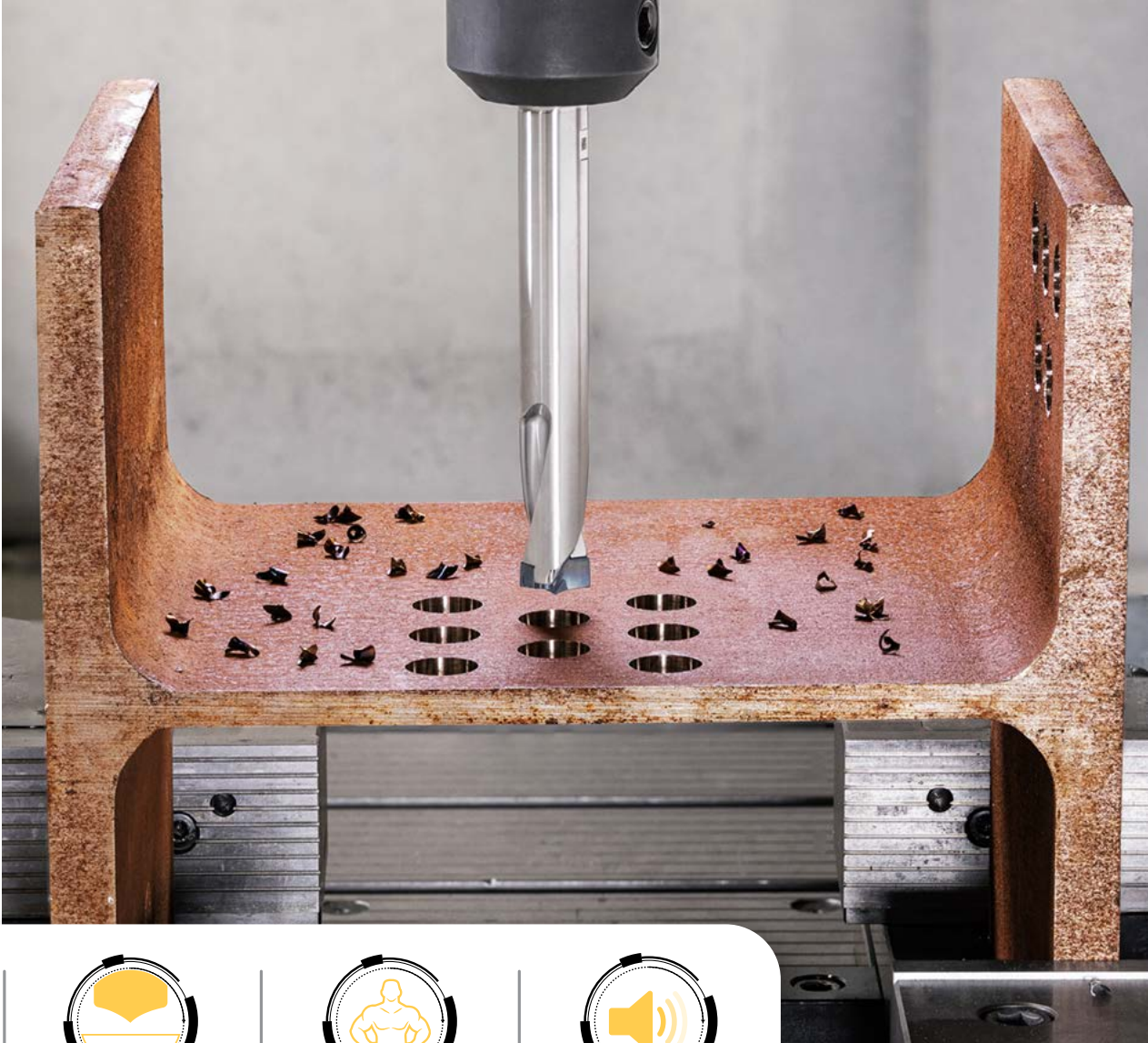


HOLE MAKING

03-2024

FEBRUARY 2024

METRIC



Self Centering
Geometry



Strong Reinforced
Body



Noise
Reduction



SUMOCHAM
CHAMDRILL LINE

IHP-BD Drilling Solution with Dedicated Tools for Machining Profile Construction Beams



