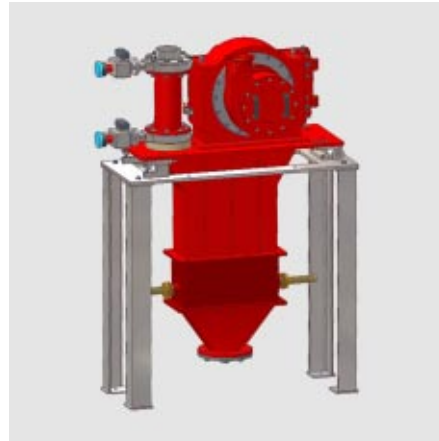
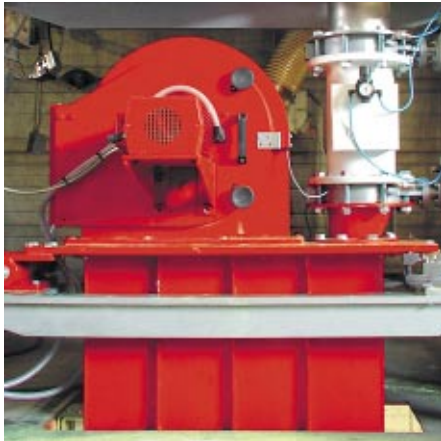
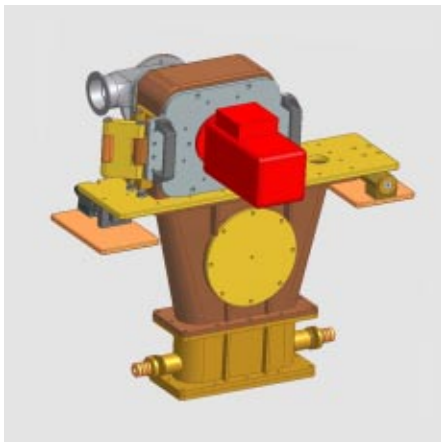


MULTINO[®]-M OPPOSED JET MILL RANGE

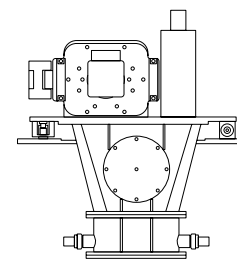
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◀◀ MultiNo[®] 6100-M
FRONT VIEW, CLOSED



◀ MultiNo[®] 6100-M
FRONT VIEW, OPEN



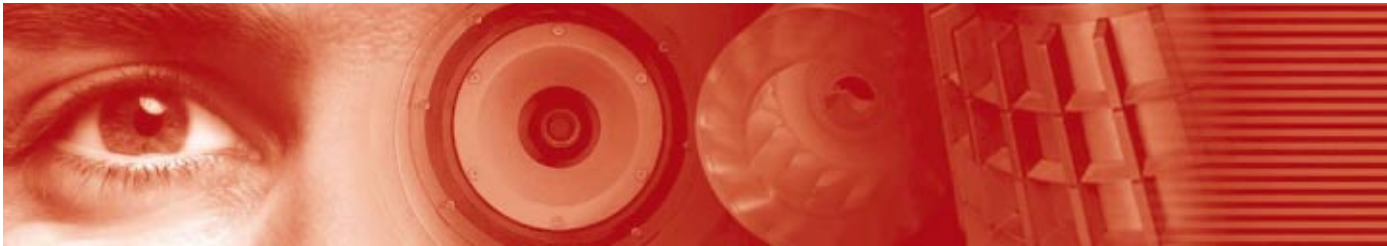
MultiNo[®]-M IS THE OPTIMAL OPPOSED JET MILL FOR THE ULTRA FINE PARTICLE SIZE REDUCTION OF DRY MATERIALS WITH MOHS HARDNESSES UP TO 10. ITS SPECIALLY DESIGNED MILLING CHAMBER PREVENTS BLOCKAGES AND DEPOSITIONS OF STICKY MATERIALS BUT ALLOWS EASY ACCESS FOR THOROUGH CLEANING AND COMFORTABLE MAINTENANCE. AVERAGE POWDER SIZES OF 2 TO 200 μm CAN BE EASILY REACHED. THE COMBINATION OF PRODUCT-ON-PRODUCT MILLING AND THE USE OF VARIOUS ABRASION-RESISTANT LININGS, MAKE THE **MultiNo[®]-M** IDEALLY SUITED FOR THE PROCESSING OF VERY PURE OR TEMPERATURE-SENSITIVE PRODUCTS.

- ▶ HIGH GRINDING PERFORMANCE
- ▶ GRAVIMETRICAL DOSING
- ▶ EXACT REPRODUCIBILITY
- ▶ QUICK CLEANING

CONTACT:

NOLL PROCESSING TECHNOLOGY

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MULTINO[®]-M OPPOSED JET MILL RANGE

