ABRASIVE TOOLS FOR THE AUTOMOTIVE INDUSTRY

The automotive industry faces many technological and economic challenges. The use of new materials, precise machining tools and growing expectations of cost saving solutions force the development of more efficient tools, including abrasive tools. ANDRE offers solutions that can meet these needs.

ANDRE ABRASIVE ARTICLES tools dedicated for automotive are commonly used for grinding engine heads and valves, piston rings, crankshafts or transmission components. ANDRE cutting-off wheels are also used in the preparation of samples for metallographic tests.

GRINDING OPERATIONS WITH ANDRE ABRASIVE TOOLS

ENGINE VALVE GRINDING

- Keeper groove grinding
- Steam face grinding
- Combustion face grinding
- Seat face grinding
- Valve head profile grinding

PISTON RINGS GRINDING

- The ring gap grinding
- Outer diameter profile grinding
- Ring face grinding
- Superfinishing

CRANKSHAFT GRINDING

- Crankshaft journal grinding

TRANSMISSION GEAR COMPONENTS GRINDING

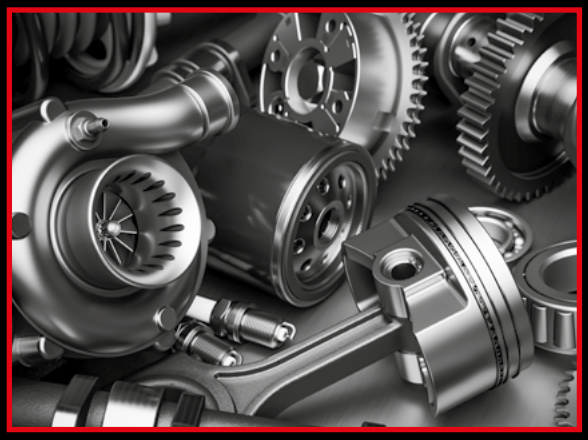
- Shaft grinding
- Synchronizer sliding sleeve grinding
- Synchronizer ring grinding
- Gear grinding with single rib wheel
- Gear grinding with grinding warms

MATERIALOGRAPHIC TESTS

- Checking the material quality and structure

OTHER GRINDING OPERATIONS

- Constant-velocity joint grinding
- Bowden housing cutting-off
- Cylinder head grinding



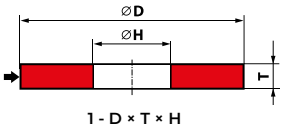
ANDRE® abrasive articles

ENGINE VALVE GRINDING

Valves are components exposed to many negative factors, such as: high temperature, corrosion, high mechanical stress. A proper geometry of the valve and surface quality plays a huge role in the functioning of that element.

Due to our experience in the automotive industry we are able to offer optimal characteristics of grinding wheels dedicated for valve machining process, also for innovative valve materials.

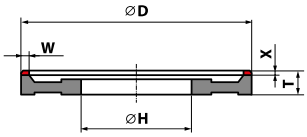
• KEEPER GROOVE GRINDING | TYPE 1



1 - D × T × H

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	610 × 20 × 305	99A803O7VTE72	63
1	610 × 20 × 305	96A80Q7VTE10	63

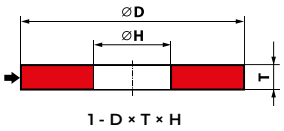
• STEAM FACE GRINDING | TYPE 6A2X



6A2X - D × T-X × W × X × H

Examples of implemented abrasive tools in industry [*]		
Type	Dimensions [mm]	Technical characteristics
6A2X	250 × 20 × 8 × 5 × 127	B107V180MBL2
6A2X	250 × 20 × 8 × 5 × 127	B64V180OBG2
6A2X	250 × 20 × 8 × 5 × 127	B91V180PBL2

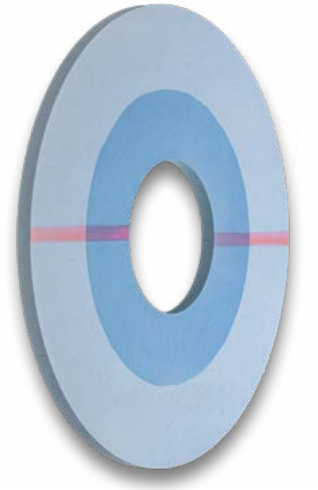
• COMBUSTION FACE GRINDING | TYPE 1

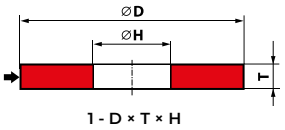


1 - D × T × H

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	610 × 20 × 203,2	99A803O7VTE72	100
1	610 × 20 × 203,2	99A803K12VTE72PKF7	100