METRIC



Self Centering Geometry



Strong Reinforced Body



Noise Reduction

NPA

New Product Announcement

SUMOCHAM CHAMDRILL LINE

Highlights

SUMOCHAM Solution Designed for Drilling Structural Beams

Steel construction beams are used for metal construction and require precise preparation in advance for drilling process assembly. However, the clamping mechanisms on the machines often lack rigidity and present a challenge for drilling tools. To overcome these limitations, it is imperative that drilling tools possess adaptive geometries to compensate for non-rigid conditions for smooth drilling performance.

ISCAR has made significant efforts to broaden its range of drilling solutions. It has provided highly productive tools and advanced technologies for holemaking applications.

ISCAR launches a newly designed IHP-BD insert, that features a dedicated self-centering cutting edge which guarantees secure hole penetration, while its sharp corners effectively prevent the formation of burrs. Together with a reinforced holder it provides an effective solution for drilling relatively thin workpieces under unstable conditions.

In addition, the coating of the insert has been optimized for machining construction steels, for improved wear resistance.

Click for Short Video



METRIC

Self Centering
GeometryStrong Reinforced
BodyNoise
Reduction

NPA

New Product Announcement

SUMOCHAM

CHAMDRILL LINE

The tool bodies are available in two drilling ratios 5xD and 8xD.

The drilling heads are Self Centering Geometry.
SUMOCHAM range: Ø13.5 – Ø32mm

Dedicated geometry of the drilling head.

Features

- The self-centering capability of the drill.
- Extremely quiet drilling process.
- Accurate hole operations.
- Eliminating the need for deburring.

Dedicated IC954 with tough substrate TiAlCrN PVD coated grade for high deformation resistance that substantially improves the efficiency and reliability of the insert.

Highly efficient with performance MQL (Minimum Quantity Lubrication).

METRIC



Self Centering Geometry



Strong Reinforced Body



Noise Reduction

NPA

New Product Announcement

SUMOCHAM CHAMDRILL LINE

Self CENTERING



No burrs on the exit due to the sharp cutting edge that eliminates the need for deburring.

No noise and no vibrations due to the dedicated insert geometry.

Tough nano-layer PVD coating for high chipping and wear resistance.



Reinforced tool body for better rigidity.

SumoCham line self-clamping mechanism.

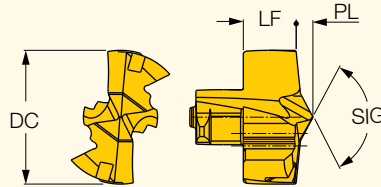
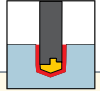
Internal coolant nozzles compatible with MQL.

SUMOCHAM CHAMDRILL LINE

IHP-BD

Exchangeable drilling heads for DCN drills for machining construction beams and structural steel materials

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5032&mapp=DR&GFSTYP=M&srch=1>



Designation	Dimensions					IC954
	DC	LF	PL	SIG	SSC ⁽¹⁾	
IHP 138-BD	13.80	5.40	1.600	128	13	●
IHP 140-BD	14.00	5.60	1.700	128	14	●
IHP 1429-BD	14.29	5.60	1.700	128	14	●
IHP 160-BD	16.00	6.10	1.950	128	16	●
IHP 170-BD	17.00	6.80	2.000	128	17	●
IHP 1746-BD	17.46	6.80	2.000	128	17	●
IHP 178-BD	17.80	6.80	2.000	128	17	●
IHP 180-BD	18.00	7.30	2.400	128	18	●
IHP 1905-BD	19.05	7.60	2.550	128	19	●
IHP 200-BD	20.00	8.10	2.600	128	20	●
IHP 2064-BD	20.64	8.10	2.600	128	20	●
IHP 210-BD	21.00	8.50	2.650	128	21	●
IHP 218-BD	21.80	8.50	2.650	128	21	●
IHP 220-BD	22.00	8.70	2.750	128	22	●
IHP 225-BD	22.50	8.70	2.750	128	22	●
IHP 230-BD	23.00	9.30	2.900	128	23	●
IHP 2381-BD	23.81	9.30	2.900	128	23	●
IHP 240-BD	24.00	10.00	3.000	128	24	●
IHP 250-BD	25.00	10.00	3.100	128	25	●
IHP 258-BD	25.80	10.00	3.100	128	25	●
IHP 260-BD	26.00	10.30	3.300	128	26	●
IHP 265-BD	26.50	10.30	3.300	128	26	●
IHP 2699-BD	26.99	10.30	3.300	128	26	●
IHP 270-BD	27.00	10.80	3.400	128	27	●
IHP 275-BD	27.50	10.80	3.400	128	27	●
IHP 280-BD	28.00	11.30	3.550	128	28	●
IHP 2858-BD	28.58	11.30	3.550	128	28	●
IHP 300-BD	30.00	12.00	3.800	128	30	●
IHP 3016-BD	30.16	12.00	3.800	128	30	●
IHP 320-BD	32.00	13.30	3.950	128	32	●

