

TOOLING

53-2024

OCTOBER 2024

METRIC/IMPERIAL

# NPA

New Product Announcement



Easy to Use



High Accuracy



Slim Shape  
Hydraulic Holder



**HYDROFIT**  
SF LINE

## Slim Hydraulic Chucks for Drilling, Threading, Reaming, Semi-Finish and Finish Milling Applications



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SF LINE

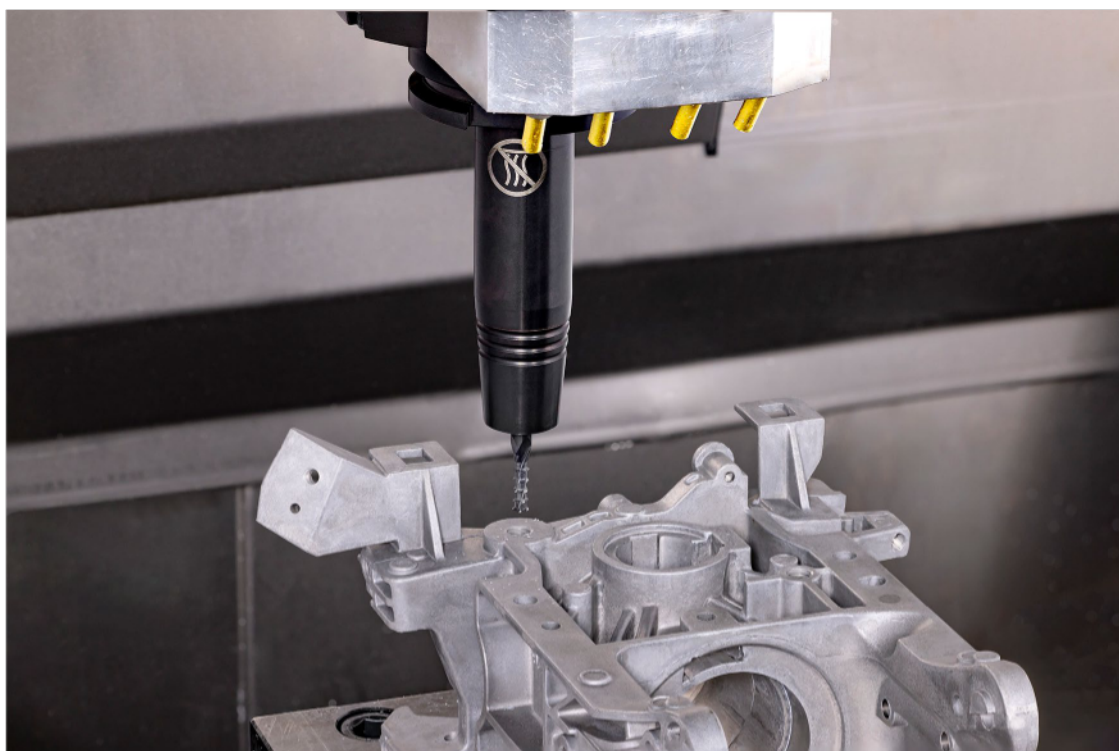
## Highlights

**New Slim Fit Hydraulic Chucks for Drilling, Threading, Reaming, Semi-Finish and Finish Milling Applications. The New HYDROFIT SF Chucks are Available with BT 30, BT 40, SK 40, CAT 40, HSK A63 and CAMFIX C6 Shanks.**

**Slim hydraulic chucks with the outer shape of SRKIN holders are used for drilling, threading, reaming, semi-finish, and finish milling applications.**

### Advantages

- Can be used in current processes without reprogramming.
- Suitable for high rotational speeds.
- Short setup time with no investment in additional clamping devices.
- Permanent runout repeatability of <0.003 mm.
- Vibration damping, which increases tool life.
- Can clamp all tool shank types.
- Dirt grooves for reliable torque transmission.





