



# FUCHS ORANGE PEEL GRAPPLE

Fuchs work attachments are specially designed for all recycling and scrap handling applications. You have optimum control over your material flow at all times with the wide range of tool options available.

All wear zones of the grapple tines are made of wear-resistant HB-400 material

Tine tips made of highly wear-resistant austenitic manganese steel, replaceable

Pressure relief valve integrat-Powerful, compact, and robust ed for grapple rotation control rotary drive for a long service life and overload protection which and good overall cost-effectiveness provides grapple life extension. Stable, integrated piston rod and line protection to avoid damage Robust hydraulic cylinders with end position damping to reduce shock and noise Slim and smooth grapple design for penetration resistance and optimal volume retention Tines integration with large-sized and highly wear-resistant hard Bolts made of high-strength steel bushings material, hardened and smoothed, the bolts are securely fixed in the housing free from play using clamping bushings, resulting in reduced bearing clearance and minimal wear

**Grapple Torque** 

max. **4,100** Nm

**Grapple Speed** 

max. 24 rpm

Operating Pressure
Opening / Closing

max. **320** bar

**Quantity of Oil** 

Opening

max. **150** L/min

Quantity of Oil

Closing

max. **250** L/mir



The rotation speed for the grapple can be adjusted easily and individually via the display.

ROTATION SPEED

continuously adjustable

TORQUE

continuously adjustable

**ROTATION OF GRAPPLE** 

Preselection proportional or black / white control Rotation of grapple

### FUCHS,

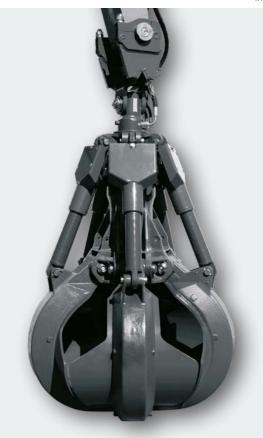
# **ORANGE PEEL GRAPPLE**

### FMG (SEMI-CLOSED)

# Fuchs 5-tine orange peel grapple with 0.4 to 1 m<sup>3</sup> filling capacity.

Fuchs orange peel grapple have been specially developed for scrap handling. Their robust design ensures longevity of components.

The performance of the orange peel grapple is a result of our simple yet robust kinematics, high clamping forces and proper adaption of high pressures. The use of high-quality materials guarantees a long service life.



### **ORANGE PEEL GRAPPLE**

## FMG (OPEN)

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### **ORANGE PEEL GRAPPLE FMG (SEMI-CLOSED)**

Туре	Overall width (closed) A	Opening width B	Height (closed) C	Filling Capacity	Grapple tines	Grapple peak force	Load capacity	Weight	Weight with attachment (semi-closed)
FMG 04	1,250 mm	2,030 mm	1,920 mm	0.4 m <sup>3</sup>	5	43 kN	8,400 kg	1,475 kg	1,600 kg
FMG 06	1,400 mm	2,360 mm	2,070 mm	0.6 m <sup>3</sup>	5	36 kN	8,255 kg	1,620 kg	1,745 kg
FMG 08	1,550 mm	2,520 mm	2,170 mm	0.8 m <sup>3</sup>	5	33 kN	8,090 kg	1,785 kg	1,910 kg
FMG 10	1,755 mm	2,650 mm	2,223 mm	1 m³	5	32,5 kN	7,930 kg	1,945 kg	2,070 kg

### **SCOPE OF DELIVERY**

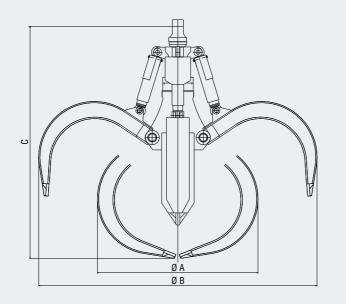
- Orange peel grapple
- Swing assembly
- 360 rotation with mounting pin
- Shock valve

### **OPTIONAL**

- Dipperstick pin
- · Quick-attach mounting
- Hose kit
- Quick-closure coupling



When choosing a grapple, remember to consider the individual load capacities of the respective machine.