• SEAT FACE GRINDING | TYPE 1

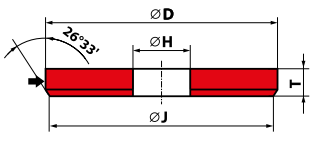




1 - D × T × H

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	610 × 17 × 304,8	9A5XC80M7VHEF7	80
1	610 × 17 × 304,8	9A5XC60M7VHEF7	80
1	610 × 17 × 305	9A5XC803M7VHEF7	80

• VALVE HEAD PROFILE GRINDING | TYPE 1X | TYPE 1



1X - D × T × H - dwg. no

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1X	610 × 33 × 203,2	63A803N7VTE72	100
1	760 × 33 × 304,8	63A803N7VTE72	80

[*] For the full range of dimensions and available technical characteristics ask the Sales Department.

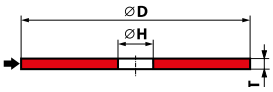
PISTON RINGS GRINDING

High temperatures, exhaust gases as well as mechanical stresses and other negative factors acting on piston rings during their normal work requires the use of precise manufacturing solutions during piston rings production. Undoubtedly grinding is the key process here.

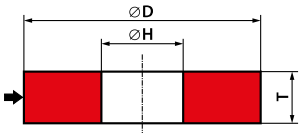
ANDRE offers a number of solutions for piston rings producers. Thanks to many years of experience, we can offer high performance abrasive tools that achieve the required geometry parameters and desired surface quality.

• THE RING GAP GRINDING

| TYPE 41 | TYPE 1



41 - D × T × H

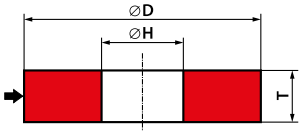


1 - D × T × H

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
41	120 × 1,2 × 20	95A80Q8B693	80
41	120 × 2,4 × 20	95A80Q8B693	80
1	180 × 13 × 76	95A80L6VE01	35
1	200 × 6 × 20	99A60K7VE01	35