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### Technical Data

clamping Ø	max. r.p.m. in min <sup>-1</sup>	permissible transmittable torque (minimum shank tolerance h6, oiled) [Nm]	minimum clamping depth	permissible radial force F on the chuck at 2.5x clamping Ø projecting length [N]
	L <sub>1</sub> up to 120			
Ø 6	50000	16	27	180
Ø 8	50000	23	27	300
Ø 10	50000	45	31	430
Ø 12	50000	90	36	520
Ø 16	50000	185	39	1130
Ø 20	50000	330	41	1490

clamping Ø	max. r.p.m. in min <sup>-1</sup>	permissible transmittable torque (minimum shank tolerance h6, oiled) [Nm]	minimum clamping depth	permissible radial force F on the chuck at 2.5x clamping Ø projecting length [N]
	L <sub>1</sub> up to 120			
Ø 1/4"	50000	17	0.95"	180
Ø 3/8"	50000	45	1.14"	400
Ø 1/2"	50000	95	1.38"	600
Ø 5/8"	50000	185	1.55"	1130
Ø 3/4"	50000	310	1.61"	1380







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### Benefits



#### Slim Hydraulic Chucks with an Outer Shape of SRKIN Holders

are designed for drilling, threading, reaming, semi-finish, and finish milling applications.

They are fine-balanced by default, making them suitable for high rotational speeds.

#### Advantages

Can be used in existing processes without reprogramming.



#### Permanent Runout Accuracy

Of less than 0.003 mm – without fluctuations. This ensures the best surface results due to a uniform cutting action and high reproducibility

#### Advantages

Safe and precise machining.



#### Excellent Vibration Damping

The hydraulic system absorbs vibrations, assuring smooth running and the best workpiece surfaces.

#### Advantages

High surface quality increases service life.



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### Benefits



#### Tool Change Within Seconds for Easy Handling

Turn the actuation screw with an Allen key to the dead stop. The clamping results in a runout accuracy of less than 0.003 mm without the need for additional equipment.

#### Advantages

Time savings due to reduced setup times and no investment costs for additional clamping devices.



#### All Shaft Types Can Be Clamped

All tools (6 to 20 mm or 1/4" to 3/4") with a smooth cylinder shank, as well as recesses according to DIN 1835 Form B, E, and DIN 6535 Form HB, HE, can be clamped directly with or without intermediate sleeves.

#### Advantages

No additional costs for new tools.



#### Low Maintenance

The sealed system blocks the penetration of dirt, coolant, lubricants, or chips. The clamping area will not be damaged, and proper function is guaranteed.

#### Advantages

Low maintenance and a long service life.



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Slim Shape  
Hydraulic Holder

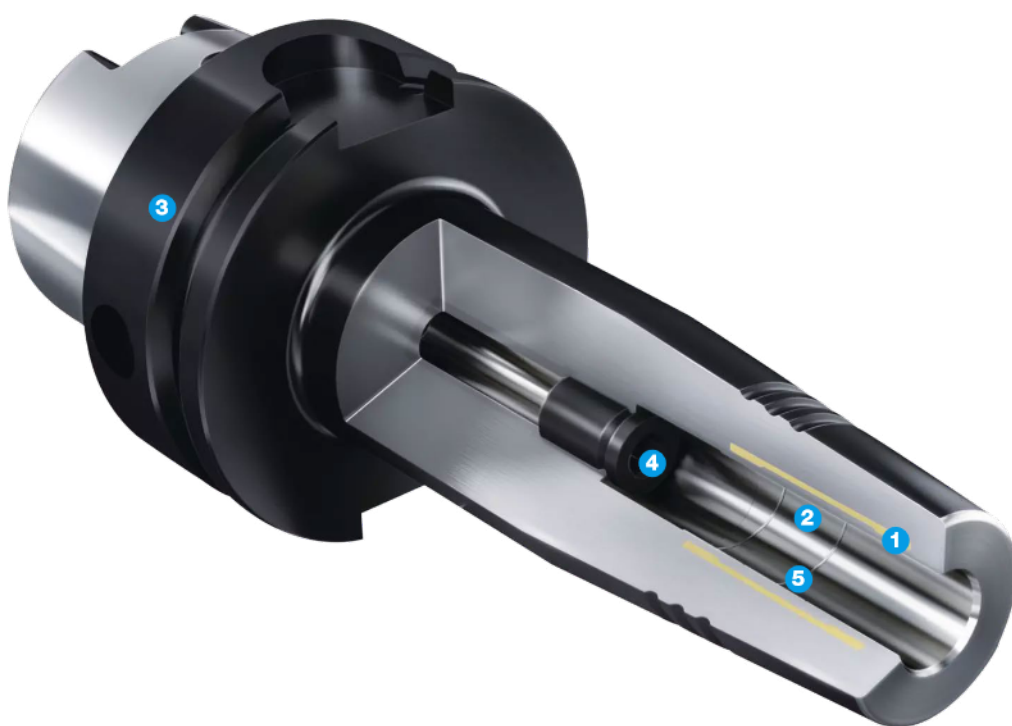
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## HYDROFIT SF LINE

