HITECH HYDRAULICS

INJECTION MOULDING MACHINES | COMPLETE HYDRAULIC SOLUTIONS | CNC TURNED PRECISION PARTS | SINGLE TURNKEY PROJECTS

www.hitechimm.com
www.hitechgroup.org
www.hitechhydraulics.com

iKSD SERIES
KINETIC SERVO DRIVE

70 Tons - 750 Tons | 60 gm - 4000 gm

HYBRID SERVO INJECTION MOULDING MACHINE

B&R - PLC

MACHINE FEATURES

PLC - FEATURES

* Display, control, I/Os and software in one set.
* I/Os to control all types of injection molding machines.
* Closed loop for hydraulic axes.
* Graphic editor for flexible automatic cycle.
* Configurable, freely programmable I/Os.
* Extensive online help.
* Multilanguage capability.
* Robot control integrated.
* Euromap63 as option.
* Servo driven hydraulic pump as option.
* remote diagnostics via modem or internet.

STANDARD

* Three Platen rigid clamping system, with Tapped holes on mould area.
* Screw Driven by Hydro motor on a rigid twin cylinder Injection system.
* 10.1" colored screen PLC, with Multi-Mould Memory feature.
* KSD - series Servo controlled close loop Hydraulic system.
* Power saving 3 phase HEATERS - controlled by GEFRAN Three Phase SSR's.
* TRIO Safe Clamping - Hydraulic, Electrical & Mechanical.
* Hardened steel bushing in toggle system.
* Grease Lubrication system
* Sealed Oil Tank.
* Thin Wall component ready.
* Rigid aesthetics.
* Multi-point Hydraulic Ejector system.
* Air blow ejections.
* Low pressure mold clamping safety.
* Stainless Steel Hopper.

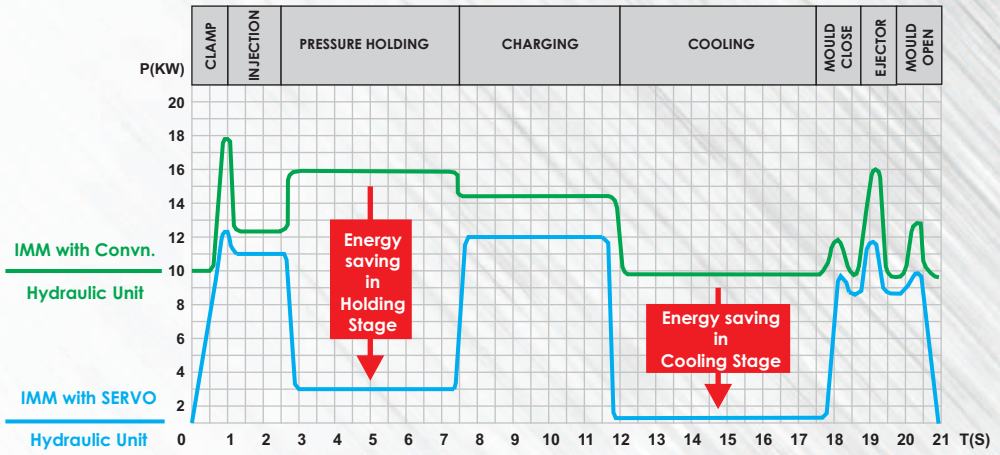
OPTIONAL

* Photo sensor system on request.
* Robot interface on request.
* Conveyor system.
* Core pulling system on request.
* Bi-Metallic screw on request.
* IML systems.
* Touch screen PLC.
* Hopper Dryer Systems.
* De-humidifer system for pet preform line.

Powered by Bharat Bijlee B&R HPB VOITH KEB GEFRAN

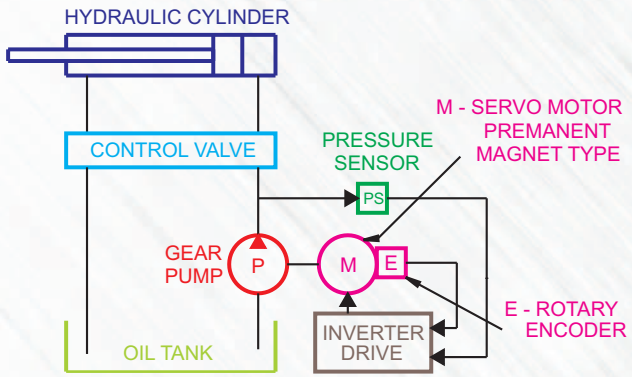
SERVO POWER SAVES ENERGY BY 20% TO 80%

POWER CONSUMPTION CHART



In Servo energy saving system, there is no extra energy consumption. I works on a principle of ON DEMAND LOAD CONSUMPTION, as the output volume changes according to load. In the holding phase stage, pressure required is maintained by lowering the RPM of servo motor by the invertor which consumes less energy maintaining the torqueas required. All thanks to the Gear pump.

