GOLD QUAD PLUNGE

Diameters:
1.50" - 4.00"

Insert Styles:
SDMS1305
SDES1305

Grades:
IN2530, IN2535,
IN4005, IN4015,
IN4030, IN4035

Materials:
Iron, Steel, Stainless Steel,
Hi-Temp Alloys

UPDATE
•2015•

Gold-Quad Plunge Roughing Cutters with Four Cutting Edges

Features and Benefits

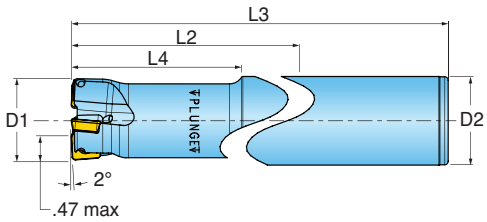
- .45" max. radial depth of cut capability (depending on corner radius)
- Excels in general purpose roughing and long reach plunge applications
- Perfect for roughing on small spindle machines
- Inserts offered with clean shearing Hi-Temp Alloy geometry and strong Flat Top geometry
- Internal coolant supply (face mills only)

Member IMC Group
Ingersoll Cutting Tools

GOLD•QUAD PLUNGE SERIES QHU END MILLS

PLUNGE ROUGHING CUTTERS

Plunge | Coolant

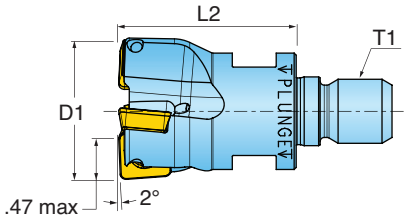


Cutter Number	D1 Nominal Diameter	L2 Extension Length	Number of Inserts	L3 Overall Length	L4 Projection Length	D2 Shank Size/Style
QHU-15073S5R01	1.500	7.34	3	10.00	3.00	1.500 Cyl

GOLD•QUAD PLUNGE SERIES QHU TOP•ON™ END MILLS

PLUNGE ROUGHING CUTTERS

Plunge | Coolant

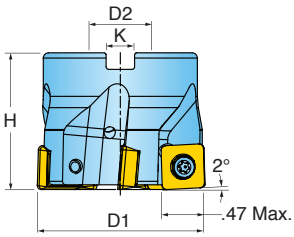


Cutter Number	D1 Nominal Diameter	L2 Extension Length	T1 Thread Size	Number of Inserts	Wrench Size
QHU-15017X8R01	1.500	1.750	M16	3	22mm

GOLD QUAD PLUNGE — SERIES QHU FACE MILLS

PLUNGE ROUGHING CUTTERS

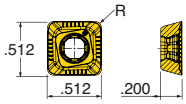
Plunge | Coolant



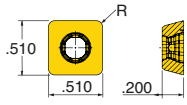
Cutter Number	D1 Effective Diameter	# of Inserts	H Height	D2 Bore Diameter	K Keyway	Retention Bolt	Optional Coolant Bolt
QHU-20015D1R01	2.000	5	1.570	0.750	0.31	SD-06-46	SD-06-89
QHU-20015D1R02	2.000	4	1.570	0.750	0.31	SD-06-46	SD-06-89
QHU-25015D1R01	2.500	5	1.570	0.750	0.31	SD-06-46	SD-06-89
QHU-30017D3R01	3.000	7	1.750	1.000	0.38	SD-08-46	SD-08-92
QHU-30017D3R02	3.000	5	1.750	1.000	0.38	SD-08-46	SD-08-92
QHU-40023D5R01	4.000	9	2.375	1.500	0.63	SD-12-82	SD-12-99
QHU-40023D5R02	4.000	7	2.375	1.500	0.63	SD-12-82	SD-12-99

GOLD QUAD PLUNGE — INSERTS

SDMS



SDES



Part Number	Application	R Corner	Indexes	Grade	IN2530	IN2535	IN4005	IN4030	IN4035	IN4015
SDMS130512R-PP	Hi-Temp/Stainless	R.047	4					•	•	
SDMS130516R-PP	Hi-Temp /Stainless	R.062	4		•	•	•	•	•	
SDES130508N-PF	Multi-Purpose Flat Top	R.031	4				•	•		•
SDES130516N-PF	Multi-Purpose Flat Top	R.062	4				•	•		•
SDES130524N-PF	Multi-Purpose Flat Top	R.093	4				•	•		
SDES130532N-PF	Multi-Purpose Flat Top	R.125	4				•	•		
SDES130508N-PF1	Hi-Temp Flat Top	R.031	4					•	•	
SDES130516N-PF1	Hi-Temp Flat Top	R.062	4					•	•	
SDES130524N-PF1	Hi-Temp Flat Top	R.093	4					•	•	
SDES130532N-PF1	Hi-Temp Flat Top	R.125	4					•	•	