### Hydraulic Expansion Technology

- ① The oil chamber system is filled with hydraulic fluid, providing a damping effect on the clamped tool.
- ② The expansion sleeve expands against the tool shank. This clamping process first centers the tool shank before fully clamping it over the whole surface.
- ③ The machine-side interface is located on the base body.
- ④ The length adjustment screw is used for fast and easy presetting.
- ⑤ The dirt groove: The enormous clamping pressure of the **HYDROFIT SF** chuck creates a displacement of oil, grease, or lubricant residues into the groove, causing surfaces to remain dry.







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SF LINE

### Care, Storage, and Maintenance

- To secure the clamping force, clean the clamping bore and groove after every tool change (use a cleaning agent that contains solvents).
- Before storage, the entire surface should be lightly oiled.
- Always store the chucks in an unclamped position and protect them against corrosion.
- Depending on environmental conditions, it may be necessary to adjust cleaning and lubrication of the actuation screw accordingly, particularly in cases of a high number of clamping cycles, high operating temperature, abrasive dirt, or swarfs.
- For optimal lubrication of the actuation screw, we recommend using copper paste MOLYKOTE CU 7439 (100 g tube).
- Basic repairs should be performed at ISCAR.

### Warranty

The warranty period for **HYDROFIT SF** chucks is 12 months from the delivery date from the factory, assuming appropriate use and respecting the recommended operating and maintenance regulations. Basic tool and machine contact components and wear parts (actuation screw and seal) are not covered under the warranty.



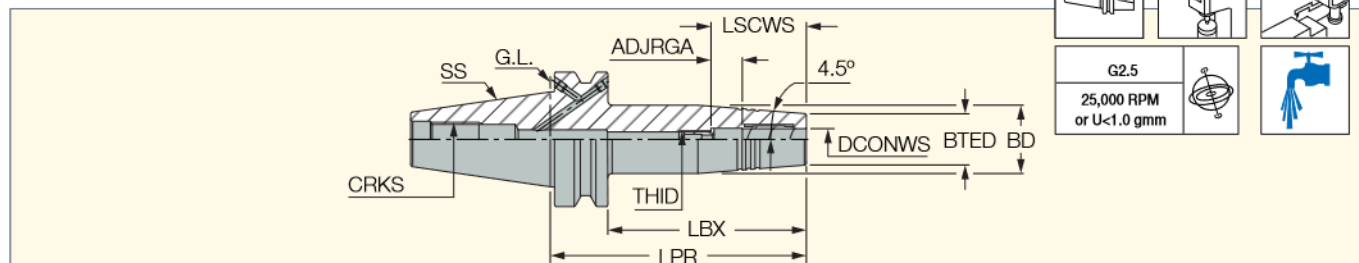
# HYDROFIT

SF LINE

## BT-HYDRO SF

Slim Design, Hydraulic Chucks with BT Shanks

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5430&mapp=IT&GFSTYP=M&srch=1>