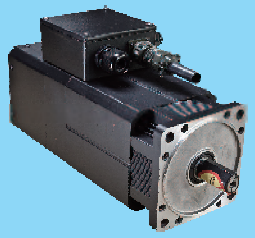
CONCEPT OF SERVO SYSTEM



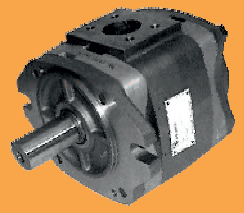
BENEFITS OF SERVO HYDRAULIC SYSTEM

> Neglible noise.
> Low electricity consumption.
> Low Oil temperatures.
> Increased hydraulic parts life.
> Fast productivity - fast cycle time.
> No PQ valves required.

BETTER MOULDING STABILITY
Repeatability in pressures, due to SERVO MOTOR CLOSE LOOP control, increases the product finish



LESS MAINTENANCE
Due to less moving part in gear pump, increases the life of the pump and helps reducing the noise level.



POWER SAVING

PRESSURE SENSOR
Close loop system helps in a accurate feedback to the inverter drive which further controlling the RPM of the servo motor.

HIGH ENERGY SAVING
In an ideal working state, compared with conventional injection moulding system, energy saving can reach upto 20% to 80%.

OPTIONAL - HRS (HYBRID REFILL SYSTEM)

HRS - HYBRID REFILL SYSTEM

This system is solely designed by us for our injection moulding machines. This system comprises a combination of torque multiplier and servo motor controlled by variable frequency drive.

HRS
HYBRID REFILL SYSTEM

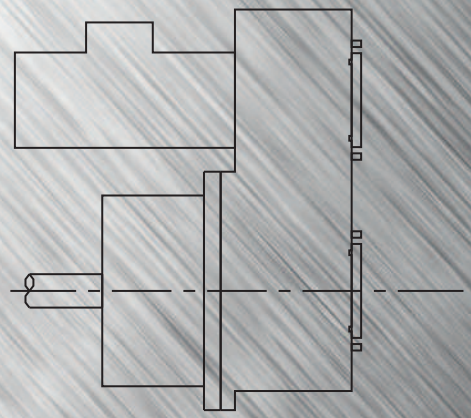
Benefits of HRS - HYBRID REFILL SYSTEM over Conventional Hydromotor System.

> Upto 98% of efficiency from input to output ratio. As compared to conventional hydro motor system in which there are hydraulic losses, frictional losses and power loss.

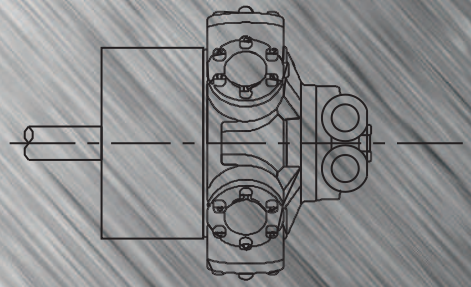
> HRS is clean, noiseless and less hardware is required to rotate the injection screw.

> This system ensures to delivery faster cycle time, as it is completly sperated from the main hydraulic system which can run parallel to refilling stage like opening and closing of moulds.

> No oil is required, no valves are required, no hose pipes.



