



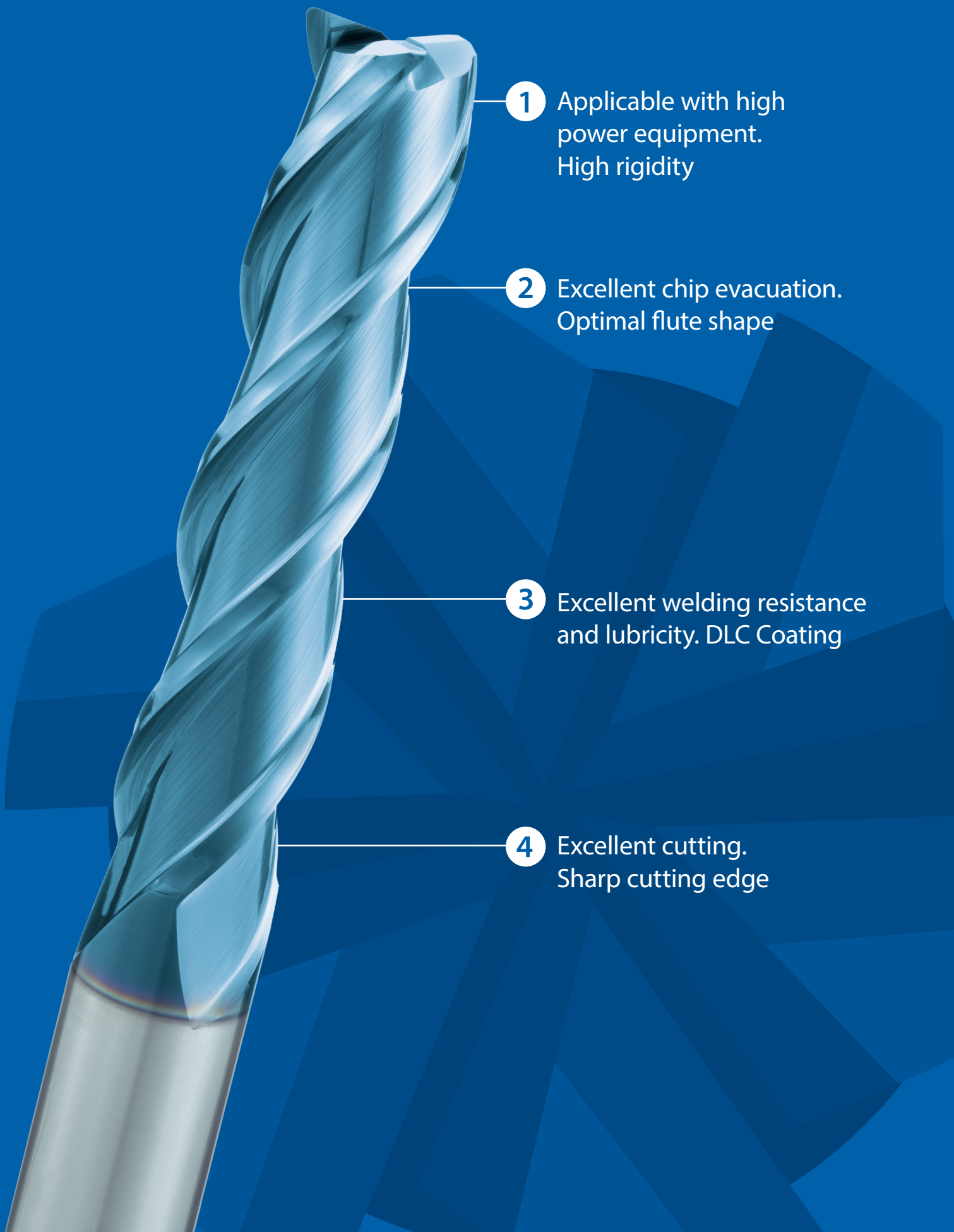
High speed end mills for aluminium alloys