## M E T R I C

Designation	SS	DCONWS	BTED	BD	LPR	LBX	ADJRGA	LSCWS	THID	CRKS	DCP <sup>(1)</sup>	kg
BT30 HYDRO 6X80 SF	30	6.00	21.00	27.00	80.00	58.00	10.00	36.00	M5	M12	0	0.00
BT30 HYDRO 8X80 SF	30	8.00	21.00	27.00	80.00	58.00	10.00	36.00	M6	M12	0	0.00
BT30 HYDRO 10X80 SF	30	10.00	24.00	32.00	80.00	58.00	10.00	43.20	M8X1	M12	0	0.68
BT30 HYDRO 12X80 SF	30	12.00	24.00	32.00	80.00	58.00	10.00	47.00	M10X1	M12	0	0.67
BT30 HYDRO 16X80 SF	30	16.00	27.00	34.00	80.00	58.00	10.00	50.00	M12X1	M12	0	0.00
BT30 HYDRO 20X90 SF	30	20.00	33.00	42.00	90.00	68.00	10.00	52.00	M16X1	M12	0	0.88
BT40 HYDRO 6X120 SF	40	6.00	21.00	27.00	120.00	93.00	10.00	36.00	M5	M16	0	1.41
BT40 HYDRO 8X90 SF	40	8.00	21.00	27.00	90.00	63.00	10.00	36.00	M5	M16	0	1.28
BT40 HYDRO 8X120 SF	40	8.00	21.00	27.00	120.00	93.00	10.00	36.00	M6	M16	0	1.39
BT40 HYDRO 8X90 SF	40	8.00	21.00	27.00	90.00	63.00	10.00	36.00	M6	M16	0	1.27
BT40 HYDRO 10X120 SF	40	10.00	24.00	32.00	120.00	93.00	10.00	43.20	M8X1	M16	0	1.49
BT40 HYDRO 10X90 SF	40	10.00	24.00	32.00	90.00	63.00	10.00	43.20	M8X1	M16	0	1.32
BT40 HYDRO 12X120 SF	40	12.00	24.00	32.00	120.00	93.00	10.00	47.00	M10X1	M16	0	1.47
BT40 HYDRO 12X90 SF	40	12.00	24.00	32.00	90.00	63.00	10.00	47.00	M10X1	M16	0	1.30
BT40 HYDRO 16X120 SF	40	16.00	27.00	34.00	120.00	93.00	10.00	50.00	M12X1	M16	0	1.51
BT40 HYDRO 16X90 SF	40	16.00	27.00	34.00	90.00	63.00	10.00	50.00	M12X1	M16	0	1.32
BT40 HYDRO 20X120 SF	40	20.00	33.00	42.00	120.00	93.00	10.00	52.00	M16X1	M16	0	1.72
BT40 HYDRO 20X90 SF	40	20.00	33.00	42.00	90.00	63.00	10.00	52.00	M16X1	M16	0	1.44

<sup>(1)</sup> 1 - Slot for data chip, 0 - Without slot for data chip

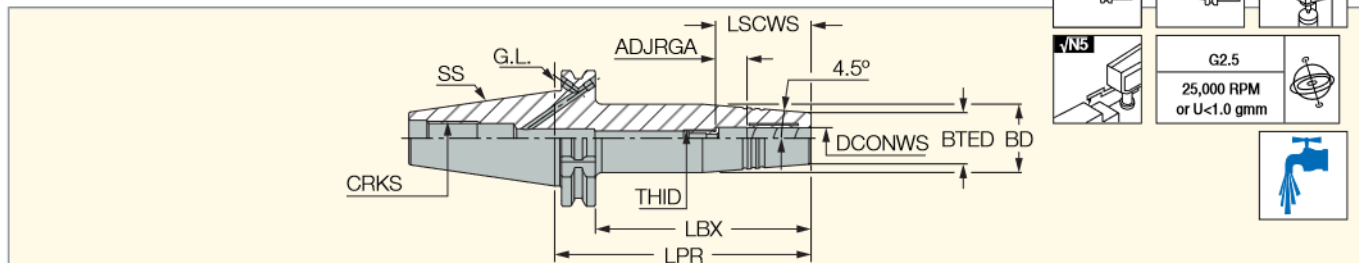


### HYDROFIT SF LINE

#### DIN69871-HYDRO SF

Slim Design, Hydraulic Chucks with DIN69871 Shanks

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5431&mapp=IT&GFSTYP=M&srch=1>