● Intermediate sizes can be supplied on request

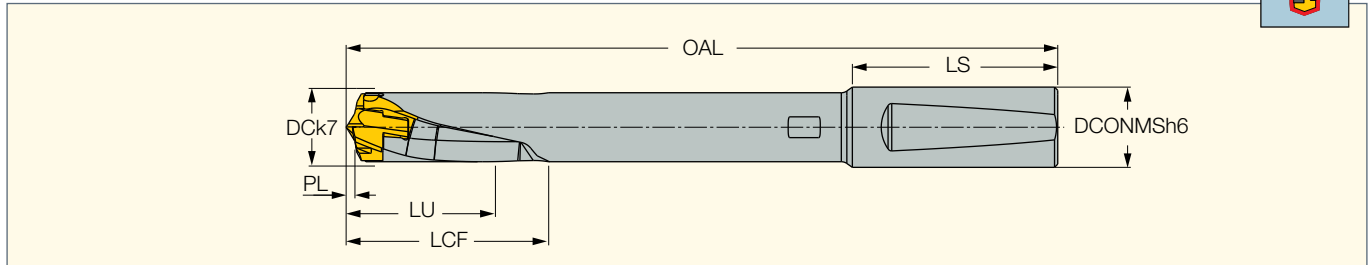
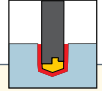
⁽¹⁾ Seat size code

SUMOCHAM CHAMDRILL LINE

DCN-N-5D-BD

Exchangeable head drills with a reinforced body and a WN shank, diameter ratio 5xD, for construction beam industry.

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5040&mapp=DR&GFSTYP=M&srch=1>



