# SELECTING THE RIGHT MACHINE FOR MAKING BOREHOLES

Trenchless moles can be equipped, among other things, with an expanding tool, also known as a calibrator. It allows making holes with a much larger diameter than the diameter of the machine itself. The table below specifies the diameters of boreholes made by particular models. Please bear in mind that the final diameter of the borehole, left behind the mole can slightly decrease over time, due to the shrink-swell capacity of the soil, initially compacted by the mole. This depends on soil type and the degree of compaction.

MACHINE / DIAMETER	MAKING BOREHOLES												
	Ø 55	Ø 65	Ø 75	Ø 95	Ø 110	Ø 125	Ø 130	Ø 160	Ø 180	Ø 195	Ø 219	Ø 244	
MAX K55													
MAX K65													
<b>MAX K75K</b>													
MAX K75S													
MAX K95S													
MAX K130S													
MAX K160S													
MAX K1805													
мо	LE												

MOLE + EXPANDING TOOL

# SELECTING THE RIGHT MACHINE FOR PULLING PLASTIC PIPES

The table below shows typical PE / PVC pipe diameters and specifies the machine for a given diameter. In order to pull a pipe of a given diameter the machine must be equipped with a sleeve for inserting pipes. In some cases it is also necessary to use an expanding tool.

MACHINE / DIAMETER	PULLING PLASTIC PIPES												
	Ø 50	Ø 63	Ø 75	Ø 90	Ø 110	Ø 125	Ø 140	Ø 160	Ø 180	Ø 200	Ø 225		
MAX K55													
MAX K65													
MAX K75K													
MAX K75S													
MAX K95S													
MAX K130S													
MAX K160S													
MAX K180S													

MOLE + ACCESSORIES FOR PULLING PIPES

MOLE + ACCESSORIES FOR PULLING PIPES OR/AND EXPANDING TOOL

# SELECTING THE RIGHT MACHINE FOR RAMMING STEEL PIPES

Moles are universal trenchless technology devices. This means that you can use them to install PE / PVC pipes and ram steel pipes. The table below shows capabilities of particular machines in terms of driving in steel pipes. In order to make the boring process easier the machine size should match the size of the installation. One should also consider the type of soil and the length of the pipe to be hammered in. In some cases K130S can cope perfectly with hammering in a tube with diameter of 323 mm and length of 20 meters. However, in another location with extremely difficult soil conditions, only a higher calibre machine will be able to perform a similar task. A smaller machine can perform such an installation, but the driving process will take a bit longer. We encourage you to contact us - our experts will help you select the appropriate device.

MACHINE / DIAMETER	RAMMING STEEL PIPES												
	Ø 133	Ø 159	Ø 219	Ø 273	Ø 323	Ø 355	Ø 406	Ø 457	Ø 508	Ø 610	Ø 711		
MAX K55													
MAX K65													
MAX K75K													
MAX K75S													
MAX K95S													
MAX K130S													
MAX K160S													
MAX K180S													
MAX T240													

# SPECIFICATIONS OF IMPACT MOLES

PARAMETR / MACHINE	UNIT	мах К55	мах К65	мах К75К	MAX K75S	MAX K95S	MAX K130S	MAX K160S	MAX K180S
diameter	mm	55	65	75	75	95	130	160	180
length	mm	1180	1366	1084	1501	1641	1815	2110	2256
weight	kg	15	22,5	22	33	56	115	203	275
air consumption*	m³/min	0.7 (1.1)	0.8 (1.2)	1.1 (1.8)	1.1 (1.8)	1.7 (2.5)	2.4 (3.6)	3.5 (4.5)	4.5 (5.0)
air pressure	atm	7	7	7	7	7	7	7	7
impact energy	J	40	100	100	150	250	430	710	1140
impact frequency	Hz	8	6	10	6	7	6	6	5

# **TERMA MAX STEEL PIPE RAMMER**



\* recommended values are specified in brackets

## **MAX T240**

	centri	icui	parameters.
•	outs	side	diameter

impact frequency

- 240 mm 1630 mm length weight air pressure air consumption impact energy
  - 380 kg 6 atm 6.0 – 7.5 m³/min 2000 J 1.7 – 2.5 Hz

Intended use: ramming steel pipes with diameter up to 711 mm

# **TERMA MAX PNEUMATIC MOLES**







## **MAX K55**

**MAX K65** 

• making boreholes (Ø 55 mm) • pulling plastic pipes (Ø 25 mm – 40 mm) using a sleeve for inserting pipes