### M E T R I C

Designation	SS	DCONWS	BTED	BD	LPR	LBX	ADJRGA	LSCWS	THID	CRKS	DCP <sup>(1)</sup>	kg
SK40 HYDRO 6X120 SF	40	6.00	21.00	27.00	120.00	100.90	10.00	36.00	M5	M16	0	1.28
SK40 HYDRO 6X80 SF	40	6.00	21.00	27.00	80.00	60.90	10.00	36.00	M5	M16	0	1.08
SK40 HYDRO 8X120 SF	40	8.00	21.00	27.00	120.00	100.90	10.00	36.00	M6	M16	0	1.27
SK40 HYDRO 8X80 SF	40	8.00	21.00	27.00	80.00	60.90	10.00	36.00	M6	M16	0	1.06
SK40 HYDRO 10X120 SF	40	10.00	24.00	32.00	120.00	100.90	10.00	42.00	M8X1	M16	0	1.39
SK40 HYDRO 10X80 SF	40	10.00	24.00	32.00	80.00	60.90	10.00	42.00	M8X1	M16	0	1.11
SK40 HYDRO 12X120 SF	40	12.00	24.00	32.00	120.00	100.90	10.00	47.00	M10X1	M16	0	1.36
SK40 HYDRO 12X80 SF	40	12.00	24.00	32.00	80.00	60.90	10.00	47.00	M10X1	M16	0	1.09
SK40 HYDRO 16X120 SF	40	16.00	27.00	34.00	120.00	100.90	10.00	50.00	M12X1	M16	0	1.41
SK40 HYDRO 16X80 SF	40	16.00	27.00	34.00	80.00	60.90	10.00	50.00	M12X1	M16	0	1.11
SK40 HYDRO 20X120 SF	40	20.00	33.00	42.00	120.00	100.90	10.00	52.00	M16X1	M16	0	1.64
SK40 HYDRO 20X80 SF	40	20.00	33.00	42.00	80.00	60.90	10.00	52.00	M16X1	M16	0	1.22

<sup>(1)</sup> 1 - Slot for data chip, 0 - Without slot for data chip

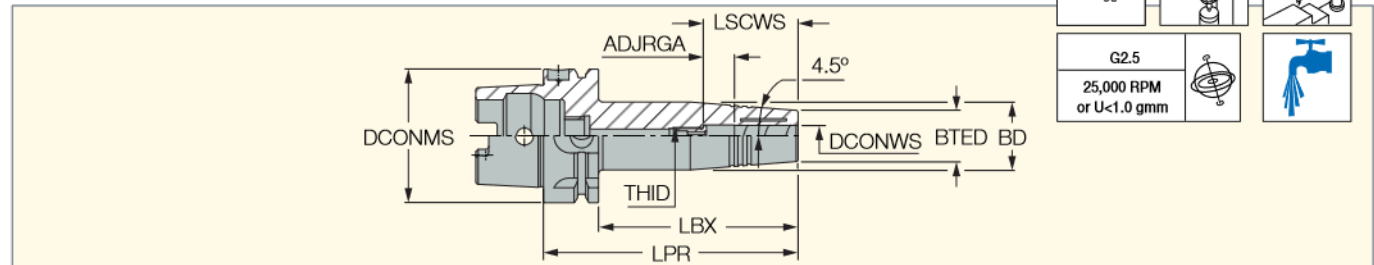
# HYDROFIT

SF LINE

## HSK A-HYDRO SF

Slim Design, Hydraulic Chucks with HSK A Shanks

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5432&mapp=IT&GFSTYP=M&srch=1>