Designation	DCN ⁽¹⁾	DCX ⁽²⁾	DCONMS	LU	LCF	PL	LS	OAL	SSC ⁽³⁾	MIID ⁽⁴⁾	
DCN 135-050-16N-5D-BD	13.50	13.99	16.00	40.00	50.0	1.600	57.0	153.60	13	IHP 130-BD	K DCN 10-13.99
DCN 140-050-16N-5D-BD	14.00	14.99	16.00	40.00	50.0	1.700	57.0	157.70	14	IHP 140-BD	K DCN 14-17.99
DCN 160-050-20N-5D-BD	16.00	16.99	20.00	40.00	50.0	1.950	59.0	175.00	16	IHP 160-BD	K DCN 14-17.99
DCN 170-050-20N-5D-BD	17.00	17.99	20.00	40.00	50.0	2.000	59.0	182.00	17	IHP 170-BD	K DCN 14-17.99
DCN 180-050-20N-5D-BD	18.00	18.99	20.00	40.00	50.0	2.400	59.0	189.40	18	IHP 180-BD	K DCN 18-21.99
DCN 190-050-20N-5D-BD	19.00	19.99	20.00	40.00	50.0	2.550	59.0	197.10	19	IHP 190-BD	K DCN 18-21.99
DCN 200-050-25N-5D-BD	20.00	20.99	25.00	40.00	50.0	2.600	64.0	207.60	20	IHP 200-BD	K DCN 18-21.99
DCN 210-050-25N-5D-BD	21.00	21.99	25.00	40.00	50.0	2.650	64.0	214.70	21	IHP 210-BD	K DCN 18-21.99
DCN 220-050-25N-5D-BD	22.00	22.99	25.00	40.00	50.0	2.750	64.0	221.80	22	IHP 220-BD	K DCN 22-26.99
DCN 230-050-25N-5D-BD	23.00	23.99	25.00	40.00	50.0	2.900	64.0	228.90	23	IHP 230-BD	K DCN 22-26.99
DCN 240-050-25N-5D-BD	24.00	24.99	25.00	40.00	50.0	3.000	64.0	236.00	24	IHP 240-BD	K DCN 22-26.99
DCN 250-050-32N-5D-BD	25.00	25.99	32.00	40.00	50.0	3.100	68.0	246.10	25	IHP 250-BD	K DCN 22-26.99
DCN 260-050-32N-5D-BD	26.00	26.99	32.00	40.00	50.0	3.300	68.0	253.30	26	IHP 260-BD	K DCN 22-26.99
DCN 270-050-32N-5D-BD	27.00	27.99	32.00	40.00	50.0	3.400	68.0	260.40	27	IHP 270-BD	K DCN 27-32.99
DCN 280-050-32N-5D-BD	28.00	28.99	32.00	40.00	50.0	3.550	68.0	267.60	28	IHP 280-BD	K DCN 27-32.99
DCN 300-070-32N-5D-BD	30.00	30.99	32.00	50.00	70.0	3.800	68.0	280.80	30	IHP 300-BD	K DCN 27-32.99
DCN 320-070-32N-5D-BD	32.00	32.99	32.00	50.00	70.0	3.950	68.0	295.00	32	IHP 320-BD	K DCN 27-32.99

• Do not mount smaller drilling heads other than the specified range of the drill body

⁽¹⁾ Cutting diameter minimum

⁽²⁾ Cutting diameter maximum

⁽³⁾ Seat size code

⁽⁴⁾ Master insert identification

NPA

New Product Announcement

HOLE MAKING

03-2024

FEBRUARY 2024

METRIC

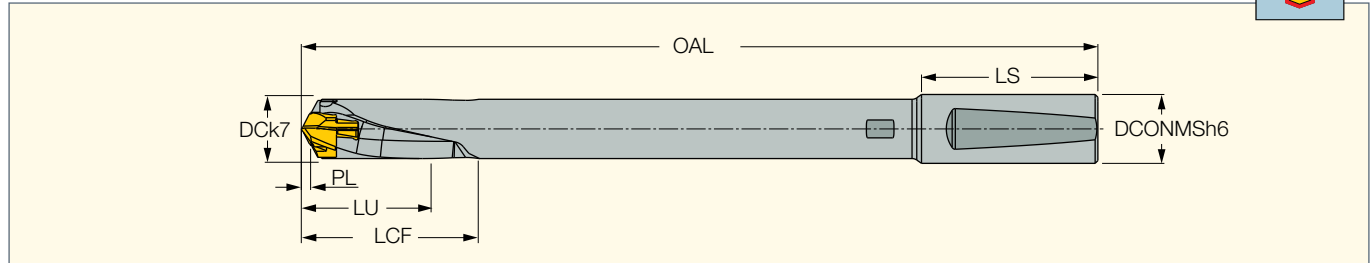
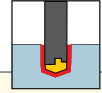
SUMOCHAM

CHAMDRILL LINE

DCN-N-8D-BD

Exchangeable head drills with a reinforced body and a WN shank, diameter ratio 8xD, for construction beam Industry.