AERO END MILL SERIES

Volume 4



KEY FEATURES: AERO SERIES



1 Applicable with high power equipment. High rigidity

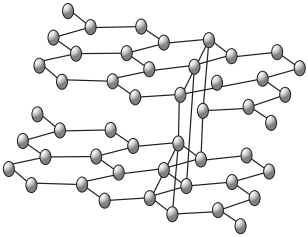
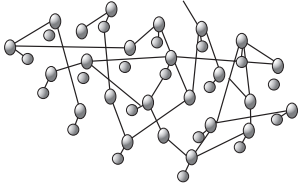
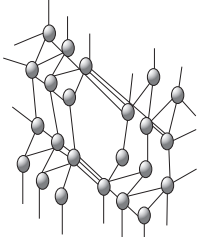
2 Excellent chip evacuation. Optimal flute shape

3 Excellent welding resistance and lubricity. DLC Coating

4 Excellent cutting. Sharp cutting edge

FOR AL ALLOYS DIAMOND LIKE CARBON COATING

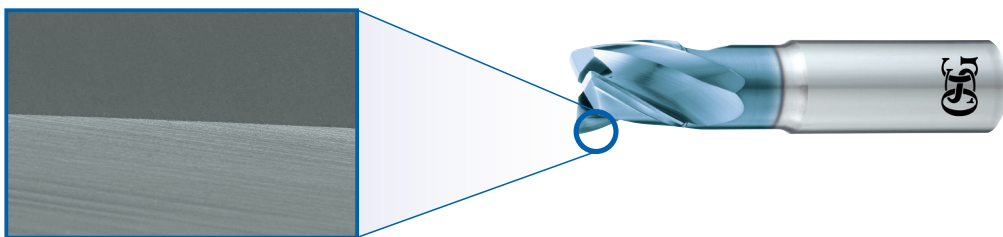
OSG's DLC coating gives shiny surface! This shiny & smooth surface optimises end mill performance particularly in aluminum alloys that require welding resistance and lubricity.

Graphite	DLC	Diamond
		
Crystal construction	Amorphous	Crystal construction

* Amorphous : no polycrystalline structure with free-grain boundaries.

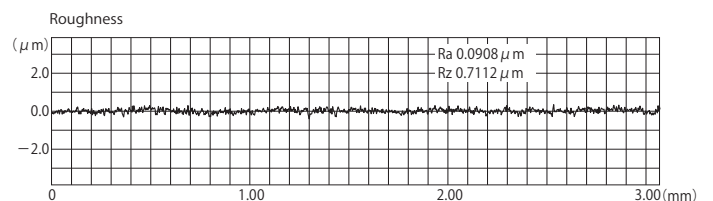
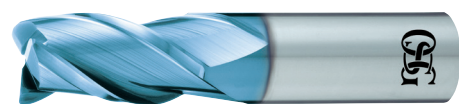
Thin coating layer (approx. 1µm)! Sharp cutting edge!

Smooth and superb surface finish!



High quality surface even in high speed feeding!

Tool	AERO-ETL Ø12XR1
Work Material	A7075
Cutting Speed	528m/min (14.000min ⁻¹)
Feed	4.000mm/min (0,095mm/t)
Depth of Cut	ap=45mm ae=0,15mm
M.R.R.	27 cm ³ /min