### M E T R I C

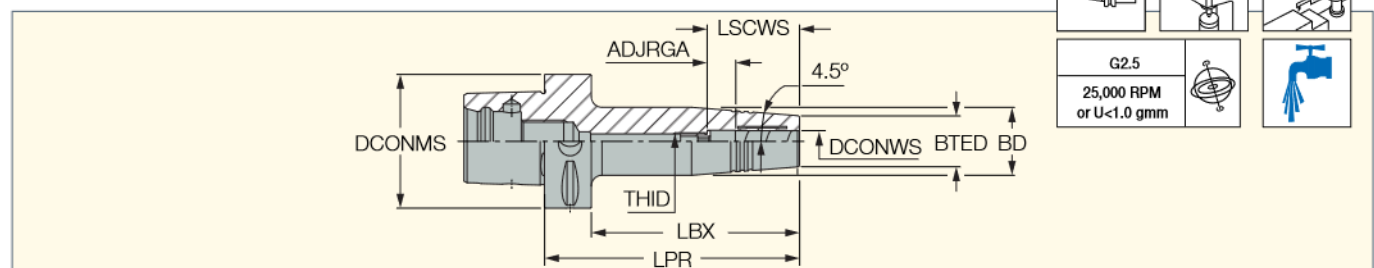
Designation	DCONMS	DCONWS	BTED	BD	LPR	LBX	ADJRGA	LSCWS	THID	DCP <sup>(1)</sup>	kg
HSK A63 HYDRO 6X120 SF	63.00	6.00	21.00	27.00	120.00	94.00	10.00	38.20	M5X0.8	1	1.04
HSK A63 HYDRO 6X80 SF	63.00	6.00	21.00	27.00	80.00	54.00	10.00	38.20	M10X1	1	0.87
HSK A63 HYDRO 8X120 SF	63.00	8.00	21.00	27.00	120.00	94.00	10.00	38.20	M7X1	1	1.03
HSK A63 HYDRO 8X80 SF	63.00	8.00	21.00	27.00	80.00	54.00	10.00	38.20	M10X1	1	0.86
HSK A63 HYDRO 10X120 SF	63.00	10.00	24.00	32.00	120.00	94.00	10.00	43.20	M8X1	1	1.15
HSK A63 HYDRO 10X85 SF	63.00	10.00	24.00	32.00	85.00	59.00	10.00	42.70	M10X1	1	0.94
HSK A63 HYDRO 12X120 SF	63.00	12.00	24.00	32.00	120.00	94.00	10.00	47.70	M10X1	1	1.12
HSK A63 HYDRO 12X90 SF	63.00	12.00	24.00	32.00	90.00	64.00	10.00	47.70	M10X1	1	0.95
HSK A63 HYDRO 14X120 SF	63.00	14.00	27.00	34.00	120.00	94.00	10.00	48.70	M10X1	1	1.19
HSK A63 HYDRO 14X90 SF	63.00	14.00	27.00	34.00	90.00	64.00	10.00	64.00	M10X1	1	0.99
HSK A63 HYDRO 16X120 SF	63.00	16.00	27.00	34.00	120.00	94.00	10.00	53.20	M12X1	1	1.17
HSK A63 HYDRO 16X95 SF	63.00	16.00	27.00	34.00	95.00	69.00	10.00	53.20	M12X1	1	1.00
HSK A63 HYDRO 20X100 SF	63.00	20.00	33.00	42.00	100.00	74.00	10.00	55.70	M16X1	1	1.18
HSK A63 HYDRO 20X120 SF	63.00	20.00	33.00	42.00	120.00	94.00	10.00	55.70	M16X1	1	1.39

(1) 1 - Slot for data chip, 0 - Without slot for data chip

## C#-HYDRO SF

Slim Design, Hydraulic Chucks with CAMFIX Shanks

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5433&mapp=IT&GFSTYP=M&srch=1>



### M E T R I C

Designation	DCONMS	DCONWS	BTED	BD	LBX	LPR	ADJRGA	LSCWS	THID	DCP <sup>(1)</sup>	kg
C6 HYDRO 6X120 SF	63.00	6.00	21.00	27.00	98.00	120.00	10.00	36.00	M5	0	0.00
C6 HYDRO 6X80 SF	63.00	6.00	21.00	27.00	58.00	80.00	10.00	36.00	M5	0	1.00
C6 HYDRO 8X120 SF	63.00	8.00	21.00	27.00	98.00	120.00	10.00	36.00	M6	0	1.17
C6 HYDRO 8X80 SF	63.00	8.00	21.00	27.00	58.00	80.00	10.00	36.00	M6	0	1.00
C6 HYDRO 10X120 SF	63.00	10.00	24.00	32.00	98.00	120.00	10.00	42.00	M8x1	0	1.28
C6 HYDRO 10X80 SF	63.00	10.00	24.00	32.00	58.00	80.00	10.00	42.00	M8x1	0	1.04
C6 HYDRO 12X120 SF	63.00	12.00	24.00	32.00	98.00	120.00	10.00	47.00	M10x1	0	1.26
C6 HYDRO 12X80 SF	63.00	12.00	24.00	32.00	58.00	80.00	10.00	47.00	M10x1	0	1.03
C6 HYDRO 16X120 SF	63.00	16.00	27.00	34.00	98.00	120.00	10.00	50.00	M12x1	0	1.30
C6 HYDRO 16X85 SF	63.00	16.00	27.00	34.00	63.00	85.00	10.00	50.00	M12x1	0	1.08
C6 HYDRO 20X85 SF	63.00	20.00	33.00	42.00	63.00	85.00	10.00	52.00	M16x1	0	1.20