HRS - Hybrid Refill System



Conventional Hydro Motor Arrangement

iKSD SERIES | FIXED TOGGLE CLAMPING | SLAUTED PLATEN | DIRECT SCREW DRIVE

			i70			i80			i90			i130			i160			i220			i260		
			A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
INJECTION SYSTEM	SCREW DIAMETER	MM	25	30	35	32	35	38	35	38	42	38	42	45	42	45	50	45	50	55	50	55	60
	SCREW L/D RATIO		24	21	19	22	20	19	22	20.3	18.4	24	22	20.5	23.6	22	19.8	24.4	22	20	24	22	20.3
	SHOT SIZE (THEORATICAL)	CC	64	92	125	133	160	190	163	193	235	226	277	318	311	357	441	397	490	593	592	704	826
	INJECTION WEIGHT (PS)	GMS	56	80	109	121	146	173	148	176	214	206	252	289	283	325	402	362	446	540	539	641	752
	INJECTION PRESSURE	Mpa	275	191	140	203	170	144	219	184	152	208	171	149	203	177	143	207	168	138	202.3	170	144.9
	SCREW SPEED	RPM	0-225			0-225			210			185			180			160			160		
CLAMPING UNIT	CLAMPING TONNAGE	KN	700			800			900			1300			1600			2200			2600		
	TOGGLE STROKE	MM	280			320			350			380			435			475			540		
	SPACE BETWEEN TIEBARS	MM	310 x 310			360 x 340			370 x 370			420 x 420			470 x 470			520 x 520			570 x 570		
	TIEBAR DIAMETER	MM	55			60			65			70			80			90			95		
	MAX MOULD HEIGHT	MM	330			350			380			450			520			560			600		
	MIN MOULD HEIGHT	MM	100			120			150			160			180			200			200		
	EJECTOR STROKE	MM	80			90			120			140			140			150			150		
	EJECTOR TONNAGE	KN	30			30			38			50			50			70			70		
	NO. OF EJECTORS	NO.	1			1			5			5			5			9			9		
SYSTEM	MAX. PUMP PRESSURE	BAR	150			150			150			150			150			150			150		
	PUMP MOTOR POWER	KW	11			11			13			13			18.5			18.5			28		
	HEATER POWER	KW	5.8			5.8			7.5			8			12.5			14			17		

			i290			i350			i400			i450			i550				i650				i750			
			A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D
INJECTION SYSTEM	SCREW DIAMETER	MM	55	60	65	65	70	75	70	75	80	75	80	85	80	85	90	95	85	90	95	100	90	95	105	110
	SCREW L/D RATIO		24	22	20.2	21.5	20	18.7	21.4	20	18.9	21.3	20	18.9	23	21.1	19.5	18.8	22.3	21	19.9	18.9	23.2	22	19.9	19
	SHOT SIZE (THEORATICAL)	CC	676	805	945	1161	1226	1407	1324	1520	1729	1679	1910	2156	2187	2468	2767	3082	2303	2582	2877	3188	2868	3195	3903	4283
	INJECTION WEIGHT (PS)	GMS	615	733	860	1057	1115	1280	1205	1383	1573	1528	1738	1962	1990	2246	2518	2805	2096	2350	2618	2901	2610	2907	3552	3898
	INJECTION PRESSURE	Mpa	202	170	145	195	168	146	199	173	152	195	172	152	188	167	149	134	206	184	164	149	195	175	143	131
	SCREW SPEED	RPM	220			160			160			155			150				125				130			
CLAMPING UNIT	CLAMPING TONNAGE	KN	2900			3500			4000			4500			5500				6500				7500			
	TOGGLE STROKE	MM	590			670			710			760			900				930				1000			
	SPACE BETWEEN TIEBARS	MM	620 x 620			710 x 630			760 x 760			800 x 720			900 x 820				960 x 880				1000 x 940			
	TIEBAR DIAMETER	MM	100			110			120			130			150				160				165			
	MAX MOULD HEIGHT	MM	630			710			780			800			850				900				1000			
	MIN MOULD HEIGHT	MM	200			260			250			300			350				350				400			
	EJECTOR STROKE	MM	150			200			200			200			250				260				300			
	EJECTOR TONNAGE	KN	70			90			110			110			250				200				200			
	NO. OF EJECTORS	NO.	9			9			13			13			-				-				-			
SYSTEM	MAX. PUMP PRESSURE	BAR	150			150			150			150			150				150				150			
	PUMP MOTOR POWER	KW	30			37			32+24			32+24			32+24				38+38				38+38			
	HEATER POWER	KW	19			24.5			26			34			36				37.2				49			

NOTE: As we are striving to improve the quality of our products, we reserve the rights to change the design & specifications without notice.

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hitechbawana@gmail.com

#hitechhydraulic

hitech.hydraulics

+91 98184 99099

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M3111204IN

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C O R P O R A T E O F F I C E

HITECH HOUSE, D4, Sector 2, DSIIDC Industrial Area, Bawana, Delhi-110039, INDIA.

Telefax: +91 011 6595 8222 * Service: +91 98 1167 1167 * Email: hitechsales@hitechgroup.org