resistant type	stainless steel	Nitride d steel	Tool steel	stainless steel	Wear-resistant and corrosion-resistant Suitable for low corrosive conditions	Need to be customized

H S	High corrosi on resista nce	stainle ss steel	Stainle ss tool steel	Stainle ss tool steel	stainle ss steel	High corrosion resistance Suitable for highly corrosive working conditions	Need to be customi zed
T	Special type	Speci al alloy	Specia l materi als	Specia l materi als	Specia l materi als	High temperature resistance or high corrosion resistance Suitable for working conditions with special requirements	Need to be customi zed

The main technical features of MEA series melt gear pump:

1. Optimized melt flow channel design: eliminate dead corners in the flow channel, reduce polymer residues to a minimum, and improve the quality of products;
2. Optional built-in flow channel: suitable for fluid cooling to adapt to a more accurate and fast temperature control system; it can also be used for heat medium heating;
3. Improved gear parameter design: more precise rotation displacement design makes the output pressure more stable and adapts to precise extrusion conditions;
4. A wide range of applicable viscosity: different sealing methods can be applied to working conditions from low viscosity to very high viscosity;
5. A variety of installation methods: to meet the individual needs of users;
6. High-precision manufacturing and excellent heat treatment: more precise and more durable;

Technical data:

Viscosity : 1E-3~40000Pa•s (1~40,000,000cP)