AERO Series

- DLC-AIR-EDS
- AERO-ETS
- AERO-O-ETS
- AERO-ETL
- AERO-EXTL
- AERO-LN-EDS
- AERO-LN-ETS

FOR AL ALLOYS DIAMOND LIKE CARBON COATING

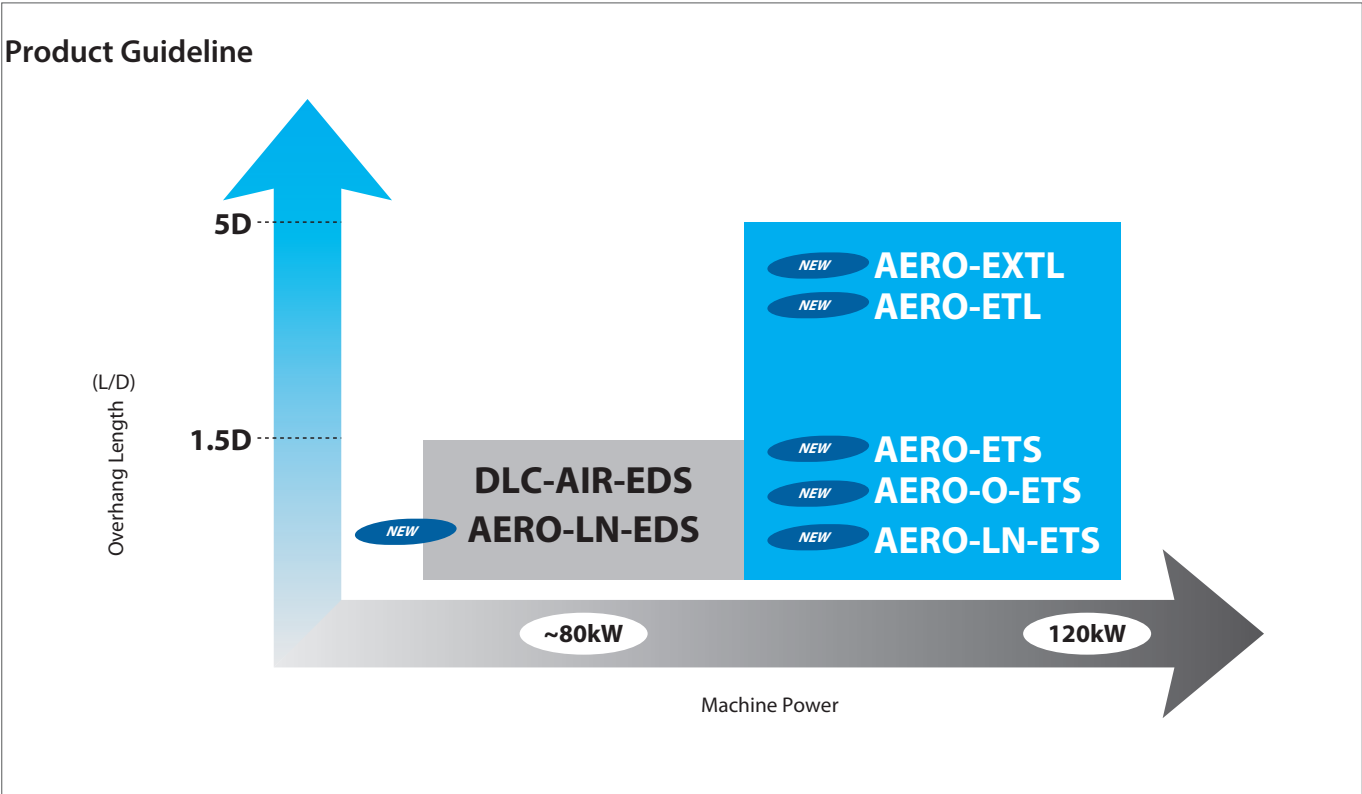
Astonishing chip evacuation with Ø25 diameter!

9.000 cm³/min chip evacuation

Tool	AERO-ETS Ø25xR3
Work Material	A7075
Cutting Speed	2.355m/min (30.000min ⁻¹)
Feed	36.000mm/min (0,4mm/t)
Depth of Cut	ap=10mm ae=25mm
Coolant	Water Soluble (External)
Machine	5-axis Machining Centers
Machine Power	120Kw



The Aero Series is perfect for high powered equipment over 80 kw



Enables high efficiency milling for both roughing and finishing

Tool	AERO-O-ETS Ø25xR3	
Work Material	A7075	
Milling Method	Roughing	Finishing
Cutting Speed	1.413m/min (18.000 min ⁻¹)	1.884m/min (24.000 min ⁻¹)
Feed	18.000mm/min (0,33mm/t)	7.200mm/min (0,1mm/t)
Coolant	Mist (Through spindle mist)	
Machine	5-axis Machining Centers	



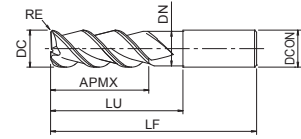
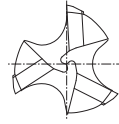
Finishing side milling by extra long flute length

Tool	AERO-EXTL Ø20xR3
Work Material	A7075
Cutting Speed	898m/min (14.300min ⁻¹)
Feed	6,435mm/min
Coolant	Water Soluble
Machine	5-axis Machining Centers



AERO-ETS

Milling | Solid carbide



- Carbide end mill with DLC coating
- For ultra high volume milling of aluminium alloys
- 3 flutes, short length of cut, corner radius



