



Exchangeable head drill

DRILL **F**ORCE MEISTER

Tungaloy Report No. 509S3-G

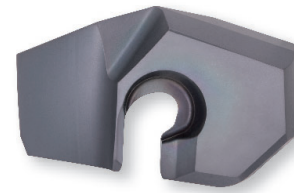
Expansion of **SMP** drill head with new diameters and AH9130



DRILLFORCE MEISTER

Grade

Latest coating optimized for extended tool life

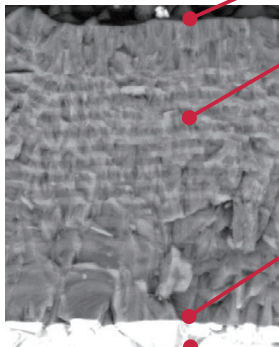


SMP

General purpose drill head

New

AH9130



Resistance to built-up edge

Coating layer to resist built-up edge

Resistance to wear, oxidation, and fracture

- 2 coating layers for wear and oxidation resistance
- Layered alternatively to prevent crack from propagating to fracture

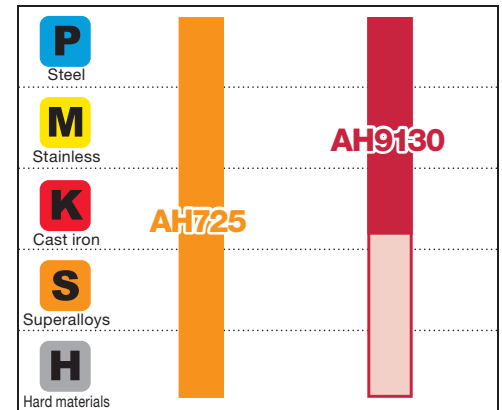
Strong coating-substrate adhesion

Coating is provided with strong adhesion between the coating layer and carbide substrate to prevent coating delamination

Substrate

Carbide substrate features wear and fracture resistance

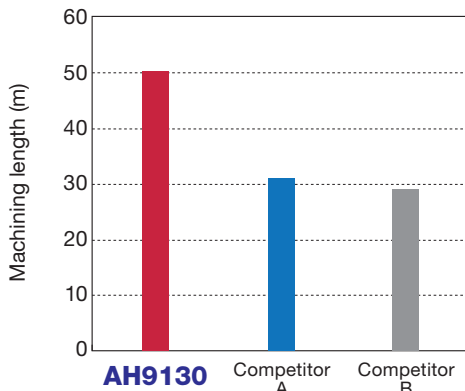
Application range



General purpose

Wear resistance

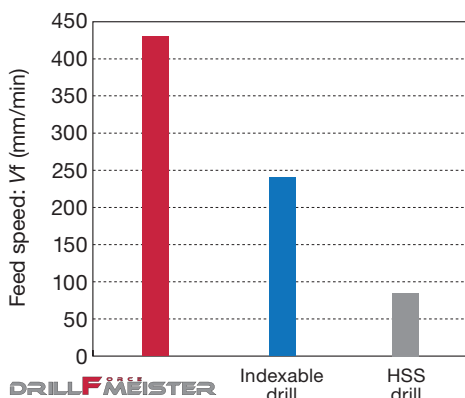
Cutting performance



Tool : $\phi 26$ mm
 Workpiece material : S55C / C55
 Cutting speed : $V_c = 100$ m/min
 Feed : $f = 0.35$ mm/rev

AH9130 provided superior wear resistance, significantly increasing tool life. In addition, secure drill tip clamping system provided tool life stability.

High productivity

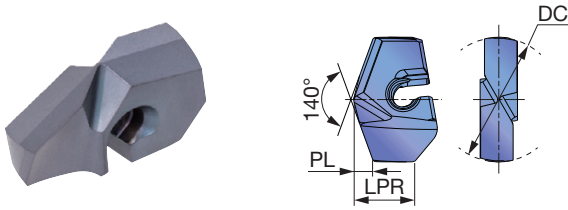


Tool : $\phi 33$ mm, L/D = 5
 Workpiece material : S55C / C55

	Cutting speed V_c (m/min)	Feed f (mm/rev)	Feed speed V_f (mm/min)
DRILLFORCE MEISTER	100	0.4	430
Indexable drill	150	0.15	240
HSS drill	20	0.4	85

Secure drill tip clamping and high-rigidity body provides remarkable increase in productivity.