### **ORANGE PEEL GRAPPLE FMG (OPEN)**

Туре	Overall width (closed) A	Opening width B	Height (closed) C	Filling Capacity	Grapple tines	Grapple peak force	Load capacity	Weight	Weight with attachment (open)
FMG 04	1,250 mm	2,030 mm	1,920 mm	0.4 m <sup>3</sup>	5	43 kN	8,500 kg	1,375 kg	1,500 kg
FMG 06	1,400 mm	2,360 mm	2,070 mm	0.6 m <sup>3</sup>	5	36 kN	8,380 kg	1,495 kg	1,620 kg
FMG 08	1,550 mm	2,520 mm	2,170 mm	0.8 m <sup>3</sup>	5	33 kN	8,345 kg	1,530 kg	1,655 kg
FMG 10	1,755 mm	2,620 mm	2,223 mm	1 m³	5	32,5 kN	8,240 kg	1,635 kg	1,760 kg

#### **SCOPE OF DELIVERY**

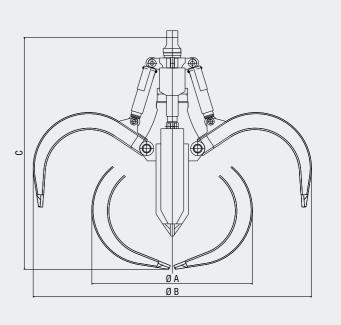
- Orange peel grapple
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#### **OPTIONAL**

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When choosing a grapple, remember to consider the individual load capacities of the respective machine



# **DEMOLITION & SORTING GRAPPLES FSG**

Work Attachments

Reliable, service-friendly and extremely strong. The Fuchs Grapple has been proven to be the perfect grab for industrial demolitions and intensive sorting and recycling applications.

The FSG Series standard has perforated shells with optional closed,- or rib shells, meaning there is a right Fuchs Sorting & Demolition Grapple for truly any application.

### **DEMOLITION & SORTING GRAPPLES FSG**

Type FSG	FSG 09-MH	FSG 12-MH	FSG 15-MH	FSG 22-MH	FSG 30-MH
Information					
Weight *	435 kg	900 kg	1015 kg	1350 kg	1600 kg
Volume	140 l	325 I	400 I	530	640 I
Closing force **	26 kN	41 kN	41 kN	53 kN	61 kN
Opening width A	1350 mm	1750 mm	1830 mm	2010 mm	2200 mm
Overall width B	650 mm	800 mm	900 mm	1000 mm	1100 mm
Heigh C	985 cm	1350 cm	1375 cm	1485 cm	1415 cm
Hole-pattern	110-120	130-140	130-140	130-140	140-150
Max. operating pressure cylinder	320 bar	320 bar	320 bar	350 bar	350 bar
Max. operating pressure motor	120 bar	140 bar	140 bar	140 bar	170 bar

\*Weight exclusive adapterplate.

\*\*Closing force by 320 Bar.

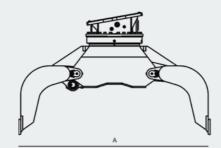
#### **SCOPE OF DELIVERY**

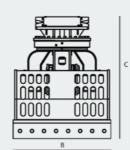
- Demolition & Sorting Grapples FSG
- Integrated adapter plate for Fuchs MH
- Shock valvel

### **OPTIONAL**

- Hose kit
- Pins









When choosing a magnetic plate remember to consider the individual load capacities of the respective machine.

### **ROTATING HEAD AND SLEWING RING**

- Equipped with a robust rotating head and generously dimensioned slewing ring
- The demolition and sorting grapple can always be positioned as required

# WEAR-RESISTANT SHELLS WITH LONG BEARING PIVOT POINTS

- Easily replaceable cutting edges
- Hardened special bolts are mounted in the generously dimensioned pivot points of the double-walled grapple yoke

### **LOAD CONTROL VALVE**

- Standard-equipped with a load control valve
- Secures the load when the oil pressure drops
- Provides an extra-long stroke

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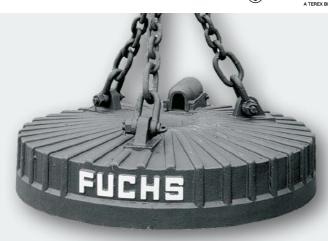
FUCHS, Work Attachments Technical Data

