Rheology Solutions

Rheology Solutions is the sole Australian distributor of this product range and we welcome the opportunity of discussing your application requirements.

We hope the information you are seeking is contained within this file. If you have any questions, or require further information please contact us. We look forward to being of further service.

Regards from the Team at Rheology Solutions.

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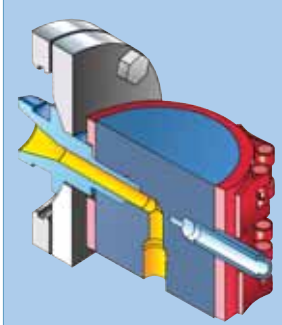
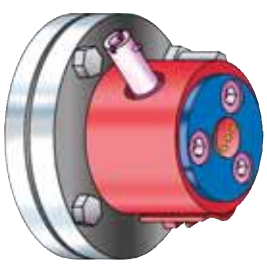
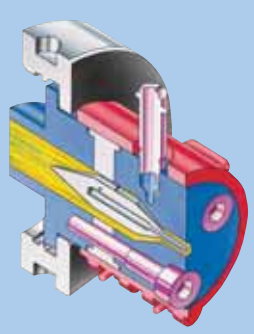
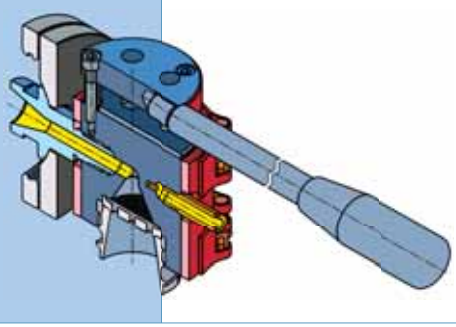
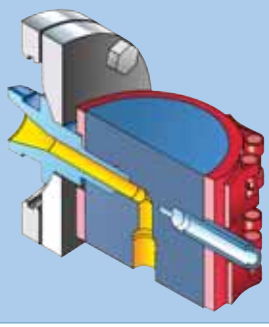
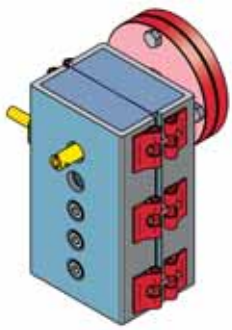
General Description	Sheet, Tape & Ribbon Die 25/50/100/150	Horizontal Rod Die / Vertical Rod Die	Multistrand Die Three Strands	Catheter / Tubing Die
	These dies produce sheets of different width and thickness. The optimized flow channel produces a ribbon of homogeneous output. The flexible die lip option enables the on-site adjustment of the sheet thickness as well as an optimization of the diameter.	The rod die produces a single strand for inspections or pelletizing. The inter-changeable nozzles on the horizontal rod die vary not only in diameter but also in length to supply different pressure ranges and die swell information.	In a pelletizing application it is sometimes of great advantage to have a high output rate while maintaining a sort strand and slower output speed. This is the dedicated application of the multi strand die. When combined with the HAAKE waterbath and pelletizer, one lab-scaled pelletize line can be set up.	The tubing die is designed for tubes with diameters of about 8 to 15 mm and a wall thickness of 1 to 2 mm. This die for tubes of small diameter and wall thickness is ideal for producing capillary and catheter tubes. The process is supported by an air supply in the inner tube to prevent a collapsing of the small tubes. Also on this die a wide range of diameter and wall thickness is available.
Specifications				
Extrudate	Sheet	Dia Ø 1 - 6 mm	3 holes Ø = 3 mm	Tubes
Material	1.4301	1.4571 / 1.4112	1.4571	1.1412 / 1.4571
Heater (Watt)	500 / 1000 / 1250 / 1800	250 / 280	160	200 / 200
Max. Temperature (°C)	360	480	480	480
Max. Pressure (bar)	–	700	700	700
Measuring Ports	1	2 / 2	–	– / –
Dimensions L x W x H (mm)		Dia 100 x 100 / 100 x 63 x 75	Dia 100 x 62	Dia 100 x 42 / 130
Approx. Weight (kg)	3 / 4.5 / 10 / 14	2.5	2	2 / 3
Order Information	Flexible Gap:		557-3180	Catheter Die: 557-3185
	25 mm – 557-2301	Horizontal Rod Die: 557-3235		Catheterdiameter up to 4.5 mm
	50 mm – 557-2302			
	100 mm – 557-2303	Vertical Rod Die: 557-3150		Tubing Die: 557-3215
	150 mm – 557-2304			Tubing die for tubes up to 8 mm
	Gap: 0.2 - 1.2 mm			
		Options: Nozzles		
	Fixed Gap:	Ø (mm) Order No.		
	25 mm – 557-2341	1.0 557-2386		
	50 mm – 557-2342	1.5 557-2387		
	100 mm – 557-2343	2.0 557-2388		
	Gap to be specified	3.0 557-2393		
		4.0 557-2394		
	PVC Dies:	5.0 557-2395		
	50 mm – 557-2346	6.0 557-2396		
	100 mm – 557-2347			
Graphical Information				