SMP General purpose



Tool diameter	Head diameter tolerance
ø20 - ø29.9	+0.014 / -0.015
ø30 - ø41	+0.014 / -0.02

P Steel	★	★	
M Stainless	★	★	
K Cast iron	★	★	
N Non-ferrous	☆	☆	
S Superalloys	☆	★	
H Hard materials	☆	★	

★ : First choice
☆ : Second choice

P Steel	★	★	
M Stainless	★	★	
K Cast iron	★	★	
N Non-ferrous	☆	☆	
S Superalloys	☆	★	
H Hard materials	☆	★	

★ : First choice
☆ : Second choice

Designation	DC	LPR	Coated		PL	Pocket size	Body
			AH9130	AH725			
SMP200	20	9.65	●	●	3.11	20	TIS200F25-*
SMP201	20.1	9.61	●		3.13	20	TIS200F25-*
SMP203	20.3	9.52	●		3.16	20	TIS200F25-*
SMP205	20.5	9.44	●	●	3.2	20	TIS200F25-*
SMP206	20.6	9.4	●		3.22	20	TIS200F25-*
SMP210	21	9.23	●	●	3.29	21	TIS210F25-*
SMP213	21.3	9.1	●		3.35	21	TIS210F25-*
SMP215	21.5	9.02	●	●	3.38	21	TIS210F25-*
SMP220	22	10.54	●	●	3.42	22	TIS220F25-*
SMP222	22.2	10.46	●		3.46	22	TIS220F25-*
SMP223	22.3	10.41	●	●	3.47	22	TIS220F25-*
SMP225	22.5	10.33	●		3.51	22	TIS220F25-*
SMP230	23	10.12	●	●	3.6	23	TIS230F25-*
SMP235	23.5	9.91	●	●	3.69	23	TIS230F25-*
SMP238	23.8	9.78	●		3.75	23	TIS230F25-*
SMP240	24	10.76	●	●	3.73	24	TIS240F32-*
SMP245	24.5	10.55	●	●	3.82	24	TIS240F32-*
SMP247	24.7	10.47	●	●	3.86	24	TIS240F32-*
SMP250	25	10.34	●	●	3.91	25	TIS250F32-*
SMP255	25.5	10.13	●	●	4	25	TIS250F32-*
SMP260	26	11.55	●	●	4.04	26	TIS260F32-*
SMP261	26.1	11.51	●	●	4.06	26	TIS260F32-*
SMP262	26.2	11.47	●		4.08	26	TIS260F32-*
SMP263	26.3	11.42	●		4.09	26	TIS260F32-*
SMP264	26.4	11.38	●		4.11	26	TIS260F32-*
SMP265	26.5	11.34	●	●	4.13	26	TIS260F32-*
SMP266	26.6	11.3	●		4.15	26	TIS260F32-*
SMP267	26.7	11.26	●	●	4.17	26	TIS260F32-*
SMP270	27	11.13	●	●	4.22	27	TIS270F32-*
SMP271	27.1	11.09	●	●	4.24	27	TIS270F32-*
SMP272	27.2	11.05	●	●	4.26	27	TIS270F32-*
SMP273	27.3	11	●		4.28	27	TIS270F32-*
SMP275	27.5	10.92	●	●	4.31	27	TIS270F32-*
SMP276	27.6	10.88	●		4.33	27	TIS270F32-*
SMP279	27.9	10.75	●	●	4.39	27	TIS270F32-*
SMP280	28	11.74	●	●	4.35	28	TIS280F32-*
SMP281	28.1	11.7	●	●	4.37	28	TIS280F32-*
SMP283	28.3	11.61	●		4.4	28	TIS280F32-*
SMP285	28.5	11.53	●	●	4.44	28	TIS280F32-*
SMP286	28.6	11.49	●	●	4.46	28	TIS280F32-*
SMP290	29	11.32	●	●	4.53	29	TIS290F32-*
SMP291	29.1	11.28	●	●	4.55	29	TIS290F32-*
SMP293	29.3	11.19	●		4.59	29	TIS290F32-*
SMP295	29.5	11.11	●	●	4.62	29	TIS290F32-*
SMP296	29.6	11.07	●	●	4.64	29	TIS290F32-*