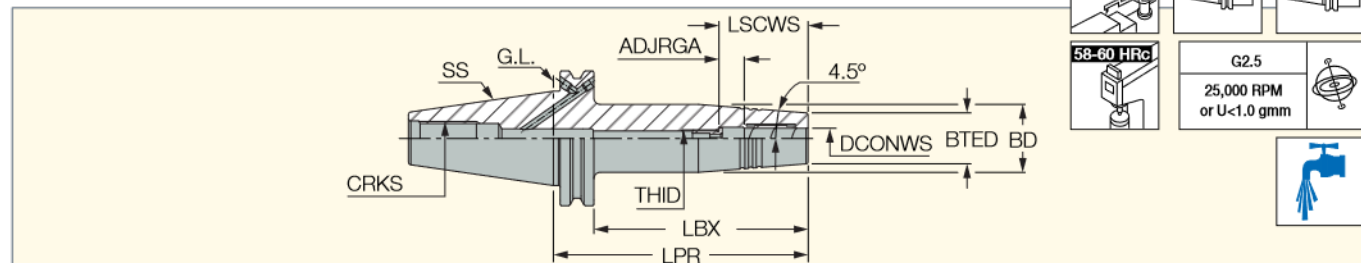
(1) 1 - Slot for data chip, 0 - Without slot for data chip

### HYDROFIT SF LINE

#### CAT-HYDRO SF

Slim Design, Hydraulic Chucks with CAT Shanks

<https://www.iscar.com/eCatalog/Family.aspx?fnum=5434&mapp=IT&GFSTYP=I&srch=1>



I N C H												
Designation	SS	DCONWS	BTED	BD	LPR	LBX	LSCWS	ADJRGA	THID	CRKS	DCP <sup>(1)</sup>	Lbs
CAT40 HYDRO 1/4X3.15 SF	40	.2500	.830	1.0600	3.150	2.400	1.4170	.394	M5	5/8"-11UNC	0	0
CAT40 HYDRO 1/4X4.72 SF	40	.2500	.830	1.0600	4.720	3.970	1.4210	.394	M5	5/8"-11UNC	0	2.86
CAT40 HYDRO 3/8X3.15 SF	40	.3750	.940	1.2600	3.150	2.400	1.5900	.394	M8x1	5/8"-11UNC	0	0
CAT40 HYDRO 3/8X4.72 SF	40	.3750	.940	1.2600	4.720	3.970	1.5900	.394	M8x1	5/8"-11UNC	0	3.08
CAT40 HYDRO 1/2X3.15 SF	40	.5000	.940	1.2600	3.150	2.400	1.8500	.394	M10x1	5/8"-11UNC	0	2.42
CAT40 HYDRO 1/2X4.72 SF	40	.5000	.940	1.2600	4.720	3.970	1.8500	.394	M10x1	5/8"-11UNC	0	0
CAT40 HYDRO 5/8X3.15 SF	40	.6250	1.200	1.3400	3.150	2.400	1.9680	.394	M12x1	5/8"-11UNC	0	0
CAT40 HYDRO 5/8X4.72 SF	40	.6250	1.060	1.3400	4.720	3.970	1.9680	.394	M12x1	5/8"-11UNC	0	0
CAT40 HYDRO 3/4X3.15 SF	40	.7500	1.300	1.6500	3.150	2.400	2.0510	.394	M16x1	5/8"-11UNC	0	0
CAT40 HYDRO 3/4X4.72 SF	40	.7500	1.300	1.6500	4.720	3.970	2.0510	.394	M16x1	5/8"-11UNC	0	0

<sup>(1)</sup> 1 - Slot for data chip, 0 - Without slot for data chip