

PRODUCT RANGE



SCHAEFF

Produced by ATLAS Maschinen GmbH

Hydraulic Transverse Cutting Units | WS15 - WS150

CUTTING UNITS



ADVANTAGES OF CUTTING TECHNOLOGY

- **Extremely economic**
- **Extremely accurate cut**
- **Low vibration**
- **Low noise**
- **Suitable for underwater operations**
- **Low maintenance**
- **Suitable for narrow and deep trenches**
- **Recycling of excavated material**



HYDRAULIC TRANSVERSE CUTTING UNITS TRUE ALLROUNDERS

INNOVATIVE ENGINEERING – INDIVIDUAL SOLUTIONS – COMMITTED CUSTOMER SERVICE

SCHAEFF' mission is to make innovative products. For over 40 years the SCHAEFF Group has been manufacturing roadheading machines with cutting heads for mi-ning and tunnelling operations. In the field of hydraulic transverse cutting units SCHAEFF is the world-wide market leader and epitomises cutting-edge technology made in Germany.

From civil engineering to landscape gardening – SCHAEFF' cutting units show their strength and flexibility in a multitude of applications. Various hydraulic motors and cutting heads can be attached to SCHAEFF | Schaeff cutting units, enabling an optimum adjustment to operating conditions. The product range comprises seven types of transverse cutting units with hydraulic drive powers of 15 kW, 30 kW, 45 kW, 60 kW, 90 kW, 120 kW and 150 kW respectively. SCHAEFF also offers solutions for spe-

cial applications, such as cutting drums and slot cutting drums in various widths and diameters, drums for cutting tree stumps, and anti-dust systems for indoor operations. Behind SCHAEFF' products you will find a network of distributors who know the business inside out. Local dedicated service and support teams offer customers professional support before, during and long after the sale.



READY-MADE SOLUTIONS

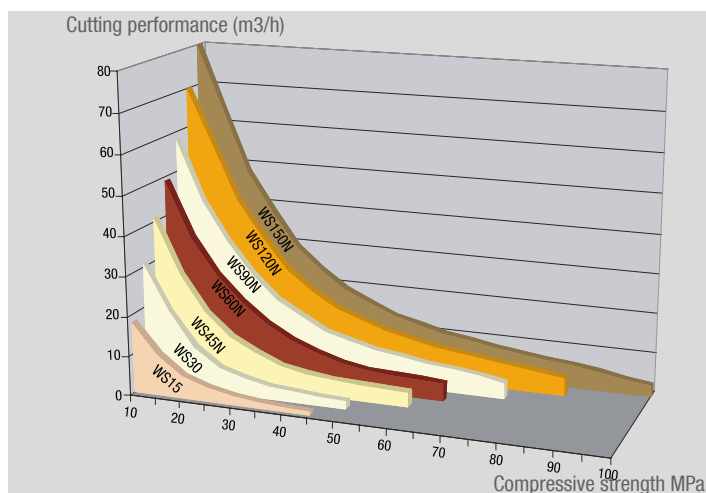
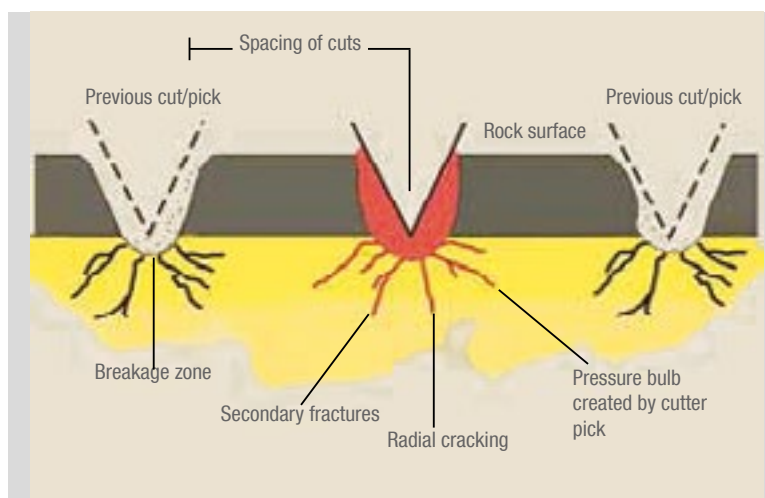
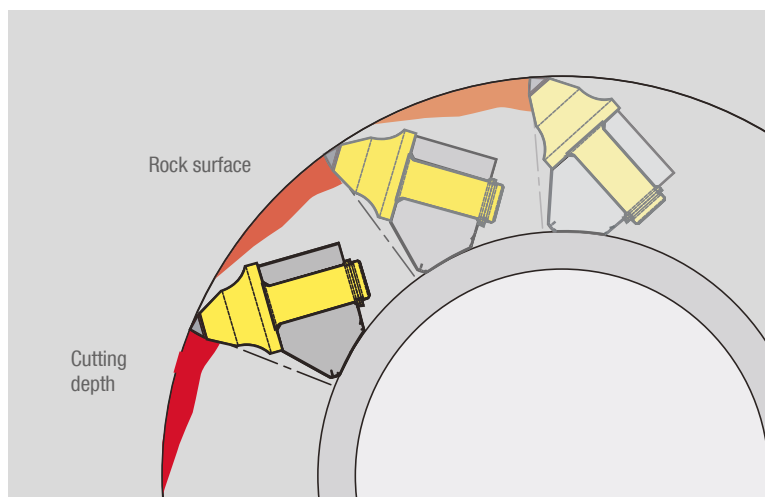
Did you know? It's not the power (kW) of a cutting unit / cutting head but the pick force that counts for effective cutting! Modern cutting units have sturdy spur gears powered by high-torque hydraulic motors. Only transverse cutting units by SCHAEFF have transmissions with gear reduction that boost cutting power. This feature is protected by European Patent No. EP084146 B1 and US Patent No. 6,158,818.