Designation	DC	LPR	Coated		PL	Pocket size	Body
			AH9130	AH725			
SMP297	29.7	11.03	●		4.66	29	TIS290F32-*
SMP298	29.8	10.98	●		4.68	29	TIS290F32-*
SMP299	29.9	10.94	●		4.7	29	TIS290F32-*
SMP300	30	14.14	●	●	4.67	30	TIS300F32-*
SMP301	30.1	14.1	●	●	4.69	30	TIS300F32-*
SMP302	30.2	14.06	●	●	4.71	30	TIS300F32-*
SMP303	30.3	14.01	●	●	4.72	30	TIS300F32-*
SMP304	30.4	13.97	●		4.74	30	TIS300F32-*
SMP305	30.5	13.93	●	●	4.76	30	TIS300F32-*
SMP307	30.7	13.85	●		4.8	30	TIS300F32-*
SMP308	30.8	13.8	●	●	4.82	30	TIS300F32-*
SMP310	31	13.72	●	●	4.85	31	TIS310F32-*
SMP311	31.1	13.68	●	●	4.87	31	TIS310F32-*
SMP313	31.3	13.59	●		4.91	31	TIS310F32-*
SMP315	31.5	13.51	●	●	4.94	31	TIS310F32-*
SMP318	31.8	13.38	●	●	5	31	TIS310F32-*
SMP320	32	14.53	●	●	4.98	32	TIS320F40-*
SMP321	32.1	14.49	●	●	5	32	TIS320F40-*
SMP322	32.2	14.45	●		5.02	32	TIS320F40-*
SMP325	32.5	14.32	●	●	5.07	32	TIS320F40-*
SMP328	32.8	14.19	●	●	5.13	32	TIS320F40-*
SMP330	33	14.11	●	●	5.16	33	TIS330F40-*
SMP331	33.1	14.07	●	●	5.18	33	TIS330F40-*
SMP333	33.3	13.98	●	●	5.22	33	TIS330F40-*
SMP335	33.5	13.9	●	●	5.25	33	TIS330F40-*
SMP339	33.9	13.73	●		5.33	33	TIS330F40-*
SMP340	34	13.69	●	●	5.34	34	TIS340F40-*
SMP341	34.1	13.65	●	●	5.36	34	TIS340F40-*
SMP343	34.3	13.56	●		5.4	34	TIS340F40-*
SMP345	34.5	13.48	●	●	5.44	34	TIS340F40-*
SMP349	34.9	13.31	●	●	5.51	34	TIS340F40-*
SMP350	35	16.56	●	●	5.44	35	TIS350F40-*
SMP351	35.1	16.52	●	●	5.46	35	TIS350F40-*
SMP352	35.2	16.48	●		5.48	35	TIS350F40-*
SMP355	35.5	16.35	●	●	5.53	35	TIS350F40-*
SMP357	35.7	16.27	●	●	5.57	35	TIS350F40-*
SMP360	36	16.14	●	●	5.62	36	TIS360F40-*
SMP361	36.1	16.1	●	●	5.64	36	TIS360F40-*
SMP362	36.2	16.06	●		5.66	36	TIS360F40-*
SMP365	36.5	15.93	●	●	5.71	36	TIS360F40-*
SMP366	36.6	15.89	●	●	5.73	36	TIS360F40-*
SMP370	37	15.72	●	●	5.8	37	TIS370F40-*
SMP371	37.1	15.68	●	●	5.82	37	TIS370F40-*