• OUTER DIAMETER PROFILE GRINDING

| TYPE 1

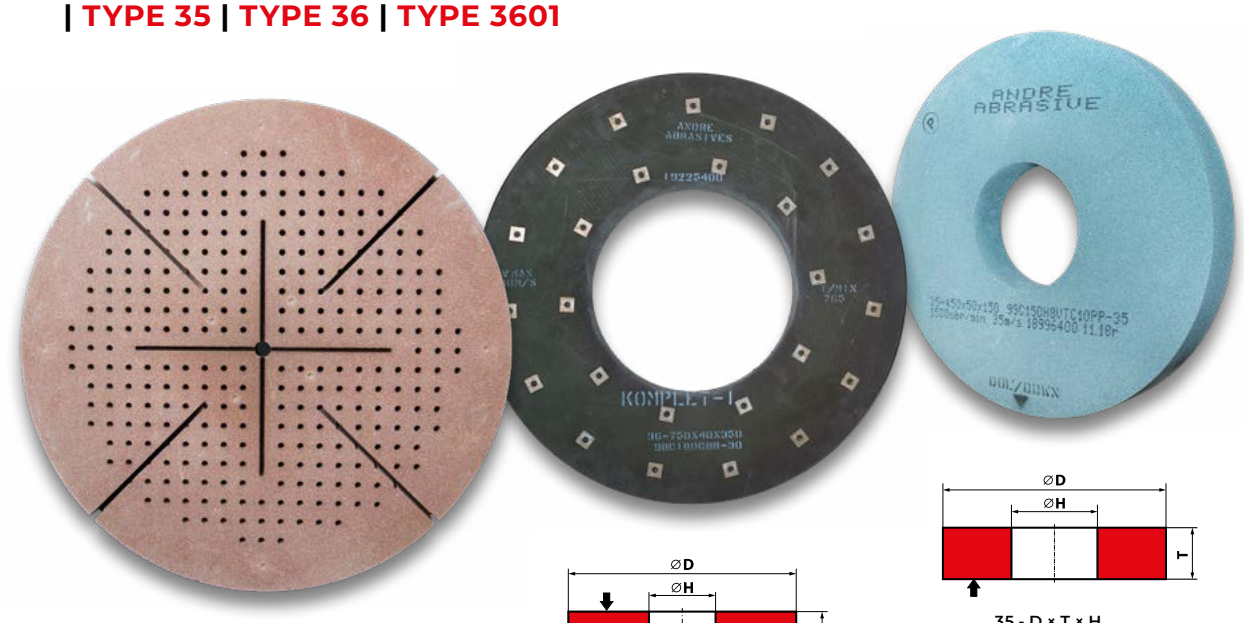


1 - D × T × H

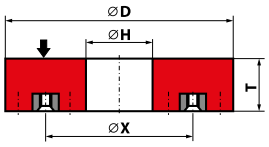
Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	600 × 30 × 305	99A100J/K7VE01	50
1	600 × 35 × 305	99A100J/K7VE01	50
1	600 × 45 × 305	99A100L7VE01	50
1	600 × 55 × 305	99A100L7VE01	50

• RING FACE GRINDING

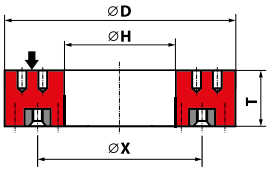
| TYPE 35 | TYPE 36 | TYPE 3601



35 - D × T × H



36 - D × T × H

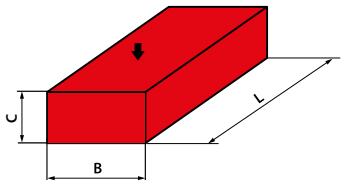


3601 - D × T × H - dwg. no

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
35	450 × 50 × 150	99C150H8VTC10PP	35
36	750 × 40 × 350	98C180G B	30
3601	660 × 55 × 50	98C36J/K9B549	30
3601	762 × 65 × 50	98C60K9B549	30

• SUPERFINISHING

| TYPE 5410



5410 - B × C × L

Examples of implemented abrasive tools in industry [*]		
Type	Dimensions [mm]	Technical characteristics
5410	13 × 14 × 100	99A320J8VTE10S
5410	13 × 14 × 100	M320I8VTE35S

[*] For the full range of dimensions and available technical characteristics ask the Sales Department.

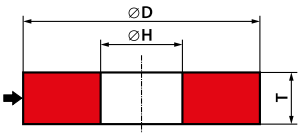
CRANKSHAFT JOURNAL GRINDING

CRANKSHAFT JOURNAL GRINDING

The task of the crankshaft during engine operation is to convert linear movement of the pistons into circulation movement that can be delivered to the gearbox. Due to the speed at which the crankshaft rotates, even small dimensional and shape deviations can lead to serious engine damage. That is why grinding also plays a very important role in the crankshaft production process.

ANDRE based on many years of experience, offers grinding wheels for grinding both forged and cast iron shafts. We have solutions to apply on production lines and in regeneration processes.

| TYPE 1



1 - D × T × H

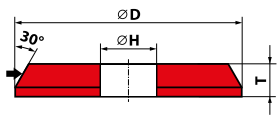
Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	900 × 20 × 305	96AY54N7VTE14	45
1	660 × 20 × 203	54A60N7VTE14	45
1	1060 × 25 × 304,8	96A60M7VTE14F7	45

TRANSMISSION GEAR COMPONENTS GRINDING

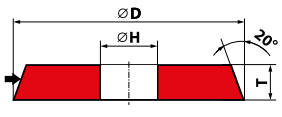
Transmissions must meet certain requirements, mainly in terms of reliability and service life. In order to achieve this, precise grinding process of all key components is necessary. Exceeding the permissible circularity tolerance of the shaft causes vibration and oscillation of the gearbox, and thus shortens its service life. Many years of experience in this industry allows ANDRE to offer competitive, proven solutions.

SHAFT GRINDING

| TYPE 1M | TYPE 1X



1M - D × T × H

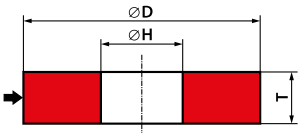


1X - D × T × H - dwg. no

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1M	740 × 85 × 304,8	99A90K7VE01NF7	63
1X	600 × 85 × 203,2	99A90K7VE01NF7	63

