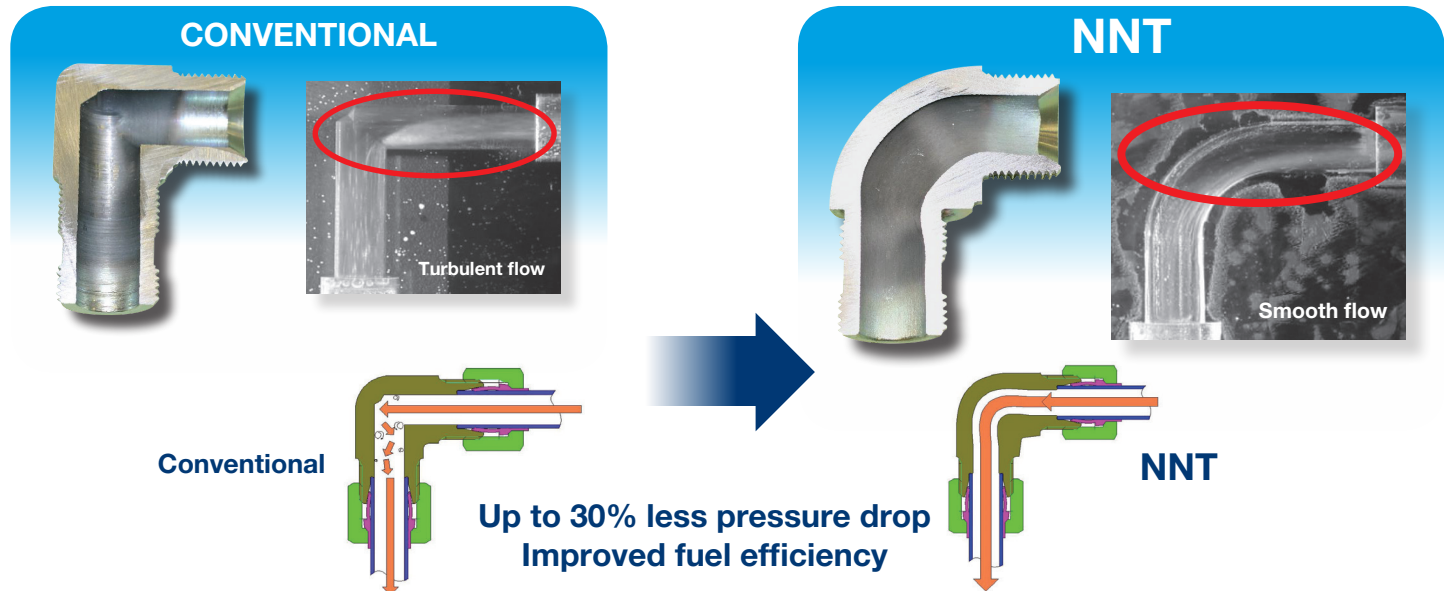


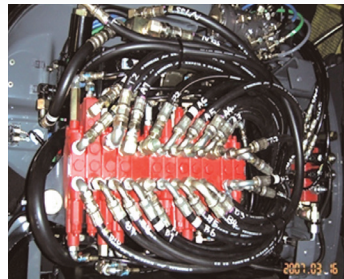
SMOOTH FLOW HYDRAULIC FITTING

CARBON STEEL HOSE ADAPTER

Reduced Pressure Drop, Energy Saving

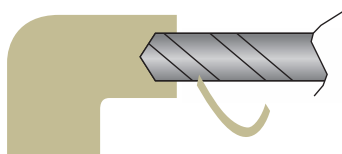


Typical Application Example for Construction Machines



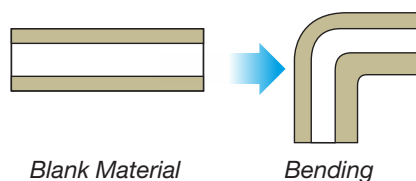
NNT MANUFACTURING PROCESS

CONVENTIONAL Make hole by drilling



- Deburring required
- Rough surface and contaminated




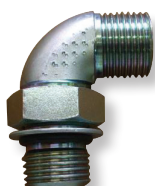
NNT Precision forming – No drilling



- Lower pressure loss
- Smooth surface and less contamination
- No deburring required



COMPARISON TABLE / CONVENTIONAL FITTING AND NNT

CONVENTIONAL		Items	NNT	
Ref. photo	Weight		Weight	Ref. photo
 4.1 OZ.	10.3 OZ.	Raw Material	6.2 OZ.	
 1.8 OZ.	7.1 OZ.	Product	5.3 OZ.	
2.3 OZ. CUT	3.2 OZ.	Chips	1 OZ.	ENERGY SAVING

NOISE (dB)	Size	Type	Flow rate • velocity • oil temp	290 psi	0 → 1,450 psi
	3/8 Hole size Ø 7.5	NHL201 (NNT)	14.4 gpm 67.5 fps 115°F	82.6	84.4
		SHL201 (Conv)		84.7	87.8
			Noise around		49.0

VIBRATION	Size	Mes. point	Sample Hose 3/8	Vibration acceleration m/s ² (peak value)			F-R gpm	O-T °F	Press psi
				X-direction	Y-direction	Z-direction			
	3/8	A	NNT	35.1 (160.5)	35.7 (162.5)	20.1 (89.3)	16.4 gpm	115°F	550 psi
			Conv.	45.9 (181.2)	46.3 (203.5)	24.8 (122.4)			
		B	NNT	34.6 (137.5)	39.6 (161.7)	15.9 (72.1)			
			Conv.	41.7 (192.6)	55.1 (294.4)	30.3 (133.0)			

Specifications of NNT

- Custom fabrication only
- Carbon steel
- Size range: 1/4", 3/8" & 1/2"
- Thread: any type available
- Configuration: any angle between 0° and 90° elbow

Benefits of NNT vs. Conventional Forged Fittings

- Reduced vibration because of smooth flow
- Less contamination and burr free because of no drilling
- Improved energy efficiency due to less pressure loss
- Noise reduction up to 2-3dB
- Less weight due to streamlined design (26% less average)

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