● : New product

● : Line up

Package quantity = 1 pc

P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	★
N	Non-ferrous	☆	☆
S	Superalloys	☆	★
H	Hard materials	☆	★

★ : First choice
☆ : Second choice

Designation	DC	LPR	Coated		PL	Pocket size	Body
			AH9130	AH725			
SMP373	37.3	15.59	●		5.86	37	TIS370F40-*
SMP374	37.4	15.55	●		5.88	37	TIS370F40-*
SMP375	37.5	15.51	●	●	5.9	37	TIS370F40-*
SMP380	38	17	●	●	5.91	38	TIS380F40-*
SMP381	38.1	16.96		●	5.93	38	TIS380F40-*
SMP383	38.3	16.87	●		5.96	38	TIS380F40-*
SMP385	38.5	16.79		●	6	38	TIS380F40-*
SMP388	38.8	16.66		●	6.06	38	TIS380F40-*
SMP390	39	16.58	●	●	6.09	39	TIS390F40-*
SMP391	39.1	16.54	●	●	6.11	39	TIS390F40-*
SMP395	39.5	16.37		●	6.18	39	TIS390F40-*
SMP397	39.7	16.29		●	6.22	39	TIS390F40-*

P	Steel	★	★
M	Stainless	★	★
K	Cast iron	★	★
N	Non-ferrous	☆	☆
S	Superalloys	☆	★
H	Hard materials	☆	★

★ : First choice
☆ : Second choice

Designation	DC	LPR	Coated		PL	Pocket size	Body
			AH9130	AH725			
SMP398	39.8	16.24		●	6.24	39	TIS390F40-*
SMP400	40	16.16	●	●	6.27	40	TIS400F40-*
SMP401	40.1	16.12		●	6.29	40	TIS400F40-*
SMP402	40.2	16.08	●		6.31	40	TIS400F40-*
SMP403	40.3	16.03	●		6.33	40	TIS400F40-*
SMP405	40.5	15.95	●	●	6.37	40	TIS400F40-*
SMP408	40.8	15.82	●		6.42	40	TIS400F40-*
SMP410	41	15.74	●	●	6.46	40	TIS400F40-*

● : New product
● : Line up
Package quantity = 1 pc

Related Items



STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Cutting speed Vc (m/min)	Feed: f (mm/rev)		
			ø20 - ø29.9	ø30 - ø35.9	ø36 - ø41
P	Low carbon steel S15C, S20C, etc. C15E4, etc.	80 - 140	0.2 - 0.5	0.2 - 0.5	0.2 - 0.55
	Carbon steel and alloy steel S55C, SCM440, etc. C55, 42CrMo4, etc.	80 - 130	0.2 - 0.5	0.2 - 0.5	0.2 - 0.55
	Prehardened steel NAK80, PX5, etc.	50 - 100	0.2 - 0.5	0.2 - 0.5	0.2 - 0.55
M	Stainless steel SUS304, SUS316, etc. X5CrNi18-9, X5CrNiMo17-12-3, etc.	40 - 80	0.15 - 0.3	0.2 - 0.3	0.2 - 0.35
K	Grey cast iron FC250, FC300, etc. 250, 300, etc.	80 - 180	0.25 - 0.55	0.25 - 0.55	0.3 - 0.6
	Ductile cast iron FCD400, FCD600, etc. 400-15, 600-3, etc.	80 - 140	0.25 - 0.55	0.25 - 0.55	0.3 - 0.6
N	Non ferrous materials	100 - 200	0.4 - 0.6	0.4 - 0.6	0.5 - 0.7
S	Heat-resistant alloys Inconel718, etc.	20 - 50	0.1 - 0.2	0.1 - 0.2	0.1 - 0.25
	Titanium alloys Ti-6Al-4V, etc.	20 - 50	0.1 - 0.2	0.1 - 0.2	0.1 - 0.25
H	Hard materials	20 - 60	0.1 - 0.2	0.1 - 0.2	0.1 - 0.25



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