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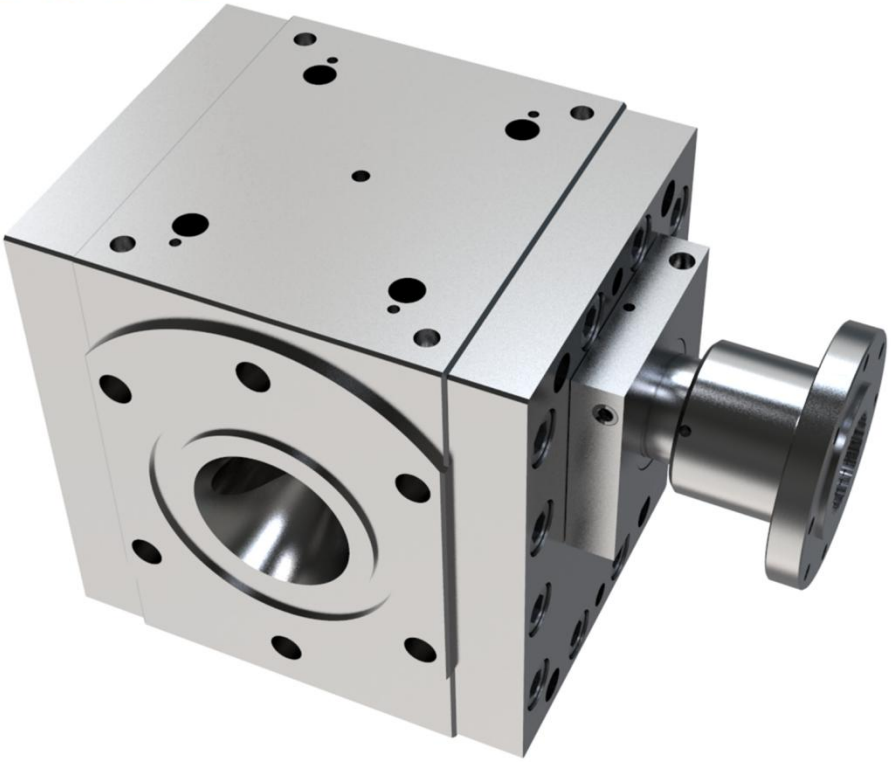

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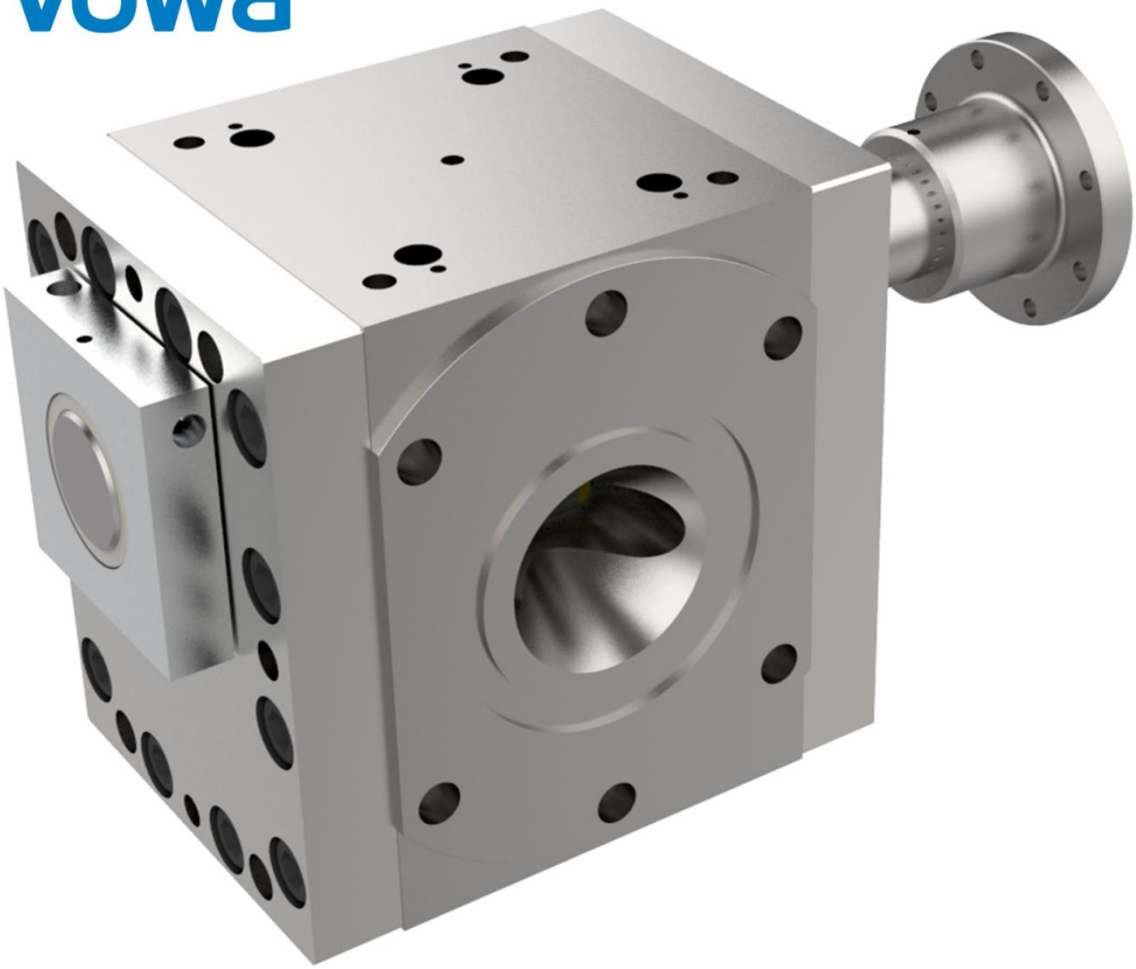