#### **MAX K75S** Possible applications

• making boreholes (Ø 75 mm)

• making boreholes (Ø 75 mm)

• pulling plastic pipes (Ø 50 mm and Ø 63 mm)

MAX K75K (short version)

• pulling plastic pipes (Ø 50 mm and Ø 63 mm)

• pulling plastic pipes (Ø 25 mm – 55 mm) using a sleeve for inserting pipes

• pulling plastic pipes (Ø 25 mm – 55 mm) using a sleeve for inserting pipes



## **MAX K95S**

- a 00 mana)
- leeve for inserting pipes • ramming steel pipes up to 2



## **MAX K130S**

- making boreholes (Ø 130 mm)
- expanding the hole diameter to 160 mm, 180 mm, 195 mm, 219 mm
- pulling plastic pipes (Ø 110 mm and Ø 125 mm)
- pulling plastic pipes (Ø 140 mm 200 mm) using expanders
- pulling plastic pipes (Ø 25 mm 75 mm) using a sleeve for inserting pipes
- ramming steel pipes up to 323 mm in diameter





## • making boreholes (Ø 160 mm)

**MAX K160S** 

- expanding the hole diameter to 195 mm, 219 mm
- pulling plastic pipes (Ø 110 mm 140 mm)
- pulling plastic pipes (Ø 160 mm 200 mm) using expanders
- pulling plastic pipes (Ø 25 mm 75 mm) using a sleeve for inserting pipes
- ramming steel pipes up to 406 mm in diameter

## **MAX K180S**

- making boreholes (Ø 180 mm)
- expanding the hole diameter to 219 mm, 244 mm
- pulling plastic pipes (Ø 140 mm and Ø 160 mm)
- pulling plastic pipes (Ø 180 mm 225 mm) using expanders
- pulling plastic pipes (Ø 25 mm 75 mm) using a sleeve for inserting pipes
- ramming steel pipes up to 406 mm in diameter









nm and Ø 90 mm)
mm – 75 mm) using a sle
219 mm in diameter



## ACCESSORIES FOR MAX IMPACT POWER **PNEUMATIC TOOLS**



#### FOR AIMING AND POSITIONING

**Optical Set, Starting Platform** Allow precise adjustment of the machine in the starting pit.

### FOR PULLING PLASTIC PIPES

Tools for pulling plastic pipes Allow pulling PE, PCV pipes directly behind the machine.

Tools for pulling plastic pipes manually Allow installation of smaller diameter PE/PVC pipes manually by pulling the hose.

Rope tensioner Is required for installing larger diameter plastic pipes.



### FOR RAMMING STEEL PIPES

Cones Allow installation of steel pipes by placing them in front of the piercing / ramming machine.

Tools for removing sand and debris from installed steel pipes Are required for larger diameter steel pipes.

#### FOR MORE INFORMATION, CONTACT OUR LOCAL PARTNER:

### ... OR CONTACT US DIRECTLY:

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Terma Sp. z o. o. is a leading Polish manufacturer of trenchless technology machines, pneumatic impact "moles". Trenchless technology machines are indispensable for laying water and gas pipelines, electrical and telecommunications installations and steel pipes for any application. Our products set new standards in the industry. The manufacturing process takes place in a state-of-the-art facility, with the use of most advanced technology. We have been present in the market for many years and by now we have earned reputation of being a leader among trenchless technology suppliers not only in Poland but also among users around the world.



#### FOR EXPANDING HOLES

Expanding tools Allow making larger boreholes than the diameter of the piercing machine.



**MAX K130S** 1. st place

THE MOLE RODEO The first international Trenchless



÷ MAX IMPACT POWER TERM





# **IMPACT MOLES**

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**MAX K95S** EXPERT 2012 THE INNOVATIVE DEVICE

Trenchless Technology NO-DIG Poland // Kielce 2012 //

**MAX K55** EXPERT 2014 THE INNOVATIVE DEVICE

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Trenchless Technology NO-DIG Poland // Kielce 2014 //

LOW MAINTENANCE AND SERVICE COSTS // EXCEPTIONAL ACCURACY **RELIABILITY // PROVEN EFFECTIVENESS // EASE OF USE AND CONTROL DURABILITY // FUNCTIONALITY // ECO-FRIENDLY SOLUTIONS** 