# **MAGNETIC PLATES**

### Fuchs electromagnets demonstrate power and performance and are designed for use in scrap and storage areas.

The high handling capacity is guaranteed by the strong force field over the entire diameter range of the magnetic plate. The control works with counter-excitation by briefly reversing the polarity, which causes even the smallest iron parts to fall off

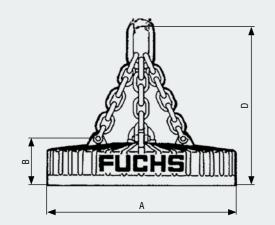
- · Magnetic plate made of special dynamo cast steel and nonmagnetizable cast steel base plate
- Magnetic upper parts made of special casting alloy
- Magnetic plate with chain suspension
- Hollow core for emitting the operating temperature and safe collection of drop balls



· Optimum alignment with direct current generator and threephase generator with rectifier

### **MAGNETIC DEVICES FMP**

Type <sup>1</sup>	Diameter	Height to upper	Height to chain	Net weight	Net weight	Power co	sumption	Operating time	Voltage
	A	part attachment B	suspension D		internal resistance <sup>2</sup>	20°C	80°C		
FMP 950	950 mm	230 mm	900 mm	720 kg	10.80 Ohm	4.5 kW	3.6 kW	65 %	220 V DC
FMP 1150	1,150 mm	245 mm	950 mm	1,070 kg	8.10 Ohm	6.0 kW	4.5 kW	65 %	220 V DC
FMP 1250	1,250 mm	270 mm	1,100 mm	1,360 kg	6.10 Ohm	7.9 kW	6.3 kW	65 %	220 V DC
FMP 1350	1,350 mm	260 mm	1,100 mm	1,630 kg	6.00 Ohm	8.1 kW	6.5 kW	65 %	220 V DC
FMP 1500	1,500 mm	270 mm	1,200 mm	2,000 kg	5.40 Ohm	9.0 kW	7.0 kW	65 %	220 V DC
FMP 1750	1,750 mm	350 mm	1,350 mm	3,500 kg	2.70 Ohm	17.8 kW	13.2 kW	65 %	220 V DC
FMP 2000	2,000 mm	390 mm	1,500 mm	5,500 kg	2.35 Ohm	20.3 kW	15.0 kW	65 %	220 V DC



1	smaller magnetic plates can be used at any time. This information
	only applies to the magnetic plates described from Fuchs; the per
	formance of plates from other manufacturers cannot necessarily
	be deduced from the size. The internal resistance values must be
	observed in this case.

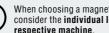
<sup>&</sup>lt;sup>2</sup> values must not fall below the values stated for the internal resistance. Lower internal resistance values can result in overload, malfunction, or shutdown of the generator system. The internal resistance values must be observed.

Туре	Load capacity <sup>3</sup>							
	Air gap D/300	Solid scrap Type 24	Pig iron	Cast iron scrap Type 3a	Swarf Type 40			
FMP 950	10.0 t	0.36 t	0.46 t	0.40 t	0.19 t			
FMP 1150	12.0 t	0.48 t	0.64 t	0.52 t	0.24 t			
FMP 1250	14.0 t	0.52 t	0.81 t	0.63 t	0.30 t			
FMP 1350	15.5 t	0.65 t	0.95 t	0.74 t	0.36 t			
FMP 1500	19.6 t	0.87 t	1.10 t	1.00 t	0.48 t			
FMP 1750	27.0 t	1.44 t	1.95 t	1.55 t	0.79 t			
FMP 2000	42.0 t	2.13 t	3.12 t	2.47 t	1.21 t			

The load capacity information stated for the various bulk materials represents average values measured in accordance with DIN-VDE 0580, and actual values can either exceed or fall below these average values, since the quantity recorded per magnetic transport is heavily influenced by the shape, alloy, composition, and storage of the relevant material. The operator's working methods also have an

All magnets can be customized to meet special requirements.