<https://www.iscar.com/eCatalog/Family.aspx?num=5041&mapp=DR&GFSTYP=M&srch=1>



Designation	DCN ⁽¹⁾	DCX ⁽²⁾	DCONMS	LU	LCF	PL	LS	OAL	SSC ⁽³⁾	MID ⁽⁴⁾	
DCN 135-050-16N-8D-BD	13.50	13.99	16.00	40.00	50.0	1.600	57.0	194.10	13	IHP 130-BD	K DCN 10-13.99
DCN 140-050-16N-8D-BD	14.00	14.99	16.00	40.00	50.0	1.700	57.0	199.70	14	IHP 140-BD	K DCN 14-17.99
DCN 160-050-20N-8D-BD	16.00	16.99	20.00	40.00	50.0	1.950	59.0	223.00	16	IHP 160-BD	K DCN 14-17.99
DCN 170-050-20N-8D-BD	17.00	17.99	20.00	40.00	50.0	2.000	59.0	233.00	17	IHP 170-BD	K DCN 14-17.99
DCN 180-050-20N-8D-BD	18.00	18.99	20.00	40.00	50.0	2.400	59.0	243.40	18	IHP 180-BD	K DCN 18-21.99
DCN 190-050-20N-8D-BD	19.00	19.99	20.00	40.00	50.0	2.550	59.0	254.10	19	IHP 190-BD	K DCN 18-21.99
DCN 200-050-25N-8D-BD	20.00	20.99	25.00	40.00	50.0	2.600	64.0	267.60	20	IHP 200-BD	K DCN 18-21.99
DCN 210-050-25N-8D-BD	21.00	21.99	25.00	40.00	50.0	2.650	64.0	277.70	21	IHP 210-BD	K DCN 18-21.99
DCN 220-050-25N-8D-BD	22.00	22.99	25.00	40.00	50.0	2.750	64.0	287.80	22	IHP 220-BD	K DCN 22-26.99
DCN 230-050-25N-8D-BD	23.00	23.99	25.00	40.00	50.0	2.900	64.0	297.90	23	IHP 230-BD	K DCN 22-26.99
DCN 240-050-25N-8D-BD	24.00	24.99	25.00	40.00	50.0	3.000	64.0	308.00	24	IHP 240-BD	K DCN 22-26.99
DCN 250-050-32N-8D-BD	25.00	25.99	32.00	40.00	50.0	3.100	68.0	321.10	25	IHP 250-BD	K DCN 22-26.99
DCN 260-050-32N-8D-BD	26.00	26.99	32.00	40.00	50.0	3.300	68.0	331.30	26	IHP 260-BD	K DCN 22-26.99
DCN 270-050-32N-8D-BD	27.00	27.99	32.00	40.00	50.0	3.400	68.0	341.40	27	IHP 270-BD	K DCN 27-32.99
DCN 280-050-32N-8D-BD	28.00	28.99	32.00	40.00	50.0	3.550	68.0	351.60	28	IHP 280-BD	K DCN 27-32.99
DCN 300-070-32N-8D-BD	30.00	30.99	32.00	50.00	70.0	3.800	68.0	370.80	30	IHP 300-BD	K DCN 27-32.99
DCN 320-070-32N-8D-BD	32.00	32.99	32.00	50.00	70.0	3.950	68.0	391.00	32	IHP 320-BD	K DCN 27-32.99

• Do not mount smaller drilling heads other than the specified range of the drill body

- (1) Cutting diameter minimum
- (2) Cutting diameter maximum
- (3) Seat size code
- (4) Master insert identification

ISO	Material Groups					Cutting parameters												
	Material	Condition	Tensile Strength [N/mm ²]	Hardness, HB	Group	Diameter range, mm	Cutting speed, V _c [m/min]											
							D=12-13.9	D=14-15.9	D=16-19.9	D=20-25.9	D=26-32.9							
P	non-alloy steel and cast steel, free cutting steel	< 0.25 %C	annealed	420	125	1	70-90-110	0.16	0.18	0.22	0.24	0.28						
		≥ 0.25 %C	annealed	650	190	2	70-100-120											
		< 0.55 %C	quenched and tempered	850	250	3	70-90-110						0.24	0.26	0.30	0.34	0.38	
			annealed	750	220	4	60-80-100						0.30	0.34	0.36	0.40	0.48	
	low alloy and cast steel (less than 5% of alloying elements)	≥ 0.55 %C	quenched and tempered	1000	300	5	50-70-90											
			annealed	600	200	6	70-90-110						0.15	0.18	0.22	0.24	0.28	
			quenched and tempered		930	275	7						60-80-100	0.22	0.26	0.30	0.34	0.38
					1000	300	8						50-70-90	0.30	0.34	0.36	0.40	0.48
					1200	350	9						40-55-70					