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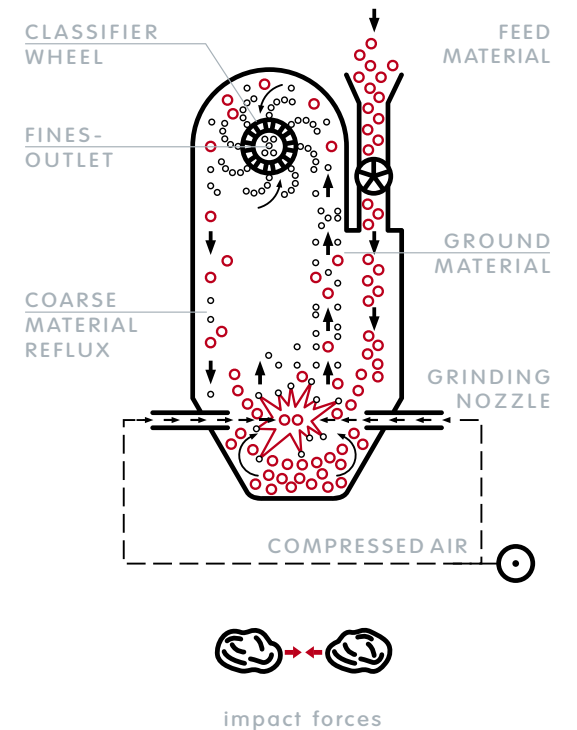
WORKING PRINCIPLE MILLING

The starting material that can be stored in Big-Bags enters the hopper of the gravimetric dosing unit. Through a feed timing flap the material is fed continuously in the milling chamber, where the compressed air out of the opposed air nozzles fluidise the material. Dry, oil-free air ensures an uncontaminated product. The fines in the starting material are directly transported to the classifier. This pre-classification insures that work is only performed on the fraction larger than required: improving energy usage.

The coarser particles entering the air stream are accelerated to high speeds and collide upon each other in midair resulting in impact particle size reduction. The remaining kinetic energy of the particles and carrier gas create an upward current transporting the milled product tangentially to the internal classifying unit.

The specially designed classifying wheel separates the coarse and fine particles by use of centrifugal and drag forces. Adjusting the classifier wheel speed can alter the top cut particle size. A specially generated air stream along the classifier wheel insures that no powder can enter the bearings or block the classifying wheel. The unmilled and from classifier returning coarser material is internally recycled and flows with the downward current back into the fluidized product bed.

The fine material according to specification exits the machine through the tangential exit, where it is packaged in the appropriate packaging medium. For metal-free processing the MultiNo[®]-M can be supplied with various abrasion resistant linings, such as polyurethane, polyamide or ceramic coatings.



PRODUCT-SPECIFIC MACHINERY CONFIGURATION:

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CLASS. WHEEL

- ▶ Stainless steel
- ▶ Special steel
- ▶ Polyurethane
- ▶ Polyamide
- ▶ Ceramic



INTERNAL LINING

- ▶ Stainless steel
- ▶ Special steel
- ▶ Steel+polyurethane
- ▶ Steel+ceramic



NOZZLES

- ▶ Stainless steel
- ▶ Special steel
- ▶ Polyurethane
- ▶ Polyamide
- ▶ Ceramic



MULTINO®-M OPPOSED JET MILL RANGE

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FIGURES - DATA - FACTS

MultiNo®-SERIES	MultiNo® 2000	MultiNo® 3000	MultiNo® 6000	MultiNo® 9000	MultiNo® 12000	MultiNo® 15000
TYPES	2070/90	3120/160	6240/300	9360/420	12480/12600	15720/15840
TYPE DESIGNATION	M - M/S - M/S/M			M - M/S		
MILLING CAPACITY (kg/h) 200 days/3 shifts (MT/year)	up to 50 240	up to 250 1200	up to 800 3840	up to 2000 9600	up to 4000 19200	up to 6000 28800
START. MATERIAL SIZE Metering screw (mm) Metering trough (mm)	< 0.2 < 2.0	< 0.3 < 3.0	< 0.5 < 5.0	< 0.5 < 5.0	< 1.0 < 10.0	< 1.0 < 10.0
FINENESS RANGE (D ₉₇ μm)	2 - 60	3 - 80	3 - 100	3 - 120	4 - 140	4 - 160
CLASSIFIER WHEEL (Ø mm)	70/90	120/160	240/300	360/420	480/600	720/840
MAX. AIRFLOW (m³/h)	300	1000	3000	8000	16000	24000
CLASS. WHEEL DRIVE (kW)	1.5	4	6.6	15	22	30
RADIAL FAN DRIVE (kW)	4	7.5	15	37	55	90
DIMENSIONS-H/W/D (m)	0.9×0.6×0.6	1.9×1.1×0.7	2.4×1.4×1.1	3.1×1.9×1.5	4.3×2.9×2.5	5.2×3.5×3.0
DESIGN	gas-proof			-	-	-
	shock and impact resistant up to 10 bar			-	-	-
MATERIAL I. CONTACT W. PRODUCT	Stainless steel, special steel, ceramics, polyamide, polyurethane					



Technical ceramics - boron carbide (B₄C), D₅₀ = 10 μm

APPLICATION EXAMPLES:

Inorganic pigments, coating powder, toners, technical ceramics, magnets, abrasives, graphite, chemical products, food, high-purity substances

OPERATING RANGE

APPLICATION RANGE abrasive, gluey, easily depositing, high-purity products
TEMPERATURE RANGE ±5°C up to 180 °C
PRODUCT HARDNESS RANGE Mohs hardness 4-10

M: Micronization, grinding
M/S: Micronization, grinding, deagglomeration – supplementary nozzle at the bottom
M/S/M: Micronization, grinding, homogenization – classifying nozzle at the bottom; Deagglomeration – supplementary nozzle at the bottom

FUNCTION

MICRONISATION/GRINDING CONTINUOUS
MIXING DIS-/CONTINUOUS
CLASSIFICATION DIS-/CONTINUOUS
SELECTIVE GRINDING DIS-/CONTINUOUS
HOMOGENISATION/DEAGGLOMERATION CONTINUOUS

MODE

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