• SYNCHRONIZER SLIDING SLEEVE GRINDING

| TYPE 1

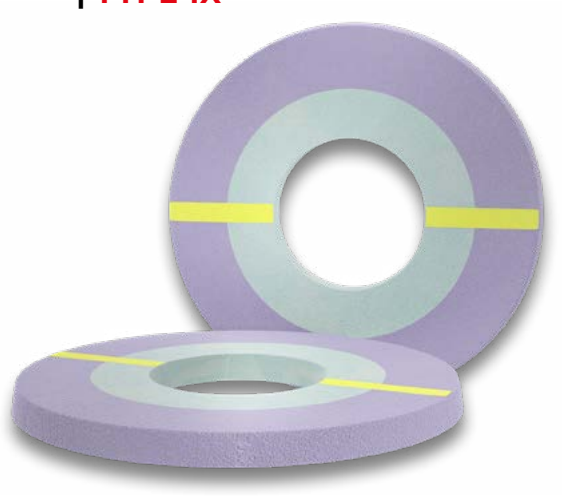


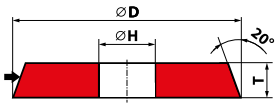
1 - D × T × H

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	610 × 20 × 203,2	9A3X80L7VE01NF7	63

• SYNCHRONIZER RING GRINDING

| TYPE 1X



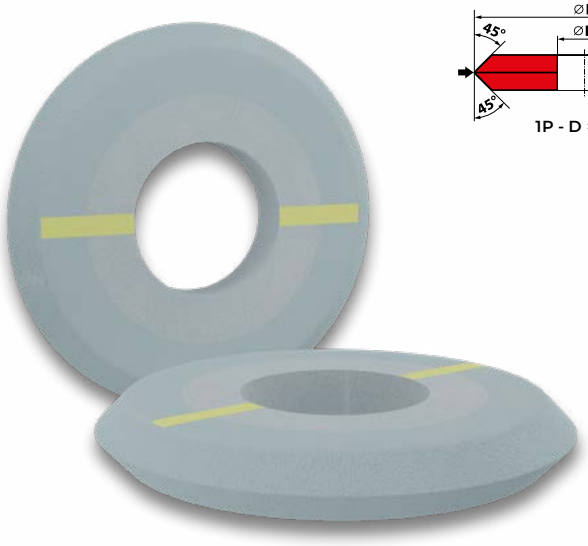


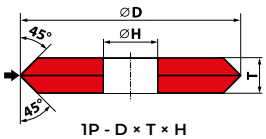
1X - D × T × H - dwg. no

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1X	400 × 25 × 203,2	9A3X1202K7VE04	63

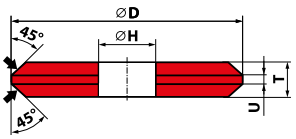
• GEAR GRINDING WITH SINGLE RIB WHEEL

| TYPE 1P | TYPE 1X | TYPE 4

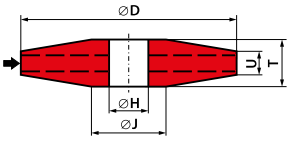




1P - D × T × H



1X - D × T × H - dwg. no

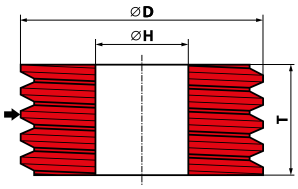


4 - D/J × T/U × H

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1P	200 × 25 × 80	9A5X80J12VE01NPP	50
1P	250 × 20 × 76,2	9A5X100I7VE01N	50
1X	100 × 20 × 36	9A5X80J8VE01	35
4	400/343 × 60/12 × 127	9A3X802J13VE01PKP	50

[*] For the full range of dimensions and available technical characteristics ask the Sales Department.

• GEAR GRINDING WITH GRINDING WARMS
| TYPE 1X



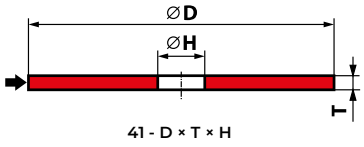
1X - D × T × H - dwg. no

Examples of implemented abrasive tools in industry [*]				
Type	Dimensions [mm]	Technical characteristics	Module	Speed [m/s]
1X	280 × 160 × 115	9A3X120H12VE01PP	MOD2;a20;3Z;Rh	63

MATERIALOGRAPHIC TESTS

ANDRE offers a wide range of Type 41 non-reinforced cutting-off wheels. Wheels of this type usually work on stationary cutting-off machines, including CNC. The main area of application is the preparation of materialographic samples in automotive laboratories.