CUTTING TECHNOLOGY

SCHAEFF transverse cutting units meet state-of-the-art engineering standards and are constantly updated in close co-operation with technical universities. An optimum configuration and pick selection guarantee a high cutting performance and low pick wear. Designed for smooth running, low vibration, and equipment-friendly operation, our transverse cutting units are geared to optimum material crushing.

PRODUCTIVITY

The wide selection of drum and pick types means that SCHAEFF cutting units can cut a wide range of rock types and strengths. Cutting performance depends mainly on rock hardness (compressive strength), toughness (tensile strength), and the content of abrasion-resistant minerals. As rock usually contains natural breakage lines or inclusions, even very hard rocks can be excavated successfully and economically. The cutting performance data shown in the chart are based on our experience.



MAIN FIELDS OF APPLICATION



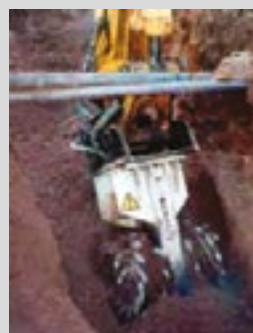
Trench and pipeline construction



Building renovation and demolition



Road construction



Sensitive areas



Scaling/grinding/protecting

FIELDS OF APPLICATION

CANAL AND PIPELINE CONSTRUCTION 1

BUILDING RENOVATION AND DEMOLATION 2

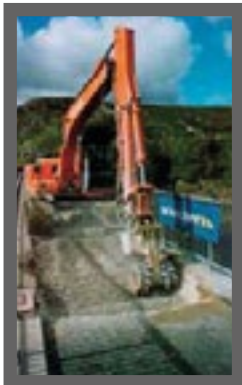
TUNNELLING AND MINING 3

ROAD CONSTRUCTION 4

SENSITIVE AREAS 5

QUARRYING 6

LANDSCAPE GARDENING 7
BIOREMEDIATION/SOIL MIXTURE





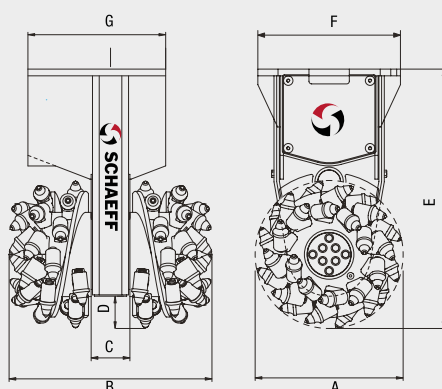
TECHNICAL DATA

SCHAEFF HYDRAULIC TRANSVERSE CUTTING UNITS AT A GLANCE

CUTTING UNIT TYPES		WS15N-LD Option	WS15N-HD Standard	WS15N-XHD Option	WS30N-MD Option	WS30N-HD Standard	WS30N-XHD Option	WS45N-MD Option
Input power	kW	18	18	22	30	30	30	45
Power peak, max.	kW	22	22	27	40	40	40	55
Max. hydr. operating pressure	bar	375	375	375	375	375	300	350
Hydr. oil flow rate required	l/min	30 - 65	40 - 65	50 - 65	70 - 110	80 - 120	100 - 150	100 - 170
Hydr. oil flow rate recommended	l/min	40	50	60	80	100	120	130
Hydraulic motor	cm ³	213	255	398	468	560	750	980
Cutting head speed	min ⁻¹	71 @ 30 l/min	77 @ 40 l/min	63 @ 50 l/min	85 @ 70 l/min	81 @ 80 l/min	81 @ 80 l/min	64 @ 100 l/min
		150 @ 65 l/min	130 @ 65 l/min	82 @ 65 l/min	134 @ 110 l/min	122 @ 120 l/min	122 @ 120 l/min	108 @ 170 l/min
Cutting head torque (350 bar)	Nm	2330	2800	3900	4600	5500	6250	8700
Weight (w/out adapter)	kg	250	250	250	420	420	420	850
Excavator weight	t	2 - 4	4 - 6	5 - 8	8 - 12	9 - 14	12 - 15	12 - 15