 $<sup>^{\,3}\,</sup>$  The stated load capacities represent the calculated maximum achievable values of the individual magnet plates under optimum conditions, excluding chain hangers and suspension. Please note that the values that can actually be achieved may be limited by the chain hangers, suspensions, load capacities of the machine etc. used.



#### **MACHINE OVERVIEW**

Туре			Magnetic plate								
		<b>950 mm</b> (D64)*	<b>1,150 mm</b> (D64)*	<b>1,250 mm</b> (D64)*	<b>1,350 mm</b> (D64)*	<b>1,500 mm</b> (D64)*	<b>1,750 mm</b> (D58)*	2,000 mm (D58)*			
MHL320	9 kW	•	•	•	•	_	_	_			
MHL320	11 kW	•	•	•	•	•	_	_			
MHL331-MHL335	11 kW	•	•	•	•	•	_	_			
MHL331-MHL335	13 kW	•	•	•	•	•	_	_			
MHL340	13 kW	•	•	•	•	•	_	_			
MHL340	17 kW	•	•	•	•	•	•	_			
MHL350	13 kW	•	•	•	•	•	_	-			
MHL350	20 kW	•	•	•	•	•	•	_			
MHL360-MHL370	20 kW	•	•	•	•	•	•	_			
MHL360-MHL370	30 kW	•	•	•	•	•	•	•			
MHL375-MHL390	30 kW	•	•	•	•	•	•	•			

Calculated based on the electrical conduction for the magnetic plates stated above. When selecting the magnetic plate, pay attention to the individual load capacities of the respective machines.

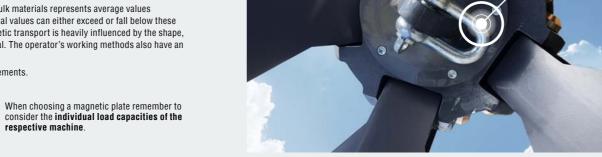
<sup>\*</sup>Plug connector type on magnetic plate

Туре		Machine plug connector		Cables	
	•		<b>6835215075</b> (6 mm² K64–D64) 950–1,500 mm	<b>6835216076</b> (6 mm² K58–D64) 950–1,500 mm	<b>6836217075</b> (10 mm² K58–D58) 1,750–2,000 mm
MHL320	9 kW	K64	•	_	_
MHL320	11 kW	K64	•	_	_
MHL331	11 kW	K64	•	_	_
MHL331	13 kW	K64	•	_	_
MHL340	13 kW	K64	•	_	_
MHL340	17 kW	K58	_	•	•
MHL350	13 kW	K64	•	_	_
MHL350	20 kW	K58	_	•	•
MHL360-MHL370	20 kW	K58	_	•	•
MHL360-MHL370	30 kW	K58	_	•	•
MHL375-MHL390	30 kW	K58	_	•	•



### **MOUNT FOR MAGNETIC PLATE IN THE GRAPPLE**

- can be changed quickly and easily
- without uncoupling the grapple
- normal chain suspension can still be used for the magnetic plate
- no special magnetic plate mount required



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# LOAD HOOKS FLH

### Fuchs load hooks with high load capacity

Fuchs load hooks with a load capacity of up to 20 tons are used primarily for heavy handling operations. A wide range of options makes it easier to use in every day operation. The Fuchs load hook come standard with quick-change hangers in either a fixed or rotating hook design.

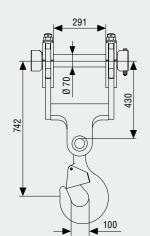


Туре	Weight	Fixed	Rotating	Permissible load capacity in accordance with the drive mechanism uni	
				<b>3</b> <sub>m</sub>	1B <sub>m</sub>
FLH10	115 kg	•		10 t	
FLH10	140 kg		•	10 t	
FLH20 s	170 kg		•		20 t
FLH20 I	170 kg		•		20 t

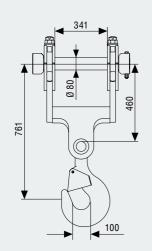
### **REQUIREMENTS FOR THE SUPPORT FRAME**

Туре	Mounting width	Bolt diameter
FLH10	290 mm	70 mm
FLH20 s	290 mm	70 mm
FLH20 I	340 mm	80 mm