• CHECKING THE MATERIAL QUALITY AND STRUCTURE
| TYPE 41**



41 - D × T × H

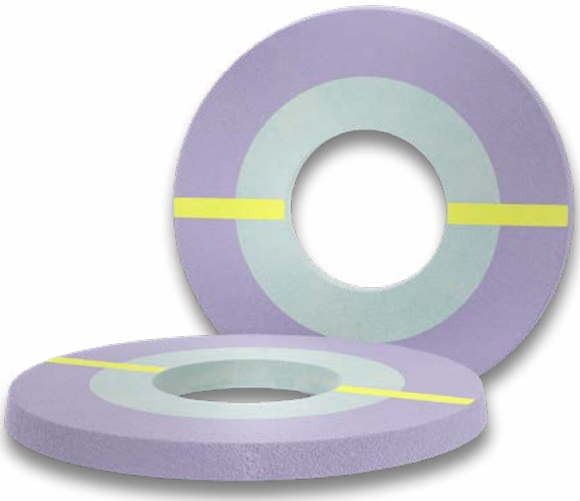
Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical charakteristics	Speed [m/s]
41	250 × 1,6 × 32	M2XL70N8B688	80
41	250 × 1,6 × 32	59A90O7B719	63
41	250 × 1,6 × 32	59A90Q7B719	63
41	350 × 2,5 × 32	59AY60J6B689	80
41	432 × 3,0 × 32	59A80H6B689	50

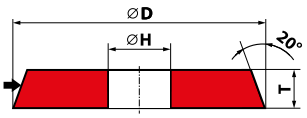
OTHER GRINDING OPERATIONS

CONSTANT-VELOCITY JOINT GRINDING

When grinding swivel joints, high precision is an important requirement, as any deviation in required tolerances of the geometry can result in premature wear. Thanks to the many years of experience built up in this operation, ANDRE is able to offer suitable grinding wheels, for less and more demanding users.

| TYPE 1X





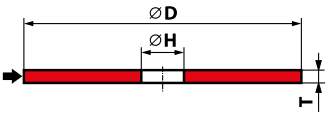
1X - D × T × H - dwg. no

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1X	610 × 85 × 203,2	99AY 90K7 VE01N	63

BOWDEN HOUSING CUTTING-OFF

An important requirement during the cutting-off operations of automotive components is high precision cutting, correct geometry and high quality of the surface. Thanks to many years of experience built up with automotive companies, ANDRE is able to offer the optimal grinding wheels for this operation.

| TYPE 41**



41 - D × T × H

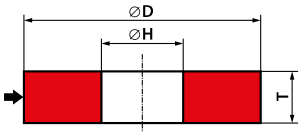
Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
41	200 × 1,0 × 20	M60Q8B688	80
41	200 × 1,2 × 22,23	97A60T12B728	80

[*] For the full range of dimensions and available technical characteristics ask the Sales Department.
[**] Only permitted for totally enclosed working area.

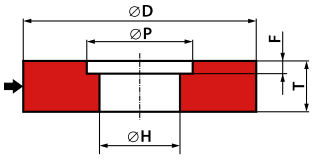
CYLINDER HEAD GRINDING

A very important requirement when grinding engine heads, is to achieve the proper flatness of the surface and the required surface roughness. With ANDRE tools, the required parameters can be obtained easily and quickly.

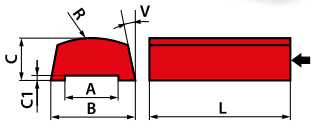
| TYPE 1 | TYPE 5 | TYPE 3113 | TYPE 3122



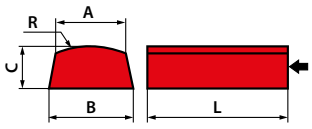
1 - D × T × H



5 - D × T × H - P...F...



3113 - B/A × C/C1 × L - R...V...



3122 - B/A × C × L - R

Examples of implemented abrasive tools in industry [*]			
Type	Dimensions [mm]	Technical characteristics	Speed [m/s]
1	350 × 63 × 127	98C46H8VTC10PP	35
5	250 × 40 × 76 - P135F10	98C46H8VTC10PP	35
3113	66/42 × 20/2 × 63 - R150V10	98C46J8VTC10	–
3122	65/57 × 25 × 85 - R150	99A20H12VTE10PP	–