GOLD QUAD PLUNGE — HARDWARE


Insert Screw — SM40-100-R0


Driver Handle — DS-A00T

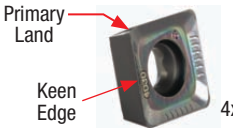
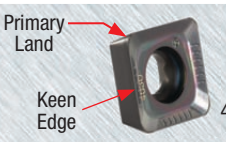

Insert Driver Blade — DS-T156B


Optional Torque Wrench — DT-35-02


Optional Insert Driver Blade — DS-T15B1

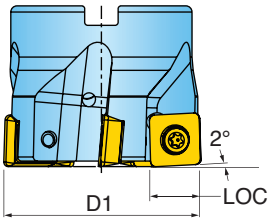
INSERT SELECTION GUIDE

INSERT STYLES

Photo	Part Number	Corner	Material Focus	Description
	SDMS130512R-PP	R.047	Stainless Steel Hi-Temp Alloys Titanium	RAKE FACE - KEEN EDGE Positive rake insert with keen edge. Equipped with primary land for reinforced edge strength in roughing cuts. Most popular insert choice for plunging Stainless Steel and Nickel Alloy materials in stable conditions.
	SDMS130516R-PP	R.062	Stainless Steel Hi-Temp Alloys Titanium	
	SDES130508N-PF1	R.031	Stainless Steel Hi Temp Alloys Titanium	FLAT FACE - KEEN EDGE The flat face combined with primary land brings durability to the keen edge, making it a good choice for long reach plunge cuts. Cutting edge is designed for Stainless Steel and Nickel Alloy materials. This geometry boasts various radii, all offering 4 indexes.
	SDES130516N-PF1	R.062	Stainless Steel Hi Temp Alloys Titanium	
	SDES130524N-PF1	R.093	Stainless Steel Hi Temp Alloys Titanium	
	SDES130532N-PF1	R.125	Stainless Steel Hi Temp Alloys Titanium	
	SDES130508N-PF	R.031	Steel Iron	FLAT FACE - LANDED EDGE The flat Face combined with primary land brings durability to the landed edge, making it a good choice for long reach plunge cuts. Cutting edge is designed for Steel and Iron. This geometry boasts various radii, all offering 4 indexes.
	SDES130516N-PF	R.062	Steel Iron	
	SDES130524N-PF	R.093	Steel Iron	
	SDES130532N-PF	R.125	Steel Iron	

GOLD QUAD PLUNGE — OPERATING GUIDELINES

LENGTH OF CUT (LOC) WITH VARIED CORNER RADII



Corner Radius	LOC
R .031	0.472
R .047	0.457
R .062	0.440
R .093	0.407
R .125	0.375

EFFECTIVE DIAMETER (D1) WITH VARIED CORNER RADII

Cutter Number	R .031	R .047	R .062	R .093	R .125
QHU-15	1.501	1.501	1.500	1.497	1.494
QHU-20	2.001	2.001	2.000	1.997	1.994
QHU-25	2.501	2.501	2.500	2.497	2.494
QHU-30	3.001	3.001	3.000	2.997	2.994
QHU-40	4.001	4.001	4.000	3.997	3.994

GOLD QUAD PLUNGE — OPERATING GUIDELINES

HiQuad Plungers - Series QHU											
Material		Brinnell Hardness	SFM	Feed per Insert	IN2530	IN2535	IN4005	IN4030	IN4035	IN4015	Coolant
Cast Iron	Gray	150 - 250	250 - 800	.005 - .012			2			1	No
	Nodular		200 - 800								
Steel	Low Carbon 1018, 8620	100 - 250	250 - 800	.004 - .012	3		2	1			No
	High Carbon F-6180	250 - 400	200 - 700	.005 - .012							
	Alloyed Steel 4140, 4340	150 - 300	250 - 700								
	Tool Steel A-6, D-1, D-2	Up to 300									
Stainless Steel	300 Series, 304, 316	-	250 - 600	.004 - .008	5	2	4	3	1		May not be required at high speeds
	400 Series 15-5 PH	Up to 320	300 - 700	.005 - .010							
	13-8 PH	-	200 - 250	.004 - .008							Yes
Nickel Alloys	Inconel, Hastelloy, Waspalloy	-	75-120	.004 - .008		2	4	3	1		Yes
Titanium	6AL-4V	-	100 - 150	.004 - .008		2	4	3	1		Yes

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.