CARBIDE
DLC
30°
0~-0.02

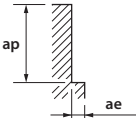
Milling | Solid carbide

EDP	ZEFP	DC	RE	LU	LF	APMX	DCON	DN
8533249	3	12	-	55	100	18	12	11
8533250	3	12	1	55	100	18	12	11
48238126	3	12	3	35	80	18	12	11
48238999	3	12	3	45	90	18	12	11
8533252	3	12	3	55	100	18	12	11
8533253	3	16	-	55	100	24	16	14,4
8533254	3	16	1	55	100	24	16	14,4
8533256	3	16	3	55	100	24	16	14,4
8533257	3	16	4	55	100	24	16	14,4
8533258	3	16	5	55	100	24	16	14,4
8533259	3	20	-	55	100	30	20	18
8533260	3	20	1	55	100	30	20	18
8533262	3	20	3	55	100	30	20	18
8533263	3	20	4	55	100	30	20	18
8533264	3	20	5	55	100	30	20	18
8533265	3	25	-	55	100	37,5	25	23
8533266	3	25	1	55	100	37,5	25	23
8533268	3	25	3	55	100	37,5	25	23
8533269	3	25	4	55	100	37,5	25	23
8533270	3	25	5	55	100	37,5	25	23

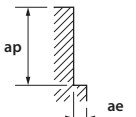
CUTTING CONDITIONS

Milling | Endmills | Cutting conditions

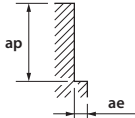
AERO-ETS

Aluminium alloy							
\emptyset	S (min^{-1})	F (mm/min)					
12	≤ 33.000	≤ 15.000					
16	≤ 33.000	≤ 20.000					
20	≤ 33.000	≤ 25.700					
25	≤ 33.000	≤ 32.600					
Max cutting depth	 <table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>$\leq 0,4 Dc$</td> <td>1 Dc</td> </tr> </table>		ap	ae	$\leq 0,4 Dc$	1 Dc	
ap	ae						
$\leq 0,4 Dc$	1 Dc						

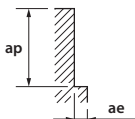
AERO-O-ETS

Aluminium alloy							
Vc	1000 ~ 3000 m/min						
\emptyset	S (min^{-1})	F (mm/min)					
12	≤ 33.000	≤ 25.700					
25	≤ 33.000	≤ 32.600					
Max cutting depth	 <table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>$\leq 0,4 Dc$</td> <td>1 Dc</td> </tr> </table>		ap	ae	$\leq 0,4 Dc$	1 Dc	
ap	ae						
$\leq 0,4 Dc$	1 Dc						

AERO-ETL

Aluminium alloy				
\emptyset	S (min^{-1})	F (mm/min)	ap (mm)	ae (mm)
12	≤ 14.000	≤ 4.000	≤ 45	$\leq 0,15$
16	≤ 14.000	≤ 5.000	≤ 45	$\leq 0,2$
20	≤ 14.000	≤ 6.000	≤ 45	$\leq 0,3$
Max cutting depth				

AERO-EXTL

Aluminium alloy				
\emptyset	S (min^{-1})	F (mm/min)	ap (mm)	ae (mm)
20	≤ 14.000	≤ 6.000	≤ 95	$\leq 0,2$
Max cutting depth				



CUTTING CONDITIONS

Milling | Endmills | Cutting conditions

AERO-LN-ETS

Aluminium alloy							
\emptyset	S (min^{-1})	F (mm/min)					
16	≤ 33.000	≤ 20.000					
20	≤ 33.000	≤ 25.700					
25	≤ 33.000	≤ 32.600					
Max cutting depth			<table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>$\leq 0,2 D$</td> <td>$1 D$</td> </tr> </table>	ap	ae	$\leq 0,2 D$	$1 D$
ap	ae						
$\leq 0,2 D$	$1 D$						

AERO-LN-EDS

Aluminium alloy							
\emptyset	S (min^{-1})	F (mm/min)					
16	≤ 33.000	≤ 12.000					
20	≤ 33.000	≤ 15.000					
25	≤ 33.000	≤ 15.000					
Max cutting depth			<table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>$\leq 0,4 D$</td> <td>$0,6 D$</td> </tr> </table>	ap	ae	$\leq 0,4 D$	$0,6 D$
ap	ae						
$\leq 0,4 D$	$0,6 D$						