General Description	Filter Die	Rod Capillary Die	Slit Capillary Die
	The Filter die is suitable for testing colorants in the form of color concentrates (master batches) in all polymers used for extrusion and melt-spinning processes. The design follows the new EN standard 13900-5. The pressure increase before of a standardized melt filter is measured, from which the FPV (Filter Pressure Value) is calculated thus indicating the dispersion quality of the master batch.	This die is designed to measure the absolute viscosity of polymers. It provides a tool with interchangeable capillaries. The pressure is measured directly before the capillary entrance. The nozzles are wear reduced for long life reproducibility and the testing of filled polymers and ceramics. Depending on testing material and nozzles, shear rates between 500 - 10000 1/s can be achieved.	This die enables a measurement of pressure gradient and melt temperature directly within the slit capillary. Thus the absolute viscosity of a polymer can be determined. Different geometries are available to adapt the die to the shear rate and the viscosity range. Depending on the geometry and testing material shear rates of 10 - 1000 1/s are possible.

Specifications							
Extrudate	–	–			1 - 2 x 20 mm		
Material	1.4112	1.4571			1.4112		
Heater (Watt)	280	400			800		
Max. Temperature (°C)	480	480			480		
Max. Pressure (bar)	350	700			700		
Measuring Ports	2	2			4		
Dimensions L x W x H (mm)	310 (with adjusting lever) x 100 x 120	100 x 100 x 93			200 x 100 x 80		
Approx. Weight (kg)	5	2.5			8		
Order Information	557-2413	557-3100			0.8 x 20 mm		557-3224
	Mesh sizes:	Options: Nozzles			1.0 x 20 mm		557-3223
	#1 25 µm	Ø (mm)	L/D	Order No.	1.2 x 20 mm		557-3222
	#2 14 µm	1.0	10	557-2552	1.5 x 20 mm		557-3221
			20	557-2553	2.0 x 20 mm		557-3220
			30	557-2399	Inserts:		
			40	557-2539	0.8 x 20 mm		002-4022
		1.2	10	557-2540	1.0 x 20 mm		002-4023
			20	557-2541	1.2 x 20 mm		002-4024
			30	557-2342	1.5 x 20 mm		002-4025
			40	557-2543	2.0 x 20 mm		002-3512
		1.5	10	557-2544			
			20	557-2545			
			30	557-2346			
			40	557-2547			
		2.0	10	557-2548			
			20	557-2549			
			30	557-2550			
			40	557-2551			







Garvey Die	Wire Coating Die	Blown Film Die	Spinning Die
The garvey die adheres to ASTM 2320 and can be used to examine the flow behavior of material, especially rubber, to continuously fill the different angles of the die. Its shape simulates the typical design of tire building blocks such as the thread and apex or parts of the side wall.	The wire coating die forms a constant coat on wires in different diameters. The die utilizes an adjustable mandrel to provide a fine tuning of the concentricity of the coating. In combination with the wire coating take-off it forms a complete lab-scaled processing unit.	A ring gap at the top of the die produces a thin-walled tube. The die supplies an adjustable orifice for molten polymer. The inner die tube for air creates the film bubble. The specially designed cooling ring provides an adjustable air curtain and a centered position. Together with the HAAKE blown film take-off it forms a complete lab scaled blown film line.	The spinning die enables the simulation of a fibre spinning process in a lab scale. The standard die extrudes 10 fibres with an initial diameter of 0.2 mm. By exchanging the spinning-plate, other geometries are possible.
Gravey profile	–	–	–
1.4305	1.4571	1.4112	1.4571
250	500	500	280
480	480	480	480
700	700	700	700
–	2	2	2
Dia 100 x 62	140 x 100 x 100	140 x 100 x 100	100 x 63 x 75
2	3.5	3.5	2
557-3230	557-3195	557-3175	557-2376
	for wires up to Ø 2.0 mm	Di: 24 mm	Number of holes: 10
		Do: 25 mm	diameter: 0.2 mm
	Coating up to 1 mm	Options:	Other geometries on request
		Air Cooling Ring: 557-3176	
		Insert 34/35 mm: 557-2380	
		Special geometry	
		for HDPE available	
	Thickness of coated wire max Ø 4 mm