Melt Gear Pump With Double Shaft Extension And Balance

Optimized tooth shape design, more stable conveying, minimal fluctuation
Runner design without dead ends, no material residue
Double-sided pressure balance structure, suitable for high pressure occasions
Optional wear-resistant configuration, suitable for high filling conditions
Suitable for electric heating

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

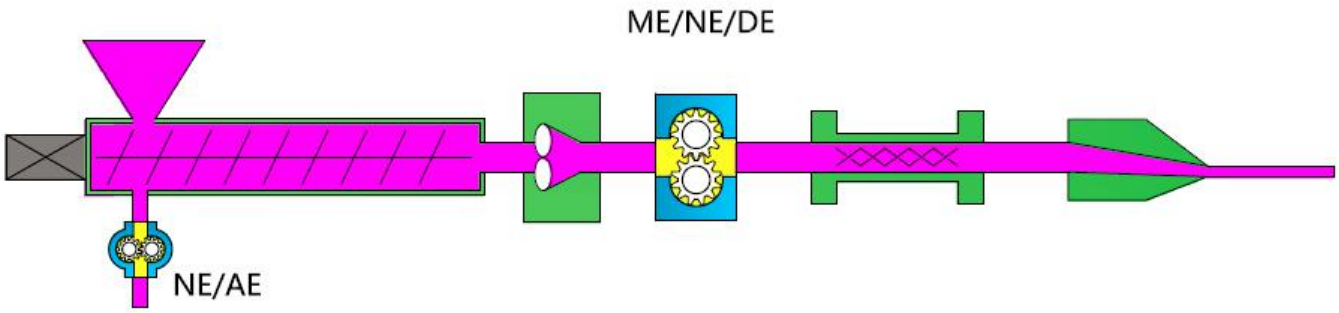
NES series melt gear pump is a melt gear pump for the extrusion system of thermoplastic materials. It is suitable for the extrusion and transportation of thermoplastic high-viscosity polymer melt; it is generally installed between the exit of the extruder and the die and used as a melt metering pump;