Load hook FLH10 / load hook FLH20 s

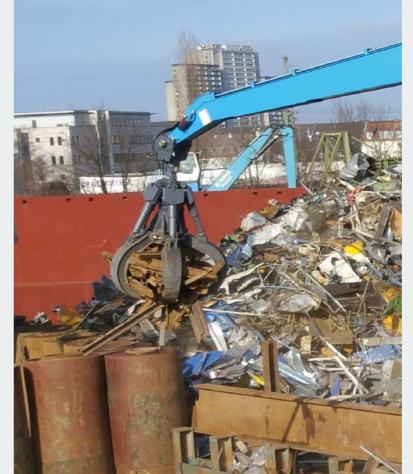


Load hook FLH20 I







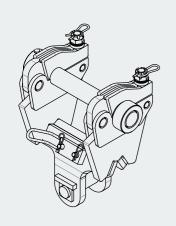


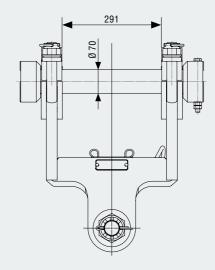


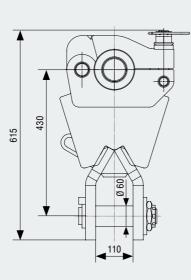
# **QUICK-ATTACH MOUNTING FGA**

### **MECHANICAL WITH DIPPERSTICK PIN** FOR GRAPPLE 0.4-1 m<sup>3</sup>

Load capacity: 10t | Weight: 125kg





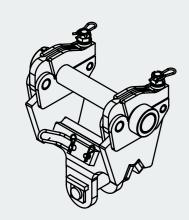


Suitable for:

MHL320-MHL370 MHL334, MHL354, MHL364, MHL434

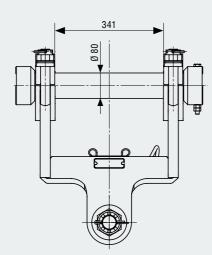
## **MECHANICAL WITH DIPPERSTICK PIN** FOR GRAPPLE 0.4-1 m<sup>3</sup>

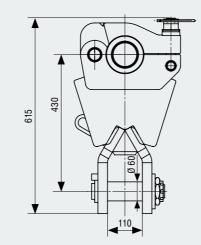
Load capacity: 10t | Weight: 135kg



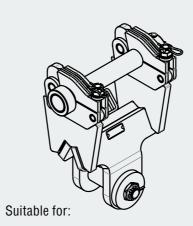
Suitable for:

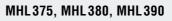
MHL375, MHL380, MHL390

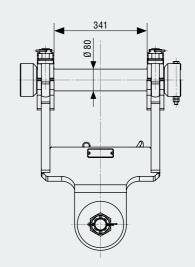




### **MECHANICAL WITH DIPPERSTICK PIN** FOR GRAPPLE 1.0-1.4 m<sup>3</sup>

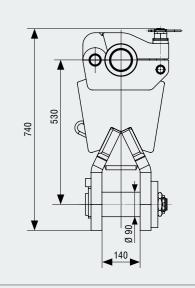






Load capacity: 17.5t | Weight: 185kg

Technical Data

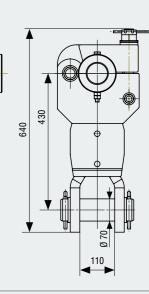


**MECHANICAL WITH DIPPERSTICK PIN** FOR CHAIN SUSPENSIONS AND MAGNETIC **PLATES** 

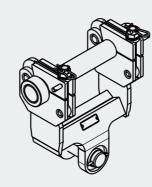
Suitable for:

Load capacity: 10t | Weight: 110kg

MHL320-MHL370

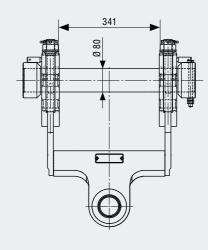


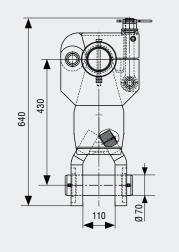
Load capacity: 10t | Weight: 125kg



Suitable for:

MHL375-MHL390





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