土壤

行　　业：	Construction materials, Environment
进料尺寸：	< 5cm
最终精度：	dry soil samples with agglomerates with up to 6cm length
样 品 量：	< 2mm (without crushing stones)
研磨建议：	100-500ml
	By lower grinding times with lightweight balls, a deagglomeration of soil will be possible with our Planetary Mono Mill PULVERISETTE 6 classic line.

PLANETARY MONO MILL PULVERISETTE 6 CLASSIC LINE

speed: 650 rpm

Only a 500 ml silicon nitride bowl without using balls.

Material attributes:	Soil sample which might have a high clay content
Feed quantity:	230 g (for a maximum useful volume of 225 ml, about 250-280 g of sample can be fed)
Feed Size:	6 cm
Grinding time:	2 min
Final fineness:	4 cm
Comments:	Agglomerates have only become round shaped. Pieces of 6cm have been reduced in size to < 4cm. For a proper deagglomeration, we would recommend using balls at low speed (e.g. 350rpm) for deagglomeration (see result 2).

PLANETARY MONO MILL PULVERISETTE 6 CLASSIC LINE

speed: **350 rpm**

Only a 500 ml silicon nitride (Si3N4)

+ 8x 30 mm Ø Si3N4 balls

Material attributes:	Soil sample which might have a high clay content
Feed quantity:	230 g
Feed Size:	6 cm
Grinding time:	+2 min (∑:4 min)
Final fineness:	agglomerates < 2 mm
Comments:	After further 2 minutes of grinding with 30mm silicon nitride balls and lowered speed (only 350rpm), the agglomerates have been destroyed completely. Sample already started sticking to bowl and balls. Threrefore, we would recommend using a little lower speed (e.g. 300rpm - see result 3).

PLANETARY MONO MILL PULVERISETTE 6 CLASSIC LINE

speed: **300 rpm**

Only a 500 ml silicon nitride (Si3N4)

+ 8x 30 mm Ø Si3N4 balls

Material attributes:	Soil sample which might have a high clay content
Feed quantity:	250 g
Feed Size:	6 cm
Grinding time:	5 min
Final fineness:	agglomerates < 2 mm
Comments:	A lower speed setting as 300rpm is not recommended for grinding. Else, balls and sample will separate inside the bowl. After 3 minutes, still agglomerates can be found. After totally 5 minutes, no agglomerates are present and sample starts sticking. A longer grinding time is not recommended.

PLANETARY MONO MILL PULVERISETTE 6 CLASSIC LINE

speed: **300 rpm**

Only a 500 ml silicon nitride (Si3N4)

+ 8x 30 mm Ø Si3N4 balls

Material attributes:	Gray soil sample (which might contain more stones)
Feed quantity:	250 g
Feed Size:	2 cm
Grinding time:	2 min
Final fineness:	agglomerates < 2 mm
Comments:	With the second kind of sample, no agglomerates have been found after only 2 minutes of grinding. Also the sample starts sticking lightly. No longer deagglomeration time is needed for a proper deagglomeration of this sample.

For deagglomeration, we recommend only using balls with lower density (like e.g. agate or silicon nitride).