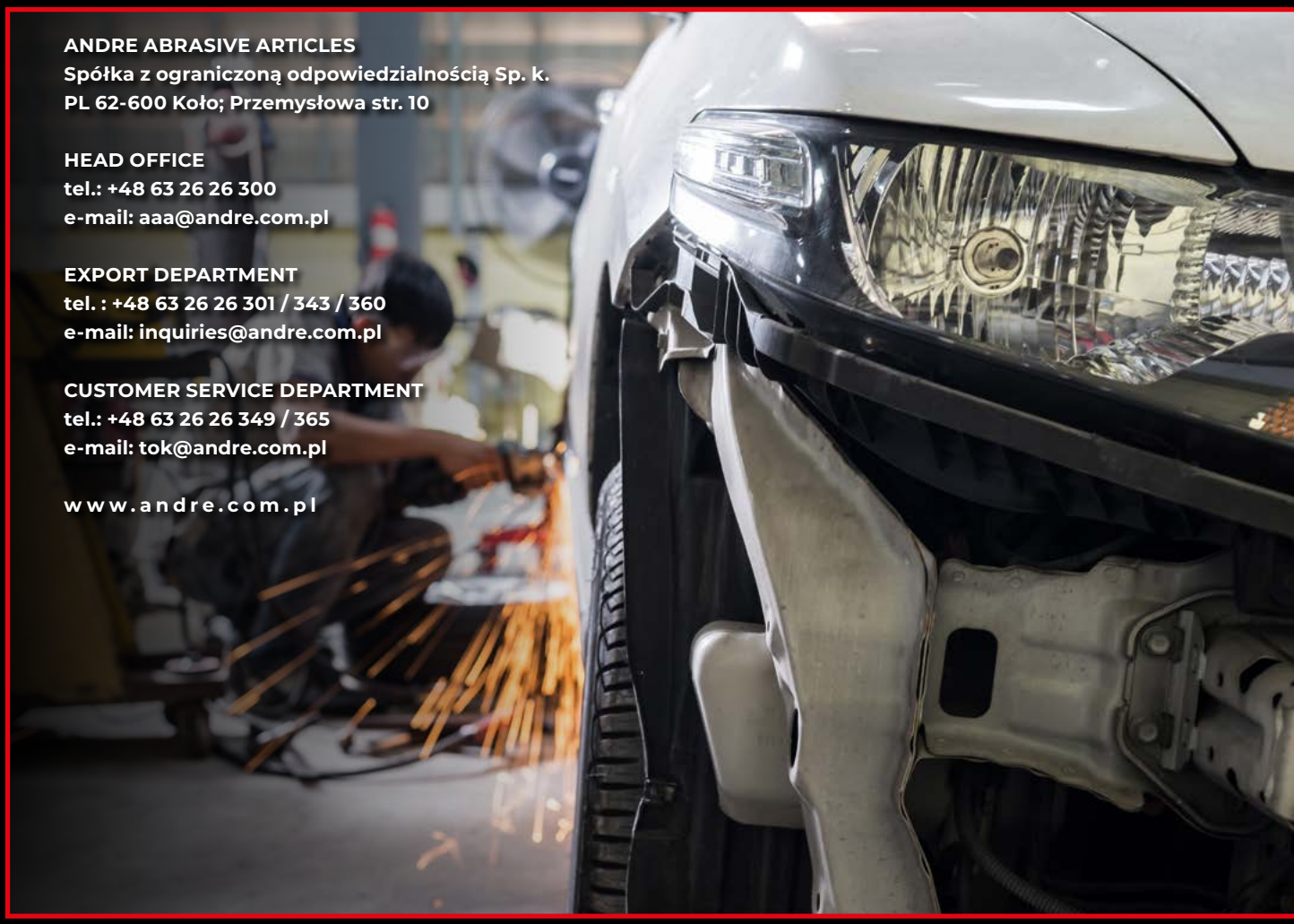
[*] For the full range of dimensions and available technical characteristics ask the Sales Department.


ANDRE
ABRASIVES
14620100
VMAX
50M/S
QUALITY SYSTEM
ISO 9001:2000
ANDRE
abrasive articles
SPRAWDZONE wg EN 12413

ANDRE®
abrasive articles

EVERYDAY TOOLS FOR EVERY WORKSHOP

IN ADDITION TO SPECIALIZED ABRASIVE TOOLS FOR THE AUTOMOTIVE INDUSTRY ANDRE OFFERS A WIDE RANGE OF PRODUCTS FOR CUTTING AND GRINDING (POLISHING, SMOOTHING) FOR COMMON WORKSHOP WORKS.



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