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

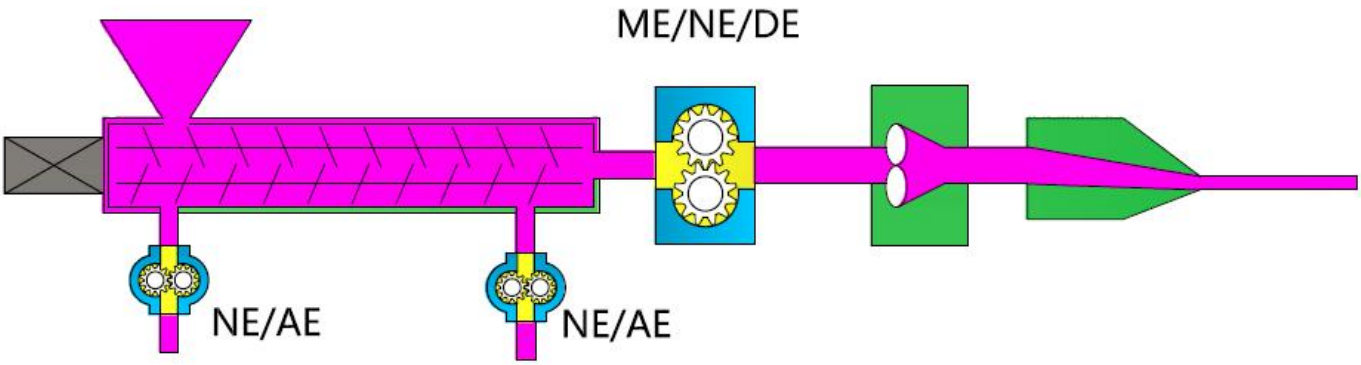
Thermoplastic materials and their blends
PET PBT PTT
PA6 PA66 PA12
PE LDPE LLDPE HDPE HMWPE
PP EVA PB

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



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 our 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 NES 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	Nitrided steel	Nitrided 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	Nitrided 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
SS	Corrosion resistant type	stainless steel	Nitrided steel	Tool steel	stainless steel	Wear-resistant and corrosion-resistant Suitable for low corrosive conditions	Need to be customized
HS	High corrosion resistance	stainless steel	Stainless tool steel	Stainless tool steel	stainless steel	High corrosion resistance Suitable for highly corrosive working conditions	Need to be customized

T	Special type	Special alloy	Special materials	Special materials	Special materials	High temperature resistance or high corrosion resistance Suitable for working conditions with special requirements	Need to be customized

The main technical features of NES 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. Improved gear parameter design: more accurate rotation displacement design makes the output pressure more stable and adapts to precise extrusion conditions;
3. A wide range of applicable viscosity: different sealing methods can be applied to working conditions from low viscosity to very high viscosity;
4. A variety of installation methods: to meet the individual needs of users;
5. High-precision manufacturing and excellent heat treatment: more precise and more durable;

Technical data:

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

Suction side pressure ： 0～30MPa

Discharge side pressure ： 0～40MPa

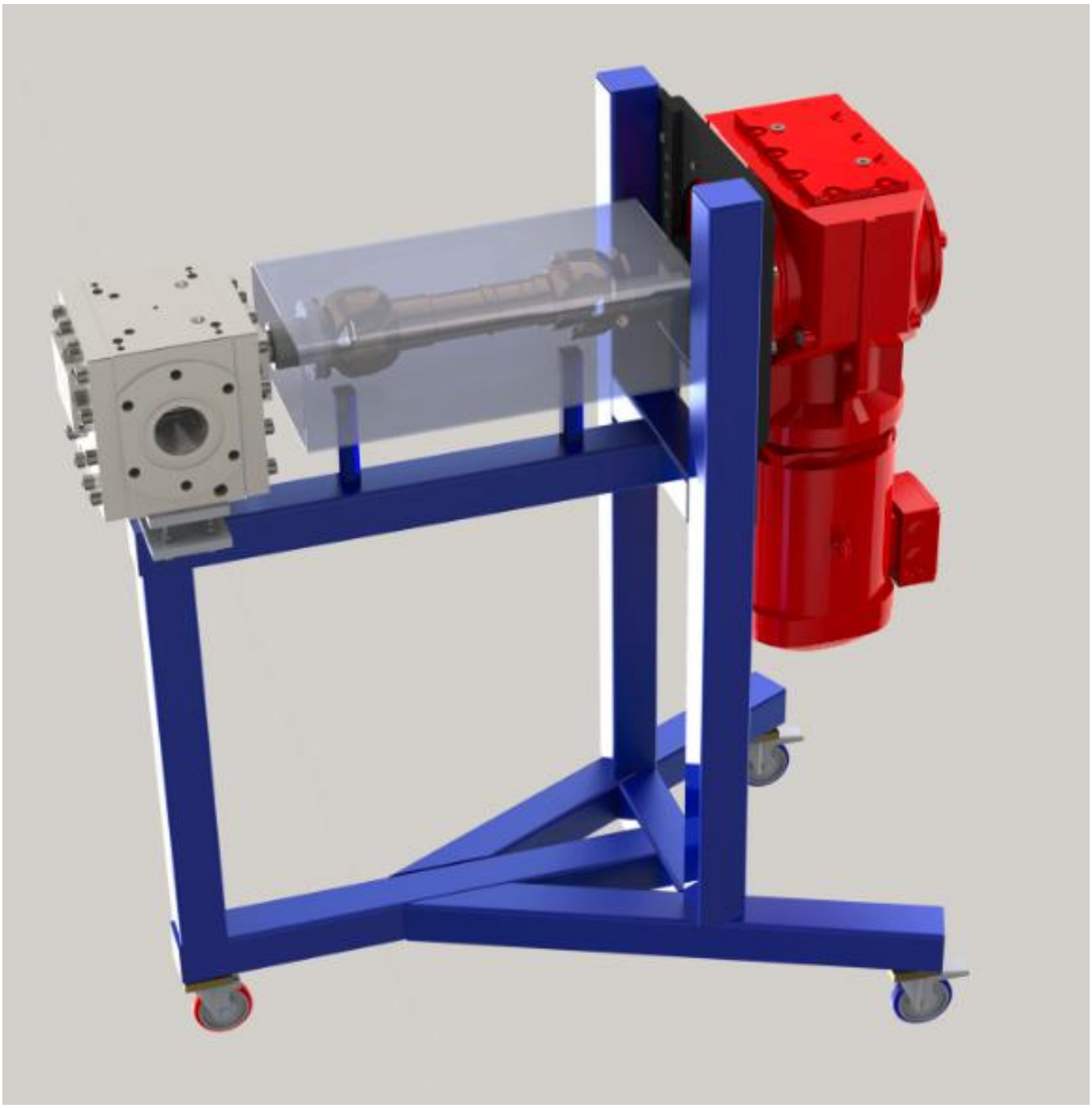
Differential pressure ： 25MPa

Temperature ： ≤350℃

Heating ： Electric 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. Frequency conversion is recommended. The speed mode can realize the nearly linear flow output of the gear pump.



Pump size and Technical data

Model	cc/r	Inlet press. MPa	Outlet press. 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	
NES-01	1	0～	≤40.	0.008	0.006	0.004	0.003	≤350

NES-02	2	30	0	0.016	0.011	0.008	0.005	℃
NES-05	5			0.041	0.028	0.019	0.012	
NES-10	10			0.081	0.054	0.038	0.024	
NES-20	20			0.162	0.108	0.076	0.049	
NES-32	32			0.259	0.173	0.121	0.078	
NES-50	50			0.405	0.270	0.189	0.122	
NES-75	75			0.527	0.365	0.243	0.162	
NES-100	100			0.702	0.486	0.324	0.216	
NES-160	160			1.123	0.778	0.518	0.346	
NES-200	200			1.404	0.972	0.648	0.432	
NES-250	250			1.620	1.080	0.675	0.473	
NES-355	355			2.3	1.5	0.9	0.7	
NES-500	500			3.2	2.2	1.2	0.9	
NES-750	750			4.9	3.2	1.8	1.4	
NES-1000	1000			5.4	3.8	2.2	1.9	
NES-1200	1200			6.5	4.5	2.6	2.3	
NES-1600	1600			8.6	6.0	3.5	3.0	
NES-2000	2000			10.8	7.6	4.3	3.8	
NES-2500	2500			10.8	8.1	4.7	4.1	
NES-3150	3150			13.6	10.2	6.0	5.1	
NES-4000	4000			13.0	10.8	7.6	6.5	
NES-6300	6300			20.4	17.0	10.2	9.2	
NES-8000	8000			21.6	17.3	13.0	11.7	
Please consult with the manufacturers for the bigger or lower specification								