		WS15N		WS30N		WS45N		WS
CUTTING DRUM TYPES		Excavation Demolition	Scaling	Excavation Demolition	Scaling	Excavation Demolition	Scaling	Excavation Demolition
Cutting diameter	A mm	325	300	390	390	550	465	615
Cutting drum width, total	B mm	500	535	630	680	750	655	900
Width at gear shaft	C mm	90	90	135	135	145	145	170
Cutting depth	D mm	65	53	85	85	120	78	125
Total length	E mm	700	690	835	835	965	923	1095
Connecting plate/ adapter	F mm	320	320	405	405	530	530	600
	G mm	310	310	475	475	510	510	620
No. of picks	Stk.	2 x 24	2 x 47	2 x 24	2 x 33	2 x 28	2 x 39	2 x 28
Pick force, max	kN	(XHD: 24.3)	19.1 (XHD: 26.6)	28	28	36	42	45.4
Pick speed		1.1 - 2.6	1.1 - 2.6	1.8 - 2.8	1.8 - 2.8	1.9 x 3.2	1.6 x 3.1	1.8 - 3.0

DIMENSIONS



CUTTING HEAD TYPES



Excavation drum

Scaling drum

Demolition drum

A GUIDE TO PICK SELECTION

WS45N-HD Standard	WS60N-MD Option	WS60N-HD Standard	WS90N-MD Standard	WS120N-LD Option	WS120N-M Standard	WS150N-HD Standard
45	60	60	90	120	120	140
55	70	70	110	130	130	150
350	350	350	350	350	350	350
120 - 190	120 - 200	140 - 210	240 - 340	250 - 400	300 - 500	360 - 555
150	160	180	290	290	360	460
1120	1666	1884	3332	4008	4996	6012
67 @ 120 l/min	55 @ 120 l/min	57 @ 140 l/min	55 @ 240 l/min	48 @ 250 l/min	48 @ 310 l/min	45 @ 360 l/min
106 @ 190 l/min	92 @ 200 l/min	86 @ 210 l/min	78 @ 340 l/min	77 @ 400 l/min	77 @ 500 l/min	70 @ 550 l/min
9.900	12,300	14,000	24,100	28,900	36,100	43,500
850	1400	1400	1460	2550	2550	2800
12 - 20	18 - 30	18 - 30	25 - 35	30 - 45	30 - 45	40 - 60

60N	WS90N		WS120N		WS150N	
Scaling	Excavation Demolition	Scaling	Excavation Demolition	Scaling	Excavation Demolition	Scaling
615	615	615	760	760	760	760
900	900	900	1200	1200	1400	1400
170	170	170	240	240	240	240
125	125	125	135	135	135	135
1095	1095	1095	1345	1345	1.345	1.345
600	600	600	740	740	740	740
650	650	650	780	780	780	780
2 x 38	2 x 28	2 x 28	2 x 32	2 x 32	2 x 40	2 x 40
45.4	78.5	78.5	95	95	115	115
1.8 - 3.0	1.8 - 2.5	1.8 - 2.5	1.8 - 3.0	1.8 - 3.0	1.8 - 3.0	1.8 - 3.0

STANDARD PICKS
for soft to medium-hard rock,
e.g. asphalt, salt, slack



HEAVY-DUTY PICKS
for medium-hard to very hard
rock, e.g. limestone, concrete



WEAR-PROTECTED PICK
for very abrasive material,
e.g. sandstone, blast-furnace
crushed stone



WOOD CUTTER PICKS
for cutting tree stumps



FOR EVERY CARRIER AND EVERY APPLICATION

SCHAEFF transverse cutting units can be equipped with a standard range of different hydraulic motors, cutting heads and picks, ensuring a flexible adjustment to the specific carrier and operating conditions. Non-standard solutions are also available.



EXCAVATION DRUM

- for soft to medium-hard rock
- pick for maximum productivity and cutting performance
- no raised ridge (spiral blade) to limit pick penetration



SCALING DRUM

- for soft to medium-hard rock - whenever a pre-cise or smooth surface is required
- higher number of picks for accurate surfaces and reduced vibration but lower cutting performance










DEMOLITION DRUM

- for medium-hard to hard rock and concrete
- wear-protected spiral blade for limited pick penetration, lower vibration and smoother operation

Hydraulic Transverse Cutting UNITS

KEY SPECIFICATIONS

Type		 WS15N	 WS30N	 WS45N	 WS60N
Hydraulic input power	kW	18/22	30	45	60
Oil flow rate required	l/min	30 - 65	70 - 120	100 - 190	120 - 210
Cutting head width	mm	500	630	750	900
Weight, approx.	kg	250	420	850	1400
Recommended excavator weight	t	2 - 8	8 - 15	12 - 20	18 - 30

Type		 WS90N	 WS120N	 WS150N
Hydraulic input power	kW	90	120	140
Oil flow rate required	l/min	240 - 340	250 - 500	360 - 550
Cutting head width	mm	900	1200	1400
Weight, approx.	kg	1460	2550	2800
Recommended excavator weight	t	25 - 35	30 - 45	40 - 60



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