Suction side pressure : 0~30MPa

Discharge side pressure : 0~40MPa

Differential pressure : 25MPa

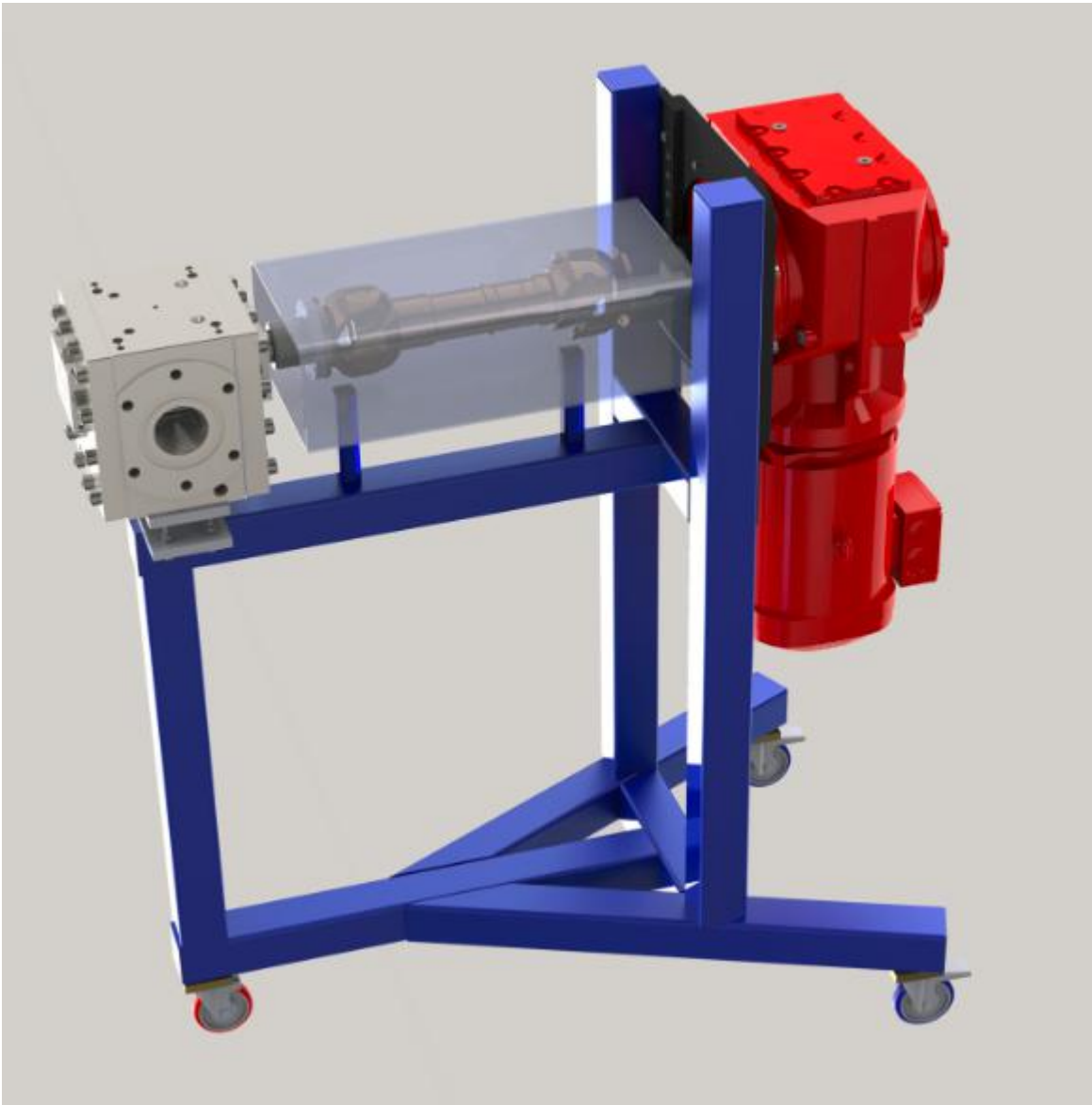
Temperature : ≤350℃

Heating : Electric heating/heating medium channel heating

The installation structure of melt gear pump:

It is recommended to use a universal coupling to connect the reducer and the melt pump to eliminate the effects of thermal deformation; the melt gear pump is a positive

displacement forced delivery pump, and the pump output flow can be adjusted by adjusting the pump speed. It is recommended to use frequency conversion adjustment. The speed mode can realize the nearly linear flow output of the gear pump.



Pump size and Technical data

Model	cc/r	Inle t pre s. MP a	Outl et pres · MPa	Max. flow rate m³/h				Temp
				Low viscosi ty materi al	Mediu m viscosi ty materi al	High viscosit y materi al	Ultra high viscosit y materi al	
				< 50Pa. s	50~ 200Pa .s	200~ 2000Pa .s	> 2000Pa .s	
MEA-5	5	0~	≤40. 0	0.041	0.028	0.019	0.012	≤350
MEA-10	10			0.081	0.054	0.038	0.024	

MEA-20	20	30		0.162	0.108	0.076	0.049	°C
MEA-32	32			0.259	0.173	0.121	0.078	
MEA-50	50			0.405	0.270	0.189	0.122	
MEA-75	75			0.527	0.365	0.243	0.162	
MEA-100	100			0.702	0.486	0.324	0.216	
MEA-160	160			1.123	0.778	0.518	0.346	
MEA-200	200			1.404	0.972	0.648	0.432	
MEA-250	250			1.620	1.080	0.675	0.473	
MEA-355	355			2.3	1.5	0.9	0.7	
MEA-500	500			3.2	2.2	1.2	0.9	
MEA-750	750			4.9	3.2	1.8	1.4	
MEA-1000	1000			5.4	3.8	2.2	1.9	
MEA-1200	1200			6.5	4.5	2.6	2.3	
MEA-1600	1600			8.6	6.0	3.5	3.0	
MEA-2000	2000			10.8	7.6	4.3	3.8	
MEA-2500	2500			10.8	8.1	4.7	4.1	
MEA-3150	3150			13.6	10.2	6.0	5.1	
MEA-4000	4000			13.0	10.8	7.6	6.5	
MEA-6300	6300			20.4	17.0	10.2	9.2	
MEA-8000	8000			21.6	17.3	13.0	11.7	
Please consult with the manufacturers for the bigger or lower specification								

The flow rate of the melt gear pump is related to the working speed, material viscosity, and working pressure. Please consult the manufacturer for specific selection.

The selection needs to provide parameters: 1 flow or output 2 material name 3 material viscosity 4 material corrosivity/toxicity 5 inlet and outlet pressure (pressure difference) 6 operating temperature

In addition, according to the actual situation and requirements of the customer, you can choose the pump casing configuration without flow channel