DLC-AIR-EDS

Aluminium alloy							
Vc	1000 ~ 3000 m/min						
\emptyset	S (min^{-1})	F (mm/min)					
12	33.000	≤ 9.100					
16	33.000	≤ 12.000					
20	33.000	≤ 15.000					
25	33.000	≤ 15.000					
Max cutting depth			<table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>$\leq 0,6 Dc$</td> <td>$1,0 Dc$</td> </tr> </table>	ap	ae	$\leq 0,6 Dc$	$1,0 Dc$
ap	ae						
$\leq 0,6 Dc$	$1,0 Dc$						



www.osgeurope.com





shaping your dreams

OSG EUROPE LOGISTICS

Avenue Lavoisier 1
B-1300 Z.I. Wavre - Nord - Belgium
Tel: +32 10 23 05 07
info@osgeurope.com

OSG POLAND Sp. z o.o.

Spółdzielcza 57
05-074 Halinów - Poland
Tel: +22 760 82 71
osg@osg-poland.com

OSG ROMANIA SRL

25C, Bucuresti-Magurele Street (Sector 5)
051431 Bucuresti - România
Tel: +40 21 322 07 47
info@osgromania.ro

OSG BELUX

Avenue Lavoisier 1
B-1300 Z.I. Wavre - Nord - Belgium
Tel: +32 10 23 05 11
info@osg-belgium.com

OSG GERMANY

Karl-Ehmann-Str. 25
D - 73037 Göppingen - Germany
Tel: +49 7161 6064 - 0
Fax: +49 7161 6064 - 444
info@osg-germany.de

AUSTRIA

Branch office of OSG GERMANY
Messestraße 11
A-6850 Dornbirn
Tel: +49 7161 6064-0
info@osg-germany.de

OSG FRANCE

Parc Icade, Paris Nord 2
Immeuble "Le Rimbaud"
22 Avenue des Nations
CS66191 - 93420 Villepinte - France
Tel: +33 1 49 90 10 10
sales@osg-france.com

OSG SCANDINAVIA

(For Scandinavian countries)
Langebjergvaenget 16
4000 Roskilde - Denmark
Tel: +45 46 75 65 55
osg@osg-scandinavia.com

OSG ITALIA

Via Ferrero, 65 A/B3
I - 10098 Rivoli - Italy
Tel: +39 0117705211
info@osg-italia.it

OSG NETHERLANDS

Bedrijfsweg 5 - 3481 MG Harmelen
Tel: +31 348 44 2764
info@osg-nl.com

SWEDEN

Branch office of OSG SCANDINAVIA
Singelgatan 7
212 28 Malmö - Sweden
Tel: +46 40 41 22 55
osg@osg-scandinavia.com

Vischer & Bolli AG

Machining and Workholding
Im Schossacher 17
CH-8600 Dübendorf
T +41 44 802 15 15
info@vb-tools.com

OSG UK

Kelsey Close, Attleborough Fields Ind Est,
CV11 6RS, Nuneaton, United Kingdom.
Tel: +44 1827 720 013
uk_sales@osg-uk.com

OSG IBERICA

Bekolarra 4
E - 01010 Vitoria-Gasteiz - Spain
Tel: +34 945 242 400
osg.iberica@osg-ib.com

CZECH, SLOVAKIA, HUNGARY

OSG Europe Logistics S.A.
Slovakia organizacna zlozka
Racianská 22/A, SK-83102 Bratislava
Slovakia
Tel. +421 24 32 91 295
Orders-osgsvk@osgeurope.com

OSG TURKEY

Rami Kışla Cad.No:56 Eyüp
Istanbul 34056 - Turkey
Tel+90 212 565 24 00
Fax: +90 212 565 44 00
info@osg-turkey.com

OSG EUROPE LOGISTICS S.A.

10/2017 - All rights reserved. © OSG Europe 2017.

The contents of this catalogue are provided to you for viewing only. They are not intended for reproduction either in part or in whole in this or other medium. They cannot be copied, used to create derivation work or used for any reason, by means without the express, written permission of the copyright owner. If prices are stated, they are netto unit-prices and any eventual tax(es) have to be added. The company is not responsible for any printing error in technical, price and/or any other data.

Tool specifications subject to change without notice.

www.osgeurope.com

